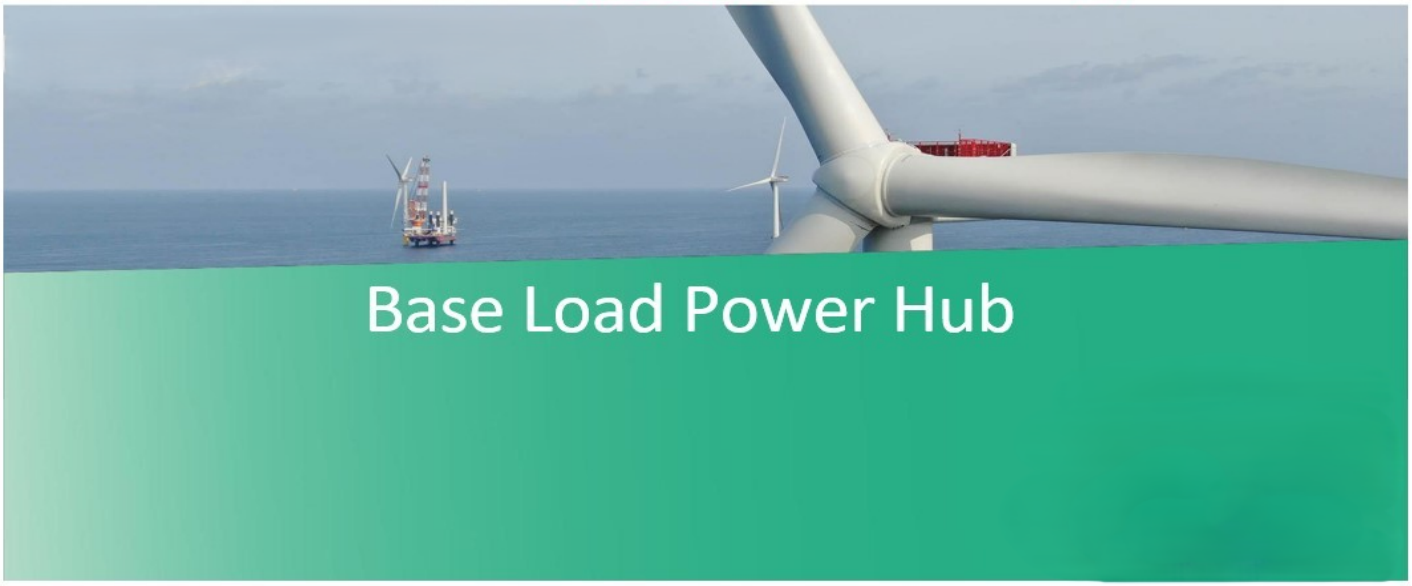
CROSSWIND

ROSETTI MARINO

PROVERLIS

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



MECHANICAL COMPLETION DOSSIER (ONSHORE)

SYSTEM	77 Heating & Ventilation
SUBSYSTEM	77-10 HVAC HV/MV Switchgear Room B-100

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

Sub System N°:	77-10	Tick as appropriate	ONSHORE	O
Description:	HVAC HV/MV Switchgear Room B-100		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*	O
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**

ROSETTI MARINO

123A90 - HOLLANDSE KUST NOORD WIND PARK
BLPH Project

CROSSWIND

Ready For Commissioning (RFC) Certificate

COMPLETE	●	PARTIAL	

Revision:	2		Issued on:	2024-12-05	
System:	77	/	Heating & Ventilation		
SubSystem:	77-10	/	HVAC HV/MV Switchgear Room B-100		

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: 5	B: 47

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	2024-12-06	2024-12-16	2024-12-16	2024-12-16
Signature	PROVERLIS Digitaly signed by Wolmer Borghi 2024-12-06T11:13:28.360Z	PROVERLIS Digitaly signed by Anthony Iveson 2024-12-16T13:18:20.621Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2024-12-16T13:34:06.156Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2024-12-16T13:34:15.156Z

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-10 & process: MC

Electrical	77-10 HVAC HV/MV Switchgear Room B-100						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
83023-CEL	LV Switchgear / HVAC Panels - HV Room	ONSHORE	C10000548	CPX09	100	2024-10-18	RFC 2
84314-CEL	AC UPS - PAS DB / UCP - HVAC HV Room	ONSHORE	C10000590	CPX09	100	2024-11-25	RFC 2
B-100	Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100	ONSHORE	C10002296	CZX01E	100	2024-10-18	RFC 2
B100-HSB-001	Distribution & HVAC Panel - HV MV Room	ONSHORE	C10000835	CPX15	100	2024-10-18	RFC 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-10 & process: MC

Instrumental	77-10 HVAC HV/MV Switchgear Room B-100

ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
77-HS-001A	Hand Switch for Fire&Gas Damper HFD-77001	ONSHORE	C10002077	CJX00	100	2024-10-16	RFC 2
77-HS-001B	Hand Switch for Fire&Gas Damper HFD-77001	ONSHORE	C10002078	CJX00	100	2024-10-16	RFC 2
77-HS-002A	Hand Switch for Fire&Gas Damper HFD-77002	ONSHORE	C10002079	CJX00	100	2024-10-16	RFC 2
77-HS-002B	Hand Switch for Fire&Gas Damper HFD-77002	ONSHORE	C10002080	CJX00	100	2024-10-16	RFC 2
77-HS-003A	Hand Switch for Fire&Gas Damper HFD-77003	ONSHORE	C10002081	CJX00	100	2024-10-16	RFC 2
77-HS-003B	Hand Switch for Fire&Gas Damper HFD-77003	ONSHORE	C10002082	CJX00	100	2024-10-16	RFC 2
B-100	Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100	ONSHORE	C10002297	CZX01I	100	2024-10-18	RFC 2
B100-HSB-001/B400-FGS-003	B-100 HVAC Control Panel / MARSHALLING PCS	ONSHORE	C10002035	CJX10	100	2024-11-19	RFC 2
C-77-HS-001A/77-HS-001B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000355	CJX10	100	2024-10-16	RFC 2
C-77-HS-001B/950-JE-06203	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000354	CJX10	100	2024-10-16	RFC 2
C-77-HS-002A/77-HS-002B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000358	CJX10	100	2024-10-16	RFC 2
C-77-HS-002B/950-JE-06203	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000357	CJX10	100	2024-10-16	RFC 2
C-77-HS-003A/77-HS-003B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000361	CJX10	100	2024-10-16	RFC 2
C-77-HS-003B/950-JE-06203	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000360	CJX10	100	2024-10-16	RFC 2
C-77-HY-001/77-HS-001A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000356	CJX10	100	2024-10-16	RFC 2
C-77-HY-002/77-HS-002A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000359	CJX10	100	2024-10-16	RFC 2
C-77-HY-003/77-HS-003A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000362	CJX10	100	2024-10-16	RFC 2
C-77-XA-001/B400-SIS-001	UCP FAULT ALARM / MARSHALLING PCS	ONSHORE	C10000184	CJX10	100	2024-11-25	RFC 2
C-77-XS-001/B400-SIS-001	TRIP SIGNAL TO UCP / MARSHALLING PCS	ONSHORE	C10000180	CJX10	100	2024-11-25	RFC 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-10 & process: MC

Mechanical	77-10 HVAC HV/MV Switchgear Room B-100						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
B-100	Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100	ONSHORE	C10002298	CZX01M	100	2024-10-18	RFC 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-10 & process: MC

Telecom	77-10 HVAC HV/MV Switchgear Room B-100						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
B100-HSB-001/B400-NET-001	COMMUNICATION / NETWORK CABINET	ONSHORE	C10004353	CIX09	100	2024-11-22	RFC 2

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000210	A	77-HS-001A C10002077	Missing earthing connection. Point valid for all HS inside B-100.	-	Installed	Gtangianu 2024-10-16	CBongiovanni 2024-10-18	Ecarotenuto 2024-10-18	2024-10-18
C30000895	A	C-77-XA-001/B400-SIS-001 C10000184	cable is not as specified in project cable schedule. (is a different gray color than what is shown in the project documentation).	.		APolo 2024-11-25	2024-12-05	Gtangianu 2024-12-05	2024-12-05
C30000195	B	77-HS-001B C10002078	EARTHING BAR SHALL BE CONNECTED TO EARTHING POINT IN N.1 POINT WITH 35sqmm Y/G CABLE	-		Gtangianu 2024-10-16			
C30000196	B	C-77-HS-001A/77-HS-001B C10000355	Missing plastic cable tag on MCT inside B-100. (This point is valid for all HS cables).	-		Gtangianu 2024-10-16			
C30000197	B	77-HS-001A C10002077	Fixing System of instrument on unistrut is not as per typical : 123A90-DDL-IN-DD-40017, sh.047 refer to POS.16. All bolts need to be replaced	-		Gtangianu 2024-10-16		Lmussi	
C30000198	B	77-HS-001A C10002077	Elevation of instrument is not in accordance with Layout. Point valid for 77-HS-001A / 77-HS-002A / 77-HS-003A . See attachment	-		Gtangianu 2024-10-16			
C30000199	B	C-77-HS-002B/950-JE-06203 C10000357	Missing plastic cable tag side 950-JE-06203	-		Gtangianu 2024-10-16			
C30000200	B	C-77-HS-001B/950-JE-06203 C10000354	Missing plastic cable tag side 950-JE-06203	-		Gtangianu 2024-10-16			
C30000201	B	C-77-HS-003B/950-JE-06203 C10000360	Missing plastic cable tag side 950-JE-06203	-		Gtangianu 2024-10-16			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation
SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000202	B	C-77-HY-001/77-HS-001A C10000356	Missing plastic cable tag side C-77-HY-001	-		Gtangianu 2024-10-16			
C30000203	B	C-77-HY-003/77-HS-003A C10000362	Missing plastic cable tag side C-77-HY-003	-		Gtangianu 2024-10-16			
C30000204	B	C-77-HY-002/77-HS-002A C10000359	Identification tag wire missing inside C-77-HY-002 connection.	-		Gtangianu 2024-10-16			
C30000205	B	C-77-HY-003/77-HS-003A C10000362	Identification tag wire missing inside C-77-HY-003 connection.	-		Gtangianu 2024-10-16			
C30000206	B	C-77-HY-001/77-HS-001A C10000356	Identification tag wire missing inside C-77-HY-001 connection.	-		Gtangianu 2024-10-16			
C30000207	B	C-77-HS-003B/950-JE-06203 C10000360	Identification tag wire missing inside 950-JE-06203 connection.	-		Gtangianu 2024-10-16			
C30000208	B	C-77-HS-002B/950-JE-06203 C10000357	Identification tag wire missing inside 950-JE-06203 connection.	-		Gtangianu 2024-10-16			
C30000209	B	C-77-HS-001B/950-JE-06203 C10000354	Identification tag wire missing inside 950-JE-06203 connection.	-		Gtangianu 2024-10-16			
C30000211	B	C-77-HS-001A/77-HS-001B C10000355	Plastic cable ties used to fix the cable tag should be replaced on all external routing.	-		Gtangianu 2024-10-16			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000212	B	C-77-HS-002A/77-HS-002B C10000358	Plastic cable ties used to fix the cable tag should be replaced on all external routing.	-		Gtangianu 2024-10-16			
C30000213	B	C-77-HS-003A/77-HS-003B C10000361	Plastic cable ties used to fix the cable tag should be replaced on all external routing.	-		Gtangianu 2024-10-16			
C30000214	B	C-77-HY-002/77-HS-002A C10000359	Missing plastic cable tag side C-77-HY-002.	-		Gtangianu 2024-10-16			
C30000232	B	B-100 C10002297	77-TP-101 INSTRUMENT IS NOT ACCESIBLE FOR MAINTENANCE.	-	POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE	Gtangianu 2024-10-18	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000611	B	B100-HSB-001/B400-FGS-003 C10002035	The plastic fixing ties , on external routing cable , to be replaced with stainless steel.	.		APolo 2024-11-19			
C30000612	B	B100-HSB-001/B400-FGS-003 C10002035	Missing the cable Plastic tag of project, cabinet side B400-FGS-002	.		APolo 2024-11-19			
C30000613	B	B100-HSB-001/B400-FGS-003 C10002035	the philosophy of cross-ferruling are wrong, cabinet side B400-FGS-002. (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-11-19			
C30000614	B	B100-HSB-001/B400-FGS-003 C10002035	Missing the cross-ferruling (Cores + Shields) . Pannel side B100-HSB-001 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-11-19			
C30000615	B	B100-HSB-001/B400-FGS-003 C10002035	The final destination of Thermo-shrink on the Shield to be done properly.	.		APolo 2024-11-19			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation
SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000883	B	C-77-XS-001/B400-SIS-001 C10000180	Missing cable tag , cabinet side B400-SIS-001	.		APolo 2024-11-25			
C30000884	B	C-77-XS-001/B400-SIS-001 C10000180	Missing the cross-ferruling (Cores) . Cabinet side B400-SIS-001 / B-100 HVAC . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-11-25			
C30000885	B	C-77-XS-001/B400-SIS-001 C10000180	Double shield connected to one terminal on shield bar. this point is valid also for cabinet side B400-SIS-001	.		APolo 2024-11-25			
C30000892	B	C-77-XA-001/B400-SIS-001 C10000184	Missing cable tag , cabinet input B400-SIS-001.	.		APolo 2024-11-25			
C30000893	B	C-77-XA-001/B400-SIS-001 C10000184	Missing the cross-ferruling (Cores) . Cabinet side B400-SIS-001 / B-100 HVAC. (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-11-25			
C30000894	B	C-77-XA-001/B400-SIS-001 C10000184	Double shield connected to one terminal on shield bar. this point is valid also for cabinet side B400-SIS-001	.		APolo 2024-11-25			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation
SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000528	A	B100-HSB-001	Install Ethernet port locks on HVAC panels to prevent access by external devices without an authorized permit, as requested by the	Add ethernet port locks to allHVAC panel boards		SLinari 2024-10-30			
C30000532	A	B100-HSB-001	The modbus I/O list have been updated during SAT, due to changes needed. During SAT activities several signals have not been checked.	Revise and issue on fusion live the HVAC I/O list documents for each HVAC panel. Before commissioning activities, all signals shall be		SLinari 2024-10-30			
C30000022	B	B-100	Roof-top cables to be fixed with cable ties made by AISI 316L		ACTIVITY PERFORMED	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	
C30000026	B	B-100	Earthing connection to be provided for all space heaters. To be done at RM yard		EARTHING INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000030	B	B-100	Earthing connection to be provided for all HVAC units. To be done at RM yard		EARTHING INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000034	B	B-100	Identification traffolyte tag to be provided for all E&I Items (lights, switches, space heaters,etc.). All traffolyte labels missing will be installed at RM		installed anche checked	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000038	B	B-100	HVAC cable tags to be provided on the panel top. Alex Sistemi will supply all loose cable tags. RM will install it		activity done - see picture	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	
C30000042	B	B-100	Cable's tag to be provided / fixed at all MCTs (IN/OUT). Alex Sistemi will supply all loose cable tags. RM will instali it		ACTIVITY DONE - SEE PICTURES	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	
C30000050	B	B-100	HVAC fixed with screws M8. To be replaced with correct ones, as per drawing. Alex Sistemi will supply all final screws. RM will install it during		FIXED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000084	B	B-100	Earthing connection to be provided for all electrical conduits. Alex Sistemi will supply all material, RM will install it		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000088	B	B-100	Teflon to be provided between different materials for Hvac ducts unistrut and supports		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000092	B	B-100	External ducts (inside) welding to be cleaned before re-installation		ACTIVITY DONE - ALL DUCTS HAS BEEN INSTALLED	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	
C30000231	B	B-100 C10002296	Lighting system to be completed	-	COMPLETED	Gtangianu 2024-10-18	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000233	B	83023-CEL C10000548	Cable to be fixed with proper cable ties (point valid for internal and external cable routing).	-		Gtangianu 2024-10-18			
C30000234	B	B100-HSB-001 C10000835	Switch identification tags are hand written . To be replaced.	-		Gtangianu 2024-10-18			
C30000235	B	B100-HSB-001 C10000835	Identification numbers on the terminal strip are hand written .To be Replaced.	-		Gtangianu 2024-10-18			
C30000236	B	B100-HSB-001 C10000835	Black Thermoshrink is used on earthing connection inside the panel. To be replaced	-		Gtangianu 2024-10-18	2024-12-03	Ecarotenuto 2024-12-03	2024-12-03
C30000520	B	B100-HSB-001	Heat shrinks for grounding inside HVAC panel installed of black color instead of yellow-green color as earthing cable itself	Heat shrink tubing to be replaced of yellow-green color type as earthing cable.		SLinari 2024-10-30			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation
SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000524	B	B100-HSB-001	Add an auxiliary IP address in addition to those already provided for each CPU, to allow communication and signals exchange between	Update software on all PLCs to enable switching to the standby CPU without losing the necessary communications		SLinari 2024-10-30			
C30000536	B	B100-HSB-001	Verify for each HVAC panel a perfect correspondence between tag reported on P&IDs and HMIs. During SAT some TAGs were bot	Update and issue final P&IDs on fusion live and update PLC software to hace a perfect match between P&IDs and HMIs.		SLinari 2024-10-30			
C30000914	B	84314-CEL C10000590	the philosophy of cross-ferruling are wrong cabinet side B100-HSB-001 / DP-200F3 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-11-25			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation
SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000548	A	B100-HSB-001	Make temperature and differental pressure trends visible on all HMIs	Update PLC software to apply the request		SLinari 2024-10-30			
C30000556	A	B-100	Since the drainage pipe and heating cable datasheet have not yet been sent to RM, the suitability of the materials used cannot be verified.	Submit both the drainage pipe and heating cable datasheet (by inserting them HVAC COMPONENTS LIST AND DS - E&I		SLinari 2024-10-30			
C30000560	A	B-100	Most of documntation is still in draft form. All documents must be finalized and approved by RM before commissioning activities. During	Review and issue al documentation by 15/11/2024 to allow for finalization by the end of november 2024, accounting fot the time		SLinari 2024-10-30			
C30000014	B	B-100	Handles fixed on external doors are made of plastic material. Temporary key cylinder and handles to be replaced with the ones made of SS			SLinari 2024-08-02			
C30000018	B	B-100	Master key (common for all modules) to be provided		done	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000046	B	B-100	Some brass cable glands are overtightened and need to be untightened to avoid cold flow of cables. Will be performed a spot check at RM		CHECKED CEMBRE INSTALLATION MANUAL - ACCEPTED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000515	B	B-100	Damper actuator HFZ-77001 is out of order. During SAT activities the actuator did not open the fire and gas damper.	It must be replaced		SLinari 2024-10-30			
C30000540	B	B-100	During SAT drainage pipes were not completely installed, incluede heat tracing and related connection to JB.	The work described has to be concluded. During commissioning heat tracing will be tested		SLinari 2024-10-30			
C30000544	B	B-100	None pressure relief damper HDR-77-101 work properly as per design conditions. They remain closed even thogh inside the shelters more then	Investigate the malfunction with the manufacturer and take corrctive actions to adjust or replace the pressure relief request.		SLinari 2024-10-30			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation
SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000552	B	B-100	Several doors present a not perfect closure on the three deadbolts, probably due to a misalignment.	Check the doors and fix the closure issue. This activity vould be done during commissioning activities.		SLinari 2024-10-30			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

HVAC

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000054	B	B-100	All documentation listed in the SMIR, shall be re-issued in final revision and approved by RM and CW			SLinari 2024-08-02			
C30000058	B	B-100	The items to be installed at RM site are coalescent filters and fire dampers. To be completed at RM yard		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000068	B	B-100	TAG in front panels to be updated following last document revisions. All TAG traffolyte labels to be completely checked; several are missing. They		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000072	B	B-100	All balancing and setting activities to be done on site. !t was not possible during FAT due to HVAC system installation not completed. Ali		PERFORMED - SEE REPORTS	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000076	B	B-100	Drain pipes and heating cables are missing, since they must be necessary instalied on site to avoid damages. To be completed at RM yard		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000080	B	B-100	Duct insulation and cladding to be completed on site; it's needed to cover all duct junctions. Alex Sistemi will supply ali material, RM will install it		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29

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PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

Telecom									
CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000786	B	B100-HSB-001/ B400-NET-001 C10004353	Identification tag wires missing both side the B100-HSB-001/B400-NET-001 connections.	.		Gtangianu 2024-11-22			

Section 2 CONSOLIDATED PUNCH LISTS

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PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000210	A	77-HS-001A C10002077	Missing earthing connection. Point valid for all HS inside B-100.	-	Installed	Gtangianu 2024-10-16	CBongiovanni 2024-10-18	Ecarotenuto 2024-10-18	2024-10-18
C30000895	A	C-77-XA-001/B400-SIS-001 C10000184	cable is not as specified in project cable schedule. (is a different gray color than what is shown in the project documentation).	.		APolo 2024-11-25	2024-12-05	Gtangianu 2024-12-05	2024-12-05
C30000195	B	77-HS-001B C10002078	EARTHING BAR SHALL BE CONNECTED TO EARTHING POINT IN N.1 POINT WITH 35sqmm Y/G CABLE	-		Gtangianu 2024-10-16	2024-12-28	Gtangianu 2024-12-28	2024-12-28
C30000196	B	C-77-HS-001A/77-HS-001B C10000355	Missing plastic cable tag on MCT inside B-100. (This point is valid for all HS cables).	-		Gtangianu 2024-10-16	2025-01-03	Ecarotenuto 2025-01-03	2025-01-03
C30000197	B	77-HS-001A C10002077	Fixing System of instrument on unistrut is not as per typical : 123A90-DDL-IN-DD-40017, sh.047 refer to POS.16. All bolts need to be replaced	-		Gtangianu 2024-10-16	2024-11-23	Lmussi 2024-11-23	2024-11-23
C30000198	B	77-HS-001A C10002077	Elevation of instrument is not in accordance with Layout. Point valid for 77-HS-001A / 77-HS-002A / 77-HS-003A . See attachment	-		Gtangianu 2024-10-16	2025-03-04	Gtangianu 2025-03-04	2025-03-04
C30000199	B	C-77-HS-002B/950-JE-06203 C10000357	Missing plastic cable tag side 950-JE-06203	-		Gtangianu 2024-10-16	2024-12-14	Ecarotenuto 2024-12-14	2024-12-14
C30000200	B	C-77-HS-001B/950-JE-06203 C10000354	Missing plastic cable tag side 950-JE-06203	-		Gtangianu 2024-10-16	2024-12-14	Ecarotenuto 2024-12-14	2024-12-14
C30000201	B	C-77-HS-003B/950-JE-06203 C10000360	Missing plastic cable tag side 950-JE-06203	-		Gtangianu 2024-10-16	2024-12-14	Ecarotenuto 2024-12-14	2024-12-14

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PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000202	B	C-77-HY-001/77-HS-001A C10000356	Missing plastic cable tag side C-77-HY-001	-		Gtangianu 2024-10-16	2024-12-14	Ecarotenuto 2024-12-14	2024-12-14
C30000203	B	C-77-HY-003/77-HS-003A C10000362	Missing plastic cable tag side C-77-HY-003	-		Gtangianu 2024-10-16	2024-12-14	Ecarotenuto 2024-12-14	2024-12-14
C30000204	B	C-77-HY-002/77-HS-002A C10000359	Identification tag wire missing inside C-77-HY-002 connection.	-		Gtangianu 2024-10-16	2024-12-17	Gtangianu 2024-12-17	2024-12-17
C30000205	B	C-77-HY-003/77-HS-003A C10000362	Identification tag wire missing inside C-77-HY-003 connection.	-		Gtangianu 2024-10-16	2024-12-17	Gtangianu 2024-12-17	2024-12-17
C30000206	B	C-77-HY-001/77-HS-001A C10000356	Identification tag wire missing inside C-77-HY-001 connection.	-		Gtangianu 2024-10-16	2025-01-30	APolo 2025-01-30	2025-01-30
C30000207	B	C-77-HS-003B/950-JE-06203 C10000360	Identification tag wire missing inside 950-JE-06203 connection.	-		Gtangianu 2024-10-16	2025-01-07	Gtangianu 2025-01-07	2025-01-07
C30000208	B	C-77-HS-002B/950-JE-06203 C10000357	Identification tag wire missing inside 950-JE-06203 connection.	-		Gtangianu 2024-10-16	2024-12-14	Ecarotenuto 2024-12-14	2024-12-14
C30000209	B	C-77-HS-001B/950-JE-06203 C10000354	Identification tag wire missing inside 950-JE-06203 connection.	-		Gtangianu 2024-10-16	2025-01-07	Gtangianu 2025-01-07	2025-01-07
C30000211	B	C-77-HS-001A/77-HS-001B C10000355	Plastic cable ties used to fix the cable tag should be replaced on all external routing.	-		Gtangianu 2024-10-16	2024-12-23	Ecarotenuto 2024-12-23	2024-12-23

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PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000212	B	C-77-HS-002A/77-HS-002B C10000358	Plastic cable ties used to fix the cable tag should be replaced on all external routing.	-		Gtangianu 2024-10-16	2024-12-14	Ecarotenuto 2024-12-14	2024-12-14
C30000213	B	C-77-HS-003A/77-HS-003B C10000361	Plastic cable ties used to fix the cable tag should be replaced on all external routing.	-		Gtangianu 2024-10-16	2024-12-14	Ecarotenuto 2024-12-14	2024-12-14
C30000214	B	C-77-HY-002/77-HS-002A C10000359	Missing plastic cable tag side C-77-HY-002.	-		Gtangianu 2024-10-16	2024-12-14	Ecarotenuto 2024-12-14	2024-12-14
C30000232	B	B-100 C10002297	77-TP-101 INSTRUMENT IS NOT ACCESIBLE FOR MAINTENANCE.	-	POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE	Gtangianu 2024-10-18	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000611	B	B100-HSB-001/B400-FGS-003 C10002035	The plastic fixing ties , on external routing cable , to be replaced with stainless steel.	.		APolo 2024-11-19	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30000612	B	B100-HSB-001/B400-FGS-003 C10002035	Missing the cable Plastic tag of project, cabinet side B400-FGS-002	.		APolo 2024-11-19	2025-02-04	APolo 2025-02-04	2025-02-04
C30000613	B	B100-HSB-001/B400-FGS-003 C10002035	the philosophy of cross-ferruling are wrong, cabinet side B400-FGS-002. (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-11-19	2025-02-21	JKrizanic 2025-02-21	2025-02-21
C30000614	B	B100-HSB-001/B400-FGS-003 C10002035	Missing the cross-ferruling (Cores + Shields) . Pannel side B100-HSB-001 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-11-19	2024-12-17	Gtangianu 2024-12-17	2024-12-17
C30000615	B	B100-HSB-001/B400-FGS-003 C10002035	The final destination of Thermo-shrink on the Shield to be done properly.	.		APolo 2024-11-19	2025-01-03	Gtangianu 2025-01-03	2025-01-03

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PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000883	B	C-77-XS-001/B400-SIS-001 C10000180	Missing cable tag , cabinet side B400-SIS-001	.		APolo 2024-11-25	2025-01-03	Gtangianu 2025-01-03	2025-01-03
C30000884	B	C-77-XS-001/B400-SIS-001 C10000180	Missing the cross-ferruling (Cores) . Cabinet side B400-SIS-001 / B-100 HVAC . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-11-25			
C30000885	B	C-77-XS-001/B400-SIS-001 C10000180	Double shield connected to one terminal on shield bar. this point is valid also for cabinet side B400-SIS-001	.		APolo 2024-11-25	2025-02-28	AAndreani 2025-02-28	2025-02-28
C30000892	B	C-77-XA-001/B400-SIS-001 C10000184	Missing cable tag , cabinet input B400-SIS-001.	.		APolo 2024-11-25	2025-01-03	Gtangianu 2025-01-03	2025-01-03
C30000893	B	C-77-XA-001/B400-SIS-001 C10000184	Missing the cross-ferruling (Cores) . Cabinet side B400-SIS-001 / B-100 HVAC. (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-11-25			
C30000894	B	C-77-XA-001/B400-SIS-001 C10000184	Double shield connected to one terminal on shield bar. this point is valid also for cabinet side B400-SIS-001	.		APolo 2024-11-25	2025-02-28	AAndreani 2025-02-28	2025-02-28

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PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000528	A	B100-HSB-001	Install Ethernet port locks on HVAC panels to prevent access by external devices without an authorized permit, as requested by the	Add ethernet port locks to allHVAC panel boards	installed	SLinari 2024-10-30	Vendor 2025-02-22	SLinari 2025-02-22	2025-02-22
C30000532	A	B100-HSB-001	The modbus I/O list have been updated during SAT, due to changes needed. During SAT activities several signals have not been checked.	Revise and issue on fusion live the HVAC I/O list documents for each HVAC panel. Before commissioning activities, all signals shall be	Spot check with Yokogawa and the communication work	SLinari 2024-10-30	Vendor 2025-02-22	SLinari 2025-02-22	2025-02-22
C30000022	B	B-100	Roof-top cables to be fixed with cable ties made by AISI 316L		ACTIVITY PERFORMED	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	2024-12-05
C30000026	B	B-100	Earthing connection to be provided for all space heaters. To be done at RM yard		EARTHING INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000030	B	B-100	Earthing connection to be provided for all HVAC units. To be done at RM yard		EARTHING INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000034	B	B-100	Identification traffolyte tag to be provided for all E&I Items (lights, switches, space heaters,etc.). All traffolyte labels missing will be installed at RM		installed anche checked	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000038	B	B-100	HVAC cable tags to be provided on the panel top. Alex Sistemi will supply all loose cable tags. RM will install it		activity done - see picture	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	2024-12-05
C30000042	B	B-100	Cable's tag to be provided / fixed at all MCTs (IN/OUT). Alex Sistemi will supply all loose cable tags. RM will instali it		ACTIVITY DONE - SEE PICTURES	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	2024-12-05
C30000050	B	B-100	HVAC fixed with screws M8. To be replaced with correct ones, as per drawing. Alex Sistemi will supply all final screws. RM will install it during		FIXED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29

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PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000084	B	B-100	Earthing connection to be provided for all electrical conduits. Alex Sistemi will supply all material, RM will install it		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000088	B	B-100	Teflon to be provided between different materials for Hvac ducts unistrut and supports		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000092	B	B-100	External ducts (inside) welding to be cleaned before re-installation		ACTIVITY DONE - ALL DUCTS HAS BEEN INSTALLED	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	2024-12-05
C30000231	B	B-100 C10002296	Lighting system to be completed	-	COMPLETED	Gtangianu 2024-10-18	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000233	B	83023-CEL C10000548	Cable to be fixed with proper cable ties (point valid for internal and external cable routing).	-		Gtangianu 2024-10-18	2025-01-30	APolo 2025-01-30	2025-01-30
C30000234	B	B100-HSB-001 C10000835	Switch identification tags are hand written . To be replaced.	-		Gtangianu 2024-10-18			
C30000235	B	B100-HSB-001 C10000835	Identification numbers on the terminal strip are hand written .To be Replaced.	-		Gtangianu 2024-10-18	2025-02-25	Ecarotenuto 2025-02-25	2025-02-25
C30000236	B	B100-HSB-001 C10000835	Black Thermoshrink is used on earthing connection inside the panel. To be replaced	-		Gtangianu 2024-10-18	2024-12-03	Ecarotenuto 2024-12-03	2024-12-03
C30000520	B	B100-HSB-001	Heat shrinks for grounding inside HVAC panel installed of black color instead of yellow-green color as earthing cable itself	Heat shrink tubing to be replaced of yellow-green color type as earthing cable.	accepted	SLinari 2024-10-30	Vendor 2025-02-25	SLinari 2025-02-25	2025-02-25

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SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000524	B	B100-HSB-001	Add an auxiliary IP address in addition to those already provided for each CPU, to allow communication and signals exchange between	Update software on all PLCs to enable switching to the standby CPU without losing the necessary communications	implemented	SLinari 2024-10-30	Vendor 2025-02-22	SLinari 2025-02-22	2025-02-22
C30000536	B	B100-HSB-001	Verify for each HVAC panel a perfect correspondence between tag reported on P&IDs and HMIs. During SAT some TAGs were bot	Update and issue final P&IDs on fusion live and update PLC software to hace a perfect match between P&IDs and HMIs.	Implemented	SLinari 2024-10-30	Vendor 2025-02-25	SLinari 2025-02-25	2025-02-25
C30000914	B	84314-CEL C10000590	the philosophy of cross-ferruling are wrong cabinet side B100-HSB-001 / DP-200F3 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-11-25	2025-02-15	AAndreani 2025-02-15	2025-02-15
C30001424	B	B-100 C10002296	(Open during WD) The ground wires connecting the BTM inside the B100 must be arranged, and all bolts used in the BTM is not typical. . See	.		Gtangianu 2024-12-06	2025-02-04	Gtangianu 2025-02-04	2025-02-04

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PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000548	A	B100-HSB-001	Make temperature and differental pressure trends visible on all HMIs	Update PLC software to apply the request	Implemented by Vendor	SLinari 2024-10-30	Vendor 2025-02-20	SLinari 2025-02-20	2025-02-20
C30000556	A	B-100	Since the drainage pipe and heating cable datasheet have not yet been sent to RM, the suitability of the materials used cannot be verified.	Submit both the drainage pipe and heating cable datasheet (by inserting them HVAC COMPONENTS LIST AND DS - E&I		SLinari 2024-10-30			
C30000560	A	B-100	Most of documntation is still in draft form. All documents must be finalized and approved by RM before commissioning activities. During	Review and issue al documentation by 15/11/2024 to allow for finalization by the end of november 2024, accounting fot the time		SLinari 2024-10-30			
C30000014	B	B-100	Handles fixed on external doors are made of plastic material. Temporary key cylinder and handles to be replaced with the ones made of SS		DONE	SLinari 2024-08-02	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000018	B	B-100	Master key (common for all modules) to be provided		done	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000046	B	B-100	Some brass cable glands are overtightened and need to be untightened to avoid cold flow of cables. Will be performed a spot check at RM		CHECKED CEMBRE INSTALLATION MANUAL - ACCEPTED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000515	B	B-100	Damper actuator HFZ-77001 is out of order. During SAT activities the actuator did not open the fire and gas damper.	It must be replaced		SLinari 2024-10-30			
C30000540	B	B-100	During SAT drainage pipes were not completely installed, incluede heat tracing and related connection to JB.	The work described has to be concluded. During commissioning heat tracing will be tested	Verified	SLinari 2024-10-30	Vendor 2025-02-20	SLinari 2025-02-20	2025-02-20
C30000544	B	B-100	None pressure relief damper HDR-77-101 work properly as per design conditions. They remain closed even thogh inside the shelters more then	Investigate the malfunction with the manufacturer and take corrctive actions to adjust or replace the pressure relief request.		SLinari 2024-10-30			

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PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

Mechanical									
CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000552	B	B-100	Several doors present a not perfect closure on the three deadbolts, probably due to a misalignment.	Check the doors and fix the closure issue. This activity vould be done during commissioning activities.		SLinari 2024-10-30			

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PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

HVAC

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000054	B	B-100	All documentation listed in the SMIR, shall be re-issued in final revision and approved by RM and CW		can be close - refer to PL n. C30000560	SLinari 2024-08-02	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000058	B	B-100	The items to be installed at RM site are coalescent filters and fire dampers. To be completed at RM yard		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000068	B	B-100	TAG in front panels to be updated following last document revisions. All TAG traffolyte labels to be completely checked; several are missing. They		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000072	B	B-100	All balancing and setting activities to be done on site. !t was not possible during FAT due to HVAC system installation not completed. Ali		PERFORMED - SEE REPORTS	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000076	B	B-100	Drain pipes and heating cables are missing, since they must be necessary instalied on site to avoid damages. To be completed at RM yard		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000080	B	B-100	Duct insulation and cladding to be completed on site; it's needed to cover all duct junctions. Alex Sistemi will supply ali material, RM will install it		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29

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PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-10 HVAC HV/MV Switchgear Room B-100

Telecom									
CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000786	B	B100-HSB-001/ B400-NET-001 C10004353	Identification tag wires missing both side the B100-HSB-001/B400-NET-001 connections.	.		Gtangianu 2024-11-22	2025-02-04	Gtangianu 2025-02-04	2025-02-04

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PUNCH ITEM ENTRY / CLEARANCE FORM

C30000234

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000835	1.4 Discipline	Electrical
1.2 Item	B100-HSB-001	Distribution & HVAC Panel - HV MV Room	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Switch identification tags are hand written . To be replaced.

Name: Giovanni Tangianu

Date: 2024-10-18

Signature: Digitaly signed by Giovanni Tangianu 2024-10-18T15:39:18.504Z

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	2024-10-18
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2024-10-18T15:39:30.957Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Name

Date

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000515

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100

2 - OBSERVATION

Damper actuator HFZ-77001 is out of order. During SAT activities the actuator did not open the fire and gas damper.

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal	It must be replaced		
3.2 Material required			
3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-10-30
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Name

Date

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000544

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100

2 - OBSERVATION

None pressure relief damper HDR-77-101 work properly as per design conditions. They remain closed even thogh inside the shelters more then 50 Pa have been measured during SAT through the differential pressure transmitters (with fans running). SAT was conducted by manually positioning the dampers as they dhould appear when operating correctly (slightly open)

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal	Investigate the malfunction with the manufacturer and take corrctive actions to adjust or replace the pressure relief request.		
3.2 Material required			
3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-10-30
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Name

Date

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000552

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100

2 - OBSERVATION

Several doors present a not perfect closure on the three deadbolts, probably due to a misalignment.

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal	Check the doors and fix the closure issue. This activity vould be done during commissioning activities.		
3.2 Material required			
3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-10-30
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Name

Date

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000556

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100

2 - OBSERVATION

Since the drainage pipe and heating cable datasheet have not yet been sent to RM, the suitability of the materials used cannot be verified. The installed drainage ppe (PVC type and plastic ties) must be able to withstand the maximum temperature reached by heating cable.

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal	Submit both the drainage pipe and heating cable datasheet (by inserting them HVAC COMPONENTS LIST AND DS - E&I SHELTERS and ELECTRICAL COMPONENTS LIST AND DS - E&I SHELTERS, for each shelter), clearly indicating the maximum temperature of the heating cable and the maximum temperature tolerance of the plastic drainage pipe, all system is not tested, will be tested during comm phase		
3.2 Material required			
3.3 Priority	A PL A	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-10-30
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Name

Date

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000560

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100

2 - OBSERVATION

Most of documntation is still in draft form. All documents must be finalized and approved by RM before commissioning activities. During revision, all mark-ups made during SAT must be applied.

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal	Review and issue al documentation by 15/11/2024 to allow for finalization by the end of november 2024, accounting fot the time required by RM to review these documents.		
3.2 Material required			
3.3 Priority	A PL A	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-10-30
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Name

Date

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000884

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000180	1.4 Discipline	Instrumental
1.2 Item	C-77-XS-001/B400-SIS-001	TRIP SIGNAL TO UCP / MARSHALLING PCS	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Missing the cross-ferruling (Cores) . Cabinet side B400-SIS-001 / B-100 HVAC . (see document 123A90-DDL-IN-DG-40016 sh.3)

Name: Alessio Polo

Date: 2024-11-25

Signature: Digitaly signed by Alessio Polo 2024-11-25T16:40:43.409Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Alessio Polo 2024-11-25T16:40:53.917Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Name

Date

Signature

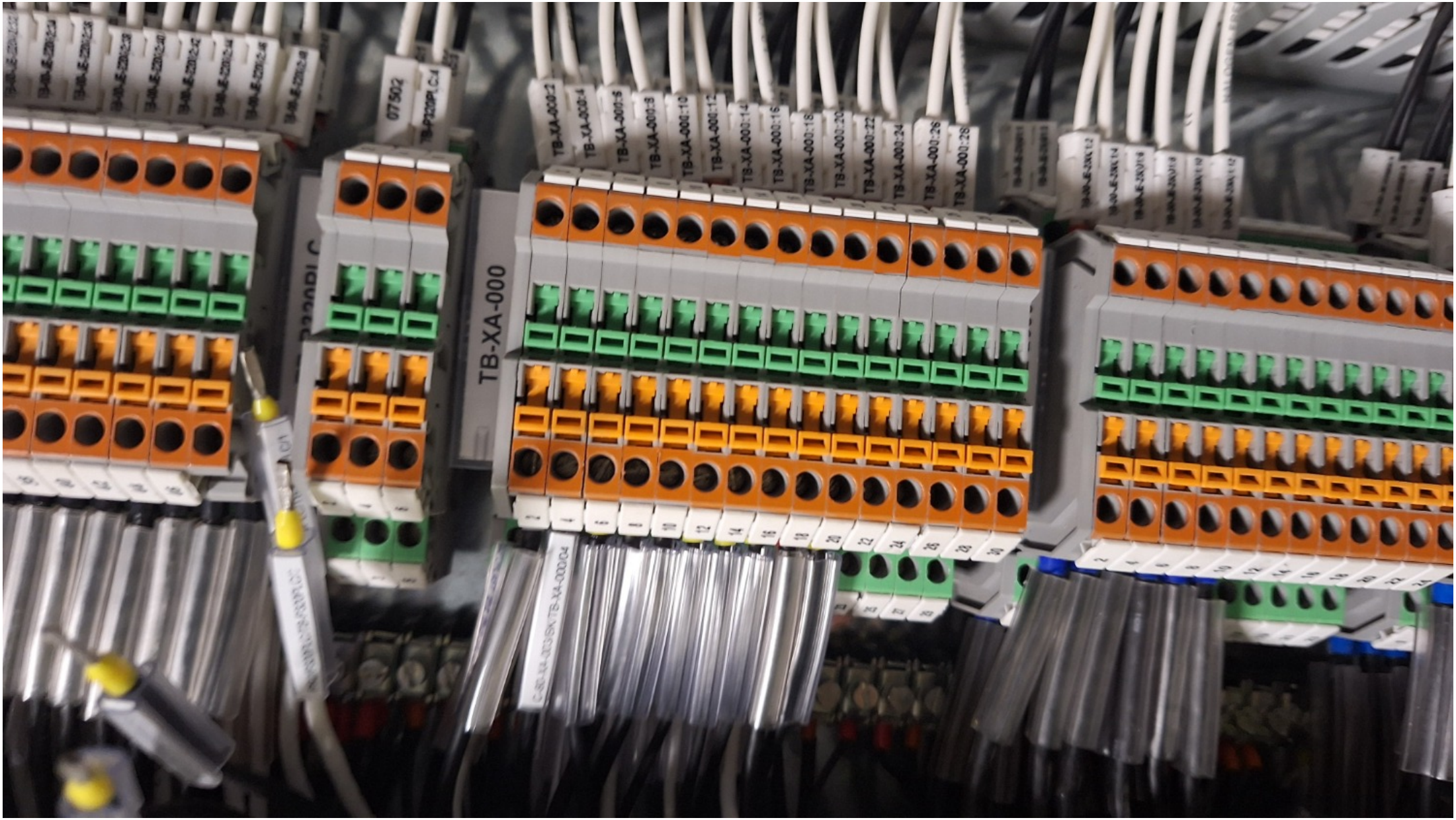
6- CLEARANCE APPROVAL

Name

Date

Signature


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TB-XA-000

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000893

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000184	1.4 Discipline	Instrumental
1.2 Item	C-77-XA-001/B400-SIS-001	UCP FAULT ALARM / MARSHALLING PCS	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Missing the cross-ferruling (Cores) . Cabinet side B400-SIS-001 / B-100 HVAC. (see document 123A90-DDL-IN-DG-40016 sh.3)

Name: Alessio Polo

Date: 2024-11-25

Signature: Digitaly signed by Alessio Polo 2024-11-25T17:15:42.761Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Alessio Polo 2024-11-25T17:15:54.320Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Name

Date

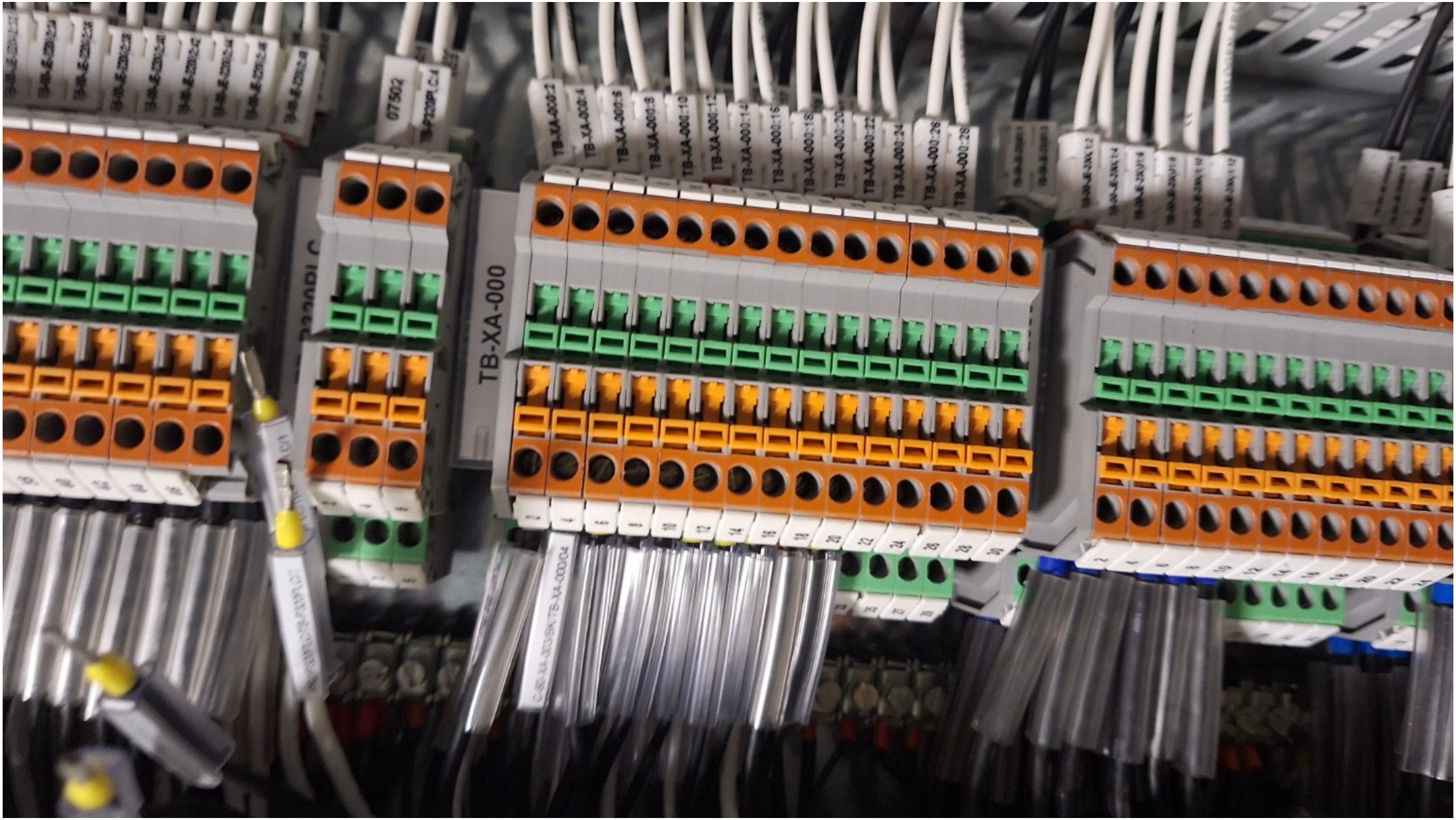
Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


TB-XA-000


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ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000014

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	90-01		HV-MV Switchgear Room B-100

2 - OBSERVATION

Handles fixed on external doors are made of plastic material. Temporary key cylinder and handles to be replaced with the ones made of SS material (AISI 316L). To be done at RM yard

Name: Stefano Linari

Date: 2024-10-08

Signature: Digitaly signed by Stefano Linari 2024-10-08T09:40:02.422Z

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-08-02
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

DONE

Name: vendor alex sistemi

Date: 2025-02-06

Signature: Digitaly signed by vendor alex sistemi 2025-02-06T16:02:45.359Z

5 - CLEARANCE CHECK

DONE

Name: Stefano Linari

Date: 2025-02-06

Signature: Digitaly signed by Stefano Linari 2025-02-06T16:03:03.729Z

6- CLEARANCE APPROVAL

Name

Date

Signature


LIVE POWER
SOTTO TENSIONE
400 V
B-100
HV SWITCHROOM

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000018

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	90-01		HV-MV Switchgear Room B-100

2 - OBSERVATION

Master key (common for all modules) to be provided

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-08-02
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

done

Name ALEX SISTEMI

Date 2024-10-29

Signature PROVERLIS Digitaly signed by ALEX SISTEMI 2024-10-29T11:58:22.927Z

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T11:59:03.645Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000022

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	90-01		HV-MV Switchgear Room B-100

2 - OBSERVATION

Roof-top cables to be fixed with cable ties made by AISI 316L

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	MC Mechanical Completion	Date	2024-08-02
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

ACTIVITY PERFORMED

Name Stefano Linari

Date 2024-12-05

Signature Digitaly signed by Stefano Linari 2024-12-05T12:39:54.565Z

5 - CLEARANCE CHECK

ACTIVITY PERFORMED

Name Stefano Linari

Date 2024-12-05

Signature Digitaly signed by Stefano Linari 2024-12-05T12:40:12.905Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000026

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	90-01		HV-MV Switchgear Room B-100

2 - OBSERVATION

Earthing connection to be provided for all space heaters. To be done at RM yard

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-08-02
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

EARTHING INSTALLED

Name ALEX SISTEMI

Date 2024-10-29

Signature PROVERLIS Digitaly signed by ALEX SISTEMI 2024-10-29T12:07:14.339Z

5 - CLEARANCE CHECK

EARTHING INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T12:07:39.952Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000030

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	90-01		HV-MV Switchgear Room B-100

2 - OBSERVATION

Earthing connection to be provided for all HVAC units. To be done at RM yard

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-08-02
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

EARTHING INSTALLED

Name ALEX SISTEMI

Date 2024-10-29

Signature Digitaly signed by ALEX SISTEMI 2024-10-29T12:14:12.565Z

5 - CLEARANCE CHECK

EARTHING INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T12:14:39.317Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000034

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	90-01		HV-MV Switchgear Room B-100

2 - OBSERVATION

Identification traffolyte tag to be provided for all E&I Items (lights, switches, space heaters,etc.). All traffolyte labels missing will be installed at RM yard

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-08-02
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

installed anche checked

Name ALEX SISTEMI

Date 2024-10-29

Signature PROVERLIS Digitaly signed by ALEX SISTEMI 2024-10-29T14:44:56.613Z

5 - CLEARANCE CHECK

installed anche checked

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T14:45:13.487Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000038

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	90-01		HV-MV Switchgear Room B-100

2 - OBSERVATION

HVAC cable tags to be provided on the panel top. Alex Sistemi will supply all loose cable tags. RM will install it

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-08-02
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

activity done - see picture

Name Stefano Linari

Date 2024-12-05

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-12-05T10:55:31.195Z

5 - CLEARANCE CHECK

activity done - see picture

Name Stefano Linari

Date 2024-12-05

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-12-05T10:55:43.889Z

6- CLEARANCE APPROVAL

Name

Date

Signature


LIVE POWER

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000042

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	90-01		HV-MV Switchgear Room B-100

2 - OBSERVATION

Cable's tag to be provided / fixed at all MCTs (IN/OUT). Alex Sistemi will supply all loose cable tags. RM will instali it

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-08-02
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

ACTIVITY DONE - SEE PICTURES

Name Stefano Linari

Date 2024-12-05

Signature Digitaly signed by Stefano Linari 2024-12-05T12:23:52.526Z

5 - CLEARANCE CHECK

ACTIVITY DONE - SEE PICTURES

Name Stefano Linari

Date 2024-12-05

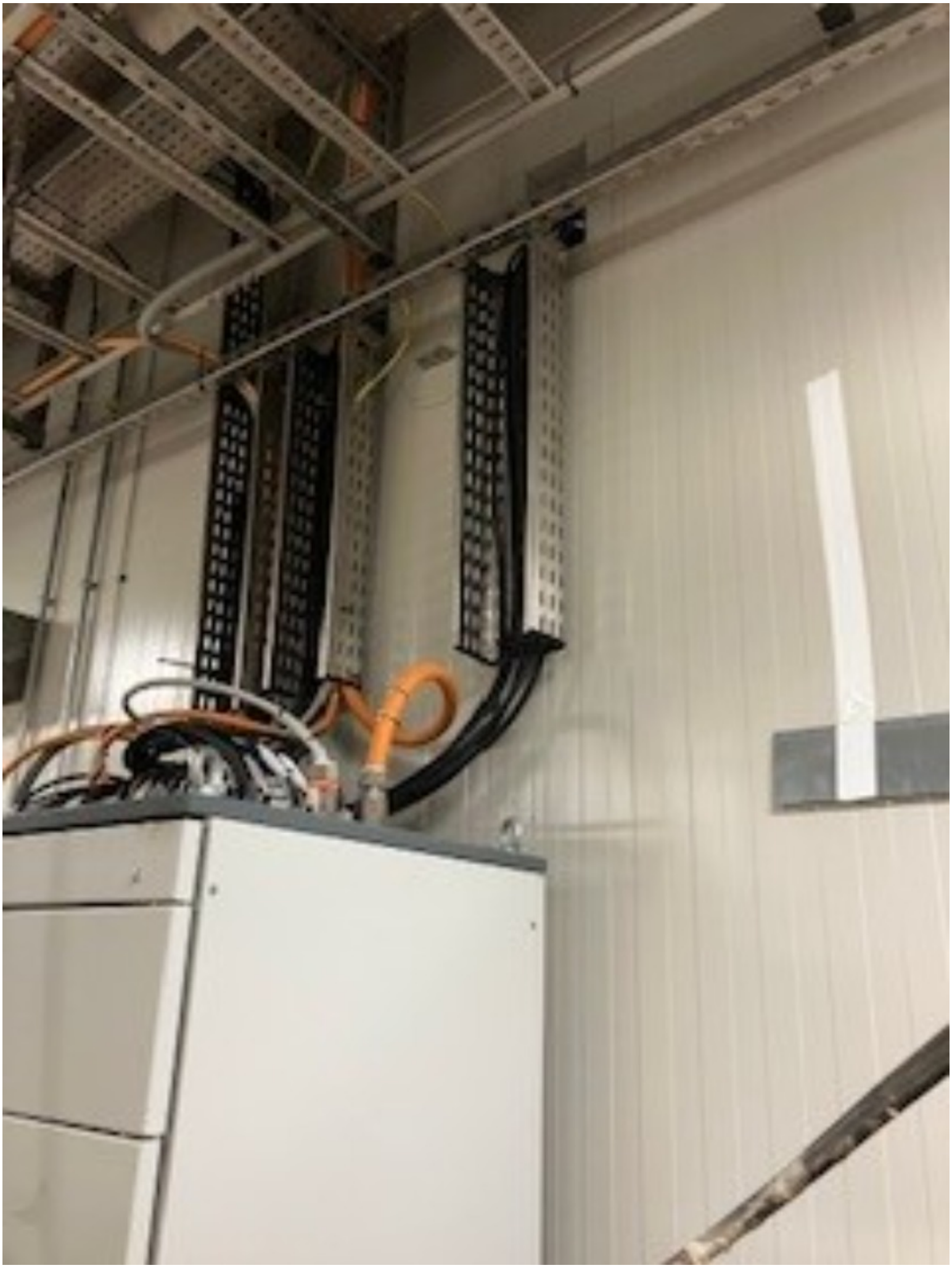
Signature Digitaly signed by Stefano Linari 2024-12-05T12:24:03.157Z

6- CLEARANCE APPROVAL

Name

Date

Signature





ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000046

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	90-01		HV-MV Switchgear Room B-100

2 - OBSERVATION

Some brass cable glands are overtightened and need to be untightened to avoid cold flow of cables. Will be performed a spot check at RM yard

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-08-02
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

CHECKED CEMBRE INSTALLATION MANUAL - ACCEPTED

Name ALEX SISTEMI

Date 2024-10-29

Signature Digitaly signed by ALEX SISTEMI 2024-10-29T12:36:02.729Z

5 - CLEARANCE CHECK

CHECKED CEMBRE INSTALLATION MANUAL - ACCEPTED

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T12:36:17.008Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000050

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	90-01		HV-MV Switchgear Room B-100

2 - OBSERVATION

HVAC fixed with screws M8. To be replaced with correct ones, as per drawing. Alex Sistemi will supply all final screws. RM will install it during re-installation of HVAC

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-08-02
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

FIXED

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T12:40:04.125Z

5 - CLEARANCE CHECK

FIXED

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T12:40:18.963Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000054

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	HVAC
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	90-01		HV-MV Switchgear Room B-100

2 - OBSERVATION

All documentation listed in the SMIR, shall be re-issued in final revision and approved by RM and CW

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-08-02
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

can be close - refer to PL n. C30000560

Name Stefano Linari

Date 2025-02-06

Signature Digitaly signed by Stefano Linari 2025-02-06T15:50:16.003Z

5 - CLEARANCE CHECK

can be close - refer to PL n. C30000560

Name Stefano Linari

Date 2025-02-06

Signature Digitaly signed by Stefano Linari 2025-02-06T15:50:39.098Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000058

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	HVAC
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	90-01		HV-MV Switchgear Room B-100

2 - OBSERVATION

The items to be installed at RM site are coalescent filters and fire dampers. To be completed at RM yard

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-08-02
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

INSTALLED

Name ALEX SISTEMI

Date 2024-10-29

Signature PROVERLIS Digitaly signed by ALEX SISTEMI 2024-10-29T12:43:27.482Z

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T12:43:42.810Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000068

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	HVAC
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	90-01		HV-MV Switchgear Room B-100

2 - OBSERVATION

TAG in front panels to be updated following last document revisions. All TAG traffolyte labels to be completely checked; several are missing. They will be installed at RM Yard

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-08-02
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

INSTALLED

Name ALEX SISTEMI

Date 2024-10-29

Signature PROVERLIS Digitaly signed by ALEX SISTEMI 2024-10-29T13:02:09.954Z

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T13:02:20.450Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000072

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	HVAC
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	90-01		HV-MV Switchgear Room B-100

2 - OBSERVATION

All balancing and setting activities to be done on site. !t was not possible during FAT due to HVAC system installation not completed. Ali notes/remarks are indicated in the FAT procedures and reports

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	MC Mechanical Completion	Date	2024-08-02
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

PERFORMED - SEE REPORTS

Name ALEX SISTEMI

Date 2024-10-29

Signature Digitaly signed by ALEX SISTEMI 2024-10-29T13:05:52.986Z

5 - CLEARANCE CHECK

PERFORMED - SEE REPORTS

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T13:06:11.122Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000076

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	HVAC
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	90-01		HV-MV Switchgear Room B-100

2 - OBSERVATION

Drain pipes and heating cables are missing, since they must be necessary instalied on site to avoid damages. To be completed at RM yard

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-08-02
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

INSTALLED

Name ALEX SISTEMI

Date 2024-10-29

Signature PROVERLIS Digitaly signed by ALEX SISTEMI 2024-10-29T13:19:51.659Z

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T13:20:10.729Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000080

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	HVAC
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	90-01		HV-MV Switchgear Room B-100

2 - OBSERVATION

Duct insulation and cladding to be completed on site; it's needed to cover all duct junctions. Alex Sistemi will supply ali material, RM will install it during re-installation of HVAC.

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-08-02
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T14:48:05.529Z

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T14:48:18.192Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000084

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	90-01		HV-MV Switchgear Room B-100

2 - OBSERVATION

Earthing connection to be provided for all electrical conduits. Alex Sistemi will supply all material, RM will install it

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-08-02
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

INSTALLED

Name ALEX SISTEMI

Date 2024-10-29

Signature PROVERLIS Digitaly signed by ALEX SISTEMI 2024-10-29T13:35:37.756Z

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T13:35:57.392Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000088

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	90-01		HV-MV Switchgear Room B-100

2 - OBSERVATION

Teflon to be provided between different materials for Hvac ducts unistrut and supports

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-08-02
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T14:52:58.541Z

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T14:53:30.036Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000092

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	90-01		HV-MV Switchgear Room B-100

2 - OBSERVATION

External ducts (inside) welding to be cleaned before re-installation

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-08-02
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

ACTIVITY DONE - ALL DUCTS HAS BEEN INSTALLED

Name Stefano Linari

Date 2024-12-05

Signature Digitaly signed by Stefano Linari 2024-12-05T10:45:28.871Z

5 - CLEARANCE CHECK

ACTIVITY DONE - ALL DUCTS HAS BEEN INSTALLED

Name Stefano Linari

Date 2024-12-05

Signature Digitaly signed by Stefano Linari 2024-12-05T10:46:44115Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000195

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002078	1.4 Discipline	Instrumental
1.2 Item	77-HS-001B		Hand Switch for Fire&Gas Damper HFD-77001
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100

2 - OBSERVATION

EARTHING BAR SHALL BE CONNECTED TO EARTHING POINT IN N.1 POINT WITH 35sqmm Y/G CABLE

Name: Giovanni Tangianu

Date: 2024-10-16

Signature: Digitaly signed by Giovanni Tangianu 2024-10-16T12:23:26.391Z

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: 2024-10-16

Signature: Digitaly signed by Giovanni Tangianu 2024-10-16T15:09:58.928Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2024-12-28

Signature: Digitaly signed by Giovanni Tangianu 2024-12-28T08:53:04.828Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000196

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000355	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-001A/77-HS-001B	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Missing plastic cable tag on MCT inside B-100. (This point is valid for all HS cables).

Name: Giovanni Tangianu

Date: 2024-10-16

Signature: Digitaly signed by Giovanni Tangianu 2024-10-16T11:59:38.900Z

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	2024-10-16
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-16T15:11:54.129Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Eleonora Carotenuto

Date: 2025-01-03

Signature: Digitaly signed by Eleonora Carotenuto 2025-01-03T16:57:08.655Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000197

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002077	1.4 Discipline	Instrumental
1.2 Item	77-HS-001A		Hand Switch for Fire&Gas Damper HFD-77001
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100

2 - OBSERVATION

Fixing System of instrument on unistrut is not as per typical : 123A90-DDL-IN-DD-40017, sh.047 refer to POS.16. All bolts need to be replaced with the proper ones M5x35. Point valid for 77-HS-001 / 77-HS-001B / 77-HS-002A / 77-HS-002B./77-HS-003A / 77-HS-003B.

Name: Giovanni Tangianu

Date: 2024-10-16

Signature: Digitaly signed by Giovanni Tangianu 2024-10-16T12:21:17.206Z

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	2024-10-16
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-16T15:12:22.358Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done

Name: Luca Mussi

Date: 2024-11-20

Signature: Digitaly signed by Luca Mussi 2024-11-20T08:11:47.169Z

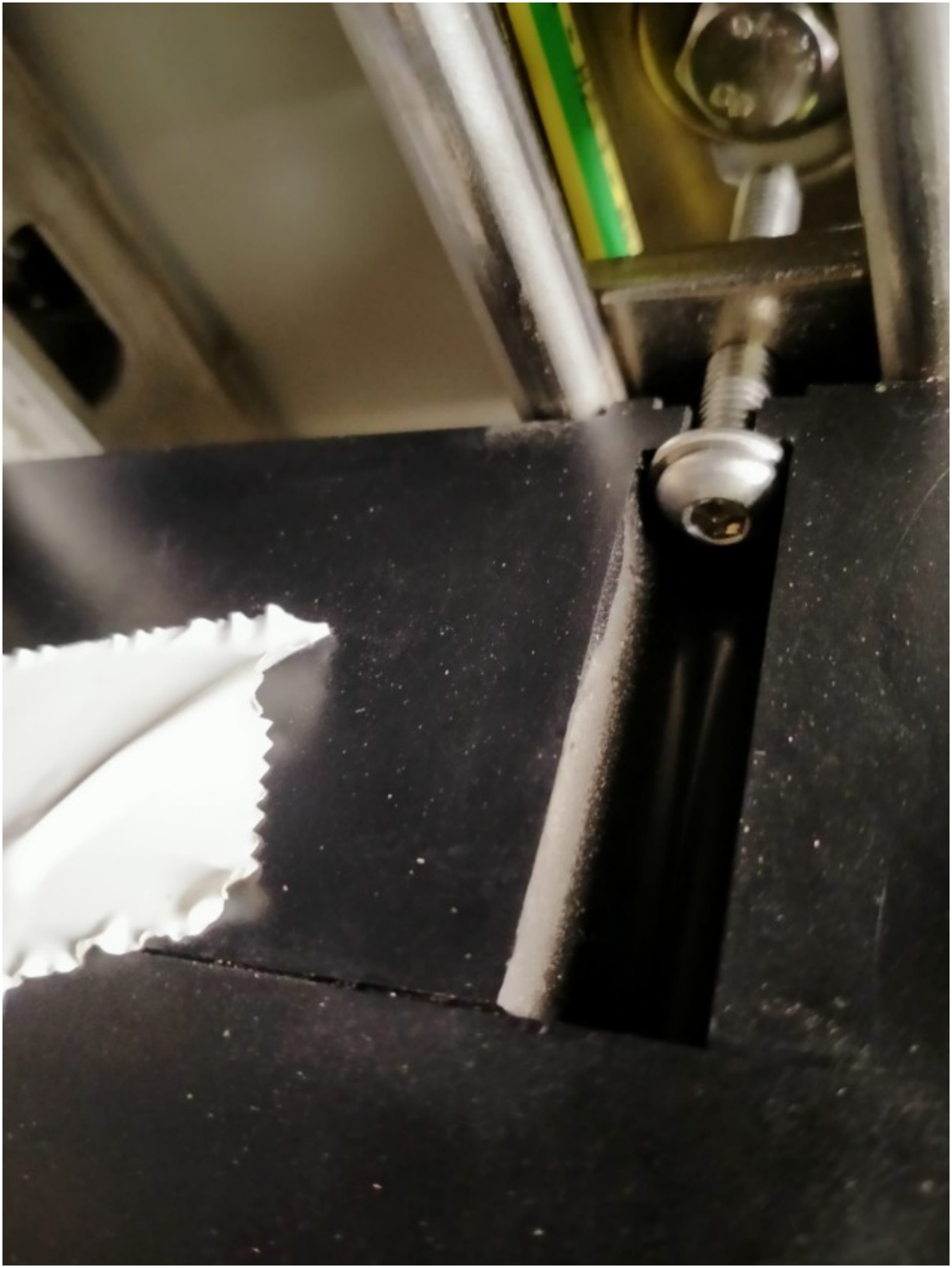
6- CLEARANCE APPROVAL

Name

Date

Signature


77-HS-001A
GHG43
BVS 22 ATEX E 032 X
Ex eb IIC T6 Gb
Ex tb IIIC T80°C Db
IECEx BVS 22.0029X
Ex eb IIC T6 Gb
Ex tb IIIC T80°C Db
IP66





ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000198

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002077	1.4 Discipline	Instrumental
1.2 Item	77-HS-001A		Hand Switch for Fire&Gas Damper HFD-77001
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100

2 - OBSERVATION

Elevation of instrument is not in accordance with Layout. Point valid for 77-HS-001A / 77-HS-002A / 77-HS-003A . See attachment

Name: Giovanni Tangianu

Date: 2024-10-16

Signature: Digitaly signed by Giovanni Tangianu 2024-10-16T12:37:26.047Z

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	2024-10-16
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-16T15:12:45.290Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done.

Name: Giovanni Tangianu

Date: 2025-03-04

Signature: Digitaly signed by Giovanni Tangianu 2025-03-04T15:52:09.921Z

6- CLEARANCE APPROVAL

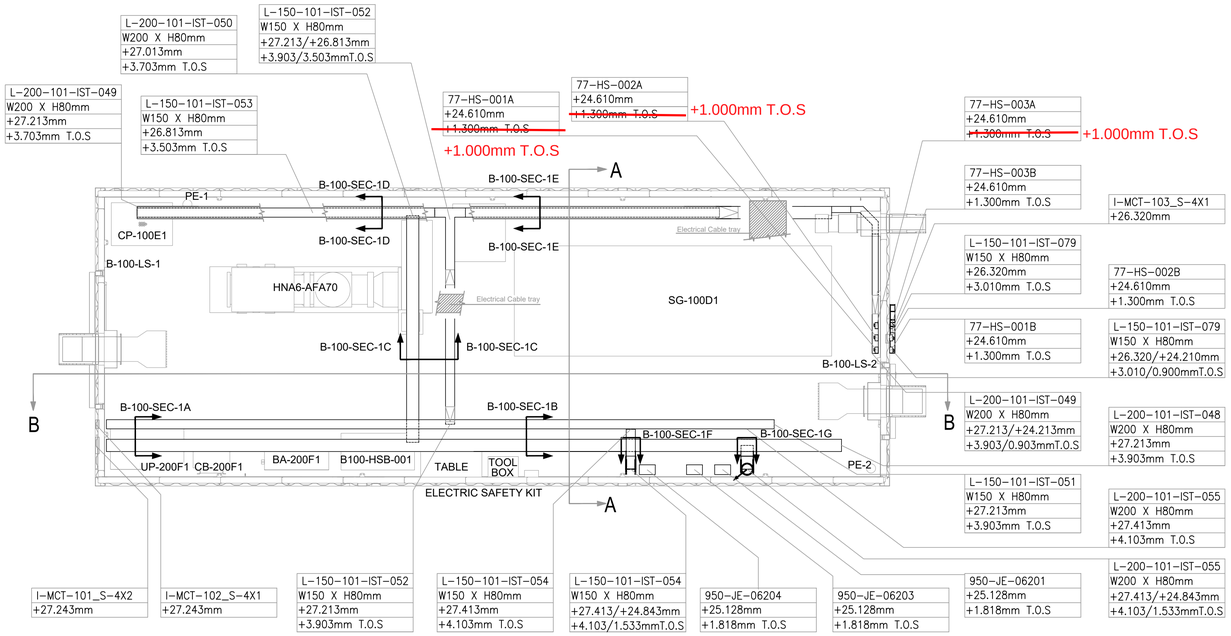
Name

Date

Signature

DRAWING NO. 123A90-DDL-IN-DL-40113

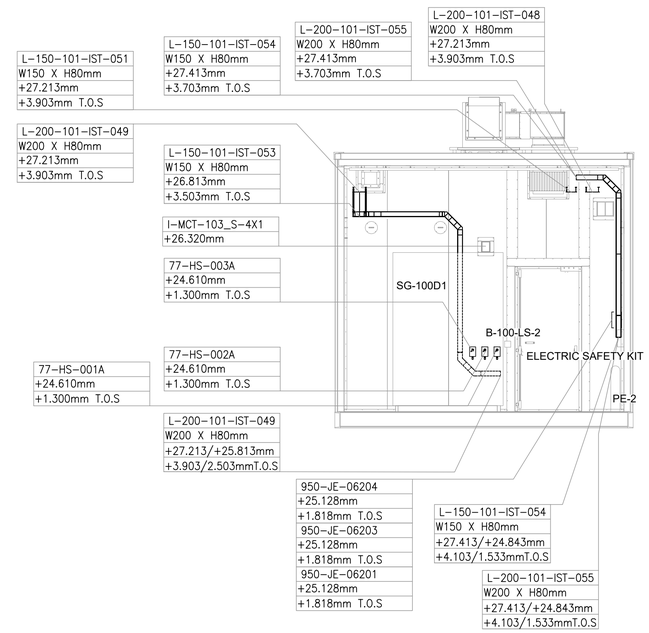
REV. 01



PLAN VIEW

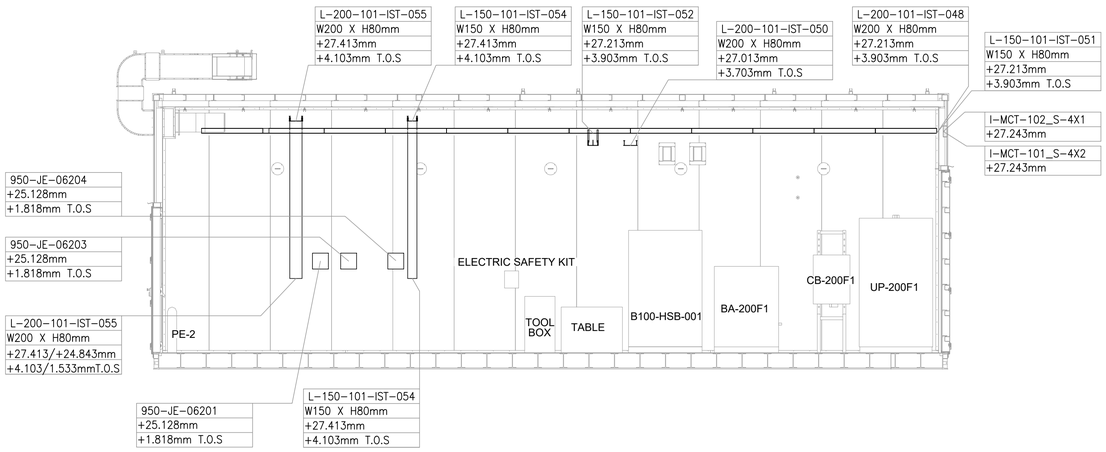
B-100 HV/MV SWITCHROOM

SCALE-1:1



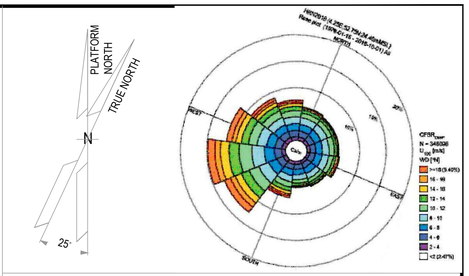
SECTION A-A

SCALE-1:1



SECTION B-B

SCALE-1:1



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR CONTAINER CABLE TRAY LAYOUT.

LEGEND

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DL-40113

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/08/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B-100 Container Lower Deck – TOS EL. 23.310m

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24

A1	DRAWING NO. 123A90-DDL-IN-DL-40113	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40113 REV:01.dwg

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000199

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000357	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-002B/950-JE-06203	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Missing plastic cable tag side 950-JE-06203

Name: Giovanni Tangianu

Date: 2024-10-16

Signature: Digitaly signed by Giovanni Tangianu 2024-10-16T13:00:13.792Z

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	2024-10-16
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-16T15:14:37.570Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-14

Signature: Digitaly signed by Eleonora Carotenuto 2024-12-14T09:51:30.020Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000200

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000354	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-001B/950-JE-06203	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Missing plastic cable tag side 950-JE-06203

Name: Giovanni Tangianu

Date: 2024-10-16

Signature: Digitaly signed by Giovanni Tangianu 2024-10-16T13:00:33.039Z

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	2024-10-16
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-16T15:15:02.073Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-14

Signature: Digitaly signed by Eleonora Carotenuto 2024-12-14T09:51:44.220Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000201

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000360	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-003B/950-JE-06203	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Missing plastic cable tag side 950-JE-06203

Name: Giovanni Tangianu

Date: 2024-10-16

Signature: Digitaly signed by Giovanni Tangianu 2024-10-16T13:00:49.743Z

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	2024-10-16
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-16T15:15:24.015Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-14

Signature: Digitaly signed by Eleonora Carotenuto 2024-12-14T09:51:55.511Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000202

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000356	1.4 Discipline	Instrumental
1.2 Item	C-77-HY-001/77-HS-001A	FIRE DAMPER / MARSHALLING PCS	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Missing plastic cable tag side C-77-HY-003

Name: Giovanni Tangianu

Date: 2024-10-16

Signature: Digitaly signed by Giovanni Tangianu 2024-10-16T13:04:52.250Z

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	2024-10-16
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-16T15:16:00.522Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-14

Signature: Digitaly signed by Eleonora Carotenuto 2024-12-14T09:62:06.276Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000203

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000362	1.4 Discipline	Instrumental
1.2 Item	C-77-HY-003/77-HS-003A	FIRE DAMPER / MARSHALLING PCS	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Missing plastic cable tag side C-77-HY-003

Name: Giovanni Tangianu

Date: 2024-10-16

Signature: Digitaly signed by Giovanni Tangianu 2024-10-16T13:05:30.587Z

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	2024-10-16
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-16T15:17:51.323Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-14

Signature: Digitaly signed by Eleonora Carotenuto 2024-12-14T09:52:22.405Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000204

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000359	CJX10	1.4 Discipline	Instrumental
1.2 Item	C-77-HY-002/77-HS-002A		FIRE DAMPER / MARSHALLING PCS	
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Identification tag wire missing inside C-77-HY-002 connection.

Name: Giovanni Tangianu

Date: 2024-10-16

Signature: Digitaly signed by Giovanni Tangianu 2024-10-16T15:58:06.766Z

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

Name: Giovanni Tangianu

Date: 2024-10-16

Signature: --- Proverlis ---
Duplicata issued from database information
Signature is on original form

4 - PERFORMED ACTION

.

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2024-12-17

Signature: Digitaly signed by Giovanni Tangianu 2024-12-17T14:07:46.993Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000205

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000362	CJX10	1.4 Discipline	Instrumental
1.2 Item	C-77-HY-003/77-HS-003A		FIRE DAMPER / MARSHALLING PCS	
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Identification tag wire missing inside C-77-HY-003 connection.

Name: Giovanni Tangianu

Date: 2024-12-17

Signature: Digitaly signed by Giovanni Tangianu 2024-12-17T14:08:38.440Z

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

Name: Giovanni Tangianu

Date: 2024-10-16

Signature: --- Proverlis ---
Duplicata issued from database information
Signature is on original form

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2024-12-17

Signature: Digitaly signed by Giovanni Tangianu 2024-12-17T14:09:09.330Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000206

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000356	CJX10	1.4 Discipline	Instrumental
1.2 Item	C-77-HY-001/77-HS-001A		FIRE DAMPER / MARSHALLING PCS	
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Identification tag wire missing inside C-77-HY-001 connection.

Name

Date

Signature

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

Name Giovanni Tangianu

Date 2024-10-16

Signature --- Proverlis ---
Duplicata issued from database information
Signature is on original form

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name Alessio Polo

Date 2025-01-30

Signature Digitaly signed by Alessio Polo
2025-01-30T16:29:11.378Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000207

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000360	CJX10	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-003B/950-JE-06203		PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Identification tag wire missing inside 950-JE-06203 connection.

Name

Date

Signature

3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-10-16
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name Giovanni Tangianu

Date 2025-01-07

Signature PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-07T16:25:18.031Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000208

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000357	CJX10	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-002B/950-JE-06203		PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Identification tag wire missing inside 950-JE-06203 connection.

Name

Date

Signature

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

Name: Giovanni Tangianu

Date: 2024-10-16

Signature: --- Proverlis ---
Duplicata issued from database information
Signature is on original form

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-14

Signature: Digitaly signed by Eleonora Carotenuto 2024-12-14T09:52:48.446Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000209

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000354	CJX10	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-001B/950-JE-06203		PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Identification tag wire missing inside 950-JE-06203 connection.

Name

Date

Signature

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

Name Giovanni Tangianu

Date 2024-10-16

Signature --- Proverlis ---
Duplicata issued from database information
Signature is on original form

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name Giovanni Tangianu

Date 2025-01-07

Signature Digitaly signed by Giovanni Tangianu
2025-01-07T16:26:06.139Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000210

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002077	CJX00	1.4 Discipline	Instrumental
1.2 Item	77-HS-001A		Hand Switch for Fire&Gas Damper HFD-77001	
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Missing earthing connection. Point valid for all HS inside B-100.

Name

Date

Signature

3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-10-16
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

Installed

Name Carmelo Bongiovanni

Date 2024-10-18

Signature Digitaly signed by Carmelo Bongiovanni 2024-10-18T15:58:27.191Z

5 - CLEARANCE CHECK

Checked

Name Eleonora Carotenuto

Date 2024-10-18

Signature Digitaly signed by Eleonora Carotenuto 2024-10-18T16:00:08.080Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000211

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000355	CJX10	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-001A/77-HS-001B		PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Plastic cable ties used to fix the cable tag should be replaced on all external routing.

Name

Date

Signature

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

Name: Giovanni Tangianu

Date: 2024-10-16

Signature: --- Proverlis ---
Duplicata issued from database information
Signature is on original form

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-23

Signature: Digitaly signed by Eleonora Carotenuto
2024-12-23T16:50:56.514Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000212

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000358	CJX10	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-002A/77-HS-002B		PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Plastic cable ties used to fix the cable tag should be replaced on all external routing.

Name

Date

Signature

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

Name: Giovanni Tangianu

Date: 2024-10-16

Signature: --- Proverlis ---
Duplicata issued from database information
Signature is on original form

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-14

Signature: Digitaly signed by Eleonora Carotenuto
2024-12-14T09:53:05.026Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000213

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000361	CJX10	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-003A/77-HS-003B		PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Plastic cable ties used to fix the cable tag should be replaced on all external routing.

Name

Date

Signature

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

Name: Giovanni Tangianu

Date: 2024-10-16

Signature: --- Proverlis ---
Duplicata issued from database information
Signature is on original form

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-14

Signature: Digitaly signed by Eleonora Carotenuto 2024-12-14T09:53:16.068Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000214

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000359	CJX10	1.4 Discipline	Instrumental
1.2 Item	C-77-HY-002/77-HS-002A		FIRE DAMPER / MARSHALLING PCS	
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Missing plastic cable tag side C-77-HY-002.

Name

Date

Signature

3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-10-16
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done

Name Eleonora Carotenuto

Date 2024-12-14

Signature PROVERLIS Digitaly signed by Eleonora Carotenuto 2024-12-14T09:53:31.187Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000231

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002296	1.4 Discipline	Electrical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100

2 - OBSERVATION

Lighting system to be completed

Name: Giovanni Tangianu

Date: 2024-10-18

Signature: Digitaly signed by Giovanni Tangianu 2024-10-18T11:16:58.404Z

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	2024-10-18
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2024-10-18T11:17:13.203Z

4 - PERFORMED ACTION

COMPLETED

Name: ALEX SISTEMI

Date: 2024-10-29

Signature: Digitaly signed by ALEX SISTEMI 2024-10-29T13:44:38.353Z

5 - CLEARANCE CHECK

COMPLETED

Name: Stefano Linari

Date: 2024-10-29

Signature: Digitaly signed by Stefano Linari 2024-10-29T13:44:56.709Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000232

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002297	1.4 Discipline	Instrumental
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100

2 - OBSERVATION

77-TP-101 INSTRUMENT IS NOT ACCESIBLE FOR MAINTENANCE.

Name: Giovanni Tangianu

Date: 2024-10-18

Signature: Digitaly signed by Giovanni Tangianu 2024-10-18T11:21:58.282Z

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	2024-10-18
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2024-10-18T11:22:17.864Z

4 - PERFORMED ACTION

POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE

Name: ALEX SISTEMI

Date: 2024-10-29

Signature: Digitaly signed by ALEX SISTEMI 2024-10-29T13:45:28.932Z

5 - CLEARANCE CHECK

POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE

Name: Stefano Linari

Date: 2024-10-29

Signature: Digitaly signed by Stefano Linari 2024-10-29T13:46:42.245Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000233

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000548	1.4 Discipline	Electrical
1.2 Item	83023-CEL	LV Switchgear / HVAC Panels - HV Room	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Cable to be fixed with proper cable ties (point valid for internal and external cable routing).

Name: Giovanni Tangianu

Date: 2024-10-18

Signature: Digitaly signed by Giovanni Tangianu 2024-10-18T11:40:46.069Z

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	2024-10-18
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-18T11:40:59.633Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-01-30

Signature: Digitaly signed by Alessio Polo 2025-01-30T16:29:18.201Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000235

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000835	1.4 Discipline	Electrical
1.2 Item	B100-HSB-001	Distribution & HVAC Panel - HV MV Room	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Identification numbers on the terminal strip are hand written .To be Replaced.

Name: Giovanni Tangianu

Date: 2024-10-18

Signature: Digitaly signed by Giovanni Tangianu 2024-10-18T15:41:03.717Z

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	2024-10-18
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2024-10-18T15:41:14.453Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

REPLACED

Name: Eleonora Carotenuto

Date: 2025-02-25

Signature: Digitaly signed by Eleonora Carotenuto 2025-02-25T16:16:58.492Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000236

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000835	1.4 Discipline	Electrical
1.2 Item	B100-HSB-001	Distribution & HVAC Panel - HV MV Room	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Black Thermoshrink is used on earthing connection inside the panel. To be replaced

Name: Giovanni Tangianu

Date: 2024-10-18

Signature: Digitaly signed by Giovanni Tangianu 2024-10-18T15:42:05.862Z

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	2024-10-18
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2024-10-18T15:42:18.737Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Duplicate point. See PI n°C30000520

Name: Eleonora Carotenuto

Date: 2024-12-03

Signature: Digitaly signed by Eleonora Carotenuto 2024-12-03T15:45:04.596Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000520

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B100-HSB-001		Distribution & HVAC Panel - HV MV Room
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100

2 - OBSERVATION

Heat shrinks for grounding inside HVAC panel installed of black color instead of yellow-green color as earthing cable itself

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal	Heat shrink tubing to be replaced of yellow-green color type as earthing cable.		
3.2 Material required			
3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-10-30
3.5 Action by	VND Vendor	Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

accepted

Name Vendor Crosswind

Date 2025-02-25

Signature Digitaly signed by ALEX SISTEMI 2025-02-25T15:20:12.640Z

5 - CLEARANCE CHECK

Name Stefano Linari

Date 2025-02-25

Signature Digitaly signed by Stefano Linari 2025-02-25T15:20:22.381Z

6- CLEARANCE APPROVAL

Name

Date 2025-02-25

Signature

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000524

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B100-HSB-001		Distribution & HVAC Panel - HV MV Room
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100

2 - OBSERVATION

Add an auxiliary IP address in addition to those already provided for each CPU, to allow communication and signals exchange between HVAC PLCs and PCS system via modbus also in case of shutdown of a single CPU. Currently, if a CPU goes offline, Modbus communication is interrupted as switching to the standby CPU is not possible; the PCS system can communicate with only one IP address per HVAC panel board.

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal	Update software on all PLCs to enable switching to the standby CPU without losing the necessary communications		
3.2 Material required			
3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-10-30
3.5 Action by	VND Vendor	Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

implemented

Name: Vendor Crosswind

Date: 2025-02-22

Signature: Digitaly signed by ALEX SISTEMI 2025-02-22T07:35:54.288Z

5 - CLEARANCE CHECK

Name: Stefano Linari

Date: 2025-02-22

Signature: Digitaly signed by Stefano Linari 2025-02-22T07:36:00.886Z

6- CLEARANCE APPROVAL

Name

Date: 2025-02-22

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000528

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B100-HSB-001		Distribution & HVAC Panel - HV MV Room
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100

2 - OBSERVATION

Install Ethernet port locks on HVAC panels to prevent access by external devices without an authorized permit, as requested by the cybersecurity team.

Name

Date

Signature

3 - DEFECT ASSESSMENT

Add ethernet port locks to allHVAC panel boards

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-10-30
3.5 Action by	VND Vendor	Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

installed

Name Vendor Crosswind

Date 2025-02-22

Signature Digitaly signed by ALEX SISTEMI 2025-02-22T07:36:18.634Z

5 - CLEARANCE CHECK

Name Stefano Linari

Date 2025-02-22

Signature Digitaly signed by Stefano Linari 2025-02-22T07:36:27.112Z

6- CLEARANCE APPROVAL

Name

Date 2025-02-22

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000532

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B100-HSB-001		Distribution & HVAC Panel - HV MV Room
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100

2 - OBSERVATION

The modbus I/O list have been updated during SAT, due to changes needed. During SAT activities several signals have not been checked.

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal	Revise and issue on fusion live the HVAC I/O list documents for each HVAC panel. Before commissioning activities, all signals shall be tested one by one at Rosetti yard.		
3.2 Material required			
3.3 Priority	A PL A	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-10-30
3.5 Action by	VND Vendor	Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

Spot check with Yokogawa and the communication work

Name Vendor Crosswind

Date 2025-02-22

Signature Digitaly signed by ALEX SISTEMI 2025-02-22T07:37:57.266Z

5 - CLEARANCE CHECK

Name Stefano Linari

Date 2025-02-22

Signature Digitaly signed by Stefano Linari 2025-02-22T07:38:03.145Z

6- CLEARANCE APPROVAL

Name

Date 2025-02-22

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000536

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B100-HSB-001		Distribution & HVAC Panel - HV MV Room
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100

2 - OBSERVATION

Verify for each HVAC panel a perfect correspondence between tag reported on P&IDs and HMIs. During SAT some TAGs were bot matching.

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal	Update and issue final P&IDs on fusion live and update PLC software to hace a perfect match between P&IDs and HMIs.		
3.2 Material required			
3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-10-30
3.5 Action by	VND Vendor	Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

Implemented

Name Vendor Crosswind

Date 2025-02-25

Signature PROVERLIS Digitaly signed by ALEX SISTEMI 2025-02-25T10:04:43.643Z

5 - CLEARANCE CHECK

Name Stefano Linari

Date 2025-02-25

Signature PROVERLIS Digitaly signed by Stefano Linari 2025-02-25T10:04:54.977Z

6- CLEARANCE APPROVAL

Name

Date 2025-02-25

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000540

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100

2 - OBSERVATION

During SAT drainage pipes were not completely installed, incluede heat tracing and related connection to JB.

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal	The work described has to be concluded. During commissioning heat tracing will be tested		
3.2 Material required			
3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-10-30
3.5 Action by	VND Vendor	Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

Verified

Name Vendor Crosswind

Date 2025-02-20

Signature Digitaly signed by ALEX SISTEMI 2025-02-20T15:45:36.674Z

5 - CLEARANCE CHECK

Name Stefano Linari

Date 2025-02-20

Signature Digitaly signed by Stefano Linari 2025-02-20T15:45:44.466Z

6- CLEARANCE APPROVAL

Name

Date 2025-02-20

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000548

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B100-HSB-001		Distribution & HVAC Panel - HV MV Room
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100

2 - OBSERVATION

Make temperature and differental pressure trends visible on all HMIs

Name

Date

Signature

3 - DEFECT ASSESSMENT

Update PLC software to apply the request

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-10-30
3.5 Action by	VND Vendor	Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

Implemented by Vendor

Name Vendor Crosswind

Date 2025-02-20

Signature Digitaly signed by ALEX SISTEMI 2025-02-20T15:48:26.107Z

5 - CLEARANCE CHECK

Name Stefano Linari

Date 2025-02-20

Signature Digitaly signed by Stefano Linari 2025-02-20T15:48:33.183Z

6- CLEARANCE APPROVAL

Name

Date 2025-02-20

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000611

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002035	1.4 Discipline	Instrumental
1.2 Item	B100-HSB-001/B400-FGS-003	B-100 HVAC Control Panel / MARSHALLING PCS	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

The plastic fixing ties , on external routing cable , to be replaced with stainless steel.

Name: Alessio Polo

Date: 2024-11-19

Signature: Digitaly signed by Alessio Polo 2024-11-19T15:20:09.277Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-19
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Alessio Polo 2024-11-19T15:20:26.860Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu

Date: 2025-02-26

Signature: Digitaly signed by Paolo Schintu 2025-02-26T12:55:42.848Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000612

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002035	1.4 Discipline	Instrumental
1.2 Item	B100-HSB-001/B400-FGS-003	B-100 HVAC Control Panel / MARSHALLING PCS	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Missing the cable Plastic tag of project, cabinet side B400-FGS-002

Name: Alessio Polo

Date: 2024-11-19

Signature: Digitaly signed by Alessio Polo 2024-11-19T15:30:57.042Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-19
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Alessio Polo 2024-11-19T15:31:12.882Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-02-04

Signature: Digitaly signed by Alessio Polo 2025-02-04T12:33:49.390Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000613

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002035	1.4 Discipline	Instrumental
1.2 Item	B100-HSB-001/B400-FGS-003	B-100 HVAC Control Panel / MARSHALLING PCS	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

the philosophy of cross-ferruling are wrong, cabinet side B400-FGS-002. (see document 123A90-DDL-IN-DG-40016 sh.3)

Name: Alessio Polo

Date: 2024-11-19

Signature: Digitaly signed by Alessio Polo 2024-11-19T15:43:00.193Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-19
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Alessio Polo 2024-11-19T15:44:11.011Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic

Date: 2025-02-21

Signature: Digitaly signed by Josip Krizanic 2025-02-21T08:34:05.153Z

6- CLEARANCE APPROVAL

Name

Date

Signature


2
4
TB-B100-HSB-001
PR1/TB-B100-HSB-001/77-ZSL-001/2
PR2/TB-B100-HSB-001/77-ZSL-002/4
PR3/TB-B100-HSB-001/77-ZSL-003/6
2
4
6
8
10
PR1/TB-B200-HSB-001/77-ZSL-004/2
2

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000614

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002035	1.4 Discipline	Instrumental
1.2 Item	B100-HSB-001/B400-FGS-003	B-100 HVAC Control Panel / MARSHALLING PCS	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Missing the cross-ferruling (Cores + Shields) . Pannel side B100-HSB-001 . (see document 123A90-DDL-IN-DG-40016 sh.3)

Name: Alessio Polo

Date: 2024-11-19

Signature: Digitaly signed by Alessio Polo 2024-11-19T15:51:44.626Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-19
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Alessio Polo 2024-11-19T15:52:19.467Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2024-12-17

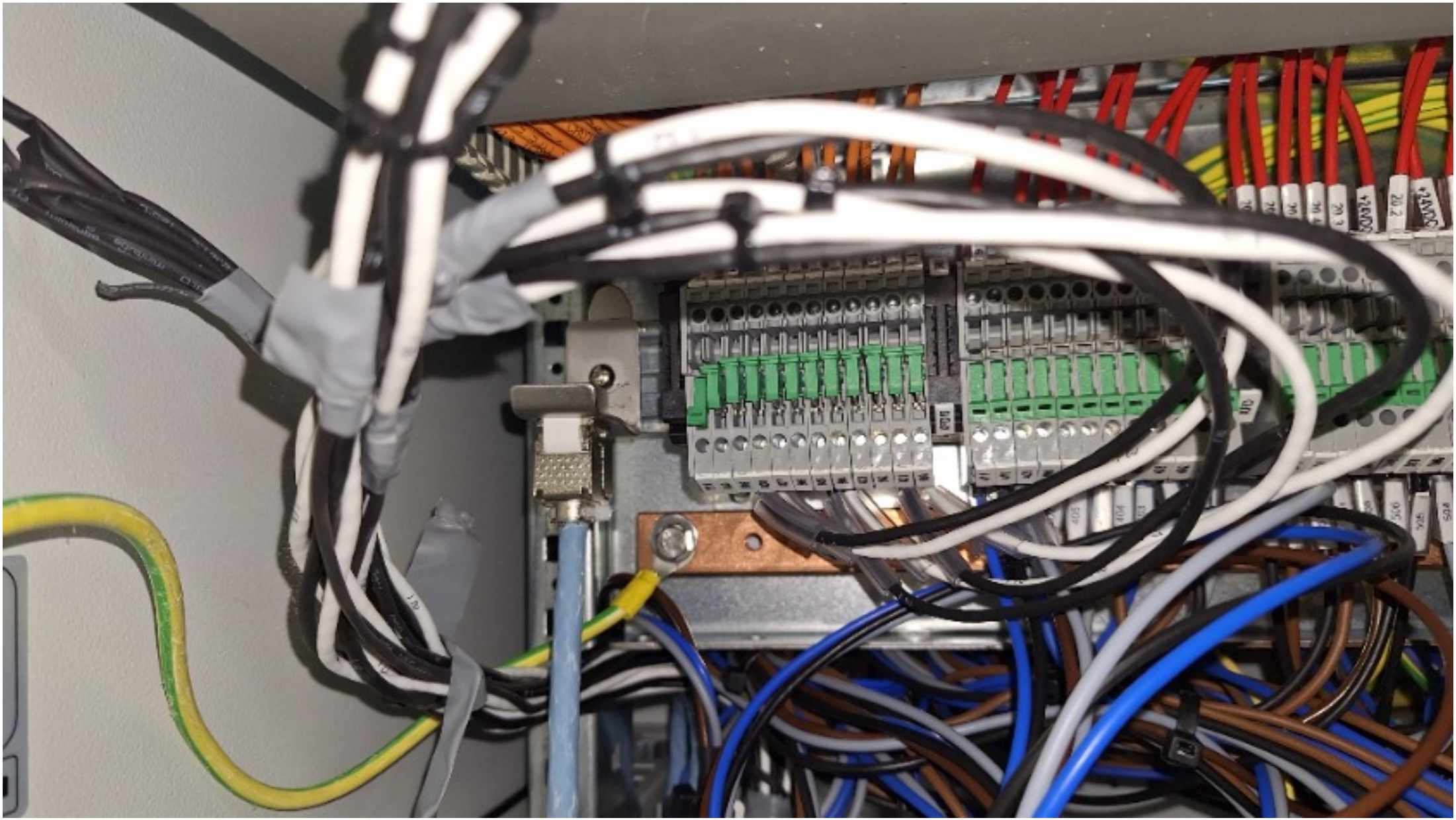
Signature: Digitaly signed by Giovanni Tangianu 2024-12-17T14:11:22.316Z

6- CLEARANCE APPROVAL

Name

Date

Signature



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000615

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002035	1.4 Discipline	Instrumental
1.2 Item	B100-HSB-001/B400-FGS-003	B-100 HVAC Control Panel / MARSHALLING PCS	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

The final destination of Thermo-shrink on the Shield to be done properly.

Name: Alessio Polo

Date: 2024-11-19

Signature: Digitaly signed by Alessio Polo 2024-11-19T16:12:29.680Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-19
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Alessio Polo 2024-11-19T16:12:47.672Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done.

Name: Giovanni Tangianu

Date: 2025-01-03

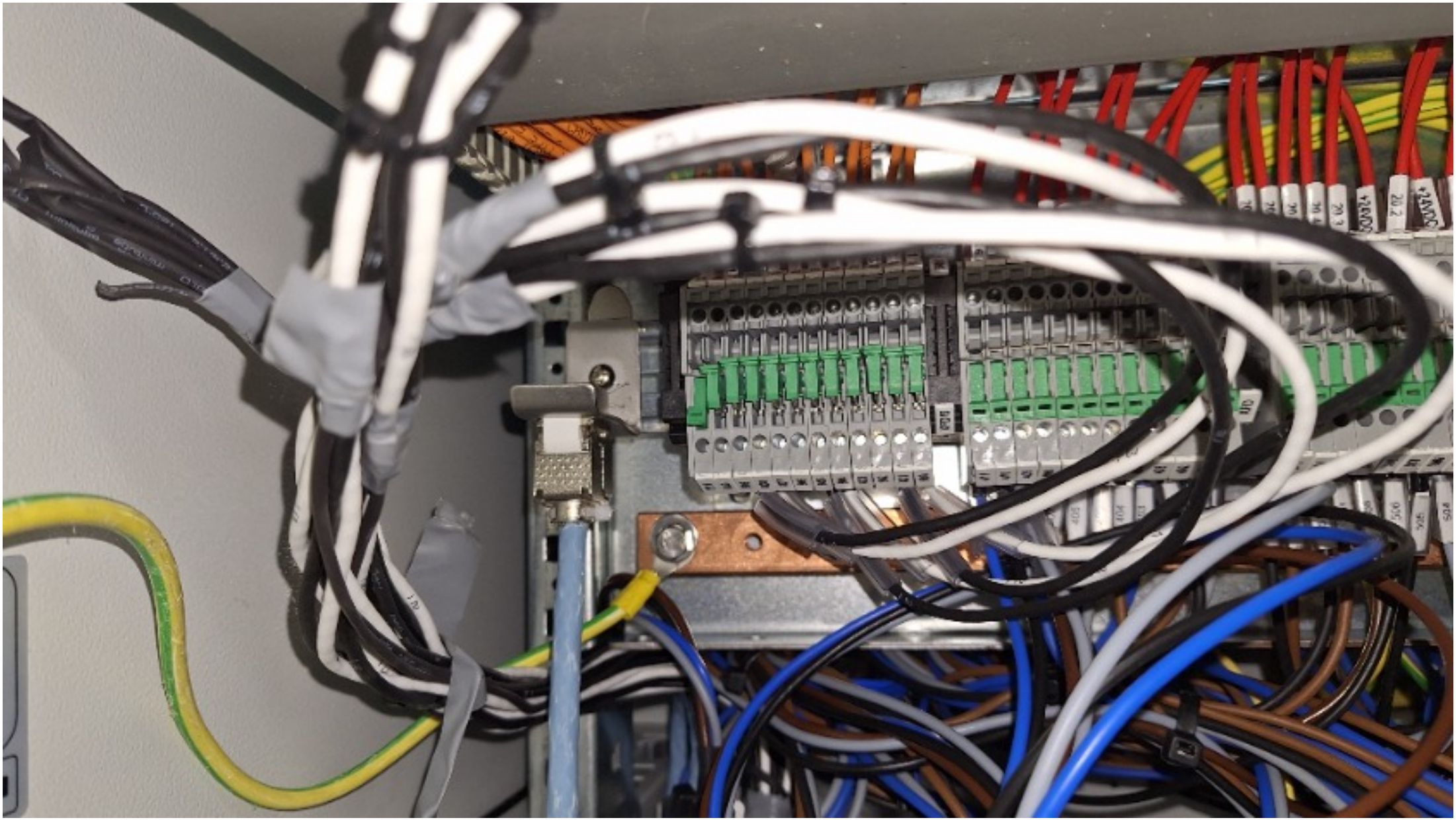
Signature: Digitaly signed by Giovanni Tangianu 2025-01-03T15:05:58.249Z

6- CLEARANCE APPROVAL

Name

Date

Signature



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000786

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004353	1.4 Discipline	Telecom
1.2 Item	B100-HSB-001/B400-NET-001	COMMUNICATION / NETWORK CABINET	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Identification tag wires missing both side the B100-HSB-001/B400-NET-001 connections.

Name: Giovanni Tangianu

Date: 2024-11-22

Signature: Digitaly signed by Giovanni Tangianu 2024-11-22T16:10:22.981Z

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 2024-11-22T16:10:33.973Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-04

Signature: Digitaly signed by Giovanni Tangianu 2025-02-04T12:56:59.256Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000883

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000180	1.4 Discipline	Instrumental
1.2 Item	C-77-XS-001/B400-SIS-001	TRIP SIGNAL TO UCP / MARSHALLING PCS	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Missing cable tag , cabinet side B400-SIS-001

Name: Alessio Polo

Date: 2024-11-25

Signature: Digitaly signed by Alessio Polo 2024-11-25T16:36:38.566Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Alessio Polo 2024-11-25T16:36:50.234Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-01-03

Signature: Digitaly signed by Giovanni Tangianu 2025-01-03T15:11:59.840Z

6- CLEARANCE APPROVAL

Name

Date

Signature



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000885

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000180	1.4 Discipline	Instrumental
1.2 Item	C-77-XS-001/B400-SIS-001	TRIP SIGNAL TO UCP / MARSHALLING PCS	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Double shield connected to one terminal on shield bar. this point is valid also for cabinet side B400-SIS-001

Name: Alessio Polo

Date: 2024-11-25

Signature: Digitaly signed by Alessio Polo 2024-11-25T16:41:55.538Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Alessio Polo 2024-11-25T16:42:25.684Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-28

Signature: Digitaly signed by Andrea Andreani 2025-02-28T12:22:52.244Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000892

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000184	1.4 Discipline	Instrumental
1.2 Item	C-77-XA-001/B400-SIS-001	UCP FAULT ALARM / MARSHALLING PCS	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Missing cable tag , cabinet input B400-SIS-001.

Name: Alessio Polo

Date: 2024-11-25

Signature: Digitaly signed by Alessio Polo 2024-11-25T17:13:05.106Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Alessio Polo 2024-11-25T17:13:23.134Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done.

Name: Giovanni Tangianu

Date: 2025-01-03

Signature: Digitaly signed by Giovanni Tangianu 2025-01-03T15:12:26.208Z

6- CLEARANCE APPROVAL

Name

Date

Signature



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000894

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000184	1.4 Discipline	Instrumental
1.2 Item	C-77-XA-001/B400-SIS-001	UCP FAULT ALARM / MARSHALLING PCS	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

Double shield connected to one terminal on shield bar. this point is valid also for cabinet side B400-SIS-001

Name: Alessio Polo

Date: 2024-11-25

Signature: Digitaly signed by Alessio Polo 2024-11-25T17:16:28.318Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Alessio Polo 2024-11-25T17:16:39.928Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-28

Signature: Digitaly signed by Andrea Andreani 2025-02-28T12:23:16.381Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000895

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000184	1.4 Discipline	Instrumental
1.2 Item	C-77-XA-001/B400-SIS-001	UCP FAULT ALARM / MARSHALLING PCS	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

cable is not as specified in project cable schedule. (is a different gray color than what is shown in the project documentation).

Name: Alessio Polo

Date: 2024-11-25

Signature: Digitaly signed by Alessio Polo 2024-11-25T17:25:31.711Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Alessio Polo 2024-11-25T17:25:51.266Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

The cable has been replaced and tested for insulation and continuity check with positive result

Name: Giovanni Tangianu

Date: 2024-12-05

Signature: Digitaly signed by Giovanni Tangianu 2024-12-05T14:28:19.145Z

6- CLEARANCE APPROVAL

Name

Date

Signature


C-77-XA-
77210-CEL-L1
77206-CEL-L1
77201-CEL-L1

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000914

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000590	1.4 Discipline	Electrical
1.2 Item	84314-CEL	AC UPS - PAS DB / UCP - HVAC HV Room	
1.3 Subsystem	77-10	HVAC HV/MV Switchgear Room B-100	

2 - OBSERVATION

the philosophy of cross-ferruling are wrong cabinet side B100-HSB-001 / DP-200F3 . (see document 123A90-DDL-IN-DG-40016 sh.3)

Name: Alessio Polo

Date: 2024-11-25

Signature: Digitaly signed by Alessio Polo 2024-11-25T17:51:38.922Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Alessio Polo 2024-11-25T17:51:52.124Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-15

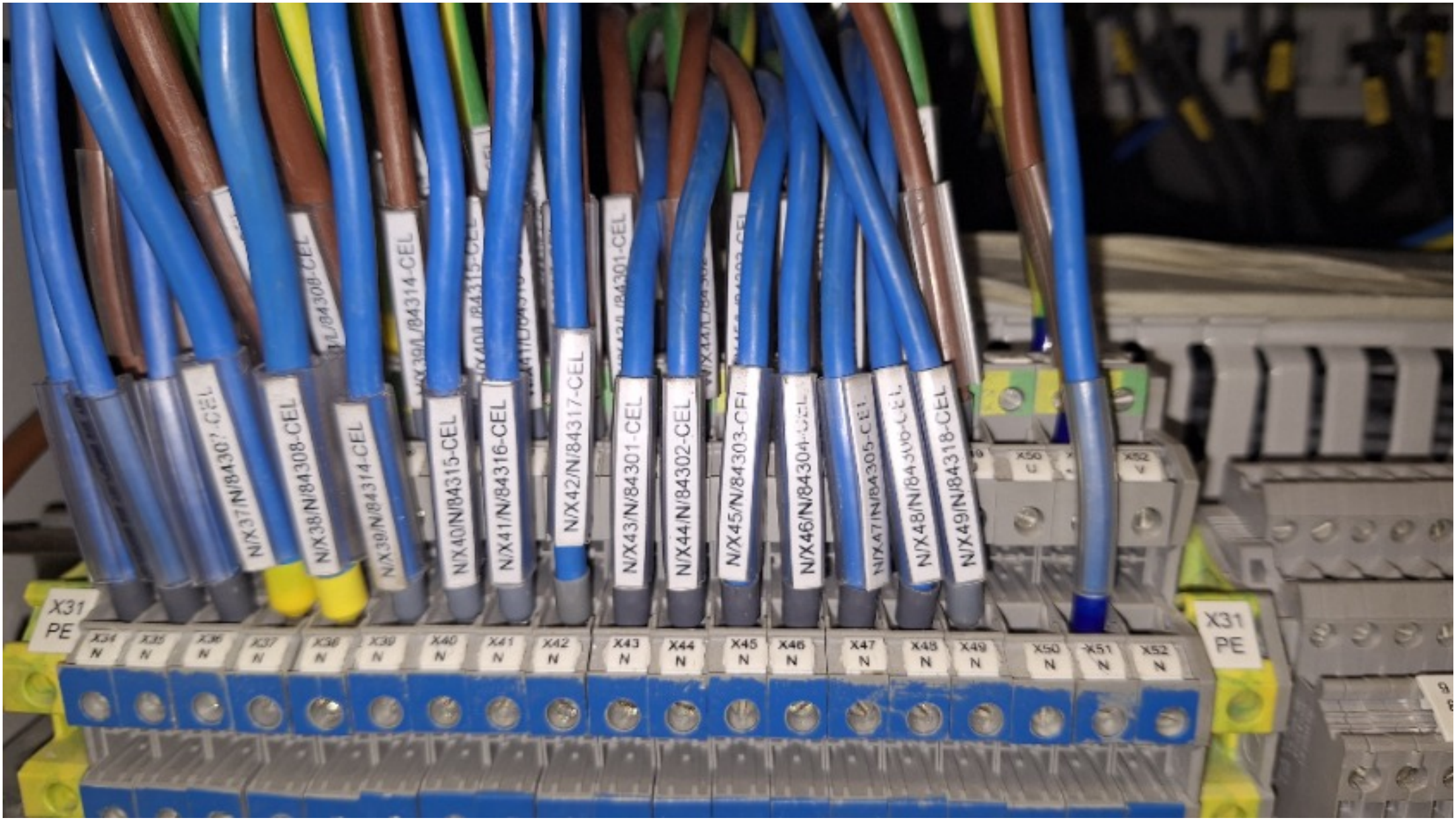
Signature: Digitaly signed by Andrea Andreani 2025-02-15T17:20:29.391Z

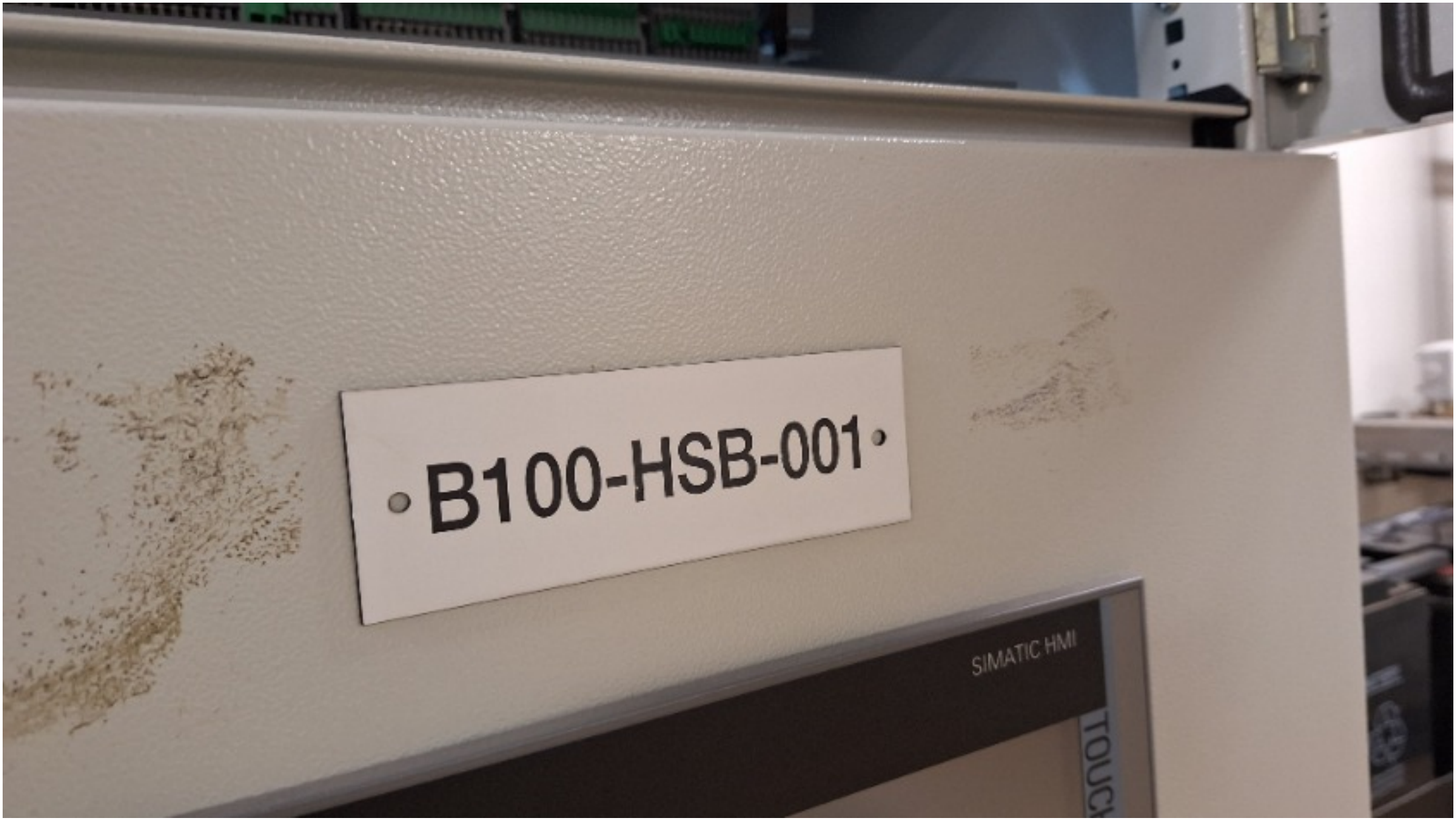
6- CLEARANCE APPROVAL

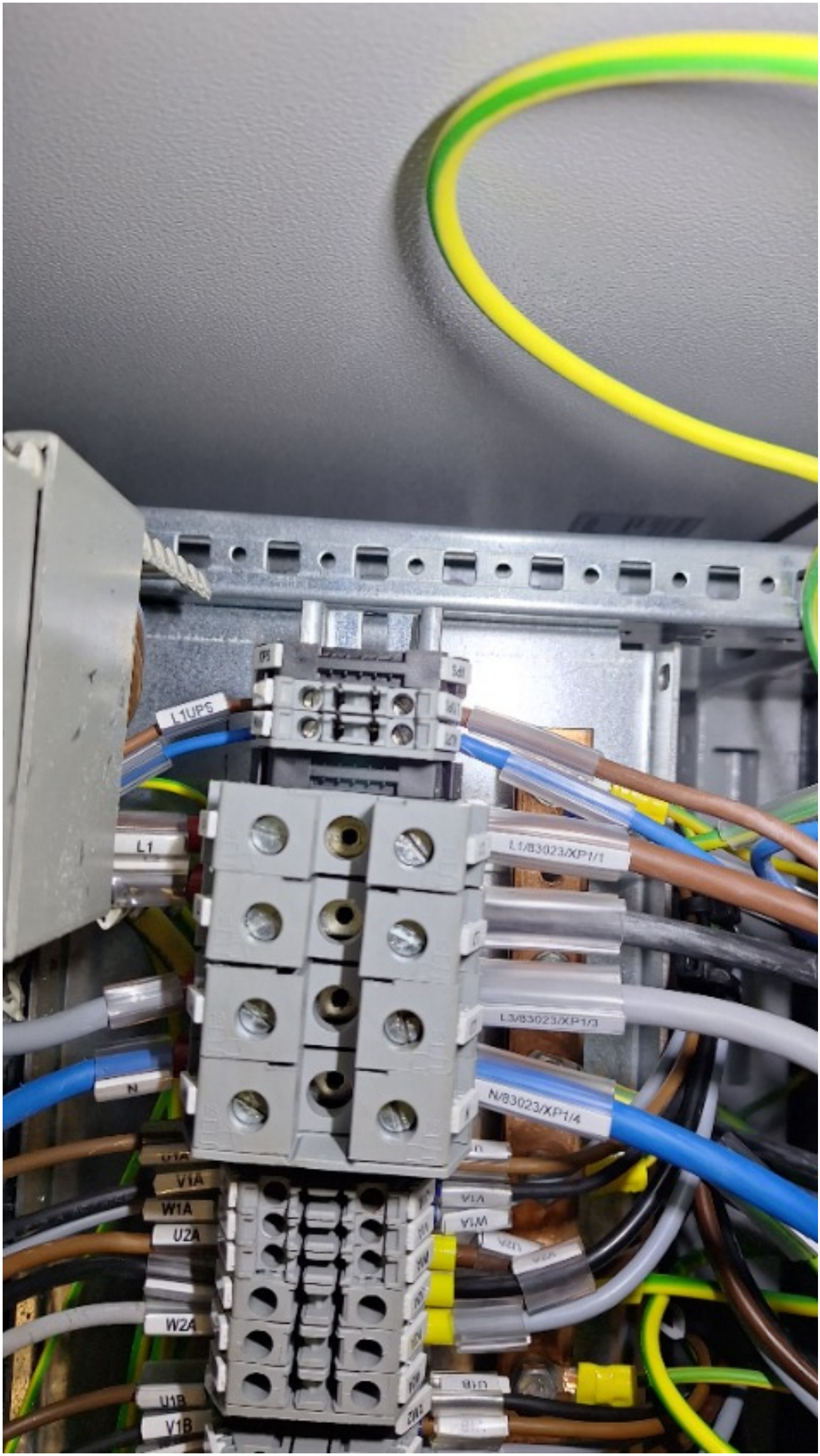
Name

Date

Signature


X31
PE
X34 N
X35 N
X36 N
X37 N
X38 N
X39 N
X40 N
X41 N
X42 N
X43 N
X44 N
X45 N
X46 N
X47 N
X48 N
X49 N
X50 N
X51 N
X52 N
N/X37/N/84307-CEL
N/X38/N/84308-CEL
N/X39/N/84314-CEL
N/X40/N/84315-CEL
N/X41/N/84316-CEL
N/X42/N/84317-CEL
N/X43/N/84301-CEL
N/X44/N/84302-CEL
N/X45/N/84303-CEL
N/X46/N/84304-CEL
N/X47/N/84305-CEL
N/X48/N/84306-CEL
N/X49/N/84318-CEL
X31
PE


B100-HSB-001
SIMATIC HMI


L1UPS
L1
N
V1A
W1A
U2A
W2A
V1B
L1/B3023/XP1/1
L3/B3023/XP1/3
N/B3023/XP1/4

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001424

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002296	1.4 Discipline	Electrical
1.2 Item	B-100		Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100
1.3 Subsystem	77-10		HVAC HV/MV Switchgear Room B-100

2 - OBSERVATION

(Open during WD) The ground wires connecting the BTM inside the B100 must be arranged, and all bolts used in the BTM is not typical. . See attached photo.

Name: Giovanni Tangianu

Date: 2024-12-06

Signature: Digitaly signed by Giovanni Tangianu 2024-12-06T11:01:51.552Z

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	2024-12-06
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-12-06T11:02:06.982Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done. all bolt Have been change.

Name: Giovanni Tangianu

Date: 2025-02-04

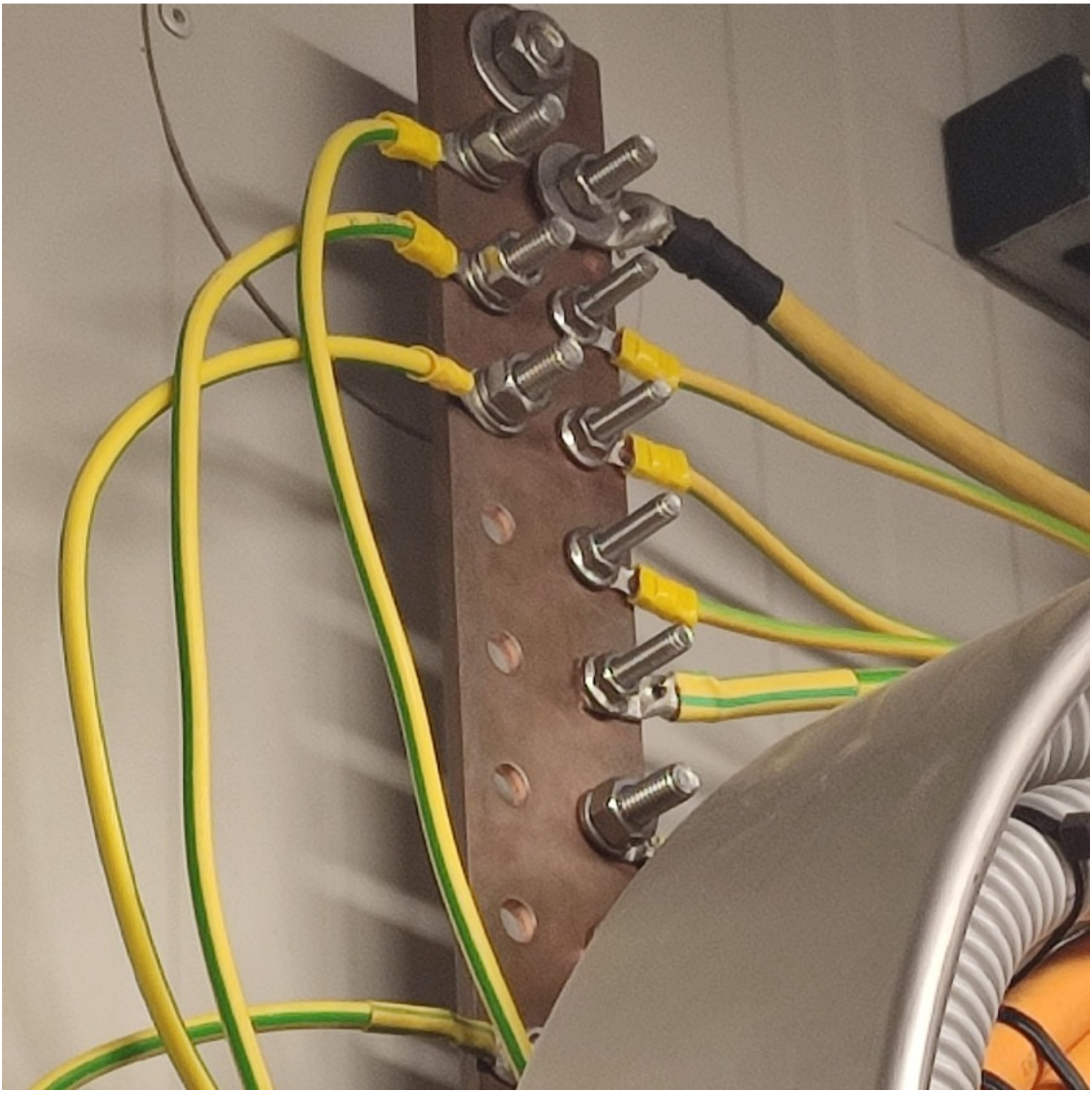
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6- CLEARANCE APPROVAL

Name

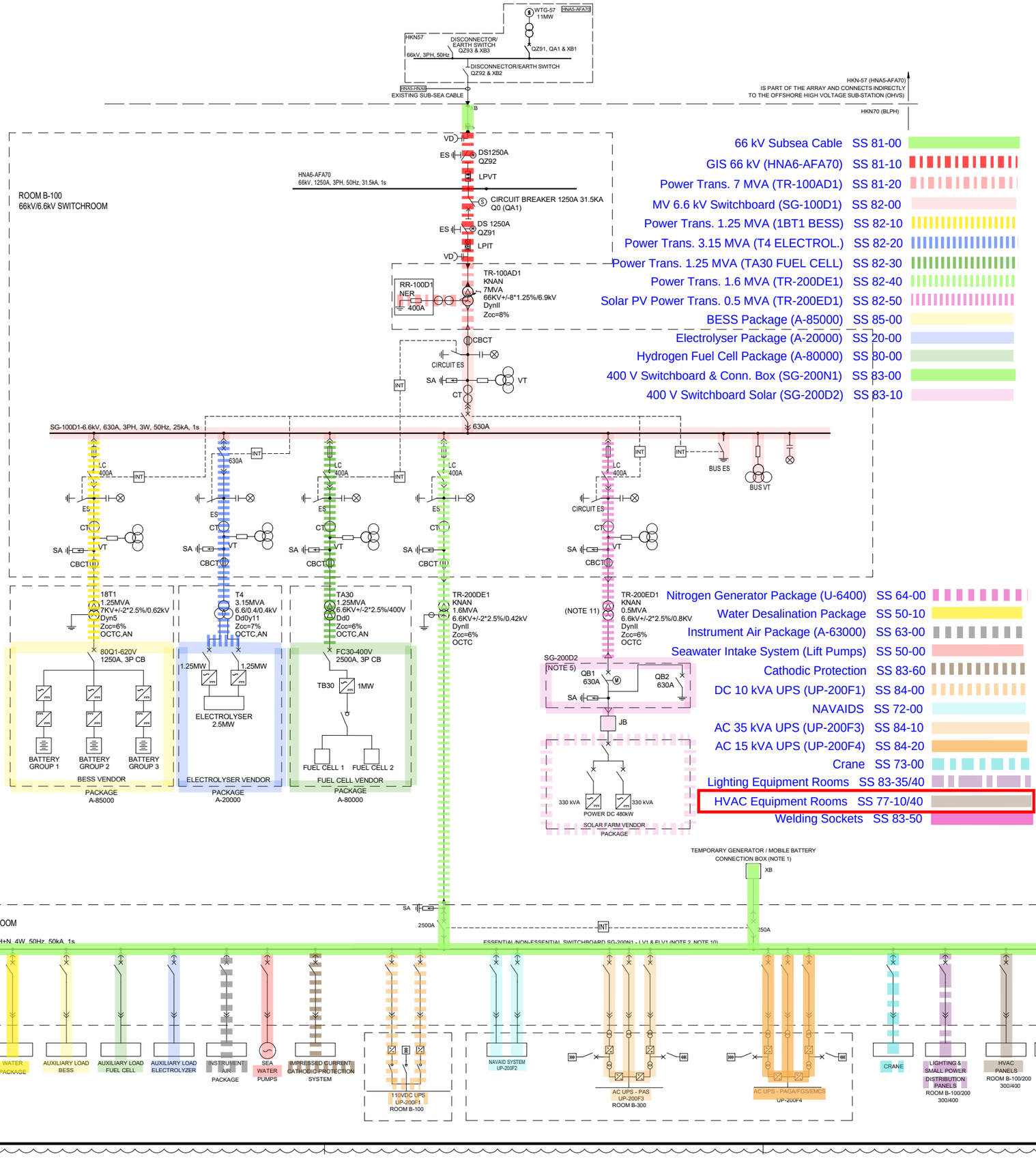
Date

Signature



Section 3 SYSTEM,SUB-SYSTEM LIMIT DRAWINGS

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



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

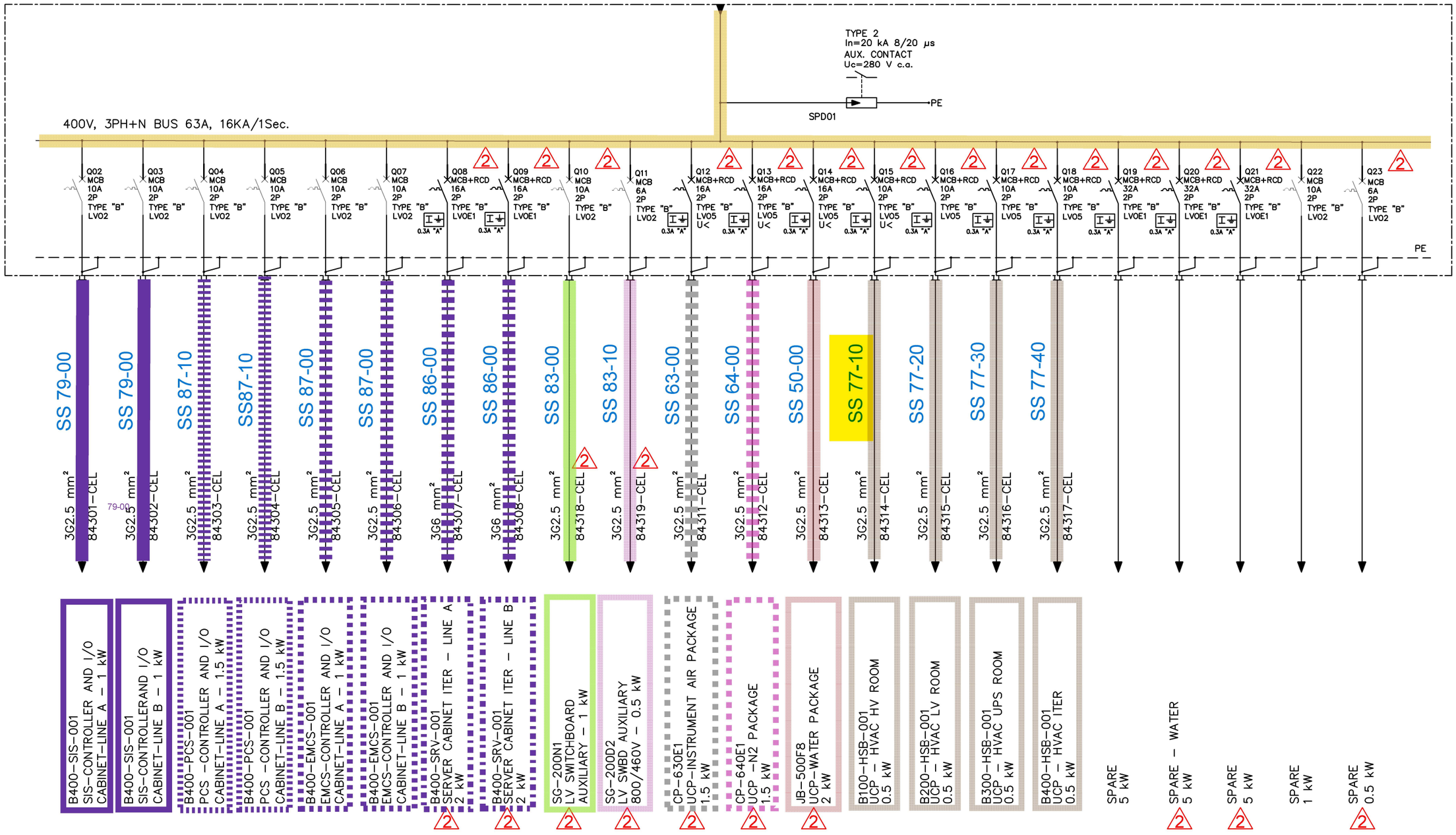
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE N/A
DRAWN GPA	CHECKED LMA/AMA	APPROVED LMA/MDO	DATE 26/03/2023
A1	DRAWING NO. 123A90-DDL-EL-DG-20158	SHEET 001	REV. 01

01

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

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

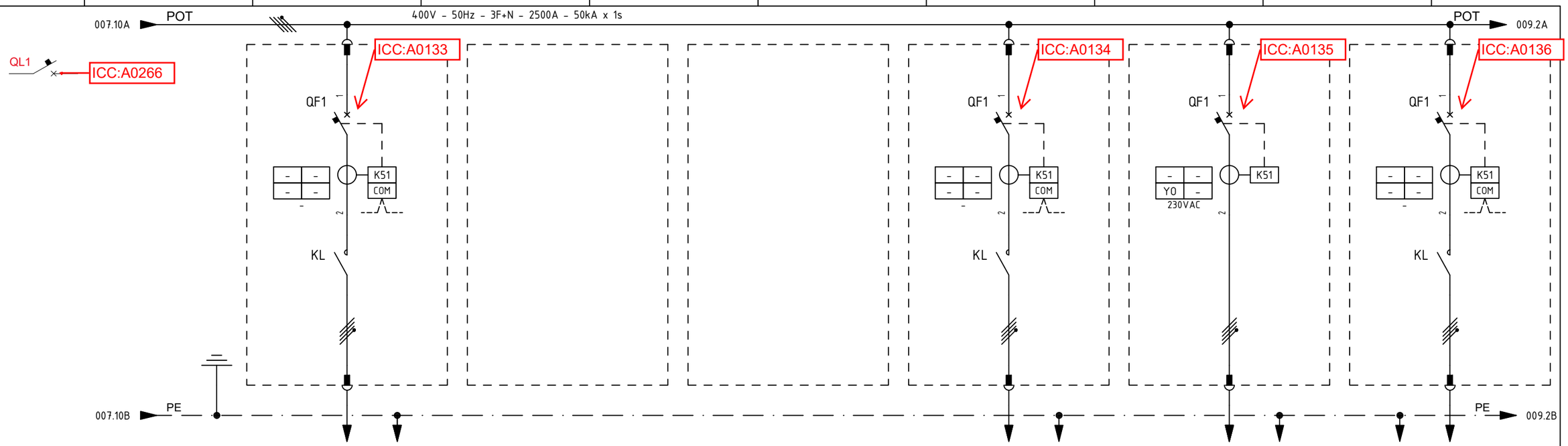
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL SINGLE LINE DIAGRAMS AC UPS SYSTEMS
AC UPS – PAS DISTRIBUTION BOARD SLD (UP–200F3)

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



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	

=
+

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

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: 77-10 & process: MC & discipline : E

Electrical	77-10 HVAC HV/MV Switchgear Room B-100						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
83023-CEL	LV Switchgear / HVAC Panels - HV Room	ONSHORE	C10000548	CPX09	100	2024-10-18	RFC 2
84314-CEL	AC UPS - PAS DB / UCP - HVAC HV Room	ONSHORE	C10000590	CPX09	100	2024-11-25	RFC 2
B-100	Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100	ONSHORE	C10002296	CZX01E	100	2024-10-18	RFC 2
B100-HSB-001	Distribution & HVAC Panel - HV MV Room	ONSHORE	C10000835	CPX15	100	2024-10-18	RFC 2

ITEM	Tag	83023-CEL	: LV Switchgear / HVAC Panels - HV Room		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100		Module	LD_B-200/LD_B-100	
TASK	code	C10000548	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: 5G16 mm2 | Color: Grey

From: SG-200N1 | To: B100-HSB-001

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	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	83023-CEL	: LV Switchgear / HVAC Panels - HV Room			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100			Module	
TASK	code	C10000548		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

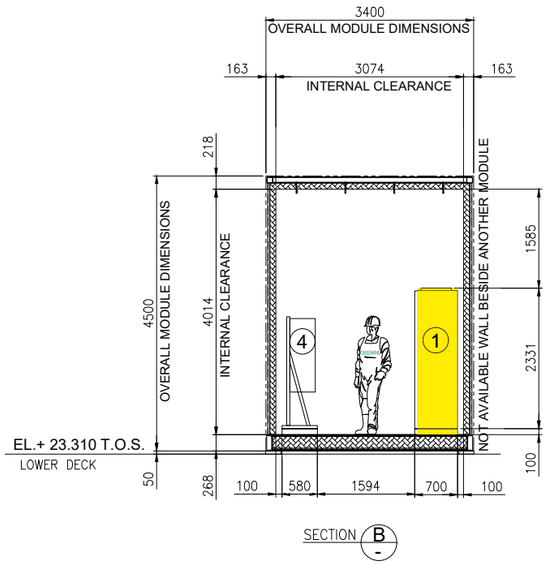
CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0.4	
6		PH 2	0.4	
7		PH 3	0.3	
8	ARMOUR CONTINUITY Ω		N/A	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0.4	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

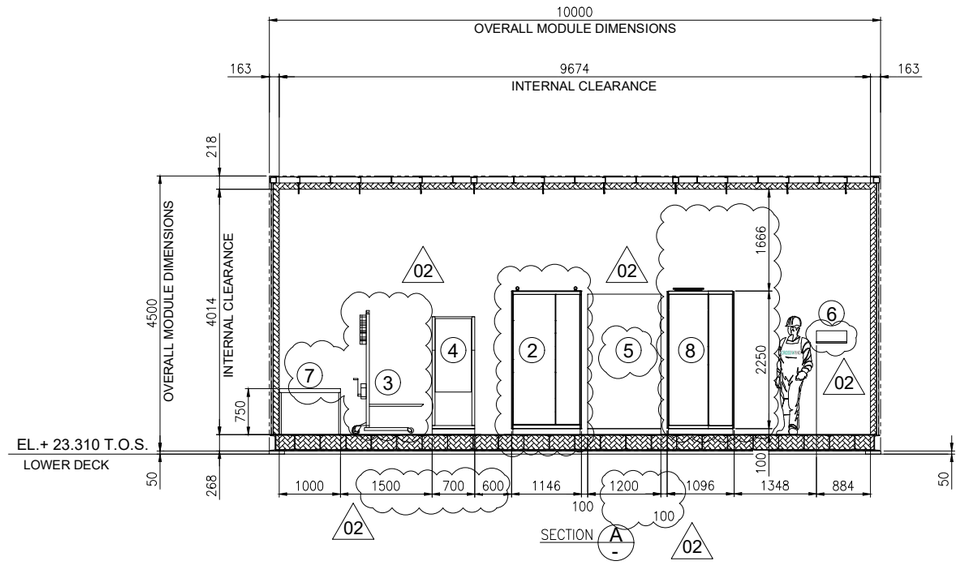
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

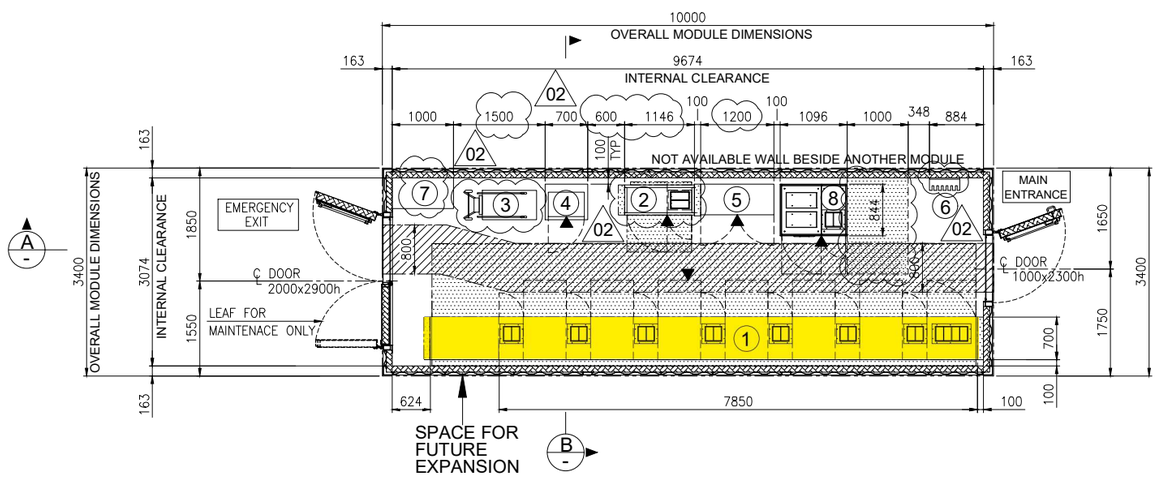
Comments:
CORE CONTINUITY PH 4= 0.3
CORES / ARMOUR+EARTH INS. PH 4 = >999 M

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-17	2024-10-18	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-17T16:32:59.669Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-18T11:41:17.225Z	

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





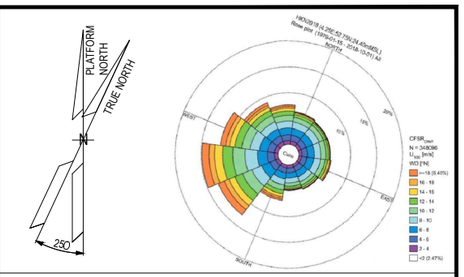


EQUIPMENT LAYOUT
"B-200" LV (400V) SWITCHGEAR ROOM
BOTTOM PLAN

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

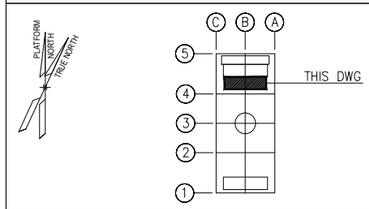
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR - WIDTH 800mm.
_____ MAINTENANCE AREA - VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

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	OYFO/MDO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

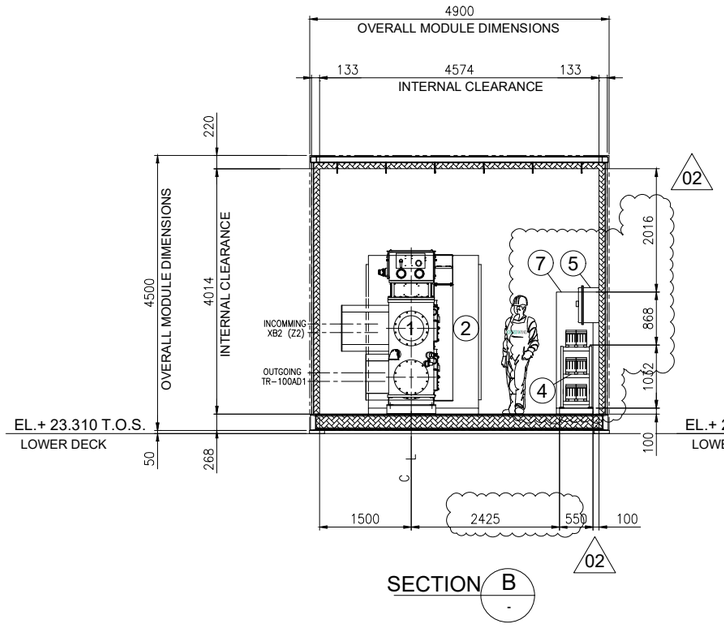
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LV SWITCHROOM

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

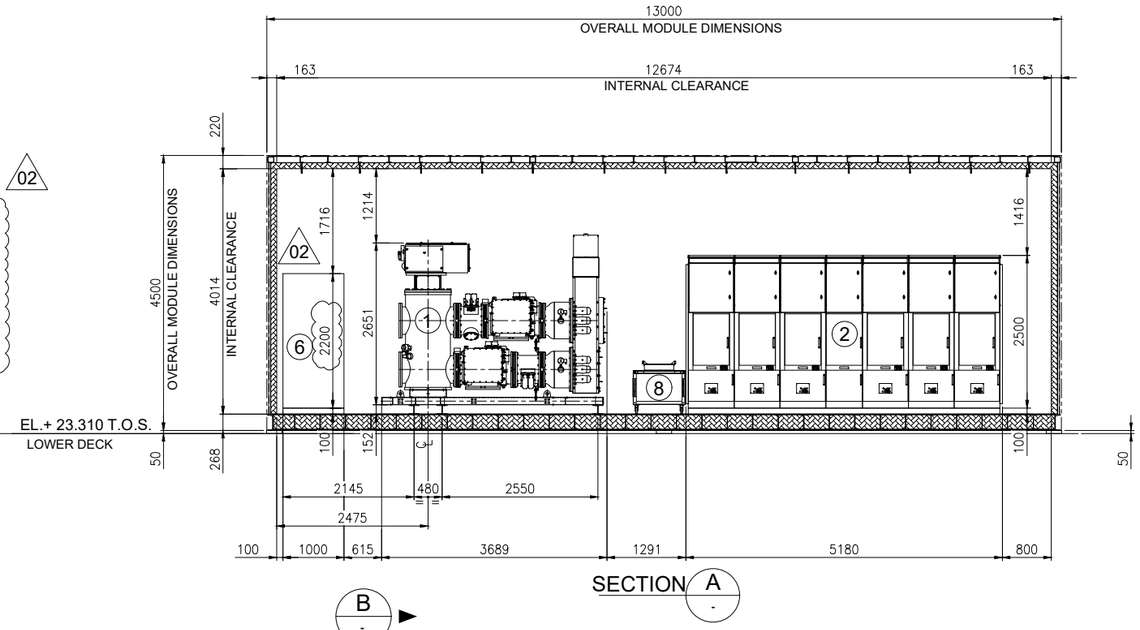
VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20105
REV.: 2_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

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

DRAWING NO. 123A90-DDL-EL-DL-20104 | REV. 02

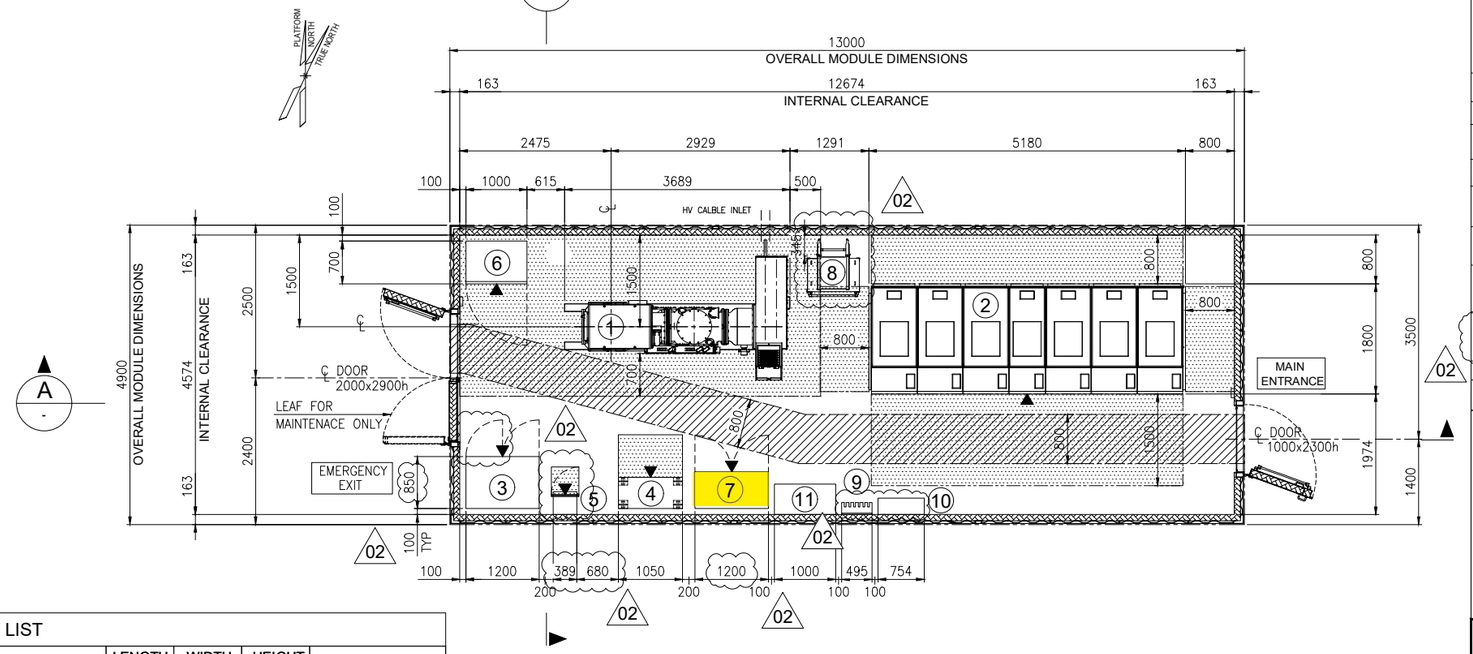


SECTION B -



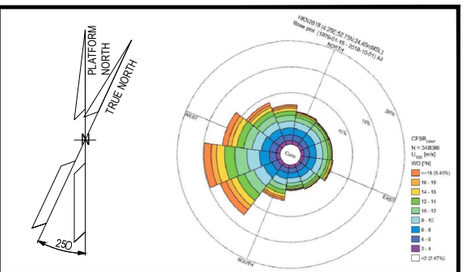
SECTION A -

B -



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	
3	UP-200F1	DC UPS PANEL	1200	850	2105	
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	
5	CB-200F1 (02)	ISOLATOR FOR DC UPS	452	377	634	
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2200	02
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV MV ROOM	1200	600	1900	
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	
9	-	TOOL BOX	495	200	200	
10	-	SUBSTATION LIFE SAVING & INTERVENTION KIT	754	270	840	
11	-	TABLE	1000	500	750	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DELETED
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT.
4. FOR OTHER ITEMS, CORRECT LOCATION AND INFROMATION, 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

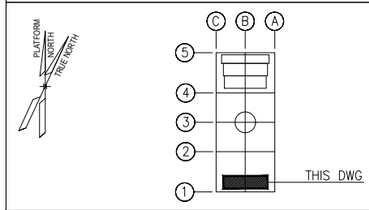
LEGEND

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

REFERENCES

DOCUMENT TITLE	DOCUMENT NUMBER
66kV SWITCHGEAR (GIS) GENERAL ARRANGEMENT DRAWING	1723001595-EL-DA-00006
CIRCUIT AND WIRING DIAGRAM	1723001595-EL-DG-00015
SG-100D1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00006
DC UPS – GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS	1724000372-EL-DA-00003
DC UPS – BATTERY LAYOUT AND INTERCONNECTING DIAGRAM	1724000372-EL-DG-00010
B-100 - GENERAL ARRANGEMENT DRAWINGS - E&I SHELTER	1724000049-AR-DA-00014

KEY PLAN



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20104**

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	10/11/2023	DSF	CB/AMA	DYFO/MDO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

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

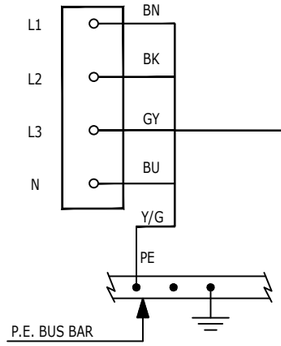
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN GPA	CHECKED LMA/AMA	APPROVED LMA/MDO	DATE 27/05/2024
A1	DRAWING NO. 123A90-DDL-EL-DL-20104	SHEET 001	REV. 02

File Name : 123A90-DDL-EL-DL-20104_REV02.dwg

FROM

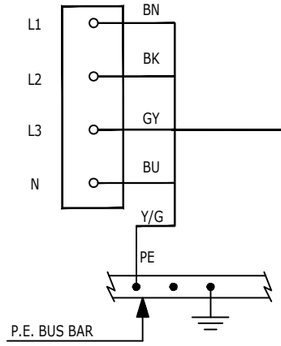
DESCRIPTION: LV Switchgear
TAG NUMBER: SG-200N1

COLUMN/CUBIC.: A6/+08



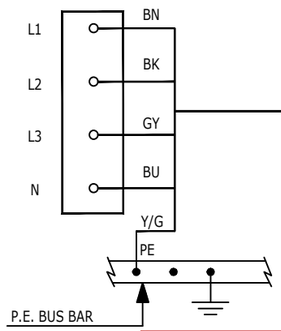
83021-CEL-01
5G50 mm²

COLUMN/CUBIC.: A7/+08



83022-CEL-01
5G50 mm²

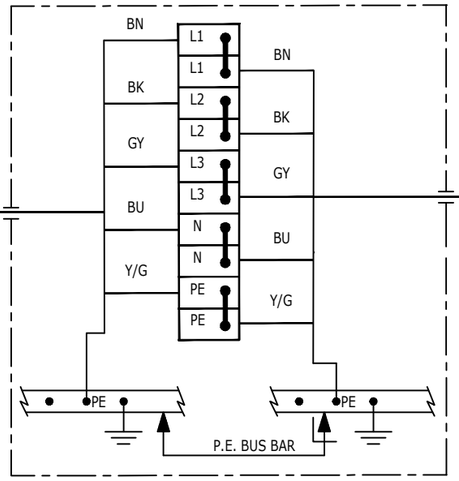
COLUMN/CUBIC.: A4/+02



83023-CEL
5G16 mm²

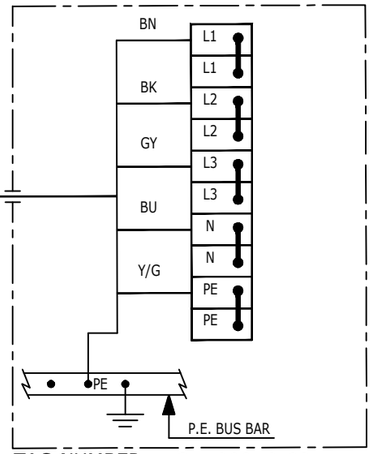
TO

DESCRIPTION: WELDING SOCKETS (TOP DECK)
TAG NUMBER: ESW-200N1-01

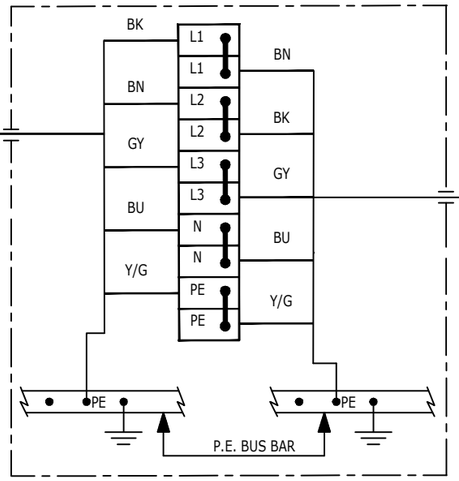


83021-CEL-02
5G50 mm²

TAG NUMBER: ESW-200N1-02

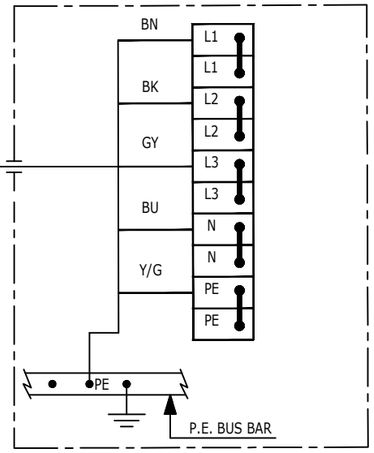


DESCRIPTION: WELDING SOCKET (LOWER DECK)
TAG NUMBER: ESW-200N2-01

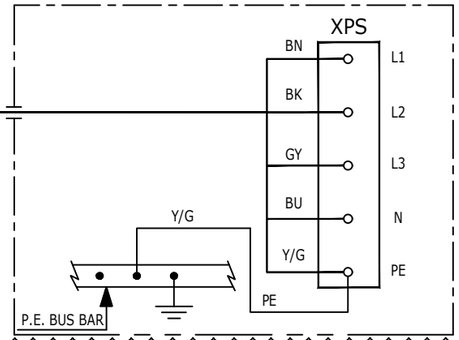


83022-CEL-02
5G50 mm²

TAG NUMBER: ESW-200N2-02



DESCRIPTION: HVAC PANELS - HV ROOM
TAG NUMBER: B100-HSB-001



01

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20149
REV.: 1_A | DATE: 17/10/24 | SIGNATURE: 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

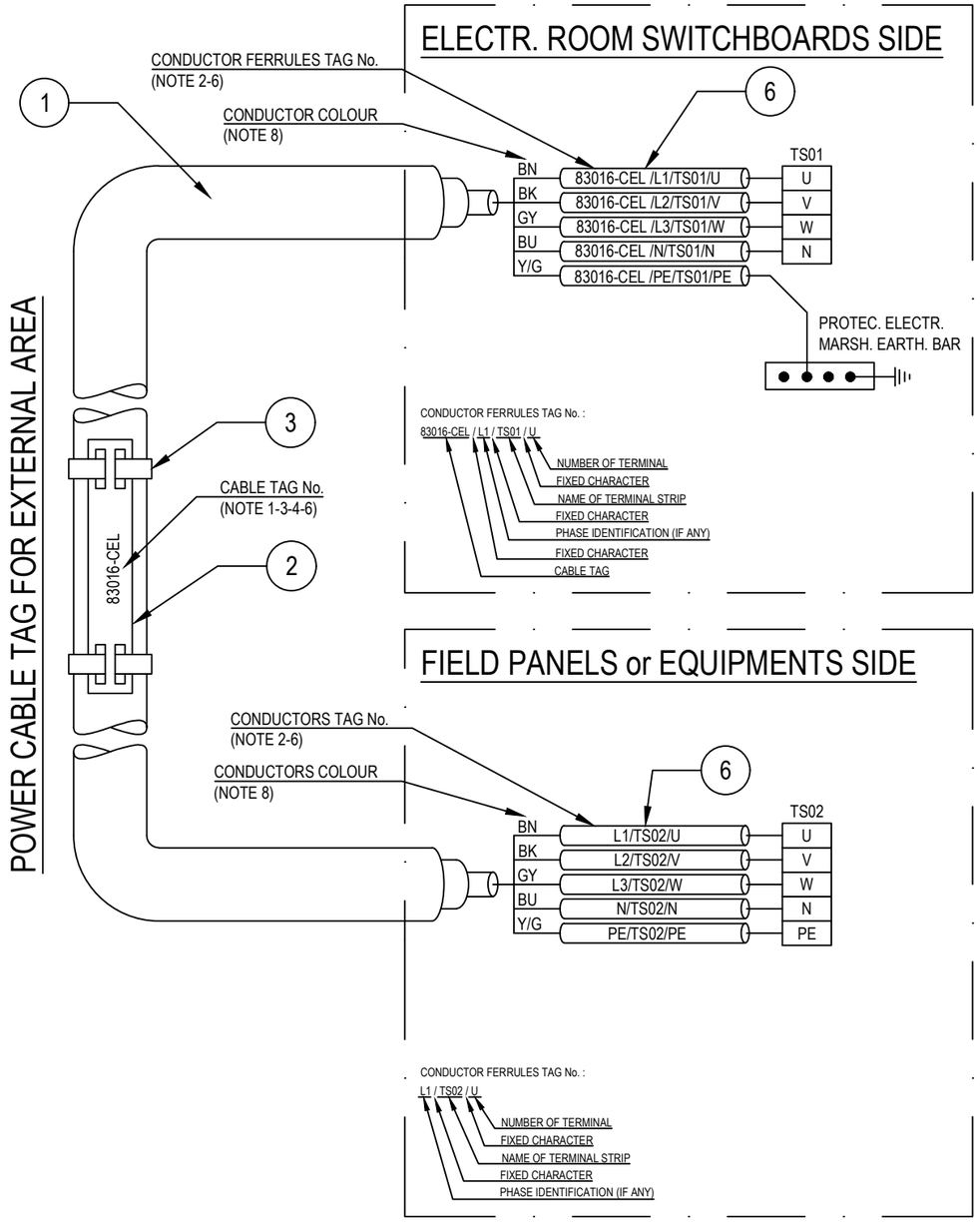
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:X

A3 | DRAWING NO. 123A90-DDL-EL-DG-20149 | SHEET 025 | 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.

