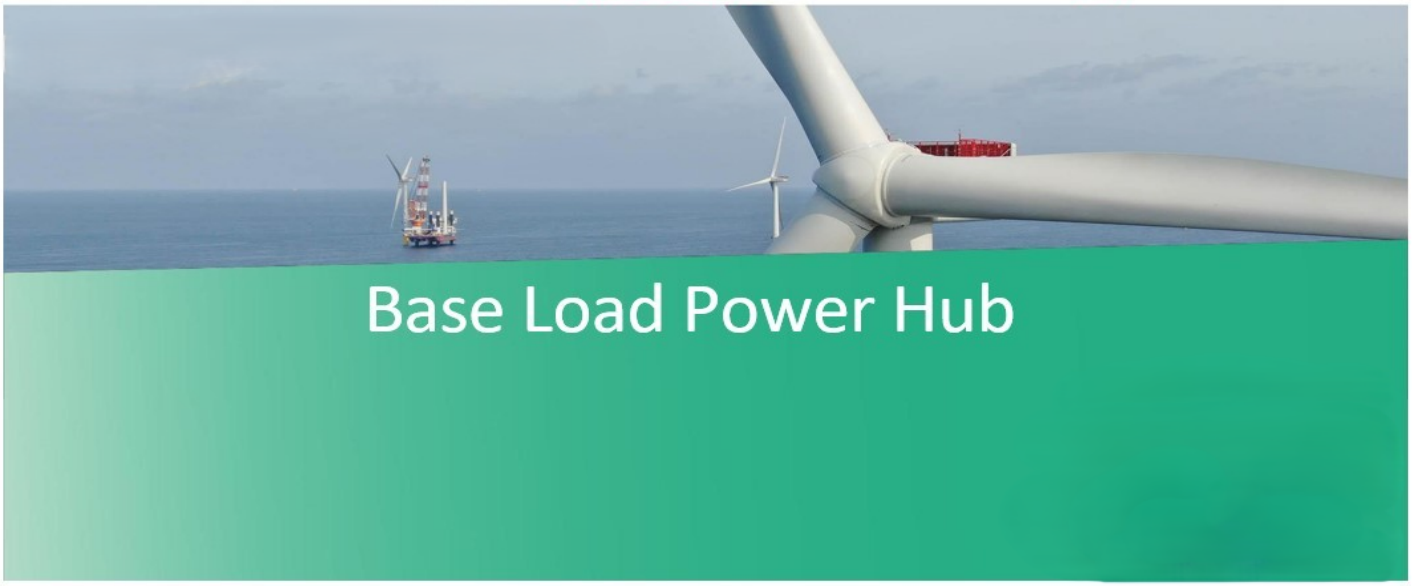
CROSSWIND

ROSETTI MARINO

PROVERLIS

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



MECHANICAL COMPLETION DOSSIER (ONSHORE)

SYSTEM	77 Heating & Ventilation
SUBSYSTEM	77-20 HVAC LV Switchgear Room B-200

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

Sub System N°:	77-20	Tick as appropriate	ONSHORE	O
Description:	HVAC LV Switchgear Room B-200		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**

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123A90 - HOLLANDSE KUST NOORD WIND PARK
BLPH Project

CROSSWIND

Ready For Commissioning (RFC) Certificate

COMPLETE	●	PARTIAL	

Revision:	2		Issued on:	2024-12-05	
System:	77	/	Heating & Ventilation		
SubSystem:	77-20	/	HVAC LV Switchgear Room B-200		

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: 31

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 2024-12-06T11:14:20.582Z	PROVERLIS Digitaly signed by Anthony Iveson 2024-12-16T13:19:05.186Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2024-12-16T13:34:39.108Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2024-12-16T13:34:51.552Z

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-20 & process: MC

Electrical	77-20 HVAC LV Switchgear Room B-200

ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
83024-CEL	LV Switchgear / HVAC panels - LV Room	ONSHORE	C10000549	CPX09	100	2024-10-07	RFC 2
84315-CEL	AC UPS - PAS DB / UCP - HVAC LV Room	ONSHORE	C10000591	CPX09	100	2024-11-25	RFC 2
B-200	Shelter LV (400V) Switchroom B-200	ONSHORE	C10002299	CZX01E	100	2024-10-10	RFC 2
B200-HSB-001	Distribution & HVAC Panel - LV Room	ONSHORE	C10000836	CPX15	100	2024-10-10	RFC 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-20 & process: MC

Instrumental	77-20 HVAC LV Switchgear Room B-200

ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
77-HS-004A	Hand Switch for Fire&Gas Damper HFD-77004	ONSHORE	C10002083	CJX00	100	2024-11-21	RFC 2
77-HS-004B	Hand Switch for Fire&Gas Damper HFD-77004	ONSHORE	C10002084	CJX00	100	2024-11-21	RFC 2
77-HS-005A	Hand Switch for Fire&Gas Damper HFD-77005	ONSHORE	C10002085	CJX00	100	2024-11-21	RFC 2
77-HS-005B	Hand Switch for Fire&Gas Damper HFD-77005	ONSHORE	C10002086	CJX00	100	2024-11-21	RFC 2
77-HS-006A	Hand Switch for Fire&Gas Damper HFD-77006	ONSHORE	C10002087	CJX00	100	2024-11-21	RFC 2
77-HS-006B	Hand Switch for Fire&Gas Damper HFD-77006	ONSHORE	C10002088	CJX00	100	2024-11-21	RFC 2
B-200	Shelter LV (400V) Switchroom B-200	ONSHORE	C10002300	CZX01I	100	2024-10-10	RFC 2
B200-HSB-001/B400-FGS-003	B-200 HVAC Control Panel / MARSHALLING PCS	ONSHORE	C10002036	CJX10	100	2024-11-19	RFC 2
C-77-HS-004A/77-HS-004B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000367	CJX10	100	2024-11-21	RFC 2
C-77-HS-004B/950-JE-04203	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000366	CJX10	100	2024-11-21	RFC 2
C-77-HS-005A/77-HS-005B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000370	CJX10	100	2024-11-21	RFC 2
C-77-HS-005B/950-JE-04203	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000369	CJX10	100	2024-11-21	RFC 2
C-77-HS-006A/77-HS-006B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000373	CJX10	100	2024-11-21	RFC 2
C-77-HS-006B/950-JE-04203	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000372	CJX10	100	2024-11-21	RFC 2
C-77-HY-004/77-HS-004A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000368	CJX10	100	2024-11-21	RFC 2
C-77-HY-005/77-HS-005A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000371	CJX10	100	2024-11-21	RFC 2
C-77-HY-006/77-HS-006A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000374	CJX10	100	2024-11-21	RFC 2
C-77-XA-002/B400-SIS-001	UCP FAULT ALARM / MARSHALLING PCS	ONSHORE	C10000185	CJX10	100	2024-11-25	RFC 2
C-77-XS-002/B400-SIS-001	TRIP SIGNAL TO UCP / MARSHALLING PCS	ONSHORE	C10000181	CJX10	100	2024-11-25	RFC 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-20 & process: MC

Mechanical	77-20 HVAC LV Switchgear Room B-200						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
B-200	Shelter LV (400V) Switchroom B-200	ONSHORE	C10002301	CZX01M	100	2024-10-10	RFC 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-20 & process: MC

Telecom	77-20 HVAC LV Switchgear Room B-200						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
B200-HSB-001/B400-NET-001	COMMUNICATION / NETWORK CABINET	ONSHORE	C10004354	CIX09	100	2024-11-22	RFC 2

CROSSWIND

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Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-20 HVAC LV Switchgear Room B-200

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000529	A	B200-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			
C30000533	A	B200-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			
C30000023	B	B-200	Roof-top cables to be fixed with cable ties made by AISI 316L		ACTIVITY PERFORMED - SEE PICTURES	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	
C30000027	B	B-200	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
C30000031	B	B-200	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
C30000035	B	B-200	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
C30000039	B	B-200	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	
C30000043	B	B-200	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	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	
C30000051	B	B-200	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 77-20 HVAC LV Switchgear Room B-200

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000085	B	B-200	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
C30000089	B	B-200	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
C30000093	B	B-200	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	
C30000146	B	83024-CEL C10000549	Cable to be fixed with proper cable ties, after MCT installetion (point valid for internal and exsternal cable routing.	.		Gtangianu 2024-10-07			
C30000147	B	83024-CEL C10000549	Identification numbers on terminal strip are missing (L1/L2/N).	.		Gtangianu 2024-10-07			
C30000160	B	B200-HSB-001 C10000836	Black Thermoshrink is used on earthing connection inside the panel	To be replaced with Y/G		Gtangianu 2024-10-10	2024-12-03	Ecarotenuto 2024-12-03	2024-12-03
C30000161	B	B-200 C10002299	Missing copper grease on external earthing connection.	-		Gtangianu 2024-10-10			
C30000162	B	B-200 C10002299	Black Thermoshrink is used on all earthing connection of HVAC System and cable trays. To be replaced with Y/G	-		Gtangianu 2024-10-10			
C30000521	B	B200-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 77-20 HVAC LV Switchgear Room B-200

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000525	B	B200-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			
C30000537	B	B200-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			
C30000917	B	84315-CEL C10000591	Missing cable tag , cabinet input B200-HSB-001.	.		APolo 2024-11-25			
C30000920	B	84315-CEL C10000591	Missing the cross-ferruling (Cores) . Cabinet side B200-HSB-001 . (see document 123A90-DDL-EL-DD-20092 sh.7-8)	.		APolo 2024-11-25			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation
SUBSYSTEM 77-20 HVAC LV Switchgear Room B-200

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000549	A	B200-HSB-001	Make temperature and differental pressure trends visible on all HMIs	Update PLC software to apply the request		SLinari 2024-10-30			
C30000557	A	B-200	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			
C30000561	A	B-200	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			
C30000015	B	B-200	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			
C30000019	B	B-200	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
C30000047	B	B-200	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
C30000541	B	B-200	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			
C30000545	B	B-200	None pressure relief damper HDR-77-201 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			
C30000553	B	B-200	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 77-20 HVAC LV Switchgear Room B-200

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000898	A	C-77-XA-002/B400-SIS-001 C10000185	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
C30000163	B	B-200 C10002300	Instrument installation to be completed: 77-TP-201	-	POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE	Gtangianu 2024-10-10	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000164	B	B-200 C10002300	77-TP-201 INSTRUMENT IS NOT ACCESIBLE FOR MAINTENANCE.	-	POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE	Gtangianu 2024-10-10	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000616	B	B200-HSB-001/ B400-FGS-003 C10002036	The plastic fixing ties , on external routing cable , to be replaced with stainless steel.	.		APolo 2024-11-19			
C30000617	B	B200-HSB-001/ B400-FGS-003 C10002036	Missing the tags plastic project on the cables , cabinet side B400-FGS-002 / Panel B200-HSB-001	.		APolo 2024-11-19			
C30000618	B	B200-HSB-001/ B400-FGS-003 C10002036	Missing the cross-ferruling (Cores + Shields) . cabinet side B400-FGS-002 / Panel B200-HSB-001 . (see document	.		APolo 2024-11-19			
C30000619	B	B200-HSB-001/ B400-FGS-003 C10002036	Double shield connected to one terminal on shield bar. this point is valid also for cabinet side B400-FGS-002 : cables	.		APolo 2024-11-19			
C30000683	B	C-77-HY-006/77-HS-006A C10000374	Identification tag wire missing inside C-77-HY-006 connection.	.		Gtangianu 2024-11-21			
C30000690	B	C-77-HY-004/77-HS-004A C10000368	Vendor HVAC Documentation (1724000049-HV-DA-00065_Rev.1) is not alligned with GA and P&I	.		Gtangianu 2024-11-21			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation
SUBSYSTEM 77-20 HVAC LV Switchgear Room B-200

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000886	B	C-77-XS-002/B400-SIS-001 C10000181	Missing cables tag , cabinet side B200 HVAC / B400-SIS-001	.		APolo 2024-11-25			
C30000887	B	C-77-XS-002/B400-SIS-001 C10000181	Missing the cross-ferruling (Cores) . Cabinet side B400-SIS-001 / B-200 HVAC . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-11-25			
C30000888	B	C-77-XS-002/B400-SIS-001 C10000181	Double shield connected to one terminal on shield bar. this point is valid also for cabinet side B400-SIS-001	.		APolo 2024-11-25			
C30000901	B	C-77-XA-002/B400-SIS-001 C10000185	Missing cables tag , cabinet side B400-SIS-001 / B-200 HVAC	.		APolo 2024-11-25			
C30000902	B	C-77-XA-002/B400-SIS-001 C10000185	Missing the cross-ferruling (Cores) . Cabinet side B400-SIS-001 / B-200 HVAC . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-11-25			
C30000903	B	C-77-XA-002/B400-SIS-001 C10000185	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 77-20 HVAC LV Switchgear Room B-200

HVAC

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000055	B	B-200	All documentation listed in the SMIR, shall be re-issued in final revision and approved by RM and CW			SLinari 2024-08-02			
C30000059	B	B-200	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
C30000069	B	B-200	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
C30000073	B	B-200	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
C30000077	B	B-200	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
C30000081	B	B-200	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 77-20 HVAC LV Switchgear Room B-200

Telecom									
CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000787	B	B200-HSB-001/ B400-NET-001 C10004354	Identification tag wires missing both side the B100-HSB-001/B400-NET-001 connections.	.		Gtangianu 2024-11-22			

Section 2 CONSOLIDATED PUNCH LISTS

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-20 HVAC LV Switchgear Room B-200

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000529	A	B200-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
C30000533	A	B200-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
C30000023	B	B-200	Roof-top cables to be fixed with cable ties made by AISI 316L		ACTIVITY PERFORMED - SEE PICTURES	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	2024-12-05
C30000027	B	B-200	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
C30000031	B	B-200	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
C30000035	B	B-200	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
C30000039	B	B-200	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
C30000043	B	B-200	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	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	2024-12-05
C30000051	B	B-200	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

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-20 HVAC LV Switchgear Room B-200

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000085	B	B-200	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
C30000089	B	B-200	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
C30000093	B	B-200	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
C30000146	B	83024-CEL C10000549	Cable to be fixed with proper cable ties, after MCT installetion (point valid for internal and exsternal cable routing.	.		Gtangianu 2024-10-07	2025-01-30	APolo 2025-01-30	2025-01-30
C30000147	B	83024-CEL C10000549	Identification numbers on terminal strip are missing (L1/L2/N).	.		Gtangianu 2024-10-07	2025-02-04	APolo 2025-02-04	2025-02-04
C30000160	B	B200-HSB-001 C10000836	Black Thermoshrink is used on earthing connection inside the panel	To be replaced with Y/G		Gtangianu 2024-10-10	2024-12-03	Ecarotenuto 2024-12-03	2024-12-03
C30000161	B	B-200 C10002299	Missing copper grease on external earthing connection.	-		Gtangianu 2024-10-10	2024-12-14	Ecarotenuto 2024-12-14	2024-12-14
C30000162	B	B-200 C10002299	Black Thermoshrink is used on all earthing connection of HVAC System and cable trays. To be replaced with Y/G	-		Gtangianu 2024-10-10	2025-02-12	Pschintu 2025-02-12	2025-02-12
C30000521	B	B200-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

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-20 HVAC LV Switchgear Room B-200

Electrical									
CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000525	B	B200-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 2025-02-20	SLinari 2025-02-20	2025-02-20
C30000537	B	B200-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
C30000917	B	84315-CEL C10000591	Missing cable tag , cabinet input B200-HSB-001.	.		APolo 2024-11-25	2025-02-21	APolo 2025-02-21	2025-02-21
C30000920	B	84315-CEL C10000591	Missing the cross-ferruling (Cores) . Cabinet side B200-HSB-001 . (see document 123A90-DDL-EL-DD-20092 sh.7-8)	.		APolo 2024-11-25	2025-02-15	AAndreani 2025-02-15	2025-02-15

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-20 HVAC LV Switchgear Room B-200

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000549	A	B200-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
C30000557	A	B-200	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			
C30000561	A	B-200	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			
C30000015	B	B-200	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
C30000019	B	B-200	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
C30000047	B	B-200	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
C30000541	B	B-200	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
C30000545	B	B-200	None pressure relief damper HDR-77-201 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			
C30000553	B	B-200	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			

CROSSWIND

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Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-20 HVAC LV Switchgear Room B-200

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000898	A	C-77-XA-002/B400-SIS-001 C10000185	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
C30000163	B	B-200 C10002300	Instrument installation to be completed: 77-TP-201	-	POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE	Gtangianu 2024-10-10	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000164	B	B-200 C10002300	77-TP-201 INSTRUMENT IS NOT ACCESIBLE FOR MAINTENANCE.	-	POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE	Gtangianu 2024-10-10	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000616	B	B200-HSB-001/ B400-FGS-003 C10002036	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
C30000617	B	B200-HSB-001/ B400-FGS-003 C10002036	Missing the tags plastic project on the cables , cabinet side B400-FGS-002 / Panel B200-HSB-001	.		APolo 2024-11-19	2025-02-21	JKrizanic 2025-02-21	2025-02-21
C30000618	B	B200-HSB-001/ B400-FGS-003 C10002036	Missing the cross-ferruling (Cores + Shields) . cabinet side B400-FGS-002 / Panel B200-HSB-001 . (see document	.		APolo 2024-11-19	2025-02-21	JKrizanic 2025-02-21	2025-02-21
C30000619	B	B200-HSB-001/ B400-FGS-003 C10002036	Double shield connected to one terminal on shield bar. this point is valid also for cabinet side B400-FGS-002 : cables	.		APolo 2024-11-19	2025-02-21	JKrizanic 2025-02-21	2025-02-21
C30000683	B	C-77-HY-006/77 -HS-006A C10000374	Identification tag wire missing inside C-77-HY-006 connection.	.		Gtangianu 2024-11-21	2024-12-17	Gtangianu 2024-12-17	2024-12-17
C30000690	B	C-77-HY-004/77 -HS-004A C10000368	Vendor HVAC Documentation (1724000049-HV-DA-00065_Rev.1) is not alligned with GA and P&I	.		Gtangianu 2024-11-21	2025-02-15	Ecarotenuto 2025-02-15	2025-02-15

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-20 HVAC LV Switchgear Room B-200

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000886	B	C-77-XS-002/B400-SIS-001 C10000181	Missing cables tag , cabinet side B200 HVAC / B400-SIS-001	.		APolo 2024-11-25	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30000887	B	C-77-XS-002/B400-SIS-001 C10000181	Missing the cross-ferruling (Cores) . Cabinet side B400-SIS-001 / B-200 HVAC . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-11-25			
C30000888	B	C-77-XS-002/B400-SIS-001 C10000181	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
C30000901	B	C-77-XA-002/B400-SIS-001 C10000185	Missing cables tag , cabinet side B400-SIS-001 / B-200 HVAC	.		APolo 2024-11-25	2025-01-03	Gtangianu 2025-01-03	2025-01-03
C30000902	B	C-77-XA-002/B400-SIS-001 C10000185	Missing the cross-ferruling (Cores) . Cabinet side B400-SIS-001 / B-200 HVAC . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-11-25			
C30000903	B	C-77-XA-002/B400-SIS-001 C10000185	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

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-20 HVAC LV Switchgear Room B-200

HVAC

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000055	B	B-200	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. C30000561	SLinari 2024-08-02	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000059	B	B-200	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
C30000069	B	B-200	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
C30000073	B	B-200	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
C30000077	B	B-200	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
C30000081	B	B-200	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

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-20 HVAC LV Switchgear Room B-200

Telecom									
CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000787	B	B200-HSB-001/ B400-NET-001 C10004354	Identification tag wires missing both side the B100-HSB-001/B400-NET-001 connections.	.		Gtangianu 2024-11-22	2025-02-26	Gtangianu 2025-02-26	2025-02-26

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000545

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	77-20		HVAC LV Switchgear Room B-200

2 - OBSERVATION

None pressure relief damper HDR-77-201 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

C30000553

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	77-20		HVAC LV Switchgear Room B-200

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

C30000557

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	77-20		HVAC LV Switchgear Room B-200

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

C30000561

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	77-20		HVAC LV Switchgear Room B-200

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

C30000887

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000181	1.4 Discipline	Instrumental
1.2 Item	C-77-XS-002/B400-SIS-001	TRIP SIGNAL TO UCP / MARSHALLING PCS	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

2 - OBSERVATION

Missing the cross-ferruling (Cores) . Cabinet side B400-SIS-001 / B-200 HVAC . (see document 123A90-DDL-IN-DG-40016 sh.3)

Name: Alessio Polo

Date: 2024-11-25

Signature: Digitaly signed by Alessio Polo 2024-11-25T16:53:11.603Z

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 2024-11-25T16:53:22.530Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Name

Date

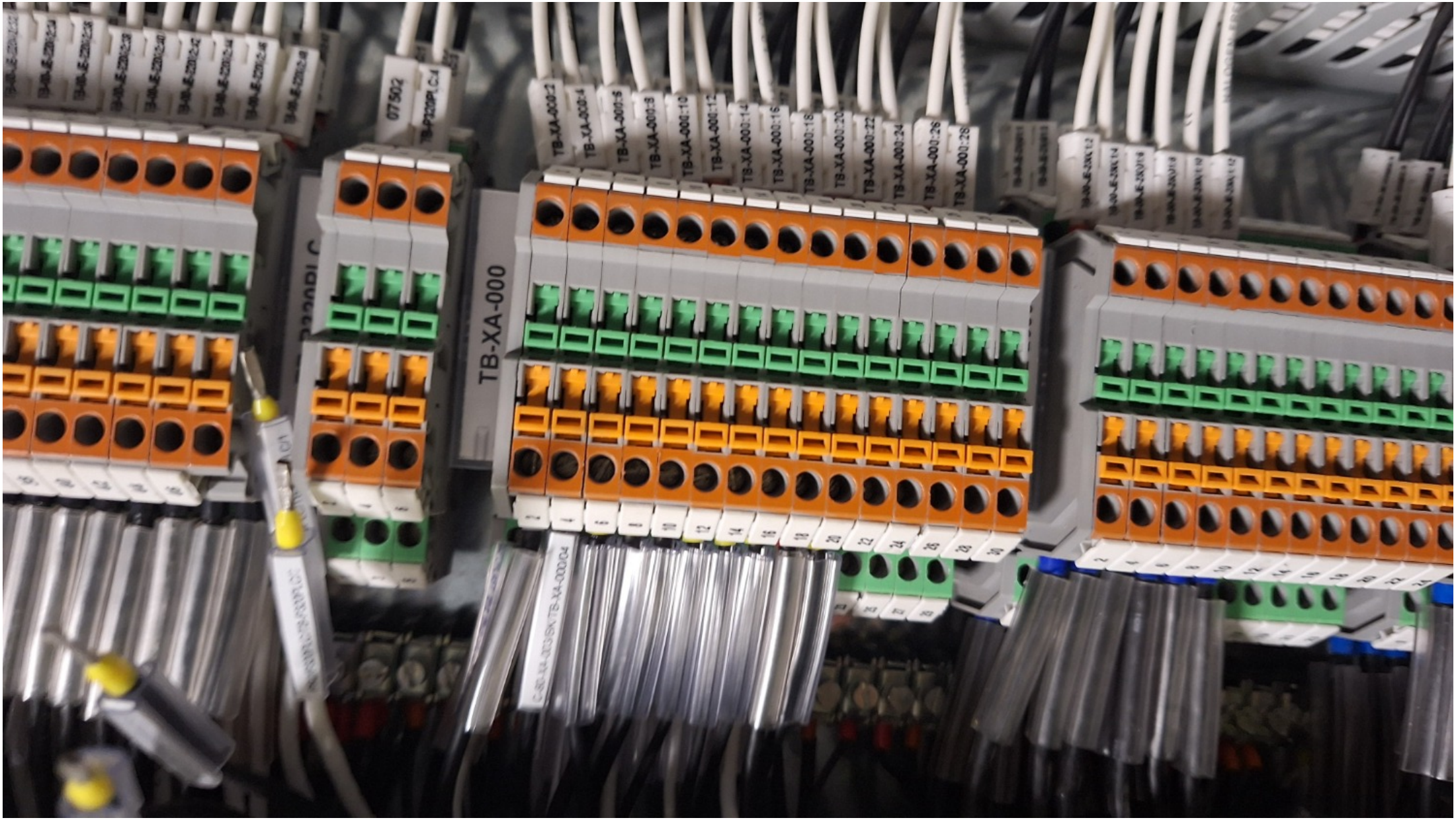
Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


TB-XA-000

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000902

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000185	1.4 Discipline	Instrumental
1.2 Item	C-77-XA-002/B400-SIS-001	UCP FAULT ALARM / MARSHALLING PCS	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

2 - OBSERVATION

Missing the cross-ferruling (Cores) . Cabinet side B400-SIS-001 / B-200 HVAC . (see document 123A90-DDL-IN-DG-40016 sh.3)

Name: Alessio Polo

Date: 2024-11-25

Signature: Digitaly signed by Alessio Polo 2024-11-25T17:34:23.565Z

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 2024-11-25T17:34:33.773Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Name

Date

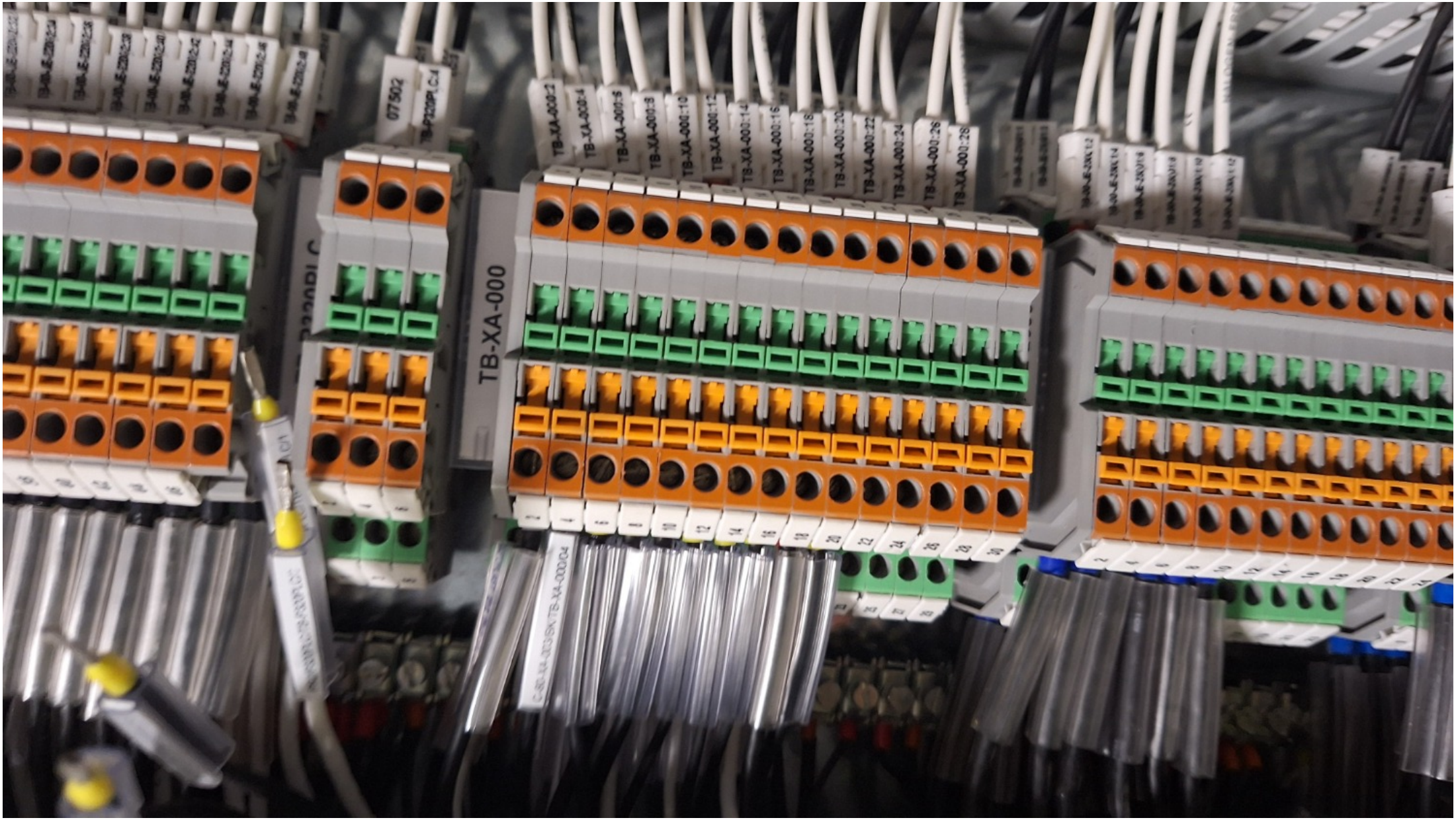
Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


TB-XA-000



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000015

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	90-02		LV Switchgear Room B-200

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

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 vendor alex sistemi

Date 2025-02-06

Signature Digitaly signed by vendor alex sistemi 2025-02-06T16:03:54.388Z

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-02-06

Signature Digitaly signed by Stefano Linari 2025-02-06T16:04:07.294Z

6- CLEARANCE APPROVAL

Name

Date

Signature


B-200
LV SWITCHROOM

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000019

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	90-02		LV Switchgear Room B-200

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 2024-10-29T12:01:16.018Z

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T12:01:34.259Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000023

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	90-02		LV Switchgear Room B-200

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 - SEE PICTURES

Name Stefano Linari

Date 2024-12-05

Signature Digitaly signed by Stefano Linari 2024-12-05T12:40:52.966Z

5 - CLEARANCE CHECK

ACTIVITY PERFORMED - SEE PICTURES

Name Stefano Linari

Date 2024-12-05

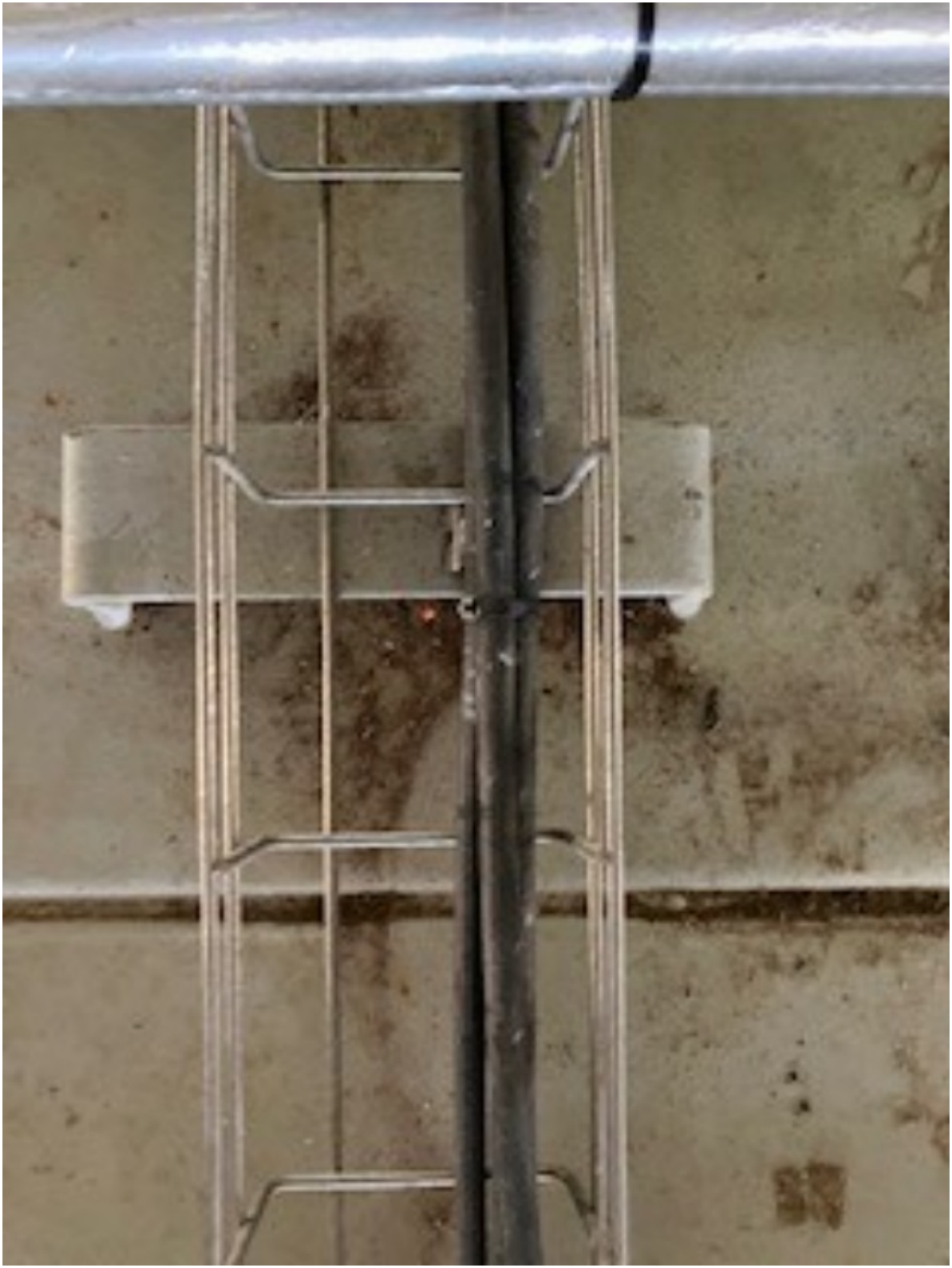
Signature Digitaly signed by Stefano Linari 2024-12-05T12:41:05.778Z

6- CLEARANCE APPROVAL

Name

Date

Signature





ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000027

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	90-02		LV Switchgear Room B-200

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 2024-10-29T12:08:13.272Z

5 - CLEARANCE CHECK

EARTHING INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T12:08:28.734Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000031

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	90-02		LV Switchgear Room B-200

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 2024-10-29T12:15:28:857Z

5 - CLEARANCE CHECK

EARTHING INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T12:15:46.313Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000035

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	90-02		LV Switchgear Room B-200

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 Digitaly signed by ALEX SISTEMI 2024-10-29T14:45:37.943Z

5 - CLEARANCE CHECK

installed anche checked

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T14:45:52.022Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000039

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	90-02		LV Switchgear Room B-200

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 Digitaly signed by Stefano Linari 2024-12-05T10:56:24.284Z

5 - CLEARANCE CHECK

activity done - see picture

Name Stefano Linari

Date 2024-12-05

Signature Digitaly signed by Stefano Linari 2024-12-05T10:56:34.965Z

6- CLEARANCE APPROVAL

Name

Date

Signature


LIVE POWER
SOTTO TENSIONE
400 V

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000043

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	90-02		LV Switchgear Room B-200

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

Name Stefano Linari

Date 2024-12-05

Signature Digitaly signed by Stefano Linari 2024-12-05T12:24:53.552Z

5 - CLEARANCE CHECK

ACTIVITY DONE

Name Stefano Linari

Date 2024-12-05

Signature Digitaly signed by Stefano Linari 2024-12-05T12:25:05.587Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000047

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	90-02		LV Switchgear Room B-200

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 PROVERLIS Digitaly signed by ALEX SISTEMI 2024-10-29T12:36:49.990Z

5 - CLEARANCE CHECK

CHECKED CEMBRE INSTALLATION MANUAL - ACCEPTED

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T12:37:02.420Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000051

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	90-02		LV Switchgear Room B-200

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 PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T12:40:40.965Z

5 - CLEARANCE CHECK

FIXED

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T12:40:54.099Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000055

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	HVAC
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	90-02		LV Switchgear Room B-200

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. C30000561

Name Stefano Linari

Date 2025-02-06

Signature Digitaly signed by Stefano Linari 2025-02-06T15:51:15.220Z

5 - CLEARANCE CHECK

can be close - refer to PL n. C30000561

Name Stefano Linari

Date 2025-02-06

Signature Digitaly signed by Stefano Linari 2025-02-06T15:51:29.782Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000059

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	HVAC
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	90-02		LV Switchgear Room B-200

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 2024-10-29T12:44:12.962Z

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T12:44:27.054Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000069

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	HVAC
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	90-02		LV Switchgear Room B-200

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 2024-10-29T13:02:55.197Z

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T13:03:11.936Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000073

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	HVAC
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	90-02		LV Switchgear Room B-200

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	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

PERFORMED - SEE REPORTS

Name ALEX SISTEMI

Date 2024-10-29

Signature PROVERLIS Digitaly signed by ALEX SISTEMI 2024-10-29T13:06:37.483Z

5 - CLEARANCE CHECK

PERFORMED - SEE REPORTS

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T13:06:51.281Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000077

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	HVAC
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	90-02		LV Switchgear Room B-200

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 2024-10-29T13:21:29.910Z

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T13:21:50.096Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000081

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	HVAC
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	90-02		LV Switchgear Room B-200

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 2024-10-29T14:48:38.052Z

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T14:48:55.216Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000085

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	90-02		LV Switchgear Room B-200

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 2024-10-29T13:36:34.160Z

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T13:36:49.873Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000089

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	90-02		LV Switchgear Room B-200

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 PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T14:53:49.148Z

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T14:54:13.054Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000093

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	90-02		LV Switchgear Room B-200

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 PROVERLIS Digitaly signed by Stefano Linari 2024-12-05T10:46:11.165Z

5 - CLEARANCE CHECK

ACTIVITY DONE - ALL DUCTS HAS BEEN INSTALLED

Name Stefano Linari

Date 2024-12-05

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-12-05T10:46:24.829Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000146

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000549	1.4 Discipline	Electrical
1.2 Item	83024-CEL	LV Switchgear / HVAC panels - LV Room	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

2 - OBSERVATION

Cable to be fixed with proper cable ties, after MCT installation (point valid for internal and exsternal cable routing).

Name: Giovanni Tangianu

Date: 2024-10-07

Signature: Digitaly signed by Giovanni Tangianu 2024-10-07T11:36:58.832Z

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	2024-10-07
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-07T11:37:28.629Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-01-30

Signature: Digitaly signed by Alessio Polo 2025-01-30T16:28:24.777Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000147

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000549	1.4 Discipline	Electrical
1.2 Item	83024-CEL	LV Switchgear / HVAC panels - LV Room	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

2 - OBSERVATION

Identification numbers on terminal strip are missing (L1/L2/N).

Name: Giovanni Tangianu

Date: 2024-10-07

Signature: Digitaly signed by Giovanni Tangianu 2024-10-07T11:37:49.552Z

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal: .Inside the panel B200-HSB-001 add identification numbers on terminal strip XPS

3.2 Material required:

3.3 Priority: B PL B

3.4 Activity code: MC Mechanical Completion

3.5 Action by: VND Vendor

Name: Giovanni Tangianu

Date: 2024-10-07

Signature: Digitaly signed by Giovanni Tangianu 2024-10-07T11:38:28.639Z

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-02-04

Signature: Digitaly signed by Alessio Polo 2025-02-04T13:42:42.696Z

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000160

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000836	1.4 Discipline	Electrical
1.2 Item	B200-HSB-001	Distribution & HVAC Panel - LV Room	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

2 - OBSERVATION

Black Thermoshrink is used on earthing connection inside the panel

Name: Giovanni Tangianu

Date: 2024-10-10

Signature: Digitaly signed by Giovanni Tangianu 2024-10-10T15:34:47.467Z

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal: To be replaced with Y/G

3.2 Material required:

3.3 Priority: B PL B

3.4 Activity code: MC Mechanical Completion

3.5 Action by: VND Vendor

Name: Giovanni Tangianu

Date: 2024-10-10

Signature: Digitaly signed by Giovanni Tangianu 2024-10-10T15:35:19.231Z

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Duplicate point. See PL n° C30000521

Name: Eleonora Carotenuto

Date: 2024-12-03

Signature: Digitaly signed by Eleonora Carotenuto 2024-12-03T15:41:36.541Z

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000161

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002299	1.4 Discipline	Electrical
1.2 Item	B-200	Shelter LV (400V) Switchroom B-200	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

2 - OBSERVATION

Missing copper grease on external earthing connection.

Name: Giovanni Tangianu

Date: 2024-10-10

Signature: Digitaly signed by Giovanni Tangianu 2024-10-10T16:01:38.153Z

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	2024-10-10
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-10T16:02:04.264Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-14

Signature: Digitaly signed by Eleonora Carotenuto 2024-12-14T09:46:29.603Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000162

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002299	1.4 Discipline	Electrical
1.2 Item	B-200	Shelter LV (400V) Switchroom B-200	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

2 - OBSERVATION

Black Thermoshrink is used on all earthing connection of HVAC System and cable trays. To be replaced with Y/G

Name: Giovanni Tangianu

Date: 2024-10-10

Signature: Digitaly signed by Giovanni Tangianu 2024-10-10T16:02:47.372Z

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	2024-10-10
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2024-10-10T16:03:10.456Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu

Date: 2025-02-12

Signature: Digitaly signed by Paolo Schintu 2025-02-12T16:54:55.701Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000163

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002300	1.4 Discipline	Instrumental
1.2 Item	B-200	Shelter LV (400V) Switchroom B-200	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

2 - OBSERVATION

Instrument installation to be completed: 77-TP-201

Name: Giovanni Tangianu

Date: 2024-10-10

Signature: Digitaly signed by Giovanni Tangianu 2024-10-10T16:09:04.866Z

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	2024-10-10
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2024-10-10T16:09:22.632Z

4 - PERFORMED ACTION

POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE

Name: ALEX SISTEMI

Date: 2024-10-29

Signature: Digitaly signed by ALEX SISTEMI 2024-10-29T13:42:08.541Z

5 - CLEARANCE CHECK

POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE

Name: Stefano Linari

Date: 2024-10-29

Signature: Digitaly signed by Stefano Linari 2024-10-29T13:42:24.629Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000164

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002300	1.4 Discipline	Instrumental
1.2 Item	B-200	Shelter LV (400V) Switchroom B-200	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

2 - OBSERVATION

77-TP-201 INSTRUMENT IS NOT ACCESIBLE FOR MAINTENANCE.

Name: Giovanni Tangianu

Date: 2024-10-10

Signature: Digitaly signed by Giovanni Tangianu 2024-10-10T16:10:09.219Z

3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-10-10
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2024-10-10T16:10:26.901Z

4 - PERFORMED ACTION

POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE

Name: ALEX SISTEMI

Date: 2024-10-29

Signature: Digitaly signed by ALEX SISTEMI 2024-10-29T13:42:57.133Z

5 - CLEARANCE CHECK

POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE

Name: Stefano Linari

Date: 2024-10-29

Signature: Digitaly signed by Stefano Linari 2024-10-29T13:43:10.572Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000521

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B200-HSB-001		Distribution & HVAC Panel - LV Room
1.3 Subsystem	77-20		HVAC LV Switchgear Room B-200

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 2025-02-25T15:20:41.206Z

5 - CLEARANCE CHECK

Name Stefano Linari

Date 2025-02-25

Signature Digitaly signed by Stefano Linari 2025-02-25T15:20:52.167Z

6- CLEARANCE APPROVAL

Name

Date 2025-02-25

Signature

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000525

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B200-HSB-001		Distribution & HVAC Panel - LV Room
1.3 Subsystem	77-20		HVAC LV Switchgear Room B-200

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: 2025-02-20

Signature: Digitaly signed by ALEX SISTEMI 2025-02-20T15:43:30.916Z

5 - CLEARANCE CHECK

Name: Stefano Linari

Date: 2025-02-20

Signature: Digitaly signed by Stefano Linari 2025-02-20T15:43:50.665Z

6- CLEARANCE APPROVAL

Name

Date: 2025-02-20

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000529

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B200-HSB-001		Distribution & HVAC Panel - LV Room
1.3 Subsystem	77-20		HVAC LV Switchgear Room B-200

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 2025-02-22T07:36:43.740Z

5 - CLEARANCE CHECK

Name Stefano Linari

Date 2025-02-22

Signature Digitaly signed by Stefano Linari 2025-02-22T07:36:51.595Z

6- CLEARANCE APPROVAL

Name

Date 2025-02-22

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000533

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B200-HSB-001		Distribution & HVAC Panel - LV Room
1.3 Subsystem	77-20		HVAC LV Switchgear Room B-200

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 2025-02-22T07:49:10.661Z

5 - CLEARANCE CHECK

Name: Stefano Linari

Date: 2025-02-22

Signature: Digitaly signed by Stefano Linari 2025-02-22T07:49:16.927Z

6- CLEARANCE APPROVAL

Name

Date: 2025-02-22

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000537

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B200-HSB-001		Distribution & HVAC Panel - LV Room
1.3 Subsystem	77-20		HVAC LV Switchgear Room B-200

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 Digitaly signed by ALEX SISTEMI 2025-02-25T10:06:11.370Z

5 - CLEARANCE CHECK

Name Stefano Linari

Date 2025-02-25

Signature Digitaly signed by Stefano Linari 2025-02-25T10:06:17.818Z

6- CLEARANCE APPROVAL

Name

Date 2025-02-25

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000541

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-200		Shelter LV (400V) Switchroom B-200
1.3 Subsystem	77-20		HVAC LV Switchgear Room B-200

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 2025-02-20T15:46:10.026Z

5 - CLEARANCE CHECK

Name Stefano Linari

Date 2025-02-20

Signature Digitaly signed by Stefano Linari 2025-02-20T15:46:17.675Z

6- CLEARANCE APPROVAL

Name

Date 2025-02-20

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000549

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B200-HSB-001		Distribution & HVAC Panel - LV Room
1.3 Subsystem	77-20		HVAC LV Switchgear Room B-200

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 2025-02-20T15:48:55.938Z

5 - CLEARANCE CHECK

Name Stefano Linari

Date 2025-02-20

Signature Digitaly signed by Stefano Linari 2025-02-20T15:49:02.404Z

6- CLEARANCE APPROVAL

Name

Date 2025-02-20

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000616

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002036	1.4 Discipline	Instrumental
1.2 Item	B200-HSB-001/B400-FGS-003	B-200 HVAC Control Panel / MARSHALLING PCS	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

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 2024-11-19T16:35:00.703Z

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 2024-11-19T16:35:25.972Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu

Date: 2025-02-26

Signature: Digitaly signed by Paolo Schintu 2025-02-26T12:55:56.074Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000617

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002036	1.4 Discipline	Instrumental
1.2 Item	B200-HSB-001/B400-FGS-003	B-200 HVAC Control Panel / MARSHALLING PCS	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

2 - OBSERVATION

Missing the tags plastic project on the cables , cabinet side B400-FGS-002 / Panel B200-HSB-001

Name: Alessio Polo

Date: 2024-11-19

Signature: Digitaly signed by Alessio Polo 2024-11-19T16:54:00.870Z

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 2024-11-19T16:54:14.964Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic

Date: 2025-02-21

Signature: Digitaly signed by Josip Krizanic 2025-02-21T12:36:36.880Z

6- CLEARANCE APPROVAL

Name

Date

Signature


CROSSWIND

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000618

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002036	1.4 Discipline	Instrumental
1.2 Item	B200-HSB-001/B400-FGS-003	B-200 HVAC Control Panel / MARSHALLING PCS	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

2 - OBSERVATION

Missing the cross-ferruling (Cores + Shields) . cabinet side B400-FGS-002 / Panel B200-HSB-001 . (see document 123A90-DDL-IN-DG-40016 sh.3)

Name: Alessio Polo

Date: 2024-11-19

Signature: Digitaly signed by Alessio Polo 2024-11-19T16:58:29.725Z

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 2024-11-19T16:58:47.659Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic

Date: 2025-02-21

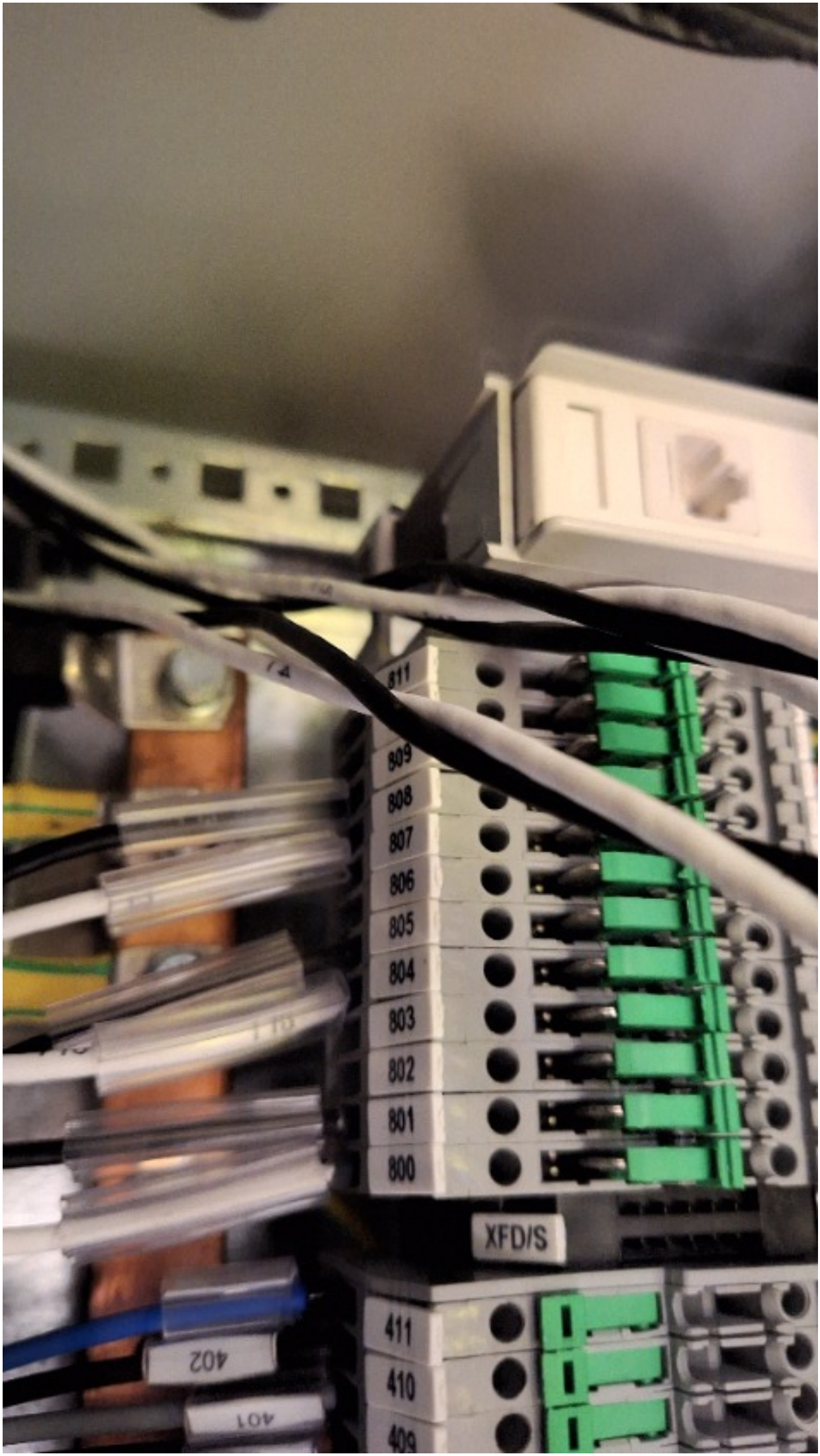
Signature: Digitaly signed by Josip Krizanic 2025-02-21T08:34:17.133Z

6- CLEARANCE APPROVAL

Name

Date

Signature


811
809
808
807
806
805
804
803
802
801
800
XFD/S
411
410
409
402
401

TB-B100-HSB-001
TB-B200-HSB-001
2
4
6
8
10
12

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000619

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002036	1.4 Discipline	Instrumental
1.2 Item	B200-HSB-001/B400-FGS-003	B-200 HVAC Control Panel / MARSHALLING PCS	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

2 - OBSERVATION

Double shield connected to one terminal on shield bar. this point is valid also for cabinet side B400-FGS-002 : cables B100-HSB-001/B400-FGS-002 - B200-HSB-001/B400-FGS-002 - B300-HSB-001/B400-FGS-002

Name: Alessio Polo

Date: 2024-11-19

Signature: Digitaly signed by Alessio Polo 2024-11-19T17:21:38.182Z

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 2024-11-19T17:22:01.682Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic

Date: 2025-02-21

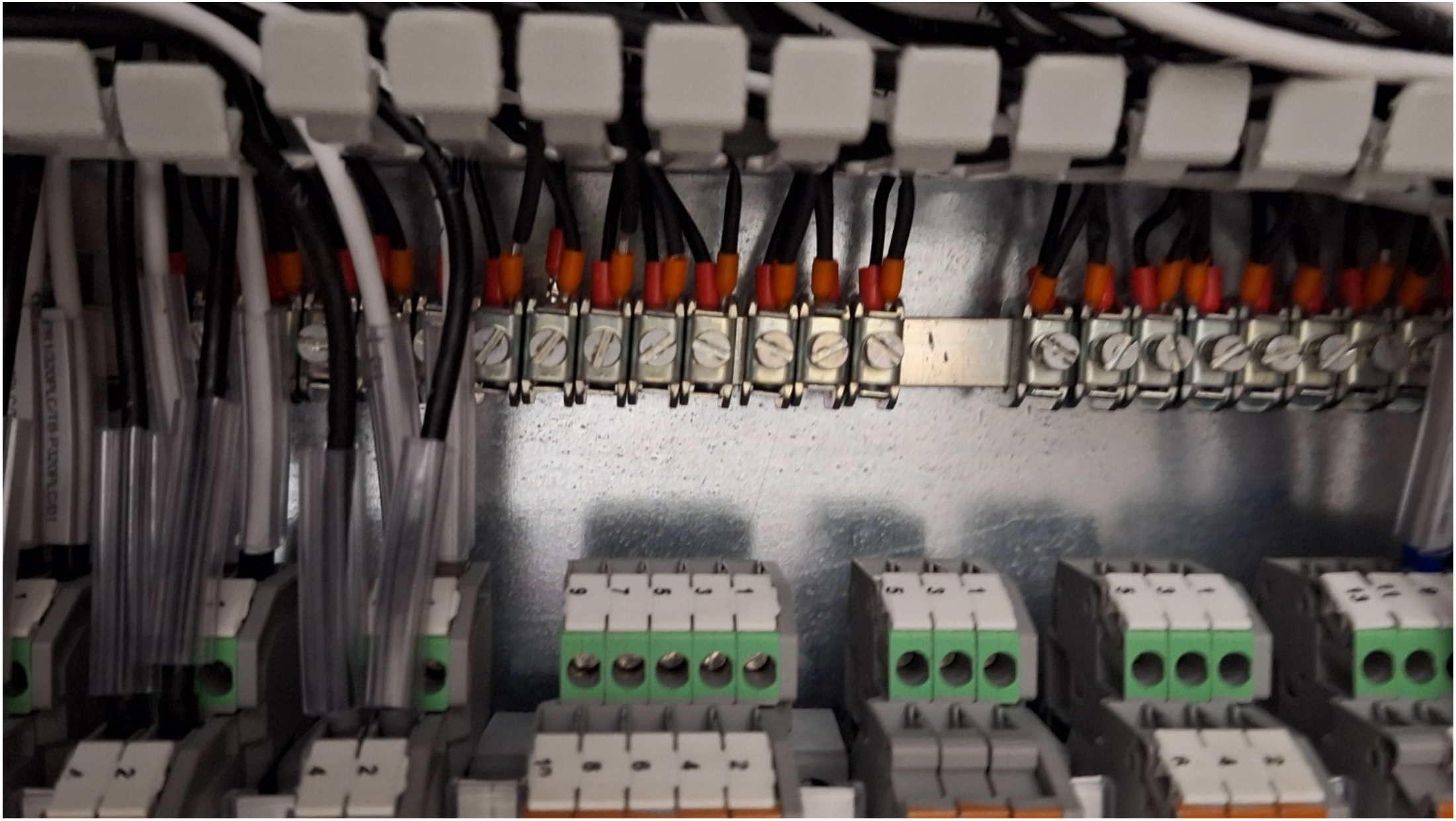
Signature: Digitaly signed by Josip Krizanic 2025-02-21T08:34:33.610Z

6- CLEARANCE APPROVAL

Name

Date

Signature



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000683

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000374	1.4 Discipline	Instrumental
1.2 Item	C-77-HY-006/77-HS-006A	FIRE DAMPER / MARSHALLING PCS	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

2 - OBSERVATION

Identification tag wire missing inside C-77-HY-006 connection.

Name: Giovanni Tangianu

Date: 2024-11-21

Signature: Digitaly signed by Giovanni Tangianu 2024-11-21T08:13:56.002Z

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	2024-11-21
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-11-21T08:14:10.915Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2024-12-17

Signature: Digitaly signed by Giovanni Tangianu 2024-12-17T14:10:32.821Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000690

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000368	1.4 Discipline	Instrumental
1.2 Item	C-77-HY-004/77-HS-004A	FIRE DAMPER / MARSHALLING PCS	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

2 - OBSERVATION

Vendor HVAC Documentation (1724000049-HV-DA-00065_Rev.1) is not alligned with GA and P&I (1724000049-AR-DA-00015_Rev.4 / 123A90-1724000049-HV-PID-00039_Rev.2). HVAC Documentation to be update in compliance with Items installation.

Name: Giovanni Tangianu

Date: 2024-11-21

Signature: Digitaly signed by Giovanni Tangianu 2024-11-21T09:32:35.265Z

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	2024-11-21
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2024-11-21T09:33:16.165Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Documentation re-issued and aligned to installation

Name: Eleonora Carotenuto

Date: 2025-02-15

Signature: Digitaly signed by Eleonora Carotenuto 2025-02-15T08:45:50.886Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000787

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004354	1.4 Discipline	Telecom
1.2 Item	B200-HSB-001/B400-NET-001	COMMUNICATION / NETWORK CABINET	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

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 2024-11-22T16:10:42.755Z

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 2024-11-22T16:10:54.933Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-26

Signature: Digitaly signed by Giovanni Tangianu 2025-02-26T08:59:44.091Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000886

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000181	1.4 Discipline	Instrumental
1.2 Item	C-77-XS-002/B400-SIS-001	TRIP SIGNAL TO UCP / MARSHALLING PCS	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

2 - OBSERVATION

Missing cables tag , cabinet side B200 HVAC / B400-SIS-001

Name: Alessio Polo

Date: 2024-11-25

Signature: Digitaly signed by Alessio Polo 2024-11-25T16:48:42.530Z

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 2024-11-25T16:48:54.987Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu

Date: 2025-02-26

Signature: Digitaly signed by Paolo Schintu 2025-02-26T15:47:33.303Z

6- CLEARANCE APPROVAL

Name

Date

Signature


C-77-XS-002/0400
77201-CEC-L1



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000888

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000181	1.4 Discipline	Instrumental
1.2 Item	C-77-XS-002/B400-SIS-001	TRIP SIGNAL TO UCP / MARSHALLING PCS	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

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 2024-11-25T16:54:32.374Z

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 2024-11-25T16:54:41.944Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-28

Signature: Digitaly signed by Andrea Andreani 2025-02-28T12:23:01.125Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000898

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000185	1.4 Discipline	Instrumental
1.2 Item	C-77-XA-002/B400-SIS-001	UCP FAULT ALARM / MARSHALLING PCS	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

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 2024-11-25T17:28:09.768Z

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 2024-11-25T17:28:26.720Z

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 2024-12-05T14:28:35.430Z

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

C30000901

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000185	1.4 Discipline	Instrumental
1.2 Item	C-77-XA-002/B400-SIS-001	UCP FAULT ALARM / MARSHALLING PCS	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

2 - OBSERVATION

Missing cables tag , cabinet side B400-SIS-001 / B-200 HVAC

Name: Alessio Polo

Date: 2024-11-25

Signature: Digitaly signed by Alessio Polo 2024-11-25T17:32:14.889Z

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 2024-11-25T17:32:25.788Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done.

Name: Giovanni Tangianu

Date: 2025-01-03

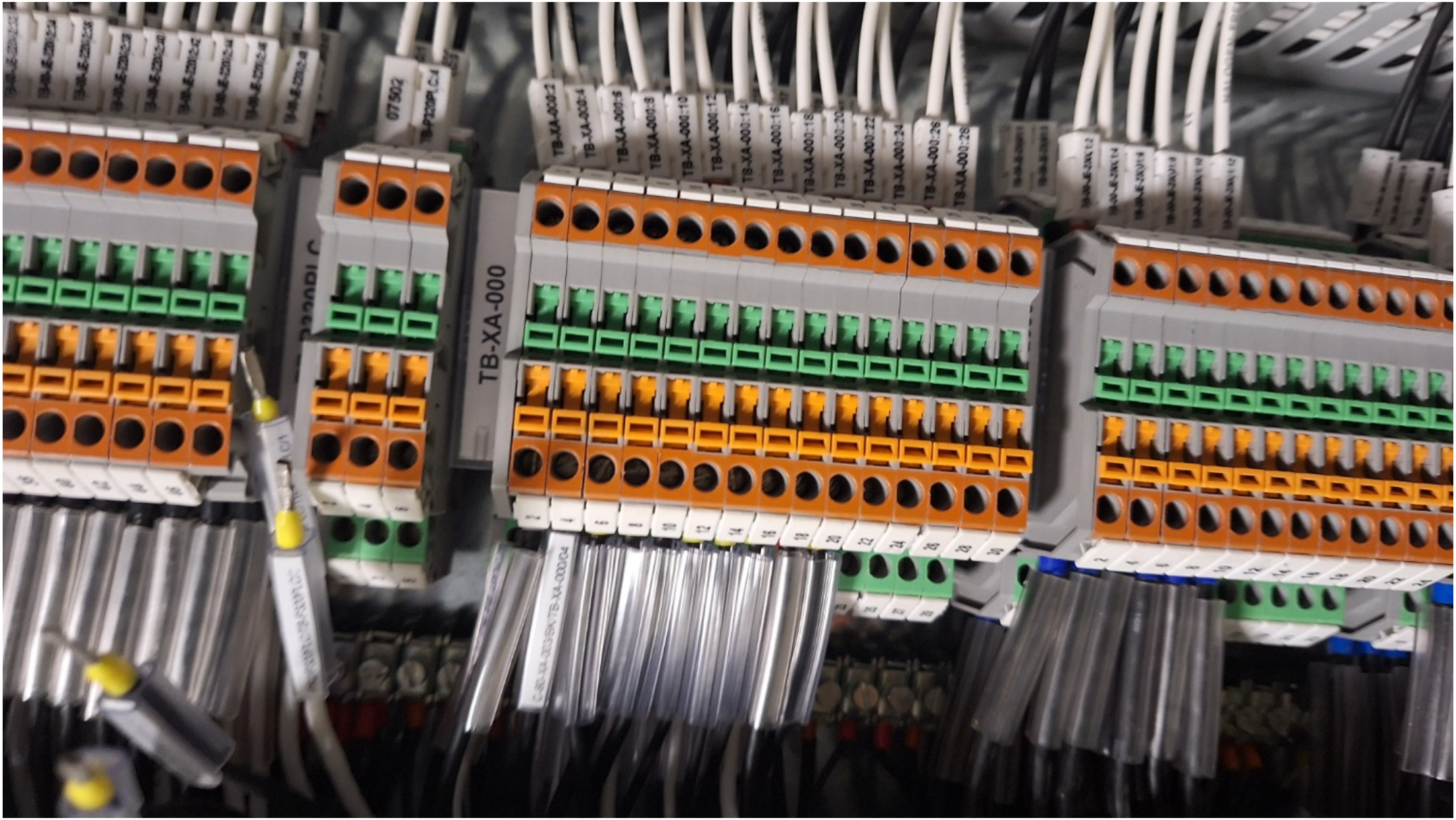
Signature: Digitaly signed by Giovanni Tangianu 2025-01-03T15:13:08.574Z

6- CLEARANCE APPROVAL

Name

Date

Signature


TB-XA-000





ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000903

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000185	1.4 Discipline	Instrumental
1.2 Item	C-77-XA-002/B400-SIS-001	UCP FAULT ALARM / MARSHALLING PCS	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

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 2024-11-25T17:35:05.173Z

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 2024-11-25T17:35:15.710Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-28

Signature: Digitaly signed by Andrea Andreani 2025-02-28T12:23:23.397Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000917

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000591	1.4 Discipline	Electrical
1.2 Item	84315-CEL	AC UPS - PAS DB / UCP - HVAC LV Room	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

2 - OBSERVATION

Missing cable tag , cabinet input B200-HSB-001.

Name: Alessio Polo

Date: 2024-11-25

Signature: Digitaly signed by Alessio Polo 2024-11-25T17:57:42.187Z

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 2024-11-25T17:57:51.305Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-02-21

Signature: Digitaly signed by Alessio Polo 2025-02-21T15:49:39.436Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000920

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000591	1.4 Discipline	Electrical
1.2 Item	84315-CEL	AC UPS - PAS DB / UCP - HVAC LV Room	
1.3 Subsystem	77-20	HVAC LV Switchgear Room B-200	

2 - OBSERVATION

Missing the cross-ferruling (Cores) . Cabinet side B200-HSB-001 . (see document 123A90-DDL-EL-DD-20092 sh.7-8)

Name: Alessio Polo

Date: 2024-11-25

Signature: Digitaly signed by Alessio Polo 2024-11-25T17:59:18.176Z

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 2024-11-25T17:59:27.491Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-15

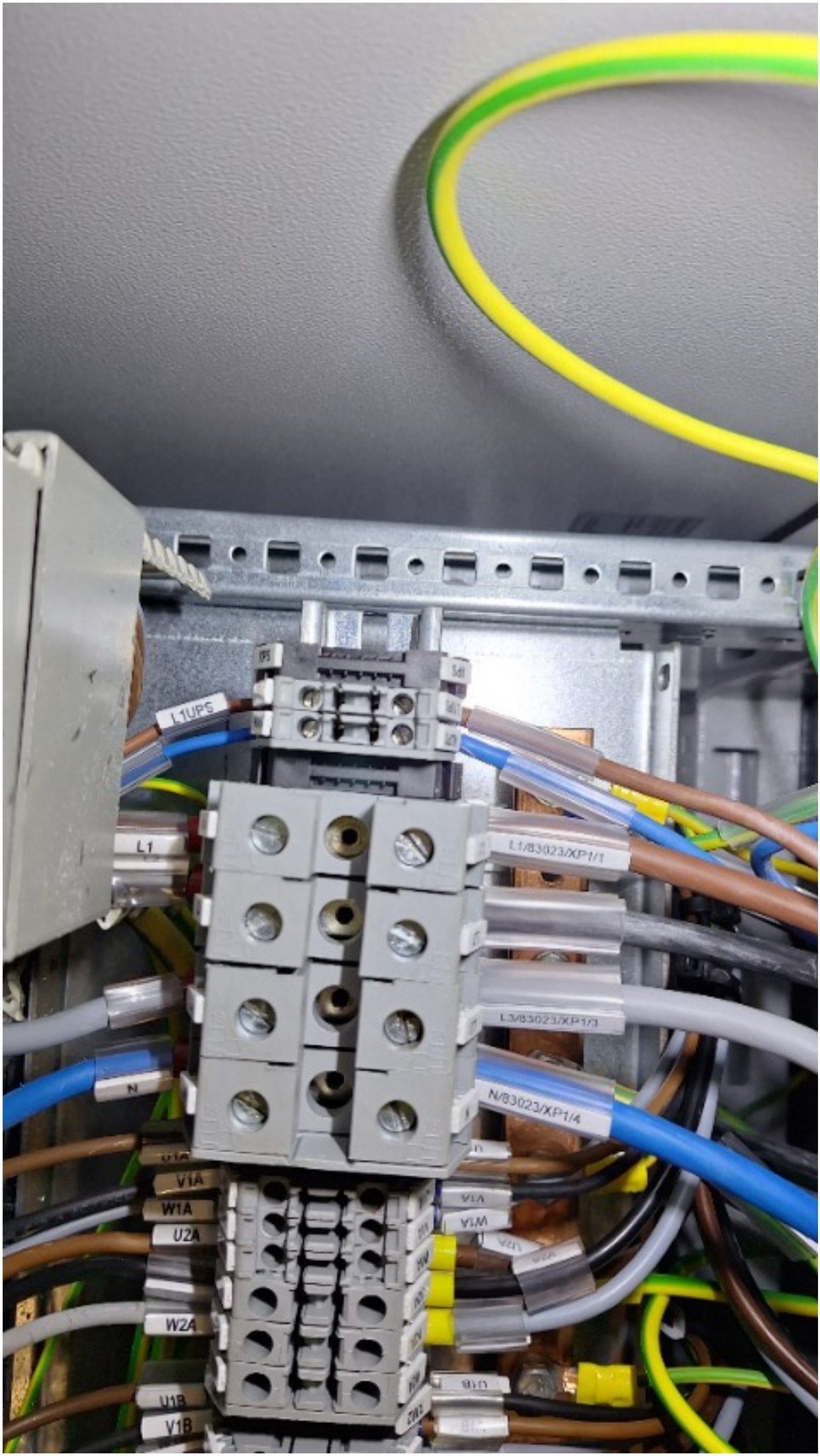
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6- CLEARANCE APPROVAL

Name

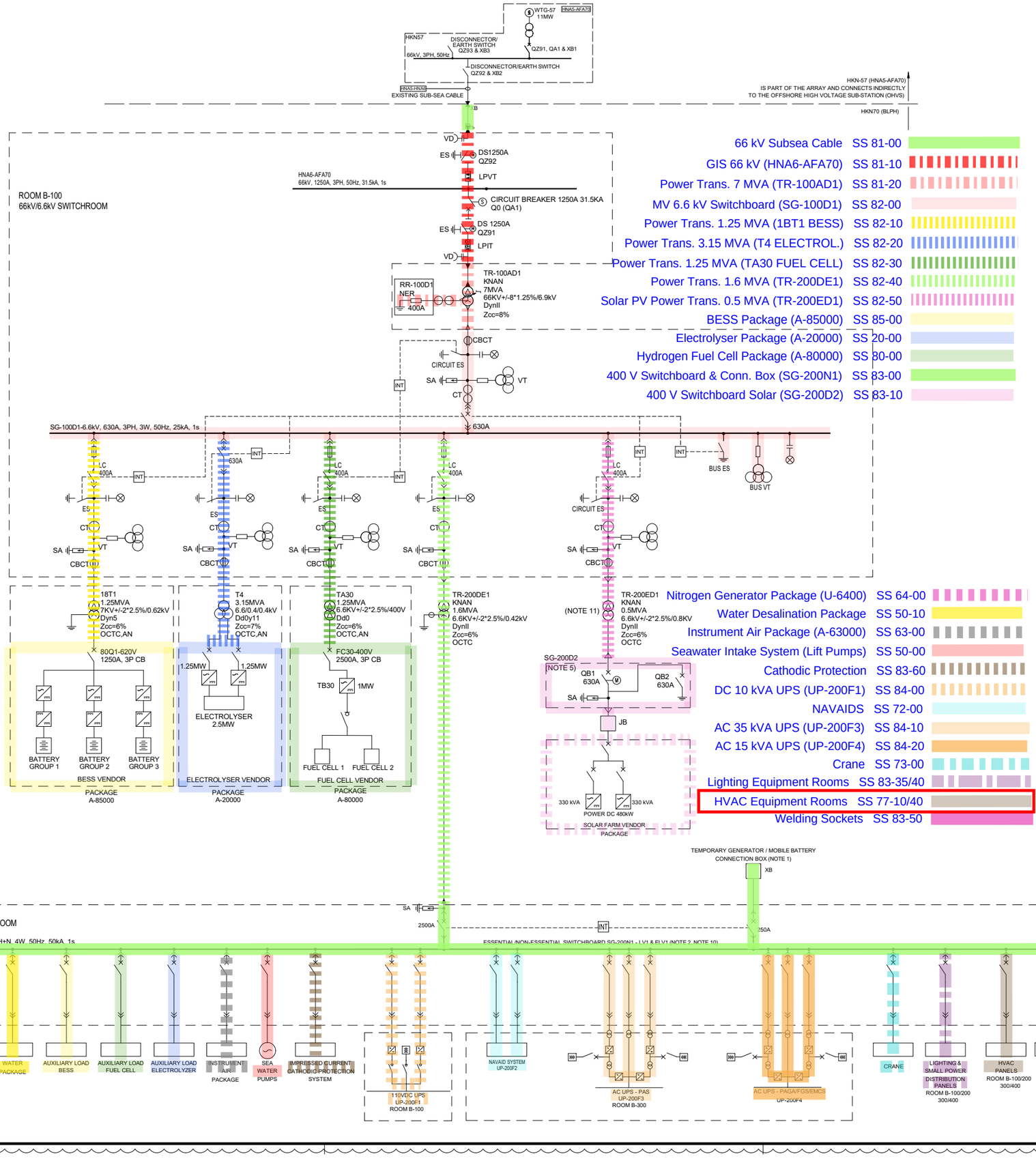
Date

Signature


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

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

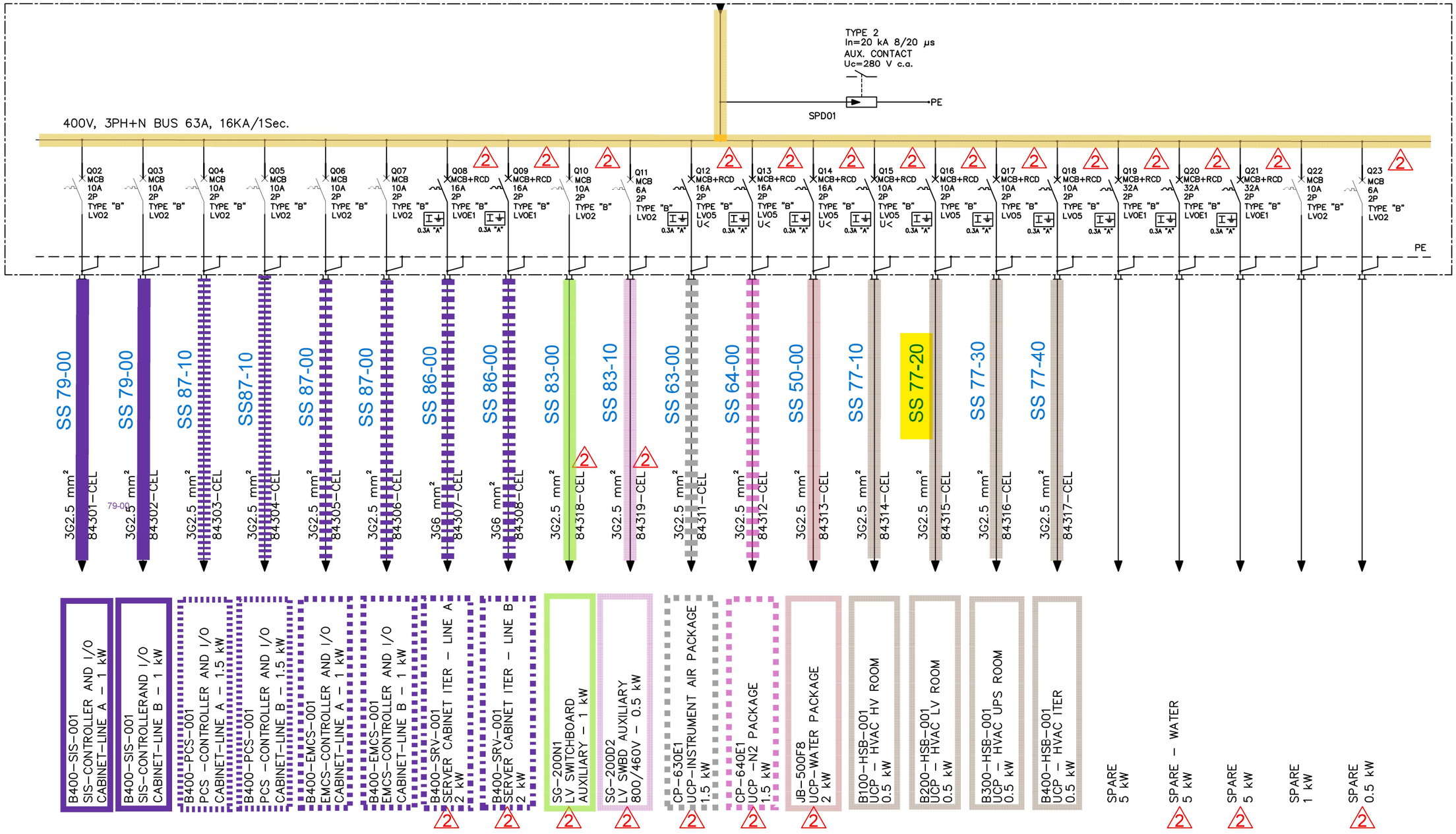
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE N/A
DRAWN GPA	CHECKED LMA/AMA	APPROVED LMA/MDO	DATE 26/03/2023
A1	DRAWING NO. 123A90-DDL-EL-DG-20158	SHEET 001	REV. 01

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

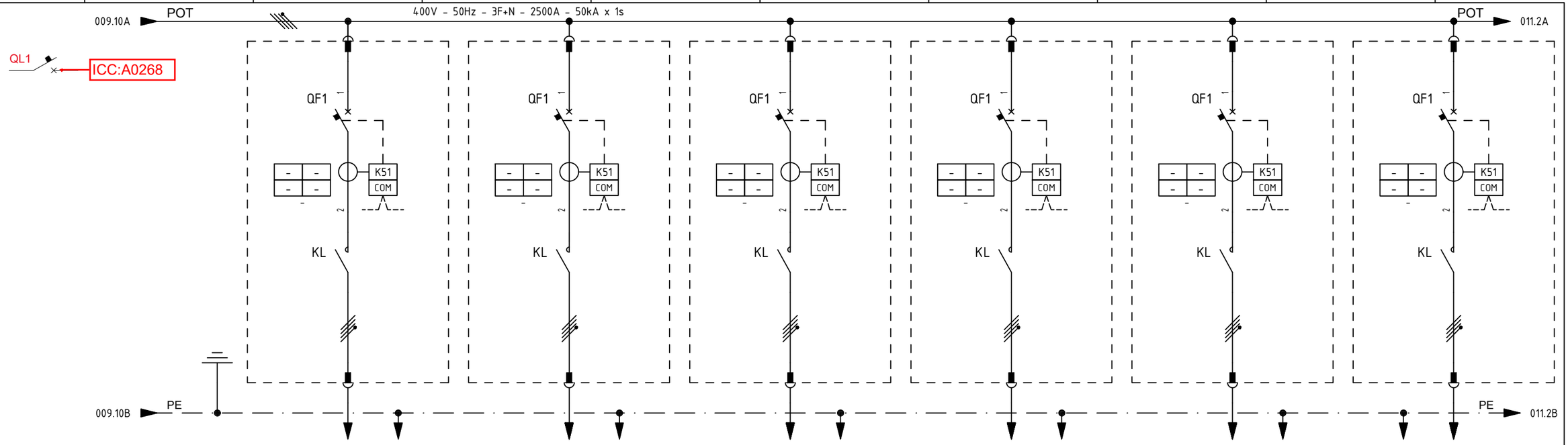
DRAWING NO. 123A90–DDL–EL–DG–20160

SHEET 005

REV. 02

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

F.to UNI A3: 420mmx297mm



ITEM			1	SPARE		B200-HSB-001		B300-HSB-001		B400-HSB-001		CN-200N1		SPARE	
UTILITY			2	SPARE		HVAC PANELS - LV ROOM		HVAC PANELS - UPS ROOM		HVAC PANELS - ITER		IMPRESSED CURR. CATHODIC PROTECTION (ICCP) SYSTEM		SPARE	
COLUMN/CUBICLE			3	A5 / +01		A5 / +02		A5 / +03		A5 / +04		A5 / +05		A5 / +06	
RATED POWER | RATED CURRENT			4/5	15 kW	24.0 A	18 kW	34.1 A	35,75 kW	61 A	35,75 kW	61 A	14 kVA	23.8 A	- kW	- A
TYPICAL FUNCTIONAL			6	LK1-40		LK1-40		LK1-63		LK1-63		LK1-40		LK1-40	
CIRCUIT BREAKER (ABB)	TYPE		7	XT2S - 160		XT2S - 160		XT2S - 160		XT2S - 160		XT2S - 160		XT2S - 160	
	VERSION		8	4P - FIXED		4P - FIXED		4P - FIXED		4P - FIXED		4P - FIXED		4P - FIXED	
	TRIP UNITS		9	EKIP HI TOUCH LSIG (In = 40A)		EKIP HI TOUCH LSIG (In = 40A)		EKIP HI TOUCH LSIG (In = 63A)		EKIP HI TOUCH LSIG (In = 63A)		EKIP HI TOUCH LSIG (In = 40A)		EKIP HI TOUCH LSIG (In = 40A)	
	Icu	KA	10	50 kA		50 kA		50 kA		50 kA		50 kA		50 kA	
OVERLOAD	L	Range A	11	(0.4 - 1) x In		(0.4 - 1) x In		(0.4 - 1) x In		(0.4 - 1) x In		(0.4 - 1) x In		(0.4 - 1) x In	
		Range t	12	k/I^2		k/I^2		k/I^2		k/I^2		k/I^2		k/I^2	
SEL. SHORT-CIRCUIT	S	Range A	13	(0.6 - 10) x In		(0.6 - 10) x In		(0.6 - 10) x In		(0.6 - 10) x In		(0.6 - 10) x In		(0.6 - 10) x In	
		Range t	14	0.05 - 0,4 sec / k/I^2		0.05 - 0,4 sec / k/I^2		0.05 - 0,4 sec / k/I^2		0.05 - 0,4 sec / k/I^2		0.05 - 0,4 sec / k/I^2		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		(1.5 - 15) x In		(1.5 - 15) x In		(1.5 - 15) x In		(1.5 - 15) x In	
		Range t	16	instantaneous		instantaneous		instantaneous		instantaneous		instantaneous		instantaneous	
EARTH FAULT PROTECTION	G	Range A	17	(0.1 - 1) x In		(0.1 - 1) x In		(0.1 - 1) x In		(0.1 - 1) x In		(0.1 - 1) x In		(0.1 - 1) x In	
		Range t	18	t=k / t=k/I^2		t=k / t=k/I^2		t=k / t=k/I^2		t=k / t=k/I^2		t=k / t=k/I^2		t=k / t=k/I^2	
CONTACTOR (ABB)			19	AF40-40-00-13 (70A-AC1); 100-250VAC/DC		AF40-40-00-13 (70A-AC1); 100-250VAC/DC		AF52-40-00-13 (100A-AC1); 100-250VAC/DC		AF52-40-00-13 (100A-AC1); 100-250VAC/DC		AF40-40-00-13 (70A-AC1); 100-250VAC/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 77.20		SUBSISTEM 77.30		SUBSISTEM 77.40		SUBSISTEM 83.60		SUBSISTEM 83.00	
INDIRECT PROTECTION (ABB)			24												
VOLTMETER			25												
CURRENT TRANSFORMER FOR MEASURE (FRER)	TYPE		26	-		-		-		-		-		-	
	PERFORMANCE/CLASS		27	-		-		-		-		-		-	
VOLTAGE TRANSFORMER FOR MEASURE (FRER)	TYPE		28	-		-		-		-		-		-	
	PERFORMANCE/CLASS		29	-		-		-		-		-		-	
LOCK-OUT RELAY (-)			30	-		-		-		-		-		-	
POWER CONDUCTOR		mmq	31	-		5G16		5G16		5G16		5G16		-	

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)

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

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 010 | 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: 77-20 & process: MC & discipline : E

Electrical	77-20 HVAC LV Switchgear Room B-200						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
83024-CEL	LV Switchgear / HVAC panels - LV Room	ONSHORE	C10000549	CPX09	100	2024-10-07	RFC 2
84315-CEL	AC UPS - PAS DB / UCP - HVAC LV Room	ONSHORE	C10000591	CPX09	100	2024-11-25	RFC 2
B-200	Shelter LV (400V) Switchroom B-200	ONSHORE	C10002299	CZX01E	100	2024-10-10	RFC 2
B200-HSB-001	Distribution & HVAC Panel - LV Room	ONSHORE	C10000836	CPX15	100	2024-10-10	RFC 2

ITEM	Tag	83024-CEL	: LV Switchgear / HVAC panels - LV Room		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	77-20	: HVAC LV Switchgear Room B-200		Module	LD_B-200	
TASK	code	C10000549	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 Color: Grey

From: SG-200N1 To: B200-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).	OK
8	Confirm cable labelling is in accordance with specifications.	OK
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	PL
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

REFER TO FINAL SHEET FOR ACCEPTANCE

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	83024-CEL	: LV Switchgear / HVAC panels - LV Room		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	77-20	: HVAC LV Switchgear Room B-200		Module		
TASK	code	C10000549	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	6,9	
6		PH 2	6,9	
7		PH 3	6,9	
8	ARMOUR CONTINUITY Ω		N/A	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		6,9	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	> 1G	
11		PH2 / PH1-PH3-A-E	> 1G	
12		PH3 / PH1-PH2-A-E	> 1G	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

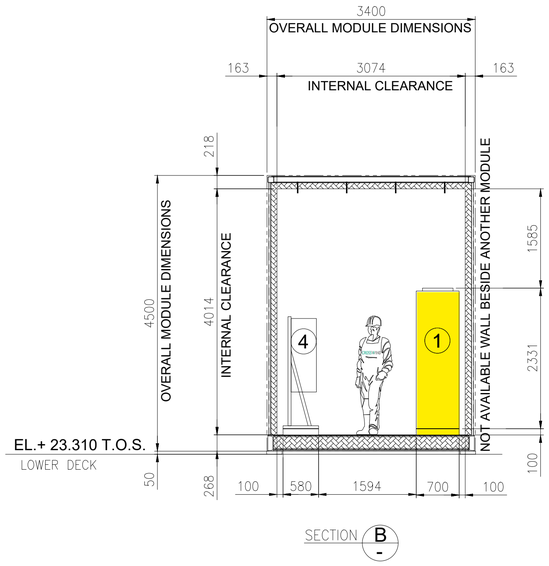
TESTING INSTRUMENTS USED

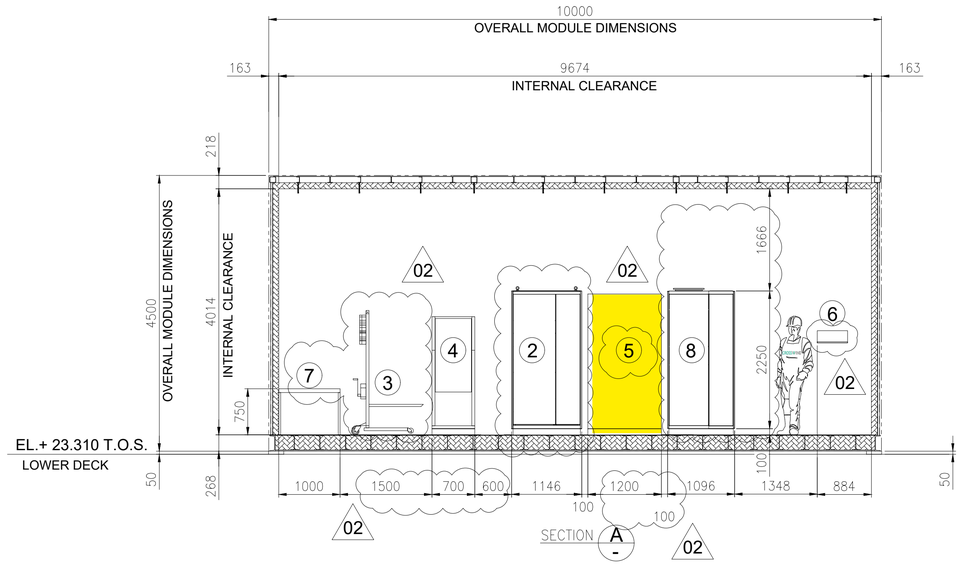
TYPE / SERIAL N° :	MEGGER (KEW3125A) SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:(AW1/018-17140769)
Calibration certificate N° and date:	N°7722/24	Calibration certificate N° and date:	N°7715/24

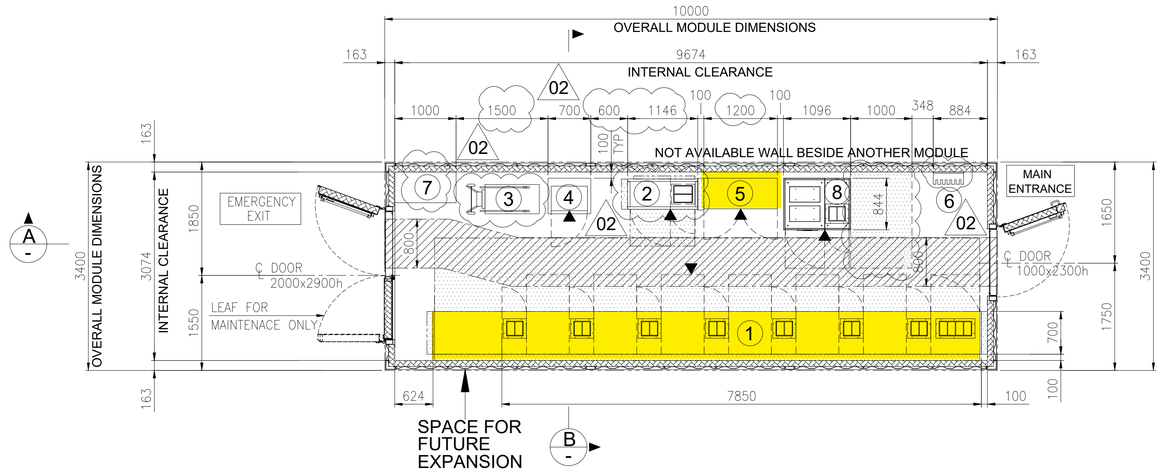
Comments: CORE CONTINUITY PH 4= 6,9
CORES / ARMOUR+EARTH M PH 4 = > 1G

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-04	2024-10-07	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-04T14:44:41.044Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-07T11:48:34.157Z	

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







EQUIPMENT LAYOUT

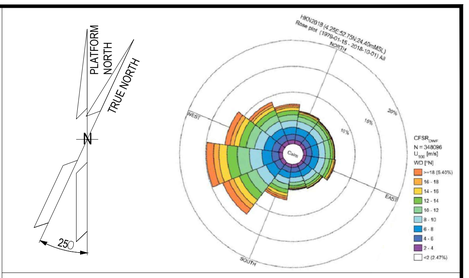
"B-200" LV (400V) SWITCHGEAR ROOM

BOTTOM PLAN

1

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	
3	-	SERVICE TROLLEY FOR 400V SWITCHGEAR	1034	490	2030	
4	CN-200N1	ICCP PANEL	700	580	1830	
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	02
6	-	TOOL BOX	495	200	200	
7	-	TABLE	1000	500	750	
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DELETED.
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
4. FOR OTHER ITEMS, CORRECT LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND DEDICATED PROJECT DOCUMENTATION.
5. HEIGHT OF ALL PANELS IN THE EQUIPMENT LIST TABLE IS WITHOUT THE BASE FRAME (100mm)

02

LEGEND

U.N.O. _____ UNLESS NOTED OTHERWISE

T.O.S. _____ TOP OF STEEL

_____ ESCAPE CORRIDOR - WIDTH 800mm.

_____ MAINTENANCE AREA - VENDOR REQUIREMENT

_____ SWITCHGEAR ROOM ENCLOUSURE

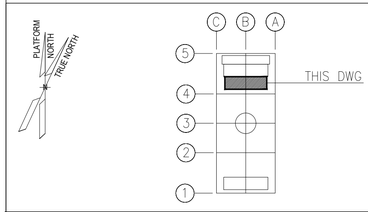
_____ FRONT OF EQUIPMENT

REFERENCES

DOCUMENT TITLE	DOCUMENT NUMBER
SG-200N1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00007
SG-200D2 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00008
DP-200N1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00009
AC UPS – GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS	1724000372-EL-DA-00004
AC UPS – BATTERY LAYOUT INTERCONNECTING DIAGRAM	1724000372-EL-DG-00011
B-200 -GENERAL ARRANGEMENT DRAWINGS - E&I SHELTER	1724000049-AR-DA-00015
ICCC PANEL GENERAL ARRANGEMENT DRAWING	144671-CORR-TF-FAB-DWG-0003

02

KEY PLAN



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

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DL-20105**

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

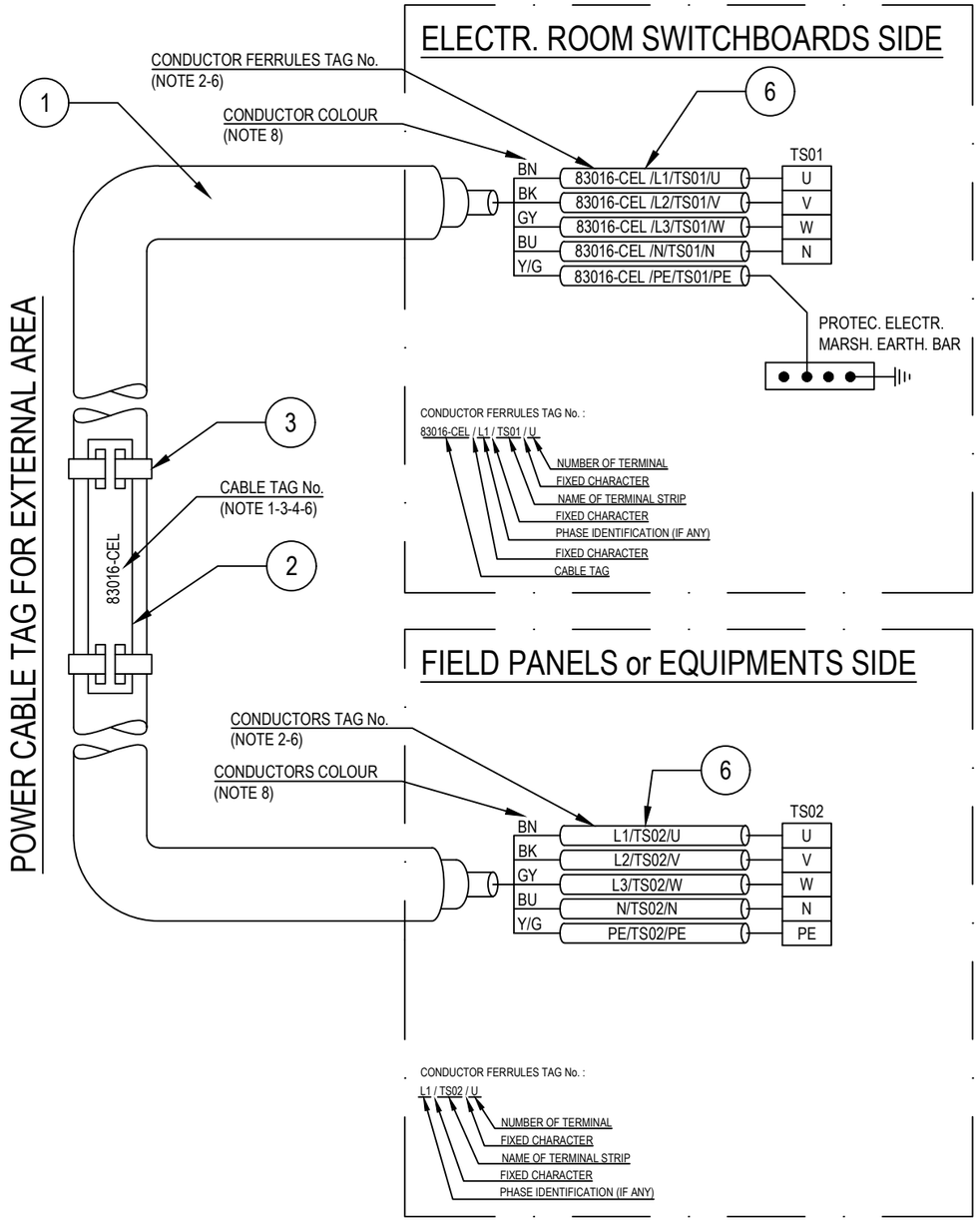
ROSETTI MARINO SpA

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

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN FMO	CHECKED LMA/AMA	APPROVED LMA/MDO	DATE 27/05/2024
A1	DRAWING NO. 123A90-DDL-EL-DL-20105	SHEET 001	REV. 02

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

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.

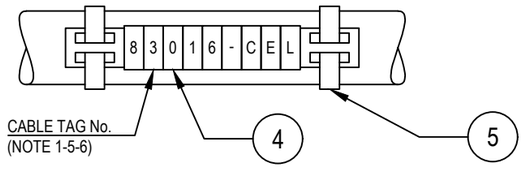
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

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

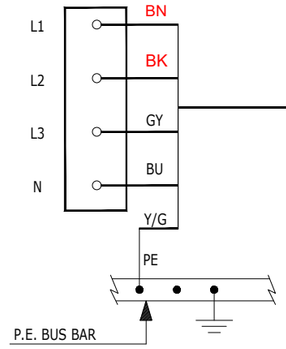
F.to UNI A3: 420mmx297mm

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

FROM	TO

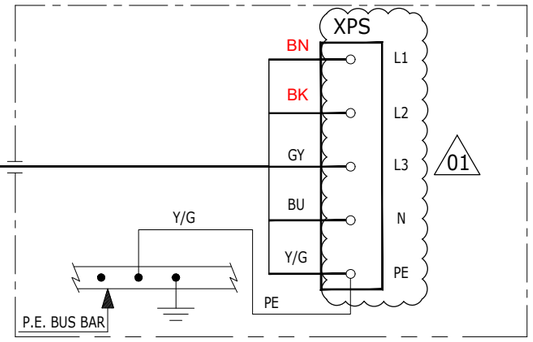
DESCRIPTION: LV SWITCHGEAR
TAG NUMBER: SG-200N1

COLUMN/CUBIC.: A5/+02

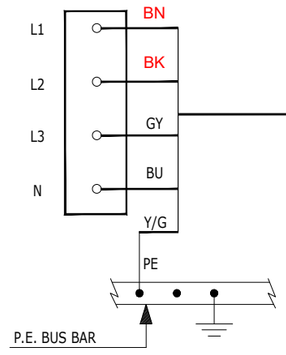


83024-CEL
5G16 mm²

DESCRIPTION: DISTRIBUTION & HVAC PANEL - LV ROOM
TAG NUMBER: B200-HSB-001

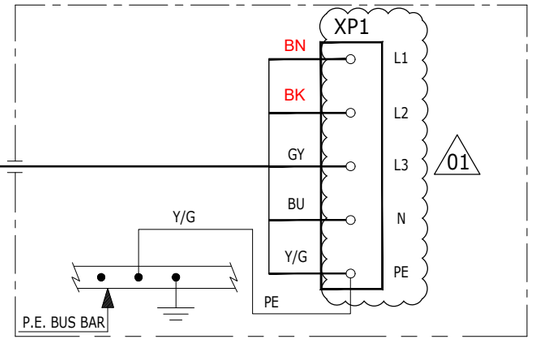


COLUMN/CUBIC.: A5/+03

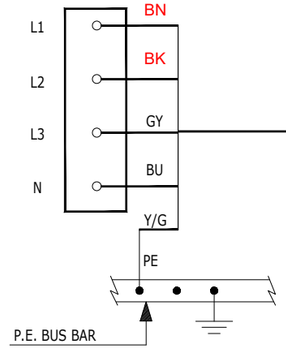


83025-CEL
5G16 mm²

DESCRIPTION: HVAC PANELS - UPS ROOM
TAG NUMBER: B300-HSB-001



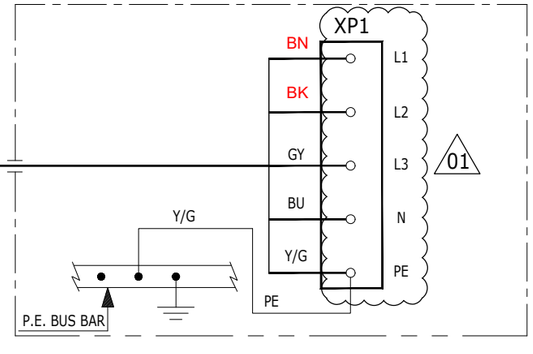
COLUMN/CUBIC.: A5/+04



83026-CEL
5G16 mm²

07/10/2024

DESCRIPTION: HVAC PANELS - ITER
TAG NUMBER: B400-HSB-001



DOCUMENTO IN PROGRESS NON ANCORA UFFICIALMENTE EMESSO
VERIFICATO E APPROVATO PER COSTRUZIONE (SOLO PER I CAVI EVIDENZIATI)

CROSSWIND

ROSETTI MARINO

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

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

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

A3 | DRAWING NO. 123A90-DDL-EL-DG-20149 | SHEET 026 | REV. 01

F.to UNI A3: 420mmx297mm

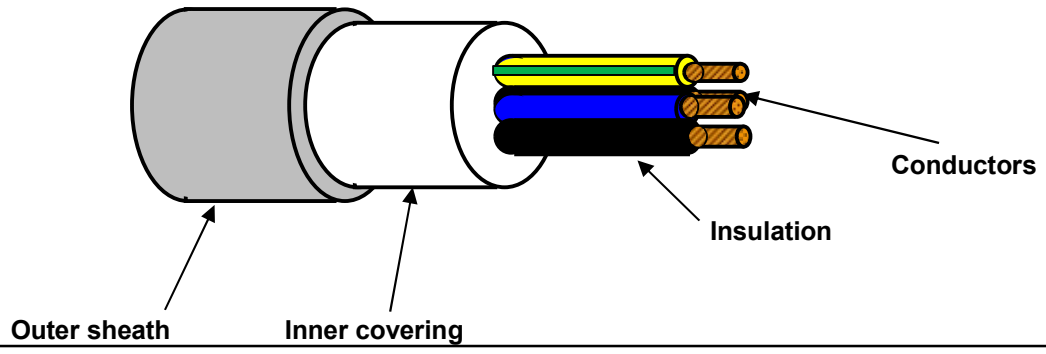
File Name : 123A90-DDL-EL-DG-20162 Rev. 01

Tag Number	Category	Discipline	Eng Status	NativeDoc	Parent Tag	Grouping	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
83024-CEL	Cable	EL	VFC	123A90-DDL-EL-LIS-20148		Int-Int				SG-200N1	LV 0,4 kV MCC Switchgear	Lower Deck (B-200)	B200-HSB-001	Distribution & HVAC Panel - LV Room	Lower Deck (B-200)	ELECV15-5G16	Cable Cu Cl.2/EPR/LSZH 0,6/1kV 5G16mm² - Grey	M32	n.a.			T1_M32_Single				L-450-101-LVT-026 / L-600-101-LVT-017 / L-600-101-LVT-018 / L-600-101-LVT-020 / L-300-101-LVT-033

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	84315-CEL	: AC UPS - PAS DB / UCP - HVAC LV Room		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	77-20	: HVAC LV Switchgear Room B-200		Module	LD_B-300/LD_B-200	
TASK	code	C10000591	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 B200-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.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	PL
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	84315-CEL	: AC UPS - PAS DB / UCP - HVAC LV Room			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	77-20	: HVAC LV Switchgear Room B-200			Module	LD_B-300/LD_B-200
TASK	code	C10000591		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

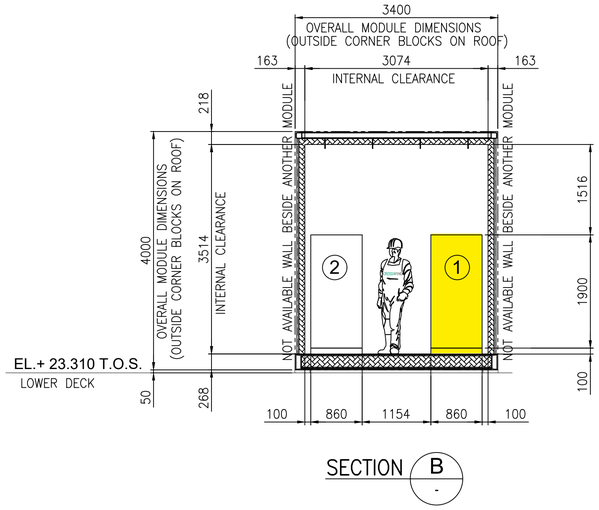
CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0.3	
6		PH 2	0.3	
7		PH 3	NA	
8	ARMOUR CONTINUITY Ω		0.3	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0.3	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>1999	
11		PH2 / PH1-PH3-A-E	>1999	
12		PH3 / PH1-PH2-A-E	NA	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

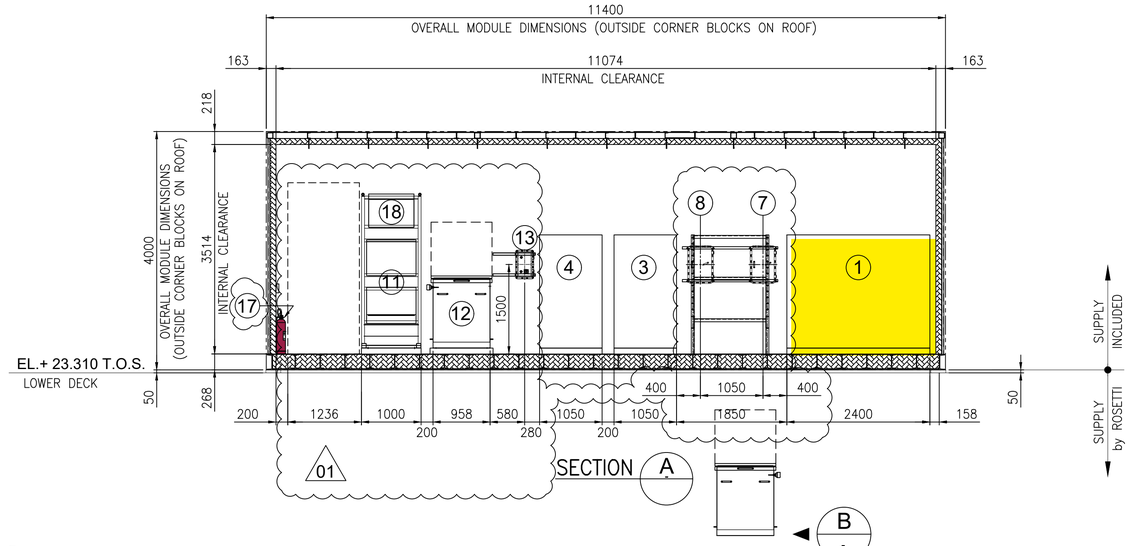
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

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 2024-11-25T11:03:16.465Z	PROVERLIS Digitaly signed by Alessio Polo 2024-11-25T18:00:19.858Z	



SECTION B -

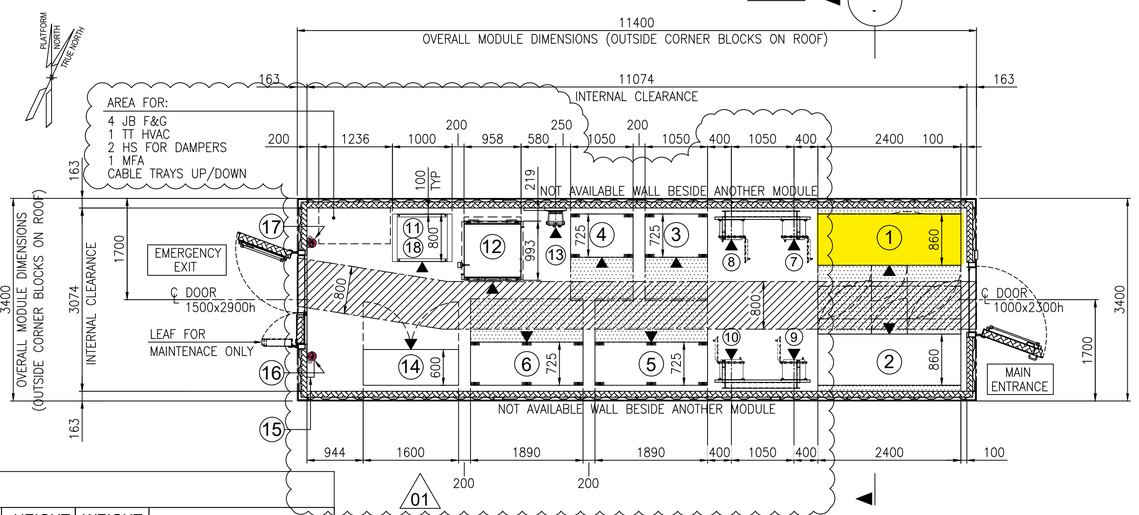


SECTION A -

SUPPLY INCLUDED

SUPPLY by ROSETTI

B -



A -

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

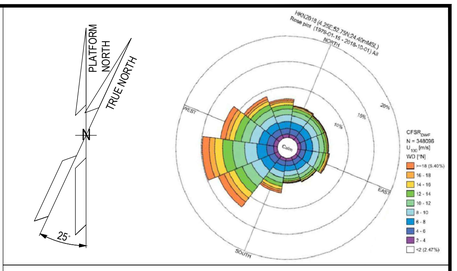
EQUIPMENT LIST

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

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

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

ROSETTI MARINO SpA



NOTES

01

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

LEGEND

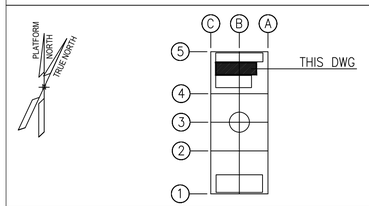
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

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

KEY PLAN



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

CROSSWIND

ROSETTI MARINO

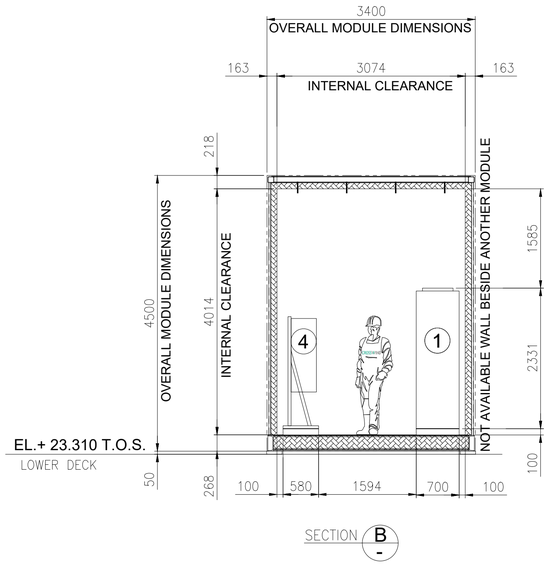
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

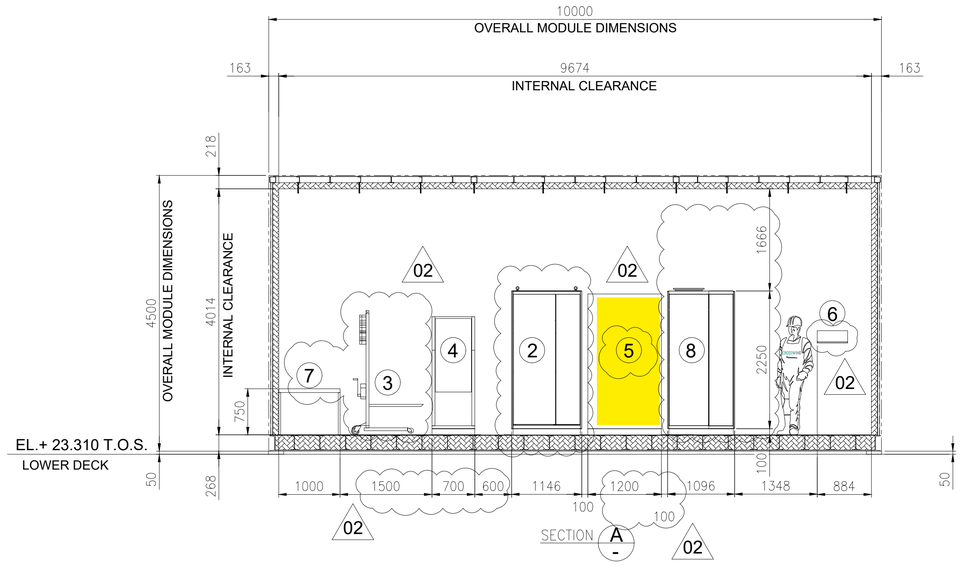
CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

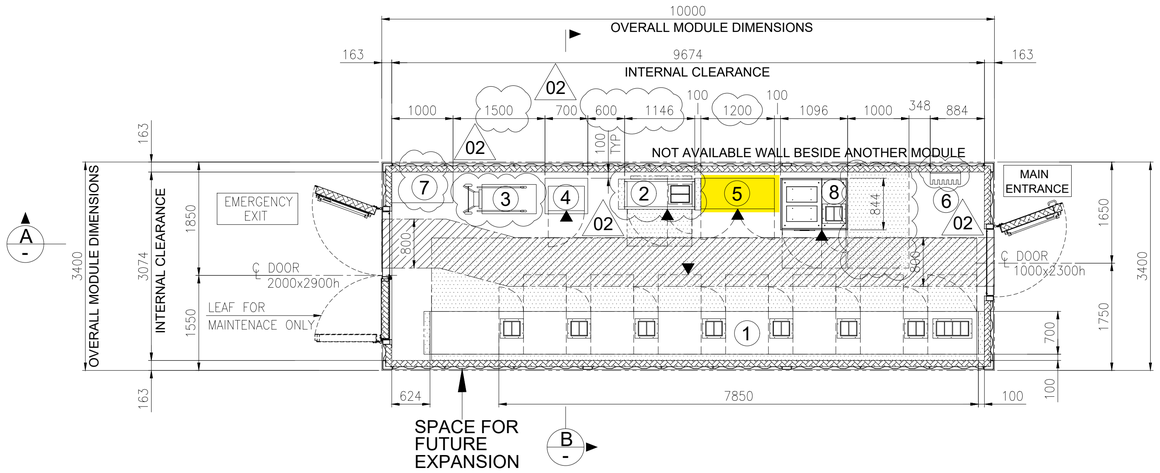
DRAWING NO. 123A90-DDL-EL-DL-20106 REV. 01

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

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







EQUIPMENT LAYOUT

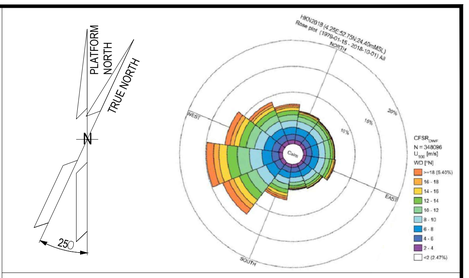
"B-200" LV (400V) SWITCHGEAR ROOM

BOTTOM PLAN

1

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	
3	-	SERVICE TROLLEY FOR 400V SWITCHGEAR	1034	490	2030	
4	CN-200N1	ICCP PANEL	700	580	1830	
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	02
6	-	TOOL BOX	495	200	200	
7	-	TABLE	1000	500	750	
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DELETED.
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
4. FOR OTHER ITEMS, CORRECT LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND DEDICATED PROJECT DOCUMENTATION.
5. HEIGHT OF ALL PANELS IN THE EQUIPMENT LIST TABLE IS WITHOUT THE BASE FRAME (100mm)

02

LEGEND

U.N.O. _____ UNLESS NOTED OTHERWISE

T.O.S. _____ TOP OF STEEL

_____ ESCAPE CORRIDOR - WIDTH 800mm.

_____ MAINTENANCE AREA - VENDOR REQUIREMENT

_____ SWITCHGEAR ROOM ENCLOUSURE

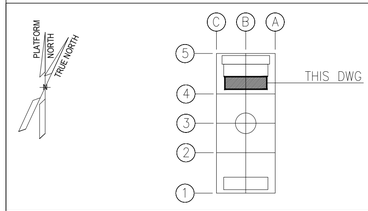
_____ FRONT OF EQUIPMENT

REFERENCES

DOCUMENT TITLE	DOCUMENT NUMBER
SG-200N1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00007
SG-200D2 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00008
DP-200N1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00009
AC UPS – GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS	1724000372-EL-DA-00004
AC UPS – BATTERY LAYOUT INTERCONNECTING DIAGRAM	1724000372-EL-DG-00011
B-200 -GENERAL ARRANGEMENT DRAWINGS - E&I SHELTER	1724000049-AR-DA-00015
ICCC PANEL GENERAL ARRANGEMENT DRAWING	144671-CORR-TF-FAB-DWG-0003

02

KEY PLAN



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

CROSSWIND

ROSETTI MARINO

TITLE :

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

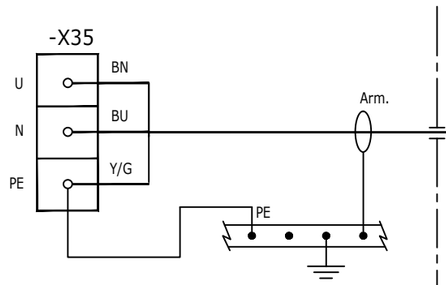
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN FMO	CHECKED LMA/AMA	APPROVED LMA/MDO	DATE 27/05/2024

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

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

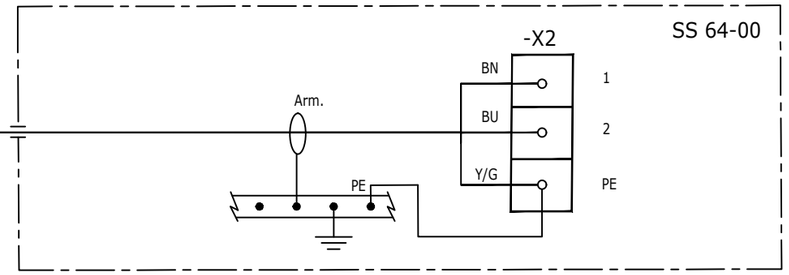
FROM	TO

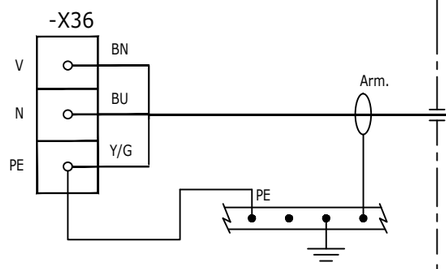
DESCRIPTION: AC UPS - PAS DB
TAG NUMBER: DP-200F3



84312-CEL
3G2.5 mm²

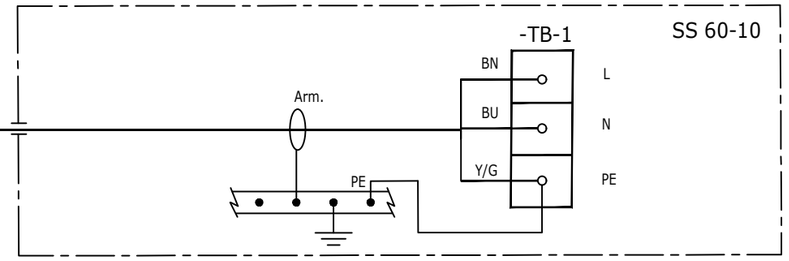
DESCRIPTION: UCP - N2 PACKAGE
TAG NUMBER: CP-640E1



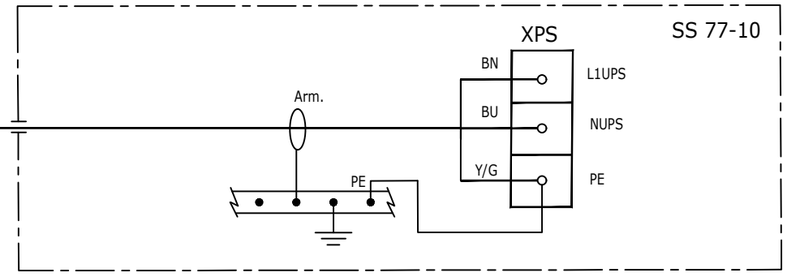


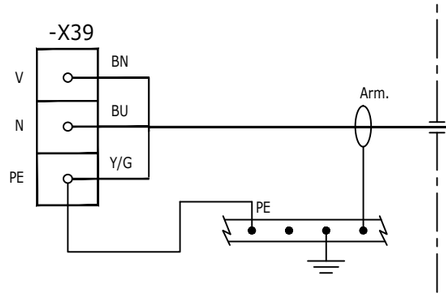
84313-CEL
3G2.5 mm²

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



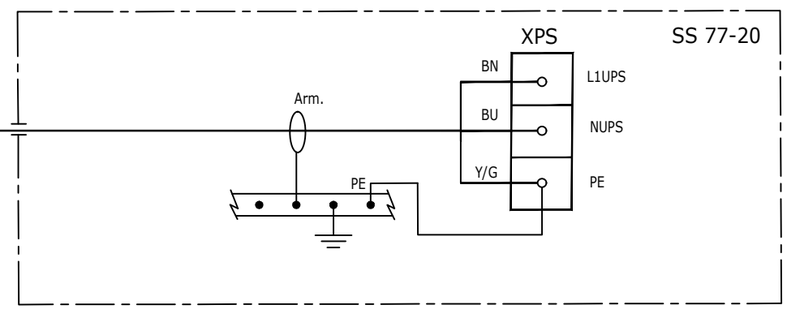
DESCRIPTION: UCP - HVAC HV ROOM
TAG NUMBER: B100-HSB-001

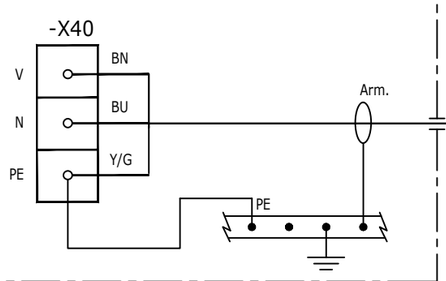




84314-CEL
3G2.5 mm²

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





84315-CEL
3G2.5 mm²

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DG-20149
REV.: 2_A | DATE: 21/11/24 | SIGNATURE: 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

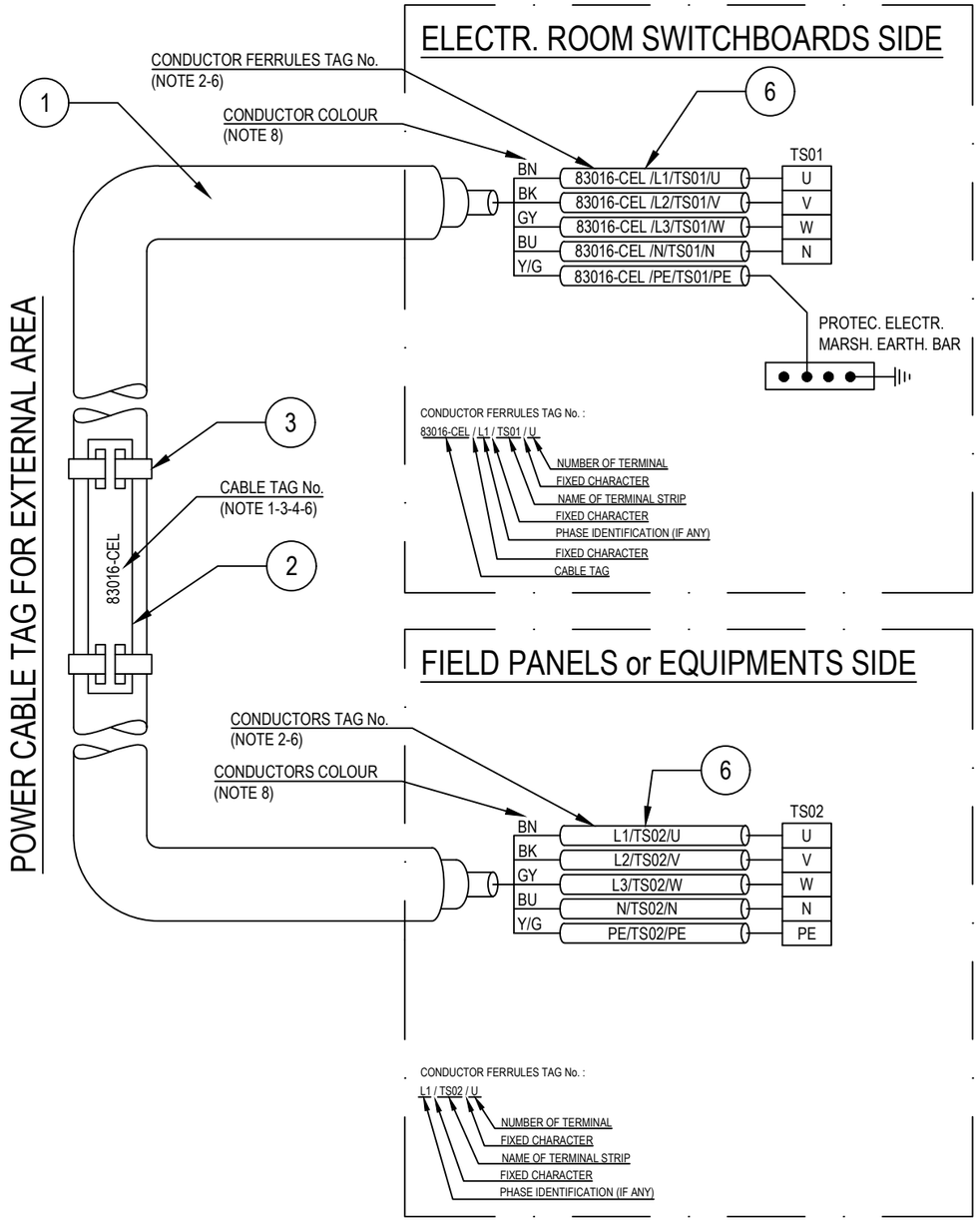
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:X

A3 | DRAWING NO. 123A90-DDL-EL-DG-20149 | SHEET 041 | REV. 02

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

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.