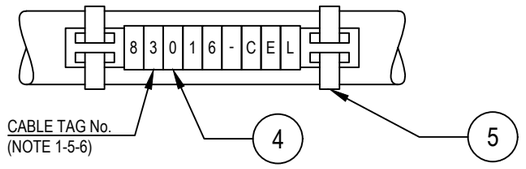
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

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

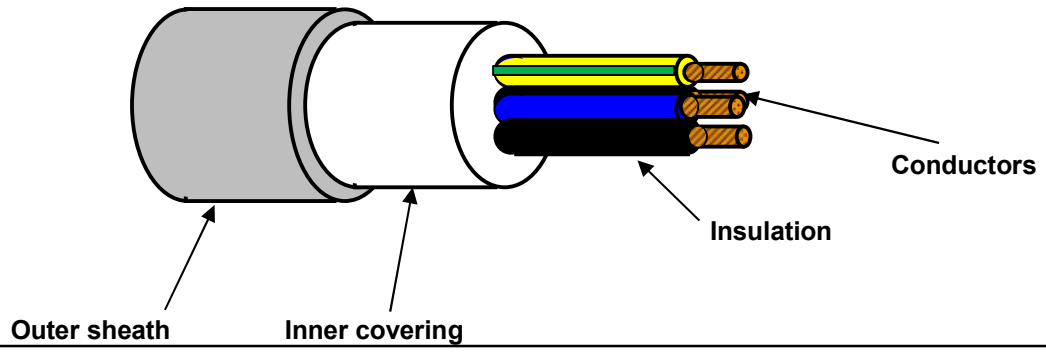
File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

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
83023-CEL	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						SG-200N1	LV 0,4 kV MCC Switchgear	Lower Deck (B-200)	B100-HSB-001	Distribution & HVAC Panel - HV MV Room	Lower Deck (B-100)	ELECV15-5G16	Cable Cu Cl.2/EPR/LSZH 0,6/1kV 5G16mm² - Grey	n.a.			T1_M32_Single				L-450-101-LVT-025 / L-600-101-LVT-017 / E-MCT-201 / L-750-101-LVT-011 / L-600-101-LVT-012 / L-300-101-LVT-074 / E-MCT-105 / L-600-101-LVT-058 / L-150-101-LVT-110

FLEI s.r.l.

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

5G16 - L.V. POWER CABLE - Flame Retardant



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires	IEC 60228 Class 2
Insulation :	EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm	
Cores colour code :	**Black - Brown - Grey - 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 1,4 mm	
Outer sheath color code:	**Grey**	
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 5G16 SQMM - EPR/LSZH - 0,6/1 KV - IEC 60332.1.2 - IEC 60332.3.22 -**	
	Year of Manufacture - CE + Meter Marking	
Outer diameter :	(24,0 ± 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 :	≥ 530 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	84314-CEL	: AC UPS - PAS DB / UCP - HVAC HV Room		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100		Module	LD_B-300/LD_B-100	
TASK	code	C10000590	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	3G2,5 mm2	Color	ORANGE

From DP-200F3 To B100-HSB-001

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	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"	

REFER TO FINAL SHEET FOR ACCEPTANCE

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	84314-CEL	: AC UPS - PAS DB / UCP - HVAC HV Room			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100			Module	LD_B-300/LD_B-100
TASK	code	C10000590		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

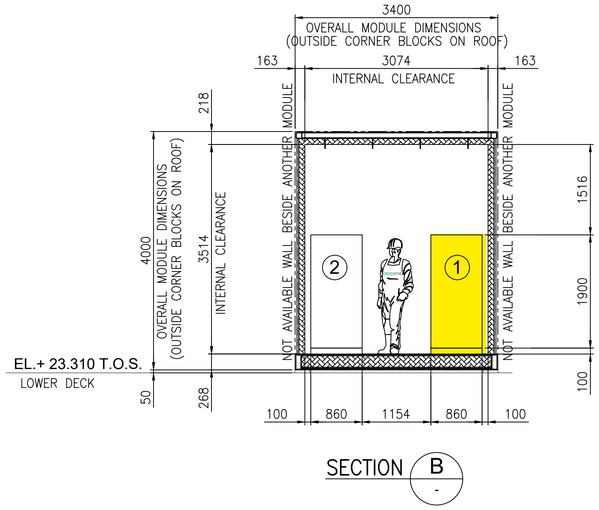
CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,6	
6		PH 2	0,6	
7		PH 3	NA	
8	ARMOUR CONTINUITY Ω		0,6	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,6	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>1999	
11		PH2 / PH1-PH3-A-E	>1999	
12		PH3 / PH1-PH2-A-E	NA	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

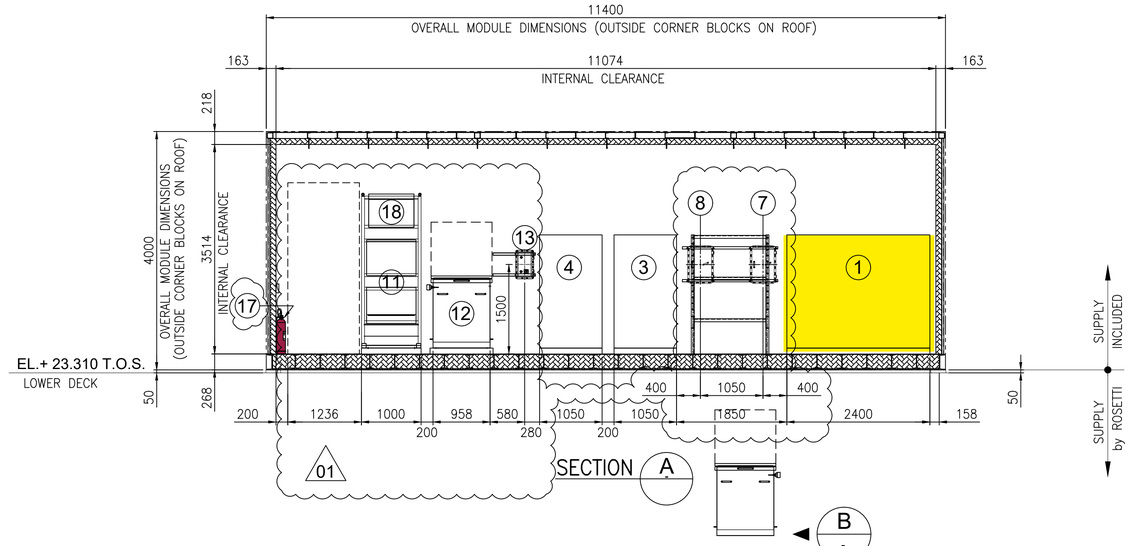
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Note 4 : Refer to PL C30000679

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Alessio Polo	
Date	2024-11-25	2024-11-25	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-11-25T11:03:01.222Z	PROVERLIS Digitaly signed by Alessio Polo 2024-11-25T18:00:37.197Z	



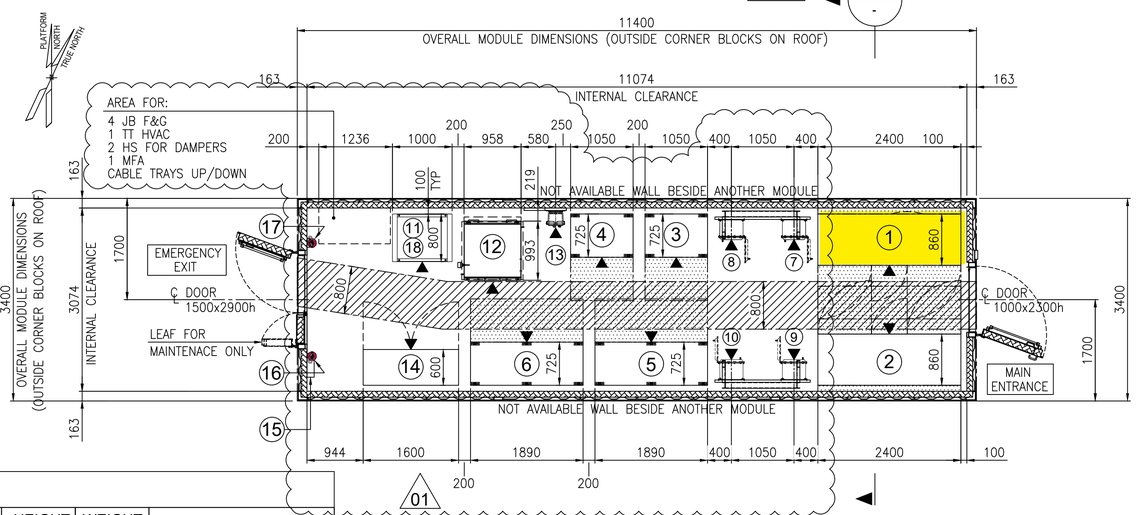
SECTION B -



SECTION A -

SUPPLY INCLUDED

SUPPLY by ROSETTI



A -

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

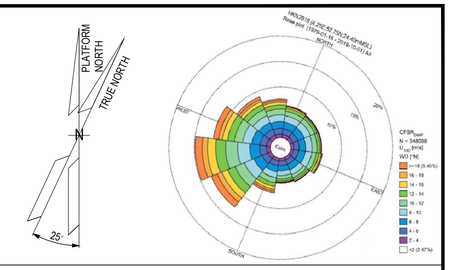
EQUIPMENT LIST

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

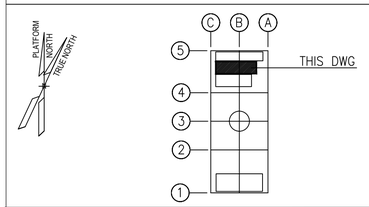
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

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

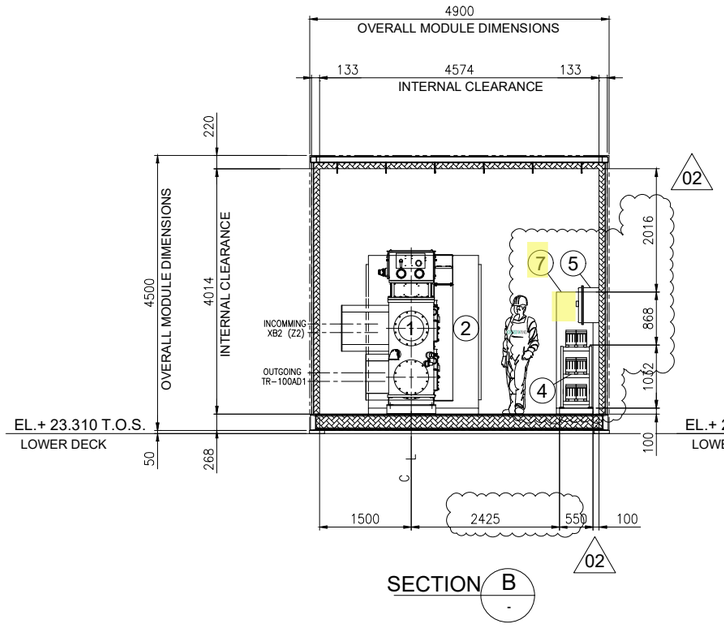
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

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

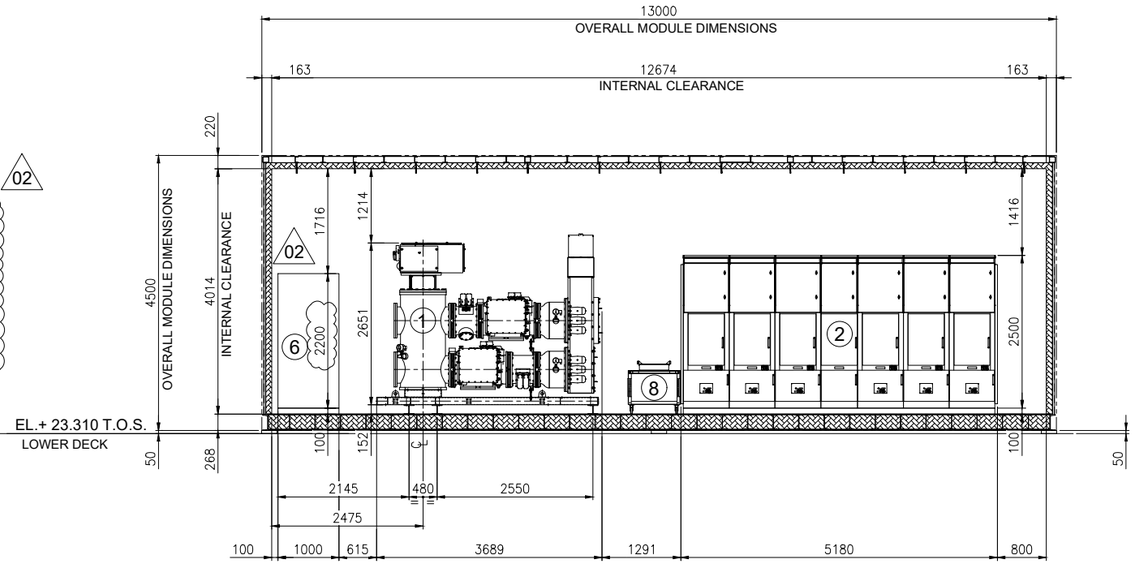
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DRAWING NO. 123A90-DDL-EL-DL-20106 REV. 01

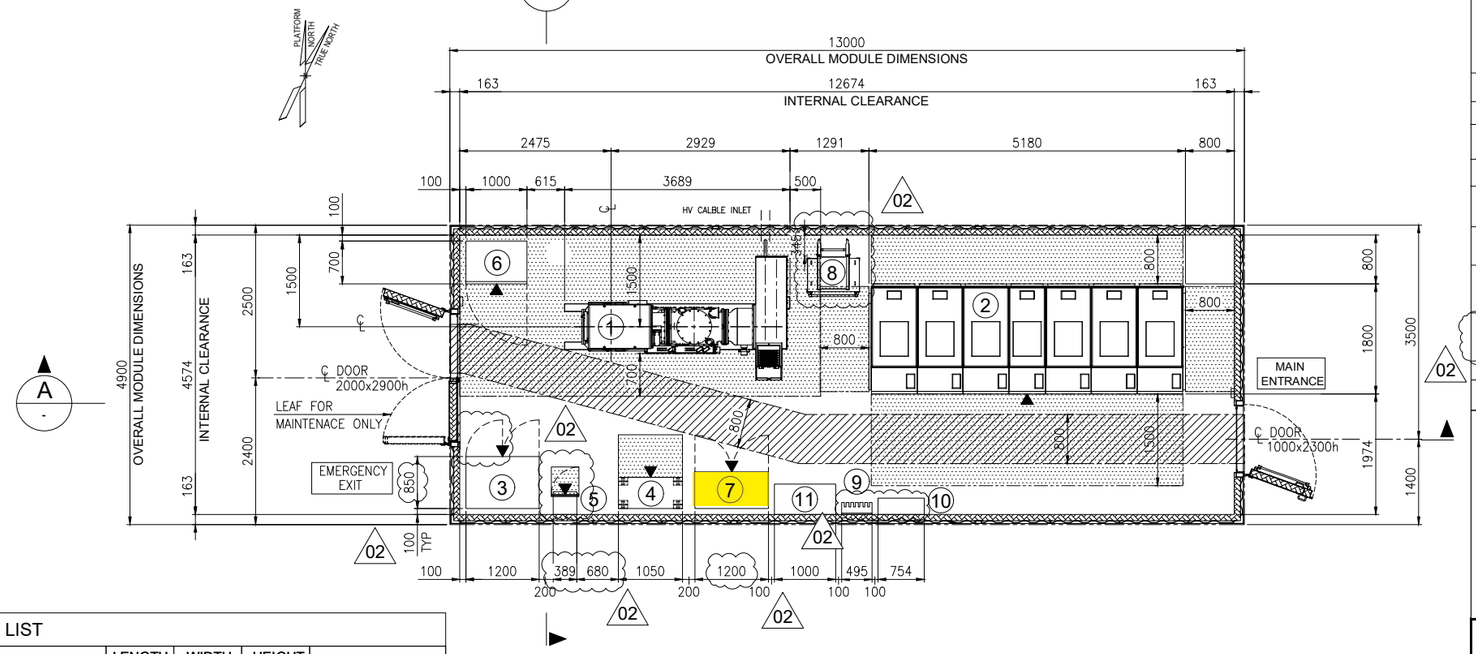
DRAWING NO. 123A90-DDL-EL-DL-20104 | REV. 02



SECTION B -

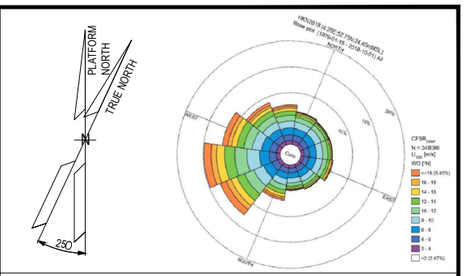


SECTION A -



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	
3	UP-200F1	DC UPS PANEL	1200	850	2105	
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	
5	CB-200F1 02	ISOLATOR FOR DC UPS	452	377	634	
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2200	02
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV MV ROOM	1200	600	1900	
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	
9	-	TOOL BOX	495	200	200	
10	-	SUBSTATION LIFE SAVING & INTERVENTION KIT	754	270	840	
11	-	TABLE	1000	500	750	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DELETED
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT.
4. FOR OTHER ITEMS, CORRECT LOCATION AND INFROMATION, 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

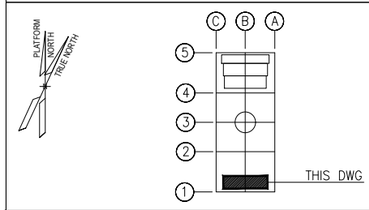
LEGEND

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

REFERENCES

DOCUMENT TITLE	DOCUMENT NUMBER
66kV SWITCHGEAR (GIS) GENERAL ARRANGEMENT DRAWING	1723001595-EL-DA-00006
CIRCUIT AND WIRING DIAGRAM	1723001595-EL-DG-00015
SG-100D1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00006
DC UPS – GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS	1724000372-EL-DA-00003
DC UPS – BATTERY LAYOUT AND INTERCONNECTING DIAGRAM	1724000372-EL-DG-00010
B-100 - GENERAL ARRANGEMENT DRAWINGS - E&I SHELTER	1724000049-AR-DA-00014

KEY PLAN



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20104**

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	10/11/2023	DSF	CB/AMA	DYFO/MDO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

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

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN GPA	CHECKED LMA/AMA	APPROVED LMA/MDO	DATE 27/05/2024
A1	DRAWING NO. 123A90-DDL-EL-DL-20104	SHEET 001	REV. 02

File Name : 123A90-DDL-EL-DL-20104_REV02.dwg

FROM	TO

DESCRIPTION: AC UPS - PAS DB
TAG NUMBER: DP-200F3

-X35
U — BN
N — BU
PE — Y/G
Arm.
PE

84312-CEL
3G2.5 mm²

DESCRIPTION: UCP - N2 PACKAGE
TAG NUMBER: CP-640E1

SS 64-00
-X2
BN — 1
BU — 2
Y/G — PE
Arm.
PE

-X36
V — BN
N — BU
PE — Y/G
Arm.
PE

84313-CEL
3G2.5 mm²

DESCRIPTION: UCP - WATER PACKAGE
TAG NUMBER: JB-500F8

SS 60-10
-TB-1
BN — L
BU — N
Y/G — PE
Arm.
PE

-X39
V — BN
N — BU
PE — Y/G
Arm.
PE

84314-CEL
3G2.5 mm²

DESCRIPTION: UCP - HVAC HV ROOM
TAG NUMBER: B100-HSB-001

SS 77-10
XPS
BN — L1UPS
BU — NUPS
Y/G — PE
Arm.
PE

-X40
V — BN
N — BU
PE — Y/G
Arm.
PE

84315-CEL
3G2.5 mm²

DESCRIPTION: UCP - HVAC LV ROOM
TAG NUMBER: B200-HSB-001

SS 77-20
XPS
BN — L1UPS
BU — NUPS
Y/G — PE
Arm.
PE

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

REV.:	DATE:	SIGNATURE:
2_A	21/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	19/11/24	SAI	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/10/24	SAI	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/07/24	SAI	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL INTERCONNECTING WIRING DIAGRAM
AC UPS – PAS DB DP-200F3

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

SCALE : 1:X

A3

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

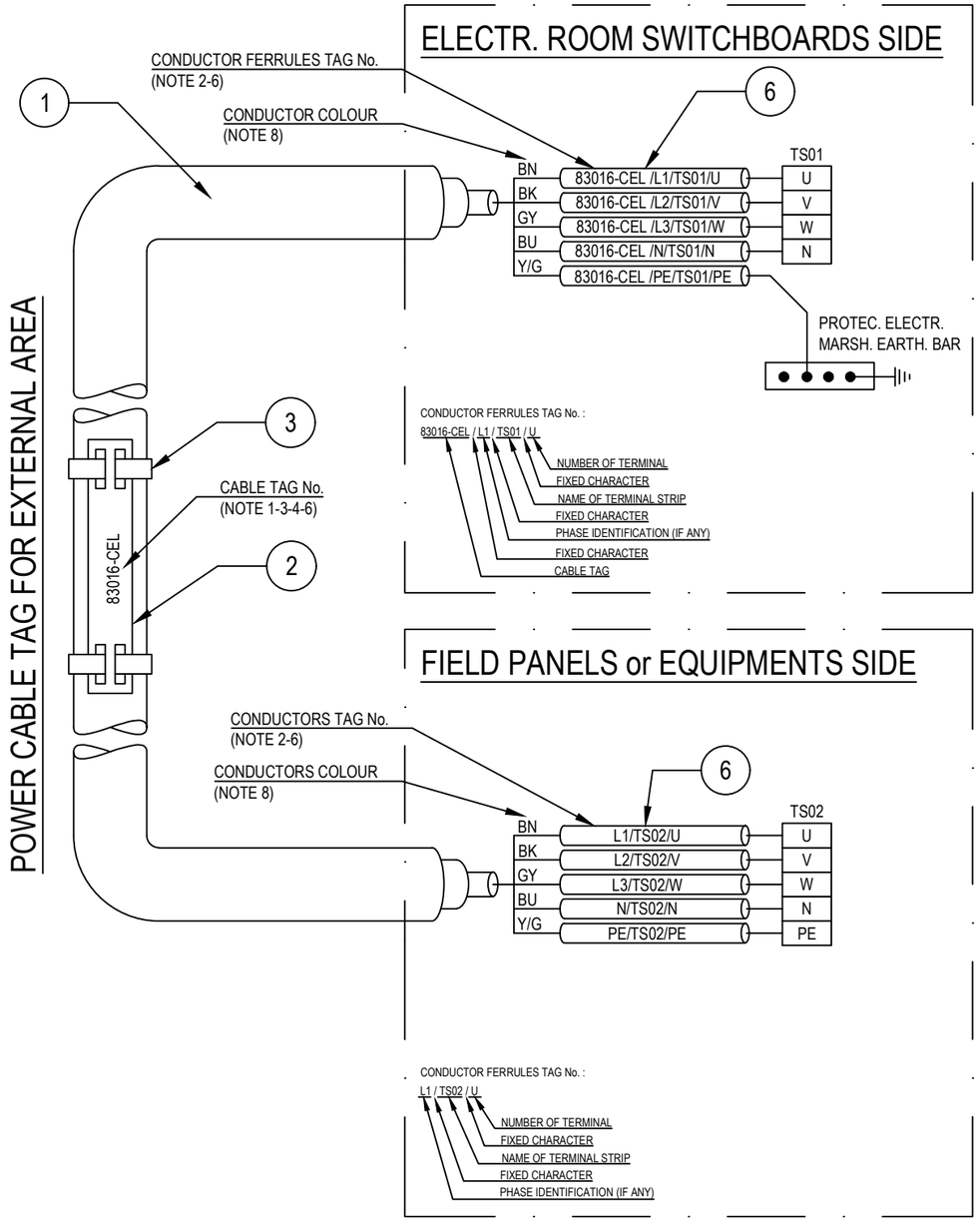
SHEET 041

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20149 Rev. 02

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.

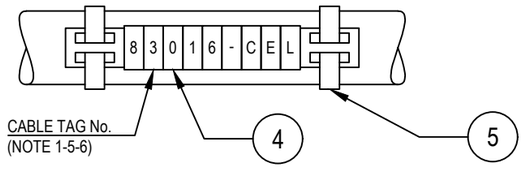
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

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

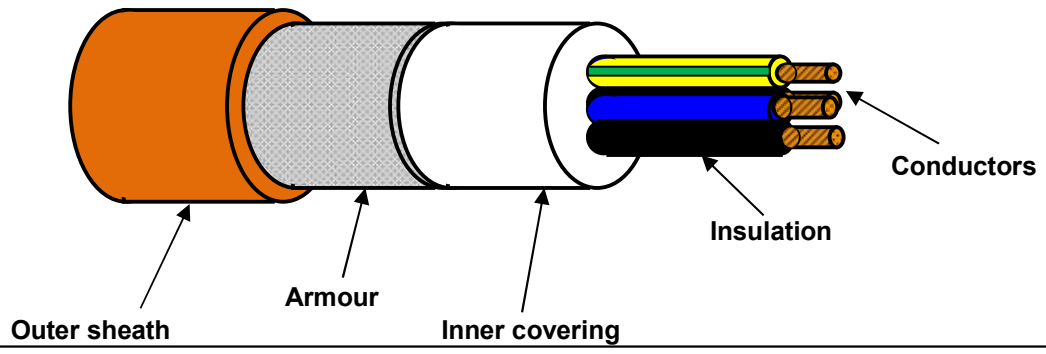
F.to UNI A3: 420mmx297mm

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
84314-CEL	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						DP-200F3	AC UPS 35 kVA Distribution Board	Lower Deck (B-300)	B100-HSB-001	Distribution & HVAC Panel - HV MV Room	Lower Deck (B-100)	ELECV19-3G2,5	Cable Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 3G2,5mm² - Orange	T2_M20_Double			T2_M20_Double				L-450-101-LVT-040 / L-600-101-LVT-036 / L-600-101-LVT-038 / L-600-101-LVT-035 / E-MCT-302 / L-450-101-LVT-005 / L-600-101-LVT-010 / L-750-101-LVT-015 / L-750-101-LVT-013 / L-750-101-LVT-014 / L-450-101-LVT-075 / E-MCT-106 / L-600-101-LVT-058 / L-150-101-LVT-110

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

3G2,5 - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires	IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm	
Cores colour code :	**Brown - Blue - Yellow/Green**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not Required	
Total Assembling :	Cores layed up with optimal lay length	
Overall Wrapping:	Not required	
Drain wire :	Not required	
Overall Shield:	Not required	
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm	
Inner covering color code:	**Black or Natural**	
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**	
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,3 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 3G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**	
Under Armour diameter :	(11,7 ± 10%) mm	
Over Armour diameter :	(12,9 ± 10%) mm	
Outer diameter :	(15,5 ± 10%) mm	
Bending radius :	cable outer diameter x 10	(in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)	
Conductors DC Resistance :		IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)	
Applicable Standards		
Design Guidelines :	**IEC 60092.353**	
ON COMPLETE CABLE		
Fire Resistant test :	**IEC 60331.21**	
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22	
Acid Gas generation :	IEC 60754.1/2	
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)	
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a	
Temperature Range :		
ON INSULATION	(max +90°C)	(max continuous operation temperature of conductors)
	(max +250°C)	(max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE		
During Operation :	(-20°C up to +90°C)	(in fixed installation)
During installation :	(- 5°C up to +50°C)	
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**	

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

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

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

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	B100-HSB-001	: Distribution & HVAC Panel - HV MV Room			Dwg	123A90-DDL-EL-DL-20104
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100			Module	LD_B-100
TASK	code	C10000835		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX15 Distribution Board

1	Check equipment is de-energized and safe.	OK
2	Check anti-condensation heaters are ready to be energized.	OK
3	Check equipment earthing and bonding against latest drawings.	PL
4	Check equipment is undammaged, correctly mounted, tagged and installed in accordance with latest layout drawings.	Note
5	Check all doors, gland plates are correctly mounted.	OK
6	Check panel-front components, indicators, lamps, meters are securely mounted and undamaged.	OK
7	Check all switching devices rating and tagging against latest drawings.	PL
8	Check all switching devices for proper mechanical operation.	OK
9	Check (visual) of cables connections.	PL
10	If required produce Red Line Mark Up for "AS BUILT"	

NAME PLATE DATA

Manufacturer :	FRIGOTERMICA	Serial N° :	1626	Type:	LK1-40
Voltage :	400 **V**	Frequency :	50 **Hz**	Rating :	16,40 **kW**
IP Rating	54	N° of outgoers:	50	Specification:	1724000049-HV-DA-00026
SWBD & CUB ref:	1724000049-HV-DA-00026			Data Sheet :	1724000049-HV-DA-00026

TESTING AND MEASUREMENT INSTRUMENT USED

Type	Serial n°	Calibration certificate	Validity

TEST RESULTS

INSULATION RESISTANCE

TEST VOLTAGE	V	R/S-T-EARTH	Mohm	
		S/ R-T-EARTH	Mohm	
		T/S-R-EARTH	Mohm	

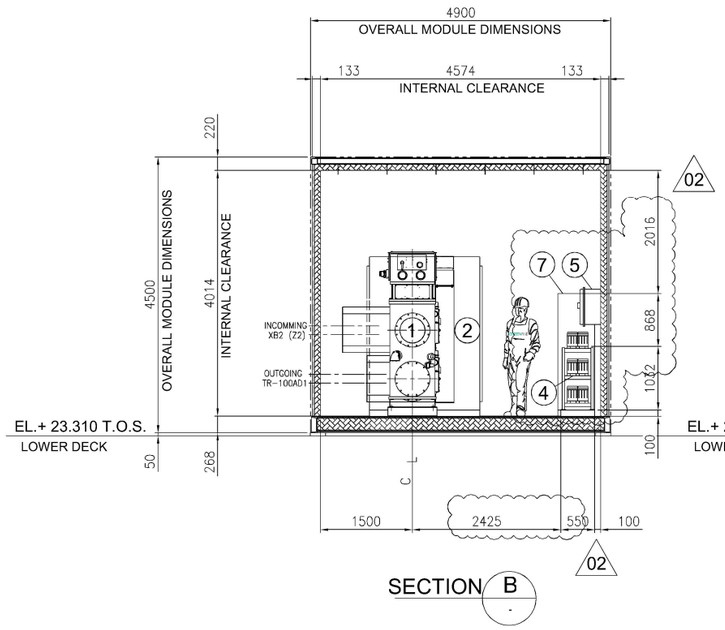
Comments: Note(2/3) : Refer to Punch list raised during first step of FAT:

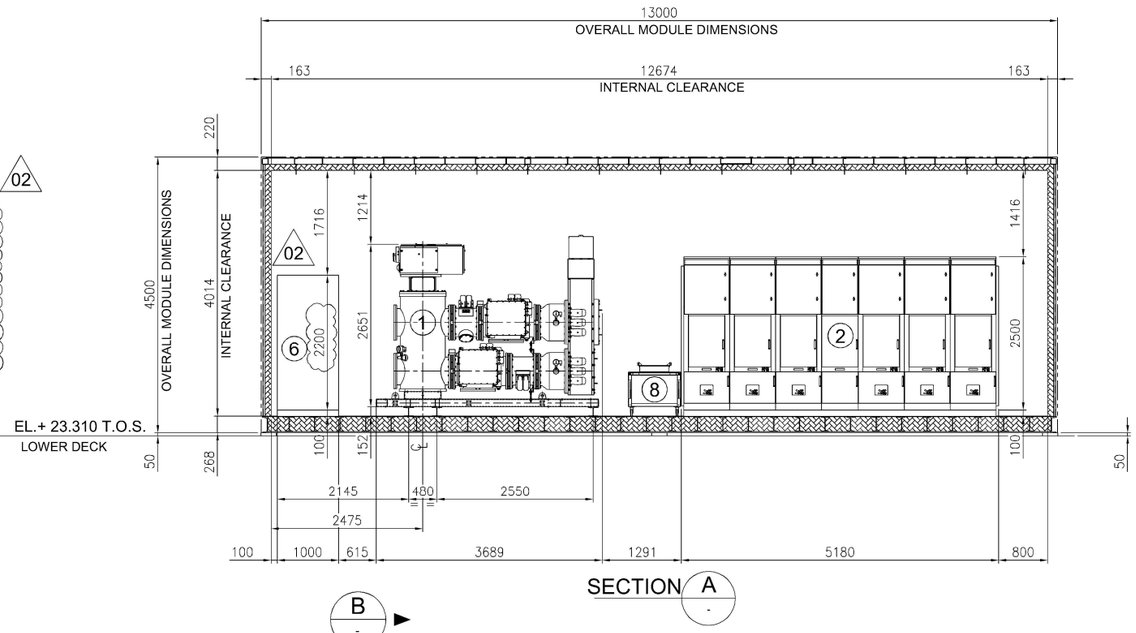
Point 4 PL: C30000068
Point 9 PL: C30000038 / C30000054

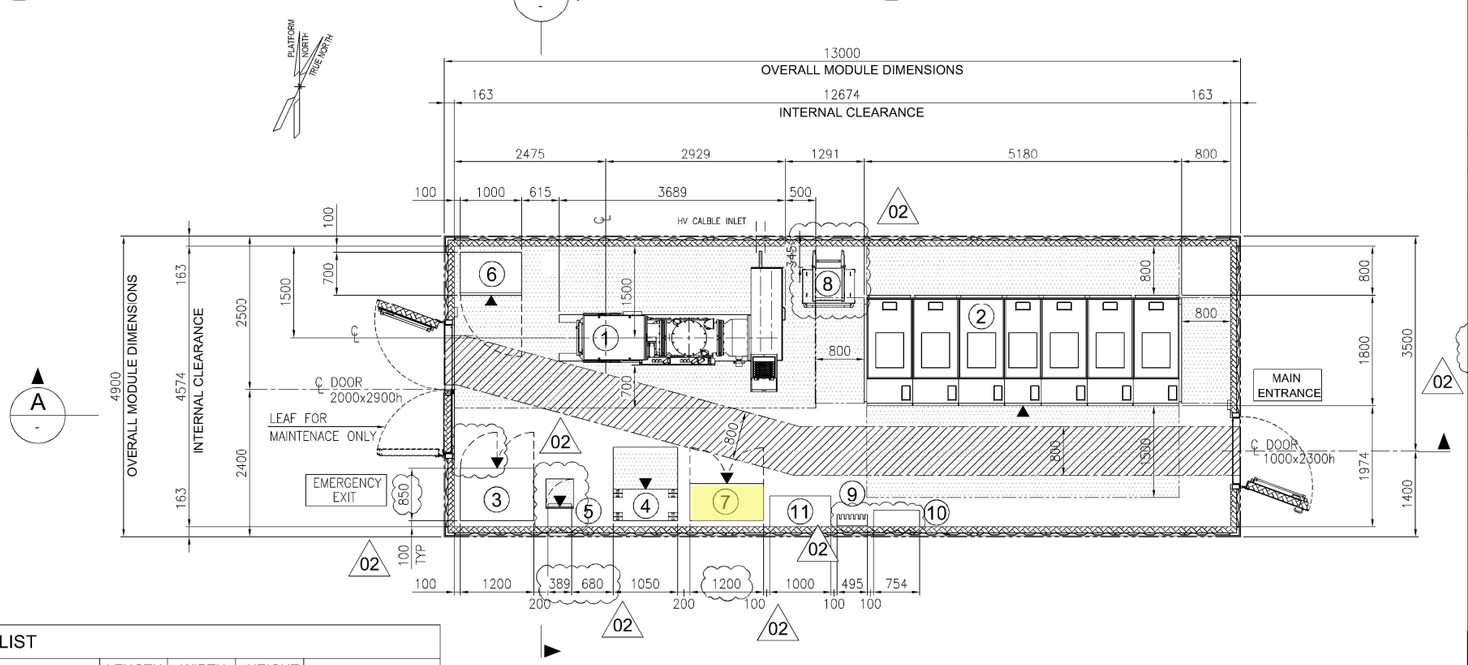
FAT will be completed at RM yard after MC phase

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ALEX SISTEMI	RM (Rosetti Marino)	
Name	Vendor Crosswind	Giovanni Tangianu	
Date	2024-10-18	2024-10-18	
Signature	Firma Digitale Sicura Vendor Crosswind 2024-10-18T16:32:21+0200	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-18T15:54:21.541Z	

DRAWING NO. 123A90-DDL-EL-DL-20104 REV. 02

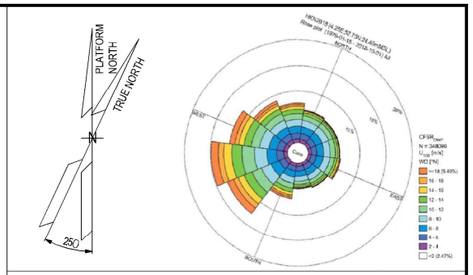






EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	
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3	UP-200F1	DC UPS PANEL	1200	850	2105	
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	
5	CB-200F1 02	ISOLATOR FOR DC UPS	452	377	634	
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2200	02
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV MV ROOM	1200	600	1900	
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	
9	-	TOOL BOX	495	200	200	
10	-	SUBSTATION LIFE SAVING & INTERVENTION KIT	754	270	840	
11	-	TABLE	1000	500	750	



NOTES

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2. DELETED
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT.
4. FOR OTHER ITEMS, CORRECT LOCATION AND INFROMATION, 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

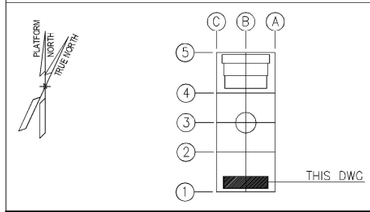
LEGEND

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
66kV SWITCHGEAR (GIS) GENERAL ARRANGEMENT DRAWING	1723001595-EL-DA-00006
CIRCUIT AND WIRING DIAGRAM	1723001595-EL-DG-00015
SG-100D1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00006
DC UPS – GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS	1724000372-EL-DA-00003
DC UPS – BATTERY LAYOUT AND INTERCONNECTING DIAGRAM	1724000372-EL-DG-00010
B-100 - GENERAL ARRANGEMENT DRAWINGS - E&I SHELTER	1724000049-AR-DA-00014

KEY PLAN



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20104**

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	10/11/2023	DSF	CB/AMA	DYFO/MDO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

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

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

A1	DRAWING NO. 123A90-DDL-EL-DL-20104	SHEET 001	REV. 02

File Name : 123A90-DDL-EL-DL-20104_REV02.dwg

PLATFORM NORTH
TRUE NORTH
N

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20136**

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

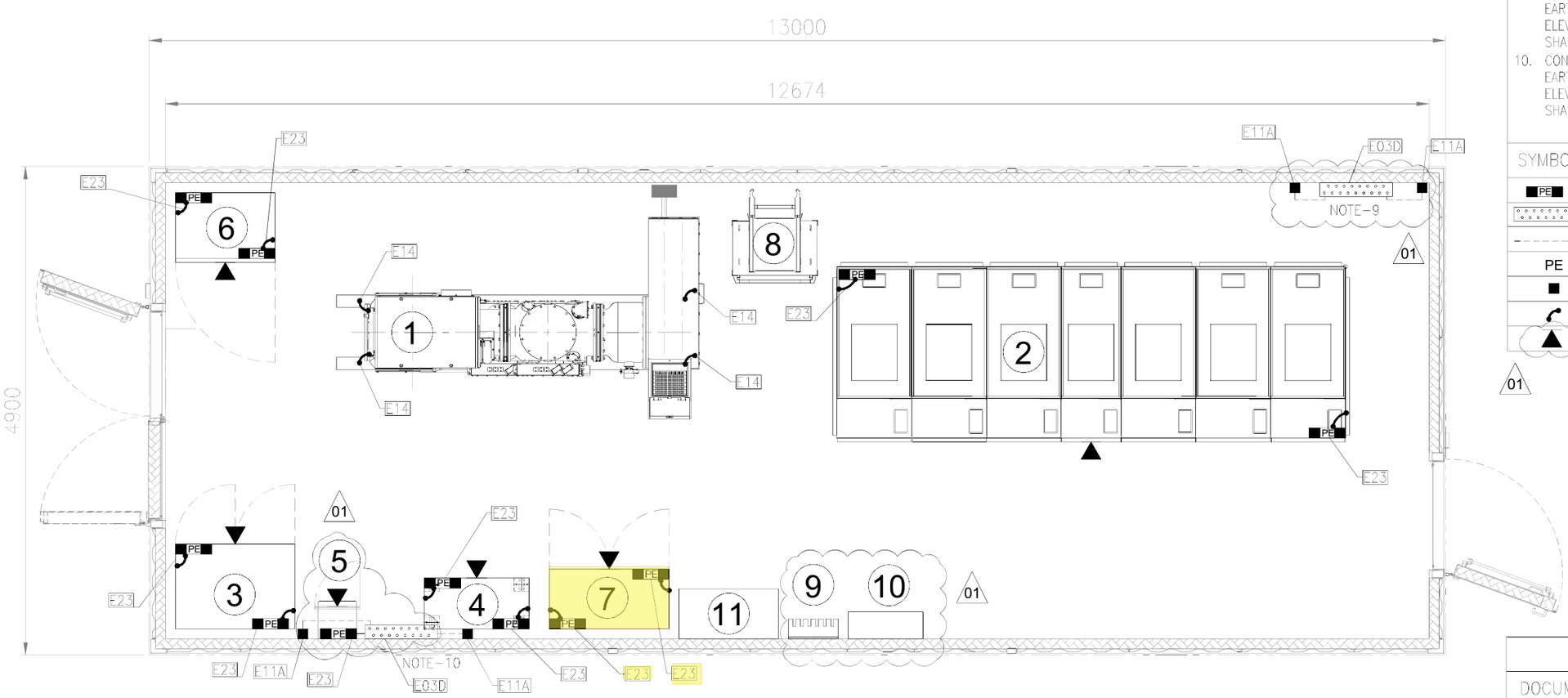
ROSETTI MARINO SpA

EQUIPMENT LIST		
REF.	TAG No.	DESCRIPTION
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)
2	SG-100D1	6.6kV SWITCHGEAR
3	UP-200F1	DC UPS PANEL
4	BA-200F1	DC UPS BATTERY RACK
5	CB-200F1	ISOLATOR FOR DC UPS
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL – HV SWITCH ROOM
8	–	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR
9	–	TOOL BOX
10	–	ELECTRIC SAFETY KIT
11	–	TABLE

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 NON WELDED OBJECTS SHALL BE EARTHED.
9. CONTAINER WILL HAVE A BTH (EARTHING BAR TINNED COPPER) WITH 2 EARTHING BOSS, INSTALLED IN THE NORTH-EAST CORNER AT AN ELEVATION OF 2.8M FROM THE CONTAINER FLOOR. EARTHING BOSS SHALL BE INSTALLED AT SAME ELEVATION 2.8M.
10. 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.



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

EARTHING LAYOUT
B-100-HV(66kV/6.6kV) SWITCHROOM
PLAN
EL.+ 23.310 T.O.S.

REFERENCE	
DOCUMENT NUMBER	DOCUMENT TITLE
123A90-DDL-EL-DD-20090	ELECTRICAL TYPICAL INSTALLATION DETAILS -EARTHING SYSTEM
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT- HV SWITCHROOM
01 1724000049-AR-DD-00018	B-100 DETAILED DRAWINGS-E&I SHELTERS

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

CROSSWIND
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING & LIGHTNING LAYOUT-HV SWITCHROOM
"B-100"HV SWITCHROOM

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

A3 | DRAWING NO. 123A90-DDL-EL-DL-20136 | SHEET 003 | REV. 01

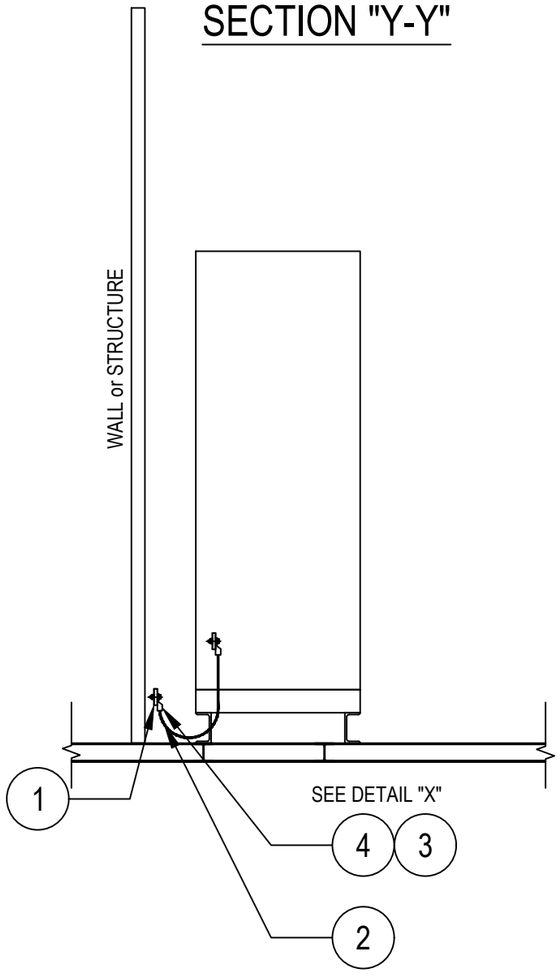
F.to UNI A3: 420mmx297mm

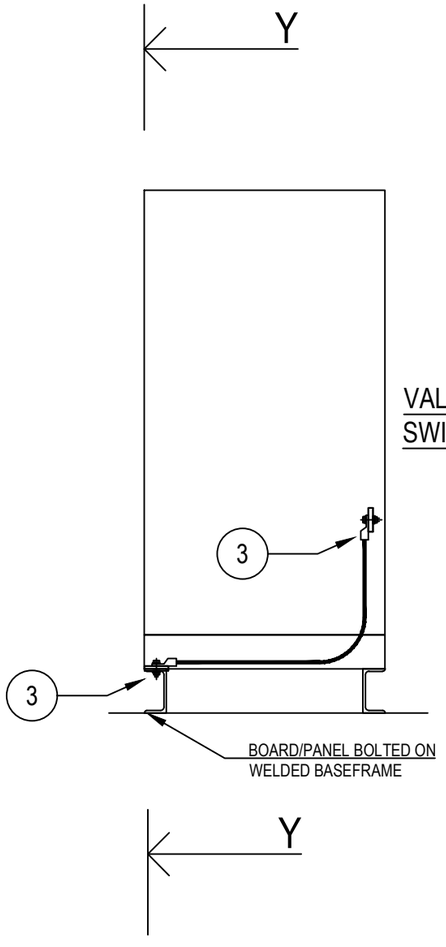
File Name : 123A90-DDL-EL-DL-20136 Rev. 01

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	

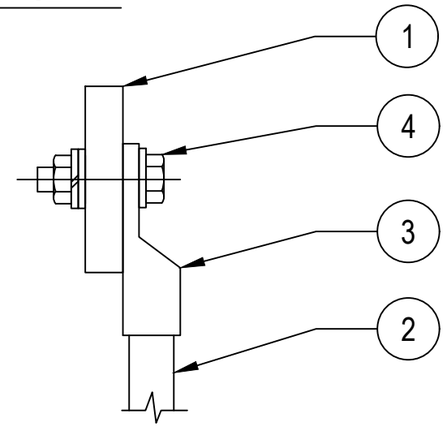
SECTION "Y-Y"





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_F	17/10/24	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)

B-100 HV-MV Switchgear Room

HVAC PANEL WIRING DIAGRAM

B100-HSB-001

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	05/09/24				ISSUE FOR REVIEW (IFR)
02	13/06/24				ISSUE FOR REVIEW (IFR)
01	15/04/24				ISSUE FOR REVIEW (IFR)
00	15/04/24				ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
WIRING DIAGRAM
FRONT PAGE

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

SCALE : NTS

A3

DRAWING NO. 123A90-1724000049-HV-DA-00026

SHEET 001

REV. 02

REV.	MODIFICA	DATA	FIRMA
03	ISSUE FOR APPROVAL	05/09/24	
02	ISSUE FOR APPROVAL	13/06/24	
01	ISSUE FOR APPROVAL	15/04/24	

DATA	15/04/2024
DISEGN.	F.M.
VISTO	S.S.
APPR.	M.G.

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CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
COVER

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 1

F.S. 2

LISTA FOGLI \ INDEX

Foglio Sheet	Descrizione Description	Revisioni Revisions 1	2	3	4	5	6	7	8	9
1	COVER									
2	INDEX									
3	SIMBOL LIST									
4	EXTERNAL VIEW									
5	INTERNAL VIEW									
6	POWER SECTION									
6A	POWER SECTION									
6B	POWER SECTION									
7	POWER SECTION									
8	POWER SECTION									
9	POWER SECTION									
9A	POWER SECTION									
10	AUX SECTION									
11	AUX SECTION									
11A	AUX SECTION									
12	AUX SECTION									
13	AUX SECTION									
14	AUX SECTION									
15	AUX SECTION									
16	AUX SECTION									
17	AUX SECTION									
18	AUX SECTION									
19	AUX SECTION									
20	AUX SECTION									
20A	AUX SECTION									
20B	AUX SECTION									
20C	PLC ARCHITECTURE									
20D	PLC ARCHITECTURE									

Foglio Sheet	Descrizione Description	Revisioni Revisions 1	2	3	4	5	6	7	8	9
21	ELECTRICAL HEATER MODULATION									
22	ELECTRICAL HEATER MODULATION									
23	AVAILABLE SIGNAL									
24	TERMINAL STRIP									
25	TERMINAL STRIP									
26	MATERIAL LIST									
27	MATERIAL LIST									
28	MATERIAL LIST									
29	MATERIAL LIST									
30	MATERIAL LIST									
31	MATERIAL LIST									

REV.	MODIFICA	DATA	FIRMA
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01	ISSUE FOR APPROVAL	15/04/24	

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CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
INDEX

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 2
F.S. 3

Symbol	Description	Symbol	Description	Symbol	Description
TR	VOLTAGE TRANSFORMER		SONIC INDICATOR	F.	FUSE
TA	CURRENT TRANSFORMER	*	INDICATOR INSTRUMENT		CONTACT N.O.
M ~	MOTOR IN C.A.		SELECTOR SWITCH		CONTACT N.C.
	GROUND : GENERAL SYMBOL	52.	SWITCH		COMMUTATION CONTACT
L..	SIGNAL LAMP	52.	AUTOMATIC CIRCUIT BREAKER	P	CONTACT ACTUATED BY A PRESSURE
L..	SIGNAL LAMP + HEATER	52. Id	DIFFERENTIAL AUTOMATIC BREAKER		CONTACT ACTUATED BY A FLOW
L..	SIGNAL LAMP + VOLTAGE TRANSF.	89.	DISCONNECTING SWITCH		CONTACT ACTUATED BY A LEVEL
	SIGNAL LAMP–PUSH BUTTON	89.	LOADED CIRCUIT BREAKER	θ	CONTACT ACTUATED BY A TEMPERATURE
	CLOSING BUTTON	89.	FUSE DISCONNECTING SWITCH	2 3 4	TERMINAL STRIP
	OPENING BUTTON	6.	CONTACTOR		SQUARE POWER TERMINAL CLAMP
	ROTARY SWITCH	6..	CONTACTOR COIL		SQUARE AUX. TERMINAL CLAMP
T..	CONTACT DELAYED TO THE ATTRACTION N.O.		AUXILIARY RELAY COIL		REMOTE TERMINAL CLAMP
T..	CONTACT DELAYED TO THE ATTRACTION N.C.	T..	TIMER WITH DELAY TO THE ATTRACTION		ONE–PHASE SYSTEM + NEUTRAL
T..	CONTACT DELAYED TO THE RE–DROP N.O.	T..	TIMER WITH DELAY TO THE RE–DROP		THREE–PHASE SYSTEM
T..	CONTACT DELAYED TO THE RE–DROP N.C.	49..	THERMAL RELAY		THREE–PHASE SYSTEM + NEUTRAL
79.	LIMIT SWITCH N.O.		HEATING ELEMENT		
79.	LIMIT SWITCH N.C.		ELECTROVALVE		

REV.	MODIFICA	DATA	FIRMA
03	ISSUE FOR APPROVAL	05/09/24	
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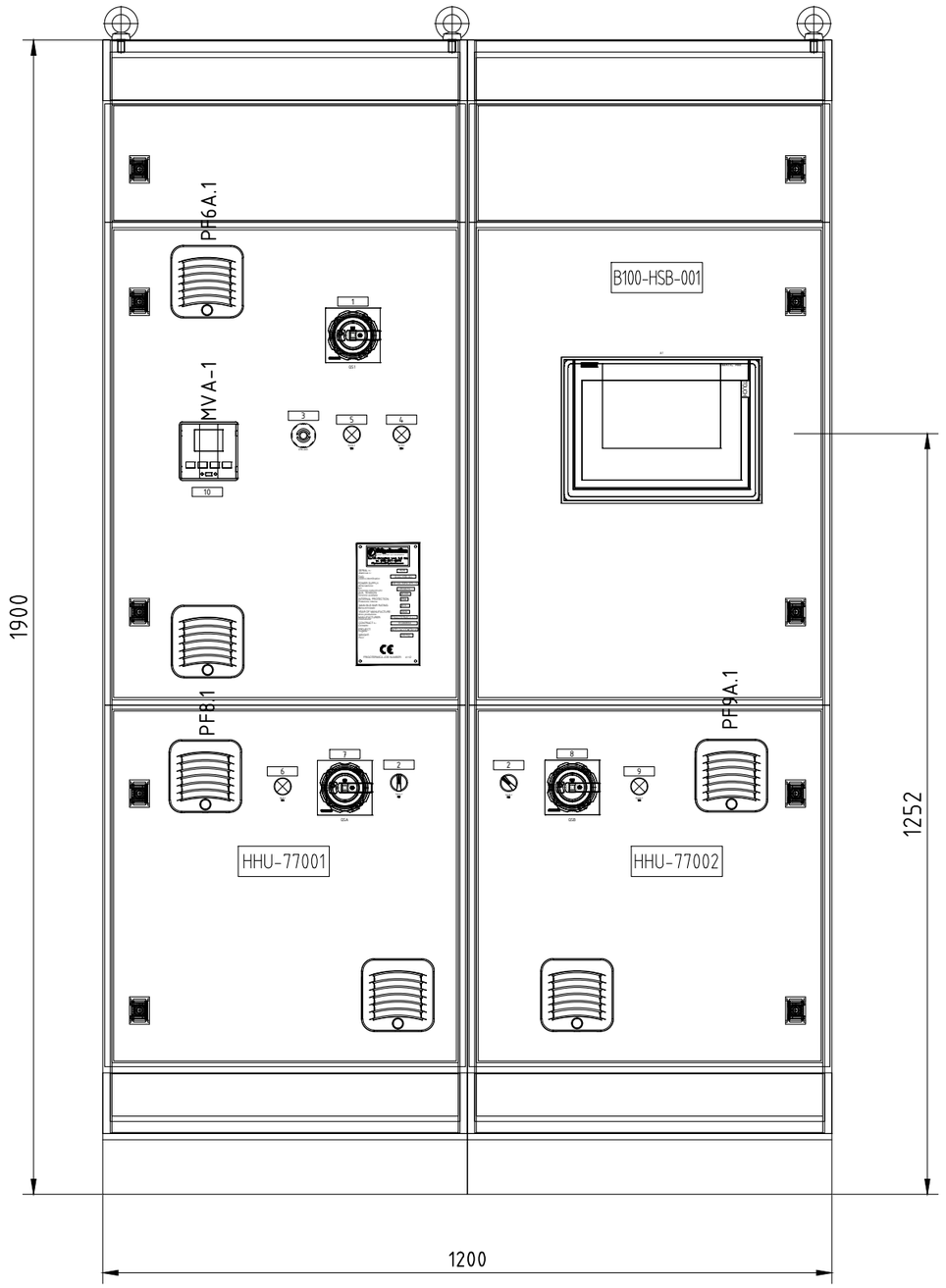
BASE LOAD POWER HUB (BLPH)
B–100 HV–MV SWITCHGEAR ROOM
SIMBOL LIST

ROSETTI MARINO

1724000049–HV–DA–00026

FG. 3
F.S. 4

EXTERNAL VIEW



LABEL	
1	MAIN SWITCH
2	AUTO-0-MANUAL
3	EPB-003
4	24VDC VOLTAGEPRESENCE
5	230V VOLTAGE PRESENCE
6	230V VOLTAGE PRESENCE
7	HHU-77001 MAIN SWITH
8	230V VOLTAGE PRESENCE
9	HHU-77002 MAIN SWITCH
10	MULTIMETER

CABINET QUOTE:
LENGHT 1200 mm
HEIGHT 1900 mm
DEPT 600mm

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SERIAL n.: *Matricola n.:*	1626
TAG: *Codice identificativo:*	B100-HSB-001
POWER SUPPLY: *Alimenatzione:*	400 Vac 50Hz 3Ph+N
Icc: *Coorente cortocircuito:*	25 kA/1s
AUX. TENSION: *Tensione ausiliaria:*	24 Vdc
INTERNAL PROTECTION: *Protezione interna:*	IP54
MAIN BUS BAR RATING: *Barra principale:*	40 A
YEAR OF MANUFACTURE: *Anno produzione:*	2024
MANUFACTURER: *Costruzione:*	FRIGOTERMICA s.r.l.
CONTRACT n.: *Contratto:*	51/240554
PROJECT: *Progetto:*	BASE LOAD POWER HUB
WEIGHT: *Peso:*	700 Kg

CE

FRIGOTERMICA JOB NUMBER: 4112

SCALA 1:10

REV.	MODIFICA	DATA	FIRMA
03	ISSUE FOR APPROVAL	05/09/24	
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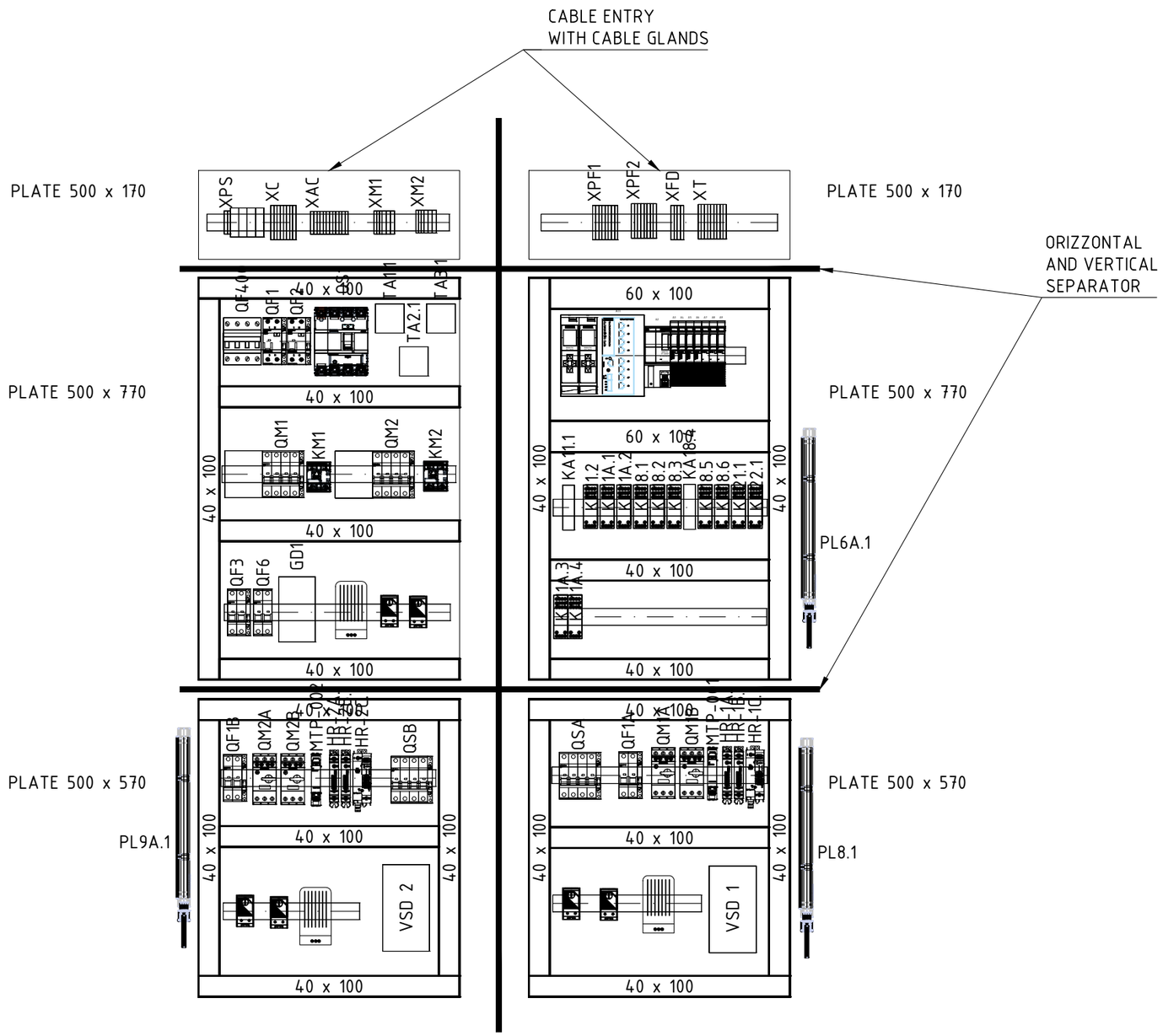
BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
EXTERNAL VIEW

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 4
F.S. 5

INTERNAL VIEW



SCALA 1:10

REV.	MODIFICA	DATA	FIRMA
03	ISSUE FOR APPROVAL	05/09/24	
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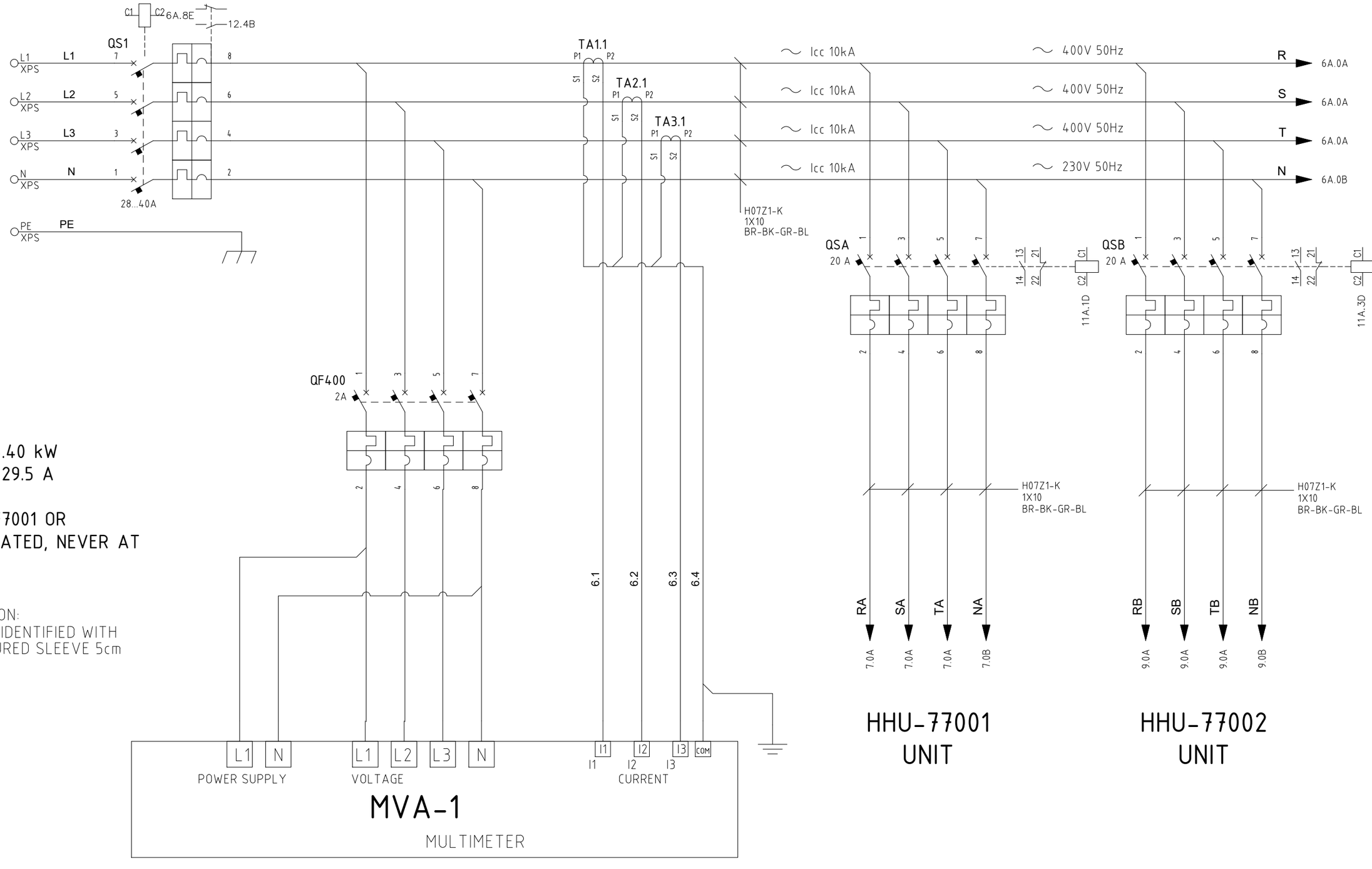
BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
INTERNAL VIEW

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 5
F.S. 6

POWER SUPPLY
BY CLIENT
3PH + N + PE
400V 50Hz



HHU-77001
UNIT

HHU-77002
UNIT

RATED POWER: 16.40 kW
RATED CURRENT: 29.5 A

ONLY UNIT HHU-77001 OR
HHU-77002 ACTIVATED, NEVER AT
SAME TIME

COLOR IDENTIFICATION:
COLORED CABLE OR IDENTIFIED WITH
HEAT SHRINK COLOURED SLEEVE 5cm

400V 3P + N
- ⟶ BROWN
- ⟶ BLACK
- ⟶ GRAY
- ⟶ BLU

230V 1P + N
- ⟶ BROWN
- ⟶ BLU

24Vdc
- ⟶ RED
- ⟶ BLACK

PANEL INTERNAL CABLES TYPE: H07Z1-K OR FG17
UNIT INTERNAL CABLES TYPE: FG16OM16 GREEN SHEATH NOT ARMOURED

REV.	MODIFICA	DATA	FIRMA
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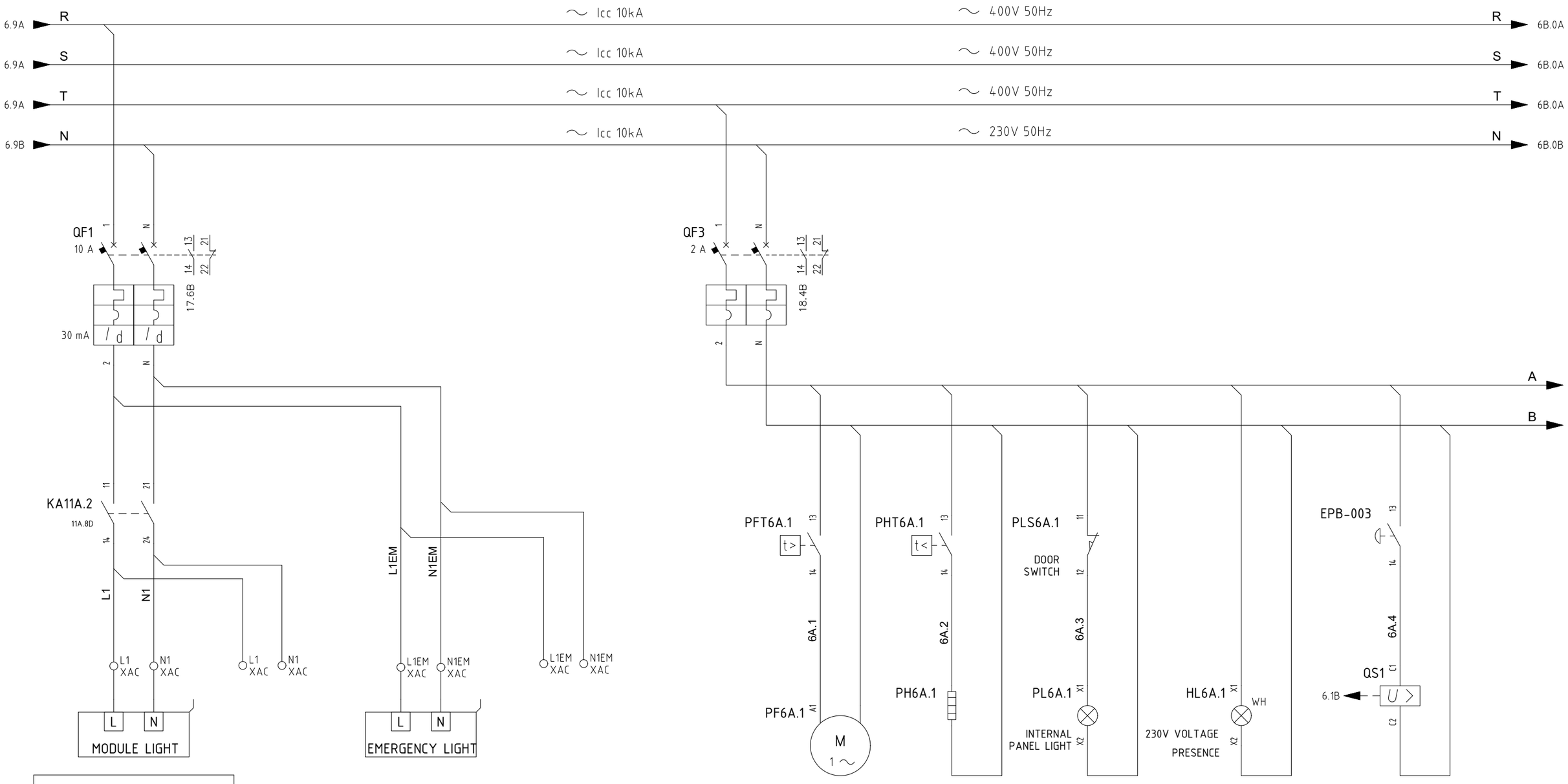
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
POWER SECTION

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 6
F.S. 6A



MODULE INTERNAL LIGHT	
RATED	ABSORBED
1 kW	0.9
4.35 A	3.9 A

REV.	MODIFICA	DATA	FIRMA
03	ISSUE FOR APPROVAL	05/09/24	
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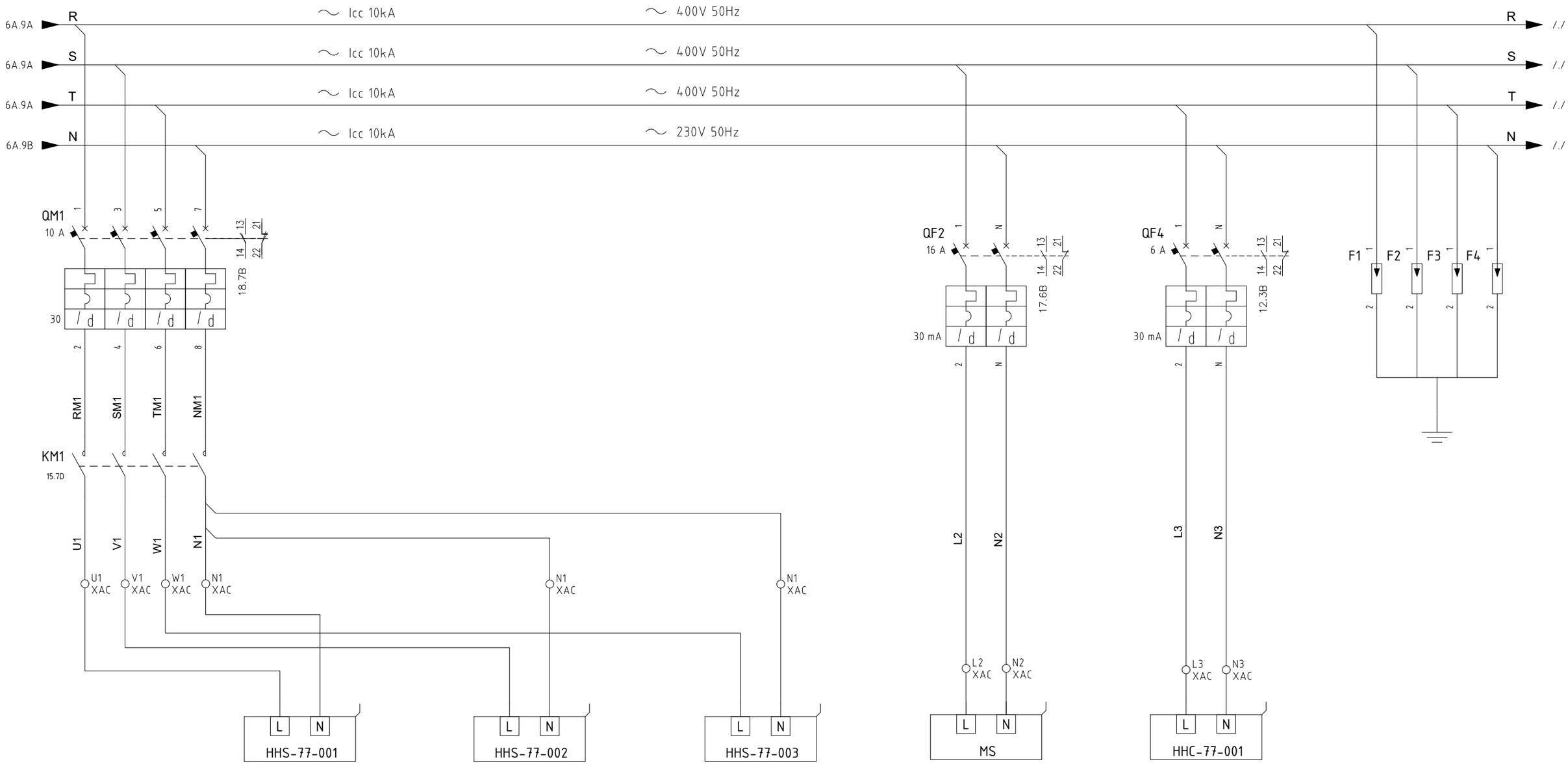
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
POWER SECTION

ROSETTI MARINO

1724000049-HV-DA-00026

F.G. 6A
F.S. 6B



HSS-77-001	
ELECTRICAL HEATER	
RATED	ABSORBED
2 kW	2 kW
8.7 A	8.7 A

HSS-77-002	
ELECTRICAL HEATER	
RATED	ABSORBED
2 kW	2 kW
8.7 A	8.7 A

HSS-77-003	
ELECTRICAL HEATER	
RATED	ABSORBED
2 kW	2 kW
8.7 A	8.7 A

MODULE INTERNAL SOCKET	
RATED	ABSORBED
2 kW	1.8 kW
8.7 A	7.83 A

HHC-77-001	
HEATING CABLE	
RATED	ABSORBED
0.12 kW	0.12 kW
0.7 A	0.7 A

REV.	MODIFICA	DATA	FIRMA
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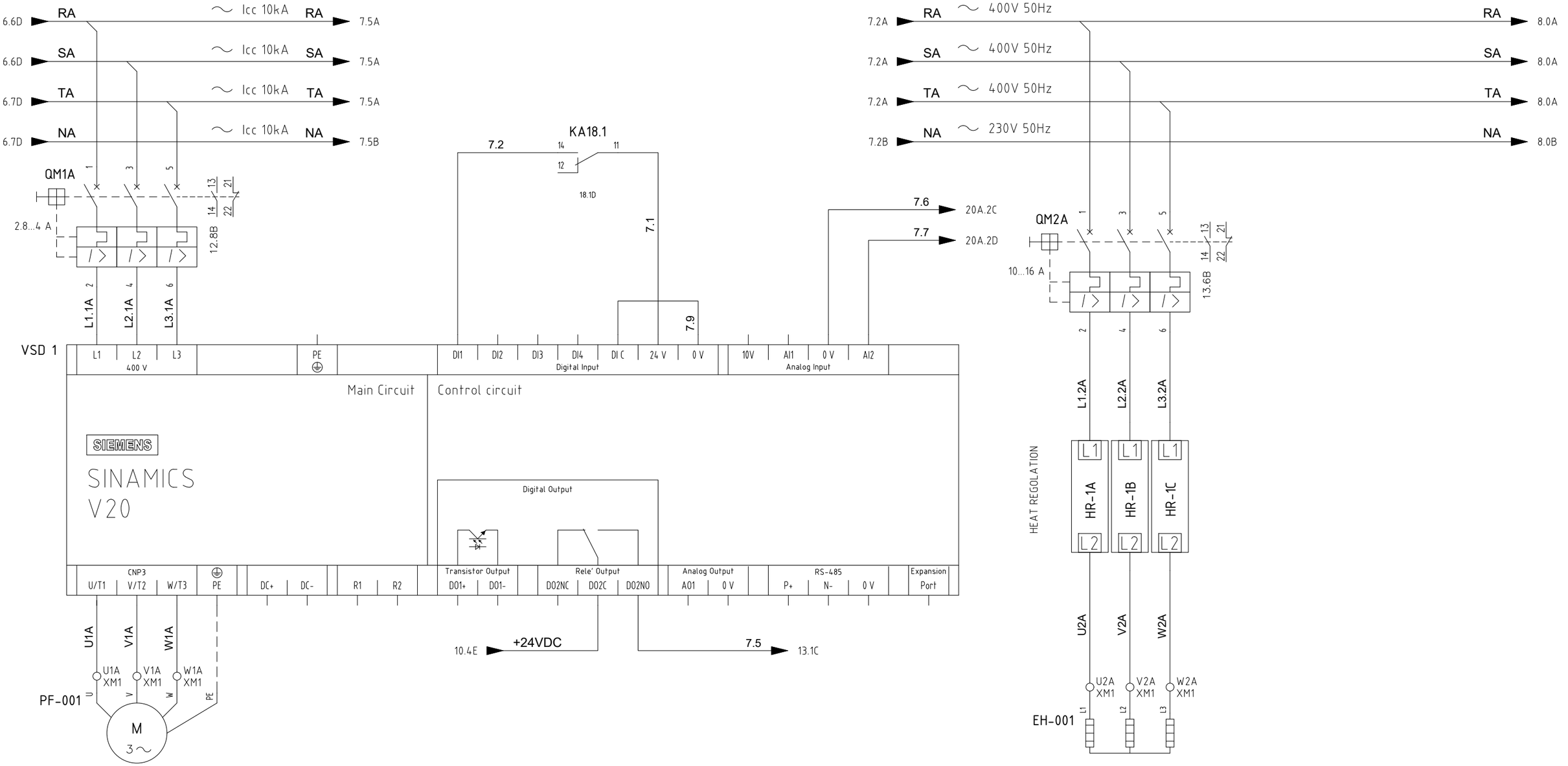
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
POWER SECTION

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 6B
F.S. 7



HFM-77-101	
PRESSURIZING FAN 1	
RATED	ABSORBED
0.75 kW	0.68 kW
1.08 A	1.15 A

HSS-77-101	
ELECTRICA HEATER	
RATED	ABSORBED
10 kW	10 kW
14.5 A	14.5 A

REV.	MODIFICA	DATA	FIRMA
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BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
POWER SECTION

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 7
F.S. 8

7.9A RA ~ Icc 10kA ~ 400V 50Hz RA /./

7.9A SA ~ Icc 10kA ~ 400V 50Hz SA /./

7.9A TA ~ Icc 10kA ~ 400V 50Hz TA 21.3F

7.9B NA ~ Icc 10kA ~ 230V 50Hz NA /./

QF1A
2 A
1 N
2 N
13 21
14 22
18.3B

A.A

B.A

PFT8.1
t>
13 14
8.1
PF8.1 A1
M
1 ~

PHT8.1
t<
13 14
8.2
PH8.1

PLS8.1
11 12
DOOR SWITCH
8.3
PL8.1 X1
INTERNAL PANEL LIGHT
X2

HL8.1 X1
WH
230V VOLTAGE PRESENCE
X2

KA18.5
15.5D
8.4
206 XPF1
HSS-77-103
207 XPF1

KA18.4
18.4D
11 14
12
8.5
212 XPF1
213 XPF1

HDZ-77-101
A1
M
1 ~

PF-001
MOTOR HEATER

REV.	MODIFICA	DATA	FIRMA
03	ISSUE FOR APPROVAL	05/09/24	
02	ISSUE FOR APPROVAL	13/06/24	
01	ISSUE FOR APPROVAL	15/04/24	

DATA	15/04/2024
DISEGN.	F.M.
VISTO	S.S.
APPR.	M.G.

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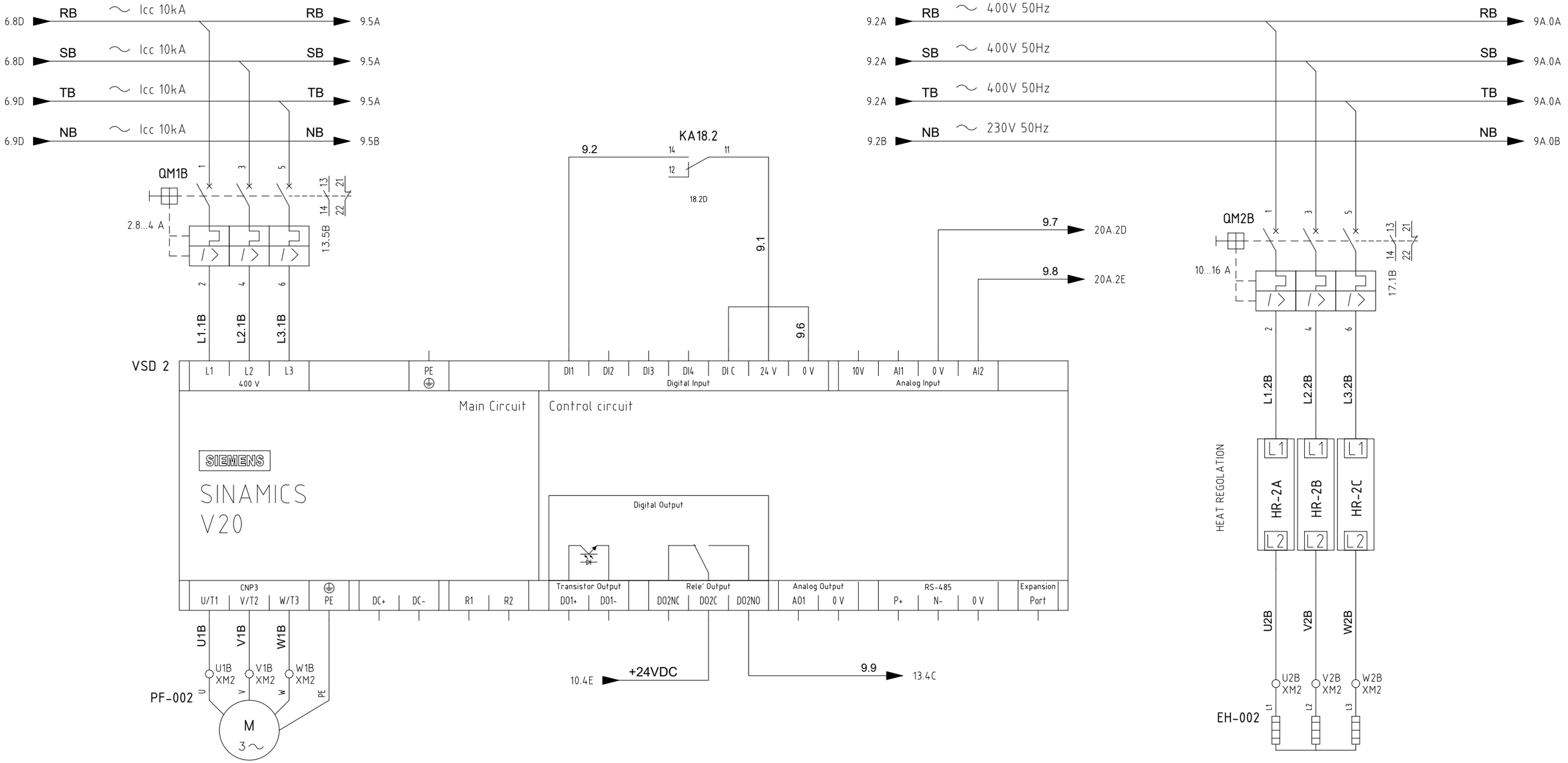
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
POWER SECTION

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 8
F.S. 9



HFM-77-102	
PRESSURIZING FAN 2	
RATED	ABSORBED
0.75 kW	0.98 kW
1.08 A	1.15 A

HHS-77-102	
ELECTRICAL HEATER	
RATED	ABSORBED
10 kW	10 kW
14.5 A	14.5 A

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BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
POWER SECTION

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 9
F.S. 9A

9.9A RB ~ Icc 10kA ~ 400V 50Hz RB /./

9.9A SB ~ Icc 10kA ~ 400V 50Hz SB /./

9.9A TB ~ Icc 10kA ~ 400V 50Hz TB 22.3F

9.9B NB ~ Icc 10kA ~ 230V 50Hz NB /./

QF1B
2 A
1 N
2 N
13 21
14 22
17.3B

A.B

B.B

PFT9A.1
t>
13 14
9A.1
PF9A.1 A1
M 1~

PHT9A.1
t<
13 14
9A.2
PH9.1

PLS9A.1
11 12
DOOR SWITCH
9A.3
PL9A.1 X1 X2

HL9A.1 X1 X2 WH
230V VOLTAGE PRESENCE

KA18.6
15.7D
9A.4
306 XPF2
HSS-77-104
307 XPF2

KA18.7
18.7D
11 14
9A.5
312 XPF2
313 XPF2
HDZ-77-102 A1
M 1~

PF-002
MOTOR HEATER

REV.	MODIFICA	DATA	FIRMA
03	ISSUE FOR APPROVAL	05/09/24	
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CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
POWER SECTION

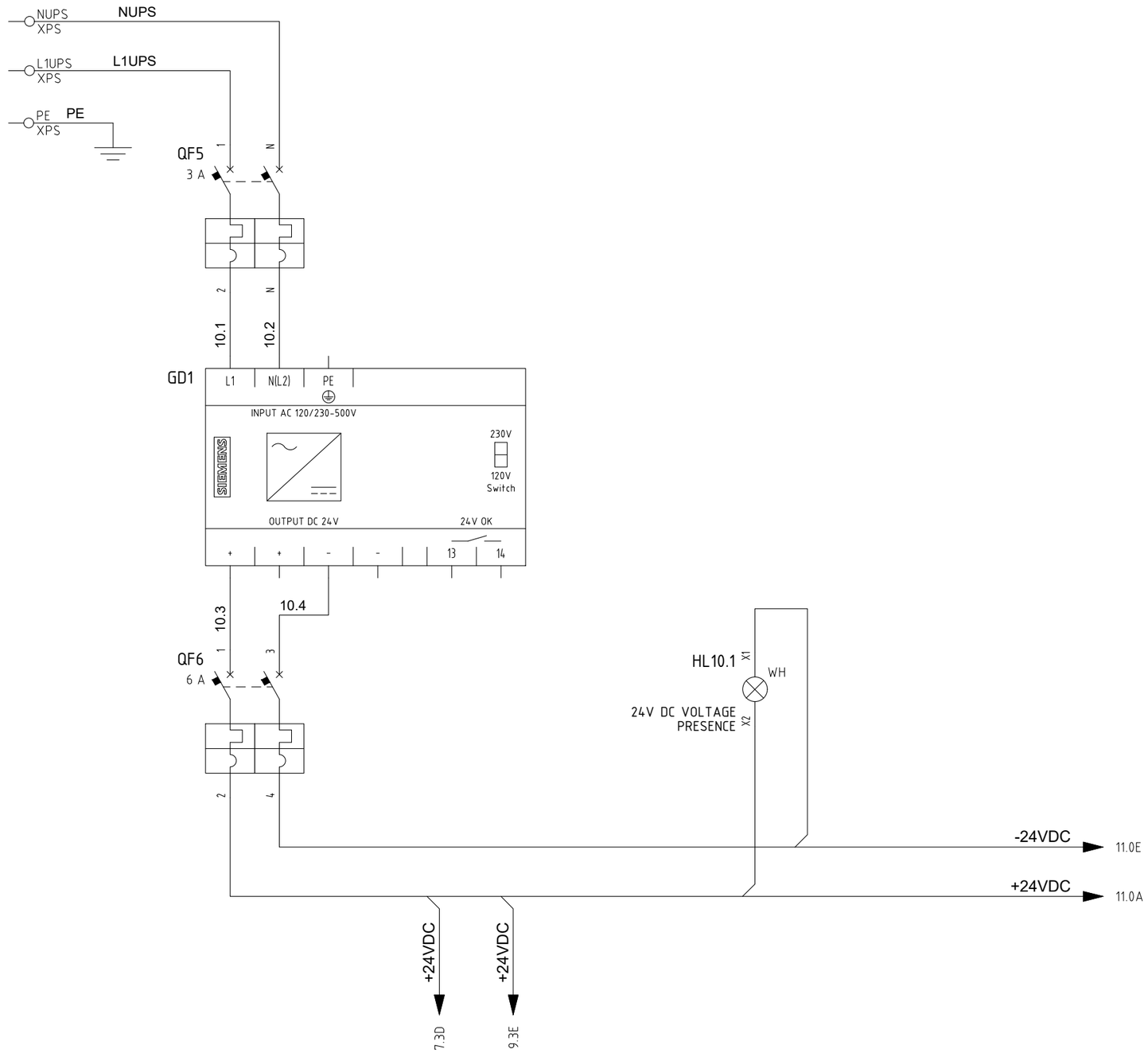
ROSETTI MARINO

1724000049-HV-DA-00026

FG. 9A
F.S. 10

UPS POWER SUPPLY
BY CLIENT

1PH + N + PE 230V
50Hz



RATED POWER: 0.7 kW
RATED CURRENT: 3 A

ABSORBED POWER: 0.5 kW
ABSORBED CURRENT: 2 A

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CLIENT:
CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00026

F.G. 10
F.S. 11

SHUT DOWN
FROM
CUSTOMER SIS

PF-001
PRESSURIZING FAN
THERMIC PROTECTION
PTC-001

PF-002
PRESSURIZING FAN
THERMIC PROTECTION
PTC-002

10.7E +24VDC

+24VDC 11A.0A

24V DC
FROM SIS
1= OK
0= SHUT
DOWN

100 XC

11.1

KA11.1 A1 A2

101 XC

11.2

14.4B 11 12 14 21 22 24 31 32 34 41 42 44

A1/11

MTP-001

SIEMENS

MOTOR THERMIC PROTECTION

TRIPPED

T1 T2 A2 NC NO 12 14

11.3 11.4

200 XPF1 201 XPF1

11.5 12.5B

MTP-002

SIEMENS

MOTOR THERMIC PROTECTION

TRIPPED

T1 T2 A2 NC NO 12 14

11.6 11.7

300 XPF2 301 XPF2

11.8 13.2C

10.7E -24VDC

-24VDC 11A.0E

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FG. 11
F.S. 11A

HPB-77-101
EMERGENCY POWER
BUTTON
HHU-77001

HPB-77-102
EMERGENCY POWER
BUTTON
HHU-77002

LIGHT SWITCH

11.9A +24VDC

+24VDC 12.0A

202 XPF1

HPB-77-101 11 12

203 XPF1

11A.3

302 XPF2

HPB-77-102 11 12

303 XPF2

11A.4

QSA C1 C2

6.6B

QSB C1 C2

6.8B

104 XC

106 XC

LIGHT
PUSH BUTTON

105 XC

107 XC

11A.6

KA11A.1 A1 A2

A A

KA11A.1 11 14 12

11A.5

KA11A.2 A1 A2

B B

6A.0C 14 11
6A.0C 24 21

11A.8C 11 12 14 21 22 24 31 32 34 41 42 44

11.9E -24VDC

-24VDC 12.0A

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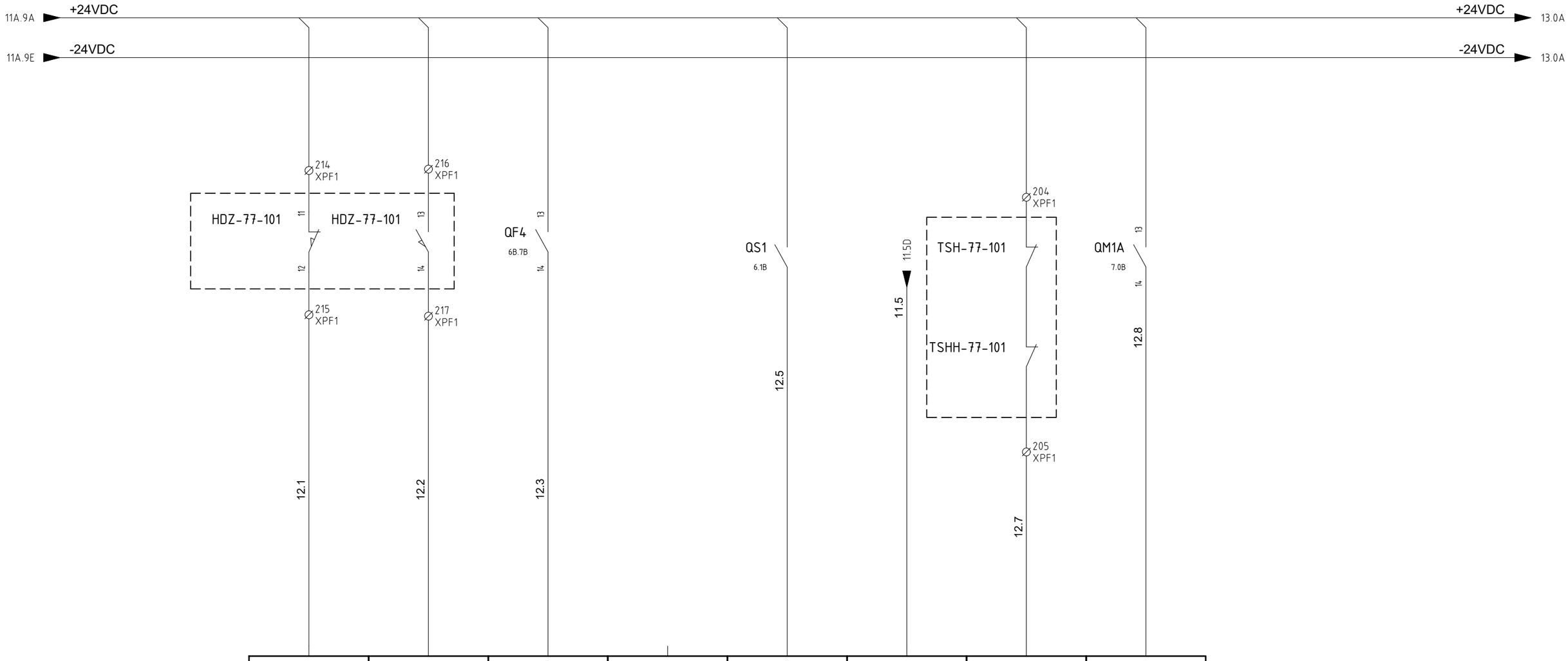
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BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 11A
F.S. 12



1	2	3	4	5	6	7	8
I0.0	I0.1	I0.2	I0.3	I0.4	I0.5	I0.6	I0.7
CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4
Name: A3 Sheet:	Name: A3 Sheet:	Name: A3 Sheet:	Name: A3 Sheet:	Name: A3 Sheet:	Name: A3 Sheet:	Name: A3 Sheet:	Name: A3 Sheet:
HDZ-77-101 CLOSE FEEDBACK 1= CLOSE 0= NOT CLOSE	HDZ-77-101 OPEN FEEDBACK 1= OPEN 0= NOT OPEN	HHC-77-001 HETING CABLE TRIP	SPARE	MAIN BRAKER TRIP SIGNAL	TE-77-101 MOTOR. TERM.PROT 0=MALFUNC. 1=NORMAL	TSH/HH-77-101 EL.HEATER THERM. 0=MALFUNC. 1=NORMAL	TRIP SIGNAL HFM-77-101 0=MALFUNC. 1=NORMAL

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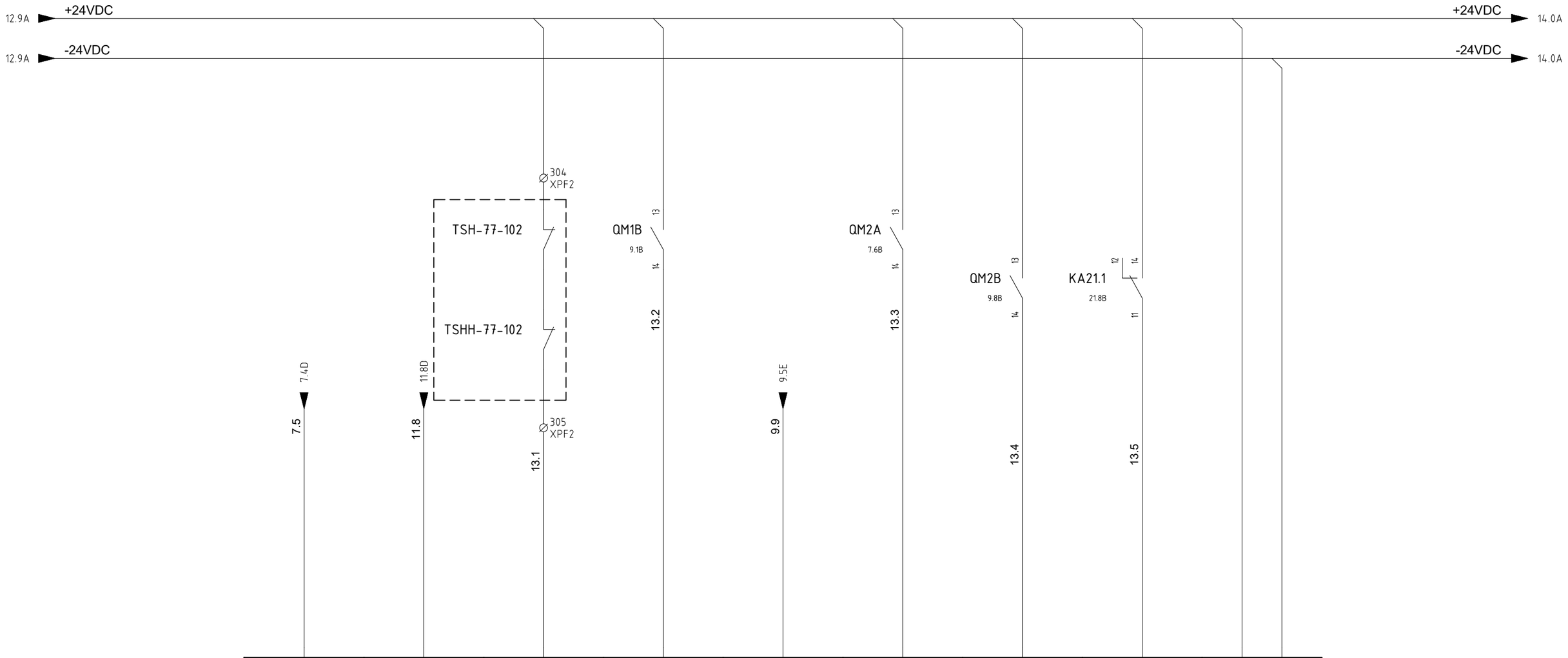
CLIENT:
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BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 12
F.S. 13



9	10	11	12	13	14	15	16	L+ M
I1.0	I1.1	I1.2	I1.3	I1.4	I1.5	I1.6	I1.7	
CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4
Name: A3 / Sheet:	Name: A3 / Sheet:	Name: A3 / Sheet:	Name: A3 / Sheet:	Name: A3 / Sheet:	Name: A3 / Sheet:	Name: A3 / Sheet:	Name: A3 / Sheet:	Name: A3 / Sheet:
VSD-1 MALFUN. SIGNAL 0=MALFUNC. 1=NORMAL	TE-77-102 MOTOR. TERM.PROT 0=MALFUNC. 1=NORMAL	TSH/HH-77-102 EL.HEATER THERM. 0=MALFUNC. 1=NORMAL	TRIP SIGNAL HFM-77-102 0=MALFUNC. 1=NORMAL	VSD-2 MALFUN. SIGNAL 0=MALFUNC. 1=NORMAL	HSS-77-101 TRIP SIGNAL 0=MALFUNC. 1=NORMAL	HSS-77-102 TRIP SIGNAL 0=MALFUNC. 1=NORMAL	HSS-77-101 MALFUNCTION 0=MALFUNC. 1=NORMAL	

REV.	MODIFICA	DATA	FIRMA
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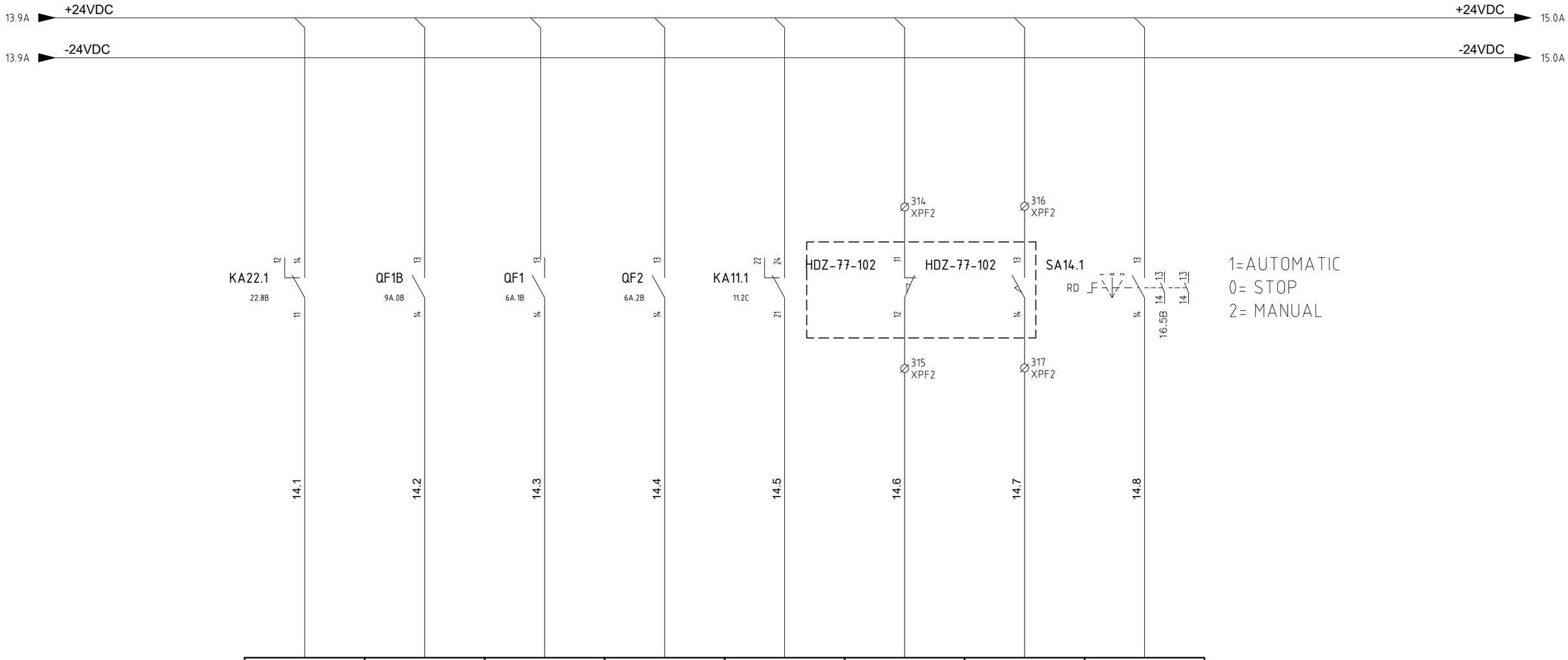
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 13
F.S. 14



1	2	3	4	5	6	7	8
12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7
CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5
Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:
HSS-77-102 MALFUNCTION 0=MALFUNC. 1=NORMAL	TRIP AUX SECTION HHU-77002 PF-002 SECTION	TRIP SIGNAL MODULE LIGHT	TRIP SIGNAL MODULE SOCKET	HVAC SHUT DOWN FROM SIS 0=SHUTDOWN 1=NORMAL	HDZ-77-102 CLOSE FEEDBACK 1= CLOSE 0= NOT CLOSE	HDZ-77-102 OPEN FEEDBACK 1= OPEN 0= NOT OPEN	HHU-77001 SELECTOR AUTOMATIC 0= NOT AUTOMATIC 1= AUTOMATIC

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BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 14
F.S. 15

14.9A +24VDC

14.9A -24VDC

+24VDC 16.0A

-24VDC 16.0A

QF1A	QF3	QSA	QSB	QM1		KM1			
8.0B	6A.4B	6.6B	6.8B	6B.1B	13 / 14	15.7D			
15.1	15.2	15.3	15.4	15.5		15.7			

9	10	11	12	13	14	15	16	L+ M
13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	
CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5
Name: A4 / Sheet:	Name: A4 / Sheet:	Name: A4 / Sheet:	Name: A4 / Sheet:	Name: A4 / Sheet:	Name: A4 / Sheet:	Name: A4 / Sheet:	Name: A4 / Sheet:	Name: A4 / Sheet:
TRIP AUX SECTION HHU-77001 Trip Aux Section PF-001	GENERAL PANEL AUX TRIP General Panel Aux Trip	HHU-77001 MAIN BRAKER TRIP	HHU-77002 MAIN BRAKER TRIP	HSS-77-001/2/3 SPACE HEATER TRIP	SPARE	HSS-77-001/2/3 SPACE HEATER RUN	SPARE	

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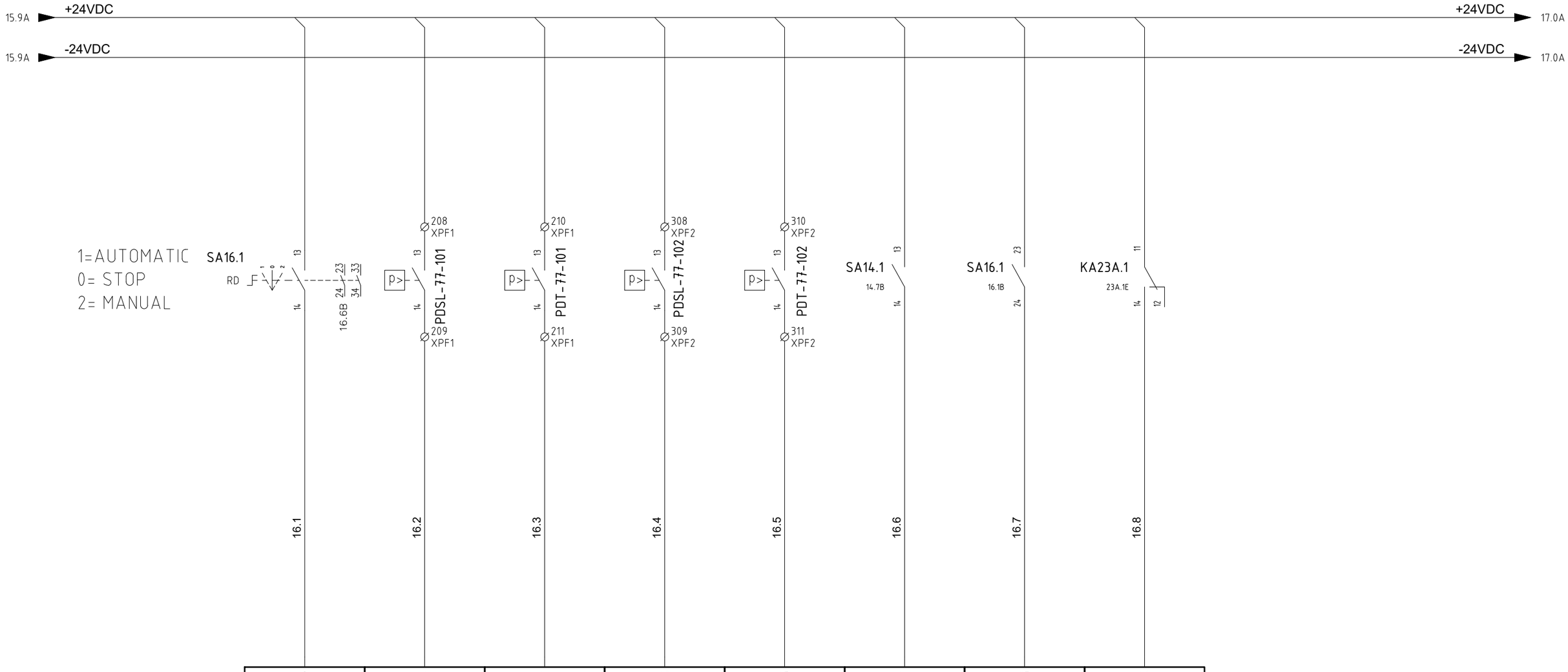
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 15
F.S. 16



9	10	11	12	13	14	15	16
14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7
CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6
Name: A5 Sheet:	Name: A5 Sheet:	Name: A5 Sheet:	Name: A5 Sheet:	Name: A5 Sheet:	Name: A5 Sheet:	Name: A5 Sheet:	Name: A5 Sheet:
HHU-77002 AUTOMATIC SELECTOR 0=NOT AUTOMATIC 1=AUTOMATIC	HHU-77001 FAN FLOW SWITCH 0=NO FLOW 1= FLOW	HHU-77001 FILTER DIFF SWITCH 0=NORMAL 1=CLOGGED	HHU-77002 FAN FLOW SWITCH 0=NO FLOW 1=FLOW	HHU-77002 FILTER DIFF SWITCH 0=NORMAL 1=CLOGGED	HHU-77001 MANUAL SELECTOR 0=NOT MANUAL 1= MANUAL	HHU-77002 MANUAL SELECTOR 0=NOT MANUAL 1= MANUAL	HFD-77001 CLOSE CONTACT 0= NOT CLOSE 1= CLOSE

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BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 16
F.S. 17



9	10	11	12	13	14	15	16	L+ M
I5.0	I5.1	I5.2	I5.3	I5.4	I5.5	I5.6	I5.7	
CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6
Name: A5 / Sheet:	Name: A5 / Sheet:	Name: A5 / Sheet:	Name: A5 / Sheet:	Name: A5 / Sheet:	Name: A5 / Sheet:	Name: A5 / Sheet:	Name: A5 / Sheet:	Name: A5 / Sheet:
HFD-77001 OPEN CONTACT 0=NOT OPEN 1=OPEN	HFD-77002 CLOSE CONTACT 0= NOT CLOSE 1= CLOSE	HFD-77002 OPEN CONTACT 0=NOT OPEN 1= OPEN	HFD-77003 CLOSE CONTACT 0= NOT CLOSE 1= CLOSE	HFD-77003 OPEN CONTACT 0= NOT OPEN 1= OPNE	SPARE	SPARE	SPARE	

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B-100 HV-MV SWITCHGEAR ROOM
AUX SECTION

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FG. 17
F.S. 18

VSD 1 START COMMAND vsd 1 start command		VSD 2 START COMMAND vsd 2 start command		HVAC MALFUNCTION SIGNAL TO SIS 0=MALFUNC. 1=NORMAL		HDZ-77-101 OPEN COMMAND		PF-001 MOTOR HEATER PF-001 Motor Heater		PF-002 MOTOR HEATER PF-002 Motor Heater		HHS-77001 SPACE HEAER START		HDZ-77-102 OPEN COMMAND	
Name: A6	Sheet:	Name: A6	Sheet:	Name: A6	Sheet:	Name: A6	Sheet:	Name: A6	Sheet:	Name: A6	Sheet:	Name: A6	Sheet:	Name: A6	Sheet:
CPU: QUADRO GENERALE MOD. : 7		CPU: QUADRO GENERALE MOD. : 7		CPU: QUADRO GENERALE MOD. : 7		CPU: QUADRO GENERALE MOD. : 7		CPU: QUADRO GENERALE MOD. : 7		CPU: QUADRO GENERALE MOD. : 7		CPU: QUADRO GENERALE MOD. : 7		CPU: QUADRO GENERALE MOD. : 7	
Q0.0		Q0.1		Q0.2		Q0.3		Q0.4		Q0.5		Q0.6		Q0.7	
1		2		3		4		5		6		7		8	

17.9A +24VDC → 19.0D

17.9A -24VDC → 19.0D

18.1 18.2 18.3 18.5 18.6 18.7

KA18.1 A1 A2 — KA18.2 A1 A2 — KA18.3 A1 A2 — KA18.4 A1 A2 — KA18.5 A1 A2 — KA18.6 A1 A2 — KM1 A1 A2 — KA18.7 A1 A2

7.3A 11 12 14 21 22 24 31 32 34 41 42 44

9.4A 11 12 14 21 22 24 31 32 34 41 42 44

23.1B 11 12 14 21 22 24 31 32 34 41 42 44

8.7D 11 12 14 21 22 24 31 32 34 41 42 44

8.6D 11 12 14 21 22 24 31 32 34 41 42 44
23.4B

9A.6D 11 12 14 21 22 24 31 32 34 41 42 44
23.5B

6B.1C
6B.1C
6B.1C
6B.1C
20A.2B

9A.8D 11 12 14 21 22 24 31 32 34 41 42 44

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CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 18
F.S. 19

SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	
Name: A6 / Sheet:	Name: A6 / Sheet:	Name: A6 / Sheet:	Name: A6 / Sheet:	Name: A6 / Sheet:	Name: A6 / Sheet:	Name: A6 / Sheet:	Name: A6 / Sheet:	Name: A6 / Sheet:
CPU: QUADRO GENERALE MOD. : 7	CPU: QUADRO GENERALE MOD. : 7	CPU: QUADRO GENERALE MOD. : 7	CPU: QUADRO GENERALE MOD. : 7	CPU: QUADRO GENERALE MOD. : 7	CPU: QUADRO GENERALE MOD. : 7	CPU: QUADRO GENERALE MOD. : 7	CPU: QUADRO GENERALE MOD. : 7	CPU: QUADRO GENERALE MOD. : 7
Q1.0	Q1.1	Q1.2	Q1.3	Q1.4	Q1.5	Q1.6	Q1.7	
9	10	11	12	13	14	15	16	L+ M

18.9C +24VDC → +24VDC 20.0A

18.9D -24VDC → -24VDC 20.0A

REV.	MODIFICA	DATA	FIRMA
03	ISSUE FOR APPROVAL	05/09/24	
02	ISSUE FOR APPROVAL	13/06/24	
01	ISSUE FOR APPROVAL	15/04/24	

DATA	15/04/2024
DISEGN.	F.M.
VISTO	S.S.
APPR.	M.G.

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tel. 0039–0371–69076
frigotermica@frigotermica.com

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 19
F.S. 20

19.9D +24VDC

19.9D -24VDC

+24VDC 20A.0A

-24VDC 20A.0A

TEMPERATURE TRANSM.
4-20ma
77-TT-101

500 XT
501 XT
502 XT

TEMPERATURE TRANSM.
4-20mA
77-TT-102

503 XT
504 XT
505 XT

DIFFER. PRESSURE
TRANSM. 4-20mA
77-TP-101

506 XT
507 XT
508 XT

TEMPERATURE TRASM.
4-20mA
77-TT-103

- + T

509 XT
510 XT

20.1 20.2 20.3

1 5 9 13	2 6 10 14	3 7 11 15	4 8 12 16	L+ M
AI0.0	AI0.1	AI0.2	AI0.3	
CPU: QUADRO GENERALE MOD. : 8	CPU: QUADRO GENERALE MOD. : 8	CPU: QUADRO GENERALE MOD. : 8	CPU: QUADRO GENERALE MOD. : 8	CPU: QUADRO GENERALE MOD. : 8
Name: A7 / Sheet:	Name: A7 / Sheet:	Name: A7 / Sheet:	Name: A7 / Sheet:	Name: A7 / Sheet:
77-TT-101 TEMPERATURE TRANSMITTER	77-TT-102 TEMPERATURE TRANSMITTER	77-PT-101 DIFFERENTIAL PRESSURE TRANSMITTER SIGNAL	77-TT-103 DUCT TEMPERATURE TRASMITTER	

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BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 20
F.S. 20A

20.9A +24VDC

20.9A -24VDC

+24VDC 20B.0A

-24VDC 20B.0A

VSD 1 MODULATION VSD 1 modulation		VSD 2 MODULATION VSD 2 modulation		HSS-77-101 MODULATION SIGNAL EH-001 Modulation Signal		HSS-77-102 MODULATION SIGNAL EH-002 Modulation Signal			
Name: A8	Sheet:	Name: A8	Sheet:	Name: A8	Sheet:	Name: A8	Sheet:	Name: A8	Sheet:
CPU: QUADRO GENERALE MOD. : 10		CPU: QUADRO GENERALE MOD. : 10		CPU: QUADRO GENERALE MOD. : 10		CPU: QUADRO GENERALE MOD. : 10		CPU: QUADRO GENERALE MOD. : 10	
AQ0.0		AQ0.1		AQ0.2		AQ0.3			
9 1 5 13		10 2 6 14		11 3 7 15		12 4 8 16		L+	M

7.5B 7.6

7.5B 7.7

9.6B 9.7

9.6B 9.8

20A.1 21.7B

20A.2 21.7B

20A.3 22.7C

20A.4 22.7C

REV.	MODIFICA	DATA	FIRMA
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BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 20A
F.S. 20B

20A.9A +24VDC

20A.9A -24VDC

+24VDC 20C.0A

-24VDC 20C.0A

SPARE	SPARE	SPARE	SPARE	
Name: A9 / Sheet:	Name: A9 / Sheet:	Name: A9 / Sheet:	Name: A9 / Sheet:	Name: A9 / Sheet:
CPU: QUADRO GENERALE MOD. : 11	CPU: QUADRO GENERALE MOD. : 11	CPU: QUADRO GENERALE MOD. : 11	CPU: QUADRO GENERALE MOD. : 11	CPU: QUADRO GENERALE MOD. : 11
AQ1.0	AQ1.1	AQ1.2	AQ1.3	
9 1 5 13	10 2 6 14	11 3 7 15	12 4 8 16	L+ M

REV.	MODIFICA	DATA	FIRMA
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BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 20B
F.S. 20C

20B.9A +24VDC

20B.9A -24VDC

+24VDC 20D.0E

-24VDC 20D.0F

TEMPERATURE TRASM.
4-20 mA
77-TT-104

\- + T

511 XT

512 XT

1 5 9 13	2 6 10 14	3 7 11 15	4 8 12 16	L+ M
AI1.0	AI1.1	AI1.2	AI1.3	
CPU: QUADRO GENERALE MOD. : 12	CPU: QUADRO GENERALE MOD. : 12	CPU: QUADRO GENERALE MOD. : 12	CPU: QUADRO GENERALE MOD. : 12	CPU: QUADRO GENERALE MOD. : 12
Name: A10 Sheet:	Name: A10 Sheet:	Name: A10 Sheet:	Name: A10 Sheet:	Name: A10 Sheet:
77-TT-104 DUCT TEMPERATURE TRANSMITTER	SPARE	SPARE	SPARE	

REV.	MODIFICA	DATA	FIRMA
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BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 20C
F.S. 20D

A1

SIEMENS

SIMATIC HMI

TOUCH

12"

X1 P1 PROFINET

X1 P2 PROFINET

X2 PROFIBUS DP

X60 Mini USB - Type B

X61 USB - Type A

X62 USB - Type A

X90 OUT Line OUT

X90 IN Line IN

CABLE 1

CABLE 2

CABLE 3

CABLE 4

X1 P1 R PROFINET

X1 P2 R PROFINET

TO PAGE 20E

D1

D2

SIEMENS

RUN

SIMATIC S7-1500

ESC OK

L+ M L+ M DC 24V (X80)

DC 24V (X80)

L+	M
1	2

FG

20C.9A +24VDC

20C.9A -24VDC

+24VDC 20E.0E

-24VDC 20E.0F

REV.	MODIFICA	DATA	FIRMA
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CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM

PLC ARCHITECTURE

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 20D

F.S. 20E

FROM
PAGE 40

CABLE 4

CABLE 1

CABLE 2

MODBUS TCP/P TO
CLIENT

RJ45
CONNECTION
IN TERMINAL
STRIP

1	TD	PROFINET IO - Port 1 RJ45
2	TD N	
3	RD	
4	GND	
5	GND	
6	RD N	
7	GND	
8	GND	

1	TD	PROFINET IO - Port 2 RJ45
2	TD N	
3	RD	
4	GND	
5	GND	
6	RD N	
7	GND	
8	GND	

1L+	DC 24V
2L+	
1M	
2M	

A2 A3 A4 A5 A6 A7 A8 A9 A10

SIEMENS
BA 2xRJ45
RN ER MT
DI 16x24VDC ST
DQ 16x24VDC/0,5A ST
AI 4xU/I 2-wire ST
AQ 4xU/I ST
DIAG
SIMATIC
ET 200SP
IM 155-6 PN/2 HF
PWR
6ES7155-6AU01-0CN0
MAC ADDRESS
X80
24VDC
X1
PROFINET
(LAN)
6ES7193-6RA00-0AA0
LK1
LK2
PR1
PR2

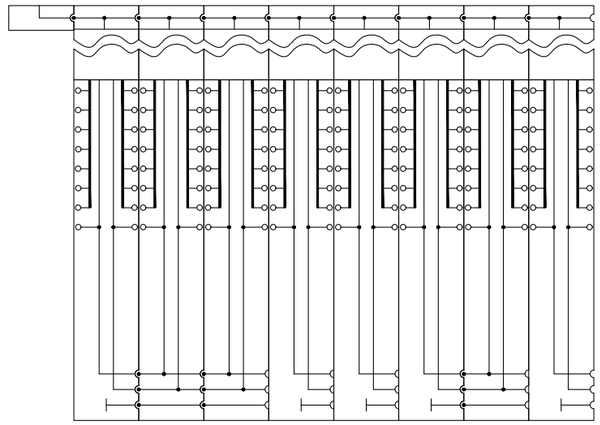
A11

SIEMENS
SCALANCE
XC208
P1 P2 P3 P4 P5 P6 P7 P8
SELECT/
SET
CONSOLE
FAULT
F1
F2
L1+
M1
M2
L2+
208-0BA00-2AC2

P1	LAN	
P2	LAN	
P3	LAN	
P4	LAN	
P5	LAN	
P6	LAN	
P7	LAN	
P8	LAN	

1	F1	
2	F2	

1	L1+	DC 24V
2	M1	
3	M2	
4	L2+	



20D.9E +24VDC → +24VDC 21.0A

20D.9F -24VDC → -24VDC 21.0A

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CLIENT:
CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
PLC ARCHITECTURE

ROSETTI MARINO

1724000049-HV-DA-00026

F.G. 20E
F.S. 21

EH-001
MODULATION

20E.9E +24VDC → +24VDC 22.0A

20E.9F -24VDC → -24VDC 22.0A

1/L1

HR-1A.

9 AL
8 A2
7 A2
6 A1
5 D1
4 US
3 A2

GRP 3

2/T1

1/L1

HR-1B.

9 AL
8 A2
7 A2
6 A1
5 D1
4 US
3 A2

GRP 3

2/T1

1/L1

HR-1C.

19 AL
18 AL
17 D17
16 A2
15 A-
14 A+
13 D13
12 US
11 A2

GRM 1

2/T1

20A.1
20A.5E

20A.2
20A.5E

KA21.1
A1
A2

17.2B
11 12 14
21 22 24
31 32 34
41 42 44

3/L2

21.4
F21.1
1
2

8.9A RA

REV.	MODIFICA	DATA	FIRMA
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CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
ELECTRICAL HEATER MODULATION

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 21
F.S. 22

EH-002
MODULATION

21.9A +24VDC → +24VDC /./

21.9A -24VDC → -24VDC /./

1/L1

HR-2A.

9 AL
8 A2
7 A2
6 A1
5 D1
4 US
3 A2

GRP 3

2/T1

1/L1

HR-2B.

9 AL
8 A2
7 A2
6 A1
5 D1
4 US
3 A2

GRP 3

2/T1

1/L1

HR-2C.