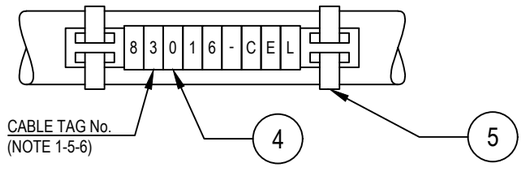
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

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

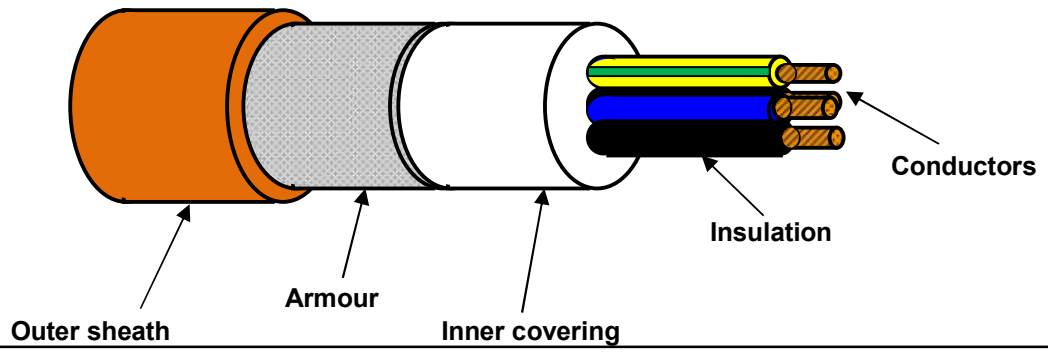
File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Parent Tag	Grouping	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
84315-CEL	Cable	EL	VFC	123A90-DDL-EL-LIS-20148		Int-Ext				DP-200F3	AC UPS 35 kVA Distribution Board	Lower Deck (B-300)	B200-HSB-001	Distribution & HVAC Panel - LV Room	Lower Deck (B-200)	ELECV19-3G2,5	Cable Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 3G2,5mm² - Orange	M20	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 / E-MCT-204 / L-600-101-LVT-020 / L-300-101-LVT-033

FLEI s.r.l.

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 60093.360, 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%)	
Temperature Range :		
ON INSULATION	(max +90°C)	(max continuous operation temperature of conductors)
	(max +250°C)	(max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE		
During Operation :	(-20°C up to +90°C)	(in fixed installation)
During installation :	(- 5°C up to +50°C)	
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**	

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

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

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ITEM	Tag	B200-HSB-001	: Distribution & HVAC Panel - LV Room	Dwg	123A90-DDL-EL-DL-20105		
	S/Sys	77-20	: HVAC LV Switchgear Room B-200	Module	LD_B-200		
TASK	code	C10000836	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.	OK
8	Check all switching devices for proper mechanical operation.	OK
9	Check (visual) of cables connections.	OK
10	If required produce Red Line Mark Up for "AS BUILT"	

NAME PLATE DATA

Manufacturer :	FRIGOTERMICA	Serial N° :	1627	Type:	LK1-40
Voltage :	400 **V**	Frequency :	50 **Hz**	Rating :	15 **kW**
IP Rating	54	N° of outgoers:	46	Specification:	1724000049-HV-DA-00027
SWBD & CUB ref:	1724000049-HV-DA-00027			Data Sheet :	1724000049-HV-DA-00027

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

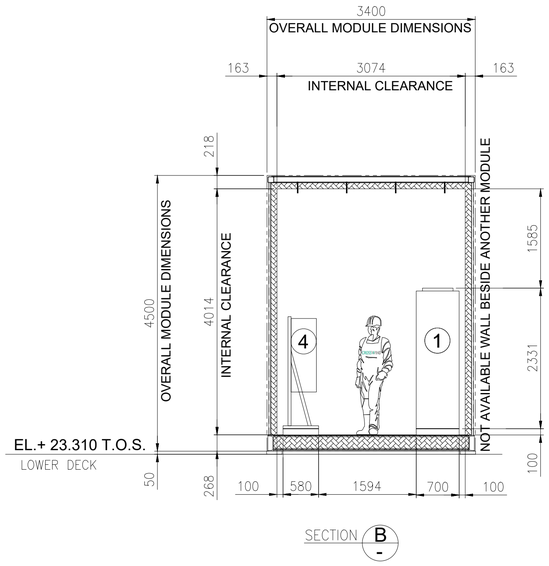
Comments: Note: Refer to Punch list raised during FAT

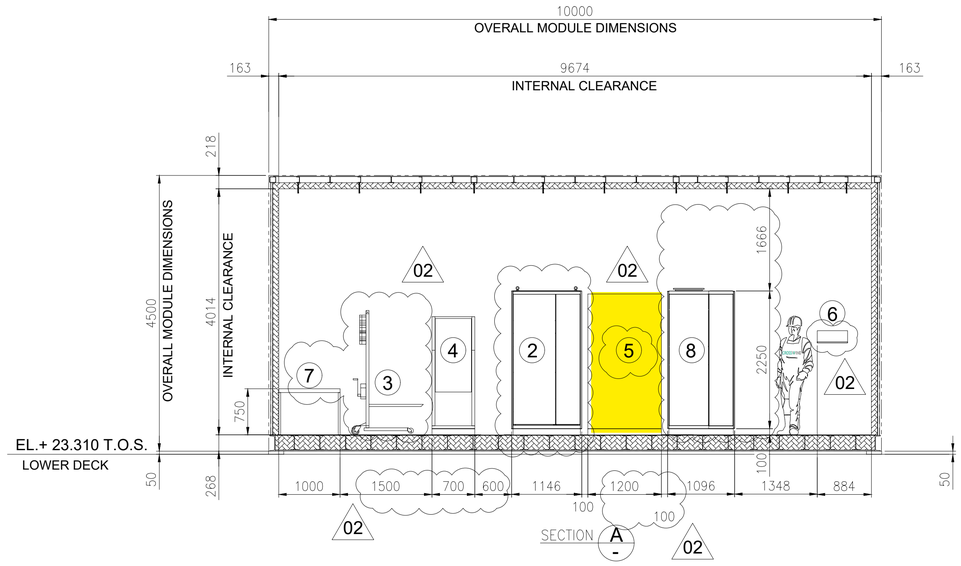
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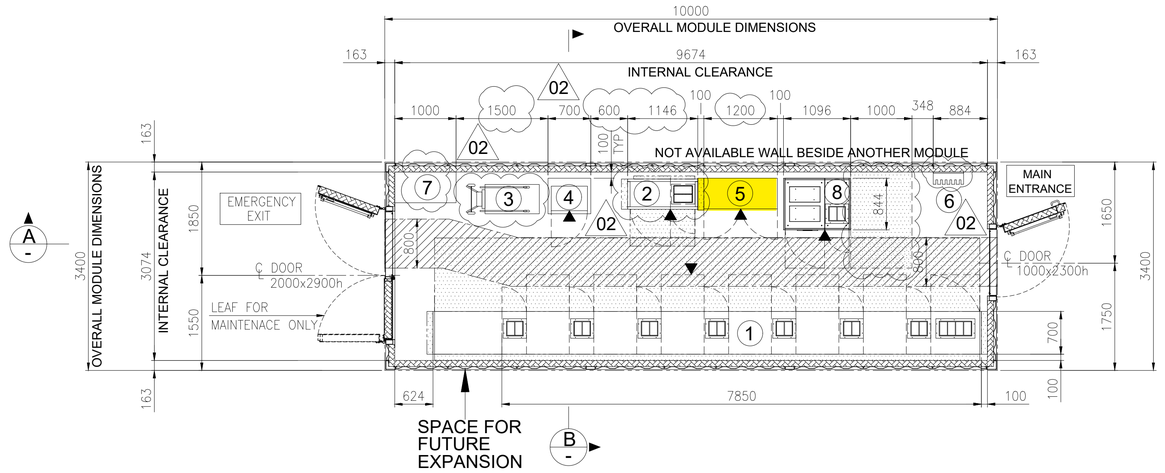
FAT will be completed at RM yard after MC phase

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	Alex Sistemi	RM (Rosetti Marino)	
Name	Vendor Crosswind	Giovanni Tangianu	
Date	2024-10-10	2024-10-10	
Signature	Firma Digitale Sicura Vendor Crosswind 2024-10-10T17:07:33+0200	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-10T15:35:45.497Z	

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





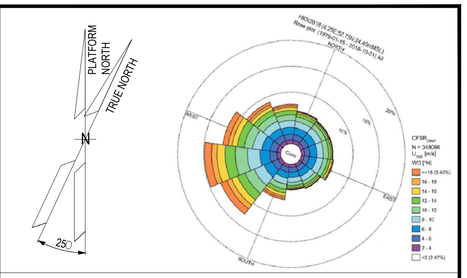


EQUIPMENT LAYOUT
"B-200" LV (400V) SWITCHGEAR ROOM
BOTTOM PLAN

1

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	
3	-	SERVICE TROLLEY FOR 400V SWITCHGEAR	1034	490	2030	
4	CN-200N1	ICCP PANEL	700	580	1830	
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	02
6	-	TOOL BOX	495	200	200	
7	-	TABLE	1000	500	750	
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DELETED.
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
4. FOR OTHER ITEMS, CORRECT LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND DEDICATED PROJECT DOCUMENTATION.
5. HEIGHT OF ALL PANELS IN THE EQUIPMENT LIST TABLE IS WITHOUT THE BASE FRAME (100mm)

02

LEGEND

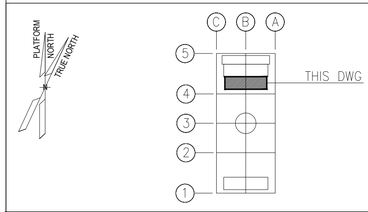
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR - WIDTH 800mm.
_____ MAINTENANCE AREA - VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

REFERENCES

DOCUMENT TITLE	DOCUMENT NUMBER
SG-200N1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00007
SG-200D2 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00008
DP-200N1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00009
AC UPS – GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS	1724000372-EL-DA-00004
AC UPS – BATTERY LAYOUT INTERCONNECTING DIAGRAM	1724000372-EL-DG-00011
B-200 -GENERAL ARRANGEMENT DRAWINGS - E&I SHELTER	1724000049-AR-DA-00015
ICCC PANEL GENERAL ARRANGEMENT DRAWING	144671-CORR-TF-FAB-DWG-0003

02

KEY PLAN



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

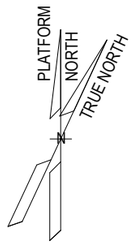
CROSSWIND

ROSETTI MARINO

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

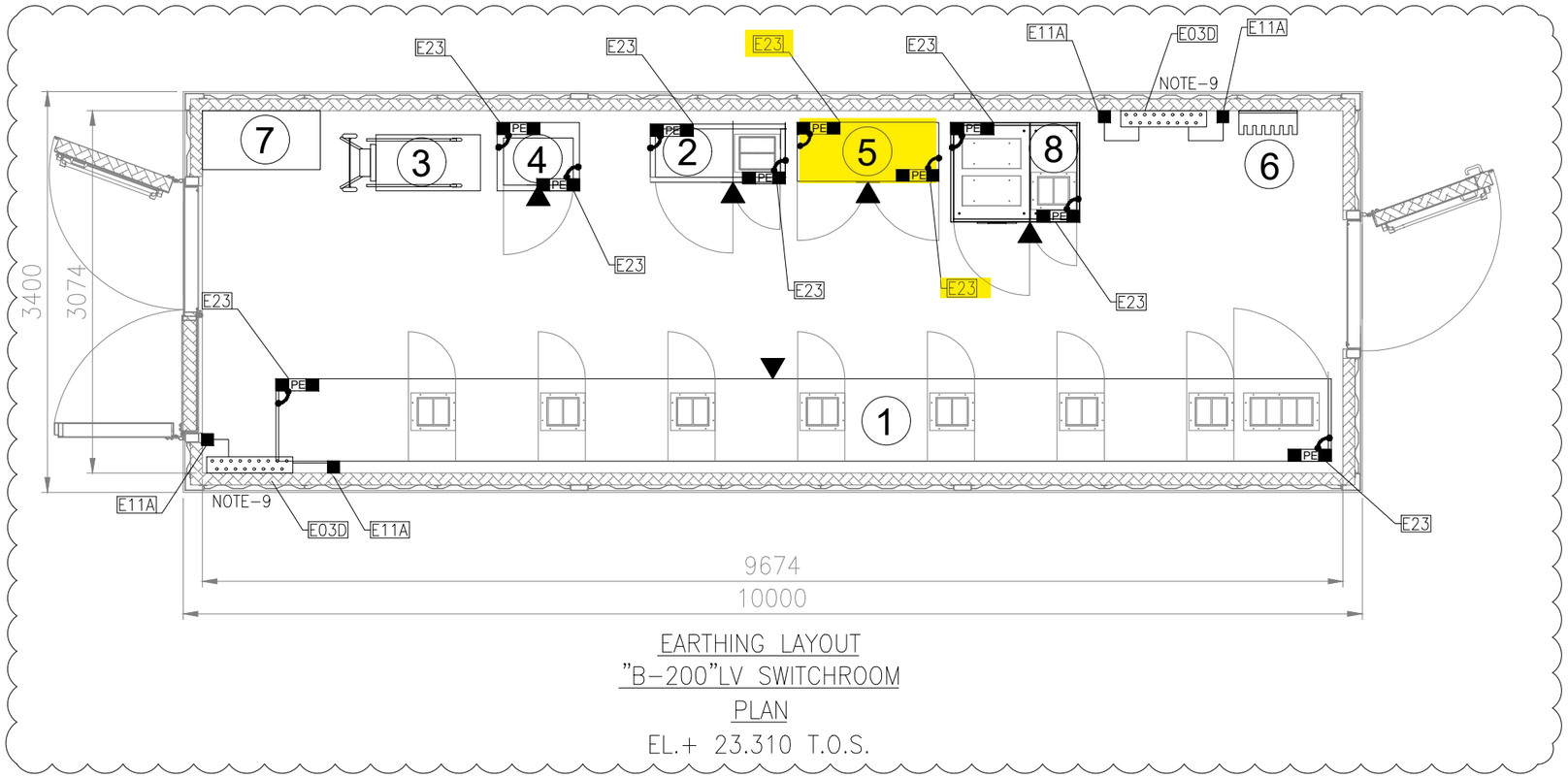
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN FMO	CHECKED LMA/AMA	APPROVED LMA/MDO	DATE 27/05/2024
A1	DRAWING NO. 123A90-DDL-EL-DL-20105	SHEET 001	REV. 02

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



EQUIPMENT LIST		
REF.	TAG No.	DESCRIPTION
1	SG-200N1	400V SWITCHGEAR
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.
3		SERVICE TROLLEY FOR 400V SWITCHGEAR
4	CN-200N1	ICCP PANEL
5	B200-HSB-001	HVAC PANEL – LV ROOM
6		TOOL BOX
7		TABLE
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE

01



EARTHING LAYOUT
"B-200"LV SWITCHROOM
PLAN
EL.+ 23.310 T.O.S.

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 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

REFERENCE	
DOCUMENT NUMBER	DOCUMENT TITLE
123A90-DDL-EL-DD-20090	ELECTRICAL TYPICAL INSTALLATION DETAILS -EARTHING SYSTEM
123A90-DDL-EL-DL-20105	ELECTRICAL EQUIPMENT LAYOUT-LV SWITCHROOM
1724000049-AR-DD-00019	B-200 DETAILED DRAWINGS – E&I SHELTERS

01

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 – LV SWITCHROOM
"B-200"LV SWITCHROOM

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

A3 | DRAWING NO. 123A90-DDL-EL-DL-20137 | SHEET 003 | REV. 01

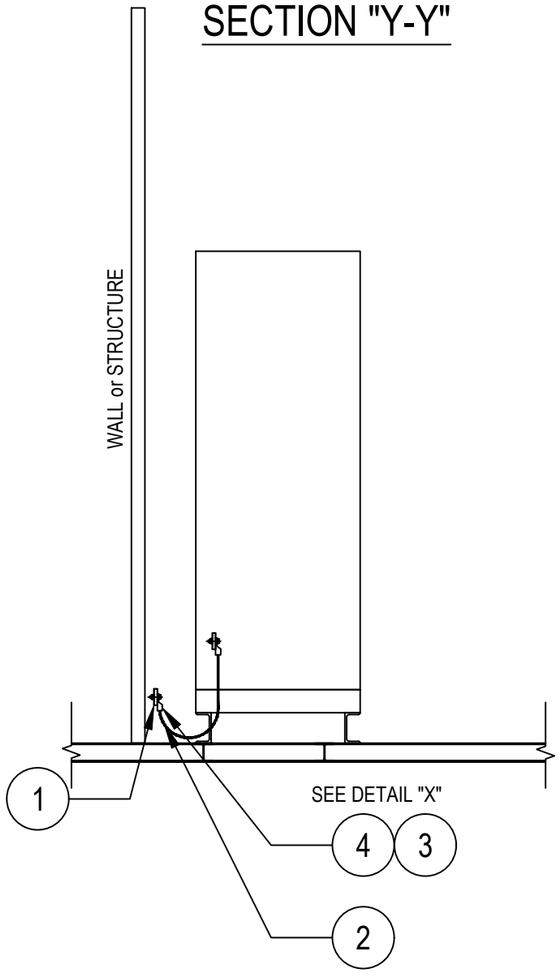
F.to UNI A3: 420mmx297mm

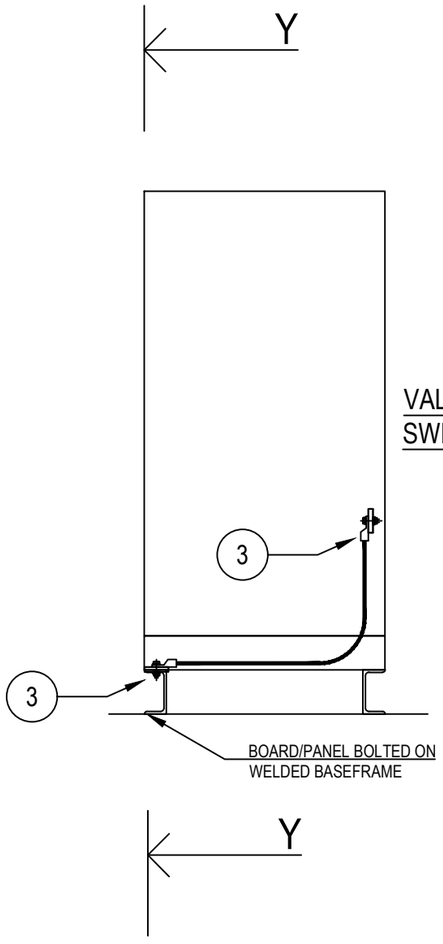
File Name : 123A90-DDL-EL-DL-20137 Rev. 01

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	

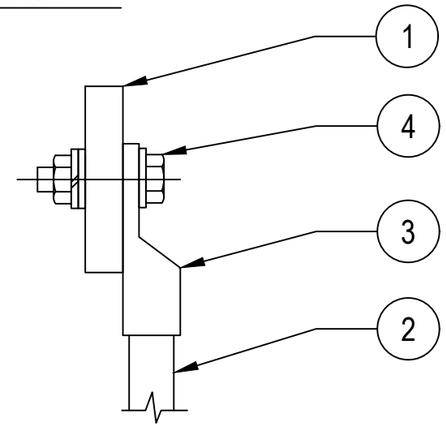
SECTION "Y-Y"





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_D	25/09/24	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-200 HV-MV Switchgear Room

HVAC PANEL WIRING DIAGRAM

B200-HSB-001

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	06/07/24				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

REV.	MODIFICA	DATA	FIRMA
03	ISSUE FOR APPROVAL	06/07/24	
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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S.p.186–Cornegliano Laud. (Lo) Italy
tel. 0039–0371–69076
frigotermica@frigotermica.com

CLIENT:
CROSSWIND

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–0027

SHEET 001

REV. 03

BASE LOAD POWER HUB (BLPH)
B–200 HV–MV SWITCHGEAR ROOM
COVER

ROSETTI MARINO

1724000049-HV-DA-00027

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
03	ISSUE FOR APPROVAL	06/07/24	
02	ISSUE FOR APPROVAL	13/06/24	
01	ISSUE FOR APPROVAL	15/04/24	

DATA	15/04/2024
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CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM

INDEX

ROSETTI MARINO

1724000049-HV-DA-00027

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	06/07/24	
02	ISSUE FOR APPROVAL	13/06/24	
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CLIENT: CROSSWIND

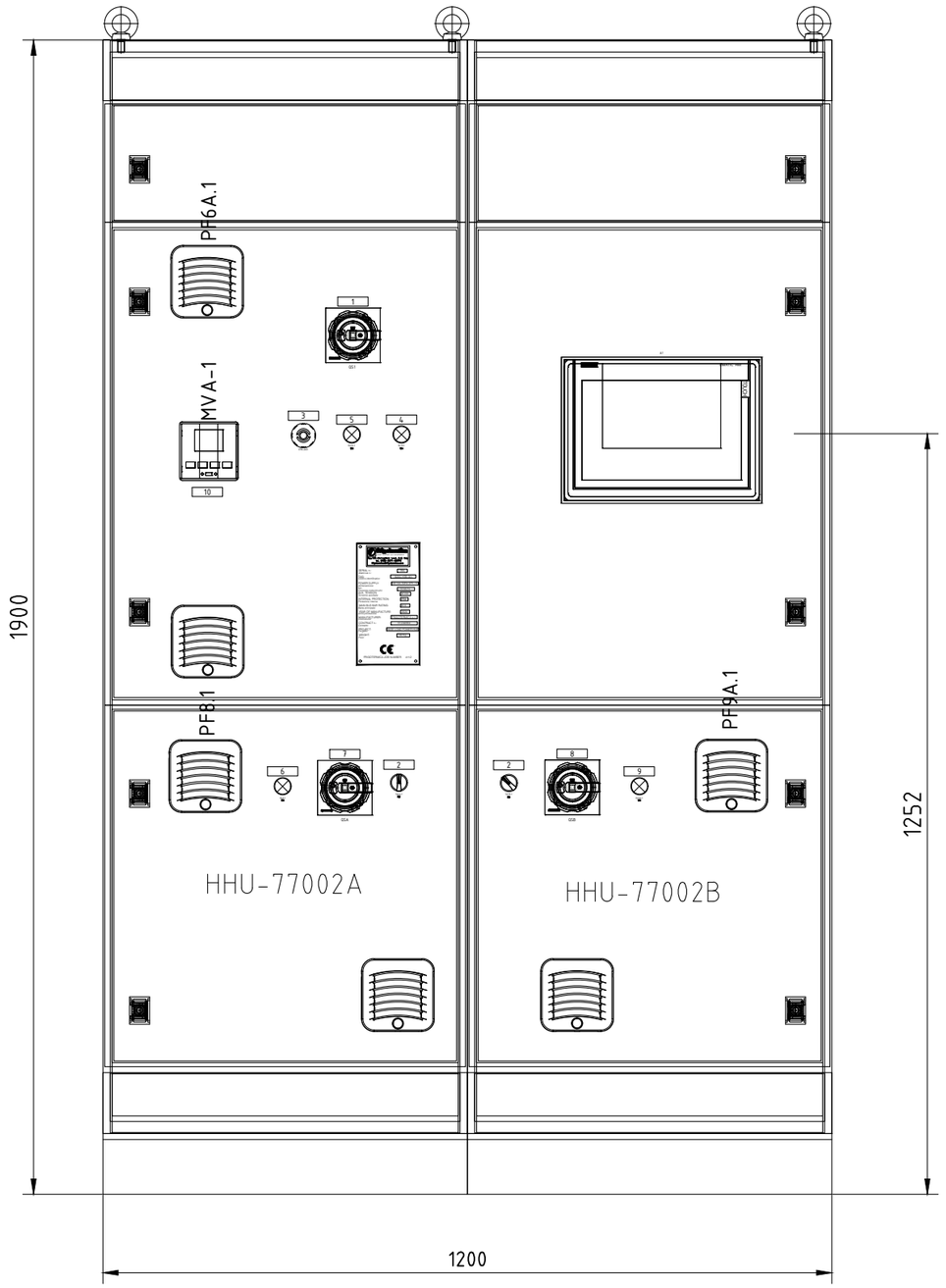
BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
SIMBOL LIST

ROSETTI MARINO

1724000049-HV-DA-00027

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-77001A MAIN SWITH
8	230V VOLTAGE PRESENCE
9	HHU-77001B MAIN SWITCH
10	MULTIMETER

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

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SERIAL n.: *Matricola n.:*	TBA
TAG: *Codice identificativo:*	B200-HSB-001
POWER SUPPLY: *Alimenatzione:*	400 Vac 50Hz 3Ph+N
Icc: *Coorente cortocircuito:*	10 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	06/07/24	
02	ISSUE FOR APPROVAL	13/06/24	
01	ISSUE FOR APPROVAL	15/04/24	

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CLIENT: CROSSWIND

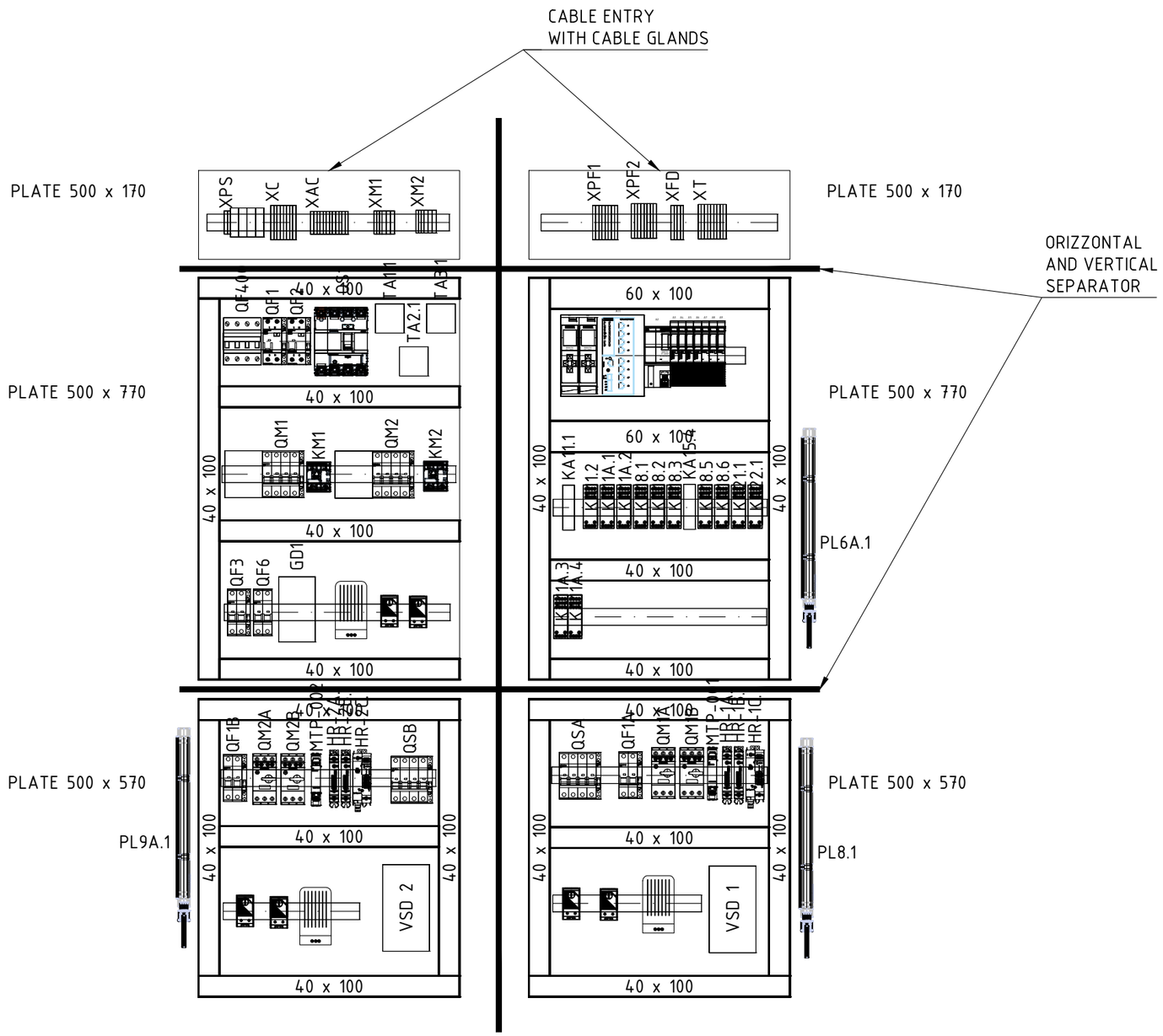
BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
EXTERNAL VIEW

ROSETTI MARINO

1724000049-HV-DA-00027

FG. 4
F.S. 5

INTERNAL VIEW



SCALA 1:10

REV.	MODIFICA	DATA	FIRMA
03	ISSUE FOR APPROVAL	06/07/24	
02	ISSUE FOR APPROVAL	13/06/24	
01	ISSUE FOR APPROVAL	15/04/24	

DATA	15/04/2024
DISEGN.	F.M.
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CLIENT:
CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
INTERNAL VIEW

ROSETTI MARINO

1724000049-HV-DA-00027

FG. 5
F.S. 6

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

RATED POWER: 15 kW
RATED CURRENT: 27.3 A

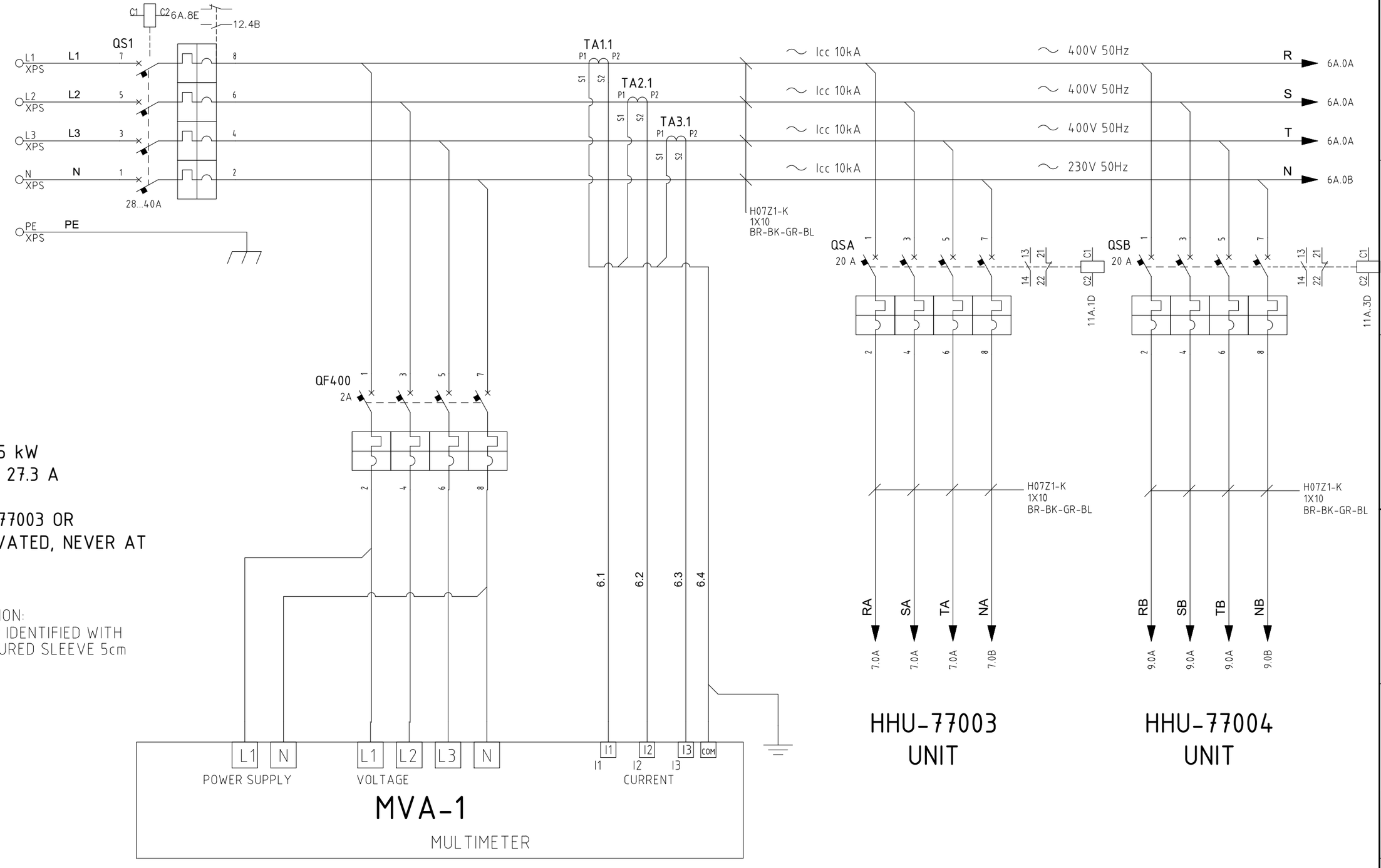
ONLY UNIT HHU-77003 OR
HHU-77004 ACTIVATED, NEVER AT
SAME TIME

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



HHU-77003
UNIT

HHU-77004
UNIT

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

REV.	MODIFICA	DATA	FIRMA
03	ISSUE FOR APPROVAL	06/07/24	
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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S.p.186–Cornegliano Laud. (Lo) Italy
tel. 0039–0371–69076
frigotermica@frigotermica.com

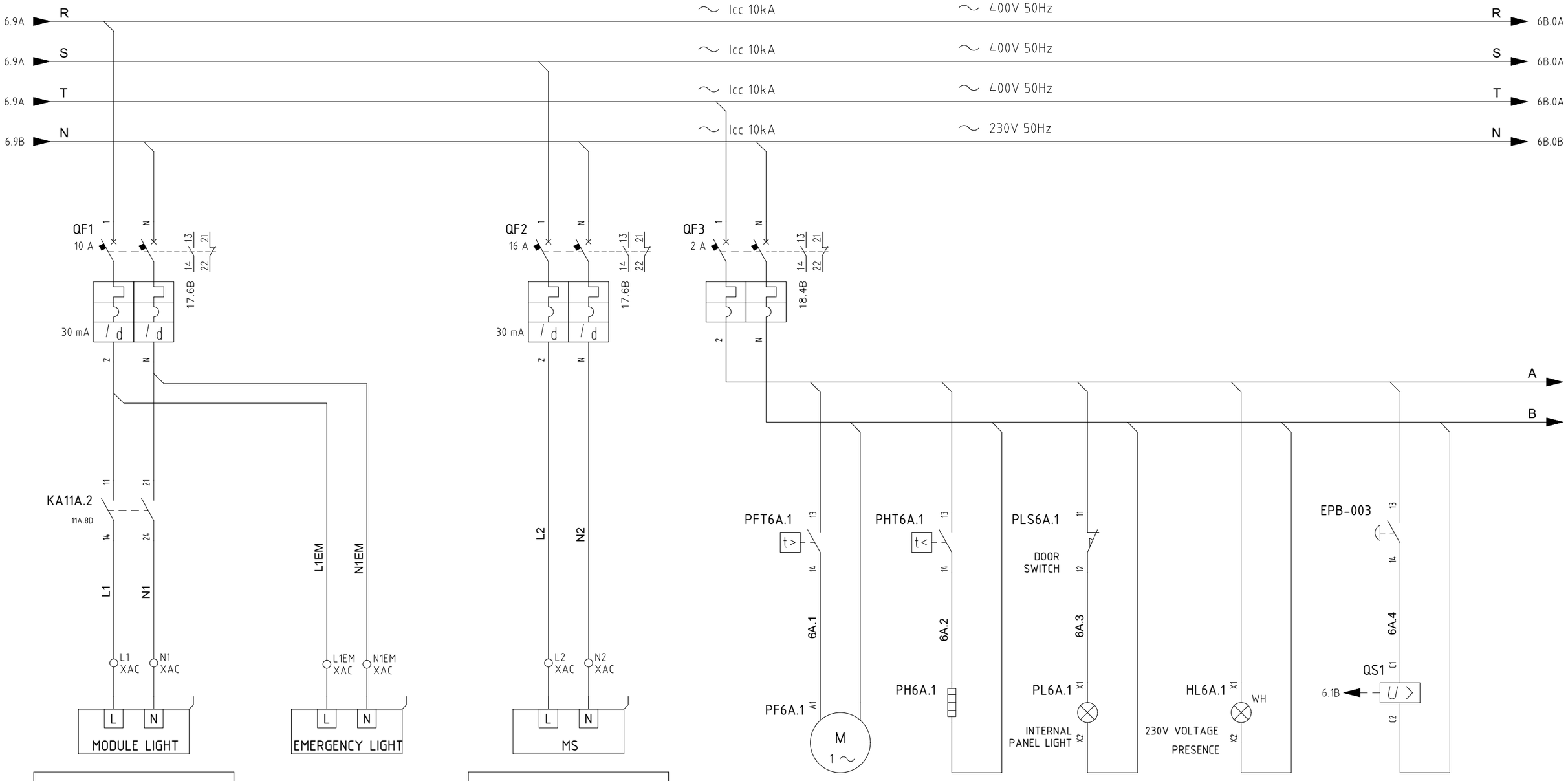
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
POWER SECTION

ROSETTI MARINO

1724000049-HV-DA-00027

FG. 6
F.S. 6A



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

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

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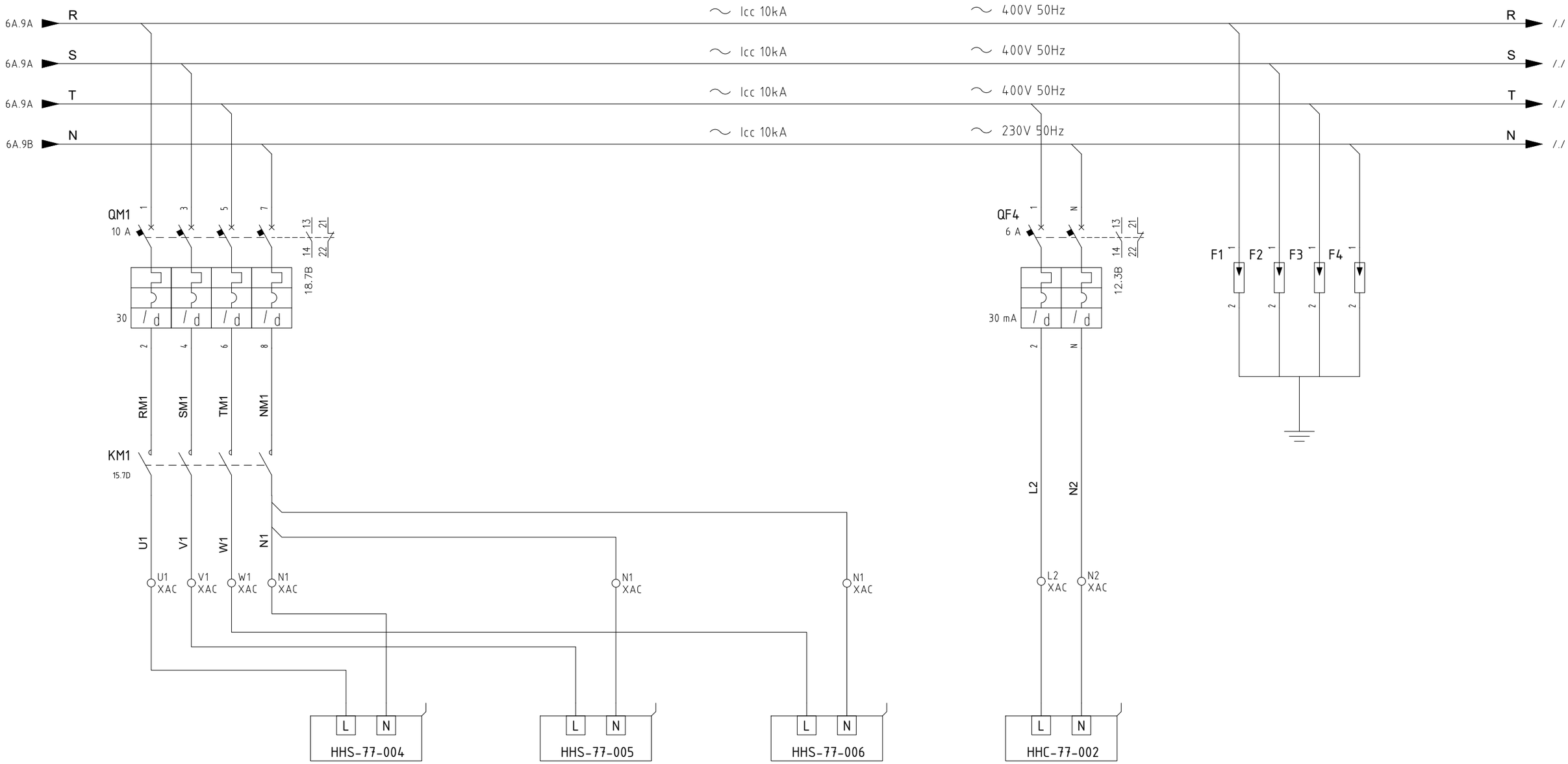
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
POWER SECTION

ROSETTI MARINO

1724000049-HV-DA-00027

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



HSS-77-004	
ELECTRICAL HEATER	
RATED	ABSORBED
2 kW	2 kW
8.7 A	8.7 A

HSS-77-005	
ELECTRICAL HEATER	
RATED	ABSORBED
2 kW	2 kW
8.7 A	8.7 A

HSS-77-006	
ELECTRICAL HEATER	
RATED	ABSORBED
2 kW	2 kW
8.7 A	8.7 A

HHC-77-002	
HEATING CABLE	
RATED	ABSORBED
0,2 kW	0.2 kW
1 A	1 A

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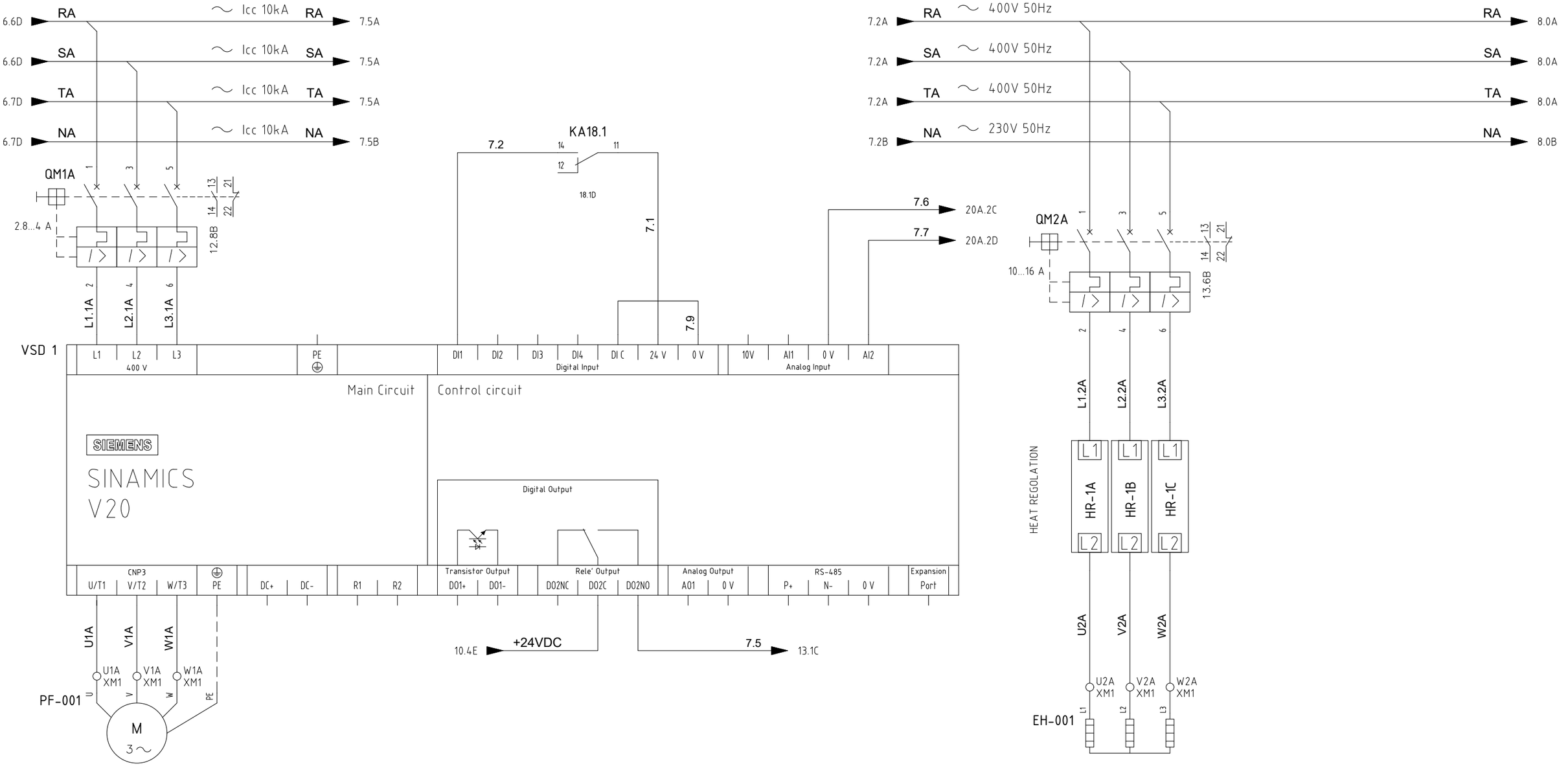
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BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
POWER SECTION

ROSETTI MARINO

1724000049-HV-DA-00027

FG. 6B
F.S. 7



HFM-77-201	
PRESSURIZING FAN 1	
RATED	ABSORBED
0.75 kW	0.68 kW
1.08 A	1.15 A

HSS-77-201	
ELECTRICA HEATER	
RATED	ABSORBED
10 kW	10 kW
14.5 A	14.5 A

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BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
POWER SECTION

ROSETTI MARINO

1724000049-HV-DA-00027

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 21.4F

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

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

A.A

B.A

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

PHT8.1 13 t< 14 8.2 PH8.1

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

HL8.1 X1 WH 230V VOLTAGE PRESENCE X2

KA18.5 18.4D 12 14 11 206 XPF1 HSS-77-203 207 XPF1

KA18.4 18.4D 11 14 12 8.6 212 XPF1 213 XPF1 HDZ-77-201 A1 M 1 ~

PF-001
MOTOR HEATER

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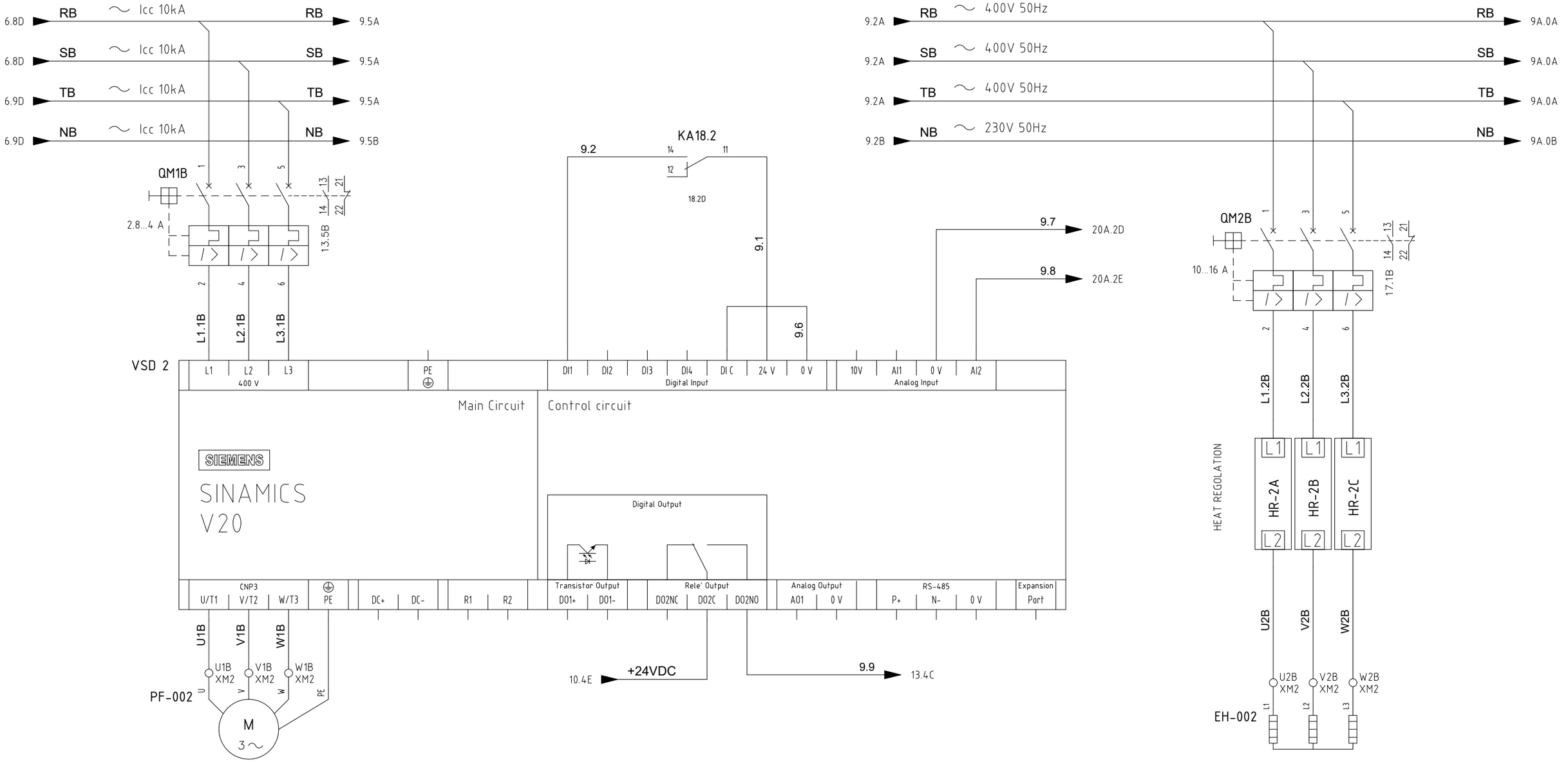
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
POWER SECTION

ROSETTI MARINO

1724000049-HV-DA-00027

FG. 8
F.S. 9



HFM-77-202	
PRESSURIZING FAN 2	
RATED	ABSORBED
0.75 kW	0.98 kW
1.08 A	1.15 A

HSS-77-202	
ELECTRICAL HEATER	
RATED	ABSORBED
10 kW	10 kW
14.5 A	14.5 A

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B-200 HV-MV SWITCHGEAR ROOM
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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 22.4F

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

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

A.B

B.B

PFT9A.1 13 t> 14 8.1 PF9A.1 A1 M 1 ~

PHT9A.1 13 t< 14 8.2 PH9.1

PLS9A.1 11 DOOR SWITCH 12 8.3 PL9A.1 X1 X2

HL9A.1 X1 WH X2 230V VOLTAGE PRESENCE

KA18.6 18.5D 12 14 11 306 XPF2 HSS-77-204 307 XPF2

KA18.7 18.7D 11 14 12 9A.7 312 XPF2 313 XPF2 HDZ-77-202 A1 M 1 ~

PF-002
MOTOR HEATER

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CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
POWER SECTION

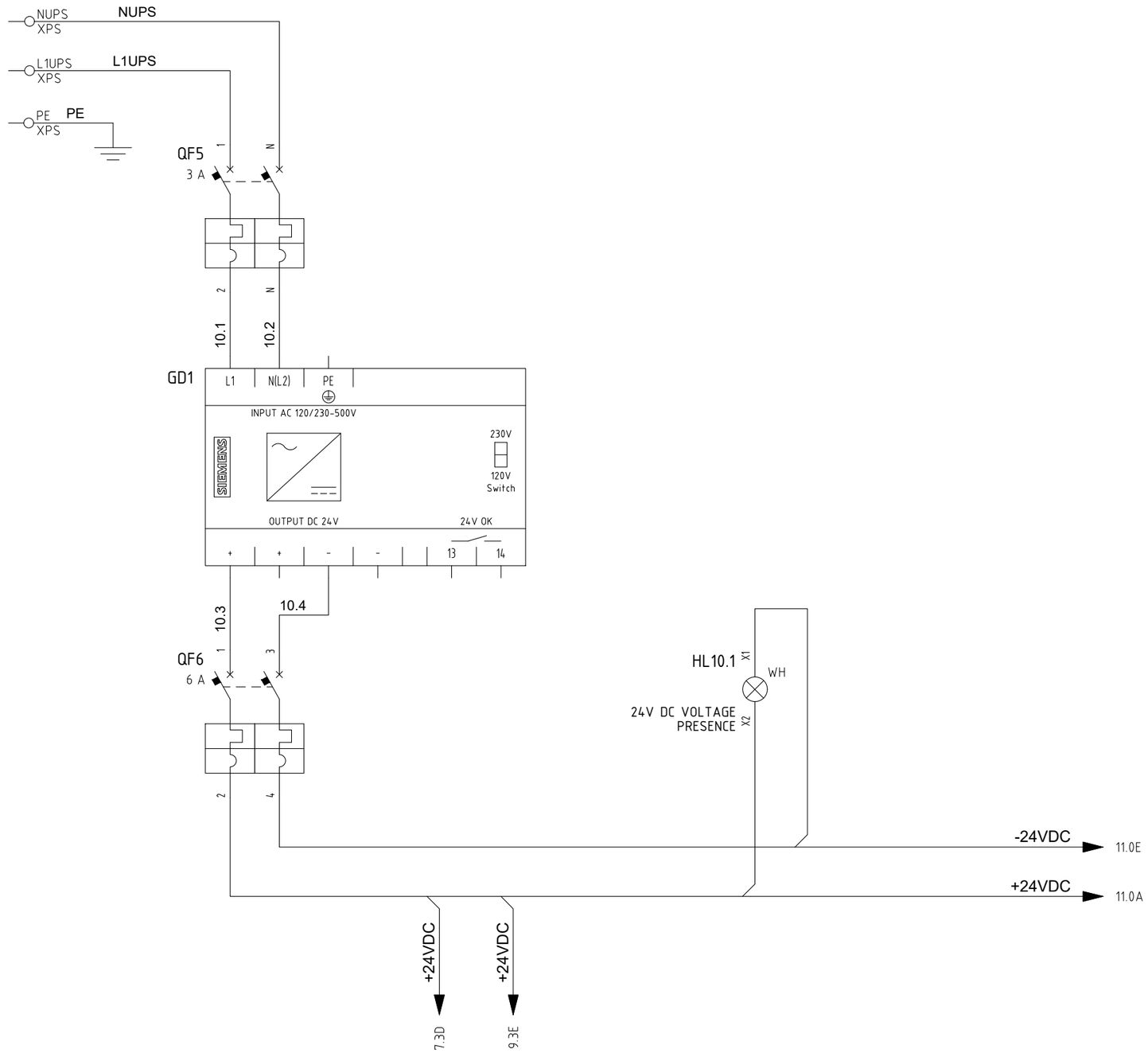
ROSETTI MARINO

1724000049-HV-DA-00027

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-200 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00027

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

101
XC

KA11.1
A1
A2

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

A1/11

MTP-001
MOTOR THERMIC
PROTECTION
SIEMENS
TRIPPED
T1 T2 A2 NC NO 12 14
11.3 11.4 11.5 12.5B
200 XPF1
201 XPF1

MTP-002
MOTOR THERMIC
PROTECTION
SIEMENS
TRIPPED
T1 T2 A2 NC NO 12 14
11.6 11.7 11.8 13.2C
300 XPF2
301 XPF2

10.7E -24VDC

-24VDC 11A.0E

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BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00027

FG. 11
F.S. 11A

HPB-77-201
EMERGENCY POWER
BUTTON
HHU-77001A

HPB-77-202
EMERGENCY POWER
BUTTON
HHU-77001B

LIGHT COMMAND

11.9A +24VDC

+24VDC 12.0A

202 XPF1

HPB-77-201 11 12

203 XPF1

302 XPF2

HPB-77-202 11 12

303 XPF2

104 XC

106 XC

LIGHT
PUSH BUTTON

105 XC

107 XC

A A

KA11A.1 11 12 14
11A.5D

11A.5

KA11A.2 A1 A2

B B

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

11A.3

QSA C1 C2
6.6B

11A.4

QSB C1 C2
6.8B

KA11A.1 A1 A2

11.9E -24VDC

-24VDC 12.0A

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

REV.	MODIFICA	DATA	FIRMA
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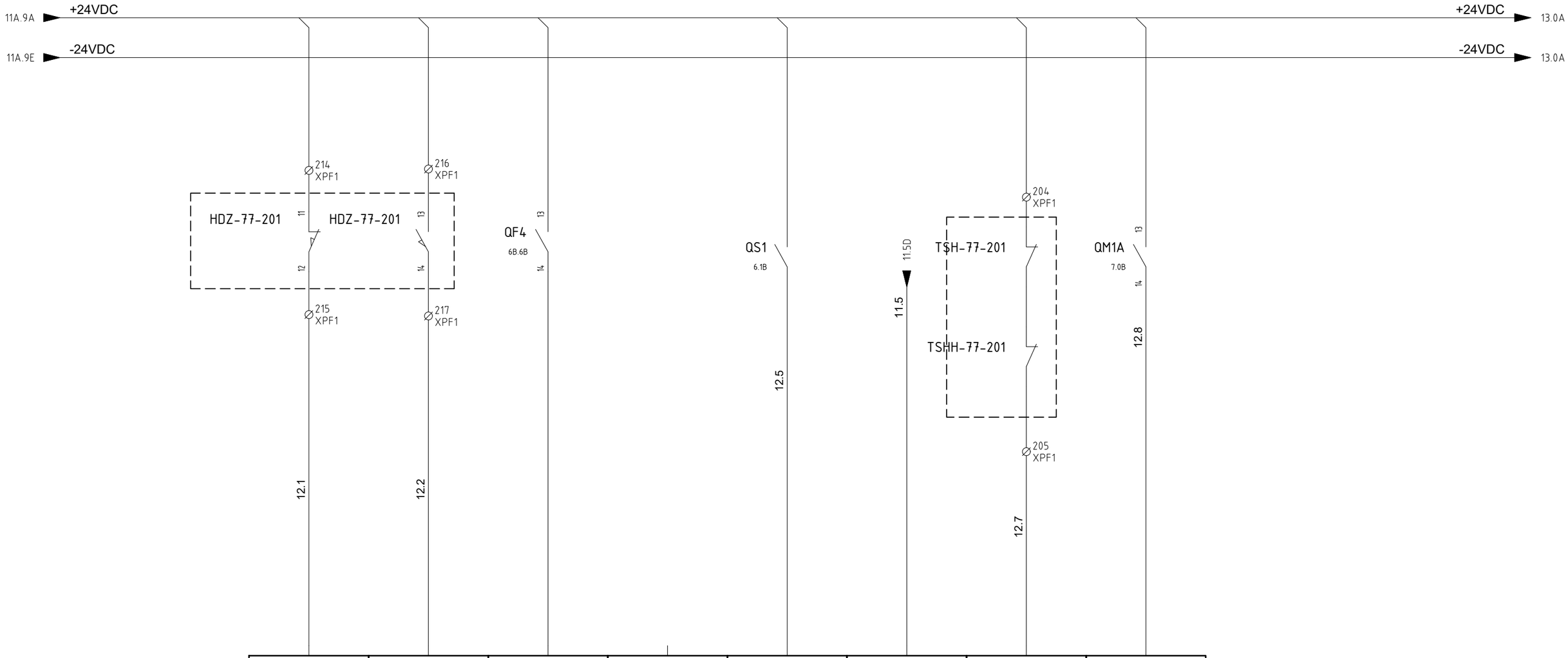
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00027

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-77-201 CLOSE FEEDBACK 0=NOT CLOSE 1=CLOSE	HDZ-77-201 OPEN FEEDBACK 0=NOT OPEN 1=OPEN	HHC-77-0002 HEATING CABLE TRIP	SPARE	MAIN BRAKER TRIP SIGNAL 0=TRIP 1=NORMAL	ET-77-201 MOTOR. TERM.PROT 0=MALFUNC. 1=NORMAL	TSH/HH-77-201 EL.HEATER THERM. 0=MALFUNC. 1=NORMAL	HFM-77-201 TRIP SIGNAL 0=TRIP 1=NORMAL