19 AL
18 AL
17 D17
16 A2
15 A-
14 A+
13 D13
12 US
11 A2

GRM 1

2/T1

20A.6E
20A.7E
20A.3
20A.4

KA22.1 A1 A2

17.3B 11 12 14 21 22 24 31 32 34 41 42 44

3/L2

22.20 1 FU22.1 2

9A.9A RB

REV.	MODIFICA	DATA	FIRMA
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CLIENT: CROSSWIND

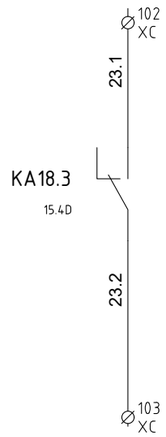
BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
ELECTRICAL HEATER MODULATION

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 22
F.S. 23

AVAILABLE SIGNAL
GENERAL FAULT
TO DCS



CLOSE= NORMAL
OPEN= MALFUNCTION

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CLIENT:
CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
AVAILABLE SIGNAL

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 23
F.S. 23A

HFD-77001
CLOSED FEEDBACK

HFD-77002
CLOSED FEEDBACK

HFD-77003
CLOSED FEEDBACK

HFD-77001
OPEN FEEDBACK

HFD-77002
OPEN FEEDBACK

HFD-77003
OPEN FEEDBACK

+24VDC

+24VDC

400 XFD
402 XFD
404 XFD
406 XFD
408 XFD
410 XFD

HFD-77001 11 12
HFD-77001 13 14
HFD-77002 11 12
HFD-77002 13 14
HFD-77003 11 12
HFD-77003 13 14

401 XFD
403 XFD
405 XFD
407 XFD
409 XFD
411 XFD

KA23A.1 A1 A2
KA23A.2 A1 A2
KA23A.3 A1 A2
KA23A.4 A1 A2
KA23A.5 A1 A2
KA23A.6 A1 A2

-24VDC

-24VDC

16.7B 11 12 14
23.2B 21 22 24
17.1B 11 12 14
23.4B 21 22 24
17.2B 11 12 14
23.5B 21 22 24
17.3B 11 12 14
23.7B 21 22 24
17.4B 11 12 14
23.4D 21 22 24
17.4B 11 12 14
23.5D 21 22 24

REV.	MODIFICA	DATA	FIRMA
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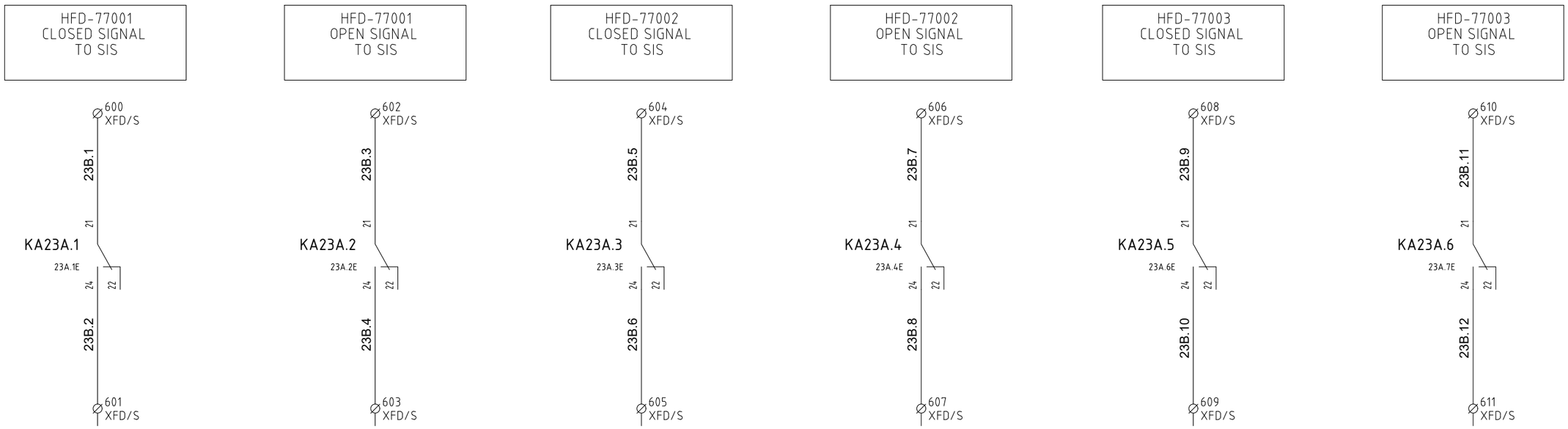
CLIENT:
CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
FIRE DAMPER

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 23A
F.S. 23B



REV.	MODIFICA	DATA	FIRMA
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BASE LOAD POWER HUB (BLPH)
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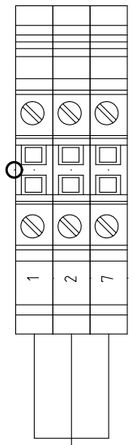
FIRE DAMPER

ROSETTI MARINO

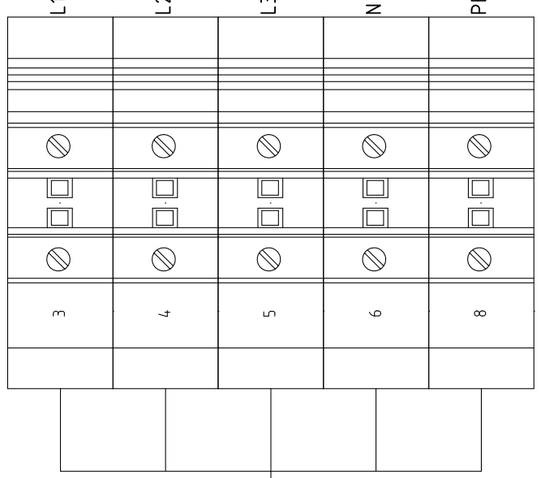
1724000049-HV-DA-00026

FG. 23B
F.S. 24

+QG - XPS
POWER SUPPLY

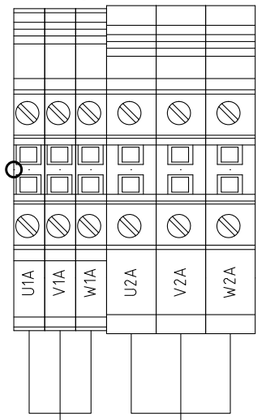


230V 1F + N + PE
50Hz
FROM CLIENT
SECTION TBA



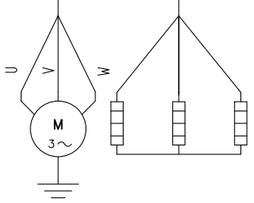
400V 3F +N + PE
50Hz
FROM CLIENT
SECTION TBA

+QG - XM1
POWER PRESS FAN 1

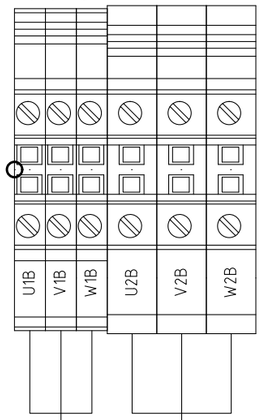


4G2.5 FG16OM16 — HFM-77-001 FAN MOTOR

4G6 FG16OM16 — HSS-77-101 ELECTRICAL HEATER

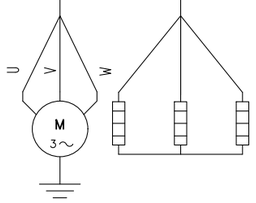


+QG - XM2
POWER PRESS FAN 2

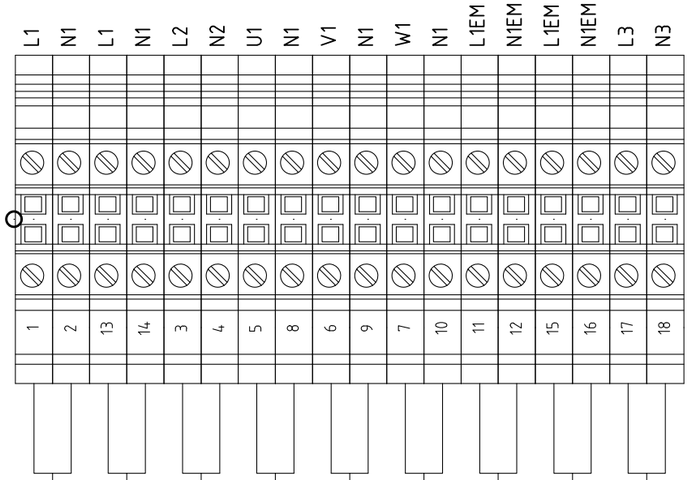


4G2.5 FG16OM16 — HFM-77-002 FAN MOTOR

4G6 FG16OM16 — HSS-77--102 ELECTRICAL HEATER



+QG - XAC
ACCESSORIES



3G2.5 — MODULE LIGHT — LIGHT

3G2.5 — MODULE LIGHT — LIGHT

3G3 — MODULE SOCKET — SOCKET

3G2.5 — SPACE HEATER — HSS-77-001

3G2.5 — SPACE HEATER — HSS-77-002

3G2.5 — SPACE HEATER — HSS-77-003

3G2.5 — MODULE EM LIGHT — EM. LIGHT

3G2.5 — MODULE EM LIGHT — EM. LIGHT

3G2.5 — HEATING CABLE — HHT-77-001

REV.	MODIFICA	DATA	FIRMA
03	ISSUE FOR APPROVAL	05/09/24	
02	ISSUE FOR APPROVAL	13/06/24	
01	ISSUE FOR APPROVAL	15/04/24	

DATA	15/04/2024
DISEGN.	F.M.
VISTO	S.S.
APPR.	M.G.

Frigotermica
HVAC SYSTEM and EQUIPMENT
S.p.186–Cornegliano Laud. (Lo) Italy
tel. 0039–0371–69076
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CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM

TERMINAL STRIP

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 24
F.S. 25

REV.	MODIFICA	DATA	FIRMA	APPR.
03	ISSUE FOR APPROVAL	05/09/24		
02	ISSUE FOR APPROVAL	13/06/24		DISEGN. F.M.
01	ISSUE FOR APPROVAL	15/04/24		VISTO S.S.
				M.G. 15/04/2024

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172400049-HV-DA-00026

FG. 25
F.S. 25A

+QG - XC

Client

SHUTDOWN FROM DCS		100	+24VDC
		101	11.1
HVAC MALF. SIGNAL TO DCS		102	23.3
		103	23.2
LIGHT BUTTON		104	+24VDC
		105	6C.4
LIGHT BUTTON		106	+24VDC
		107	6C.4

+QG - XPF1

AUX PRES FAN 1

TE-77-101	PTC MOTOR PROTECTION	3G1.5 FG16OM16	200	11.3
			201	11.4
HPB-77-101	EMERGENCY STOP BUTTON	3G1.5 FG16OM16	202	+24VDC
			203	12.3
TSH/HH-77-101	ELECTRICAL HEATER THERMOSTATE PROTECTION	3G1.5 FG16OM16	204	+24VDC
			205	12.7
HSS-77-103	MOTOR FAN ELECTRICAL HEATER	3G1.5 FG16OM16	206	23.5
			207	B
PDSL-77-101	FAN FLOW SWITCH	2X1.5 FG16OM16	208	+24VDC
			209	16.2
PDT-77-101	FILTER FLOW SWITCH	2X1.5 FG16OM16	210	+24VDC
			211	16.3
HDZ-77-101 (240V, 1–2, S1–S6, <5°, >85°)	POWER SUPPLY	3G2.5	212	A.A
			213	B.A
	SIGNAL FEEDBACK	4X1.5	214	+24VDC
			215	12.1
			216	+24VDC
			217	12.2

+QG - XPF2

AUX PRES FAN 2

TE-77-102	PTC MOTOR PROTECTION	3G1.5 FG16OM16	300	11.6
			301	11.7
HPB-77-102	EMERGENCY STOP BUTTON	3G1.5 FG16OM16	302	+24VDC
			303	12.4
TSH/HH-77-102	ELECTRICAL HEATER THERMOSTATE PROTECTION	3G1.5 FG16OM16	304	+24VDC
			305	13.1
HSS-77-104	MOTOR FAN ELECTRICAL HEATER	3G1.5 FG16OM16	306	23.6
			307	B
PDSL-77-102	FAN FLOW SWITCH	2X1.5 FG16OM16	308	+24VDC
			309	16.4
PDT-77-102	FILTER FLOW SWITCH	2X1.5 FG16OM16	310	+24VDC
			311	16.5
HDZ-77-102 (240V, 1–2, S1–S6, <5°, >85°)	POWER SUPPLY	3G2.5	312	A.B
			313	B.B
	SIGNAL FEEDBACK	4X1.5	314	+24VDC
			315	14.6
			316	+24VDC
			317	14.7

+QG - XT

77-TT-101	TEMPERATURE TRANSMITTER BY CLIENT	3X1.5+Sh	500	+24VDC
			501	-24VDC
77-TT-102	TEMPERATURE TRANSMITTER BY CLIENT	3X1.5+Sh	502	20.1
			503	+24VDC
77-TP-101	DIFFERENTIAL PRESSURE TRANSM BY CLIENT	3X1.5+Sh	504	-24VDC
			505	20.2
			506	+24VDC
			507	-24VDC
77-TT-103	DUCT TEMPERATURE TRASMITTER	2X1.5+Sh TBA	508	20.3
			509	20.13
77-TT-104	DUCT TEMPERATURE TRASMITTER	2X1.5+Sh TBA	510	20.15
			511	20C.17
			512	20C.19

+QG - XFD
FIRE DAMPER

+24VDC 16.8 | +24VDC 17.1 | +24VDC 17.2 | +24VDC 17.3 | +24VDC 17.4 | +24VDC 17.5

400 401 402 403 404 405 406 407 408 409 410 411

4X1.5 FEEDBACK SIGNAL

HFD-77001 — HFD-77002 — HFD-77003

1 2 | S1 S2 S3 S4 S5 S6 | 240V | ZSC <5° | ZSO >85°

+QG - XFD/S
FIRE DAMPER SIGNAL

23B.1 23.14 | 23B.3 23.18 | 23B.5 23.22 | 23B.7 23.26 | 23B.9 23.30 | 23B.11 23.34

600 601 602 603 604 605 606 607 608 609 610 611

HFD-77001 CLOSED SIGNAL
HFD-77002 CLOSED SIGNAL
HFD-77003 CLOSED SIGNAL

HFD-77001 OPEN SIGNAL
HFD-77002 OPEN SIGNAL
HFD-77003 OPEN SIGNAL

X3 RJ45

RJ45 CLIENT CONNECTION

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BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
TERMINAL STRIP

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 25A
F.S. 26

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
				Hq	4	2
	R5CPFE6100	Compensation panel for modular cabinet height 100 width 600	dkc	Hq	4	2
	R5CPME6200	Solid modular door for cabinet width 600, door height 200	dkc	Hq	4	2
	RZPCE6200	modular wiring panel L.600 H.200	dkc			2
	R5CPME6600	Solid modular cabinet door 600 width, 600 door height	dkc	Hq	4	2
	RZPCE6600	Modular wiring panel L.600 H.600	dkc			2
	R5CPME6800	Solid modular cabinet door width 600, door height 800	dkc	Hq	4	2
	RZPCE6800	Modular wiring panel L.600 H.800	dkc			2
	R5CQE1866R	Cabinet comp. 1800x600x600 back	dkc	Hq	4	2
	R5LE1862	SIDE DOOR FOR CQE PANEL DEPTH 600 HEIGHT 1800	dkc			2
	R1ZCOR1	Modular plinth corner H100 4pcs	dkc			2
	R1ZPRO601	Front/side flange H100 length 600	dkc			3
	R5TOE60	Rebate crossbar for modular doors, width 600	dkc			5
	RZMVE18	Vertical support height 1800	dkc			2
	RZA33	Lifting Ring	dkc			3
	RZKE65	CQE cabinet union kit	dkc			2
	rzkre65	Flat Cooling Kit for CQE Cabinets	dkc			2
	rzksre65	L-shaped union reinforcement kit for CQE cabinets	dkc			2
	RZSOE545	HORIZONTAL SUPPORT TOTAL CABINET DEPTH 600	dkc			5
	RZDOE6545	HORIZONTAL PARTITION TOTAL CABINET WIDTH 600 DEPTH 600	dkc			5
	RZDVE1860	Vertical partition for CQE 1800x600	dkc			2
32 x 15	534-2	DIN rail EN60715 32x15x1.5 closed	Arnocanali	Hq	5	3.94
32 x 15	PD32Z	Sendzimir rail 32x15x9 closed	Canloplast	Hq	5	0.41
40 x 100	E35	can.cabl.40x100 sg	Canloplast	Hq	5	9.79
60 x 100	E184	Can.Cabl.60x100 SG S/4	Canloplast	Hq	5	0.84
77-TT-103				Hq		1
77-TT-104				Hq		1
A1	6AV2124-0MC01-0AX0	SIMATIC HMI TP1200 Comfort. Touch control, 12" widescreen display	siemens	Hq	20d	1
A2	6ES7155-6AU01-0CN0	IM 155-6 PN HF/2 V4.2 Interface Module	siemens	Hq	20th	1
	6ES7193-6AR00-0AA0	BA 2×RJ45 (PROFINET busadapter with standard Ethernet socket for IM-PN)	siemens			1
A3	6ES7131-6BH01-0BA0	Digital Input Module: 16x24VDC ST	siemens	Hq	20th	1
	6ES7193-6BP00-0DA0	Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)	siemens			1
A4	6ES7131-6BH01-0BA0	Digital Input Module: 16x24VDC ST	siemens	Hq	20th	1
	6ES7193-6BP00-0BA0	Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)	siemens			1
A5	6ES7131-6BH01-0BA0	Digital Input Module: 16x24VDC ST	siemens	Hq	20th	1
	6ES7193-6BP00-0BA0	Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)	siemens			1
A6	6ES7132-6BH01-0BA0	Digital Output Module: DQ 16x24VDC/0.5A ST	siemens	Hq	20th	1
	6ES7193-6BP00-0DA0	Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)	siemens			1
A7	6ES7134-6HD01-0BA1	Analog Input Module: AI 4XU/I 2-Wire ST	siemens	Hq	20th	1
	6ES7193-6BP00-0DA0	Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)	siemens			1
A8	6ES7135-6HD00-0BA1	Analog Output Module: AQ 4XU/I ST	siemens	Hq	20th	1
	6ES7193-6BP00-0DA0	Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)	siemens			1
A9	6ES7135-6HD00-0BA1	Analog Output Module: AQ 4XU/I ST	siemens	Hq	20th	1
	6ES7193-6BP00-0BA0	Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)	siemens			1
A10	6ES7134-6HD01-0BA1	Analog Input Module: AI 4XU/I 2-Wire ST	siemens	Hq	20th	1

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CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
MATERIAL LIST

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 26
F.S. 27

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
A10	*6ES7193-6BP00-0DA0*	*Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)*	*siemens*	*Hq*	*20th*	1
A11	*6GK5208-0BA00-2AC2*	*XC208 Managed Switch with 8 RJ45 100Mbit/s Ports*	*siemens*	*Hq*	*20th*	1
D1	*6ES7513-1RM03-0AB0*	*CPU 1513R-1PN*	*siemens*	*Hq*	*20d*	1
	6ES7954-8LF02-0AA0	*Memory card, 24 MB*	*siemens*			1
	6ES7590-1AB60-0AA0	*Profile rail S7-1500, 160 mm*	*siemens*			1
D2	*6ES7513-1RM03-0AB0*	*CPU 1513R-1PN*	*siemens*	*Hq*	*20d*	1
	6ES7954-8LF02-0AA0	*Memory card, 24 MB*	*siemens*			1
	6ES7590-1AB60-0AA0	*Profile rail S7-1500, 160 mm*	*siemens*			1
EM. LIGHT				*Hq*		1
EM. LIGHT				*Hq*		1
EPB-003	*3su1900-0dy30-0aa0*	*Protective collar for merge button, plastic, yellow, 22mm hole*	*siemens*	*Hq*	*6th*	1
	3SU1001-1HB20-0AA0	*Emergency stop mushroom pushbutton, illuminatable, twist release, 40 mm diameter, 2 positions*	*siemens*			1
	3su1500-0aa10-0aa0	*Support without module. plastic*	*siemens*			1
F1		*docker*		*Hq*	*6b*	1
F2		*docker*		*Hq*	*6b*	1
F3		*docker*		*Hq*	*6b*	1
FU6B.1		*Three-pole fuse*		*Hq*	*6b*	1
GD1	*6EP1333-3BA10*	*Sitop PSU200M single-phase and two-phase, DC 24V/5A. Stabilized power supply Input: 120-230/230-500V AC, Output: DC 24V/5A*	*siemens*	*Hq*	10	1
HDZ-77-101		*Single-phase alternating current motor*		*Hq*	8	1
HDZ-77-101		*NC Limit Switch*		*Hq*	12	1
HDZ-77-101		*Limit Switch: No*		*Hq*	12	1
HDZ-77-102		*Single-phase alternating current motor*		*Hq*	*9a*	1
HDZ-77-102		*NC Limit Switch*		*Hq*	14	1
HDZ-77-102		*Limit Switch: No*		*Hq*	14	1
HFD-77001		*NC Limit Switch*		*Hq*	16	1
HFD-77001		*Limit Switch: No*		*Hq*	17	1
HFD-77001				*Hq*	*25th*	1
HFD-77002		*NC Limit Switch*		*Hq*	17	1
HFD-77002		*Limit Switch: No*		*Hq*	17	1
HFD-77002				*Hq*	*25th*	1
HFD-77003		*NC Limit Switch*		*Hq*	17	1
HFD-77003		*Limit Switch: No*		*Hq*	17	1
HFD-77003				*Hq*	*25th*	1
HL6A.1	*3SU1001-6AA60-0AA0*	*Indicator light with smooth lens, white*	*siemens*	*Hq*	*6th*	1
	3SU1401-1BH60-1AA0	*White LED module for mounting on front plate, 24 ... 240 V AC/DC. Screw terminals*	*siemens*			1
	3su1500-0aa10-0aa0	*Support without module. plastic*	*siemens*			1
HL8.1	*3SU1001-6AA60-0AA0*	*Indicator light with smooth lens, white*	*siemens*	*Hq*	8	1
	3SU1401-1BH60-1AA0	*White LED module for mounting on front plate, 24 ... 240 V AC/DC. Screw terminals*	*siemens*			1
	3su1500-0aa10-0aa0	*Support without module. plastic*	*siemens*			1
HL9A.1	*3SU1001-6AA60-0AA0*	*Indicator light with smooth lens, white*	*siemens*	*Hq*	*9a*	1
	3SU1401-1BH60-1AA0	*White LED module for mounting on front plate, 24 ... 240 V AC/DC. Screw terminals*	*siemens*			1
	3su1500-0aa10-0aa0	*Support without module. plastic*	*siemens*			1
HL10.1	*3SU1001-6AA60-0AA0*	*Indicator light with smooth lens, white*	*siemens*	*Hq*	10	1
	3SU1401-1BH60-1AA0	*White LED module for mounting on front plate, 24 ... 240 V AC/DC. Screw terminals*	*siemens*			1

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B-100 HV-MV SWITCHGEAR ROOM
MATERIAL LIST

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 27
F.S. 28

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
HL10.1	*3su1500-0aa10-0aa0*	*Support without module. plastic*	*siemens*	*Hq*	10	1
HR-1A				*Hq*	7	1
HR-1A.	*GRP-H-25-48-D-1-0000*	*Static power slave unit for load control, logic/analog control. Maximum current 25A.*	*Gefran*	*Hq*	21	1
HR-1B				*Hq*	7	1
HR-1B.	*GRP-H-25-48-D-1-0000*	*Static power slave unit for load control, logic/analog control. Maximum current 25A.*	*Gefran*	*Hq*	21	1
HR-1C				*Hq*	7	1
HR-1C.	*GRM-H-25-48-AN-OL-00000*	*Static power master unit for load control, logic/analog control. Maximum current 25A.*	*Gefran*	*Hq*	21	1
HR-2A				*Hq*	9	1
HR-2A.	*GRP-H-25-48-D-1-0000*	*Static power slave unit for load control, logic/analog control. Maximum current 25A.*	*Gefran*	*Hq*	22	1
HR-2B				*Hq*	9	1
HR-2B.	*GRP-H-25-48-D-1-0000*	*Static power slave unit for load control, logic/analog control. Maximum current 25A.*	*Gefran*	*Hq*	22	1
HR-2C				*Hq*	9	1
HR-2C.	*GRM-H-25-48-AN-OL-00000*	*Static power master unit for load control, logic/analog control. Maximum current 25A.*	*Gefran*	*Hq*	22	1
HSS-77-001				*Hq*		1
HSS-77-002				*Hq*		1
HSS-77-003				*Hq*		1
KA11.1	553490240040 *9404spa* 094913	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in connection Power supply: DC volts DC: 24 V. Non-polarized monostable Protection category: RT I. Option* *Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20 Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC* *Latching and unhooking jumper*	*Finder* *Finder* *Finder*	*Hq*	11	1 1 1
KA11A.1	*9404spa* 553490240040 094913	*Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20 Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC* *industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in connection Power supply: DC volts DC: 24 V. Non-polarized monostable Protection category: RT I. Option* *Latching and unhooking jumper*	*Finder* *Finder* *Finder*	*Hq*	*11th*	1 1 1
KA11A.2	202290244000	*Modular Pulse Relay No. of contacts: 2 Contact configuration: No Contact material: AGSNo2 Mounting: DIN rail Function: Mechanical Sizing current: 16 A. Width in subdivision units: 1 Type of supply voltage*	*Finder*	*Hq*	*11th*	1
KA18.1	553490240040 *9404spa* 094913	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in connection Power supply: DC volts DC: 24 V. Non-polarized monostable Protection category: RT I. Option* *Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20 Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC* *Latching and unhooking jumper*	*Finder* *Finder* *Finder*	*Hq*	18	1 1 1
KA18.2	553490240040 *9404spa* 094913	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in connection Power supply: DC volts DC: 24 V. Non-polarized monostable Protection category: RT I. Option* *Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20 Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC* *Latching and unhooking jumper*	*Finder* *Finder* *Finder*	*Hq*	18	1 1 1

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B-100 HV-MV SWITCHGEAR ROOM
MATERIAL LIST

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 28
F.S. 29

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
KA18.3	553490240040	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in connection Power supply: DC volts DC: 24 V. Non-polarized monostable Protection category: RT I. Option*	*Finder*	*Hq*	18	1
	9404spa	*Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20 Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC*	*Finder*			1
	094913	*Latching and unhooking jumper*	*Finder*			1
KA18.4	*9404spa*	*Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20 Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC*	*Finder*	*Hq*	18	1
	553490240040	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in connection Power supply: DC volts DC: 24 V. Non-polarized monostable Protection category: RT I. Option*	*Finder*			1
	094913	*Latching and unhooking jumper*	*Finder*			1
KA18.5	553490240040	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in connection Power supply: DC volts DC: 24 V. Non-polarized monostable Protection category: RT I. Option*	*Finder*	*Hq*	18	1
	9404spa	*Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20 Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC*	*Finder*			1
	094913	*Latching and unhooking jumper*	*Finder*			1
KA18.6	553490240040	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in connection Power supply: DC volts DC: 24 V. Non-polarized monostable Protection category: RT I. Option*	*Finder*	*Hq*	18	1
	9404spa	*Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20 Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC*	*Finder*			1
	094913	*Latching and unhooking jumper*	*Finder*			1
KA18.7	*9404spa*	*Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20 Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC*	*Finder*	*Hq*	18	1
	553490240040	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in connection Power supply: DC volts DC: 24 V. Non-polarized monostable Protection category: RT I. Option*	*Finder*			1
	094913	*Latching and unhooking jumper*	*Finder*			1
KA21.1	553490240040	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in connection Power supply: DC volts DC: 24 V. Non-polarized monostable Protection category: RT I. Option*	*Finder*	*Hq*	21	1
	9404spa	*Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20 Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC*	*Finder*			1
	094913	*Latching and unhooking jumper*	*Finder*			1
KA22.1	553490240040	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in connection Power supply: DC volts DC: 24 V. Non-polarized monostable Protection category: RT I. Option*	*Finder*	*Hq*	22	1
	9404spa	*Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20 Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC*	*Finder*			1
	094913	*Latching and unhooking jumper*	*Finder*			1
KM1	*3RT2316-1BB40*	*Contactor, 4 NO, AC-1: 18 to 24 V DC, 4-pole, 4 NO, size S00, screw terminals*	*siemens*	*Hq*	18	1
	3RH29111HA22	*Bloc.Aus.2L 2R 1L,1L,S00/S0,*	*siemens*			1
LIGHT				*Hq*		1

REV.	MODIFICA	DATA	FIRMA
03	ISSUE FOR APPROVAL	05/09/24	
02	ISSUE FOR APPROVAL	13/06/24	
01	ISSUE FOR APPROVAL	15/04/24	

DATA	15/04/2024
DISEGN.	F.M.
VISTO	S.S.
APPR.	M.G.

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CLIENT:
CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
MATERIAL LIST

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 29
F.S. 30

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
LIGHT				Hq		1
MTP-001	3RN2000-1AW30	Motor protection relay for PTC thermistor supervision 24/240 V AC/DC 1 changeover contact	siemens	Hq	11	1
MTP-002	3RN2000-1AW30	Motor protection relay for PTC thermistor supervision 24/240 V AC/DC 1 changeover contact	siemens	Hq	11	1
MVA-1	DMG600	multimeter with icon-based LCD	Lovato	Hq	6	1
PDSL-77-101		Pressure-controlled (pressure switch) No		Hq	16	1
PDSL-77-101				Hq		1
PDSL-77-102		Pressure-controlled (pressure switch) No		Hq	16	1
PDSL-77-102				Hq		1
PDT-77-101		Pressure-controlled (pressure switch) No		Hq	16	1
PDT-77-101				Hq		1
PDT-77-102		Pressure-controlled (pressure switch) No		Hq	16	1
PDT-77-102				Hq		1
PF6A.1	GSF10	air intake filter 100x100	Cosmotec	Hq	6th	1
	GSV1000220	Panel Fan 100x100 230V 24m^3/h	Cosmotec			1
PF8.1	GSV1000220	Panel Fan 100x100 230V 24m^3/h	Cosmotec	Hq	8	1
	GSF10	air intake filter 100x100	Cosmotec			1
PF9A.1	GSV1000220	Panel Fan 100x100 230V 24m^3/h	Cosmotec	Hq	9a	1
	GSF10	air intake filter 100x100	Cosmotec			1
PFT6A.1	007026.00001	Thermostate Panel Fan	Fandis	Hq	6th	1
PFT8.1	007026.00001	Thermostate Panel Fan	Fandis	Hq	8	1
PFT9A.1	007026.00001	Thermostate Panel Fan	Fandis	Hq	9a	1
PH6A.1	050ra50	Anticondensing Heater 230V 50W	New Elfin	Hq	6th	1
PH8.1	050ra50	Anticondensing Heater 230V 50W	New Elfin	Hq	8	1
PH9.1	050ra50	Anticondensing Heater 230V 50W	New Elfin	Hq	9a	1
PHT6A.1	007038.00001	Antcondensing Thermostat 230V	Fandis	Hq	6th	1
PHT8.1	007038.00001	Antcondensing Thermostat 230V	Fandis	Hq	8	1
PHT9A.1	007038.00001	Antcondensing Thermostat 230V	Fandis	Hq	9a	1
PL6A.1	050PEL3C	230V lamp	New Elfin	Hq	6th	1
	050kfm	Magnet kit	New Elfin			1
PL8.1	050PEL3C	230V lamp	New Elfin	Hq	8	1
	050kfm	Magnet kit	New Elfin			1
PL9A.1	050PEL3C	230V lamp	New Elfin	Hq	9a	1
	050kfm	Magnet kit	New Elfin			1
PLS6A.1	RAMC05	Micro Door Opening Switch 1 No & 1NC	dkc	Hq	6th	1
PLS8.1	RAMC05	Micro Door Opening Switch 1 No & 1NC	dkc	Hq	8	1
PLS9A.1	RAMC05	Micro Door Opening Switch 1 No & 1NC	dkc	Hq	9a	1
QF1	5SU1354-1KK10	Residual current circuit breaker, 10 kA, 1P N, AC type, 30 mA, C, IN: 10 A, UN AC: 230 V	siemens	Hq	6th	1
	5ST3010	Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker	siemens			1
QF1A	5SY4502-7	Circuit breaker 230 V 10KA, 1P N, C, 2A, D=70 mm	siemens	Hq	8	1
	5ST3010	Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker	siemens			1
QF1B	5SY4502-7	Circuit breaker 230 V 10KA, 1P N, C, 2A, D=70 mm	siemens	Hq	9a	1
	5ST3010	Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker	siemens			1
QF2	5SU1354-1KK16	RCD, 10 kA, 1P N, AC type, 30 mA, C, IN: 16 A, UN AC: 230 V	siemens	Hq	6b	1
	5ST3010	Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker	siemens			1
QF3	5SY7502-7	Circuit breaker 230 V 15KA, 1P N, C, 2 A, D=70 mm	siemens	Hq	6th	1

REV.	MODIFICA	DATA	FIRMA
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CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
MATERIAL LIST

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 30
F.S. 31

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
QF3	*5ST3010*	*Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker*	*siemens*	*Hq*	*6th*	1
QF5	*5SY7503-7*	*Circuit breaker 230 V 15Ka, 1P N, C, 3 A, D=70 mm*	*siemens*	*Hq*	10	1
QF6	*5SY5206-7*	*Universal current circuit breaker 440 V DC - 400 V AC 10Ka, 2P, C, 6 A*	*siemens*	*Hq*	10	1
QF400	*5SY74027*	*Int. MT 4P C2 ICN 15KA, ICU 50KA*	*siemens*	*Hq*	6	1
QM1	*5SY4406-7*	*Circuit breaker 400 V 10Ka, 4P, C, 6A, D=70 mm*	*siemens*	*Hq*	*6b*	1
	5SM23420	*Block diff. 4P 40A 30mA Type AC x 5sy*	*siemens*			1
	5ST3010	*Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker*	*siemens*			1
QM1A	*3RV2011-1EA10*	*Circuit breaker size S00 for motor protection, class 10, trip A 2.8...4 A, trip N 52 A, screw terminal*	*siemens*	*Hq*	7	1
	3RV2901-1E	*Cross Auxiliary Contact Block 1No 1NC Screw Terminals for 3RV2 Circuit Breakers*	*siemens*			1
QM1B	*3RV2011-1EA10*	*Circuit breaker size S00 for motor protection, class 10, trip A 2.8...4 A, trip N 52 A, screw terminal*	*siemens*	*Hq*	9	1
	3RV2901-1E	*Cross Auxiliary Contact Block 1No 1NC Screw Terminals for 3RV2 Circuit Breakers*	*siemens*			1
QM2A	*3RV2011-4AA10*	*Circuit breaker size S00 for motor protection, class 10, trip A 10...16 A, trip N 208 A, screw terminal*	*siemens*	*Hq*	7	1
	3RV2901-1E	*Cross Auxiliary Contact Block 1No 1NC Screw Terminals for 3RV2 Circuit Breakers*	*siemens*			1
QM2B	*3RV2011-4AA10*	*Circuit breaker size S00 for motor protection, class 10, trip A 10...16 A, trip N 208 A, screw terminal*	*siemens*	*Hq*	9	1
	3RV2901-1E	*Cross Auxiliary Contact Block 1No 1NC Screw Terminals for 3RV2 Circuit Breakers*	*siemens*			1
QS1	*3VA1140-3GE42-0AA0*	*3VA1 switch IEC chassis 160 switching capacity class n ICU=25 KA 415 V 4-pole, TM220 system protection, ATFM, IN=40 A Overload protection IR=28 A... 40 A Short-Circuit Protection II=10 x in N-Conductor Protection 100% LUG terminal*	*siemens*	*Hq*	6	1
	3VA9988-0BL30	*bobsleigh. Launch SIN 24VAC 50/60 Hz/12-30 VDC*	*siemens*			1
	3VA9988-0AA11	*Cont. HP-type status*	*siemens*			1
	3VA9157-0FK21	*com. rinv. Door Lock x 3VA10/1 STD*	*siemens*			1
	3VA9111-0WD40	*Cover x 3VA10/1 4P 1pcs.*	*siemens*			2
QSA	*5SY4420-7*	*Circuit breaker 400 V 10Ka, 4P, C, 20A, D=70 mm*	*siemens*	*Hq*	6	1
	5ST3010	*Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker*	*siemens*			1
	5st3060	*Rotary control padlockable door lock IP65 black*	*siemens*			1
	5st3031	*24-48 V DC opening trip, for 5SL4, 5SY, 5SP, RCBO 5SU1, FI 5SV circuit breaker*	*siemens*			1
QSB	*5SY4420-7*	*Circuit breaker 400 V 10Ka, 4P, C, 20A, D=70 mm*	*siemens*	*Hq*	6	1
	5ST3010	*Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker*	*siemens*			1
	5st3060	*Rotary control padlockable door lock IP65 black*	*siemens*			1
	5st3031	*24-48 V DC opening trip, for 5SL4, 5SY, 5SP, RCBO 5SU1, FI 5SV circuit breaker*	*siemens*			1
SA14.1	*3su1002-2bl10-0aa0*	*Black selector 3 positions (I or II), illuminable. permanent, 2 x 45°*	*siemens*	*Hq*	14	1
	3su1500-0aa10-0aa0	*Support without module. plastic*	*siemens*			1
	3SU1400-1AA10-1BA0	*Module of contacts for fixing on the front plate. 1 NO, screw terminals*	*siemens*			2
SA16.1	*3su1002-2bl10-0aa0*	*Black selector 3 positions (I or II), illuminable. permanent, 2 x 45°*	*siemens*	*Hq*	16	1
	3su1500-0aa10-0aa0	*Support without module. plastic*	*siemens*			1
	3SU1400-1AA10-1BA0	*Module of contacts for fixing on the front plate. 1 NO, screw terminals*	*siemens*			2
SOCKET				*Hq*		1
TA1.1	*TAC022150X05*	*Amperometric transformer hole 22, transformation ratio 150/5 A*	*Frer*	*Hq*	6	1
TA2.1	*TAC022150X05*	*Amperometric transformer hole 22, transformation ratio 150/5 A*	*Frer*	*Hq*	6	1
TA3.1	*TAC022150X05*	*Amperometric transformer hole 22, transformation ratio 150/5 A*	*Frer*	*Hq*	6	1
VSD 1	*6SL3210-5BE22-2CV0*	*SinamiCs V20 3AC380-480V 2.2KW with C3 Filter*	*siemens*	*Hq*	7	1

REV.	MODIFICA	DATA	FIRMA
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DATA	15/04/2024
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CLIENT:
CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
MATERIAL LIST

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 31
F.S. 32

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
VSD 2	*6SL3210-5BE22-2CV0*	*SinamiCs V20 3AC380-480V 2.2KW with C3 Filter*	*siemens*	*Hq*	9	1
XAC	*CBC04GR*	*CBC.4/GR Feed-through clamp*	*Cabur*	*Hq*		16
XC	*CBS02GR*	*Sectionable clamp 2.5 mm2*	*Cabur*	*Hq*		8
XFD	*CBS02GR*	*Sectionable clamp 2.5 mm2*	*Cabur*	*Hq*		12
XM1	*CBC02GR*	*CBC.2/GR Thru-Clamp*	*Cabur*	*Hq*		3
	CBC06GR	*CBC.6/GR Thru-Clamp*	*Cabur*			3
XM2	*CBC02GR*	*CBC.2/GR Thru-Clamp*	*Cabur*	*Hq*		3
	CBC06GR	*CBC.6/GR Thru-Clamp*	*Cabur*			3
XPF1	*CBS02GR*	*Sectionable clamp 2.5 mm2*	*Cabur*	*Hq*		16
	SF900GR	*SFR.4/GR Sectionable clamp*	*Cabur*			2
XPF2	*CBS02GR*	*Sectionable clamp 2.5 mm2*	*Cabur*	*Hq*		16
	SF900GR	*SFR.4/GR Sectionable clamp*	*Cabur*			2
XPS	*CBC04GR*	*CBC.4/GR Feed-through clamp*	*Cabur*	*Hq*		3
	CBC35gr	*CBC.35/GR Feed-through clamp*	*Cabur*			5
XT	*CBS02GR*	*Sectionable clamp 2.5 mm2*	*Cabur*	*Hq*		13

REV.	MODIFICA	DATA	FIRMA
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BASE LOAD POWER HUB (BLPH)
B-100 HV-MV SWITCHGEAR ROOM
MATERIAL LIST

ROSETTI MARINO

1724000049-HV-DA-00026

FG. 32
F.S. 71_GS_LI

ITEM	Tag	B-100	: Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100			Dwg	1724000049-AR-DA-00015
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100			Module	LD_B-100
TASK	code	C10002296		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CZX01E		Package - E

1	Check that electrical component is not damaged.	PL
2	Check that the cables are adequately supported and protected.	Note
3	Check that the equipment, including cables and glands, have been correctly installed (only visual inspection).	Note
4	Check that all equipment has been earthed and bonded.	OK
5	Check if accessibility and maintenance are possible and safe.	OK
6	Verify that all vendor punch list created during FAT are uploaded in the Database.	OK
7	Check identification tag plate.	Note
8	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note : Refer to Punch list raised during first step of FAT:

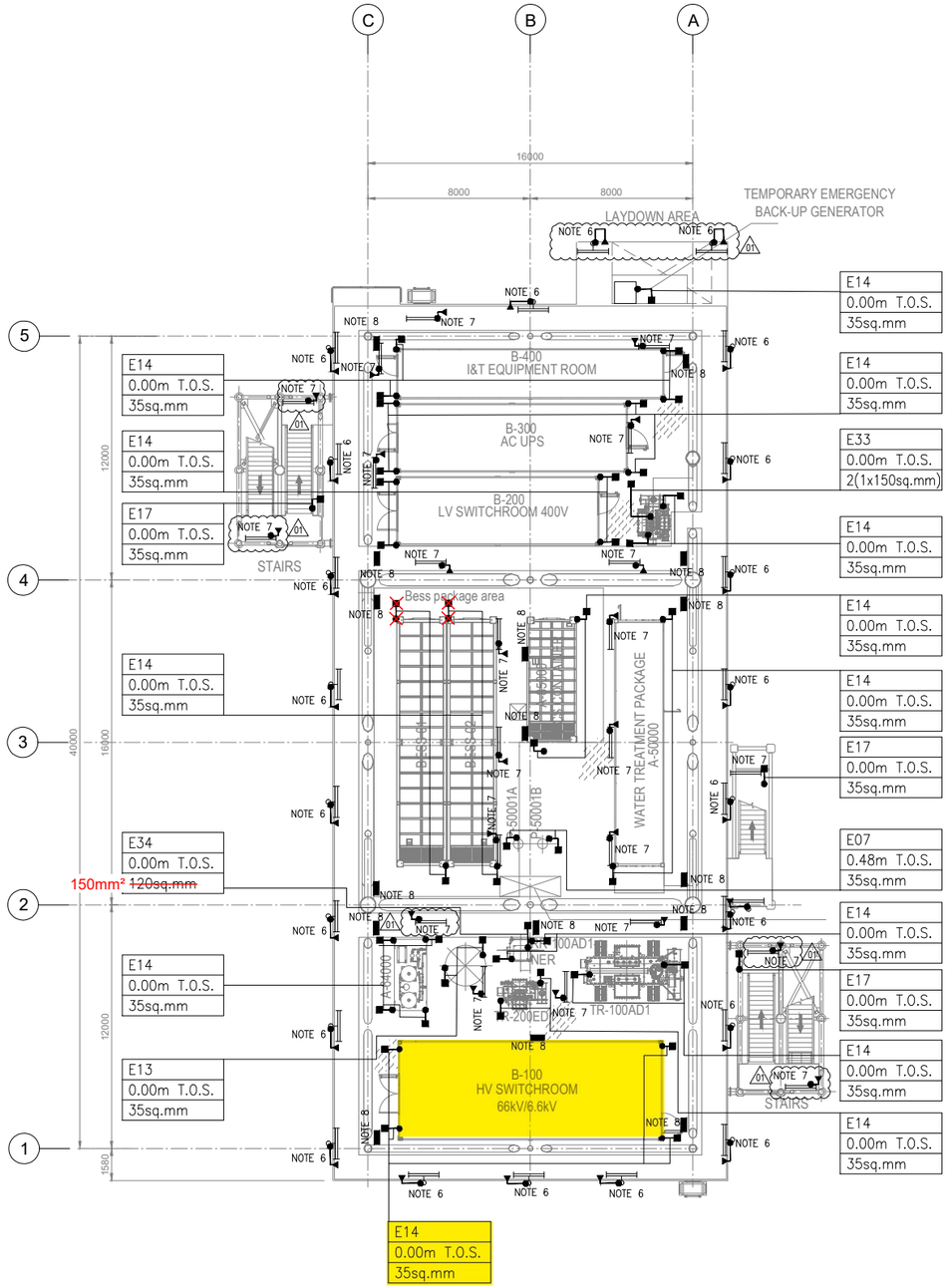
Point 2 PL: C30000022
Point 3 PL: C30000042 / C30000046
Point 7 PL: C30000034

FAT will be completed at RM yard after MC phase.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-17	2024-10-18	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-17T16:33:14.293Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-18T11:17:37.384Z	

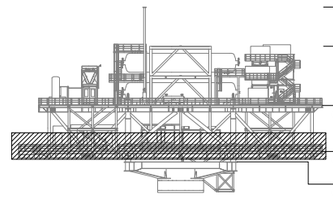
DRAWING NO. 123A90-DDL-EL-DL-20133

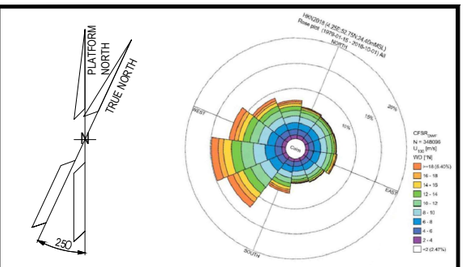
REV. 01



PLAN ON LOWER DECK
EL+23.310 T.O.S.

KEY PLAN





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DOCUMENT IS ONLY VALID FOR EARTHING LAYOUT.
4. ALL ELECTRICAL EQUIPMENT NOT DIRECTLY WELDED TO SKID FRAME SHALL BE BONDED TO STEEL TO THE STRUCTURE OF SKID BASEFRAME.
5. FOR LIGHTNING PROTECTION SYSTEM SURGE PROTECTIVE DEVICES (SPD), REFER TO THE DOCUMENT 123A90-DDL-EL-RE-20154.
6. ALL NON-WELDED POLES WILL BE EARTHED AS PER TYPICAL E05 AND E24. 01
7. ALL LINEAR LIGHTING FIXTURE WILL BE EARTHED AS PER TYPICAL E32.
8. EARTH BAR WILL BE FIXED TO THE PRIMARY BEAMS OF THE UPPER DECK. COMPLETE EARTHING INCLUDING WITH 2 THREADED STUDS. ALL EARTH BAR WILL BE EARTHED AS PER TYPICAL E03D / 6.00M T.O.S. / 35 SQ MM.
9. EQUIPOTENTIAL BONDING GROUPING FOR BOLTED HANDRAILS ARE PROVIDED EVERY 3M FOR THE ENTIRE PERIMETER AS TYPICAL E16 AND WILL BE DEFINED DURING ASSEMBLY PHASE

LEGEND

- LIGHTING FIXTURE POLE MOUNTED
- LINEAR LIGHTING FIXTURE
- ■ EARTHING BOSS AISI316L
- ● COMPRESSION TYPE LUG TINNED COPPER
- ▲ THREADED STUD FOR EARTHING CONNECTION
- Exx EARTHING TYPICAL CODE
- ▬ EARTHING BAR

TYP.	TYPICAL
ELE	ELEVATION
SIZE	

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DD-20090	ELECTRICAL TYPICAL INSTALLATION DETAILS - EARTHING SYSTEM
123A90-DDL-EL-RE-20154	LIGHTNING PROTECTION SYSTEM CALCULATION REPORT
123A90-DDL-EL-DL-20119	LIGHTING & SOCKET LAYOUT - LOWER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	25/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	29/05/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING & LIGHTNING LAYOUT
LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 25/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20133	SHEET 001	REV. 01

SHEET 001 OF 002

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20133**

REV.:	DATE:	SIGNATURE:
1_B	11/09/24	G.Randi

ROSETTI MARINO SpA

File Name : 123A90-DDL-EL-DL-20133

PLATFORM NORTH
TRUE NORTH

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20136**

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

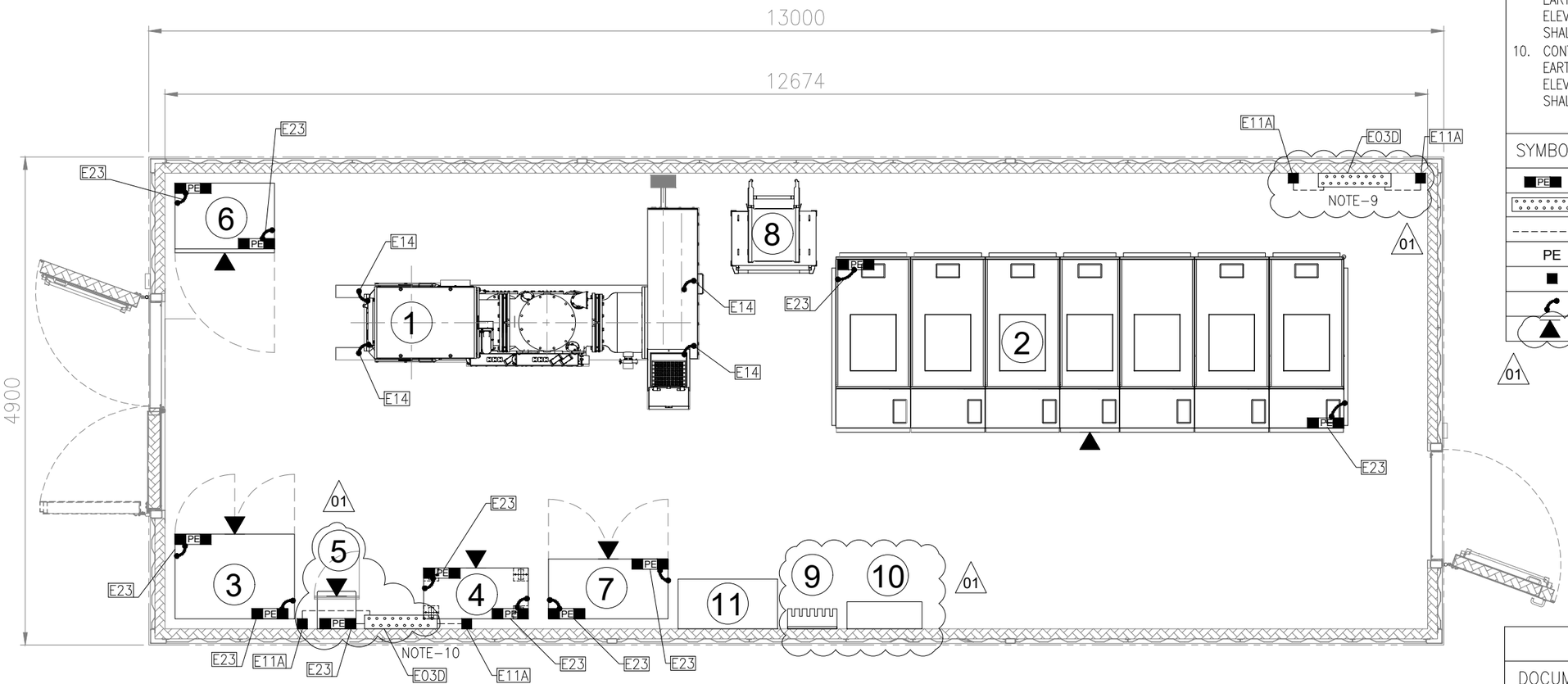
ROSETTI MARINO SpA

EQUIPMENT LIST		
REF.	TAG No.	DESCRIPTION
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)
2	SG-100D1	6.6kV SWITCHGEAR
3	UP-200F1	DC UPS PANEL
4	BA-200F1	DC UPS BATTERY RACK
5	CB-200F1	ISOLATOR FOR DC UPS
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL – HV SWITCH ROOM
8	–	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR
9	–	TOOL BOX
10	–	ELECTRIC SAFETY KIT
11	–	TABLE

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 NON WELDED OBJECTS SHALL BE EARTHED.
9. CONTAINER WILL HAVE A BTH (EARTHING BAR TINNED COPPER) WITH 2 EARTHING BOSS, INSTALLED IN THE NORTH-EAST CORNER AT AN ELEVATION OF 2.8M FROM THE CONTAINER FLOOR. EARTHING BOSS SHALL BE INSTALLED AT SAME ELEVATION 2.8M.
10. 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-100-HV(66kV/6.6kV) 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-20104	ELECTRICAL EQUIPMENT LAYOUT- HV SWITCHROOM
01 1724000049-AR-DD-00018	B-100 DETAILED DRAWINGS-E&I SHELTERS

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

CROSSWIND
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING & LIGHTNING LAYOUT-HV SWITCHROOM "B-100"HV SWITCHROOM

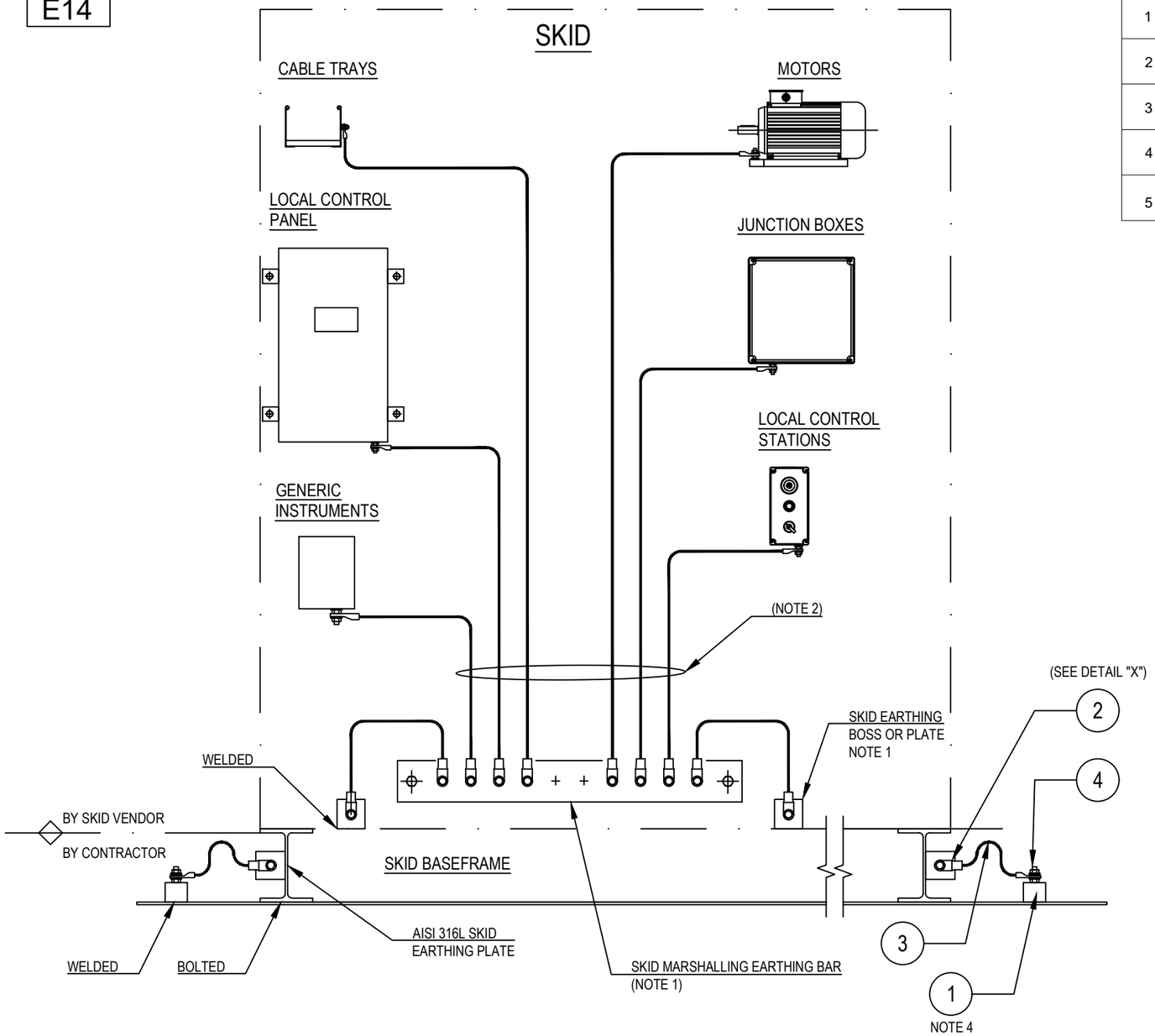
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:50

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DL-20136	003	01

F.to UNI A3: 420mmx297mm

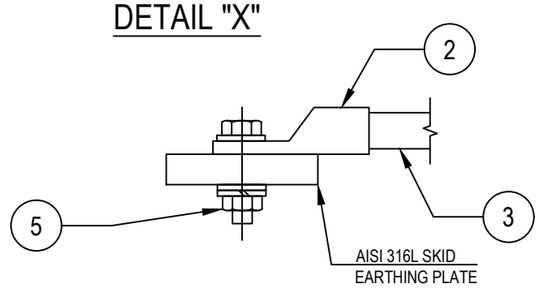
File Name : 123A90-DDL-EL-DL-20136 Rev. 01

E14



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50		NOTE 5
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	35mm^2		~~NOTE 3~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	35mm^2		~~NOTE 3~~
4	STUD BOLT WITH PLANE WASHER, SPRING WASHER AND NUT	AISI 316L	M10X50		
5	HEXAG. BOLT COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30		

DETAIL "X"



NOTES:
1) EARTHING BAR/BOSS/PLATE SUPPLIED BY SKID MANUFACTURER
2) ALL EQUIPMENTS AND CABLE TRAYS WILL BE EARTHING ON SKID EARTHING BAR BY SKID MANUFACTURER
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY~~
4) FOR EARTHING BOSS TYPICAL DETAIL E11A
5) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

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

REV.:	DATE:	SIGNATURE:
2_F	17/10/24	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 SKID BASEFRAME

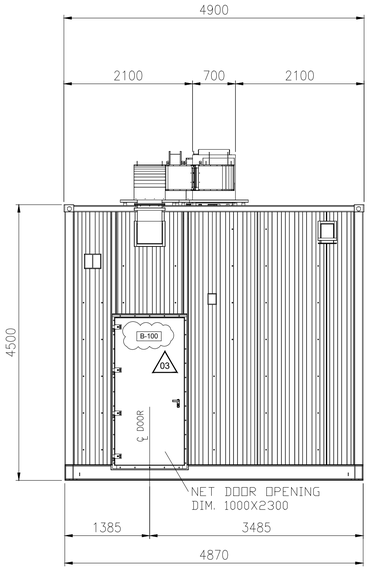
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 014 | REV. 02

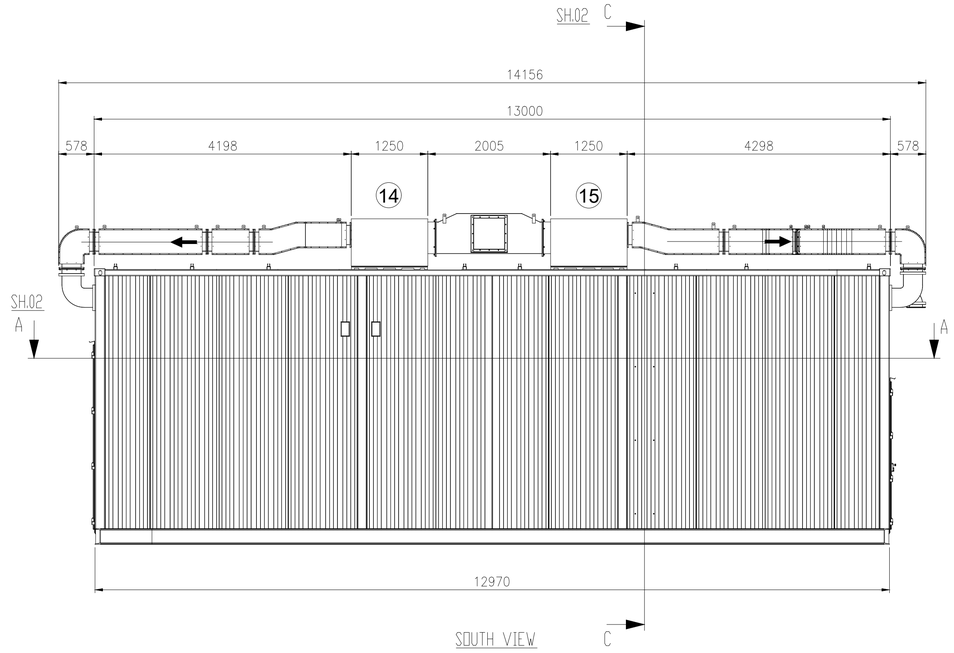
F.to UNI A3: 420mmx297mm

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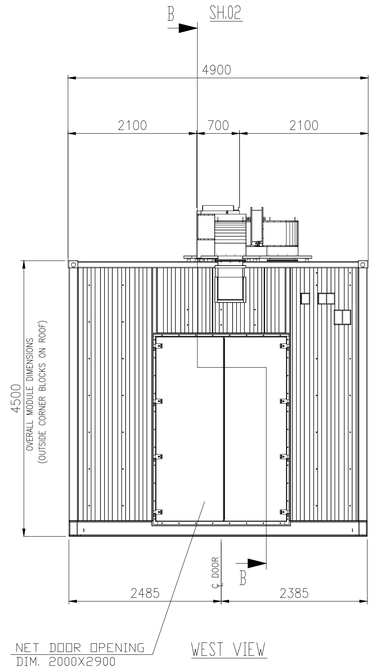
DRAWING NO. 1724000049-AR-DA-00014 REV. 03



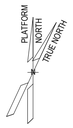
EAST VIEW

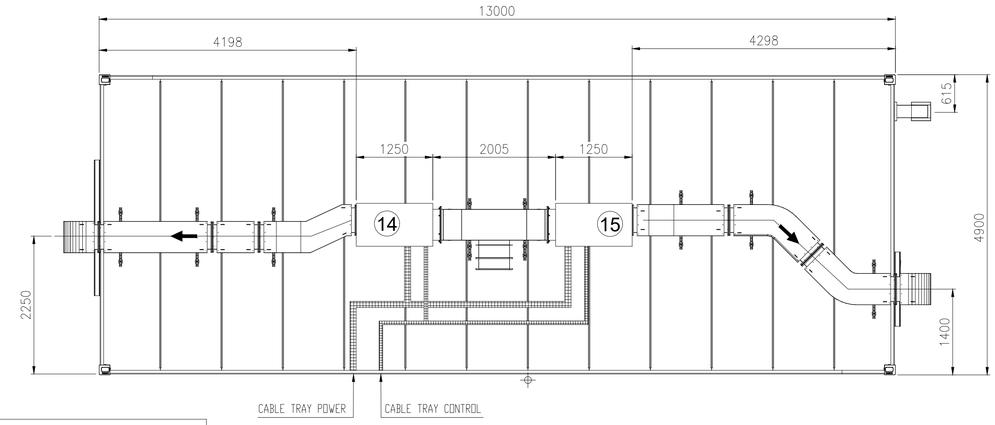


SOUTH VIEW



WEST VIEW

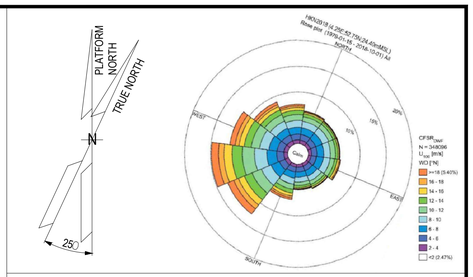




TOP VIEW

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	2600
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	7400
3	UP-200F1	DC UPS PANEL	1200	850	2105	500
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	522
5	CB-200F1	ISOLATOR FOR DC UPS	600	300	800	100
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2100	2100
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV ROOM	1200	600	1900	400
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	70
9	-	TOOL BOX	495	335	920	20
10	-	ELECTRIC SAFETY KIT	230	110	280	20
11	-	TABLE	1000	500	750	50
12	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
14	HHU-77001	AIR HANDLING UNIT A	1250	850	900	140
15	HHU-77002	AIR HANDLING UNIT B	1250	850	900	140
16	HSS-77-001	SPACE HEATER 1	184	145	1100	5
17	HSS-77-002	SPACE HEATER 2	184	145	1100	5
18	HSS-77-003	SPACE HEATER 3	184	145	1100	5



NOTE

1) ALL DIMENSIONS ARE IM MM.
2) THE POSITION OF THE LAMPS INDICATED IS TO BE CONSIDERED THE THEORETICAL ONE, THE FINA ONE WILL BE CONFIRMED IN THE AS-BUILT ISSUE.

REFERENCE

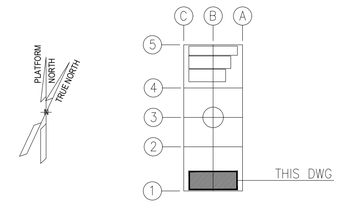
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00064
"B-100" DETAILED DRAWING	1724000049-AR-DD-00018
PAINTING PROCEDURE	1724000049-MAT-PRO-00004
"B-100" FOUNDATION	1724000049-ST-DD-00010
"B-100" STRUCTURAL CALCULATION	1724000049-ST-CA-00006

LEGEND

- INTERNAL LIGHT
- E INTERNAL EMERGENCY LIGHT
- SOCKET OUTLET, INDOOR
- LIGHT SWITCH
- ESCAPE CORRIDOR – WIDTH 800mm.
- MAINTENANCE AREA – VENDOR REQUIREMENT
- INSULATION PANEL

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	28/06/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	14/05/24	M.G.	SKV	C.A.	ISSUE FOR REVIEW (IFR)
00	08/02/24	A.G.	SKV	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

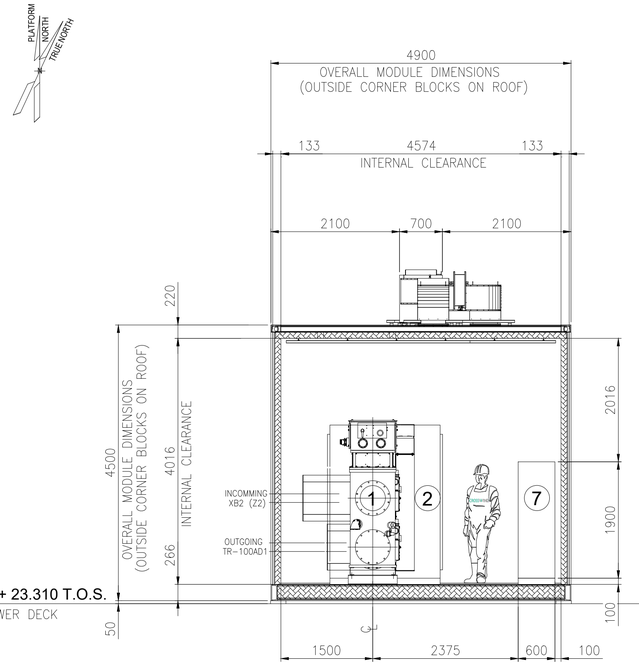
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-100 GENERAL ARRANGEMENT DRAWINGS

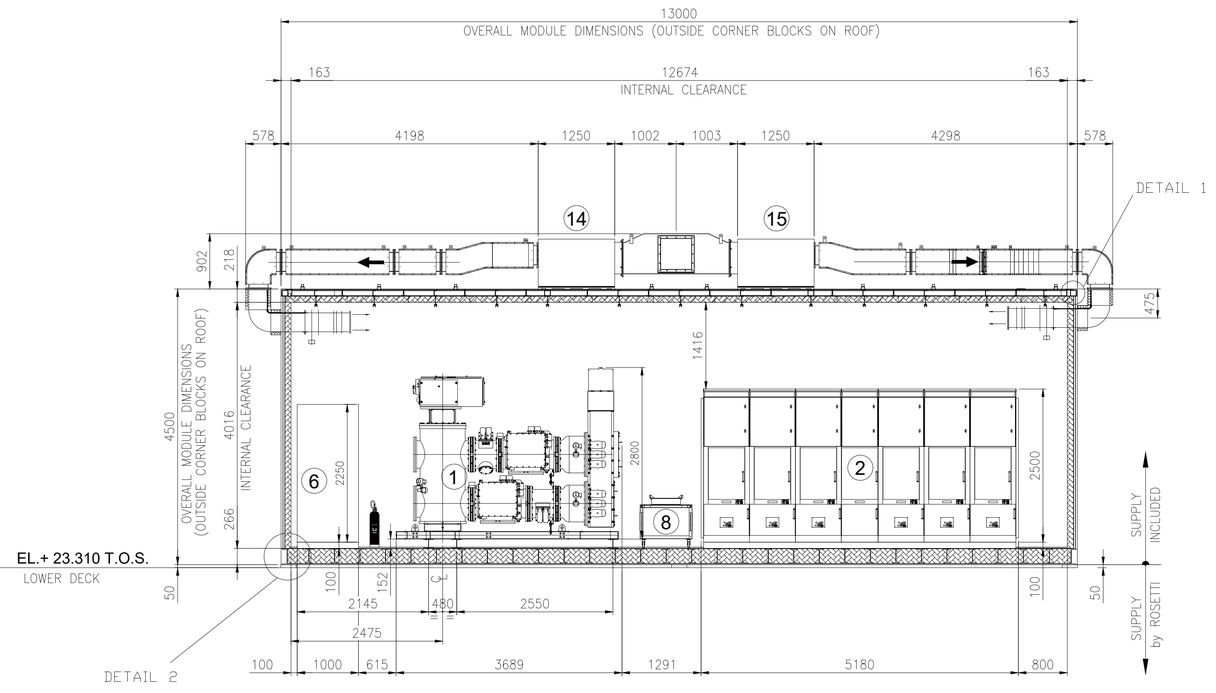
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00014	SHEET 001	REV. 03

File Name : 1724000049-AR-DA-00014-REV.03

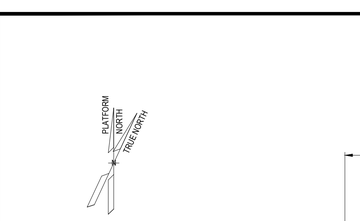
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SECTION C-C

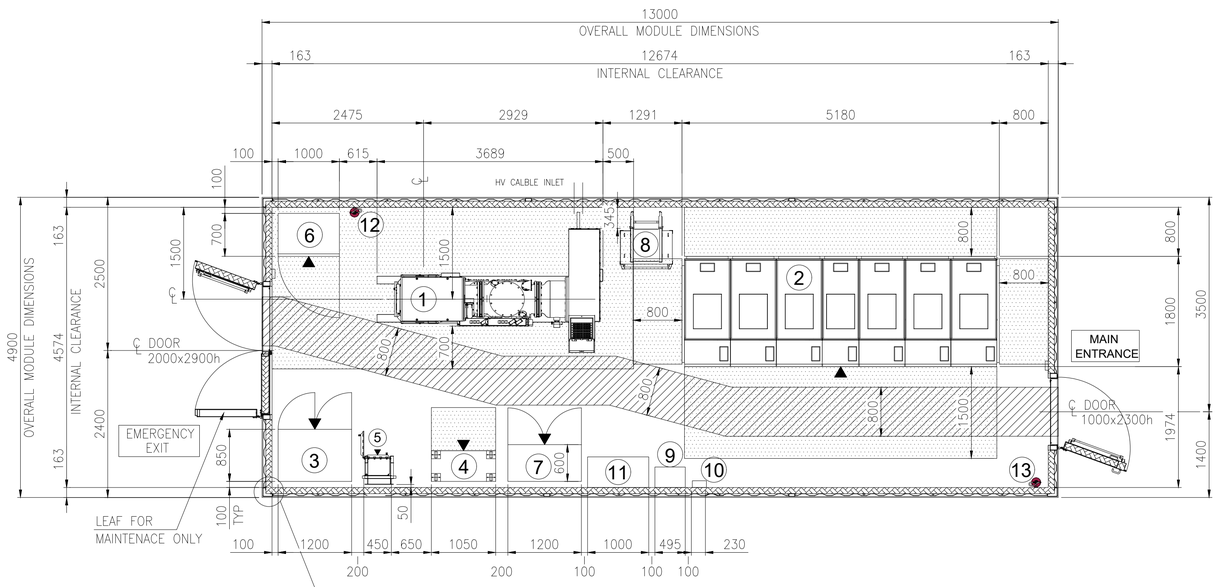


SECTION B-B

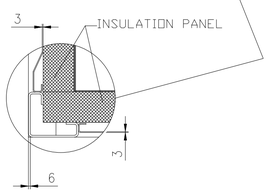


EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	2600
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	7400
3	UP-200F1	DC UPS PANEL	1200	850	2105	500
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	522
5	CB-200F1	ISOLATOR FOR DC UPS	600	300	800	100
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2100	2100
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV ROOM	1200	600	1900	400
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	70
9	-	TOOL BOX	495	335	920	20
10	-	ELECTRIC SAFETY KIT	230	110	280	20
11	-	TABLE	1000	500	750	50
12	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
14	HHU-77001	AIR HANDLING UNIT A	1250	850	900	140
15	HHU-77002	AIR HANDLING UNIT B	1250	850	900	140
16	HSS-77-001	SPACE HEATER 1	184	145	1100	5
17	HSS-77-002	SPACE HEATER 2	184	145	1100	5
18	HSS-77-003	SPACE HEATER 3	184	145	1100	5



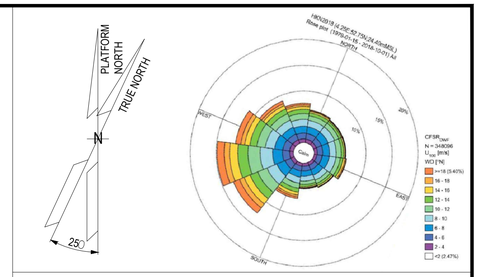
SECTION A-A



EQUIPMENT LAYOUT

"B-100" HV (66kV/6.6kV) SWITCHGEAR ROOM

BOTTOM PLAN



NOTE

1) ALL DIMENSIONS ARE IM MM.
2) THE POSITION OF THE LAMPS INDICATED IS TO BE CONSIDERED THE THEORETICAL ONE, THE FINA ONE WILL BE CONFIRMED IN THE AS-BUILT ISSUE.

03

REFERENCE

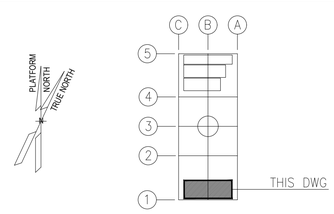
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00064
"B-100" DETAILED DRAWING	1724000049-AR-DD-00018
PAINTING PROCEDURE	1724000049-MAT-PRO-00004
03 "B-100" FOUNDATION	1724000049-ST-DD-00010
03 "B-100" STRUCTURAL CALCULATION	1724000049-ST-CA-00006

LEGEND

- INTERNAL LIGHT
- E INTERNAL EMERGENCY LIGHT
- SOCKET OUTLET, INDOOR
- LIGHT SWITCH
- ESCAPE CORRIDOR – WIDTH 800mm.
- MAINTENANCE AREA – VENDOR REQUIREMENT
- INSULATION PANEL

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	28/06/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	14/05/24	M.G.	SKV	C.A.	ISSUE FOR REVIEW (IFR)
00	08/02/24	A.G.	SKV	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

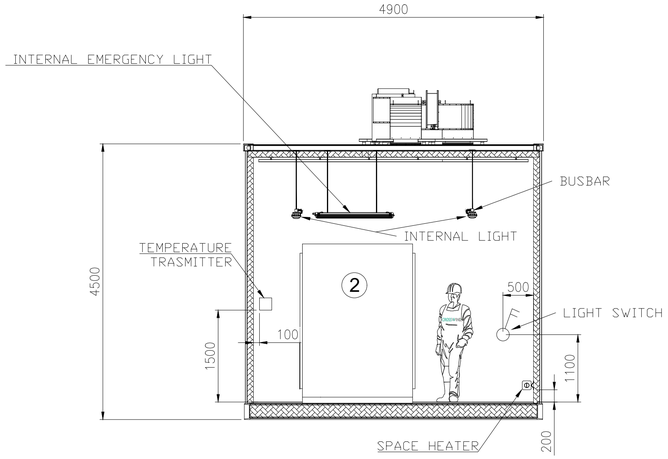
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-100 GENERAL ARRANGEMENT DRAWINGS

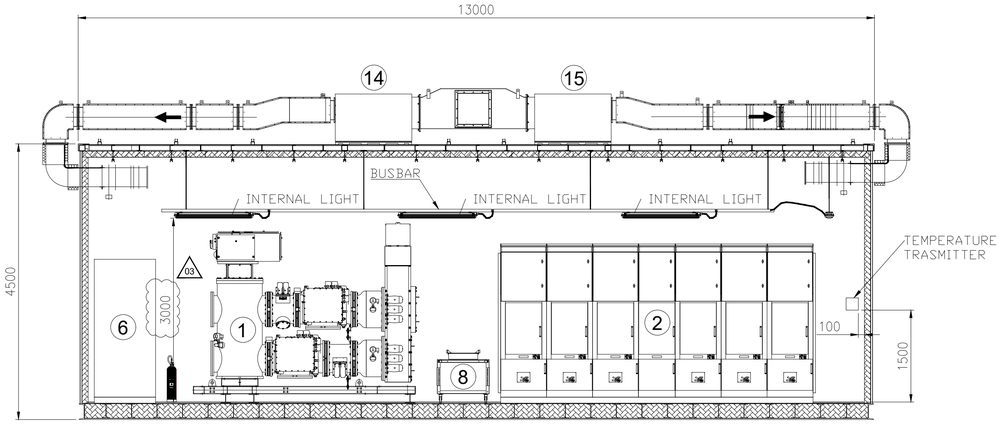
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
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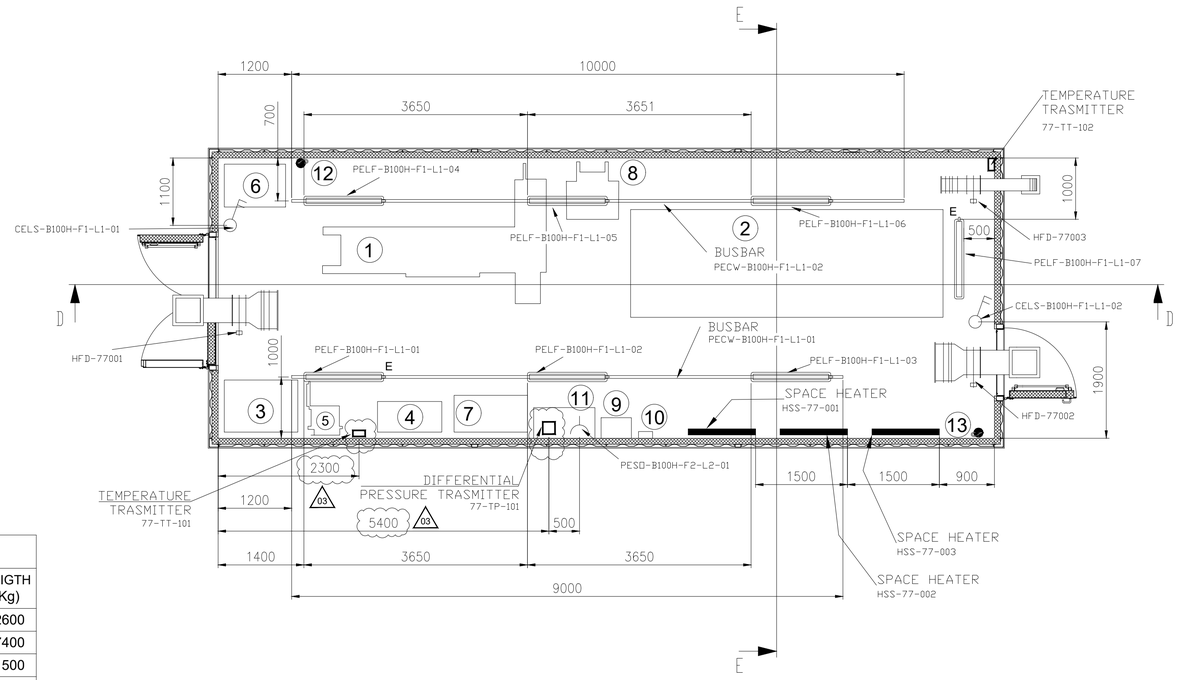
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SECTION E-E

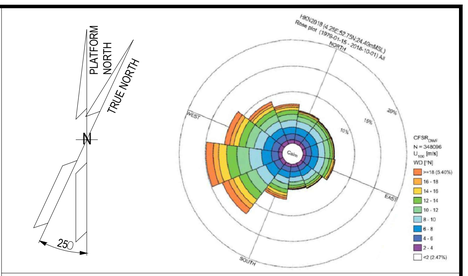


SECTION D-D



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	2600
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	7400
3	UP-200F1	DC UPS PANEL	1200	850	2105	500
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	522
5	CB-200F1	ISOLATOR FOR DC UPS	600	300	800	100
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2100	2100
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV ROOM	1200	600	1900	400
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	70
9	-	TOOL BOX	495	335	920	20
10	-	ELECTRIC SAFETY KIT	230	110	280	20
11	-	TABLE	1000	500	750	50
12	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
14	HHU-77001 (03)	AIR HANDLING UNIT A	1250	850	900	140
15	HHU-77002 (03)	AIR HANDLING UNIT B	1250	850	900	140
16	HSS-77-001	SPACE HEATER 1	184	145	1100	5
17	HSS-77-002	SPACE HEATER 2	184	145	1100	5
18	HSS-77-003	SPACE HEATER 3	184	145	1100	5



NOTE

1) ALL DIMENSIONS ARE IM MM.
2) (03) THE POSITION OF THE LAMPS INDICATED IS TO BE CONSIDERED THE THEORETICAL ONE, THE FINA ONE WILL BE CONFIRMED IN THE AS-BUILT ISSUE.

REFERENCE

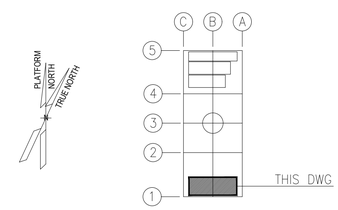
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00064
"B-100" DETAILED DRAWING	1724000049-AR-DD-00018
PAINTING PROCEDURE	1724000049-MAT-PRO-00004
(03) "B-100" FOUNDATION	1724000049-ST-DD-00010
(03) "B-100" STRUCTURAL CALCULATION	1724000049-ST-CA-00006

LEGEND

- INTERNAL LIGHT
- E — INTERNAL EMERGENCY LIGHT
- SOCKET OUTLET, INDOOR
- LIGHT SWITCH
- ESCAPE CORRIDOR – WIDTH 800mm.
- MAINTENANCE AREA – VENDOR REQUIREMENT
- INSULATION PANEL

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	28/06/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	14/05/24	M.G.	SKV	C.A.	ISSUE FOR REVIEW (IFR)
00	08/02/24	A.G.	SKV	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-100 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00014	SHEET 003	REV. 03

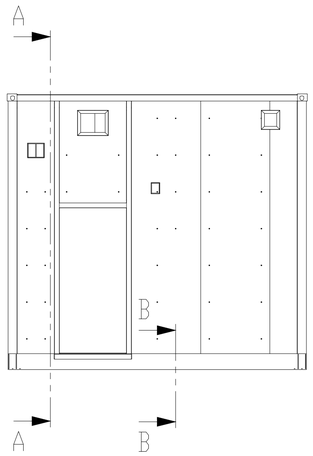
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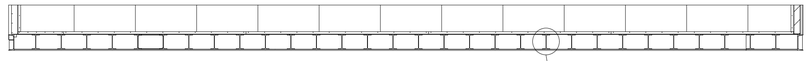
DRAWING NO. 1724000049-AR-DD-00018

REV. 02

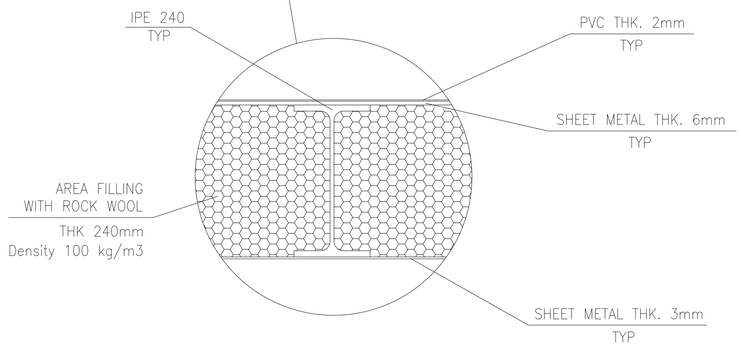
MODULE B-100

REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" STRUCTURAL CALCULATION	1724000049-ST-CA-00006
Weld Procedure Specifications (WPS), Weld Procedure Qualification Report (WPQR), Welding Map and Welders Qualifications	1724000049-WEL-RE-00003

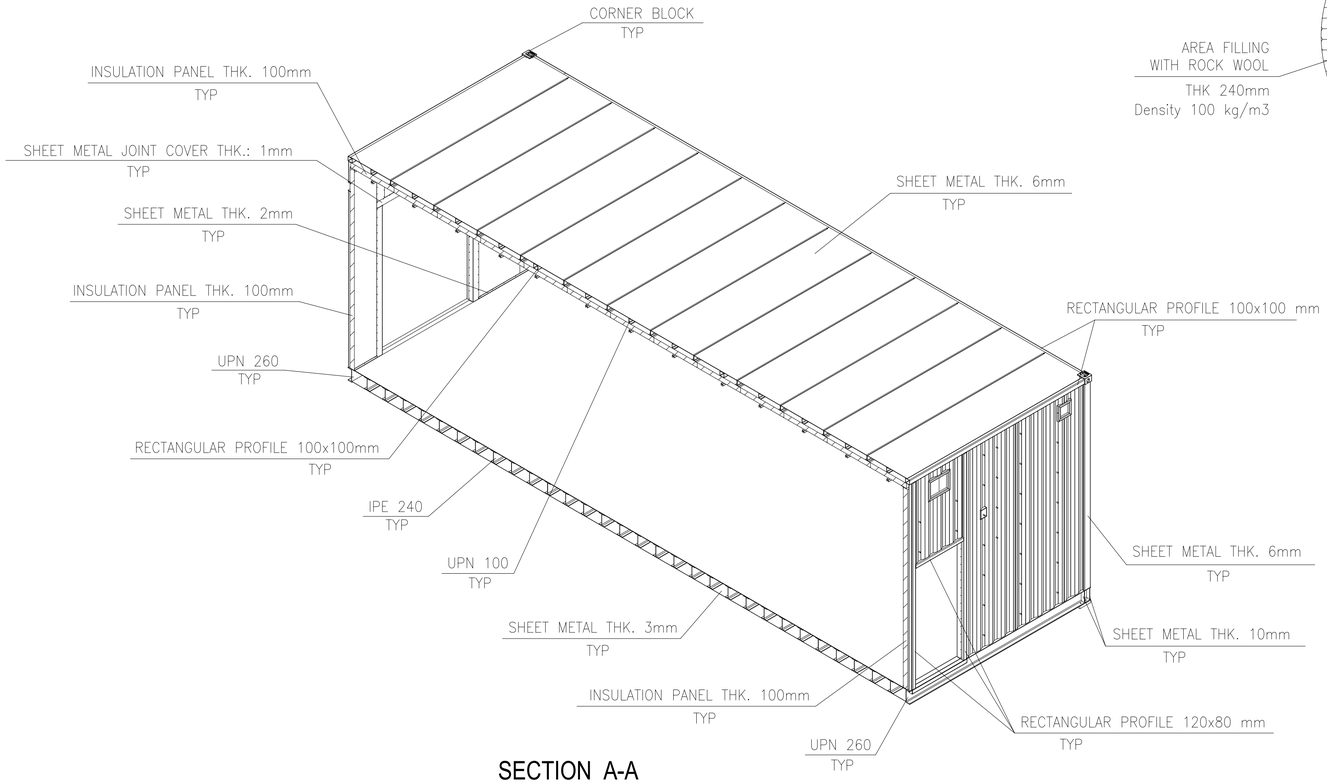




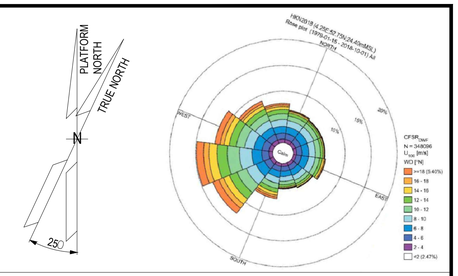
SECTION B-B



DETAIL "C"

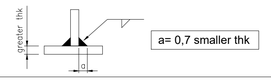


SECTION A-A



NOTES

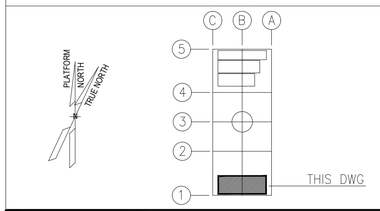
1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D.1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



LEGEND

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	11/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
01	08/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	23/05/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

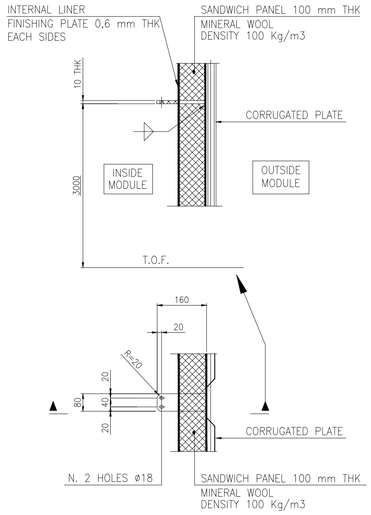
TITLE :

B-100 DETAILED DRAWINGS-E&I SHELTERS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00018	SHEET 001	REV. 02

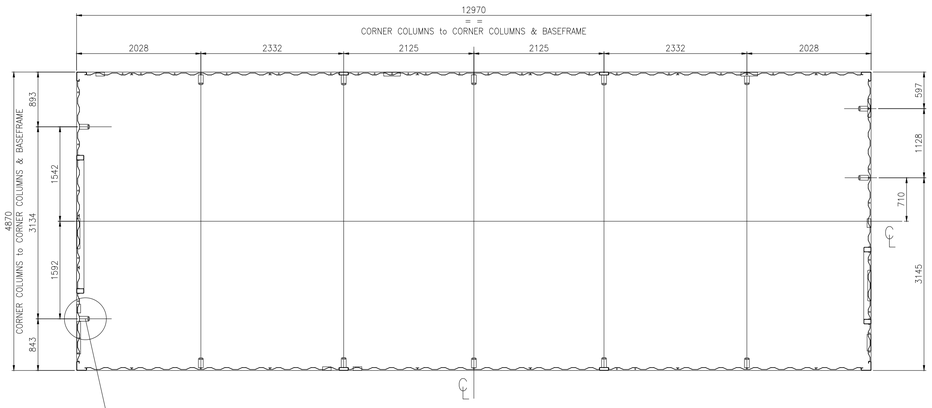
File Name : 1724000049-AR-DD-00018-REV.02

DRAWING NO. 1724000049-AR-DD-00018 REV. 02



WEST WALL

NORTH WALL

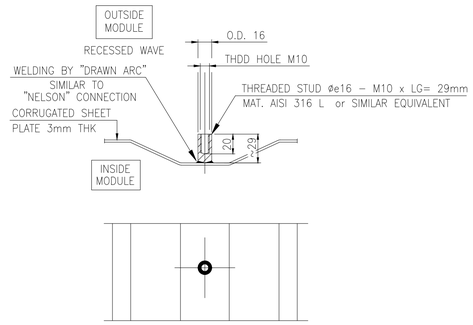


SOUTH WALL

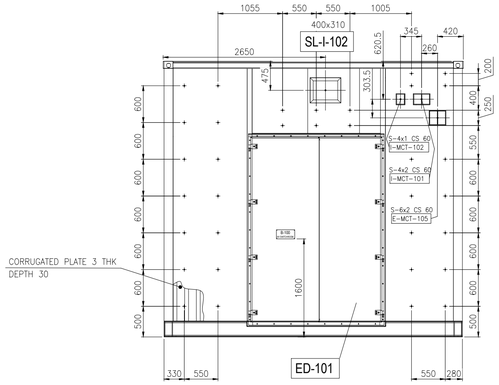
EST WALL

MODULE B-100

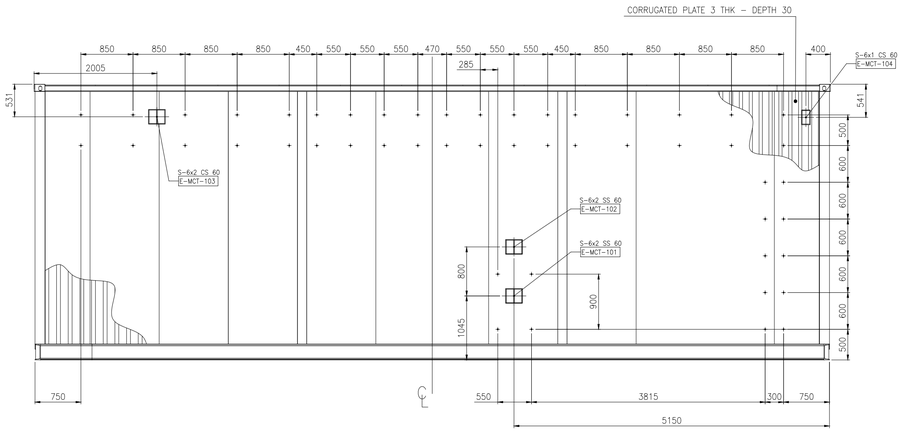
INTERNAL SEA FASTENING PLATES PLAN



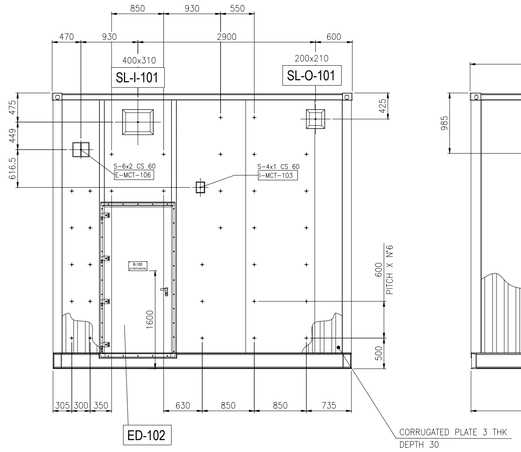
THREADED STUD INSTALLATION



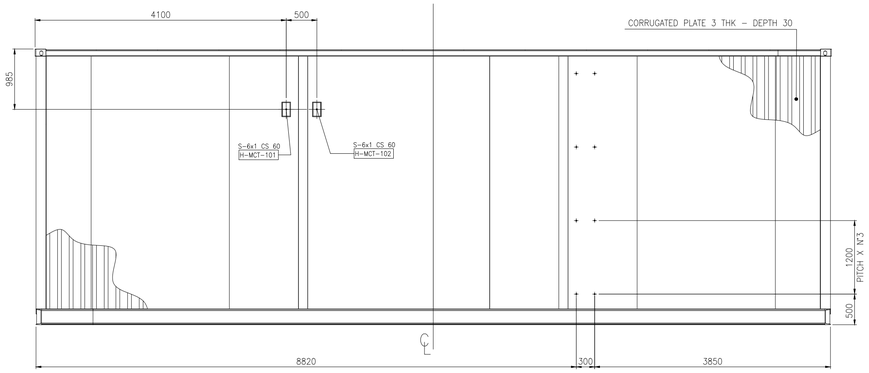
VIEW OF WEST WALL



VIEW OF NORTH WALL



VIEW OF EAST WALL



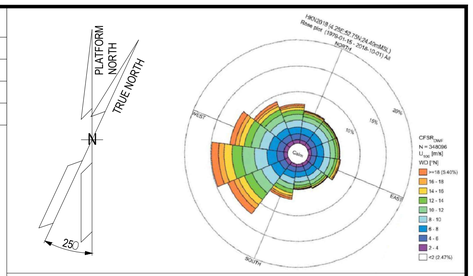
VIEW OF SOUTH WALL

MCT LIST

SERVICE	TAG No.	MCT DIMENSIONS and INSTALLATION SENSE L (mm) HORIZONTAL	H (mm) VERTICAL	W (mm) DEPTH	MCT SIZE TYPE "S" FRAME Primed Mild Steel BRAND: ROXTEC	MCT SIZE TYPE "S" FRAME AISI 316 L BRAND: ROXTEC
ELECTRICAL	E-MCT-101	271	238	60		6x2
	E-MCT-102	271	238	60		6x2
	E-MCT-103	271	238	60	6x2	
	E-MCT-104	140.5	238	60	6x1	
	E-MCT-105	271	238	60	6x2	
	E-MCT-106	271	238	60	6x2	
INSTRUMENTAL	I-MCT-101	271	179.5	60	4x2	
	I-MCT-102	140.5	179.5	60	4x1	
	I-MCT-103	140.5	179.5	60	4x1	
HVAC	H-MCT-101	140.5	238	60	6x1	
	H-MCT-102	140.5	238	60	6x1	

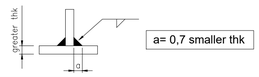
REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00014
"B-100" HVAC GENERAL ARRANGEMENT	1724000049-HV-DA-00064



NOTES

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D.1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



LEGEND

THREADED STUD ø16 – M10 x LG= 29mm

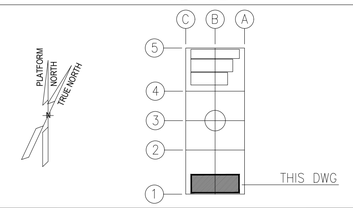
T.O.F. TOP OF FLOOR

MCT LEGEND: E-MCT-101
- MCT TYPE & SIZE / BRAND ROXTEC
- MATERIAL: C.S.= PRIMED MILD STEEL; S.S.= AISI 316 L
- MCT DEPTH: S 6x2 C.S. 60
- MCT SERVICE: E= ELECTRICAL; I= INSTRUMENTAL; H= HVAC
- PROGRESSIVE NUMBER FROM 01
- MODULE LOCATION: 1= B-100 3= B-300 2= B-200 4= B-400

HVAC SLEEVE LEGEND: SL-I-101
- INTERNAL SIZE OF DUCT L x H (mm): 300x300
- SERVICE: I= AIR IN; R= RECYRCLE; O= OVERPRESSURE
- PROGRESSIVE NUMBER FROM 01
- MODULE LOCATION: 1= B-100 3= B-300 2= B-200 4= B-400

DOOR LEGEND: ED-101
- EXTERNAL DOOR
- PROGRESSIVE NUMBER FROM 01
- MODULE LOCATION: 1= B-100; 2= B-200; 3= B-300; 4= B-400

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	11/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
01	08/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	23/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND | ROSETTI MARINO

TITLE :

B-100 DETAILED DRAWINGS-E&I SHELTERS

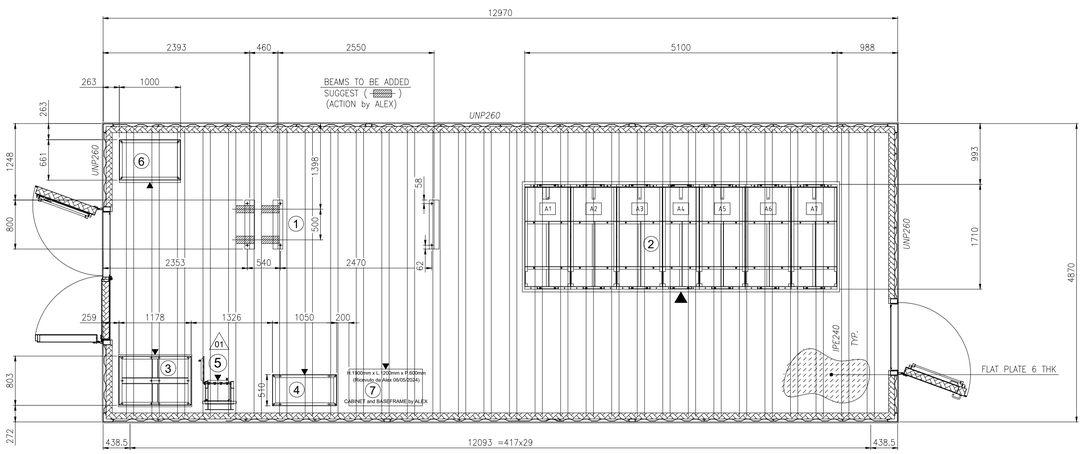
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00018	SHEET 002	REV. 02

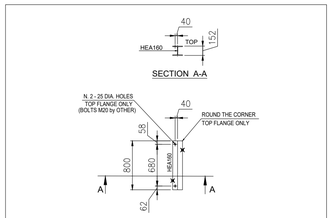
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DRAWING NO. 1724000049-AR-DD-00018

REV. 02

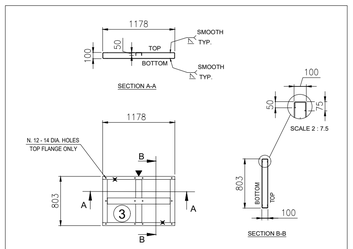
B-100
I&T EQUIPMENT ROOM
BASEFRAME LOCATION PLAN





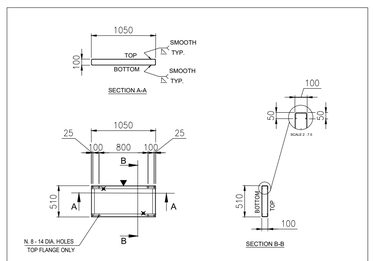
BESEFRAME FOR POS. 1

BUILT N. 3 PIECES
FOR LOCATION SEE PLAN
HEA160 MANDATORY



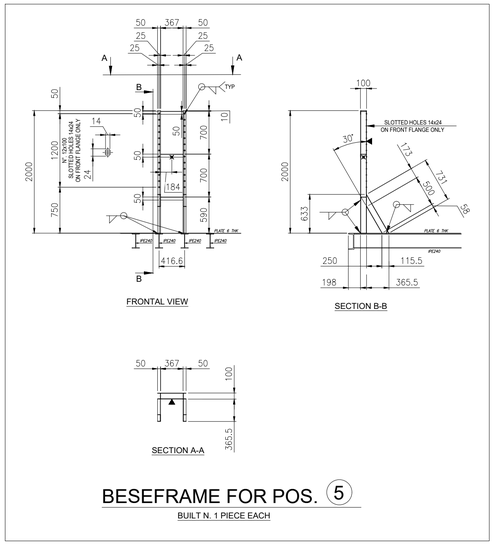
BESEFRAME FOR POS. 3

BUILT N. 1 PIECE



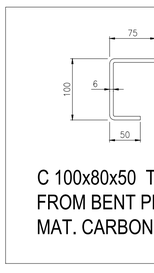
BESEFRAME FOR POS. 4

BUILT N. 1 PIECE EACH

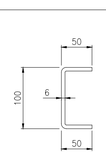


BESEFRAME FOR POS. 5

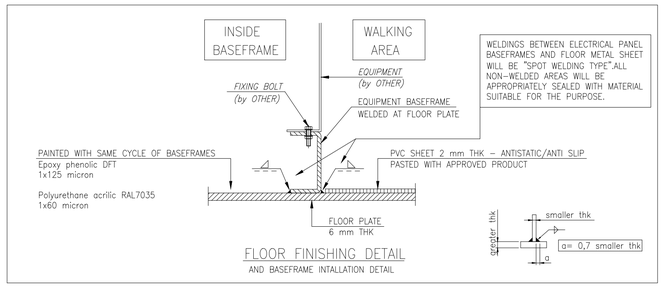
BUILT N. 1 PIECE EACH



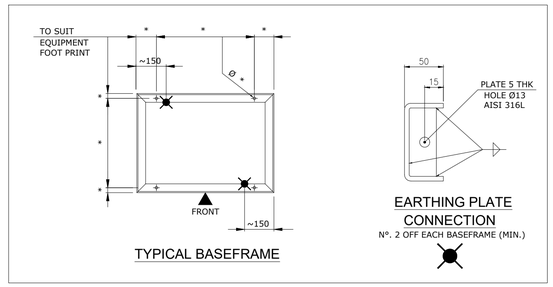
C 100x80x50 THK 6mm.
FROM BENT PLATE THK 6mm.
MAT. CARBON STEEL



C 100x50x50 THK 6mm.
FROM BENT PLATE THK 6mm.
MAT. CARBON STEEL

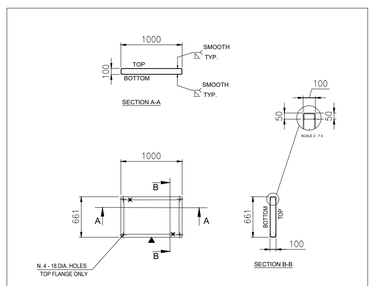


FLOOR FINISHING DETAIL
AND BASEFRAME INTALLATION DETAIL



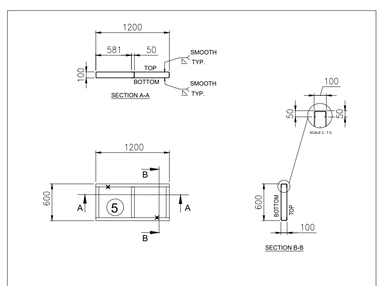
TYPICAL BASEFRAME

EARTHING PLATE
CONNECTION
N°. 2 OFF EACH BASEFRAME (MIN.)



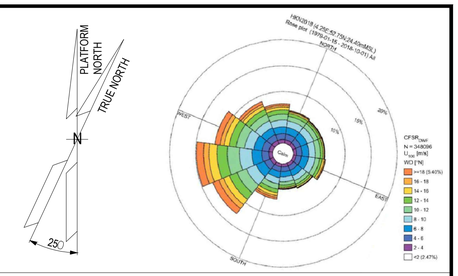
BESEFRAME FOR POS. 6

BUILT N. 1 PIECE



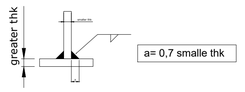
BESEFRAME FOR POS. 7

BUILT N. 1 PIECE



NOTES

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D.1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



4. ALL WELDS ON TOP & BOTTOM SIDES OF BASEFRAMES MUST BE PERFECTLY SMOOTHED.
5. WHERE INDICATED " ▲ " SHOULD BE STAMP "FRONT", ABOVE "TOP" AND BELOW "BOTTOM".

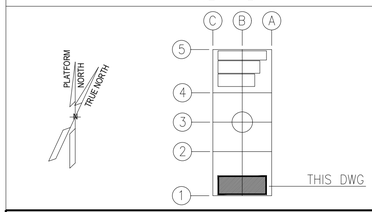


6. SURFACE TREATMENT ACCORDING DOCUMENT N. 1724000049-MAT-PRO-00004 - PAINTING PROCEDURE FINAL COLOUR LIGHT GREY RAL 7035.

LEGEND

ASI = ALEX SISTEMI

KEY PLAN



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)	SCOPE
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	2600	ASI
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	7400	ROSETTI MARINO
3	UP-200F1	DC UPS PANEL	1200	850	2105	500	ASI
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	522	ASI
5	CB-200F1	ISOLATOR FOR DC UPS	600	300	800	100	ASI
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2100	2100	ASI
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV MV ROOM	1200	600	1900	TBD	ASI

ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	11/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
01	08/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	23/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND

ROSETTI MARINO

TITLE :

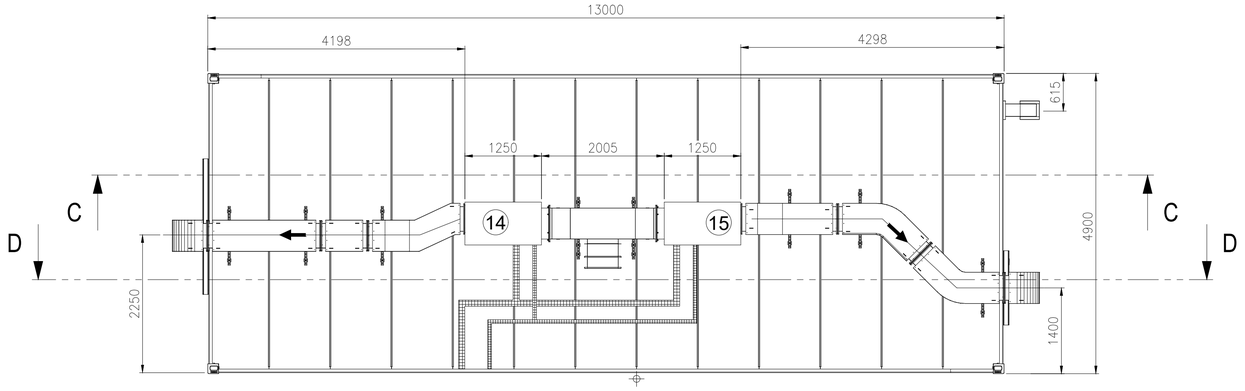
B-100 DETAILED DRAWINGS-E&I SHELTERS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00018		SHEET 003 / REV. 02

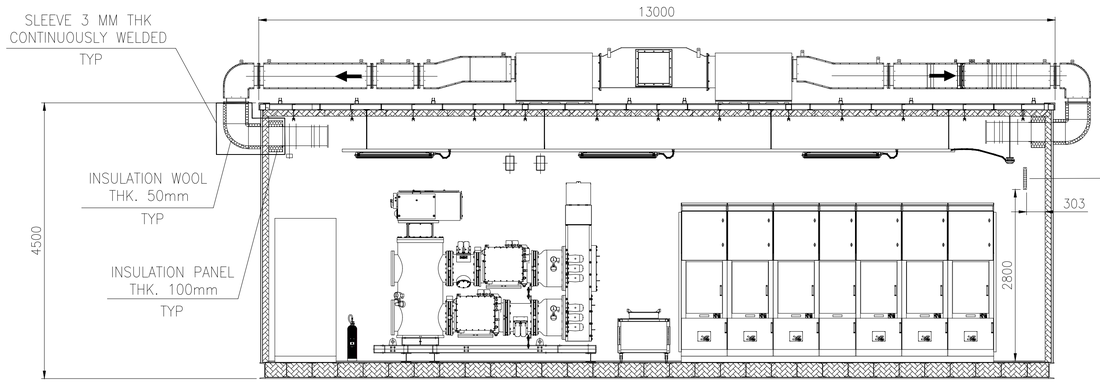
File Name : 1724000049-AR-DD-00018-REV.02

DRAWING NO. 1724000049-AR-DD-00018

REV. 02



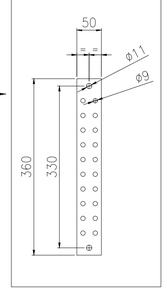
TOP VIEW



SECTION C-C

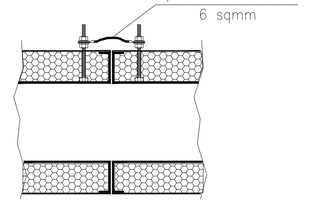
DET. 3

TYPICAL DETAIL
Ground bar



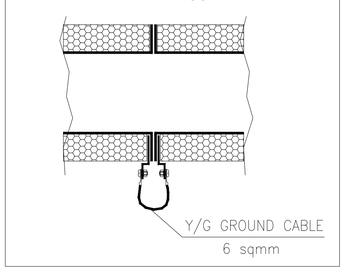
DET. 1

EXTERNAL DUCT



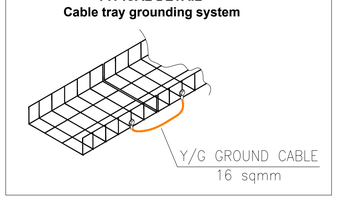
DET. 2

INTERNAL DUCT



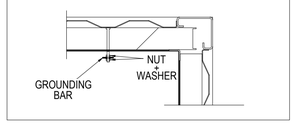
DET. 4

TYPICAL DETAIL
Cable tray grounding system



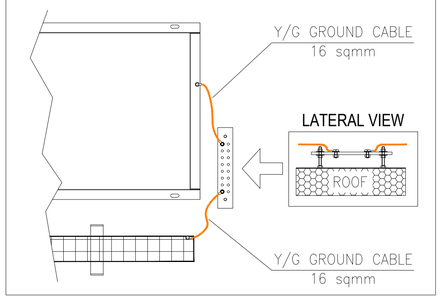
DET. 5

TYPICAL INSTALLATION BTH PE



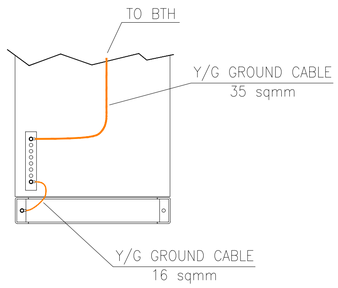
DET. 6

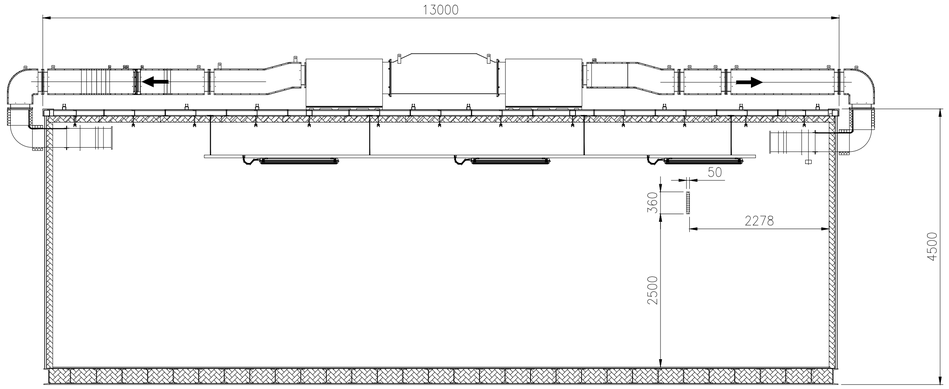
TYPICAL ROOF GROUNDING CONNECTION



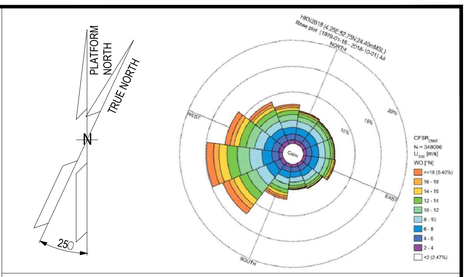
DET. 7

TYPICAL CABINET GROUNDING CONNECTION





SECTION D-D

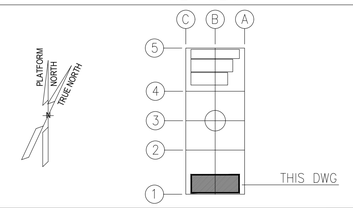


NOTES

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.

LEGEND

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	11/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
01	08/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	23/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND

ROSETTI MARINO

TITLE :

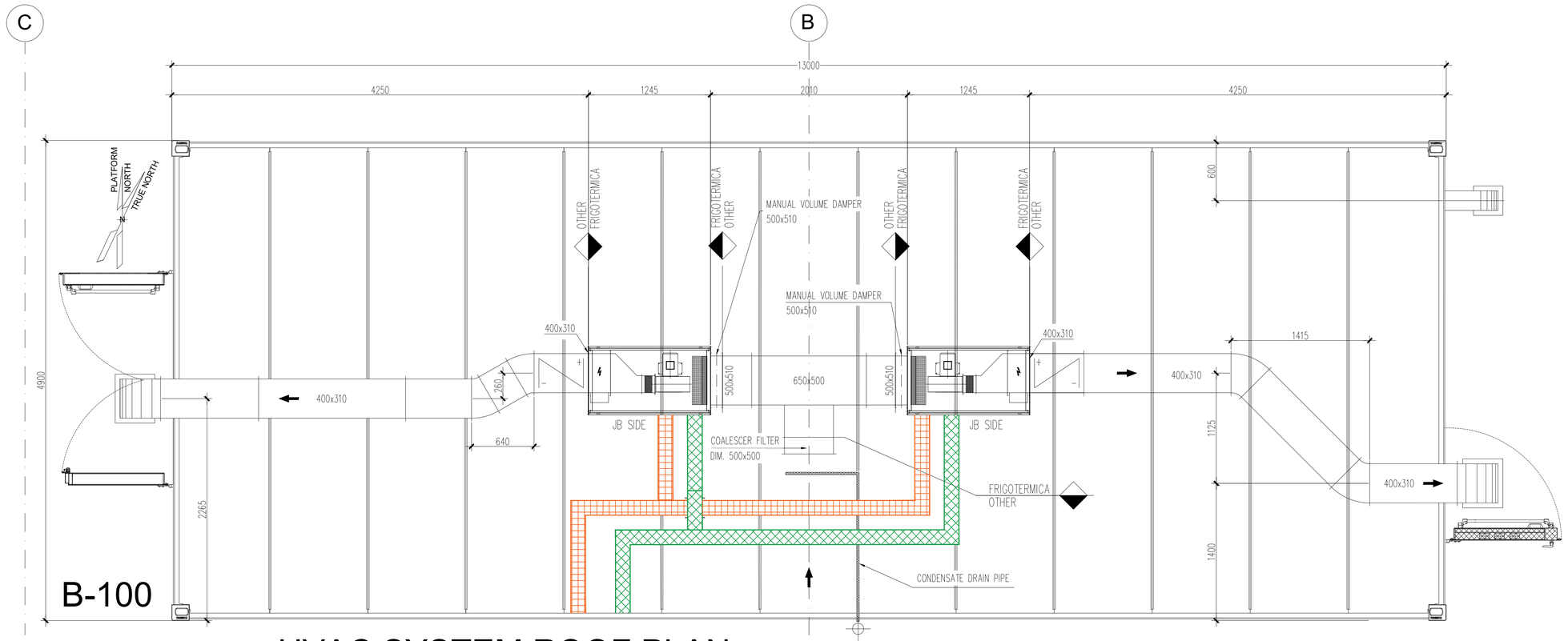
B-100 DETAILED DRAWINGS-E&I SHELTERS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00018	SHEET 004	REV. 02

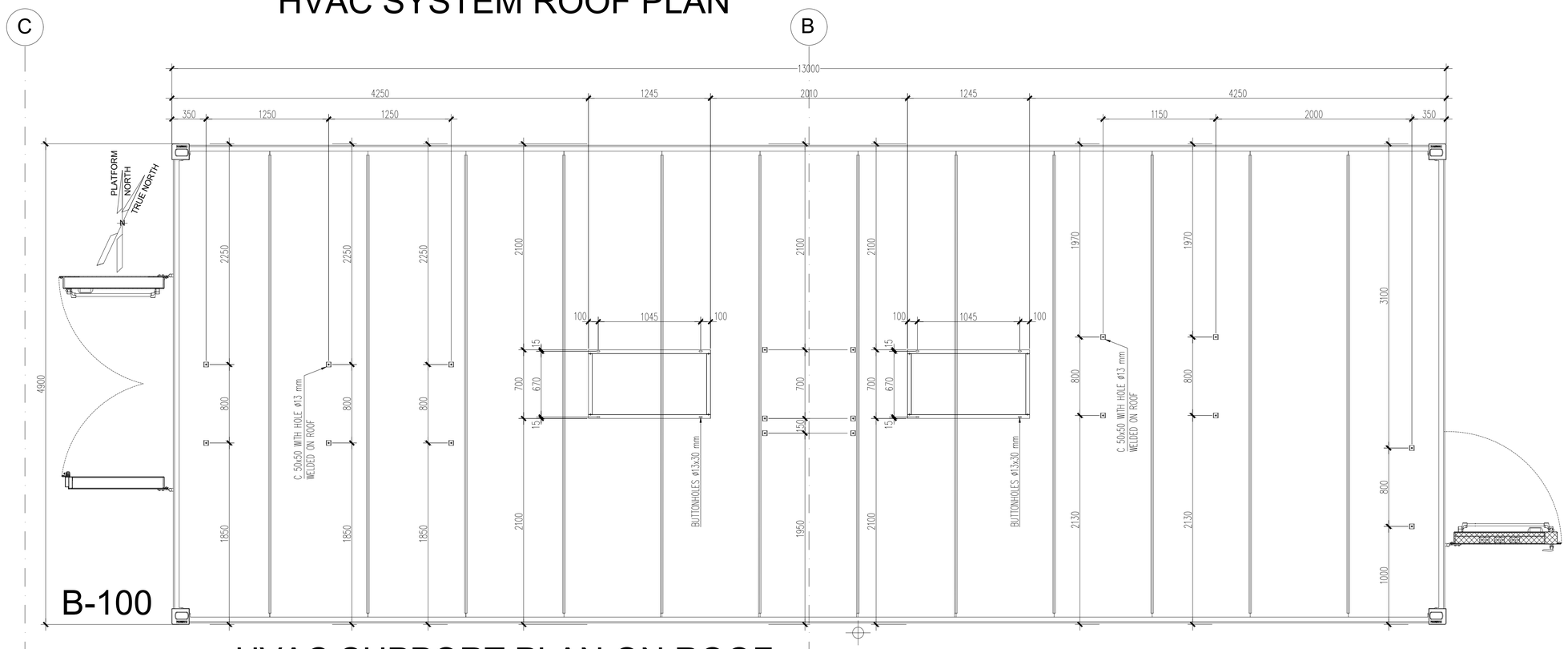
File Name : 1724000049-AR-DD-00018-REV.02

DRAWING NO. 1724000049-HV-DA-00064_0

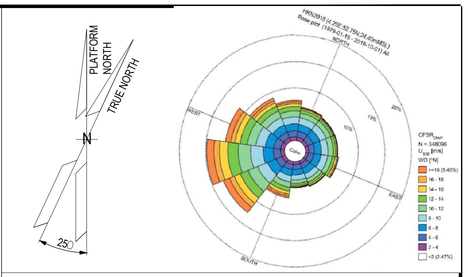
REV. 00



HVAC SYSTEM ROOF PLAN



HVAC SUPPORT PLAN ON ROOF



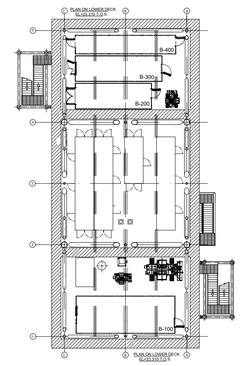
NOTES

Outdoor ductwork in stainless steel AISI 316L
Indoor ductwork in galvanized steel Z275

Basket tray Power

Basket tray Instrument

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	13/06/2024	S.Z.	S.S.	M.G.	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

S.S.
MODULE B-100
HVAC SYSTEM - G.A. AND DETAILS

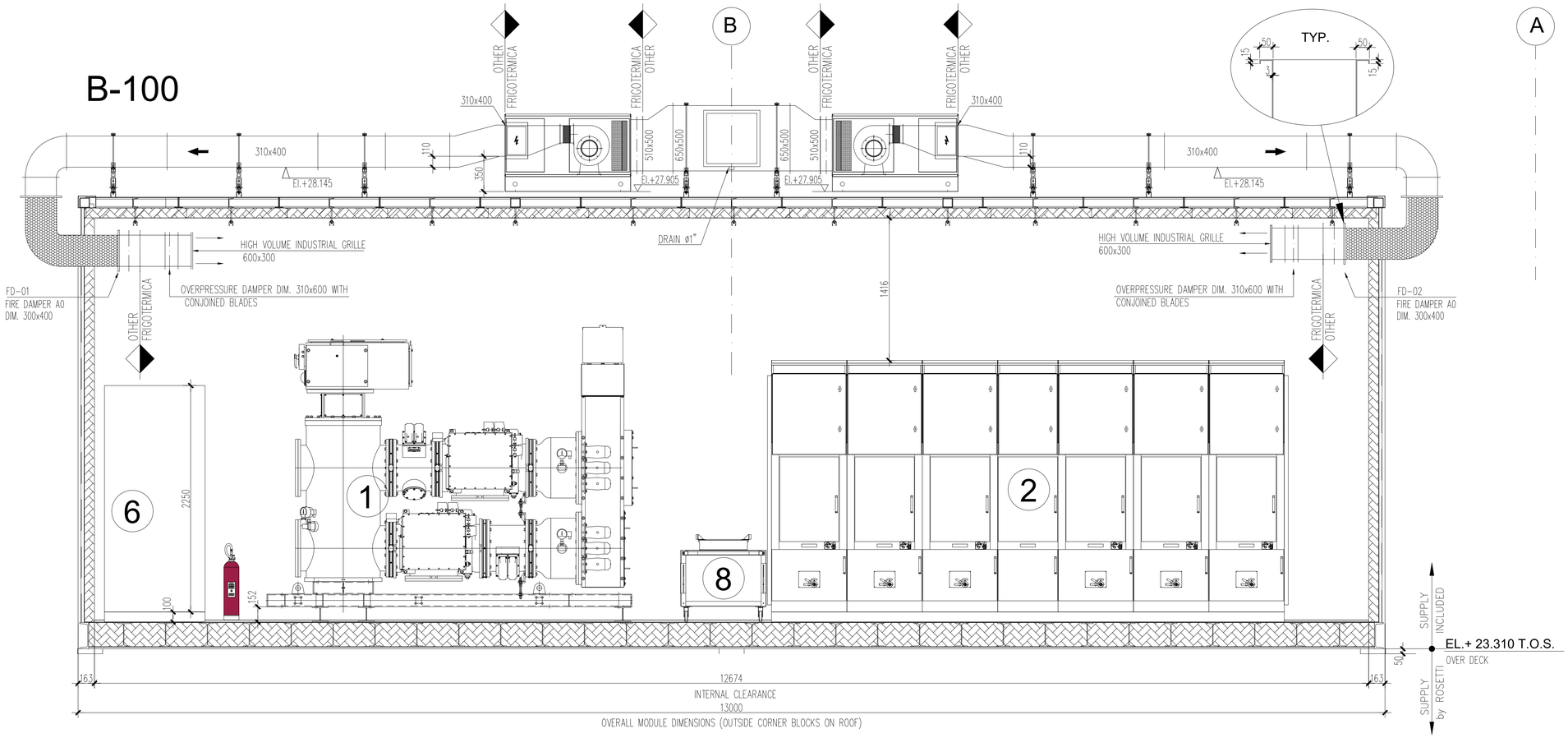
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 25
DRAWN S.Z.	CHECKED S.S.	APPROVED M.G.	DATE 13/06/2024
A1	DRAWING NO. 1724000049-HV-DA-00064	SHEET 001	REV. 00

File Name : 1724000049-HV-DA-00064_0

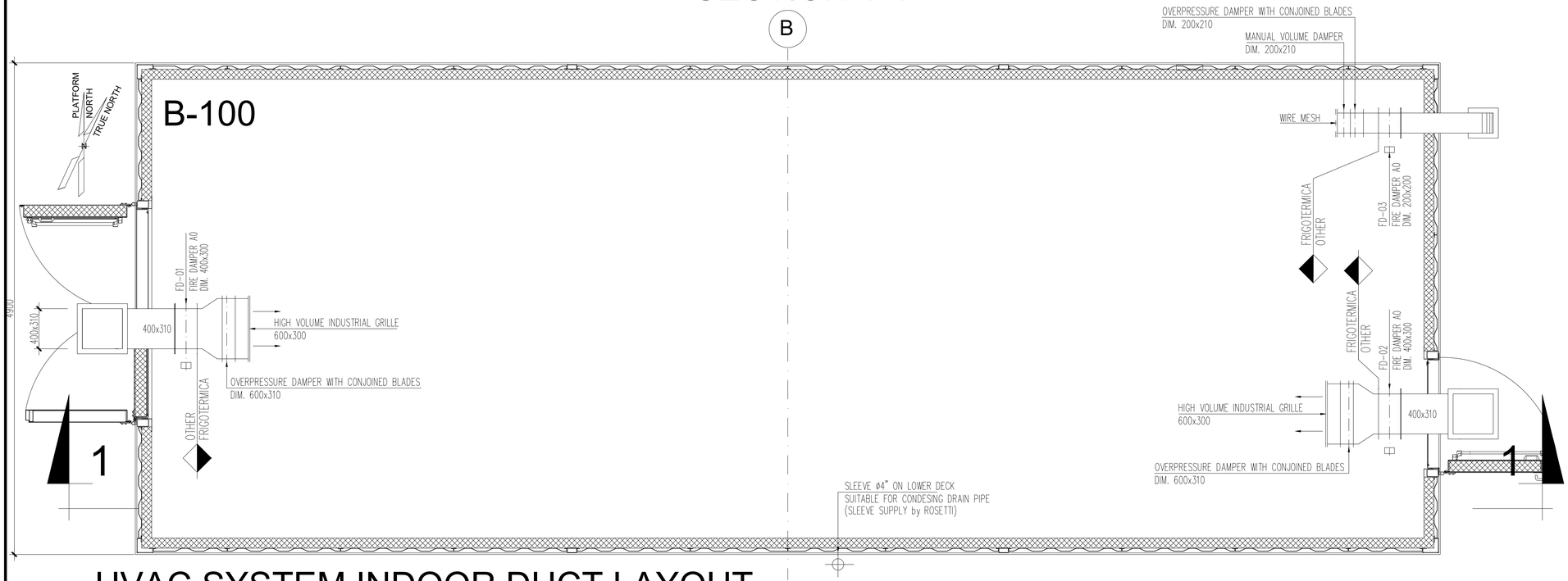
DRAWING NO. 1724000049-HV-DA-00064_0

REV. 00

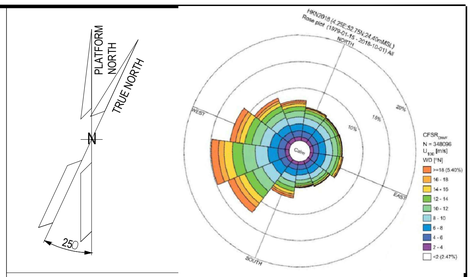
B-100



SECTION 1-1



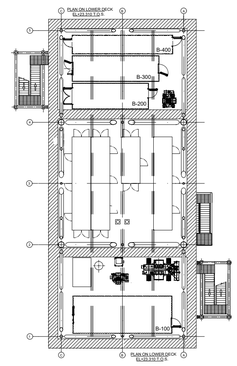
HVAC SYSTEM INDOOR DUCT LAYOUT



NOTES

Outdoor ductwork in stainless steel AISI 316L
Indoor ductwork in galvanized steel Z275

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	13/06/2024	S.Z.	S.S.	M.G.	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
S.S.
MODULE B-100
HVAC SYSTEM - G.A. AND DETAILS

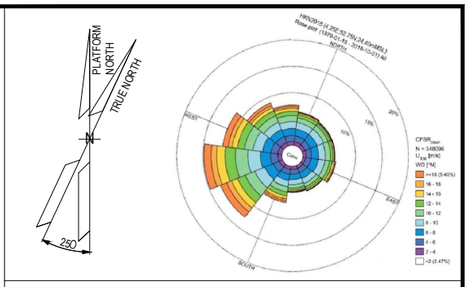
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 25
DRAWN S.Z.	CHECKED S.S.	APPROVED M.G.	DATE 13/06/2024
A1	DRAWING NO. 1724000049-HV-DA-00064	SHEET 002	REV. 00

File Name : 1724000049-HV-DA-00064_0

DRAWING NO. 123A90-1724000049-HV-PID-00039

REV. 01

BASE LOAD POWER HUB (BLPH)
B-100 HV
P&ID HVAC System



NOTES

LEGEND

HOLDS

ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	09/07/24	S.Z.	S.S.	M.G.	ISSUE FOR INFORMATION (IFI)
0	10/06/24	S.Z.	S.S.	M.G.	ISSUE FOR INFORMATION (IFI)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-100 HV
P&ID HVAC System

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:1
DRAWN G.M.	CHECKED A.O.	APPROVED A.C.	DATE 09/07/24

A1	DRAWING NO. 123A90-1724000049-HV-PID-00039	SHEET 001	REV. 01

File Name : 123A90-1724000049-HV-PID-00039_REV.01

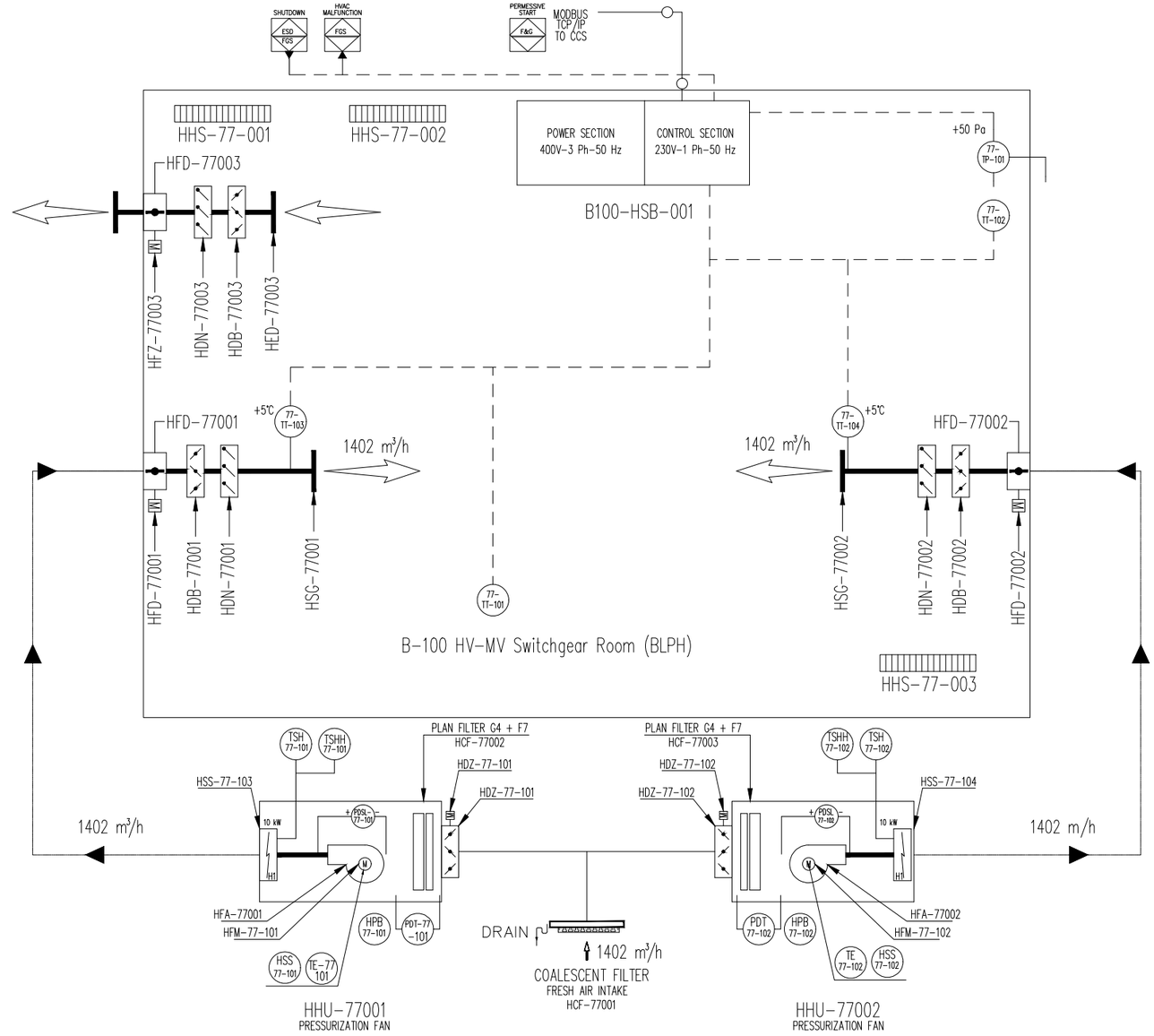
DRAWING NO. 123A90-1724000049-HV-PID-00039

REV. 01

ITEM	HVAC-PRESSURISING FAN
DESCRIPTION	HVAC UNIT
MAKER	FRIGOTERMICA srl
MODEL	4112-TBA
SUPPLY AIR FLOW	360 l/s
COOLING COIL CAPACITY	N.A.
HEATING COIL CAPACITY	11 kW
TENSIONE	400 V - 50 Hz - 3 Ph+N
EXECUTION	SAFE AREA
REFRIGERANT	N.A.

LEGENDA

	MOTORISED DAMPER WITH SPRING RETURN	F1	AIR FILTER "G4"		MOTORISED FIRE DAMPER WITH SPRING RETURN
	REGULATION DAMPER	F2	BAG FILTER "F8"		EVAPORATING COIL
	OVERPRESSURE DAMPER		CONDENSING COIL		
PDSH	DIFFERENTIAL PRESSURE SWITCH HIGH PRESSURE		CONDENSING FAN		
PDSL	DIFFERENTIAL PRESSURE SWITCH LOW PRESSURE		ELECTRICAL HEATER		LIQUID RECEIVER
TT	TEMPERATURE TRASMITTER		SUPPLY FAN	MT	MOISTURE TRASMITTER
EPB	EMERGENCY PUSH BUTTON		GLOBE VALVE	PTM	HIG PRESSURE TRASDUCER
OH	COMPRESSOR OIL HEATER		DRYER FILTER	P	COMPRESSOR THERMIC PROTECTION
SV	SOLENOID VALVE		SIGHT GLASS	TSM	SECURITI THERMOSTATE
	REFRIGERANT COMPRESSOR		THERMOSTATIC VALVE	PSH	HIGH PRESSURE SWITCH
			PRESSURE RELIEF VALVE	PSL	LOW PRESSURE SWITCH
				PC	CONDENSING PRESSURE SWITCH



OUTDOOR DESIGN CONDITIONS

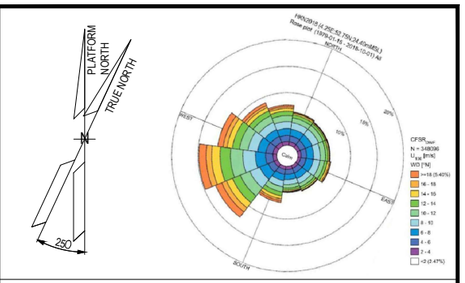
Safe Area
Min. design DB Temp: -8,4°C with RH 100 %
Max. design DB Temp: +25°C with RH 90 %

Module hv-mv (66 kW-6.6 kW)

Safe Area
Indoor min. design temperature: +5°C with RH 30 ÷ 70% ±5
Indor max. design temperature: +35°C with RH 30 ÷ 70% ±5
Min. ACH: 6

NOTES:

- HVAC POWER CABINET will energize what above shown.
- HVAC CONTROL CABINET will control all what above shown.
- HVAC POWER CABINET will energize light and socket.
- Outside drainage system shall be provided of heatng cable with anti-freeze funcion to avoid ice inside pipes when outside temeprature reaches values close to 0°C.
- Outdoor air ductworks in stainless steel AISI 316



NOTES

LEGEND

HOLDS

ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	09/07/24	S.Z.	S.S.	M.G.	ISSUE FOR INFORMATION (IFI)
0	10/06/24	S.Z.	S.S.	M.G.	ISSUE FOR INFORMATION (IFI)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-100 HV
P&ID HVAC System

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 1
DRAWN G.M.	CHECKED A.O.	APPROVED A.C.	DATE 09/07/24
A1	DRAWING NO. 123A90-1724000049-HV-PID-00039	SHEET 003	REV. 01

File Name : 123A90-1724000049-HV-PID-00039_REV.01

B-100 HVAC - CABLE LIST

Posizione	n:° CABLE	CABLE CHARACTERISTICS				CABLE FROM:				CABLE TO:				JB TAG	CABLE LENGHT (m)	CABLE DIAMETER	CABLE TYPE	NOTE
		SECTION	TIPE	U_0/U (kV)	MATERIAL SHEAT	ITEM	CABLE GLAND	TAG	POSITION	ITEM	CABLE GLAND	TAG	POSITION					
a	a	a	a	a		a	a	a	a	a	a	a	a	a	a	a	a	
1		5G25	by Client	by Client	by Client	by Client	by Client	by Client	by Client	HVAC PANEL	by Client	B100-HSB-001	inside B100	N.A.	by Client	25,60	LOW VOLTAGE	General power supply 400V 3ph+N+PE Cable supply by RM. Info not available
2		3G4	by Client	by Client	by Client	by Client	by Client	by Client	by Client	HVAC PANEL	by Client	B100-HSB-001	inside B100	N.A.	by Client	11,10	LOW VOLTAGE	UPS Power Supply 1ph+N+PE Cable supply by RM. Info not available
3	77101-CEL-L1	5G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	BLINDO 1	2900.M20N	PECW-B100H-F1-L1-01	inside B100	N.A.	12,5	11,60	LOW VOLTAGE	
4	77102-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO 1	N.A.	PECW-B100H-F1-L1-01	inside B100	LAMP (E) 1	2900.M20N	PELF-B100H-F1-L1-01	inside B100	N.A.	0,5	10,80	LOW VOLTAGE	
5	77103-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO 1	N.A.	PECW-B100H-F1-L1-01	inside B100	LAMP 2	2900.M20N	PELF-B100H-F1-L1-02	inside B100	N.A.	0,5	9,80	LOW VOLTAGE	
6	77104-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO 1	N.A.	PECW-B100H-F1-L1-01	inside B100	LAMP 3	2900.M20N	PELF-B100H-F1-L1-03	inside B100	N.A.	0,5	9,80	LOW VOLTAGE	
7	77105-CEL-L1	5G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	BLINDO 2	2900.M20N	PECW-B100H-F1-L1-02	inside B100	N.A.	16	11,60	LOW VOLTAGE	
8	77106-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO 2	N.A.	PECW-B100H-F1-L1-02	inside B100	LAMP 4	2900.M20N	PELF-B100H-F1-L1-04	inside B100	N.A.	0,5	9,80	LOW VOLTAGE	
9	77107-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO 2	N.A.	PECW-B100H-F1-L1-02	inside B100	LAMP 5	2900.M20N	PELF-B100H-F1-L1-05	inside B100	N.A.	0,5	9,80	LOW VOLTAGE	
10	77108-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO 2	N.A.	PECW-B100H-F1-L1-02	inside B100	LAMP 6	2900.M20N	PELF-B100H-F1-L1-06	inside B100	N.A.	0,5	9,80	LOW VOLTAGE	
11	77109-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO 2	N.A.	PECW-B100H-F1-L1-02	inside B100	LAMP (E) 7	2900.M20N	PELF-B100H-F1-L1-07	inside B100	N.A.	0,5	10,80	LOW VOLTAGE	
12	77110-CEL-L2	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	MODULE SOCKET	2900.M20N	PESO-B100H-F2-L2-01	inside B100	N.A.	14	9,80	LOW VOLTAGE	
13	77101-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	MODULE SWITCH 1	2900.M20N	CELS-B100H-F1-L1-01	inside B100	N.A.	18,5	8,20	CONTROL	
14	77102-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	MODULE SWITCH 2	2900.M20N	CELS-B100H-F1-L1-02	inside B100	N.A.	16	8,20	CONTROL	
15	77111-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	SPACE HEATER 1	2900.M20N	HSS-77-001	inside B100	N.A.	13	9,80	LOW VOLTAGE	
16	77112-CEL-L2	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	SPACE HEATER 2	2900.M20N	HSS-77-002	inside B100	N.A.	14,5	9,80	LOW VOLTAGE	
17	77113-CEL-L3	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	SPACE HEATER 3	2900.M20N	HSS-77-003	inside B100	N.A.	16	9,80	LOW VOLTAGE	
18	77114-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PRESSURIZING FAN 1	2900.M20N	HFM-77-101	HHU-77001	HJB-77001-A	7	10,80	LOW VOLTAGE	
19	77115-CEL-L1	4G6	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	ELECTRICAL HEATER 1	2900.M25N	HSS-77-101	HHU-77001	HJB-77001-A	7	13,80	LOW VOLTAGE	
20	77116-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PRESSURIZING FAN 2	2900.M20N	HFM-77-102	HHU-77002	HJB-77002-A	10	10,80	LOW VOLTAGE	
21	77117-CEL-L1	4G6	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	ELECTRICAL HEATER 2	2900.M25N	HSS-77-102	HHU-77002	HJB-77002-A	10	13,80	LOW VOLTAGE	
22		TBA	by Client	0,6/1,0	by Client	SIS	by Client	by Client	by Client	HVAC PANEL	by Client	B100-HSB-001	inside B100		by Client	0,00	by Client	Cable supply by RM. Info not available
23		TBA	by Client	0,6/1,0	by Client	SIS	by Client	by Client	by Client	HVAC PANEL	by Client	B100-HSB-001	inside B100		by Client	0,00	by Client	Cable supply by RM. Info not available
24	77103-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PRESSURIZING FAN1 MOTOR PTC	2900.M20N	TE-77-101	HHU-77001	HJB-77001-B	7	8,20	CONTROL	
25	77104-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PRESSURIZING FAN 1 EMERGENCY BUTTON	2900.M20N	HPB-77-101	HHU-77001	HJB-77001-B	7	8,20	CONTROL	
26	77105-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	ELECTRICAL HEATER 1 PROTECTION THERMOSTATE	2900.M20N	TSH/TSHH-77-101	HHU-77001	HJB-77001-B	7	8,20	CONTROL	
27	77106-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PRESSURIZING FAN 1 MOTOR HEATER	2900.M20N	HSS-77-103	HHU-77001	HJB-77001-B	7	8,20	CONTROL	
28	77120-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PDT - FAN 1 FILTERS DIFFERENTIAL PRESSURE TRASMITTER	2900.M20N	PDT-77-101	HHU-77001	HJB-77001-B	7	11,10	CONTROL	
29	77121-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PDSL - FAN 1 DIFFERENTIAL PRESSURE SWITCH LOW PRESSURE	2900.M20N	PDSL-77-101	HHU-77001	HJB-77001-B	7	8,20	CONTROL	
30	77118-CEL-L2	3G1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	POWER SUPPLY MOTORISED DAMPER	2900.M20N	HDZ-77-101	HHU-77001	HJB-77001-A	7	9,80	LOW VOLTAGE	
31	77111-CEC-L2	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	SIGNAL MOTORISED DAMPER	2900.M20N	HDZ-77-101	HHU-77001	HJB-77001-B	7	9,70	CONTROL	
32	77107-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PRESSURIZING FAN 2 MOTOR PTC	2900.M20N	TE-77-102	HHU-77002	HJB-77002-B	10	8,20	CONTROL	
33	77108-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PRESSURIZING FAN 2 EMERGENCY BUTTON	2900.M20N	HPB-77-102	HHU-77002	HJB-77002-B	10	8,20	CONTROL	
34	77109-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	ELECTRICAL HEATER 2 PROTECTION THERMOSTATE	2900.M20N	TSH/TSHH-77-102	HHU-77002	HJB-77002-B	10	8,20	CONTROL	
35	77110-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PRESSURIZING FAN 2 MOTOR HEATER	2900.M20N	HSS-77-104	HHU-77002	HJB-77002-B	10	8,20	CONTROL	
36	77122-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PDT - FAN 2 FILTERS DIFFERENTIAL PRESSURE TRASMITTER	2900.M20N	PDT-77-102	HHU-77002	HJB-77002-B	10	11,10	CONTROL	
37	77123-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PDSL - FAN 2 DIFFERENTIAL PRESSURE SWITCH LOW PRESSURE	2900.M20N	PDSL-77-102	HHU-77002	HJB-77002-B	10	8,20	CONTROL	
38	77119-CEL-L2	3G1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	POWER SUPPLY MOTORISED DAMPER	2900.M20N	HDZ-77-102	HHU-77002	HJB-77002-A	10	9,80	LOW VOLTAGE	
39	77112-CEC-L2	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	SIGNAL MOTORISED DAMPER	2900.M20N	HDZ-77-102	HHU-77002	HJB-77002-B	10	9,70	CONTROL	
40	77123-CEL-L2	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	TEMPERATURE TRASMITTER 1	2900.M20N	77-TT-101	inside B100	N.A.	11,5	11,10	CONTROL	
41	77124-CEL-L2	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	TEMPERATURE TRASMITTER 2	2900.M20N	77-TT-102	inside B100	N.A.	15,5	11,10	CONTROL	
42	77126-CEL-L2	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	TEMPERATURE TRASMITTER 3	2900.M20N	77-TT-103	inside B100	N.A.	15	11,10	CONTROL	Mounted on internal sleeve
43	77127-CEL-L2	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	TEMPERATURE TRASMITTER 4	2900.M20N	77-TT-104	inside B100	N.A.	18	11,10	CONTROL	Mounted on internal sleeve
44	77125-CEL-L2	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	DIFFERENTIAL PRESSURE TRASMITTER	2900.M20N	77-TP-101	inside B100	N.A.	2	11,10	CONTROL	
45	77113-CEC-L2	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77001	inside B100	N.A.	12	9,70	CONTROL	
46	77114-CEC-L2	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77002	inside B100	N.A.	15	9,70	CONTROL	
47	77115-CEC-L2	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77003	inside B100	N.A.	18	9,70	CONTROL	

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Section 6 MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-10 & process: MC & discipline : I

Instrumental	77-10 HVAC HV/MV Switchgear Room B-100

ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
77-HS-001A	Hand Switch for Fire&Gas Damper HFD-77001	ONSHORE	C10002077	CJX00	100	2024-10-16	RFC 2
77-HS-001B	Hand Switch for Fire&Gas Damper HFD-77001	ONSHORE	C10002078	CJX00	100	2024-10-16	RFC 2
77-HS-002A	Hand Switch for Fire&Gas Damper HFD-77002	ONSHORE	C10002079	CJX00	100	2024-10-16	RFC 2
77-HS-002B	Hand Switch for Fire&Gas Damper HFD-77002	ONSHORE	C10002080	CJX00	100	2024-10-16	RFC 2
77-HS-003A	Hand Switch for Fire&Gas Damper HFD-77003	ONSHORE	C10002081	CJX00	100	2024-10-16	RFC 2
77-HS-003B	Hand Switch for Fire&Gas Damper HFD-77003	ONSHORE	C10002082	CJX00	100	2024-10-16	RFC 2
B-100	Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100	ONSHORE	C10002297	CZX01I	100	2024-10-18	RFC 2
B100-HSB-001/B400-FGS-003	B-100 HVAC Control Panel / MARSHALLING PCS	ONSHORE	C10002035	CJX10	100	2024-11-19	RFC 2
C-77-HS-001A/77-HS-001B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000355	CJX10	100	2024-10-16	RFC 2
C-77-HS-001B/950-JE-06203	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000354	CJX10	100	2024-10-16	RFC 2
C-77-HS-002A/77-HS-002B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000358	CJX10	100	2024-10-16	RFC 2
C-77-HS-002B/950-JE-06203	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000357	CJX10	100	2024-10-16	RFC 2
C-77-HS-003A/77-HS-003B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000361	CJX10	100	2024-10-16	RFC 2
C-77-HS-003B/950-JE-06203	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000360	CJX10	100	2024-10-16	RFC 2
C-77-HY-001/77-HS-001A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000356	CJX10	100	2024-10-16	RFC 2
C-77-HY-002/77-HS-002A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000359	CJX10	100	2024-10-16	RFC 2
C-77-HY-003/77-HS-003A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000362	CJX10	100	2024-10-16	RFC 2
C-77-XA-001/B400-SIS-001	UCP FAULT ALARM / MARSHALLING PCS	ONSHORE	C10000184	CJX10	100	2024-11-25	RFC 2
C-77-XS-001/B400-SIS-001	TRIP SIGNAL TO UCP / MARSHALLING PCS	ONSHORE	C10000180	CJX10	100	2024-11-25	RFC 2

ROSETTI MARINO — PROVERLIS — CROSSWIND

ITEM	Tag	C-77-XS-001/B400-SIS-001	: TRIP SIGNAL TO UCP / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100	Module	LD_B-100/LD_B-400		
TASK	code	C10000180	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	B100-HSB-001	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	PL
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		0,9	Ω
	SCREEN		0,9	Ω
	EARTH		NA	Ω
	ARMr		0,9	Ω
	TEST VOLTS		500	V

TEST ALL CORES AND RECORD LOWEST VALUE

Notes: The lowest value is recorded and must be within project specifications

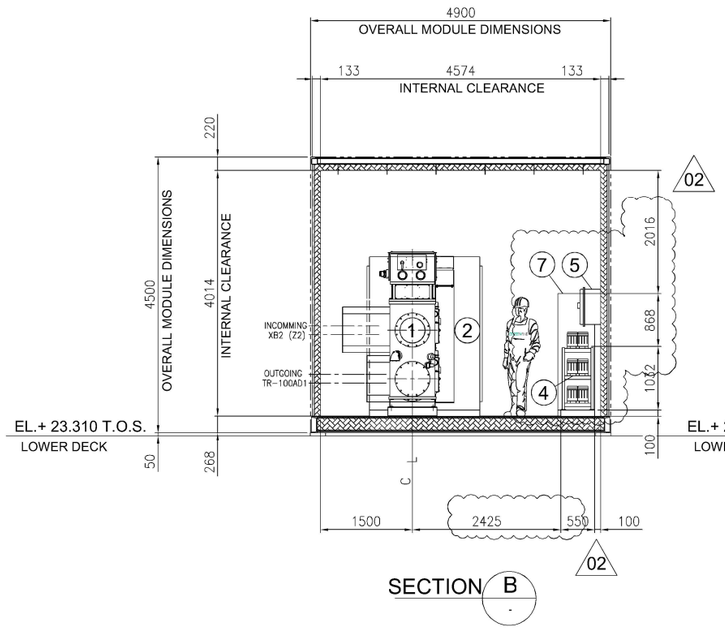
TESTING INSTRUMENTS USED

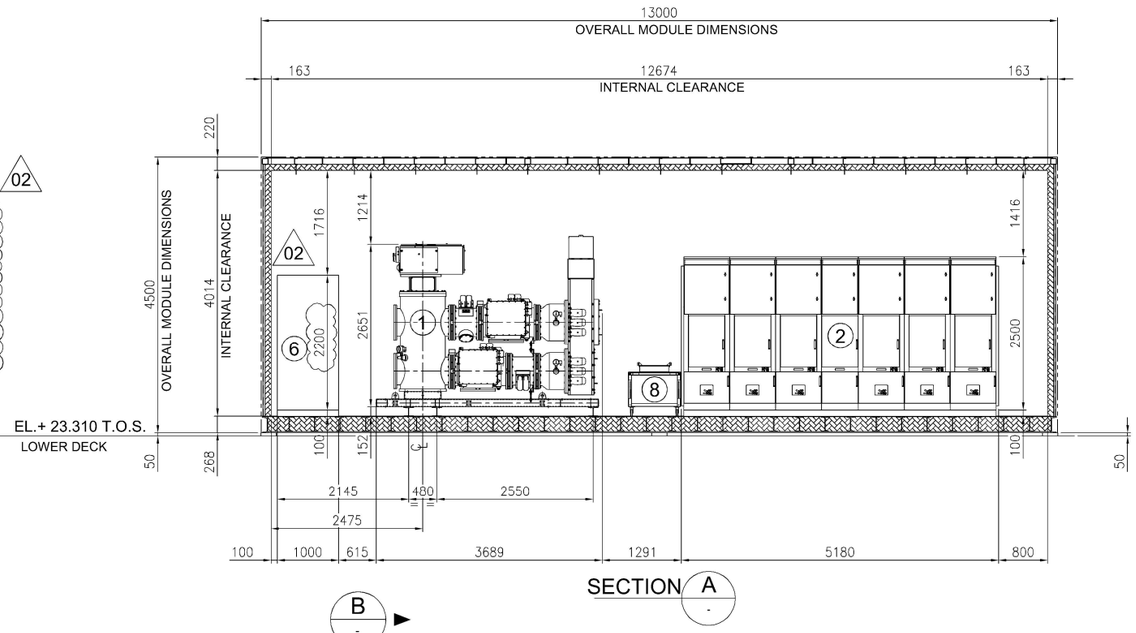
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 Calibration date: N°7722/24 10/07/2024

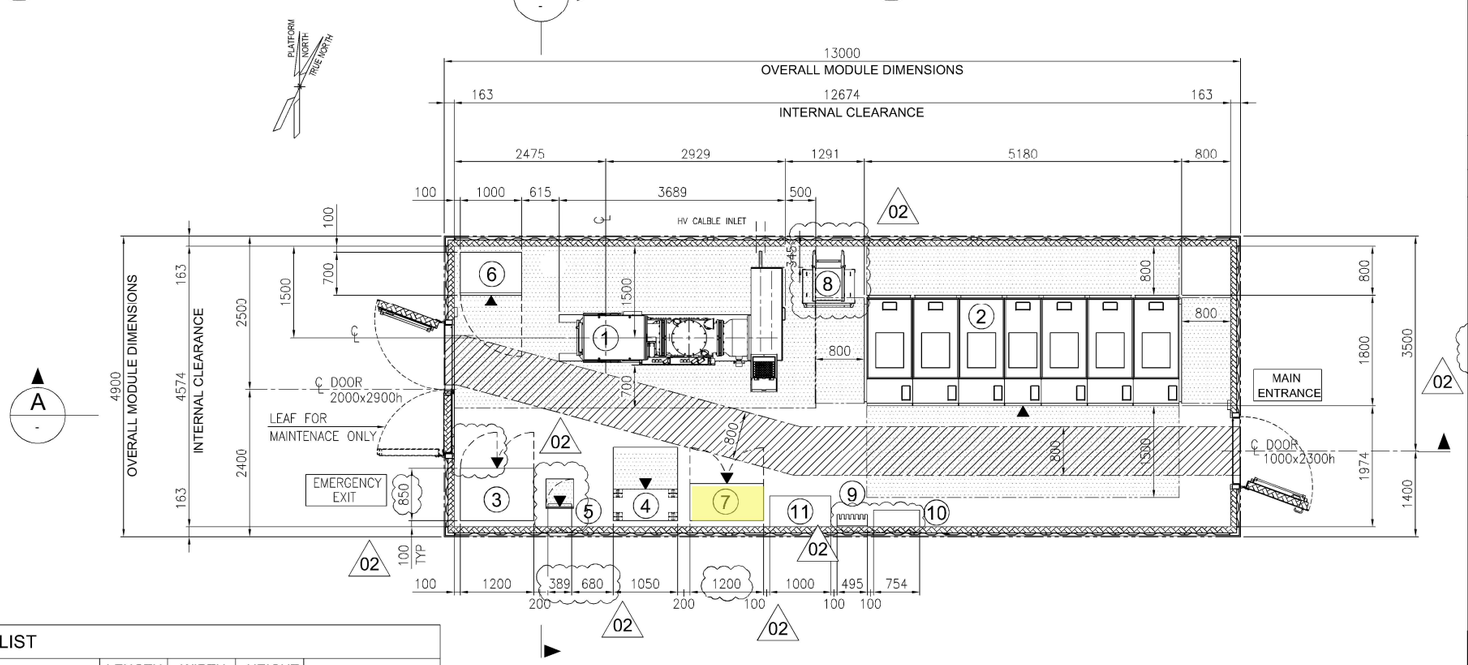
Comments Nota 5: refer to PL C30000680

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Alessio Polo	
Date	2024-11-25	2024-11-25	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-11-25T10:57:12.296Z	PROVERLIS Digitaly signed by Alessio Polo 2024-11-25T18:03:26.209Z	

DRAWING NO. 123A90-DDL-EL-DL-20104 REV. 02

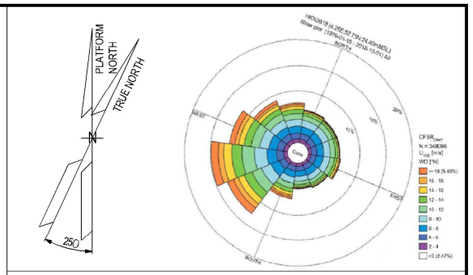






EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	
3	UP-200F1	DC UPS PANEL	1200	850	2105	
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	
5	CB-200F1 02	ISOLATOR FOR DC UPS	452	377	634	
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2200	02
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV MV ROOM	1200	600	1900	
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	
9	-	TOOL BOX	495	200	200	
10	-	SUBSTATION LIFE SAVING & INTERVENTION KIT	754	270	840	
11	-	TABLE	1000	500	750	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DELETED
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT.
4. FOR OTHER ITEMS, CORRECT LOCATION AND INFROMATION, 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

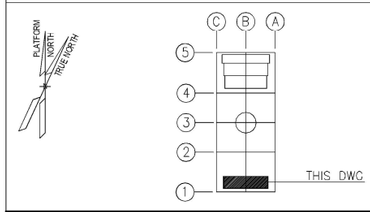
LEGEND

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
66kV SWITCHGEAR (GIS) GENERAL ARRANGEMENT DRAWING	1723001595-EL-DA-00006
CIRCUIT AND WIRING DIAGRAM	1723001595-EL-DG-00015
SG-100D1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00006
DC UPS – GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS	1724000372-EL-DA-00003
DC UPS – BATTERY LAYOUT AND INTERCONNECTING DIAGRAM	1724000372-EL-DG-00010
B-100 - GENERAL ARRANGEMENT DRAWINGS - E&I SHELTER	1724000049-AR-DA-00014

KEY PLAN



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20104**

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	10/11/2023	DSF	CB/AMA	DYFO/MDO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

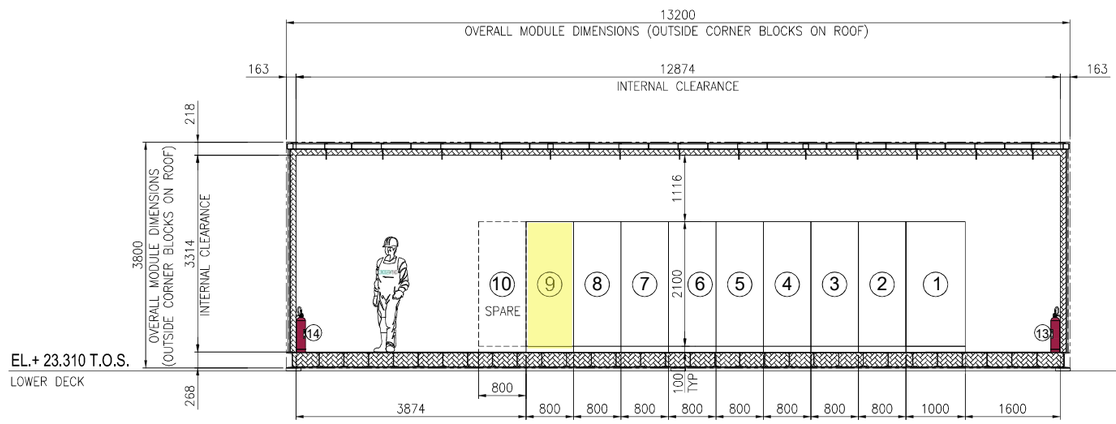
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
HV SWITCHROOM

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

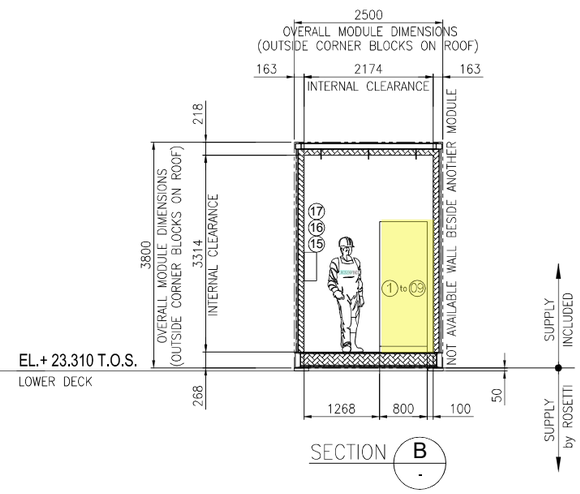
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File Name : 123A90-DDL-EL-DL-20104_REV02.dwg

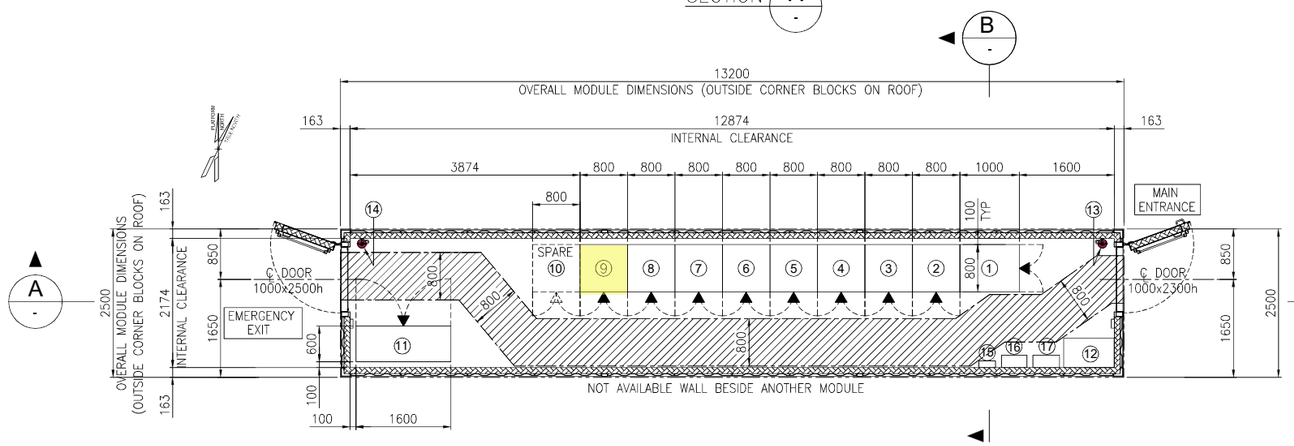
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SECTION A -



SECTION B -

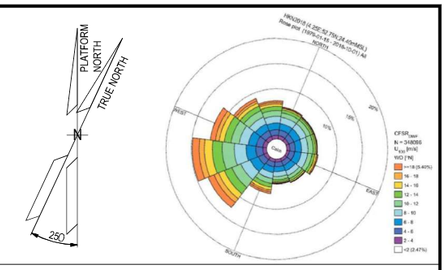


EQUIPMENT LAYOUT
"B-400" I&T EQUIPMENT ROOM
BOTTOM PLAN

02

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-001	PCS SYSTEM CABINET	800	800	2100	
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	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 ENCLOSURE
_____ FRONT OF EQUIPMENT

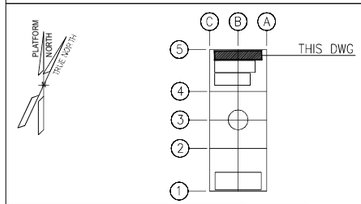
HOLDS

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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
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. 02

File Name : 123A90-DDL-IN-DL-40012 Rev.02.dwg

DRAWING NO. 123A90-DDL-IN-DG-40016

REV. 01

FIELD		I&T EQUIPMENT ROOM (ITER)
HVAC SYSTEMs	CABLE NO	MARSHALLING CABINET B400-SIS-001

<01>

B-100 HVAC CONTROL P. UCP	77-XS-001	TB-XC 100 1BK, 101 2BK	NOTE-2	C-77-XS-001/B400-SIS-001 6PR*2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	TB-XS-000 1BK 21, 2BK 22	77-XS-001
B-200 HVAC CONTROL P. UCP	77-XS-002	TB-XC 100 1BK, 101 2BK	NOTE-2	C-77-XS-002/B400-SIS-001 6PR*2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	TB-XS-000 1BK 23, 2BK 24	77-XS-002
B-300 HVAC CONTROL P. UCP	77-XS-003	TB-XC 500 1BK, 501 2BK	NOTE-2	C-77-XS-003/B400-SIS-001 6PR*2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	TB-XS-000 1BK 25, 2BK 26	77-XS-003
B-400 HVAC CONTROL P. UCP	77-XS-004	TB-XC 500 1BK, 501 2BK	NOTE-2	C-77-XS-004/B400-SIS-001 6PR*2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	TB-XS-000 1BK 27, 2BK 28	77-XS-004

Shield Bar

Shield Bar

Shield Bar

Shield Bar

I.E.

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
HVAC SYSTEM 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	021	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>

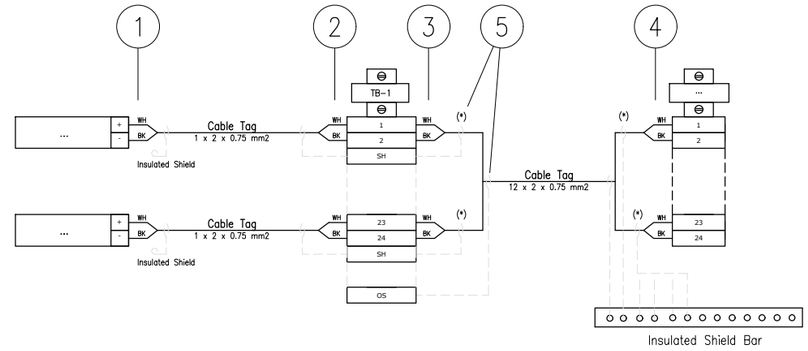
LEGENDS & SYMBOLS:

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

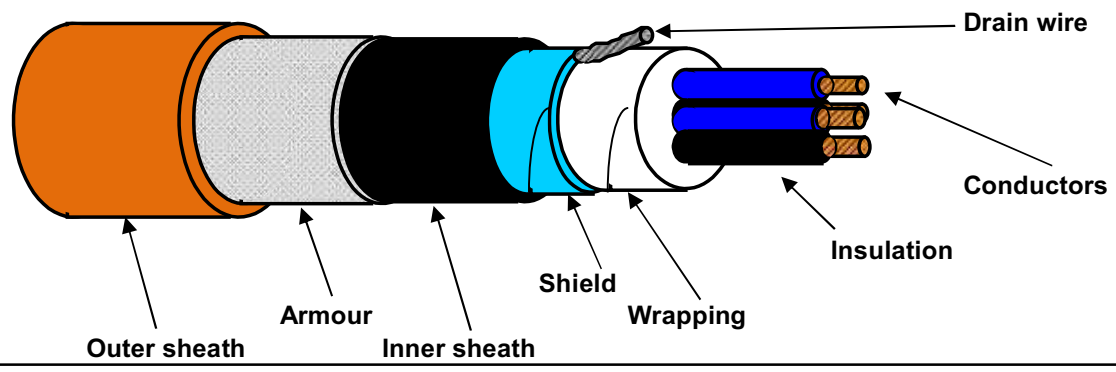
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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-77-XS-001/B400-SIS-001	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						B100-HSB-001	Distribution & HVAC Panel - HV MV Room	Lower Deck (B-100)	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-101 / B-100-SEC-1A / L-SEC-17 / L-SEC-1N / 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-77-XA-001/B400-SIS-001	:	UCP FAULT ALARM / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091
	S/Sys	77-10	:	HVAC HV/MV Switchgear Room B-100	Module	LD_B-100/LD_B-400
TASK	code	C10000184	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	1X2X0,75 mm2	Color	ORANGE
From	B100-HSB-001	To	B400-SIS-001		

1	Check cable is as specified in project cable schedule.	PL
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	PL
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	1,8	Ω
	SCREEN	1,8	Ω
	EARTH	NA	Ω
	ARMr	1,8	Ω
	TEST VOLTS	500	V

TEST ALL CORES AND RECORD LOWEST VALUE

Notes: The lowest value is recorded and must be within project specifications

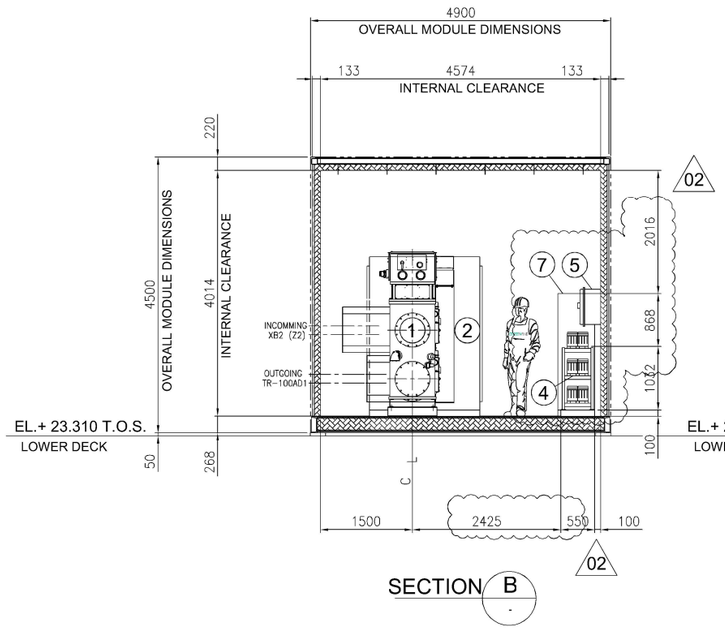
TESTING INSTRUMENTS USED

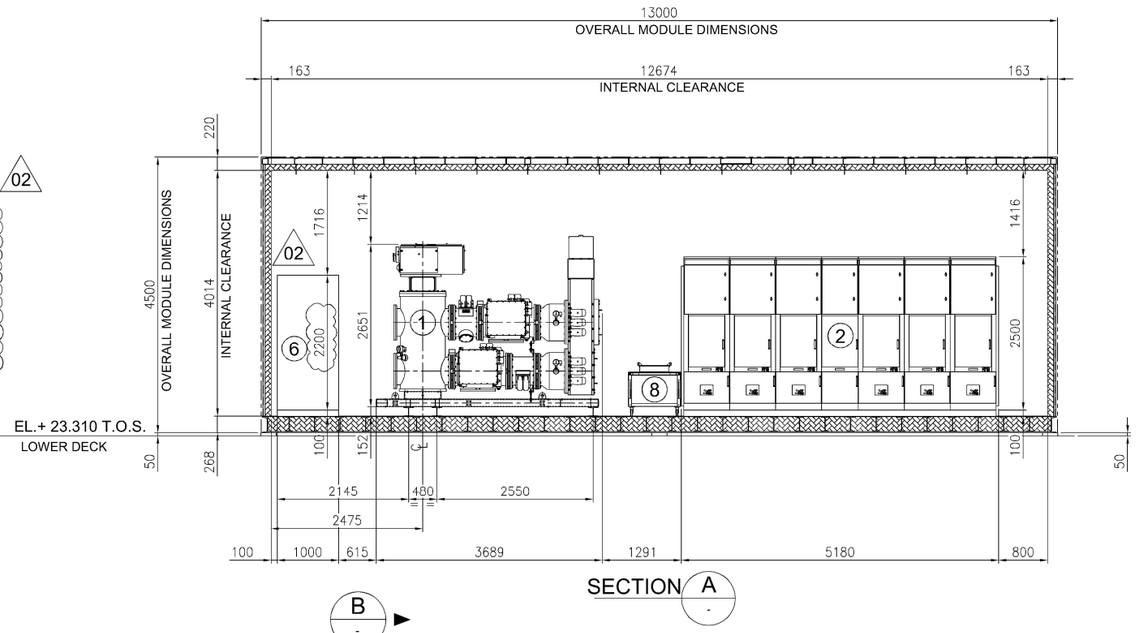
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 Calibration date: N°7722/24 10/07/2024

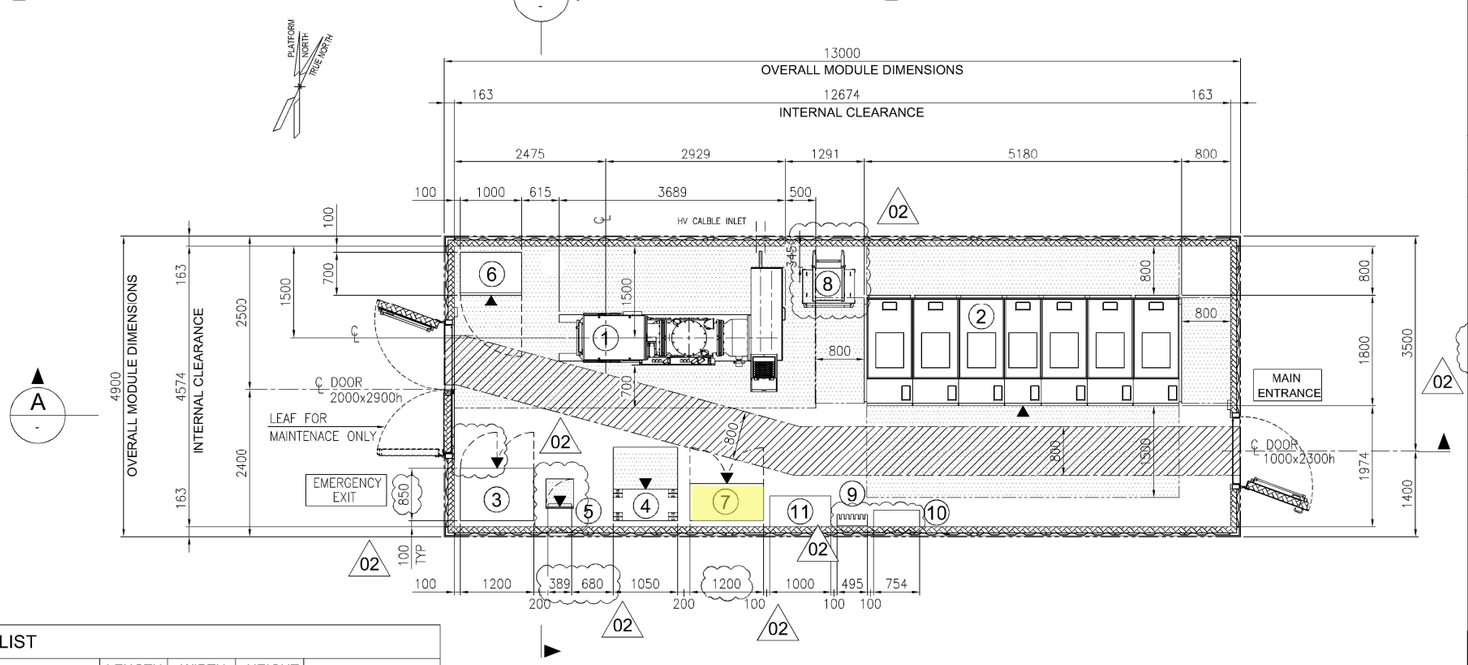
Comments Nota 5: refer to PL C30000680

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Alessio Polo	
Date	2024-11-25	2024-11-25	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-11-25T11:02:17.285Z	PROVERLIS Digitaly signed by Alessio Polo 2024-11-25T18:03:10.011Z	

DRAWING NO. 123A90-DDL-EL-DL-20104 REV. 02

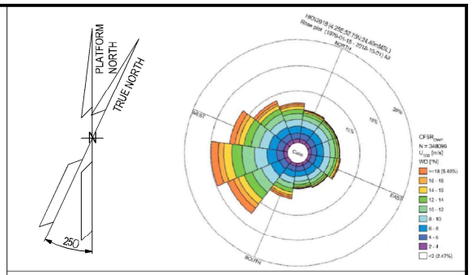






EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	
3	UP-200F1	DC UPS PANEL	1200	850	2105	
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	
5	CB-200F1 02	ISOLATOR FOR DC UPS	452	377	634	
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2200	02
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV MV ROOM	1200	600	1900	
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	
9	-	TOOL BOX	495	200	200	
10	-	SUBSTATION LIFE SAVING & INTERVENTION KIT	754	270	840	
11	-	TABLE	1000	500	750	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DELETED
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT.
4. FOR OTHER ITEMS, CORRECT LOCATION AND INFROMATION, 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

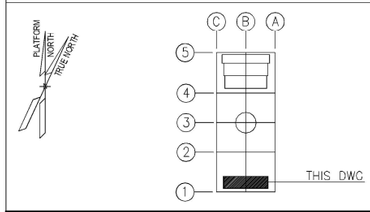
LEGEND

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
66kV SWITCHGEAR (GIS) GENERAL ARRANGEMENT DRAWING	1723001595-EL-DA-00006
CIRCUIT AND WIRING DIAGRAM	1723001595-EL-DG-00015
SG-100D1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00006
DC UPS – GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS	1724000372-EL-DA-00003
DC UPS – BATTERY LAYOUT AND INTERCONNECTING DIAGRAM	1724000372-EL-DG-00010
B-100 - GENERAL ARRANGEMENT DRAWINGS - E&I SHELTER	1724000049-AR-DA-00014

KEY PLAN



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20104**

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	10/11/2023	DSF	CB/AMA	DYFO/MDO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

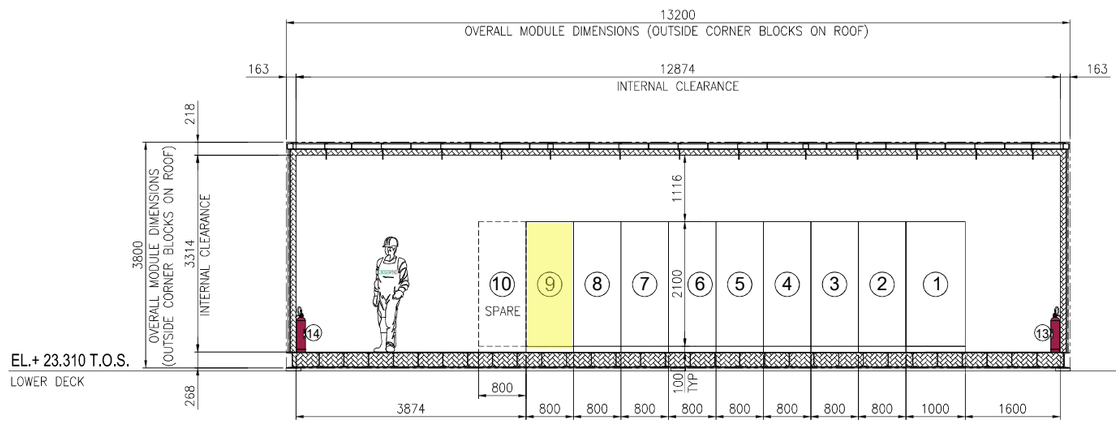
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
HV SWITCHROOM

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

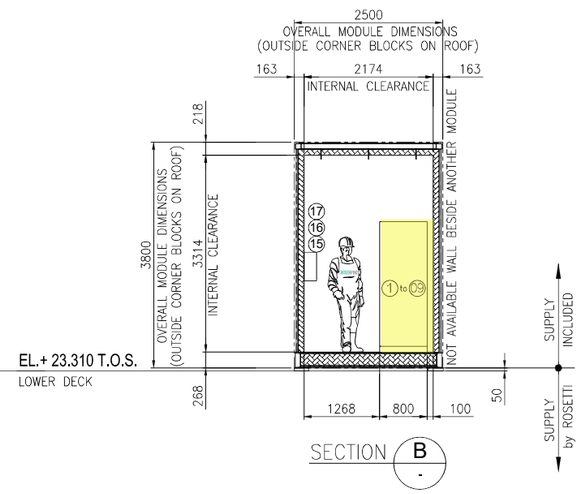
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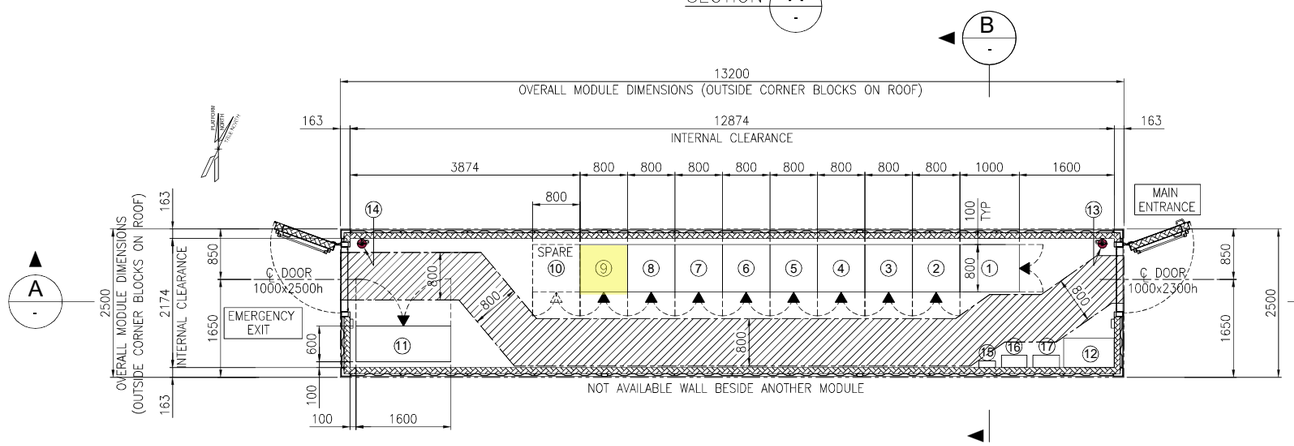
DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 02



SECTION A -



SECTION B -

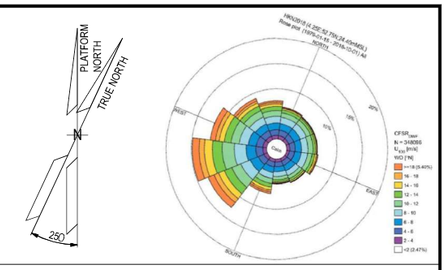


EQUIPMENT LAYOUT
"B-400" I&T EQUIPMENT ROOM
BOTTOM PLAN

02

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-001	PCS SYSTEM CABINET	800	800	2100	
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	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 ENCLOSURE
_____ FRONT OF EQUIPMENT

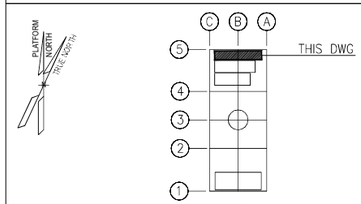
HOLDS

.

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
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. 02

File Name : 123A90-DDL-IN-DL-40012 Rev.02.dwg

DRAWING NO. 123A90-DDL-IN-DG-40016

REV. 01

FIELD		I&T EQUIPMENT ROOM (ITER)
HVAC SYSTEMs	CABLE NO	MARSHALLING CABINET
		B400-SIS-001

<01>

B-100 HVAC CONTROL P. UCP

TB-XC 102 (WH) 103 (BK) NOTE-2

C-77-XA-001/B400-SIS-001
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-XA-000 WH 11 BK 12 77-XA-001

Shield Bar

B-200 HVAC CONTROL P. UCP

TB-XC 102 (WH) 103 (BK) NOTE-2

C-77-XA-002/B400-SIS-001
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-XA-000 WH 13 BK 14 77-XA-002

Shield Bar

B-300 HVAC CONTROL P. UCP

TB-XC 502 (WH) 503 (BK) NOTE-2

C-77-XA-003/B400-SIS-001
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-XA-000 WH 15 BK 16 77-XA-003

Shield Bar

B-400 HVAC CONTROL P. UCP

TB-XC 502 (WH) 503 (BK) NOTE-2

C-77-XA-004/B400-SIS-001
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-XA-000 WH 17 BK 18 77-XA-004

Shield Bar

I.E.

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
HVAC SYSTEM FAULT ALARM

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	015	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>

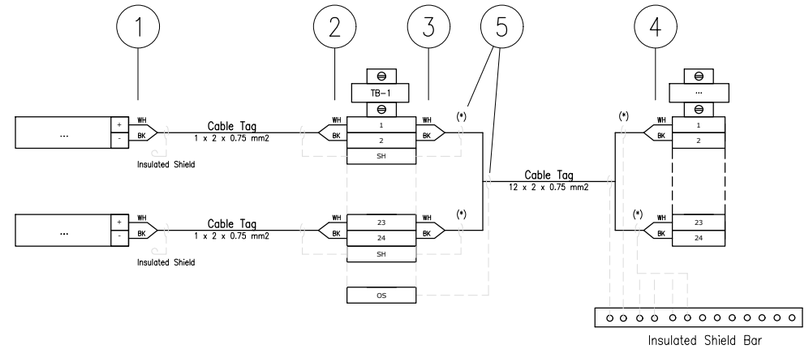
LEGENDS & SYMBOLS:

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

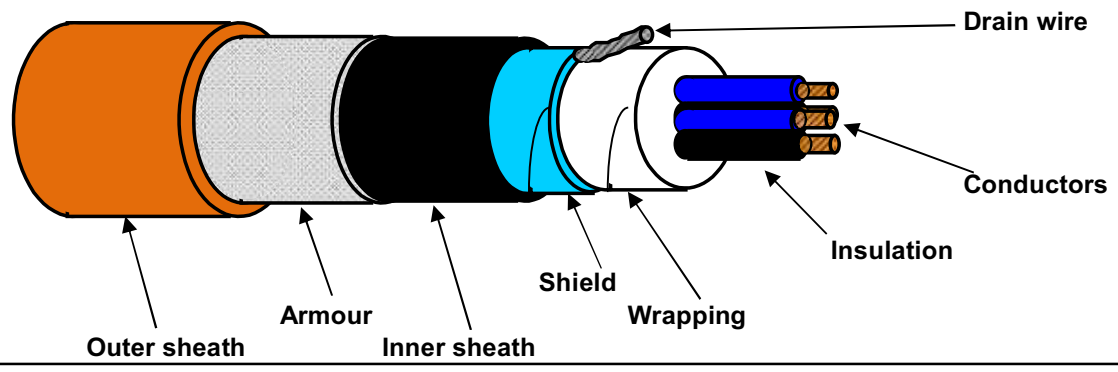
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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-77-XA-001/B400-SIS-001	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						B100-HSB-001	Distribution & HVAC Panel - HV MV Room	Lower Deck (B-100)	B400-SIS-001	Marshalling SIS	Lower Deck (B-400)	SMICV08-1X2X0,75	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 1x2x0,75mm² - Orange	T2_M20S_Double			n.a.				I-MCT-101 / B-100-SEC-1A / L-SEC-17 / L-SEC-1N / L-SEC-1M / L-SEC-1L / L-SEC-1J / L-SEC-1I / L-SEC-1H / L-SEC-1G / L-SEC-1F / L-SEC-1E / L-SEC-1D / L-SEC-1C / 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)

1X2X0,75 - 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 0,5 mm	
Cores colour code :	**White - Black**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not required	
Total Assembling :	10/1mt	
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 0,5 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 1,2 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - 1X2X0,75 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 :	(8,5 ± 10%) mm	
Over armour diameter :	(9,3 ± 10%) mm	
Outer diameter :	(11,7 ± 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 :	≤ 26 Ω/km (@ 20°C)	
Insulation Resistance :	≥ 1000 MΩ x Km (@ 20°C)	
Mutual Capacitance :	≤ 150 nF/km	
L/R ratio :	≤ 25 µH/Ω	
Inductance :	≤ 0,9 mH/km	
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			

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The data provided, landing extract for the treatment, will be used in the sense of the article 19 of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments of informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

ROSETTI MARINO — CROSSWIND

ITEM	Tag	C-77-HS-001B/950-JE-06203	:	PUSH BUTTON / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-10	:	HVAC HV/MV Switchgear Room B-100	Module	LD_B-100/LD_B-100_Ext	
TASK	code	C10000354	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: 77-HS-001B — To: 950-JE-06203

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.	OK
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		0.5	Ω
	SCREEN		o,6	Ω
	EARTH		o,6	Ω
	ARMr		o,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

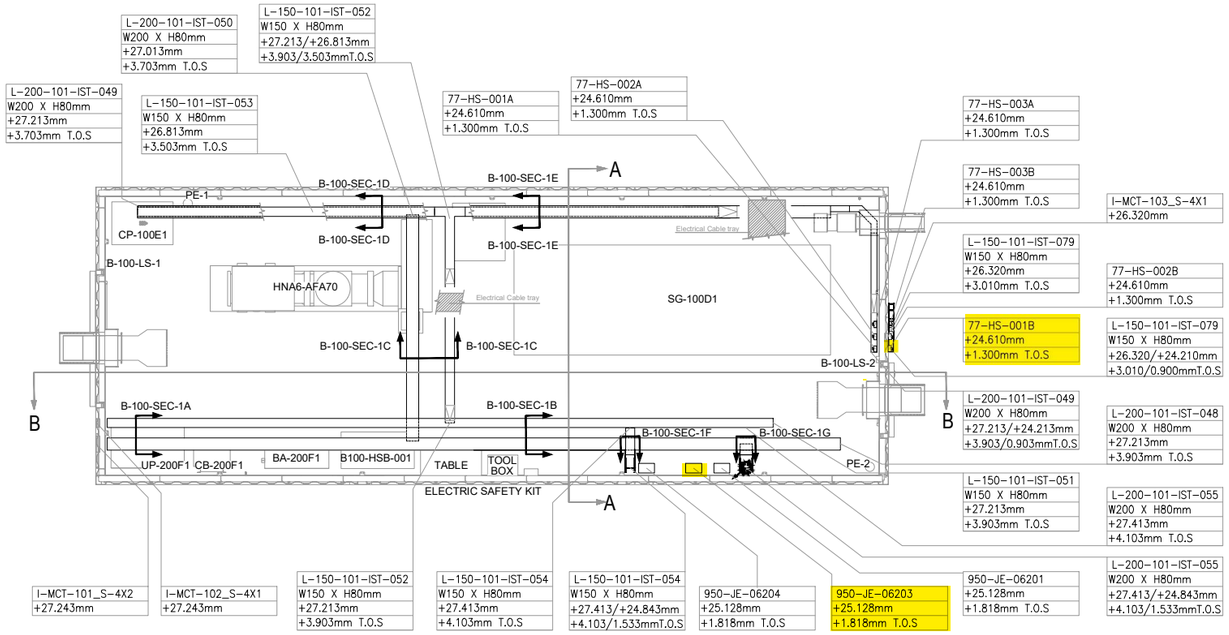
TYPE / SERIAL N°: KEW3125A / W8330207 — Calibration date: 10-07-2024

Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-16	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:35:03.816Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-16T15:31:25.386Z	

DRAWING NO. 123A90-DDL-IN-DL-40113

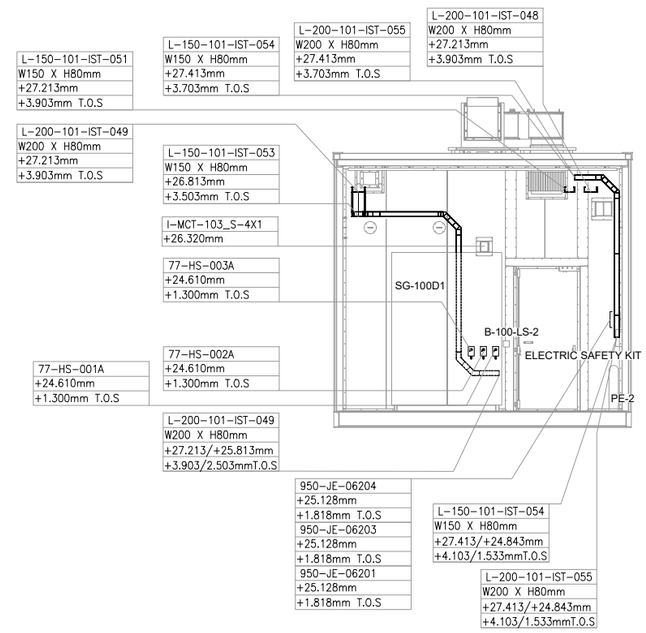
REV. 01



PLAN VIEW

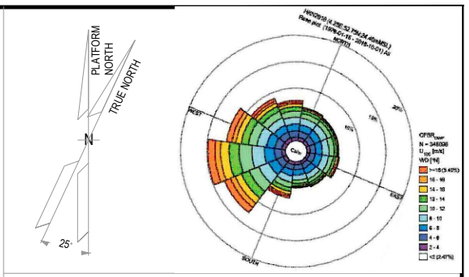
B-100 HV/MV SWITCHROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR CONTAINER CABLE TRAY LAYOUT.

LEGEND

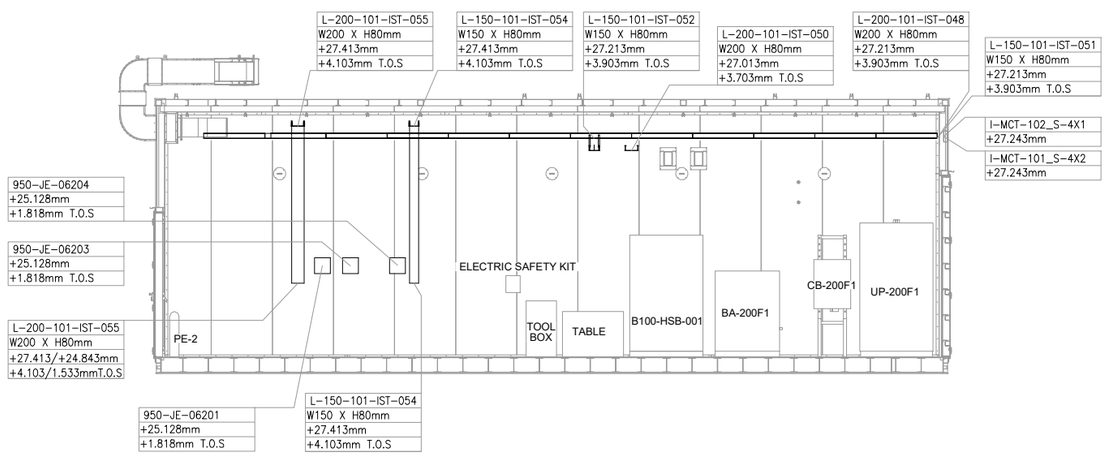
VALID FOR CONSTRUCTION

FDL DWG: 123A90-FDL-IN-DL-40113

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

HOLDS



SECTION B-B

SCALE-1:1

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/08/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)

Base Load Power HUB Cables Tray Layout

B-100 Container Lower Deck - TOS EL. 23.310m

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24

A1	DRAWING NO.	SHEET	REV.
	123A90-DDL-IN-DL-40113	001	01

File Name : 123A90-DDL-IN-DL-40113 REV01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016 REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-06203	No.	MARSHALLING CABINET B400-FGS-002

<01>

B-100 HV Switch Gear Room

950-XZ-06201 (+/-) 1BK 2BK — C-950-XZ-06201/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06201 (+/-) 1BK 2BK — C-950-XL-06201/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06202 (+/-) 1BK 2BK — C-950-XL-06202/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 OUTDOOR

77-HS-001B (12/22 — 11/21) 1BK 2BK — NOTE-2 — NOTE-2

C-77-HS-001B/950-JE-06203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

C-77-HS-001A/77-HS-001B
~~C-77-HS-001B/77-HS-001A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77001

77-HY-001 (1/2) 1BK 2BK — C-77-HY-001/77-HS-001A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-001A (12/22 — 11/21) 1BK 2BK — NOTE-2 — NOTE-2

B-100 OUTDOOR

77-HS-002B (12/22 — 11/21) 1BK 2BK — NOTE-2 — NOTE-2

C-77-HS-002B/950-JE-06203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

C-77-HS-002A/77-HS-002B
~~C-77-HS-002B/77-HS-002A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77002

77-HY-002 (1/2) 1BK 2BK — C-77-HY-002/77-HS-002A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-002A (12/22 — 11/21) 1BK 2BK — NOTE-2 — NOTE-2

B-100 OUTDOOR

77-HS-003B (12/22 — 11/21) 1BK 2BK — NOTE-2 — NOTE-2

C-77-HS-003B/950-JE-06203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

C-77-HS-003A/77-HS-003B
~~C-77-HS-003B/77-HS-003A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77003

77-HY-003 (1/2) 1BK 2BK — C-77-HY-003/77-HS-003A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-003A (12/22 — 11/21) 1BK 2BK — NOTE-2 — NOTE-2

TB-1

1BK 2BK	1	1BK 2BK
	2	
	SH	
1BK 2BK	3	3BK 4BK
	4	
	SH	
1BK 2BK	5	5BK 6BK
	6	
	SH	
1BK 2BK	7	7BK 8BK
	8	
	SH	
1BK 2BK	9	9BK 10BK
	10	
	SH	
1BK 2BK	11	11BK 12BK
	12	
	SH	
	OS	

950-JE-06203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-06203

1BK	1	950-XZ-06201
2BK	2	
3BK	3	950-XL-06201
4BK	4	
5BK	5	950-XL-06202
6BK	6	
7BK	7	77-HY-001
8BK	8	
9BK	9	77-HY-002
10BK	10	
11BK	11	77-HY-003
12BK	12	

Shield Bar — I.E.

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–06203

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

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 073	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>

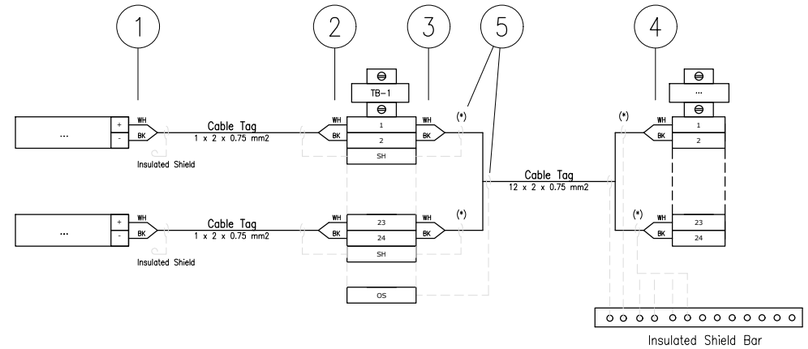
LEGENDS & SYMBOLS:

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 TAG NO./INSTRUMENT TERMINAL NO. OR POLARITY/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)

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

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

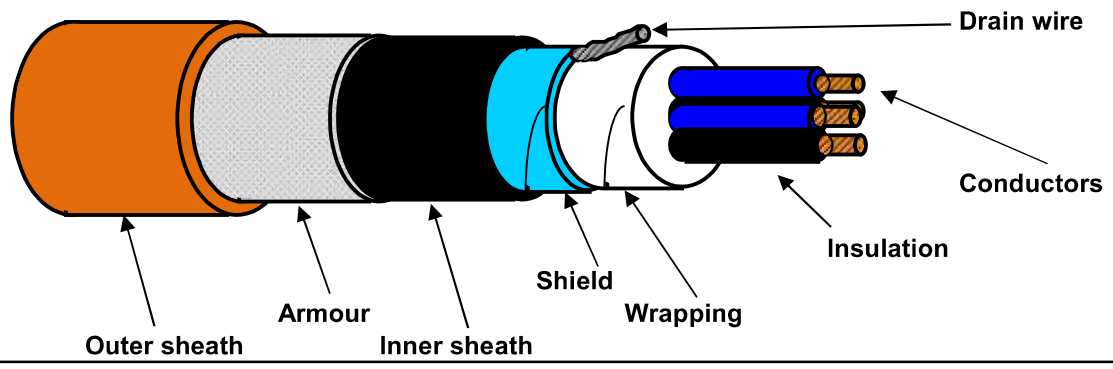
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-77-HS-001B/950-JE-06203	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						77-HS-001B	Hand Switch	Lower Deck (B-100) Ext.	950-JE-06203	DO JB to FGS	Lower Deck (B-100)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	M20	T2_M20_Double			T2_M20_Double				B-100-SEC-1E / B-100-SEC-1C / B-100-SEC-1B / B-100-SEC-1G

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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ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	C-77-HS-001A/77-HS-001B	: PUSH BUTTON / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100	Module	LD_B-100/LD_B-100_Ext		
TASK	code	C10000355	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: 77-HS-001A | To: 77-HS-001B

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.	OK
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		0,5	Ω
	SCREEN		0,5	Ω
	EARTH		0,5	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

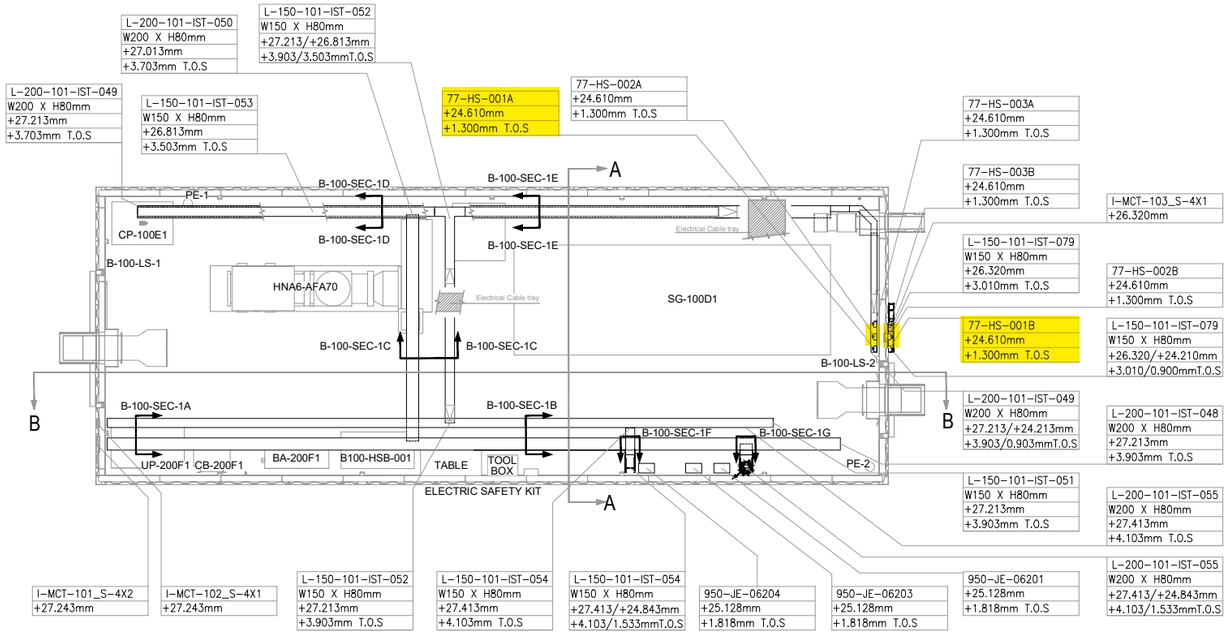
TYPE / SERIAL N°: KEW3125A / W8330207 Calibration date: 10-07-2024

Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-16	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:35:15.238Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-16T15:41:10.725Z	

DRAWING NO. 123A90-DDL-IN-DL-40113

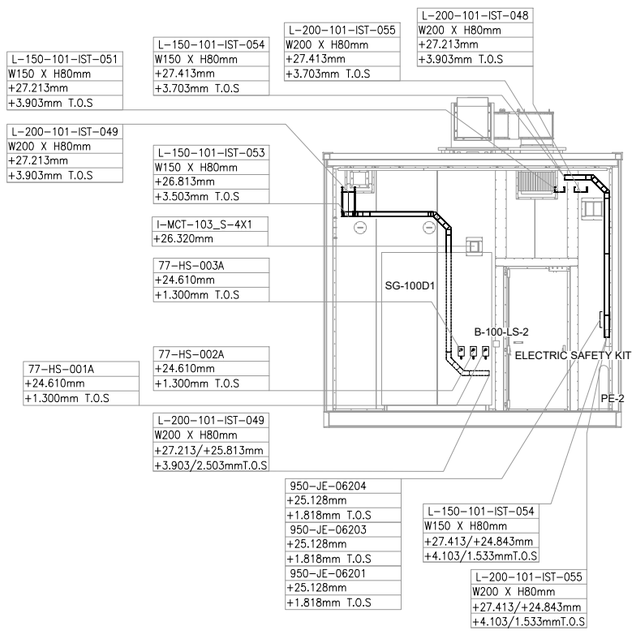
REV. 01



PLAN VIEW

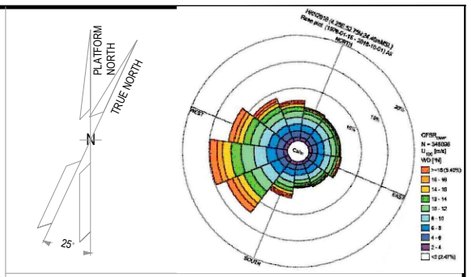
B-100 HV/MV SWITCHROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR CONTAINER CABLE TRAY LAYOUT.

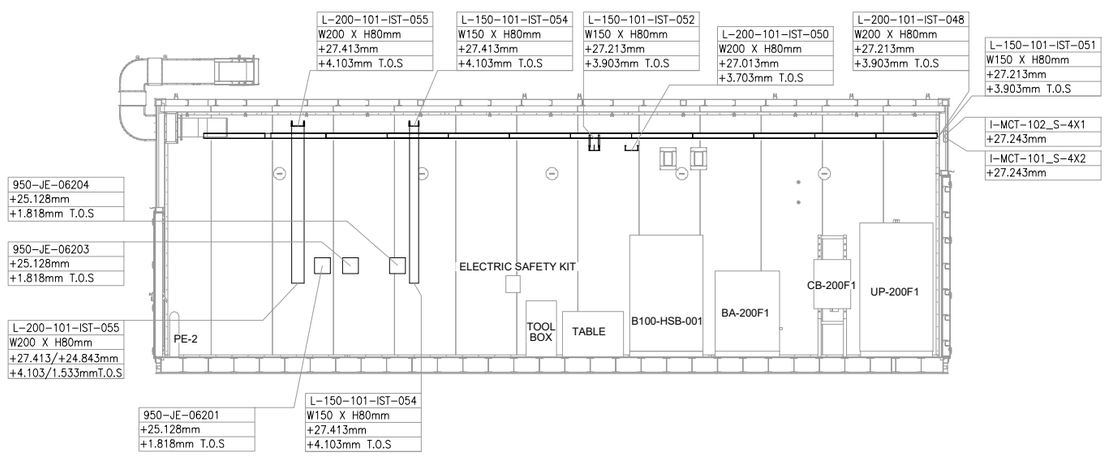
LEGEND

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DL-40113

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

HOLDS



SECTION B-B

SCALE-1:1

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/08/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B-100 Container Lower Deck - TOS EL. 23.310m

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40113	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40113 REV01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016 REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-06203	No.	MARSHALLING CABINET B400-FGS-002

<01>

B-100 HV Switch Gear Room

950-XZ-06201 (+/-) 1BK 2BK — C-950-XZ-06201/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06201 (+/-) 1BK 2BK — C-950-XL-06201/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06202 (+/-) 1BK 2BK — C-950-XL-06202/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 OUTDOOR

77-HS-001B (12/22 — 11/21) 1BK 2BK — C-77-HS-001B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

NOTE-2

C-77-HS-001A/77-HS-001B

~~C-77-HS-001B/77-HS-001A~~

2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77001

77-HY-001 (1/2) 1BK 2BK — C-77-HY-001/77-HS-001A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-001A (12/22 — 11/21) 1BK 2BK — NOTE-2

B-100 OUTDOOR

77-HS-002B (12/22 — 11/21) 1BK 2BK — C-77-HS-002B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

NOTE-2

C-77-HS-002A/77-HS-002B

~~C-77-HS-002B/77-HS-002A~~

2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77002

77-HY-002 (1/2) 1BK 2BK — C-77-HY-002/77-HS-002A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-002A (12/22 — 11/21) 1BK 2BK — NOTE-2

B-100 OUTDOOR

77-HS-003B (12/22 — 11/21) 1BK 2BK — C-77-HS-003B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

NOTE-2

C-77-HS-003A/77-HS-003B

~~C-77-HS-003B/77-HS-003A~~

2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77003

77-HY-003 (1/2) 1BK 2BK — C-77-HY-003/77-HS-003A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-003A (12/22 — 11/21) 1BK 2BK — NOTE-2

TB-1

1BK 2BK	1	1BK 2BK
	2	
	SH	
1BK 2BK	3	3BK 4BK
	4	
	SH	
1BK 2BK	5	5BK 6BK
	6	
	SH	
1BK 2BK	7	7BK 8BK
	8	
	SH	
1BK 2BK	9	9BK 10BK
	10	
	SH	
1BK 2BK	11	11BK 12BK
	12	
	SH	
	OS	

950-JE-06203/B400-FGS-002

12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-06203

1BK 2BK	1	950-XZ-06201
3BK 4BK	2	
5BK 6BK	3	950-XL-06201
7BK 8BK	4	
9BK 10BK	5	950-XL-06202
11BK 12BK	6	
	7	77-HY-001
	8	
	9	77-HY-002
	10	
	11	77-HY-003
	12	

Shield Bar — I.E.

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–06203

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 073	REV. 01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

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>

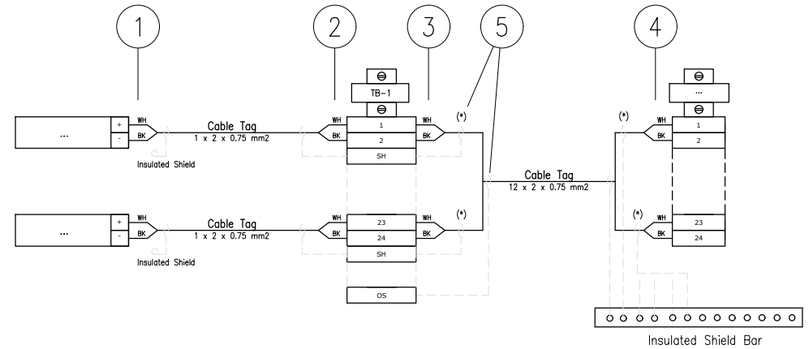
LEGENDS & SYMBOLS:

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 TAG NO./INSTRUMENT TERMINAL NO. OR POLARITY/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)

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

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

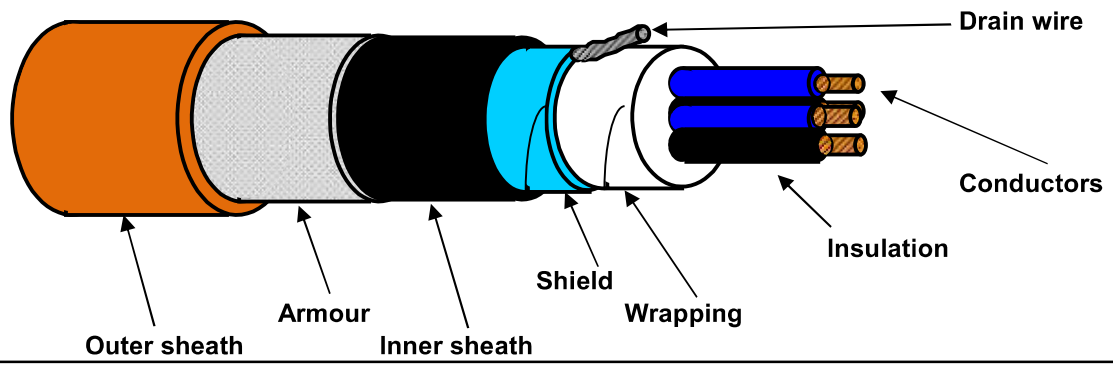
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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-77-HS-001A/77-HS-001B	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						77-HS-001A	Hand Switch	Lower Deck (B-100)	77-HS-001B	Hand Switch	Lower Deck (B-100) Ext.	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			T2_M20_Double				I-MCT-103 / B-100-SEC-1E

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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ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	C-77-HY-001/77-HS-001A	: FIRE DAMPER / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100	Module	LD_B-100		
TASK	code	C10000356	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	HFD-77001	To	77-HS-001A		

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.	OK
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		0,7	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

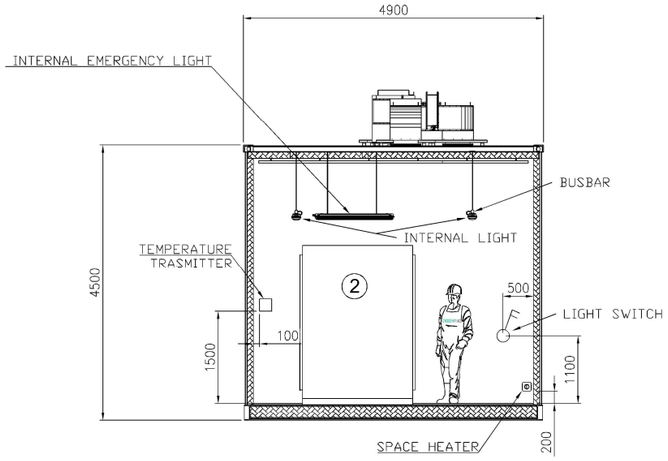
TESTING INSTRUMENTS USED

TYPE / SERIAL N°: Calibration date:

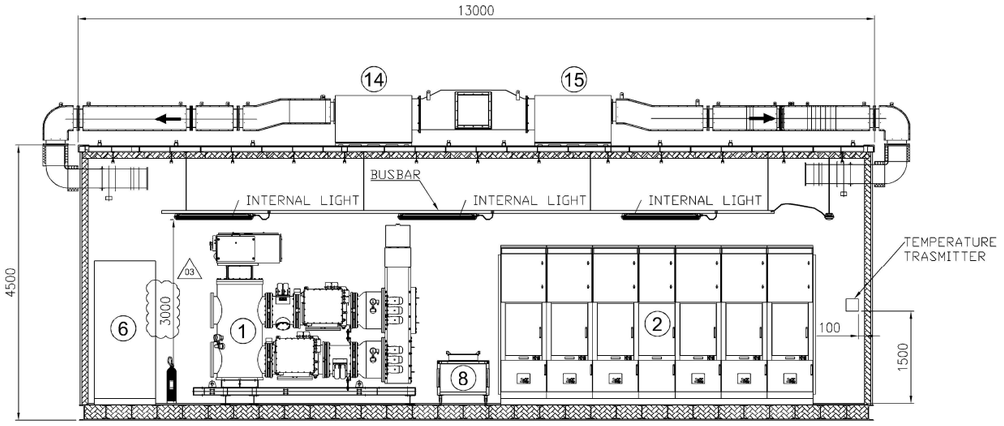
Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-16	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:35:24.668Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-16T15:40:33.958Z	

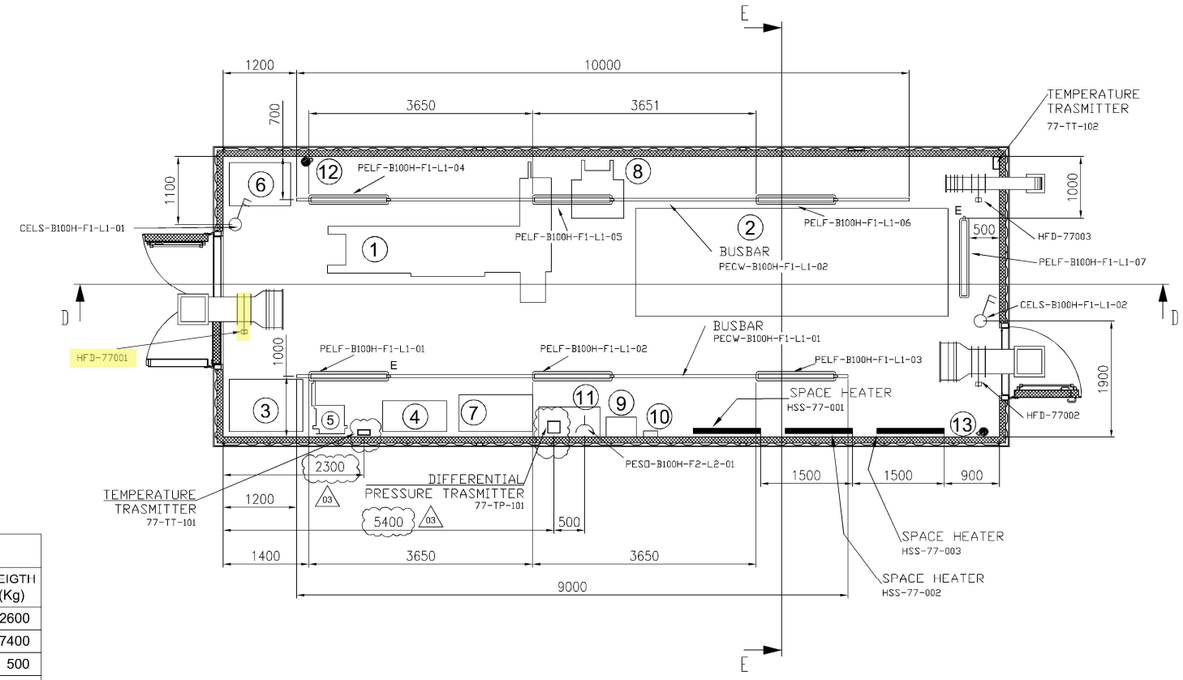
DRAWING NO. 1724000049-AR-DA-00014 REV. 03



SECTION E-E

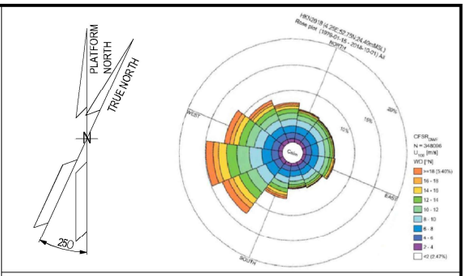


SECTION D-D



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	2600
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	7400
3	UP-200F1	DC UPS PANEL	1200	850	2105	500
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	522
5	CB-200F1	ISOLATOR FOR DC UPS	600	300	800	100
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2100	2100
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV ROOM	1200	600	1900	400
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	70
9	-	TOOL BOX	495	335	920	20
10	-	ELECTRIC SAFETY KIT	230	110	280	20
11	-	TABLE	1000	500	750	50
12	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
14	HHU-77001 (03)	AIR HANDLING UNIT A	1250	850	900	140
15	HHU-77002 (03)	AIR HANDLING UNIT B	1250	850	900	140
16	HSS-77-001	SPACE HEATER 1	184	145	1100	5
17	HSS-77-002	SPACE HEATER 2	184	145	1100	5
18	HSS-77-003	SPACE HEATER 3	184	145	1100	5



NOTE

1) ALL DIMENSIONS ARE IN MM.
(03) 2) THE POSITION OF THE LAMPS INDICATED IS TO BE CONSIDERED THE THEORETICAL ONE, THE FINA ONE WILL BE CONFIRMED IN THE AS-BUILT ISSUE.

REFERENCE

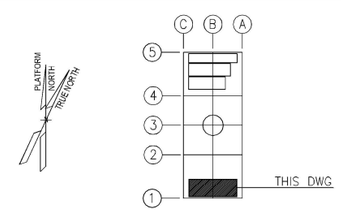
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00064
"B-100" DETAILED DRAWING	1724000049-AR-DD-00018
PAINTING PROCEDURE	1724000049-MAT-PRO-00004
(03) "B-100" FOUNDATION	1724000049-ST-DD-00010
(03) "B-100" STRUCTURAL CALCULATION	1724000049-ST-CA-00006

LEGEND

- INTERNAL LIGHT
- E INTERNAL EMERGENCY LIGHT
- SOCKET OUTLET, INDOOR
- LIGHT SWITCH
- ESCAPE CORRIDOR – WIDTH 800mm.
- MAINTENANCE AREA – VENDOR REQUIREMENT
- INSULATION PANEL

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	28/06/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	14/05/24	M.G.	SKV	C.A.	ISSUE FOR REVIEW (IFR)
00	08/02/24	A.G.	SKV	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

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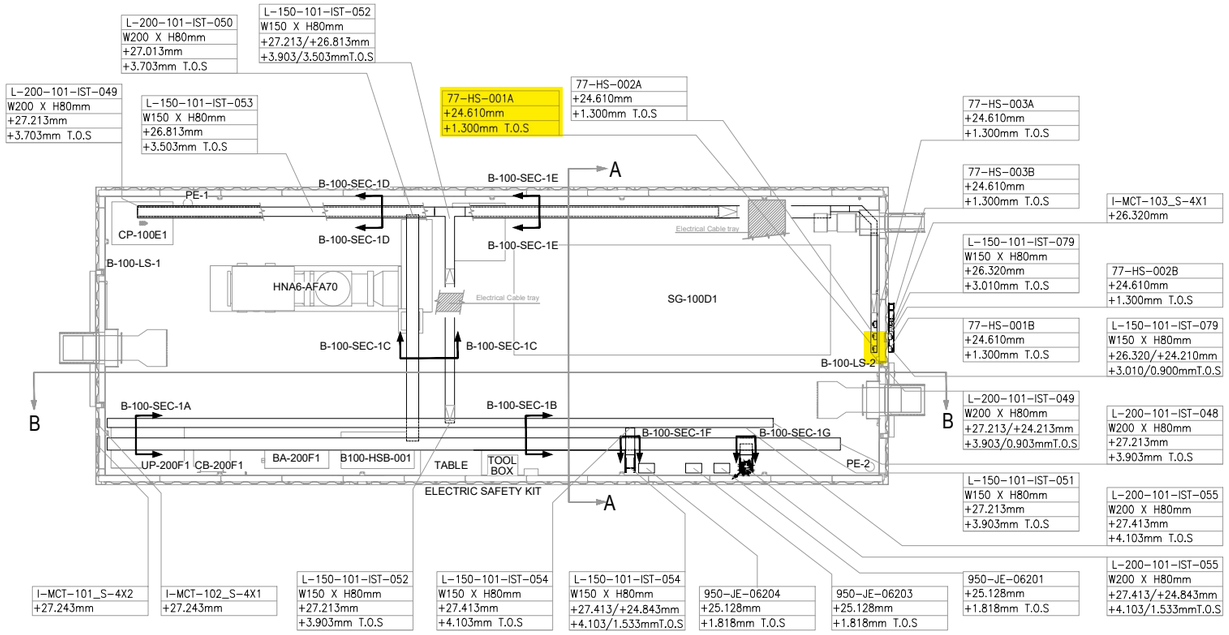
TITLE : BASE LOAD POWER HUB (BLPH)
B-100 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00014	SHEET 003	REV. 03

File Name : 1724000049-AR-DA-00014-REV.03

DRAWING NO. 123A90-DDL-IN-DL-40113

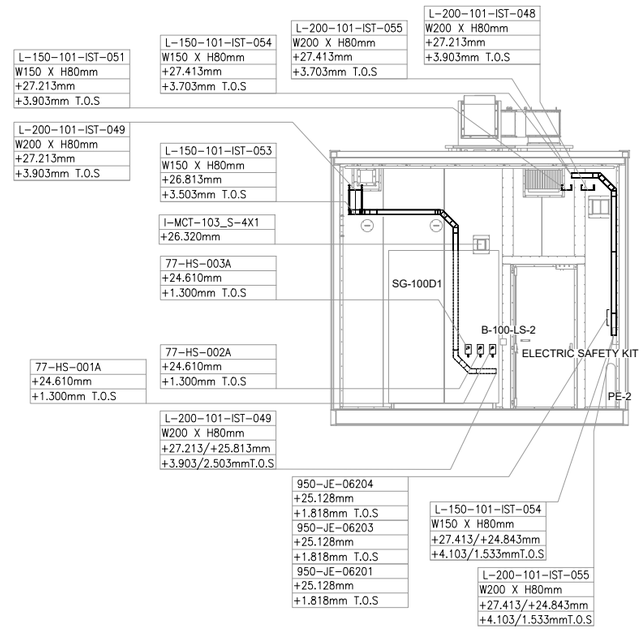
REV. 01



PLAN VIEW

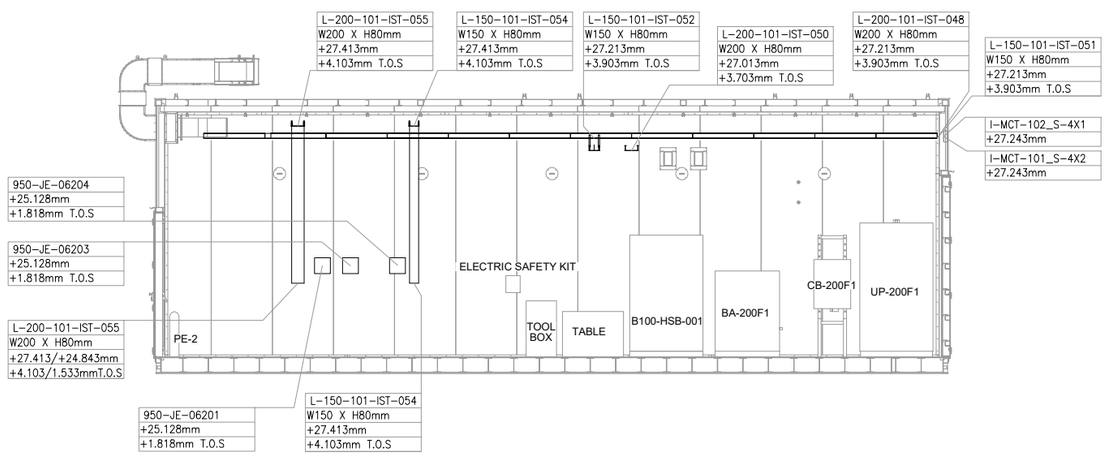
B-100 HV/MV SWITCHROOM

SCALE-1:1



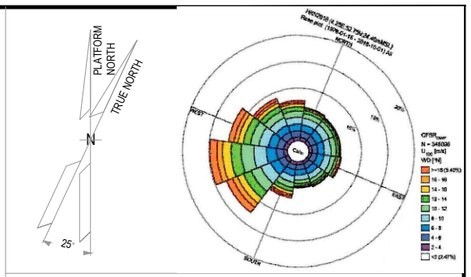
SECTION A-A

SCALE-1:1



SECTION B-B

SCALE-1:1



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR CONTAINER CABLE TRAY LAYOUT.

LEGEND

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DL-40113

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/08/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B-100 Container Lower Deck - TOS EL. 23.310m

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40113	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40113 REV01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016 REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-06203	No.	MARSHALLING CABINET B400-FGS-002

<01>

B-100 HV Switch Gear Room

950-XZ-06201 (+ 1BK, - 2BK) — C-950-XZ-06201/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
→ TB-1: 1BK→1, 2BK→2, SH

950-XL-06201 (+ 1BK, - 2BK) — C-950-XL-06201/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
→ TB-1: 1BK→3, 2BK→4, SH

950-XL-06202 (+ 1BK, - 2BK) — C-950-XL-06202/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
→ TB-1: 1BK→5, 2BK→6, SH

B-100 OUTDOOR
77-HS-001B (1BK, 2BK, 12, 22, 11, 21) — C-77-HS-001B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
→ TB-1: 1BK→7, 2BK→8, SH
C-77-HS-001A/77-HS-001B
~~C-77-HS-001B/77-HS-001A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77001
77-HY-001 (1, 2, 1BK, 2BK) — C-77-HY-001/77-HS-001A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
B-100 INDOOR
77-HS-001A (1BK, 2BK, 12, 22, 11, 21) — NOTE-2

B-100 OUTDOOR
77-HS-002B (1BK, 2BK, 12, 22, 11, 21) — C-77-HS-002B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
→ TB-1: 1BK→9, 2BK→10, SH
C-77-HS-002A/77-HS-002B
~~C-77-HS-002B/77-HS-002A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77002
77-HY-002 (1, 2, 1BK, 2BK) — C-77-HY-002/77-HS-002A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
B-100 INDOOR
77-HS-002A (1BK, 2BK, 12, 22, 11, 21) — NOTE-2

B-100 OUTDOOR
77-HS-003B (1BK, 2BK, 12, 22, 11, 21) — C-77-HS-003B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
→ TB-1: 1BK→11, 2BK→12, SH, OS
C-77-HS-003A/77-HS-003B
~~C-77-HS-003B/77-HS-003A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77003
77-HY-003 (1, 2, 1BK, 2BK) — C-77-HY-003/77-HS-003A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
B-100 INDOOR
77-HS-003A (1BK, 2BK, 12, 22, 11, 21) — NOTE-2

950-JE-06203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-06203
1BK, 2BK → 1 — 950-XZ-06201
3BK, 4BK → 2 — 950-XL-06201
5BK, 6BK → 3 — 950-XL-06202
7BK, 8BK → 4 — 77-HY-001
9BK, 10BK → 5 — 77-HY-002
11BK, 12BK → 6 — 77-HY-003

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

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TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–06203

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 073	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>

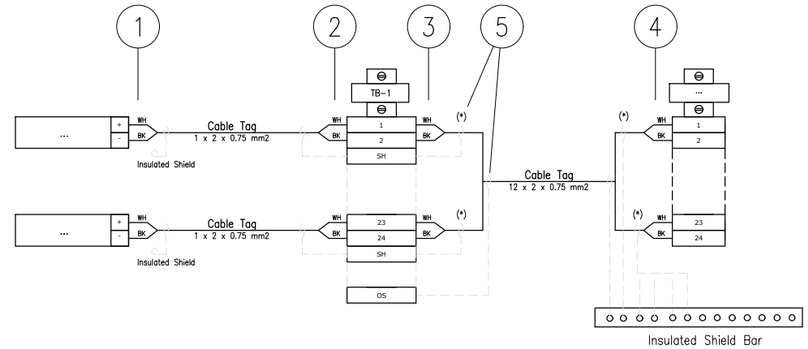
LEGENDS & SYMBOLS:

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 TAG NO./INSTRUMENT TERMINAL NO. OR POLARITY/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)

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

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

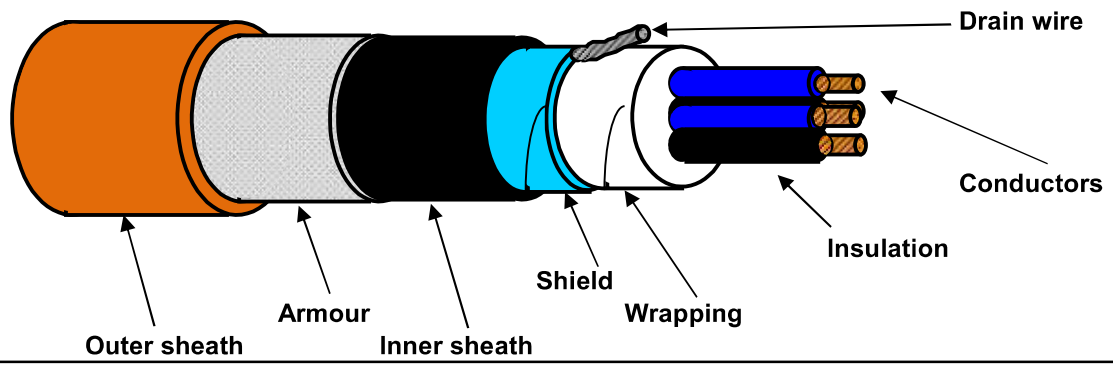
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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-77-HY-001/77-HS-001A	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						HFD-77001	Fire Damper	Lower Deck (B-100)	77-HS-001A	Hand Switch	Lower Deck (B-100)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			T2_M20_Double				B-100-SEC-1A / B-100-SEC-1B / B-100-SEC-1G

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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ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	C-77-HS-002B/950-JE-06203 : PUSH BUTTON / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-10 : HVAC HV/MV Switchgear Room B-100			Module	LD_B-100_Ext/LD_B-100	
TASK	code	C10000357	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	77-HS-002B	To	950-JE-06203		

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.	OK
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	0,5	Ω
	ARMr	0.7	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

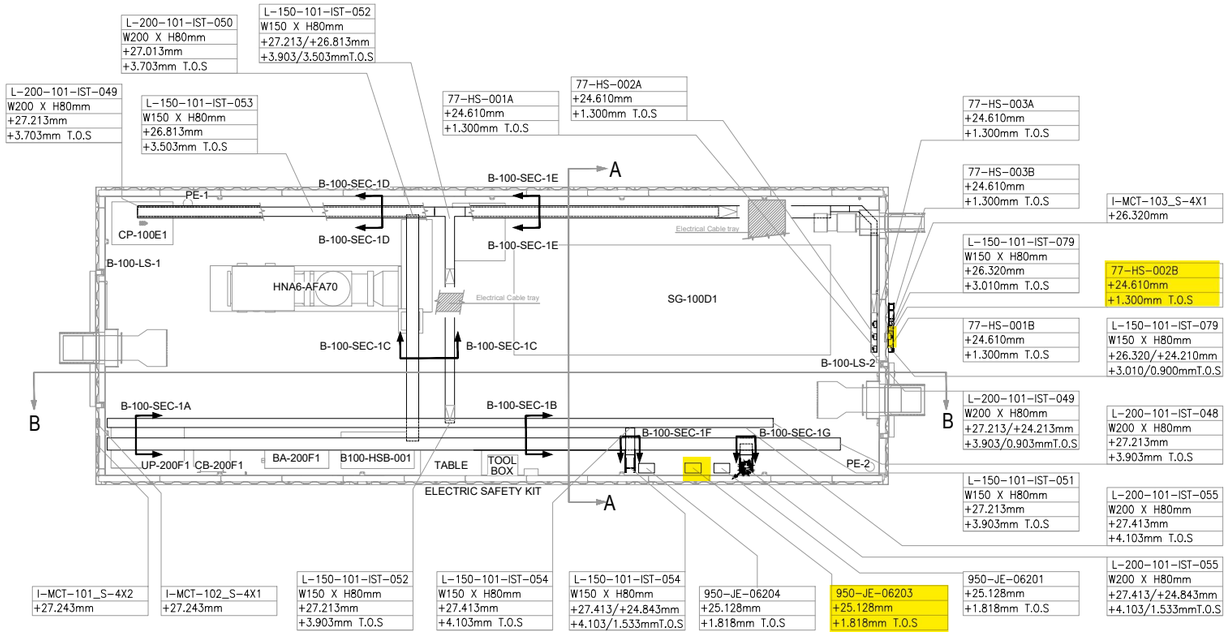
TYPE / SERIAL N°: KEW3125A / W8330207 Calibration date: 10-07-2024

Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-16	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:35:35.788Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-16T15:39:54.203Z	

DRAWING NO. 123A90-DDL-IN-DL-40113

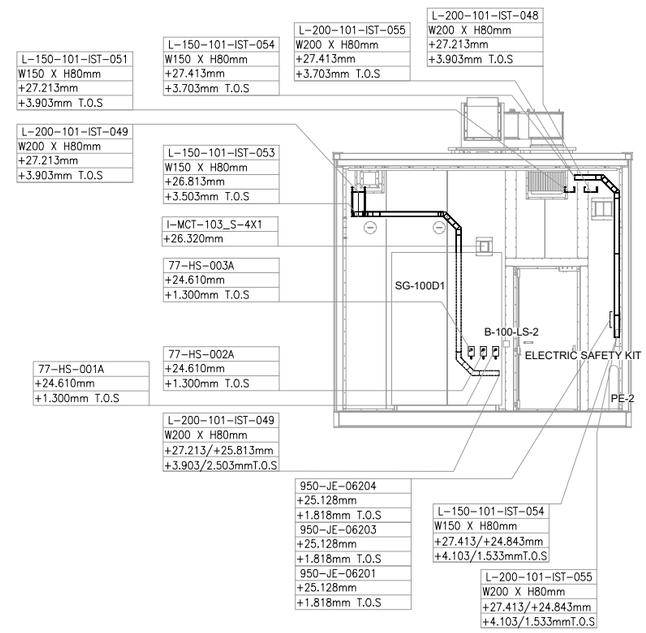
REV. 01



PLAN VIEW

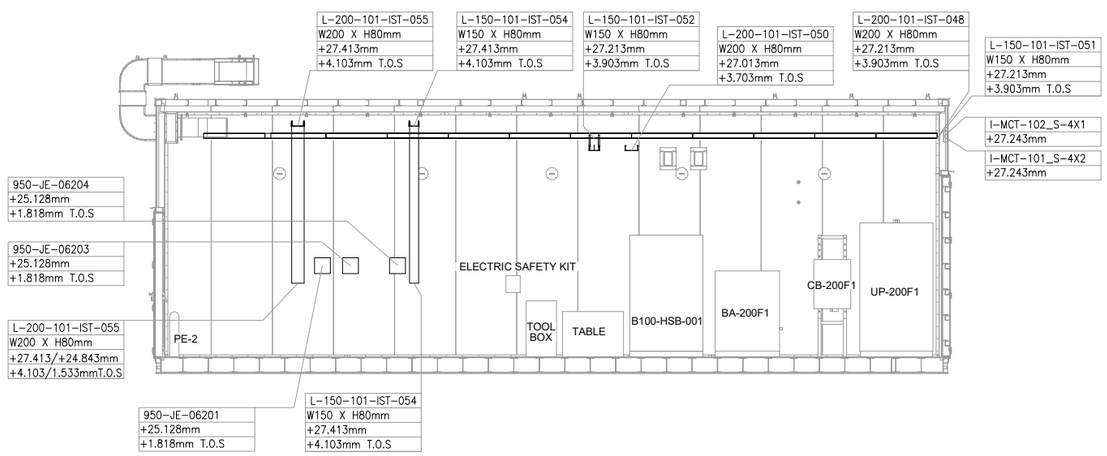
B-100 HV/MV SWITCHROOM

SCALE-1:1



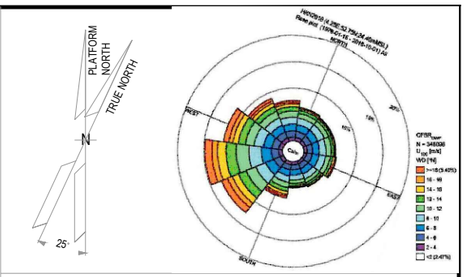
SECTION A-A

SCALE-1:1



SECTION B-B

SCALE-1:1



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR CONTAINER CABLE TRAY LAYOUT.

LEGEND

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DL-40113

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/08/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B-100 Container Lower Deck - TOS EL. 23.310m

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40113	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40113 REV01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016 REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-06203	No.	MARSHALLING CABINET B400-FGS-002

<01>

B-100 HV Switch Gear Room

950-XZ-06201 (+/-) 1BK 2BK — C-950-XZ-06201/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06201 (+/-) 1BK 2BK — C-950-XL-06201/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06202 (+/-) 1BK 2BK — C-950-XL-06202/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 OUTDOOR

77-HS-001B (12/22 — 11/21) 1BK 2BK — C-77-HS-001B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

NOTE-2

C-77-HS-001A/77-HS-001B
~~C-77-HS-001B/77-HS-001A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77001

77-HY-001 (1/2) — C-77-HY-001/77-HS-001A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-001A (12/22 — 11/21) — NOTE-2

B-100 OUTDOOR

77-HS-002B (12/22 — 11/21) — C-77-HS-002B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

NOTE-2

C-77-HS-002A/77-HS-002B
~~C-77-HS-002B/77-HS-002A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77002

77-HY-002 (1/2) — C-77-HY-002/77-HS-002A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-002A (12/22 — 11/21) — NOTE-2

B-100 OUTDOOR

77-HS-003B (12/22 — 11/21) — C-77-HS-003B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

NOTE-2

C-77-HS-003A/77-HS-003B
~~C-77-HS-003B/77-HS-003A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77003

77-HY-003 (1/2) — C-77-HY-003/77-HS-003A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-003A (12/22 — 11/21) — NOTE-2

TB-1

1BK 2BK	1 / 2	1BK 2BK
	SH	
1BK 2BK	3 / 4	3BK 4BK
	SH	
1BK 2BK	5 / 6	5BK 6BK
	SH	
1BK 2BK	7 / 8	7BK 8BK
	SH	
1BK 2BK	9 / 10	9BK 10BK
	SH	
1BK 2BK	11 / 12	11BK 12BK
	SH	
	OS	

950-JE-06203/B400-FGS-002

12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-06203

1BK 2BK	1 / 2	950-XZ-06201
3BK 4BK	3 / 4	950-XL-06201
5BK 6BK	5 / 6	950-XL-06202
7BK 8BK	7 / 8	77-HY-001
9BK 10BK	9 / 10	77-HY-002
11BK 12BK	11 / 12	77-HY-003

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND — ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–06203

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 073	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>

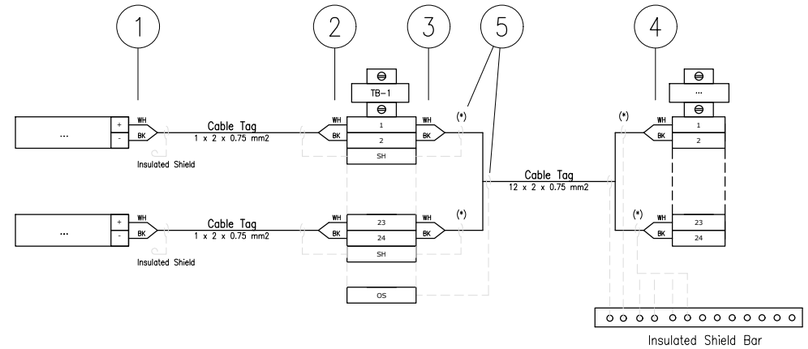
LEGENDS & SYMBOLS:

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 TAG NO./INSTRUMENT TERMINAL NO. OR POLARITY/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)

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

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

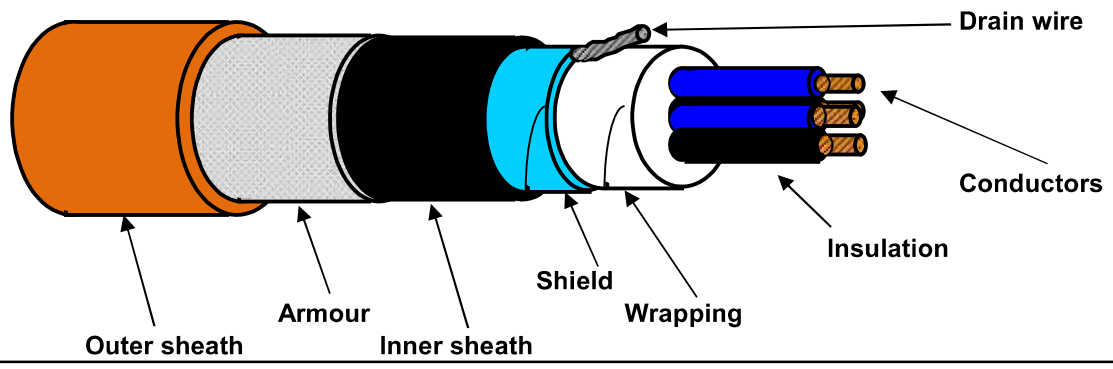
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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-77-HS-002B/950-JE-06203	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						77-HS-002B	Hand Switch	Lower Deck (B-100) Ext.	950-JE-06203	DO JB to FGS	Lower Deck (B-100)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			T2_M20_Double				B-100-SEC-1E / B-100-SEC-1C / B-100-SEC-1B / B-100-SEC-1G

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.

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 — PROVERLIS — CROSSWIND

ITEM	Tag	C-77-HS-002A/77-HS-002B	: PUSH BUTTON / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100	Module	LD_B-100/LD_B-100_Ext		
TASK	code	C10000358	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: 77-HS-002A — To: 77-HS-002B

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.	OK
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	0.7	Ω
	SCREEN	0.7	Ω
	EARTH	0.7	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

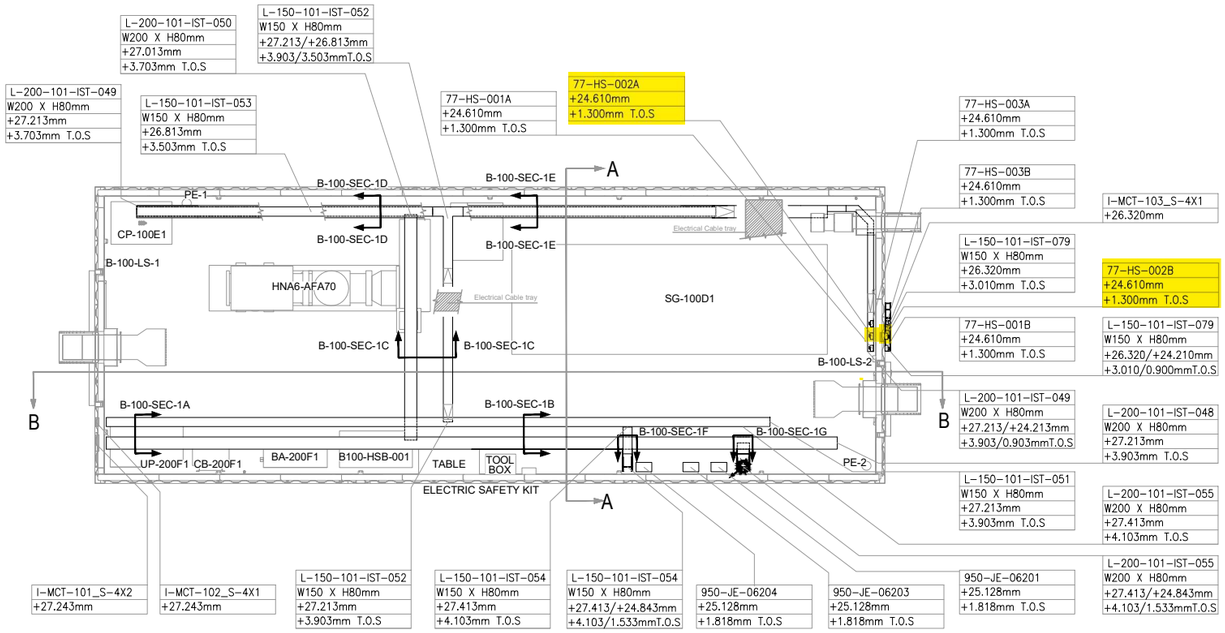
TYPE / SERIAL N°: KEW3125A / W8330207 — Calibration date: 10-07-2024

Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-16	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:35:49.359Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-16T15:39:24.781Z	

DRAWING NO. 123A90-DDL-IN-DL-40113

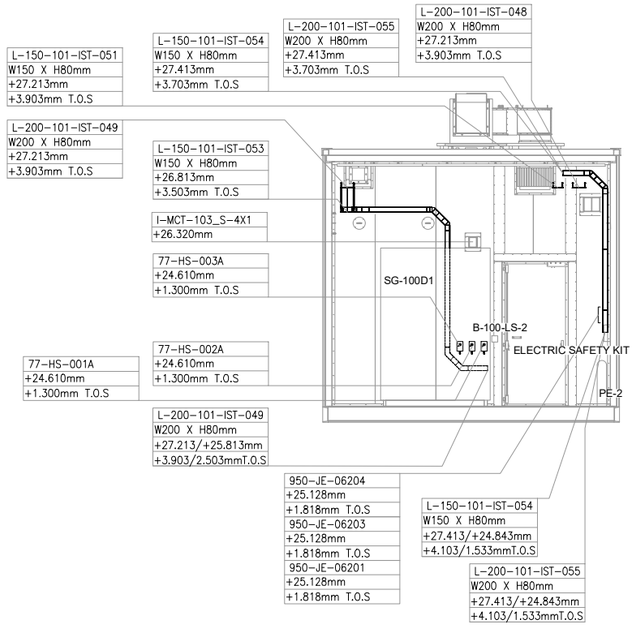
REV. 01



PLAN VIEW

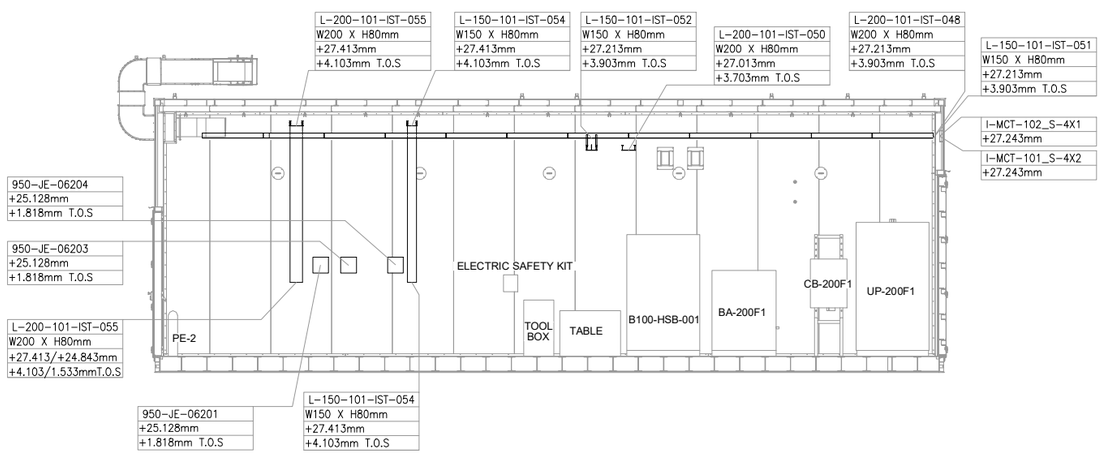
B-100 HV/MV SWITCHROOM

SCALE-1:1



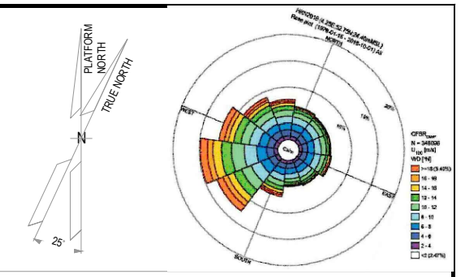
SECTION A-A

SCALE-1:1



SECTION B-B

SCALE-1:1



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR CONTAINER CABLE TRAY LAYOUT.

LEGEND

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DL-40113

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/08/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B-100 Container Lower Deck - TOS EL. 23.310m

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40113	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40113 REV01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016 REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-06203	No.	MARSHALLING CABINET B400-FGS-002

<01>

B-100 HV Switch Gear Room

950-XZ-06201 (+/-) 1BK 2BK — C-950-XZ-06201/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06201 (+/-) 1BK 2BK — C-950-XL-06201/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06202 (+/-) 1BK 2BK — C-950-XL-06202/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 OUTDOOR

77-HS-001B (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2 — C-77-HS-001B/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

C-77-HS-001A/77-HS-001B
~~C-77-HS-001B/77-HS-001A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77001 — 77-HY-001 (1, 2) 1BK 2BK — C-77-HY-001/77-HS-001A, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-001A (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2

B-100 OUTDOOR

77-HS-002B (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2 — C-77-HS-002B/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

C-77-HS-002A/77-HS-002B
~~C-77-HS-002B/77-HS-002A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77002 — 77-HY-002 (1, 2) 1BK 2BK — C-77-HY-002/77-HS-002A, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-002A (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2

B-100 OUTDOOR

77-HS-003B (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2 — C-77-HS-003B/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

C-77-HS-003A/77-HS-003B
~~C-77-HS-003B/77-HS-003A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77003 — 77-HY-003 (1, 2) 1BK 2BK — C-77-HY-003/77-HS-003A, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-003A (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2

TB-1

1BK	1	1BK
2BK	2	2BK
	SH	
1BK	3	3BK
2BK	4	4BK
	SH	
1BK	5	5BK
2BK	6	6BK
	SH	
1BK	7	7BK
2BK	8	8BK
	SH	
1BK	9	9BK
2BK	10	10BK
	SH	
1BK	11	11BK
2BK	12	12BK
	SH	
	OS	

950-JE-06203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-06203

1BK	1	950-XZ-06201
2BK	2	
3BK	3	950-XL-06201
4BK	4	
5BK	5	950-XL-06202
6BK	6	
7BK	7	77-HY-001
8BK	8	
9BK	9	77-HY-002
10BK	10	
11BK	11	77-HY-003
12BK	12	

Shield Bar — I.E.

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–06203

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

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 073	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>

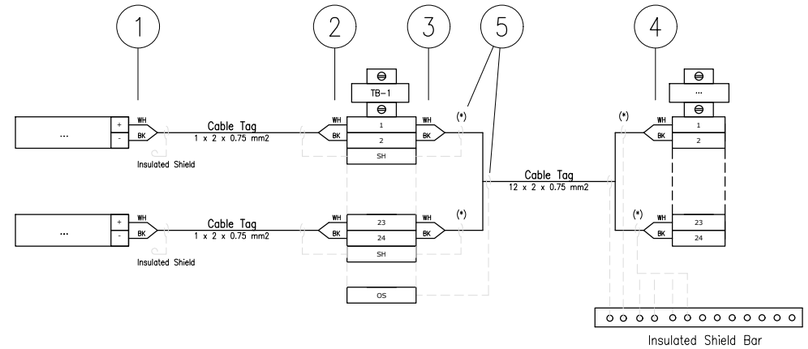
LEGENDS & SYMBOLS:

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 TAG NO./INSTRUMENT TERMINAL NO. OR POLARITY/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)

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

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

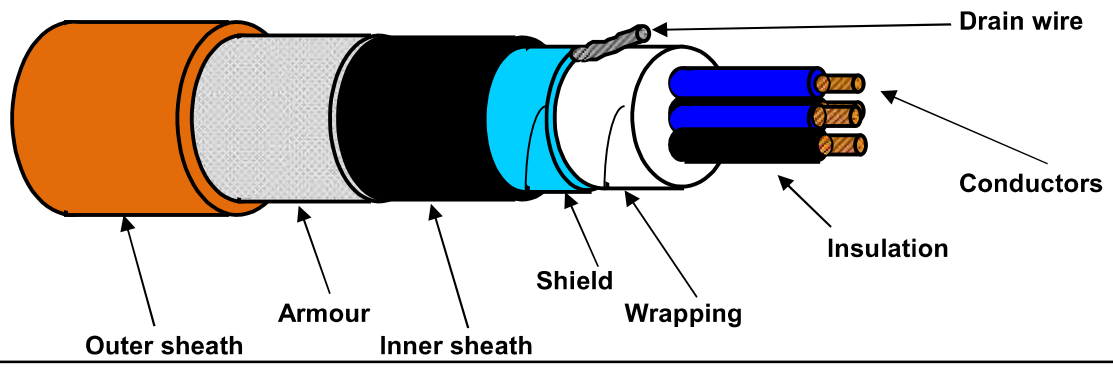
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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-77-HS-002A/77-HS-002B	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						77-HS-002A	Hand Switch	Lower Deck (B-100)	77-HS-002B	Hand Switch	Lower Deck (B-100) Ext.	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			T2_M20_Double				I-MCT-103 / B-100-SEC-1E

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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ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	C-77-HY-002/77-HS-002A	: FIRE DAMPER / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100	Module	LD_B-100		
TASK	code	C10000359	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: HFD-77002 | To: 77-HS-002A

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.	OK
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		0,7	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

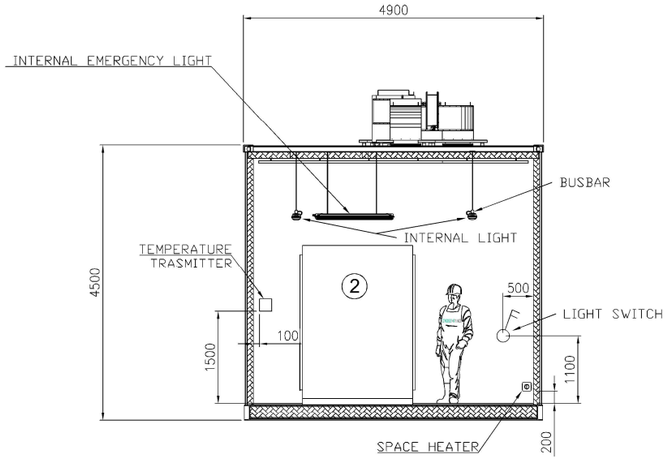
TESTING INSTRUMENTS USED

TYPE / SERIAL N°: KEW3125A / W8330207 | Calibration date: 10-07-2024

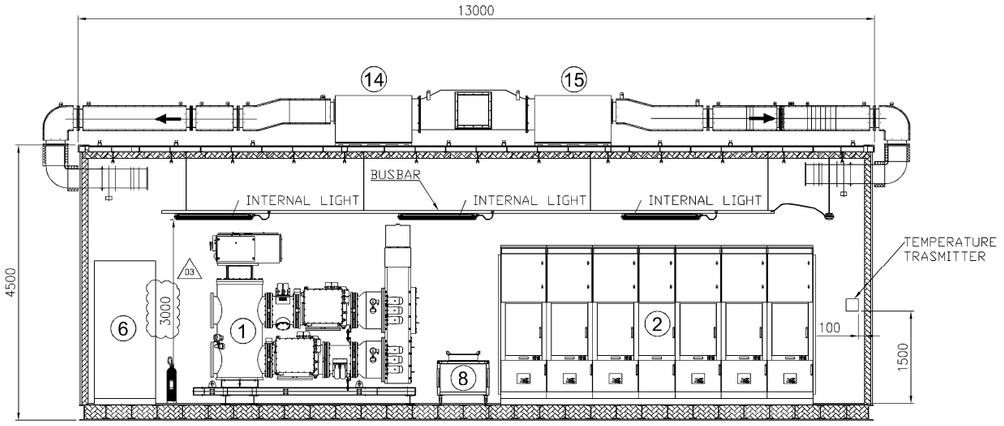
Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-16	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:36:14.838Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-16T15:38:45.630Z	

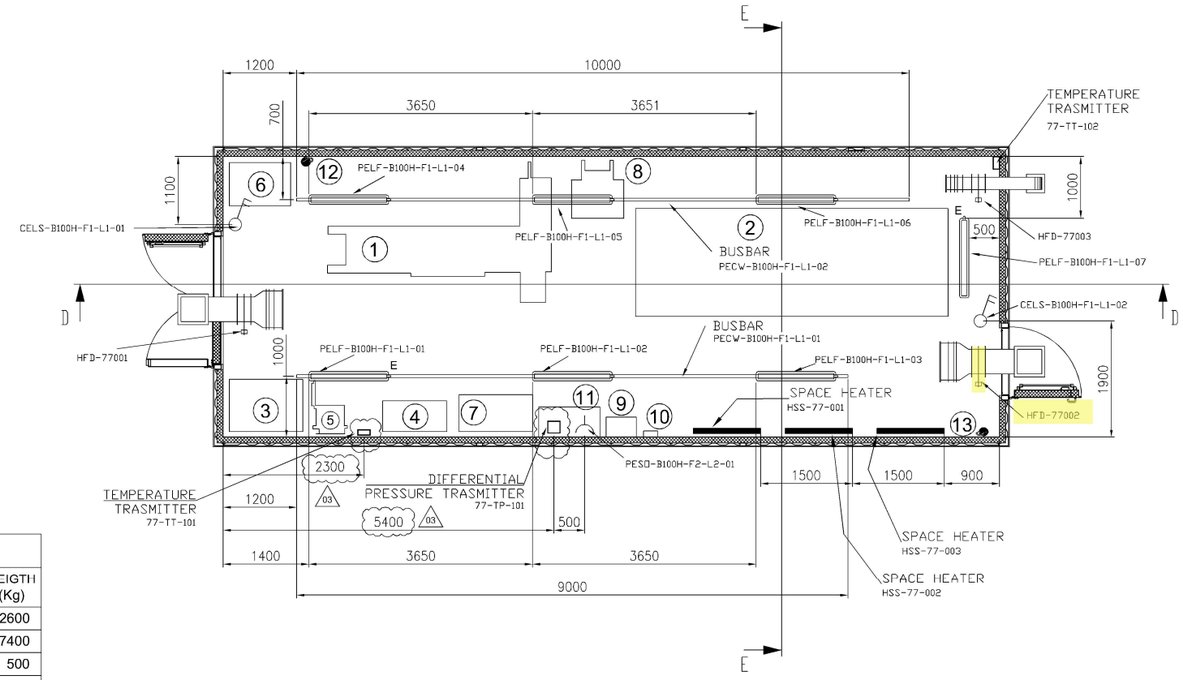
DRAWING NO. 1724000049-AR-DA-00014 REV. 03



SECTION E-E

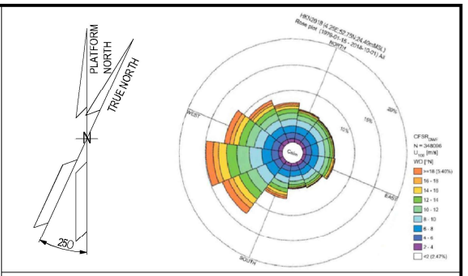


SECTION D-D



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	2600
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	7400
3	UP-200F1	DC UPS PANEL	1200	850	2105	500
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	522
5	CB-200F1	ISOLATOR FOR DC UPS	600	300	800	100
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2100	2100
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV ROOM	1200	600	1900	400
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	70
9	-	TOOL BOX	495	335	920	20
10	-	ELECTRIC SAFETY KIT	230	110	280	20
11	-	TABLE	1000	500	750	50
12	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
14	HHU-77001 (03)	AIR HANDLING UNIT A	1250	850	900	140
15	HHU-77002 (03)	AIR HANDLING UNIT B	1250	850	900	140
16	HSS-77-001	SPACE HEATER 1	184	145	1100	5
17	HSS-77-002	SPACE HEATER 2	184	145	1100	5
18	HSS-77-003	SPACE HEATER 3	184	145	1100	5



NOTE

1) ALL DIMENSIONS ARE IN MM.
2) THE POSITION OF THE LAMPS INDICATED IS TO BE CONSIDERED THE THEORETICAL ONE, THE FINA ONE WILL BE CONFIRMED IN THE AS-BUILT ISSUE. (03)

REFERENCE

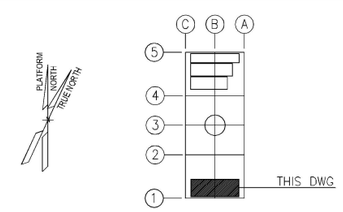
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00064
"B-100" DETAILED DRAWING	1724000049-AR-DD-00018
PAINTING PROCEDURE	1724000049-MAT-PRO-00004
(03) "B-100" FOUNDATION	1724000049-ST-DD-00010
(03) "B-100" STRUCTURAL CALCULATION	1724000049-ST-CA-00006

LEGEND

- INTERNAL LIGHT
- E INTERNAL EMERGENCY LIGHT
- SOCKET OUTLET, INDOOR
- LIGHT SWITCH
- ESCAPE CORRIDOR – WIDTH 800mm.
- MAINTENANCE AREA – VENDOR REQUIREMENT
- INSULATION PANEL

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	28/06/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	14/05/24	M.G.	SKV	C.A.	ISSUE FOR REVIEW (IFR)
00	08/02/24	A.G.	SKV	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND | ROSETTI MARINO

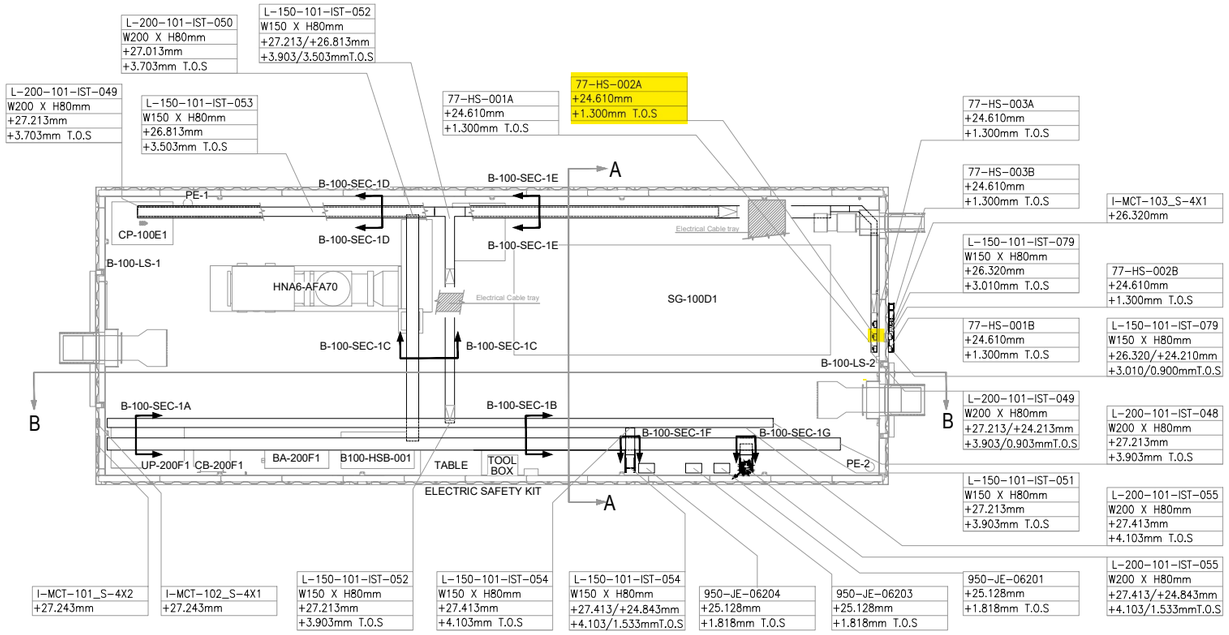
TITLE : BASE LOAD POWER HUB (BLPH)
B-100 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00014	SHEET 003	REV. 03

File Name : 1724000049-AR-DA-00014-REV.03

DRAWING NO. 123A90-DDL-IN-DL-40113

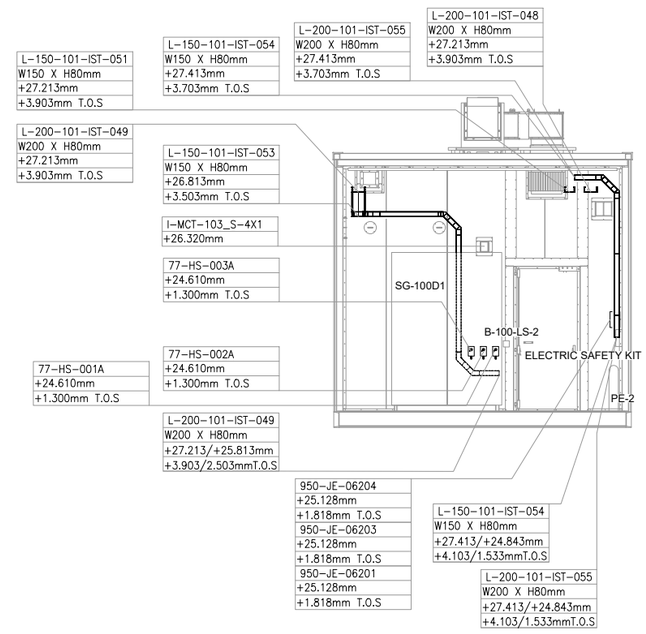
REV. 01



PLAN VIEW

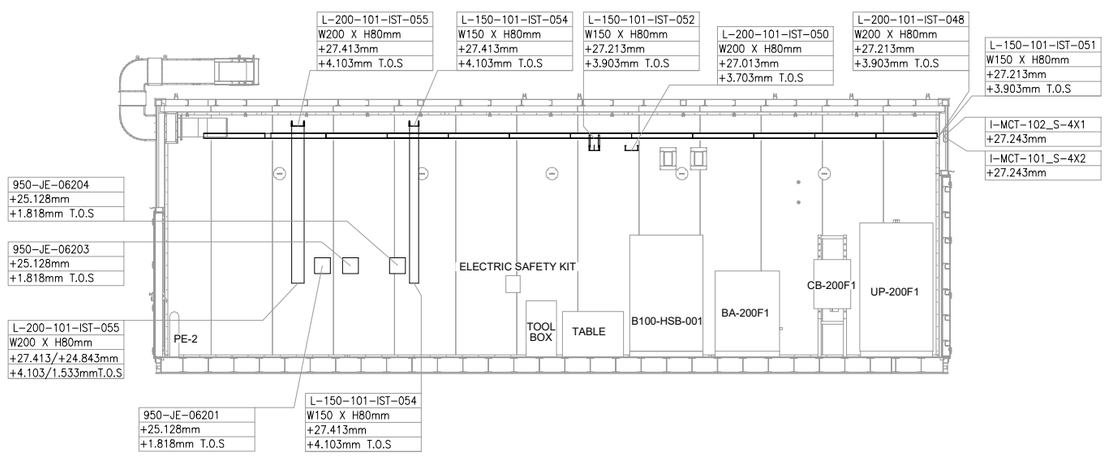
B-100 HV/MV SWITCHROOM

SCALE-1:1



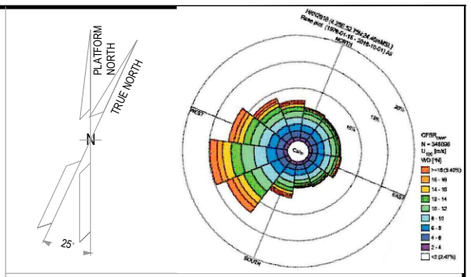
SECTION A-A

SCALE-1:1



SECTION B-B

SCALE-1:1



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR CONTAINER CABLE TRAY LAYOUT.

LEGEND

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DL-40113

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/08/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B-100 Container Lower Deck – TOS EL. 23.310m

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40113	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40113 REV01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016 REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-06203	No.	MARSHALLING CABINET B400-FGS-002

<01>

B-100 HV Switch Gear Room

950-XZ-06201 (+/-) 1BK 2BK — C-950-XZ-06201/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06201 (+/-) 1BK 2BK — C-950-XL-06201/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06202 (+/-) 1BK 2BK — C-950-XL-06202/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 OUTDOOR

77-HS-001B (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2 — C-77-HS-001B/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

C-77-HS-001A/77-HS-001B
~~C-77-HS-001B/77-HS-001A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77001

77-HY-001 (1, 2) 1BK 2BK — C-77-HY-001/77-HS-001A, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-001A (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2

B-100 OUTDOOR

77-HS-002B (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2 — C-77-HS-002B/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

C-77-HS-002A/77-HS-002B
~~C-77-HS-002B/77-HS-002A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77002

77-HY-002 (1, 2) 1BK 2BK — C-77-HY-002/77-HS-002A, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-002A (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2

B-100 OUTDOOR

77-HS-003B (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2 — C-77-HS-003B/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

C-77-HS-003A/77-HS-003B
~~C-77-HS-003B/77-HS-003A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77003

77-HY-003 (1, 2) 1BK 2BK — C-77-HY-003/77-HS-003A, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-003A (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2

TB-1

1BK	1	1BK
2BK	2	2BK
	SH	
1BK	3	3BK
2BK	4	4BK
	SH	
1BK	5	5BK
2BK	6	6BK
	SH	
1BK	7	7BK
2BK	8	8BK
	SH	
1BK	9	9BK
2BK	10	10BK
	SH	
1BK	11	11BK
2BK	12	12BK
	SH	
	OS	

950-JE-06203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-06203

1BK	1	950-XZ-06201
2BK	2	
3BK	3	950-XL-06201
4BK	4	
5BK	5	950-XL-06202
6BK	6	
7BK	7	77-HY-001
8BK	8	
9BK	9	77-HY-002
10BK	10	
11BK	11	77-HY-003
12BK	12	

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–06203

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 073	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>

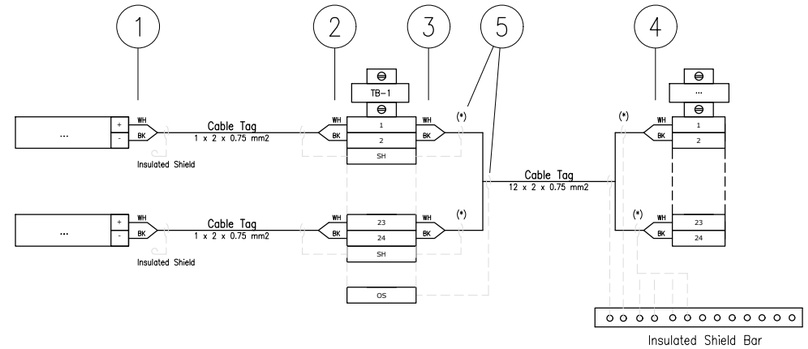
LEGENDS & SYMBOLS:

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 TAG NO./INSTRUMENT TERMINAL NO. OR POLARITY/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)

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

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

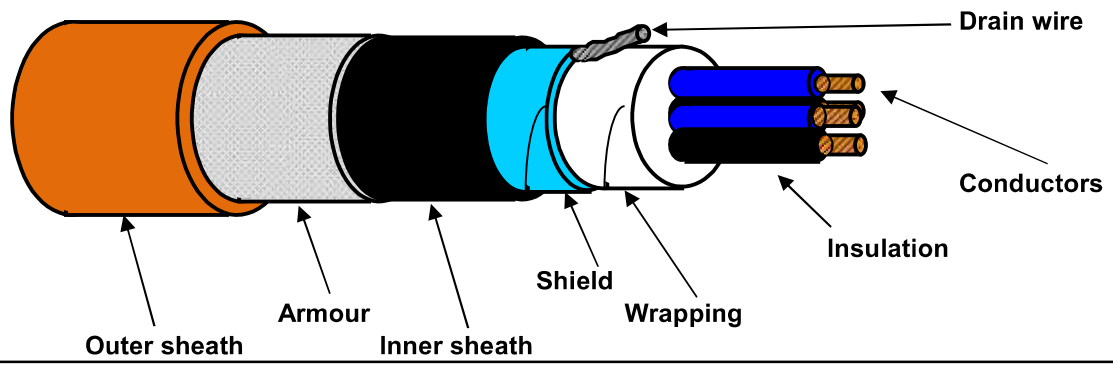
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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-77-HY-002/77-HS-002A	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						HFD-77002	Fire Damper	Lower Deck (B-100)	77-HS-002A	Hand Switch	Lower Deck (B-100)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			T2_M20_Double				

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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ROSETTI MARINO — CROSSWIND

ITEM	Tag	C-77-HS-003B/950-JE-06203 : PUSH BUTTON / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-10 : HVAC HV/MV Switchgear Room B-100			Module	LD_B-100_Ext/LD_B-100	
TASK	code	C10000360	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	77-HS-003B	To	950-JE-06203		

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.	OK
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	0,7	Ω
	SCREEN	0,6	Ω
	EARTH	0,7	Ω
	ARMr	0,5	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

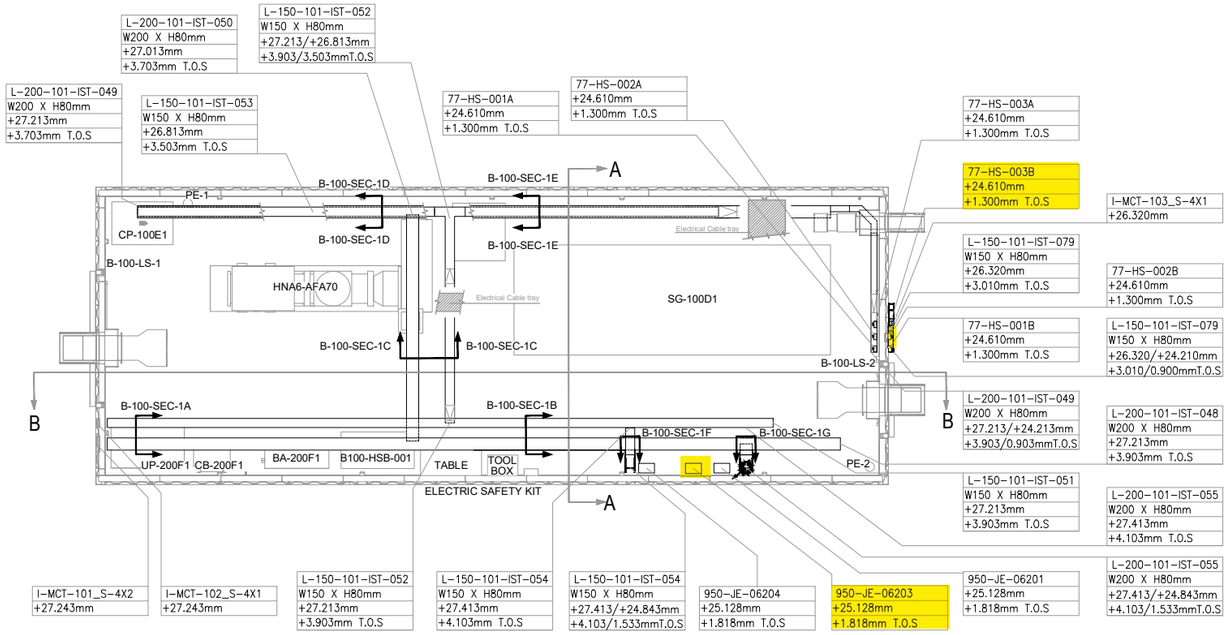
TYPE / SERIAL N°: KEW3125A / W8330207 Calibration date: 10-07-2024

Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-16	
Signature	Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:36:26.457Z	Digitaly signed by Giovanni Tangianu 2024-10-16T15:37:59.474Z	

DRAWING NO. 123A90-DDL-IN-DL-40113

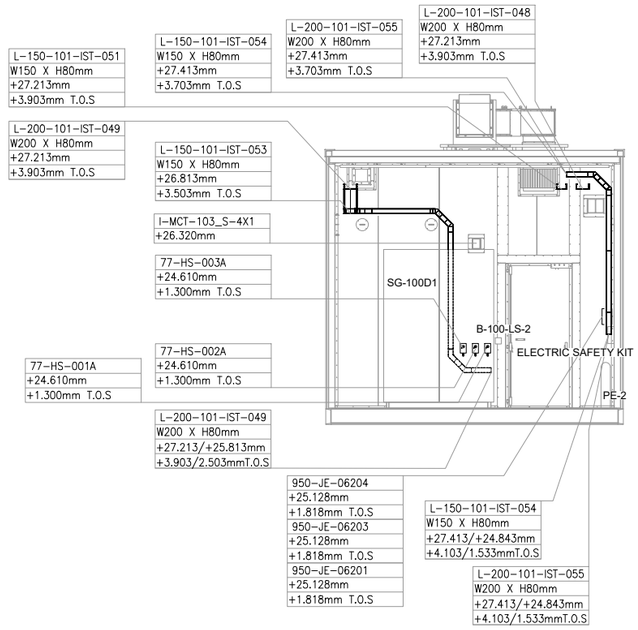
REV. 01



PLAN VIEW

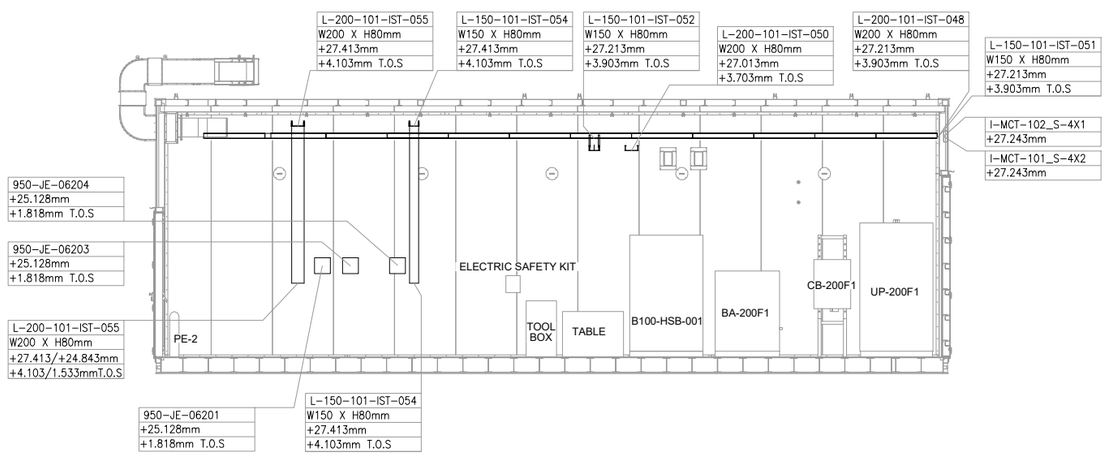
B-100 HV/MV SWITCHROOM

SCALE-1:1



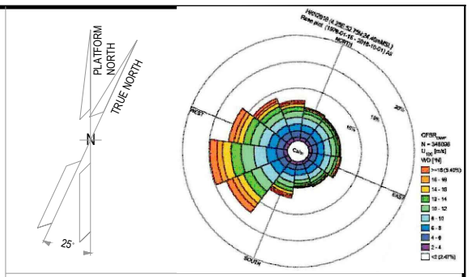
SECTION A-A

SCALE-1:1



SECTION B-B

SCALE-1:1



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR CONTAINER CABLE TRAY LAYOUT.