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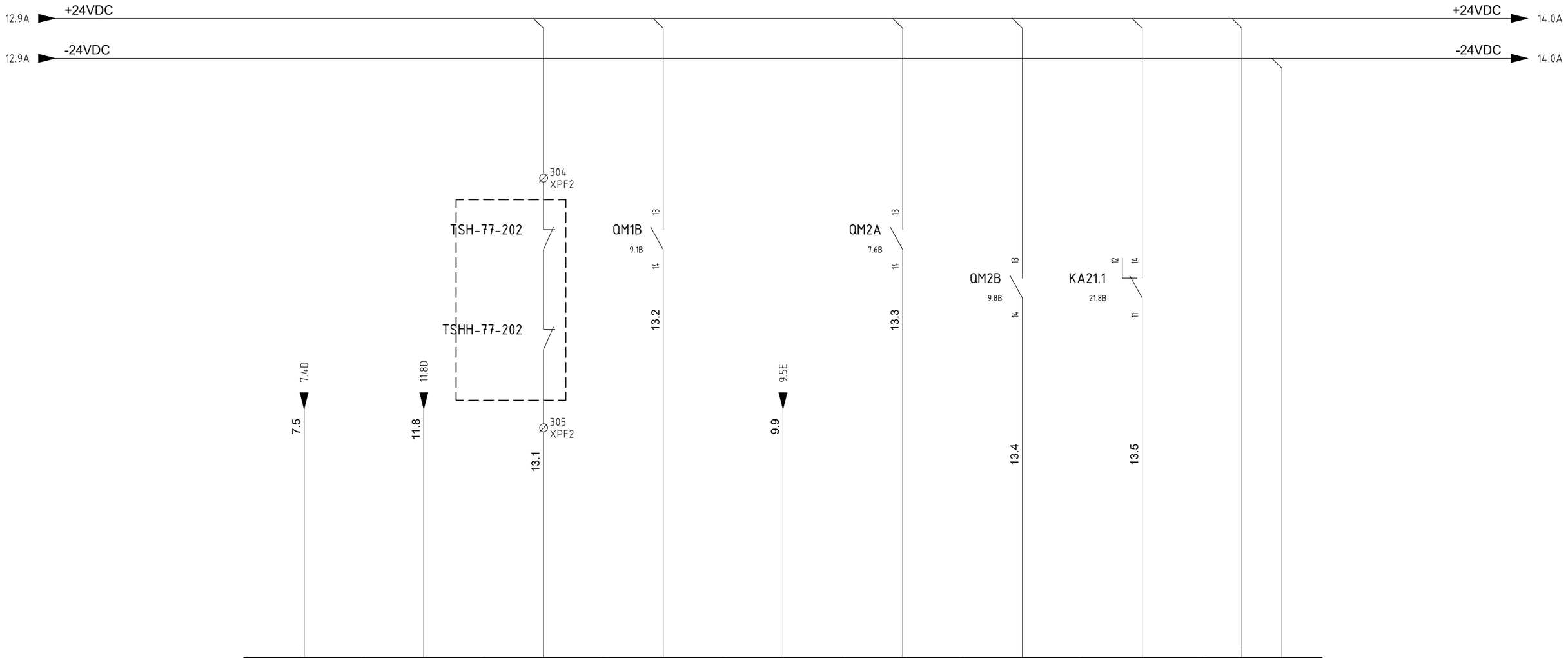
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BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00027

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
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VSD-1 MALFUN. SIGNAL 0=MALFUNC. 1=NORMAL	ET-77-202 MOTOR. TERM.PROT 0=MALFUNC. 1=NORMAL	TSH/HH-77-202 EL.HEATER THERM. 0=MALFUNC. 1=NORMAL	HFM-77-202 TRIP SIGNAL 0=MALFUNC. 1=NORMAL	VSD-2 MALFUN. SIGNAL 0=MALFUNC. 1=NORMAL	HSS-77-201 TRIP SIGNAL 0=MALFUNC. 1=NORMAL	HSS-77-202 TRIP SIGNAL 0=MALFUNC. 1=NORMAL	HSS-77-201 MODULATION FAULT 0=MALFUNC. 1=NORMAL	

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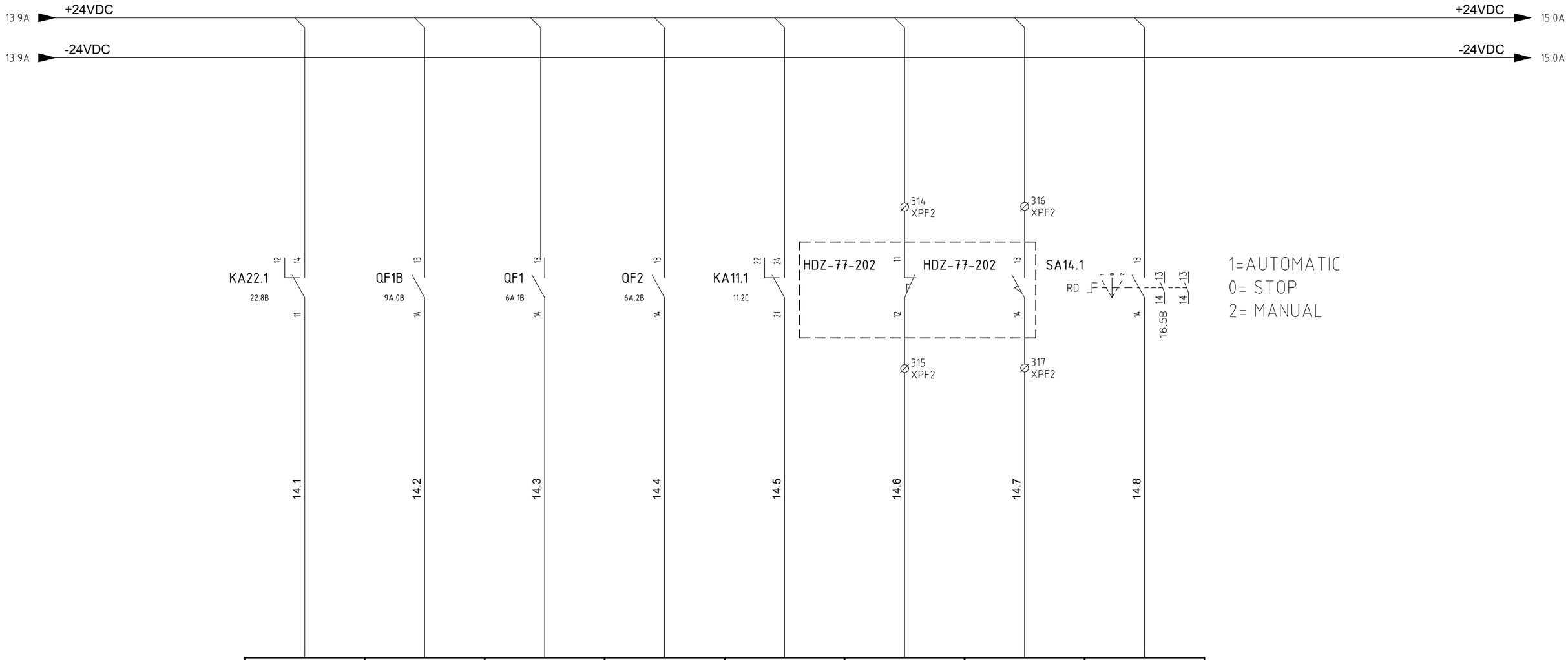
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BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00027

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-77-202 MODULATION FAULT 0=MALFUNC. 1=NORMAL	HHU-77004 TRIP AUX SECTION	TRIP SIGNAL MODULE LIGHT	TRIP SIGNAL MODULE SOCKET	HVAC SHUT DOWN FROM SIS 0=SHUTDOWN 1=NORMAL	HDZ-77-202 CLOSE FEEDBACK 0=NOT CLOSE 1=CLOSE	HDZ-77-202 OPEN FEEDBACK 0=NOT OPEN 1=OPEN	HHU-77003 AUTO MODE 0=NOT AUTO 1= AUTOMATIC

REV.	MODIFICA	DATA	FIRMA
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AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00027

FG. 14
F.S. 15

14.9A +24VDC → +24VDC 16.0A

14.9A -24VDC → -24VDC 16.0A

9	10	11	12	13	14	15	16	L+ M
QF1A 8.0B	QF3 6A.4B	QSA 6.6B	QSB 6.8B	QM1 6B.1B		KM1 15.7D		
15.1	15.2	15.3	15.4	15.5		15.7		
				13 / 14				
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:
HHU-77003 TRIP AUX SECTION	GENERAL PANEL AUX TRIP	HHU-77003 MAIN BRAKER TRIP	HHU-77004 MAIN BRAKER TRIP	HSS-77004/5/6 SPACE HEATER TRIP	SPARE	HSS-77004/5/6 SPACE HEATER RUN	SPARE	

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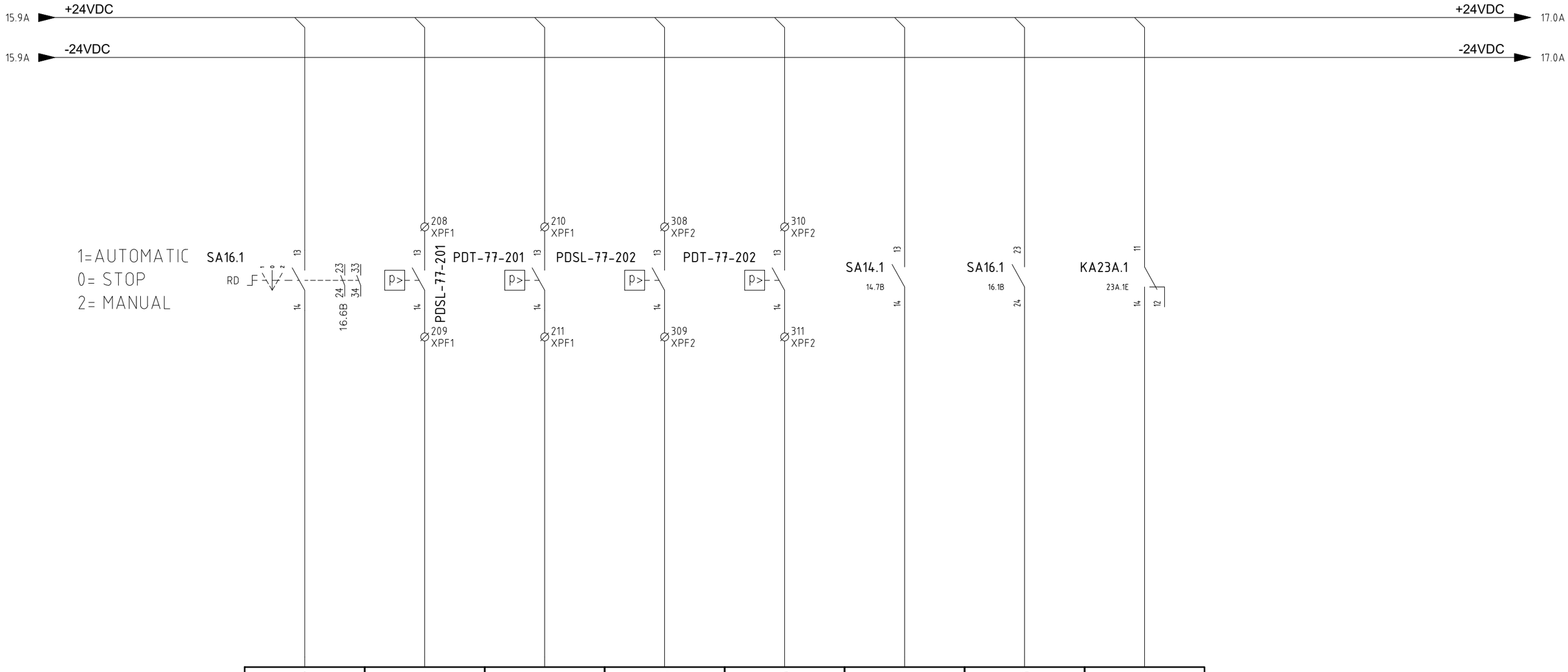
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00027

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-77004 AUTO MODE 0=NOT AUTO 1= AUTOMATIC	PDSL-77-201 FAN FLOW SWITCH 0=NO FLOW 1=FLOW	PDT-77-201 FILTER DIFF SWITCH 0=NORMAL 1=CLOGGED	PDSL-77-202 FAN FLOW SWITCH 0=NO FLOW 1=FLOW	PDT-77-202 FILTER DIFF SWITCH 0=NORMAL 1=CLOGGED	HHU-77003 MANUAL MODE 0=NOT MANUAL 1=MANUAL	HHU-77004 MANUAL MODE 0=NOT MANUAL 1=MANUAL	HFD-77004 CLOSE CONTACT 0=NOT CLOSE 1=CLOSE

REV.	MODIFICA	DATA	FIRMA
03	ISSUE FOR APPROVAL	06/07/24	
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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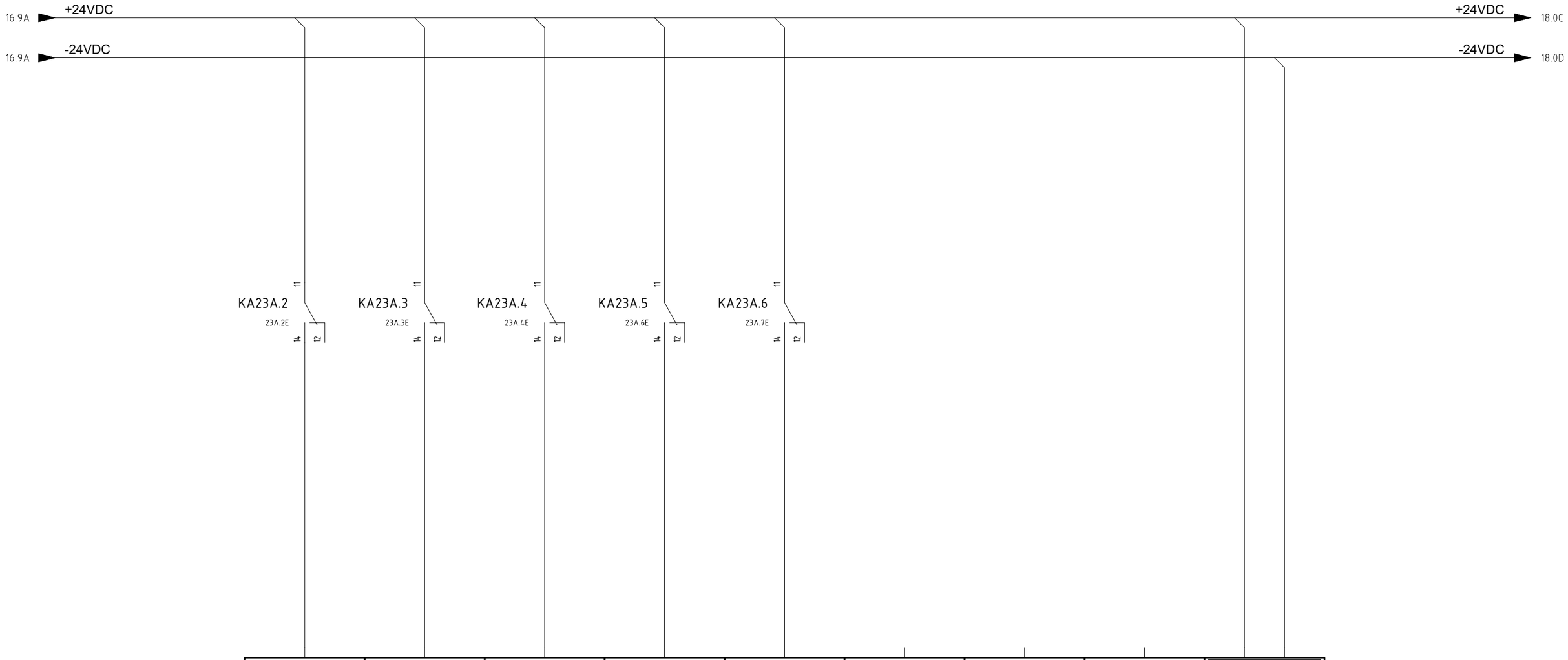
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00027

FG. 16
F.S. 17



9	10	11	12	13	14	15	16	L+ M
15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	
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-77004 OPEN CONTACT 0=NOT OPEN 1=OPEN	HFD-77005 CLOSE CONTACT 0=NOT CLOSE 1=CLOSE	HFD-77005 OPEN CONTACT 0=NOT OPEN 1=OPEN	HFD-77006 CLOSE CONTACT 0=NOT CLOSE 1=CLOSE	HFD-77006 OPEN CONTACT 0=NOT OPEN 1=OPEN	SPARE	SPARE	SPARE	

REV.	MODIFICA	DATA	FIRMA
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BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00027

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-77-201 OPEN COMMAND 0=OFF 1=OPEN		HSS-77-203 MOTOR HEATER		HSS-77-204 MOTOR HEATER		HSS-77004/5/6 SPACE HEATER START		HDZ-77-202 OPEN COMMAND 0=OFF 1=OPEN	
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	

18.1 18.2 18.3 18.5 18.6 18.7

17.9A +24VDC → 19.0D +24VDC

17.9A -24VDC → 19.0D -24VDC

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

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

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

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

REV.	MODIFICA	DATA	FIRMA
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CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00027

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
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CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM

AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00027

FG. 19
F.S. 20

19.9D +24VDC

19.9D -24VDC

+24VDC 20A.0A

-24VDC 20A.0A

TEMPERATURE TRANSM. 4-20ma
77-TT-201
500 XT
501 XT
502 XT

TEMPERATURE TRANSM. 4-20mA
77-TT-202
503 XT
504 XT
505 XT

DIFFER. PRESSURE TRANSM. 4-20mA
77-PT-201
506 XT
507 XT
508 XT

TEMPERATURE TRASM. 4-20mA
77-TT-203
- + 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-201 TEMPERATURE TRASMITTER	77-TT-202 TEMPERATURE TRASMITTER	77-PT-201 DIFFERENTIAL PRESSURE TRASMITTER SIGNAL	77-TT-203 TEMPERATURE TRASMITTER	

REV.	MODIFICA	DATA	FIRMA
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BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00027

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		EH-001 MODULATION SIGNAL EH-001 Modulation Signal		EH-002 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
03	ISSUE FOR APPROVAL	06/07/24	
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BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00027

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-200 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

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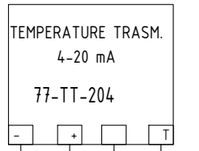
FG. 20B
F.S. 20C

20B.9A +24VDC

20B.9A -24VDC

+24VDC 20D.0E

-24VDC 20D.0F



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-204 TEMPERATURE TRANSMITTER	SPARE	SPARE	SPARE	

REV.	MODIFICA	DATA	FIRMA
03	ISSUE FOR APPROVAL	06/07/24	
02	ISSUE FOR APPROVAL	13/06/24	
01	ISSUE FOR APPROVAL	15/04/24	

DATA	15/04/2024
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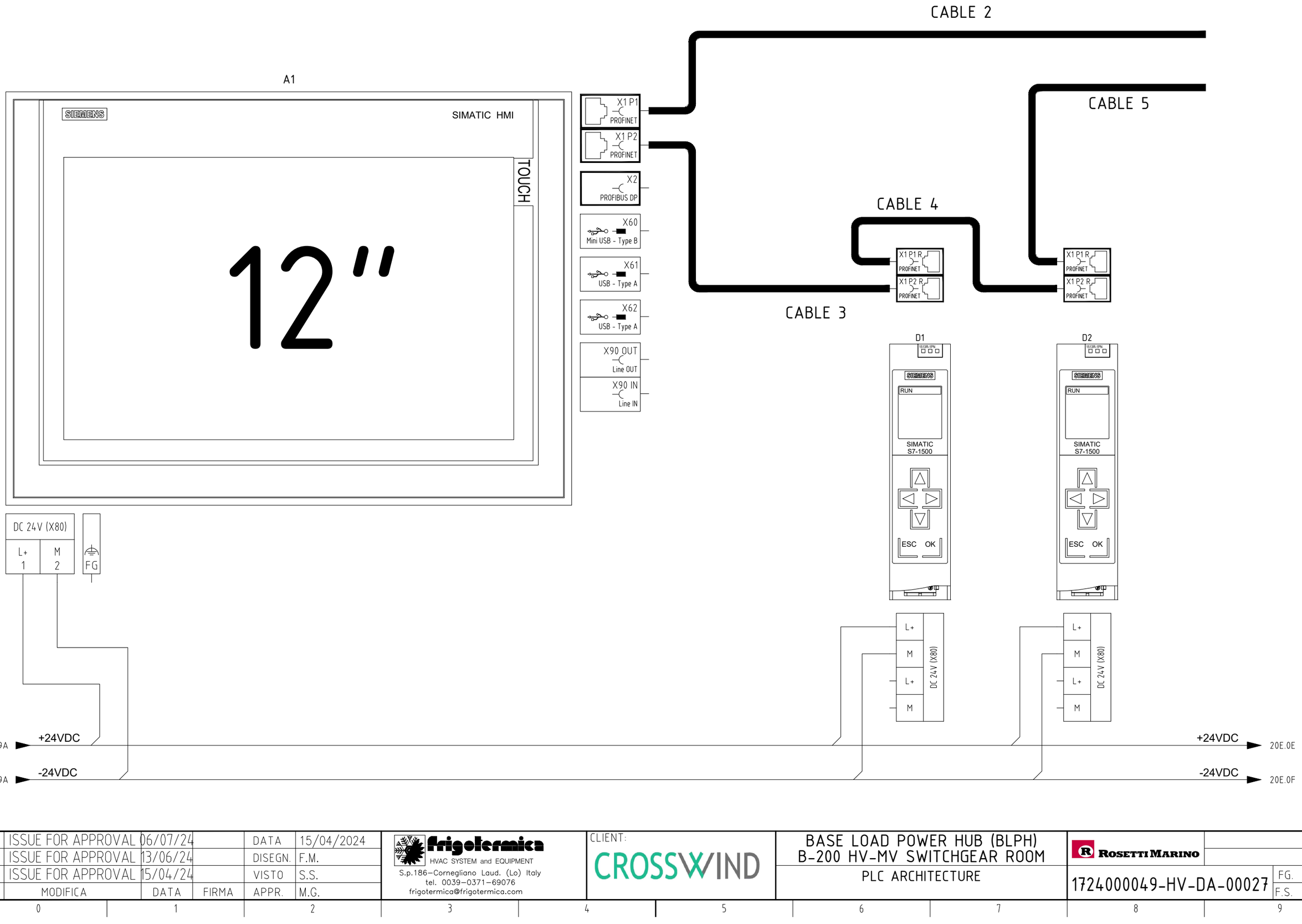
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
AUX SECTION

ROSETTI MARINO

1724000049-HV-DA-00027

FG. 20C
F.S. 20D



REV.	MODIFICA	DATA	FIRMA
03	ISSUE FOR APPROVAL	06/07/24	
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DATA	15/04/2024
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CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
PLC ARCHITECTURE

ROSETTI MARINO

1724000049-HV-DA-00027

FG. 20D
F.S. 20E

CABLE 2

CABLE 1

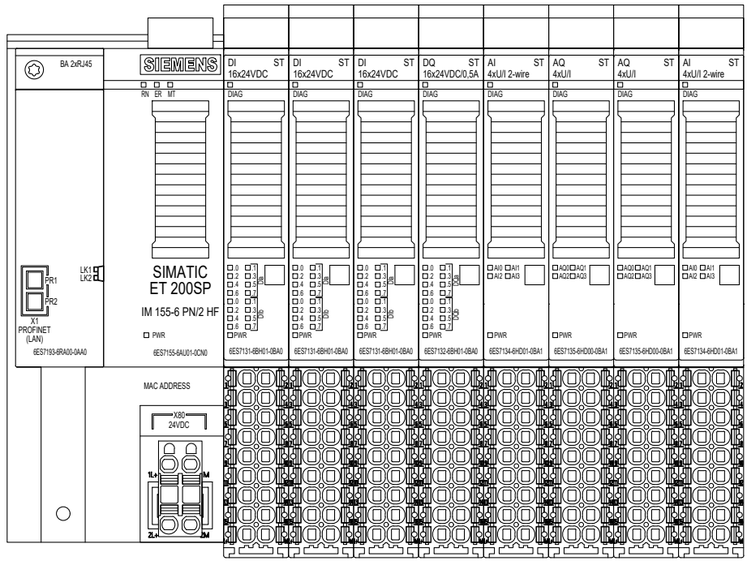
CABLE 5

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

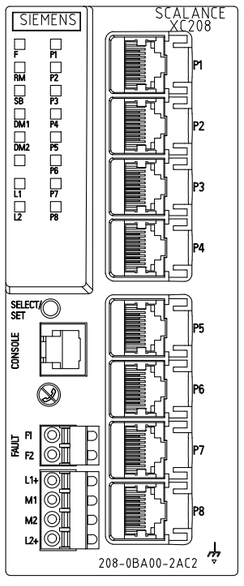
1	TD	PROFINET IO - Port 2 RJ45
2	TD N	
3	RD	
4	GND	
5	GND	
6	RD N	
7	GND	
8	GND	

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

A2 A3 A4 A5 A6 A7 A8 A9 A10



A11



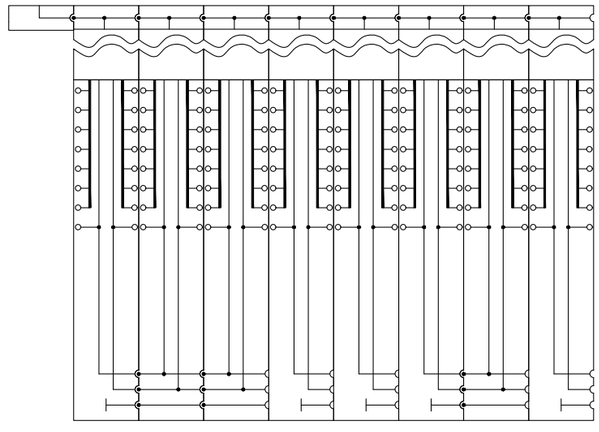
P1	LAN
P2	LAN
P3	LAN
P4	LAN
P5	LAN
P6	LAN
P7	LAN
P8	LAN

MODBUS TCP/IP TO CLIENT

RJ45 CONNECTION IN TERMINAL STRIP

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

REV.	MODIFICA	DATA	FIRMA
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CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM

PLC ARCHITECTURE

ROSETTI MARINO

1724000049-HV-DA-00027

FG. 20E

F.S. 21

EH-001
MODULATION

20E.9E +24VDC → +24VDC 22.0A

20E.9F -24VDC → -24VDC 22.0A

1/L1

HR-1A.

GRP 3

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

2/T1

1/L1

HR-1B.

GRP 3

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

2/T1

1/L1

HR-1C.

GRM 1

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

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

FU21.1 1 2

8.9A RA

REV.	MODIFICA	DATA	FIRMA
03	ISSUE FOR APPROVAL	06/07/24	
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BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
ELECTRICAL HEATER MODULATION

ROSETTI MARINO

1724000049-HV-DA-00027

FG. 21
F.S. 22

EH-002
MODULATION

21.9A +24VDC

21.9A -24VDC

+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

FU22.1 1 2

9A.9A RB

REV.	MODIFICA	DATA	FIRMA
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CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
ELECTRICAL HEATER MODULATION

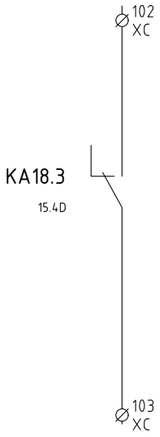
ROSETTI MARINO

1724000049-HV-DA-00027

FG. 22
F.S. 23

AVAILABLE FREE
VOLTAGE SIGNAL
GENERAL FAULT
TO DCS

HVAC
MALFUNCTION
SIGNAL



CLOSE= NORMAL
OPEN= MALFUNCTION

REV.	MODIFICA	DATA	FIRMA
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CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
AVAILABLE SIGNAL

ROSETTI MARINO

1724000049-HV-DA-00027

FG. 23
F.S. 23A

HFD-77004
CLOSED FEEDBACK

HFD-77005
CLOSED FEEDBACK

HFD-77006
CLOSED FEEDBACK

HFD-77004
OPEN FEEDBACK

HFD-77005
OPEN FEEDBACK

HFD-77006
OPEN FEEDBACK

+24VDC

+24VDC

402 XFD
404 XFD
408 XFD
410 XFD
414 XFD
416 XFD

HFD-77004 11 12
HFD-77004 13 14
HFD-77005 11 12
HFD-77005 13 14
HFD-77006 11 12
HFD-77006 13 14

403 XFD
405 XFD
409 XFD
411 XFD
415 XFD
417 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 21 22 24
23B.1C

17.1B 11 12 14 21 22 24
23B.2C

17.2B 11 12 14 21 22 24
23B.4C

17.3B 11 12 14 21 22 24
23B.5C

17.4B 11 12 14 21 22 24
23B.7C

17.4B 11 12 14 21 22 24
23B.8C

REV.	MODIFICA	DATA	FIRMA
03	ISSUE FOR APPROVAL	06/07/24	
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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HVAC SYSTEM and EQUIPMENT
S.p.186–Cornegliano Laud. (Lo) Italy
tel. 0039–0371–69076
frigotermica@frigotermica.com

CLIENT:
CROSSWIND

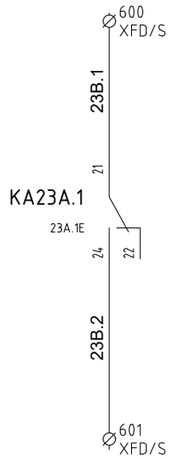
BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
AVAILABLE SIGNAL

ROSETTI MARINO

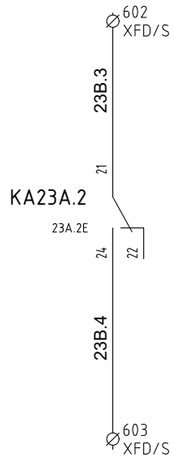
1724000049-HV-DA-00027

FG. 23A
F.S. 23B

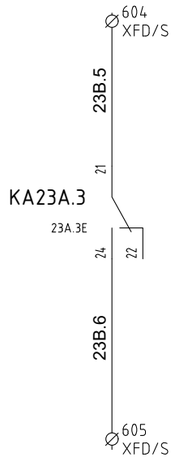
HFD-77004
CLOSED SIGNAL
TO SIS



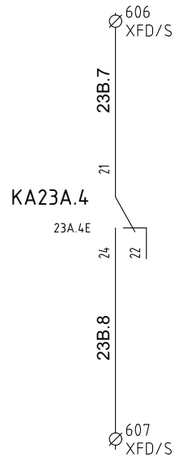
HFD-77004
OPEN SIGNAL
TO SIS



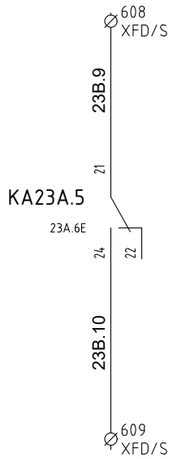
HFD-77005
CLOSED SIGNAL
TO SIS



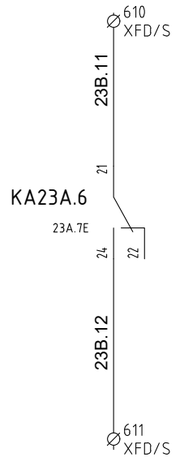
HFD-77005
OPEN SIGNAL
TO SIS



HFD-77006
CLOSED SIGNAL
TO SIS



HFD-77006
OPEN SIGNAL
TO SIS



REV.	MODIFICA	DATA	FIRMA
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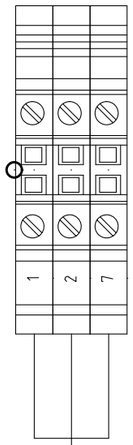
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B-200 HV-MV SWITCHGEAR ROOM
AVAILABLE SIGNAL

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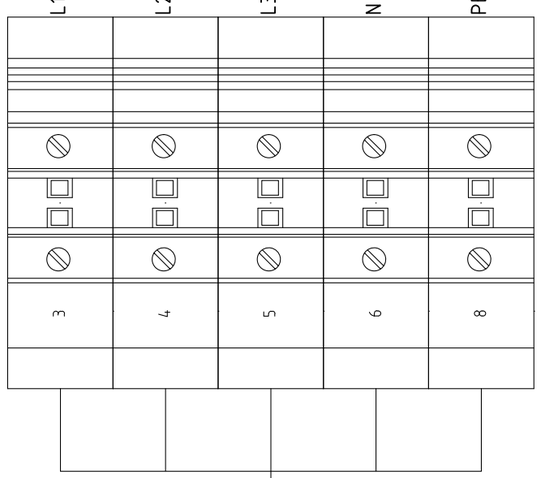
1724000049-HV-DA-00027

FG. 23B
F.S. 24

+QG - XPS
POWER SUPPLY

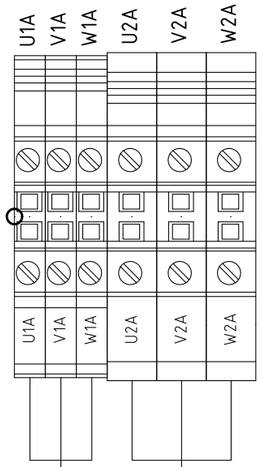


230V 1F + N + PE
50Hz
FROM CLIENT
SECTION TBA



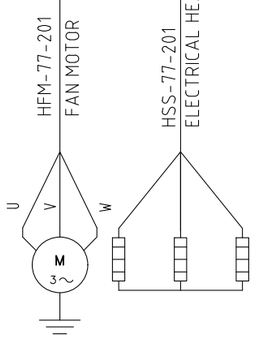
400V 3F +N + PE
50Hz
FROM CLIENT
SECTION TBA

+QG - XM1
POWER PRESS FAN 1

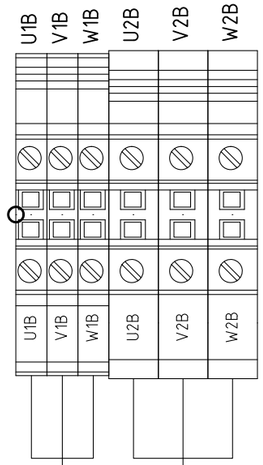


4G2.5 FG16OM16 HFM-77-201 FAN MOTOR

4G6 FG16OM16 HSS-77-201 ELECTRICAL HEATER

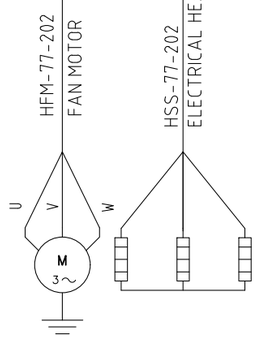


+QG - XM2
POWER PRESS FAN 2

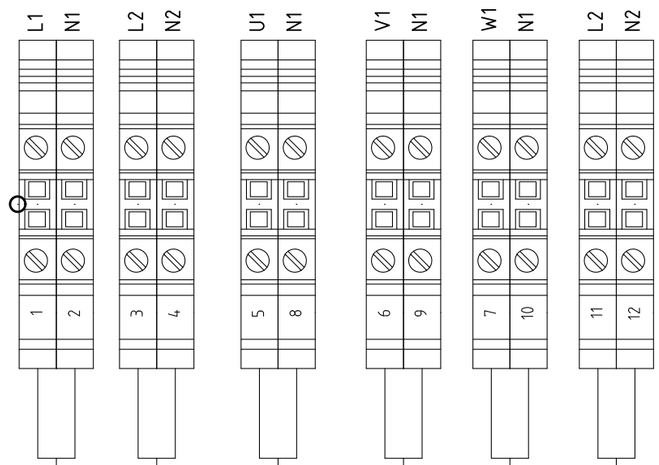


4G2.5 FG16OM16 HFM-77-202 FAN MOTOR

4G6 FG16OM16 HSS-77-202 ELECTRICAL HEATER



+QG - XAC
ACCESSORIES



3G2.5 MODULE LIGHT LIGHT

3G3 MODULE SOCKET SOCKET

3G2.5 SPACE HEATER HSS-77-004

3G2.5 SPACE HEATER HSS-77-005

3G2.5 SPACE HEATER HSS-77-006

3G2.5 HEATING CABLE HHC-77-002

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CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM

TERMINAL STRIP

ROSETTI MARINO

1724000049-HV-DA-00027

FG. 24
F.S. 25

+QG - XC
Client

+24VDC 11.1 23.3 23.2 +24VDC +24VDC +24VDC +24VDC
100 101 102 103 104 105 106 107

SHUTDOWN FROM DCS
LIGHT BUTTON
HVAC MALF. SIGNAL TO DCS
LIGHT BUTTON

+QG - XPF1
AUX PRES FAN 1

11.3 11.4 +24VDC 12.3 +24VDC 12.7 23.5 B +24VDC 16.5 +24VDC 16.7 A.A B.A +24VDC 12.1 +24VDC 12.2
200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217

3G1.5 FG16OM16 . PTC MOTOR PROTECTION
3G1.5 FG16OM16 . EMERGENCY STOP BUTTON
3G1.5 FG16OM16 . ELECTRICAL HEATER THERMOSTATE PROTECTION
3G1.5 FG16OM16 . MOTOR FAN ELECTRICAL HEATER
2X1.5 FG16OM16 . FAN FLOW SWITCH
2X1.5 FG16OM16 . FILTER FLOW SWITCH
3G2.5 . POWER SUPPLY
4X1.5 . SIGNAL FEEDBACK

TE-77-201
HPB-77-201
TSH/HH-77-201
HSS-77-203
PDSL-77-201
PDT-77-201
HDZ-77-201 (1 2 · 240V · S1 S2 S3 S4 S5 S6 · ZSC <5° · ZSO >85°)

+QG - XPF2
AUX PRES FAN 2

11.6 11.7 +24VDC 12.4 +24VDC 13.1 23.6 B +24VDC 16.9 +24VDC 16.11 A.B B.B +24VDC 14.6 +24VDC 14.7
300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317

3G1.5 FG16OM16 . PTC MOTOR PROTECTION
3G1.5 FG16OM16 . EMERGENCY STOP BUTTON
3G1.5 FG16OM16 . ELECTRICAL HEATER THERMOSTATE PROTECTION
3G1.5 FG16OM16 . MOTOR FAN ELECTRICAL HEATER
2X1.5 FG16OM16 . FAN FLOW SWITCH
2X1.5 FG16OM16 . FILTER FLOW SWITCH
3G2.5 . POWER SUPPLY
4X1.5 . SIGNAL FEEDBACK

TE-77-202
HPB-77-202
TSH/HH-77-202
HSS-77-204
PDSL-77-202
PDT-77-202
HDZ-77-202 (1 2 · 240V · S1 S2 S3 S4 S5 S6 · ZSC <5° · ZSO >85°)

+QG - XT

+24VDC -24VDC 20.1 +24VDC -24VDC 20.2 +24VDC -24VDC 20.3 20.13 20.15 20C.17 20C.19
500 501 502 503 504 505 506 507 508 509 510 511 512

3X1.5+Sh . TEMPERATURE TRANSMITTER BY CLIENT
3X1.5+Sh . TEMPERATURE TRANSMITTER BY CLIENT
3X1.5+Sh . DIFFERENTIAL PRESSURE TRANSM BY CLIENT
2X1.5+Sh . DUCT TEMPERATURE TRASMITTER
2X1.5+Sh . DUCT TEMPERATURE TRASMITTER

77-TT-201
77-TT-202
77-PT-201
77-TT-203
77-TT-204

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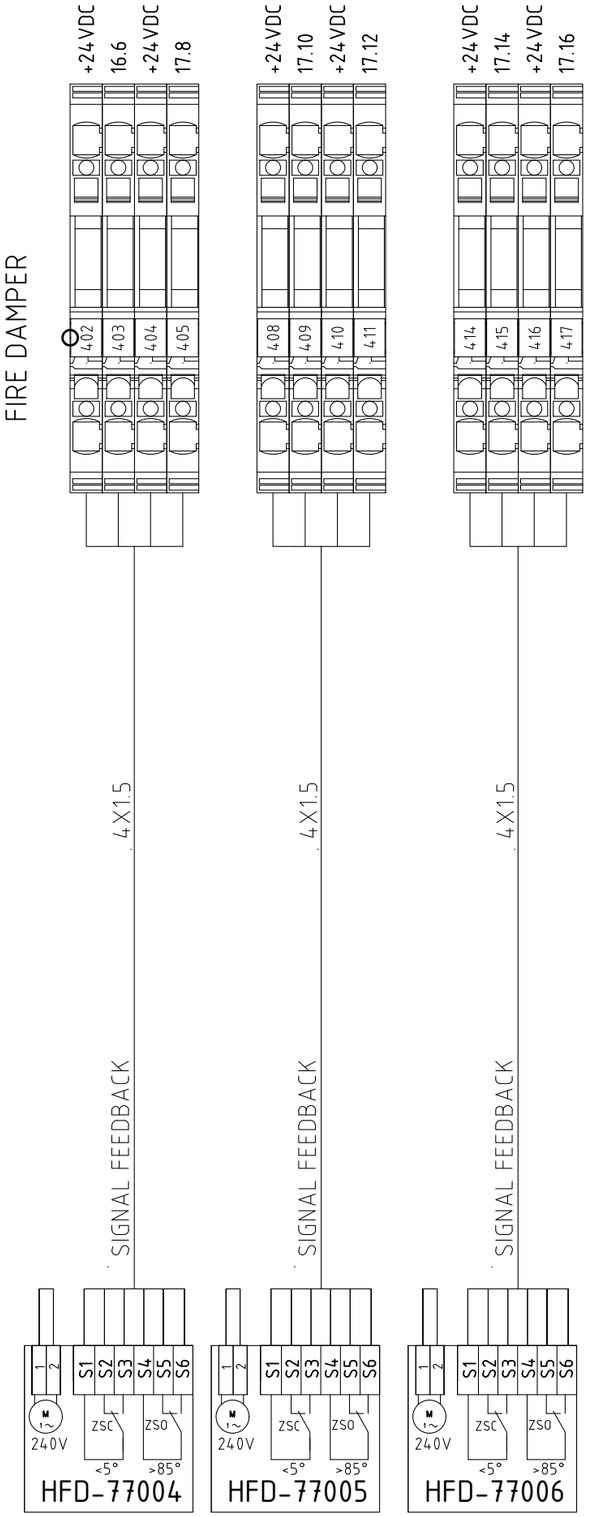
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B-200 HV-MV SWITCHGEAR ROOM
TERMINAL STRIP

ROSETTI MARINO

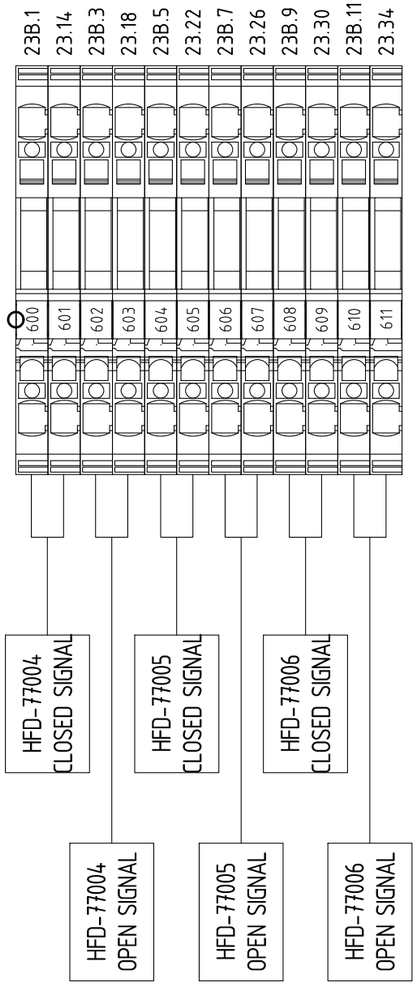
1724000049-HV-DA-00027

FG. 25
F.S. 25A

+QG - XFD
FIRE DAMPER



+QG - XFD/S
FIRE DAMPER SIGNAL





REV.	MODIFICA	DATA	FIRMA
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BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM
TERMINAL STRIP

ROSETTI MARINO

1724000049-HV-DA-00027

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-203				Hq		1
77-TT-204				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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B-200 HV-MV SWITCHGEAR ROOM

MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO

1724000049-HV-DA-00027

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
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
F4		*docker*		*Hq*	*6b*	1
FU21.1		*Single-pole fuse*		*Hq*	21	1
FU22.1		*Single-pole fuse*		*Hq*	22	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-77-201		*Single-phase alternating current motor*		*Hq*	8	1
HDZ-77-201		*NC Limit Switch*		*Hq*	12	1
HDZ-77-201		*Limit Switch: No*		*Hq*	12	1
HDZ-77-202		*Single-phase alternating current motor*		*Hq*	*9a*	1
HDZ-77-202		*NC Limit Switch*		*Hq*	14	1
HDZ-77-202		*Limit Switch: No*		*Hq*	14	1
HFD-77004		*NC Limit Switch*		*Hq*	16	1
HFD-77004		*Limit Switch: No*		*Hq*	17	1
HFD-77004				*Hq*	*25th*	1
HFD-77005		*NC Limit Switch*		*Hq*	17	1
HFD-77005		*Limit Switch: No*		*Hq*	17	1
HFD-77005				*Hq*	*25th*	1
HFD-77006		*NC Limit Switch*		*Hq*	17	1
HFD-77006		*Limit Switch: No*		*Hq*	17	1
HFD-77006				*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

REV.	MODIFICA	DATA	FIRMA
03	ISSUE FOR APPROVAL	06/07/24	
02	ISSUE FOR APPROVAL	13/06/24	
01	ISSUE FOR APPROVAL	15/04/24	

DATA	15/04/2024
DISEGN.	F.M.
VISTO	S.S.
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CLIENT:
CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM

MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO

1724000049-HV-DA-00027

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-77-004				*Hq*		1
HSS-77-005				*Hq*		1
HSS-77-006				*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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MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO

1724000049-HV-DA-00027

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

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LISTA METERIALI

ROSETTI MARINO

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FG. 29
F.S. 30

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
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-77-201		*Pressure-controlled (pressure switch) No*		*Hq*	16	1
PDSL-77-201				*Hq*		1
PDSL-77-202		*Pressure-controlled (pressure switch) No*		*Hq*	16	1
PDSL-77-202				*Hq*		1
PDT-77-201		*Pressure-controlled (pressure switch) No*		*Hq*	16	1
PDT-77-201				*Hq*		1
PDT-77-202		*Pressure-controlled (pressure switch) No*		*Hq*	16	1
PDT-77-202				*Hq*		1
PF6A.1	*GSF10*	*air intake filter 100x100*	*Cosmotec*	*Hq*	*6th*	1
	GSV1000220	*Panel Fan 100x100 230V 24m³/h*	*Cosmotec*			1
PF8.1	*GSV1000220*	*Panel Fan 100x100 230V 24m³/h*	*Cosmotec*	*Hq*	8	1
	GSF10	*air intake filter 100x100*	*Cosmotec*			1
PF9A.1	*GSV1000220*	*Panel Fan 100x100 230V 24m³/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*	*6th*	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
	5ST3010	*Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker*	*siemens*			1

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MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO

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FG. 30
F.S. 31

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
QF4	*5su1354-1kk06*	*RCD, 10 kA, 1P N, AC Type, 30 mA, C, In: 6 A, One AC: 230 V*	*siemens*	*Hq*	*6b*	1
	5ST3010	*Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker*	*siemens*			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	*5SY7410-7*	*Circuit breaker 400 V 15kA, 4P, C, 10 A, 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

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FG. 31
F.S. 32

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
VSD 1	*6SL3210-5BE22-2CV0*	*SinamiCs V20 3AC380-480V 2.2KW with C3 Filter*	*siemens*	*Hq*	7	1
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*		12
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
03	ISSUE FOR APPROVAL	06/07/24	
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
frigotermica@frigotermica.com

CLIENT:
CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 HV-MV SWITCHGEAR ROOM

Distinta Materiali
Bill of Materials

ROSETTI MARINO

1724000049-HV-DA-00027

FG. 32
F.S. 71_GS_LI

ITEM	Tag	B-200	: Shelter LV (400V) Switchroom B-200			Dwg	
	S/Sys	77-20	: HVAC LV Switchgear Room B-200			Module	LD_B-200
TASK	code	C10002299		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.	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.	PL
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"	

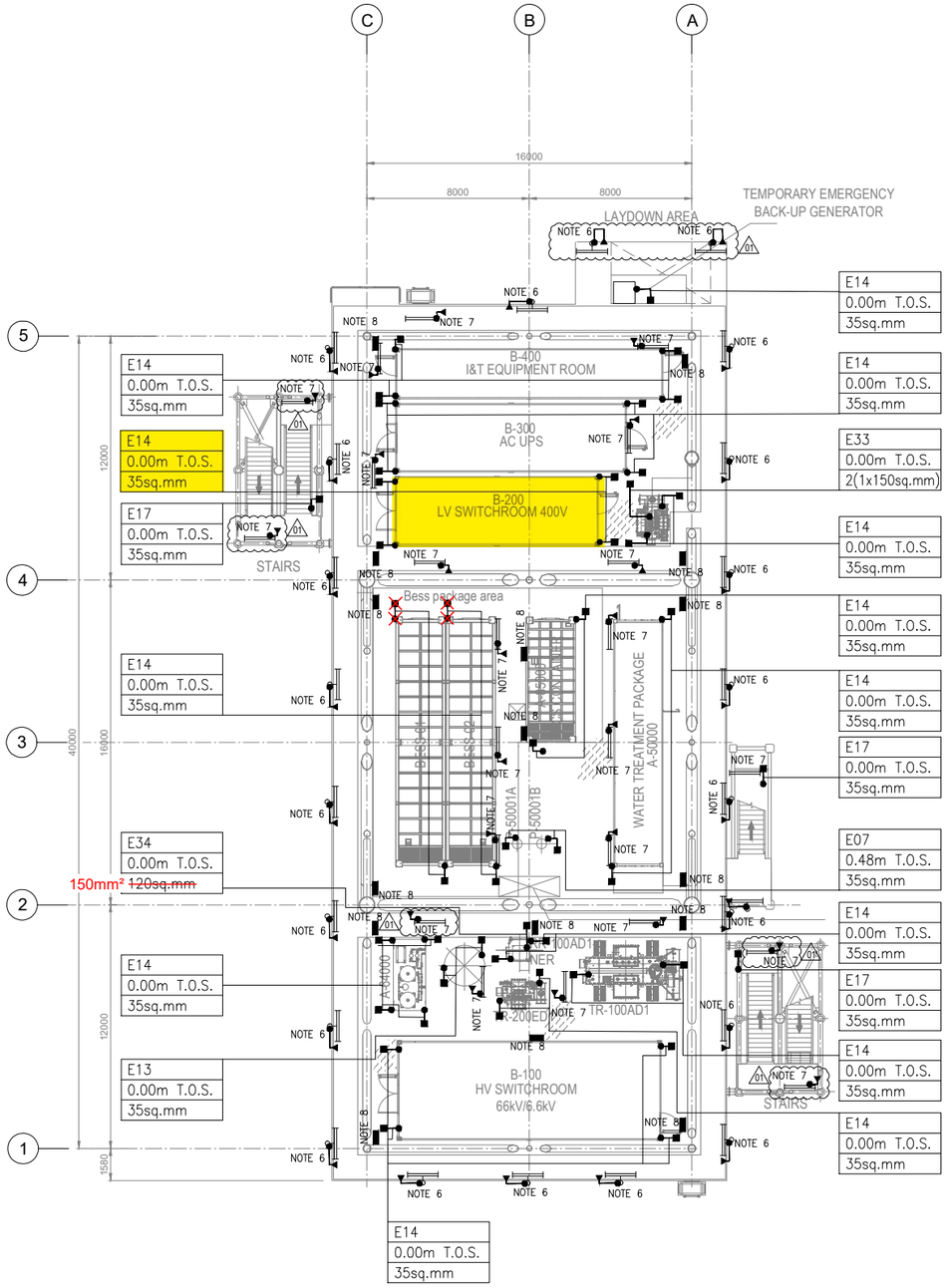
Comments: Note : Refer to Punch list raised during first step of FAT:

Point 2 PL: C30000023
Point 3 PL: C30000043 / C30000047 / C30000069 / C30000077
Point 7 PL:C30000035 / C3000039

Page 1/1	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-10	2024-10-10	
Signature	Digitaly signed by Carmelo Bongiovanni 2024-10-10T15:57:50.461Z	Digitaly signed by Giovanni Tangianu 2024-10-10T16:07:01.385Z	

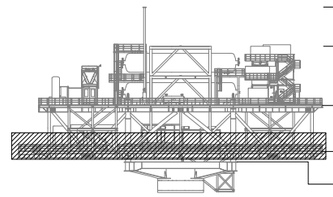
DRAWING NO. 123A90-DDL-EL-DL-20133

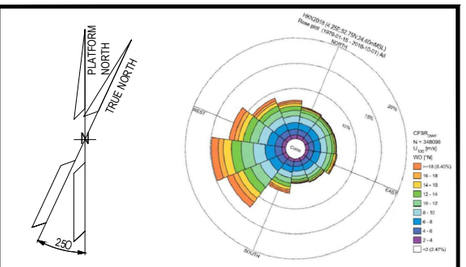
REV. 01



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

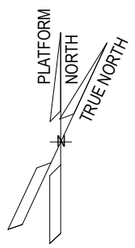
SHEET 001 OF 002

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

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

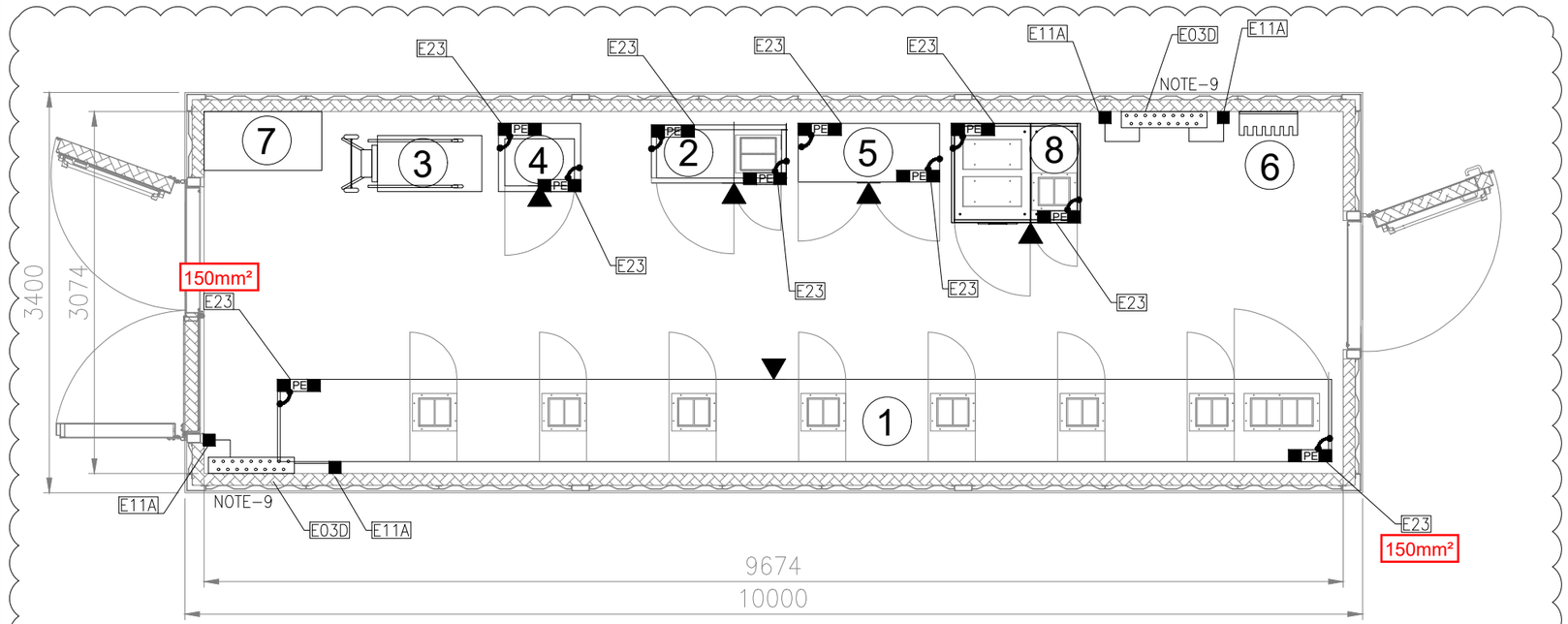
ROSETTI MARINO SpA

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



EQUIPMENT LIST		
REF.	TAG No.	DESCRIPTION
1	SG-200N1	400V SWITCHGEAR
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.
3		SERVICE TROLLEY FOR 400V SWITCHGEAR
4	CN-200N1	ICCP PANEL
5	B200-HSB-001	HVAC PANEL – LV ROOM
6		TOOL BOX
7		TABLE
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE

01



EARTHING LAYOUT
"B-200"LV SWITCHROOM
PLAN
EL.+ 23.310 T.O.S.