LEGEND

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DL-40113

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/08/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B-100 Container Lower Deck - TOS EL. 23.310m

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40113	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40113 REV01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016 REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-06203	No.	MARSHALLING CABINET B400-FGS-002

<01>

B-100 HV Switch Gear Room

950-XZ-06201 (+/-) 1BK 2BK — C-950-XZ-06201/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06201 (+/-) 1BK 2BK — C-950-XL-06201/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06202 (+/-) 1BK 2BK — C-950-XL-06202/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 OUTDOOR

77-HS-001B (12/22 — 11/21) 1BK 2BK — C-77-HS-001B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

NOTE-2

C-77-HS-001A/77-HS-001B

~~C-77-HS-001B/77-HS-001A~~

2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77001

77-HY-001 (1/2) — C-77-HY-001/77-HS-001A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-001A (12/22 — 11/21) 1BK 2BK — NOTE-2

B-100 OUTDOOR

77-HS-002B (12/22 — 11/21) 1BK 2BK — C-77-HS-002B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

NOTE-2

C-77-HS-002A/77-HS-002B

~~C-77-HS-002B/77-HS-002A~~

2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77002

77-HY-002 (1/2) — C-77-HY-002/77-HS-002A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-002A (12/22 — 11/21) 1BK 2BK — NOTE-2

B-100 OUTDOOR

77-HS-003B (12/22 — 11/21) 1BK 2BK — C-77-HS-003B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

NOTE-2

C-77-HS-003A/77-HS-003B

~~C-77-HS-003B/77-HS-003A~~

2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77003

77-HY-003 (1/2) — C-77-HY-003/77-HS-003A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-003A (12/22 — 11/21) 1BK 2BK — NOTE-2

TB-1

1BK	1	1BK
2BK	2	2BK
	SH	
1BK	3	3BK
2BK	4	4BK
	SH	
1BK	5	5BK
2BK	6	6BK
	SH	
1BK	7	7BK
2BK	8	8BK
	SH	
1BK	9	9BK
2BK	10	10BK
	SH	
1BK	11	11BK
2BK	12	12BK
	SH	
	OS	

950-JE-06203/B400-FGS-002

12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-06203

1BK	1	950-XZ-06201
2BK	2	
3BK	3	950-XL-06201
4BK	4	
5BK	5	950-XL-06202
6BK	6	
7BK	7	77-HY-001
8BK	8	
9BK	9	77-HY-002
10BK	10	
11BK	11	77-HY-003
12BK	12	

Shield Bar — I.E.

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–06203

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 073	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>

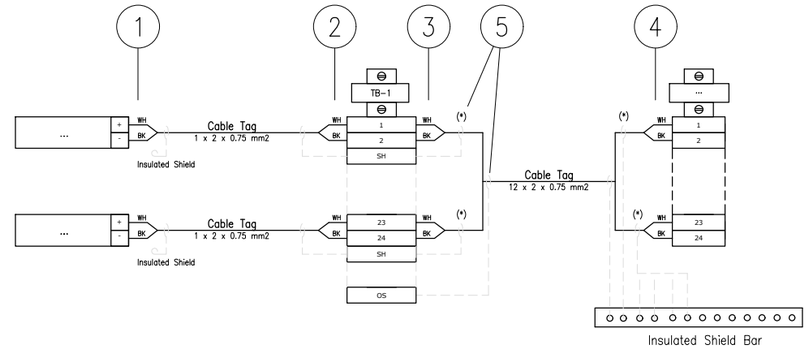
LEGENDS & SYMBOLS:

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 TAG NO./INSTRUMENT TERMINAL NO. OR POLARITY/JB TERMINAL NO.
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(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)

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

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

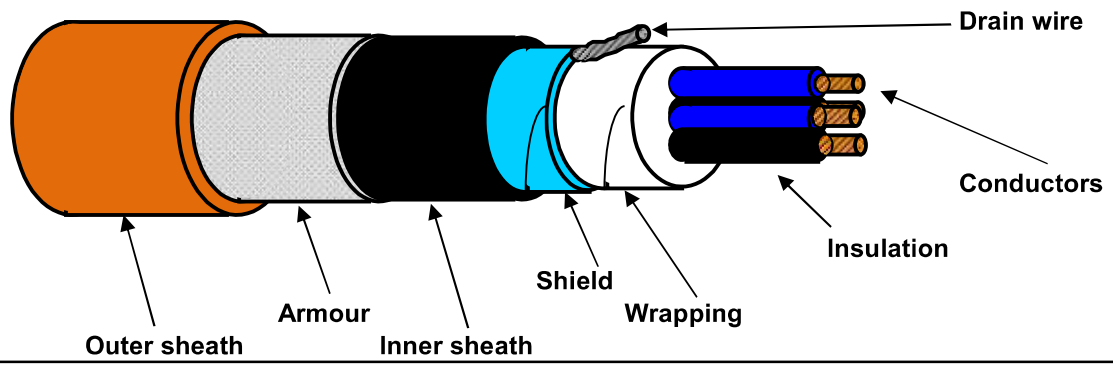
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-77-HS-003B/950-JE-06203	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						77-HS-003B	Hand Switch	Lower Deck (B-100) Ext.	950-JE-06203	DO JB to FGS	Lower Deck (B-100)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	M20	T2_M20_Double			T2_M20_Double				B-100-SEC-1E / B-100-SEC-1C / B-100-SEC-1B / B-100-SEC-1G

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.

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	C-77-HS-003A/77-HS-003B	: PUSH BUTTON / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100	Module	LD_B-100/LD_B-100_Ext		
TASK	code	C10000361	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	77-HS-003A	To	77-HS-003B		

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.	OK
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		0,5	Ω
	ARMr		0,5	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

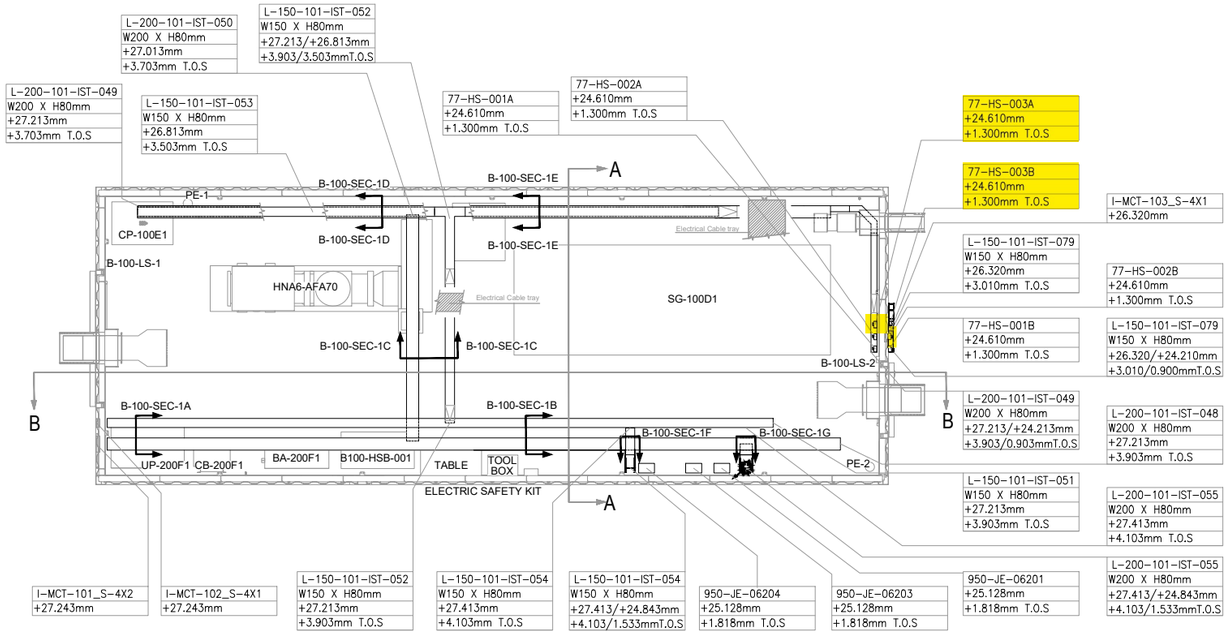
TYPE / SERIAL N°: KEW3125A / W8330207 Calibration date: 10-07-2024

Comments

Page 1/1	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-16	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:36:36.424Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-16T15:37:23.804Z	

DRAWING NO. 123A90-DDL-IN-DL-40113

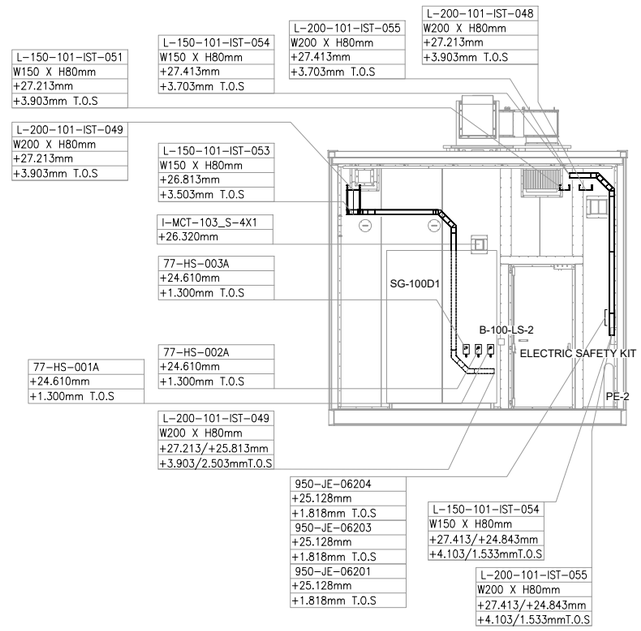
REV. 01



PLAN VIEW

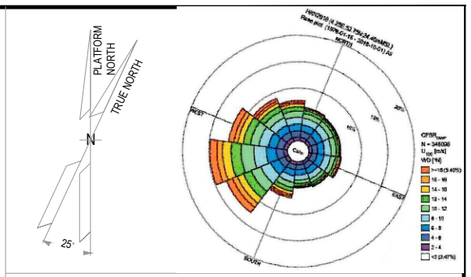
B–100 HV/MV SWITCHROOM

SCALE–1:1



SECTION A-A

SCALE–1:1



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR CONTAINER CABLE TRAY LAYOUT.

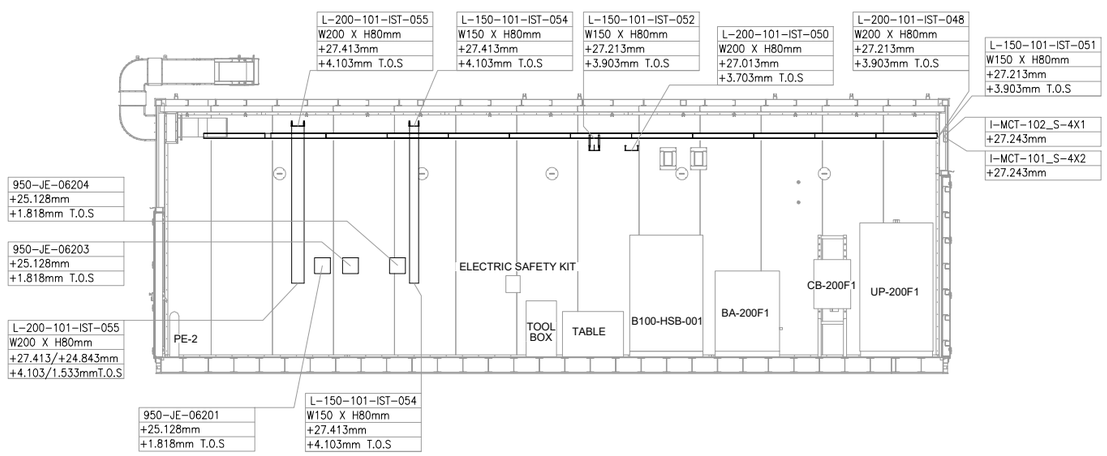
LEGEND

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DL-40113

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

HOLDS



SECTION B-B

SCALE–1:1

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/08/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B–100 Container Lower Deck – TOS EL. 23.310m

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40113	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40113 REV01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016 REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-06203	No.	MARSHALLING CABINET B400-FGS-002

<01>

B-100 HV Switch Gear Room

950-XZ-06201 (+ 1BK, - 2BK) — C-950-XZ-06201/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2 — TB-1: 1BK→1, 2BK→2, SH

950-XL-06201 (+ 1BK, - 2BK) — C-950-XL-06201/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2 — TB-1: 1BK→3, 2BK→4, SH

950-XL-06202 (+ 1BK, - 2BK) — C-950-XL-06202/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2 — TB-1: 1BK→5, 2BK→6, SH

950-JE-06203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-06203:
- 1BK → 1 → 950-XZ-06201
- 2BK → 2
- 3BK → 3 → 950-XL-06201
- 4BK → 4
- 5BK → 5 → 950-XL-06202
- 6BK → 6
- 7BK → 7 → 77-HY-001
- 8BK → 8
- 9BK → 9 → 77-HY-002
- 10BK → 10
- 11BK → 11 → 77-HY-003
- 12BK → 12

Shield Bar — I.E.

B-100 OUTDOOR

77-HS-001B (1BK/12, 2BK/22 | 11/21, 1BK, 2BK) — NOTE-2 — C-77-HS-001B/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — TB-1: 1BK→7, 2BK→8, SH

C-77-HS-001A/77-HS-001B
~~C-77-HS-001B/77-HS-001A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77001

77-HY-001 (1, 2, 1BK, 2BK) — C-77-HY-001/77-HS-001A, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-001A (1BK/12, 2BK/22 | 11/21, 1BK, 2BK) — NOTE-2

B-100 OUTDOOR

77-HS-002B (1BK/12, 2BK/22 | 11/21, 1BK, 2BK) — NOTE-2 — C-77-HS-002B/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — TB-1: 1BK→9, 2BK→10, SH

C-77-HS-002A/77-HS-002B
~~C-77-HS-002B/77-HS-002A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77002

77-HY-002 (1, 2, 1BK, 2BK) — C-77-HY-002/77-HS-002A, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-002A (1BK/12, 2BK/22 | 11/21, 1BK, 2BK) — NOTE-2

77-HS-003B (1BK/12, 2BK/22 | 11/21, 1BK, 2BK) — NOTE-2 — C-77-HS-003B/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — TB-1: 1BK→11, 2BK→12, SH, OS

C-77-HS-003A/77-HS-003B
~~C-77-HS-003B/77-HS-003A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77003

77-HY-003 (1, 2, 1BK, 2BK) — C-77-HY-003/77-HS-003A, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-003A (1BK/12, 2BK/22 | 11/21, 1BK, 2BK) — NOTE-2

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–06203

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 073	REV. 01

File Name : 123A90–DDL–IN–DG–40016_Rev.01

DRAWING NO. 123A90-DDL-IN-DG-40016

REV. 01

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<01>

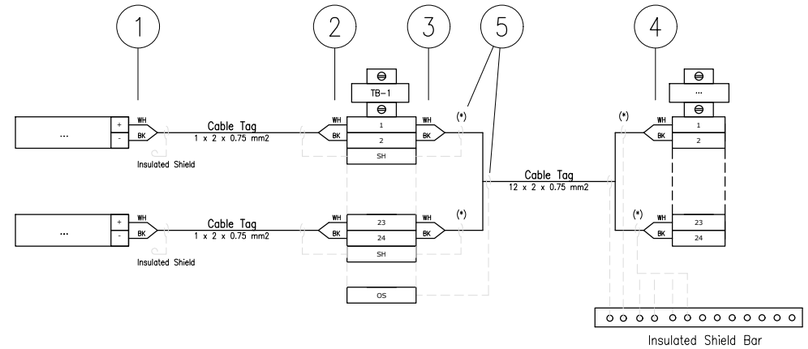
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NIS	- NON INTRINSICALLY SAFE
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P.E.	- PLANT EARTH
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ESD	- EMERGENCY SHUTDOWN SYSTEM
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FGS	- FIRE & GAS SYSTEM <01>
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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.

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(HEAT SHRINKABLE BLUE FOR SHIELD OF NIS INSTRUMENT CABLE)

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

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

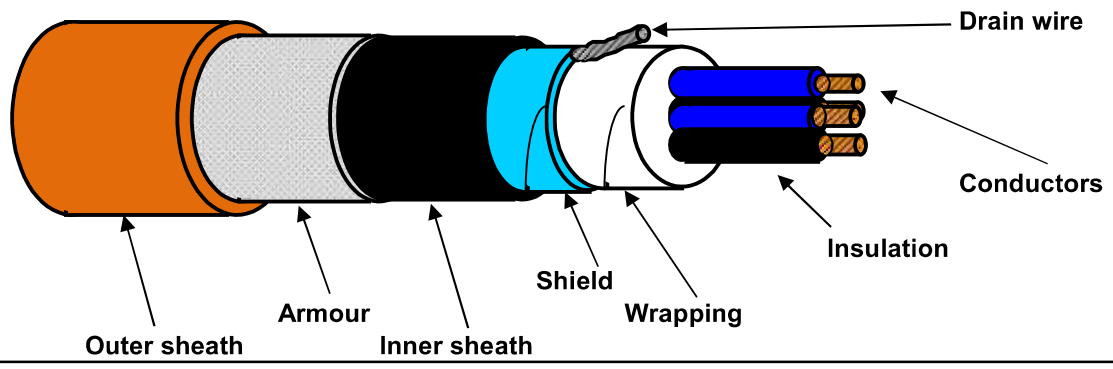
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A3	123A90-DDL-IN-DG-40016	003	01

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-77-HS-003A/77-HS-003B	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						77-HS-003A	Hand Switch	Lower Deck (B-100)	77-HS-003B	Hand Switch	Lower Deck (B-100) Ext.	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			T2_M20_Double				I-MCT-103 / B-100-SEC-1E

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.

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-77-HY-003/77-HS-003A	: FIRE DAMPER / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100	Module	LD_B-200/LD_B-100		
TASK	code	C10000362	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: HFD-77003 — To: 77-HS-003A

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.	OK
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	0.6	Ω
	ARMr	0,7	Ω
	TEST VOLTS	500	V

TEST ALL CORES AND RECORD LOWEST VALUE

Notes: The lowest value is recorded and must be within project specifications

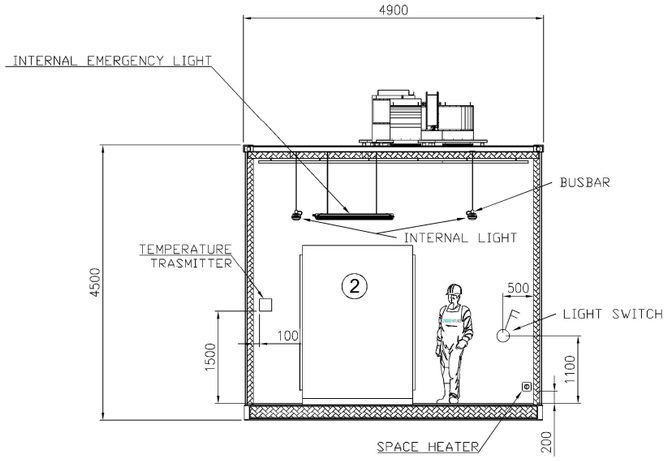
TESTING INSTRUMENTS USED

TYPE / SERIAL N°: KEW3125A / W8330207 — Calibration date: 10-07-2024

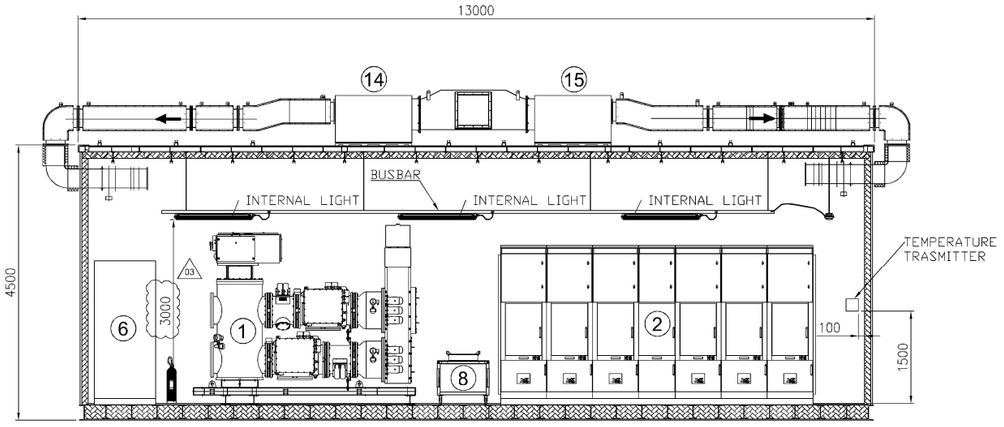
Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-16	
Signature	Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:36:47.400Z	Digitaly signed by Giovanni Tangianu 2024-10-16T15:36:33.849Z	

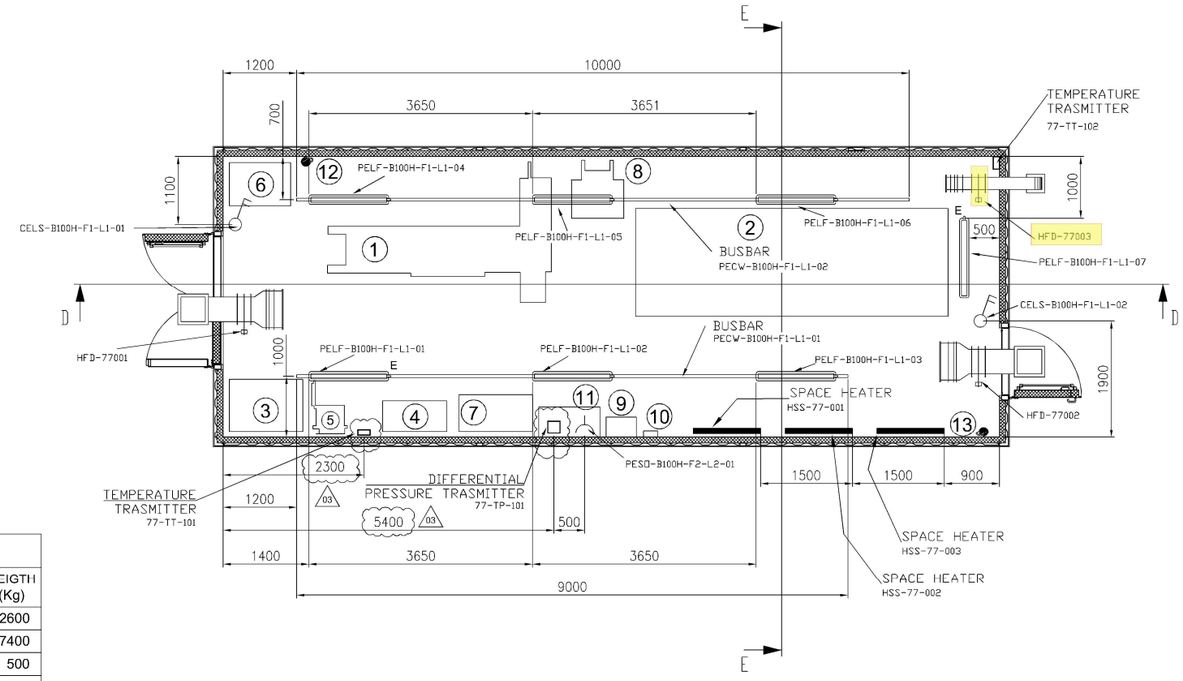
DRAWING NO. 1724000049-AR-DA-00014 REV. 03



SECTION E-E

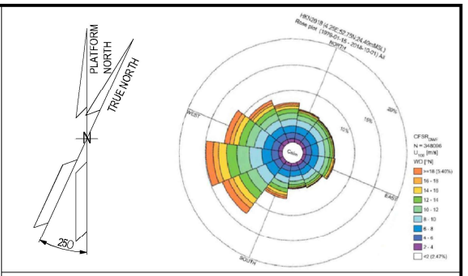


SECTION D-D



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	2600
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	7400
3	UP-200F1	DC UPS PANEL	1200	850	2105	500
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	522
5	CB-200F1	ISOLATOR FOR DC UPS	600	300	800	100
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2100	2100
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV ROOM	1200	600	1900	400
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	70
9	-	TOOL BOX	495	335	920	20
10	-	ELECTRIC SAFETY KIT	230	110	280	20
11	-	TABLE	1000	500	750	50
12	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
14	HHU-77001 (03)	AIR HANDLING UNIT A	1250	850	900	140
15	HHU-77002 (03)	AIR HANDLING UNIT B	1250	850	900	140
16	HSS-77-001	SPACE HEATER 1	184	145	1100	5
17	HSS-77-002	SPACE HEATER 2	184	145	1100	5
18	HSS-77-003	SPACE HEATER 3	184	145	1100	5



NOTE

1) ALL DIMENSIONS ARE IN MM.
(03) 2) THE POSITION OF THE LAMPS INDICATED IS TO BE CONSIDERED THE THEORETICAL ONE, THE FINA ONE WILL BE CONFIRMED IN THE AS-BUILT ISSUE.

REFERENCE

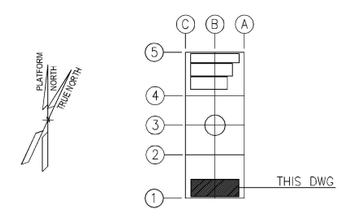
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00064
"B-100" DETAILED DRAWING	1724000049-AR-DD-00018
PAINTING PROCEDURE	1724000049-MAT-PRO-00004
(03) "B-100" FOUNDATION	1724000049-ST-DD-00010
(03) "B-100" STRUCTURAL CALCULATION	1724000049-ST-CA-00006

LEGEND

- INTERNAL LIGHT
- E INTERNAL EMERGENCY LIGHT
- SOCKET OUTLET, INDOOR
- LIGHT SWITCH
- ESCAPE CORRIDOR – WIDTH 800mm.
- MAINTENANCE AREA – VENDOR REQUIREMENT
- INSULATION PANEL

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	28/06/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	14/05/24	M.G.	SKV	C.A.	ISSUE FOR REVIEW (IFR)
00	08/02/24	A.G.	SKV	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND | ROSETTI MARINO

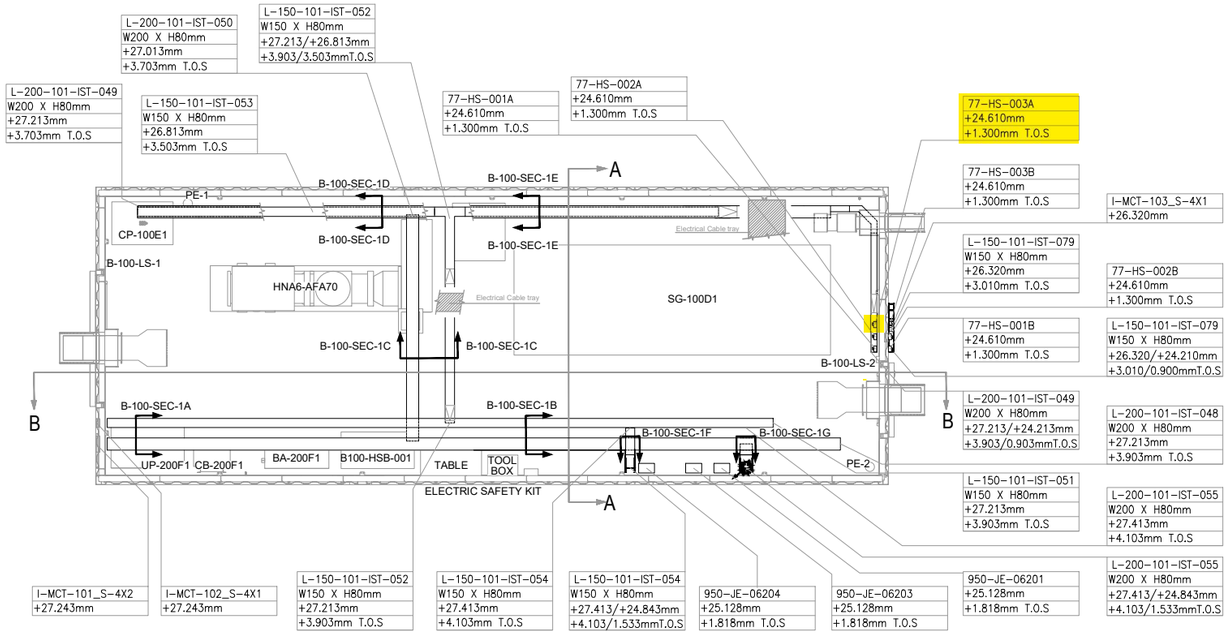
TITLE : BASE LOAD POWER HUB (BLPH)
B-100 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00014	SHEET 003	REV. 03

File Name : 1724000049-AR-DA-00014-REV.03

DRAWING NO. 123A90-DDL-IN-DL-40113

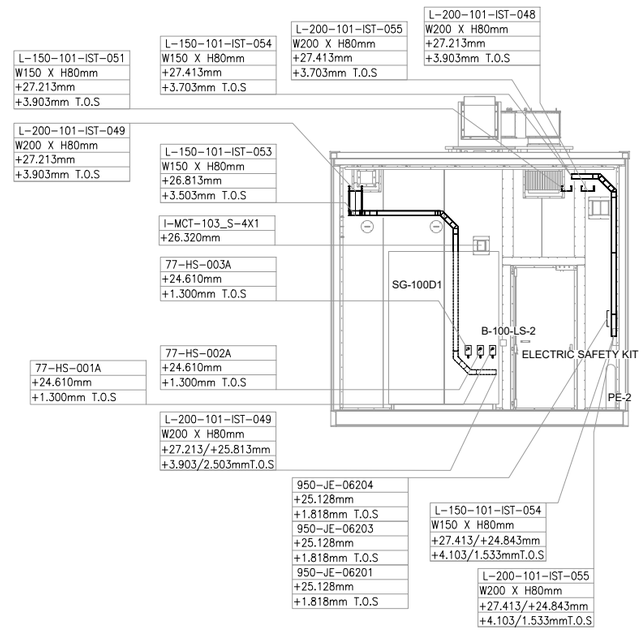
REV. 01



PLAN VIEW

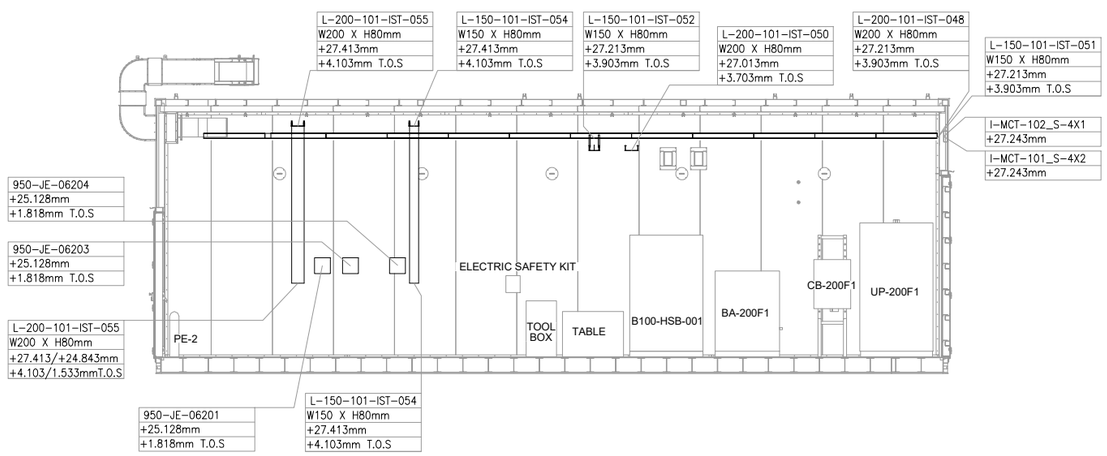
B-100 HV/MV SWITCHROOM

SCALE-1:1



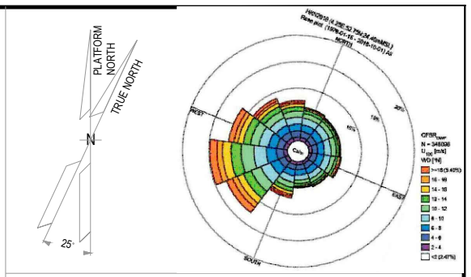
SECTION A-A

SCALE-1:1



SECTION B-B

SCALE-1:1



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR CONTAINER CABLE TRAY LAYOUT.

LEGEND

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DL-40113

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/08/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B-100 Container Lower Deck - TOS EL. 23.310m

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40113	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40113 REV01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016 REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-06203	No.	MARSHALLING CABINET B400-FGS-002

<01>

B-100 HV Switch Gear Room

950-XZ-06201 (+/-) 1BK 2BK — C-950-XZ-06201/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06201 (+/-) 1BK 2BK — C-950-XL-06201/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06202 (+/-) 1BK 2BK — C-950-XL-06202/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 OUTDOOR

77-HS-001B (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2 — C-77-HS-001B/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

C-77-HS-001A/77-HS-001B
~~C-77-HS-001B/77-HS-001A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77001

77-HY-001 (1, 2) 1BK 2BK — C-77-HY-001/77-HS-001A, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-001A (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2

B-100 OUTDOOR

77-HS-002B (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2 — C-77-HS-002B/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

C-77-HS-002A/77-HS-002B
~~C-77-HS-002B/77-HS-002A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77002

77-HY-002 (1, 2) 1BK 2BK — C-77-HY-002/77-HS-002A, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-002A (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2

B-100 OUTDOOR

77-HS-003B (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2 — C-77-HS-003B/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

C-77-HS-003A/77-HS-003B
~~C-77-HS-003B/77-HS-003A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77003

77-HY-003 (1, 2) 1BK 2BK — C-77-HY-003/77-HS-003A, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-003A (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2

TB-1

1BK	1	1BK
2BK	2	2BK
	SH	
1BK	3	3BK
2BK	4	4BK
	SH	
1BK	5	5BK
2BK	6	6BK
	SH	
1BK	7	7BK
2BK	8	8BK
	SH	
1BK	9	9BK
2BK	10	10BK
	SH	
1BK	11	11BK
2BK	12	12BK
	SH	
	OS	

950-JE-06203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-06203

1BK	1	950-XZ-06201
2BK	2	
3BK	3	950-XL-06201
4BK	4	
5BK	5	950-XL-06202
6BK	6	
7BK	7	77-HY-001
8BK	8	
9BK	9	77-HY-002
10BK	10	
11BK	11	77-HY-003
12BK	12	

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–06203

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 073	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>

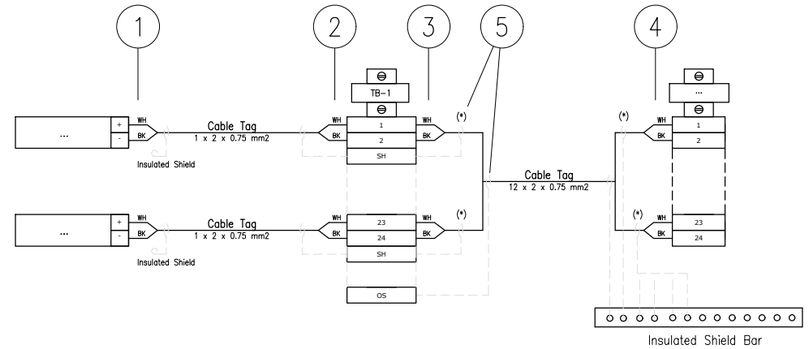
LEGENDS & SYMBOLS:

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 TAG NO./INSTRUMENT TERMINAL NO. OR POLARITY/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)

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

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

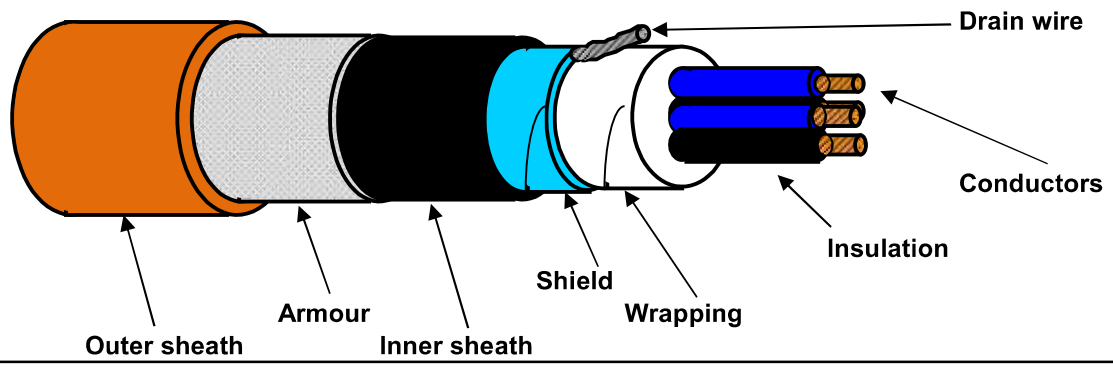
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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-77-HY-003/77-HS-003A	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						HFD-77003	Fire Damper	Lower Deck (B-100)	77-HS-003A	Hand Switch	Lower Deck (B-100)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			T2_M20_Double				B-100-SEC-1E / B-100-SEC-1C / B-100-SEC-1B / B-100-SEC-1G

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	B100-HSB-001/B400-FGS-003	: B-100 HVAC Control Panel / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100	Module	LD_B-100/LD_B-400		
TASK	code	C10002035	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-IS-OS-LSZH-SWB-LSZH	Cores/Size mm²	6X2X0,75 mm2	Color	ORANGE
From	B100-HSB-001	To	B400-FGS-003		

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.	PL
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	PL
12	Check gland plate for single core cables is non-ferrous.	OK
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	1,3	Ω
	SCREEN	1,3	Ω
	EARTH	N/A	Ω
	ARMr	1,3	Ω
	TEST VOLTS	500	V

TEST ALL CORES AND RECORD LOWEST VALUE

Notes: The lowest value is recorded and must be within project specifications

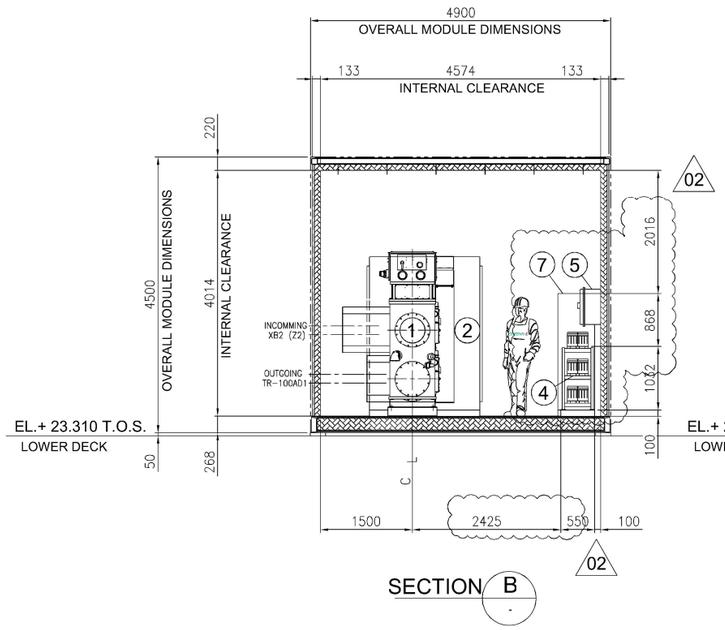
TESTING INSTRUMENTS USED

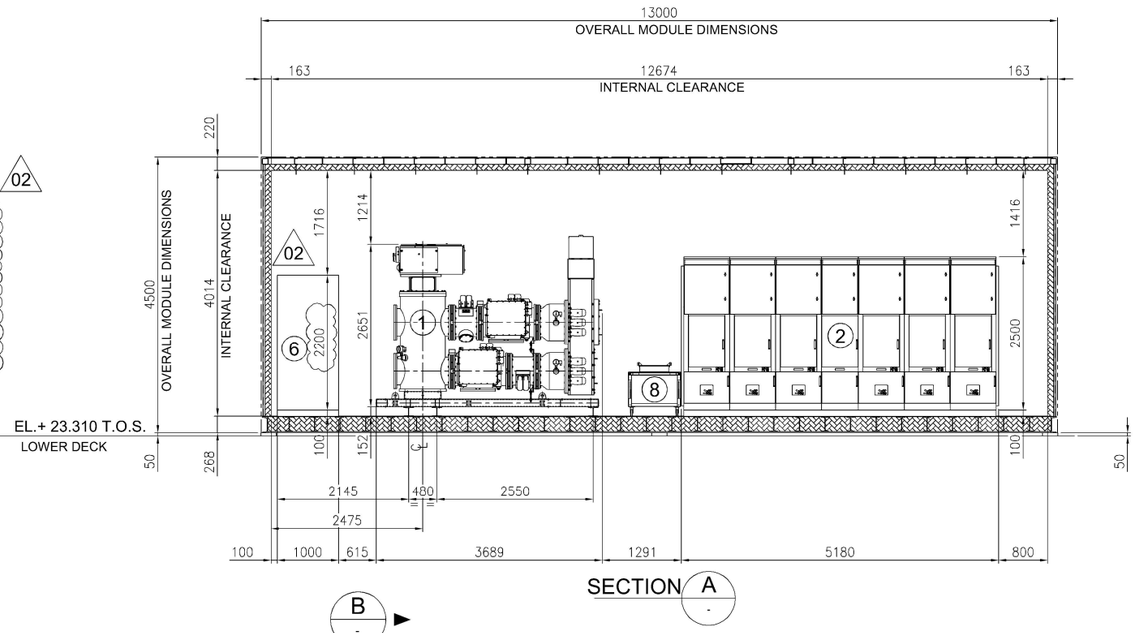
TYPE / SERIAL N°: MEGGER: KEW3125A SERIAL:W8330207 Calibration date: N° 7722/24 10/07/2024

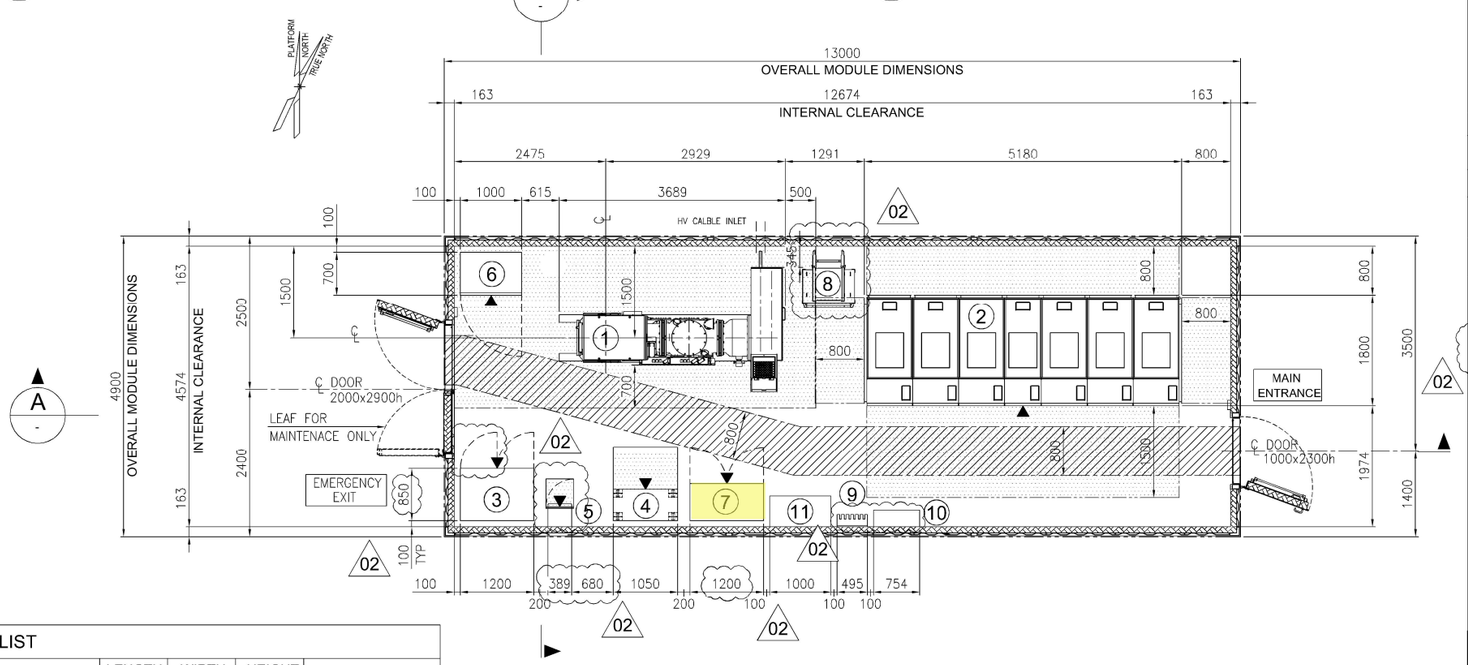
Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	ROSETTI MARINO	
Name	Carmelo Bongiovanni	Alessio Polo	
Date	2024-11-15	2024-11-19	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-15T12:15:18.792Z	PROVERLIS Digitaly signed by Alessio Polo 2024-11-19T16:28:47.538Z	

DRAWING NO. 123A90-DDL-EL-DL-20104 REV. 02

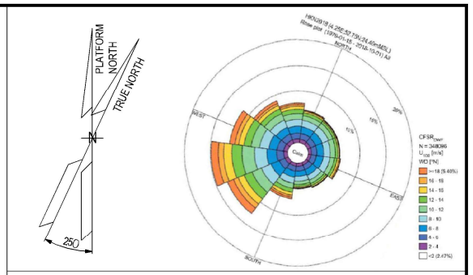






EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	
3	UP-200F1	DC UPS PANEL	1200	850	2105	
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	
5	CB-200F1 02	ISOLATOR FOR DC UPS	452	377	634	
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2200	02
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV MV ROOM	1200	600	1900	
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	
9	-	TOOL BOX	495	200	200	
10	-	SUBSTATION LIFE SAVING & INTERVENTION KIT	754	270	840	
11	-	TABLE	1000	500	750	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DELETED
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT.
4. FOR OTHER ITEMS, CORRECT LOCATION AND INFROMATION, 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

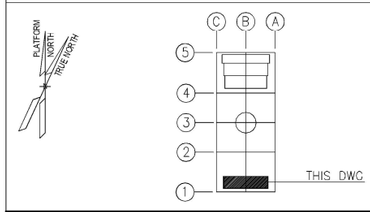
LEGEND

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
66kV SWITCHGEAR (GIS) GENERAL ARRANGEMENT DRAWING	1723001595-EL-DA-00006
CIRCUIT AND WIRING DIAGRAM	1723001595-EL-DG-00015
SG-100D1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00006
DC UPS – GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS	1724000372-EL-DA-00003
DC UPS – BATTERY LAYOUT AND INTERCONNECTING DIAGRAM	1724000372-EL-DG-00010
B-100 - GENERAL ARRANGEMENT DRAWINGS - E&I SHELTER	1724000049-AR-DA-00014

KEY PLAN



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20104**

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	10/11/2023	DSF	CB/AMA	DYFO/MDO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

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

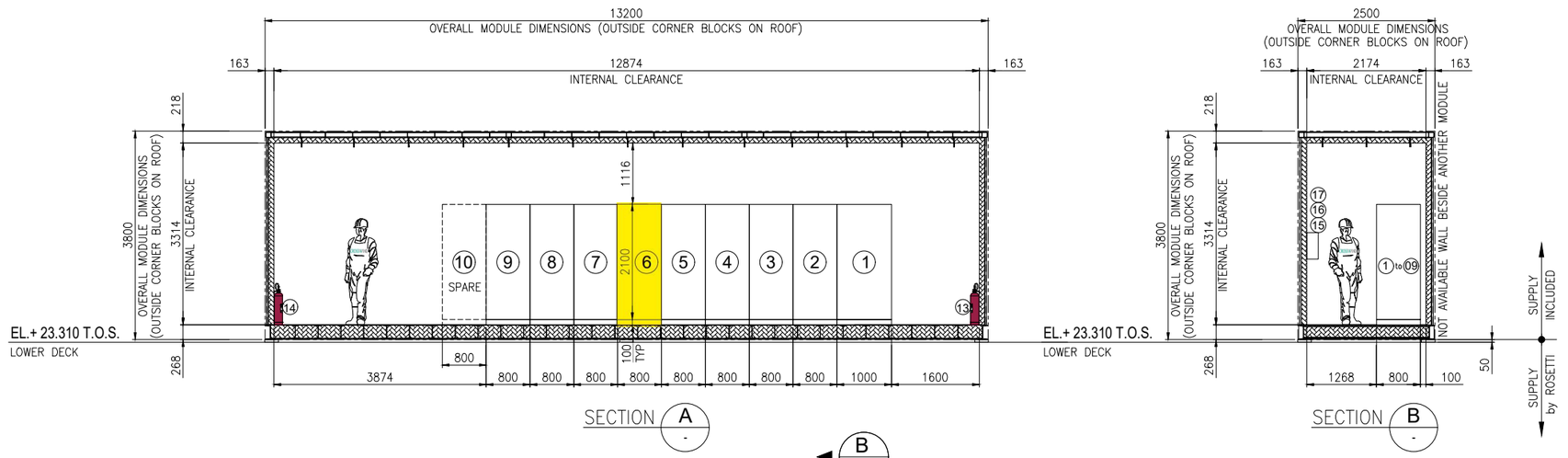
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN GPA	CHECKED LMA/AMA	APPROVED LMA/MDO	DATE 27/05/2024

A1	DRAWING NO. 123A90-DDL-EL-DL-20104	SHEET 001	REV. 02

File Name : 123A90-DDL-EL-DL-20104_REV02.dwg

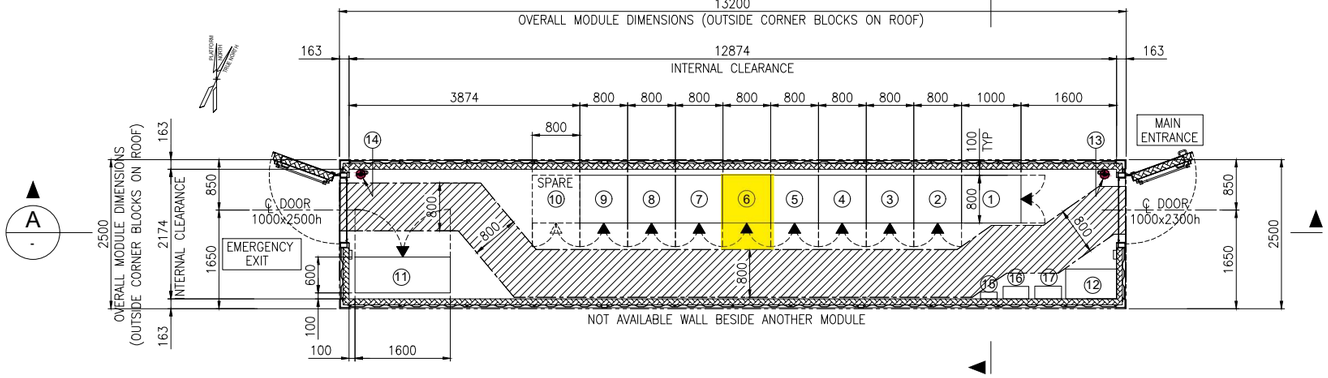
DRAWING NO. 123A90-DDL-IN-DL-40012

REV. 03



SECTION A -

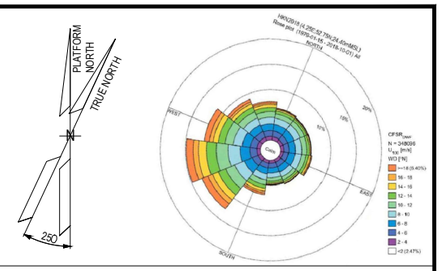
SECTION B -



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

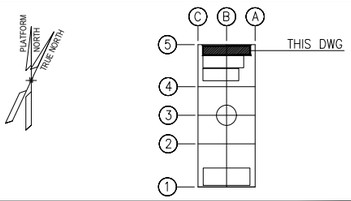
HOLDS

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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)

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

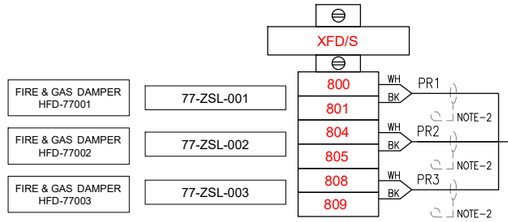
DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

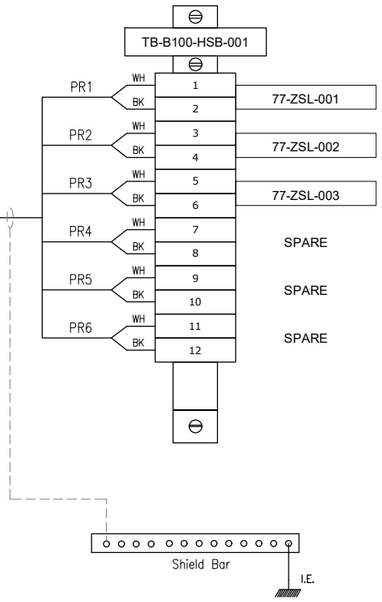
FIELD	MULTICABLE	I&T EQUIPMENT ROOM (ITER)
B-100 HV SWITCH GEAR ROOM	No.	MARSHALLING CABINET
		~~B400-FGS-002~~ B400-FGS-003

<01>

HVAC Panel B100-HSB-001



B100-HSB-001/B400-FGS-003
~~B100-HSB-001/B400-FGS-002~~
6x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS



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-FGS WIRING DIAGRAMS
FIRE DAMPER FEEDBACK - B-100

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-IN-DG-40016	056	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>

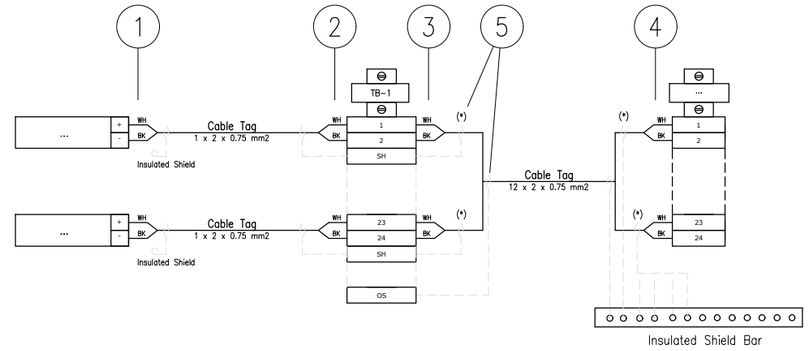
LEGENDS & SYMBOLS:

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

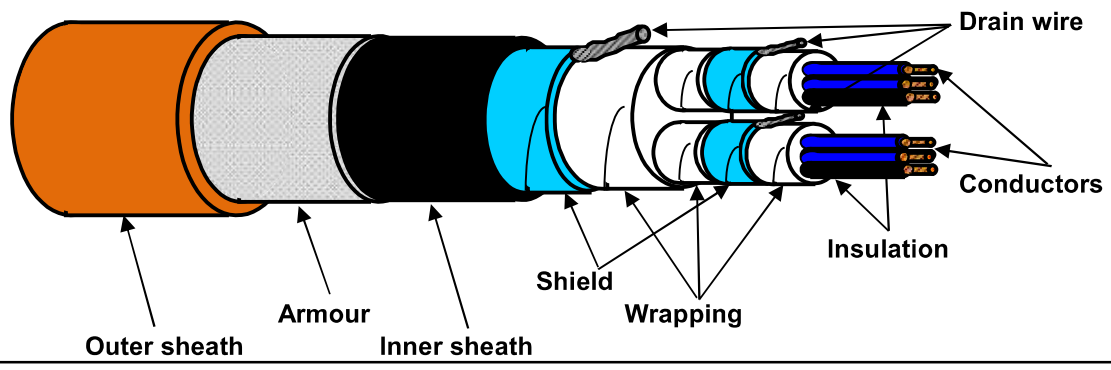
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
B100-HSB-001/B400-FGS-003	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						B100-HSB-001	Distribution & HVAC Panel - HV MV Room	Lower Deck (B-100)	77-ZSL-001/2/3	B400-FGS-003	Marshalling FGS	Lower Deck (B-400)		SMICV10-6X2X0,75	Cable Cu Cl.2/MGT/XLPE/IS/OS/LSZH/SWB/LSZH 150/250V (300V) 6x2x0,75mm² - Orange	M25	n.a.			n.a.				I-MCT-101 / B-100-SEC-1A / L-SEC-17 / L-SEC-1N / L-SEC-1M / L-SEC-1L / L-SEC-1J / L-SEC-1I / L-SEC-1H / L-SEC-1G / L-SEC-1F / L-SEC-1E / L-SEC-1D / L-SEC-1C / L-SEC-1B / L-SEC-1A / B-400-SEC-1A / B-400-SEC-1B / I-MCT-401

Cu Cl.2/MGT/XLPE/IS/OS/LSZH/SWB/LSZH 150/250 V (300 V)

6X2X0,75 - 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 0,5 mm	
Cores colour code :	**White - Black (each core NUMBERED for PAIR identification)**	
Pair Assembling :	10/1mt	
Pair Wrapping:	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Drain wire :	7-Stranded **TINNED** annealed copper drain wire, **size 0,5 sqmm**, in continuous contact with the shield	
Pair Shield :	by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Shield Insulation :	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
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 0,5 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 1,7 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - 6X2X0,75 SQMM - MGT/XLPE/IS/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 :	(20,6 ± 10%) mm	
Over armour diameter :	(21,8 ± 10%) mm	
Outer diameter :	(25,2 ± 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 :	≤ 26 Ω/km (@ 20°C)	
Insulation Resistance :	≥ 1000 MΩ x Km (@ 20°C)	
Mutual Capacitance :	≤ 150 nF/km	
L/R ratio :	≤ 25 µH/Ω	
Inductance :	≤ 0,9 mH/km	
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 :	06/05/2024	Messa			
Checked :	06/05/2024	Spaccasassi			
Approved :	06/05/2024	Cucinotta			

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ITEM	Tag	77-HS-001A	: Hand Switch for Fire&Gas Damper HFD-77001		Dwg		
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100		Module		
TASK	code	C10002077		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form CJX00	Miscellaneous

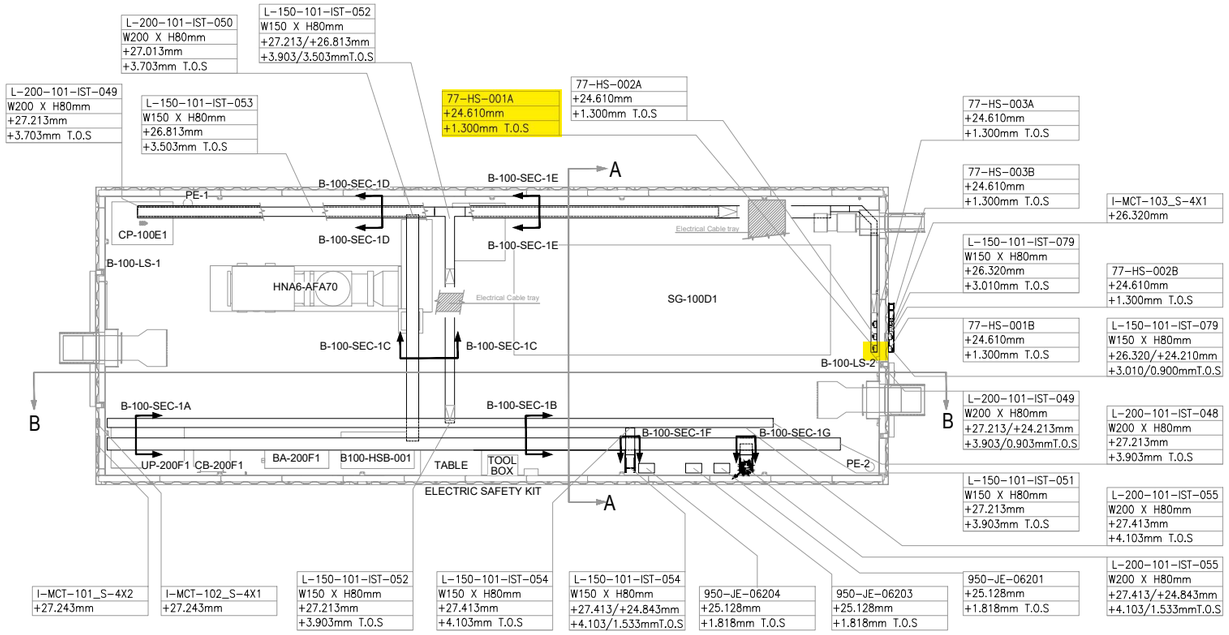
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	PL
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	NA
7	Check identification (tag number, tag plates).	OK
8	Check supporting and protection against vibrations.	PL
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	PL
10	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	2024-10-14	2024-10-16	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:39:19.028Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-16T15:35:30.938Z	

DRAWING NO. 123A90-DDL-IN-DL-40113

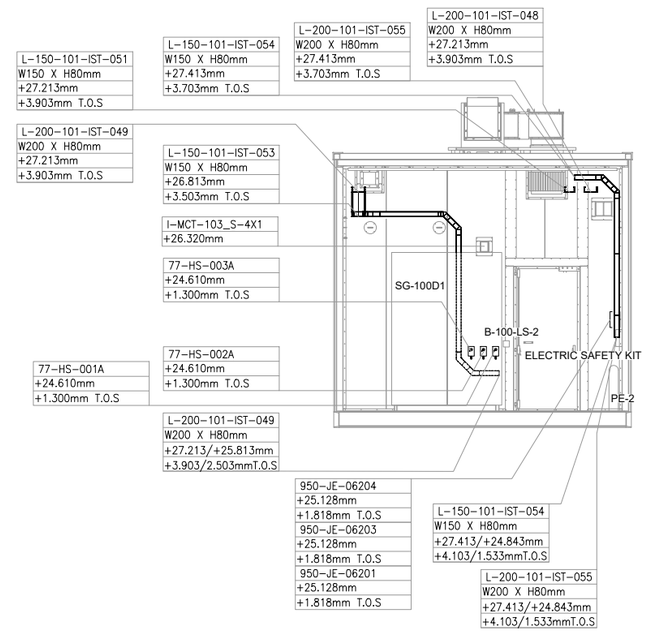
REV. 01



PLAN VIEW

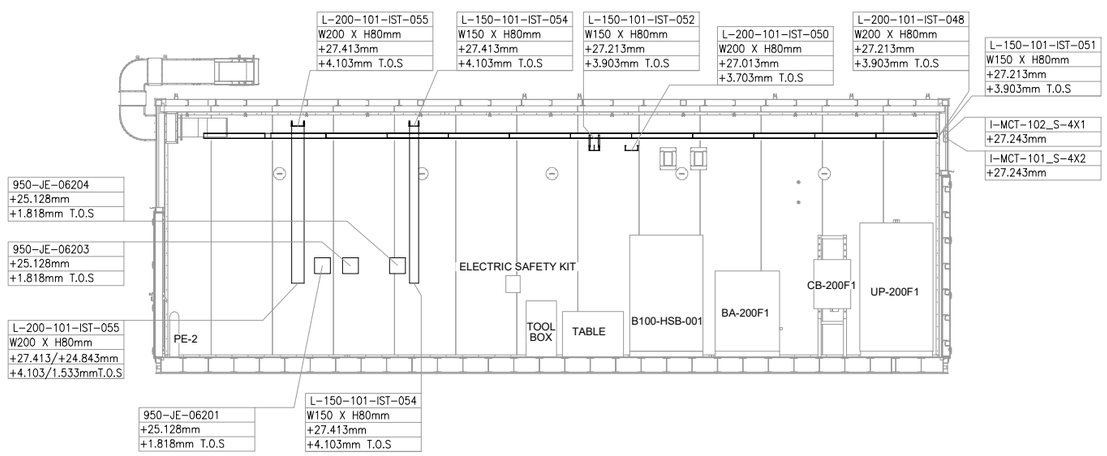
B-100 HV/MV SWITCHROOM

SCALE-1:1



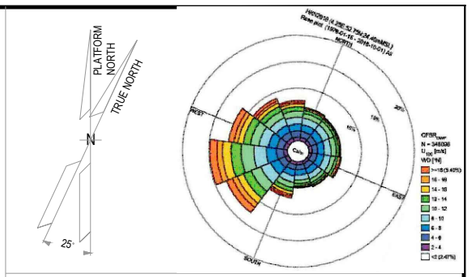
SECTION A-A

SCALE-1:1



SECTION B-B

SCALE-1:1



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR CONTAINER CABLE TRAY LAYOUT.

LEGEND

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DL-40113

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/08/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B-100 Container Lower Deck – TOS EL. 23.310m

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40113	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40113 REV01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016 REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-06203	No.	MARSHALLING CABINET B400-FGS-002

<01>

B-100 HV Switch Gear Room

950-XZ-06201 (+/-) 1BK 2BK — C-950-XZ-06201/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06201 (+/-) 1BK 2BK — C-950-XL-06201/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06202 (+/-) 1BK 2BK — C-950-XL-06202/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 OUTDOOR

77-HS-001B (12/22 — 11/21) 1BK 2BK — C-77-HS-001B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

NOTE-2

C-77-HS-001A/77-HS-001B

~~C-77-HS-001B/77-HS-001A~~

2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77001

77-HY-001 (1/2) 1BK 2BK — C-77-HY-001/77-HS-001A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-001A (12/22 — 11/21) 1BK 2BK — NOTE-2

B-100 OUTDOOR

77-HS-002B (12/22 — 11/21) 1BK 2BK — C-77-HS-002B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

NOTE-2

C-77-HS-002A/77-HS-002B

~~C-77-HS-002B/77-HS-002A~~

2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77002

77-HY-002 (1/2) 1BK 2BK — C-77-HY-002/77-HS-002A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-002A (12/22 — 11/21) 1BK 2BK — NOTE-2

B-100 OUTDOOR

77-HS-003B (12/22 — 11/21) 1BK 2BK — C-77-HS-003B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

NOTE-2

C-77-HS-003A/77-HS-003B

~~C-77-HS-003B/77-HS-003A~~

2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77003

77-HY-003 (1/2) 1BK 2BK — C-77-HY-003/77-HS-003A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-003A (12/22 — 11/21) 1BK 2BK — NOTE-2

TB-1

1BK 2BK	1 / 2	1BK 2BK
1BK 2BK	3 / 4	3BK 4BK
1BK 2BK	5 / 6	5BK 6BK
1BK 2BK	7 / 8	7BK 8BK
1BK 2BK	9 / 10	9BK 10BK
1BK 2BK	11 / 12	11BK 12BK
	SH	
	OS	

950-JE-06203/B400-FGS-002

12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-06203

1BK 2BK	1 / 2	950-XZ-06201
3BK 4BK	3 / 4	950-XL-06201
5BK 6BK	5 / 6	950-XL-06202
7BK 8BK	7 / 8	77-HY-001
9BK 10BK	9 / 10	77-HY-002
11BK 12BK	11 / 12	77-HY-003

Shield Bar — I.E.

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

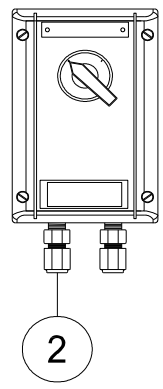
TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–06203

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 073	REV. 01

File Name : 123A90–DDL–IN–DG–40016_Rev.01

ELECTRICAL HOOK-UP FOR HAND SWITCH TEST OF THE DAMPERS



INSTRUMENT TAG	
1	77-HS-001A
2	77-HS-001B
3	77-HS-002A
4	77-HS-002B
5	77-HS-003A
6	77-HS-003B
7	77-HS-004A
8	77-HS-004B
9	77-HS-005A
10	77-HS-005B
11	77-HS-006A
12	77-HS-006B
13	77-HS-007A
14	77-HS-007B
15	77-HS-008A
16	77-HS-008B
17	77-HS-009A
18	77-HS-009B
19	77-HS-010A
20	77-HS-010B
21	77-HS-011A
22	77-HS-011B
23	77-HS-012A
24	77-HS-012B
25	77-HS-013A
26	77-HS-013B
27	77-HS-014A
28	77-HS-014B
29	77-HS-015A
30	77-HS-015B
31	77-HS-016A
32	77-HS-016B

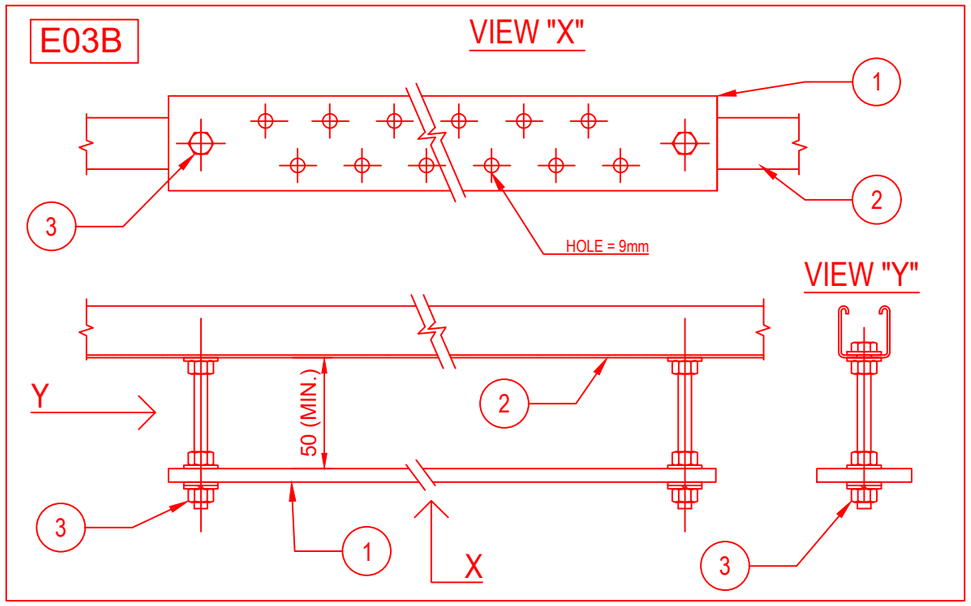
POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-HD-40079
REV.: 2_A | DATE: 08/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

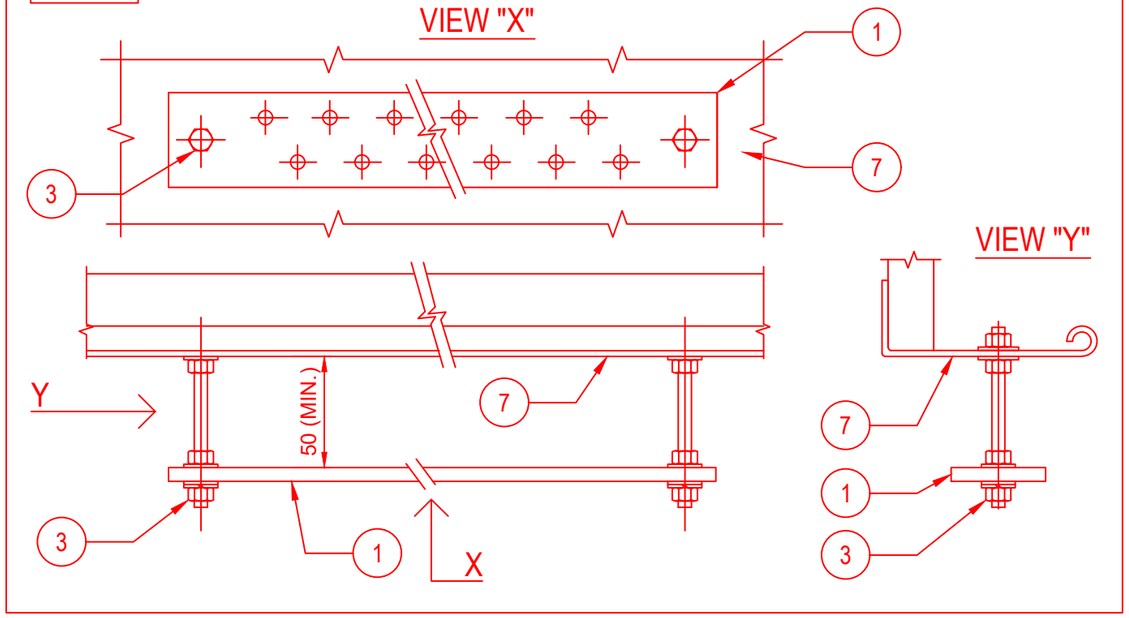
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TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

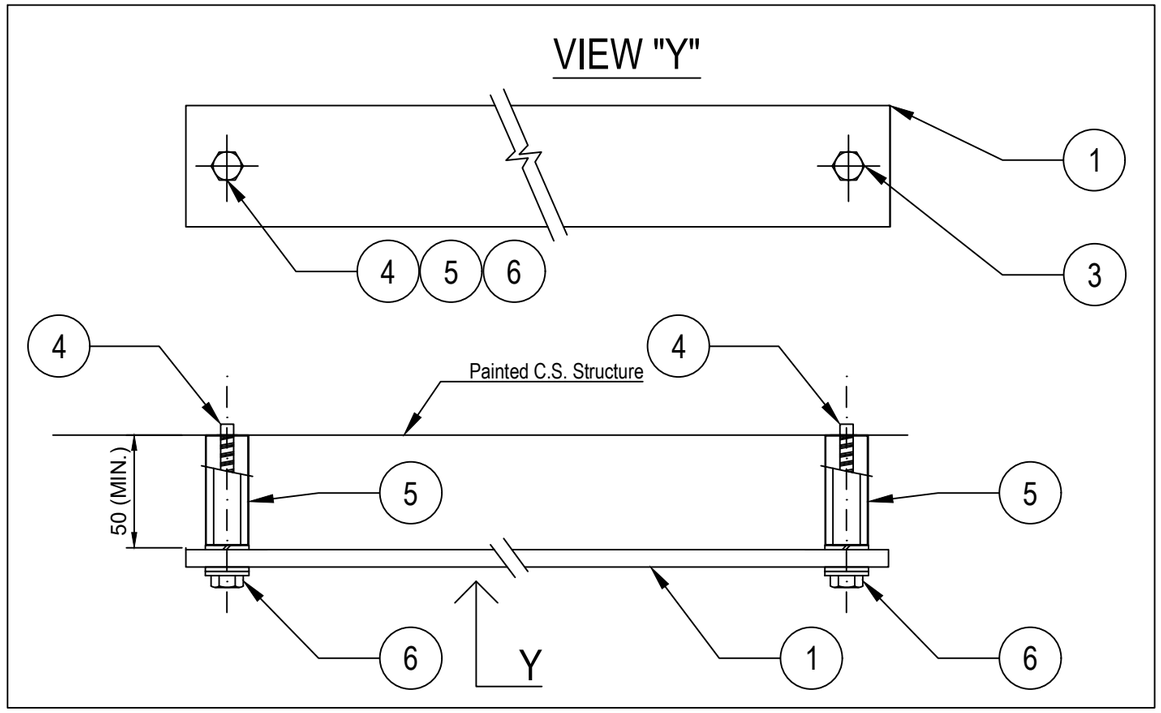


E03C



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BAR	TINNED COPPER	285X50X5	1	
2	SINGLE U-CHANNEL PERFORATED ON N.3 SIDE	AISI 316L		2	
3	HEXAG. BOLTS, PLANE WASHERS, GROWER SPRING WASHER AND NUT	AISI 316L	M10X30	2	
4	THREADED STUD	AISI 316L	M10X28	2	NOTE 1
5	FEMALE / MALE COUPLING	AISI 316L	M10X50	2	NOTE 2
6	PLANE WASHER, GROWER AND NUT	AISI 316L	M10	2	
7	CABLE LADDER	AISI 316L			

E03D



NOTES:

1) THREADED STUD mod. HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM.
2) STANDOFF ADAPTER mod. HILTI M10-HC120 50.
3) FOR TYPICALS E03B AND E03C (EARTHING BAR FIXED TO U-CHANNEL OR CABLE TRAY/LADDER) THE EARTHING BAR SHALL BE CONNECTED TO EARTHING POINT IN N.1 POINT WITH 35sqmm Y/G CABLE

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	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 BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

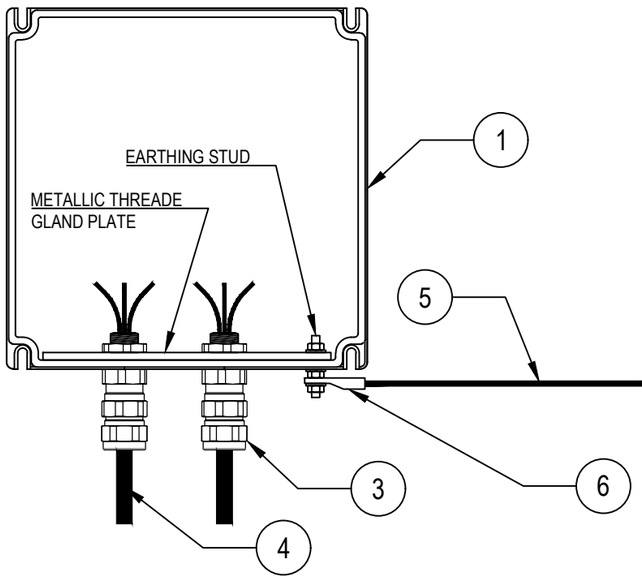
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

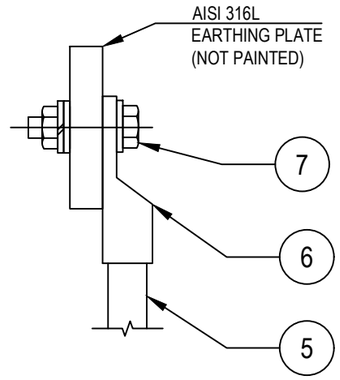
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E04

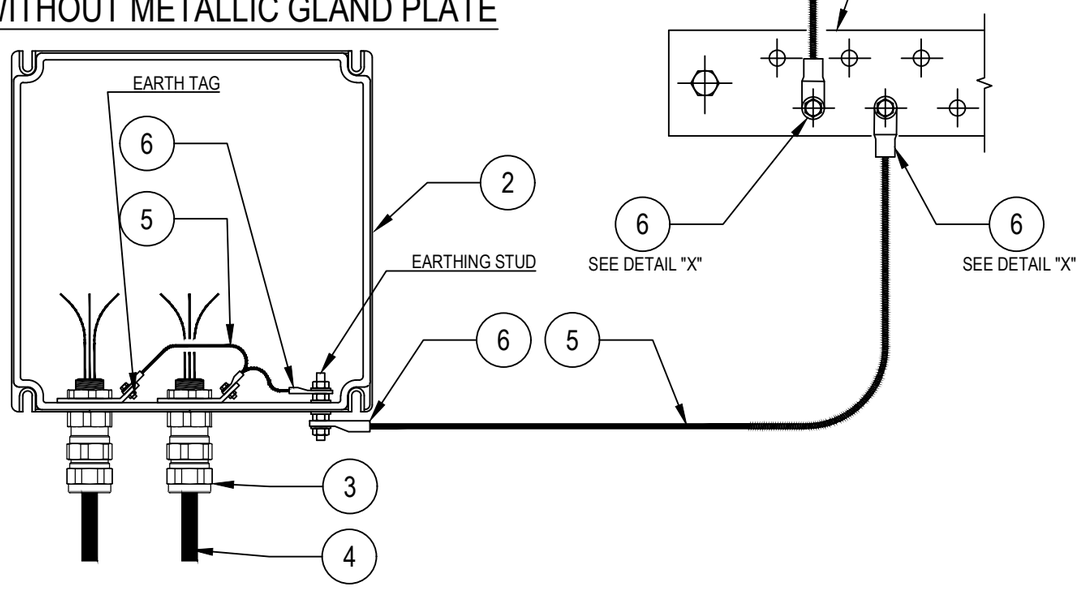
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



DETAIL "X"



DETAIL OF NON METALLIC ENCLOSURE WITHOUT METALLIC GLAND PLATE



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX WITH PLATE (EX)	GRP			
2	JUNCTION BOX WITHOUT GLAND PLATE (EX)	GRP			
3	DOUBLE SEAL CABLE GLAND (EX) FOR ARMOURED CABLE	NICK.PL.BRASS			~~NOTE 2~~
4	ARMOURED CABLE				
5	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		NOTE 1
6	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$		NOTE 1
7	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L			

NOTES:
1) FOR EARTHING BAR SEE TYPICAL DETAILS E03
~~2) CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	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 CABLE ARMOUR BY CABLE GLAND

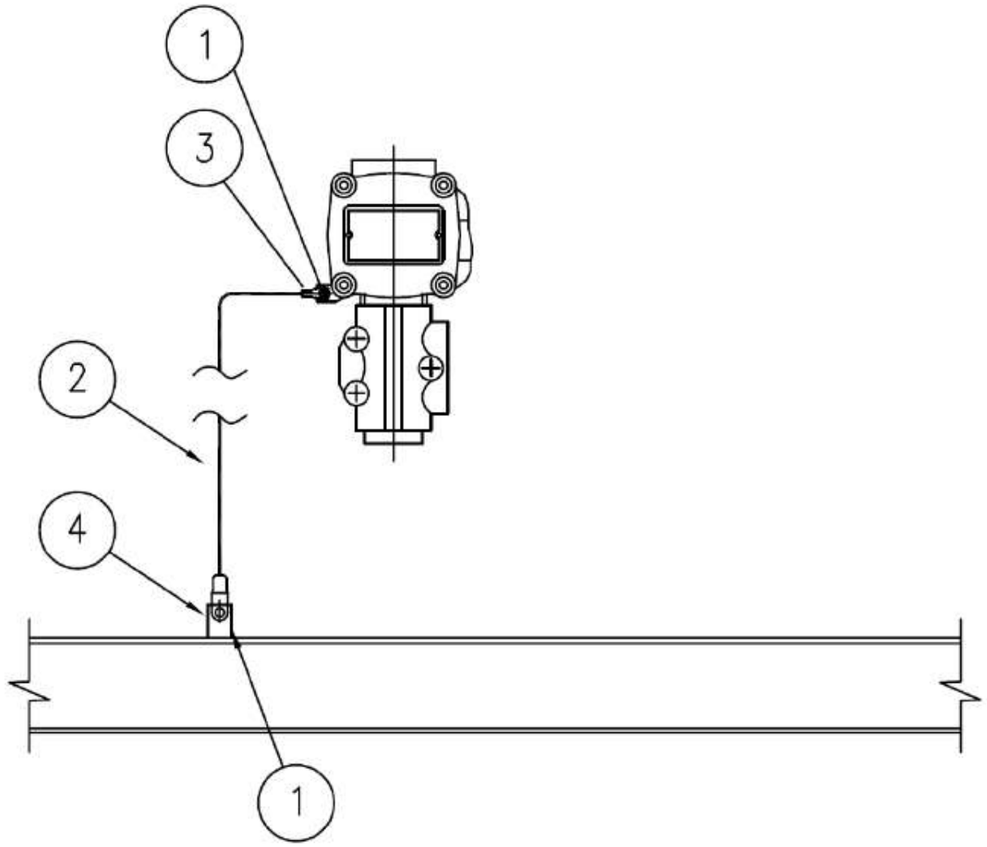
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

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

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

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

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 027 | REV. 02

F.to UNI A3: 420mmx297mm

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

I-3

DRAWING NO. 123A90-DDL-IN-DD-40017

REV. 00



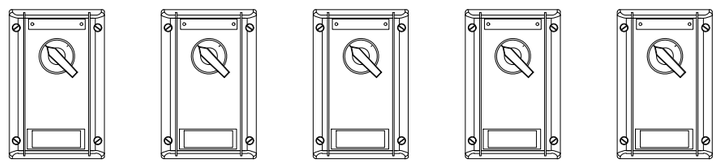
B-100
~~B-101~~



B-200
~~B-201~~



B-300
~~B-301~~



B-400
~~B-401~~

POS.	DESCRIPTION	Q.TY
-	SELFING TAPPING SCREW	-

CONTAINER	ITEM	DESCRIPTION	TAGNAME
B-100 ~~B-101~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-011A~~ 77-HS-001A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-012A~~ 77-HS-002A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-013A~~ 77-HS-003A
B-200 ~~B-201~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-014A~~ 77-HS-004A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-015A~~ 77-HS-005A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-016A~~ 77-HS-006A
B-300 ~~B-301~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-017A~~ 77-HS-007A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-018A~~ 77-HS-008A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-019A~~ 77-HS-009A
	4	HAND SWITCH FOR DAMPER TEST	77-HS-010A
	5	HAND SWITCH FOR DAMPER TEST	77-HS-011A
B-400 ~~B-401~~	1	HAND SWITCH FOR DAMPER TEST	77-HS-012A
	2	HAND SWITCH FOR DAMPER TEST	77-HS-013A
	3	HAND SWITCH FOR DAMPER TEST	77-HS-014A
	4	HAND SWITCH FOR DAMPER TEST	77-HS-015A
	5	HAND SWITCH FOR DAMPER TEST	77-HS-016A

NOTES

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/09/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	11/07/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-123A90-FDL-IN-DD-40017**

REV.:	DATE:	SIGNATURE:
1_B	18/09/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
HAND SWITCH INSIDE CONTAINERS

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

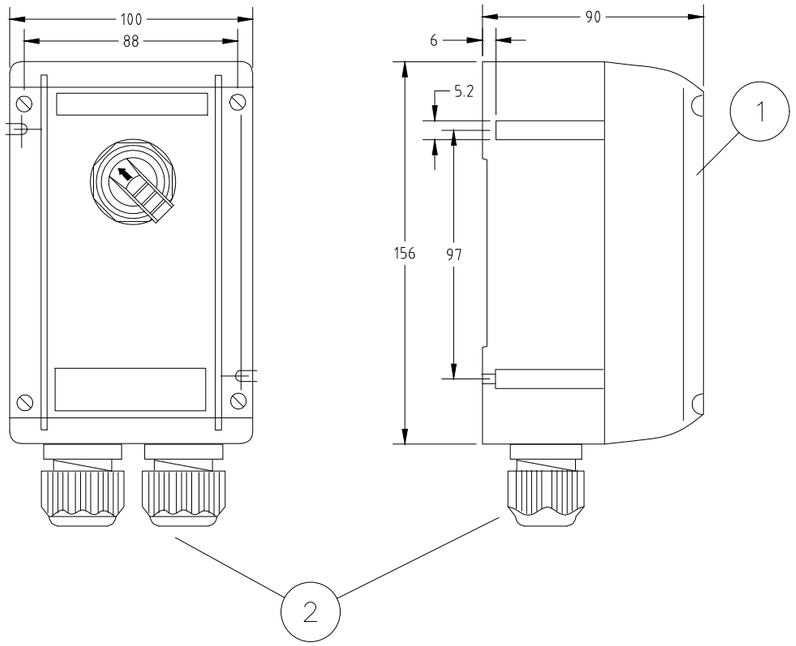
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PUSH BUTTON DPDT CONTACT

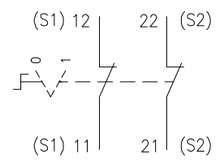
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

INSTALLATION
QUANTITY

32



WIRING



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	03/09/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/07/24	DB	MO	SM	ISSUE FOR REVIEW (IFR)

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
GENERAL ARRANGEMENT
PUSH BUTTON DPDT CONTACT

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

SCALE : NTS

A3

DRAWING NO. 1724000821-IN-DA-00003

SHEET 014

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 01



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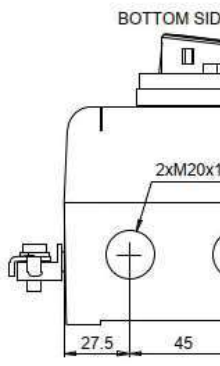


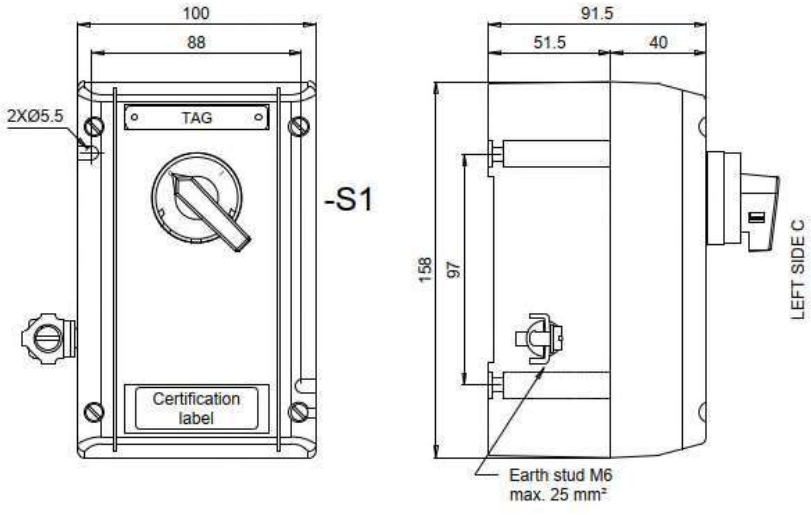
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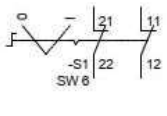
Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ib m IIC T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEx Certificate of Conformity	IECEx BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 up to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 110 V / I_e 0.5 A	Ex23 AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.5 A
Connecting terminals	2 x 4 mm²	
Protection class	I	
Degree of protection accd. to EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	2 x M25 cable gland incl. 1 blanking plug or optional 2 x M20 thread with internal brass plate	
Enclosure material	Polyamide	
Enclosure colour	black	

	Type 432
Dimensions (L x W x H)	156 x 100 x 90 mm
Weight (empty)	0.47 kg

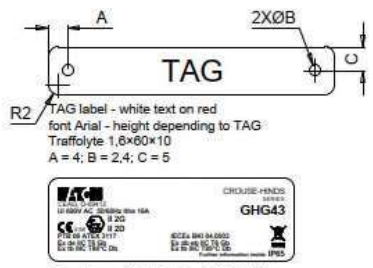






Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Techical data:
Manufactured by Eaton Crouse-Hinds Division
Model: GHG 432
Certificate No.
PTB 00 ATEX 3117
IECEx BKI 04.0003
Marking: ATEX and IECEx
II 2G Ex de IIC T6 Gb
II 2D Ex tb IIIC T80°C Db
-40°C ≤ tamb ≤ +55°C
Ui 690V
IP65

Specific characteristics:
- Polyamide (PA), black
- Closed with stainless steel screw
- Bottom with internal earth plate in brass
- M6 internal/external stainless steel earth stud

Components:
- No. 1 black selector switch with 2 position 2NC

Entries bottom side B:
- No. 2 M20 threaded taped with transit tape

No.1 1,6×60×10 mm white text on red background traffolyte tag fixed with stainless steel screws on the cover, sealed on the back with PU adhesive and engraved

Also a certification label fixed with back self adhesive on the cover

Quantity: 32

ITEM	Tag	77-HS-001B	: Hand Switch for Fire&Gas Damper HFD-77001			Dwg	
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100			Module	
TASK	code	C10002078		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00 Miscellaneous

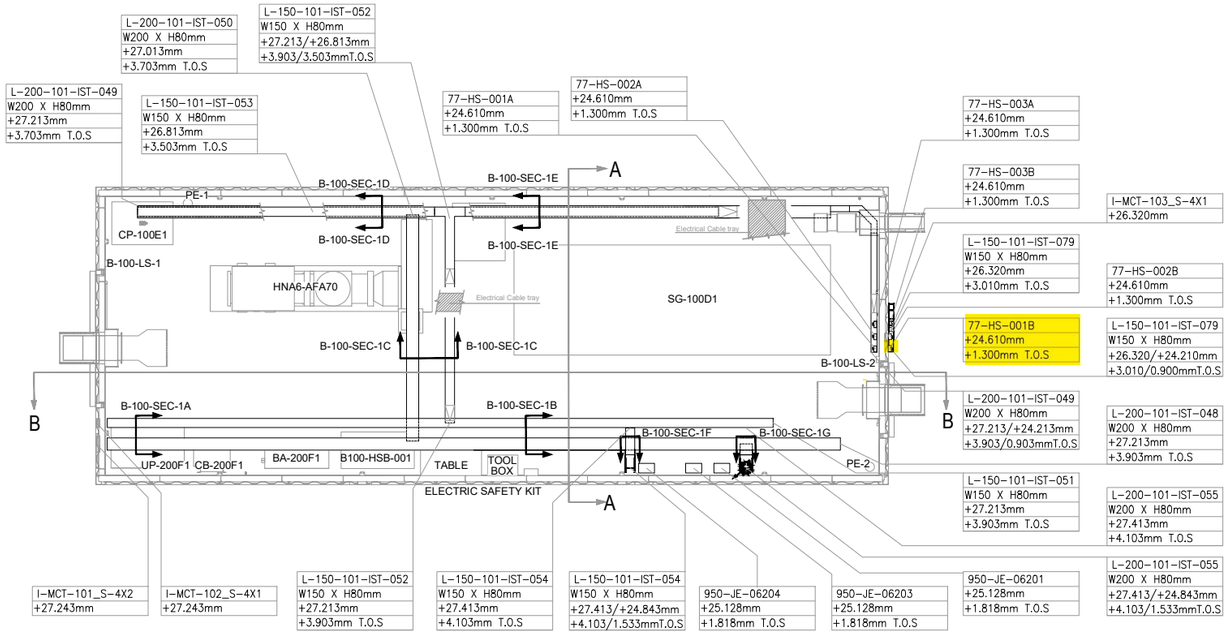
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	NA
7	Check identification (tag number, tag plates).	OK
8	Check supporting and protection against vibrations.	OK
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	PL
10	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	2024-10-14	2024-10-16	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:39:28.489Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-16T15:34:48.491Z	

DRAWING NO. 123A90-DDL-IN-DL-40113

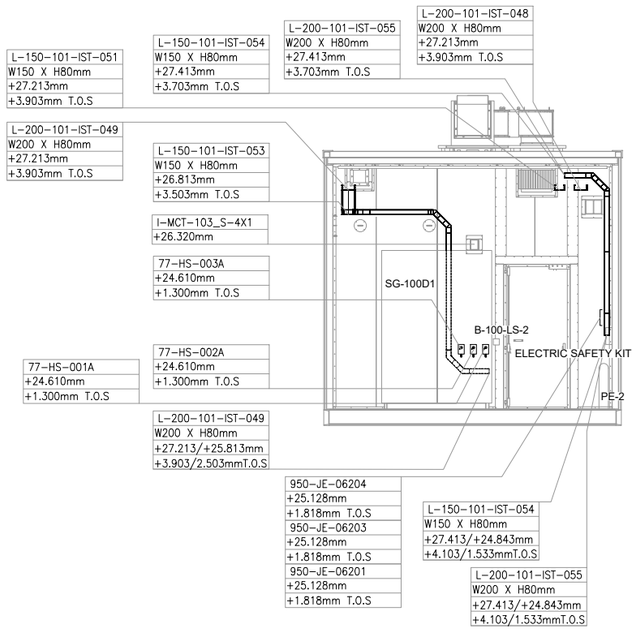
REV. 01



PLAN VIEW

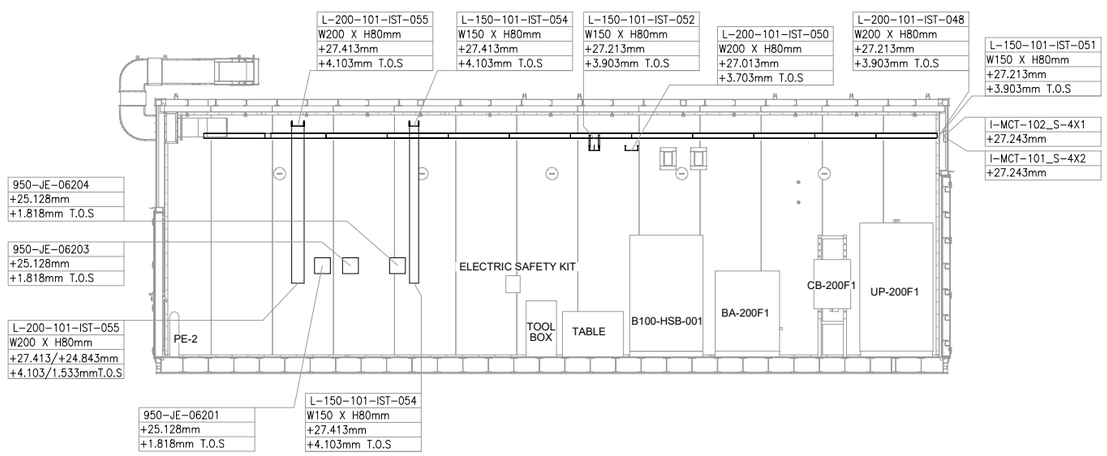
B-100 HV/MV SWITCHROOM

SCALE-1:1



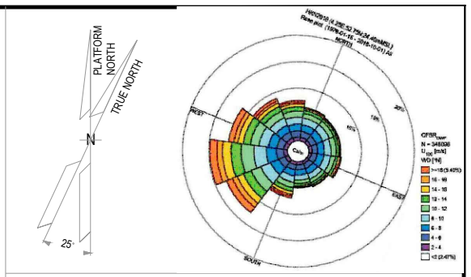
SECTION A-A

SCALE-1:1



SECTION B-B

SCALE-1:1



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR CONTAINER CABLE TRAY LAYOUT.

LEGEND

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DL-40113

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/08/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B-100 Container Lower Deck - TOS EL. 23.310m

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40113	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40113 REV01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016 REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-06203	No.	MARSHALLING CABINET B400-FGS-002

<01>

B-100 HV Switch Gear Room

950-XZ-06201 (+/-) 1BK 2BK — C-950-XZ-06201/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06201 (+/-) 1BK 2BK — C-950-XL-06201/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06202 (+/-) 1BK 2BK — C-950-XL-06202/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 OUTDOOR: 77-HS-001B (1BK 12 22 2BK / 1BK 11 21 2BK) NOTE-2 — C-77-HS-001B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

C-77-HS-001A/77-HS-001B
~~C-77-HS-001B/77-HS-001A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77001 — 77-HY-001 (1 2) 1BK 2BK — C-77-HY-001/77-HS-001A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR: 77-HS-001A (1BK 12 22 2BK / 1BK 11 21 2BK) NOTE-2

B-100 OUTDOOR: 77-HS-002B (1BK 12 22 2BK / 1BK 11 21 2BK) NOTE-2 — C-77-HS-002B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

C-77-HS-002A/77-HS-002B
~~C-77-HS-002B/77-HS-002A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77002 — 77-HY-002 (1 2) 1BK 2BK — C-77-HY-002/77-HS-002A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR: 77-HS-002A (1BK 12 22 2BK / 1BK 11 21 2BK) NOTE-2

B-100 OUTDOOR: 77-HS-003B (1BK 12 22 2BK / 1BK 11 21 2BK) NOTE-2 — C-77-HS-003B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

C-77-HS-003A/77-HS-003B
~~C-77-HS-003B/77-HS-003A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77003 — 77-HY-003 (1 2) 1BK 2BK — C-77-HY-003/77-HS-003A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR: 77-HS-003A (1BK 12 22 2BK / 1BK 11 21 2BK) NOTE-2

TB-1

1BK 2BK	1	1BK 2BK
	2	
	SH	
1BK 2BK	3	3BK 4BK
	4	
	SH	
1BK 2BK	5	5BK 6BK
	6	
	SH	
1BK 2BK	7	7BK 8BK
	8	
	SH	
1BK 2BK	9	9BK 10BK
	10	
	SH	
1BK 2BK	11	11BK 12BK
	12	
	SH	
	OS	

950-JE-06203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-06203

1BK 2BK	1	950-XZ-06201
3BK 4BK	2	
	3	950-XL-06201
5BK 6BK	4	
	5	950-XL-06202
7BK 8BK	6	
	7	77-HY-001
9BK 10BK	8	
	9	77-HY-002
11BK 12BK	10	
	11	77-HY-003
	12	

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

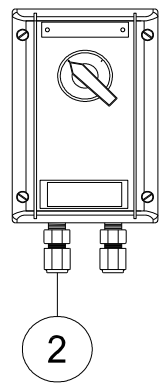
TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–06203

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 073	REV. 01

File Name : 123A90–DDL–IN–DG–40016_Rev.01

ELECTRICAL HOOK-UP FOR HAND SWITCH TEST OF THE DAMPERS



INSTRUMENT TAG	
1	77-HS-001A
2	77-HS-001B
3	77-HS-002A
4	77-HS-002B
5	77-HS-003A
6	77-HS-003B
7	77-HS-004A
8	77-HS-004B
9	77-HS-005A
10	77-HS-005B
11	77-HS-006A
12	77-HS-006B
13	77-HS-007A
14	77-HS-007B
15	77-HS-008A
16	77-HS-008B
17	77-HS-009A
18	77-HS-009B
19	77-HS-010A
20	77-HS-010B
21	77-HS-011A
22	77-HS-011B
23	77-HS-012A
24	77-HS-012B
25	77-HS-013A
26	77-HS-013B
27	77-HS-014A
28	77-HS-014B
29	77-HS-015A
30	77-HS-015B
31	77-HS-016A
32	77-HS-016B

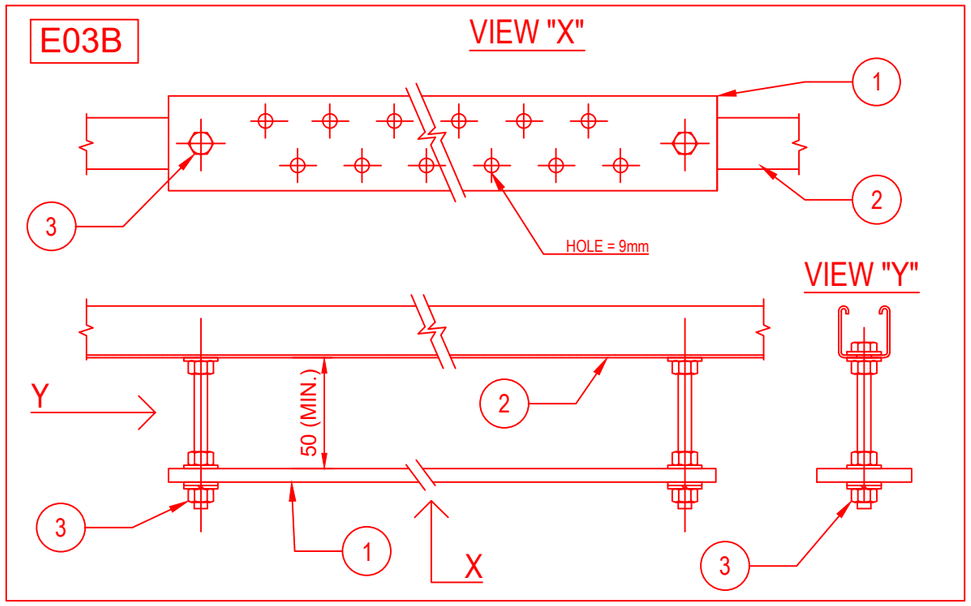
POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-HD-40079
REV.: 2_A | DATE: 08/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

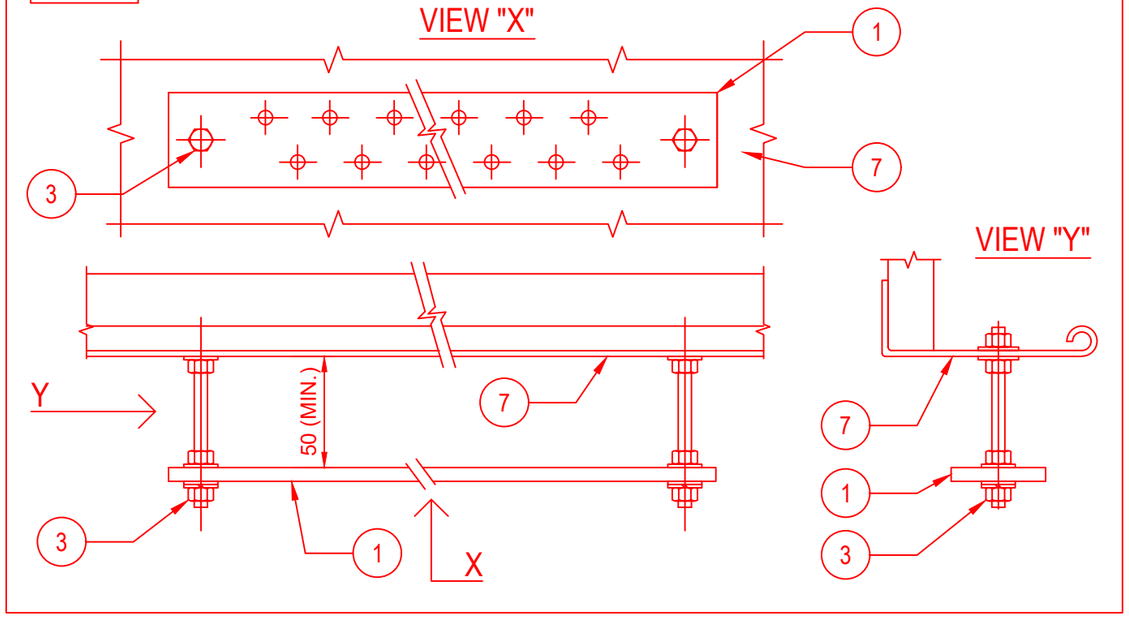
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Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

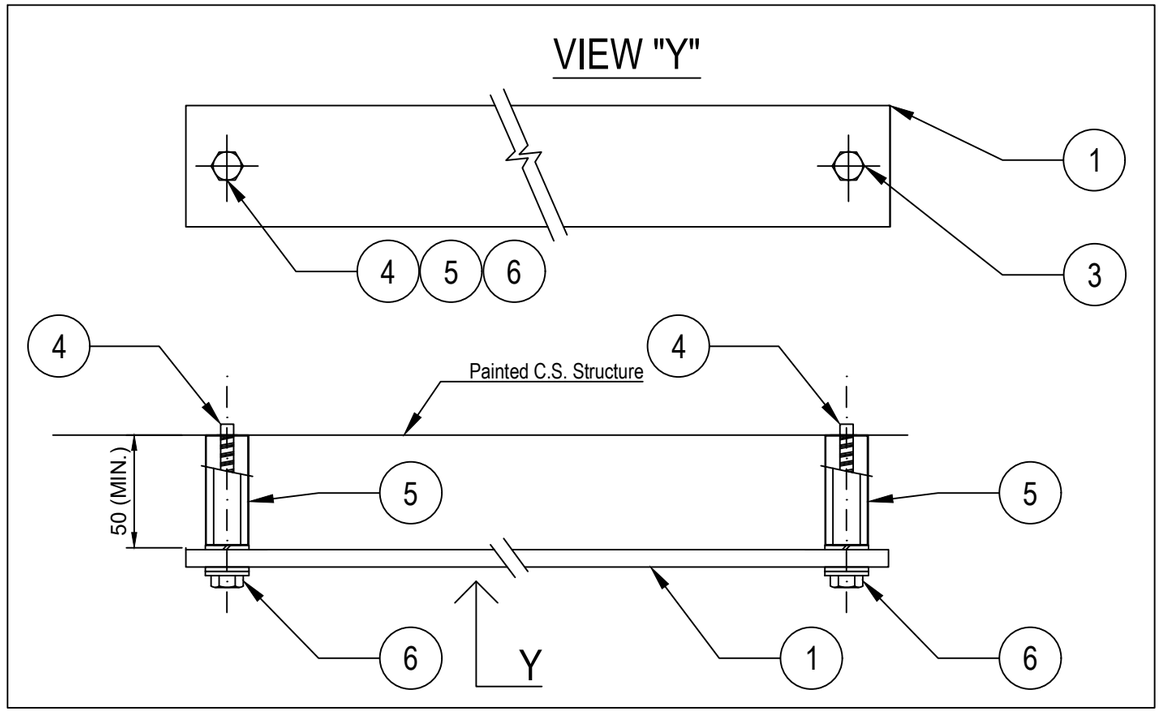


E03C



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BAR	TINNED COPPER	285X50X5	1	
2	SINGLE U-CHANNEL PERFORATED ON N.3 SIDE	AISI 316L		2	
3	HEXAG. BOLTS, PLANE WASHERS, GROWER SPRING WASHER AND NUT	AISI 316L	M10X30	2	
4	THREADED STUD	AISI 316L	M10X28	2	NOTE 1
5	FEMALE / MALE COUPLING	AISI 316L	M10X50	2	NOTE 2
6	PLANE WASHER, GROWER AND NUT	AISI 316L	M10	2	
7	CABLE LADDER	AISI 316L			

E03D



NOTES:

1) THREADED STUD mod. HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM.
2) STANDOFF ADAPTER mod. HILTI M10-HC120 50.
3) FOR TYPICALS E03B AND E03C (EARTHING BAR FIXED TO U-CHANNEL OR CABLE TRAY/LADDER) THE EARTHING BAR SHALL BE CONNECTED TO EARTHING POINT IN N.1 POINT WITH 35sqmm Y/G CABLE

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	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 BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

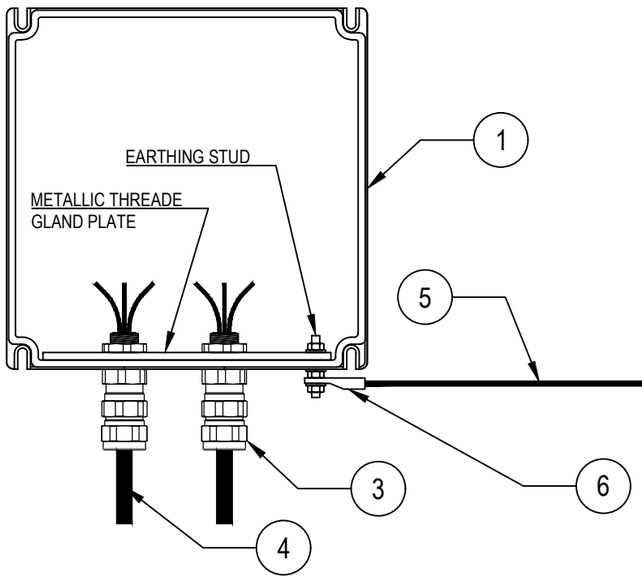
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

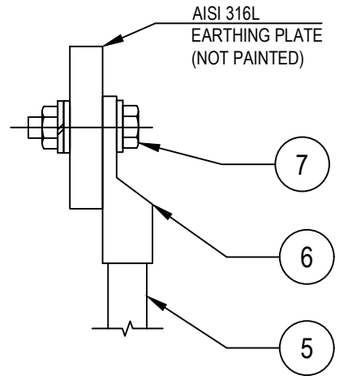
File Name : 123A90-DDL-EL-DD-20090 REV.02 RLMU.DWG

E04

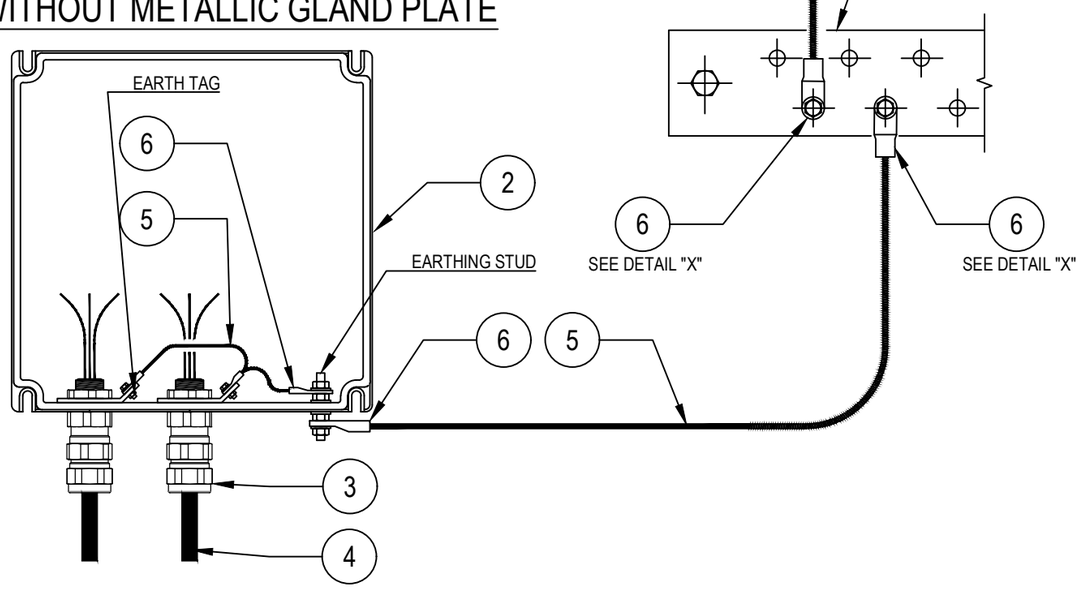
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



DETAIL "X"



DETAIL OF NON METALLIC ENCLOSURE WITHOUT METALLIC GLAND PLATE



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX WITH PLATE (EX)	GRP			
2	JUNCTION BOX WITHOUT GLAND PLATE (EX)	GRP			
3	DOUBLE SEAL CABLE GLAND (EX) FOR ARMOURED CABLE	NICK.PL.BRASS			~~NOTE 2~~
4	ARMOURED CABLE				
5	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		NOTE 1
6	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$		NOTE 1
7	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L			

NOTES:
1) FOR EARTHING BAR SEE TYPICAL DETAILS E03
~~2) CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	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 CABLE ARMOUR BY CABLE GLAND

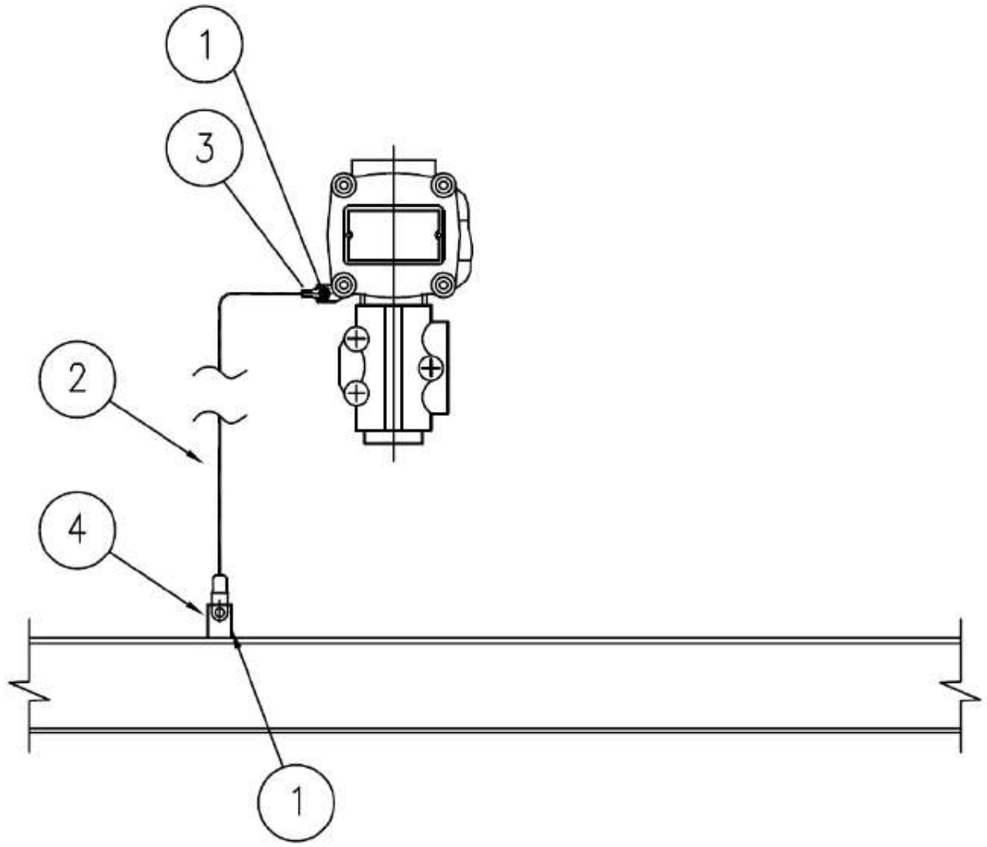
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

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

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

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

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 027 | REV. 02

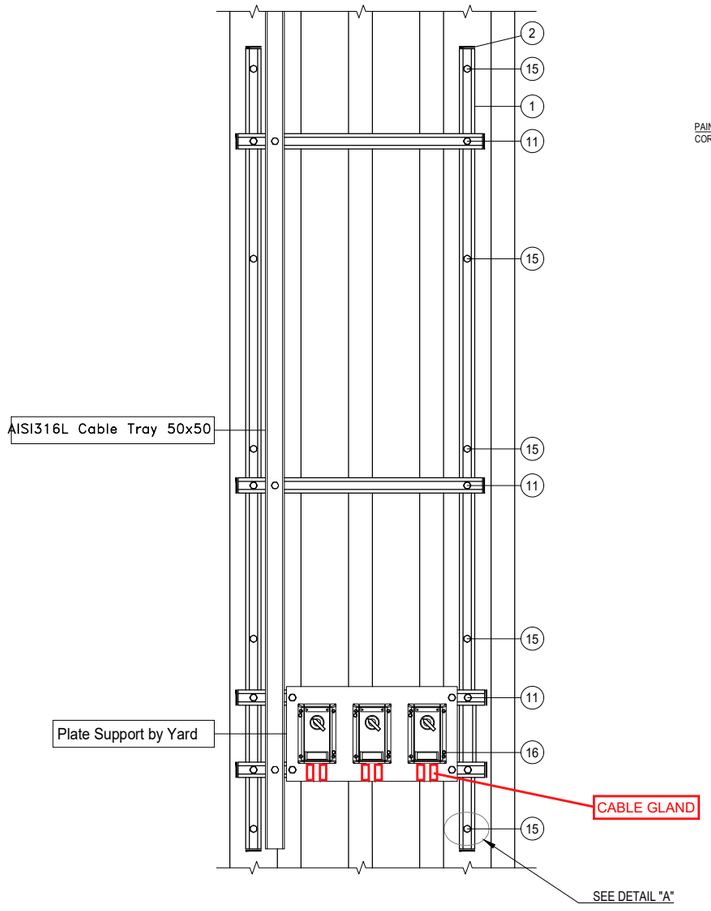
F.to UNI A3: 420mmx297mm

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

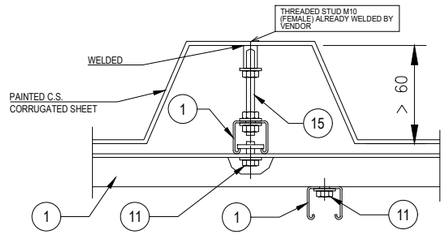
I-4

DRAWING NO. 123A90-DDL-IN-DD-40017

REV. 00



DETAIL "A"



POS.	DESCRIPTION	Q.TY
1	AISI 316L U-CHANNEL 41x41	5m
2	LDPE PLUG FOR U-CHANNEL 41x41	12
11	AISI 316L SPRING NUT M8 FOR U-CHANNEL 41X41 + BOLT M8x35 + WASHER M8	18
15	THREADED ROD M10 (L=110mm) + PLATE WASHER, LARGE PLATE WASHERS SPRING WASHER AND NUTS	10
16	AISI 316L BOLT M5x35 + NUT M5 + WASHER M5	6

CONTAINER	ITEM	DESCRIPTION	TAGNAME
B-100 ~~B-101~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-011B~~ 77-HS-001B
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-012B~~ 77-HS-002B
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-013B~~ 77-HS-003B
B-200 ~~B-201~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-014B~~ 77-HS-004B
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-015B~~ 77-HS-005B
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-016B~~ 77-HS-006B

NOTES

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/09/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	11/07/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-123A90-FDL-IN-DD-40017

REV.:	DATE:	SIGNATURE:
1_B	18/09/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
HAND SWITCH OUTSIDE CONTAINERS

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

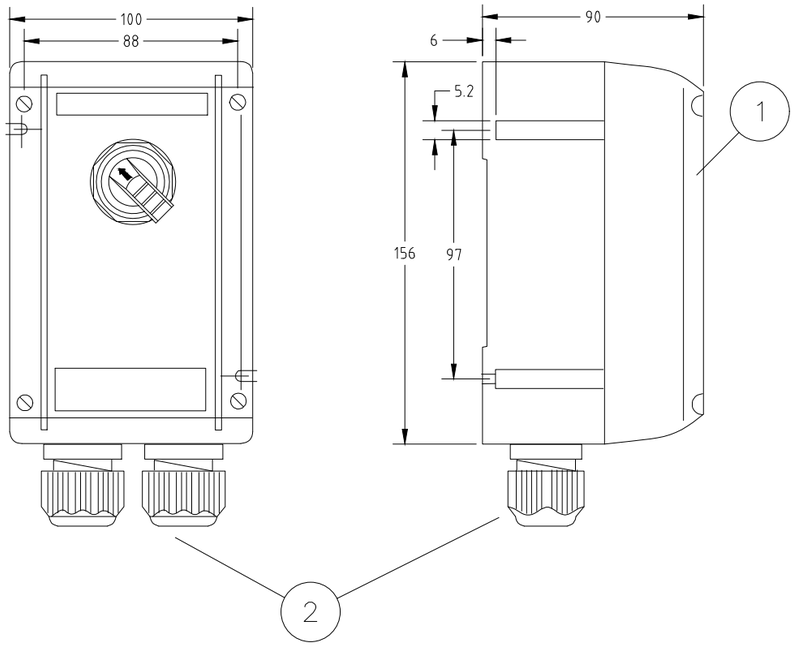
A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 047	REV. 01

PUSH BUTTON DPDT CONTACT

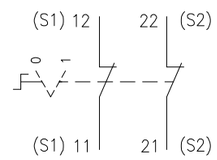
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

INSTALLATION
QUANTITY

32



WIRING



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	03/09/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/07/24	DB	MO	SM	ISSUE FOR REVIEW (IFR)

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
GENERAL ARRANGEMENT
PUSH BUTTON DPDT CONTACT

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

SCALE : NTS

A3

DRAWING NO. 1724000821-IN-DA-00003

SHEET 014

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 01



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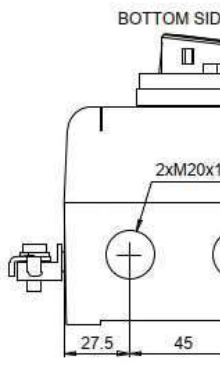


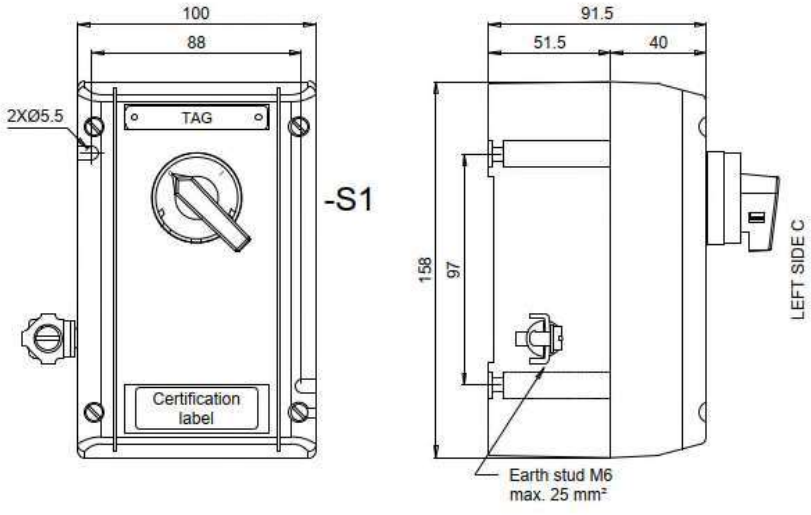
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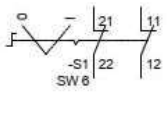
Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ib m IIC T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEx Certificate of Conformity	IECEx BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 up to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 110 V / I_e 0.5 A	Ex23 AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.5 A
Connecting terminals	2 x 4 mm²	
Protection class	I	
Degree of protection accd. to EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	2 x M25 cable gland incl. 1 blanking plug or optional 2 x M20 thread with internal brass plate	
Enclosure material	Polyamide	
Enclosure colour	black	

	Type 432
Dimensions (L x W x H)	156 x 100 x 90 mm
Weight (empty)	0.47 kg

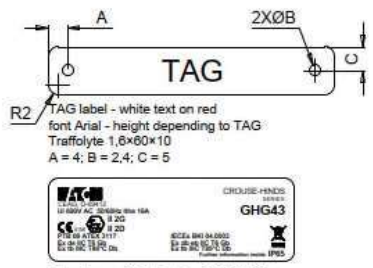






Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Techical data:
Manufactured by Eaton Crouse-Hinds Division
Model: GHG 432
Certificate No.
PTB 00 ATEX 3117
IECEx BKI 04.0003
Marking: ATEX and IECEx
II 2G Ex de IIC T6 Gb
II 2D Ex tb IIIC T80°C Db
-40°C ≤ tamb ≤ +55°C
Ui 690V
IP65

Specific characteristics:
- Polyamide (PA), black
- Closed with stainless steel screw
- Bottom with internal earth plate in brass
- M6 internal/external stainless steel earth stud

Components:
- No. 1 black selector switch with 2 position 2NC

Entries bottom side B:
- No. 2 M20 threaded taped with transit tape

No.1 1,6×60×10 mm white text on red background traffolyte tag fixed with stainless steel screws on the cover, sealed on the back with PU adhesive and engraved

Also a certification label fixed with back self adhesive on the cover

Quantity: 32

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	77-HS-002A	: Hand Switch for Fire&Gas Damper HFD-77002			Dwg	
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100			Module	
TASK	code	C10002079		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00 Miscellaneous

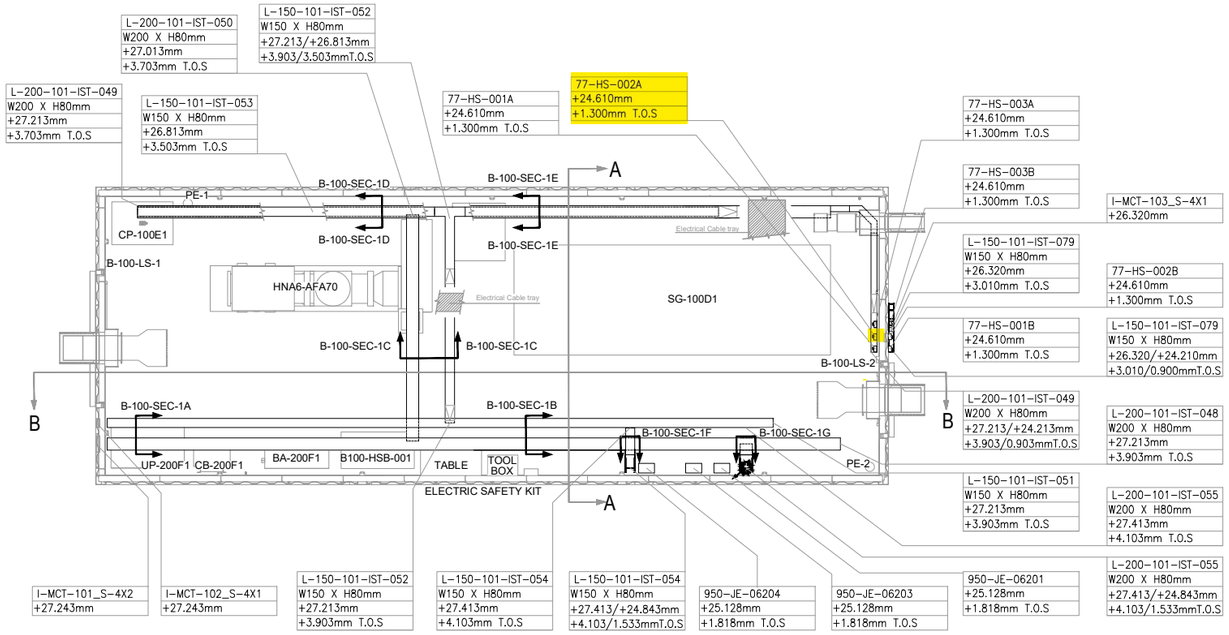
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	NA
7	Check identification (tag number, tag plates).	OK
8	Check supporting and protection against vibrations.	OK
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	OK
10	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	2024-10-14	2024-10-16	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:39:37.174Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-16T15:33:10.851Z	

DRAWING NO. 123A90-DDL-IN-DL-40113

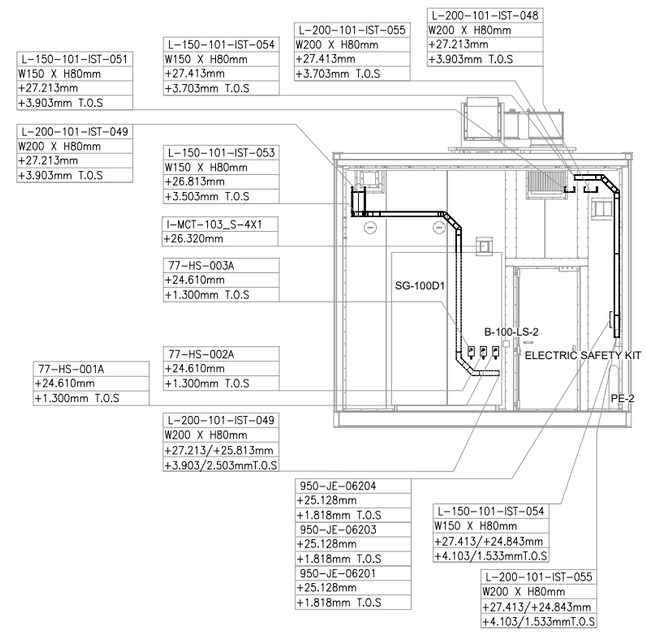
REV. 01



PLAN VIEW

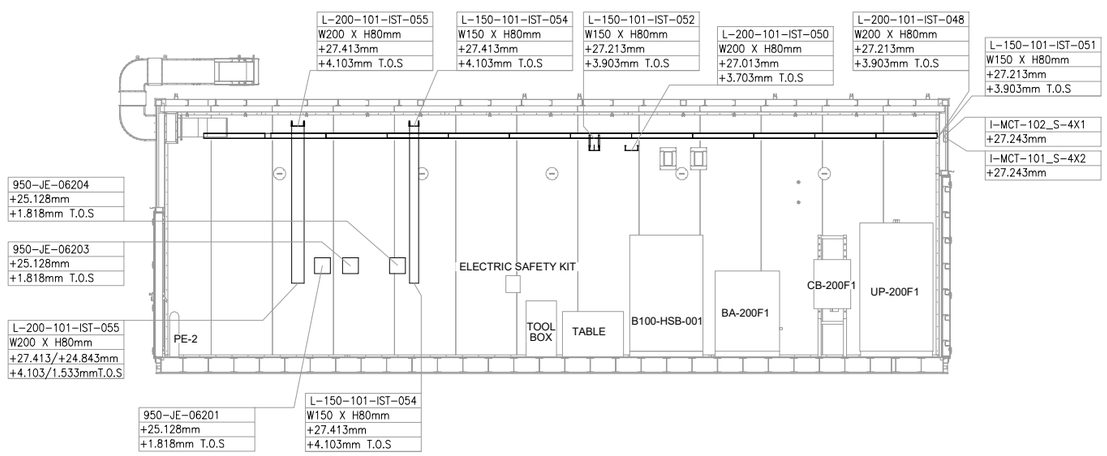
B-100 HV/MV SWITCHROOM

SCALE-1:1



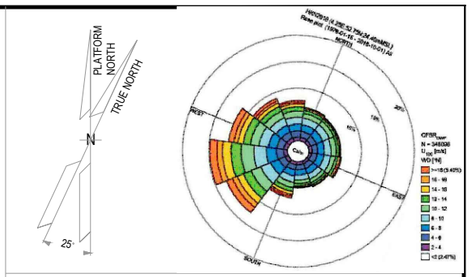
SECTION A-A

SCALE-1:1



SECTION B-B

SCALE-1:1



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR CONTAINER CABLE TRAY LAYOUT.

LEGEND

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DL-40113

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/08/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B-100 Container Lower Deck – TOS EL. 23.310m

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40113	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40113 REV01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016 REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-06203	No.	MARSHALLING CABINET B400-FGS-002

<01>

B-100 HV Switch Gear Room

950-XZ-06201 (+/-) 1BK 2BK — C-950-XZ-06201/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06201 (+/-) 1BK 2BK — C-950-XL-06201/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06202 (+/-) 1BK 2BK — C-950-XL-06202/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 OUTDOOR

77-HS-001B (12/22 NOTE-2, 11/21 1BK 2BK) — C-77-HS-001B/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

C-77-HS-001A/77-HS-001B
~~C-77-HS-001B/77-HS-001A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77001 — 77-HY-001 (1, 2) 1BK 2BK — C-77-HY-001/77-HS-001A, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-001A (12/22 1BK 2BK NOTE-2, 11/21 1BK 2BK NOTE-2)

B-100 OUTDOOR

77-HS-002B (12/22 1BK 2BK NOTE-2, 11/21 1BK 2BK NOTE-2) — C-77-HS-002B/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

C-77-HS-002A/77-HS-002B
~~C-77-HS-002B/77-HS-002A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77002 — 77-HY-002 (1, 2) 1BK 2BK — C-77-HY-002/77-HS-002A, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-002A (12/22 1BK 2BK NOTE-2, 11/21 1BK 2BK NOTE-2)

77-HS-003B (12/22 1BK 2BK NOTE-2, 11/21 1BK 2BK NOTE-2) — C-77-HS-003B/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

C-77-HS-003A/77-HS-003B
~~C-77-HS-003B/77-HS-003A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77003 — 77-HY-003 (1, 2) 1BK 2BK — C-77-HY-003/77-HS-003A, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-003A (12/22 1BK 2BK NOTE-2, 11/21 1BK 2BK NOTE-2)

TB-1

1BK 2BK	1	1BK 2BK
	2	
	SH	
1BK 2BK	3	3BK 4BK
	4	
	SH	
1BK 2BK	5	5BK 6BK
	6	
	SH	
1BK 2BK	7	7BK 8BK
	8	
	SH	
1BK 2BK	9	9BK 10BK
	10	
	SH	
1BK 2BK	11	11BK 12BK
	12	
	SH	
	OS	

950-JE-06203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-06203

1BK	1	950-XZ-06201
2BK	2	
3BK	3	950-XL-06201
4BK	4	
5BK	5	950-XL-06202
6BK	6	
7BK	7	77-HY-001
8BK	8	
9BK	9	77-HY-002
10BK	10	
11BK	11	77-HY-003
12BK	12	

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

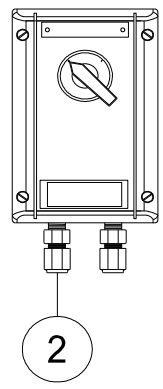
TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–06203

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 073	REV. 01

File Name : 123A90–DDL–IN–DG–40016_Rev.01

ELECTRICAL HOOK-UP FOR HAND SWITCH TEST OF THE DAMPERS



INSTRUMENT TAG	
1	77-HS-001A
2	77-HS-001B
3	77-HS-002A
4	77-HS-002B
5	77-HS-003A
6	77-HS-003B
7	77-HS-004A
8	77-HS-004B
9	77-HS-005A
10	77-HS-005B
11	77-HS-006A
12	77-HS-006B
13	77-HS-007A
14	77-HS-007B
15	77-HS-008A
16	77-HS-008B
17	77-HS-009A
18	77-HS-009B
19	77-HS-010A
20	77-HS-010B
21	77-HS-011A
22	77-HS-011B
23	77-HS-012A
24	77-HS-012B
25	77-HS-013A
26	77-HS-013B
27	77-HS-014A
28	77-HS-014B
29	77-HS-015A
30	77-HS-015B
31	77-HS-016A
32	77-HS-016B

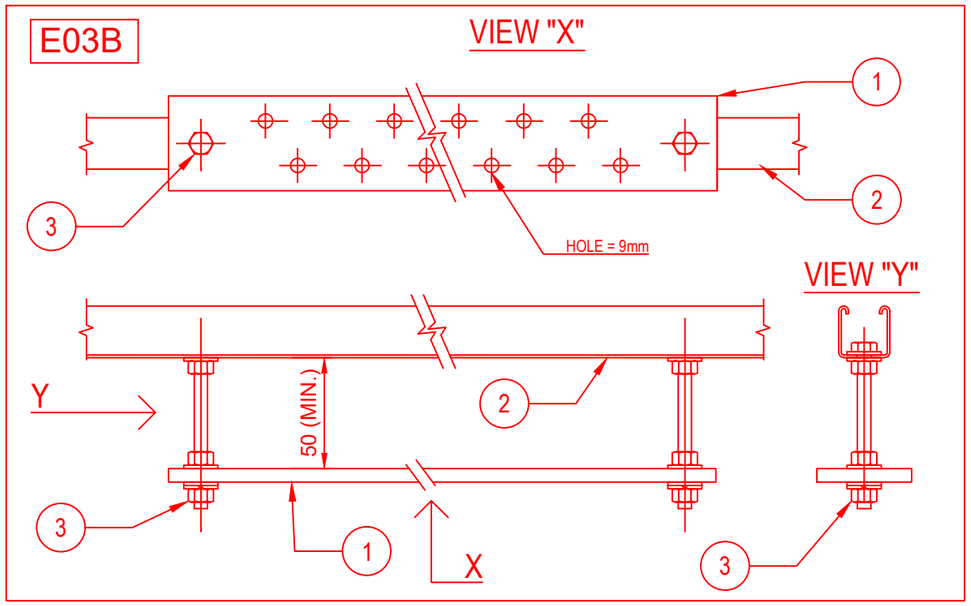
POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-HD-40079
REV.: 2_A | DATE: 08/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

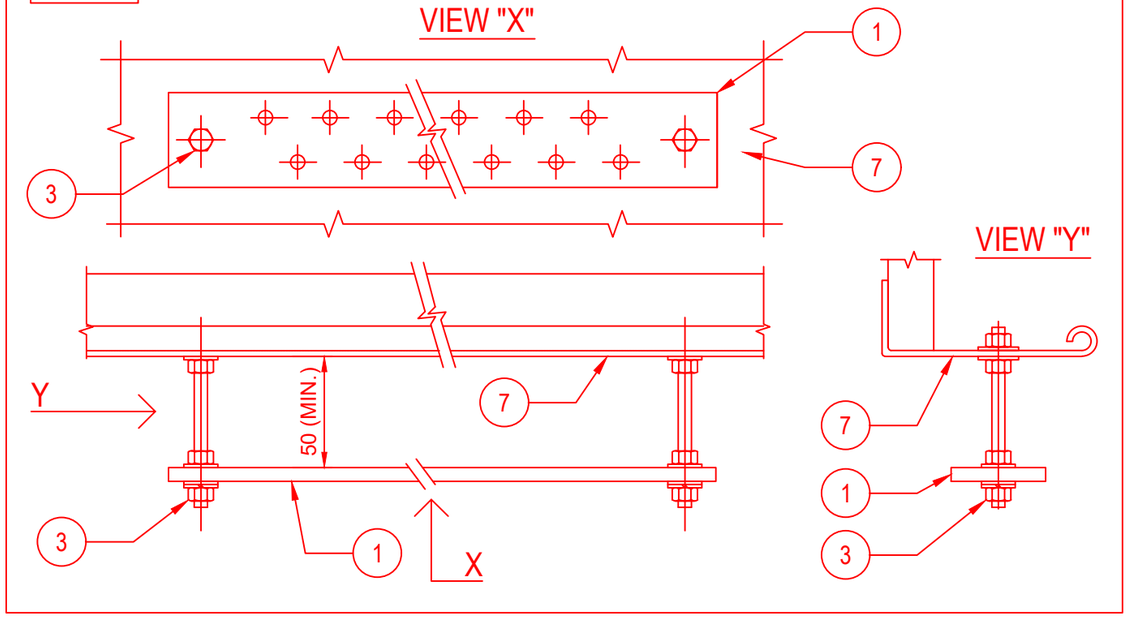
This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

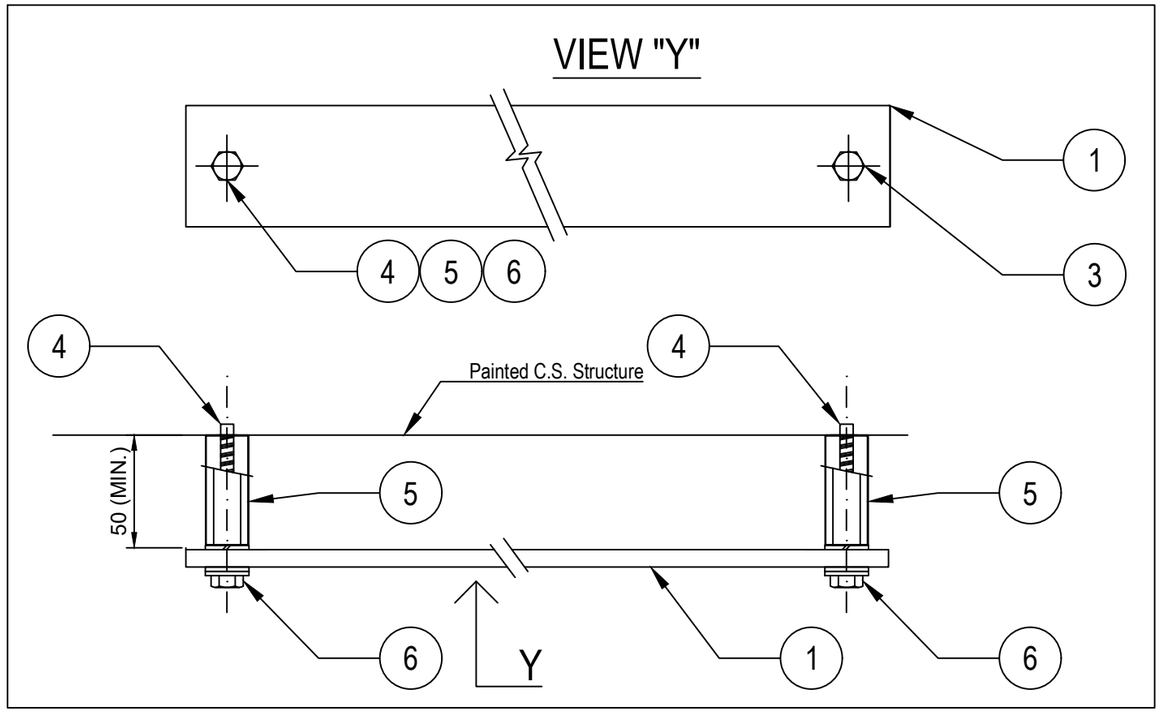


E03C



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BAR	TINNED COPPER	285X50X5	1	
2	SINGLE U-CHANNEL PERFORATED ON N.3 SIDE	AISI 316L		2	
3	HEXAG. BOLTS, PLANE WASHERS, GROWER SPRING WASHER AND NUT	AISI 316L	M10X30	2	
4	THREADED STUD	AISI 316L	M10X28	2	NOTE 1
5	FEMALE / MALE COUPLING	AISI 316L	M10X50	2	NOTE 2
6	PLANE WASHER, GROWER AND NUT	AISI 316L	M10	2	
7	CABLE LADDER	AISI 316L			

E03D



NOTES:

1) THREADED STUD mod. HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM.
2) STANDOFF ADAPTER mod. HILTI M10-HC120 50.
3) FOR TYPICALS E03B AND E03C (EARTHING BAR FIXED TO U-CHANNEL OR CABLE TRAY/LADDER) THE EARTHING BAR SHALL BE CONNECTED TO EARTHING POINT IN N.1 POINT WITH 35sqmm Y/G CABLE

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	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 BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

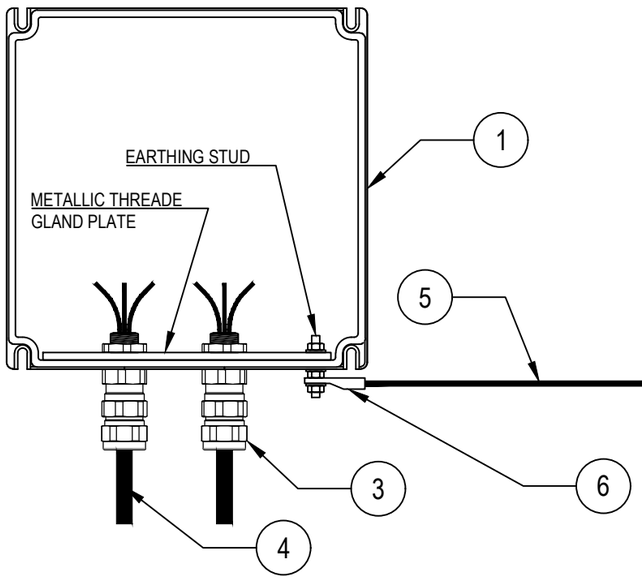
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

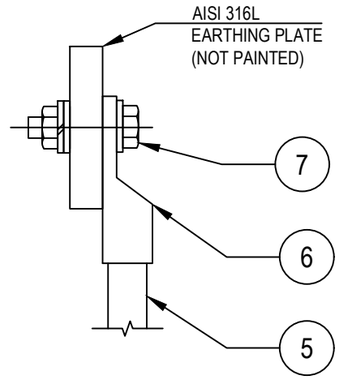
File Name : 123A90-DDL-EL-DD-20090 REV.02 RLMU.DWG

E04

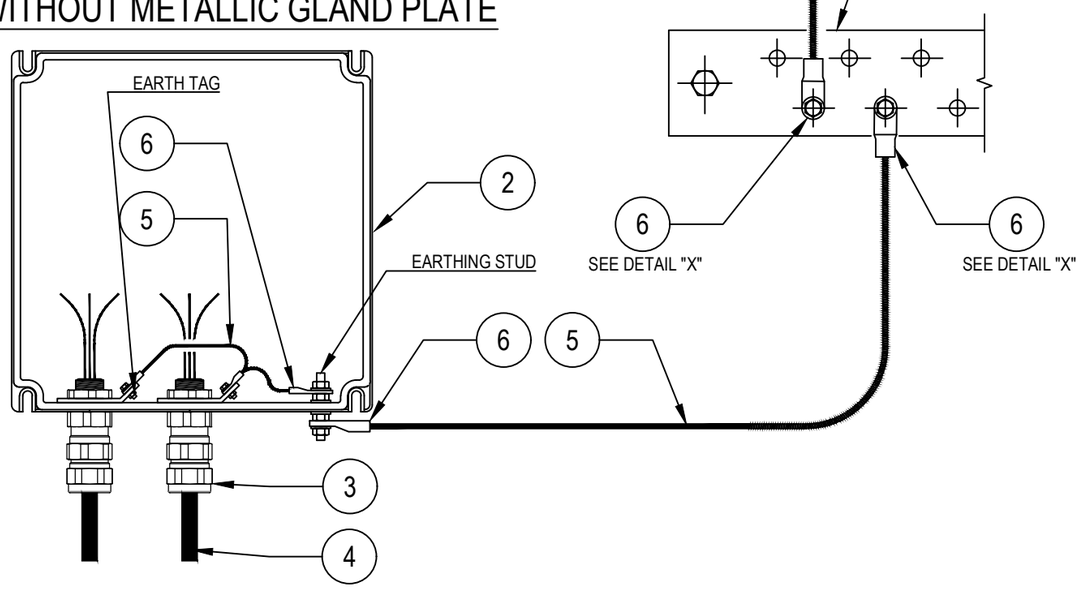
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



DETAIL "X"



DETAIL OF NON METALLIC ENCLOSURE WITHOUT METALLIC GLAND PLATE



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX WITH PLATE (EX)	GRP			
2	JUNCTION BOX WITHOUT GLAND PLATE (EX)	GRP			
3	DOUBLE SEAL CABLE GLAND (EX) FOR ARMOURED CABLE	NICK.PL.BRASS			~~NOTE 2~~
4	ARMOURED CABLE				
5	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		NOTE 1
6	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$		NOTE 1
7	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L			

NOTES:
1) FOR EARTHING BAR SEE TYPICAL DETAILS E03
~~2) CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	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 CABLE ARMOUR BY CABLE GLAND

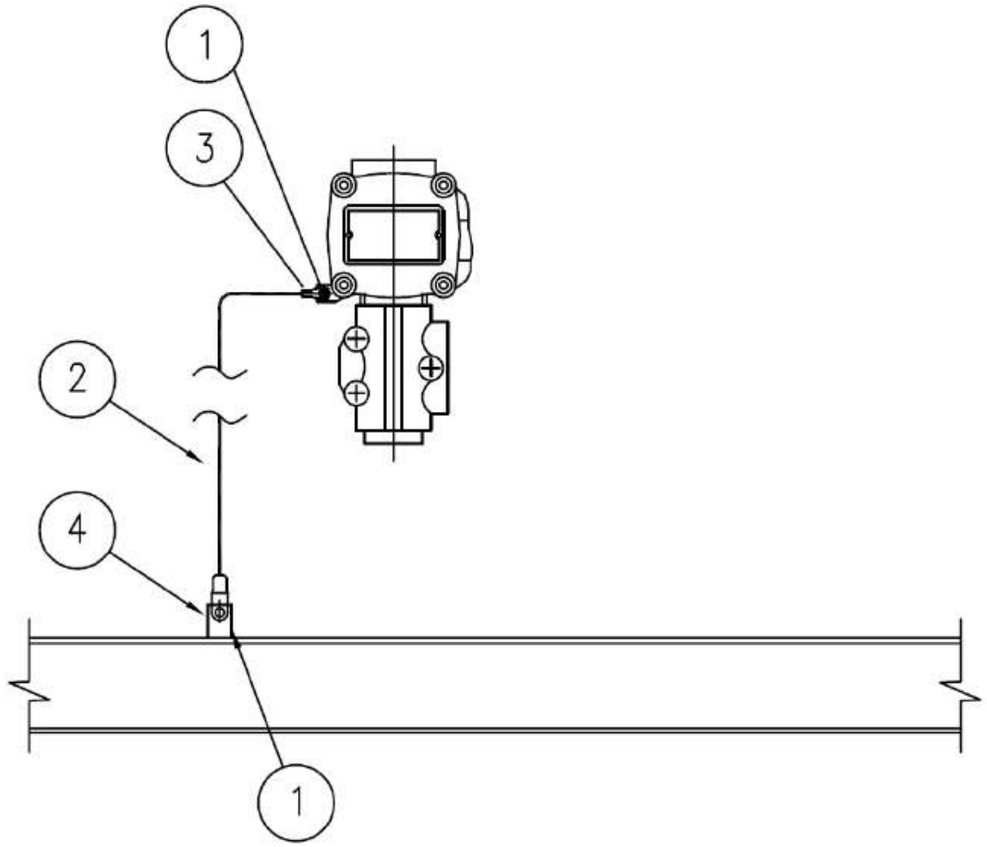
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

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

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

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

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 027 | REV. 02

F.to UNI A3: 420mmx297mm

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

I-3

DRAWING NO. 123A90-DDL-IN-DD-40017

REV. 00



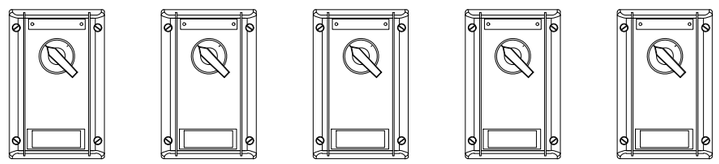
B-100
~~B-101~~



B-200
~~B-201~~



B-300
~~B-301~~



B-400
~~B-401~~

POS.	DESCRIPTION	Q.TY
-	SELFING TAPPING SCREW	-

CONTAINER	ITEM	DESCRIPTION	TAGNAME
B-100 ~~B-101~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-011A~~ 77-HS-001A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-012A~~ 77-HS-002A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-013A~~ 77-HS-003A
B-200 ~~B-201~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-014A~~ 77-HS-004A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-015A~~ 77-HS-005A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-016A~~ 77-HS-006A
B-300 ~~B-301~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-017A~~ 77-HS-007A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-018A~~ 77-HS-008A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-019A~~ 77-HS-009A
	4	HAND SWITCH FOR DAMPER TEST	77-HS-010A
	5	HAND SWITCH FOR DAMPER TEST	77-HS-011A
B-400 ~~B-401~~	1	HAND SWITCH FOR DAMPER TEST	77-HS-012A
	2	HAND SWITCH FOR DAMPER TEST	77-HS-013A
	3	HAND SWITCH FOR DAMPER TEST	77-HS-014A
	4	HAND SWITCH FOR DAMPER TEST	77-HS-015A
	5	HAND SWITCH FOR DAMPER TEST	77-HS-016A

NOTES

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/09/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	11/07/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-123A90-FDL-IN-DD-40017**

REV.:	DATE:	SIGNATURE:
1_B	18/09/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
HAND SWITCH INSIDE CONTAINERS

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

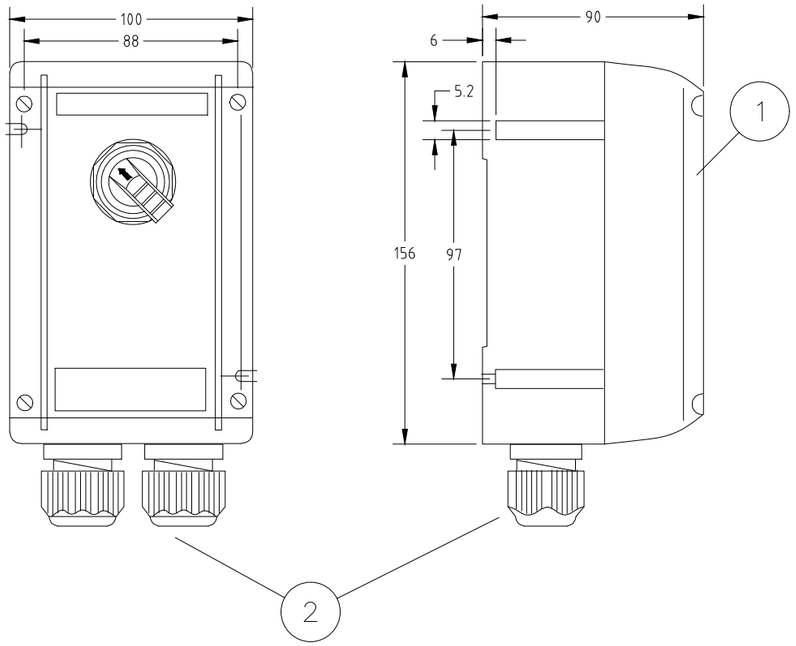
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PUSH BUTTON DPDT CONTACT

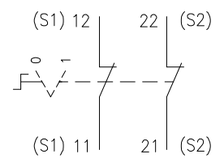
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

INSTALLATION
QUANTITY

32



WIRING



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	03/09/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/07/24	DB	MO	SM	ISSUE FOR REVIEW (IFR)

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
GENERAL ARRANGEMENT
PUSH BUTTON DPDT CONTACT

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

SCALE : NTS

A3

DRAWING NO. 1724000821-IN-DA-00003

SHEET 014

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 01



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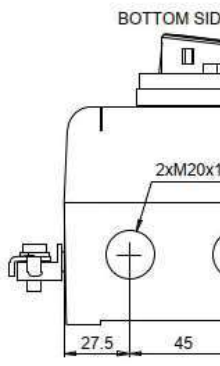


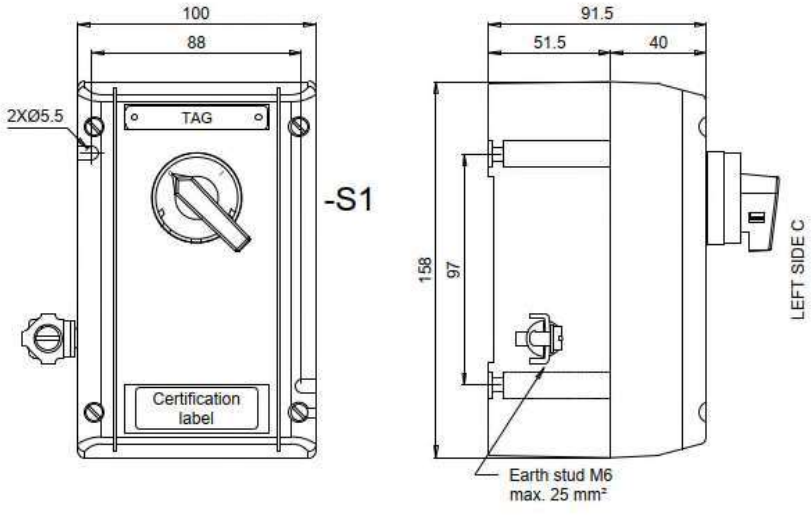
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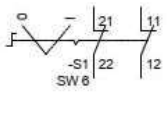
Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ib m IIC T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEx Certificate of Conformity	IECEx BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 up to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 110 V / I_e 0.5 A	Ex23 AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.5 A
Connecting terminals	2 x 4 mm²	
Protection class	I	
Degree of protection accd. to EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	2 x M25 cable gland incl. 1 blanking plug or optional 2 x M20 thread with internal brass plate	
Enclosure material	Polyamide	
Enclosure colour	black	

	Type 432
Dimensions (L x W x H)	156 x 100 x 90 mm
Weight (empty)	0.47 kg

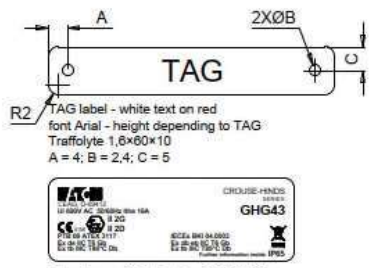






Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Techical data:
Manufactured by Eaton Crouse-Hinds Division
Model: GHG 432
Certificate No.
PTB 00 ATEX 3117
IECEx BKI 04.0003
Marking: ATEX and IECEx
II 2G Ex de IIC T6 Gb
II 2D Ex tb IIIC T80°C Db
-40°C ≤ tamb ≤ +55°C
Ui 690V
IP65

Specific characteristics:
- Polyamide (PA), black
- Closed with stainless steel screw
- Bottom with internal earth plate in brass
- M6 internal/external stainless steel earth stud

Components:
- No. 1 black selector switch with 2 position 2NC

Entries bottom side B:
- No. 2 M20 threaded taped with transit tape

No.1 1,6×60×10 mm white text on red background traffolyte tag fixed with stainless steel screws on the cover, sealed on the back with PU adhesive and engraved

Also a certification label fixed with back self adhesive on the cover

Quantity: 32

ITEM	Tag	77-HS-002B	: Hand Switch for Fire&Gas Damper HFD-77002			Dwg	
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100			Module	
TASK	code	C10002080		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00		Miscellaneous

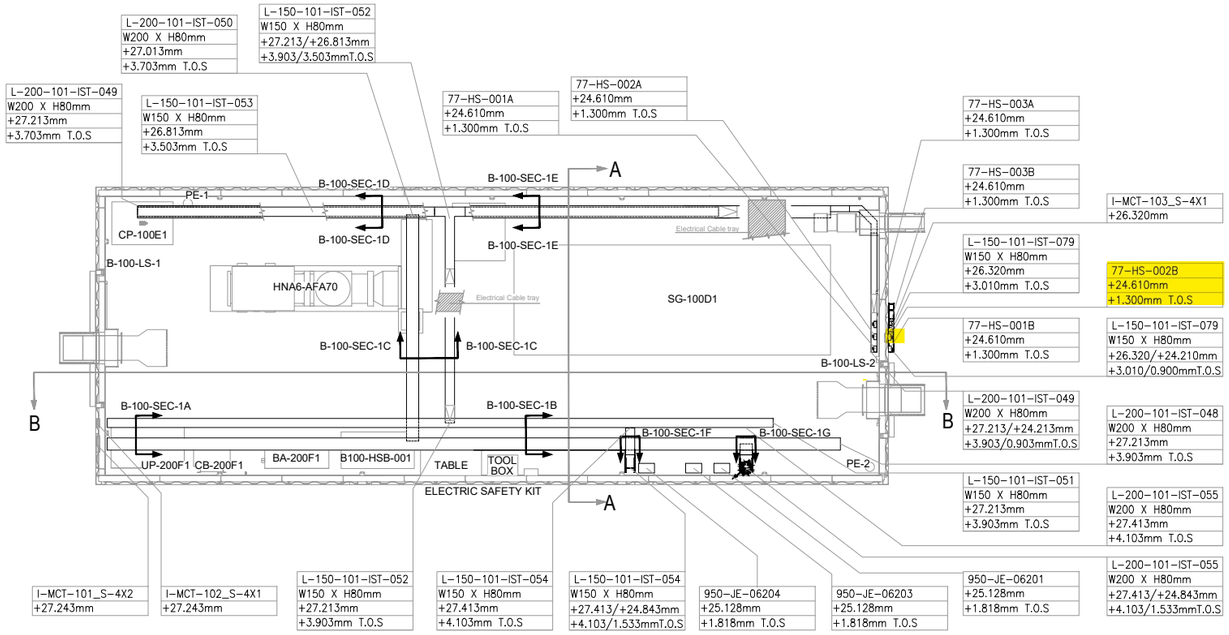
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	NA
7	Check identification (tag number, tag plates).	OK
8	Check supporting and protection against vibrations.	OK
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	OK
10	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	2024-10-14	2024-10-16	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:39:46.352Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-16T15:32:47.677Z	

DRAWING NO. 123A90-DDL-IN-DL-40113

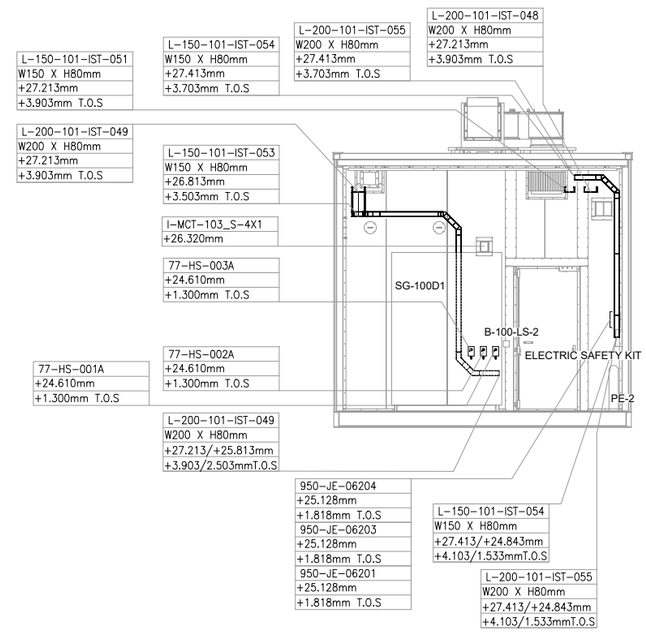
REV. 01



PLAN VIEW

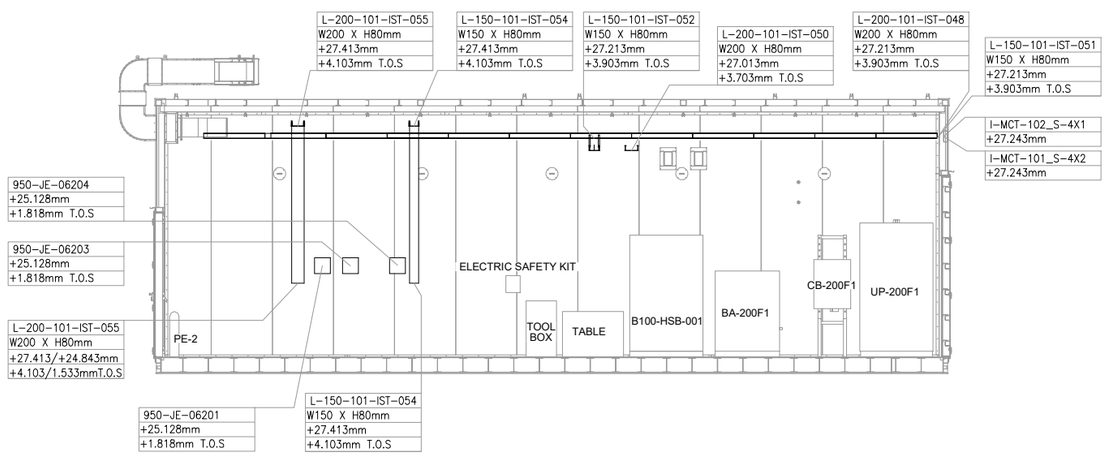
B-100 HV/MV SWITCHROOM

SCALE-1:1



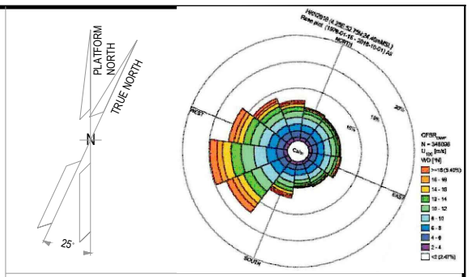
SECTION A-A

SCALE-1:1



SECTION B-B

SCALE-1:1



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR CONTAINER CABLE TRAY LAYOUT.

LEGEND

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DL-40113

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/08/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B-100 Container Lower Deck - TOS EL. 23.310m

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40113	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40113 REV01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016 REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-06203	No.	MARSHALLING CABINET B400-FGS-002

<01>

B-100 HV Switch Gear Room

950-XZ-06201 (+/-) 1BK 2BK — C-950-XZ-06201/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06201 (+/-) 1BK 2BK — C-950-XL-06201/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06202 (+/-) 1BK 2BK — C-950-XL-06202/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 OUTDOOR

77-HS-001B (12/22 — 11/21) 1BK 2BK — C-77-HS-001B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

NOTE-2

C-77-HS-001A/77-HS-001B

~~C-77-HS-001B/77-HS-001A~~

2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77001

77-HY-001 (1/2) 1BK 2BK — C-77-HY-001/77-HS-001A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-001A (12/22 — 11/21) 1BK 2BK — NOTE-2

B-100 OUTDOOR

77-HS-002B (12/22 — 11/21) 1BK 2BK — C-77-HS-002B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

NOTE-2

C-77-HS-002A/77-HS-002B

~~C-77-HS-002B/77-HS-002A~~

2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77002

77-HY-002 (1/2) 1BK 2BK — C-77-HY-002/77-HS-002A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-002A (12/22 — 11/21) 1BK 2BK — NOTE-2

77-HS-003B (12/22 — 11/21) 1BK 2BK — C-77-HS-003B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

NOTE-2

C-77-HS-003A/77-HS-003B

~~C-77-HS-003B/77-HS-003A~~

2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77003

77-HY-003 (1/2) 1BK 2BK — C-77-HY-003/77-HS-003A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-003A (12/22 — 11/21) 1BK 2BK — NOTE-2

TB-1

1BK	1	1BK
2BK	2	2BK
	SH	
1BK	3	3BK
2BK	4	4BK
	SH	
1BK	5	5BK
2BK	6	6BK
	SH	
1BK	7	7BK
2BK	8	8BK
	SH	
1BK	9	9BK
2BK	10	10BK
	SH	
1BK	11	11BK
2BK	12	12BK
	SH	
	OS	

950-JE-06203/B400-FGS-002

12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-06203

1BK	1	950-XZ-06201
2BK	2	
3BK	3	950-XL-06201
4BK	4	
5BK	5	950-XL-06202
6BK	6	
7BK	7	77-HY-001
8BK	8	
9BK	9	77-HY-002
10BK	10	
11BK	11	77-HY-003
12BK	12	

Shield Bar — I.E.

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

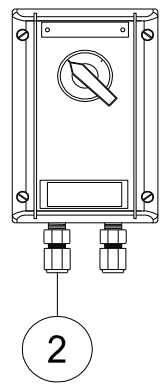
TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–06203

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 073	REV. 01

File Name : 123A90–DDL–IN–DG–40016_Rev.01

ELECTRICAL HOOK-UP FOR HAND SWITCH TEST OF THE DAMPERS



INSTRUMENT TAG	
1	77-HS-001A
2	77-HS-001B
3	77-HS-002A
4	77-HS-002B
5	77-HS-003A
6	77-HS-003B
7	77-HS-004A
8	77-HS-004B
9	77-HS-005A
10	77-HS-005B
11	77-HS-006A
12	77-HS-006B
13	77-HS-007A
14	77-HS-007B
15	77-HS-008A
16	77-HS-008B
17	77-HS-009A
18	77-HS-009B
19	77-HS-010A
20	77-HS-010B
21	77-HS-011A
22	77-HS-011B
23	77-HS-012A
24	77-HS-012B
25	77-HS-013A
26	77-HS-013B
27	77-HS-014A
28	77-HS-014B
29	77-HS-015A
30	77-HS-015B
31	77-HS-016A
32	77-HS-016B

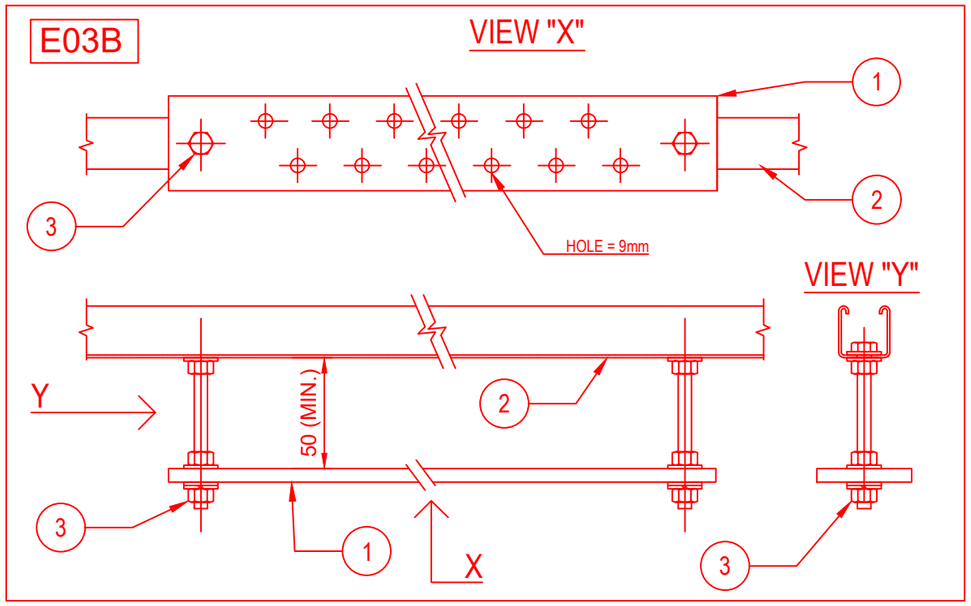
POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-HD-40079
REV.: 2_A | DATE: 08/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

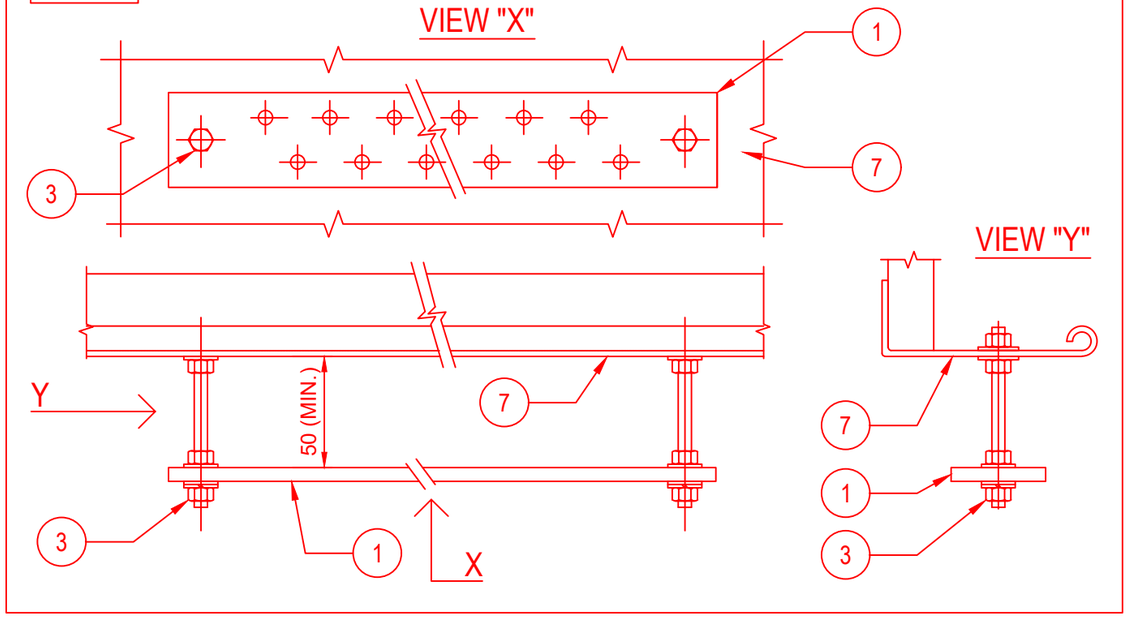
This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

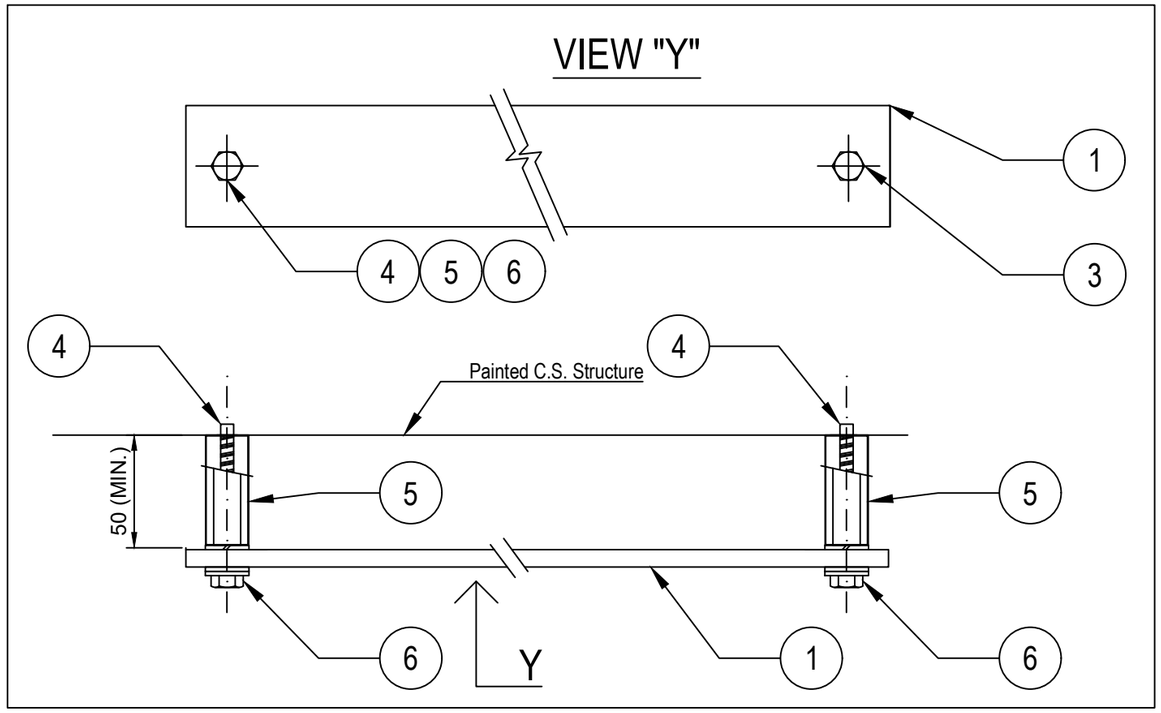


E03C



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BAR	TINNED COPPER	285X50X5	1	
2	SINGLE U-CHANNEL PERFORATED ON N.3 SIDE	AISI 316L		2	
3	HEXAG. BOLTS, PLANE WASHERS, GROWER SPRING WASHER AND NUT	AISI 316L	M10X30	2	
4	THREADED STUD	AISI 316L	M10X28	2	NOTE 1
5	FEMALE / MALE COUPLING	AISI 316L	M10X50	2	NOTE 2
6	PLANE WASHER, GROWER AND NUT	AISI 316L	M10	2	
7	CABLE LADDER	AISI 316L			

E03D



NOTES:

1) THREADED STUD mod. HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM.
2) STANDOFF ADAPTER mod. HILTI M10-HC120 50.
3) FOR TYPICALS E03B AND E03C (EARTHING BAR FIXED TO U-CHANNEL OR CABLE TRAY/LADDER) THE EARTHING BAR SHALL BE CONNECTED TO EARTHING POINT IN N.1 POINT WITH 35sqmm Y/G CABLE

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	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 BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

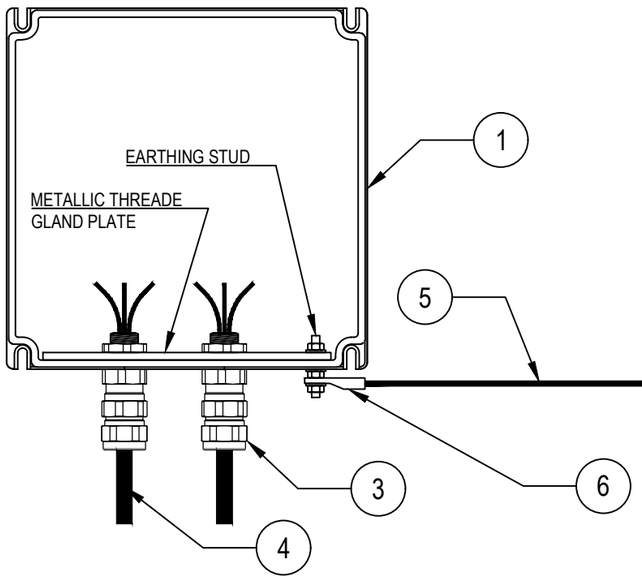
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

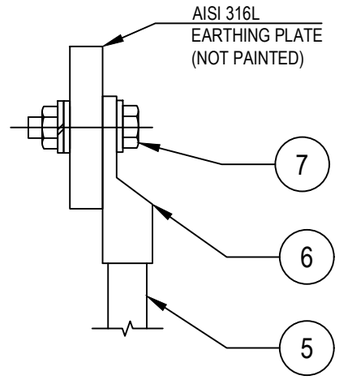
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E04

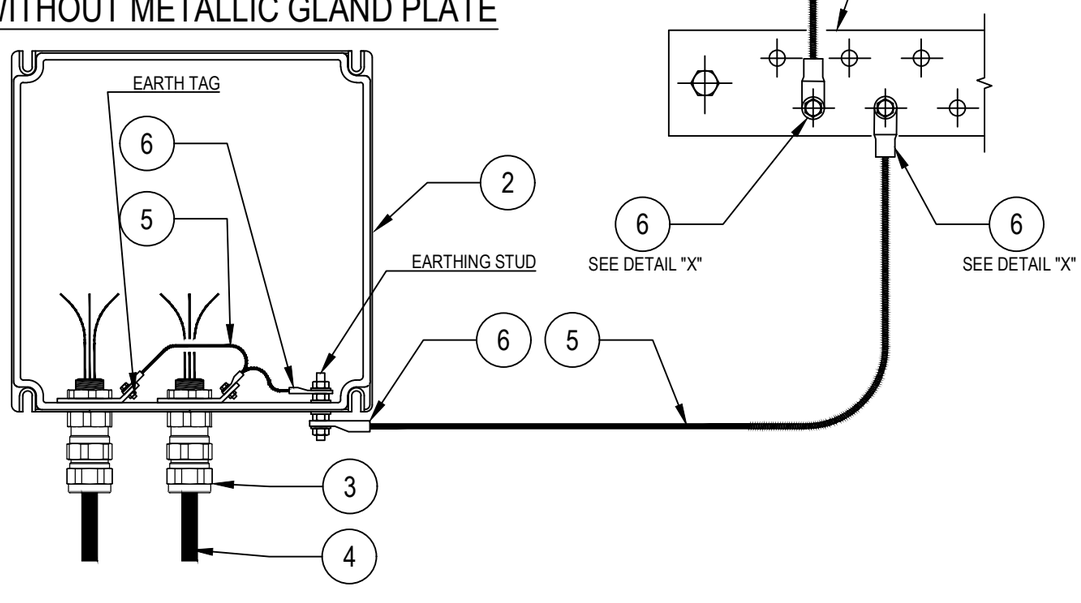
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



DETAIL "X"



DETAIL OF NON METALLIC ENCLOSURE WITHOUT METALLIC GLAND PLATE



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX WITH PLATE (EX)	GRP			
2	JUNCTION BOX WITHOUT GLAND PLATE (EX)	GRP			
3	DOUBLE SEAL CABLE GLAND (EX) FOR ARMOURED CABLE	NICK.PL.BRASS			~~NOTE 2~~
4	ARMOURED CABLE				
5	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		NOTE 1
6	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$		NOTE 1
7	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L			

NOTES:
1) FOR EARTHING BAR SEE TYPICAL DETAILS E03
~~2) CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	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 CABLE ARMOUR BY CABLE GLAND

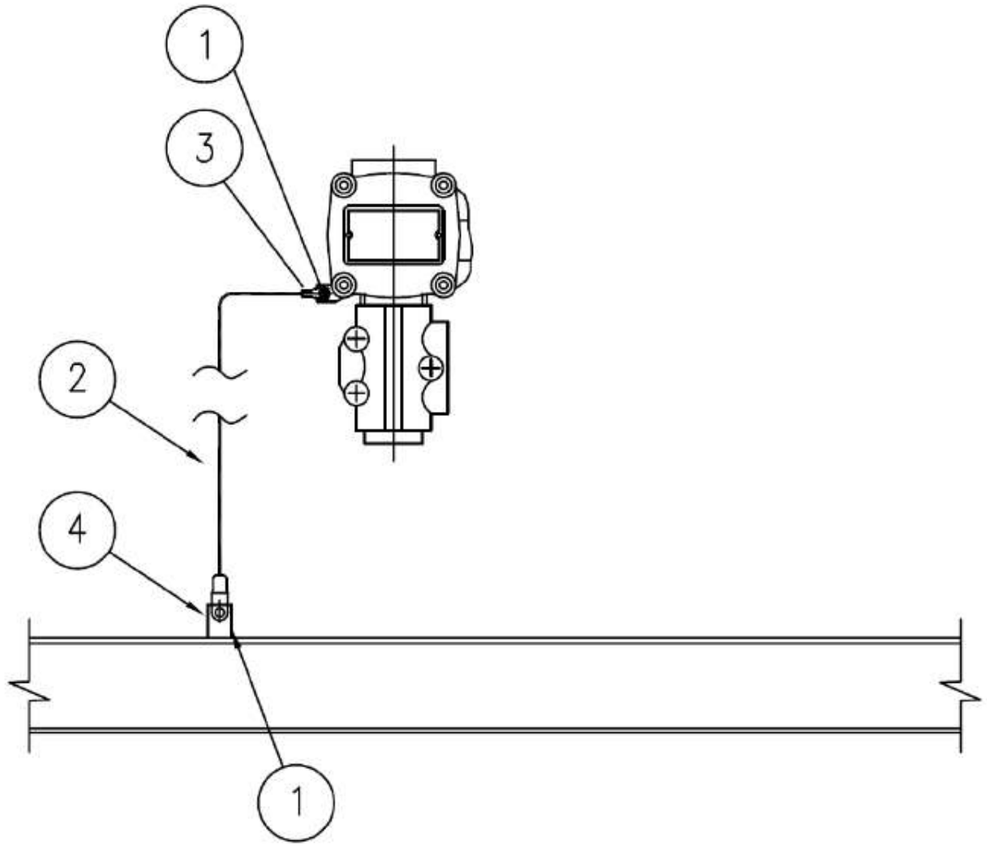
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A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

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

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

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

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 027 | REV. 02

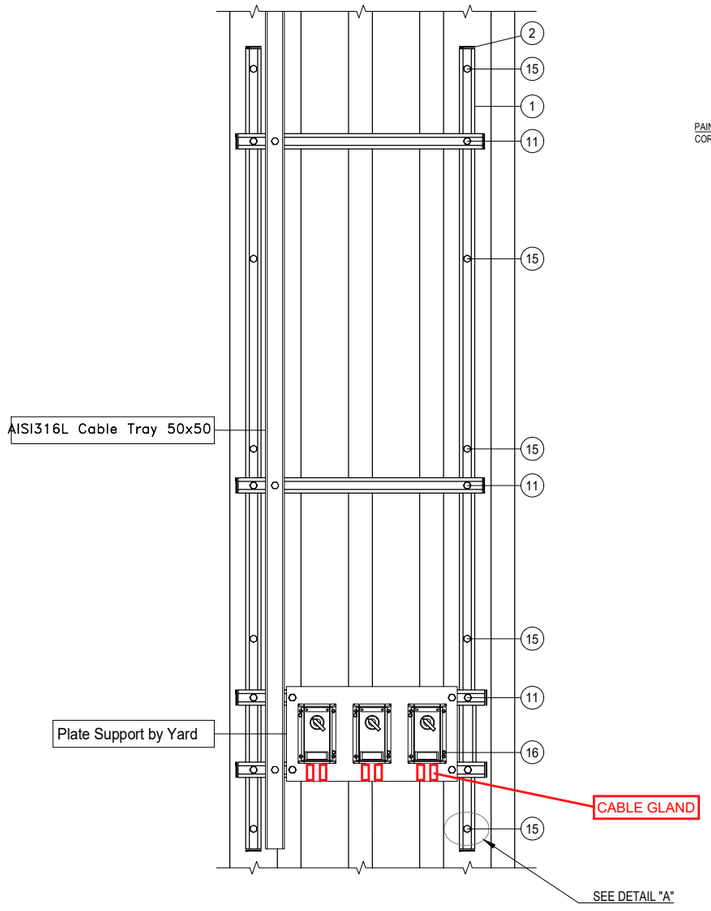
F.to UNI A3: 420mmx297mm

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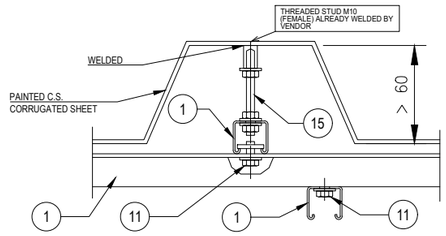
I-4

DRAWING NO. 123A90-DDL-IN-DD-40017

REV. 00



DETAIL "A"



POS.	DESCRIPTION	Q.TY
1	AISI 316L U-CHANNEL 41x41	5m
2	LDPE PLUG FOR U-CHANNEL 41x41	12
11	AISI 316L SPRING NUT M8 FOR U-CHANNEL 41X41 + BOLT M8x35 + WASHER M8	18
15	THREADED ROD M10 (L=110mm) + PLATE WASHER, LARGE PLATE WASHERS SPRING WASHER AND NUTS	10
16	AISI 316L BOLT M5x35 + NUT M5 + WASHER M5	6

CONTAINER	ITEM	DESCRIPTION	TAGNAME
B-100 ~~B-101~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-011B~~ 77-HS-001B
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-012B~~ 77-HS-002B
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-013B~~ 77-HS-003B
B-200 ~~B-201~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-014B~~ 77-HS-004B
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-015B~~ 77-HS-005B
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-016B~~ 77-HS-006B

NOTES

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/09/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	11/07/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-123A90-FDL-IN-DD-40017

REV.:	DATE:	SIGNATURE:
1_B	18/09/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
HAND SWITCH OUTSIDE CONTAINERS

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

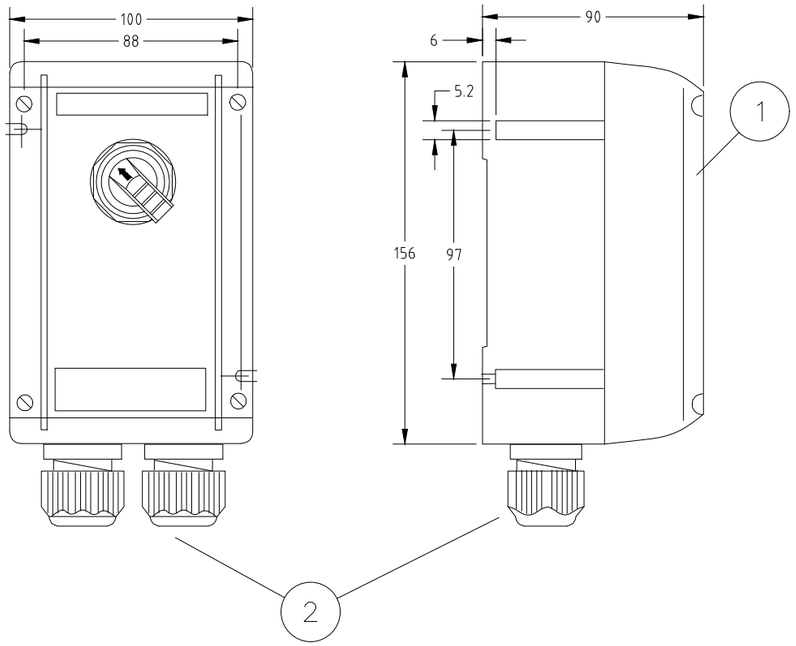
A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 047	REV. 01

PUSH BUTTON DPDT CONTACT

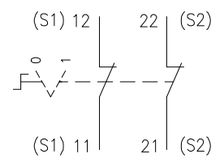
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

INSTALLATION
QUANTITY

32



WIRING



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	03/09/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/07/24	DB	MO	SM	ISSUE FOR REVIEW (IFR)

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
GENERAL ARRANGEMENT
PUSH BUTTON DPDT CONTACT

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

SCALE : NTS

A3

DRAWING NO. 1724000821-IN-DA-00003

SHEET 014

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 01



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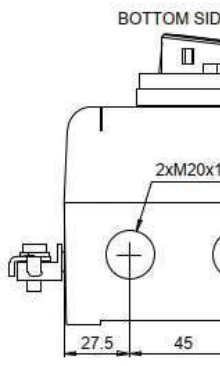


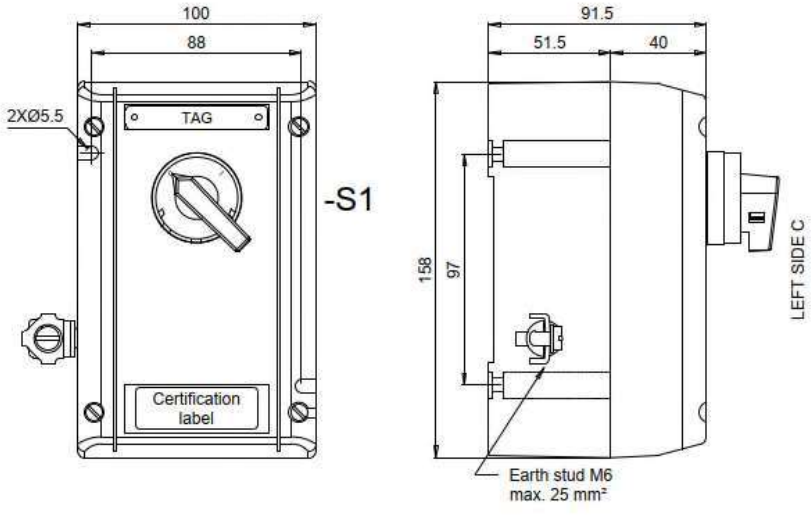
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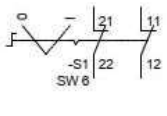
Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ib m IIC T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEx Certificate of Conformity	IECEx BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 up to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 110 V / I_e 0.5 A	Ex23 AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.5 A
Connecting terminals	2 x 4 mm²	
Protection class	I	
Degree of protection accd. to EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	2 x M25 cable gland incl. 1 blanking plug or optional 2 x M20 thread with internal brass plate	
Enclosure material	Polyamide	
Enclosure colour	black	

	Type 432
Dimensions (L x W x H)	156 x 100 x 90 mm
Weight (empty)	0.47 kg

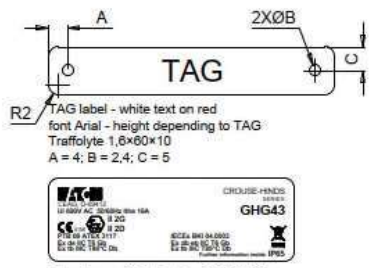






Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Techical data:
Manufactured by Eaton Crouse-Hinds Division
Model: GHG 432
Certificate No.
PTB 00 ATEX 3117
IECEx BKI 04.0003
Marking: ATEX and IECEx
II 2G Ex de IIC T6 Gb
II 2D Ex tb IIIC T80°C Db
-40°C ≤ tamb ≤ +55°C
Ui 690V
IP65

Specific characteristics:
- Polyamide (PA), black
- Closed with stainless steel screw
- Bottom with internal earth plate in brass
- M6 internal/external stainless steel earth stud

Components:
- No. 1 black selector switch with 2 position 2NC

Entries bottom side B:
- No. 2 M20 threaded taped with transit tape

No.1 1,6×60×10 mm white text on red background traffolyte tag fixed with stainless steel screws on the cover, sealed on the back with PU adhesive and engraved

Also a certification label fixed with back self adhesive on the cover

Quantity: 32

ITEM	Tag	77-HS-003A	: Hand Switch for Fire&Gas Damper HFD-77003			Dwg	
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100			Module	
TASK	code	C10002081		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00		Miscellaneous

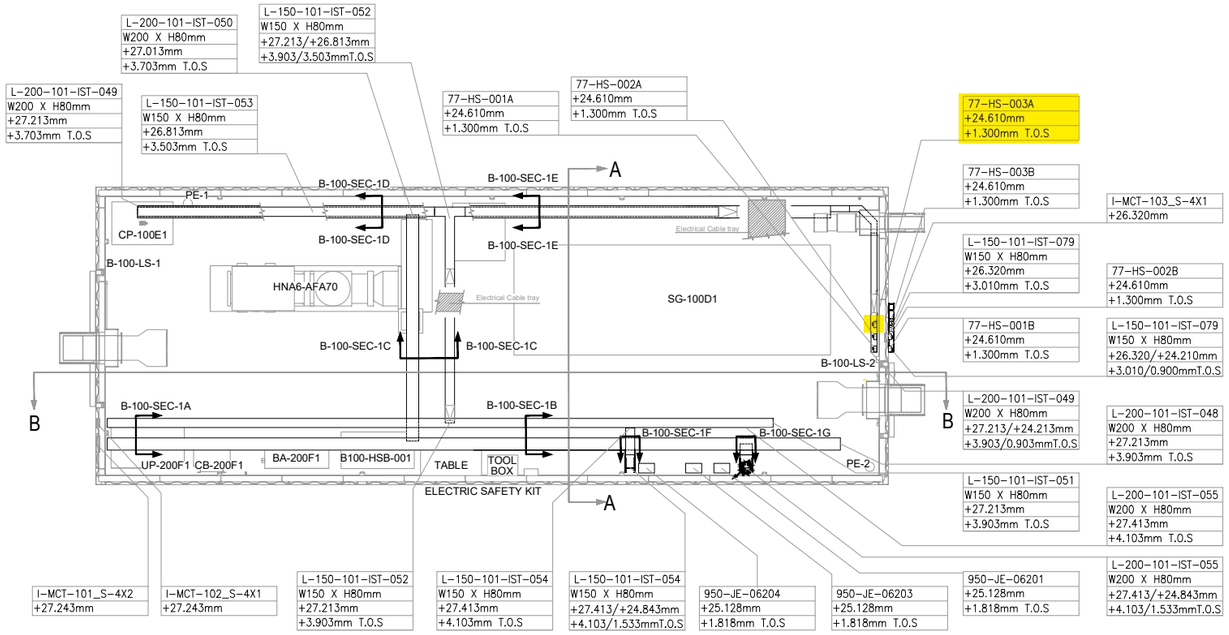
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	NA
7	Check identification (tag number, tag plates).	OK
8	Check supporting and protection against vibrations.	OK
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	OK
10	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	2024-10-14	2024-10-16	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:39:54.600Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-16T15:32:31.853Z	

DRAWING NO. 123A90-DDL-IN-DL-40113

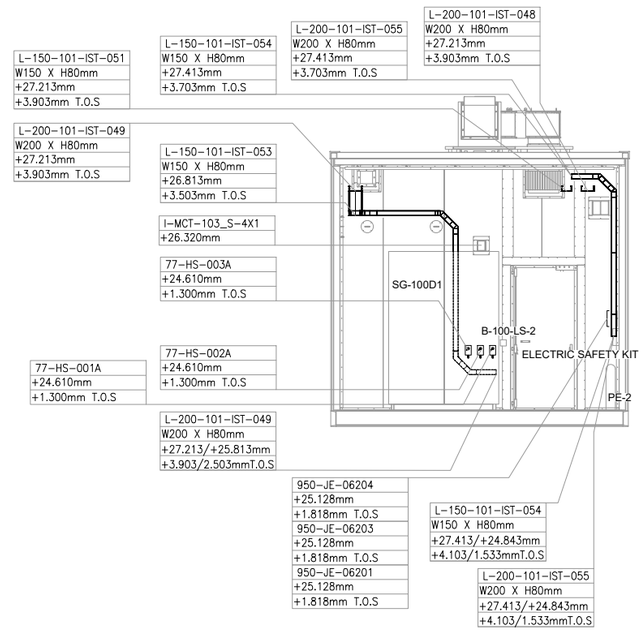
REV. 01



PLAN VIEW

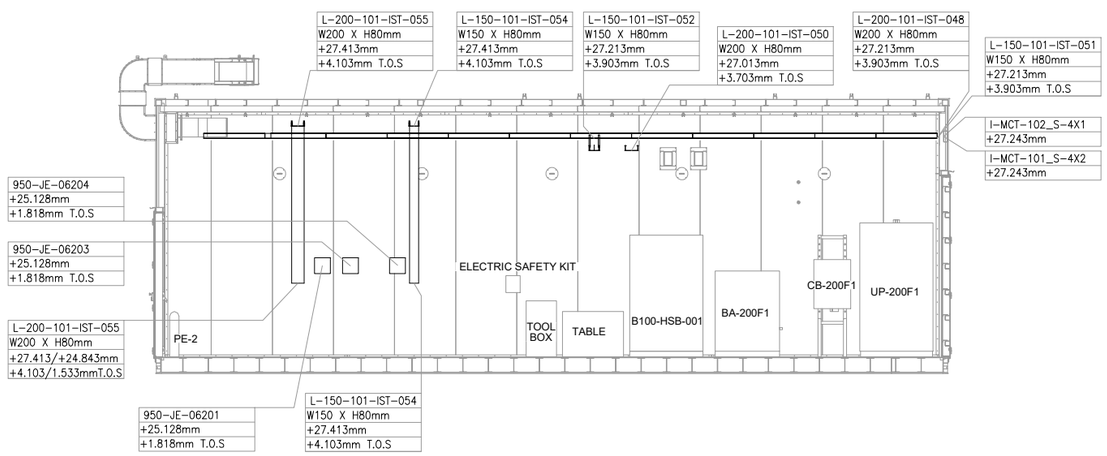
B-100 HV/MV SWITCHROOM

SCALE-1:1



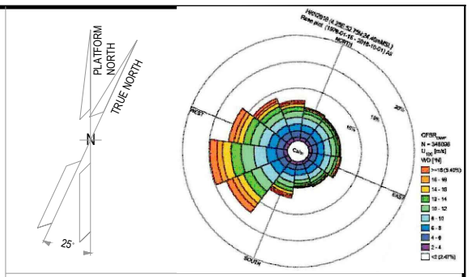
SECTION A-A

SCALE-1:1



SECTION B-B

SCALE-1:1



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR CONTAINER CABLE TRAY LAYOUT.

LEGEND

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DL-40113

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/08/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B-100 Container Lower Deck - TOS EL. 23.310m

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40113	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40113 REV01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016 REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-06203	No.	MARSHALLING CABINET B400-FGS-002

<01>

B-100 HV Switch Gear Room

950-XZ-06201 (+/-) 1BK 2BK — C-950-XZ-06201/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06201 (+/-) 1BK 2BK — C-950-XL-06201/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06202 (+/-) 1BK 2BK — C-950-XL-06202/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 OUTDOOR

77-HS-001B (12/22 — 11/21) 1BK 2BK — C-77-HS-001B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

NOTE-2

C-77-HS-001A/77-HS-001B

~~C-77-HS-001B/77-HS-001A~~

2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77001

77-HY-001 (1/2) 1BK 2BK — C-77-HY-001/77-HS-001A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-001A (12/22 — 11/21) 1BK 2BK — NOTE-2

B-100 OUTDOOR

77-HS-002B (12/22 — 11/21) 1BK 2BK — C-77-HS-002B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

NOTE-2

C-77-HS-002A/77-HS-002B

~~C-77-HS-002B/77-HS-002A~~

2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77002

77-HY-002 (1/2) 1BK 2BK — C-77-HY-002/77-HS-002A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-002A (12/22 — 11/21) 1BK 2BK — NOTE-2

B-100 OUTDOOR

77-HS-003B (12/22 — 11/21) 1BK 2BK — C-77-HS-003B/950-JE-06203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

NOTE-2

C-77-HS-003A/77-HS-003B

~~C-77-HS-003B/77-HS-003A~~

2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77003

77-HY-003 (1/2) 1BK 2BK — C-77-HY-003/77-HS-003A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-003A (12/22 — 11/21) 1BK 2BK — NOTE-2

TB-1

1BK	1	1BK
2BK	2	2BK
	SH	
1BK	3	3BK
2BK	4	4BK
	SH	
1BK	5	5BK
2BK	6	6BK
	SH	
1BK	7	7BK
2BK	8	8BK
	SH	
1BK	9	9BK
2BK	10	10BK
	SH	
1BK	11	11BK
2BK	12	12BK
	SH	
	OS	

950-JE-06203/B400-FGS-002

12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-06203

1BK	1	950-XZ-06201
2BK	2	
3BK	3	950-XL-06201
4BK	4	
5BK	5	950-XL-06202
6BK	6	
7BK	7	77-HY-001
8BK	8	
9BK	9	77-HY-002
10BK	10	
11BK	11	77-HY-003
12BK	12	

Shield Bar — I.E.

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

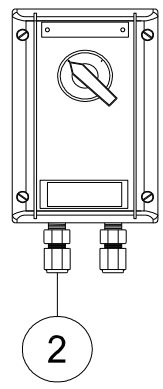
TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–06203

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 073	REV. 01

File Name : 123A90–DDL–IN–DG–40016_Rev.01

ELECTRICAL HOOK-UP FOR HAND SWITCH TEST OF THE DAMPERS



INSTRUMENT TAG	
1	77-HS-001A
2	77-HS-001B
3	77-HS-002A
4	77-HS-002B
5	77-HS-003A
6	77-HS-003B
7	77-HS-004A
8	77-HS-004B
9	77-HS-005A
10	77-HS-005B
11	77-HS-006A
12	77-HS-006B
13	77-HS-007A
14	77-HS-007B
15	77-HS-008A
16	77-HS-008B
17	77-HS-009A
18	77-HS-009B
19	77-HS-010A
20	77-HS-010B
21	77-HS-011A
22	77-HS-011B
23	77-HS-012A
24	77-HS-012B
25	77-HS-013A
26	77-HS-013B
27	77-HS-014A
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29	77-HS-015A
30	77-HS-015B
31	77-HS-016A
32	77-HS-016B

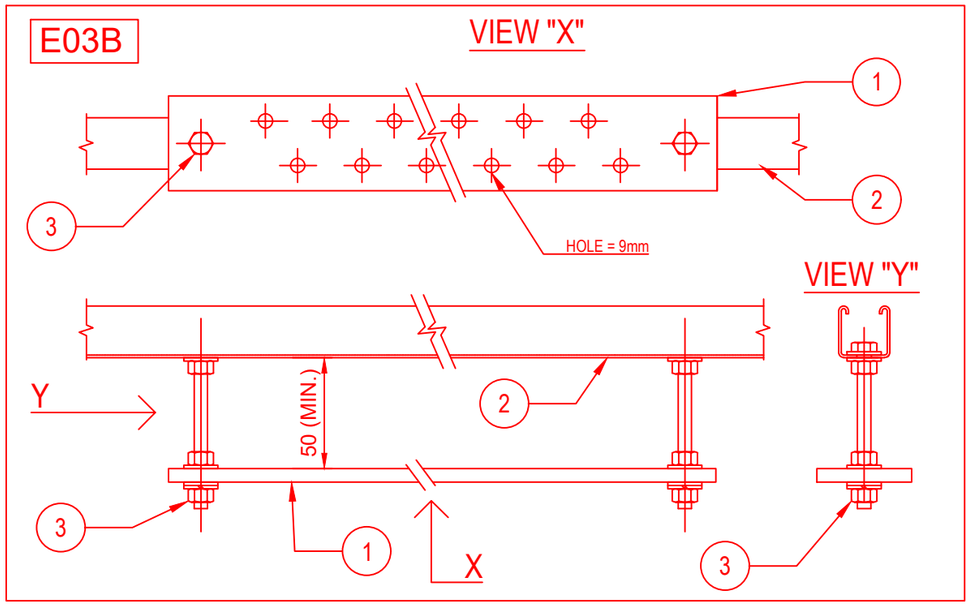
POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-HD-40079
REV.: 2_A | DATE: 08/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

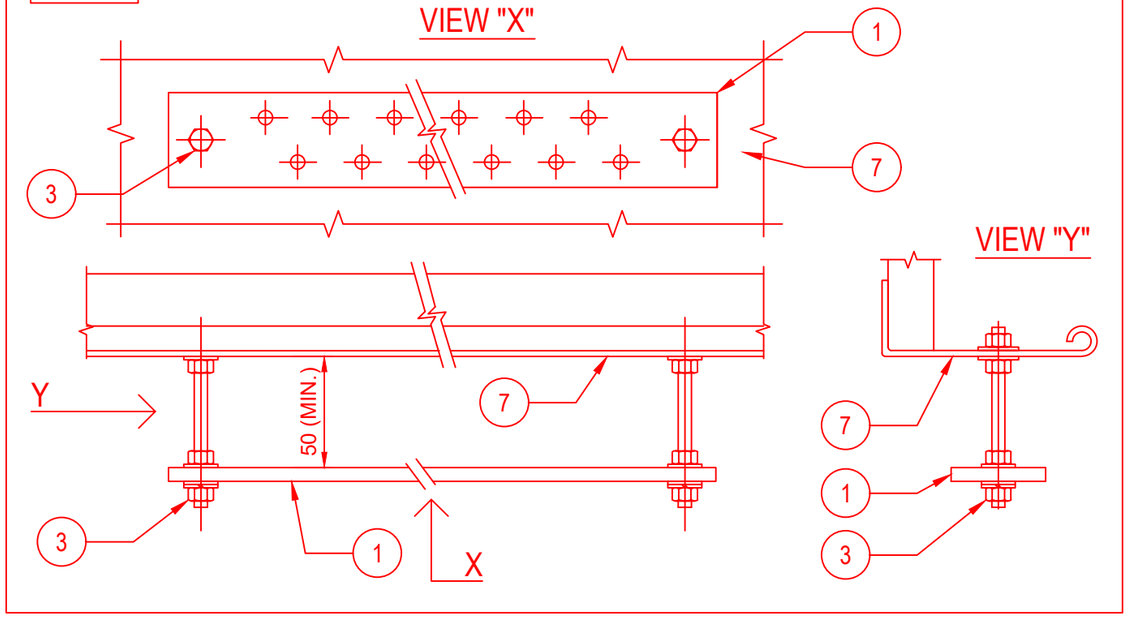
This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

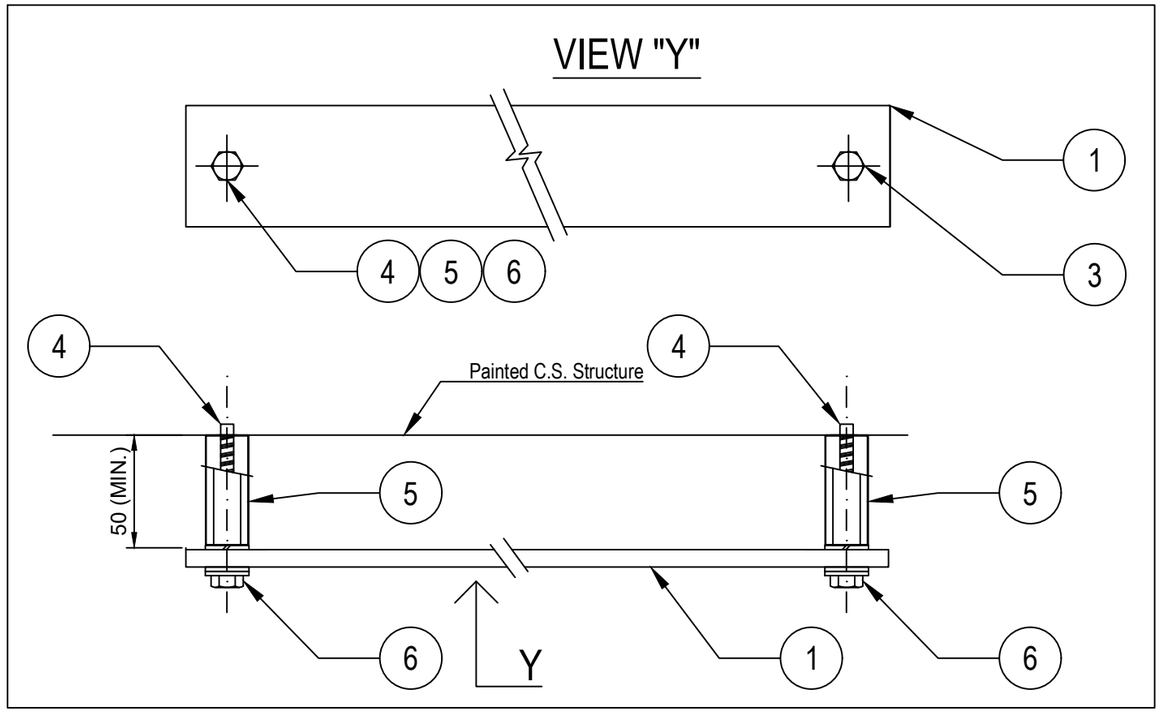


E03C



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BAR	TINNED COPPER	285X50X5	1	
2	SINGLE U-CHANNEL PERFORATED ON N.3 SIDE	AISI 316L		2	
3	HEXAG. BOLTS, PLANE WASHERS, GROWER SPRING WASHER AND NUT	AISI 316L	M10X30	2	
4	THREADED STUD	AISI 316L	M10X28	2	NOTE 1
5	FEMALE / MALE COUPLING	AISI 316L	M10X50	2	NOTE 2
6	PLANE WASHER, GROWER AND NUT	AISI 316L	M10	2	
7	CABLE LADDER	AISI 316L			

E03D



NOTES:

1) THREADED STUD mod. HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM.
2) STANDOFF ADAPTER mod. HILTI M10-HC120 50.
3) FOR TYPICALS E03B AND E03C (EARTHING BAR FIXED TO U-CHANNEL OR CABLE TRAY/LADDER) THE EARTHING BAR SHALL BE CONNECTED TO EARTHING POINT IN N.1 POINT WITH 35sqmm Y/G CABLE

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	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 BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

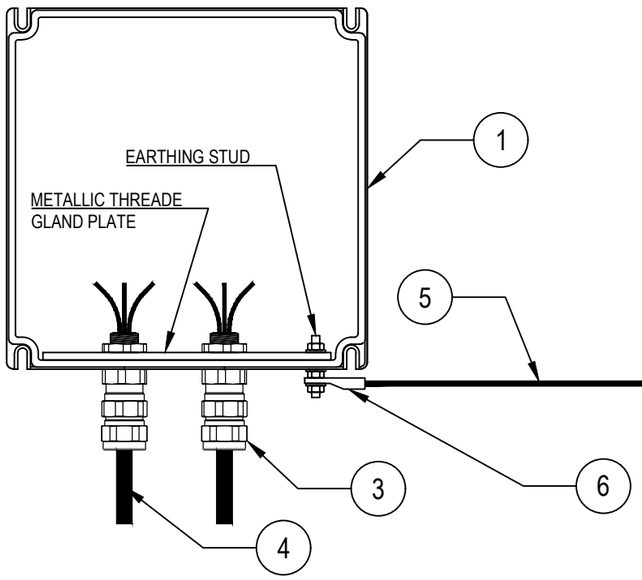
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

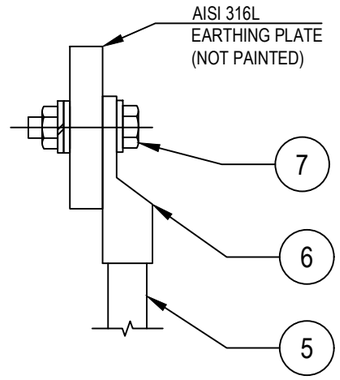
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E04

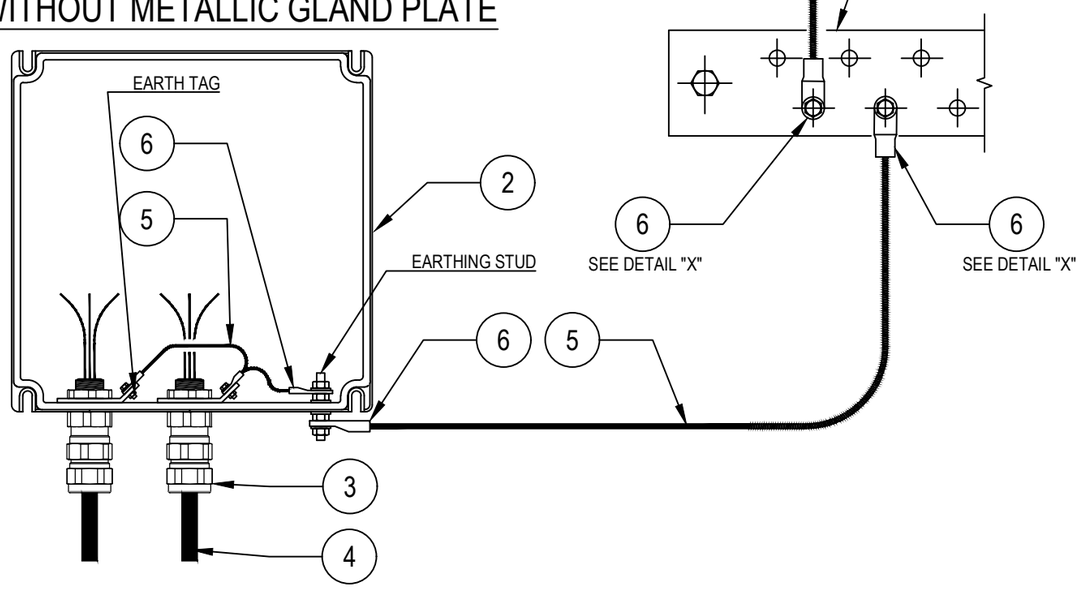
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



DETAIL "X"



DETAIL OF NON METALLIC ENCLOSURE WITHOUT METALLIC GLAND PLATE



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX WITH PLATE (EX)	GRP			
2	JUNCTION BOX WITHOUT GLAND PLATE (EX)	GRP			
3	DOUBLE SEAL CABLE GLAND (EX) FOR ARMOURED CABLE	NICK.PL.BRASS			~~NOTE 2~~
4	ARMOURED CABLE				
5	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		NOTE 1
6	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$		NOTE 1
7	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L			

NOTES:
1) FOR EARTHING BAR SEE TYPICAL DETAILS E03
~~2) CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	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 CABLE ARMOUR BY CABLE GLAND

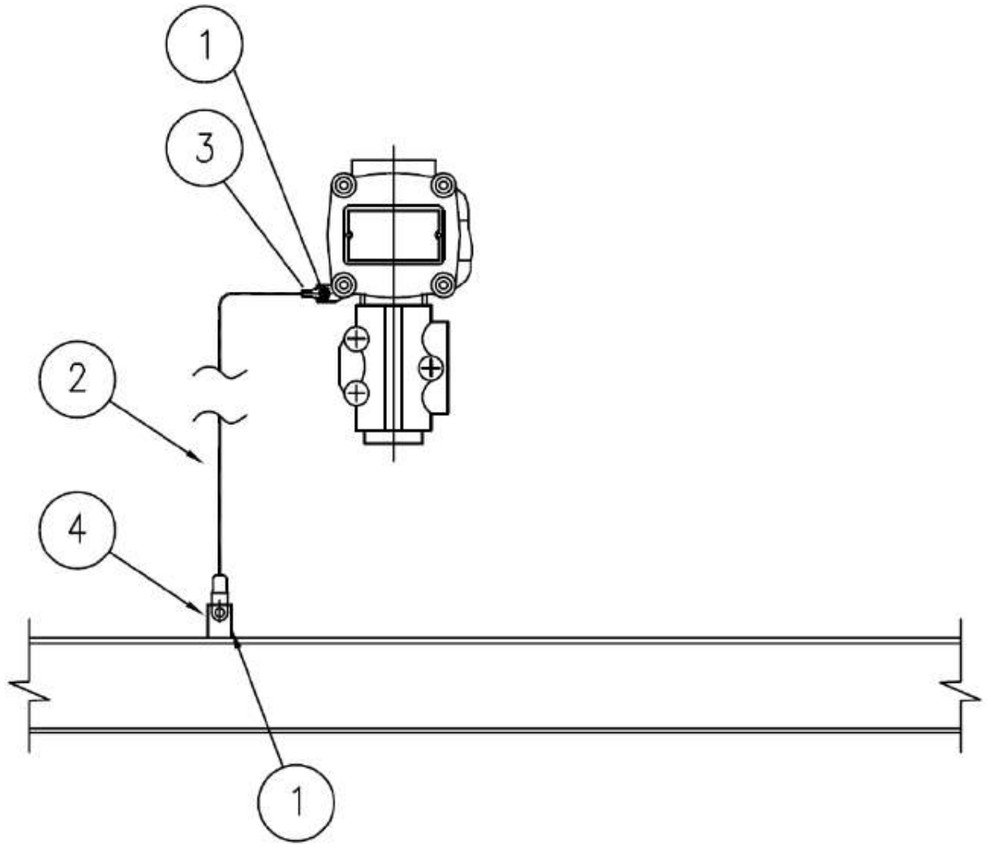
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

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

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

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

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 027 | REV. 02

F.to UNI A3: 420mmx297mm

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

I-3

DRAWING NO. 123A90-DDL-IN-DD-40017

REV. 00



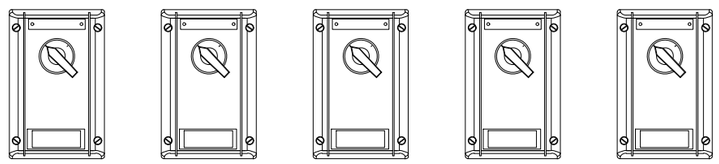
B-100
~~B-101~~



B-200
~~B-201~~



B-300
~~B-301~~



B-400
~~B-401~~

POS.	DESCRIPTION	Q.TY
-	SELFING TAPPING SCREW	-

CONTAINER	ITEM	DESCRIPTION	TAGNAME
B-100 ~~B-101~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-011A~~ 77-HS-001A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-012A~~ 77-HS-002A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-013A~~ 77-HS-003A
B-200 ~~B-201~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-014A~~ 77-HS-004A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-015A~~ 77-HS-005A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-016A~~ 77-HS-006A
B-300 ~~B-301~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-017A~~ 77-HS-007A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-018A~~ 77-HS-008A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-019A~~ 77-HS-009A
	4	HAND SWITCH FOR DAMPER TEST	77-HS-010A
	5	HAND SWITCH FOR DAMPER TEST	77-HS-011A
B-400 ~~B-401~~	1	HAND SWITCH FOR DAMPER TEST	77-HS-012A
	2	HAND SWITCH FOR DAMPER TEST	77-HS-013A
	3	HAND SWITCH FOR DAMPER TEST	77-HS-014A
	4	HAND SWITCH FOR DAMPER TEST	77-HS-015A
	5	HAND SWITCH FOR DAMPER TEST	77-HS-016A

NOTES

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/09/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	11/07/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-123A90-FDL-IN-DD-40017**

REV.:	DATE:	SIGNATURE:
1_B	18/09/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
HAND SWITCH INSIDE CONTAINERS

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

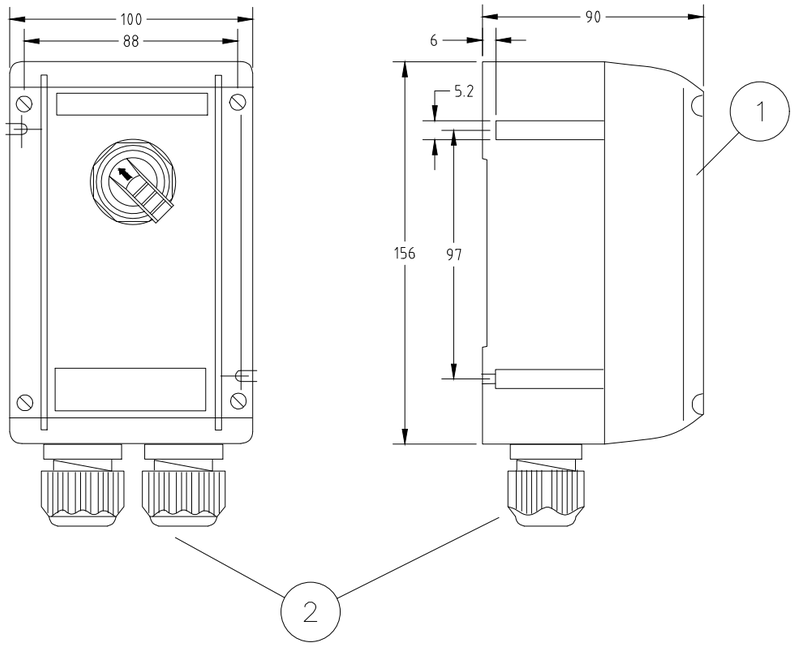
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PUSH BUTTON DPDT CONTACT

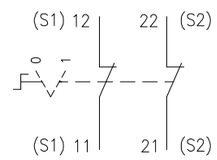
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

INSTALLATION
QUANTITY

32



WIRING



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	03/09/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/07/24	DB	MO	SM	ISSUE FOR REVIEW (IFR)

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
GENERAL ARRANGEMENT
PUSH BUTTON DPDT CONTACT

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

SCALE : NTS

A3

DRAWING NO. 1724000821-IN-DA-00003

SHEET 014

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 01



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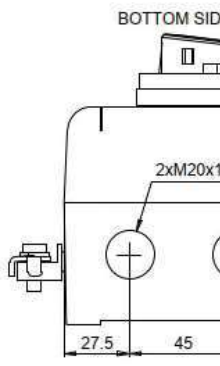


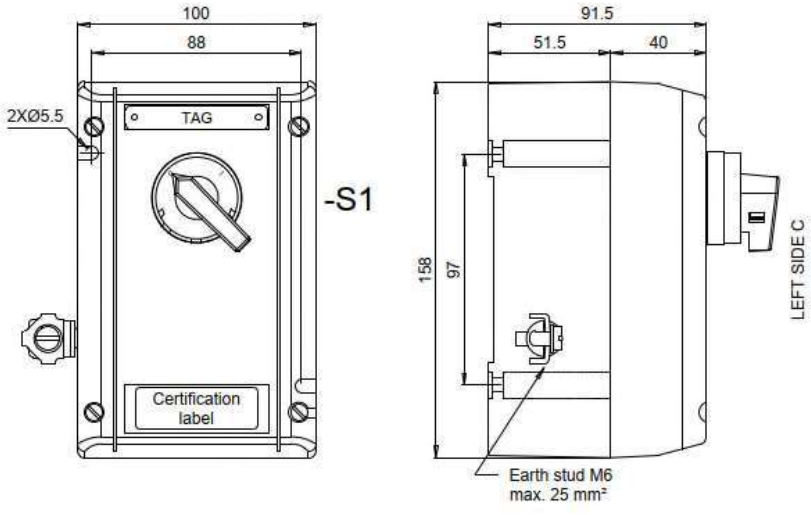
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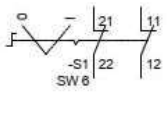
Technical data

	Ex-control stations Type 432 I Type 434	
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EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEx Certificate of Conformity	IECEx BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 up to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 110 V / I_e 0.5 A	Ex23 AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.5 A
Connecting terminals	2 x 4 mm²	
Protection class	I	
Degree of protection accd. to EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	2 x M25 cable gland incl. 1 blanking plug or optional 2 x M20 thread with internal brass plate	
Enclosure material	Polyamide	
Enclosure colour	black	

	Type 432
Dimensions (L x W x H)	156 x 100 x 90 mm
Weight (empty)	0.47 kg

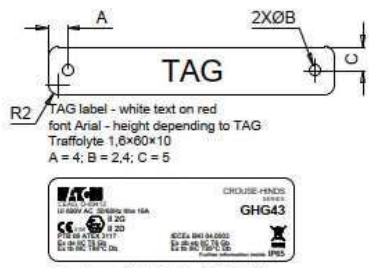






Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Techical data:
Manufactured by Eaton Crouse-Hinds Division
Model: GHG 432
Certificate No.
PTB 00 ATEX 3117
IECEx BKI 04.0003
Marking: ATEX and IECEx
II 2G Ex de IIC T6 Gb
II 2D Ex tb IIIC T80°C Db
-40°C ≤ tamb ≤ +55°C
Ui 690V
IP65

Specific characteristics:
- Polyamide (PA), black
- Closed with stainless steel screw
- Bottom with internal earth plate in brass
- M6 internal/external stainless steel earth stud

Components:
- No. 1 black selector switch with 2 position 2NC

Entries bottom side B:
- No. 2 M20 threaded taped with transit tape

No.1 1,6×60×10 mm white text on red background traffolyte tag fixed with stainless steel screws on the cover, sealed on the back with PU adhesive and engraved

Also a certification label fixed with back self adhesive on the cover

Quantity: 32

ITEM	Tag	77-HS-003B	: Hand Switch for Fire&Gas Damper HFD-77003			Dwg	
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100			Module	
TASK	code	C10002082		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00 Miscellaneous

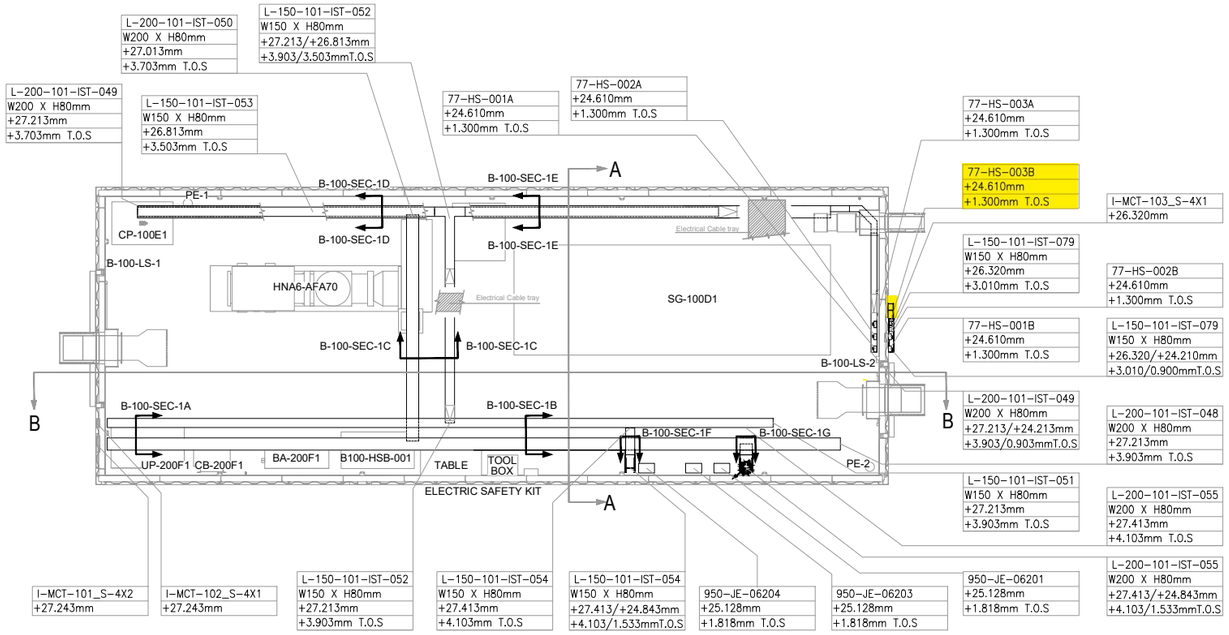
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	NA
7	Check identification (tag number, tag plates).	OK
8	Check supporting and protection against vibrations.	OK
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	OK
10	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	2024-10-14	2024-10-16	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:40:05.278Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-16T15:32:03.996Z	

DRAWING NO. 123A90-DDL-IN-DL-40113

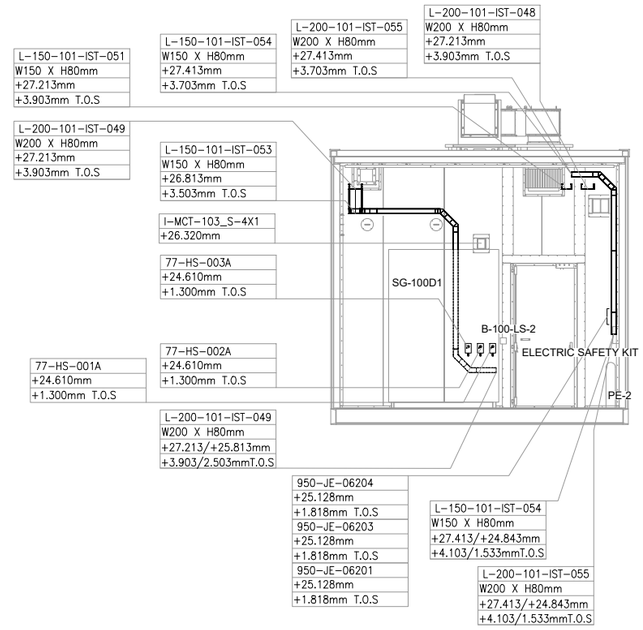
REV. 01



PLAN VIEW

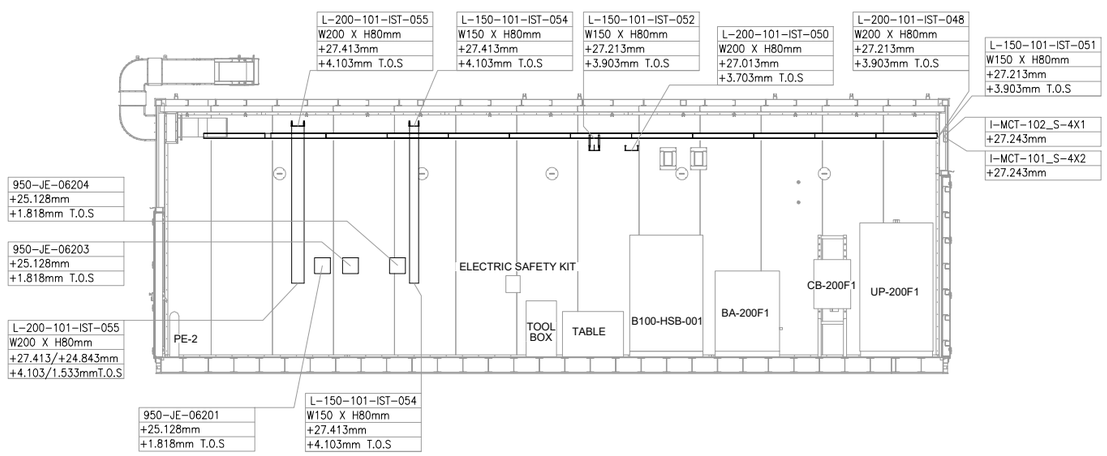
B-100 HV/MV SWITCHROOM

SCALE-1:1



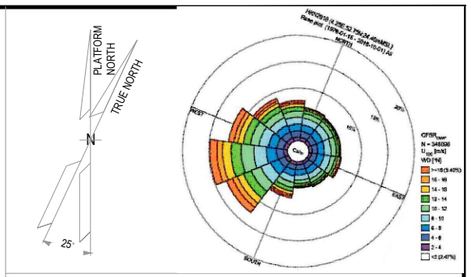
SECTION A-A

SCALE-1:1



SECTION B-B

SCALE-1:1



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR CONTAINER CABLE TRAY LAYOUT.

LEGEND

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DL-40113

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/08/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B-100 Container Lower Deck - TOS EL. 23.310m

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40113	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40113 REV01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016 REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-06203	No.	MARSHALLING CABINET B400-FGS-002

<01>

B-100 HV Switch Gear Room

950-XZ-06201 (+/-) 1BK 2BK — C-950-XZ-06201/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06201 (+/-) 1BK 2BK — C-950-XL-06201/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-06202 (+/-) 1BK 2BK — C-950-XL-06202/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 OUTDOOR

77-HS-001B (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2 — C-77-HS-001B/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

C-77-HS-001A/77-HS-001B
~~C-77-HS-001B/77-HS-001A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77001

77-HY-001 (1, 2) 1BK 2BK — C-77-HY-001/77-HS-001A, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-001A (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2

B-100 OUTDOOR

77-HS-002B (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2 — C-77-HS-002B/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

C-77-HS-002A/77-HS-002B
~~C-77-HS-002B/77-HS-002A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77002

77-HY-002 (1, 2) 1BK 2BK — C-77-HY-002/77-HS-002A, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-002A (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2

77-HS-003B (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2 — C-77-HS-003B/950-JE-06203, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

C-77-HS-003A/77-HS-003B
~~C-77-HS-003B/77-HS-003A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77003

77-HY-003 (1, 2) 1BK 2BK — C-77-HY-003/77-HS-003A, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-100 INDOOR

77-HS-003A (12/22 1BK 2BK, 11/21 1BK 2BK) — NOTE-2

TB-1

1BK	1	1BK
2BK	2	2BK
	SH	
1BK	3	3BK
2BK	4	4BK
	SH	
1BK	5	5BK
2BK	6	6BK
	SH	
1BK	7	7BK
2BK	8	8BK
	SH	
1BK	9	9BK
2BK	10	10BK
	SH	
1BK	11	11BK
2BK	12	12BK
	SH	
	OS	

950-JE-06203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-06203

1BK	1	950-XZ-06201
2BK	2	
3BK	3	950-XL-06201
4BK	4	
5BK	5	950-XL-06202
6BK	6	
7BK	7	77-HY-001
8BK	8	
9BK	9	77-HY-002
10BK	10	
11BK	11	77-HY-003
12BK	12	

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

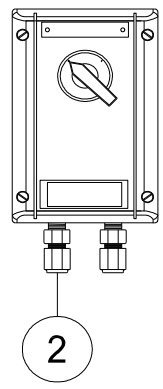
TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–06203

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 073	REV. 01

File Name : 123A90–DDL–IN–DG–40016_Rev.01

ELECTRICAL HOOK-UP FOR HAND SWITCH TEST OF THE DAMPERS



INSTRUMENT TAG	
1	77-HS-001A
2	77-HS-001B
3	77-HS-002A
4	77-HS-002B
5	77-HS-003A
6	77-HS-003B
7	77-HS-004A
8	77-HS-004B
9	77-HS-005A
10	77-HS-005B
11	77-HS-006A
12	77-HS-006B
13	77-HS-007A
14	77-HS-007B
15	77-HS-008A
16	77-HS-008B
17	77-HS-009A
18	77-HS-009B
19	77-HS-010A
20	77-HS-010B
21	77-HS-011A
22	77-HS-011B
23	77-HS-012A
24	77-HS-012B
25	77-HS-013A
26	77-HS-013B
27	77-HS-014A
28	77-HS-014B
29	77-HS-015A
30	77-HS-015B
31	77-HS-016A
32	77-HS-016B

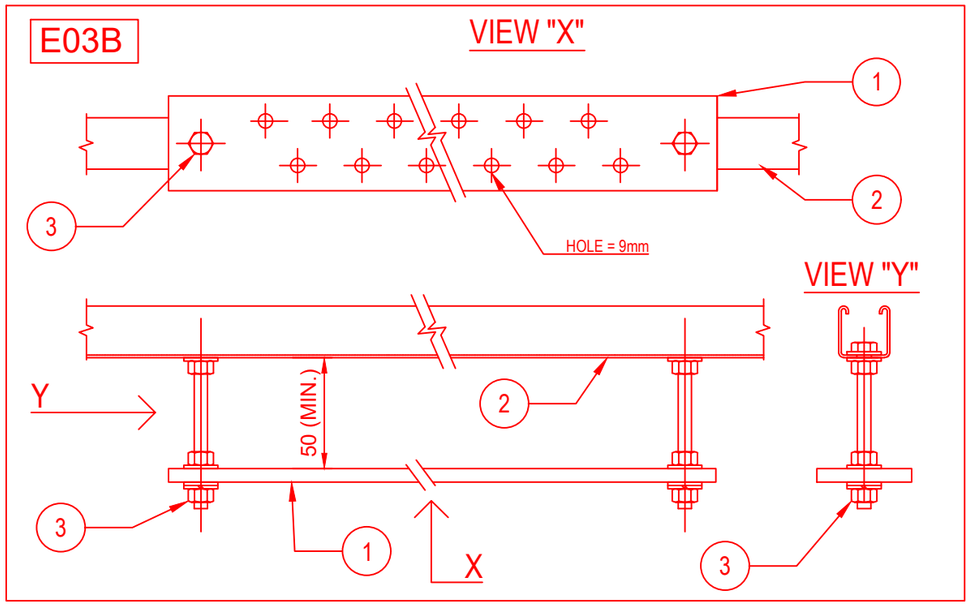
POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-HD-40079
REV.: 2_A | DATE: 08/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

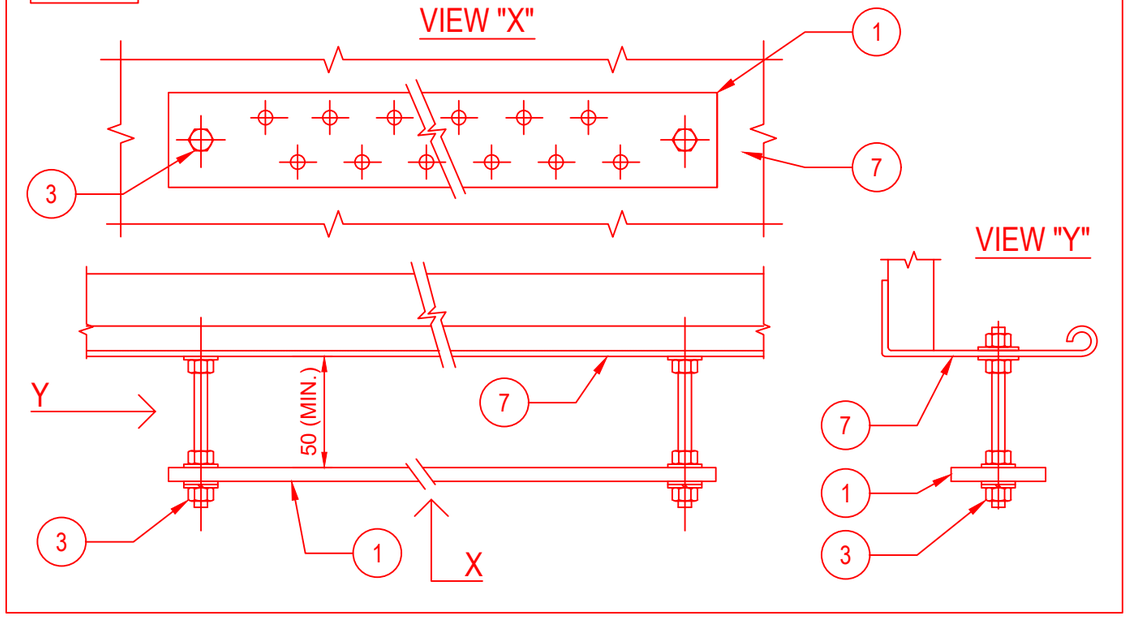
This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

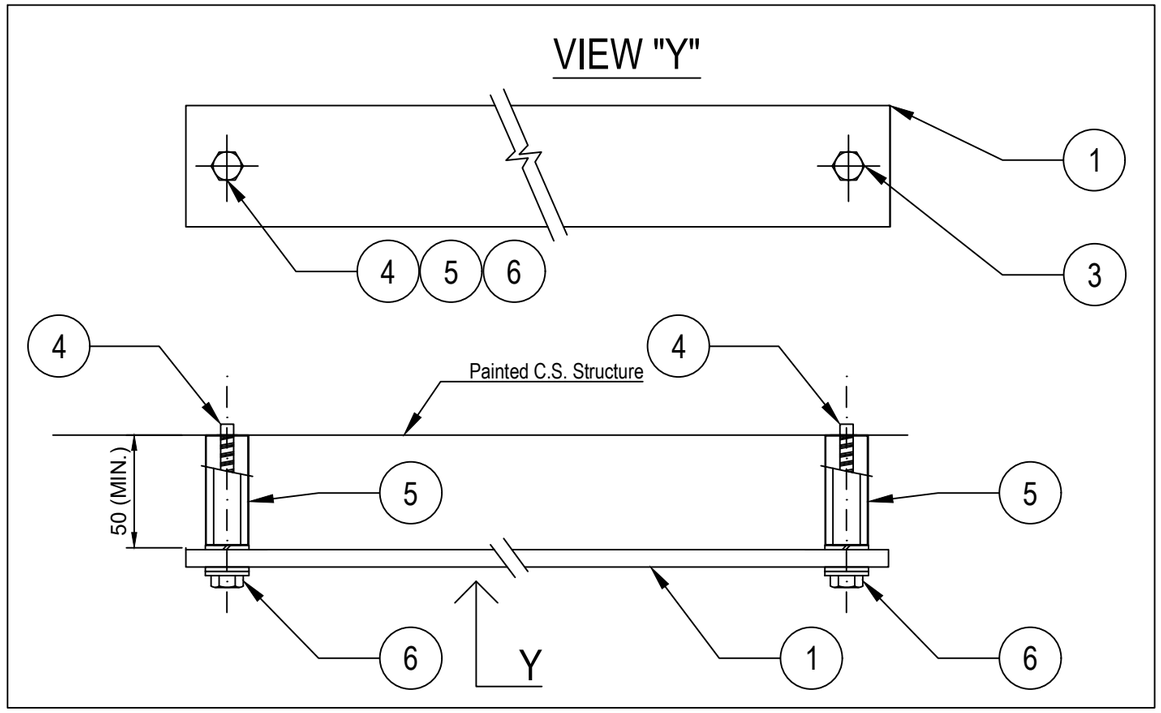


E03C



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BAR	TINNED COPPER	285X50X5	1	
2	SINGLE U-CHANNEL PERFORATED ON N.3 SIDE	AISI 316L		2	
3	HEXAG. BOLTS, PLANE WASHERS, GROWER SPRING WASHER AND NUT	AISI 316L	M10X30	2	
4	THREADED STUD	AISI 316L	M10X28	2	NOTE 1
5	FEMALE / MALE COUPLING	AISI 316L	M10X50	2	NOTE 2
6	PLANE WASHER, GROWER AND NUT	AISI 316L	M10	2	
7	CABLE LADDER	AISI 316L			

E03D



NOTES:

1) THREADED STUD mod. HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM.
2) STANDOFF ADAPTER mod. HILTI M10-HC120 50.
3) FOR TYPICALS E03B AND E03C (EARTHING BAR FIXED TO U-CHANNEL OR CABLE TRAY/LADDER) THE EARTHING BAR SHALL BE CONNECTED TO EARTHING POINT IN N.1 POINT WITH 35sqmm Y/G CABLE

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	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 BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

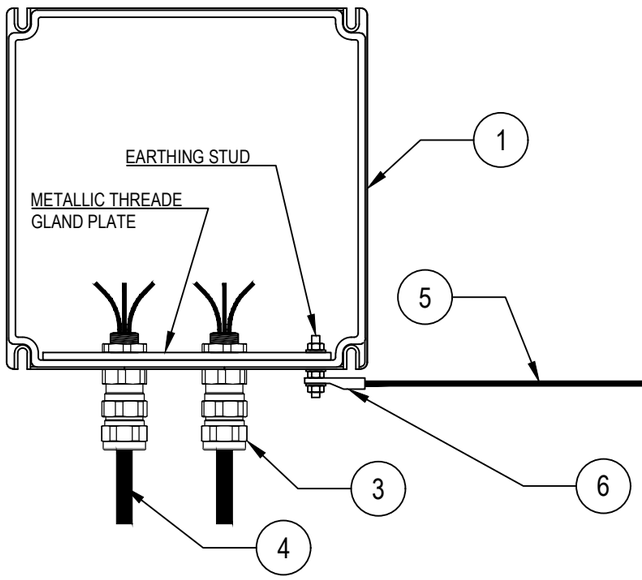
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

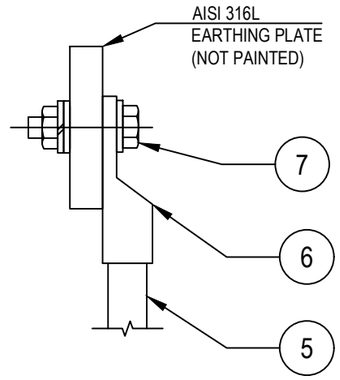
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E04

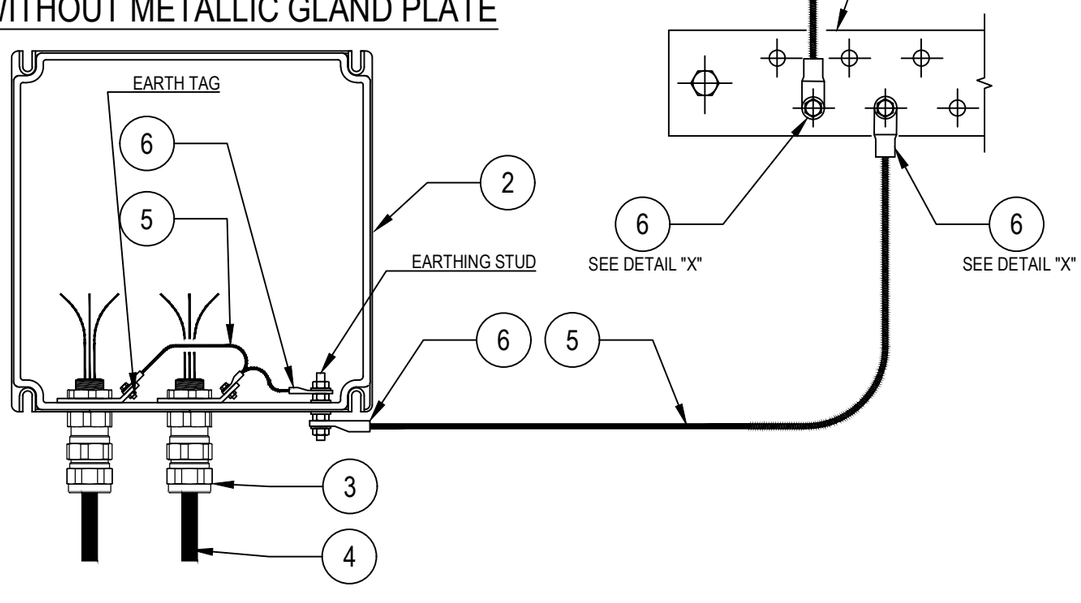
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



DETAIL "X"



DETAIL OF NON METALLIC ENCLOSURE WITHOUT METALLIC GLAND PLATE



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX WITH PLATE (EX)	GRP			
2	JUNCTION BOX WITHOUT GLAND PLATE (EX)	GRP			
3	DOUBLE SEAL CABLE GLAND (EX) FOR ARMOURED CABLE	NICK.PL.BRASS			~~NOTE 2~~
4	ARMOURED CABLE				
5	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		NOTE 1
6	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$		NOTE 1
7	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L			

NOTES:
1) FOR EARTHING BAR SEE TYPICAL DETAILS E03
~~2) CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	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 CABLE ARMOUR BY CABLE GLAND

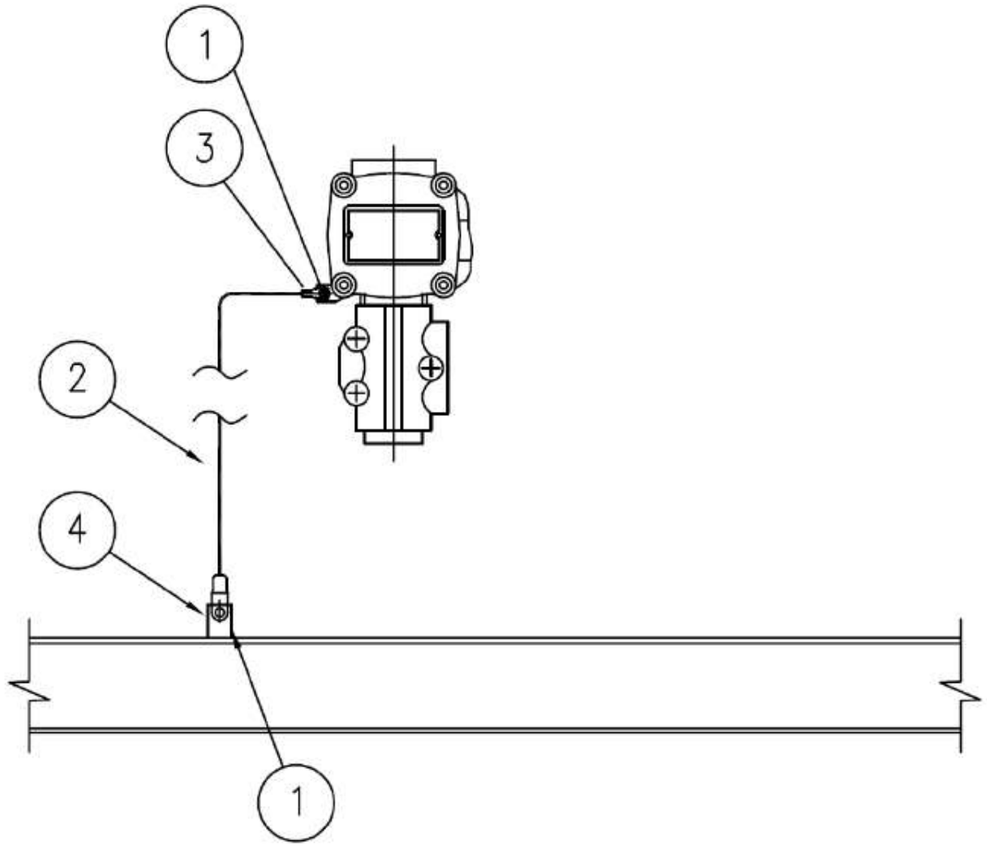
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

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

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

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

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 027 | REV. 02

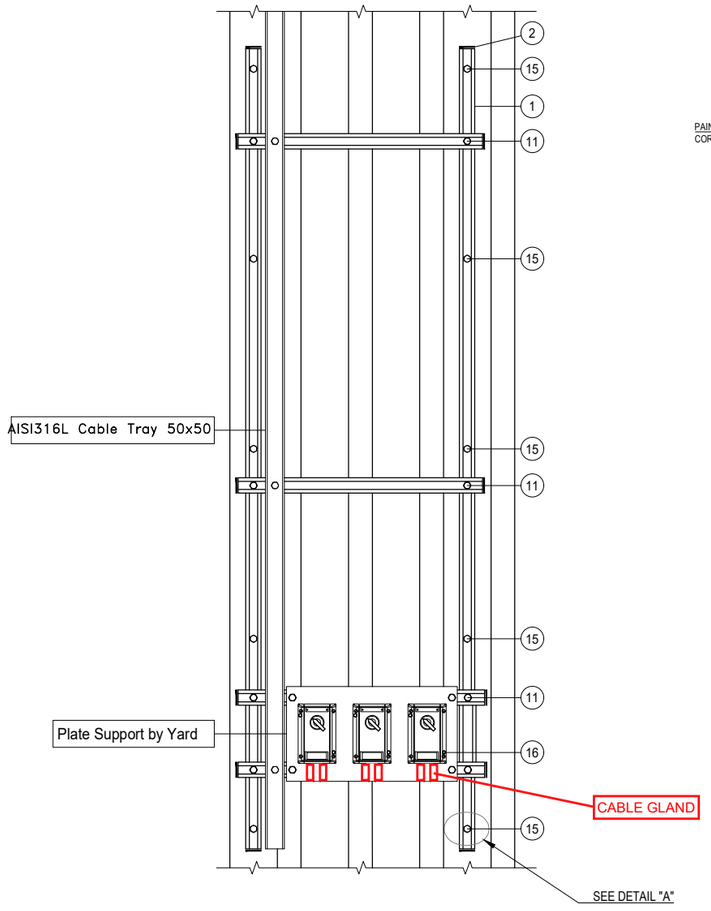
F.to UNI A3: 420mmx297mm

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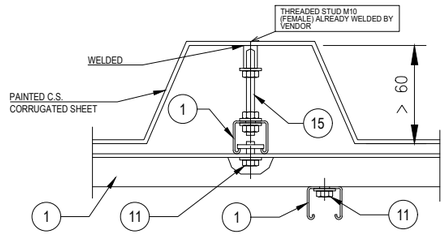
I-4

DRAWING NO. 123A90-DDL-IN-DD-40017

REV. 00



DETAIL "A"



POS.	DESCRIPTION	Q.TY
1	AISI 316L U-CHANNEL 41x41	5m
2	LDPE PLUG FOR U-CHANNEL 41x41	12
11	AISI 316L SPRING NUT M8 FOR U-CHANNEL 41X41 + BOLT M8x35 + WASHER M8	18
15	THREADED ROD M10 (L=110mm) + PLATE WASHER, LARGE PLATE WASHERS SPRING WASHER AND NUTS	10
16	AISI 316L BOLT M5x35 + NUT M5 + WASHER M5	6

CONTAINER	ITEM	DESCRIPTION	TAGNAME
B-100 ~~B-101~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-011B~~ 77-HS-001B
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-012B~~ 77-HS-002B
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-013B~~ 77-HS-003B
B-200 ~~B-201~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-014B~~ 77-HS-004B
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-015B~~ 77-HS-005B
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-016B~~ 77-HS-006B

NOTES

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/09/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	11/07/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-123A90-FDL-IN-DD-40017

REV.:	DATE:	SIGNATURE:
1_B	18/09/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
HAND SWITCH OUTSIDE CONTAINERS

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

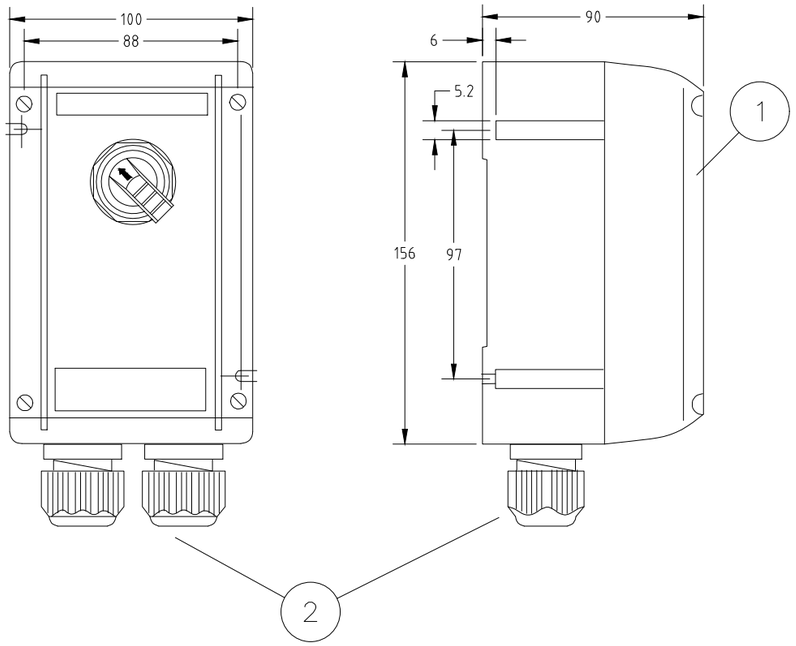
A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 047	REV. 01

PUSH BUTTON DPDT CONTACT

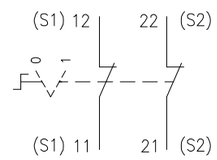
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

INSTALLATION
QUANTITY

32



WIRING



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	03/09/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/07/24	DB	MO	SM	ISSUE FOR REVIEW (IFR)

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
GENERAL ARRANGEMENT
PUSH BUTTON DPDT CONTACT

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

SCALE : NTS

A3

DRAWING NO. 1724000821-IN-DA-00003

SHEET 014

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 01



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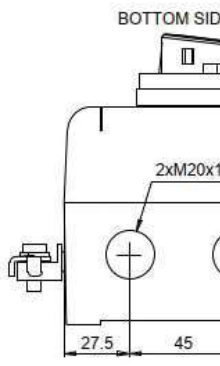


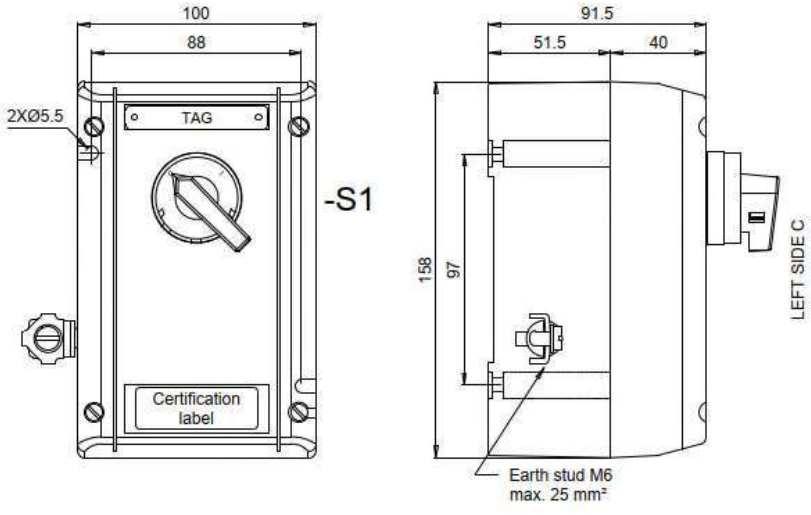
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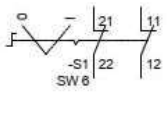
Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ib m IIC T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEx Certificate of Conformity	IECEx BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 up to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 110 V / I_e 0.5 A	Ex23 AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.5 A
Connecting terminals	2 x 4 mm²	
Protection class	I	
Degree of protection accd. to EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	2 x M25 cable gland incl. 1 blanking plug or optional 2 x M20 thread with internal brass plate	
Enclosure material	Polyamide	
Enclosure colour	black	

	Type 432
Dimensions (L x W x H)	156 x 100 x 90 mm
Weight (empty)	0.47 kg

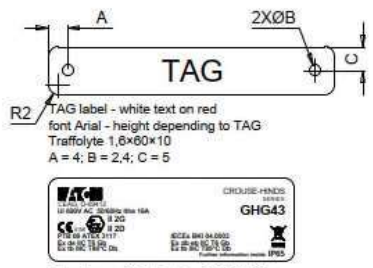






Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Techical data:
Manufactured by Eaton Crouse-Hinds Division
Model: GHG 432
Certificate No.
PTB 00 ATEX 3117
IECEx BKI 04.0003
Marking: ATEX and IECEx
II 2G Ex de IIC T6 Gb
II 2D Ex tb IIIC T80°C Db
-40°C ≤ tamb ≤ +55°C
Ui 690V
IP65

Specific characteristics:
- Polyamide (PA), black
- Closed with stainless steel screw
- Bottom with internal earth plate in brass
- M6 internal/external stainless steel earth stud

Components:
- No. 1 black selector switch with 2 position 2NC

Entries bottom side B:
- No. 2 M20 threaded taped with transit tape

No.1 1,6×60×10 mm white text on red background traffolyte tag fixed with stainless steel screws on the cover, sealed on the back with PU adhesive and engraved

Also a certification label fixed with back self adhesive on the cover

Quantity: 32

ITEM	Tag	B-100	: Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100			Dwg	1724000049-AR-DA-00015
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100			Module	LD_B-100
TASK	code	C10002297		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CZX01I		Package - I

1	Check that electrical component is not damaged.	OK
2	Check that the cables are adequately supported and protected.	Note
3	Check that the equipment, including cables and glands, have been correctly installed (only visual inspection).	Note
4	Check that all equipment has been earthed and bonded.	Note
5	Check if accessibility and maintenance are possible and safe.	PL
6	Verify that all vendor punch list created during FAT are uploaded in the Database.	OK
7	Check if accessibility and maintenance are possible and safe.	OK
8	Check identification tag plate	Note
9	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note : Refer to Punch list raised during first step of FAT:

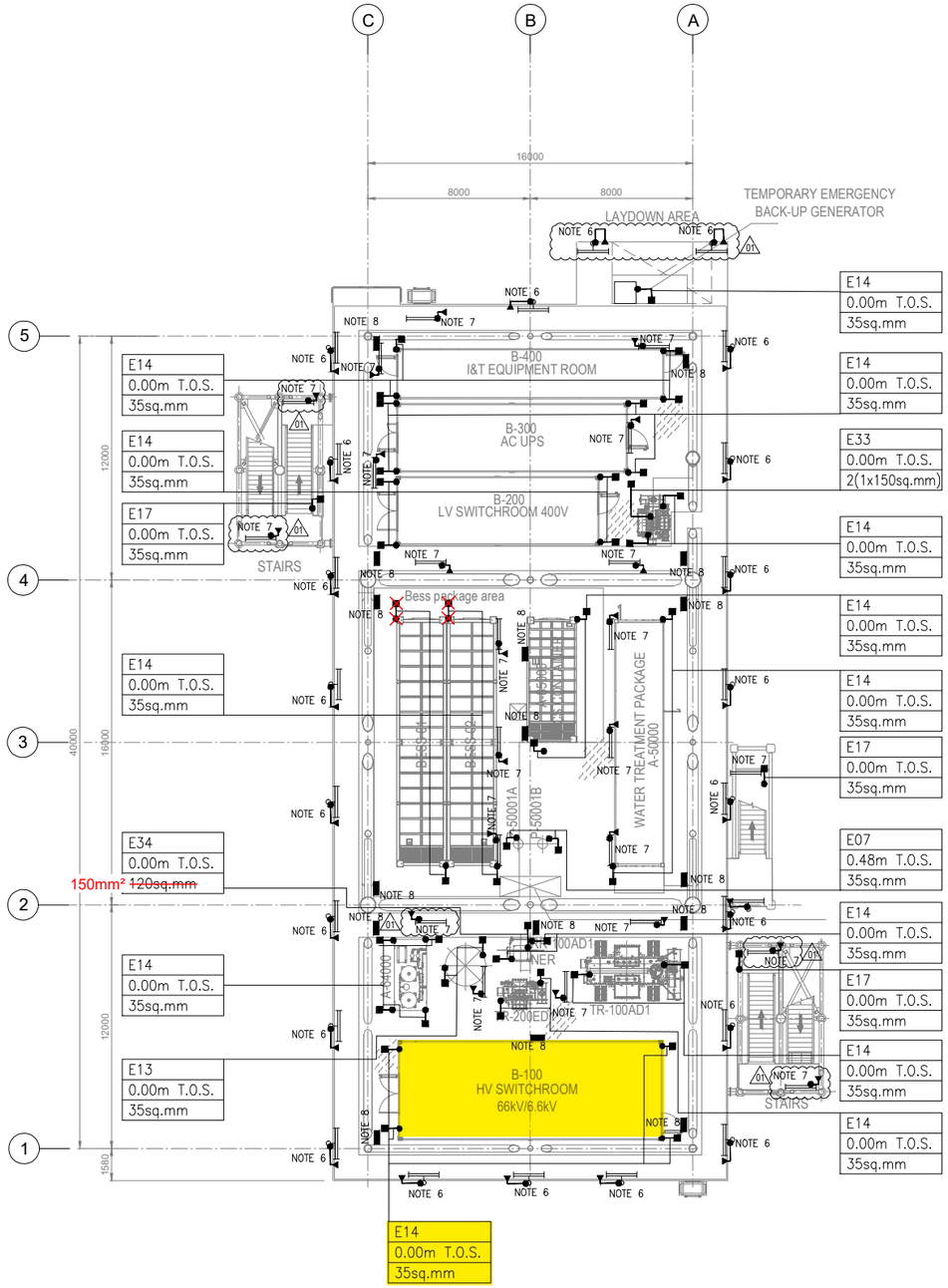
Point 2 PL: C30000022
Point 3 PL: C30000042 / C30000046
Point 4 PL: C30000084
Point 8 PL: C30000034

FAT will be completed at RM yard after MC phase.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-17	2024-10-18	
Signature	Digitaly signed by Carmelo Bongiovanni 2024-10-17T16:33:38.423Z	Digitaly signed by Giovanni Tangianu 2024-10-18T11:22:47.976Z	

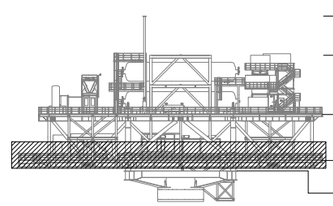
DRAWING NO. 123A90-DDL-EL-DL-20133

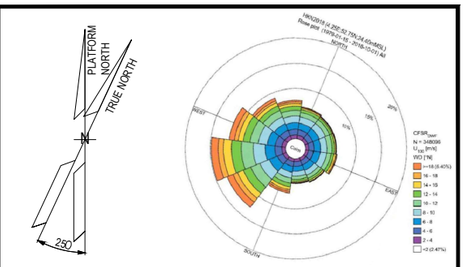
REV. 01



PLAN ON LOWER DECK
EL+23.310 T.O.S.

KEY PLAN





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DOCUMENT IS ONLY VALID FOR EARTHING LAYOUT.
4. ALL ELECTRICAL EQUIPMENT NOT DIRECTLY WELDED TO SKID FRAME SHALL BE BONDED TO STEEL TO THE STRUCTURE OF SKID BASEFRAME.
5. FOR LIGHTNING PROTECTION SYSTEM SURGE PROTECTIVE DEVICES (SPD), REFER TO THE DOCUMENT 123A90-DDL-EL-RE-20154.
6. ALL NON-WELDED POLES WILL BE EARTHED AS PER TYPICAL E05 AND E24. 01
7. ALL LINEAR LIGHTING FIXTURE WILL BE EARTHED AS PER TYPICAL E32.
8. EARTH BAR WILL BE FIXED TO THE PRIMARY BEAMS OF THE UPPER DECK. COMPLETE EARTHING INCLUDING WITH 2 THREADED STUDS. ALL EARTH BAR WILL BE EARTHED AS PER TYPICAL E03D / 6.00M T.O.S. / 35 SQ MM.
9. EQUIPOTENTIAL BONDING GROUPING FOR BOLTED HANDRAILS ARE PROVIDED EVERY 3M FOR THE ENTIRE PERIMETER AS TYPICAL E16 AND WILL BE DEFINED DURING ASSEMBLY PHASE

LEGEND

- LIGHTING FIXTURE POLE MOUNTED
- LINEAR LIGHTING FIXTURE
- EARTHING BOSS AISI316L
- COMPRESSION TYPE LUG TINNED COPPER
- THREADED STUD FOR EARTHING CONNECTION
- Exx EARTHING TYPICAL CODE
- EARTHING BAR

TYP.	TYPICAL
ELE	ELEVATION
SIZE	

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DD-20090	ELECTRICAL TYPICAL INSTALLATION DETAILS - EARTHING SYSTEM
123A90-DDL-EL-RE-20154	LIGHTNING PROTECTION SYSTEM CALCULATION REPORT
123A90-DDL-EL-DL-20119	LIGHTING & SOCKET LAYOUT - LOWER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	25/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	29/05/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING & LIGHTNING LAYOUT
LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 25/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20133	SHEET 001	REV. 01

SHEET 001 OF 002

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20133**

REV.:	DATE:	SIGNATURE:
1_B	11/09/24	G.Randi

ROSETTI MARINO SpA

File Name : 123A90-DDL-EL-DL-20133

PLATFORM NORTH
TRUE NORTH

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20136**

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

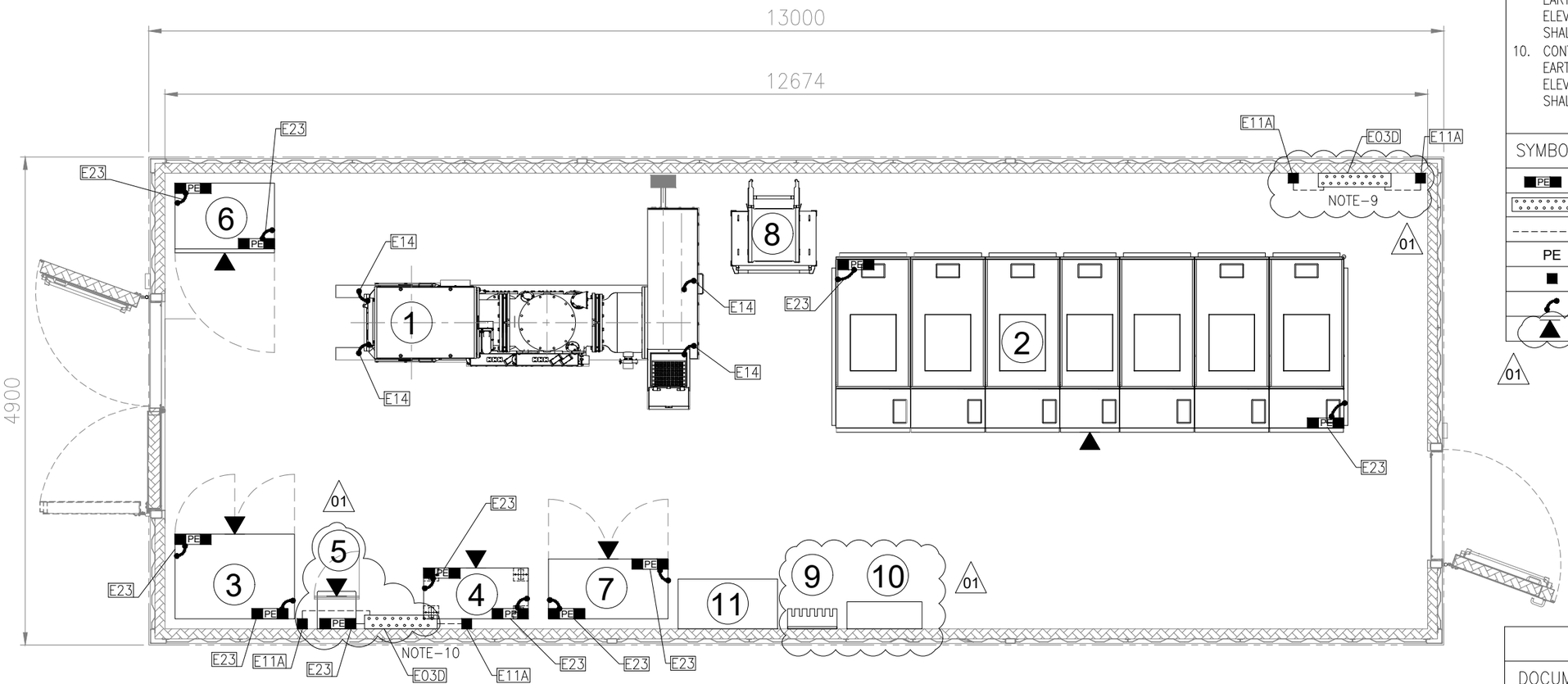
ROSETTI MARINO SpA

EQUIPMENT LIST		
REF.	TAG No.	DESCRIPTION
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)
2	SG-100D1	6.6kV SWITCHGEAR
3	UP-200F1	DC UPS PANEL
4	BA-200F1	DC UPS BATTERY RACK
5	CB-200F1	ISOLATOR FOR DC UPS
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL – HV SWITCH ROOM
8	–	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR
9	–	TOOL BOX
10	–	ELECTRIC SAFETY KIT
11	–	TABLE

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 NON WELDED OBJECTS SHALL BE EARTHED.
9. CONTAINER WILL HAVE A BTH (EARTHING BAR TINNED COPPER) WITH 2 EARTHING BOSS, INSTALLED IN THE NORTH-EAST CORNER AT AN ELEVATION OF 2.8M FROM THE CONTAINER FLOOR. EARTHING BOSS SHALL BE INSTALLED AT SAME ELEVATION 2.8M.
10. 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-100-HV(66kV/6.6kV) 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-20104	ELECTRICAL EQUIPMENT LAYOUT- HV SWITCHROOM
01 1724000049-AR-DD-00018	B-100 DETAILED DRAWINGS-E&I SHELTERS

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

CROSSWIND
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING & LIGHTNING LAYOUT-HV SWITCHROOM "B-100"HV SWITCHROOM

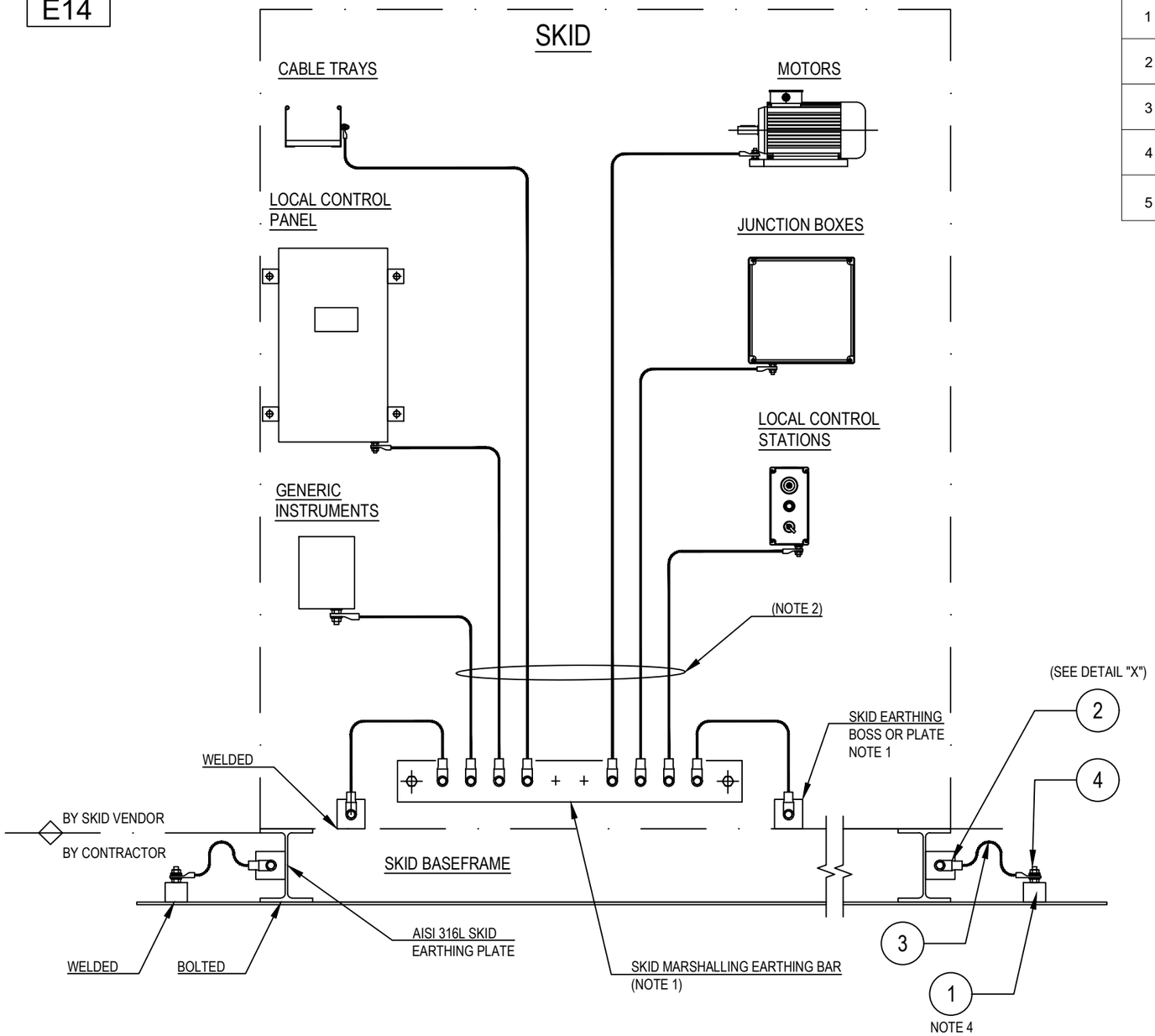
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A3	DRAWING NO.	SHEET	REV.
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F.to UNI A3: 420mmx297mm

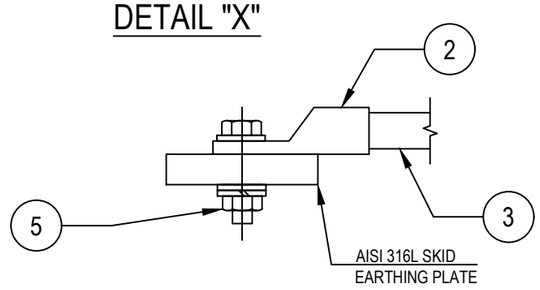
File Name : 123A90-DDL-EL-DL-20136 Rev. 01

E14



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50		NOTE 5
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	35mm^2		~~NOTE 3~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	35mm^2		~~NOTE 3~~
4	STUD BOLT WITH PLANE WASHER, SPRING WASHER AND NUT	AISI 316L	M10X50		
5	HEXAG. BOLT COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30		

DETAIL "X"



NOTES:
1) EARTHING BAR/BOSS/PLATE SUPPLIED BY SKID MANUFACTURER
2) ALL EQUIPMENTS AND CABLE TRAYS WILL BE EARTHING ON SKID EARTHING BAR BY SKID MANUFACTURER
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY~~
4) FOR EARTHING BOSS TYPICAL DETAIL E11A
5) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

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

REV.:	DATE:	SIGNATURE:
2_F	17/10/24	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 SKID BASEFRAME

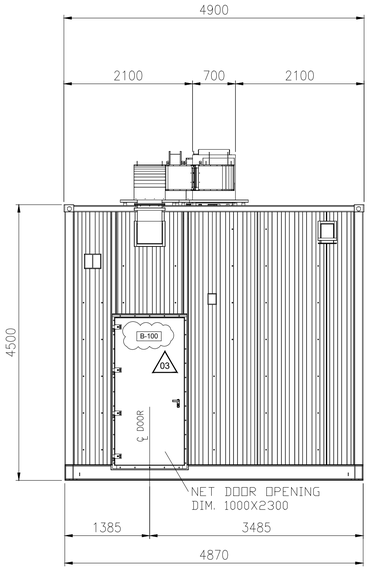
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 014 | REV. 02

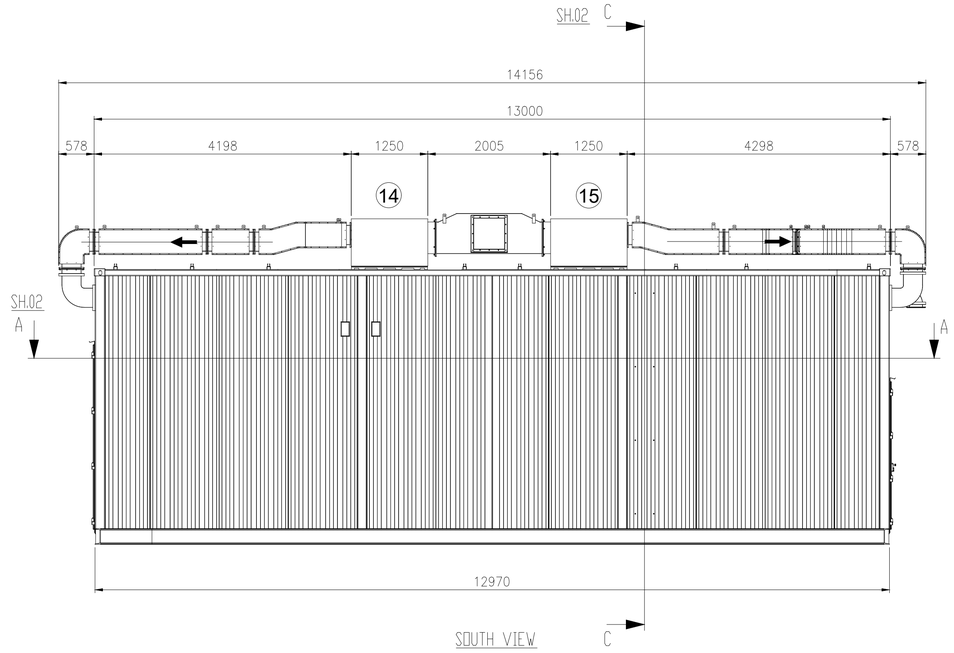
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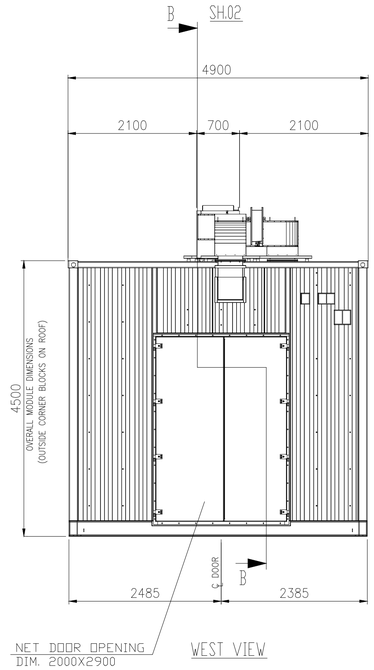
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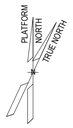
EAST VIEW

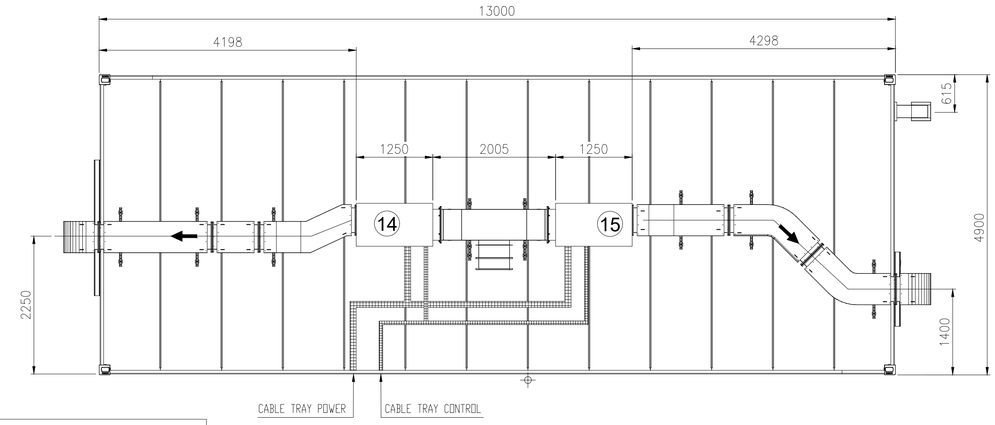


SOUTH VIEW



WEST VIEW

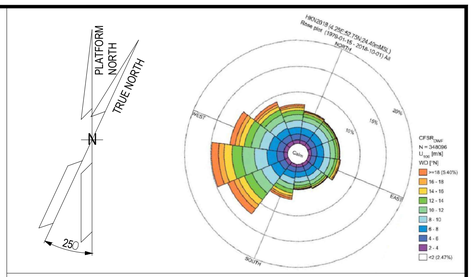




TOP VIEW

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	2600
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	7400
3	UP-200F1	DC UPS PANEL	1200	850	2105	500
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	522
5	CB-200F1	ISOLATOR FOR DC UPS	600	300	800	100
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2100	2100
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV ROOM	1200	600	1900	400
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	70
9	-	TOOL BOX	495	335	920	20
10	-	ELECTRIC SAFETY KIT	230	110	280	20
11	-	TABLE	1000	500	750	50
12	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
14	HHU-77001	AIR HANDLING UNIT A	1250	850	900	140
15	HHU-77002	AIR HANDLING UNIT B	1250	850	900	140
16	HSS-77-001	SPACE HEATER 1	184	145	1100	5
17	HSS-77-002	SPACE HEATER 2	184	145	1100	5
18	HSS-77-003	SPACE HEATER 3	184	145	1100	5



NOTE

1) ALL DIMENSIONS ARE IM MM.
2) THE POSITION OF THE LAMPS INDICATED IS TO BE CONSIDERED THE THEORETICAL ONE, THE FINA ONE WILL BE CONFIRMED IN THE AS-BUILT ISSUE.