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 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

REFERENCE	
DOCUMENT NUMBER	DOCUMENT TITLE
123A90-DDL-EL-DD-20090	ELECTRICAL TYPICAL INSTALLATION DETAILS -EARTHING SYSTEM
123A90-DDL-EL-DL-20105	ELECTRICAL EQUIPMENT LAYOUT-LV SWITCHROOM
1724000049-AR-DD-00019	B-200 DETAILED DRAWINGS – E&I SHELTERS

01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20137**

REV.:	DATE:	SIGNATURE:
1_B	02/09/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING & LIGHTNING LAYOUT – LV SWITCHROOM
"B-200"LV SWITCHROOM

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

SCALE : 1:50

A3

DRAWING NO. 123A90-DDL-EL-DL-20137

SHEET 003

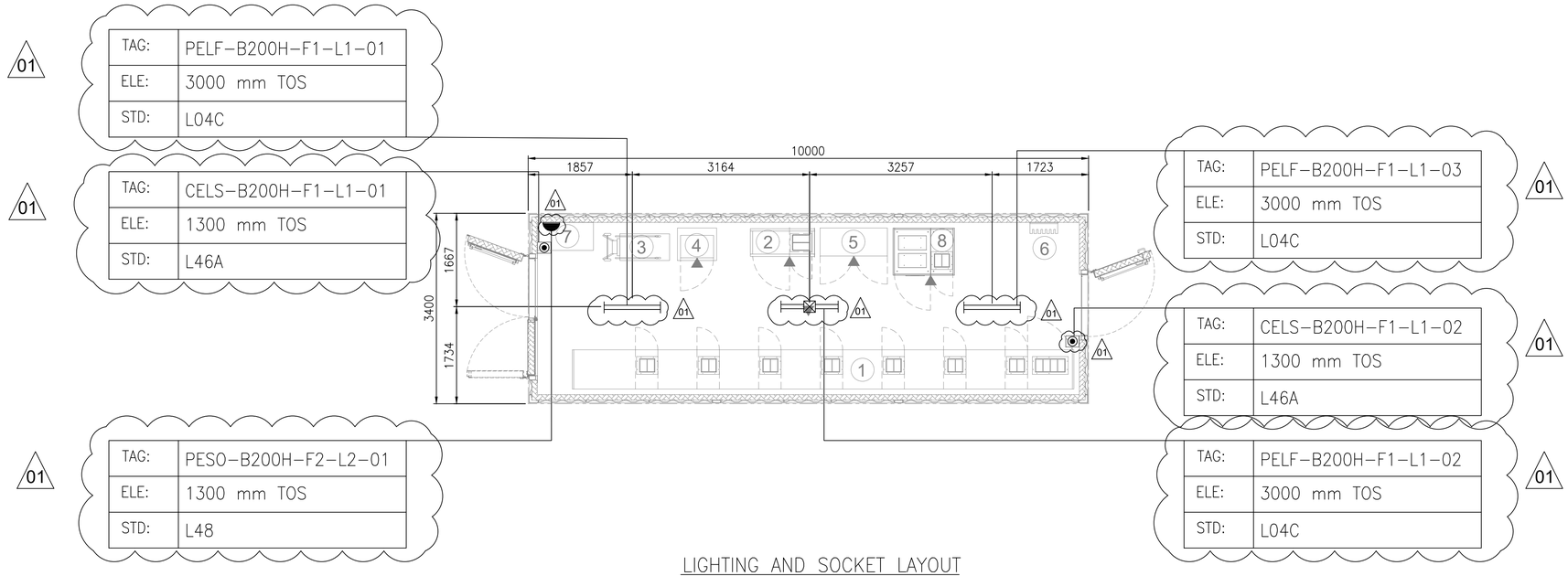
REV. 01

File Name : 123A90-DDL-EL-DL-20137 Rev. 01

F.to UNI A3: 420mmx297mm

DRAWING NO. 123A90-DDL-EL-DL-20123

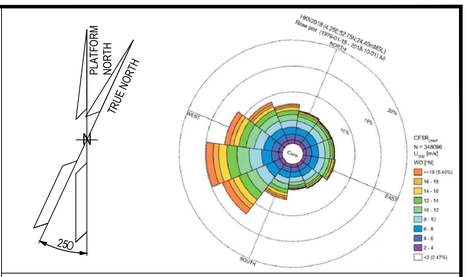
REV. 01



LIGHTING AND SOCKET LAYOUT
"B-200" LV (400V) SWITCHGEAR ROOM
PLAN

1 EQUIPMENT LIST

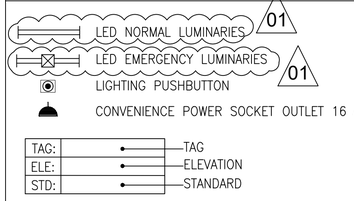
REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	
3	-	SERVICE TROLLEY FOR 400V SWITCHGEAR	1034	490	2030	
4	CN-200N1	ICCP PANEL	700	580	1830	
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	
6	-	TOOL BOX	495	200	200	
7	-	TABLE	1000	500	750	
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF LAMPS AND PUSHBUTTON ARE REFERRED TO THE BOTTOM OF THE LAMP
4. CABLE FOR LIGHTING PUSHBUTTON LOCATED OUTSIDE THE CONTAINER WILL ENTER THROUGH MCT

LEGEND



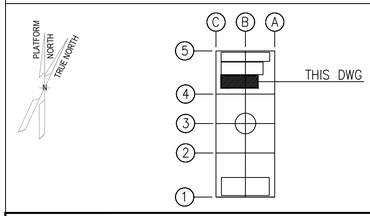
HOLDS

REFERENCE

DOCUMENT NUMBER	DOCUMENT TITLE
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT – HV SWITCHROOM
123A90-DDL-EL-DL-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS – LIGHTING SYSTEM
1724000049-AR-DA-00015	B-200 GENERAL ARRANGEMENT DRAWINGS
1724000049-EL-LIS-00044	B-200 ELECTRICAL COMPONENTS LIST AND DS – E&I SHELTERS

KEY PLAN

01



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	24/07/2024	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	06/05/2024	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

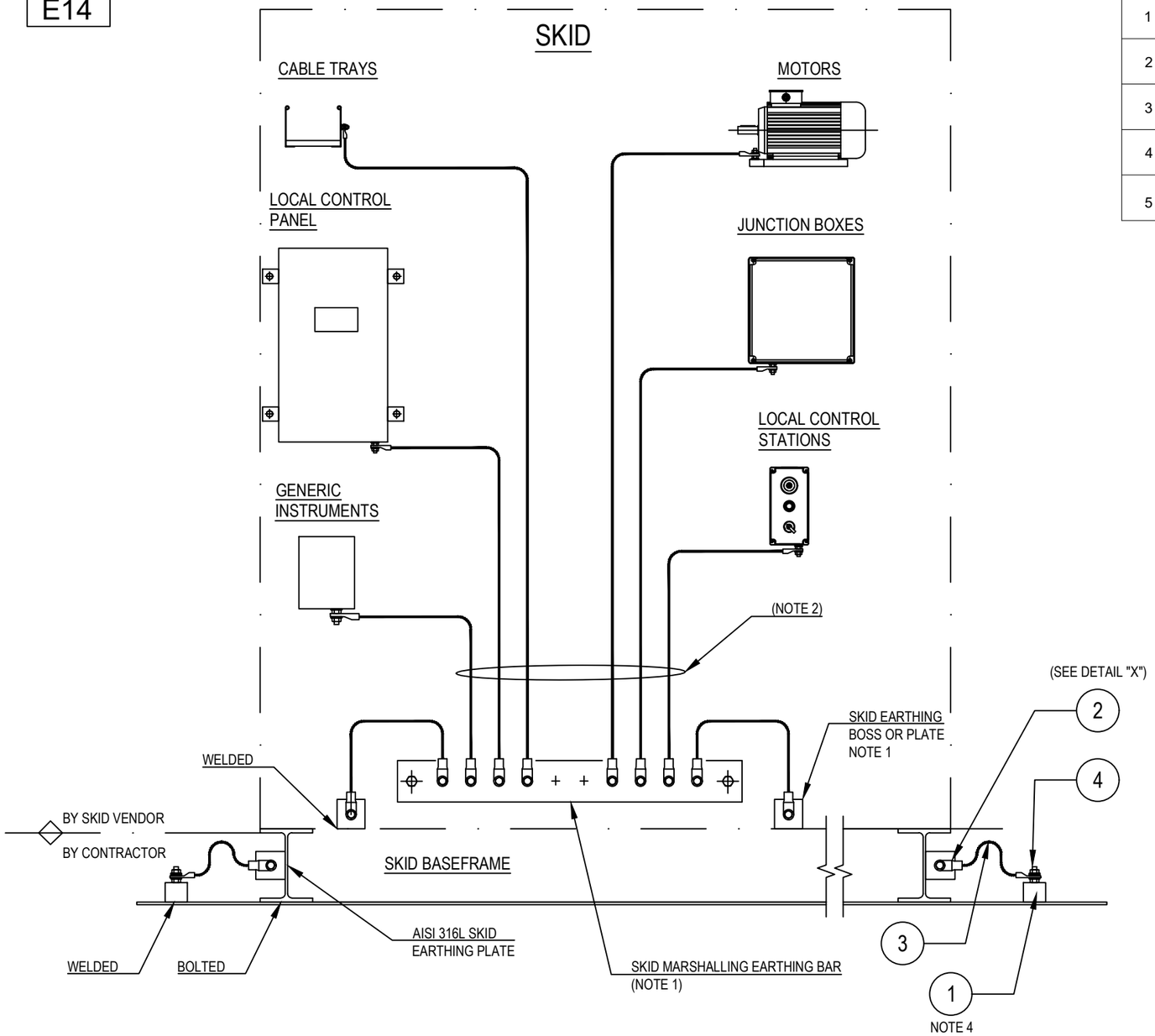
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FDL DWG: 123A90-FDL-EL-DL-20123
REV.: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT
LV SWITCHROOM

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 24/07/2024
A1	DRAWING NO. 123A90-DDL-EL-DL-20123	SHEET 001	REV. 01

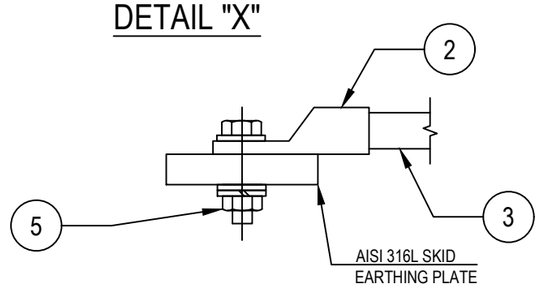
File Name : 123A90-DDL-EL-DL-20123

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_D	25/09/24	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

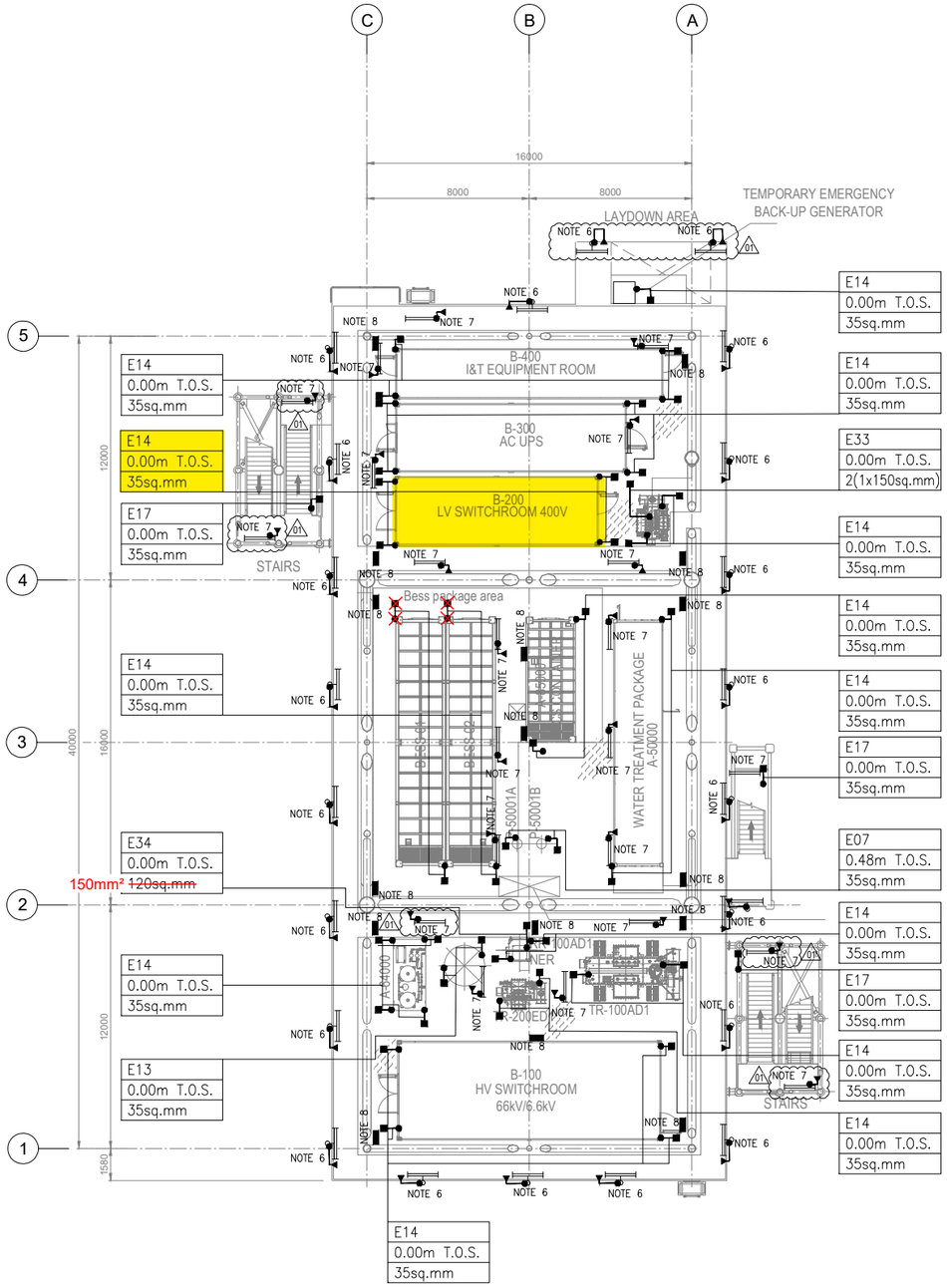
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

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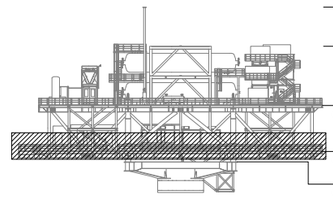
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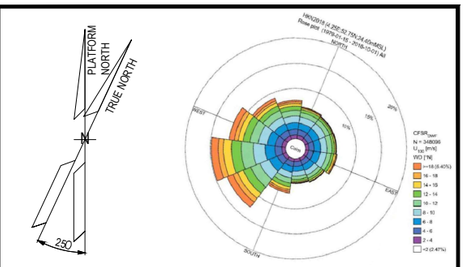
REV. 01



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**

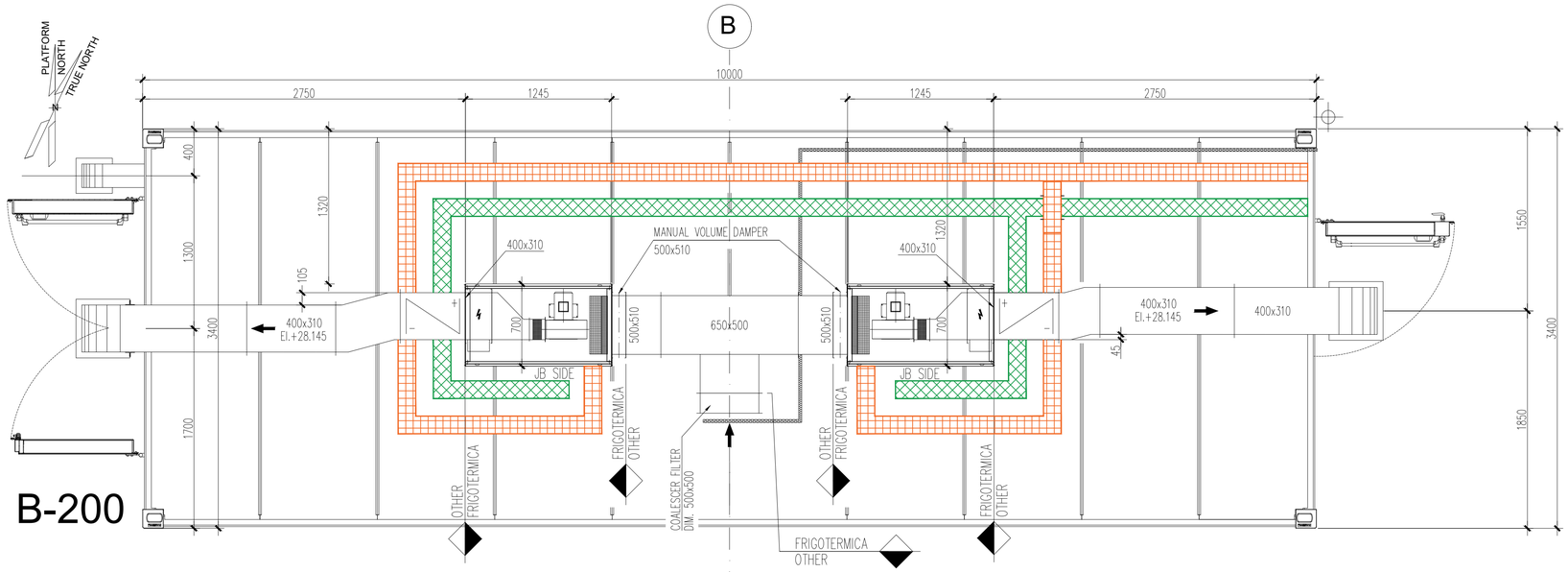
REV.:	DATE:	SIGNATURE:
1_B	11/09/24	G.Randi

ROSETTI MARINO SpA

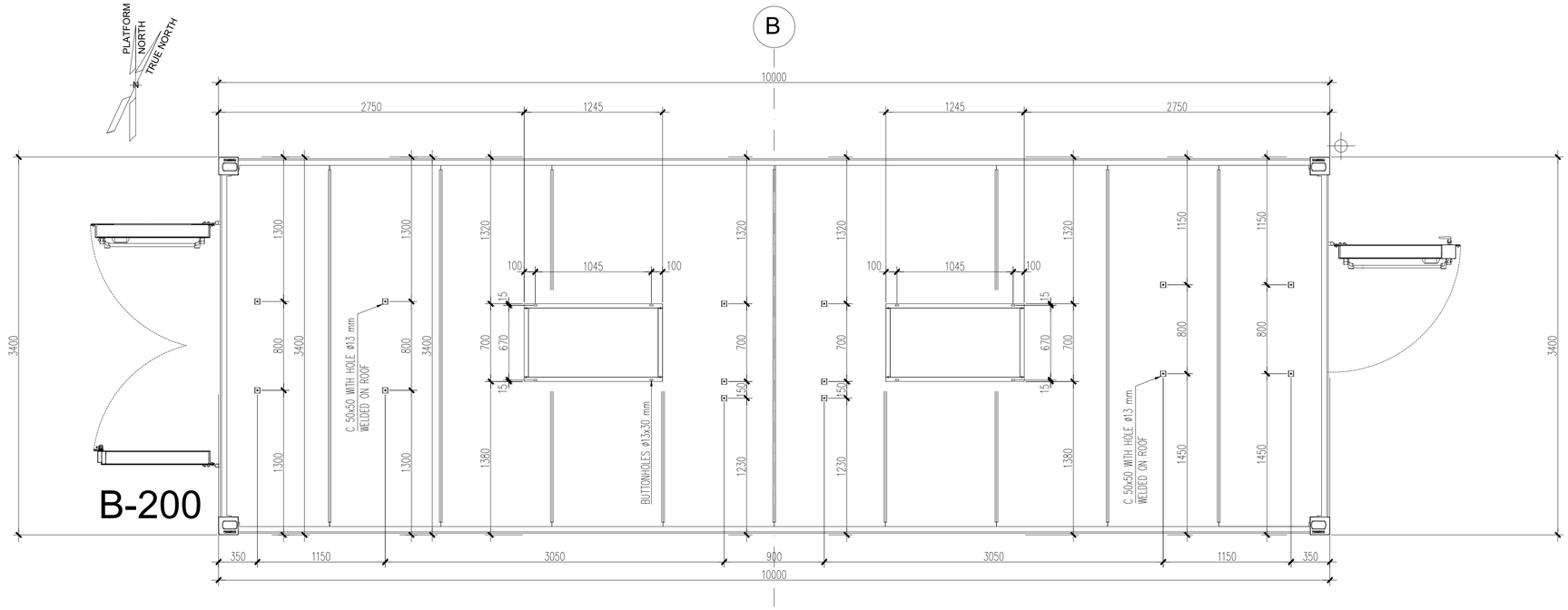
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DRAWING NO. 1724000049-HV-DA-00065_0

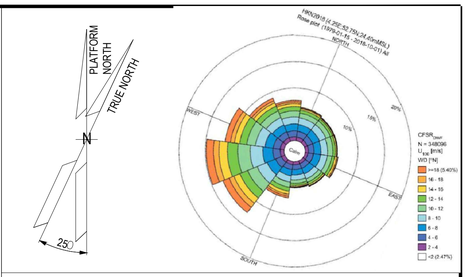
REV. 00



HVAC SYSTEM ROOF PLAN

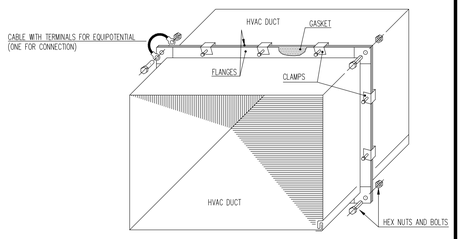


HVAC SUPPORT PLAN ON ROOF



NOTES

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

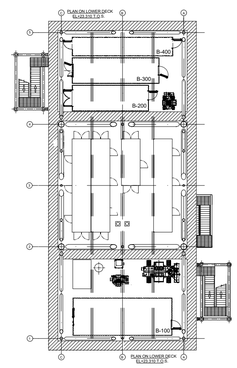


TYPICAL EQUIPOTENTIAL INSTALLING FOR FLANGE CONNECTION INDOOR AIR DUCT

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-200
HVAC SYSTEM - G.A. AND DETAILS

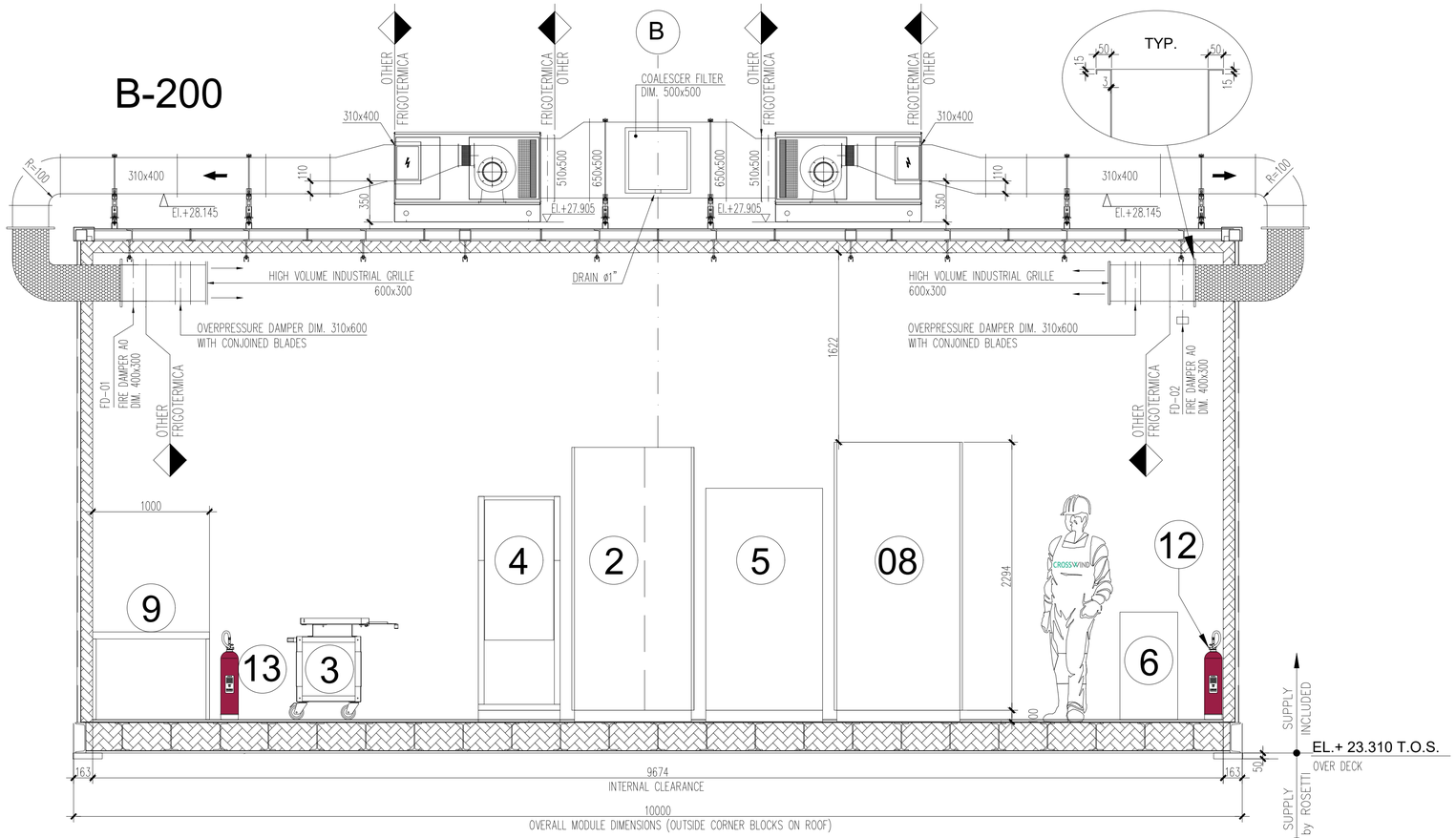
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 25
DRAWN S.Z.	CHECKED S.S.	APPROVED M.G.	DATE 13/06/2024
A1	DRAWING NO. 1724000049-HV-DA-00065	SHEET 001	REV. 00

File Name : 1724000049-HV-DA-00065_0

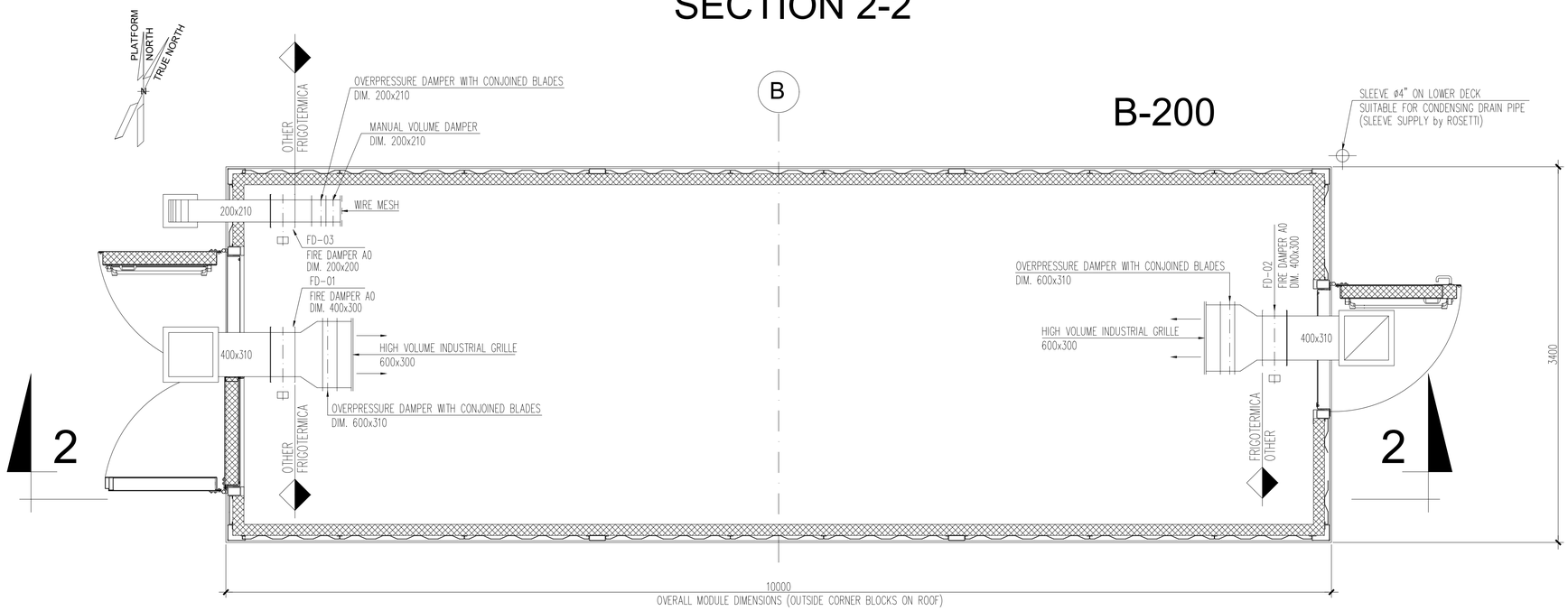
DRAWING NO. 1724000049-HV-DA-00065_0

REV. 00

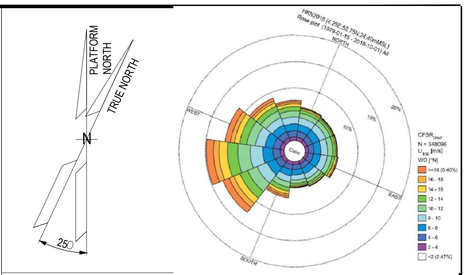
B-200



SECTION 2-2

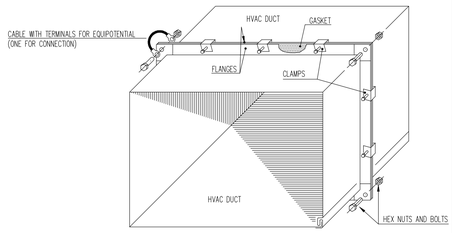


HVAC SYSTEM INDOOR DUCT LAYOUT



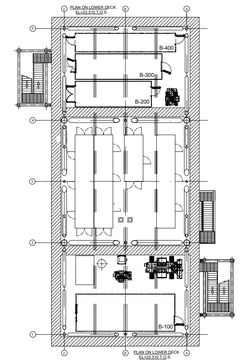
NOTES

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



TYPICAL EQUIPOTENTIAL INSTALLING FOR FLANGE CONNECTION INDOOR AIR DUCT

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-200
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-00065	SHEET 002	REV. 00

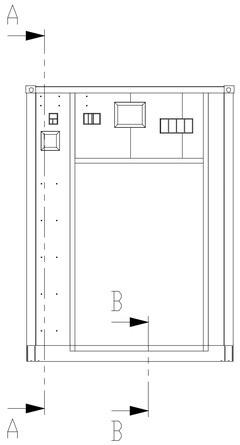
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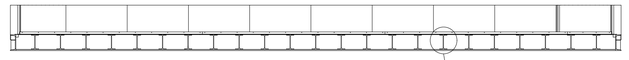
DRAWING NO. 1724000049-AR-DD-00019

REV. 02

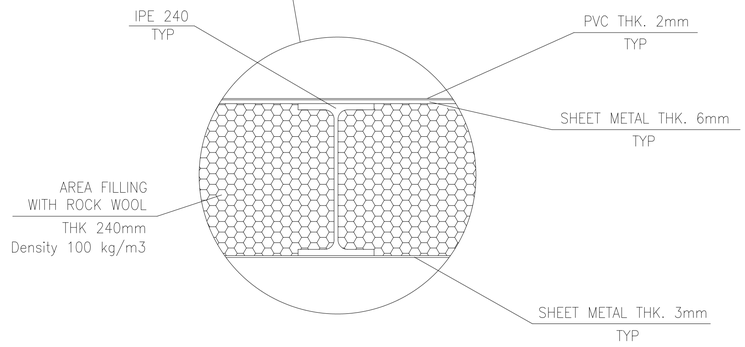
MODULE B-200

REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" STRUCTURAL CALCULATION	1724000049-ST-CA-00007
Weld Procedure Specifications (WPS), Weld Procedure Qualification Report (WPQR), Welding Map and Welders Qualifications	1724000049-WEL-RE-00003

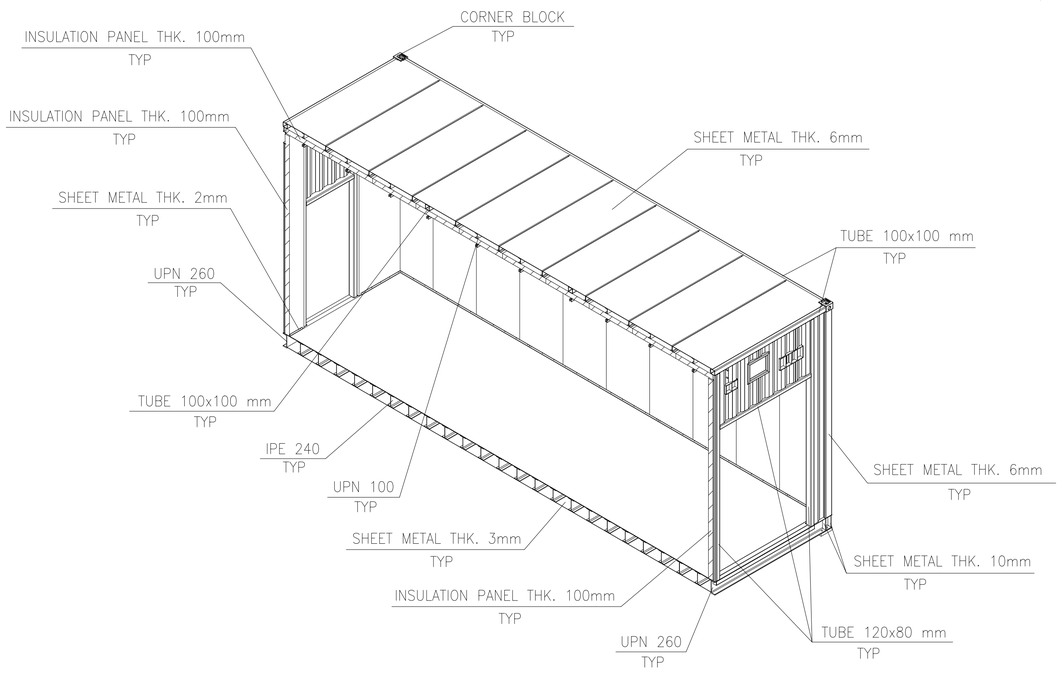




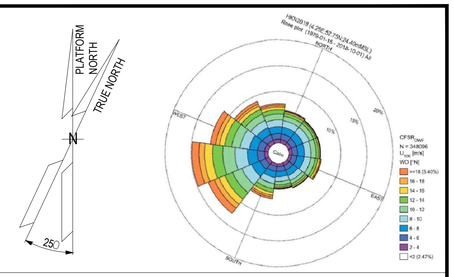
SECTION B-B



DETAIL "C"

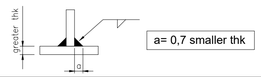


SECTION A-A



NOTES

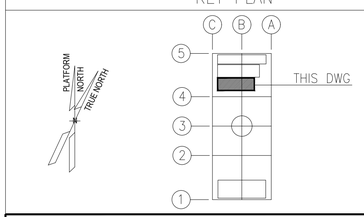
1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D.1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



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 CLIENT REVIEW (ICR)

CROSSWIND

ROSETTI MARINO

TITLE :

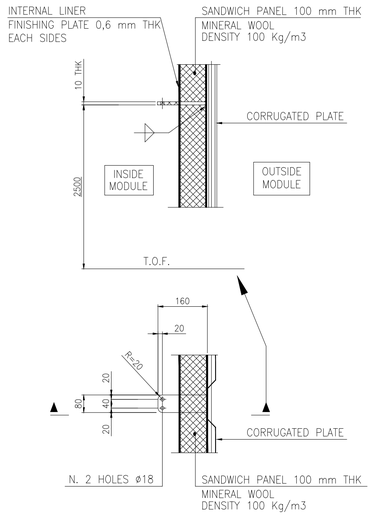
B-200 DETAILED DRAWINGS-E&I SHELTERS

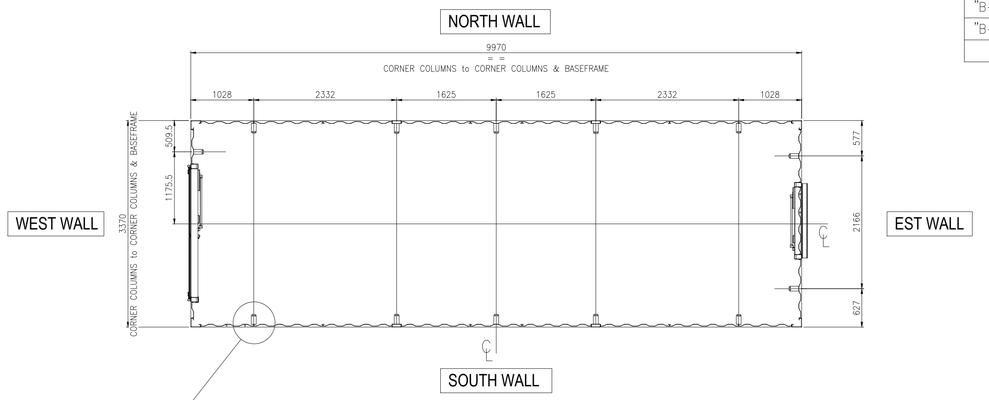
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00019	SHEET 001	REV. 02

File Name : 1724000049-AR-DD-00019-REV.02

DRAWING NO. 1724000049-AR-DD-00019 REV. 02

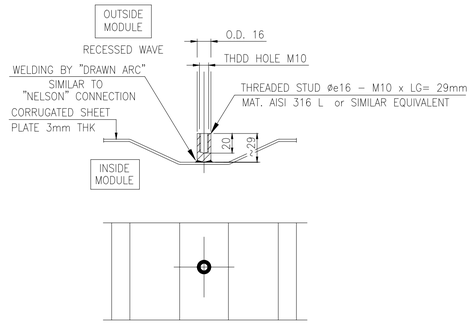
REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00015
"B-200" HVAC GENERAL ARRANGEMENT	1724000049-HV-DA-00065



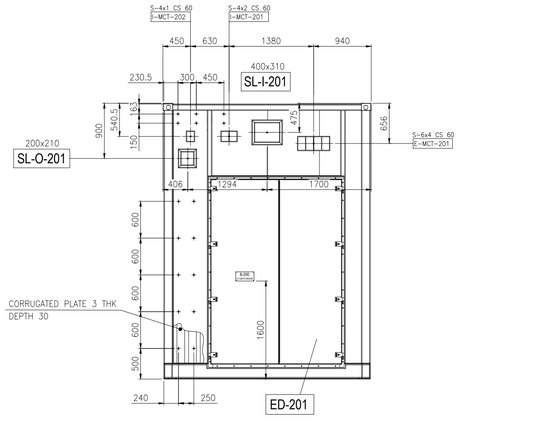


MODULE B-200

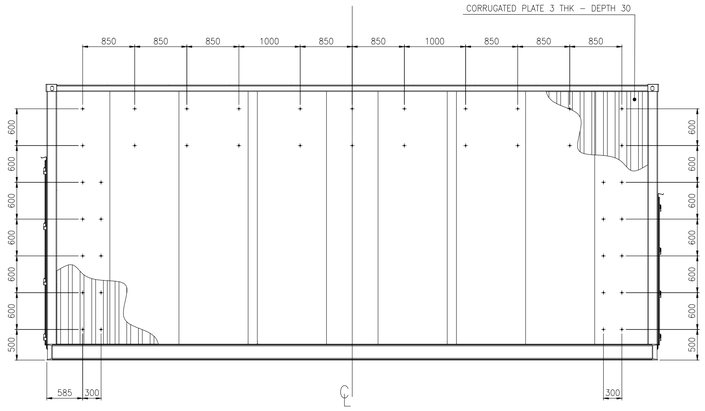
INTERNAL SEA FASTENING PLATES PLAN



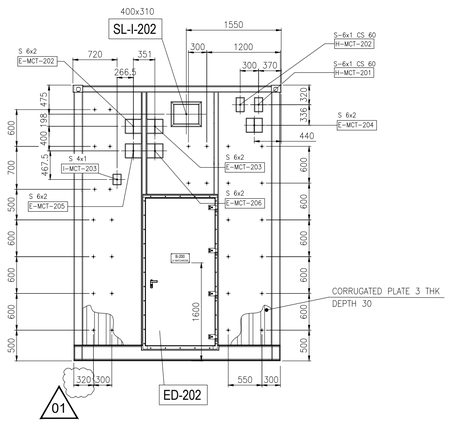
THREADED STUD INSTALLATION



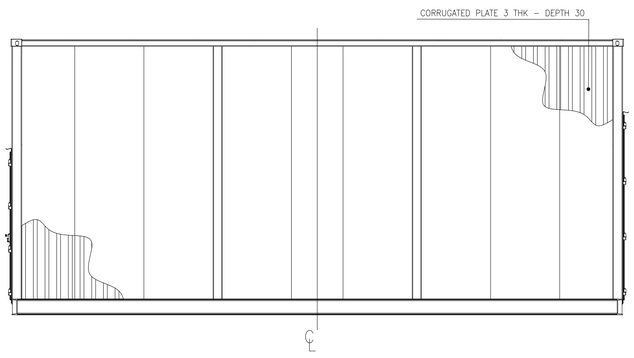
VIEW OF WEST WALL



VIEW OF NORTH WALL



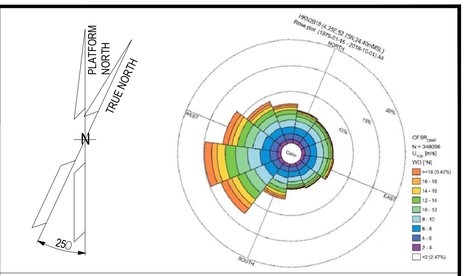
VIEW OF EAST WALL



VIEW OF SOUTH WALL

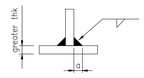
MCT LIST

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-201	532	238	60	6x4	
	E-MCT-202	271	238	60		6x2
	E-MCT-203	271	238	60		6x2
	E-MCT-204	271	238	60	6x2	
	E-MCT-205	271	238	60		6x2
	E-MCT-206	271	238	60		6x2
INSTRUMENTAL	I-MCT-201	271	179.5	60	4x2	
	I-MCT-202	140.5	179.5	60	4x1	
	I-MCT-203	140.5	179.5	60	4x1	
HVAC	H-MCT-201	140.5	238	60	6x1	
	H-MCT-202	140.5	238	60	6x1	



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-201
- MCT TYPE & SIZE: BRAND ROXTEC
- MATERIAL: C.S.= PRIMED MILD STEEL; S.S.= AISI 316 L
- MCT DEPTH: S 6x2 C.S. 60
- PROGRESSIVE NUMBER: FROM 01
- MCT SERVICE: E= ELECTRICAL; I= INSTRUMENTAL; H= HVAC
- MODULE LOCATION: 1= B-100 3= B-300 2= B-200 4= B-400

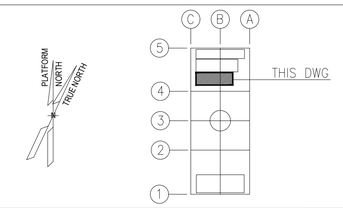
HVAC SLEEVE LEGEND:

300x300 SL-I-201
- INTERNAL SIZE OF DUCT: L x H (mm)
- PROGRESSIVE NUMBER: FROM 01
- SERVICE: I= AIR IN; R= RECYRCLE; O= OVERPRESSURE
- MODULE LOCATION: 1= B-100 3= B-300 2= B-200 4= B-400

DOOR LEGEND:

ED-201
- 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-200 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

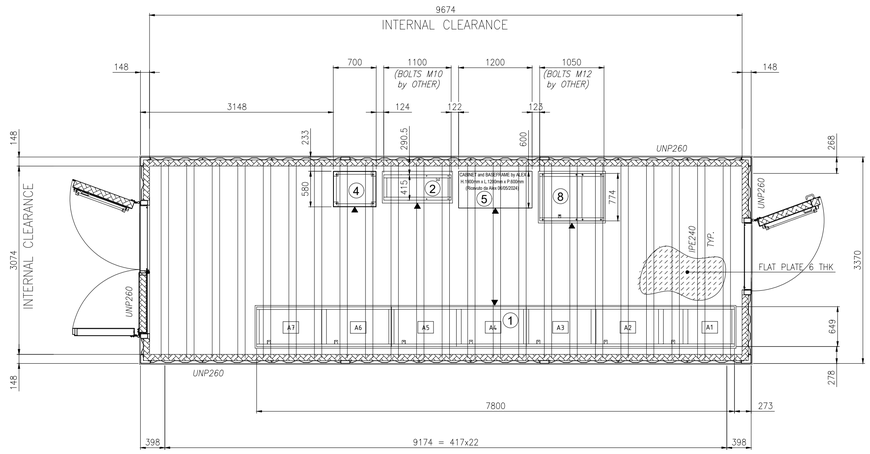
A1	DRAWING NO. 1724000049-AR-DD-00019	SHEET 002	REV. 02

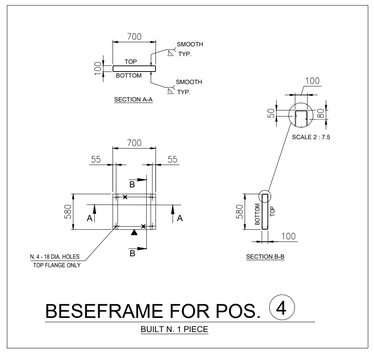
File Name : 1724000049-AR-DD-00019-REV.02

DRAWING NO. 1724000049-AR-DD-00019

REV. 02

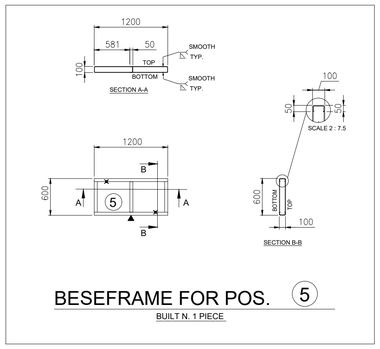
B-200
I&T EQUIPMENT ROOM
BASEFRAME LOCATION PLAN





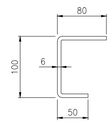
BESEFRAME FOR POS. 4

BUILT N. 1 PIECE

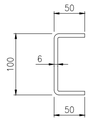


BESEFRAME FOR POS. 5

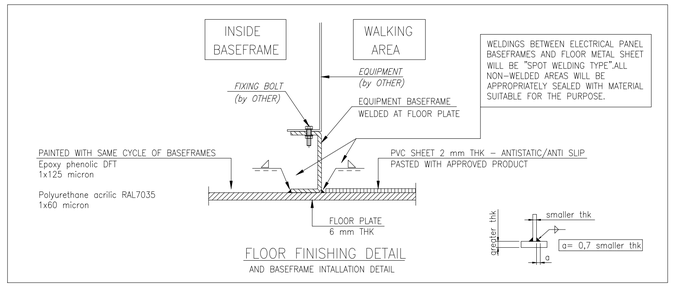
BUILT N. 1 PIECE



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

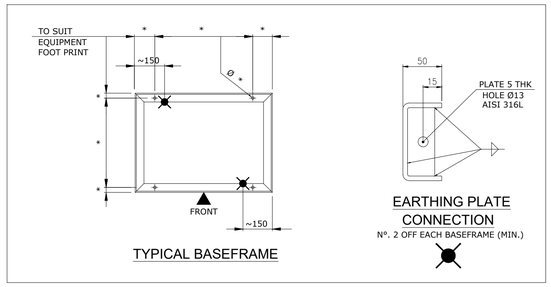


C 100x50x50 THK 6mm.
FROM BENT PLATE THK 6mm.
MAT. CARBON STEEL

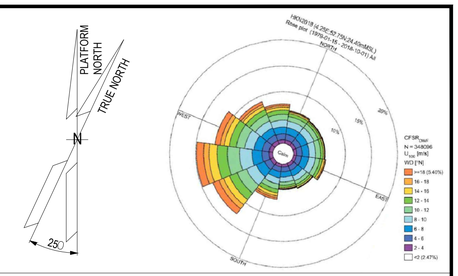


FLOOR FINISHING DETAIL

AND BASEFRAME INTALLATION DETAIL

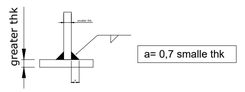


TYPICAL BASEFRAME



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.

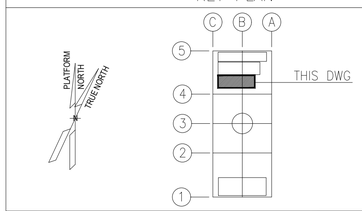
LEGEND

ASI = ALEX SISTEMI

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	SCOPE
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	4900	ROSETTI MARINO
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	600	ROSETTI MARINO
4	CN-200N1	ICCP PANEL	700	580	1830	250	ASI
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	TBD	ASI
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	1000	ROSETTI MARINO

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 :

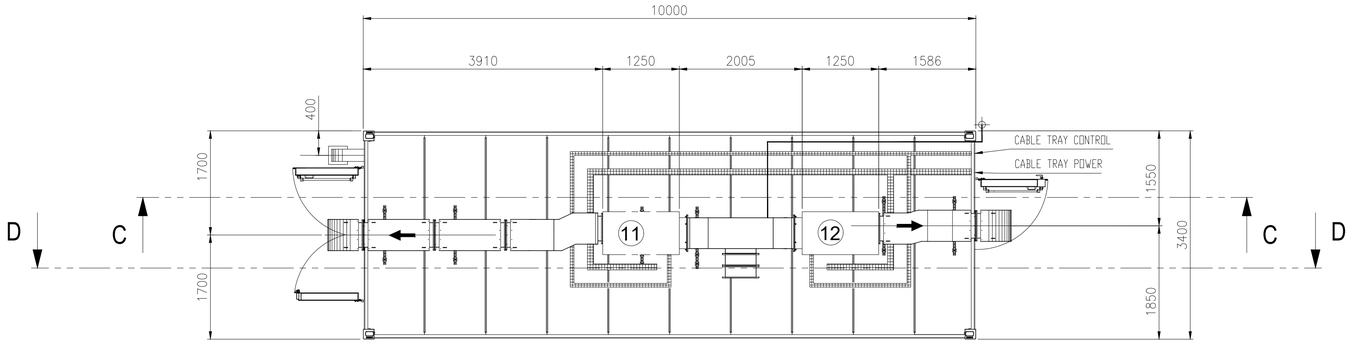
B-200 DETAILED DRAWINGS-E&I SHELTERS

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-00019	SHEET 003	REV. 02

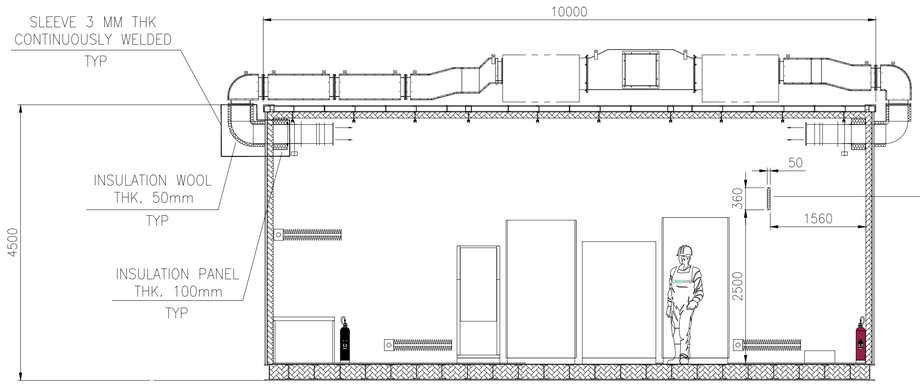
File Name : 1724000049-AR-DD-00019-REV.02

DRAWING NO. 1724000049-AR-DD-00019

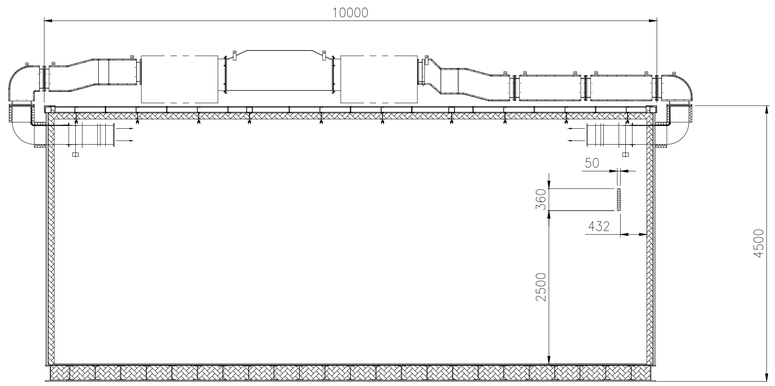
REV. 02



TOP VIEW



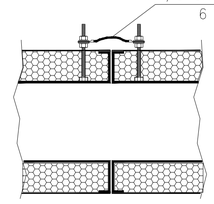
SECTION C-C



SECTION D-D

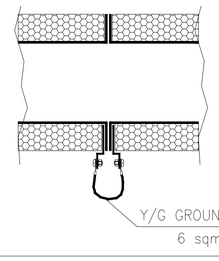
DET. 1

EXTERNAL DUCT



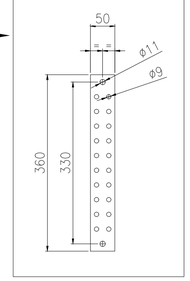
DET. 2

INTERNAL DUCT



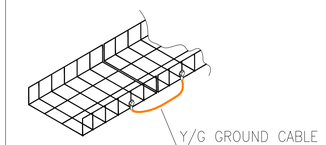
DET. 3

TYPICAL DETAIL
Ground bar



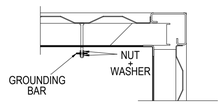
DET. 4

TYPICAL DETAIL
Cable tray grounding system



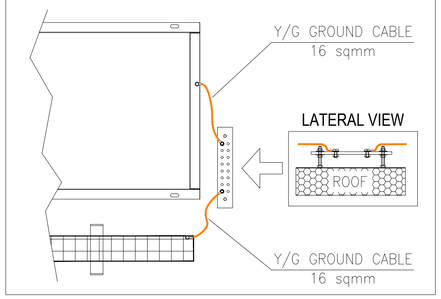
DET. 5

TYPICAL INSTALLATION BTH PE



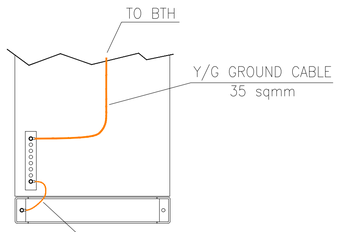
DET. 6

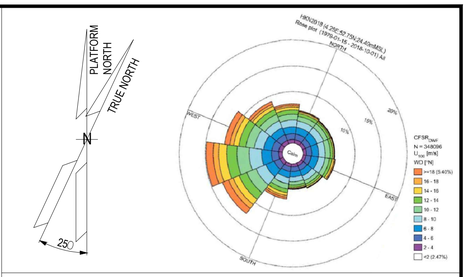
TYPICAL ROOF GROUNDING CONNECTION



DET. 7

TYPICAL CABINET GROUNDING CONNECTION



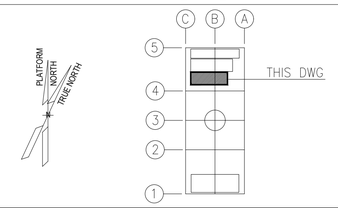


NOTES

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-200 DETAILED DRAWINGS-E&I SHELTERS

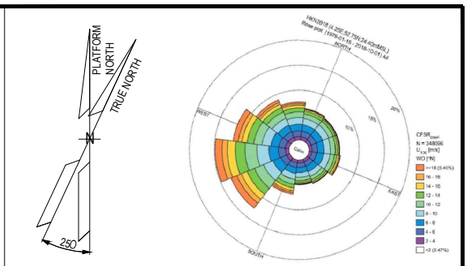
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00019	SHEET 004	REV. 02

File Name : 1724000049-AR-DD-00019-REV.02

DRAWING NO. 123A90-1724000049-HV-PID-00040

REV. 01

BASE LOAD POWER HUB (BLPH)
B-200 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-200 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-00040	SHEET 001	REV. 01

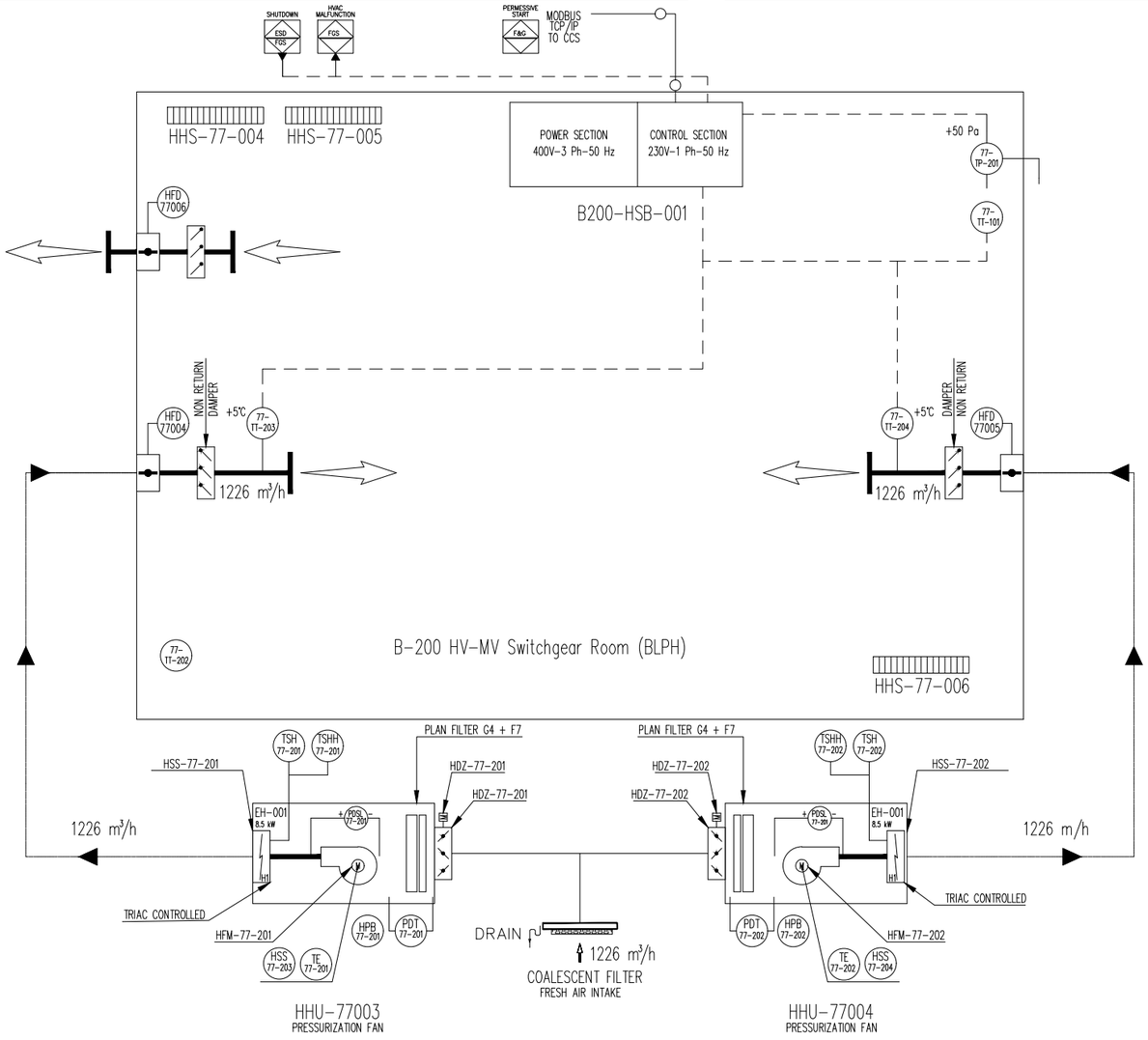
File Name : 123A90-1724000049-HV-PID-00040_REV.01

DRAWING NO. 123A90-1724000049-HV-PID-00040 | REV. 01

ITEM	HVAC-PRESSURISING FAN
DESCRIPTION	HVAC UNIT
MAKER	FRIGOTERMICA srl
MODEL	4112-TBA
SUPPLY AIR FLOW	1226 mc/h
COOLING COIL CAPACITY	N.A.
HEATING COIL CAPACITY	8.5 kW
TENSIONE	400 V - 50 Hz - 3 Ph+N
EXECUTION	SAFE AREA
REFRIGERANT	N.A.

LEGENDA

MD	MOTORISED DAMPER WITH SPRING RETURN	F1	AIR FILTER "G4"	MFD	MOTORISED FIRE DAMPER WITH SPRING RETURN
RD	REGULATION DAMPER	F2	BAG FILTER "F8"	EC	EVAPORATING COIL
OPD	OVERPRESSURE DAMPER	CC	CONDENSING COIL	LR	LIQUID RECEIVER
PSH	DIFFERENTIAL PRESSURE SWITCH HIGH PRESSURE	CF	CONDENSING FAN	MT	MOISTURE TRASMITTER
PSL	DIFFERENTIAL PRESSURE SWITCH LOW PRESSURE	SF	SUPPLY FAN	HPT	HIG PRESSURE TRASDUCER
TT	TEMPERATURE TRASMITTER	GV	GLOBE VALVE	TP	COMPRESSOR THERMIC PROTECTION
EPB	EMERGENCY PUSH BUTTON	DF	DRYER FILTER	TSH	SECURITI THERMOSTATE
OH	COMPRESSOR OIL HEATER	SG	SIGHT GLASS	PSH	HIGH PRESSURE SWITCH
SV	SOLENOID VALVE	TV	THERMOSTATIC VALVE	PSL	LOW PRESSURE SWITCH
C	REFRIGERANT COMPRESSOR	PRV	PRESSURE RELIEF VALVE	PC	CONDENSING PRESSURE SWITCH



OUTDOOR DESIGN CONDITIONS

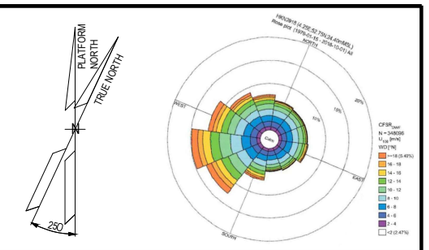
Safe Area
Min. design DB Temp: -8,4°C with RH 100 %
Max. design DB Temp: +25°C with RH 90 %

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-200 HV
P&ID HVAC System

CONTRACT NO./TITLE CW-1-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-00040	SHEET 001	REV. 01

File Name : 123A90-1724000049-HV-PID-00040-REV.01

B-200 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	B200-HSB-001	inside B200	N.A.	by Client	25,60	by Client	General power supply 400V 3ph+N+PE
2		4G4	by Client	by Client	by Client	by Client	by Client	by Client	by Client	HVAC PANEL	by Client	B200-HSB-001	inside B200	N.A.	by Client	12,10	by Client	UPS Power Supply 1ph+N+PE
3	77201-CEL-L1	5G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	BLINDO	2900.M20N	PECW-B200H-F1-L1-01	inside B200	N.A.	12,5	11,60	LOW VOLTAGE	
4	77202-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO	N.A.	PECW-B200H-F1-L1-01	inside B200	LAMP (E) 2	2900.M20N	PELF-B200H-F1-L1-01	inside B200	N.A.	0,5	10,80	LOW VOLTAGE	
5	77203-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO	N.A.	PECW-B200H-F1-L1-01	inside B200	LAMP 1	2900.M20N	PELF-B200H-F1-L1-02	inside B200	N.A.	0,5	9,80	LOW VOLTAGE	
6	77204-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO	N.A.	PECW-B200H-F1-L1-01	inside B200	LAMP 3	2900.M20N	PELF-B200H-F1-L1-03	inside B200	N.A.	0,5	9,80	LOW VOLTAGE	
7	77205-CEL-L2	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	MODULE SOCKET	2900.M20N	PESO-B200H-F2-L2-01	inside B200	N.A.	14,5	9,80	LOW VOLTAGE	
8	77201-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	MODULE SWITCH 1	2900.M20N	CELS-B200H-F1-L1-01	inside B200	N.A.	14,5	8,20	CONTROL	
9	77202-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	MODULE SWITCH 2	2900.M20N	CELS-B200H-F1-L1-02	inside B200	N.A.	14	8,20	CONTROL	
10	77206-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	SPACE HEATER	2900.M20N	HSS-77-004	inside B200	N.A.	11	9,80	LOW VOLTAGE	
11	77207-CEL-L2	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	SPACE HEATER	2900.M20N	HSS-77-005	inside B200	N.A.	12,5	9,80	LOW VOLTAGE	
12	77208-CEL-L3	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	SPACE HEATER	2900.M20N	HSS-77-006	inside B200	N.A.	14	9,80	LOW VOLTAGE	
13	77209-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PRESSURIZING FAN1	2900.M20N	HFM-77-201	HHU-77003	HJB-77003-A	20	10,80	LOW VOLTAGE	
14	77210-CEL-L1	4G6	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	ELECTRICAL HEATER	2900.M25N	HHS-77-201	HHU-77003	HJB-77003-A	20	13,80	LOW VOLTAGE	
15	77211-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PRESSURIZING FAN2	2900.M20N	HFM-77-202	HHU-77004	HJB-77004-A	15	10,80	LOW VOLTAGE	
16	77212-CEL-L1	4G6	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	ELECTRICAL HEATER	2900.M25N	HSS-77-202	HHU-77004	HJB-77004-A	15	13,80	LOW VOLTAGE	
17		TBA	by Client	0,6/1,0	by Client	SIS	by Client	by Client	by Client	HVAC PANEL	by Client	B200-HSB-001	inside B200	N.A.	by Client		by Client	
18		TBA	by Client	0,6/1,0	by Client	SIS	by Client	by Client	by Client	HVAC PANEL	by Client	B200-HSB-001	inside B200	N.A.	by Client		by Client	
19	77203-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PRESSURIZING FAN1 MOTOR PTC	2900.M20N	TE-77-201	HHU-77003	HJB-77003-B	20	8,20	CONTROL	
20	77204-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PRESSURIZING FAN 1 EMERGENCY BUTTON	2900.M20N	HPB-77-201	HHU-77003	HJB-77003-B	20	8,20	CONTROL	
21	77205-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	ELECTRICAL HEATER 1 PROTECTION THERMOSTATE	2900.M20N	TSH/TSHH-77-201	HHU-77003	HJB-77003-B	20	8,20	CONTROL	
22	77206-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PRESSURIZING FAN 1 MOTOR HEATER	2900.M20N	HSS-77-203	HHU-77003	HJB-77003-B	20	8,20	CONTROL	
23	77221-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PDT - FAN 1 FILTERS DIFFERENTIAL PRESSURE TRASMITTER	2900.M20N	PDT-77-201	HHU-77003	HJB-77003-B	20	11,10	CONTROL	
24	77222-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PDSL - FAN 1 DIFFERENTIAL PRESSURE SWITCH LOW PRESSURE	2900.M20N	PDSL-77-201	HHU-77003	HJB-77003-B	20	8,20	CONTROL	
25	77207-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PRESSURIZING FAN 2 MOTOR PTC	2900.M20N	TE-77-202	HHU-77004	HJB-77004-B	15	8,20	CONTROL	
26	77208-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PRESSURIZING FAN 2 EMERGENCY BUTTON	2900.M20N	HPB-77-202	HHU-77004	HJB-77004-B	15	8,20	CONTROL	
27	77213-CEL-L2	3G1,5	XLPE/UNEL S2	by Client	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	POWER SUPPLY MOTORISED DAMPER	2900.M20N	HDZ-77-201	HHU-77003	HJB-77003-A	20	9,80	LOW VOLTAGE	
28	77216-CEC-L2	4x1,5	XLPE/UNEL S2	by Client	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	SIGNAL MOTORISED DAMPER	2900.M20N	HDZ-77-201	HHU-77003	HJB-77003-B	20	9,70	CONTROL	
29	77209-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	ELECTRICAL HEATER 2 PROTECTION THERMOSTATE	2900.M20N	TSH/TSHH-77-202	HHU-77004	HJB-77004-B	15	8,20	CONTROL	
30	77210-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PRESSURIZING FAN 2 MOTOR HEATER	2900.M20N	HSS-77-204	HHU-77004	HJB-77004-B	15	8,20	CONTROL	
31	77223-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PDT - FAN 2 FILTERS DIFFERENTIAL PRESSURE TRASMITTER	2900.M20N	PDT-77-202	HHU-77004	HJB-77004-B	15	11,10	CONTROL	
32	77224-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PDSL - FAN 2 DIFFERENTIAL PRESSURE SWITCH LOW PRESSURE	2900.M20N	PDSL-77-202	HHU-77004	HJB-77004-B	15	8,20	CONTROL	
33	77214-CEL-L2	3G1,5	XLPE/UNEL S2	by Client	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	POWER SUPPLY MOTORISED DAMPER	2900.M20N	HDZ-77-202	HHU-77004	HJB-77004-A	15	9,80	LOW VOLTAGE	
34	77217-CEC-L2	4x1,5	XLPE/UNEL S2	by Client	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	SIGNAL MOTORISED DAMPER	2900.M20N	HDZ-77-202	HHU-77004	HJB-77004-B	15	9,70	CONTROL	
35	77225-CEC-L2	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	TEMPERATURE TRASMITTER 1	2900.M20N	77-TT-201	inside B200	N.A.	11	11,10	CONTROL	
36	77226-CEC-L2	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	TEMPERATURE TRASMITTER 2	2900.M20N	77-TT-202	inside B200	N.A.	14	11,10	CONTROL	
37	77227-CEC-L2	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	TEMPERATURE TRASMITTER 3	2900.M20N	77-TT-203	inside B200	N.A.	11	11,10	CONTROL	Mounted on internal sleeve
38	77228-CEC-L2	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	TEMPERATURE TRASMITTER 4	2900.M20N	77-TT-204	inside B200	N.A.	12	11,10	CONTROL	Mounted on internal sleeve
39	C-77-TP-201/B100-HSB-001	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	DIFFERENTIAL PRESSURE TRASMITTER	2900.M20N	77-TP-201	inside B200	N.A.	11	11,10	CONTROL	
40	77218-CEC-L2	4x1,5	XLPE/UNEL S2	by Client	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77004	inside B200	N.A.	15	9,70	CONTROL	
41	77219-CEC-L2	4x1,5	XLPE/UNEL S2	by Client	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77005	inside B200	N.A.	12	9,70	CONTROL	
42	77220-CEC-L2	4x1,5	XLPE/UNEL S2	by Client	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77006	inside B200	N.A.	11	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: 77-20 & process: MC & discipline : I

Instrumental	77-20 HVAC LV Switchgear Room B-200

ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
77-HS-004A	Hand Switch for Fire&Gas Damper HFD-77004	ONSHORE	C10002083	CJX00	100	2024-11-21	RFC 2
77-HS-004B	Hand Switch for Fire&Gas Damper HFD-77004	ONSHORE	C10002084	CJX00	100	2024-11-21	RFC 2
77-HS-005A	Hand Switch for Fire&Gas Damper HFD-77005	ONSHORE	C10002085	CJX00	100	2024-11-21	RFC 2
77-HS-005B	Hand Switch for Fire&Gas Damper HFD-77005	ONSHORE	C10002086	CJX00	100	2024-11-21	RFC 2
77-HS-006A	Hand Switch for Fire&Gas Damper HFD-77006	ONSHORE	C10002087	CJX00	100	2024-11-21	RFC 2
77-HS-006B	Hand Switch for Fire&Gas Damper HFD-77006	ONSHORE	C10002088	CJX00	100	2024-11-21	RFC 2
B-200	Shelter LV (400V) Switchroom B-200	ONSHORE	C10002300	CZX01I	100	2024-10-10	RFC 2
B200-HSB-001/B400-FGS-003	B-200 HVAC Control Panel / MARSHALLING PCS	ONSHORE	C10002036	CJX10	100	2024-11-19	RFC 2
C-77-HS-004A/77-HS-004B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000367	CJX10	100	2024-11-21	RFC 2
C-77-HS-004B/950-JE-04203	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000366	CJX10	100	2024-11-21	RFC 2
C-77-HS-005A/77-HS-005B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000370	CJX10	100	2024-11-21	RFC 2
C-77-HS-005B/950-JE-04203	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000369	CJX10	100	2024-11-21	RFC 2
C-77-HS-006A/77-HS-006B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000373	CJX10	100	2024-11-21	RFC 2
C-77-HS-006B/950-JE-04203	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000372	CJX10	100	2024-11-21	RFC 2
C-77-HY-004/77-HS-004A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000368	CJX10	100	2024-11-21	RFC 2
C-77-HY-005/77-HS-005A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000371	CJX10	100	2024-11-21	RFC 2
C-77-HY-006/77-HS-006A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000374	CJX10	100	2024-11-21	RFC 2
C-77-XA-002/B400-SIS-001	UCP FAULT ALARM / MARSHALLING PCS	ONSHORE	C10000185	CJX10	100	2024-11-25	RFC 2
C-77-XS-002/B400-SIS-001	TRIP SIGNAL TO UCP / MARSHALLING PCS	ONSHORE	C10000181	CJX10	100	2024-11-25	RFC 2

ROSETTI MARINO — PROVERLIS — CROSSWIND

ITEM	Tag	C-77-XS-002/B400-SIS-001	: TRIP SIGNAL TO UCP / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-20	: HVAC LV Switchgear Room B-200	Module	LD_B-200/LD_B-400		
TASK	code	C10000181	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	B200-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	1,2	Ω
	SCREEN	1,2	Ω
	EARTH	NA	Ω
	ARMr	1,2	Ω
	TEST VOLTS	500	V

TEST ALL CORES AND RECORD LOWEST VALUE

Notes: The lowest value is recorded and must be within project specifications

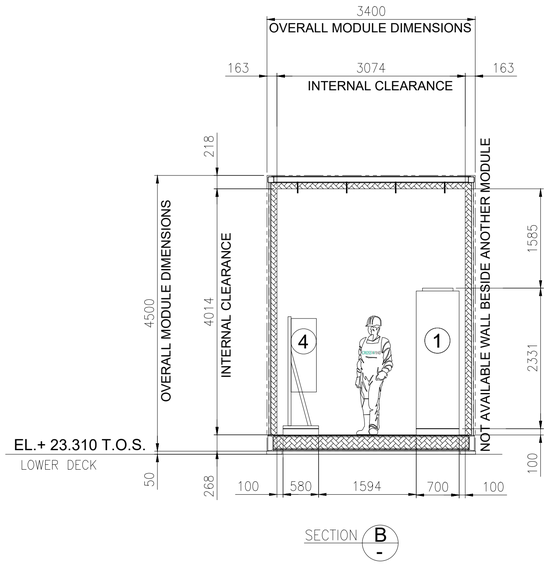
TESTING INSTRUMENTS USED

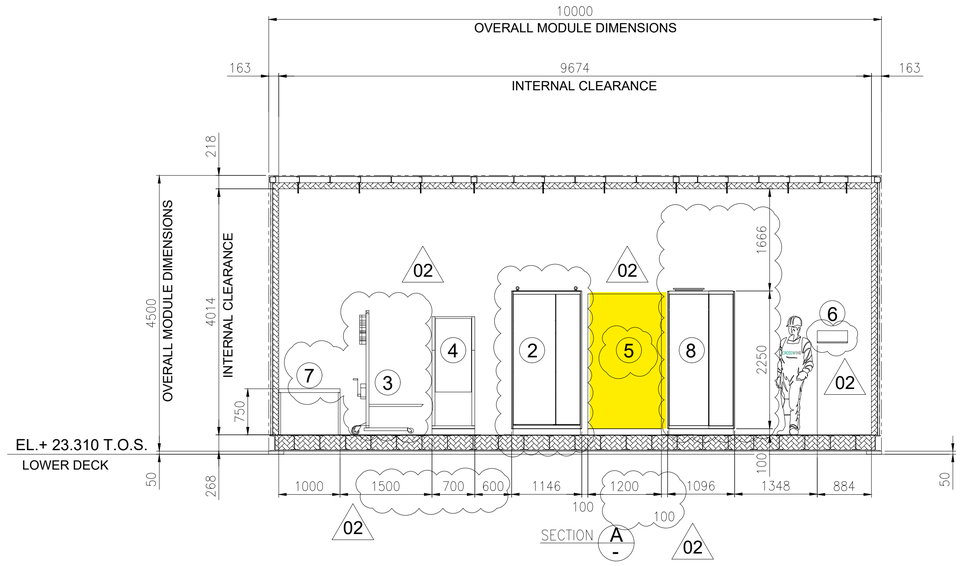
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 Calibration date: N°7722/24 10/07/2024

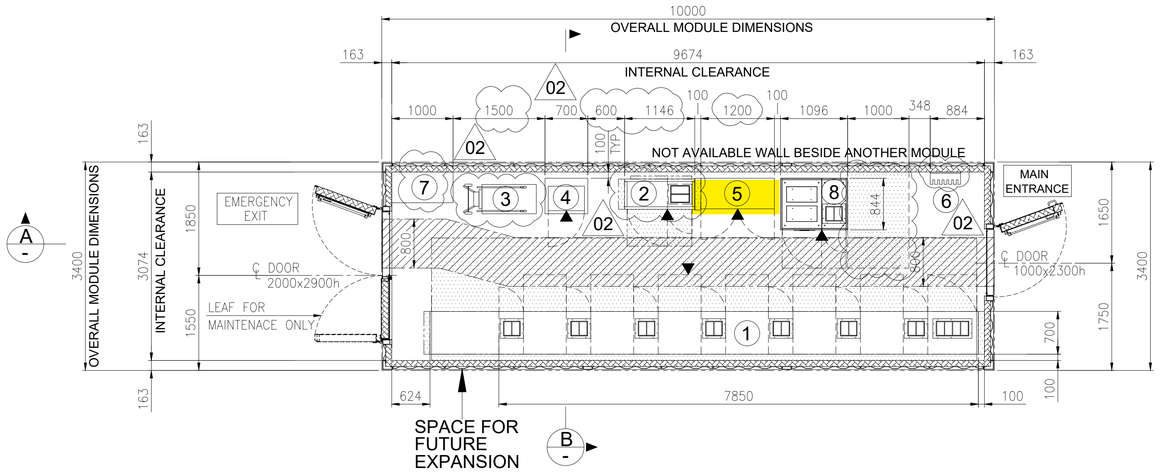
Comments Nota 5: refer to PL C30000680

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 2024-11-25T10:58:22.645Z	PROVERLIS Digitaly signed by Alessio Polo 2024-11-25T18:03:38.298Z	

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







EQUIPMENT LAYOUT

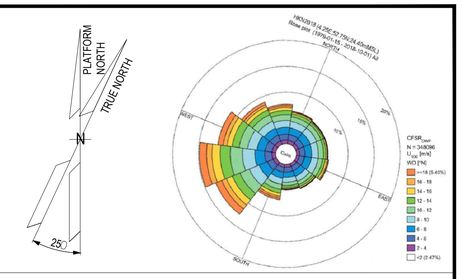
"B-200" LV (400V) SWITCHGEAR ROOM

BOTTOM PLAN

1

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	
3	-	SERVICE TROLLEY FOR 400V SWITCHGEAR	1034	490	2030	
4	CN-200N1	ICCP PANEL	700	580	1830	
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	02
6	-	TOOL BOX	495	200	200	
7	-	TABLE	1000	500	750	
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DELETED.
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
4. FOR OTHER ITEMS, CORRECT LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND DEDICATED PROJECT DOCUMENTATION.
5. HEIGHT OF ALL PANELS IN THE EQUIPMENT LIST TABLE IS WITHOUT THE BASE FRAME (100mm)

02

LEGEND

U.N.O. _____ UNLESS NOTED OTHERWISE

T.O.S. _____ TOP OF STEEL

_____ ESCAPE CORRIDOR - WIDTH 800mm.

_____ MAINTENANCE AREA - VENDOR REQUIREMENT

_____ SWITCHGEAR ROOM ENCLOUSURE

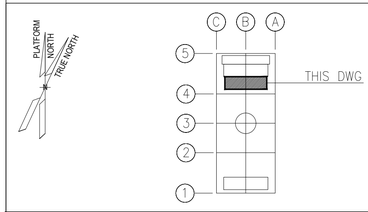
_____ FRONT OF EQUIPMENT

REFERENCES

DOCUMENT TITLE	DOCUMENT NUMBER
SG-200N1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00007
SG-200D2 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00008
DP-200N1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00009
AC UPS – GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS	1724000372-EL-DA-00004
AC UPS – BATTERY LAYOUT INTERCONNECTING DIAGRAM	1724000372-EL-DG-00011
B-200 -GENERAL ARRANGEMENT DRAWINGS - E&I SHELTER	1724000049-AR-DA-00015
ICCC PANEL GENERAL ARRANGEMENT DRAWING	144671-CORR-TF-FAB-DWG-0003

02

KEY PLAN



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

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DL-20105**

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

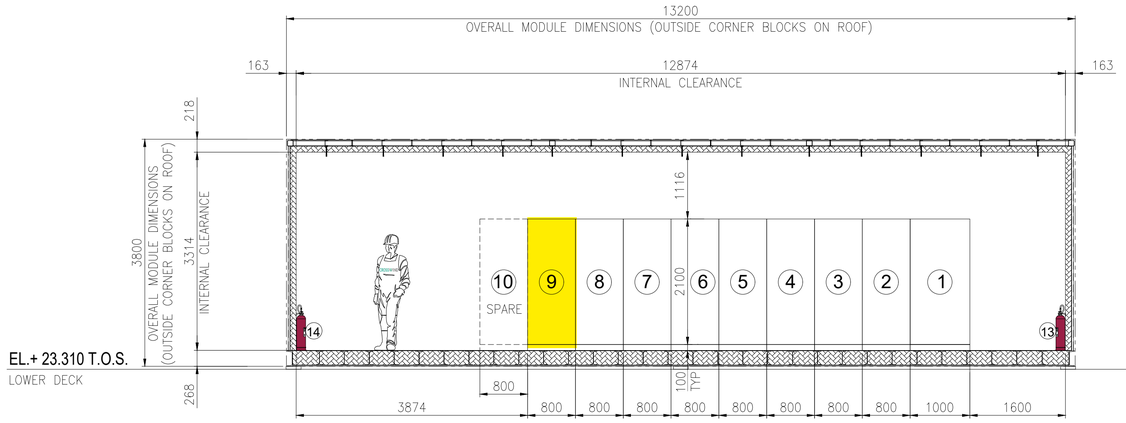
ROSETTI MARINO SpA

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

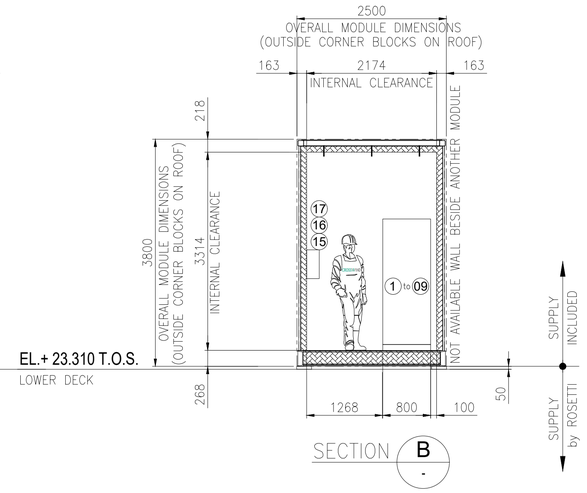
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN FMO	CHECKED LMA/AMA	APPROVED LMA/MDO	DATE 27/05/2024

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

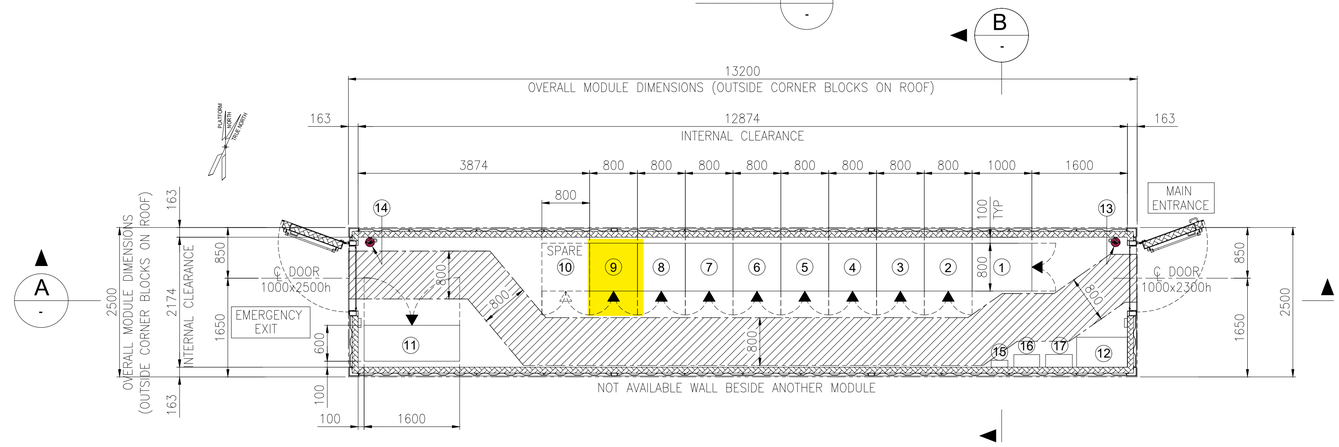
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SECTION A -



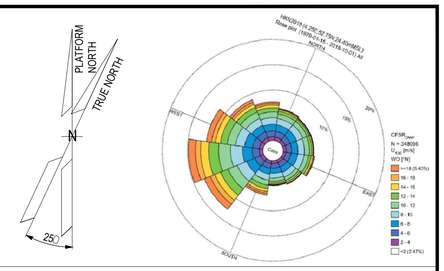
SECTION B -



EQUIPMENT LAYOUT
"B-400" I&T EQUIPMENT ROOM
BOTTOM PLAN

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	
2	B400-NET-001	NETWORK CABINET	800	800	2100	
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	
4	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	
5	B400-PCS-001	PCS SYSTEM CABINET 03	800	800	2100	
6	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	
8	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	
10	-	SPARE				
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	
12	-	TABLE	850	500	750	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	
15	-	FIRST AID KIT	280	115	200	
16	-	RESUSCITATION UNIT	430	210	480	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	



NOTES

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2. DOCUMENT VALID ONLY FOR INSTRUMENT COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.

LEGEND

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

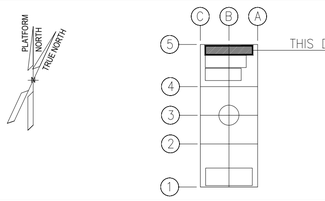
HOLDS

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REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
Control System Architecture Detailed Drawings	123A90-DDL-IN-DD-40096
Data Network Architecture Drawings	123A90-DDL-IN-DD-40019
Earthing layouts drawings (CCR, ITER)	123A90-DDL-IN-DL-40013
Instrument and Telecom MCT Layout – Lower Deck	123A90-DDL-IN-DL-40086
"B-400" I&T Equipment Room – Architectural Layout	123A90-DDL-AR-DL-10015
"B-400" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10015
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00017
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DD-00021
"B-400" HVAC SYSTEM G.A. and DETAILS	1724000049-HV-DA-00067

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	27/05/24	MGA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	22/01/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)
00	07/11/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND — ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40012**

REV.:	DATE:	SIGNATURE:
3_A	07/10/24	G.Randi

ROSETTI MARINO SpA

TITLE : BASE LOAD POWER HUB (BLPH)
OFF-SHORE ITER
EQUIPMENT LAYOUT

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:33,3
DRAWN MGA | CHECKED LCA | APPROVED DLO | DATE 27/05/24
A1 | DRAWING NO. 123A90-DDL-IN-DL-40012 | SHEET 001 | REV. 03

File Name : 123A90-DDL-IN-DL-40012 Rev.03.dwg

DRAWING NO. 123A90-DDL-IN-DG-40016

REV. 01

FIELD		I&T EQUIPMENT ROOM (ITER)
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 4PR*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 4PR*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 4PR*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 4PR*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>

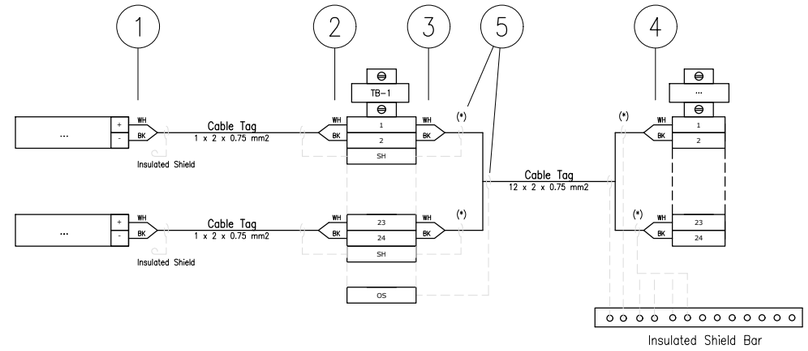
LEGENDS & SYMBOLS:

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

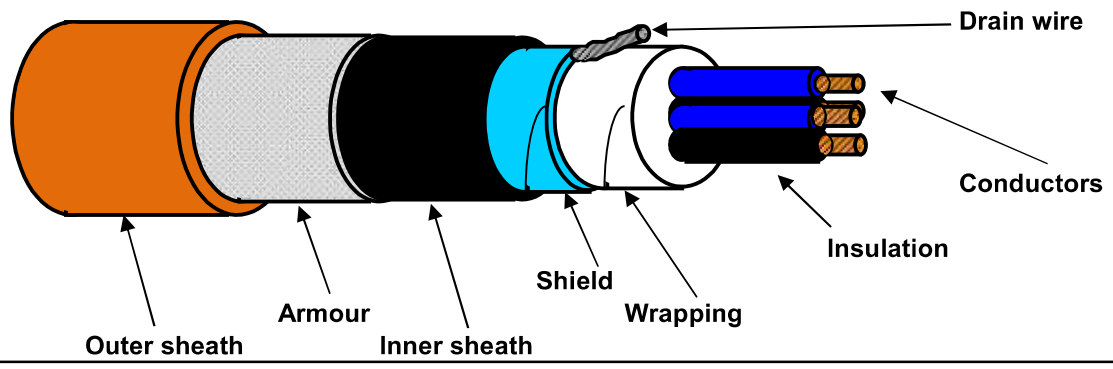
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

Tag Number	Category	Discipline	Eng Status	NativeDoc	Parent Tag	Grouping	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-XS-002/B400-SIS-001	Cable	IN	VFC	123A90-DDL-IN-LIS-40091		Int-Ext				B200-HSB-001	Distribution & HVAC Panel - LV Room	Lower Deck (B-200)	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	M20	T2_M20_Double			n.a.				I-MCT-201 / B-200-SEC-2E / B-200-SEC-2C / B-200-SEC-2B / 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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ROSETTI MARINO — CROSSWIND

ITEM	Tag	C-77-XA-002/B400-SIS-001	: UCP FAULT ALARM / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-20	: HVAC LV Switchgear Room B-200	Module	LD_B-200/LD_B-400		
TASK	code	C10000185	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	B200-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	1,4	Ω
	SCREEN	1,4	Ω
	EARTH	NA	Ω
	ARMr	1,4	Ω
	TEST VOLTS	500	V

TEST ALL CORES AND RECORD LOWEST VALUE

Notes: The lowest value is recorded and must be within project specifications

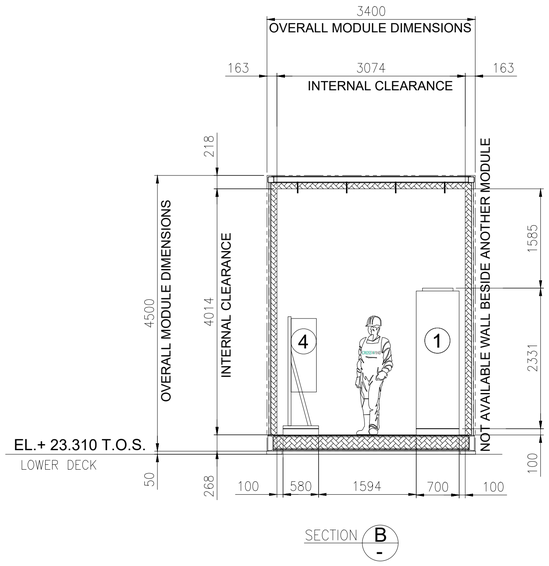
TESTING INSTRUMENTS USED

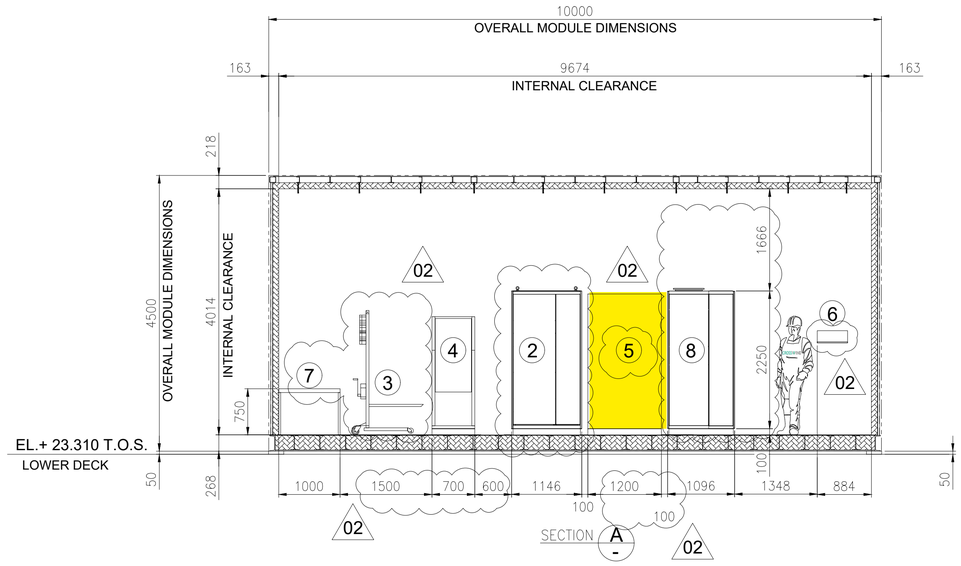
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 Calibration date: N°7722/24 10/07/2024

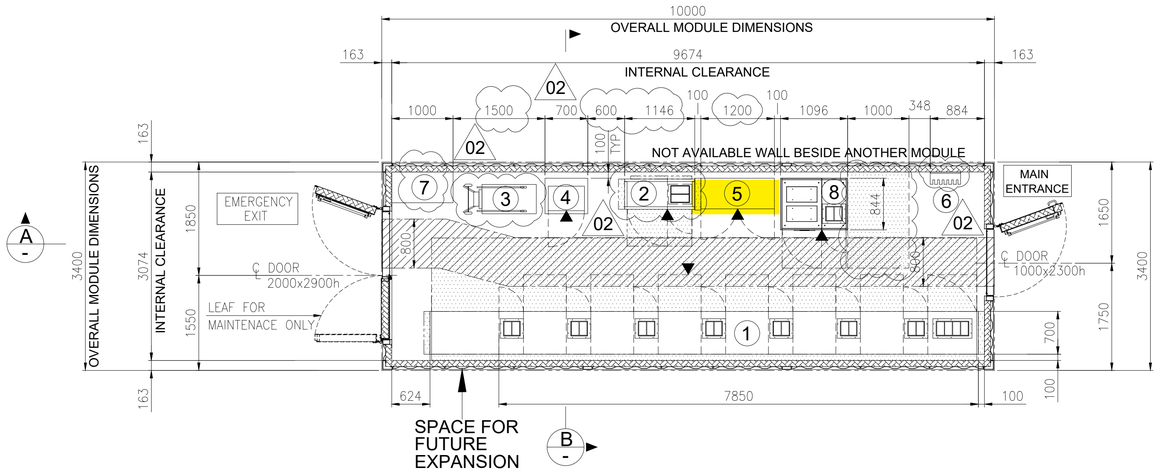
Comments Nota 5: refer to PL C30000680

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	Digitaly signed by Francesco Zucca 2024-11-25T11:02:29.817Z	Digitaly signed by Alessio Polo 2024-11-25T18:03:01.000Z	

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







EQUIPMENT LAYOUT

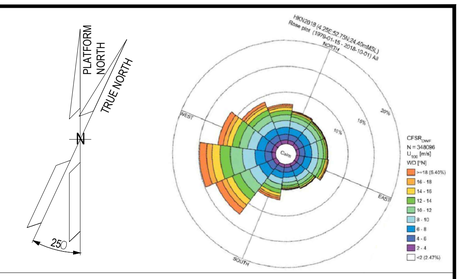
"B-200" LV (400V) SWITCHGEAR ROOM

BOTTOM PLAN

1

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	
3	-	SERVICE TROLLEY FOR 400V SWITCHGEAR	1034	490	2030	
4	CN-200N1	ICCP PANEL	700	580	1830	
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	02
6	-	TOOL BOX	495	200	200	
7	-	TABLE	1000	500	750	
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DELETED.
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
4. FOR OTHER ITEMS, CORRECT LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND DEDICATED PROJECT DOCUMENTATION.
5. HEIGHT OF ALL PANELS IN THE EQUIPMENT LIST TABLE IS WITHOUT THE BASE FRAME (100mm)

02

LEGEND

U.N.O. _____ UNLESS NOTED OTHERWISE

T.O.S. _____ TOP OF STEEL

_____ ESCAPE CORRIDOR - WIDTH 800mm.

_____ MAINTENANCE AREA - VENDOR REQUIREMENT

_____ SWITCHGEAR ROOM ENCLOUSURE

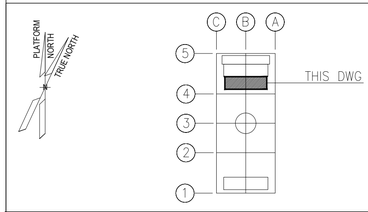
_____ FRONT OF EQUIPMENT

REFERENCES

DOCUMENT TITLE	DOCUMENT NUMBER
SG-200N1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00007
SG-200D2 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00008
DP-200N1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00009
AC UPS – GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS	1724000372-EL-DA-00004
AC UPS – BATTERY LAYOUT INTERCONNECTING DIAGRAM	1724000372-EL-DG-00011
B-200 -GENERAL ARRANGEMENT DRAWINGS - E&I SHELTER	1724000049-AR-DA-00015
ICCC PANEL GENERAL ARRANGEMENT DRAWING	144671-CORR-TF-FAB-DWG-0003

02

KEY PLAN



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

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DL-20105**

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

ROSETTI MARINO SpA

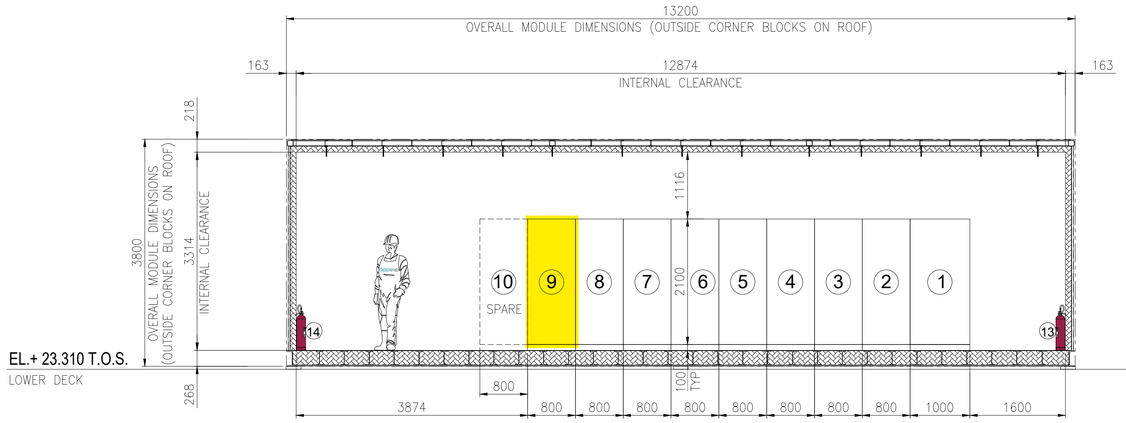
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LV SWITCHROOM

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

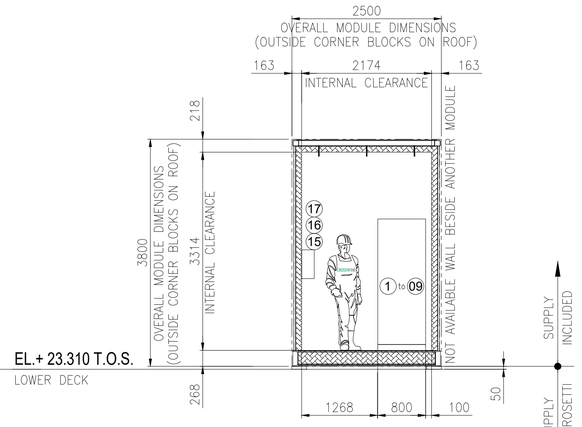
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File Name : 123A90-DDL-EL-DL-20105_REV02.dwg

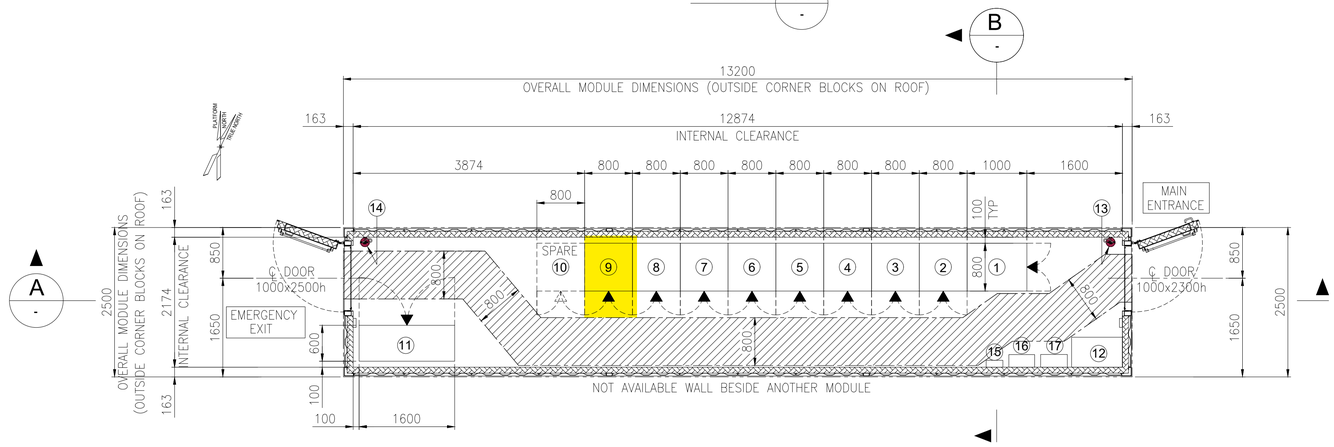
DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 03



SECTION A -



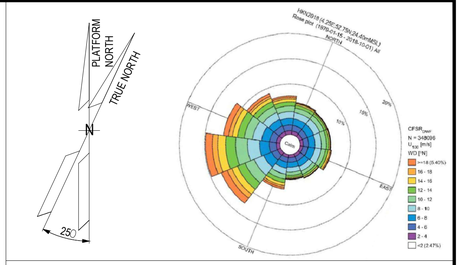
SECTION B -



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

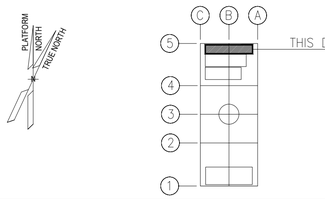
HOLDS

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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-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>

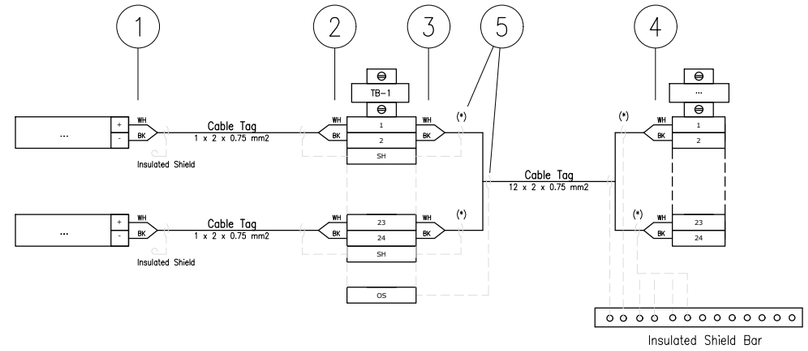
LEGENDS & SYMBOLS:

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

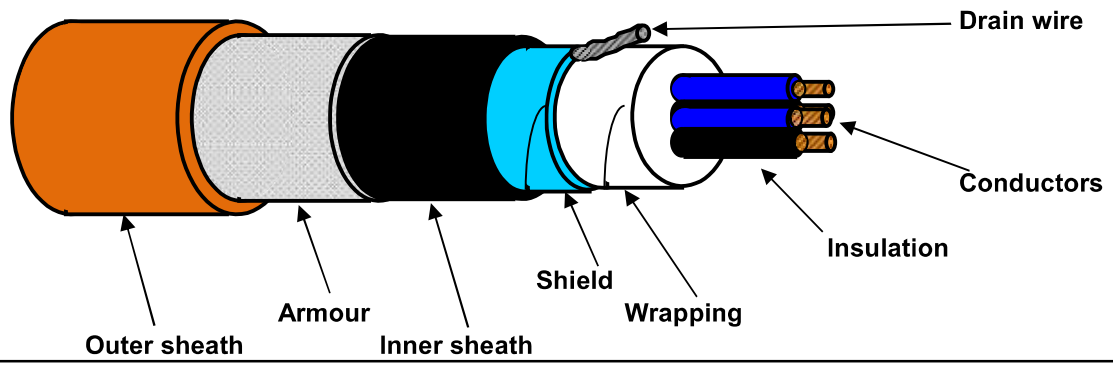
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

Tag Number	Category	Discipline	Eng Status	NativeDoc	Parent Tag	Grouping	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-XA-002/B400-SIS-001	Cable	IN	VFC	123A90-DDL-IN-LIS-40091		Int-Ext				B200-HSB-001	Distribution & HVAC Panel - LV Room	Lower Deck (B-200)	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	M20S	T2_M20S_Double			n.a.				I-MCT-201 / L-SEC-5 / L-SEC-1C / L-SEC-1B / L-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			

The data provided herein are meant for the transaction will be used in the sense of the article 19 of the Regulation (UE) 2016/679, also by such subjects 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-HS-004B/950-JE-04203 : PUSH BUTTON / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-20 : HVAC LV Switchgear Room B-200			Module	LD_B-200_Ext/LD_B-200	
TASK	code	C10000366	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-004B	To	950-JE-04203		

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.	OK
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.	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	0,4	Ω
	SCREEN	0,4	Ω
	EARTH	NA	Ω
	ARMr	0,4	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

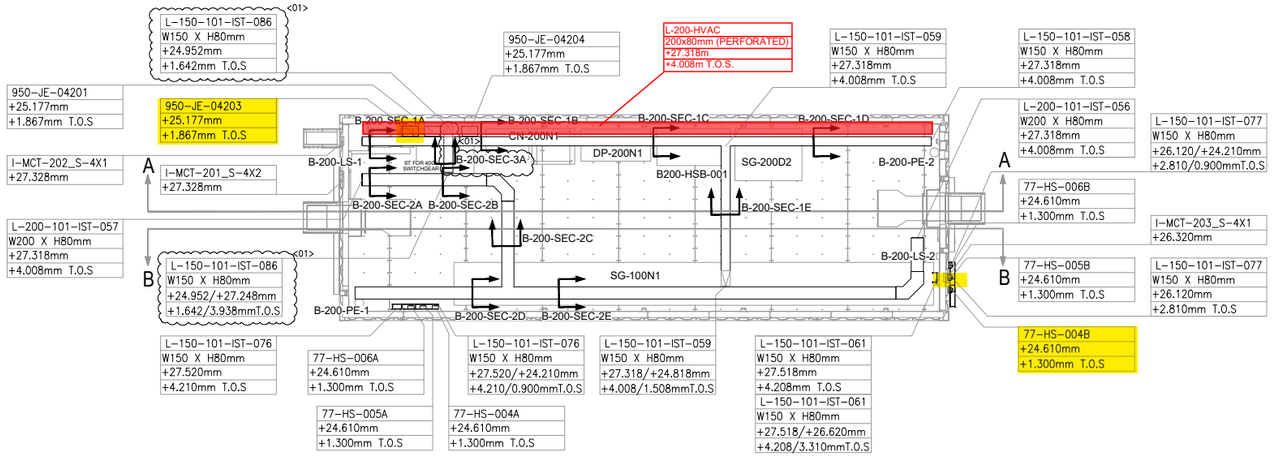
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 Calibration date: 10/07/2024

Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICSI IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-28	2024-11-21	
Signature	Digitaly signed by Carmelo Bongiovanni 2024-10-28T06:53:03.051Z	Digitaly signed by Giovanni Tangianu 2024-11-21T08:06:29.491Z	

DRAWING NO. 123A90-DDL-IN-DL-40114

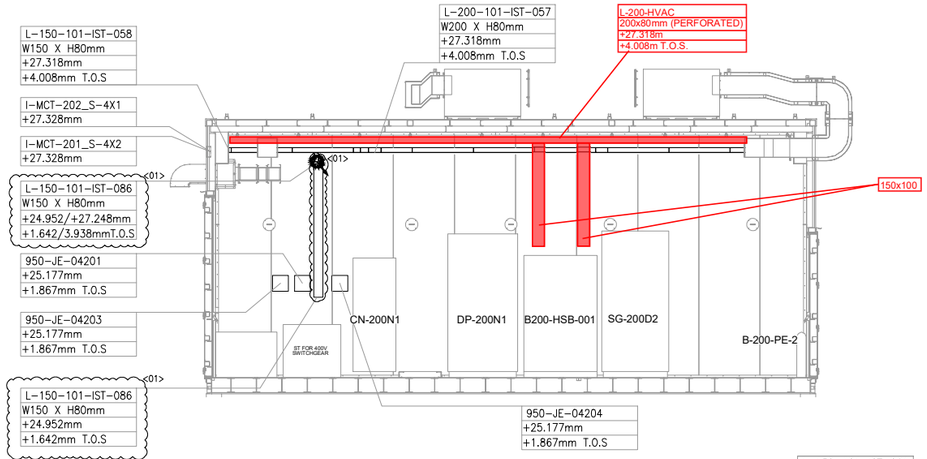
REV. 01



PLAN VIEW

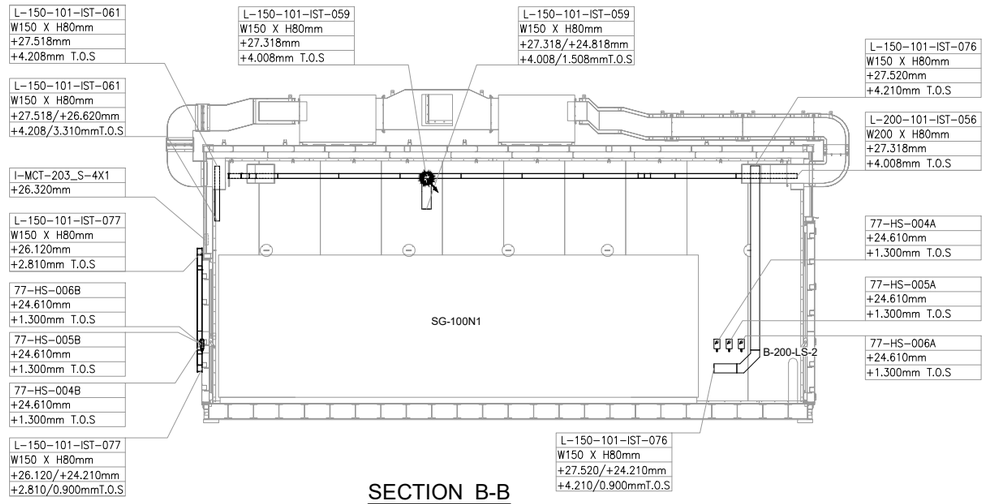
B-200 – LV SWITCHROOM

SCALE-1:1



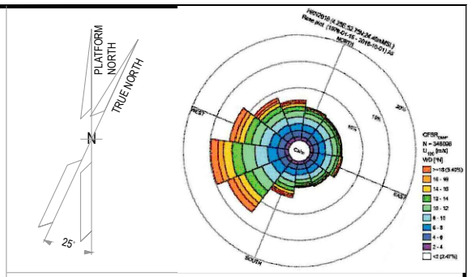
SECTION A-A

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-40114**

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-200 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-40114	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40114 REV:01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-04203	No.	MARSHALLING CABINET B400-FGS-002

B-200 LV Switch Gear Room

<01>

950-XZ-04203 (1, 2) — 1BK / 2BK — NOTE-2
C-950-XZ-04203/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK/2BK 1 — 2 — SH

950-XL-04205 (1, 3) — 1BK / 2BK — NOTE-2
C-950-XL-04205/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 3BK/4BK 3 — 4 — SH

950-XL-04206 (1, 3) — 1BK / 2BK — NOTE-2
C-950-XL-04206/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 5BK/6BK 5 — 6 — SH

950-JE-04203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-950-JE-04203: 1 — 950-XZ-04203; 2 — 950-XL-04205; 3 — 950-XL-04206; 4 — 77-HY-004; 5 — 77-HY-005; 6 — 77-HY-006

B-200 OUTDOOR
1BK/2BK 12/22 77-HS-004B 11/21 1BK/2BK — NOTE-2 — NOTE-2
C-77-HS-004B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 7BK/8BK 7 — 8 — SH
C-77-HS-004A/77-HS-004B
~~C-77-HS-004B/77-HS-004A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77004

77-HY-004 (1, 2) — 1BK / 2BK — NOTE-2
C-77-HY-004/77-HS-004A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

B-200 INDOOR
1BK/2BK 12/22 77-HS-004A 11/21 1BK/2BK — NOTE-2 — NOTE-2

B-200 OUTDOOR
1BK/2BK 12/22 77-HS-005B 11/21 1BK/2BK — NOTE-2 — NOTE-2
C-77-HS-005B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 9BK/10BK 9 — 10 — SH
C-77-HS-005A/77-HS-005B
~~C-77-HS-005B/77-HS-005A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77005

77-HY-005 (1, 2) — 1BK / 2BK — NOTE-2
C-77-HY-00577-HS-005A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

B-200 INDOOR
1BK/2BK 12/22 77-HS-005A 11/21 1BK/2BK — NOTE-2 — NOTE-2

B-200 OUTDOOR
1BK/2BK 12/22 77-HS-006B 11/21 1BK/2BK — NOTE-2 — NOTE-2
C-77-HS-006B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 11BK/12BK 11 — 12 — SH — OS
C-77-HS-006A/77-HS-006B
~~C-77-HS-006B/77-HS-006A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77006

77-HY-006 (1, 2) — 1BK / 2BK — NOTE-2
C-77-HY-006/77-HS-006A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

B-200 INDOOR
1BK/2BK 12/22 77-HS-006A 11/21 1BK/2BK — NOTE-2 — NOTE-2

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–04203

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	068	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>

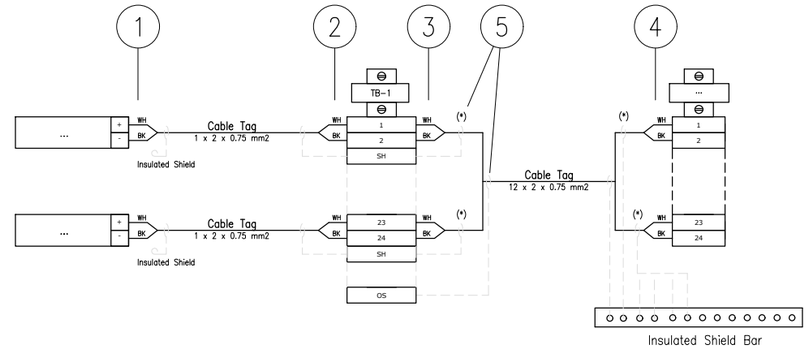
LEGENDS & SYMBOLS:

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

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

A3	DRAWING NO. 123A90-DDL-IN-DG-40016	SHEET 003	REV. 01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

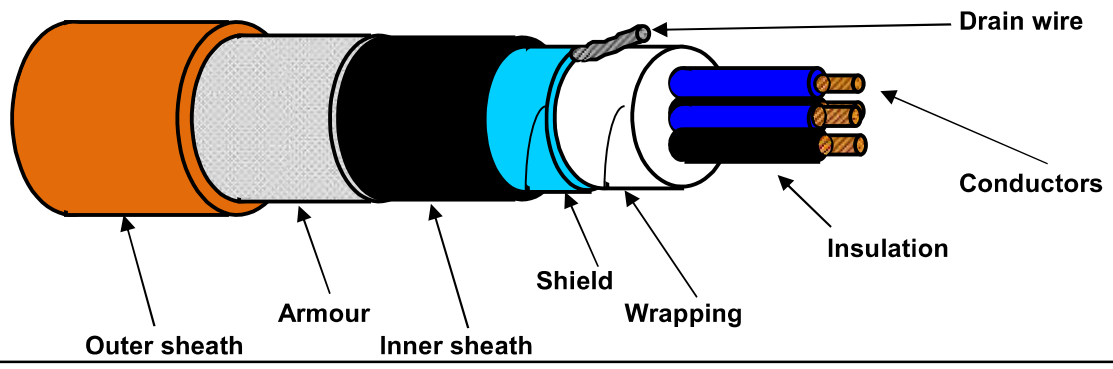
REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

Tag Number	Category	Discipline	Eng Status	NativeDoc	Parent Tag	Grouping	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-004B/950-JE-04203	Cable	IN	VFC	123A90-DDL-IN-LIS-40091		Int-Ext				77-HS-004B	Hand Switch	Lower Deck (B-200) Ext.	950-JE-04203	DO JB to FGS	Lower Deck (B-200)	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-200-SEC-2E / B-200-SEC-2C / B-200-SEC-2B / B-200-SEC-3

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-004A/77-HS-004B : PUSH BUTTON / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-20 : HVAC LV Switchgear Room B-200			Module	LD_B-200/LD_B-200_Ext	
TASK	code	C10000367	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-004A	To	77-HS-004B		

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.	OK
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.	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		0,5	Ω
	SCREEN		0,5	Ω
	EARTH		NA	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

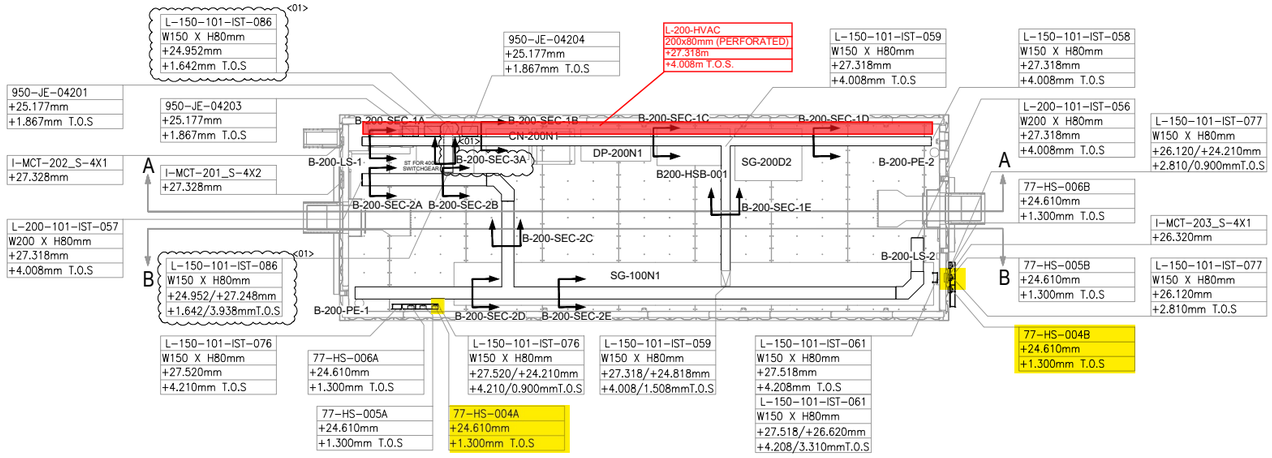
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 Calibration date: 10/07/2024

Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICSI IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-28	2024-11-21	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-28T06:53:13.765Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-21T08:07:22.475Z	

DRAWING NO. 123A90-DDL-IN-DL-40114

REV. 01



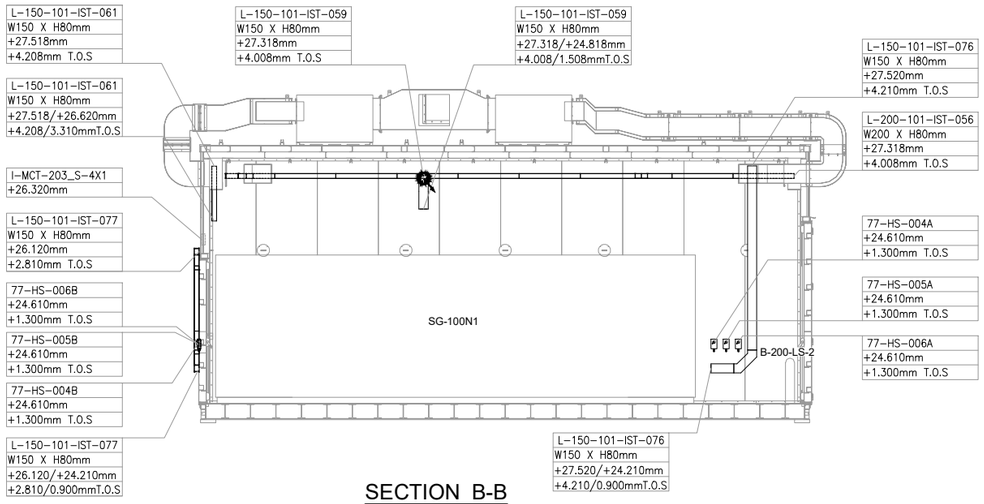
PLAN VIEW

B-200 – LV SWITCHROOM

SCALE-1:1

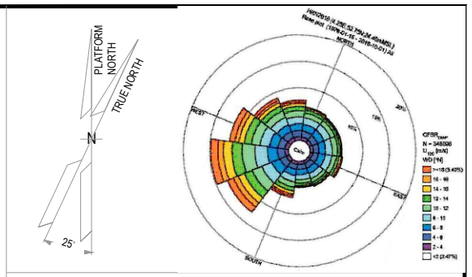
SECTION A-A

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-40114**

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-200 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-40114	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40114 REV:01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-04203	No.	MARSHALLING CABINET B400-FGS-002

B-200 LV Switch Gear Room

<01>

950-XZ-04203 (1, 2) — 1BK / 2BK — NOTE-2
C-950-XZ-04203/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 1 1BK, 2BK 2, SH

950-XL-04205 (1, 3) — 1BK / 2BK — NOTE-2
C-950-XL-04205/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 3 3BK, 2BK 4, SH

950-XL-04206 (1, 3) — 1BK / 2BK — NOTE-2
C-950-XL-04206/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 5 5BK, 2BK 6, SH

950-JE-04203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

→ TB-950-JE-04203: 1 950-XZ-04203; 2 950-XL-04205; 3 950-XL-04206; 4 77-HY-004; 5 77-HY-005; 6 77-HY-006

B-200 OUTDOOR
1BK 12 / 2BK 22 — 77-HS-004B — 11 21 1BK 2BK — NOTE-2
C-77-HS-004B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 7 7BK, 2BK 8, SH
NOTE-2
C-77-HS-004A/77-HS-004B
~~C-77-HS-004B/77-HS-004A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77004

77-HY-004 (1, 2) — 1BK / 2BK — NOTE-2
C-77-HY-004/77-HS-004A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

B-200 INDOOR
1BK 12 / 2BK 22 — 77-HS-004A — 11 21 1BK 2BK — NOTE-2

B-200 OUTDOOR
1BK 12 / 2BK 22 — 77-HS-005B — 11 21 1BK 2BK — NOTE-2
C-77-HS-005B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 9 9BK, 2BK 10, SH
NOTE-2
C-77-HS-005A/77-HS-005B
~~C-77-HS-005B/77-HS-005A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77005

77-HY-005 (1, 2) — 1BK / 2BK — NOTE-2
C-77-HY-00577-HS-005A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

B-200 INDOOR
1BK 12 / 2BK 22 — 77-HS-005A — 11 21 1BK 2BK — NOTE-2

B-200 OUTDOOR
1BK 12 / 2BK 22 — 77-HS-006B — 11 21 1BK 2BK — NOTE-2
C-77-HS-006B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 11 11BK, 2BK 12, SH, OS
NOTE-2
C-77-HS-006A/77-HS-006B
~~C-77-HS-006B/77-HS-006A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77006

77-HY-006 (1, 2) — 1BK / 2BK — NOTE-2
C-77-HY-006/77-HS-006A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

B-200 INDOOR
1BK 12 / 2BK 22 — 77-HS-006A — 11 21 1BK 2BK — NOTE-2

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–04203

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 068	REV. 01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

DRAWING NO. 123A90-DDL-IN-DG-40016

REV. 01

NOTES:

1. ALL SPARE ENTRIES SHALL BE PROVIDED WITH CERTIFIED EX PROOF PLUGS.
2. CABLE SCREENS / DRAIN WIRE SHALL BE SECURELY INSULATED AND TIED BACK IN THE INSTRUMENT SIDE AND SHAL BE TERMINATED IN THE MARSHALLING SIDE OF THE PANEL.
3. SPARE PAIRS / TRIADS SHALL BE CONNECTED TO TERMINALS IN JUNCTION BOX AND PANEL / MARSHALLING CABINETS.
4. ALL CABLE SCREENS TO BE TERMINATED AT THE INSTRUMENT EARTH BAR IN THE RESPECTIVE EARTH BARS (IS OR NIS) AS APPLICABLE IN THE MARSHALLING CABINET.
5. CONNECTION TERMINAL BLOCK SHALL BE DEFINED DURING CONSTRUCTION PHASE.

<01>

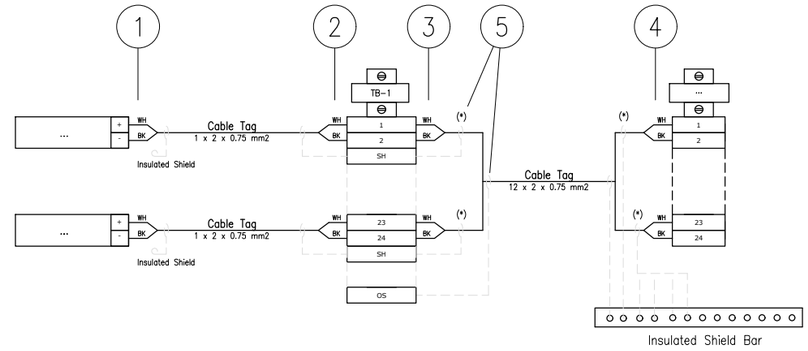
LEGENDS & SYMBOLS:

LEGEND:

I.E.	- GREEN ——— INSTRUMENT SIGNAL EARTH
P.E.	- GREEN/YELLOW —— P.E. EARTH/BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY SAFE
P.E.	- PLANT EARTH
PCS	- PROCESS CONTROL SYSTEM <01>
ESD	- EMERGENCY SHUTDOWN SYSTEM
SIS	- SAFETY INSTRUMENT SYSTEM
FGS	- FIRE & GAS SYSTEM <01>
MC	- MARSHALLING CABINET
AI	- ANALOGUE INPUT
AO	- ANALOGUE OUTPUT
DI	- DIGITAL INPUT
DO	- DIGITAL OUTPUT
JE	- JUNCTION BOX FOR ELECTRICAL SIGNALS <01>

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



(*) Single shield is foreseen only for AI/AO signals.