REFERENCE

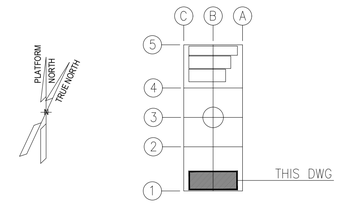
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00064
"B-100" DETAILED DRAWING	1724000049-AR-DD-00018
PAINTING PROCEDURE	1724000049-MAT-PRO-00004
"B-100" FOUNDATION	1724000049-ST-DD-00010
"B-100" STRUCTURAL CALCULATION	1724000049-ST-CA-00006

LEGEND

- INTERNAL LIGHT
- E INTERNAL EMERGENCY LIGHT
- SOCKET OUTLET, INDOOR
- LIGHT SWITCH
- ESCAPE CORRIDOR – WIDTH 800mm.
- MAINTENANCE AREA – VENDOR REQUIREMENT
- INSULATION PANEL

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	28/06/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	14/05/24	M.G.	SKV	C.A.	ISSUE FOR REVIEW (IFR)
00	08/02/24	A.G.	SKV	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

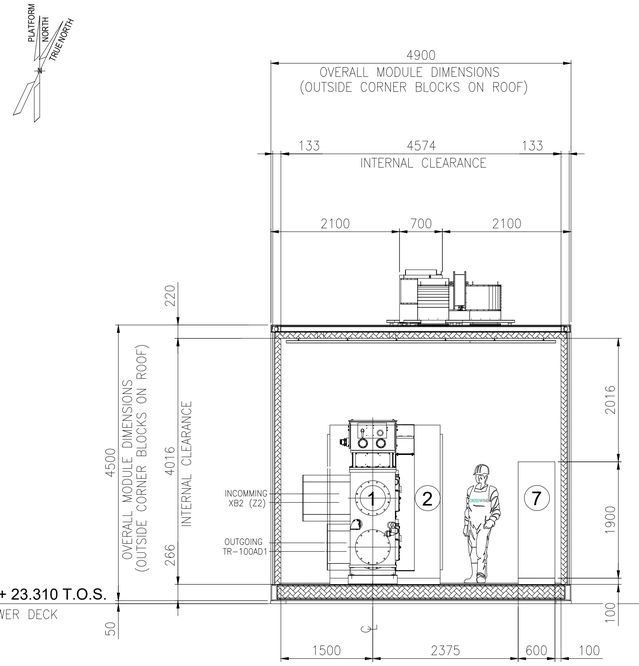
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-100 GENERAL ARRANGEMENT DRAWINGS

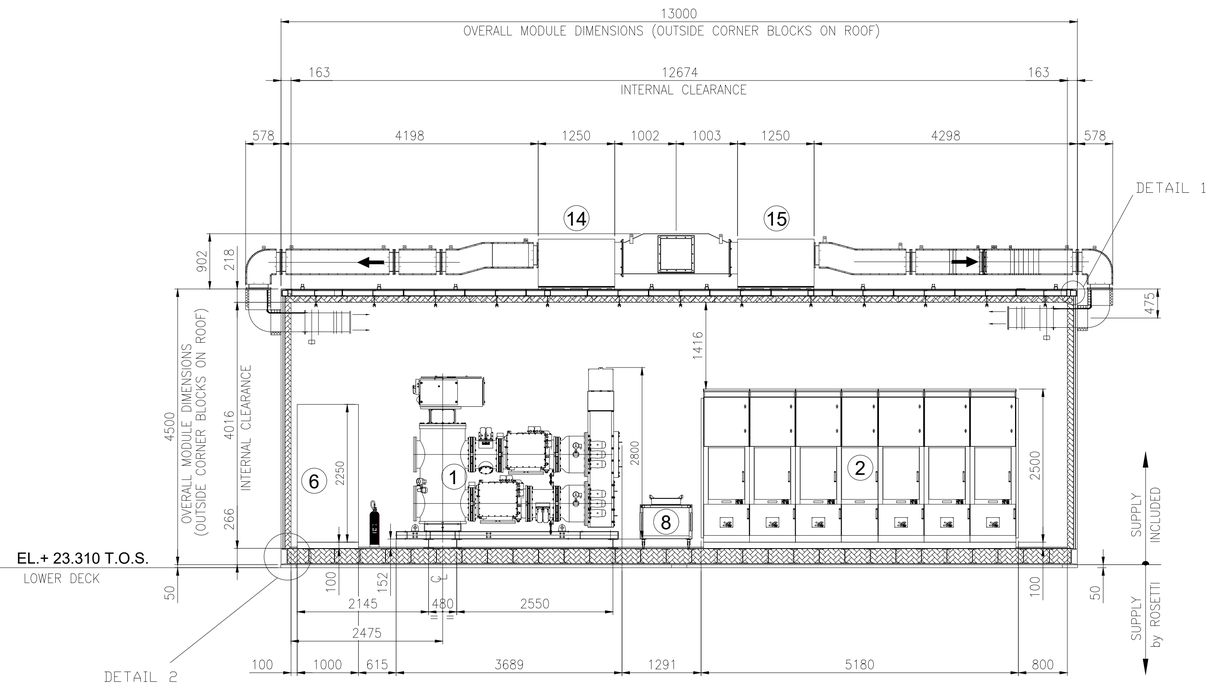
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DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00014	SHEET 001	REV. 03

File Name : 1724000049-AR-DA-00014-REV.03

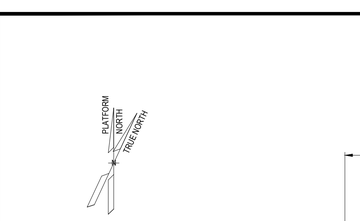
DRAWING NO. 1724000049-AR-DA-00014 REV. 03



SECTION C-C

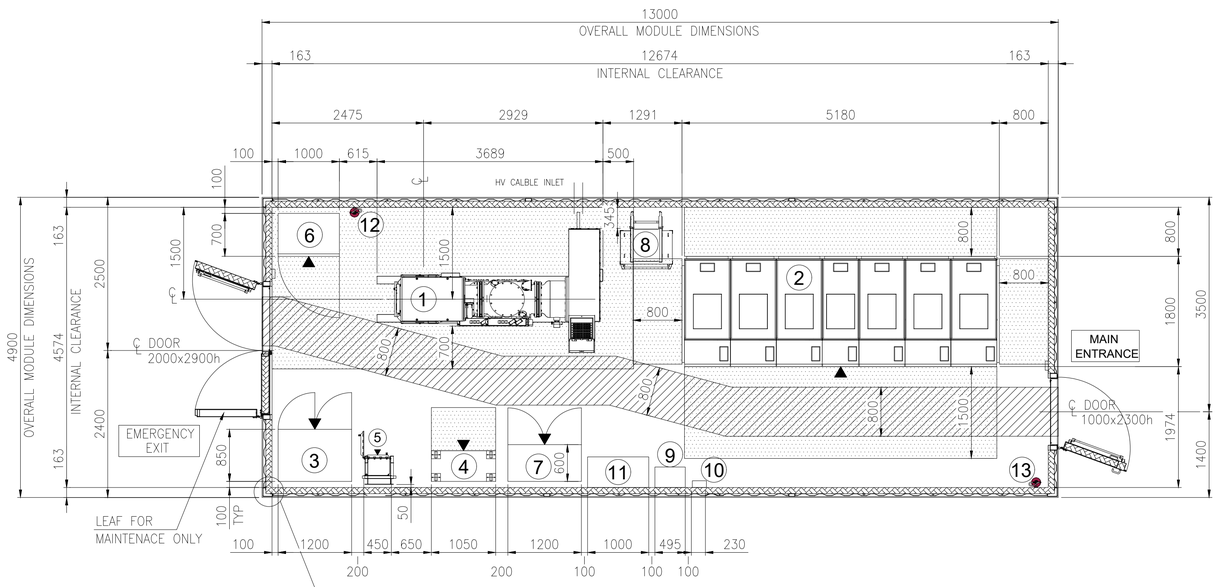


SECTION B-B

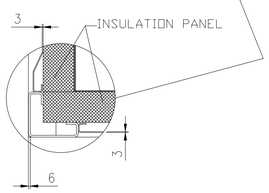


EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	2600
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	7400
3	UP-200F1	DC UPS PANEL	1200	850	2105	500
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	522
5	CB-200F1	ISOLATOR FOR DC UPS	600	300	800	100
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2100	2100
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV ROOM	1200	600	1900	400
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	70
9	-	TOOL BOX	495	335	920	20
10	-	ELECTRIC SAFETY KIT	230	110	280	20
11	-	TABLE	1000	500	750	50
12	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
14	HHU-77001	AIR HANDLING UNIT A	1250	850	900	140
15	HHU-77002	AIR HANDLING UNIT B	1250	850	900	140
16	HSS-77-001	SPACE HEATER 1	184	145	1100	5
17	HSS-77-002	SPACE HEATER 2	184	145	1100	5
18	HSS-77-003	SPACE HEATER 3	184	145	1100	5



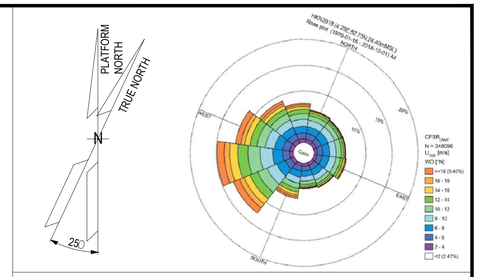
SECTION A-A



EQUIPMENT LAYOUT

"B-100" HV (66kV/6.6kV) SWITCHGEAR ROOM

BOTTOM PLAN



NOTE

1) ALL DIMENSIONS ARE IM MM.
2) THE POSITION OF THE LAMPS INDICATED IS TO BE CONSIDERED THE THEORETICAL ONE, THE FINA ONE WILL BE CONFIRMED IN THE AS-BUILT ISSUE.

03

REFERENCE

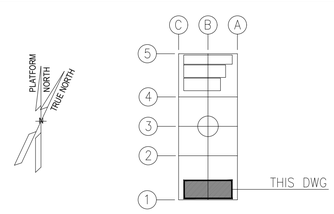
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00064
"B-100" DETAILED DRAWING	1724000049-AR-DD-00018
PAINTING PROCEDURE	1724000049-MAT-PRO-00004
03 "B-100" FOUNDATION	1724000049-ST-DD-00010
03 "B-100" STRUCTURAL CALCULATION	1724000049-ST-CA-00006

LEGEND

- INTERNAL LIGHT
- E INTERNAL EMERGENCY LIGHT
- SOCKET OUTLET, INDOOR
- LIGHT SWITCH
- ESCAPE CORRIDOR – WIDTH 800mm.
- MAINTENANCE AREA – VENDOR REQUIREMENT
- INSULATION PANEL

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	28/06/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	14/05/24	M.G.	SKV	C.A.	ISSUE FOR REVIEW (IFR)
00	08/02/24	A.G.	SKV	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

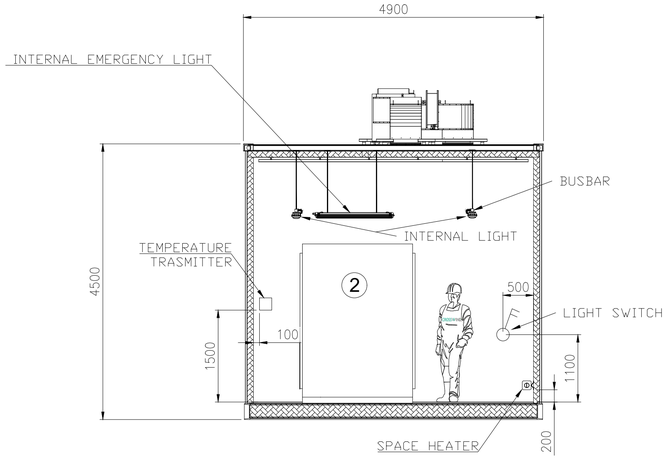
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-100 GENERAL ARRANGEMENT DRAWINGS

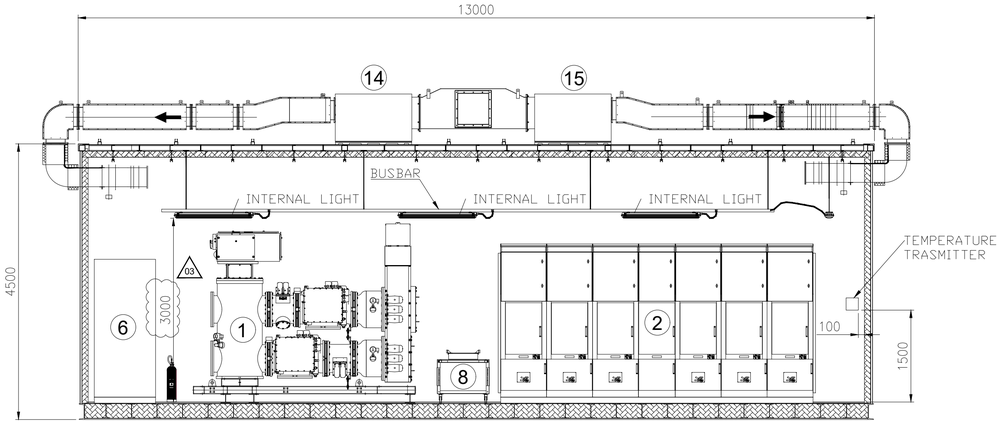
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00014	SHEET 002	REV. 03

File Name : 1724000049-AR-DA-00014-REV.03

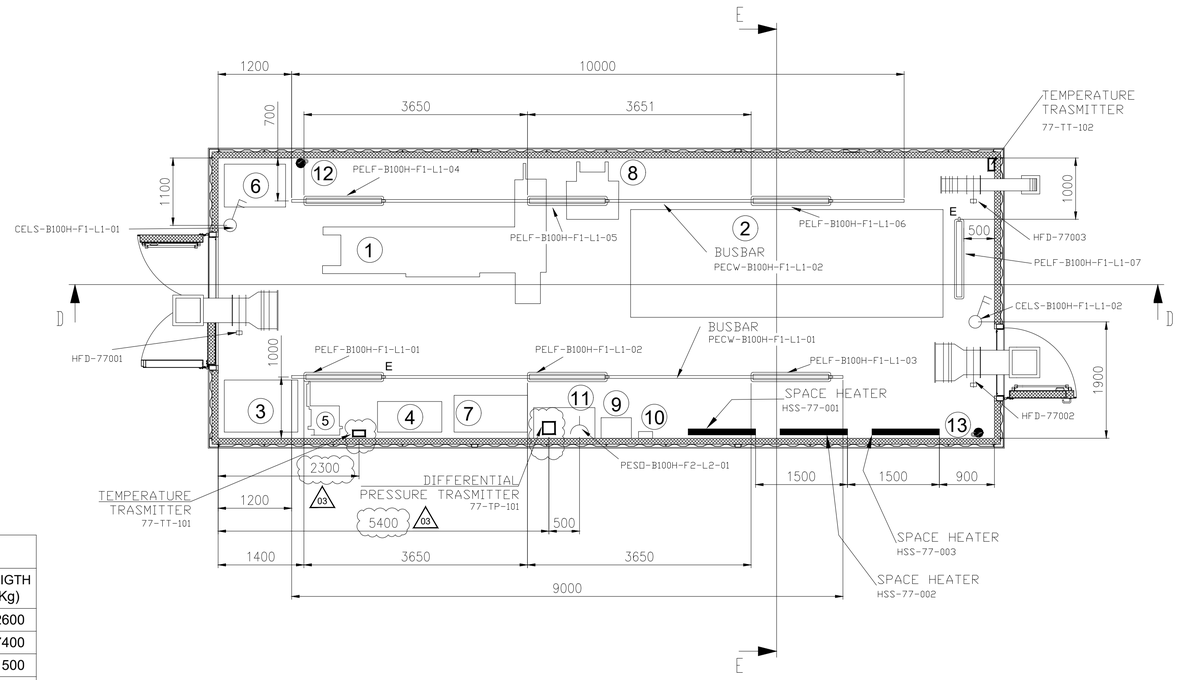
DRAWING NO. 1724000049-AR-DA-00014 REV. 03



SECTION E-E

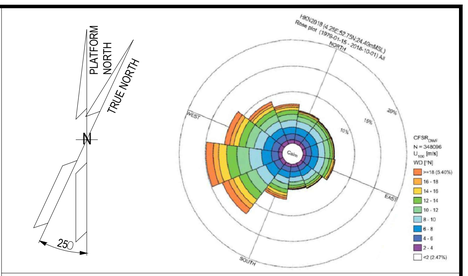


SECTION D-D



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	2600
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	7400
3	UP-200F1	DC UPS PANEL	1200	850	2105	500
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	522
5	CB-200F1	ISOLATOR FOR DC UPS	600	300	800	100
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2100	2100
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV ROOM	1200	600	1900	400
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	70
9	-	TOOL BOX	495	335	920	20
10	-	ELECTRIC SAFETY KIT	230	110	280	20
11	-	TABLE	1000	500	750	50
12	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
14	HHU-77001 (03)	AIR HANDLING UNIT A	1250	850	900	140
15	HHU-77002 (03)	AIR HANDLING UNIT B	1250	850	900	140
16	HSS-77-001	SPACE HEATER 1	184	145	1100	5
17	HSS-77-002	SPACE HEATER 2	184	145	1100	5
18	HSS-77-003	SPACE HEATER 3	184	145	1100	5



NOTE

1) ALL DIMENSIONS ARE IM MM.
2) (03) THE POSITION OF THE LAMPS INDICATED IS TO BE CONSIDERED THE THEORETICAL ONE, THE FINA ONE WILL BE CONFIRMED IN THE AS-BUILT ISSUE.

REFERENCE

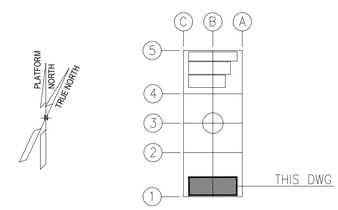
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00064
"B-100" DETAILED DRAWING	1724000049-AR-DD-00018
PAINTING PROCEDURE	1724000049-MAT-PRO-00004
(03) "B-100" FOUNDATION	1724000049-ST-DD-00010
(03) "B-100" STRUCTURAL CALCULATION	1724000049-ST-CA-00006

LEGEND

- INTERNAL LIGHT
- E — INTERNAL EMERGENCY LIGHT
- SOCKET OUTLET, INDOOR
- LIGHT SWITCH
- ESCAPE CORRIDOR – WIDTH 800mm.
- MAINTENANCE AREA – VENDOR REQUIREMENT
- INSULATION PANEL

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	28/06/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	14/05/24	M.G.	SKV	C.A.	ISSUE FOR REVIEW (IFR)
00	08/02/24	A.G.	SKV	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-100 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00014	SHEET 003	REV. 03

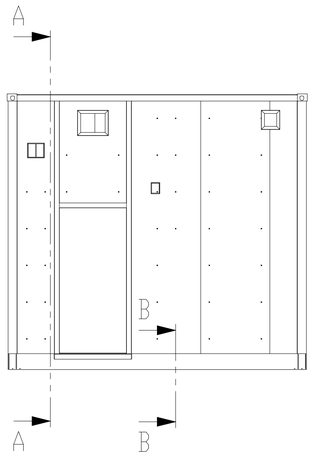
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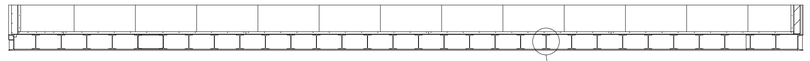
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REV. 02

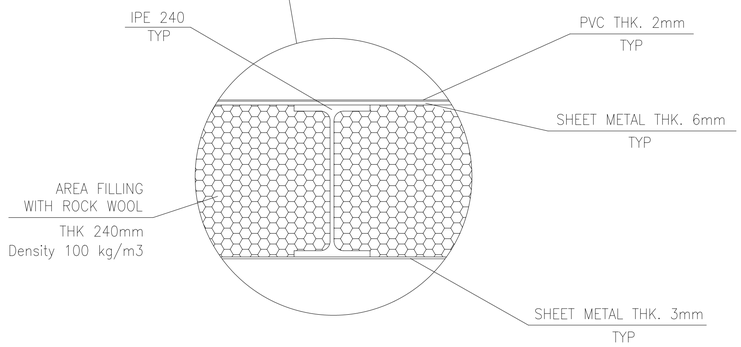
MODULE B-100

REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" STRUCTURAL CALCULATION	1724000049-ST-CA-00006
Weld Procedure Specifications (WPS), Weld Procedure Qualification Report (WPQR), Welding Map and Welders Qualifications	1724000049-WEL-RE-00003

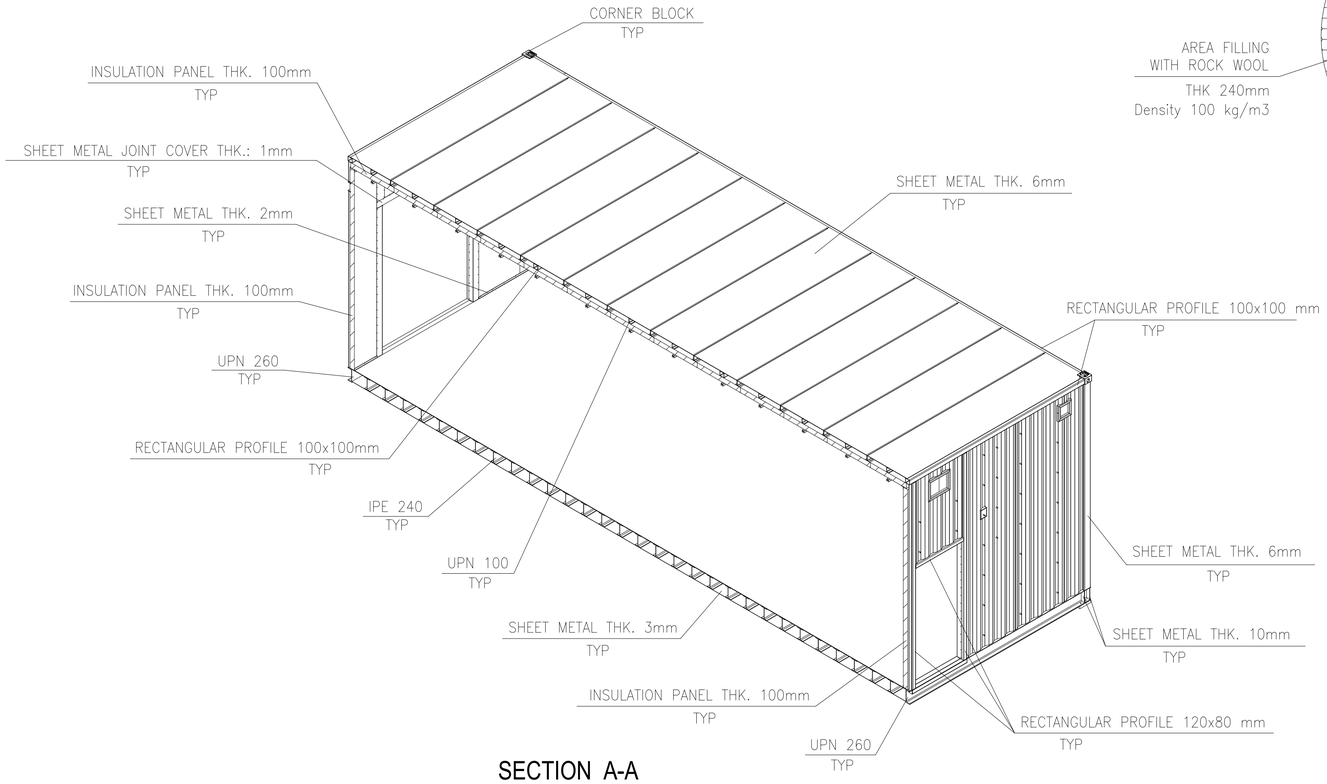




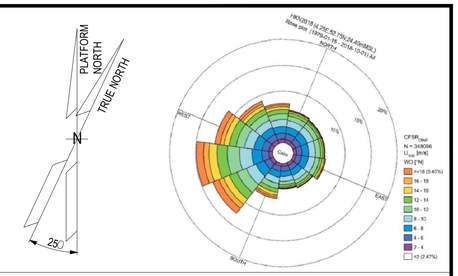
SECTION B-B



DETAIL "C"

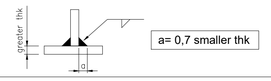


SECTION A-A



NOTES

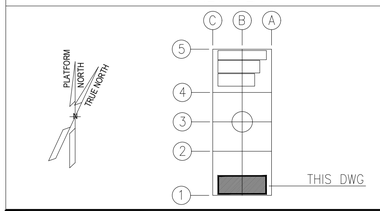
1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D.1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



LEGEND

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	11/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
01	08/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	23/05/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

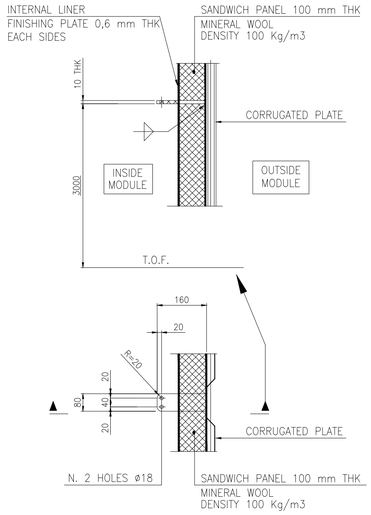
TITLE :

B-100 DETAILED DRAWINGS-E&I SHELTERS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00018	SHEET 001	REV. 02

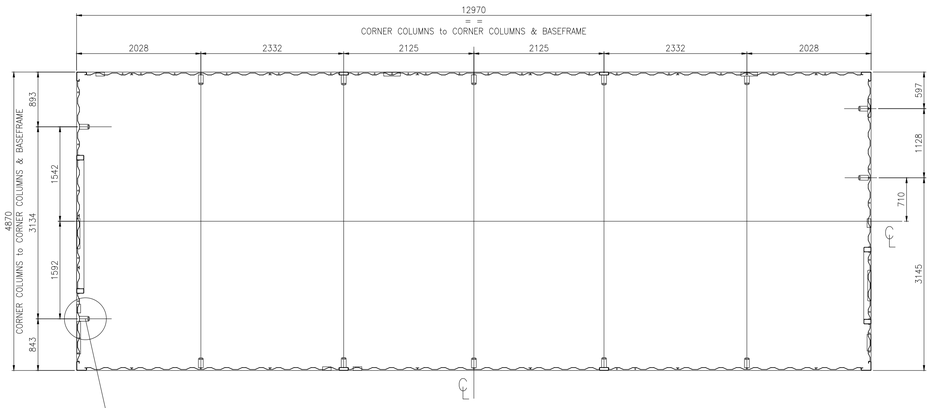
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DRAWING NO. 1724000049-AR-DD-00018 REV. 02



WEST WALL

NORTH WALL

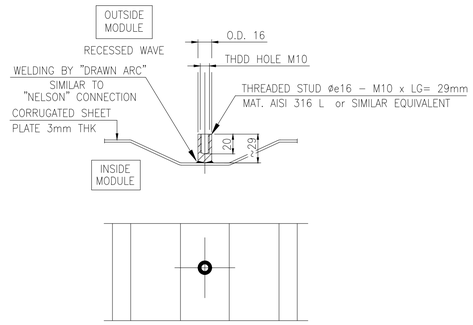


SOUTH WALL

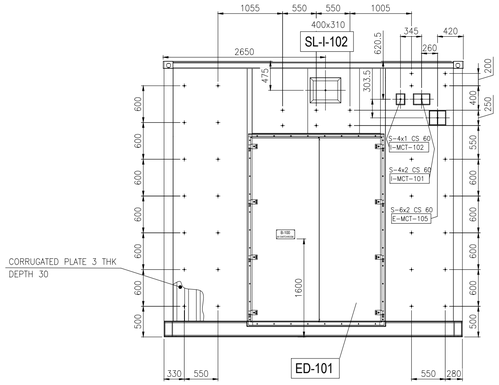
EST WALL

MODULE B-100

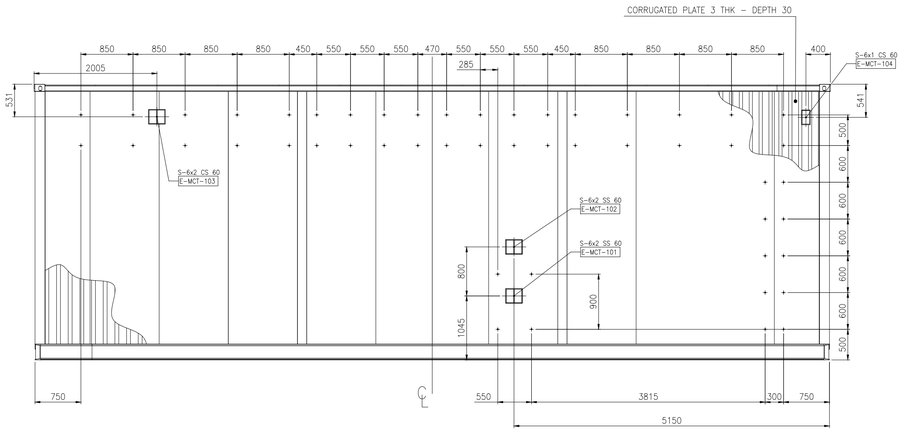
INTERNAL SEA FASTENING PLATES PLAN



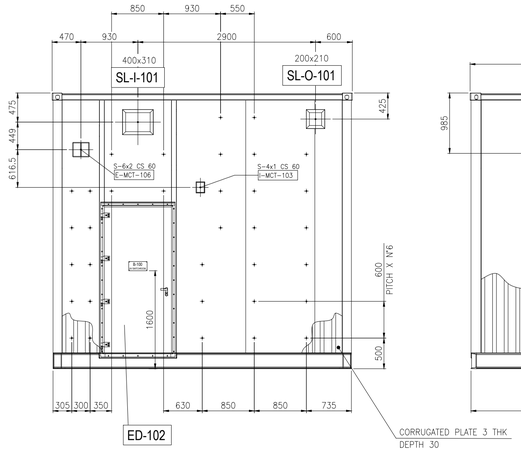
THREADED STUD INSTALLATION



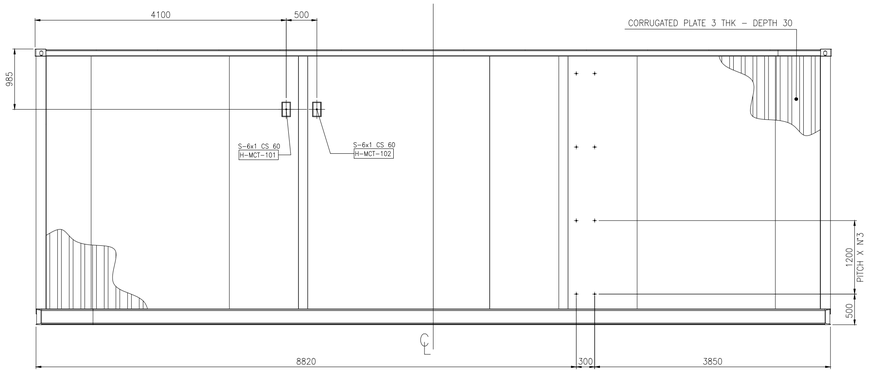
VIEW OF WEST WALL



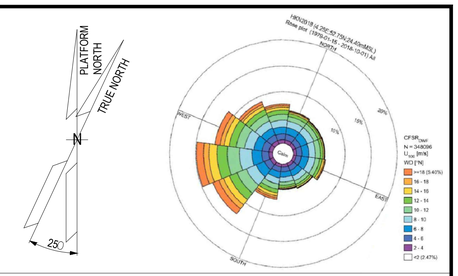
VIEW OF NORTH WALL



VIEW OF EAST WALL

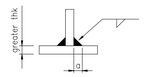


VIEW OF SOUTH WALL



NOTES

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D.1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



a= 0,7 smaller thk

LEGEND

THREADED STUD ø16 – M10 x LG= 29mm

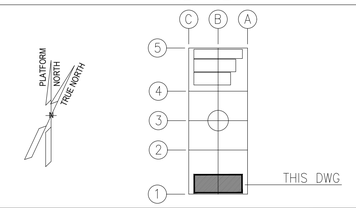
T.O.F. TOP OF FLOOR

MCT LEGEND: E-MCT-101
- MCT TYPE & SIZE / BRAND ROXTEC
- MATERIAL: C.S.= PRIMED MILD STEEL; S.S.= AISI 316 L
- MCT DEPTH: S 6x2 C.S. 60
- MCT SERVICE: E= ELECTRICAL; I= INSTRUMENTAL; H= HVAC
- PROGRESSIVE NUMBER FROM 01
- MODULE LOCATION: 1= B-100 3= B-300 2= B-200 4= B-400

HVAC SLEEVE LEGEND: SL-I-101
- INTERNAL SIZE OF DUCT L x H (mm): 300x300
- SERVICE: I= AIR IN; R= RECYRCLE; O= OVERPRESSURE
- PROGRESSIVE NUMBER FROM 01
- MODULE LOCATION: 1= B-100 3= B-300 2= B-200 4= B-400

DOOR LEGEND: ED-101
- EXTERNAL DOOR
- PROGRESSIVE NUMBER FROM 01
- MODULE LOCATION: 1= B-100; 2= B-200; 3= B-300; 4= B-400

KEY PLAN



REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00014
"B-100" HVAC GENERAL ARRANGEMENT	1724000049-HV-DA-00064

MCT LIST

SERVICE	TAG No.	MCT DIMENSIONS and INSTALLATION SENSE L (mm) HORIZONTAL	H (mm) VERTICAL	W (mm) DEPTH	MCT SIZE TYPE "S" FRAME Primed Mild Steel BRAND: ROXTEC	MCT SIZE TYPE "S" FRAME AISI 316 L BRAND: ROXTEC
ELECTRICAL	E-MCT-101	271	238	60		6x2
	E-MCT-102	271	238	60		6x2
	E-MCT-103	271	238	60	6x2	
	E-MCT-104	140.5	238	60	6x1	
	E-MCT-105	271	238	60	6x2	
	E-MCT-106	271	238	60	6x2	
INSTRUMENTAL	I-MCT-101	271	179.5	60	4x2	
	I-MCT-102	140.5	179.5	60	4x1	
	I-MCT-103	140.5	179.5	60	4x1	
HVAC	H-MCT-101	140.5	238	60	6x1	
	H-MCT-102	140.5	238	60	6x1	

ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	11/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
01	08/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	23/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND — ROSETTI MARINO

TITLE :

B-100 DETAILED DRAWINGS-E&I SHELTERS

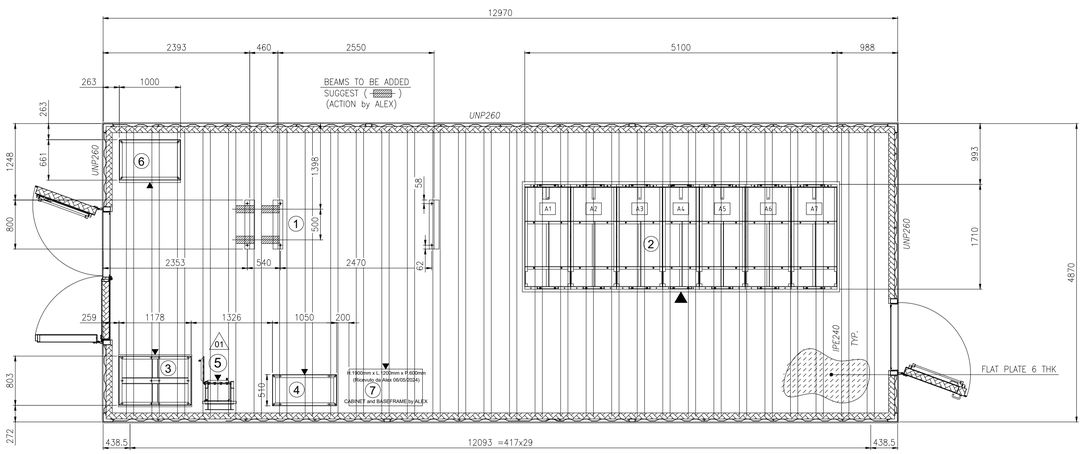
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00018	SHEET 002	REV. 02

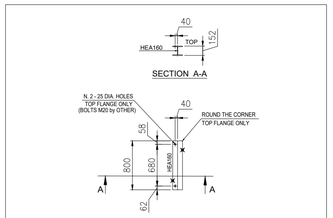
File Name : 1724000049-AR-DD-00018-REV.02

DRAWING NO. 1724000049-AR-DD-00018

REV. 02

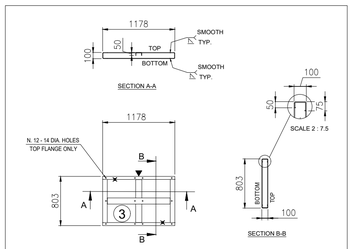
B-100
I&T EQUIPMENT ROOM
BASEFRAME LOCATION PLAN





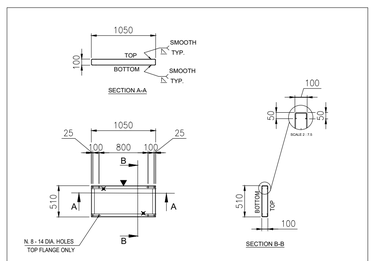
BESEFRAME FOR POS. 1

BUILT N. 3 PIECES
FOR LOCATION SEE PLAN
HEA160 MANDATORY



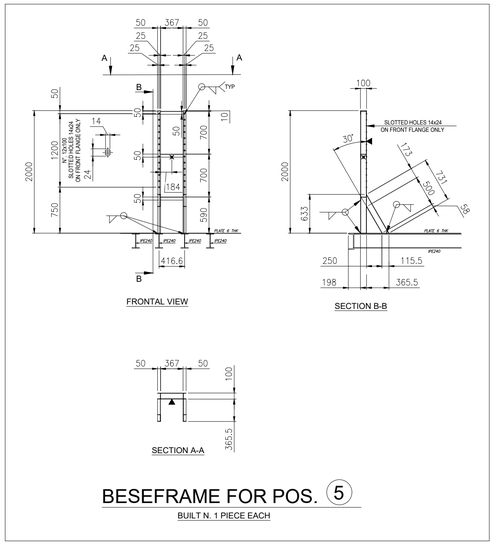
BESEFRAME FOR POS. 3

BUILT N. 1 PIECE



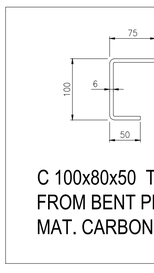
BESEFRAME FOR POS. 4

BUILT N. 1 PIECE EACH

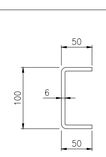


BESEFRAME FOR POS. 5

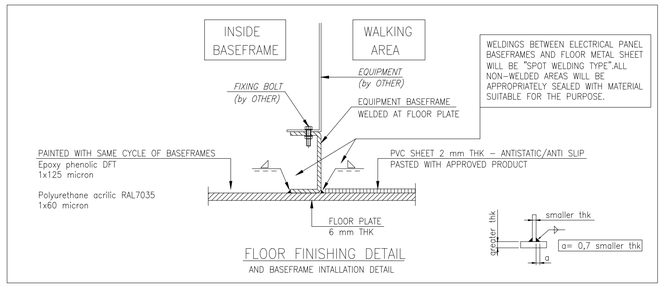
BUILT N. 1 PIECE EACH



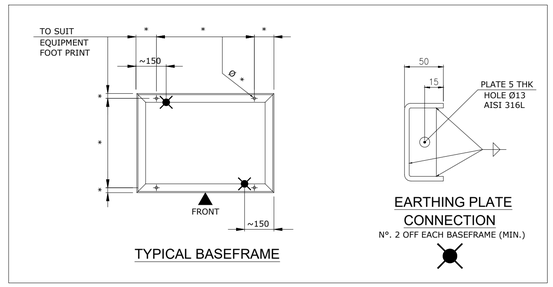
C 100x80x50 THK 6mm.
FROM BENT PLATE THK 6mm.
MAT. CARBON STEEL



C 100x50x50 THK 6mm.
FROM BENT PLATE THK 6mm.
MAT. CARBON STEEL

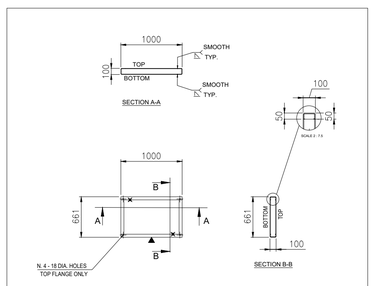


FLOOR FINISHING DETAIL
AND BASEFRAME INTALLATION DETAIL



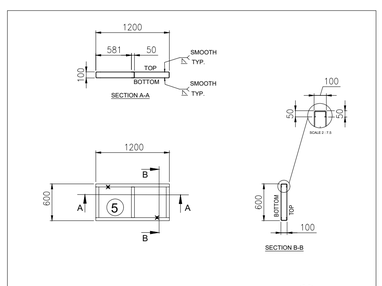
TYPICAL BASEFRAME

EARTHING PLATE
CONNECTION
N°. 2 OFF EACH BASEFRAME (MIN.)



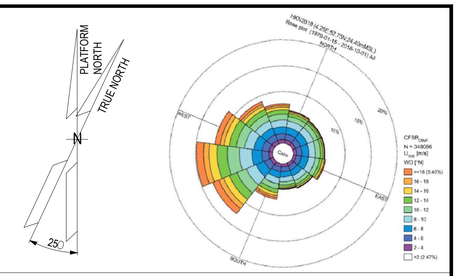
BESEFRAME FOR POS. 6

BUILT N. 1 PIECE



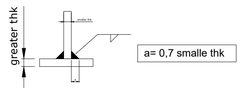
BESEFRAME FOR POS. 7

BUILT N. 1 PIECE



NOTES

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D.1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



4. ALL WELDS ON TOP & BOTTOM SIDES OF BASEFRAMES MUST BE PERFECTLY SMOOTHED.
5. WHERE INDICATED " ▲ " SHOULD BE STAMP "FRONT", ABOVE "TOP" AND BELOW "BOTTOM".

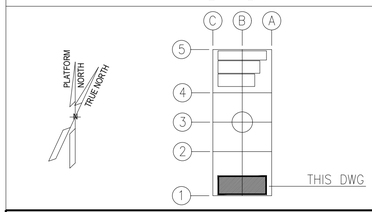


6. SURFACE TREATMENT ACCORDING DOCUMENT N. 1724000049-MAT-PRO-00004 - PAINTING PROCEDURE FINAL COLOUR LIGHT GREY RAL 7035.

LEGEND

ASI = ALEX SISTEMI

KEY PLAN



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)	SCOPE
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	2600	ASI
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	7400	ROSETTI MARINO
3	UP-200F1	DC UPS PANEL	1200	850	2105	500	ASI
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	522	ASI
5	CB-200F1	ISOLATOR FOR DC UPS	600	300	800	100	ASI
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2100	2100	ASI
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV MV ROOM	1200	600	1900	TBD	ASI

ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	11/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
01	08/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	23/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND

ROSETTI MARINO

TITLE :

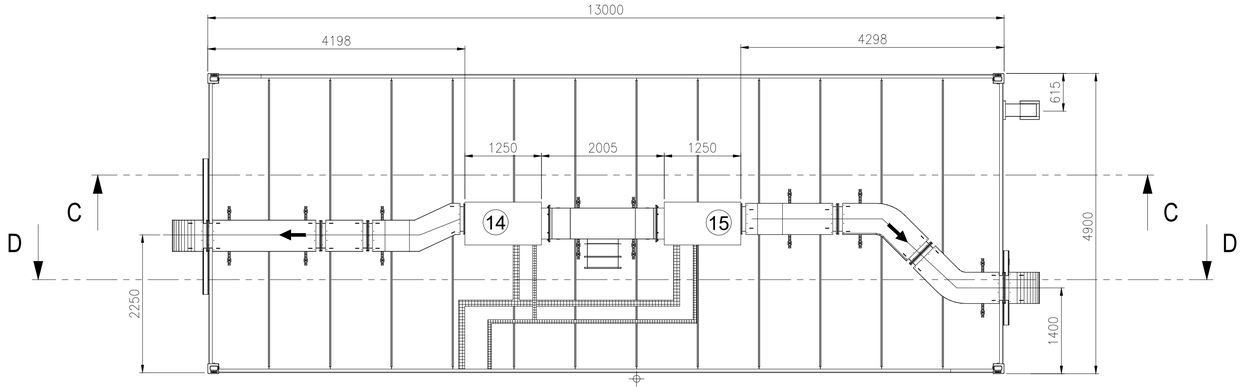
B-100 DETAILED DRAWINGS-E&I SHELTERS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00018		SHEET 003 / REV. 02

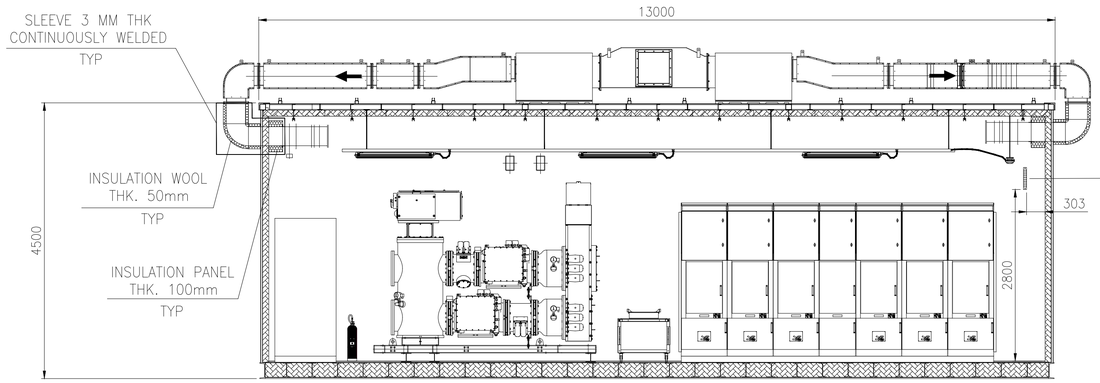
File Name : 1724000049-AR-DD-00018-REV.02

DRAWING NO. 1724000049-AR-DD-00018

REV. 02



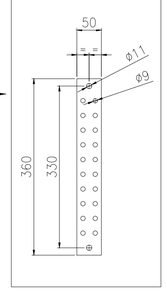
TOP VIEW



SECTION C-C

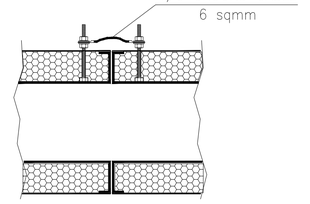
DET. 3

TYPICAL DETAIL
Ground bar



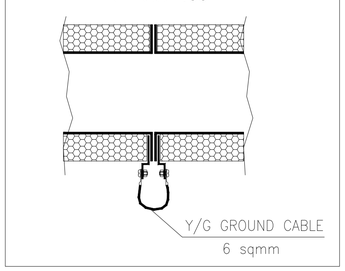
DET. 1

EXTERNAL DUCT



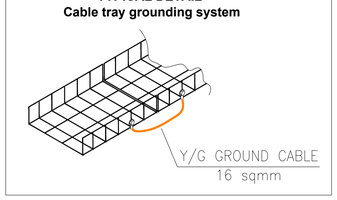
DET. 2

INTERNAL DUCT



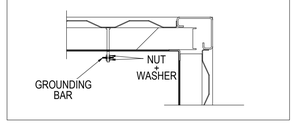
DET. 4

TYPICAL DETAIL
Cable tray grounding system



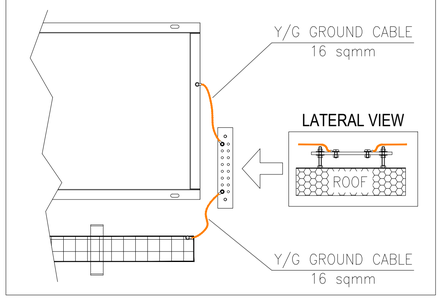
DET. 5

TYPICAL INSTALLATION BTH PE



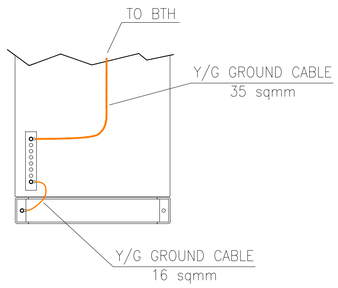
DET. 6

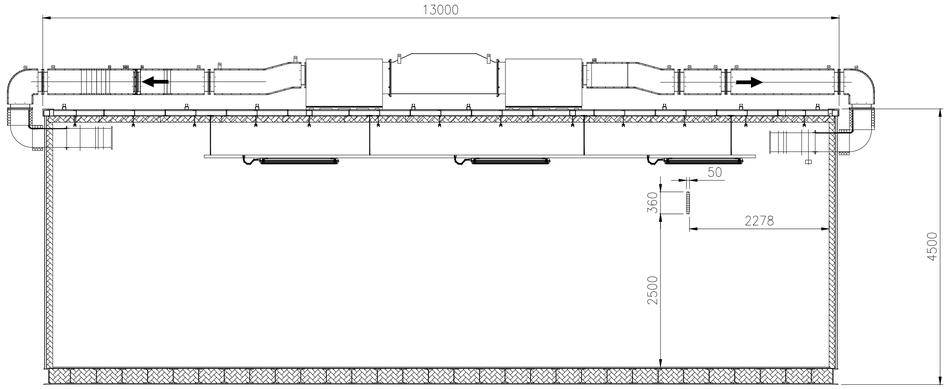
TYPICAL ROOF GROUNDING CONNECTION



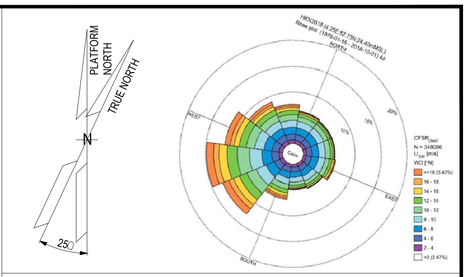
DET. 7

TYPICAL CABINET GROUNDING CONNECTION





SECTION D-D

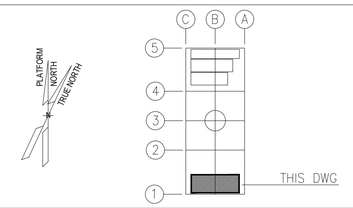


NOTES

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.

LEGEND

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	11/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
01	08/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	23/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND

ROSETTI MARINO

TITLE :

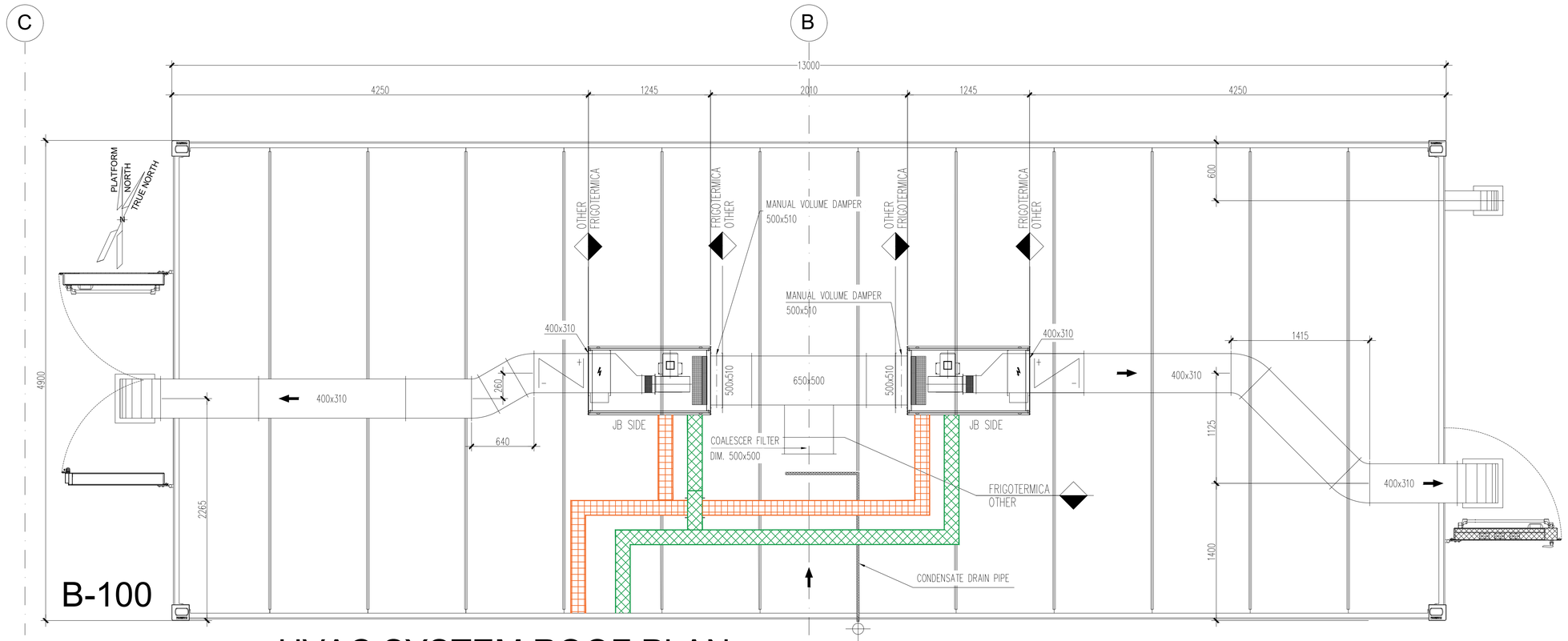
B-100 DETAILED DRAWINGS-E&I SHELTERS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00018	SHEET 004	REV. 02

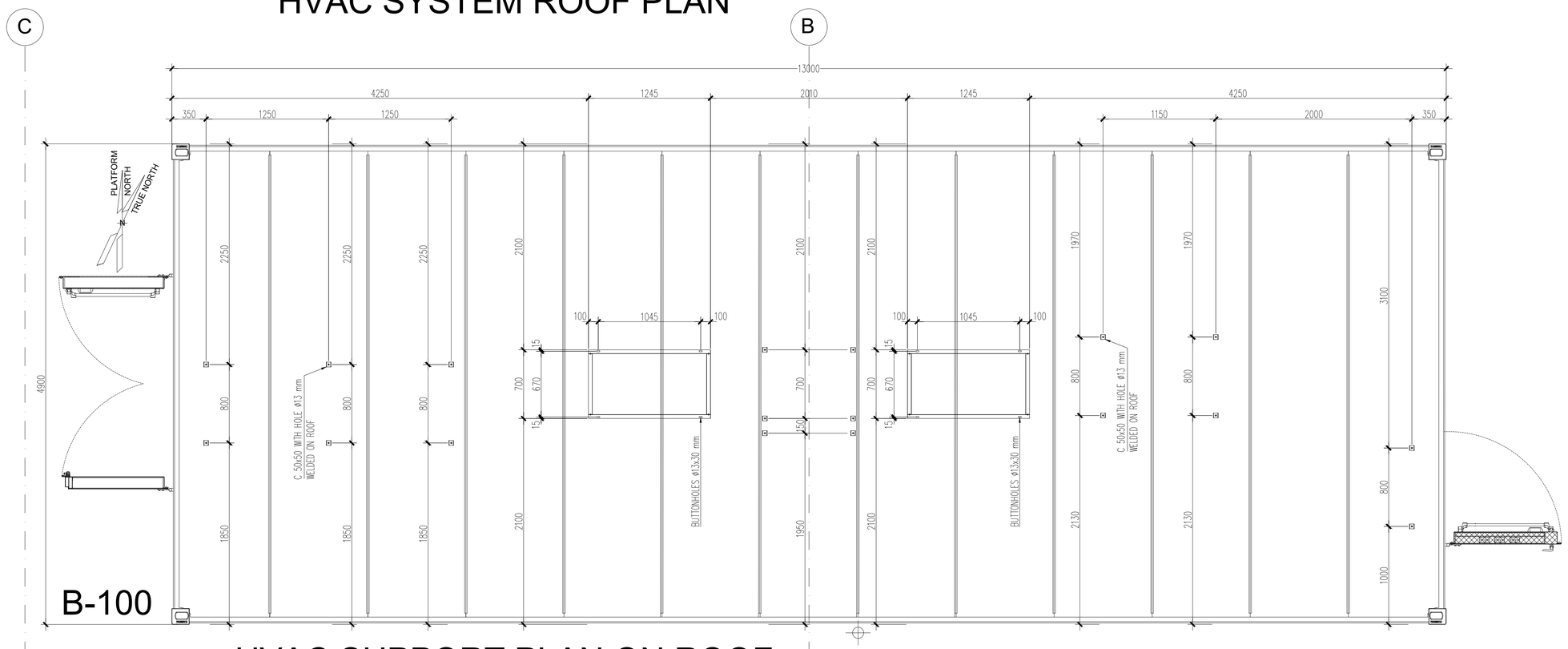
File Name : 1724000049-AR-DD-00018-REV.02

DRAWING NO. 1724000049-HV-DA-00064_0

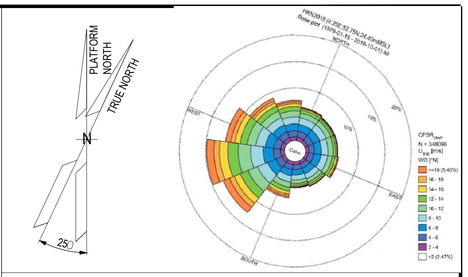
REV. 00



HVAC SYSTEM ROOF PLAN



HVAC SUPPORT PLAN ON ROOF



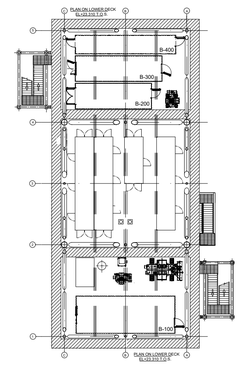
NOTES

Outdoor ductwork in stainless steel AISI 316L
Indoor ductwork in galvanized steel Z275

Basket tray Power

Basket tray Instrument

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	13/06/2024	S.Z.	S.S.	M.G.	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

S.S.
MODULE B-100
HVAC SYSTEM - G.A. AND DETAILS

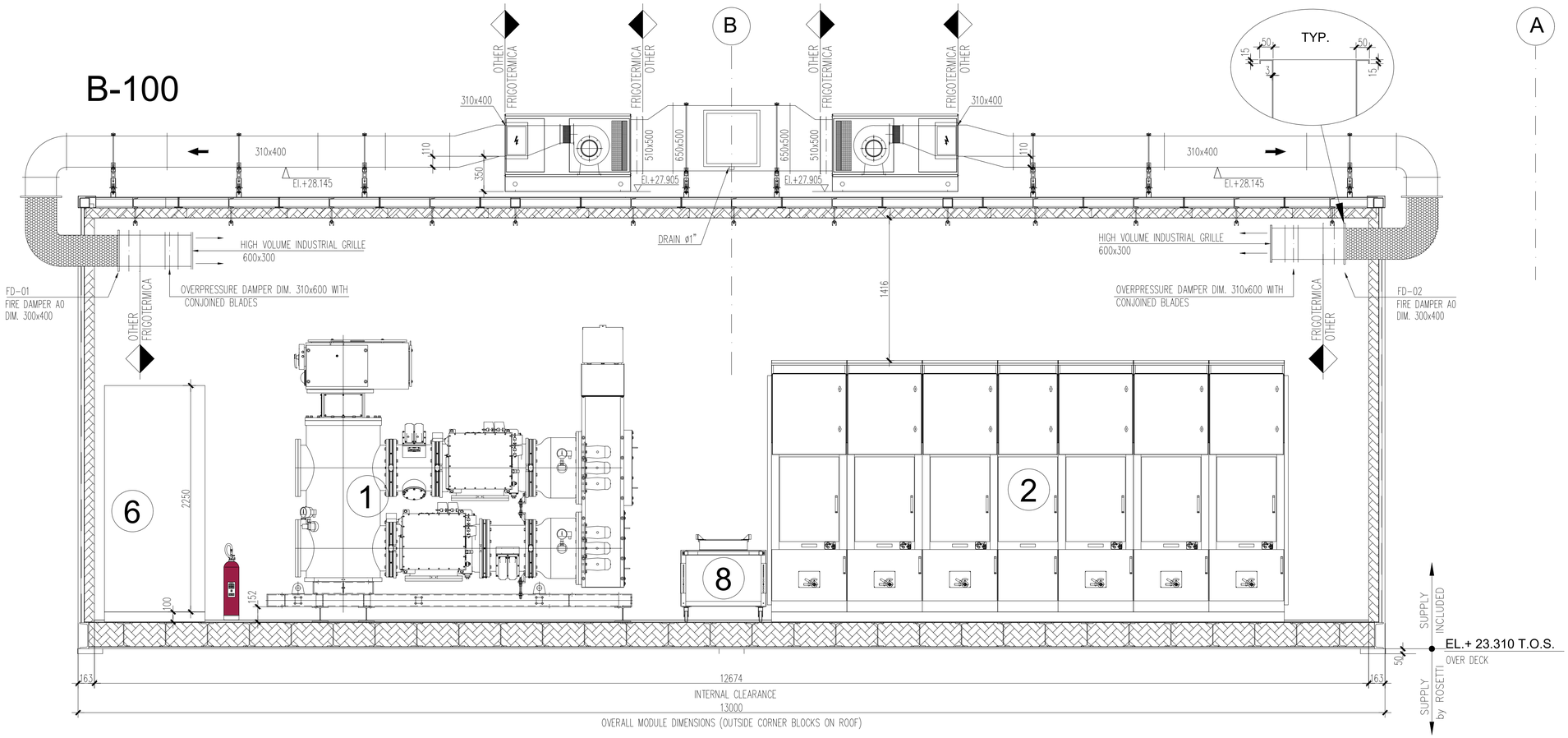
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 25
DRAWN S.Z.	CHECKED S.S.	APPROVED M.G.	DATE 13/06/2024
A1	DRAWING NO. 1724000049-HV-DA-00064	SHEET 001	REV. 00

File Name : 1724000049-HV-DA-00064_0

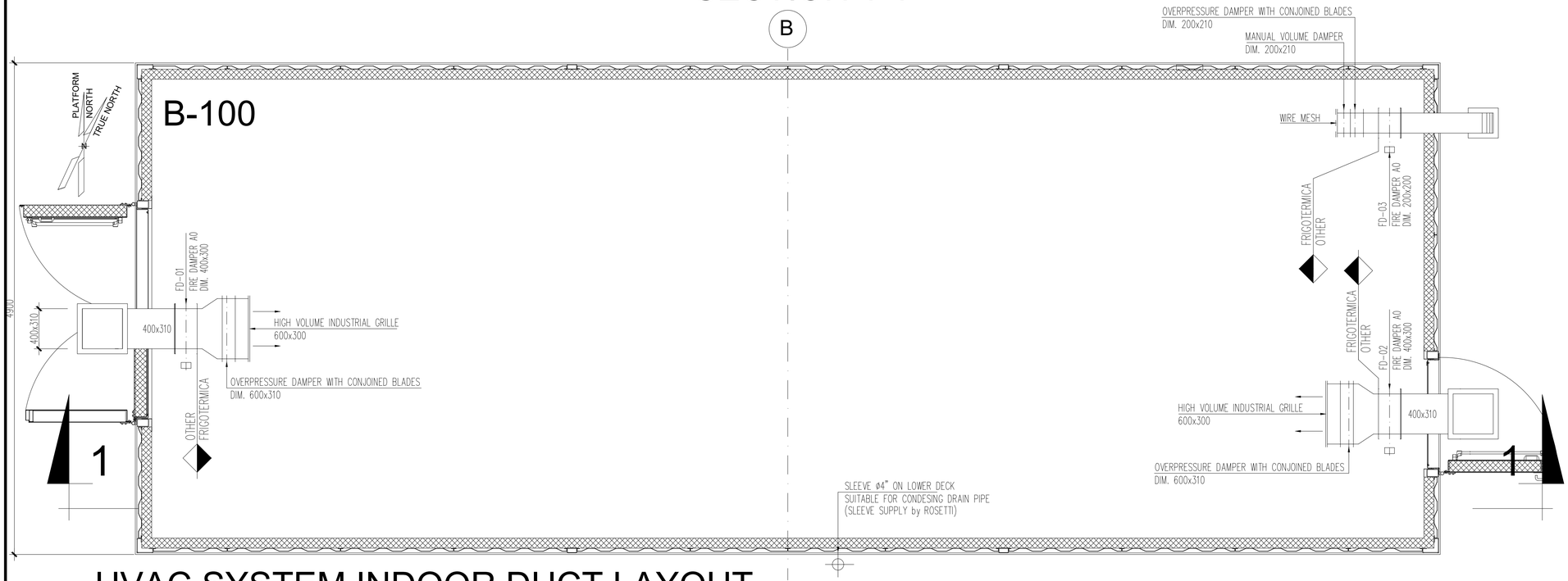
DRAWING NO. 1724000049-HV-DA-00064_0

REV. 00

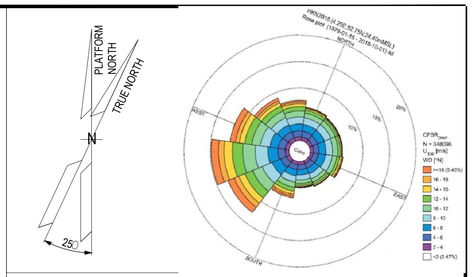
B-100



SECTION 1-1



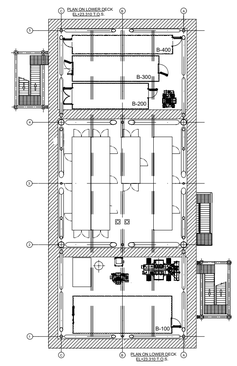
HVAC SYSTEM INDOOR DUCT LAYOUT



NOTES

Outdoor ductwork in stainless steel AISI 316L
Indoor ductwork in galvanized steel Z275

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	13/06/2024	S.Z.	S.S.	M.G.	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
S.S.
MODULE B-100
HVAC SYSTEM - G.A. AND DETAILS

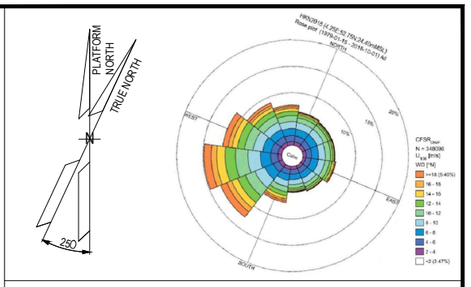
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 25
DRAWN S.Z.	CHECKED S.S.	APPROVED M.G.	DATE 13/06/2024
A1	DRAWING NO. 1724000049-HV-DA-00064	SHEET 002	REV. 00

File Name : 1724000049-HV-DA-00064_0

DRAWING NO. 123A90-1724000049-HV-PID-00039

REV. 01

BASE LOAD POWER HUB (BLPH)
B-100 HV
P&ID HVAC System



NOTES

LEGEND

HOLDS

ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	09/07/24	S.Z.	S.S.	M.G.	ISSUE FOR INFORMATION (IFI)
0	10/06/24	S.Z.	S.S.	M.G.	ISSUE FOR INFORMATION (IFI)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-100 HV
P&ID HVAC System

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:1
DRAWN G.M.	CHECKED A.O.	APPROVED A.C.	DATE 09/07/24

A1	DRAWING NO. 123A90-1724000049-HV-PID-00039	SHEET 001	REV. 01

File Name : 123A90-1724000049-HV-PID-00039_REV.01

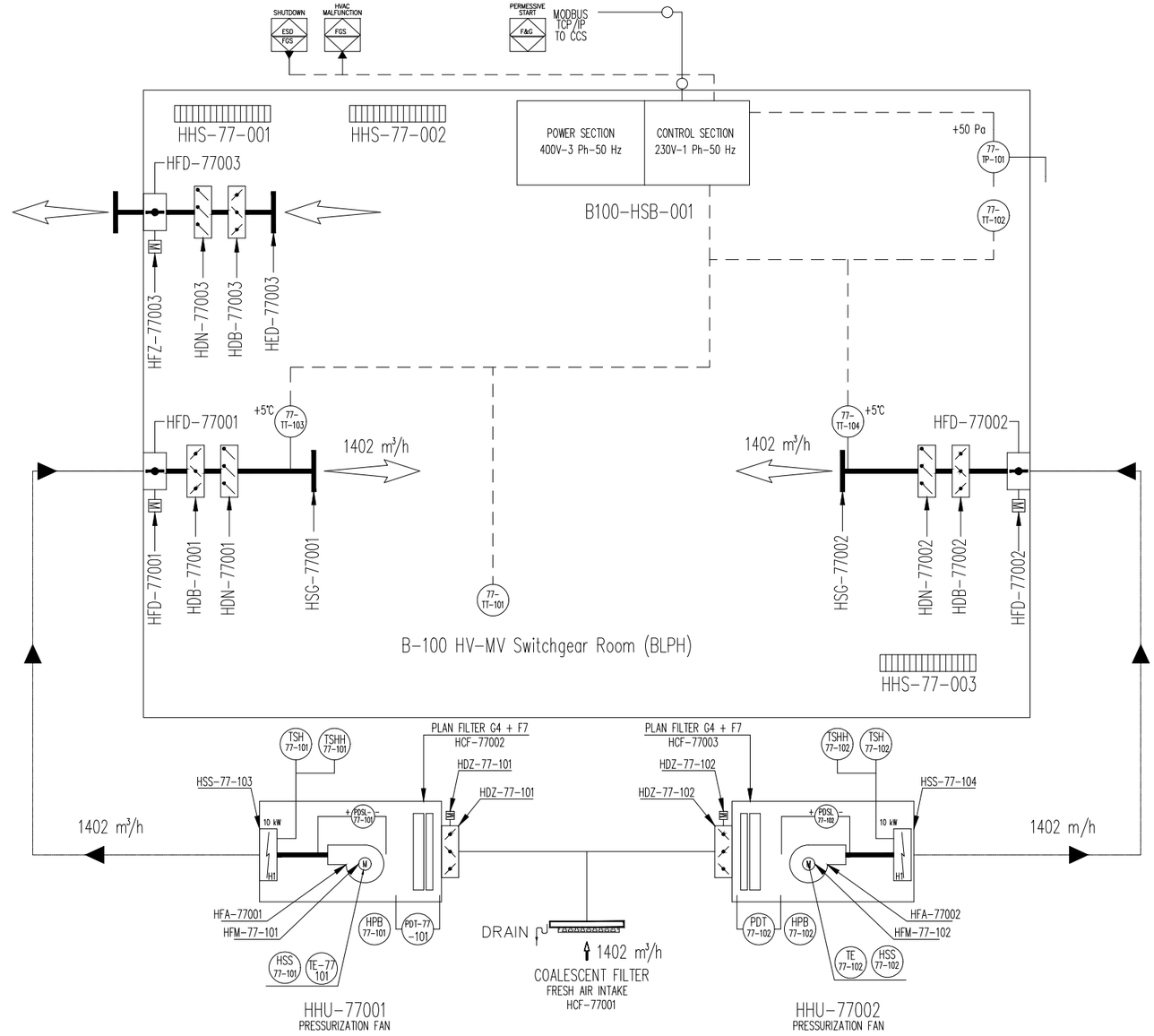
DRAWING NO. 123A90-1724000049-HV-PID-00039

REV. 01

ITEM	HVAC-PRESSURISING FAN
DESCRIPTION	HVAC UNIT
MAKER	FRIGOTERMICA srl
MODEL	4112-TBA
SUPPLY AIR FLOW	360 l/s
COOLING COIL CAPACITY	N.A.
HEATING COIL CAPACITY	11 kW
TENSIONE	400 V - 50 Hz - 3 Ph+N
EXECUTION	SAFE AREA
REFRIGERANT	N.A.

LEGENDA

	MOTORISED DAMPER WITH SPRING RETURN	F1	AIR FILTER "G4"		MOTORISED FIRE DAMPER WITH SPRING RETURN
	REGULATION DAMPER	F2	BAG FILTER "F8"		EVAPORATING COIL
	OVERPRESSURE DAMPER		CONDENSING COIL		
PDSH	DIFFERENTIAL PRESSURE SWITCH HIGH PRESSURE		CONDENSING FAN		
PDSL	DIFFERENTIAL PRESSURE SWITCH LOW PRESSURE		ELECTRICAL HEATER		LIQUID RECEIVER
TT	TEMPERATURE TRASMITTER		SUPPLY FAN	MT	MOISTURE TRASMITTER
EPB	EMERGENCY PUSH BUTTON		GLOBE VALVE	PTM	HIG PRESSURE TRASDUCER
OH	COMPRESSOR OIL HEATER		DRYER FILTER	P	COMPRESSOR THERMIC PROTECTION
SV	SOLENOID VALVE		SIGHT GLASS	TSM	SECURITI THERMOSTATE
	REFRIGERANT COMPRESSOR		THERMOSTATIC VALVE	PSH	HIGH PRESSURE SWITCH
			PRESSURE RELIEF VALVE	PSL	LOW PRESSURE SWITCH
				PC	CONDENSING PRESSURE SWITCH



OUTDOOR DESIGN CONDITIONS

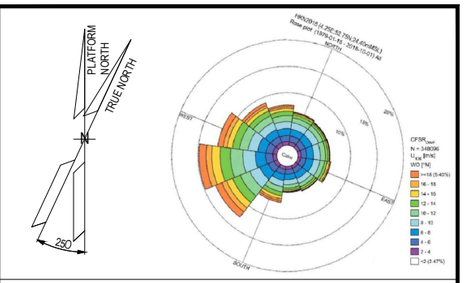
Safe Area
Min. design DB Temp: -8,4°C with RH 100 %
Max. design DB Temp: +25°C with RH 90 %

Module hv-mv (66 kW-6.6 kW)

Safe Area
Indoor min. design temperature: +5°C with RH 30 ÷ 70% ±5
Indor max. design temperature: +35°C with RH 30 ÷ 70% ±5
Min. ACH: 6

NOTES:

- HVAC POWER CABINET will energize what above shown.
- HVAC CONTROL CABINET will control all what above shown.
- HVAC POWER CABINET will energize light and socket.
- Outside drainage system shall be provided of heatng cable with anti-freeze funcion to avoid ice inside pipes when outside temeprature reaches values close to 0°C.
- Outdoor air ductworks in stainless steel AISI 316



NOTES

LEGEND

HOLDS

ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	09/07/24	S.Z.	S.S.	M.G.	ISSUE FOR INFORMATION (IFI)
0	10/06/24	S.Z.	S.S.	M.G.	ISSUE FOR INFORMATION (IFI)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-100 HV
P&ID HVAC System

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 1
DRAWN G.M.	CHECKED A.O.	APPROVED A.C.	DATE 09/07/24
A1	DRAWING NO. 123A90-1724000049-HV-PID-00039	SHEET 003	REV. 01

File Name : 123A90-1724000049-HV-PID-00039_REV.01

B-100 HVAC - CABLE LIST

Posizione	n:° CABLE	CABLE CHARACTERISTICS				CABLE FROM:				CABLE TO:				JB TAG	CABLE LENGHT (m)	CABLE DIAMETER	CABLE TYPE	NOTE
		SECTION	TIPE	U_0/U (kV)	MATERIAL SHEAT	ITEM	CABLE GLAND	TAG	POSITION	ITEM	CABLE GLAND	TAG	POSITION					
a	a	a	a	a		a	a	a	a	a	a	a	a	a	a	a	a	
1		5G25	by Client	by Client	by Client	by Client	by Client	by Client	by Client	HVAC PANEL	by Client	B100-HSB-001	inside B100	N.A.	by Client	25,60	LOW VOLTAGE	General power supply 400V 3ph+N+PE Cable supply by RM. Info not available
2		3G4	by Client	by Client	by Client	by Client	by Client	by Client	by Client	HVAC PANEL	by Client	B100-HSB-001	inside B100	N.A.	by Client	11,10	LOW VOLTAGE	UPS Power Supply 1ph+N+PE Cable supply by RM. Info not available
3	77101-CEL-L1	5G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	BLINDO 1	2900.M20N	PECW-B100H-F1-L1-01	inside B100	N.A.	12,5	11,60	LOW VOLTAGE	
4	77102-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO 1	N.A.	PECW-B100H-F1-L1-01	inside B100	LAMP (E) 1	2900.M20N	PELF-B100H-F1-L1-01	inside B100	N.A.	0,5	10,80	LOW VOLTAGE	
5	77103-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO 1	N.A.	PECW-B100H-F1-L1-01	inside B100	LAMP 2	2900.M20N	PELF-B100H-F1-L1-02	inside B100	N.A.	0,5	9,80	LOW VOLTAGE	
6	77104-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO 1	N.A.	PECW-B100H-F1-L1-01	inside B100	LAMP 3	2900.M20N	PELF-B100H-F1-L1-03	inside B100	N.A.	0,5	9,80	LOW VOLTAGE	
7	77105-CEL-L1	5G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	BLINDO 2	2900.M20N	PECW-B100H-F1-L1-02	inside B100	N.A.	16	11,60	LOW VOLTAGE	
8	77106-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO 2	N.A.	PECW-B100H-F1-L1-02	inside B100	LAMP 4	2900.M20N	PELF-B100H-F1-L1-04	inside B100	N.A.	0,5	9,80	LOW VOLTAGE	
9	77107-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO 2	N.A.	PECW-B100H-F1-L1-02	inside B100	LAMP 5	2900.M20N	PELF-B100H-F1-L1-05	inside B100	N.A.	0,5	9,80	LOW VOLTAGE	
10	77108-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO 2	N.A.	PECW-B100H-F1-L1-02	inside B100	LAMP 6	2900.M20N	PELF-B100H-F1-L1-06	inside B100	N.A.	0,5	9,80	LOW VOLTAGE	
11	77109-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO 2	N.A.	PECW-B100H-F1-L1-02	inside B100	LAMP (E) 7	2900.M20N	PELF-B100H-F1-L1-07	inside B100	N.A.	0,5	10,80	LOW VOLTAGE	
12	77110-CEL-L2	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	MODULE SOCKET	2900.M20N	PESO-B100H-F2-L2-01	inside B100	N.A.	14	9,80	LOW VOLTAGE	
13	77101-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	MODULE SWITCH 1	2900.M20N	CELS-B100H-F1-L1-01	inside B100	N.A.	18,5	8,20	CONTROL	
14	77102-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	MODULE SWITCH 2	2900.M20N	CELS-B100H-F1-L1-02	inside B100	N.A.	16	8,20	CONTROL	
15	77111-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	SPACE HEATER 1	2900.M20N	HSS-77-001	inside B100	N.A.	13	9,80	LOW VOLTAGE	
16	77112-CEL-L2	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	SPACE HEATER 2	2900.M20N	HSS-77-002	inside B100	N.A.	14,5	9,80	LOW VOLTAGE	
17	77113-CEL-L3	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	SPACE HEATER 3	2900.M20N	HSS-77-003	inside B100	N.A.	16	9,80	LOW VOLTAGE	
18	77114-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PRESSURIZING FAN 1	2900.M20N	HFM-77-101	HHU-77001	HJB-77001-A	7	10,80	LOW VOLTAGE	
19	77115-CEL-L1	4G6	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	ELECTRICAL HEATER 1	2900.M25N	HSS-77-101	HHU-77001	HJB-77001-A	7	13,80	LOW VOLTAGE	
20	77116-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PRESSURIZING FAN 2	2900.M20N	HFM-77-102	HHU-77002	HJB-77002-A	10	10,80	LOW VOLTAGE	
21	77117-CEL-L1	4G6	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	ELECTRICAL HEATER 2	2900.M25N	HSS-77-102	HHU-77002	HJB-77002-A	10	13,80	LOW VOLTAGE	
22		TBA	by Client	0,6/1,0	by Client	SIS	by Client	by Client	by Client	HVAC PANEL	by Client	B100-HSB-001	inside B100		by Client	0,00	by Client	Cable supply by RM. Info not available
23		TBA	by Client	0,6/1,0	by Client	SIS	by Client	by Client	by Client	HVAC PANEL	by Client	B100-HSB-001	inside B100		by Client	0,00	by Client	Cable supply by RM. Info not available
24	77103-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PRESSURIZING FAN1 MOTOR PTC	2900.M20N	TE-77-101	HHU-77001	HJB-77001-B	7	8,20	CONTROL	
25	77104-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PRESSURIZING FAN 1 EMERGENCY BUTTON	2900.M20N	HPB-77-101	HHU-77001	HJB-77001-B	7	8,20	CONTROL	
26	77105-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	ELECTRICAL HEATER 1 PROTECTION THERMOSTATE	2900.M20N	TSH/TSHH-77-101	HHU-77001	HJB-77001-B	7	8,20	CONTROL	
27	77106-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PRESSURIZING FAN 1 MOTOR HEATER	2900.M20N	HSS-77-103	HHU-77001	HJB-77001-B	7	8,20	CONTROL	
28	77120-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PDT - FAN 1 FILTERS DIFFERENTIAL PRESSURE TRASMITTER	2900.M20N	PDT-77-101	HHU-77001	HJB-77001-B	7	11,10	CONTROL	
29	77121-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PDSL - FAN 1 DIFFERENTIAL PRESSURE SWITCH LOW PRESSURE	2900.M20N	PDSL-77-101	HHU-77001	HJB-77001-B	7	8,20	CONTROL	
30	77118-CEL-L2	3G1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	POWER SUPPLY MOTORISED DAMPER	2900.M20N	HDZ-77-101	HHU-77001	HJB-77001-A	7	9,80	LOW VOLTAGE	
31	77111-CEC-L2	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	SIGNAL MOTORISED DAMPER	2900.M20N	HDZ-77-101	HHU-77001	HJB-77001-B	7	9,70	CONTROL	
32	77107-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PRESSURIZING FAN 2 MOTOR PTC	2900.M20N	TE-77-102	HHU-77002	HJB-77002-B	10	8,20	CONTROL	
33	77108-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PRESSURIZING FAN 2 EMERGENCY BUTTON	2900.M20N	HPB-77-102	HHU-77002	HJB-77002-B	10	8,20	CONTROL	
34	77109-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	ELECTRICAL HEATER 2 PROTECTION THERMOSTATE	2900.M20N	TSH/TSHH-77-102	HHU-77002	HJB-77002-B	10	8,20	CONTROL	
35	77110-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PRESSURIZING FAN 2 MOTOR HEATER	2900.M20N	HSS-77-104	HHU-77002	HJB-77002-B	10	8,20	CONTROL	
36	77122-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PDT - FAN 2 FILTERS DIFFERENTIAL PRESSURE TRASMITTER	2900.M20N	PDT-77-102	HHU-77002	HJB-77002-B	10	11,10	CONTROL	
37	77123-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	PDSL - FAN 2 DIFFERENTIAL PRESSURE SWITCH LOW PRESSURE	2900.M20N	PDSL-77-102	HHU-77002	HJB-77002-B	10	8,20	CONTROL	
38	77119-CEL-L2	3G1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	POWER SUPPLY MOTORISED DAMPER	2900.M20N	HDZ-77-102	HHU-77002	HJB-77002-A	10	9,80	LOW VOLTAGE	
39	77112-CEC-L2	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	SIGNAL MOTORISED DAMPER	2900.M20N	HDZ-77-102	HHU-77002	HJB-77002-B	10	9,70	CONTROL	
40	77123-CEL-L2	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	TEMPERATURE TRASMITTER 1	2900.M20N	77-TT-101	inside B100	N.A.	11,5	11,10	CONTROL	
41	77124-CEL-L2	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	TEMPERATURE TRASMITTER 2	2900.M20N	77-TT-102	inside B100	N.A.	15,5	11,10	CONTROL	
42	77126-CEL-L2	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	TEMPERATURE TRASMITTER 3	2900.M20N	77-TT-103	inside B100	N.A.	15	11,10	CONTROL	Mounted on internal sleeve
43	77127-CEL-L2	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	TEMPERATURE TRASMITTER 4	2900.M20N	77-TT-104	inside B100	N.A.	18	11,10	CONTROL	Mounted on internal sleeve
44	77125-CEL-L2	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	DIFFERENTIAL PRESSURE TRASMITTER	2900.M20N	77-TP-101	inside B100	N.A.	2	11,10	CONTROL	
45	77113-CEC-L2	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77001	inside B100	N.A.	12	9,70	CONTROL	
46	77114-CEC-L2	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77002	inside B100	N.A.	15	9,70	CONTROL	
47	77115-CEC-L2	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B100-HSB-001	inside B100	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77003	inside B100	N.A.	18	9,70	CONTROL	

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Section 7 MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-10 & process: MC & discipline : M

Mechanical	77-10 HVAC HV/MV Switchgear Room B-100						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
B-100	Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100	ONSHORE	C10002298	CZX01M	100	2024-10-18	RFC 2

ITEM	Tag	B-100	: Shelter HV-MV (66 kV / 6,6 kV) Switchroom B-100			Dwg	1724000049-AR-DA-00015
	S/Sys	77-10	: HVAC HV/MV Switchgear Room B-100			Module	LD_B-100
TASK	code	C10002298		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Mechanical Form CZX01M		Package - M

1	Check that the nameplate details and tag number are complete and correct.	OK
2	Check that the holding down arrangements are correct.	Note
3	Check for all interface piping/mechanical reinstated on site by contractor.	Note
4	Check that the package Mechanical equipment is complete and not damaged.	OK
5	Check all the equipment for correct lubrication, for oil leaks and cleanliness.	Note
6	Check for the free rotation of rotating equipment.	Note
7	Check the insulation, painting and for correct tagging and identification.	Note
8	Check that the earthing system of the equipment is as per specification.	OK
9	Check that the Package is fixed and tightened to the structures.	OK
10	Check the release note, FAT report and outstanding Punch list for the Package	Note
11	If required produce Red Line Mark Up for "AS BUILT".	

Comments:

Note(2/3) : Refer to Punch list raised during first step of FAT:

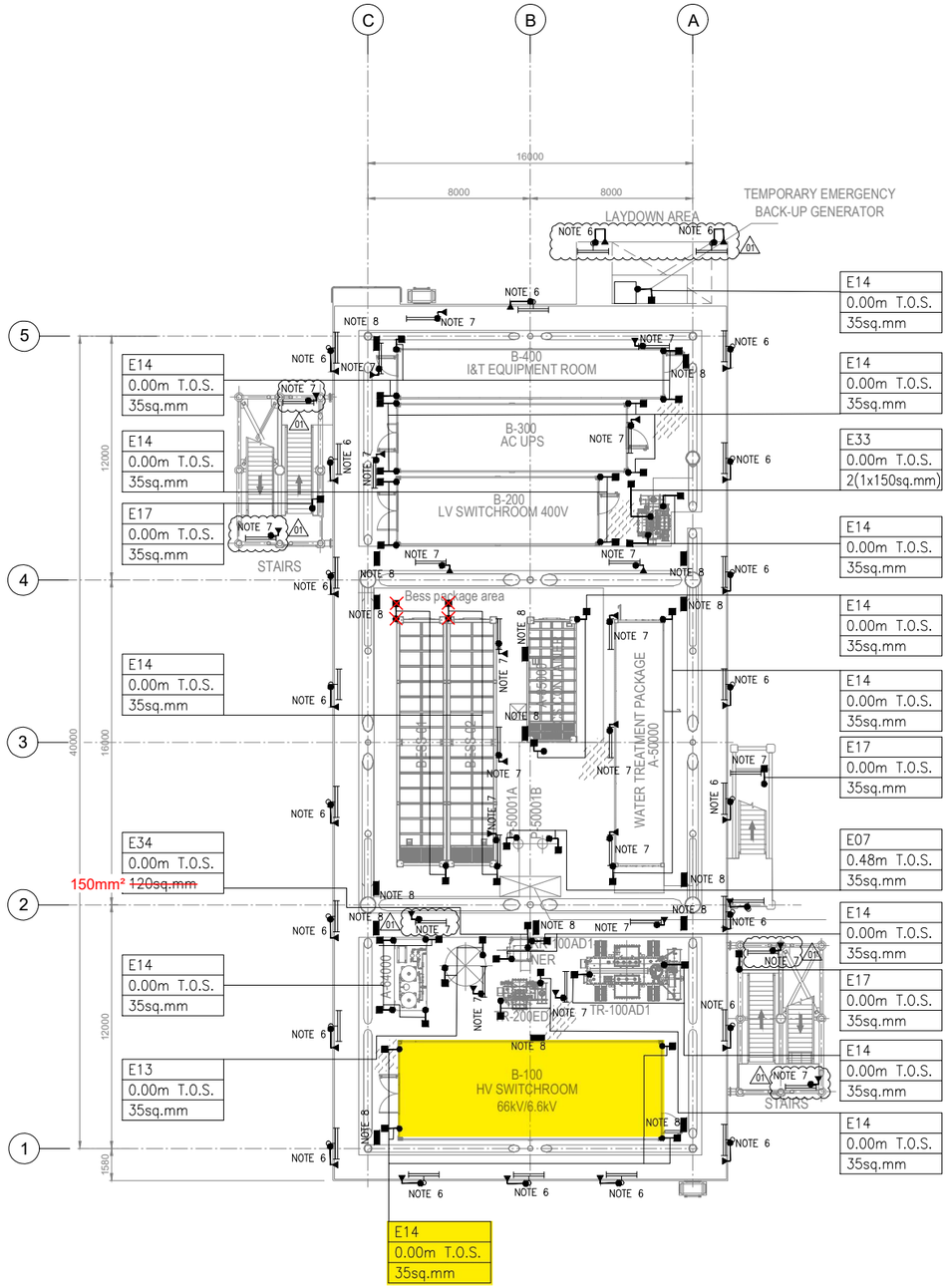
Point 2 PL: C30000014 / C30000018
Point 3 PL: C30000050 / C30000076 / C30000088 / C30000092

Note (5/6/7/10): FAT will be completed at RM yard after MC phase

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-17	2024-10-18	
Signature	Digitaly signed by Carmelo Bongiovanni 2024-10-17T16:34:02.382Z	Digitaly signed by Giovanni Tangianu 2024-10-18T11:37:27.685Z	

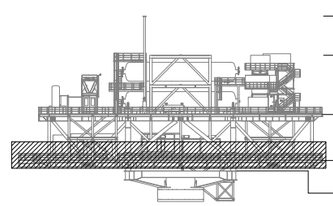
DRAWING NO. 123A90-DDL-EL-DL-20133

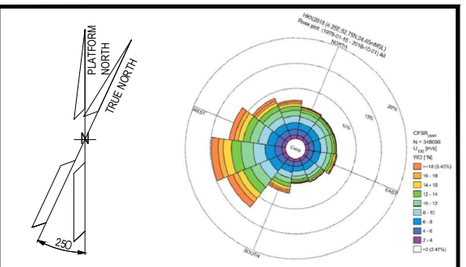
REV. 01



PLAN ON LOWER DECK
EL+23.310 T.O.S.

KEY PLAN





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DOCUMENT IS ONLY VALID FOR EARTHING LAYOUT.
4. ALL ELECTRICAL EQUIPMENT NOT DIRECTLY WELDED TO SKID FRAME SHALL BE BONDED TO STEEL TO THE STRUCTURE OF SKID BASEFRAME.
5. FOR LIGHTNING PROTECTION SYSTEM SURGE PROTECTIVE DEVICES (SPD), REFER TO THE DOCUMENT 123A90-DDL-EL-RE-20154.
6. ALL NON-WELDED POLES WILL BE EARTHED AS PER TYPICAL E05 AND E24. 01
7. ALL LINEAR LIGHTING FIXTURE WILL BE EARTHED AS PER TYPICAL E32.
8. EARTH BAR WILL BE FIXED TO THE PRIMARY BEAMS OF THE UPPER DECK. COMPLETE EARTHING INCLUDING WITH 2 THREADED STUDS. ALL EARTH BAR WILL BE EARTHED AS PER TYPICAL E03D / 6.00M T.O.S. / 35 SQ MM.
9. EQUIPOTENTIAL BONDING GROUPING FOR BOLTED HANDRAILS ARE PROVIDED EVERY 3M FOR THE ENTIRE PERIMETER AS TYPICAL E16 AND WILL BE DEFINED DURING ASSEMBLY PHASE

LEGEND

- LIGHTING FIXTURE POLE MOUNTED
- LINEAR LIGHTING FIXTURE
- EARTHING BOSS AISI316L
- COMPRESSION TYPE LUG TINNED COPPER
- THREADED STUD FOR EARTHING CONNECTION
- Exx EARTHING TYPICAL CODE
- EARTHING BAR

TYP.	TYPICAL
ELE	ELEVATION
SIZE	

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DD-20090	ELECTRICAL TYPICAL INSTALLATION DETAILS - EARTHING SYSTEM
123A90-DDL-EL-RE-20154	LIGHTNING PROTECTION SYSTEM CALCULATION REPORT
123A90-DDL-EL-DL-20119	LIGHTING & SOCKET LAYOUT - LOWER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	25/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	29/05/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING & LIGHTNING LAYOUT
LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 25/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20133	SHEET 001	REV. 01

SHEET 001 OF 002

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20133**

REV.:	DATE:	SIGNATURE:
1_B	11/09/24	G.Randi

ROSETTI MARINO SpA

File Name : 123A90-DDL-EL-DL-20133

PLATFORM NORTH
TRUE NORTH

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20136**

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

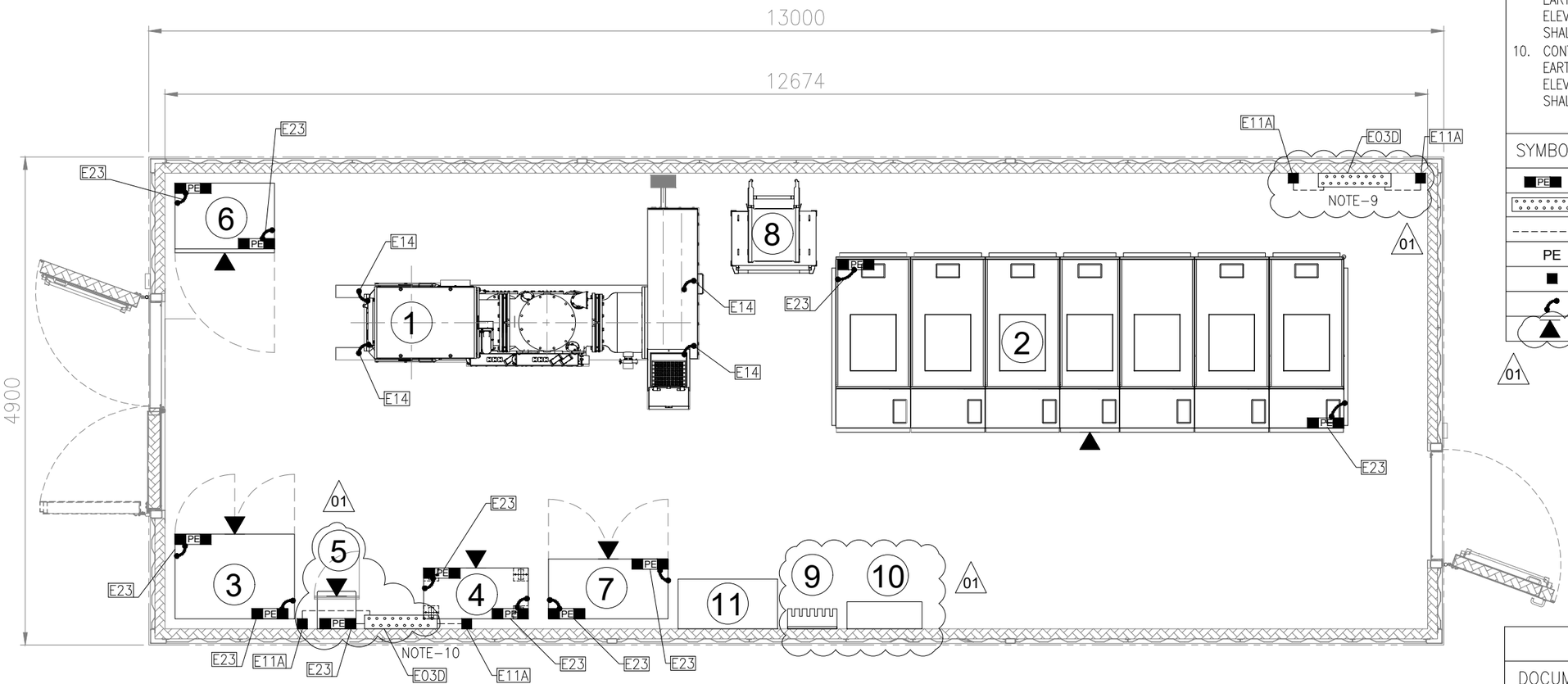
ROSETTI MARINO SpA

EQUIPMENT LIST		
REF.	TAG No.	DESCRIPTION
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)
2	SG-100D1	6.6kV SWITCHGEAR
3	UP-200F1	DC UPS PANEL
4	BA-200F1	DC UPS BATTERY RACK
5	CB-200F1	ISOLATOR FOR DC UPS
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL – HV SWITCH ROOM
8	–	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR
9	–	TOOL BOX
10	–	ELECTRIC SAFETY KIT
11	–	TABLE

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 NON WELDED OBJECTS SHALL BE EARTHED.
9. CONTAINER WILL HAVE A BTH (EARTHING BAR TINNED COPPER) WITH 2 EARTHING BOSS, INSTALLED IN THE NORTH-EAST CORNER AT AN ELEVATION OF 2.8M FROM THE CONTAINER FLOOR. EARTHING BOSS SHALL BE INSTALLED AT SAME ELEVATION 2.8M.
10. 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-100-HV(66kV/6.6kV) 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-20104	ELECTRICAL EQUIPMENT LAYOUT- HV SWITCHROOM
01 1724000049-AR-DD-00018	B-100 DETAILED DRAWINGS-E&I SHELTERS

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

CROSSWIND
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING & LIGHTNING LAYOUT-HV SWITCHROOM "B-100"HV SWITCHROOM

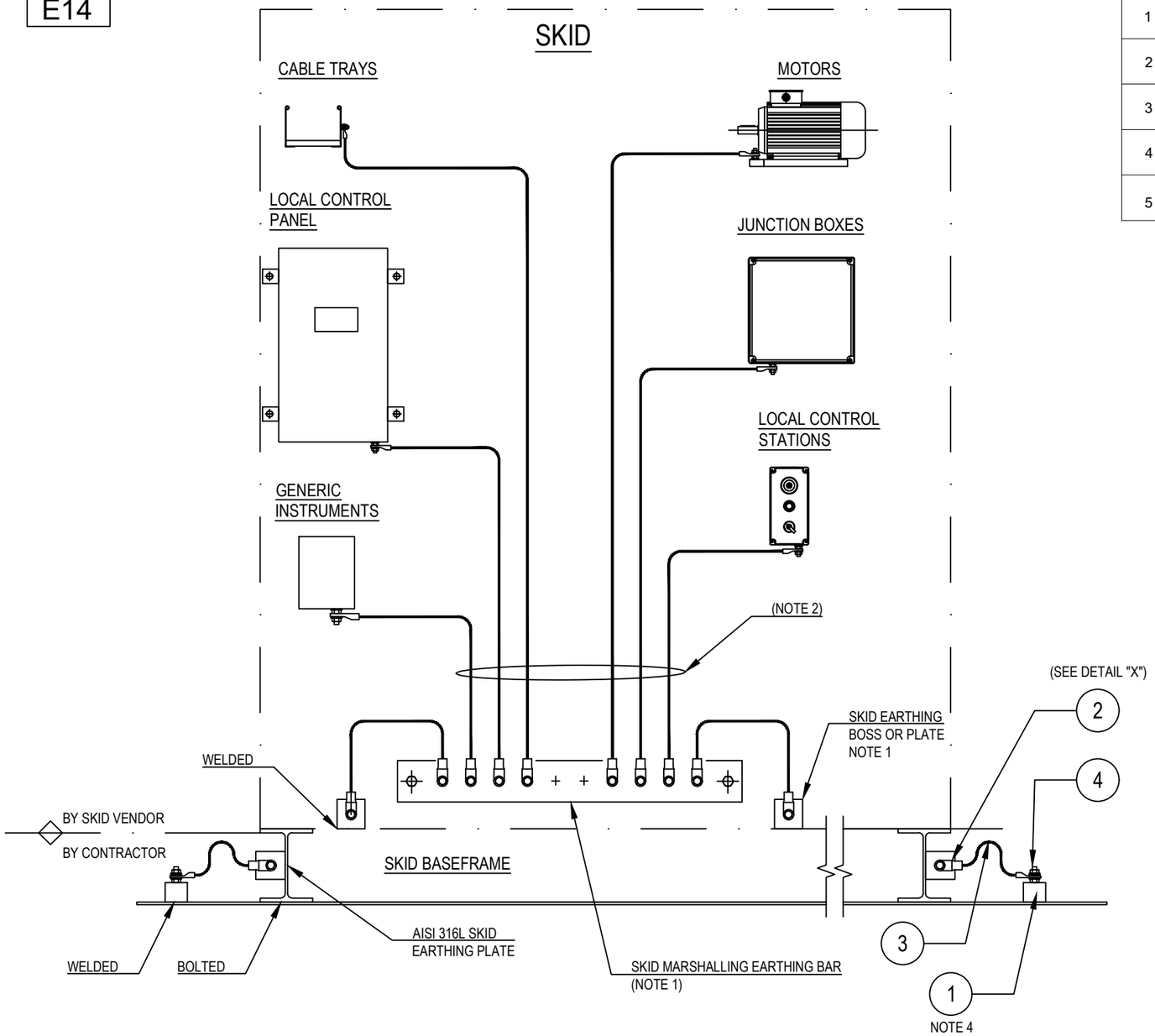
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:50

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DL-20136	003	01

F.to UNI A3: 420mmx297mm

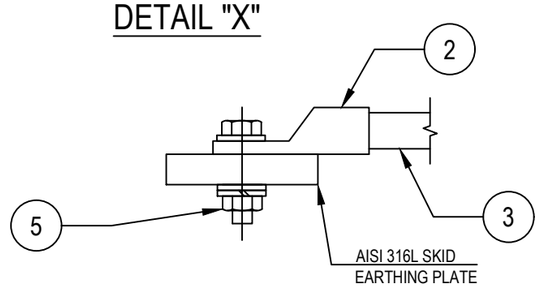
File Name : 123A90-DDL-EL-DL-20136 Rev. 01

E14



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50		NOTE 5
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	35mm^2		~~NOTE 3~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	35mm^2		~~NOTE 3~~
4	STUD BOLT WITH PLANE WASHER, SPRING WASHER AND NUT	AISI 316L	M10X50		
5	HEXAG. BOLT COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30		

DETAIL "X"



NOTES:
1) EARTHING BAR/BOSS/PLATE SUPPLIED BY SKID MANUFACTURER
2) ALL EQUIPMENTS AND CABLE TRAYS WILL BE EARTHING ON SKID EARTHING BAR BY SKID MANUFACTURER
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY~~
4) FOR EARTHING BOSS TYPICAL DETAIL E11A
5) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

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

REV.:	DATE:	SIGNATURE:
2_F	17/10/24	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 SKID BASEFRAME

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

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 014 | REV. 02

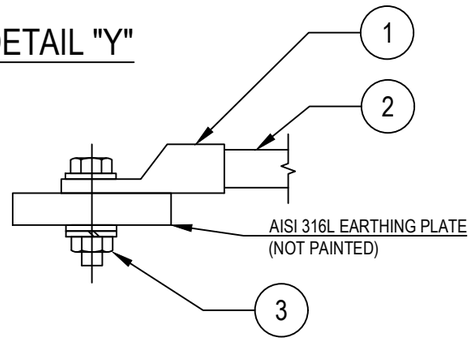
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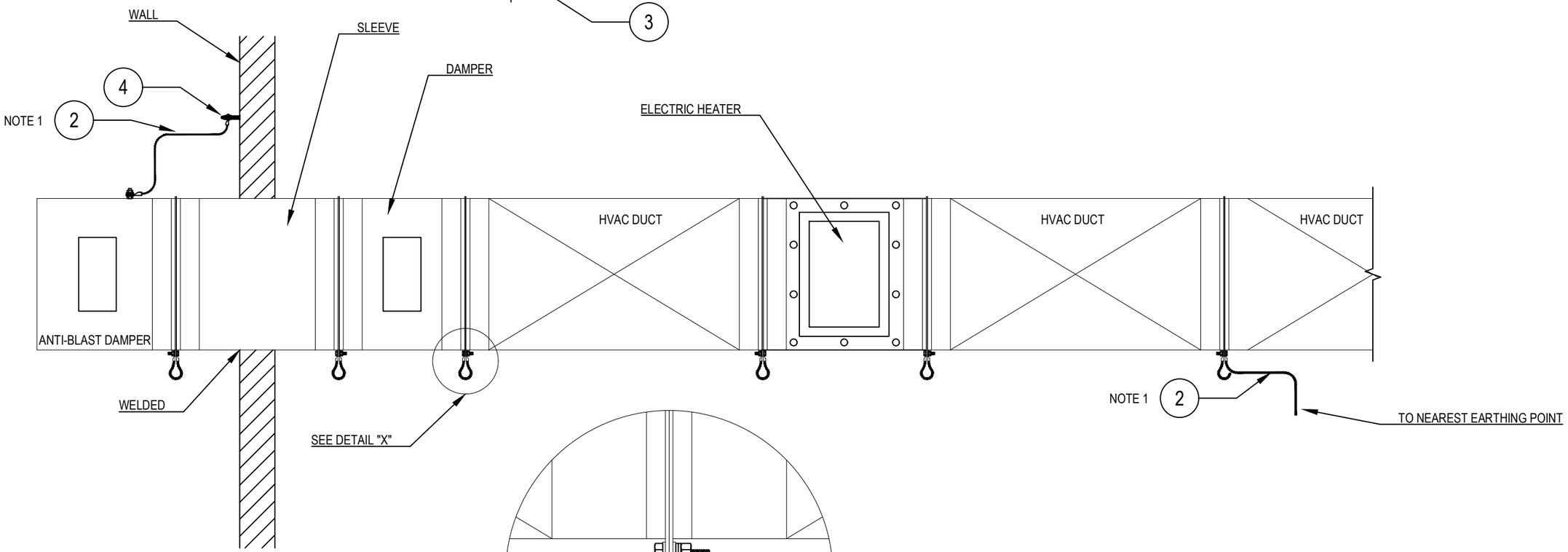
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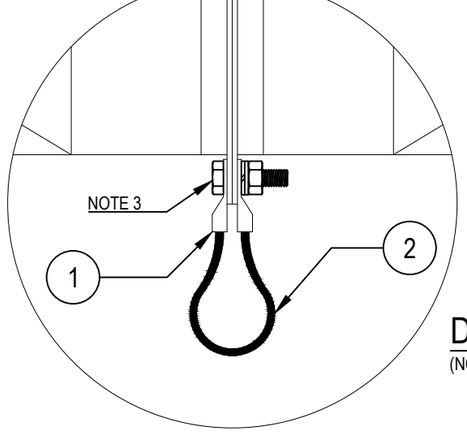
E26

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$	1	
2	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$	1	
3	HEXAG. BOLT COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30	1	
4	HILTI S-BT-ER M10/15 SN6	AISI 316L		1	NOTE 4

DETAIL "Y"







DETAIL "X"

(NOTE 2)

NOTES:
1) HVAC DUCT SHALL BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM AT BOTH ENDS AND EVERY 25 m. FULL CONTINUITY SHALL BE ENSURED. IN CASE OF SHORT LENGTH ELEMENTS (LESS THAN 3 M) ONE END ONLY MAY BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM.
2) REACH EARTHING BONDING SHALL BE INSTALLED WHEN CONTINUITY CANNOT BE ENSURED.
3) AISI 316L HARDWARE INCLUDED WITH HVAC DUCT.
4) REFER TO TYP. "E11D" SHEET 003.

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

REV.:	DATE:	SIGNATURE:
2_F	17/10/24	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 HVAC DUCT AND ITS COMPONENTS

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

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 017 | REV. 02

F.to UNI A3: 420mmx297mm

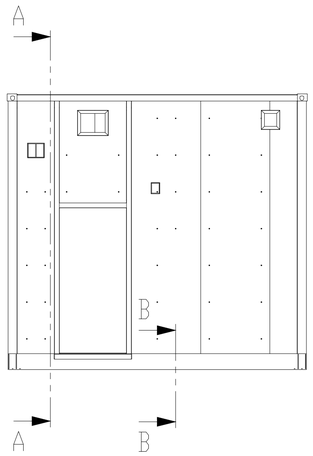
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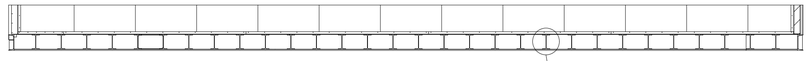
DRAWING NO. 1724000049-AR-DD-00018

REV. 02

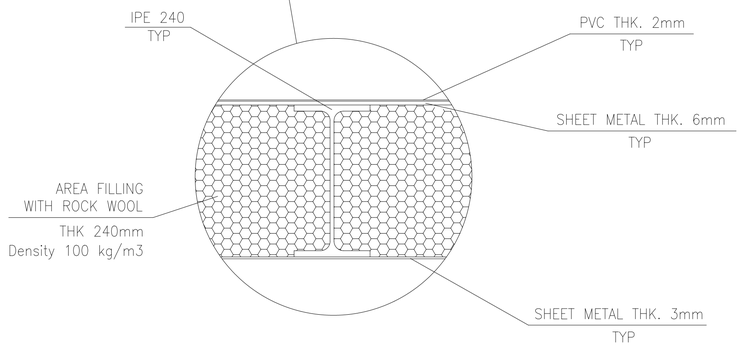
MODULE B-100

REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" STRUCTURAL CALCULATION	1724000049-ST-CA-00006
Weld Procedure Specifications (WPS), Weld Procedure Qualification Report (WPQR), Welding Map and Welders Qualifications	1724000049-WEL-RE-00003

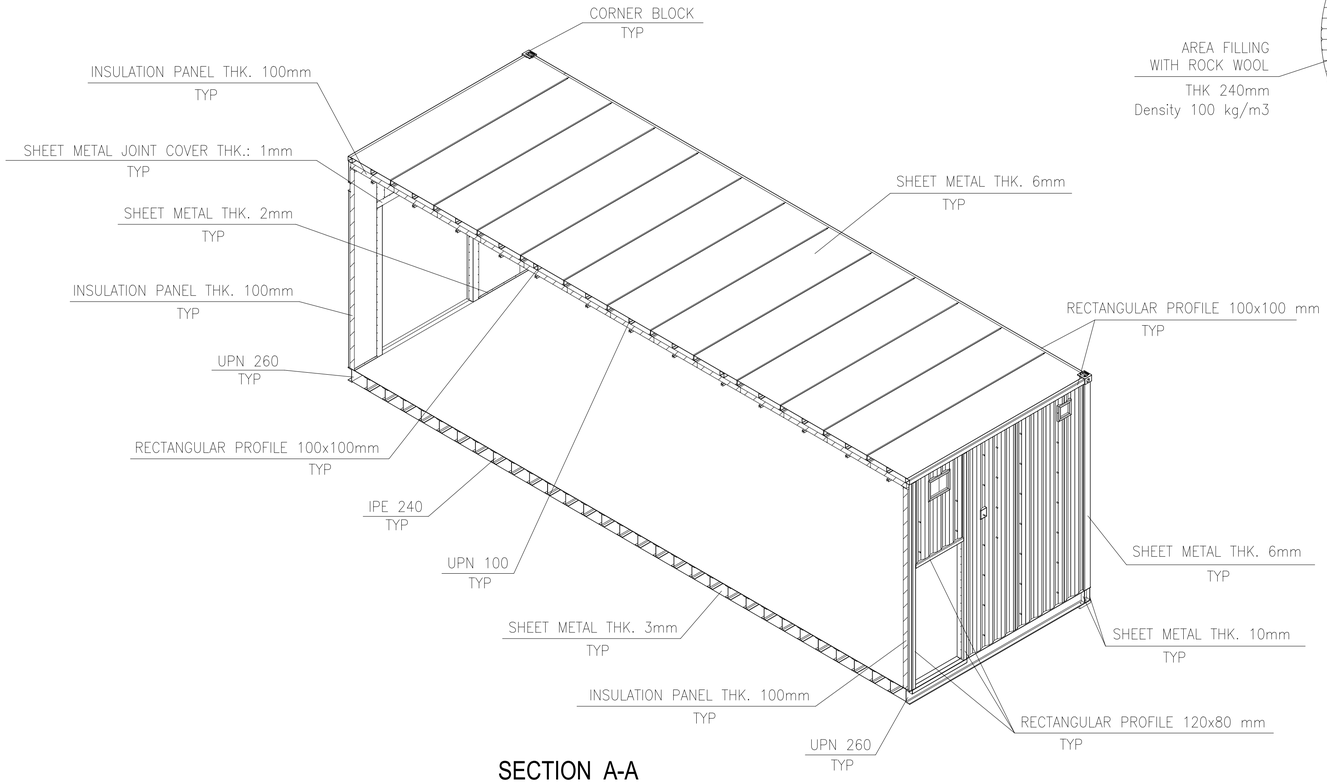




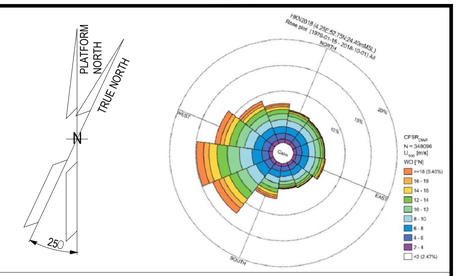
SECTION B-B



DETAIL "C"

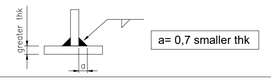


SECTION A-A



NOTES

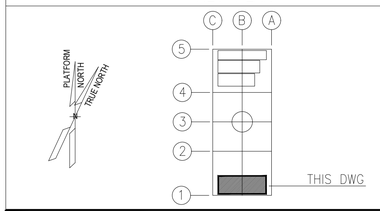
1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D.1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



LEGEND

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	11/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
01	08/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	23/05/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

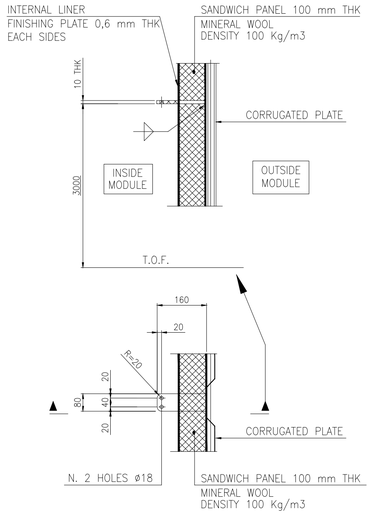
TITLE :

B-100 DETAILED DRAWINGS-E&I SHELTERS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00018	SHEET 001	REV. 02

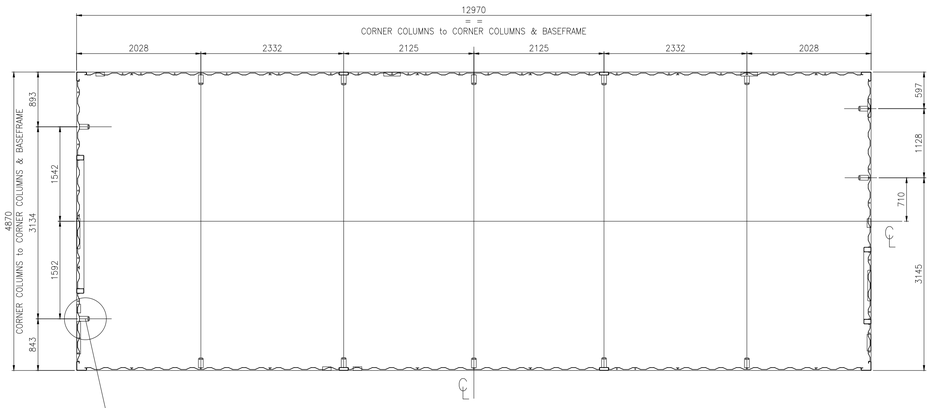
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DRAWING NO. 1724000049-AR-DD-00018 REV. 02



WEST WALL

NORTH WALL

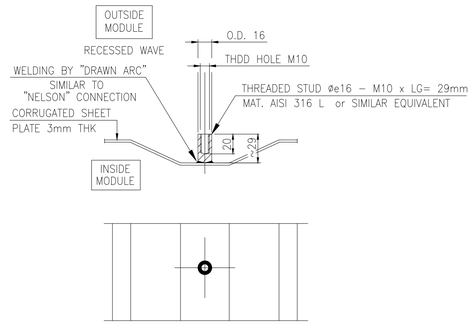


SOUTH WALL

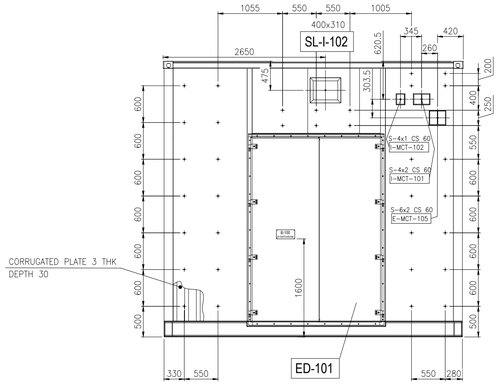
EST WALL

MODULE B-100

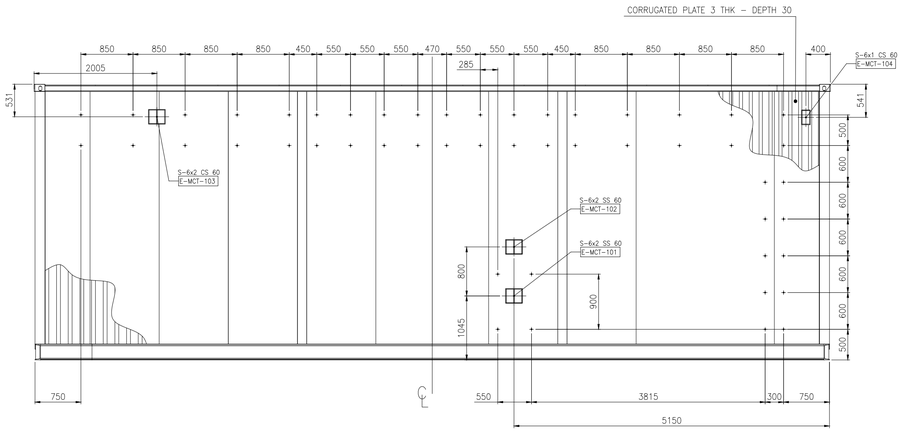
INTERNAL SEA FASTENING PLATES PLAN



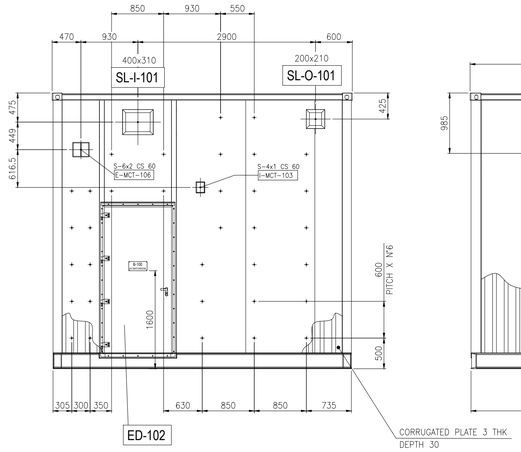
THREADED STUD INSTALLATION



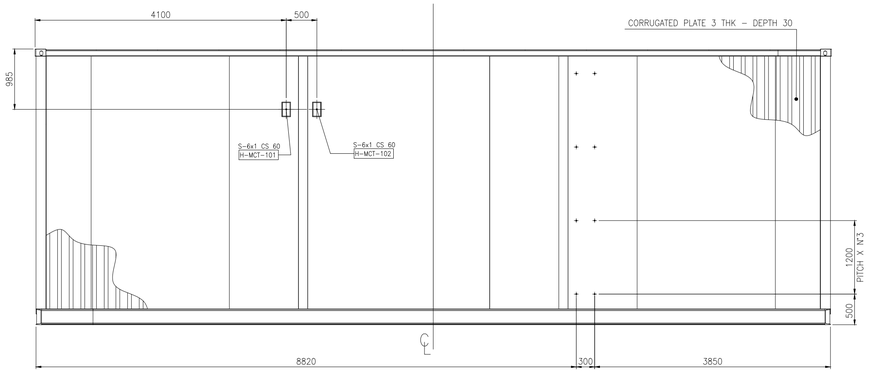
VIEW OF WEST WALL



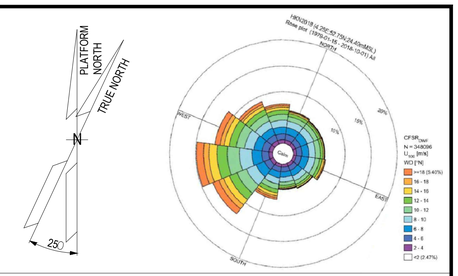
VIEW OF NORTH WALL



VIEW OF EAST WALL

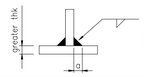


VIEW OF SOUTH WALL



NOTES

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D.1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



a= 0,7 smaller thk

LEGEND

THREADED STUD ø16 – M10 x LG= 29mm

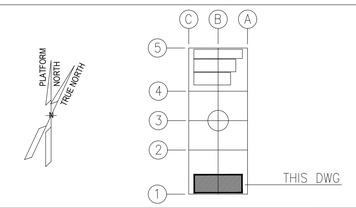
T.O.F. TOP OF FLOOR

MCT LEGEND: E-MCT-101
- MCT TYPE & SIZE / BRAND ROXTEC
- MATERIAL: C.S.= PRIMED MILD STEEL; S.S.= AISI 316 L
- MCT DEPTH: S 6x2 C.S. 60
- MCT SERVICE: E= ELECTRICAL; I= INSTRUMENTAL; H= HVAC
- PROGRESSIVE NUMBER FROM 01
- MODULE LOCATION: 1= B-100 3= B-300 2= B-200 4= B-400

HVAC SLEEVE LEGEND: SL-I-101
- INTERNAL SIZE OF DUCT L x H (mm): 300x300
- SERVICE: I= AIR IN; R= RECYRCLE; O= OVERPRESSURE
- PROGRESSIVE NUMBER FROM 01
- MODULE LOCATION: 1= B-100 3= B-300 2= B-200 4= B-400

DOOR LEGEND: ED-101
- EXTERNAL DOOR
- PROGRESSIVE NUMBER FROM 01
- MODULE LOCATION: 1= B-100; 2= B-200; 3= B-300; 4= B-400

KEY PLAN



REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00014
"B-100" HVAC GENERAL ARRANGEMENT	1724000049-HV-DA-00064

MCT LIST

SERVICE	TAG No.	MCT DIMENSIONS and INSTALLATION SENSE L (mm) HORIZONTAL	H (mm) VERTICAL	W (mm) DEPTH	MCT SIZE TYPE "S" FRAME Primed Mild Steel BRAND: ROXTEC	MCT SIZE TYPE "S" FRAME AISI 316 L BRAND: ROXTEC
ELECTRICAL	E-MCT-101	271	238	60		6x2
	E-MCT-102	271	238	60		6x2
	E-MCT-103	271	238	60	6x2	
	E-MCT-104	140.5	238	60	6x1	
	E-MCT-105	271	238	60	6x2	
	E-MCT-106	271	238	60	6x2	
INSTRUMENTAL	I-MCT-101	271	179.5	60	4x2	
	I-MCT-102	140.5	179.5	60	4x1	
	I-MCT-103	140.5	179.5	60	4x1	
HVAC	H-MCT-101	140.5	238	60	6x1	
	H-MCT-102	140.5	238	60	6x1	

ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	11/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
01	08/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	23/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND — ROSETTI MARINO

TITLE :

B-100 DETAILED DRAWINGS-E&I SHELTERS

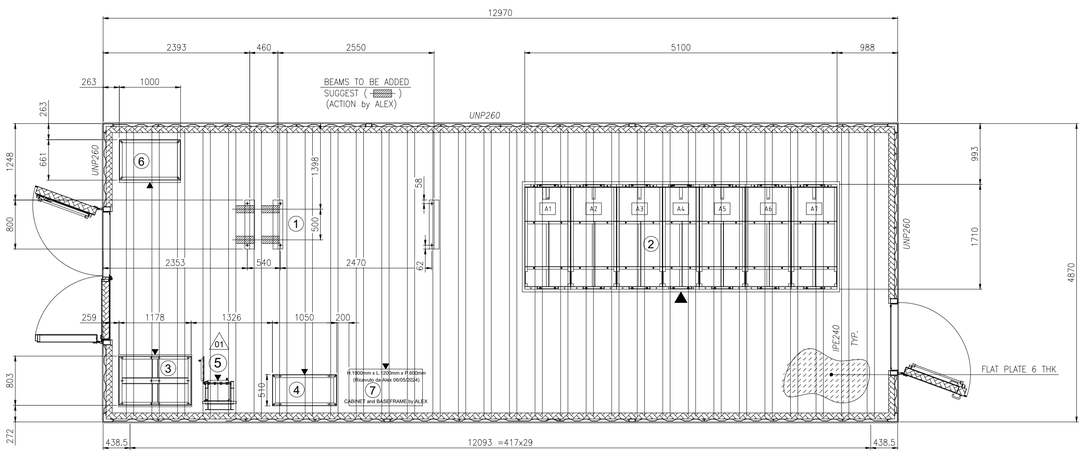
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00018	SHEET 002	REV. 02

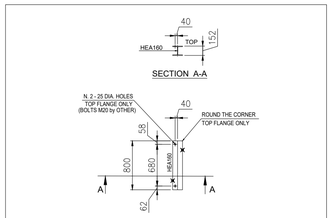
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REV. 02

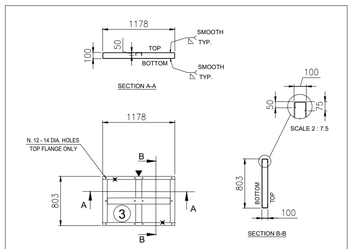
B-100
I&T EQUIPMENT ROOM
BASEFRAME LOCATION PLAN





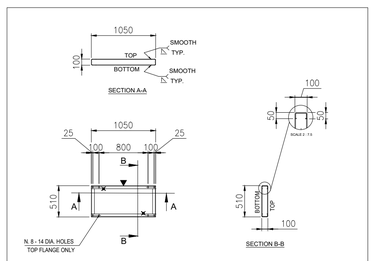
BESEFRAME FOR POS. 1

BUILT N. 3 PIECES
FOR LOCATION SEE PLAN
HEA160 MANDATORY



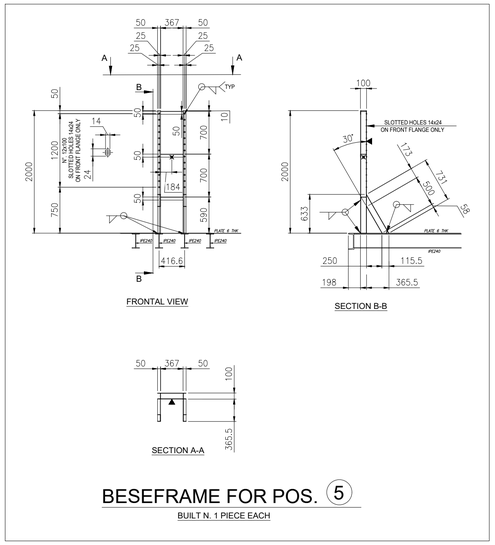
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BUILT N. 1 PIECE



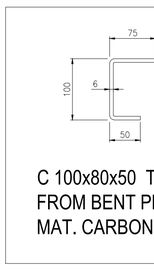
BESEFRAME FOR POS. 4

BUILT N. 1 PIECE EACH

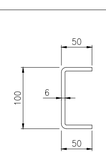


BESEFRAME FOR POS. 5

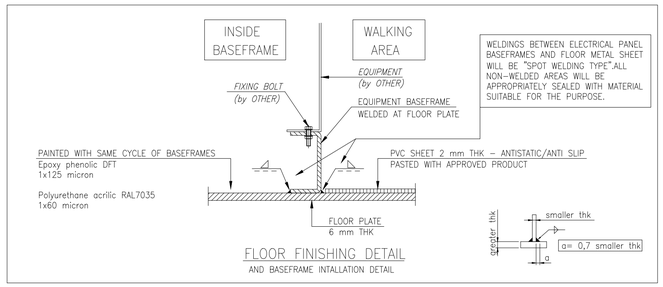
BUILT N. 1 PIECE EACH



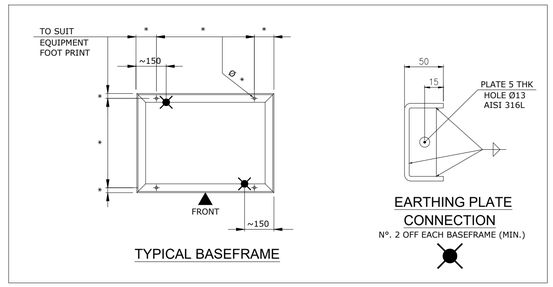
C 100x80x50 THK 6mm.
FROM BENT PLATE THK 6mm.
MAT. CARBON STEEL



C 100x50x50 THK 6mm.
FROM BENT PLATE THK 6mm.
MAT. CARBON STEEL

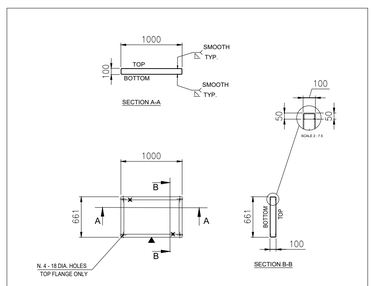


FLOOR FINISHING DETAIL
AND BASEFRAME INTALLATION DETAIL



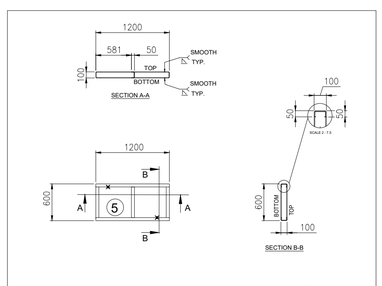
TYPICAL BASEFRAME

EARTHING PLATE
CONNECTION
N°. 2 OFF EACH BASEFRAME (MIN.)



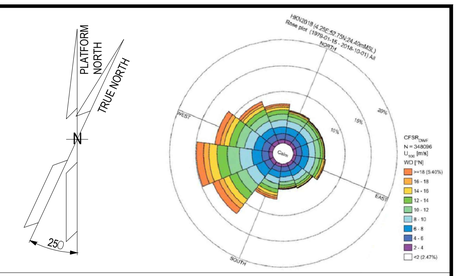
BESEFRAME FOR POS. 6

BUILT N. 1 PIECE



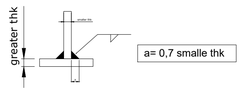
BESEFRAME FOR POS. 7

BUILT N. 1 PIECE



NOTES

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D.1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



4. ALL WELDS ON TOP & BOTTOM SIDES OF BASEFRAMES MUST BE PERFECTLY SMOOTHED.
5. WHERE INDICATED " ▲ " SHOULD BE STAMP "FRONT", ABOVE "TOP" AND BELOW "BOTTOM".

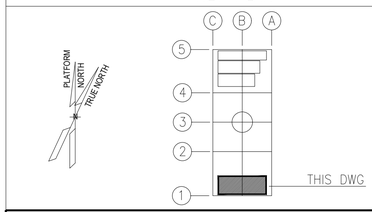


6. SURFACE TREATMENT ACCORDING DOCUMENT N. 1724000049-MAT-PRO-00004 - PAINTING PROCEDURE FINAL COLOUR LIGHT GREY RAL 7035.

LEGEND

ASI = ALEX SISTEMI

KEY PLAN



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)	SCOPE
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	2600	ASI
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	7400	ROSETTI MARINO
3	UP-200F1	DC UPS PANEL	1200	850	2105	500	ASI
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	522	ASI
5	CB-200F1	ISOLATOR FOR DC UPS	600	300	800	100	ASI
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2100	2100	ASI
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV MV ROOM	1200	600	1900	TBD	ASI

ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	11/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
01	08/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	23/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND

ROSETTI MARINO

TITLE :

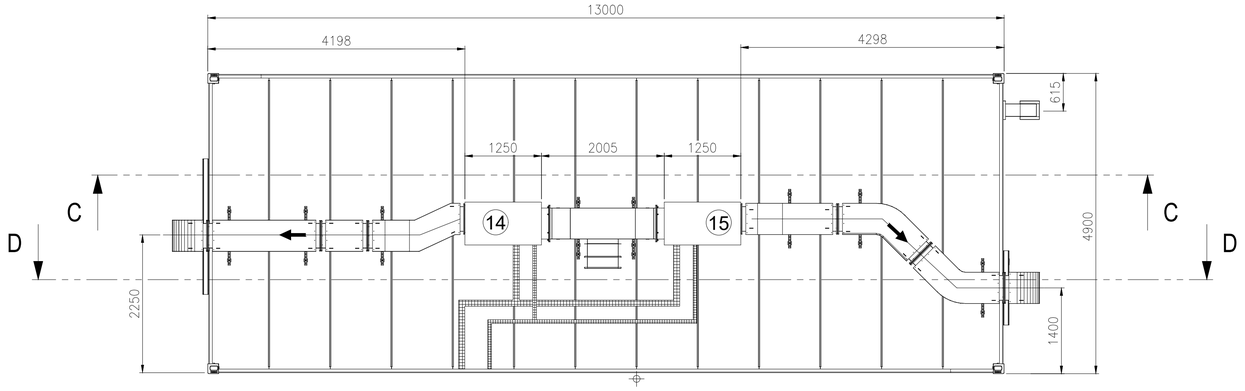
B-100 DETAILED DRAWINGS-E&I SHELTERS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00018		SHEET 003 / REV. 02

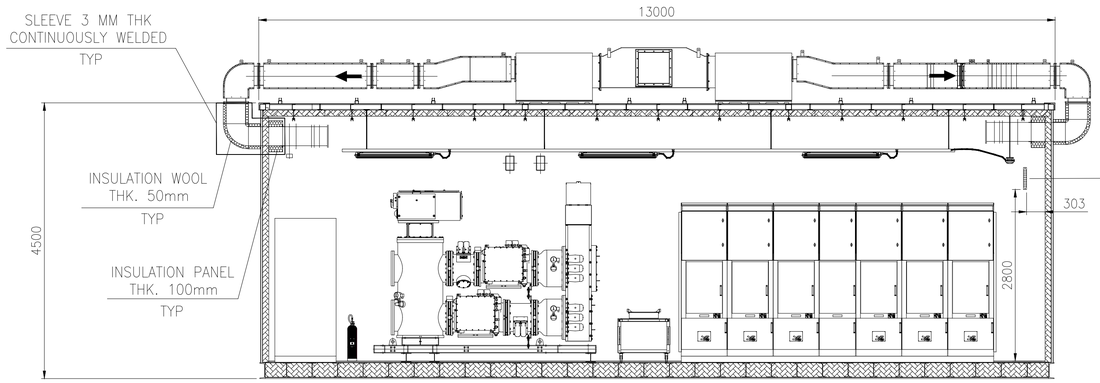
File Name : 1724000049-AR-DD-00018-REV.02

DRAWING NO. 1724000049-AR-DD-00018

REV. 02



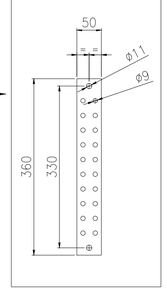
TOP VIEW



SECTION C-C

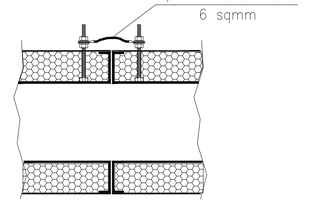
DET. 3

TYPICAL DETAIL
Ground bar



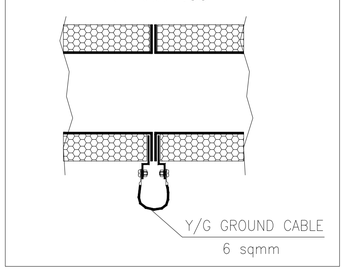
DET. 1

EXTERNAL DUCT



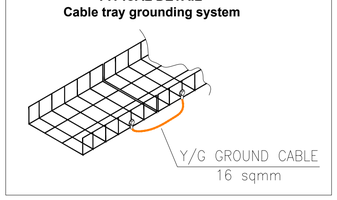
DET. 2

INTERNAL DUCT



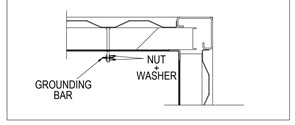
DET. 4

TYPICAL DETAIL
Cable tray grounding system



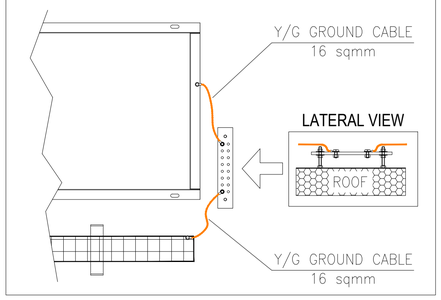
DET. 5

TYPICAL INSTALLATION BTH PE



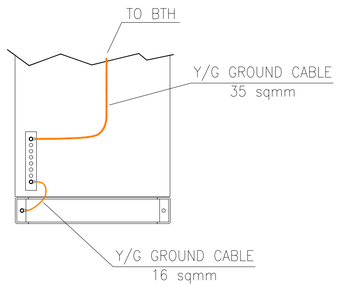
DET. 6

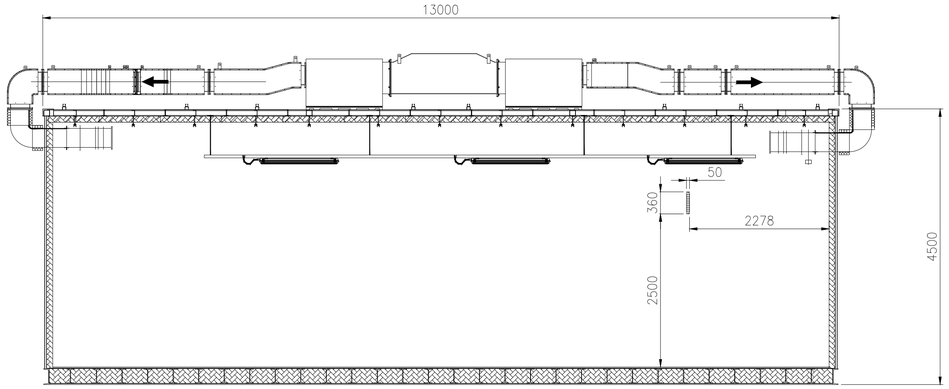
TYPICAL ROOF GROUNDING CONNECTION



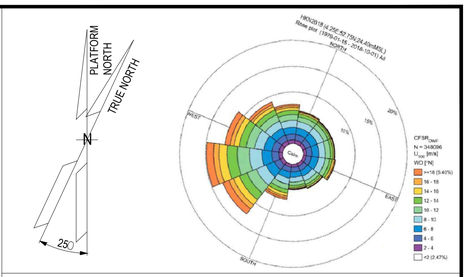
DET. 7

TYPICAL CABINET GROUNDING CONNECTION





SECTION D-D

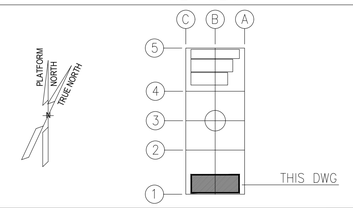


NOTES

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.