1 - INSTRUMENT TERMINAL NO. OR POLARITY/JB NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

2 - INSTRUMENT TERMINAL NO. OR POLARITY/INSTRUMENT TAG NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

3 - PAIR OR CORE NO./MARSHALLING CABINET NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

4 - PAIR OR CORE NO./JB NO./JB TERMINAL NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

5 - HEAT SHRINKABLE BLACK FOR SHIELD OF NIS INSTRUMENT CABLE.
(HEAT SHRINKABLE BLUE FOR SHIELD OF NIS INSTRUMENT CABLE)

6 - IN CASE OF CONNECTION FROM RIGHT TO LEFT, ORDER OF INFORMATION SHALL BE MIRRORED

REFERENCE DRAWINGS

PIPING AND INSTRUMENT DIAGRAM	123A90-DDL-PR-PID-80009
INSTRUMENT INDEX	123A90-DDL-IN-LIS-40088 Rev.01
F&G DETECTORS LAYOUT	123A90-DDL-SAF-DL-30027

CROSSWIND

ROSETTI MARINO

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

A3	DRAWING NO. 123A90-DDL-IN-DG-40016	SHEET 003	REV. 01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

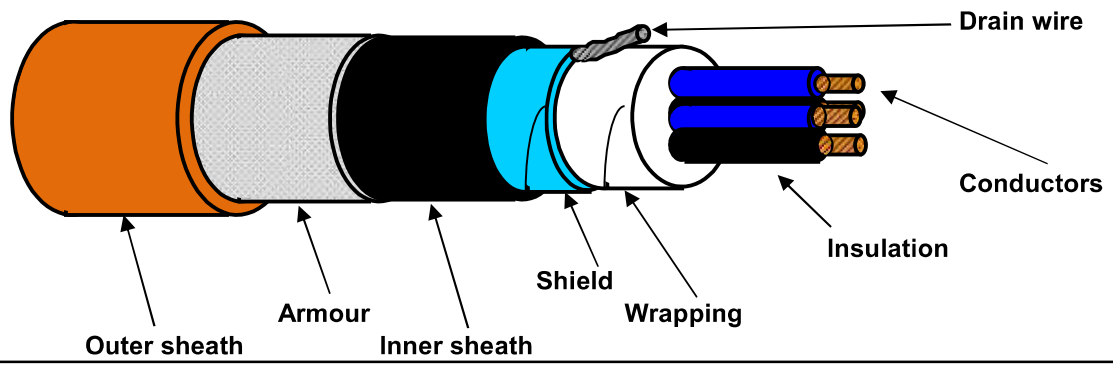
REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

Tag Number	Category	Discipline	Eng Status	NativeDoc	Parent Tag	Grouping	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-004A/77-HS-004B	Cable	IN	VFC	123A90-DDL-IN-LIS-40091		Int-Ext				77-HS-004A	Hand Switch	Lower Deck (B-200)	77-HS-004B	Hand Switch	Lower Deck (B-200) Ext.	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				I-MCT-203 / B-200-SEC-2D / B-200-SEC-2E

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-HY-004/77-HS-004A	: FIRE DAMPER / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-20	: HVAC LV Switchgear Room B-200	Module	LD_B-200		
TASK	code	C10000368	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-77004	To	77-HS-004A		

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	PL
3	Check cable is routed in accordance with cable layout drawings.	PL
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.	OK
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.	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	0,3	Ω
	SCREEN	0,3	Ω
	EARTH	NA	Ω
	ARMr	0,3	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

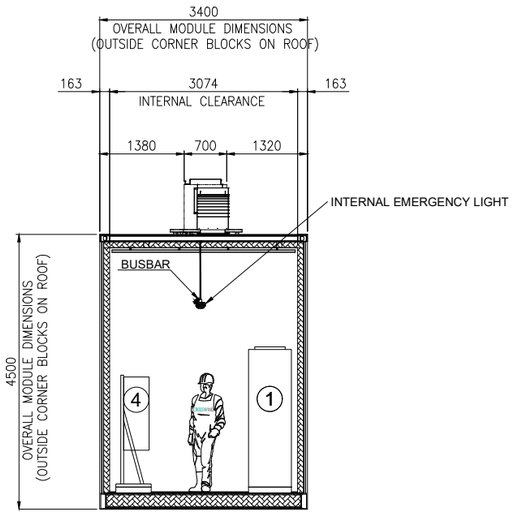
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 Calibration date: 10/07/2024

Comments Note :
Refer to PL: C30000679 / C30000680 / C30000681 / C30000682

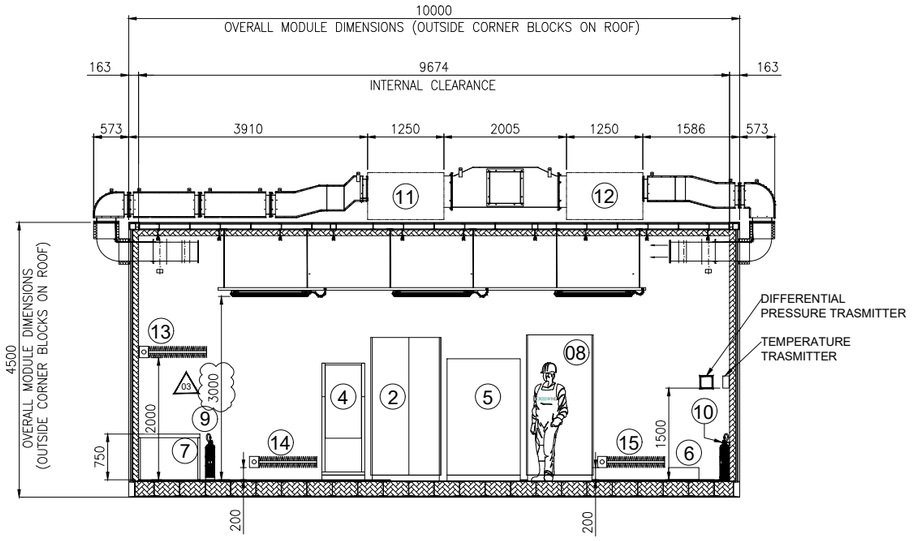
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICSI IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-28	2024-11-21	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-28T06:53:22.458Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-21T09:33:41.364Z	

DRAWING NO. 1724000049-AR-DA-00015

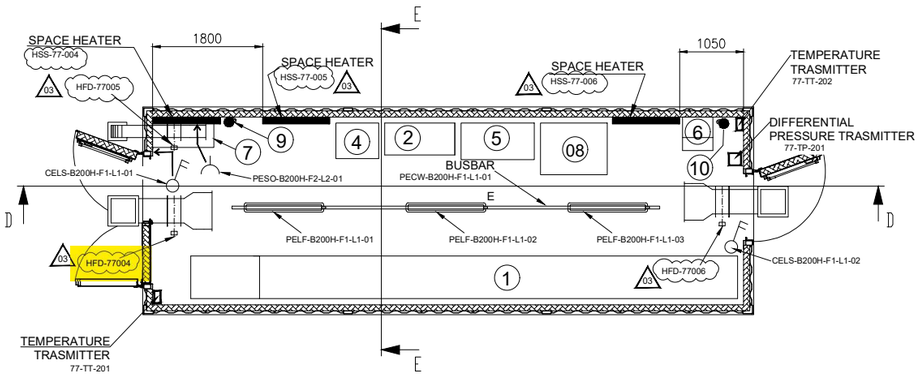
REV. 03



SECTION E-E

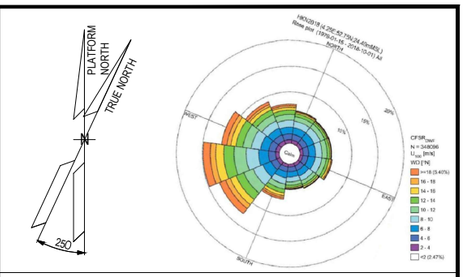


SECTION D-D



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	4900
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	600
3		*DELETED*				
4	CN-200N1	ICCP PANEL	700	580	1830	250
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	400
6	-	TOOL BOX	495	335	200	20
7	-	TABLE	1000	500	750	50
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	1000
9	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
10	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
11	HHU-77003	AIR HANDLING UNIT A	1250	850	900	140
12	HHU-77004	AIR HANDLING UNIT B	1250	850	900	140
13	HSS-77-004	SPACE HEATER 1	184	145	1100	5
14	HSS-77-005	SPACE HEATER 2	184	145	1100	5
15	HSS-77-006	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.

03

REFERENCE

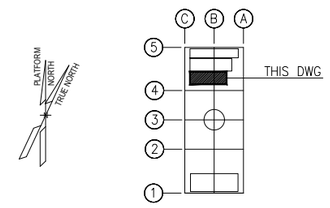
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00065
"B-200" DETAILED DRAWING	1724000049-AR-DD-00019
PAINTING PROCEDURE	1724000049-MAT-PRO-00005

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	19/07/24	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

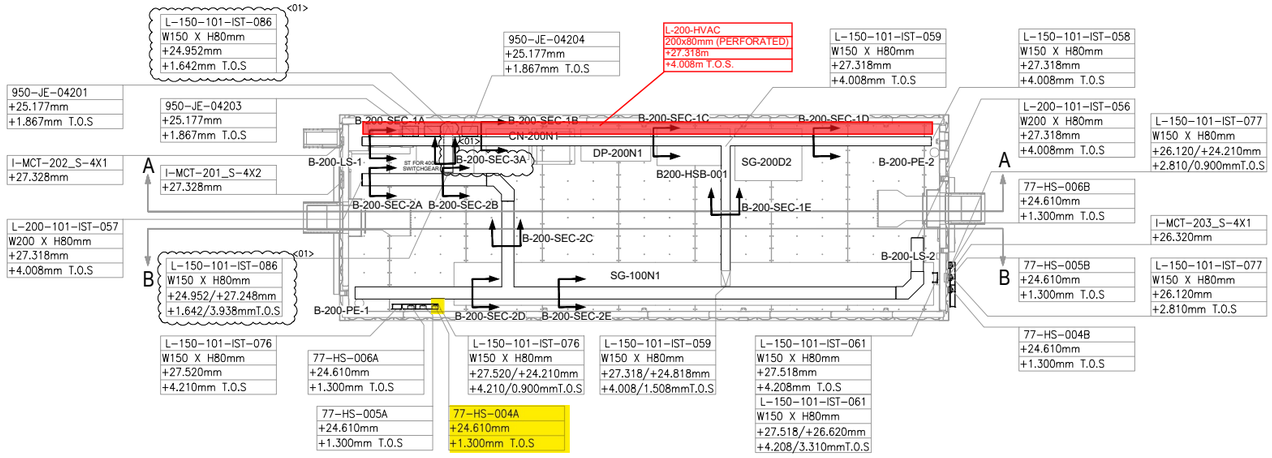
TITLE : BASE LOAD POWER HUB (BLPH)
B-200 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 19/07/24
A1	DRAWING NO. 1724000049-AR-DA-00015	SHEET 003	REV. 03

File Name : 1724000049-AR-DA-00015-REV.03

DRAWING NO. 123A90-DDL-IN-DL-40114

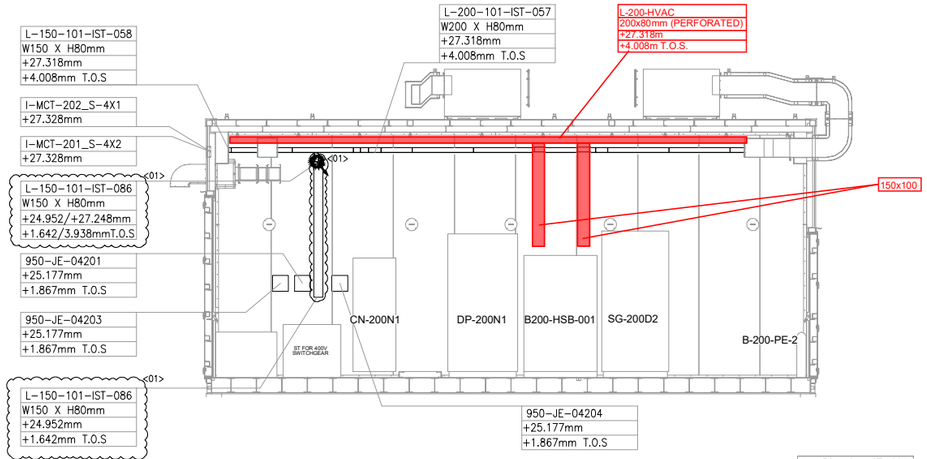
REV. 01



PLAN VIEW

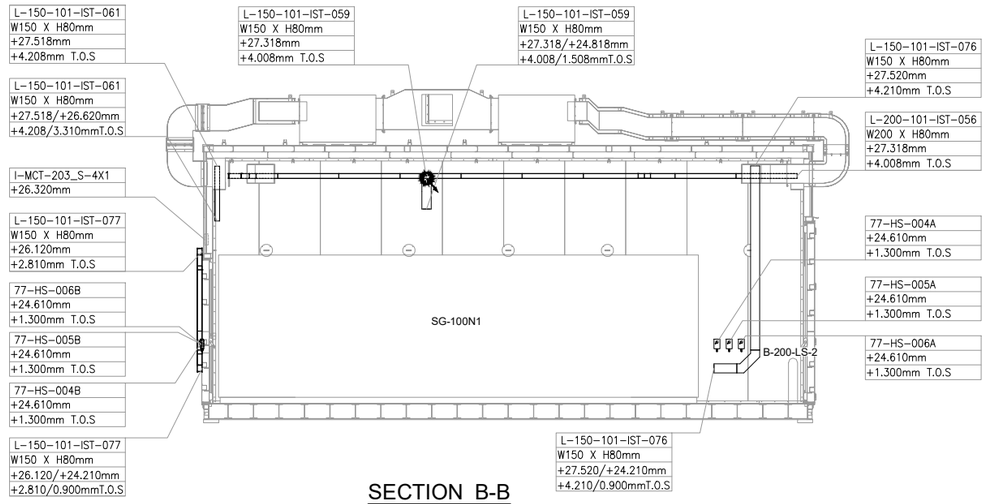
B-200 – LV SWITCHROOM

SCALE-1:1



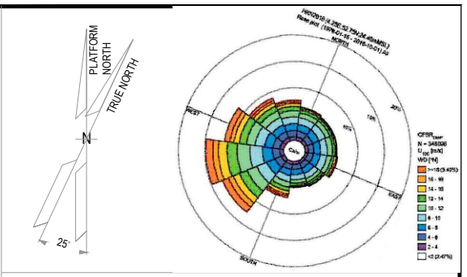
SECTION A-A

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-40114**

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-200 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-40114	001	01

File Name : 123A90-DDL-IN-DL-40114 REV:01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-04203	No.	MARSHALLING CABINET B400-FGS-002

B-200 LV Switch Gear Room

<01>

950-XZ-04203 (1BK, 2BK) — C-950-XZ-04203/950-JE-04203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-04205 (1BK, 3BK) — C-950-XL-04205/950-JE-04203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

950-XL-04206 (1BK, 3BK) — C-950-XL-04206/950-JE-04203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-200 OUTDOOR

77-HS-004B (12, 22 / 11, 21) — C-77-HS-004B/950-JE-04203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

C-77-HS-004A/77-HS-004B

~~C-77-HS-004B/77-HS-004A~~

2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77004

77-HY-004 (1, 2) — C-77-HY-004/77-HS-004A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-200 INDOOR

77-HS-004A (12, 22 / 11, 21) — NOTE-2

B-200 OUTDOOR

77-HS-005B (12, 22 / 11, 21) — C-77-HS-005B/950-JE-04203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

C-77-HS-005A/77-HS-005B

~~C-77-HS-005B/77-HS-005A~~

2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77005

77-HY-005 (1, 2) — C-77-HY-00577-HS-005A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-200 INDOOR

77-HS-005A (12, 22 / 11, 21) — NOTE-2

B-200 OUTDOOR

77-HS-006B (12, 22 / 11, 21) — C-77-HS-006B/950-JE-04203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

C-77-HS-006A/77-HS-006B

~~C-77-HS-006B/77-HS-006A~~

2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77006

77-HY-006 (1, 2) — C-77-HY-006/77-HS-006A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-200 INDOOR

77-HS-006A (12, 22 / 11, 21) — NOTE-2

TB-1

1	1BK
2	2BK
SH	
3	3BK
4	4BK
SH	
5	5BK
6	6BK
SH	
7	7BK
8	8BK
SH	
9	9BK
10	10BK
SH	
11	11BK
12	12BK
SH	
OS	

950-JE-04203/B400-FGS-002

12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-04203

1	950-XZ-04203
2	
3	950-XL-04205
4	
5	950-XL-04206
6	
7	77-HY-004
8	
9	77-HY-005
10	
11	77-HY-006
12	

Shield Bar — I.E.

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–04203

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	068	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>

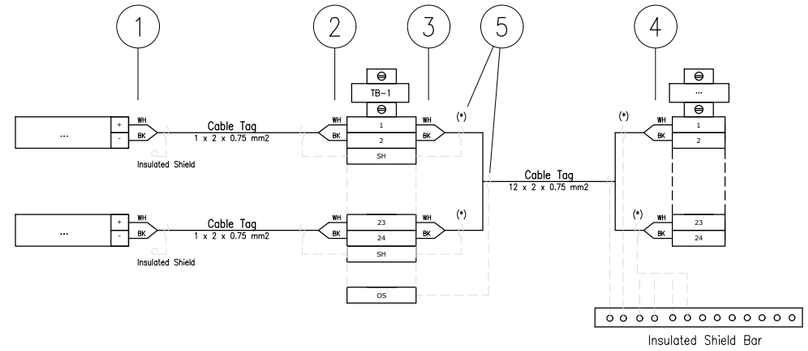
LEGENDS & SYMBOLS:

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

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

A3	DRAWING NO. 123A90-DDL-IN-DG-40016	SHEET 003	REV. 01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

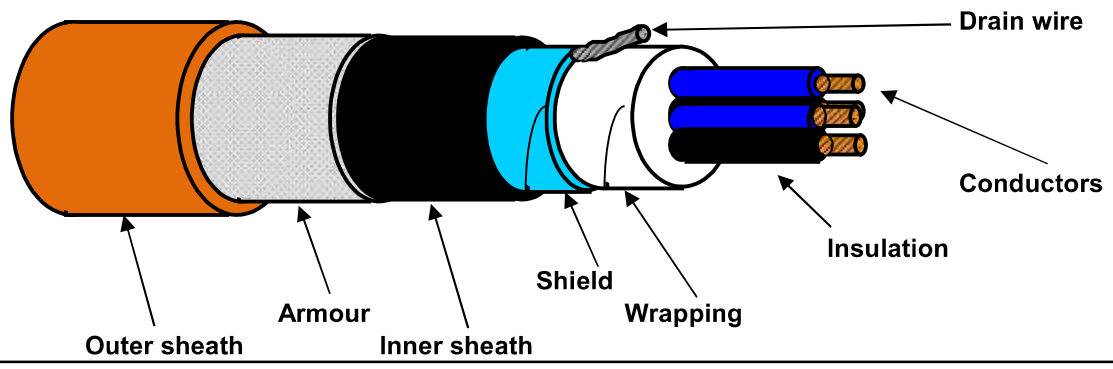
REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

Tag Number	Category	Discipline	Eng Status	NativeDoc	Parent Tag	Grouping	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-HY-004/77-HS-004A	Cable	IN	VFC	123A90-DDL-IN-LIS-40091		Int-Int				HFD-77004	Fire Damper	Lower Deck (B-200)	77-HS-004A	Hand Switch	Lower Deck (B-200)	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-200-SEC-2A / B-200-SEC-2B / B-200-SEC-2C / B-200-SEC-2D

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-HS-005B/950-JE-04203 : PUSH BUTTON / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-20 : HVAC LV Switchgear Room B-200			Module	LD_B-200_Ext/LD_B-200	
TASK	code	C10000369	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-005B	To	950-JE-04203		

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.	OK
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.	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	0,3	Ω
	SCREEN	0,3	Ω
	EARTH	NA	Ω
	ARMr	0,3	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

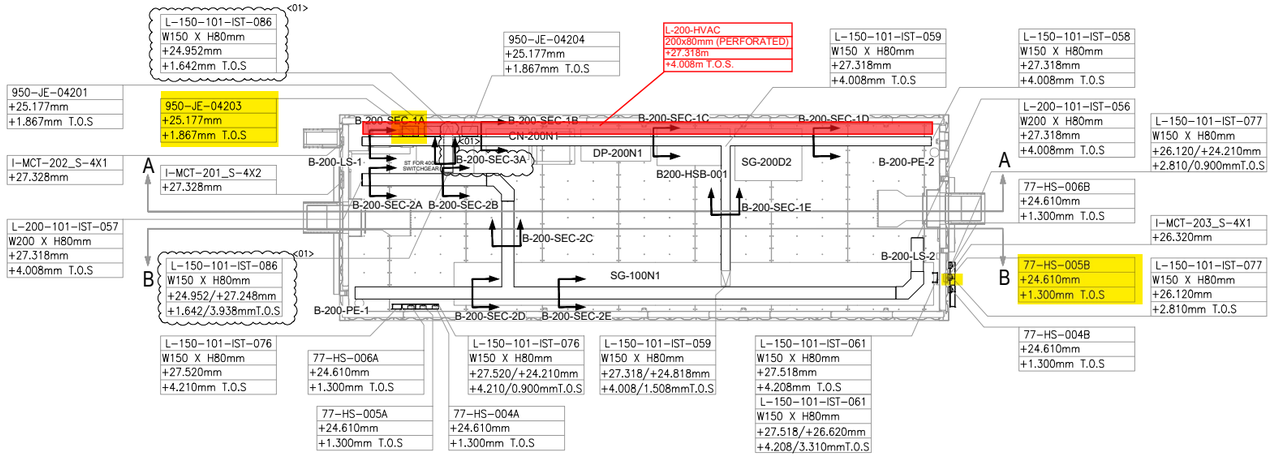
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 Calibration date: 10/07/2024

Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICSI IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-28	2024-11-21	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-28T06:53:32.917Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-21T08:08:57.030Z	

DRAWING NO. 123A90-DDL-IN-DL-40114

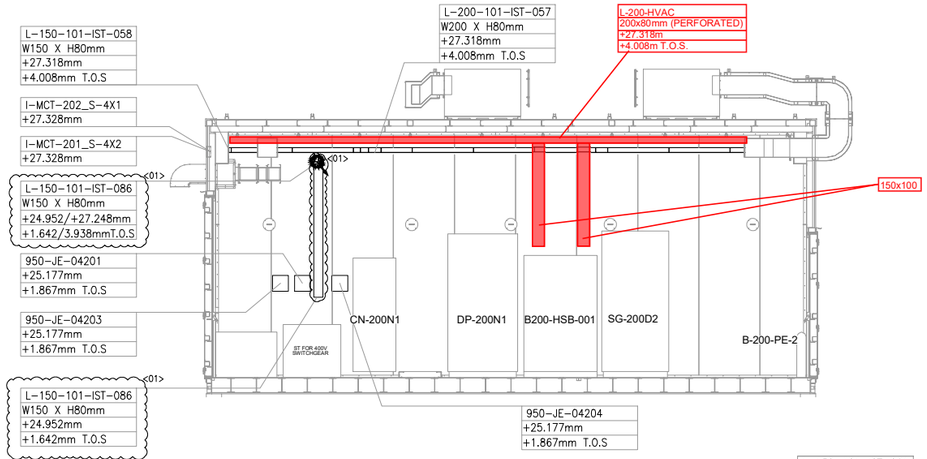
REV. 01



PLAN VIEW

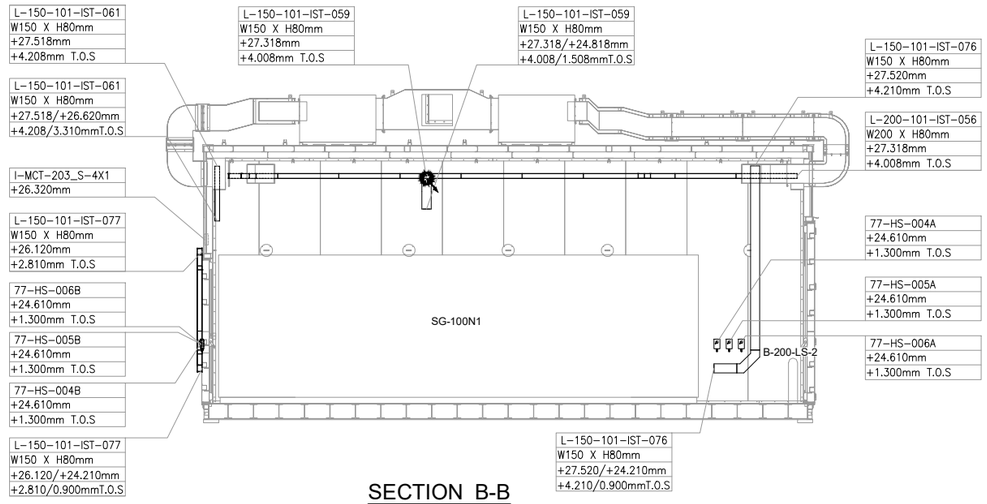
B-200 – LV SWITCHROOM

SCALE-1:1



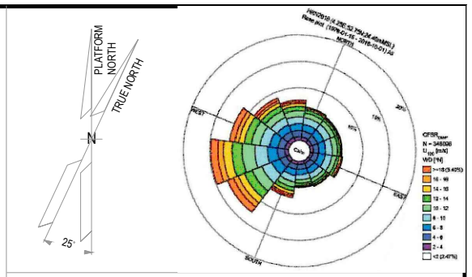
SECTION A-A

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-40114**

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-200 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-40114	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40114 REV:01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-04203	No.	MARSHALLING CABINET B400-FGS-002

B-200 LV Switch Gear Room

<01>

950-XZ-04203 (1, 2) — 1BK / 2BK — NOTE-2
C-950-XZ-04203/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 1 1BK, 2BK 2, SH

950-XL-04205 (1, 3) — 1BK / 2BK — NOTE-2
C-950-XL-04205/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 3 3BK, 2BK 4, SH

950-XL-04206 (1, 3) — 1BK / 2BK — NOTE-2
C-950-XL-04206/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 5 5BK, 2BK 6, SH

950-JE-04203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

B-200 OUTDOOR
1BK 12 / 2BK 22 — 77-HS-004B — 11 / 21 1BK / 2BK — NOTE-2
NOTE-2
C-77-HS-004B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 7 7BK, 2BK 8, SH

C-77-HS-004A/77-HS-004B
~~C-77-HS-004B/77-HS-004A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77004

77-HY-004 (1, 2) — 1BK / 2BK — NOTE-2
C-77-HY-004/77-HS-004A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
NOTE-2

B-200 INDOOR
1BK 12 / 2BK 22 — 77-HS-004A — 11 / 21 1BK / 2BK — NOTE-2

B-200 OUTDOOR
1BK 12 / 2BK 22 — 77-HS-005B — 11 / 21 1BK / 2BK — NOTE-2
NOTE-2
C-77-HS-005B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 9 9BK, 2BK 10, SH

C-77-HS-005A/77-HS-005B
~~C-77-HS-005B/77-HS-005A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77005

77-HY-005 (1, 2) — 1BK / 2BK — NOTE-2
C-77-HY-00577-HS-005A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
NOTE-2

B-200 INDOOR
1BK 12 / 2BK 22 — 77-HS-005A — 11 / 21 1BK / 2BK — NOTE-2

B-200 OUTDOOR
1BK 12 / 2BK 22 — 77-HS-006B — 11 / 21 1BK / 2BK — NOTE-2
NOTE-2
C-77-HS-006B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 11 11BK, 2BK 12, SH, OS

C-77-HS-006A/77-HS-006B
~~C-77-HS-006B/77-HS-006A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77006

77-HY-006 (1, 2) — 1BK / 2BK — NOTE-2
C-77-HY-006/77-HS-006A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
NOTE-2

B-200 INDOOR
1BK 12 / 2BK 22 — 77-HS-006A — 11 / 21 1BK / 2BK — NOTE-2

TB-950-JE-04203
1BK 1 — 950-XZ-04203
2BK 2
3BK 3 — 950-XL-04205
4BK 4
5BK 5 — 950-XL-04206
6BK 6
7BK 7 — 77-HY-004
8BK 8
9BK 9 — 77-HY-005
10BK 10
11BK 11 — 77-HY-006
12BK 12

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–04203

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	068	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>

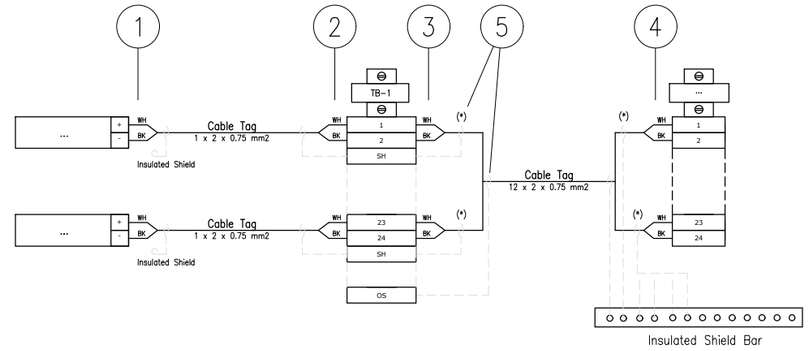
LEGENDS & SYMBOLS:

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

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

A3	DRAWING NO. 123A90-DDL-IN-DG-40016	SHEET 003	REV. 01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

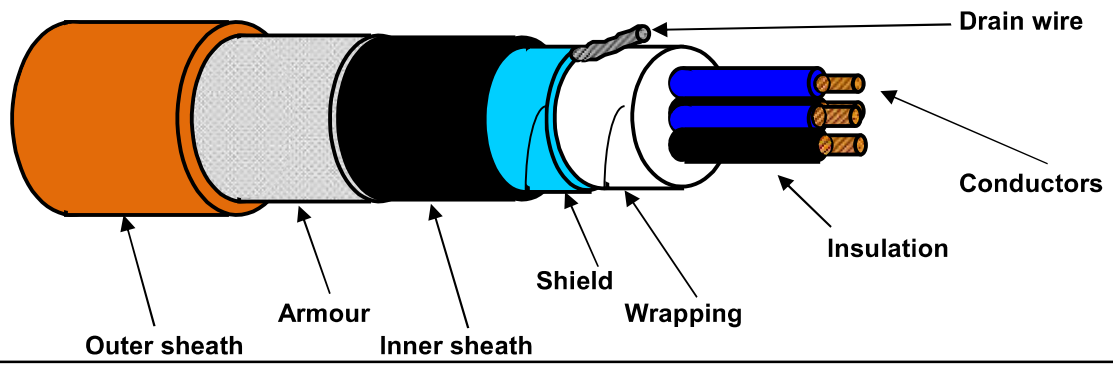
REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

Tag Number	Category	Discipline	Eng Status	NativeDoc	Parent Tag	Grouping	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-005B/950-JE-04203	Cable	IN	VFC	123A90-DDL-IN-LIS-40091		Int-Ext				77-HS-005B	Hand Switch	Lower Deck (B-200) Ext.	950-JE-04203	DO JB to FGS	Lower Deck (B-200)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - M20 Orange		T2_M20_Double			T2_M20_Double				B-200-SEC-2E / B-200-SEC-2C / B-200-SEC-2B / B-200-SEC-3

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-005A/77-HS-005B : PUSH BUTTON / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-20 : HVAC LV Switchgear Room B-200			Module	LD_B-200/LD_B-200_Ext	
TASK	code	C10000370	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-005A — To: 77-HS-005B

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.	OK
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.	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		0,4	Ω
	SCREEN		0,4	Ω
	EARTH		NA	Ω
	ARMr		0,4	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

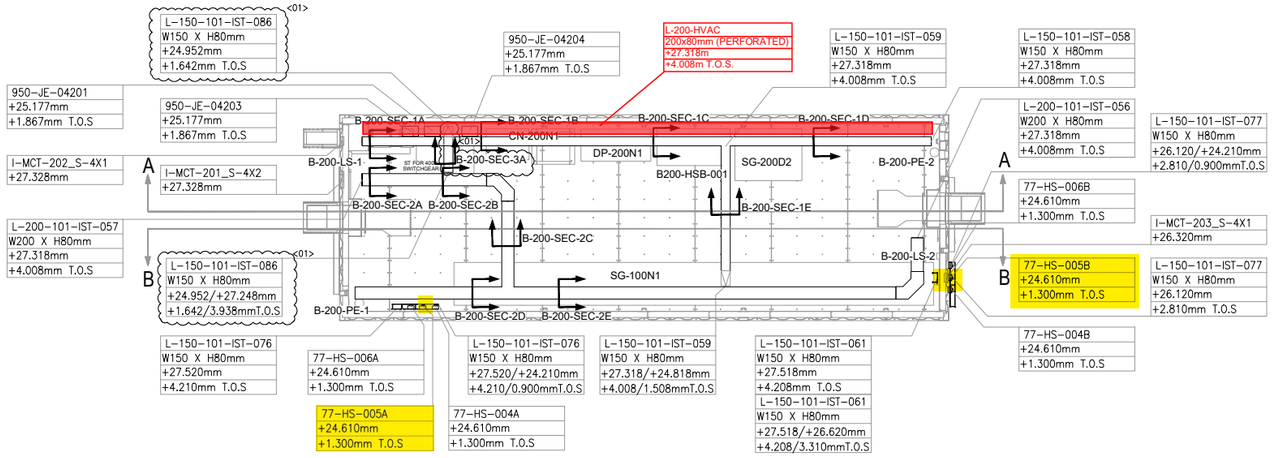
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 — Calibration date: 10/07/2024

Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICSI IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-28	2024-11-21	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-28T06:53:42.108Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-21T08:09:27.936Z	

DRAWING NO. 123A90-DDL-IN-DL-40114

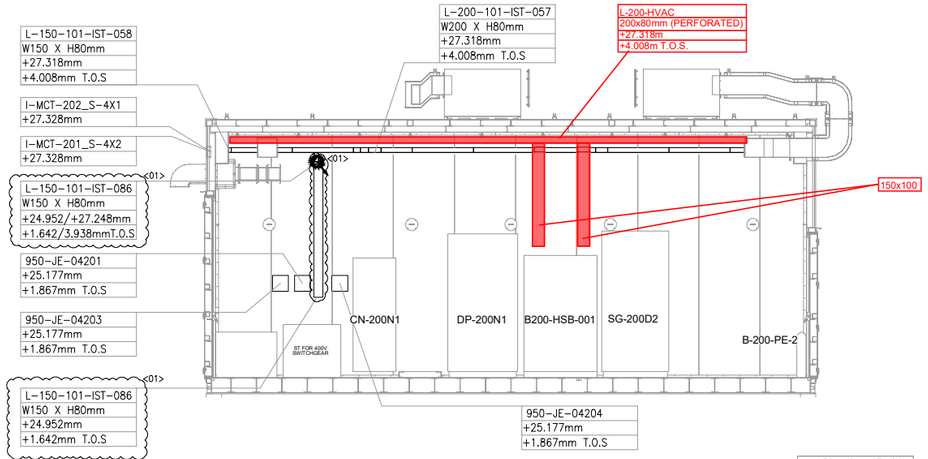
REV. 01



PLAN VIEW

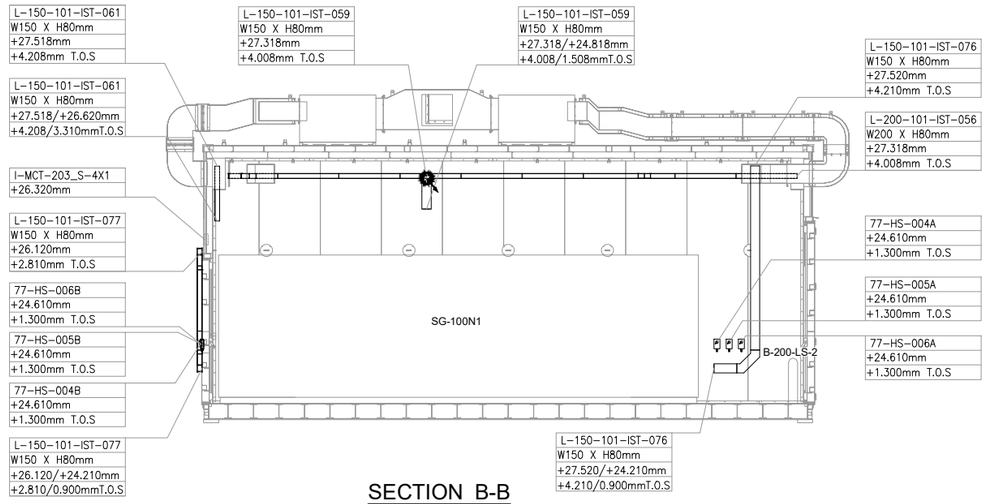
B-200 – LV SWITCHROOM

SCALE-1:1



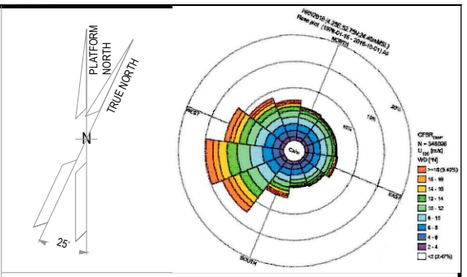
SECTION A-A

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-40114**

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-200 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-40114	001	01

File Name : 123A90-DDL-IN-DL-40114 REV:01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-04203	No.	MARSHALLING CABINET B400-FGS-002

B-200 LV Switch Gear Room

<01>

950-XZ-04203 (1, 2) — 1BK / 2BK — NOTE-2 — C-950-XZ-04203/950-JE-04203 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS → TB-1: 1BK 1, 2BK 2, SH

950-XL-04205 (1, 3) — 1BK / 2BK — NOTE-2 — C-950-XL-04205/950-JE-04203 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS → TB-1: 3BK 3, 4BK 4, SH

950-XL-04206 (1, 3) — 1BK / 2BK — NOTE-2 — C-950-XL-04206/950-JE-04203 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS → TB-1: 5BK 5, 6BK 6, SH

950-JE-04203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-04203: 1BK 1 — 950-XZ-04203; 3BK 3 — 950-XL-04205; 5BK 5 — 950-XL-04206; 7BK 7 — 77-HY-004; 9BK 9 — 77-HY-005; 11BK 11 — 77-HY-006

B-200 OUTDOOR

1BK 12/22 77-HS-004B 11/21 1BK — NOTE-2 — C-77-HS-004B/950-JE-04203 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS → TB-1: 7BK 7, 8BK 8, SH

C-77-HS-004A/77-HS-004B
~~C-77-HS-004B/77-HS-004A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77004

77-HY-004 (1, 2) — 1BK / 2BK — C-77-HY-004/77-HS-004A 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-200 INDOOR

1BK 12/22 77-HS-004A 11/21 1BK — NOTE-2

B-200 OUTDOOR

1BK 12/22 77-HS-005B 11/21 1BK — NOTE-2 — C-77-HS-005B/950-JE-04203 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS → TB-1: 9BK 9, 10BK 10, SH

C-77-HS-005A/77-HS-005B
~~C-77-HS-005B/77-HS-005A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77005

77-HY-005 (1, 2) — 1BK / 2BK — C-77-HY-00577-HS-005A 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-200 INDOOR

1BK 12/22 77-HS-005A 11/21 1BK — NOTE-2

B-200 OUTDOOR

1BK 12/22 77-HS-006B 11/21 1BK — NOTE-2 — C-77-HS-006B/950-JE-04203 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS → TB-1: 11BK 11, 12BK 12, SH, OS

C-77-HS-006A/77-HS-006B
~~C-77-HS-006B/77-HS-006A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77006

77-HY-006 (1, 2) — 1BK / 2BK — C-77-HY-006/77-HS-006A 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-200 INDOOR

1BK 12/22 77-HS-006A 11/21 1BK — NOTE-2

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–04203

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	068	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>

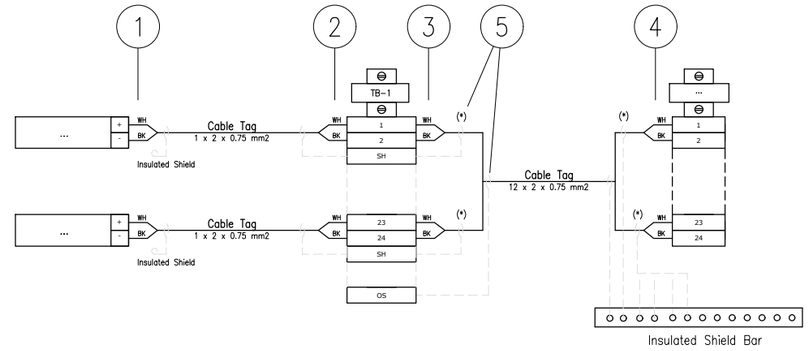
LEGENDS & SYMBOLS:

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

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

A3	DRAWING NO. 123A90-DDL-IN-DG-40016	SHEET 003	REV. 01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

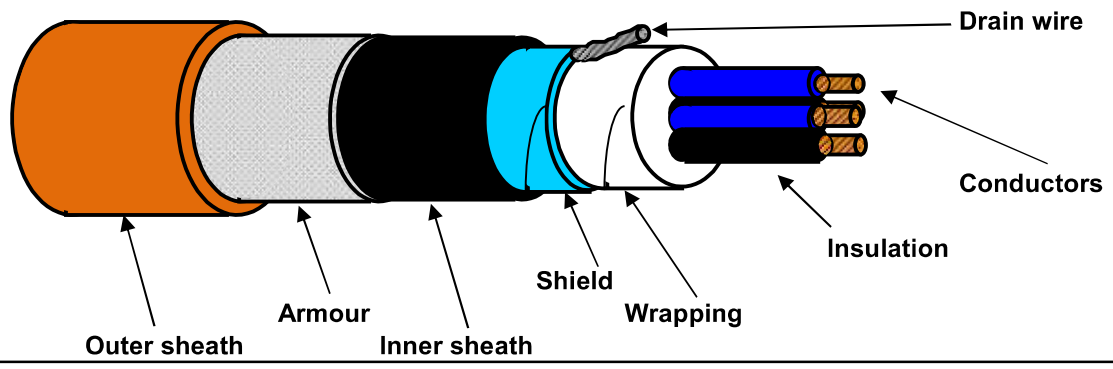
REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

Tag Number	Category	Discipline	Eng Status	NativeDoc	Parent Tag	Grouping	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-005A/77-HS-005B	Cable	IN	VFC	123A90-DDL-IN-LIS-40091		Int-Ext				77-HS-005A	Hand Switch	Lower Deck (B-200)	77-HS-005B	Hand Switch	Lower Deck (B-200) Ext.	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				I-MCT-203 / B-200-SEC-2D / B-200-SEC-2E

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-HY-005/77-HS-005A	: FIRE DAMPER / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-20	: HVAC LV Switchgear Room B-200	Module	LD_B-200		
TASK	code	C10000371	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-77005	To	77-HS-005A		

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.	OK
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.	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	0,3	Ω
	SCREEN	0,3	Ω
	EARTH	NA	Ω
	ARMr	0,3	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

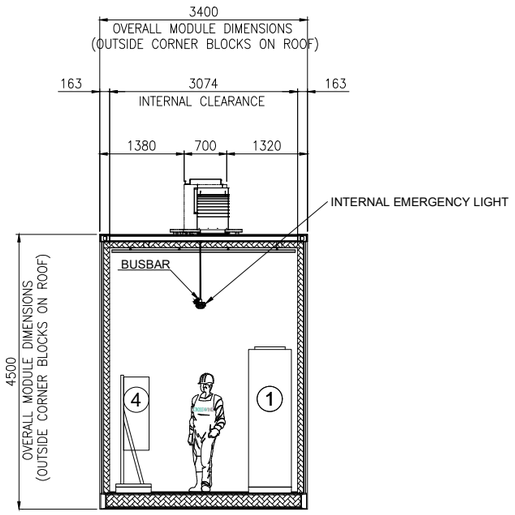
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 Calibration date: 10/07/2024

Comments

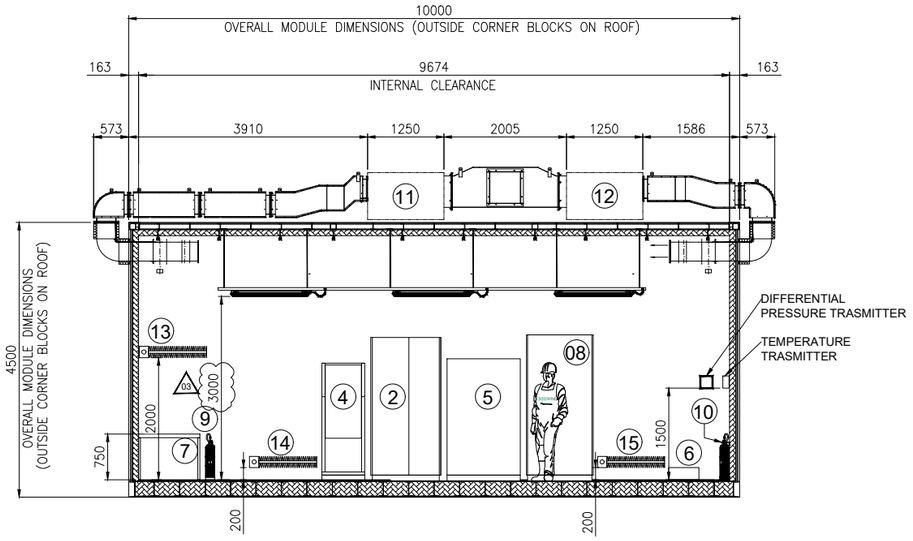
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICSI IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-28	2024-11-21	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-28T06:53:54.083Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-21T09:35:55.077Z	

DRAWING NO. 1724000049-AR-DA-00015

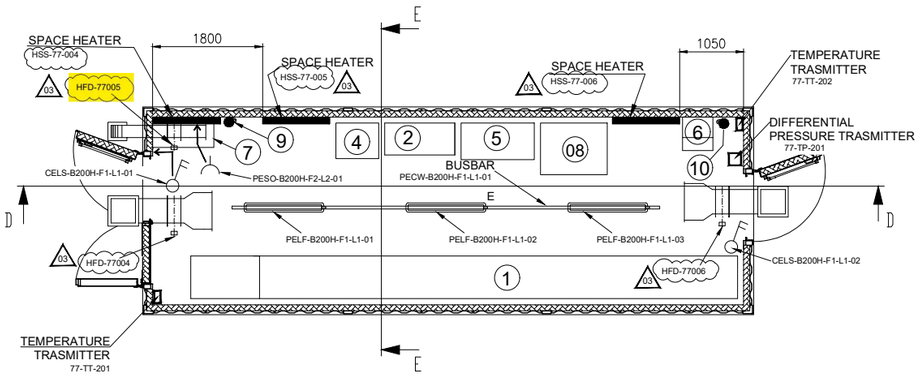
REV. 03



SECTION E-E

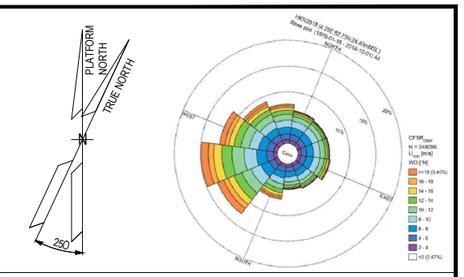


SECTION D-D



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	4900
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	600
3		*DELETED*				
4	CN-200N1	ICCP PANEL	700	580	1830	250
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	400
6	-	TOOL BOX	495	335	200	20
7	-	TABLE	1000	500	750	50
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	1000
9	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
10	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
11	HHU-77003	AIR HANDLING UNIT A	1250	850	900	140
12	HHU-77004	AIR HANDLING UNIT B	1250	850	900	140
13	HSS-77-004	SPACE HEATER 1	184	145	1100	5
14	HSS-77-005	SPACE HEATER 2	184	145	1100	5
15	HSS-77-006	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.

03

REFERENCE

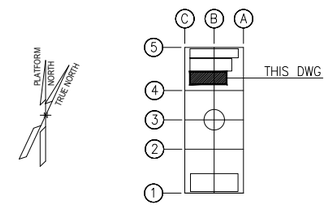
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00065
"B-200" DETAILED DRAWING	1724000049-AR-DD-00019
PAINTING PROCEDURE	1724000049-MAT-PRO-00005

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	19/07/24	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

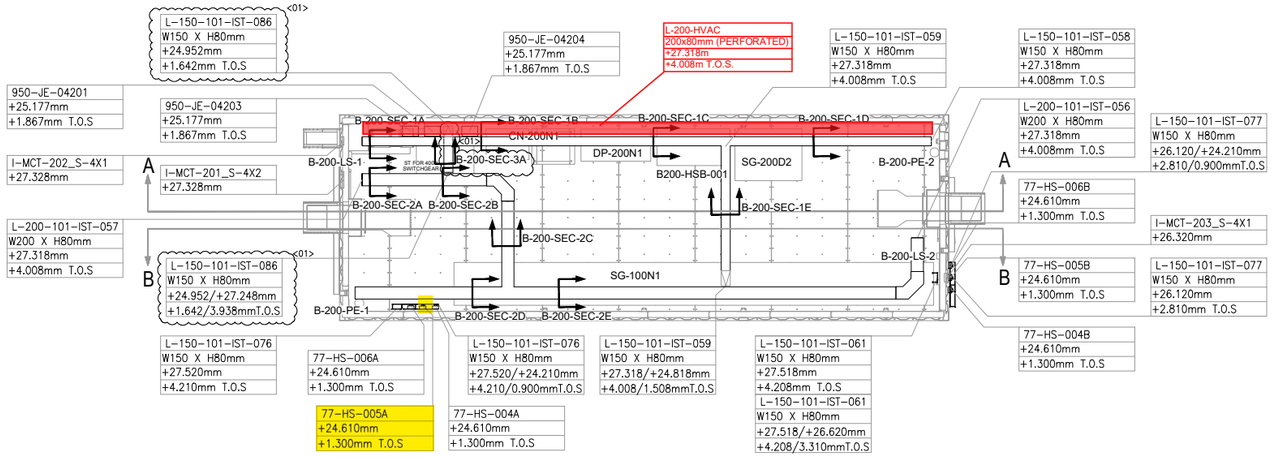
TITLE : BASE LOAD POWER HUB (BLPH)
B-200 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 19/07/24
A1	DRAWING NO. 1724000049-AR-DA-00015		SHEET 003 / REV. 03

File Name : 1724000049-AR-DA-00015-REV.03

DRAWING NO. 123A90-DDL-IN-DL-40114

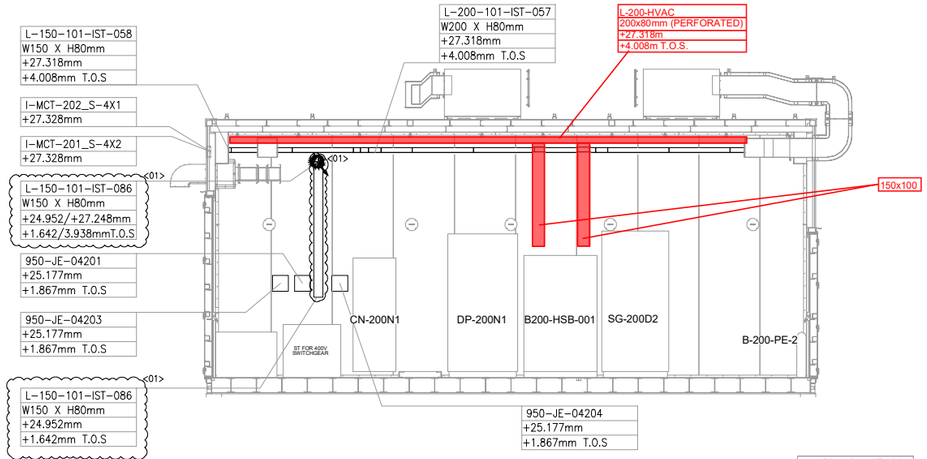
REV. 01



PLAN VIEW

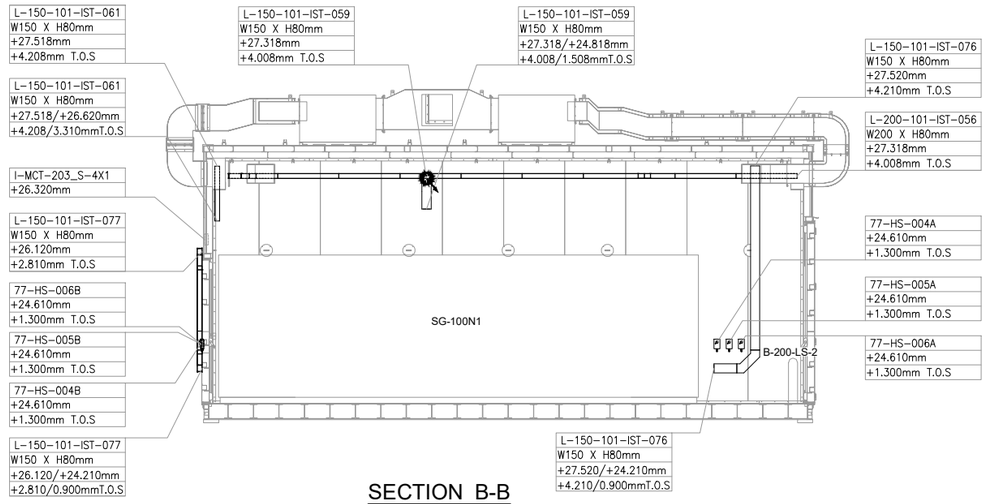
B-200 – LV SWITCHROOM

SCALE-1:1



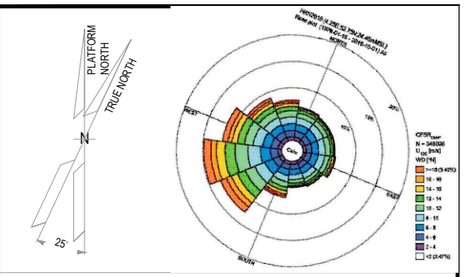
SECTION A-A

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-40114**

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-200 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-40114	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40114 REV:01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-04203	No.	MARSHALLING CABINET B400-FGS-002

B-200 LV Switch Gear Room

<01>

950-XZ-04203 (1BK, 2BK) — NOTE-2 — C-950-XZ-04203/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-XL-04205 (1BK, 3BK) — NOTE-2 — C-950-XL-04205/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-XL-04206 (1BK, 3BK) — NOTE-2 — C-950-XL-04206/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-JE-04203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

B-200 OUTDOOR

77-HS-004B (12BK, 22BK / 11BK, 21BK) — NOTE-2 — C-77-HS-004B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

C-77-HS-004A/77-HS-004B
~~C-77-HS-004B/77-HS-004A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77004

77-HY-004 (1BK, 2BK) — C-77-HY-004/77-HS-004A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-200 INDOOR

77-HS-004A (12BK, 22BK / 11BK, 21BK) — NOTE-2

B-200 OUTDOOR

77-HS-005B (12BK, 22BK / 11BK, 21BK) — NOTE-2 — C-77-HS-005B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

C-77-HS-005A/77-HS-005B
~~C-77-HS-005B/77-HS-005A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77005

77-HY-005 (1BK, 2BK) — C-77-HY-00577-HS-005A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-200 INDOOR

77-HS-005A (12BK, 22BK / 11BK, 21BK) — NOTE-2

B-200 OUTDOOR

77-HS-006B (12BK, 22BK / 11BK, 21BK) — NOTE-2 — C-77-HS-006B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

C-77-HS-006A/77-HS-006B
~~C-77-HS-006B/77-HS-006A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77006

77-HY-006 (1BK, 2BK) — C-77-HY-006/77-HS-006A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-200 INDOOR

77-HS-006A (12BK, 22BK / 11BK, 21BK) — NOTE-2

TB-1

1	1BK
2	2BK
SH	
3	3BK
4	4BK
SH	
5	5BK
6	6BK
SH	
7	7BK
8	8BK
SH	
9	9BK
10	10BK
SH	
11	11BK
12	12BK
SH	
OS	

TB-950-JE-04203

1	950-XZ-04203
2	
3	950-XL-04205
4	
5	950-XL-04206
6	
7	77-HY-004
8	
9	77-HY-005
10	
11	77-HY-006
12	

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–04203

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	068	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>

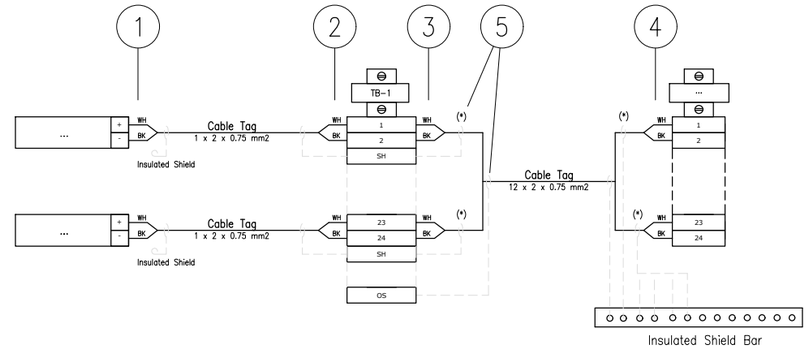
LEGENDS & SYMBOLS:

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

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

A3	DRAWING NO. 123A90-DDL-IN-DG-40016	SHEET 003	REV. 01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

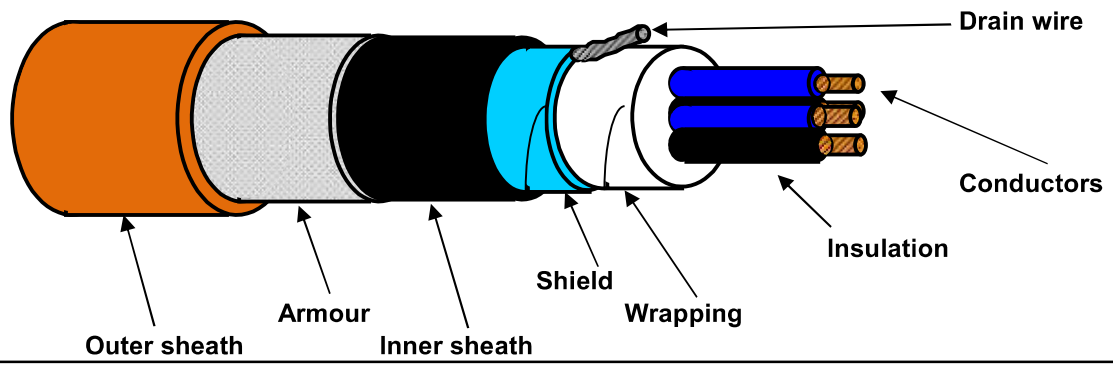
REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

Tag Number	Category	Discipline	Eng Status	NativeDoc	Parent Tag	Grouping	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-HY-005/77-HS-005A	Cable	IN	VFC	123A90-DDL-IN-LIS-40091		Int-Ext				HFD-77005	Fire Damper	Lower Deck (B-200)	77-HS-005A	Hand Switch	Lower Deck (B-200)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - M20 Orange		T2_M20_Double			T2_M20_Double				B-200-SEC-2E / B-200-SEC-2D

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-006B/950-JE-04203 : PUSH BUTTON / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-20 : HVAC LV Switchgear Room B-200			Module	LD_B-200_Ext/LD_B-200	
TASK	code	C10000372	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-006B	To	950-JE-04203		

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.	OK
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.	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	0,3	Ω
	SCREEN	0,3	Ω
	EARTH	NA	Ω
	ARMr	0,3	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

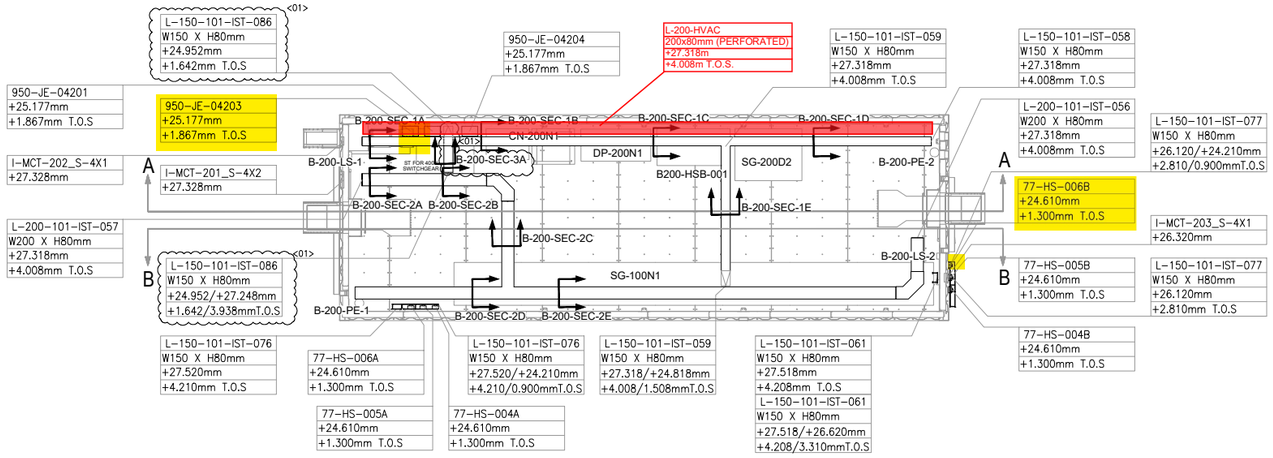
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 Calibration date: 10/07/2024

Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICSI IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-28	2024-11-21	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-28T06:54:03.644Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-21T08:10:16.925Z	

DRAWING NO. 123A90-DDL-IN-DL-40114

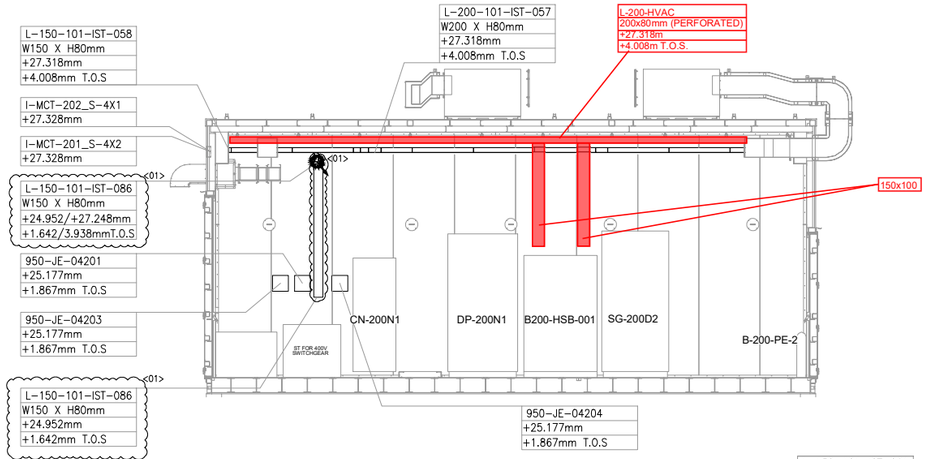
REV. 01



PLAN VIEW

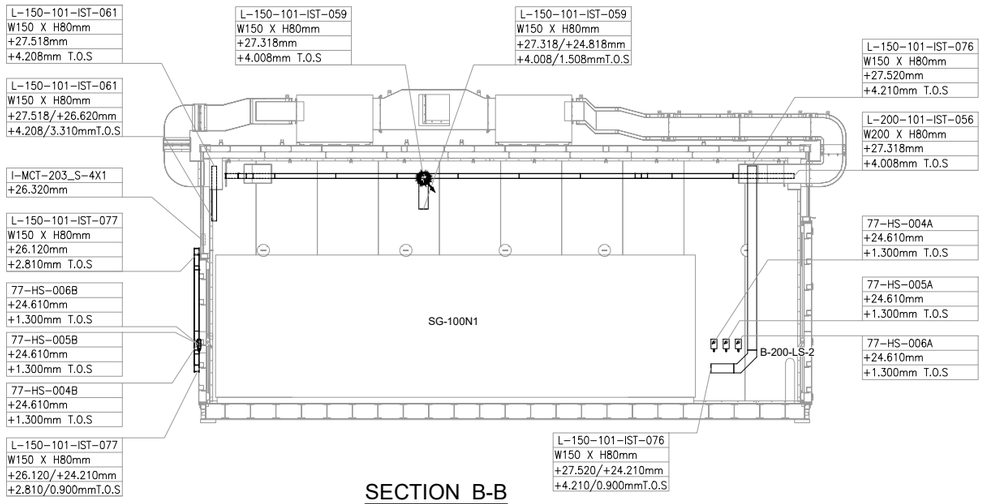
B-200 – LV SWITCHROOM

SCALE-1:1



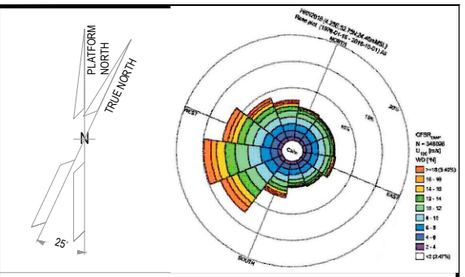
SECTION A-A

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-40114**

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-200 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-40114	001	01

File Name : 123A90-DDL-IN-DL-40114 REV:01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-04203	No.	MARSHALLING CABINET B400-FGS-002

B-200 LV Switch Gear Room

<01>

950-XZ-04203 (1BK, 2BK) — NOTE-2 — C-950-XZ-04203/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-XL-04205 (1BK, 3BK) — NOTE-2 — C-950-XL-04205/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-XL-04206 (1BK, 3BK) — NOTE-2 — C-950-XL-04206/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

B-200 OUTDOOR
77-HS-004B (12, 22 / 11, 21) — NOTE-2 — C-77-HS-004B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
C-77-HS-004A/77-HS-004B
~~C-77-HS-004B/77-HS-004A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77004
77-HY-004 (1, 2) — NOTE-2 — C-77-HY-004/77-HS-004A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
B-200 INDOOR
77-HS-004A (12, 22 / 11, 21) — NOTE-2

B-200 OUTDOOR
77-HS-005B (12, 22 / 11, 21) — NOTE-2 — C-77-HS-005B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
C-77-HS-005A/77-HS-005B
~~C-77-HS-005B/77-HS-005A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77005
77-HY-005 (1, 2) — NOTE-2 — C-77-HY-00577-HS-005A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
B-200 INDOOR
77-HS-005A (12, 22 / 11, 21) — NOTE-2

B-200 OUTDOOR
77-HS-006B (12, 22 / 11, 21) — NOTE-2 — C-77-HS-006B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
C-77-HS-006A/77-HS-006B
~~C-77-HS-006B/77-HS-006A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77006
77-HY-006 (1, 2) — NOTE-2 — C-77-HY-006/77-HS-006A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
B-200 INDOOR
77-HS-006A (12, 22 / 11, 21) — NOTE-2

TB-1
1 — 950-XZ-04203
2 — 950-XL-04205
3 — 950-XL-04206
4 — 77-HY-004
5 — 77-HY-005
6 — 77-HY-006
7 — C-77-HS-004B/950-JE-04203
8 — C-77-HS-004A/77-HS-004B
9 — C-77-HS-005B/950-JE-04203
10 — C-77-HS-005A/77-HS-005B
11 — C-77-HS-006B/950-JE-04203
12 — C-77-HS-006A/77-HS-006B
SH
OS

950-JE-04203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-04203
1 — 950-XZ-04203
2 — 950-XL-04205
3 — 950-XL-04206
4 — 77-HY-004
5 — 77-HY-005
6 — 77-HY-006
Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–04203

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 068	REV. 01

File Name : 123A90–DDL–IN–DG–40016_Rev.01

DRAWING NO. 123A90-DDL-IN-DG-40016

REV. 01

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5. CONNECTION TERMINAL BLOCK SHALL BE DEFINED DURING CONSTRUCTION PHASE.