LEGEND

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	11/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
01	08/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	23/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND

ROSETTI MARINO

TITLE :

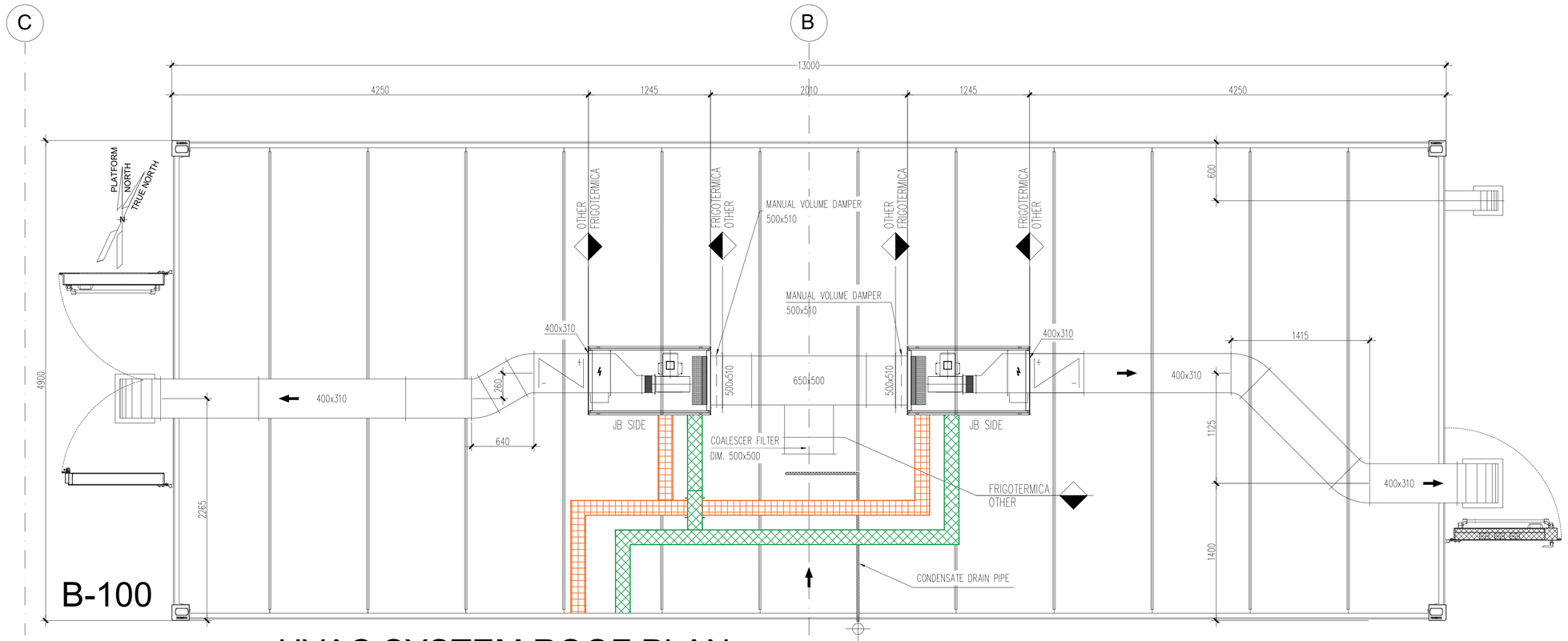
B-100 DETAILED DRAWINGS-E&I SHELTERS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00018	SHEET 004	REV. 02

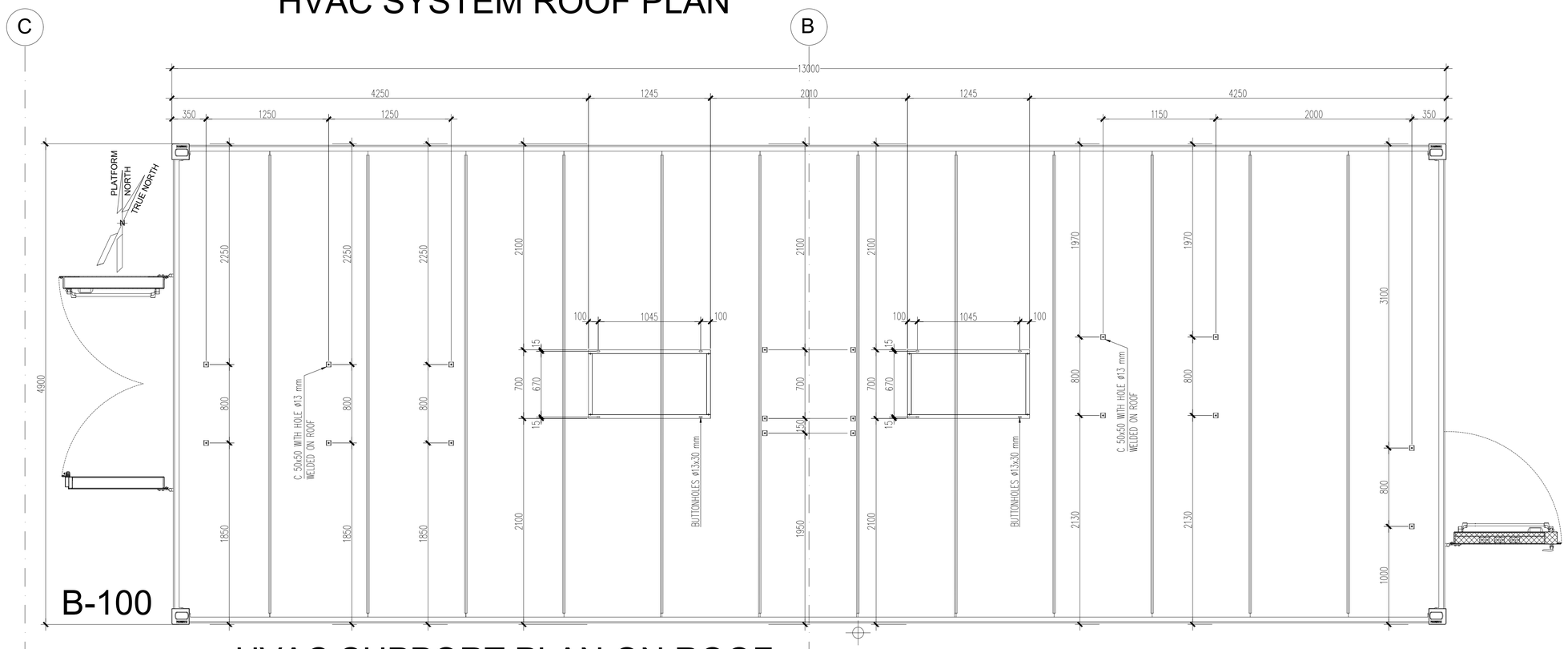
File Name : 1724000049-AR-DD-00018-REV.02

DRAWING NO. 1724000049-HV-DA-00064_0

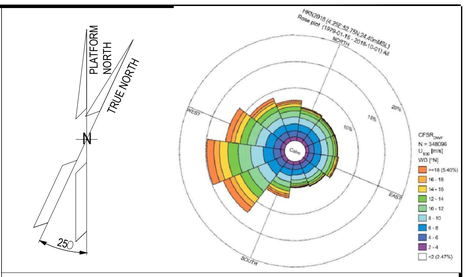
REV. 00



HVAC SYSTEM ROOF PLAN



HVAC SUPPORT PLAN ON ROOF



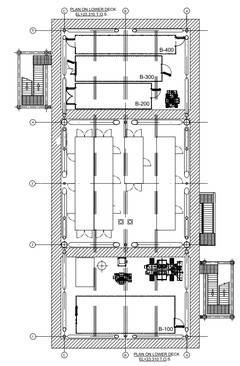
NOTES

Outdoor ductwork in stainless steel AISI 316L
Indoor ductwork in galvanized steel Z275

Basket tray Power

Basket tray Instrument

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	13/06/2024	S.Z.	S.S.	M.G.	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

S.S.
MODULE B-100
HVAC SYSTEM - G.A. AND DETAILS

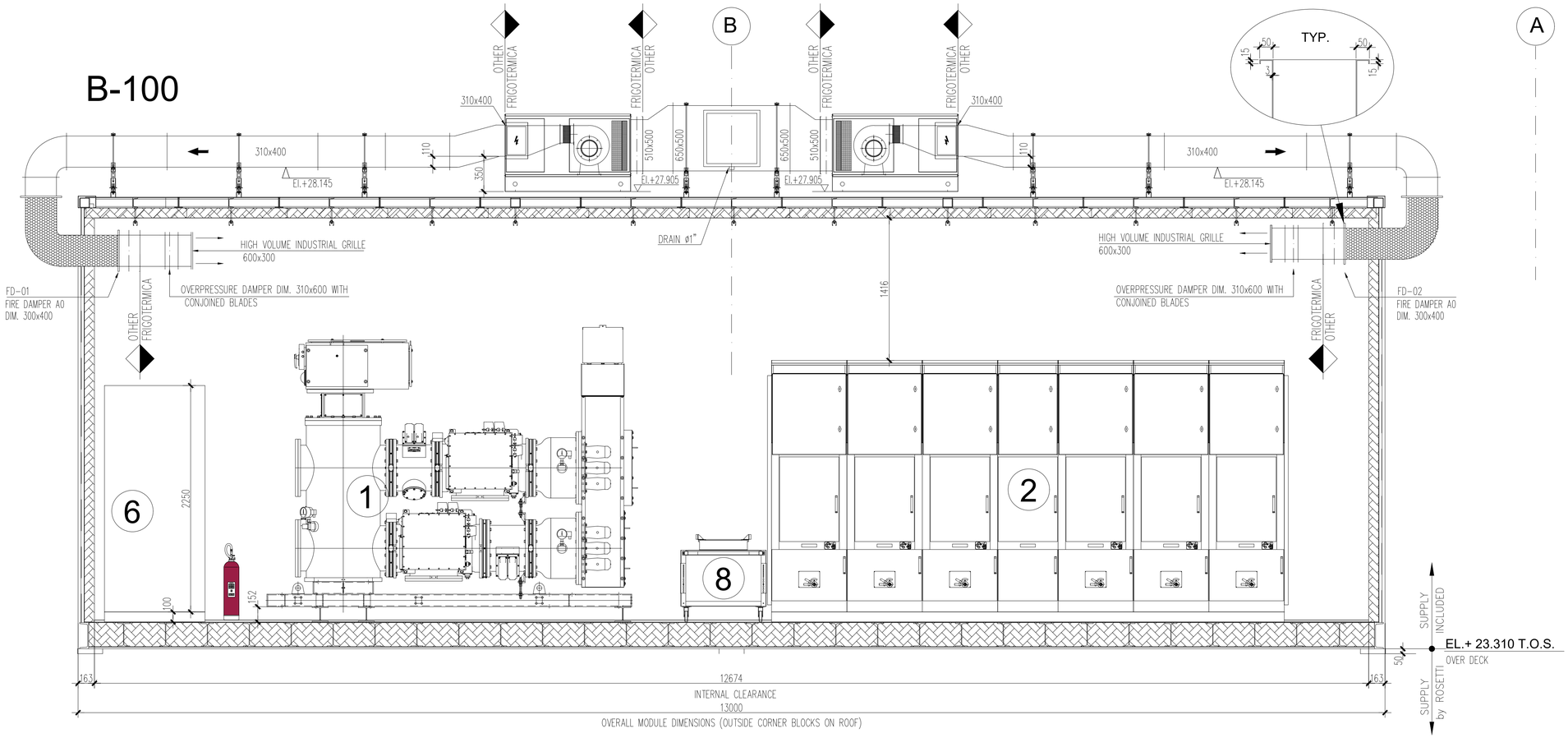
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 25
DRAWN S.Z.	CHECKED S.S.	APPROVED M.G.	DATE 13/06/2024
A1	DRAWING NO. 1724000049-HV-DA-00064	SHEET 001	REV. 00

File Name : 1724000049-HV-DA-00064_0

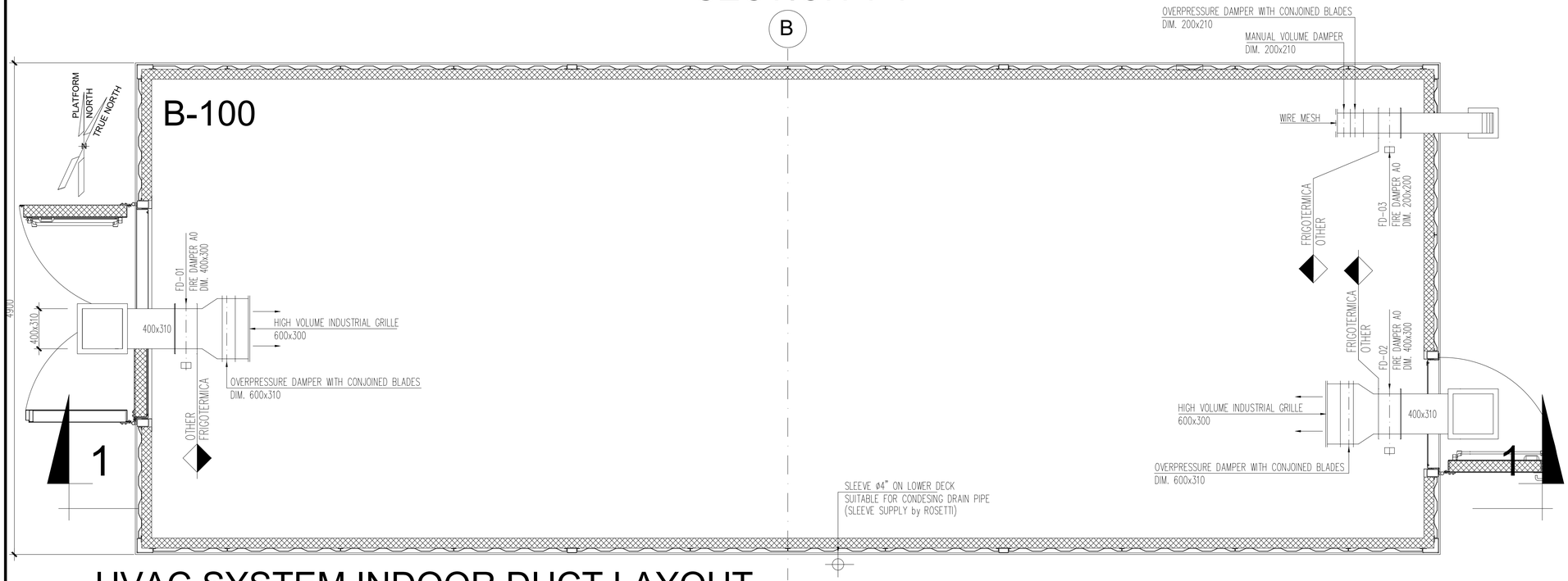
DRAWING NO. 1724000049-HV-DA-00064_0

REV. 00

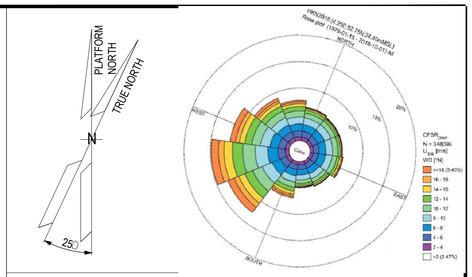
B-100



SECTION 1-1



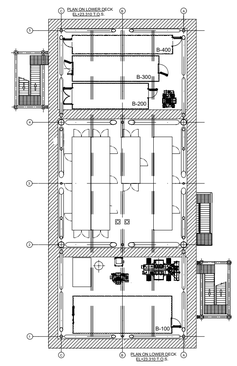
HVAC SYSTEM INDOOR DUCT LAYOUT



NOTES

Outdoor ductwork in stainless steel AISI 316L
Indoor ductwork in galvanized steel Z275

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	13/06/2024	S.Z.	S.S.	M.G.	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
S.S.
MODULE B-100
HVAC SYSTEM - G.A. AND DETAILS

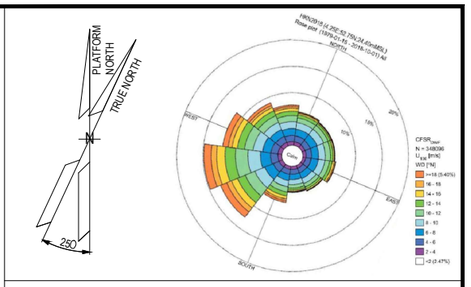
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DRAWN S.Z.	CHECKED S.S.	APPROVED M.G.	DATE 13/06/2024
A1	DRAWING NO. 1724000049-HV-DA-00064	SHEET 002	REV. 00

File Name : 1724000049-HV-DA-00064_0

DRAWING NO. 123A90-1724000049-HV-PID-00039

REV. 01

BASE LOAD POWER HUB (BLPH)
B-100 HV
P&ID HVAC System



NOTES

LEGEND

HOLDS

ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	09/07/24	S.Z.	S.S.	M.G.	ISSUE FOR INFORMATION (IFI)
0	10/06/24	S.Z.	S.S.	M.G.	ISSUE FOR INFORMATION (IFI)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-100 HV
P&ID HVAC System

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:1
DRAWN G.M.	CHECKED A.O.	APPROVED A.C.	DATE 09/07/24

A1	DRAWING NO. 123A90-1724000049-HV-PID-00039	SHEET 001	REV. 01

File Name : 123A90-1724000049-HV-PID-00039_REV.01

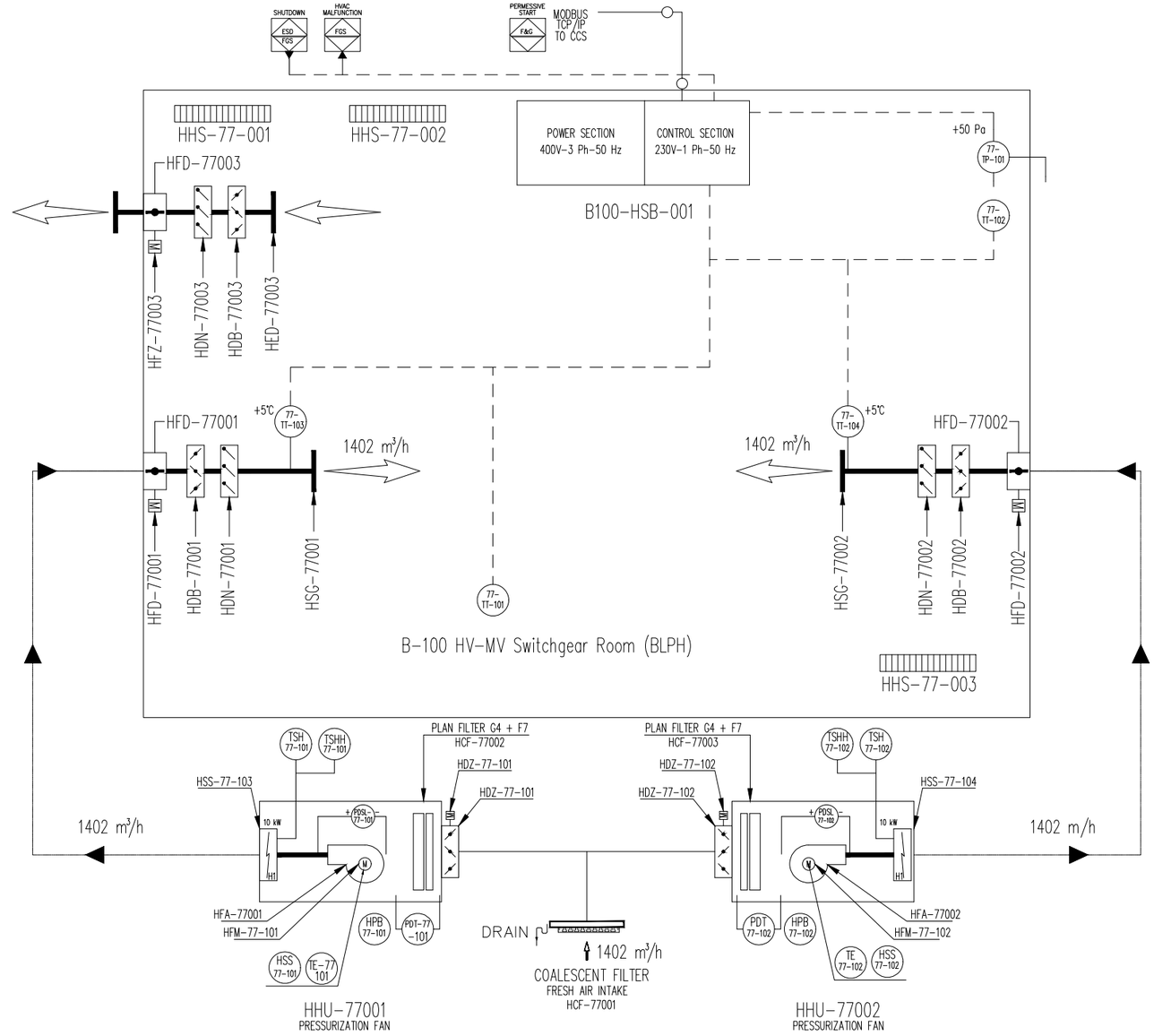
DRAWING NO. 123A90-1724000049-HV-PID-00039

REV. 01

ITEM	HVAC-PRESSURISING FAN
DESCRIPTION	HVAC UNIT
MAKER	FRIGOTERMICA srl
MODEL	4112-TBA
SUPPLY AIR FLOW	360 l/s
COOLING COIL CAPACITY	N.A.
HEATING COIL CAPACITY	11 kW
TENSIONE	400 V - 50 Hz - 3 Ph+N
EXECUTION	SAFE AREA
REFRIGERANT	N.A.

LEGENDA

	MOTORISED DAMPER WITH SPRING RETURN	F1	AIR FILTER "G4"		MOTORISED FIRE DAMPER WITH SPRING RETURN
	REGULATION DAMPER	F2	BAG FILTER "F8"		EVAPORATING COIL
	OVERPRESSURE DAMPER		CONDENSING COIL		
PDSH	DIFFERENTIAL PRESSURE SWITCH HIGH PRESSURE		CONDENSING FAN		
PDSL	DIFFERENTIAL PRESSURE SWITCH LOW PRESSURE		ELECTRICAL HEATER		LIQUID RECEIVER
TT	TEMPERATURE TRASMITTER		SUPPLY FAN	MT	MOISTURE TRASMITTER
EPB	EMERGENCY PUSH BUTTON		GLOBE VALVE	PTM	HIG PRESSURE TRASDUCER
OH	COMPRESSOR OIL HEATER		DRYER FILTER	P	COMPRESSOR THERMIC PROTECTION
SV	SOLENOID VALVE		SIGHT GLASS	TSM	SECURITI THERMOSTATE
	REFRIGERANT COMPRESSOR		THERMOSTATIC VALVE	PSH	HIGH PRESSURE SWITCH
			PRESSURE RELIEF VALVE	PSL	LOW PRESSURE SWITCH
				PC	CONDENSING PRESSURE SWITCH



OUTDOOR DESIGN CONDITIONS

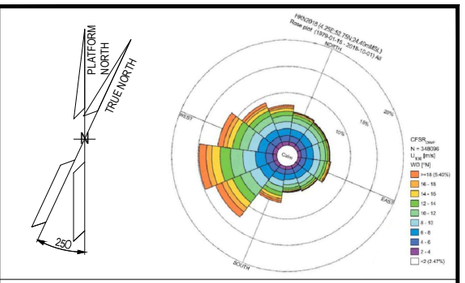
Safe Area
Min. design DB Temp: -8,4°C with RH 100 %
Max. design DB Temp: +25°C with RH 90 %

Module hv-mv (66 kW-6.6 kW)

Safe Area
Indoor min. design temperature: +5°C with RH 30 ÷ 70% ±5
Indor max. design temperature: +35°C with RH 30 ÷ 70% ±5
Min. ACH: 6

NOTES:

- HVAC POWER CABINET will energize what above shown.
- HVAC CONTROL CABINET will control all what above shown.
- HVAC POWER CABINET will energize light and socket.
- Outside drainage system shall be provided of heatng cable with anti-freeze funcion to avoid ice inside pipes when outside temeprature reaches values close to 0°C.
- Outdoor air ductworks in stainless steel AISI 316



NOTES

LEGEND

HOLDS

ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	09/07/24	S.Z.	S.S.	M.G.	ISSUE FOR INFORMATION (IFI)
0	10/06/24	S.Z.	S.S.	M.G.	ISSUE FOR INFORMATION (IFI)

CROSSWIND

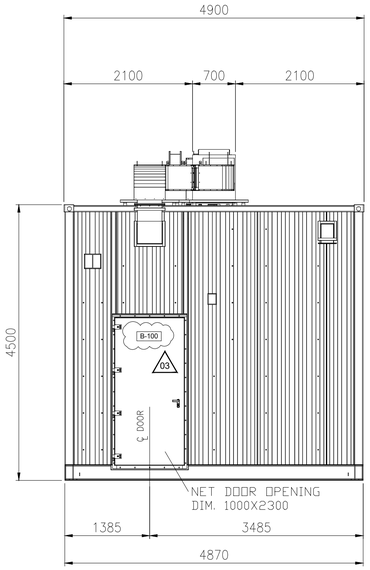
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-100 HV
P&ID HVAC System

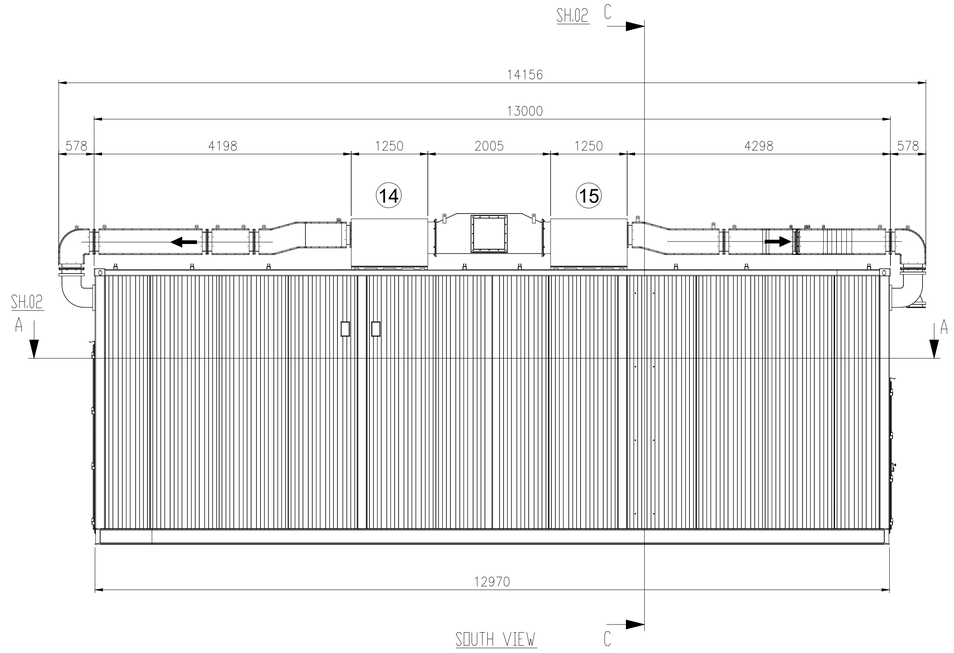
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 1
DRAWN G.M.	CHECKED A.O.	APPROVED A.C.	DATE 09/07/24
A1	DRAWING NO. 123A90-1724000049-HV-PID-00039	SHEET 003	REV. 01

File Name : 123A90-1724000049-HV-PID-00039_REV.01

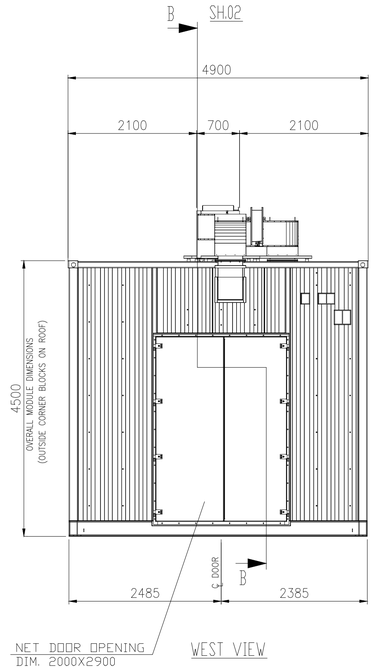
DRAWING NO. 1724000049-AR-DA-00014 REV. 03



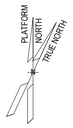
EAST VIEW

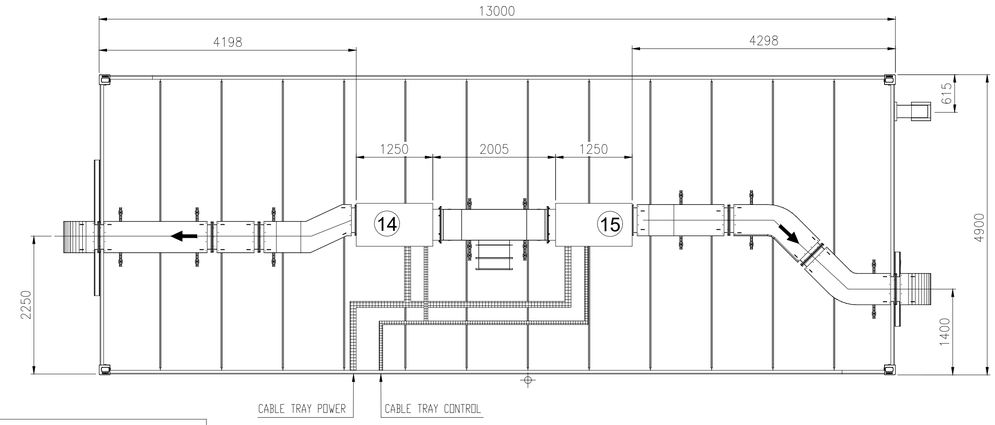


SOUTH VIEW



WEST VIEW

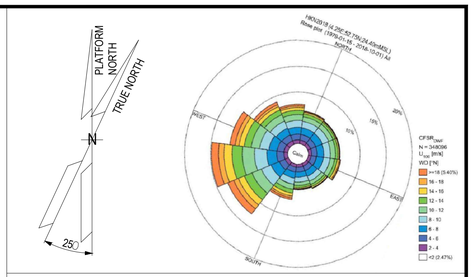




TOP VIEW

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	2600
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	7400
3	UP-200F1	DC UPS PANEL	1200	850	2105	500
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	522
5	CB-200F1	ISOLATOR FOR DC UPS	600	300	800	100
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2100	2100
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV ROOM	1200	600	1900	400
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	70
9	-	TOOL BOX	495	335	920	20
10	-	ELECTRIC SAFETY KIT	230	110	280	20
11	-	TABLE	1000	500	750	50
12	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
14	HHU-77001	AIR HANDLING UNIT A	1250	850	900	140
15	HHU-77002	AIR HANDLING UNIT B	1250	850	900	140
16	HSS-77-001	SPACE HEATER 1	184	145	1100	5
17	HSS-77-002	SPACE HEATER 2	184	145	1100	5
18	HSS-77-003	SPACE HEATER 3	184	145	1100	5



NOTE

1) ALL DIMENSIONS ARE IM MM.
2) THE POSITION OF THE LAMPS INDICATED IS TO BE CONSIDERED THE THEORETICAL ONE, THE FINA ONE WILL BE CONFIRMED IN THE AS-BUILT ISSUE.

REFERENCE

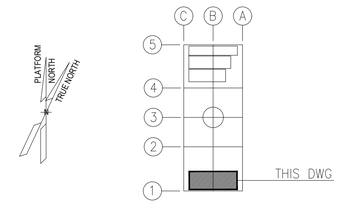
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00064
"B-100" DETAILED DRAWING	1724000049-AR-DD-00018
PAINTING PROCEDURE	1724000049-MAT-PRO-00004
"B-100" FOUNDATION	1724000049-ST-DD-00010
"B-100" STRUCTURAL CALCULATION	1724000049-ST-CA-00006

LEGEND

- INTERNAL LIGHT
- E INTERNAL EMERGENCY LIGHT
- SOCKET OUTLET, INDOOR
- LIGHT SWITCH
- ESCAPE CORRIDOR – WIDTH 800mm.
- MAINTENANCE AREA – VENDOR REQUIREMENT
- INSULATION PANEL

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	28/06/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	14/05/24	M.G.	SKV	C.A.	ISSUE FOR REVIEW (IFR)
00	08/02/24	A.G.	SKV	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

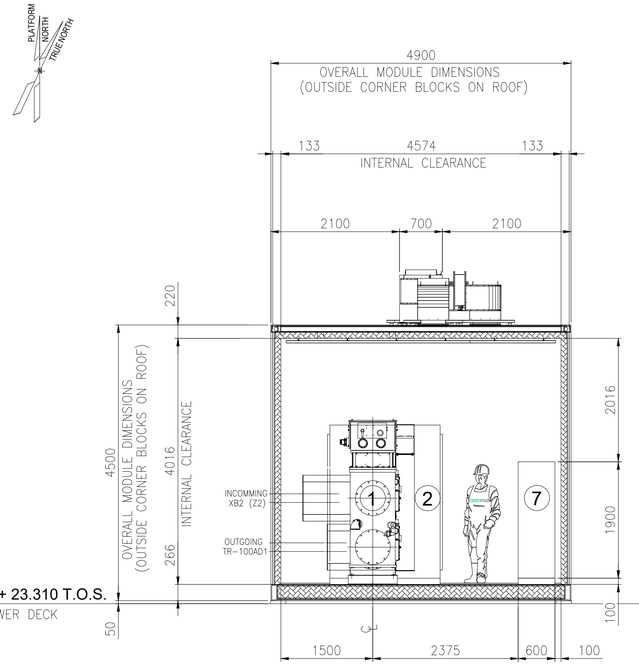
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-100 GENERAL ARRANGEMENT DRAWINGS

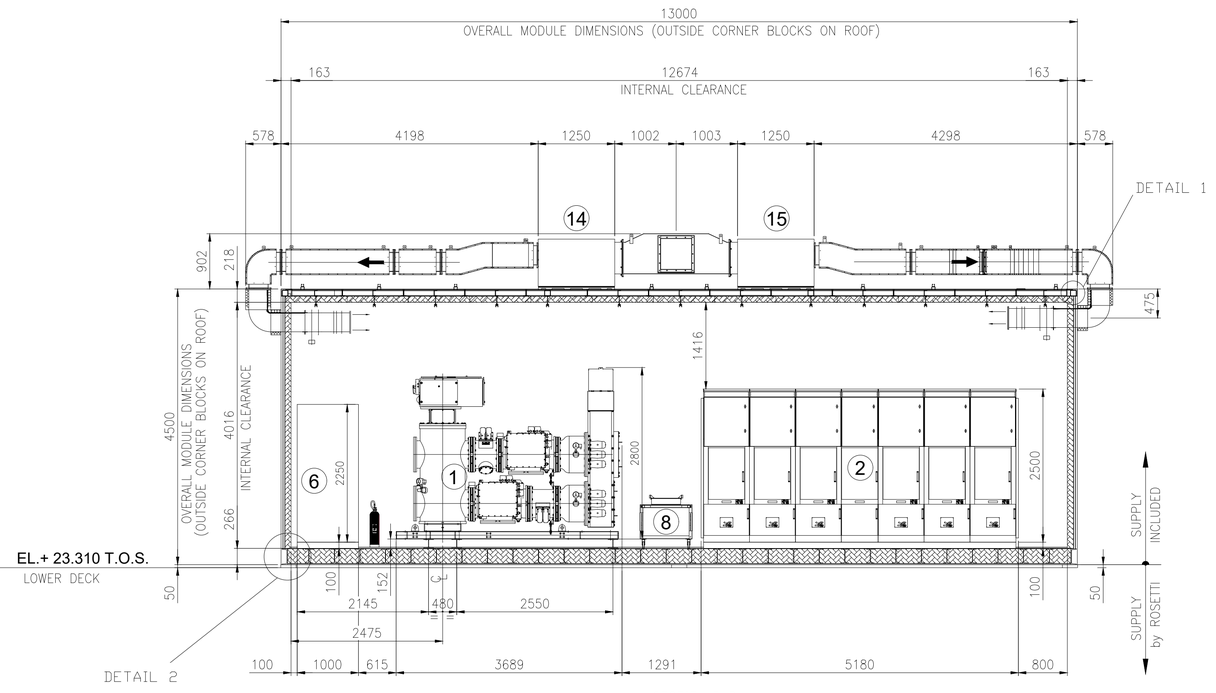
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00014	SHEET 001	REV. 03

File Name : 1724000049-AR-DA-00014-REV.03

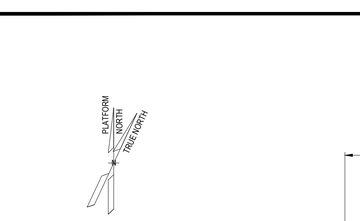
DRAWING NO. 1724000049-AR-DA-00014 REV. 03



SECTION C-C

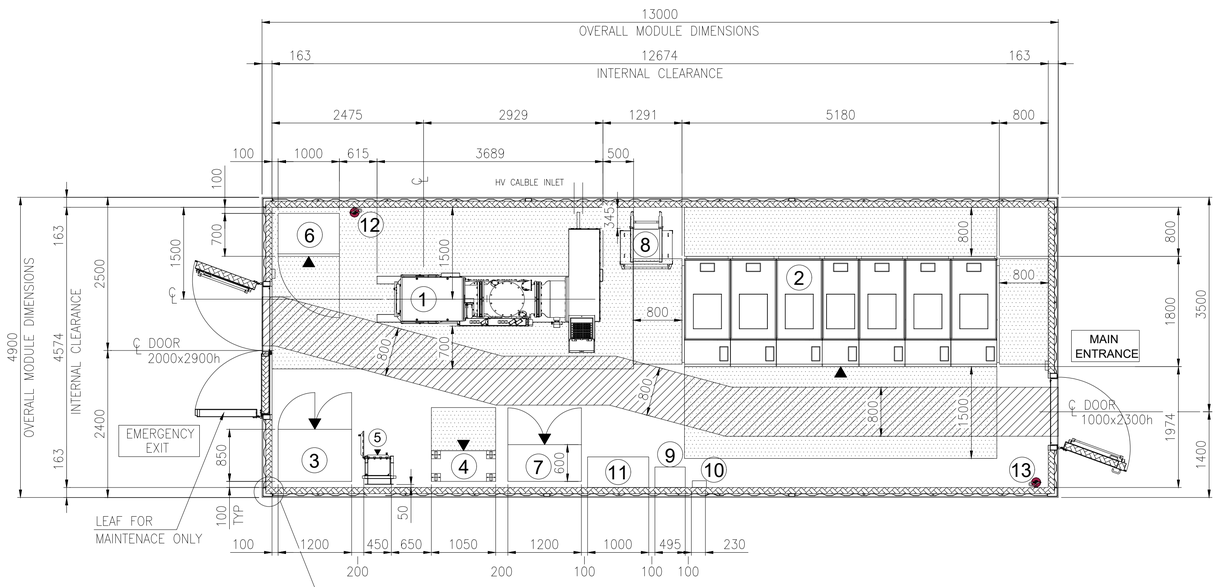


SECTION B-B

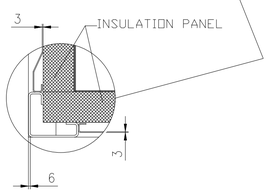


EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	2600
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	7400
3	UP-200F1	DC UPS PANEL	1200	850	2105	500
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	522
5	CB-200F1	ISOLATOR FOR DC UPS	600	300	800	100
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2100	2100
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV ROOM	1200	600	1900	400
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	70
9	-	TOOL BOX	495	335	920	20
10	-	ELECTRIC SAFETY KIT	230	110	280	20
11	-	TABLE	1000	500	750	50
12	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
14	HHU-77001	AIR HANDLING UNIT A	1250	850	900	140
15	HHU-77002	AIR HANDLING UNIT B	1250	850	900	140
16	HSS-77-001	SPACE HEATER 1	184	145	1100	5
17	HSS-77-002	SPACE HEATER 2	184	145	1100	5
18	HSS-77-003	SPACE HEATER 3	184	145	1100	5



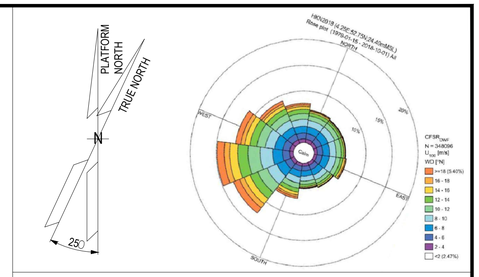
SECTION A-A



EQUIPMENT LAYOUT

"B-100" HV (66kV/6.6kV) SWITCHGEAR ROOM

BOTTOM PLAN



NOTE

1) ALL DIMENSIONS ARE IM MM.
2) THE POSITION OF THE LAMPS INDICATED IS TO BE CONSIDERED THE THEORETICAL ONE, THE FINA ONE WILL BE CONFIRMED IN THE AS-BUILT ISSUE.

03

REFERENCE

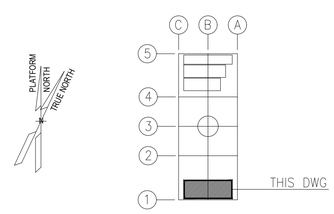
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00064
"B-100" DETAILED DRAWING	1724000049-AR-DD-00018
PAINTING PROCEDURE	1724000049-MAT-PRO-00004
03 "B-100" FOUNDATION	1724000049-ST-DD-00010
03 "B-100" STRUCTURAL CALCULATION	1724000049-ST-CA-00006

LEGEND

- INTERNAL LIGHT
- E INTERNAL EMERGENCY LIGHT
- SOCKET OUTLET, INDOOR
- LIGHT SWITCH
- ESCAPE CORRIDOR – WIDTH 800mm.
- MAINTENANCE AREA – VENDOR REQUIREMENT
- INSULATION PANEL

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	28/06/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	14/05/24	M.G.	SKV	C.A.	ISSUE FOR REVIEW (IFR)
00	08/02/24	A.G.	SKV	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

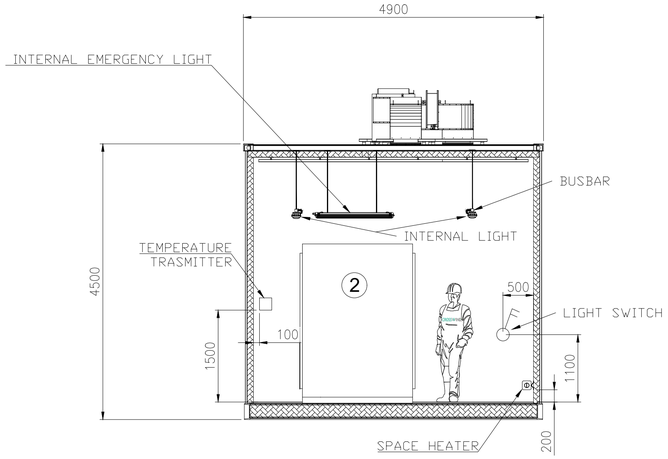
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-100 GENERAL ARRANGEMENT DRAWINGS

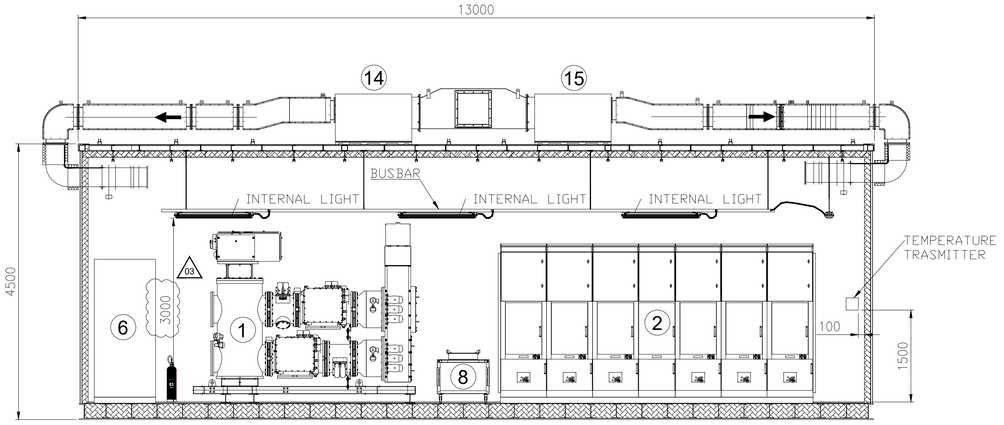
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00014	SHEET 002	REV. 03

File Name : 1724000049-AR-DA-00014-REV.03

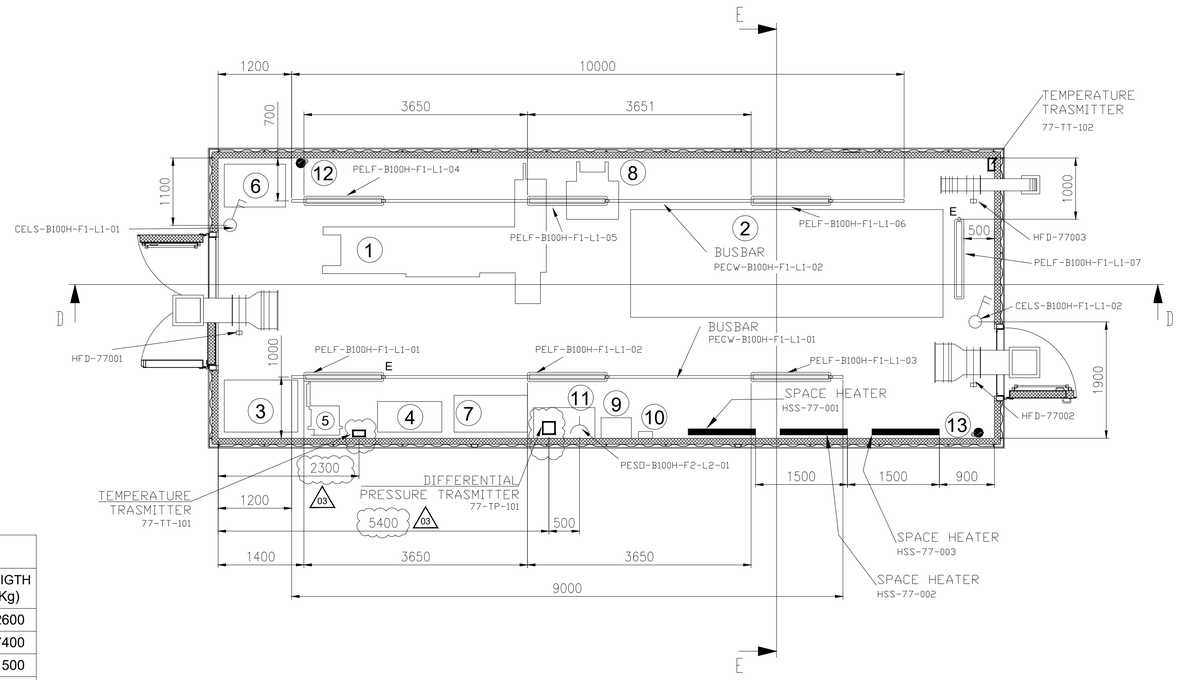
DRAWING NO. 1724000049-AR-DA-00014 REV. 03



SECTION E-E

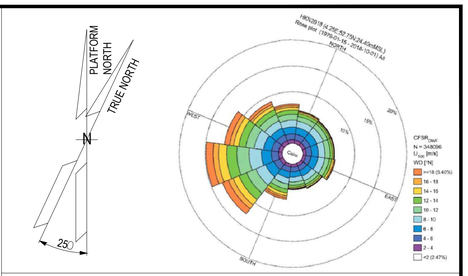


SECTION D-D



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	2600
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	7400
3	UP-200F1	DC UPS PANEL	1200	850	2105	500
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	522
5	CB-200F1	ISOLATOR FOR DC UPS	600	300	800	100
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2100	2100
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV ROOM	1200	600	1900	400
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	70
9	-	TOOL BOX	495	335	920	20
10	-	ELECTRIC SAFETY KIT	230	110	280	20
11	-	TABLE	1000	500	750	50
12	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
14	HHU-77001 (03)	AIR HANDLING UNIT A	1250	850	900	140
15	HHU-77002 (03)	AIR HANDLING UNIT B	1250	850	900	140
16	HSS-77-001	SPACE HEATER 1	184	145	1100	5
17	HSS-77-002	SPACE HEATER 2	184	145	1100	5
18	HSS-77-003	SPACE HEATER 3	184	145	1100	5



NOTE

1) ALL DIMENSIONS ARE IM MM.
2) (03) THE POSITION OF THE LAMPS INDICATED IS TO BE CONSIDERED THE THEORETICAL ONE, THE FINA ONE WILL BE CONFIRMED IN THE AS-BUILT ISSUE.

REFERENCE

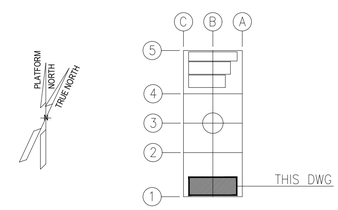
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00064
"B-100" DETAILED DRAWING	1724000049-AR-DD-00018
PAINTING PROCEDURE	1724000049-MAT-PRO-00004
(03) "B-100" FOUNDATION	1724000049-ST-DD-00010
(03) "B-100" STRUCTURAL CALCULATION	1724000049-ST-CA-00006

LEGEND

- INTERNAL LIGHT
- E — INTERNAL EMERGENCY LIGHT
- SOCKET OUTLET, INDOOR
- LIGHT SWITCH
- ESCAPE CORRIDOR – WIDTH 800mm.
- MAINTENANCE AREA – VENDOR REQUIREMENT
- INSULATION PANEL

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	28/06/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	14/05/24	M.G.	SKV	C.A.	ISSUE FOR REVIEW (IFR)
00	08/02/24	A.G.	SKV	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-100 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00014	SHEET 003	REV. 03

File Name : 1724000049-AR-DA-00014-REV.03

Section 8 MECHANICAL COMPLETION STATUS INDEX - TELECOMMUNICATION DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-10 & process: MC & discipline : T

Telecom	77-10 HVAC HV/MV Switchgear Room B-100						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
B100-HSB-001/B400-NET-001	COMMUNICATION / NETWORK CABINET	ONSHORE	C10004353	CIX09	100	2024-11-22	RFC 2

ROSETTI MARINO | CROSSWIND

ITEM	Tag	B100-HSB-001/B400-NET-001 : COMMUNICATION / NETWORK CABINET			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-10 : HVAC HV/MV Switchgear Room B-100			Module	LD_B-100/LD_B-400	
TASK	code	C10004353	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	B100-HSB-001	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 C30000680

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-11-12	2024-11-22	
Signature	Digitaly signed by Carmelo Bongiovanni 2024-11-12T17:50:11.947Z	Digitaly signed by Giovanni Tangianu 2024-11-22T16:16:37.255Z	

ROSETTI MARINO

Cable ID: B100-HSB-001/B400-NET-001

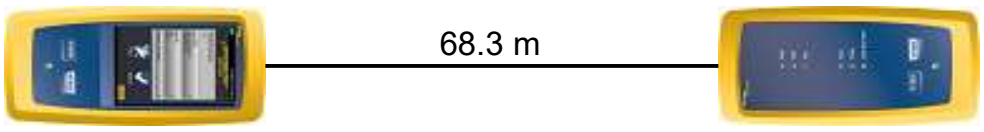
Test Limit: ISO11801 PL2 Class Ea
Limits Version: V7.6
Date / Time: 21-11-2024 11:26:34
Headroom 4.9 dB (NEXT 1,2-4,5)
Cable Type: Cat 6A S/FTP
NVP: 77.0%

Main: Versiv
S/N: 2226344
Software Version: V6.7 Build 1
Calibration Date: 12-12-2022
Adapter: DSX-8000 (DSX-PLA804)
S/N: 22340270

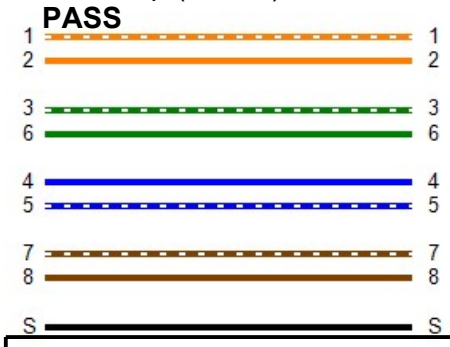
Test Summary: PASS

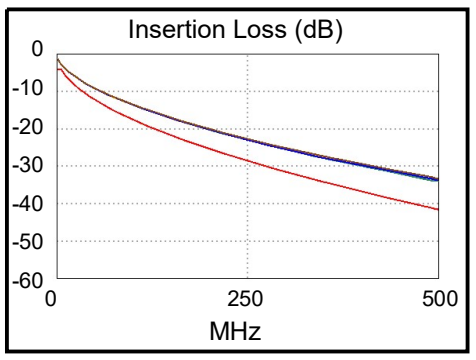
Remote: Versiv
S/N: 2226336
Software Version: V6.7 Build 1
Calibration Date: 12-12-2022
Adapter: DSX-8000R (DSX-PLA804)
S/N: 22340257

Length (m), Limit 90.0	[Pair 4,5]	68.3
Prop. Delay (ns), Limit 496	[Pair 1,2]	302
Delay Skew (ns), Limit 43	[Pair 1,2]	6
Resistance (ohms), Limit 20.60	[Pair 3,6]	9.47
Insertion Loss Margin (dB)	[Pair 3,6]	7.5
Frequency (MHz)	[Pair 3,6]	500.0
Limit (dB)	[Pair 3,6]	41.6

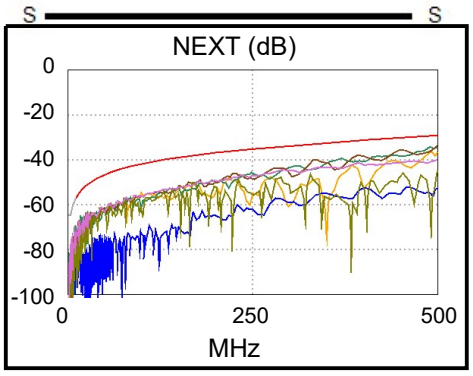


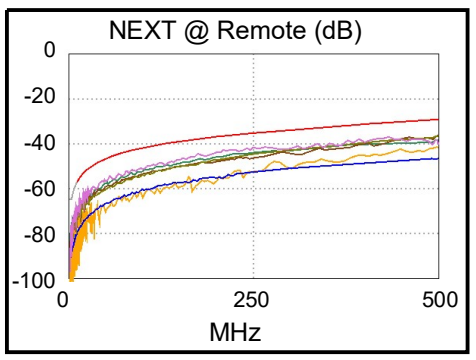
Wire Map (T568B)
PASS



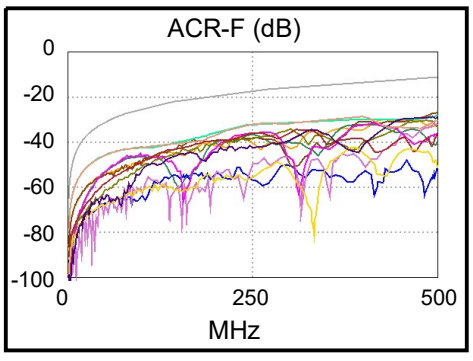


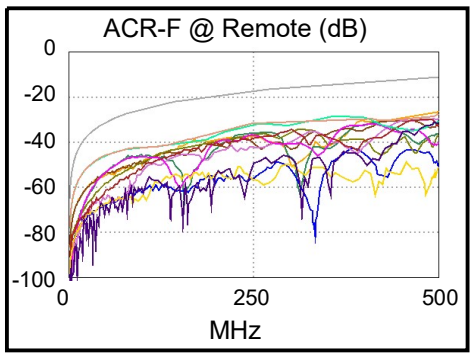
	Worst Case Margin		Worst Case Value	
PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2-4,5	4,5-7,8	3,6-4,5	3,6-4,5
NEXT (dB)	4.9	5.9	5.0	7.1
Freq. (MHz)	489.0	251.0	500.0	500.0
Limit (dB)	29.5	35.3	29.2	29.2
Worst Pair	4,5	4,5	4,5	3,6
PS NEXT (dB)	4.4	5.7	4.4	6.5
Freq. (MHz)	499.0	392.0	499.0	500.0
Limit (dB)	26.4	28.8	26.4	26.4



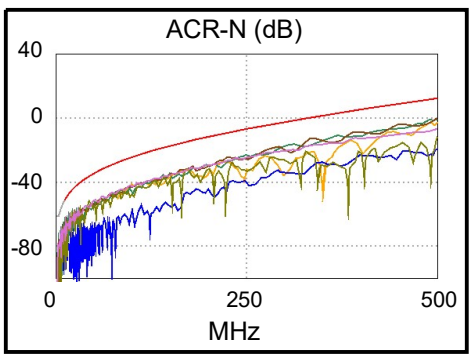


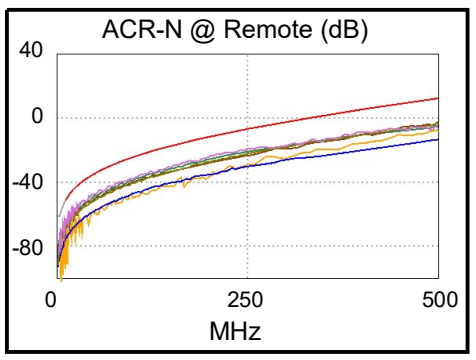
PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5-7,8	7,8-4,5	3,6-1,2	1,2-3,6
ACR-F (dB)	13.5	13.2	15.4	15.0
Freq. (MHz)	3.6	294.0	500.0	500.0
Limit (dB)	54.0	15.9	11.3	11.3
Worst Pair	4,5	4,5	3,6	3,6
PS ACR-F (dB)	15.8	14.6	17.1	15.9
Freq. (MHz)	366.0	263.0	454.0	493.0
Limit (dB)	11.0	13.8	9.1	8.4



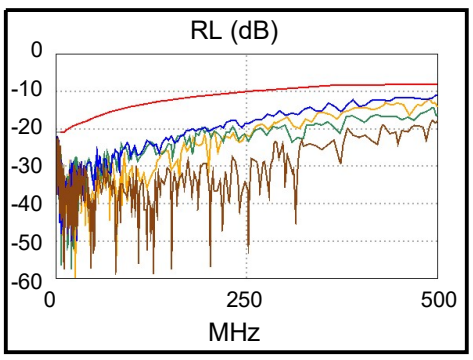


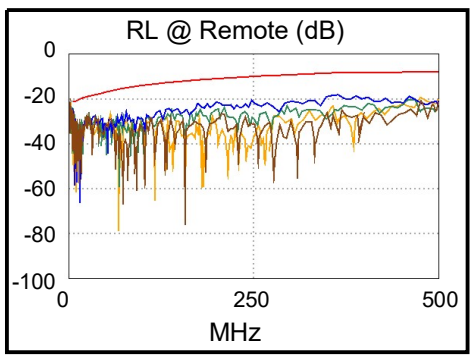
PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2-4,5	4,5-7,8	3,6-4,5	3,6-4,5
ACR-N (dB)	12.7	11.6	12.8	14.9
Freq. (MHz)	490.0	208.5	500.0	500.0
Limit (dB)	-11.7	10.7	-12.4	-12.4
Worst Pair	4,5	4,5	4,5	3,6
PS ACR-N (dB)	12.2	11.2	12.2	14.1
Freq. (MHz)	499.0	221.5	499.0	500.0
Limit (dB)	-15.2	6.8	-15.2	-15.3





PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5	7,8	4,5	4,5
RL (dB)	3.0	7.0	3.0	9.6
Freq. (MHz)	500.0	6.9	500.0	365.0
Limit (dB)	8.0	21.0	8.0	8.4





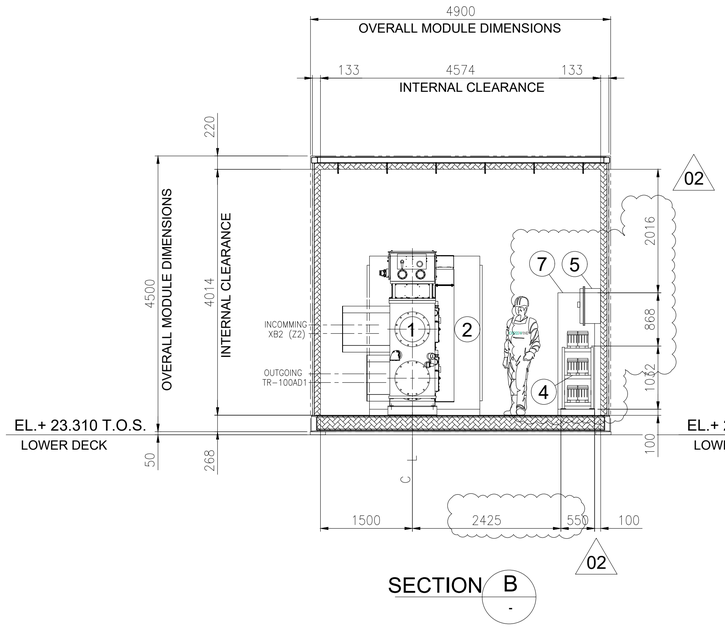
Compliant Network Standards:

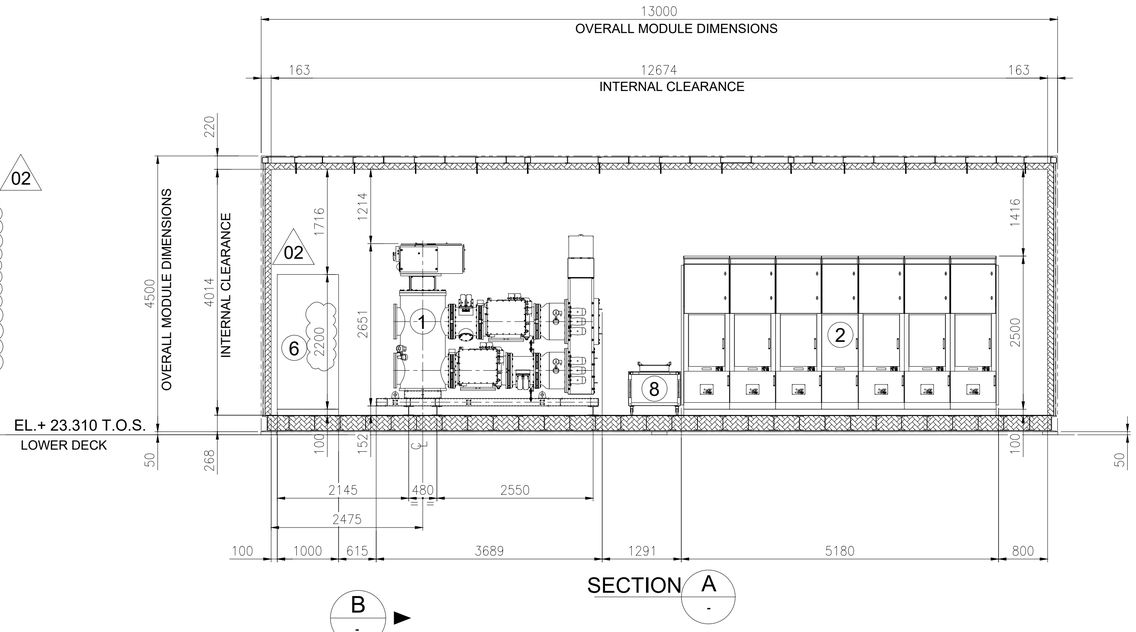
10BASE-T	100BASE-TX	100BASE-T4
1000BASE-T	2.5GBASE-T	5GBASE-T
10GBASE-T	ATM-25	ATM-51
ATM-155	100VG-AnyLan	TR-4
TR-16 Active	TR-16 Passive	

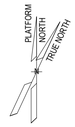
LinkWare™ PC Version 11.4

FLUKE networks

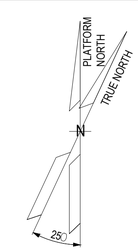
DRAWING NO. 123A90-DDL-EL-DL-20104 REV. 02

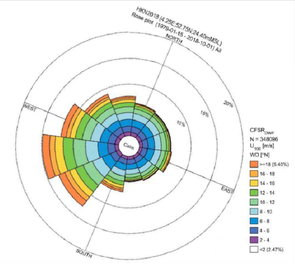






B -





NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DELETED
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT.
4. FOR OTHER ITEMS, CORRECT LOCATION AND INFROMATION, 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

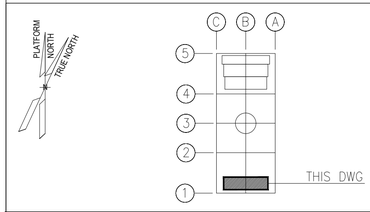
LEGEND

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
66kV SWITCHGEAR (GIS) GENERAL ARRANGEMENT DRAWING	1723001595-EL-DA-00006
CIRCUIT AND WIRING DIAGRAM	1723001595-EL-DG-00015
SG-100D1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00006
DC UPS – GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS	1724000372-EL-DA-00003
DC UPS – BATTERY LAYOUT AND INTERCONNECTING DIAGRAM	1724000372-EL-DG-00010
B-100 - GENERAL ARRANGEMENT DRAWINGS - E&I SHELTER	1724000049-AR-DA-00014

KEY PLAN



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	
3	UP-200F1	DC UPS PANEL	1200	850	2105	
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	
5	CB-200F1 02	ISOLATOR FOR DC UPS	452	377	634	
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2200	02
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV MV ROOM	1200	600	1900	
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	
9	-	TOOL BOX	495	200	200	
10	-	SUBSTATION LIFE SAVING & INTERVENTION KIT	754	270	840	
11	-	TABLE	1000	500	750	

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20104**

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	10/11/2023	DSF	CB/AMA	DYFO/MDO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

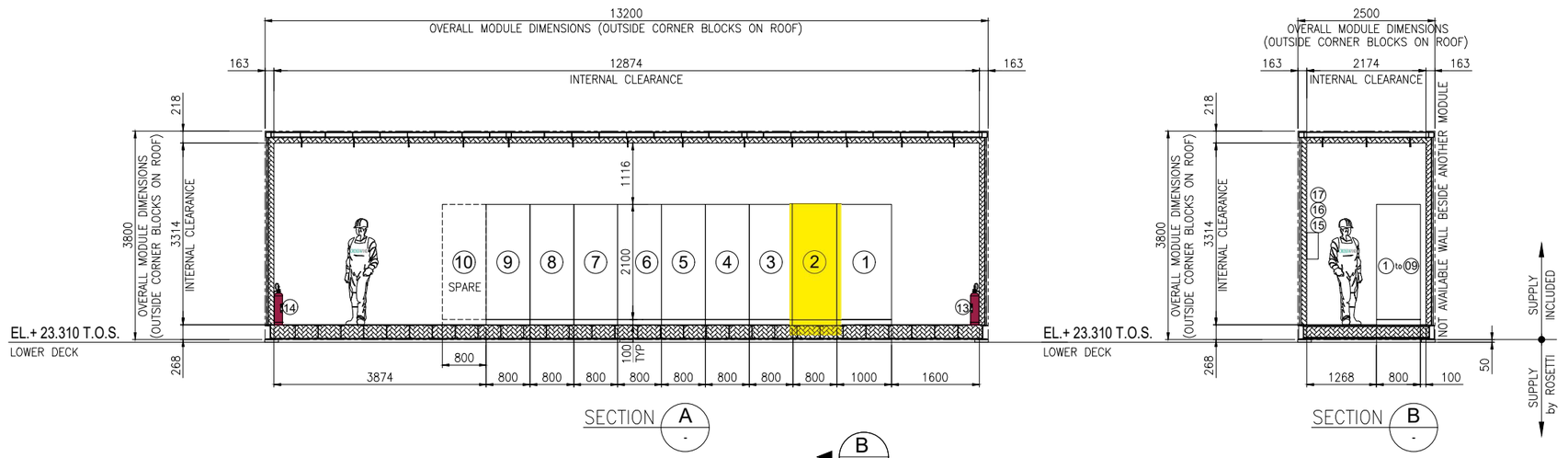
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
HV SWITCHROOM

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

A1	DRAWING NO. 123A90-DDL-EL-DL-20104	SHEET 001	REV. 02

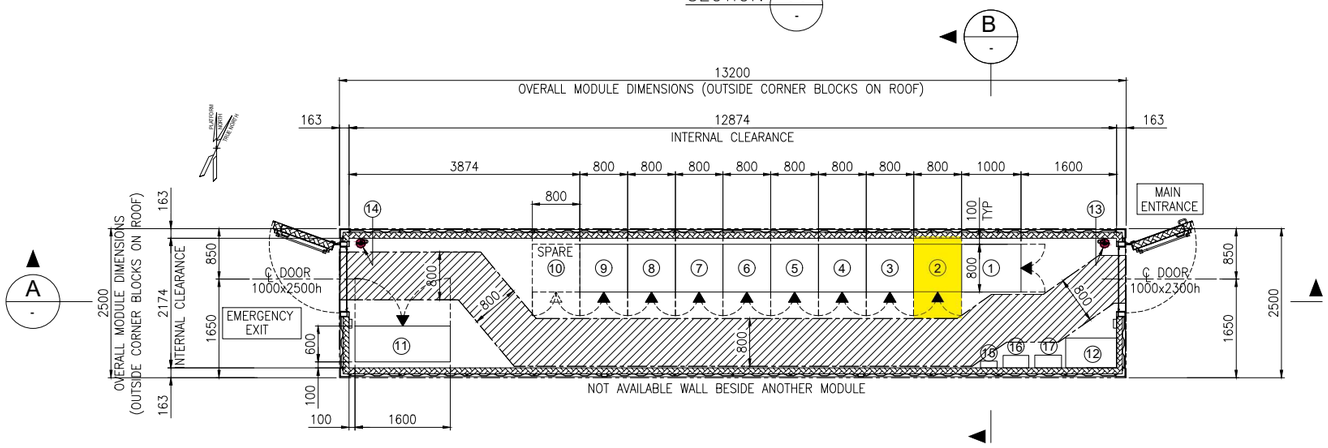
File Name : 123A90-DDL-EL-DL-20104_REV02.dwg

DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 03



SECTION A -

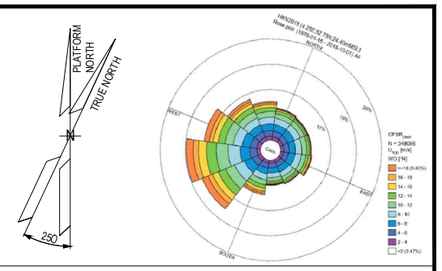
SECTION B -



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

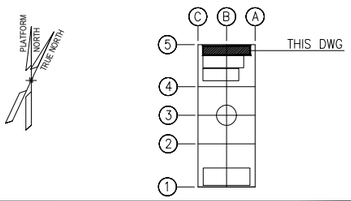
HOLDS

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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-40015

REV. 01

HV SWITCHROOM (B-100)

I&T EQUIPMENT ROOM (ITER B400)

NETWORK CABINET - B400-NET-001

<01>

HVAC CABINET B100-HSB-001	ITEM: SCALANCE XC208 PORT: P3 LAN	RJ45	B100-HSB-001/B400-NET-001 CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS	RJ45	SWITCH: COOP-01 PORT: P11
Ref. Vendor Doc.: 1724000049-HV-DA-00026					
DCS UPS PANEL UP-200F1	ITEM: -A1 GCAU (/8.2) -A73 NCS-TCP/IP PORT: IN	RJ45	UP-200F1/B400-NET-001.01 CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS	RJ45	SWITCH: COOP-01 PORT: P09
Ref. Vendor Doc.: 1724000372-EL-DG-00010					
DCS UPS PANEL UP-200F1	ITEM: -A1 GCAU (/11.2) -A73 NCS-TCP/IP PORT: IN	RJ45	UP-200F1/B400-NET-001.02 CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS	RJ45	SWITCH: COOP-01 PORT: P10
Ref. Vendor Doc.: 1724000372-EL-DG-00010					

~~EMCS SYSTEM - B400-EMCS-001~~

6.6kV SWITCHGEAR SG-100D1	ITEM: VT BUS BARS "A5" SWH.A PORT: 8	RJ45	SG-100D1/B400-NET-001.01 ~~SG-100D1/B400-EMCS-001.01~~ CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS	RJ45	SWITCH: COOP-01 PORT: P20
Ref. Vendor Doc.: 1723002197-EL-DG-00022					
6.6kV SWITCHGEAR SG-100D1	ITEM: VT BUS BARS "A5" SWH.B PORT: 8	RJ45	SG-100D1/B400-NET-001.02 ~~SG-100D1/B400-EMCS-001.02~~ CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS	RJ45	SWITCH: COOP-01 PORT: P01
Ref. Vendor Doc.: 1723002197-EL-DG-00022					
6.6kV SWITCHGEAR SG-100D1	ITEM: VT BUS BARS "A5" SWH.C PORT: 1	RJ45	SG-100D1/B400-NET-001.03 ~~SG-100D1/B400-EMCS-001.03~~ CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS	RJ45	SWITCH: COOP-01 PORT: P03
Ref. Vendor Doc.: 1723002197-EL-DG-00022					

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 033	REV. 01

File Name : 123A90-DDL-IN-DG-40015_Rev.01

DRAWING NO. 123A90-DDL-IN-DG-40015

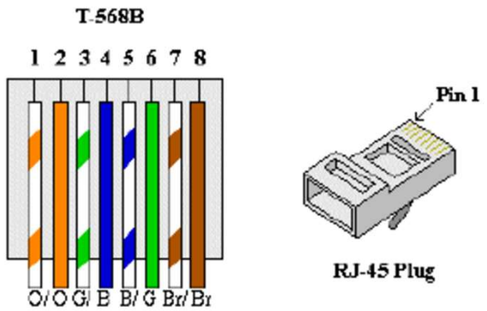
REV. 01

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

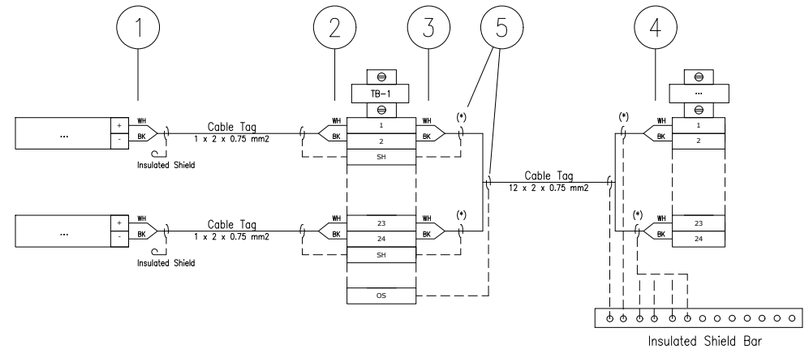
LEGENDS & SYMBOLS:

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

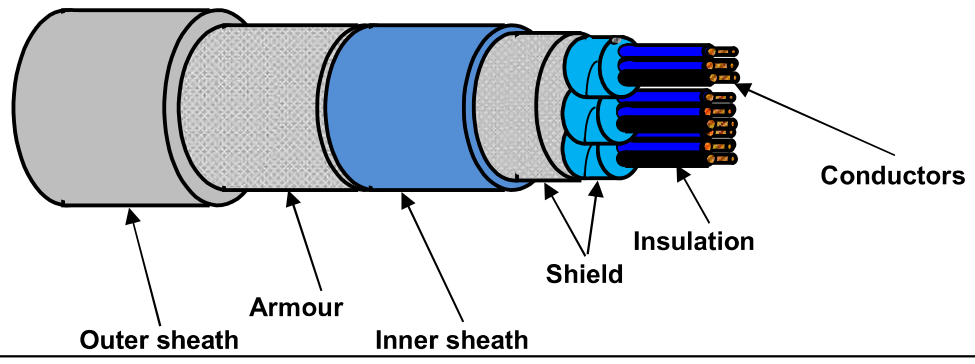
File Name : 123A90-DDL-IN-DG-40015_Rev.01

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.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
B100-HSB-001/B400-NET-001	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						B100-HSB-001	Distribution & HVAC Panel - HV MV Room	Lower Deck (B-100)	B400-NET-001	Network Cabinet / EMCS System	Lower Deck (B-400)	TELCV03-4X2X23AWG	Cable CAT 6A S/FTP 4x2x23AWG Armoured LSZH - Grey	n.a.			n.a.				I-MCT-102 / B-100-SEC-1A / L-SEC-17 / L-SEC-1N / L-SEC-1M / L-SEC-1L / L-SEC-1J / L-SEC-1I / L-SEC-1H / L-SEC-1G / L-SEC-1F / L-SEC-1E / L-SEC-1D / L-SEC-1C / 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

Doc. Name: PAINTING CHECK		Report No.01 Mod 1.4.2
OUR JOB X176-24X	Date 24/07/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 24/07/2024

REFERENCE DRAWING:

REFERENCE DOCUMENT: 1724000049-MAT-PRO-00004

Inspection List	YES	NO	N.A.
1 Verification of paint and color code according to design specification			
Visual Check External Color walls, roof, base frame RAL 7035	✓		
Visual Check External Color doors RAL 7035	✓		
Layer thickness of external coating µm 320 total	✓		
Visual Check Internal Equipment Baseframe RAL 7035	✓		

Comments:

** Touch-up and cleaning are required before proceeding with packaging*

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	COICEA CATALIN ROSETTI MARINO	CROSSWIND		

ALEX SISTEMI spa

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV = ISO 9001 =

Doc. Name: CHECK AND FUNCTIONAL TEST		Report No.01
OUR JOB X176-24X	Date 24/07/2024	Page 1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION : ON SITE ☒ OFF SITE ☐

DATE OF TEST: 24/07/2024

REFERENCE DRAWING:

REFERENCE DOCUMENT: ECA-00-ELE-DEB- 0001 Rev.7 Electrical Design Criteria

Inspection List		YES	NO	N.A.
Functional Test of Doors :				
Opening/Closing doors, doors locking		✓		

Comments:

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEX SISTEMI spa	COICEA CATALIN ROSETTI MARINO	CROSSWIND		

Doc. Name: ELECTRICAL TESTS		Report No.01 Mod 1.4.6
OUR JOB X176-24X	Date 24/07/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 24/07/2024

REFERENCE DRAWING:

- 1724000049-AR-DA-00014 - B-100 GENERAL ARRANGMENT DRAWINGS - E&I SHELTERS
- 1724000049-HV-DA-00064 - MODULE B-100 – HVAC SYSTEM–G.A. AND DETAILS
- 1724000049-HV-DA-00026 - B-100 HVAC and LIGHTING PANEL WIRING DRAWINGS and GENERAL ARRANGEMENT (INCL INTERCONNECTING) - E&I SHELTERS

REFERENCE DOCUMENT:

- 1724000049-HV-PID-00039 - B-100 PID - E&I SHELTERS
- 1724000049-HV-LIS-00047 - B-100 HVAC COMPONENTS LIST AND DS - E&I SHELTERS
- 1724000049-HV-RE-00055 - HVAC SYST DESCRIPTION (MANAGEMENT LOGICS) - E&I SHELTERS
- 1724000049-QC-PRO-00056 (FAT Procedure)
- ECA-00-ELE-DEB-0001 Rev.7 Electrical Design Criteria

Inspection List	YES	NO	N.A.
Functional Test of Electrical System			
- Check of Lighting System, Control Panel, and socket/switch.			X
- Cable tag and wiring			X
- Cable tray and conduit installation			X
- Grounding System Installation			X
Functional Test of Grounding System			
- Check the functionality of Grounding System (less than 200 mΩ)			X

Comments:

The items listed above are marked as N.A. because FAT activities have not been conducted. The HVAC system supply and installation were not completed by the specified date, making it impossible to perform all the functional tests outlined in the table.

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

At this stage, checking the lighting system was not possible, as this activity must be performed only after the lights are installed at the correct height.
However, the following preliminary checks have been completed:

- Main unit changeover by simulating a system fault.
- Switching on of space heaters.
- Maintaining overpressure through VSD control.
- Reading temperature and differential pressure values on the HMI.

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	Other
ALEXSISTEMI spa	ROSETTI MARINO	CROSSWIND W 29/07/24		

ALEXSISTEMI spa

Doc. Name: CHECK AND FUNCTIONAL TEST OF HVAC SYSTEM		Report No.05 Mod 1.4.7
OUR JOB X176-24X	Date 25/07/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 25/07/2024

REFERENCE DRAWING:

- 1724000049-AR-DA-00014 - B-100 GENERAL ARRANGMENT DRAWINGS - E&I SHELTERS
- 1724000049-HV-DA-00064 - MODULE B-100 – HVAC SYSTEM–G.A. AND DETAILS
- 1724000049-HV-DA-00026 - B-100 HVAC and LIGHTING PANEL WIRING DRAWINGS and GENERAL ARRANGEMENT (INCL INTERCONNECTING) - E&I SHELTERS

REFERENCE DOCUMENT:

- 1724000049-HV-PID-00039 - B-100 PID - E&I SHELTERS
- 1724000049-HV-CA-00035 - B-100 HVAC CALCULATION REPORT (Incl HVAC SYS CALC and HEAT DISSIPATION CALC) - E&I SHELTERS
- 1724000049-HV-LIS-00047 - B-100 HVAC COMPONENTS LIST AND DS - E&I SHELTERS
- 1724000049-HV-RE-00055 - HVAC SYST DESCRIPTION (MANAGEMENT LOGICS) - E&I SHELTERS
- 1724000049-QC-PRO-00056 (FAT Procedure)
- ECA-00-ELE-DEB-0001 Rev.7 Electrical Design Criteria

Inspection List	PASS	FAIL	N.A.	value
Functional & performance Test of A/C System (HVAC Test):				
• Visual and correct installation of HVAC fans.			X	
• Functional check of fans.	X			
• Check the functionality and performance of A/C System			X	

Doc. Name: CHECK AND FUNCTIONAL TEST OF HVAC SYSTEM		Report No.05 Mod 1.4.7
OUR JOB X176-24X	Date 25/07/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

Comments:

Some items listed above are marked as N.A. because FAT activities have not been conducted. The HVAC system supply and installation were not completed by the specified date, making it impossible to perform all the functional tests outlined in the table. However, the following preliminary checks have been completed:

- Main unit changeover by simulating a system fault.
- Switching on of space heaters.
- Maintaining overpressure through VSD control.
- Reading temperature and differential pressure values on the HMI.

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	ROSETTI MARINO	x CROSSWIND 29/07/24		

ALEXSISTEMI spa

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV = ISO 9001 =

Doc. Name: **Dimensional Check and Visual Inspection**		Report No.05
OUR JOB X176-24X	Date 23/07/2024	Page 1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION : ON SITE ☒ OFF SITE ☐

DATE OF TEST: 23/07/2024

REFERENCE DRAWING: 1724000049-AR-DA-00014 / 1724000049-ST-DD-00010 / 1724000049-AR-DD-00018

REFERENCE DOCUMENT: ISO 17637 / EEMUA 158

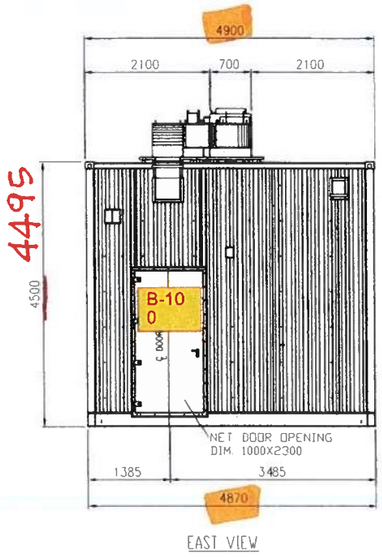
Inspection List	YES	NO	N.A.
Verificare tutte le quote di seguito indicate a disegno:			
NORTH VIEW	✓		
EAST VIEW	✓		
SOUT VIEW	✓		
WEST VIEW	✓		
TOP VIEW	✓		
SECTION A-A	✓		
SECTION B-B	✓		
SECTION C-C	✓		
SECTION D-D	✓		
SECTION E-E	✓		
BASEFRAME LOCATION	✓		

Comments:

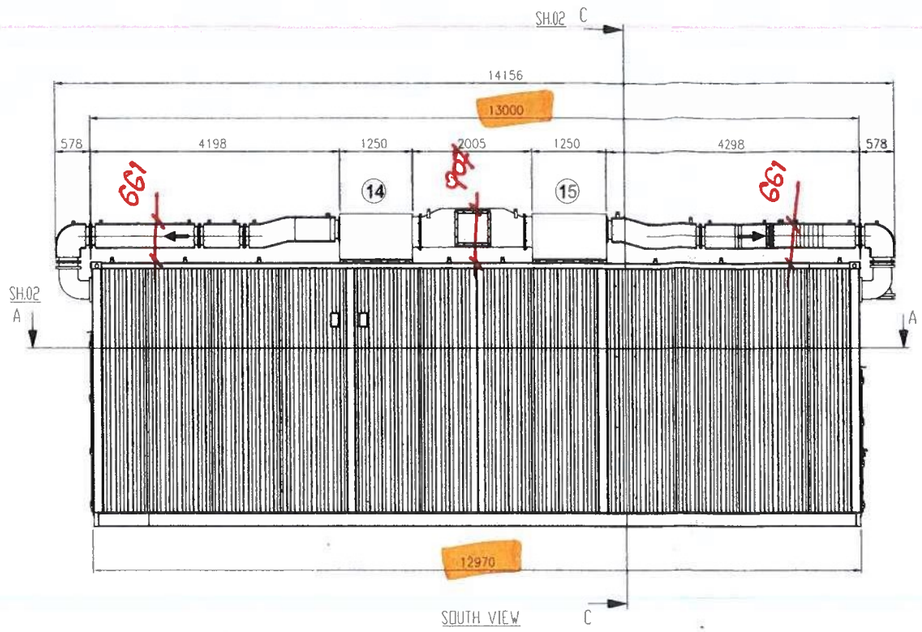
DWG attached.

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	COCEA CATALIN ROSETTI MARINO (R)			

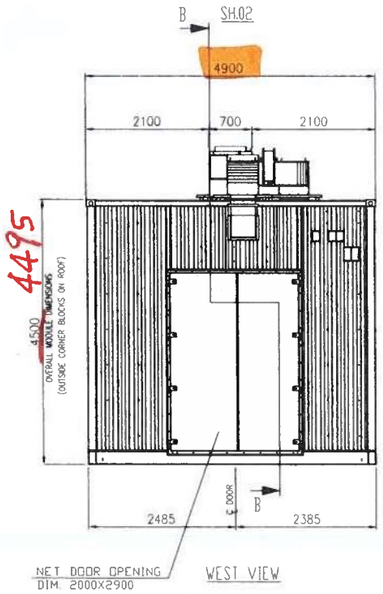
DRAWING NO. 1724000049-AR-DA-00014 REV. 02



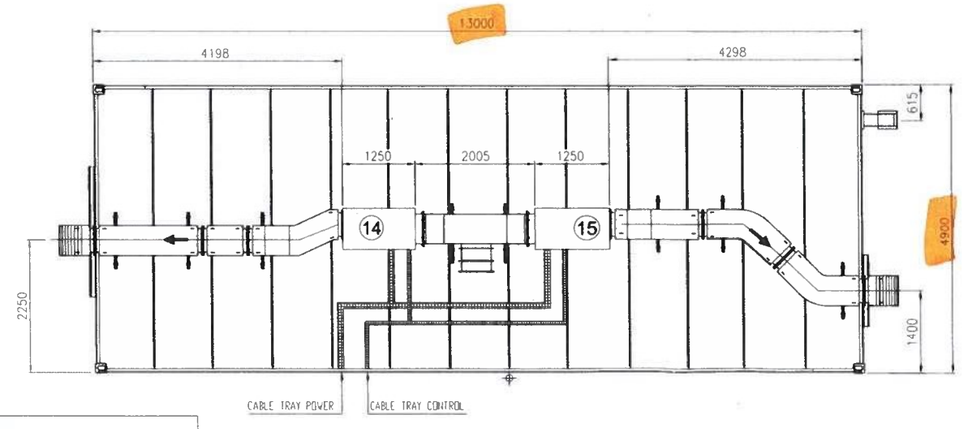
EAST VIEW



SOUTH VIEW



WEST VIEW



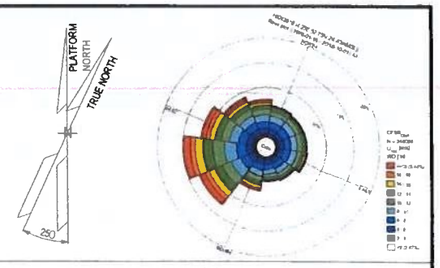
TOP VIEW

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	2600
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	7400
3	UP-200F1	DC UPS PANEL	1200	850	2105	500
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	522
5	CB-200F1	ISOLATOR FOR DC UPS	600	300	800	100
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2100	2100
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV MV ROOM	1200	600	1900	400
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	70
9	-	TOOL BOX	495	335	920	20
10	-	ELECTRIC SAFETY KIT	230	110	280	20
11	-	TABLE	1000	500	750	50
12	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
14	HHU-77001A	AIR HANDLING UNIT A	1250	850	900	140
15	HHU-77001B	AIR HANDLING UNIT B	1250	850	900	140
16	HSS-77-001	SPACE HEATER 1	184	145	1100	5
17	HSS-77-002	SPACE HEATER 2	184	145	1100	5
18	HSS-77-003	SPACE HEATER 3	184	145	1100	5

MASTER COPY
INTERNAL TEST

02



NOTE

1) ALL DIMENSIONS ARE IN MM.
~~2) INTERNAL LIGHTS DIMENSION AND QUANTITY TO BE DEFINE AFTER ADVANCE ENGINEERING~~
~~3) GROUDING SYSTEM WILL BE ADDED IN NEXT REVISION.~~

remove Note 2 and 3 typical for all sh.

REFERENCE

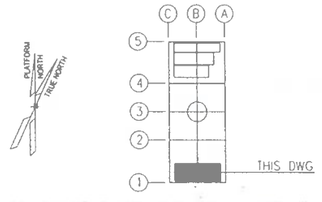
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00064
"B-100" DETAILED DRAWING	1724000049-AR-DD-00018
PAINTING PROCEDURE	1724000049-MAT-PRO-00004

LEGEND

- INTERNAL LIGHT
- E INTERNAL EMERGENCY LIGHT
- SOCKET OUTLET, INDOOR
- LIGHT SWITCH
- ESCAPE CORRIDOR - WIDTH 800mm.
- MAINTENANCE AREA - VENDOR REQUIREMENT
- INSULATION PANEL

HOLDS

KEY PLAN



ALEX

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/06/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	14/05/24	M.G.	SKV	C.A.	ISSUE FOR REVIEW (IFR)
00	08/02/24	A.G.	SKV	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND — ROSETTI MARINO

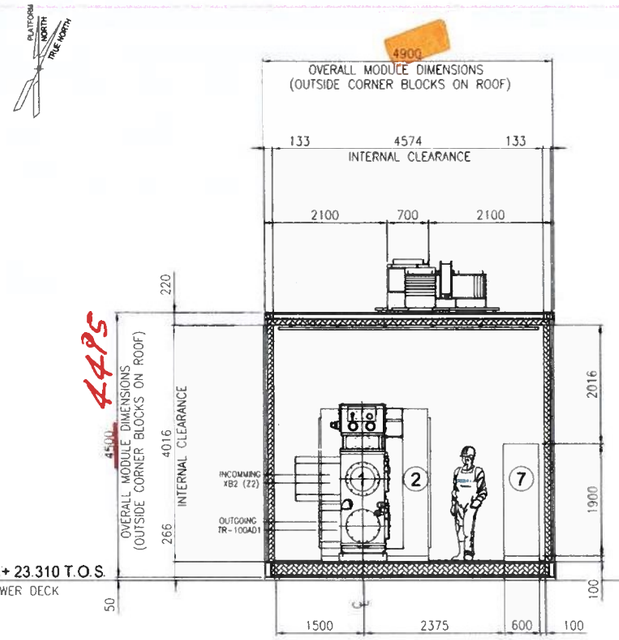
TITLE : BASE LOAD POWER HUB (BLPH)
B-100 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 28/06/24
A1	DRAWING NO. 1724000049-AR-DA-00014	SHEET 001	REV. 02

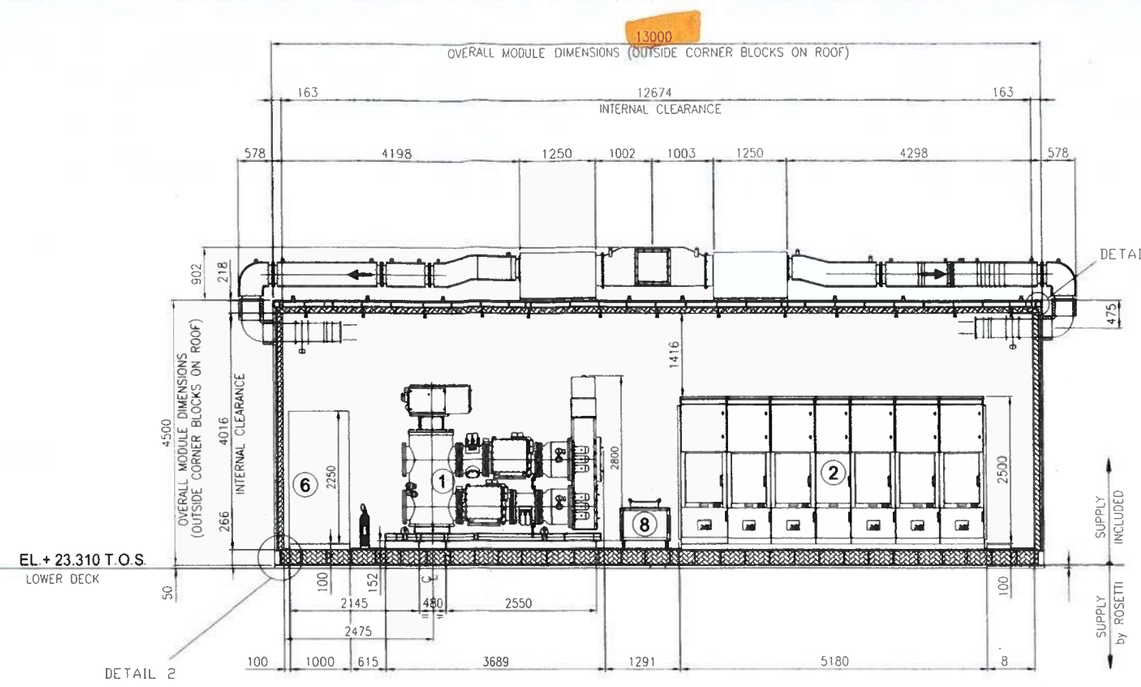
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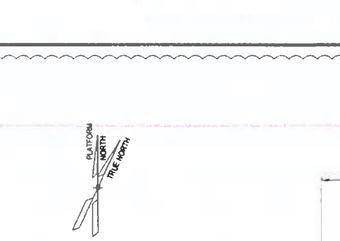
REV. 02

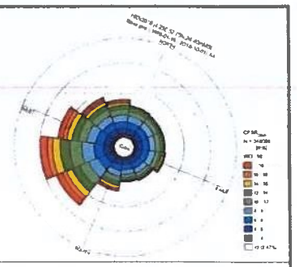


SECTION C-C



SECTION B-B





NOTES

1) ALL DIMENSIONS ARE IM MM.
2) INTERNAL LIGHTS DIMENSION AND Q ANTITY T BE DEF(NE AFTER ADVANCE ENGINEERING
3) GROUDING SYSTEM WILL BE ADDED IN NEXT RE ISI N

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B 100" HVAC SYSTEM G.A. & DETA S	1724000049-HV-DA-00064
"B-100" DETAILED DRAWING	1724000049-AR-DD-00018
PAINTING PROCEDURE	1724000049-MAT-PRO-00004

LEGEND

INTERNA LIGHT

INTERNAL EMERGEN Y

SOCKET OUTLET, INDOOR

LIGHT SWITCH

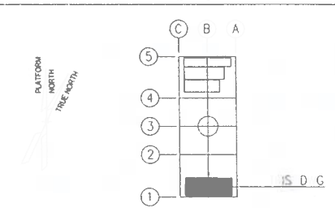
ESCAPE CORRIDOR - W

MAINTENANCE AREA IREMENT

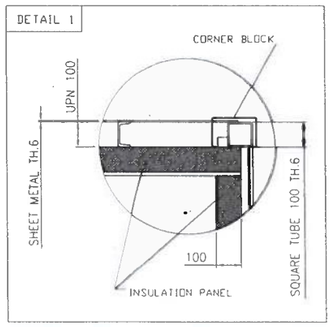
INSULATION PANE

HOLDS

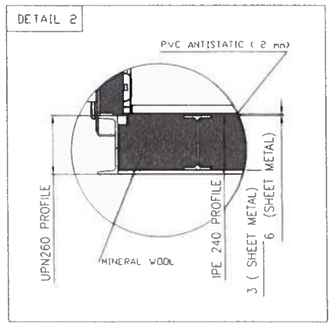
KEY PLAN



DETAIL 1

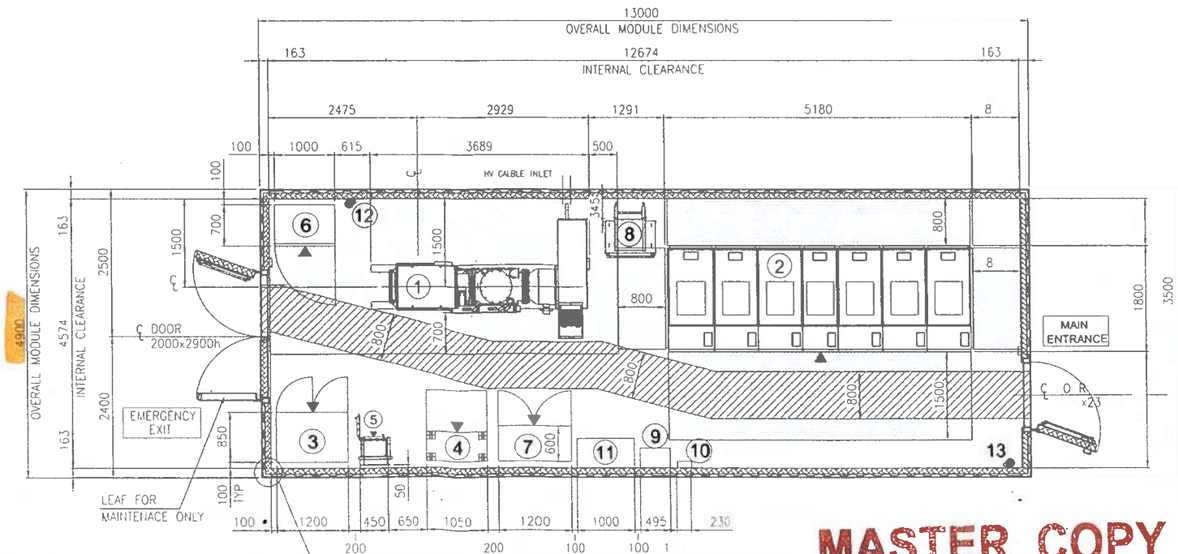


DETAIL 2

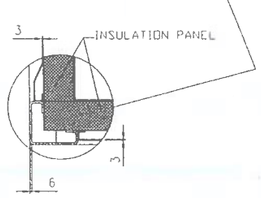


EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	2600
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	7400
3	UP-200F1	DC UPS PANEL	1200	850	2105	500
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	522
5	CB-200F1	ISOLATOR FOR DC UPS	600	300	800	100
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2100	2100
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV MV ROOM	1200	600	1900	400
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	70
9	-	TOOL BOX	495	335	920	20
10	-	ELECTRIC SAFETY KIT	230	110	280	20
11	-	TABLE	1000	500	750	50
12	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg	150	150	750	20
14	HHU-77001A	AIR HANDLING UNIT A	1250	850	900	140
15	HHU-77001B	AIR HANDLING UNIT B	1250	850	900	140
16	HSS-77-001	SPACE HEATER 1	184	145	1100	5
17	HSS-77-002	SPACE HEATER 2	184	145	1100	5
18	HSS-77-003	SPACE HEATER 3	184	145	1100	5



SECTION A-A



EQUIPMENT LAYOUT

"B-100" HV (66kV/6.6kV SWITCHGEAR ROOM

BOTTOM PLAN

MASTER COPY
INTERNAL TEST

02

		4	M		
		4	M		
8 2 24		A	SKV	A	
ATE		DRN	CHKD	APPD	

CROSSWIND

ROSETTI MARINO

BA E AD P W
B-1 ENERA AR

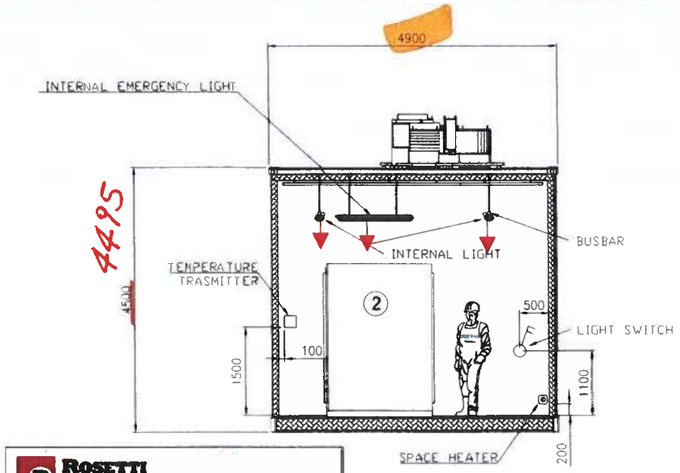
TRACT N T E CONTRA T NO 1724

WN M HE KE SKV

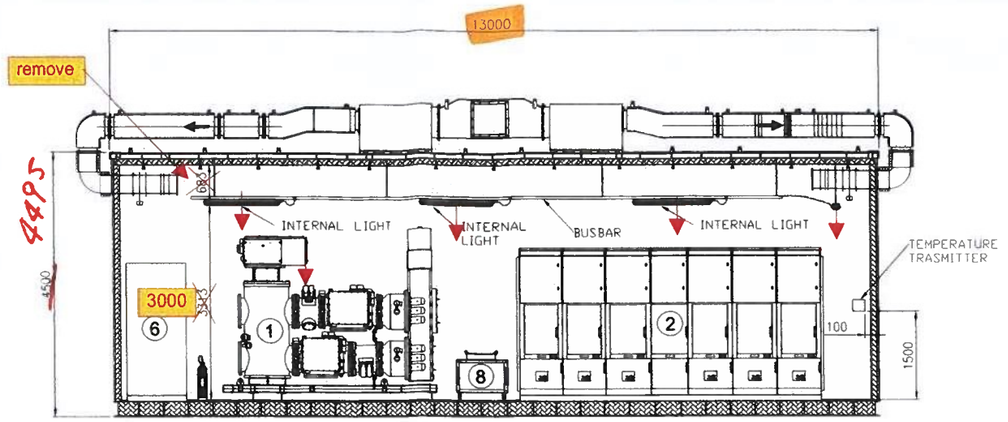
A1

DRAWING
4 49-A A

DRAWING NO. 1724U00049-AR-DA-00014 REV. 02

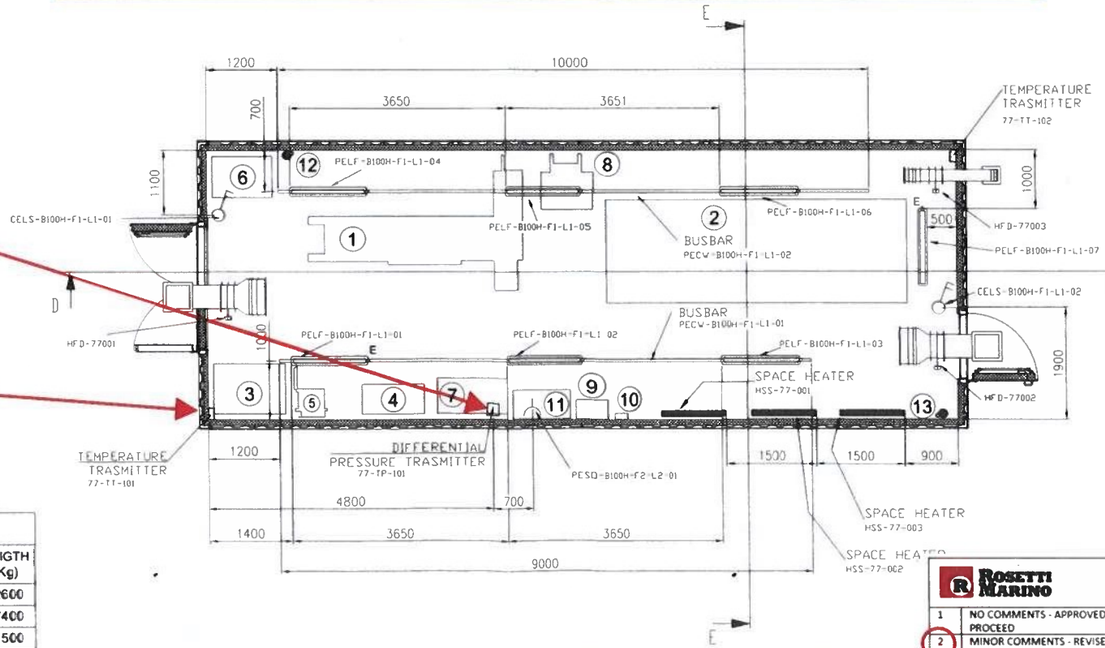


SECTION E-E



SECTION D-D

Verify that TAGs used on this document are the same used on all other documents



A better placing for differential pressure probe need to be evaluated, both for maintenance purposes and better differential pressure detection, preferably not behind other equipments.

A better placing for temperature probe need to be evaluated, both for maintenance purposes and better temperature detection, preferably not behind other equipments.

ROSETTI MARINO	
1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED

NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.

Sign	Date
R. Bossi	10/07/2024

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	2600
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	7400
3	UP-200F1	DC UPS PANEL	1200	850	2105	500
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	522
5	CB-200F1	ISOLATOR FOR DC UPS	600	300	800	100
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2100	2100
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV ~~MV~~ ROOM	1200	600	1900	400
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	70
9	-	TOOL BOX	495	335	920	20
10	-	ELECTRIC SAFETY KIT	230	110	280	20
11	-	TABLE	1000	500	750	50
12	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
14	~~HHU-77601A~~	AIR HANDLING UNIT A	1250	850	900	140
15	~~HHU-77301B~~	AIR HANDLING UNIT B	1250	850	900	140
16	HSS-77-001	SPACE HEATER 1	184	145	1100	5
17	HSS-77-002	SPACE HEATER 2	184	145	1100	5
18	HSS-77-003	SPACE HEATER 3	184	145	1100	5

Note for lighting system:
The position of the lamps indicated is to be considered the theoretical one, the final one will be confirmed in the As-Built issue.

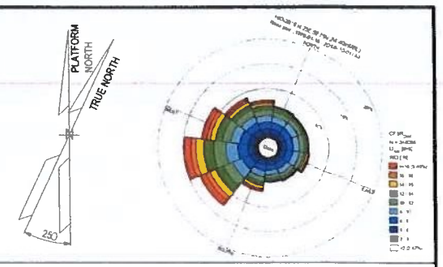
Revise TAG according to all documents (P&IDs, HVAC & Lighting Panel, HVAC GA & Details, etc.)

ROSETTI MARINO	
1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED

NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.

Sign	Date
R. Bossi	10/07/2024

MASTER COPY
INTERNAL TEST



NOTE

1) ALL DIMENSIONS ARE IM MM.
2) INTERNAL LIGHTS DIMENSION AND QUANTITY TO BE DEFINE AFTER ADVANCE ENGINEERING
3) GROUDING SYSTEM WILL BE ADDED IN NEXT REVISION

REFERENCE

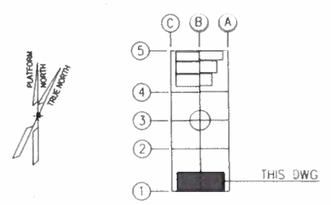
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00064
"B-100" DETAILED DRAWING	1724000049-AR-DD-00018
PAINTING PROCEDURE	1724000049-MAT-PRO-00004

LEGEND

- INTERNAL LIGHT
- E — INTERNAL EMERGENCY LIGHT
- SOCKET OUTLET, INDOOR
- F — LIGHT SWITCH
- ESCAPE CORRIDOR – WIDTH 800mm.
- MAINTENANCE AREA – VENDOR REQUIREMENT
- INSULATION PANEL

HOLDS

KEY PLAN



ALEX

Next revision: 03 Accepted For Constructiion (AFC)

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/06/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	14/05/24	M.G.	SKV	C.A.	ISSUE FOR REVIEW (IFR)
00	08/02/24	A.G.	SKV	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND — ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-100 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO /TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 28/06/24
A1	DRAWING NO 1724000049-AR-DA-00014	SHEET 003	REV. 02

File Name 1724000049-AR-DA-00014-REV02

DRAWING NO 1724000049-ST-DD-00010

REV 01

13000

OVERALL MODULE DIMENSIONS (OUTSIDE CORNER BLOCKS ON ROOF)

250 | 6175 | 200 | 6175 | 250

250 | 250 | UNP260

4870 | 4483 | 120 | 13,5 | 120

250 | 250 | UNP260

4423 | 4900

OVERALL MODULE DIMENSIONS (OUTSIDE CORNER BLOCKS ON ROOF)

250 | 250 | UNP260

250 | 200 | 250 | 250

No. 2 HOLES Ø18
FOR M16 SCREW
AT EACH CORNER
(SCREW SUPPLY by ROSETTI)

HOLES | 40 | 12970 | 40

ROSETTI MARINO

1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED

NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.

Sign	Date
R. Bossi	07/06/2024

B-100

80 | 170 | 25 | 100 | 11.5 | 120 | 30

TYPICAL CORNER PLATE POSITION

200 | 11.5 | 250

TYPICAL CENTRAL PLATE POSITION

ALEX SISTEMI

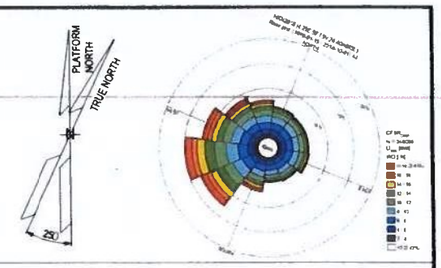
EL.+23.310 TOS
LOWER DECK

ROSETTI MARINO

50 | Ø18 | M16

TYPICAL FIXING DETAIL
SCALE 1 : 10

MASTER COPY
INTERNAL TEST



NOTE

1) ALL DIMENSIONS ARE IM MM.

REFERENCE

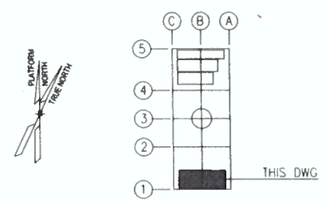
DOCUMENT TITLE	DOCUMENT NUMBER
B-100 STRUCTURAL CALCULATION - E&I SHELTERS	1724000049-ST-CA-00006

LEGEND

Plate 50 mm thk. welded on
Lower Deck - Supply by Rosetti

HOLDS

KEY PLAN



ALEX

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	03/06/24	M.G.	M.R.	O.A.	APPROVED FOR CONSTRUCTION (AFC)
00	16/04/24	M.G.	M.R.	O.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND | ROSETTI MARINO

TITLE : B-100 FOUNDATION DRAWING - E&I SHELTERS

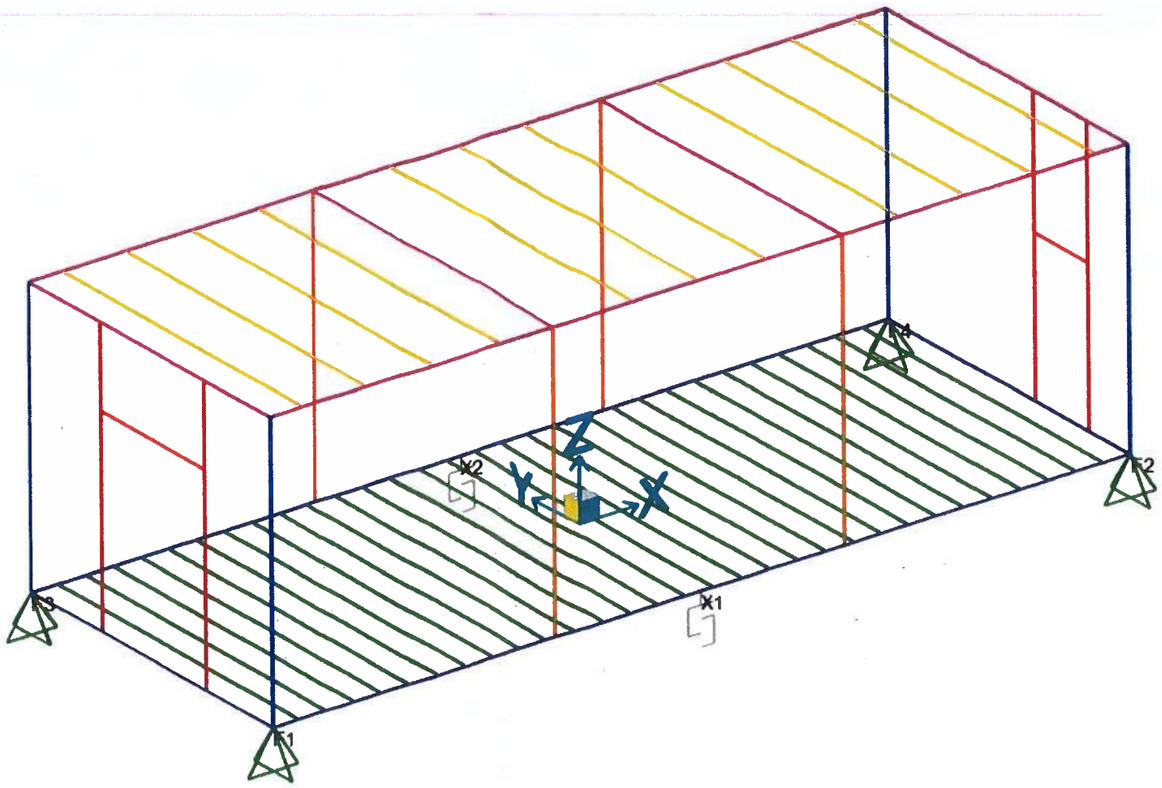
CONTRACT NO /TITLE CONTRACT_NO 1724000049			SCALE N.A.
DRAWN M.G.	CHECKED M.R.	APPROVED O.A.	DATE 03/06/24
A1	DRAWING NO 1724000049-ST-DD-00010	SHEET 001/002	REV. 01

File Name 1724000049-ST-DD-00010-REV.01

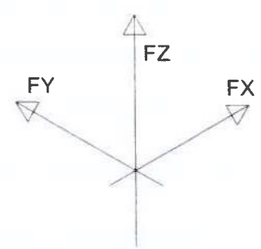
DRAWING NO. 1724000049-ST-DD-00010 REV. 01

TABLE: Joint Reactions

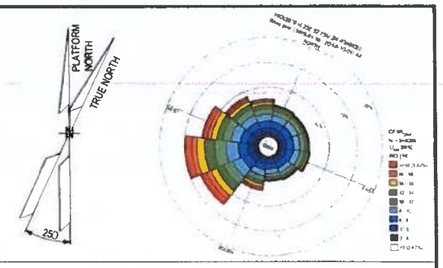
Joint	OutputCase	CaseType	StepType	Fx	Fy	Fz	Mx	My	Mz
Text	Text	Text	Text	KN	KN	KN	KN-m	KN-m	KN-m
F1	DEAD	NonStatic	Last Step	12,82	4,16	31,39	0,00	0,00	0,00
F1	SD	NonStatic	Last Step	16,38	5,33	21,73	0,00	0,00	0,00
F1	LIVE	NonStatic	Last Step	35,09	0,18	78,19	0,00	0,00	0,00
F1	WIND X	NonStatic	Last Step	-19,31	1,03	-16,62	0,00	0,00	0,00
F1	WIND Y	NonStatic	Last Step	-16,35	-34,39	-38,28	0,00	0,00	0,00
F1	NOT X	NonStatic	Last Step	-0,10	-0,02	-0,03	0,00	0,00	0,00
F1	NOT Y	NonStatic	Last Step	-0,04	-0,10	-0,07	0,00	0,00	0,00
F1	SLU LIVE	Combination		93,68	12,99	190,55	0,00	0,00	0,00
F1	SLU WIND X	Combination		44,02	4,30	118,95	0,00	0,00	0,00
F1	SLU WIND Y	Combination		47,58	-38,21	92,96	0,00	0,00	0,00
F1	SLE LIVE	Combination		64,15	9,20	131,20	0,00	0,00	0,00
F1	SLE WIND X	Combination		4,84	0,09	24,91	0,00	0,00	0,00
F1	SLE WIND Y	Combination		6,92	-24,71	9,75	0,00	0,00	0,00
F2	DEAD	NonStatic	Last Step	-12,89	4,23	31,70	0,00	0,00	0,00
F2	SD	NonStatic	Last Step	-16,73	4,65	38,99	0,00	0,00	0,00
F2	LIVE	NonStatic	Last Step	-34,60	2,23	65,52	0,00	0,00	0,00
F2	WIND X	NonStatic	Last Step	-2,48	-2,84	-9,63	0,00	0,00	0,00
F2	WIND Y	NonStatic	Last Step	16,10	-35,47	38,40	0,00	0,00	0,00
F2	NOT X	NonStatic	Last Step	-0,10	0,02	0,03	0,00	0,00	0,00
F2	NOT Y	NonStatic	Last Step	0,04	-0,10	-0,07	0,00	0,00	0,00
F2	SLU LIVE	Combination		-93,82	15,71	197,91	0,00	0,00	0,00
F2	SLU WIND X	Combination		-77,15	-0,20	142,47	0,00	0,00	0,00
F2	SLU WIND Y	Combination		-54,85	-39,35	107,95	0,00	0,00	0,00
F2	SLE LIVE	Combination		-64,28	11,02	136,16	0,00	0,00	0,00
F2	SLE WIND X	Combination		-27,33	-4,69	49,50	0,00	0,00	0,00
F2	SLE WIND Y	Combination		-14,32	-27,53	29,36	0,00	0,00	0,00
F3	DEAD	NonStatic	Last Step	12,94	-4,19	31,46	0,00	0,00	0,00
F3	SD	NonStatic	Last Step	16,46	-5,46	21,91	0,00	0,00	0,00
F3	LIVE	NonStatic	Last Step	34,14	0,36	76,92	0,00	0,00	0,00
F3	WIND X	NonStatic	Last Step	-19,52	-1,01	-16,62	0,00	0,00	0,00
F3	WIND Y	NonStatic	Last Step	2,37	-24,36	12,03	0,00	0,00	0,00
F3	NOT X	NonStatic	Last Step	-0,10	0,02	-0,03	0,00	0,00	0,00
F3	NOT Y	NonStatic	Last Step	0,04	-0,10	0,07	0,00	0,00	0,00
F3	SLU LIVE	Combination		92,65	-13,21	189,20	0,00	0,00	0,00
F3	SLU WIND X	Combination		48,71	-22,20	133,26	0,00	0,00	0,00
F3	SLU WIND Y	Combination		74,98	-50,22	167,64	0,00	0,00	0,00
F3	SLE LIVE	Combination		63,49	-9,37	130,33	0,00	0,00	0,00
F3	SLE WIND X	Combination		10,53	-18,05	40,41	0,00	0,00	0,00
F3	SLE WIND Y	Combination		25,85	-34,40	60,46	0,00	0,00	0,00
F4	DEAD	NonStatic	Last Step	-12,88	-4,20	30,83	0,00	0,00	0,00
F4	SD	NonStatic	Last Step	-16,11	-4,52	37,51	0,00	0,00	0,00
F4	LIVE	NonStatic	Last Step	-34,62	-2,41	65,64	0,00	0,00	0,00
F4	WIND X	NonStatic	Last Step	-2,36	2,82	-9,63	0,00	0,00	0,00
F4	WIND Y	NonStatic	Last Step	-2,12	-23,11	12,15	0,00	0,00	0,00
F4	NOT X	NonStatic	Last Step	-0,10	-0,02	0,03	0,00	0,00	0,00
F4	NOT Y	NonStatic	Last Step	-0,04	-0,10	0,07	0,00	0,00	0,00
F4	SLU LIVE	Combination		-93,03	-16,01	194,92	0,00	0,00	0,00
F4	SLU WIND X	Combination		-81,63	-17,62	154,59	0,00	0,00	0,00
F4	SLU WIND Y	Combination		-81,34	-48,74	180,72	0,00	0,00	0,00
F4	SLE LIVE	Combination		-63,76	-11,25	134,07	0,00	0,00	0,00
F4	SLE WIND X	Combination		-32,13	-12,95	62,45	0,00	0,00	0,00
F4	SLE WIND Y	Combination		-31,96	-31,10	77,70	0,00	0,00	0,00
X1	DEAD	NonStatic	Last Step	0,00	0,01	37,72	0,00	0,00	0,00
X1	SD	NonStatic	Last Step	0,00	0,01	44,32	0,00	0,00	0,00
X1	LIVE	NonStatic	Last Step	0,00	0,08	103,90	0,01	0,00	0,00
X1	WIND X	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X1	WIND Y	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X1	NOT X	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X1	NOT Y	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X1	SLU LIVE	Combination		0,00	0,14	271,37	0,01	0,00	0,00
X1	SLU WIND X	Combination		0,00	0,11	224,62	0,01	0,00	0,00
X1	SLU WIND Y	Combination		0,00	0,11	224,62	0,01	0,00	0,00
X1	SLE LIVE	Combination		0,00	0,10	185,94	0,01	0,00	0,00
X1	SLE WIND X	Combination		0,00	0,02	82,05	0,00	0,00	0,00
X1	SLE WIND Y	Combination		0,00	0,02	82,05	0,00	0,00	0,00
X2	DEAD	NonStatic	Last Step	0,00	-0,01	37,74	0,00	0,00	0,00
X2	SD	NonStatic	Last Step	0,00	-0,01	43,58	0,00	0,00	0,00
X2	LIVE	NonStatic	Last Step	0,00	-0,08	102,92	-0,01	0,00	0,00
X2	WIND X	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X2	WIND Y	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X2	NOT X	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X2	NOT Y	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X2	SLU LIVE	Combination		0,00	-0,14	268,80	-0,01	0,00	0,00
X2	SLU WIND X	Combination		0,00	-0,10	222,49	-0,01	0,00	0,00
X2	SLU WIND Y	Combination		0,00	-0,10	222,49	-0,01	0,00	0,00
X2	SLE LIVE	Combination		0,00	-0,09	184,23	-0,01	0,00	0,00
X2	SLE WIND X	Combination		0,00	-0,02	81,32	0,00	0,00	0,00
X2	SLE WIND Y	Combination		0,00	-0,02	81,32	0,00	0,00	0,00







MASTER COPY
INTERNAL TEST



NOTE

1) ALL DIMENSIONS ARE IN MM.

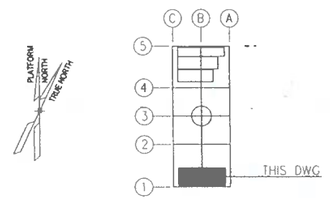
REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
B-100 STRUCTURAL CALCULATION - E&I SHELTERS	1724000049-ST-CA-00006

LEGEND

HOLDS

KEY PLAN



ALEX

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	03/06/24	M.G.	M.R.	O.A.	APPROVED FOR CONSTRUCTION (AFC)
00	16/04/24	M.G.	M.R.	O.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND

ROSETTI MARINO

TITLE
B-100 FOUNDATION DRAWING - E&I SHELTERS

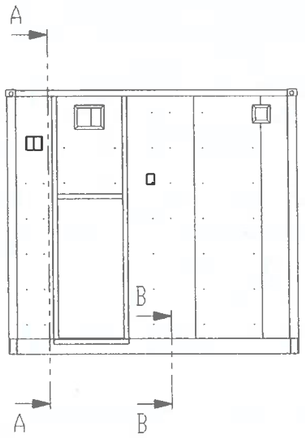
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE N.A.
DRAWN M.G.	CHECKED M.R.	APPROVED O.A.	DATE 03/06/24
A1	DRAWING NO. 1724000049-ST-DD-00010	SHEET 002/002	REV 01

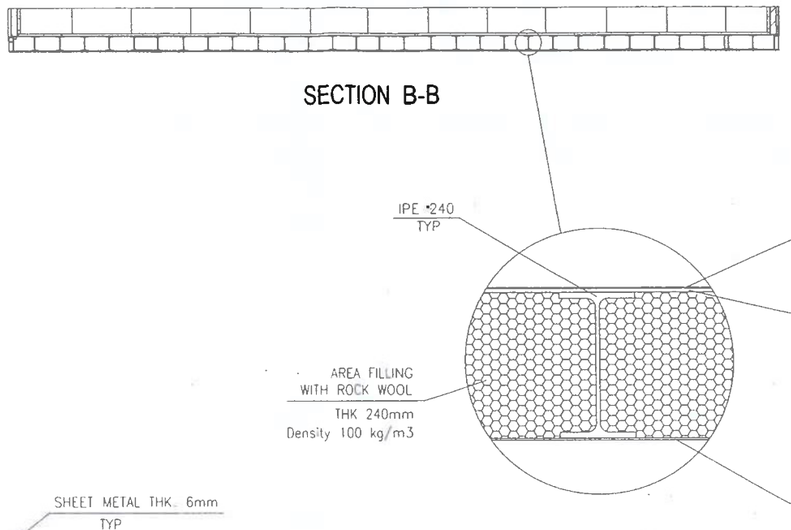
File Name 1724000049-ST-DD-00010-REV.01

DRAWING NO. 1724000049-AR-DD-00018 REV 02

MODULE B-100

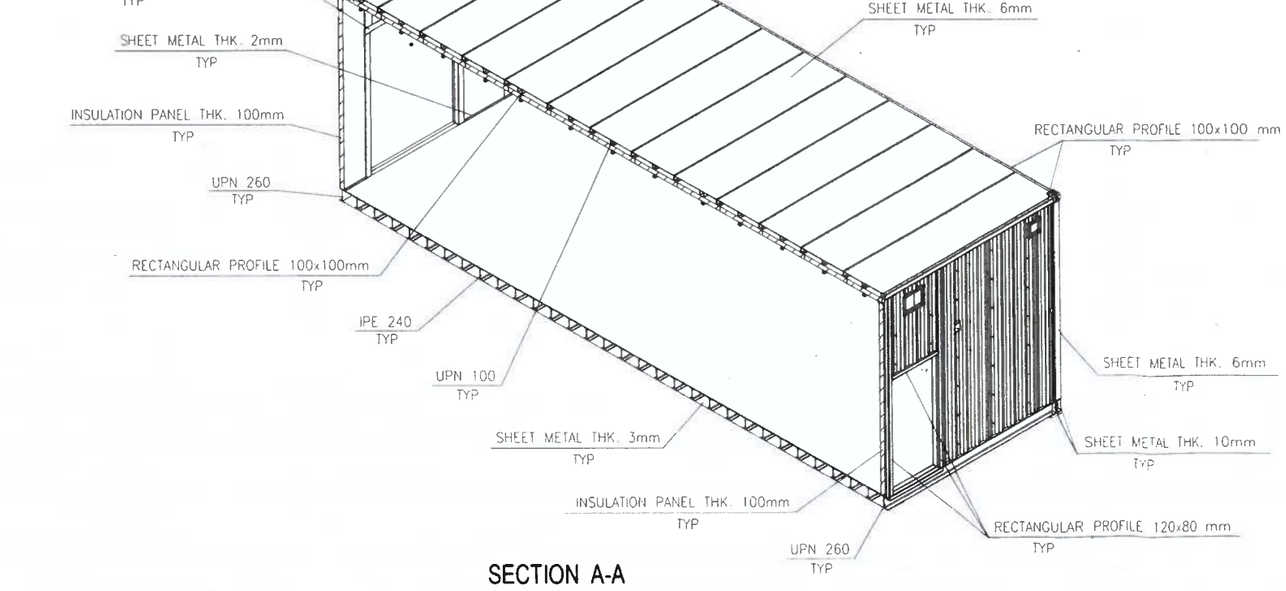
REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" STRUCTURAL CALCULATION	1724000049-ST-CA-00006
Weld Procedure Specifications (WPS), Weld Procedure Qualification Report (WPQR), Welding Map and Welders Qualifications	1724000049-WEL-RE-00003





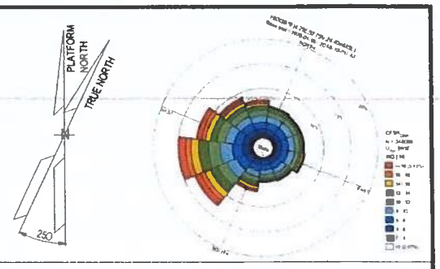
SECTION B-B

DETAIL "C"



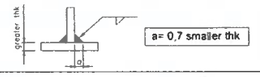
SECTION A-A

MASTER COPY
INTERNAL TEST



NOTES

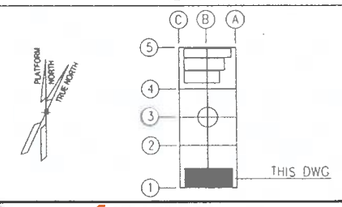
1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D 1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



LEGEND

HOLDS

KEY PLAN



ALEX

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	11/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
01	08/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	23/05/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)

CROSSWIND

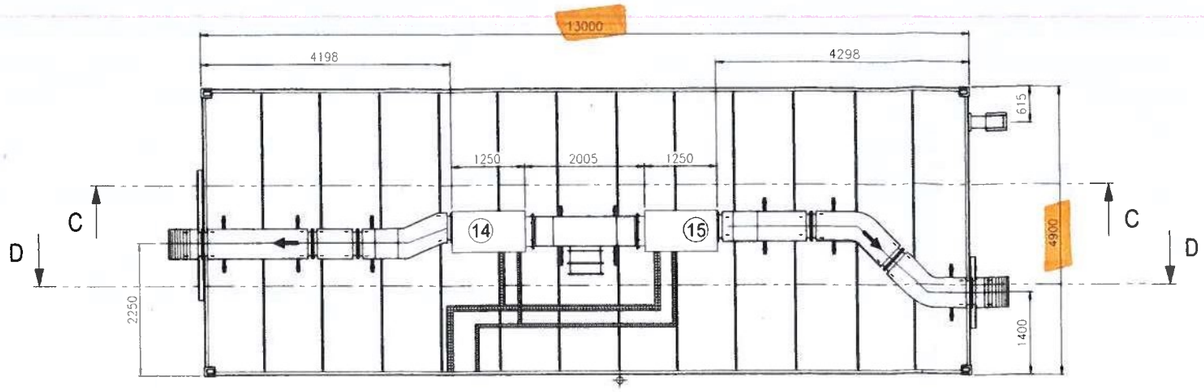
ROSETTI MARINO

TITLE :
B-100 DETAILED DRAWINGS-E&I SHELTERS

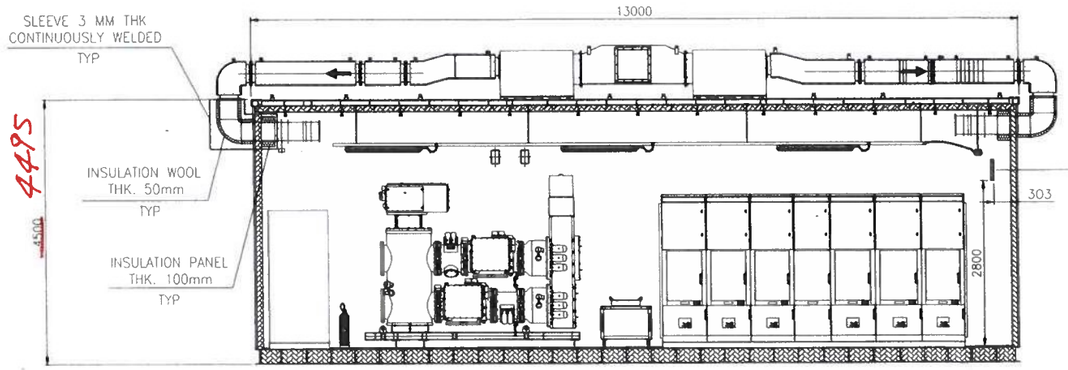
CONTRACT NO /TITLE CONTRACT_NO. 1724000049		SCALE 1:50
DRAWN M.G.	CHECKED O.A. APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO 1724000049-AR-DD-00018	SHEET 001 / REV 02

File Name = 1724000049-AR-DD-00018-REV.02

DRAWING NO. 1724000049-AR-DD-00018 REV. 02

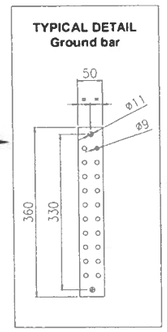


TOP VIEW

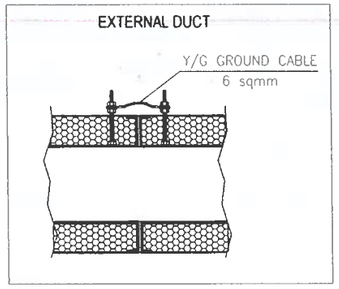


SECTION C-C

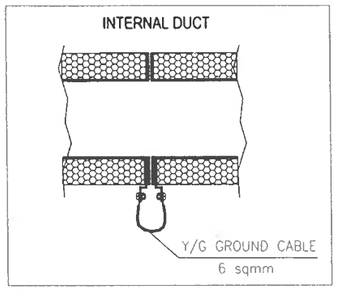
DET. 3



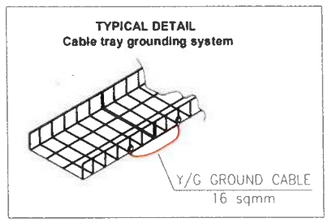
DET. 1



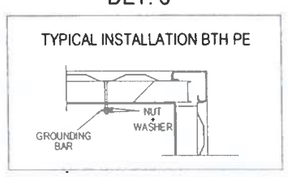
DET. 2



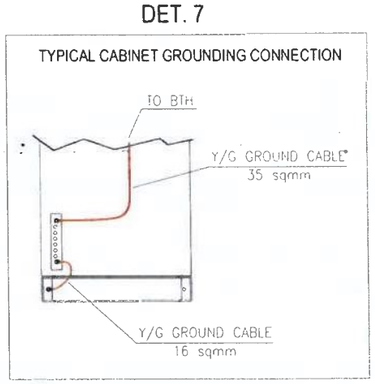
DET. 4

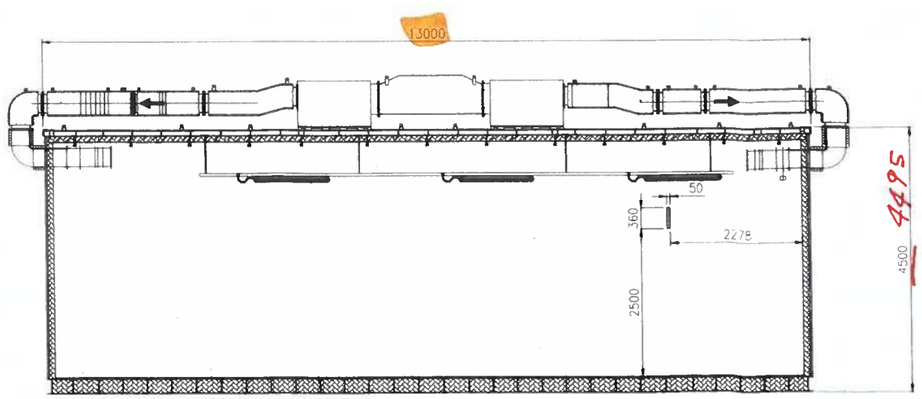


DET. 5



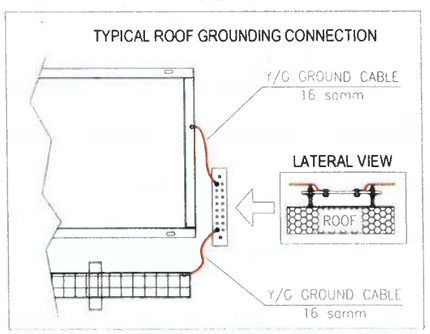
DET. 7

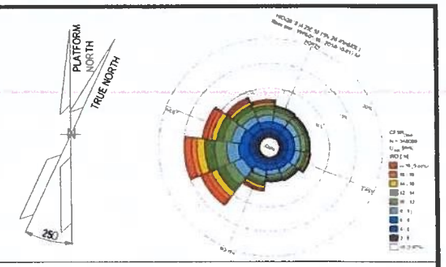




SECTION D-D

DET. 6



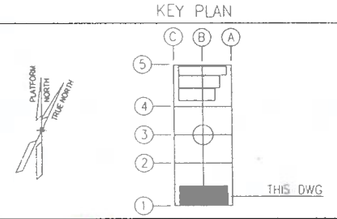


NOTES

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.

LEGEND

KEY PLAN



ALEX

REV.	DATE	DRN.	CHKD	APPD	DESCRIPTION
02	11/07/24	M.C.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
01	08/07/24	M.C.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	23/05/24	M.C.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND

ROSETTI MARINO

TITLE :
B-100 DETAILED DRAWINGS-E&I SHELTERS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.C.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00018	SHEET 004	REV 02

File Name: 1724000049-AR-DD-00018-REV.02

Doc. Name:		Report No.05
PAINTING CHECK		Mod 1.4.2
OUR JOB X176-24X	Date 23/07/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 23/07/2024

REFERENCE DRAWING:

REFERENCE DOCUMENT: 1724000049-MAT-PRO-00004

Inspection List	YES	NO	N.A.
1 Verification of paint and color code according to design specification			
Visual Check External Color walls, roof, base frame RAL 7035	X		
Visual Check External Color doors RAL 7035	X		
Layer thickness of external coating µm 320 total	X		
Visual Check Internal Equipment Baseframe	X		

Comments:

** Touch-up and cleaning are required before proceeding with packaging*

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	COICEA CRISTIAN ROSETTI MARINO			

ALEXSISTEMI spa

R

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV = ISO 9001 =

Doc. Name: CHECK AND FUNCTIONAL TEST		Report No.05
OUR JOB X176-24X	Date 23/07/2024	Page 1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION : ON SITE ☒ OFF SITE ☐

DATE OF TEST: 23/07/2024

REFERENCE DRAWING:

REFERENCE DOCUMENT: ECA-00-ELE-DEB- 0001 Rev.7 Electrical Design Criteria

Inspection List	YES	NO	N.A.
Functional Test of Doors :			
Opening/Closing doors, doors locking	✓		

Comments:

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	COICEA CATHCIN & ROSETTI MARINO (R)			

ALEXSISTEMI spa

Doc. Name: ELECTRICAL TESTS		Report No.05 Mod 1.4.6
OUR JOB X176-24X	Date 23/07/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 23/07/2024

REFERENCE DRAWING:

- 1724000049-AR-DA-00014 - B-100 GENERAL ARRANGMENT DRAWINGS - E&I SHELTERS
- 1724000049-HV-DA-00064 - MODULE B-100 – HVAC SYSTEM–G.A. AND DETAILS
- 1724000049-HV-DA-00026 - B-100 HVAC and LIGHTING PANEL WIRING DRAWINGS and GENERAL ARRANGEMENT (INCL INTERCONNECTING) - E&I SHELTERS

REFERENCE DOCUMENT:

- 1724000049-HV-PID-00039 - B-100 PID - E&I SHELTERS
- 1724000049-HV-LIS-00047 - B-100 HVAC COMPONENTS LIST AND DS - E&I SHELTERS
- 1724000049-HV-RE-00055 - HVAC SYST DESCRIPTION (MANAGEMENT LOGICS) - E&I SHELTERS
- 1724000049-QC-PRO-00056 (FAT Procedure)
- ECA-00-ELE-DEB-0001 Rev.7 Electrical Design Criteria

Inspection List	YES	NO	N.A.
Functional Test of Electrical System			
- Check of Lighting System, Control Panel, and socket/switch.			X
- Cable tag and wiring			X
- Cable tray and conduit installation			X
- Grounding System Installation			X
Functional Test of Grounding System			
- Check the functionality of Grounding System (less than 200 mΩ)			X

Comments:

The items listed above are marked as N.A. because FAT activities have not been conducted. The HVAC system supply and installation were not completed by the specified date, making it impossible to perform all the functional tests outlined in the table.

Doc. Name: ELECTRICAL TESTS		Report No.05 Mod 1.4.6
OUR JOB X176-24X	Date 23/07/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

At this stage, checking the lighting system was not possible, as this activity must be performed only after the lights are installed at the correct height.

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	Other

ALEXSISTEMI spa

Doc. Name: CHECK AND FUNCTIONAL TEST OF HVAC SYSTEM		Report No.01 Mod 1.4.7
OUR JOB X176-24X	Date 23/07/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 23/07/2024

REFERENCE DRAWING:

- 1724000049-AR-DA-00014 - B-100 GENERAL ARRANGMENT DRAWINGS - E&I SHELTERS
- 1724000049-HV-DA-00064 - MODULE B-100 – HVAC SYSTEM–G.A. AND DETAILS
- 1724000049-HV-DA-00026 - B-100 HVAC and LIGHTING PANEL WIRING DRAWINGS and GENERAL ARRANGEMENT (INCL INTERCONNECTING) - E&I SHELTERS

REFERENCE DOCUMENT:

- 1724000049-HV-PID-00039 - B-100 PID - E&I SHELTERS
- 1724000049-HV-CA-00035 - B-100 HVAC CALCULATION REPORT (Incl HVAC SYS CALC and HEAT DISSIPATION CALC) - E&I SHELTERS
- 1724000049-HV-LIS-00047 - B-100 HVAC COMPONENTS LIST AND DS - E&I SHELTERS
- 1724000049-HV-RE-00055 - HVAC SYST DESCRIPTION (MANAGEMENT LOGICS) - E&I SHELTERS
- 1724000049-QC-PRO-00056 (FAT Procedure)
- ECA-00-ELE-DEB-0001 Rev.7 Electrical Design Criteria

Inspection List	PASS	FAIL	N.A.	value
Functional & performance Test of A/C System (HVAC Test):				
• Visual and correct installation of HVAC fans.			x	
• Functional check of fans.			x	
• Check the functionality and performance of A/C System			x	

ALEXSISTEMI spa

Doc. Name: CHECK AND FUNCTIONAL TEST OF HVAC SYSTEM		Report No.01 Mod 1.4.7
OUR JOB X176-24X	Date 23/07/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

Comments:

Some items listed above are marked as N.A. because FAT activities have not been conducted. The HVAC system supply and installation were not completed by the specified date, making it impossible to perform all the functional tests outlined in the table.

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa				

Section 13 MECHANICAL COMPLETION CHANGES / MARK-UPS

NOT APPLICABLE