<01>

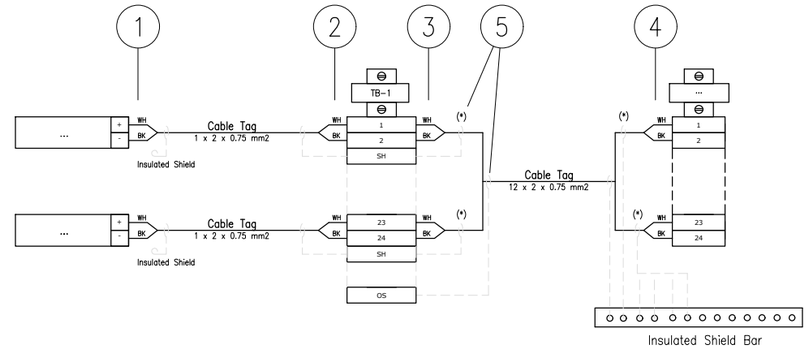
LEGENDS & SYMBOLS:

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.
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(HEAT SHRINKABLE BLUE FOR SHIELD OF NIS INSTRUMENT CABLE)

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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

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

A3	DRAWING NO. 123A90-DDL-IN-DG-40016	SHEET 003	REV. 01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

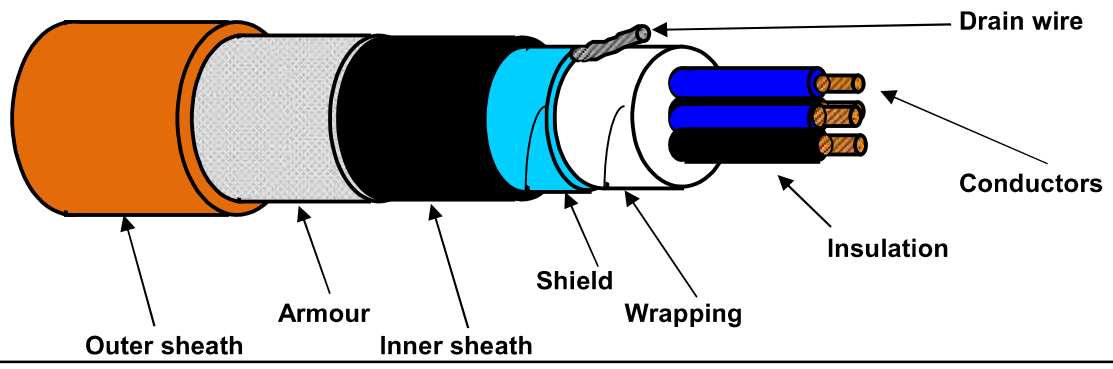
REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

Tag Number	Category	Discipline	Eng Status	NativeDoc	Parent Tag	Grouping	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-006B/950-JE-04203	Cable	IN	VFC	123A90-DDL-IN-LIS-40091		Int-Ext				77-HS-006B	Hand Switch	Lower Deck (B-200) Ext.	950-JE-04203	DO JB to FGS	Lower Deck (B-200)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - M20 Orange		T2_M20_Double			T2_M20_Double				B-200-SEC-2E / B-200-SEC-2C / B-200-SEC-2B / B-200-SEC-3

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-006A/77-HS-006B	: PUSH BUTTON / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-20	: HVAC LV Switchgear Room B-200	Module	LD_B-200/LD_B-200_Ext		
TASK	code	C10000373	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-006A — To: 77-HS-006B

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.	OK
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.	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	0,4	Ω
	SCREEN	0,4	Ω
	EARTH	NA	Ω
	ARMr	0,4	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

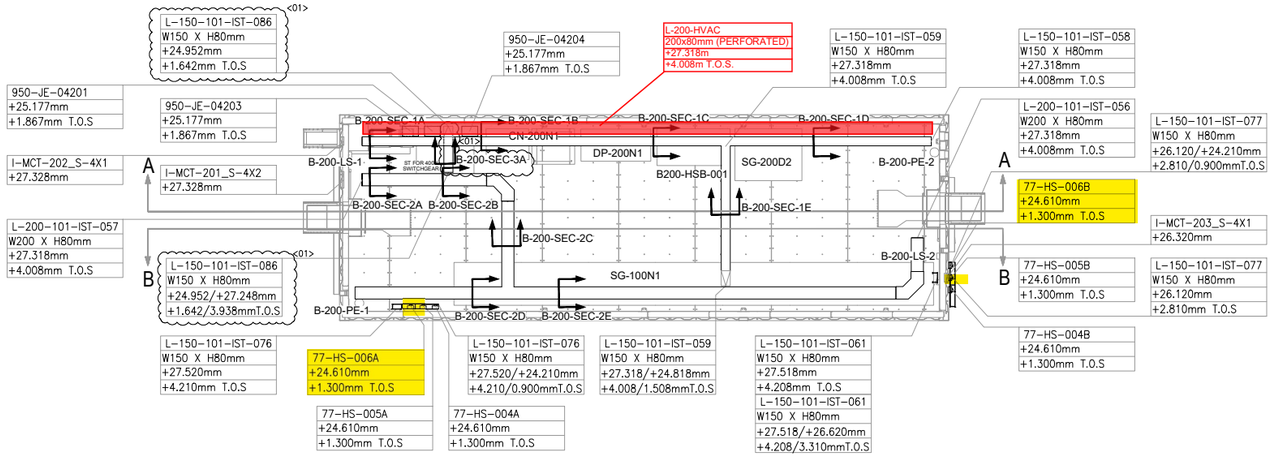
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 — Calibration date: 10/07/2024

Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICSI IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-28	2024-11-21	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-28T06:54:15.572Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-21T08:11:21.012Z	

DRAWING NO. 123A90-DDL-IN-DL-40114

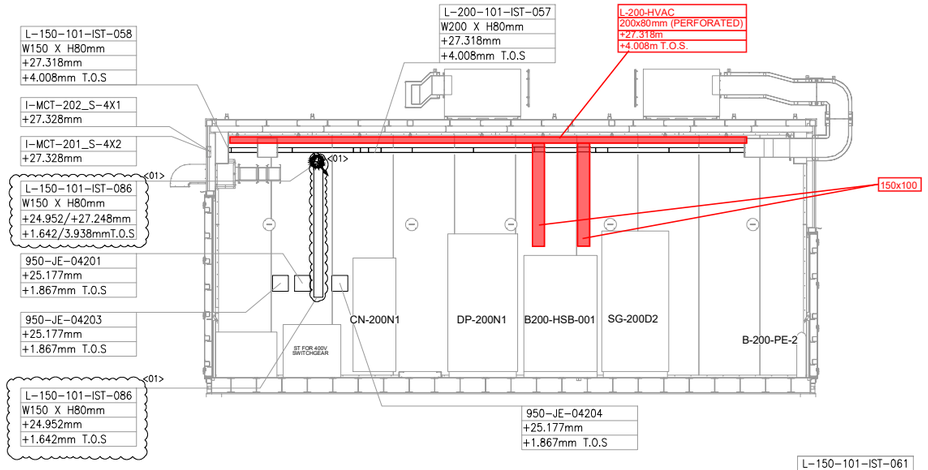
REV. 01



PLAN VIEW

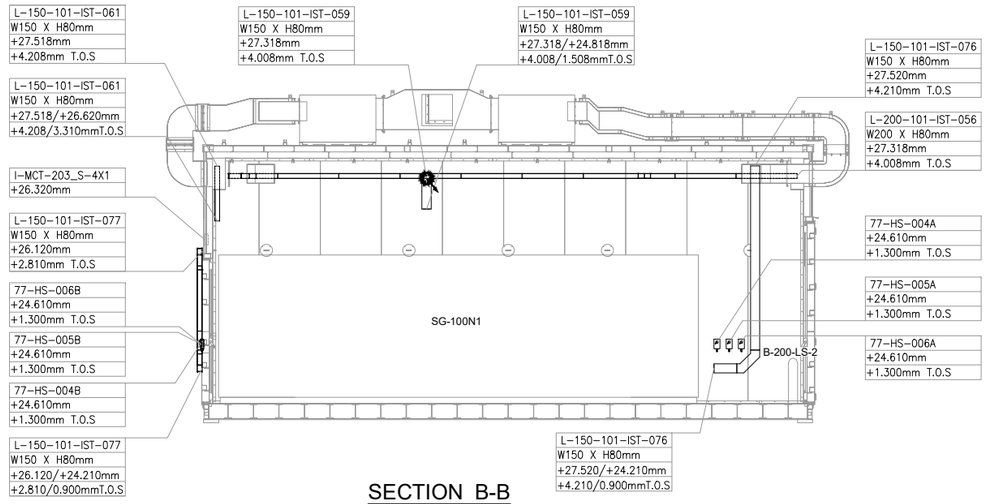
B-200 – LV SWITCHROOM

SCALE-1:1



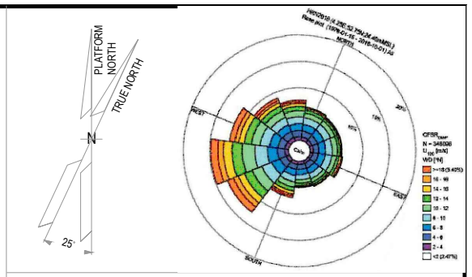
SECTION A-A

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-40114**

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-200 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-40114	001	01

File Name : 123A90-DDL-IN-DL-40114 REV:01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-04203	No.	MARSHALLING CABINET B400-FGS-002

B-200 LV Switch Gear Room

<01>

950-XZ-04203 (1, 2) — C-950-XZ-04203/950-JE-04203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2 — TB-1: 1, 2, SH

950-XL-04205 (1, 3) — C-950-XL-04205/950-JE-04203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2 — TB-1: 3, 4, SH

950-XL-04206 (1, 3) — C-950-XL-04206/950-JE-04203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2 — TB-1: 5, 6, SH

950-JE-04203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-04203: 1 — 950-XZ-04203; 2, 3 — 950-XL-04205; 4, 5 — 950-XL-04206; 6 — 77-HY-004; 7 — 77-HY-005; 8 — 77-HY-006

Shield Bar — I.E.

B-200 OUTDOOR: 77-HS-004B (12, 22 / 11, 21) — C-77-HS-004B/950-JE-04203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2 — TB-1: 7, 8, SH

C-77-HS-004A/77-HS-004B
~~C-77-HS-004B/77-HS-004A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77004 — 77-HY-004 (1, 2) — C-77-HY-004/77-HS-004A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — B-200 INDOOR: 77-HS-004A (12, 22 / 11, 21)

B-200 OUTDOOR: 77-HS-005B (12, 22 / 11, 21) — C-77-HS-005B/950-JE-04203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2 — TB-1: 9, 10, SH

C-77-HS-005A/77-HS-005B
~~C-77-HS-005B/77-HS-005A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77005 — 77-HY-005 (1, 2) — C-77-HY-00577-HS-005A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — B-200 INDOOR: 77-HS-005A (12, 22 / 11, 21)

B-200 OUTDOOR: 77-HS-006B (12, 22 / 11, 21) — C-77-HS-006B/950-JE-04203 — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2 — TB-1: 11, 12, SH, OS

C-77-HS-006A/77-HS-006B
~~C-77-HS-006B/77-HS-006A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77006 — 77-HY-006 (1, 2) — C-77-HY-006/77-HS-006A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — B-200 INDOOR: 77-HS-006A (12, 22 / 11, 21)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–04203

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	068	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>

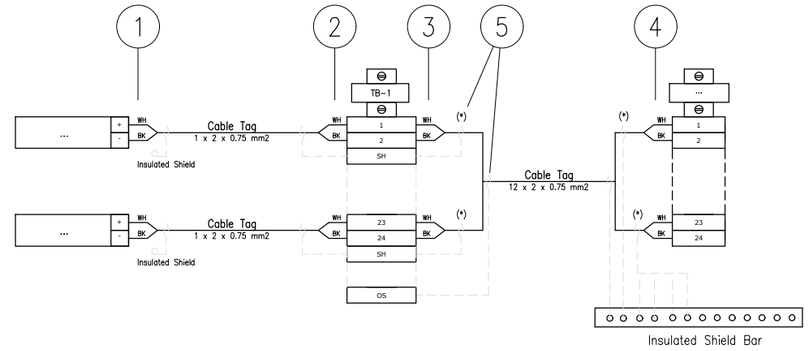
LEGENDS & SYMBOLS:

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

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

A3	DRAWING NO. 123A90-DDL-IN-DG-40016	SHEET 003	REV. 01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

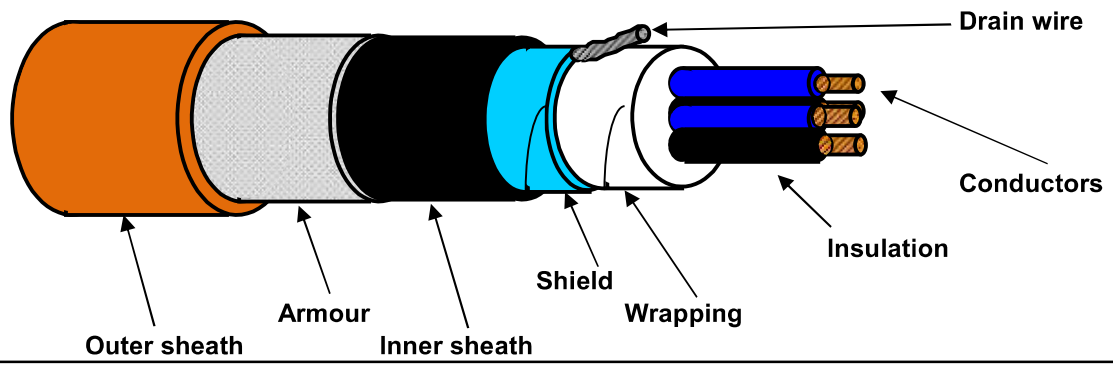
REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

Tag Number	Category	Discipline	Eng Status	NativeDoc	Parent Tag	Grouping	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-006A/77-HS-006B	Cable	IN	VFC	123A90-DDL-IN-LIS-40091		Int-Ext				77-HS-006A	Hand Switch	Lower Deck (B-200)	77-HS-006B	Hand Switch	Lower Deck (B-200) Ext.	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-200-SEC-2D / B-200-SEC-2E

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-HY-006/77-HS-006A	: FIRE DAMPER / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-20	: HVAC LV Switchgear Room B-200	Module	LD_B-200		
TASK	code	C10000374	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-77006	To	77-HS-006A		

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.	OK
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.	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		0,3	Ω
	SCREEN		0,3	Ω
	EARTH		NA	Ω
	ARMr		0,3	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

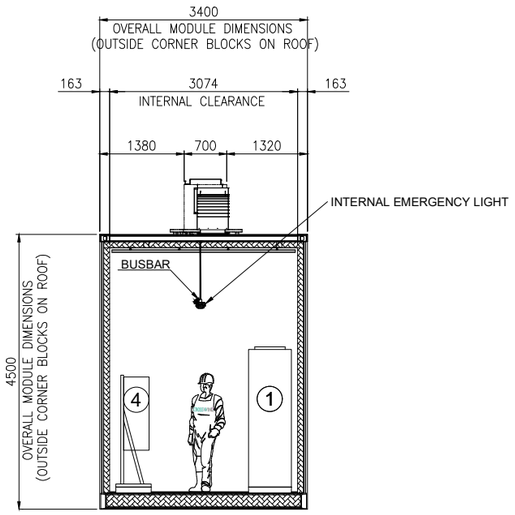
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 Calibration date: 10/07/2024

Comments

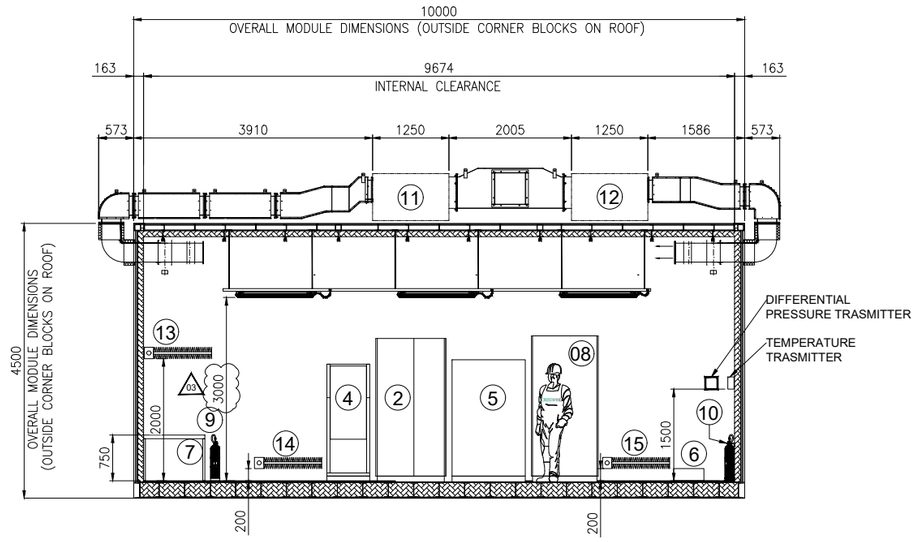
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICSI IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-28	2024-11-21	
Signature	Digitaly signed by Carmelo Bongiovanni 2024-10-28T06:54:25.359Z	Digitaly signed by Giovanni Tangianu 2024-11-21T09:36:51.174Z	

DRAWING NO. 1724000049-AR-DA-00015

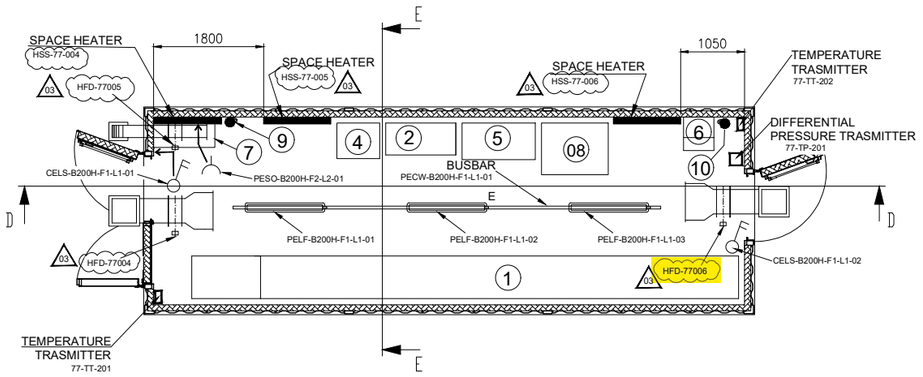
REV. 03



SECTION E-E

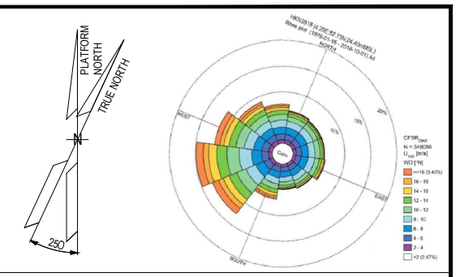


SECTION D-D



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	4900
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	600
3		*DELETED*				
4	CN-200N1	ICCP PANEL	700	580	1830	250
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	400
6	-	TOOL BOX	495	335	200	20
7	-	TABLE	1000	500	750	50
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	1000
9	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
10	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
11	HHU-77003	AIR HANDLING UNIT A	1250	850	900	140
12	HHU-77004	AIR HANDLING UNIT B	1250	850	900	140
13	HSS-77-004	SPACE HEATER 1	184	145	1100	5
14	HSS-77-005	SPACE HEATER 2	184	145	1100	5
15	HSS-77-006	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.

03

REFERENCE

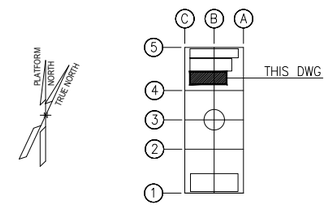
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00065
"B-200" DETAILED DRAWING	1724000049-AR-DD-00019
PAINTING PROCEDURE	1724000049-MAT-PRO-00005

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	19/07/24	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

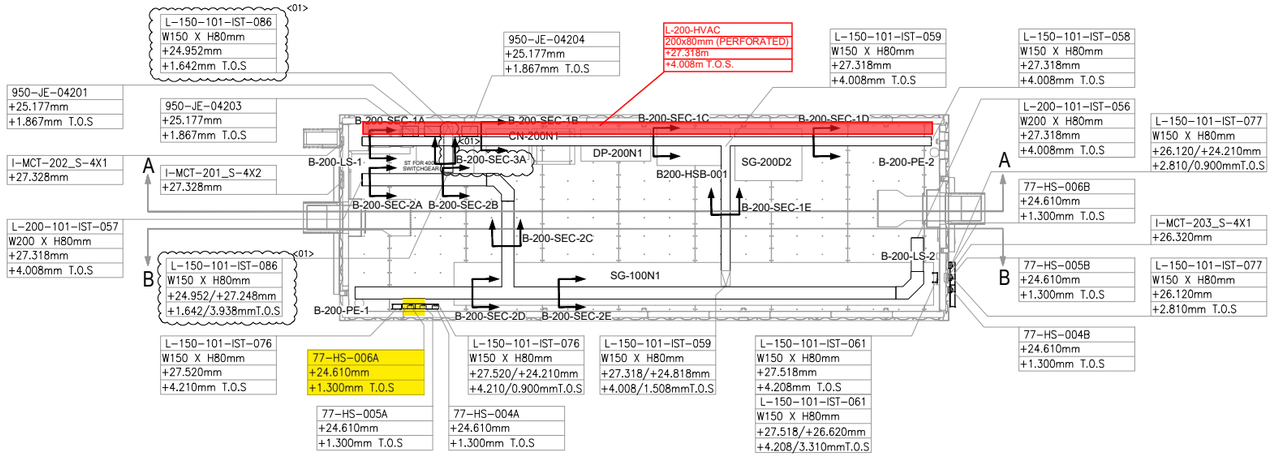
TITLE : BASE LOAD POWER HUB (BLPH)
B-200 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 19/07/24
A1	DRAWING NO. 1724000049-AR-DA-00015	SHEET 003	REV. 03

File Name : 1724000049-AR-DA-00015-REV.03

DRAWING NO. 123A90-DDL-IN-DL-40114

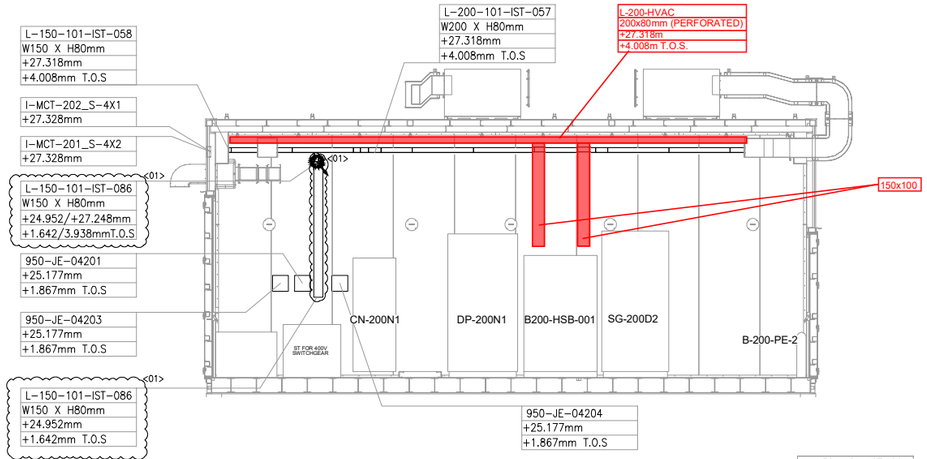
REV. 01



PLAN VIEW

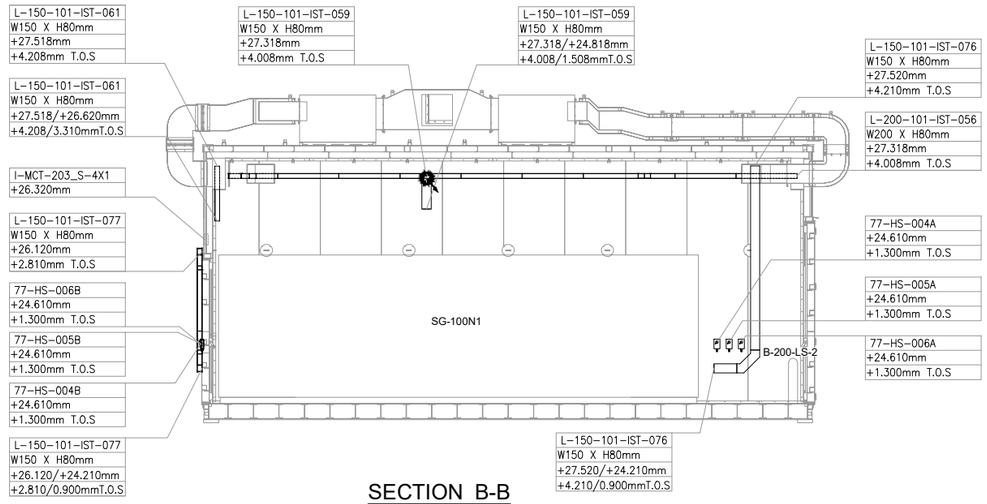
B-200 – LV SWITCHROOM

SCALE-1:1



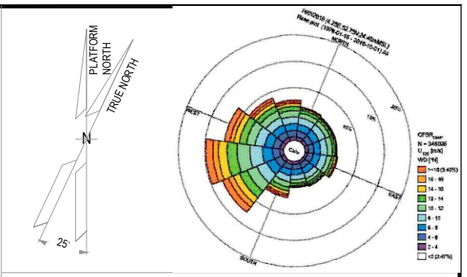
SECTION A-A

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-40114**

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-200 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-40114	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40114 REV:01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-04203	No.	MARSHALLING CABINET B400-FGS-002

B-200 LV Switch Gear Room

<01>

950-XZ-04203 (1BK, 2BK) — NOTE-2 — C-950-XZ-04203/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-XL-04205 (1BK, 3BK) — NOTE-2 — C-950-XL-04205/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-XL-04206 (1BK, 3BK) — NOTE-2 — C-950-XL-04206/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-JE-04203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

B-200 OUTDOOR
77-HS-004B (12BK, 22BK / 11BK, 21BK) — NOTE-2 — C-77-HS-004B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
C-77-HS-004A/77-HS-004B
~~C-77-HS-004B/77-HS-004A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77004
77-HY-004 (1BK, 2BK) — NOTE-2 — C-77-HY-004/77-HS-004A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
B-200 INDOOR
77-HS-004A (12BK, 22BK / 11BK, 21BK) — NOTE-2

B-200 OUTDOOR
77-HS-005B (12BK, 22BK / 11BK, 21BK) — NOTE-2 — C-77-HS-005B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
C-77-HS-005A/77-HS-005B
~~C-77-HS-005B/77-HS-005A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77005
77-HY-005 (1BK, 2BK) — NOTE-2 — C-77-HY-00577-HS-005A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
B-200 INDOOR
77-HS-005A (12BK, 22BK / 11BK, 21BK) — NOTE-2

B-200 OUTDOOR
77-HS-006B (12BK, 22BK / 11BK, 21BK) — NOTE-2 — C-77-HS-006B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
C-77-HS-006A/77-HS-006B
~~C-77-HS-006B/77-HS-006A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77006
77-HY-006 (1BK, 2BK) — NOTE-2 — C-77-HY-006/77-HS-006A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
B-200 INDOOR
77-HS-006A (12BK, 22BK / 11BK, 21BK) — NOTE-2

TB-1
1 (1BK) — 2 (2BK) — SH — 3 (3BK) — 4 (4BK) — SH — 5 (5BK) — 6 (6BK) — SH — 7 (7BK) — 8 (8BK) — SH — 9 (9BK) — 10 (10BK) — SH — 11 (11BK) — 12 (12BK) — SH — OS

TB-950-JE-04203
1 — 950-XZ-04203
2 — 3 — 950-XL-04205
4 — 5 — 950-XL-04206
6 — 7 — 77-HY-004
8 — 9 — 77-HY-005
10 — 11 — 77-HY-006
12

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

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TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–04203

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 068	REV. 01

File Name : 123A90–DDL–IN–DG–40016_Rev.01

DRAWING NO. 123A90-DDL-IN-DG-40016

REV. 01

NOTES:

1. ALL SPARE ENTRIES SHALL BE PROVIDED WITH CERTIFIED EX PROOF PLUGS.
2. CABLE SCREENS / DRAIN WIRE SHALL BE SECURELY INSULATED AND TIED BACK IN THE INSTRUMENT SIDE AND SHAL BE TERMINATED IN THE MARSHALLING SIDE OF THE PANEL.
3. SPARE PAIRS / TRIADS SHALL BE CONNECTED TO TERMINALS IN JUNCTION BOX AND PANEL / MARSHALLING CABINETS.
4. ALL CABLE SCREENS TO BE TERMINATED AT THE INSTRUMENT EARTH BAR IN THE RESPECTIVE EARTH BARS (IS OR NIS) AS APPLICABLE IN THE MARSHALLING CABINET.
5. CONNECTION TERMINAL BLOCK SHALL BE DEFINED DURING CONSTRUCTION PHASE.

<01>

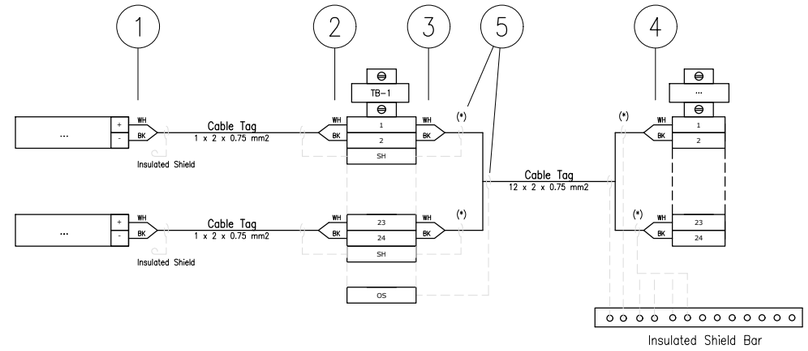
LEGENDS & SYMBOLS:

LEGEND:

I.E.	- GREEN ——— INSTRUMENT SIGNAL EARTH
P.E.	- GREEN/YELLOW —— P.E. EARTH/BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY SAFE
P.E.	- PLANT EARTH
PCS	- PROCESS CONTROL SYSTEM <01>
ESD	- EMERGENCY SHUTDOWN SYSTEM
SIS	- SAFETY INSTRUMENT SYSTEM
FGS	- FIRE & GAS SYSTEM <01>
MC	- MARSHALLING CABINET
AI	- ANALOGUE INPUT
AO	- ANALOGUE OUTPUT
DI	- DIGITAL INPUT
DO	- DIGITAL OUTPUT
JE	- JUNCTION BOX FOR ELECTRICAL SIGNALS <01>

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



(*) Single shield is foreseen only for AI/AO signals.

1 - INSTRUMENT TERMINAL NO. OR POLARITY/JB NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

2 - INSTRUMENT TERMINAL NO. OR POLARITY/INSTRUMENT TAG NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

3 - PAIR OR CORE NO./MARSHALLING CABINET NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

4 - PAIR OR CORE NO./JB NO./JB TERMINAL NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

5 - HEAT SHRINKABLE BLACK FOR SHIELD OF NIS INSTRUMENT CABLE.
(HEAT SHRINKABLE BLUE FOR SHIELD OF NIS INSTRUMENT CABLE)

6 - IN CASE OF CONNECTION FROM RIGHT TO LEFT, ORDER OF INFORMATION SHALL BE MIRRORED

REFERENCE DRAWINGS

PIPING AND INSTRUMENT DIAGRAM	123A90-DDL-PR-PID-80009
INSTRUMENT INDEX	123A90-DDL-IN-LIS-40088 Rev.01
F&G DETECTORS LAYOUT	123A90-DDL-SAF-DL-30027

CROSSWIND

ROSETTI MARINO

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

A3	DRAWING NO. 123A90-DDL-IN-DG-40016	SHEET 003	REV. 01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

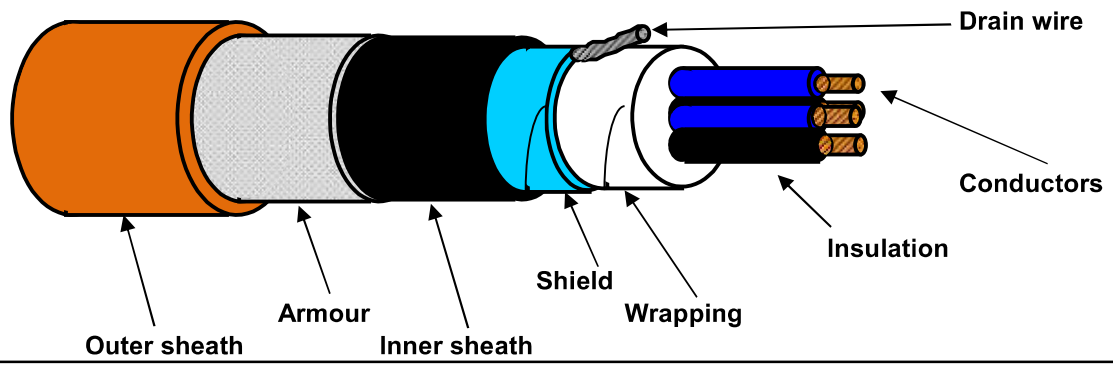
REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

Tag Number	Category	Discipline	Eng Status	NativeDoc	Parent Tag	Grouping	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-HY-006/77-HS-006A	Cable	IN	VFC	123A90-DDL-IN-LIS-40091		Int-Ext				HFD-77006	Fire Damper	Lower Deck (B-200)	77-HS-006A	Hand Switch	Lower Deck (B-200)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - M20 Orange		T2_M20_Double			T2_M20_Double				B-200-SEC-2A / B-200-SEC-2B / B-200-SEC-2C / B-200-SEC-2D

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	B200-HSB-001/B400-FGS-003	: B-200 HVAC Control Panel / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-20	: HVAC LV Switchgear Room B-200	Module	LD_B-200/LD_B-400		
TASK	code	C10002036	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	B200-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

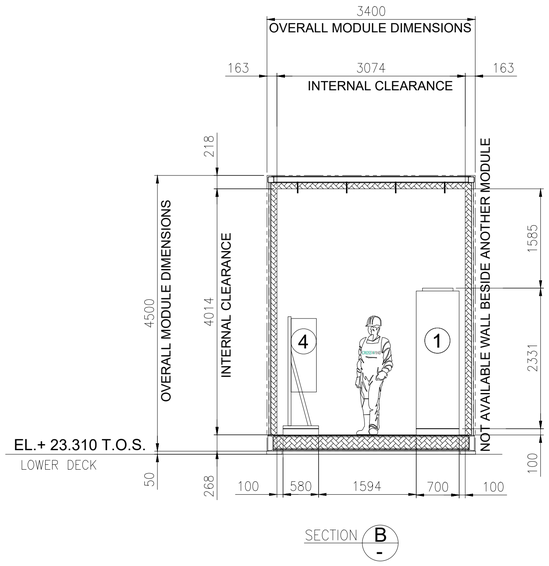
TESTING INSTRUMENTS USED

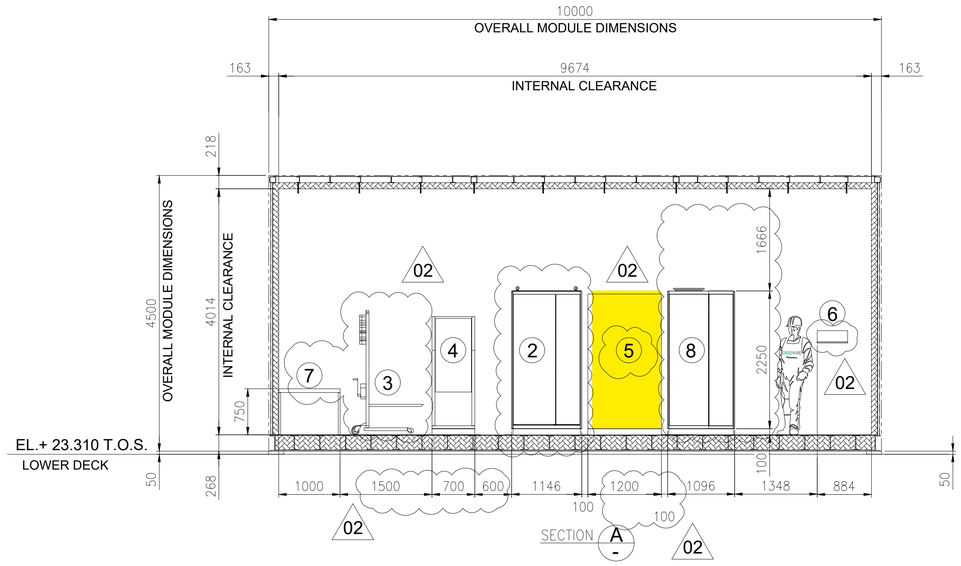
TYPE / SERIAL N°: MEGGER: KEW3125A SERIAL:W8330207 Calibration date: N° 7722/24 10/07/2024

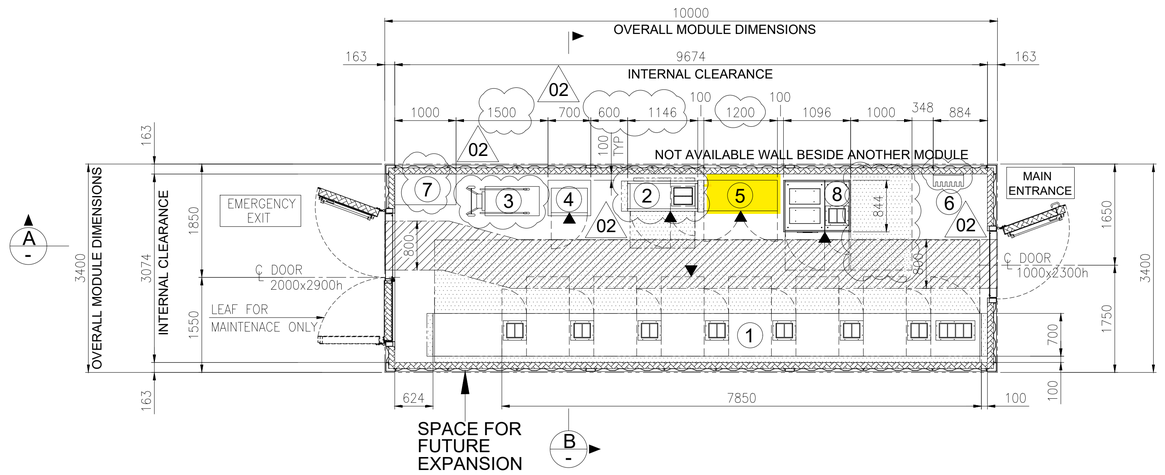
Comments

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	Digitaly signed by Carmelo Bongiovanni 2024-11-15T12:15:29.645Z	Digitaly signed by Alessio Polo 2024-11-19T17:26:48.732Z	

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





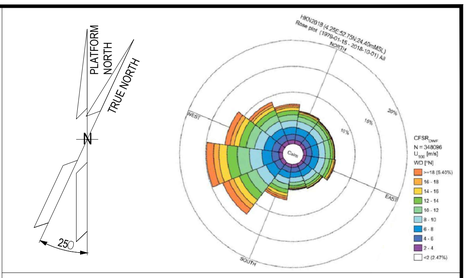


EQUIPMENT LAYOUT
"B-200" LV (400V) SWITCHGEAR ROOM
BOTTOM PLAN

1

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	
3	-	SERVICE TROLLEY FOR 400V SWITCHGEAR	1034	490	2030	
4	CN-200N1	ICCP PANEL	700	580	1830	
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	02
6	-	TOOL BOX	495	200	200	
7	-	TABLE	1000	500	750	
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DELETED.
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
4. FOR OTHER ITEMS, CORRECT LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND DEDICATED PROJECT DOCUMENTATION.
5. HEIGHT OF ALL PANELS IN THE EQUIPMENT LIST TABLE IS WITHOUT THE BASE FRAME (100mm)

02

LEGEND

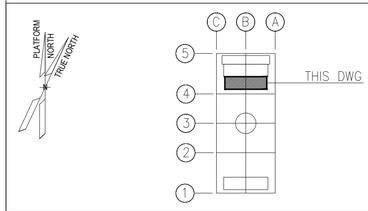
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR - WIDTH 800mm.
_____ MAINTENANCE AREA - VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

REFERENCES

DOCUMENT TITLE	DOCUMENT NUMBER
SG-200N1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00007
SG-200D2 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00008
DP-200N1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00009
AC UPS – GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS	1724000372-EL-DA-00004
AC UPS – BATTERY LAYOUT INTERCONNECTING DIAGRAM	1724000372-EL-DG-00011
B-200 -GENERAL ARRANGEMENT DRAWINGS - E&I SHELTER	1724000049-AR-DA-00015
ICCC PANEL GENERAL ARRANGEMENT DRAWING	144671-CORR-TF-FAB-DWG-0003

02

KEY PLAN



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

CROSSWIND

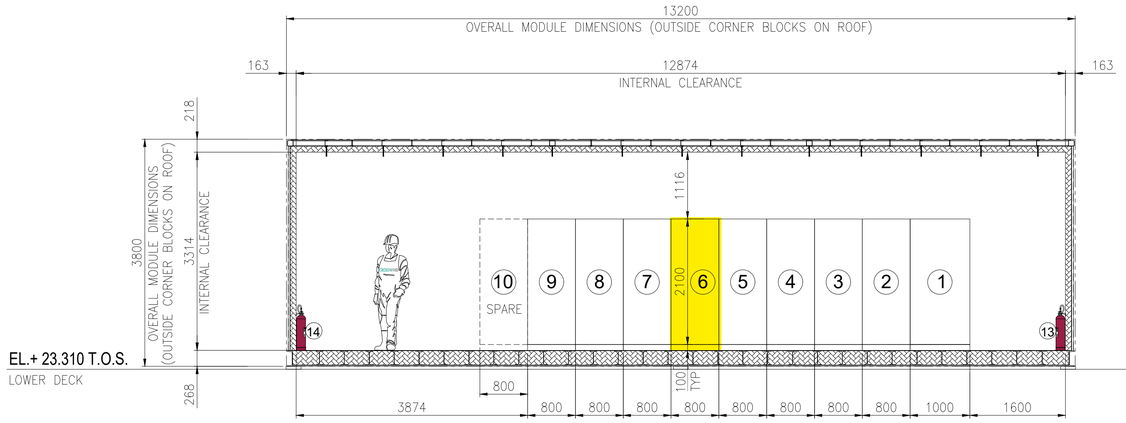
ROSETTI MARINO

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

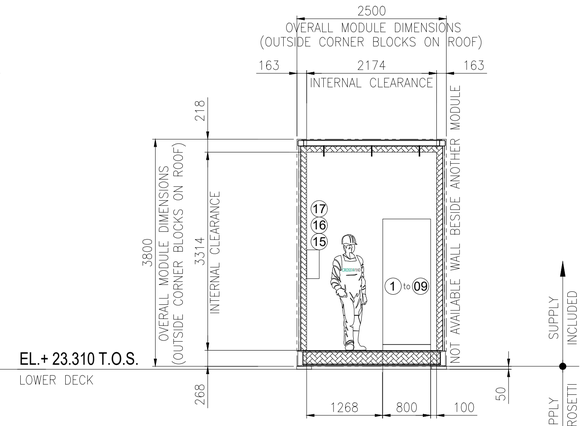
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:50
DRAWN FMO | CHECKED LMA/AMA | APPROVED LMA/MDO | DATE 27/05/2024
A1 | DRAWING NO. 123A90-DDL-EL-DL-20105 | SHEET 001 | REV. 02

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

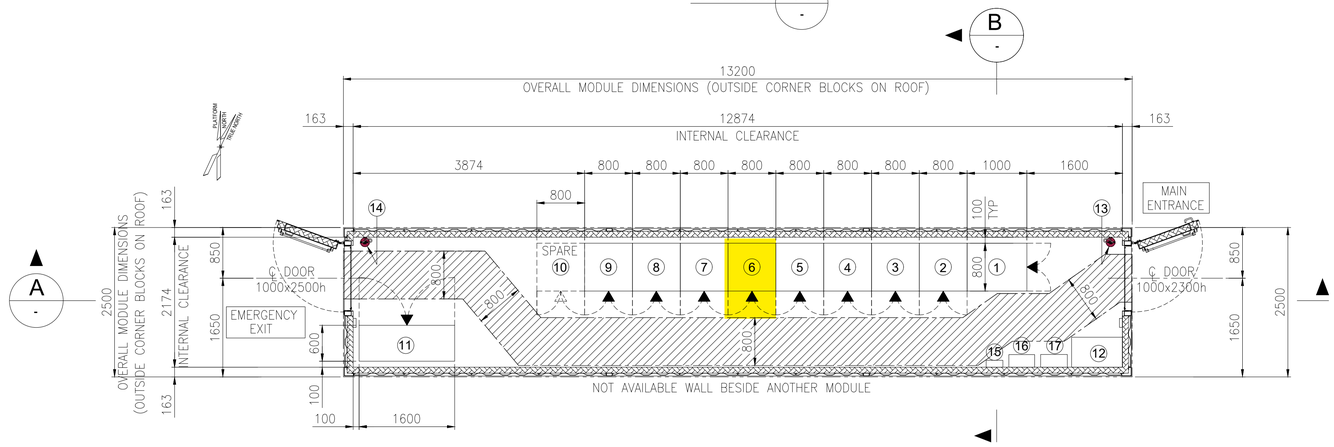
DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 03



SECTION A -



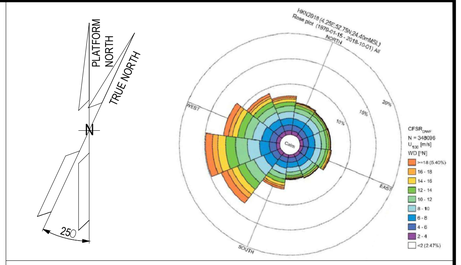
SECTION B -



EQUIPMENT LAYOUT
"B-400" I&T EQUIPMENT ROOM
BOTTOM PLAN

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	
2	B400-NET-001	NETWORK CABINET	800	800	2100	
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	
4	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	
5	B400-PCS-001	PCS SYSTEM CABINET 03	800	800	2100	
6	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	
8	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	
10	-	SPARE				
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	
12	-	TABLE	850	500	750	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	
15	-	FIRST AID KIT	280	115	200	
16	-	RESUSCITATION UNIT	430	210	480	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	



NOTES

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2. DOCUMENT VALID ONLY FOR INSTRUMENT COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.

LEGEND

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

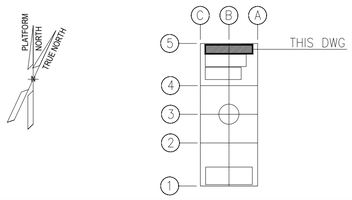
HOLDS

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REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
Control System Architecture Detailed Drawings	123A90-DDL-IN-DD-40096
Data Network Architecture Drawings	123A90-DDL-IN-DD-40019
Earthing layouts drawings (CCR, ITER)	123A90-DDL-IN-DL-40013
Instrument and Telecom MCT Layout – Lower Deck	123A90-DDL-IN-DL-40086
"B-400" I&T Equipment Room – Architectural Layout	123A90-DDL-AR-DL-10015
"B-400" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10015
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00017
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DD-00021
"B-400" HVAC SYSTEM G.A. and DETAILS	1724000049-HV-DA-00067

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	27/05/24	MGA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	22/01/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)
00	07/11/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40012**

REV.:	DATE:	SIGNATURE:
3_A	07/10/24	G.Randi

ROSETTI MARINO SpA

TITLE : BASE LOAD POWER HUB (BLPH)
OFF-SHORE ITER
EQUIPMENT LAYOUT

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:33,3
DRAWN MGA | CHECKED LCA | APPROVED DLO | DATE 27/05/24
A1 | DRAWING NO. 123A90-DDL-IN-DL-40012 | SHEET 001 | REV. 03

File Name : 123A90-DDL-IN-DL-40012 Rev.03.dwg

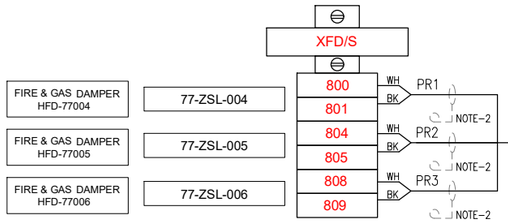
DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

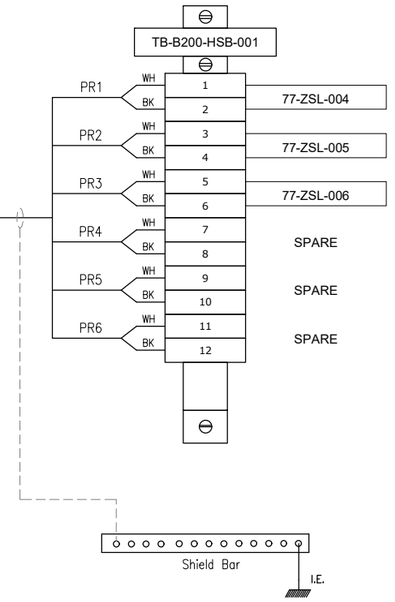
FIELD	MULTICABLE	I&T EQUIPMENT ROOM (ITER)
B-200 LV SWITCH GEAR ROOM	No.	MARSHALLING CABINET
		~~B400-FGS-002~~ B400-FGS-003

<01>

HVAC Panel B200-HSB-001



B200-HSB-001/B400-FGS-003
~~B200-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-200

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 057	REV. 01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

DRAWING NO. 123A90-DDL-IN-DG-40016

REV. 01

NOTES:

1. ALL SPARE ENTRIES SHALL BE PROVIDED WITH CERTIFIED EX PROOF PLUGS.
2. CABLE SCREENS / DRAIN WIRE SHALL BE SECURELY INSULATED AND TIED BACK IN THE INSTRUMENT SIDE AND SHAL BE TERMINATED IN THE MARSHALLING SIDE OF THE PANEL.
3. SPARE PAIRS / TRIADS SHALL BE CONNECTED TO TERMINALS IN JUNCTION BOX AND PANEL / MARSHALLING CABINETS.
4. ALL CABLE SCREENS TO BE TERMINATED AT THE INSTRUMENT EARTH BAR IN THE RESPECTIVE EARTH BARS (IS OR NIS) AS APPLICABLE IN THE MARSHALLING CABINET.
5. CONNECTION TERMINAL BLOCK SHALL BE DEFINED DURING CONSTRUCTION PHASE.

<01>

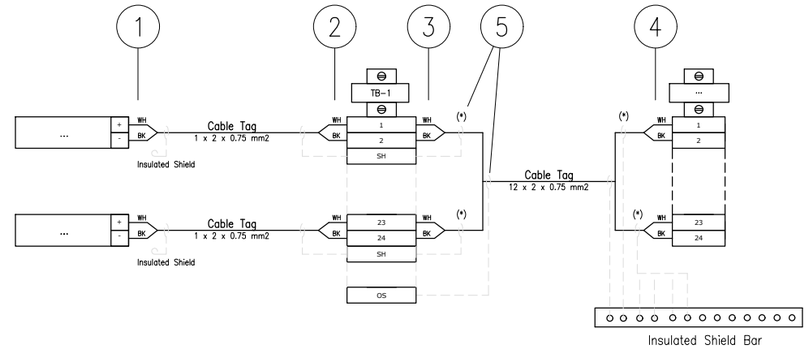
LEGENDS & SYMBOLS:

LEGEND:

I.E.	- GREEN ——— INSTRUMENT SIGNAL EARTH
P.E.	- GREEN/YELLOW —— P.E. EARTH/BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY SAFE
P.E.	- PLANT EARTH
PCS	- PROCESS CONTROL SYSTEM <01>
ESD	- EMERGENCY SHUTDOWN SYSTEM
SIS	- SAFETY INSTRUMENT SYSTEM
FGS	- FIRE & GAS SYSTEM <01>
MC	- MARSHALLING CABINET
AI	- ANALOGUE INPUT
AO	- ANALOGUE OUTPUT
DI	- DIGITAL INPUT
DO	- DIGITAL OUTPUT
JE	- JUNCTION BOX FOR ELECTRICAL SIGNALS <01>

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



(*) Single shield is foreseen only for AI/AO signals.

1 - INSTRUMENT TERMINAL NO. OR POLARITY/JB NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

2 - INSTRUMENT TERMINAL NO. OR POLARITY/INSTRUMENT TAG NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

3 - PAIR OR CORE NO./MARSHALLING CABINET NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

4 - PAIR OR CORE NO./JB NO./JB TERMINAL NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

5 - HEAT SHRINKABLE BLACK FOR SHIELD OF NIS INSTRUMENT CABLE.
(HEAT SHRINKABLE BLUE FOR SHIELD OF NIS INSTRUMENT CABLE)

6 - IN CASE OF CONNECTION FROM RIGHT TO LEFT, ORDER OF INFORMATION SHALL BE MIRRORED

REFERENCE DRAWINGS

PIPING AND INSTRUMENT DIAGRAM	123A90-DDL-PR-PID-80009
INSTRUMENT INDEX	123A90-DDL-IN-LIS-40088 Rev.01
F&G DETECTORS LAYOUT	123A90-DDL-SAF-DL-30027

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_K	18/11/24	G.Randi

ROSETTI MARINO SpA

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

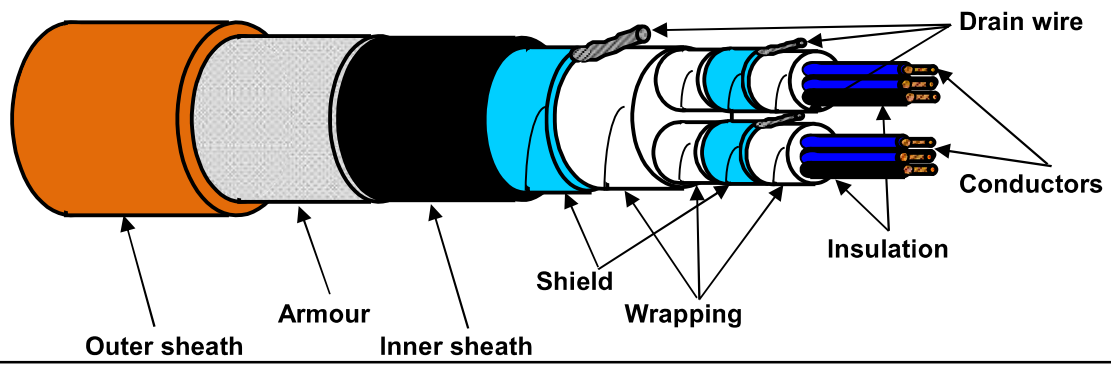
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	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
B200-HSB-001/B400-FGS-003	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						B200-HSB-001	Distribution & HVAC Panel - LV Room	Lower Deck (B-200)	77-ZSL-004/5/6	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-201 / B-200-SEC-2E / B-200-SEC-2C / B-200-SEC-2B / B-200-SEC-2A / L-SEC-5 / 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-004A	: Hand Switch for Fire&Gas Damper HFD-77004			Dwg	
	S/Sys	77-20	: HVAC LV Switchgear Room B-200			Module	
TASK	code	C10002083		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX00		Miscellaneous

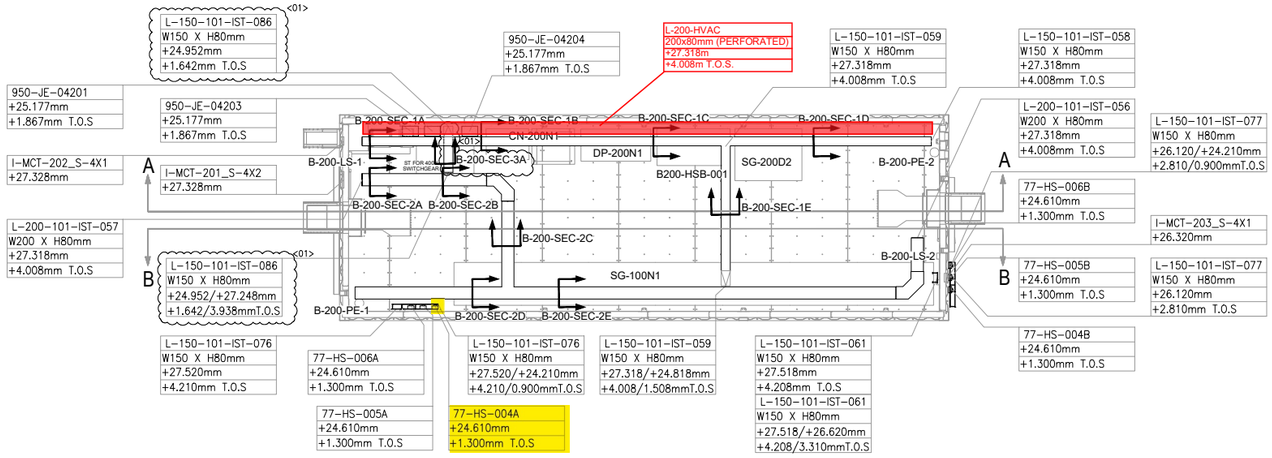
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (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	2024-10-28	2024-11-21	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-28T09:12:31.495Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-21T08:28:06.123Z	

DRAWING NO. 123A90-DDL-IN-DL-40114

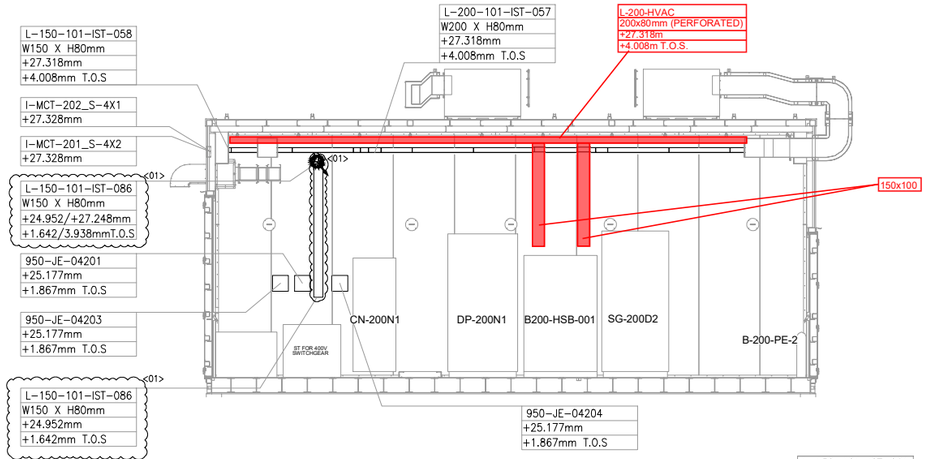
REV. 01



PLAN VIEW

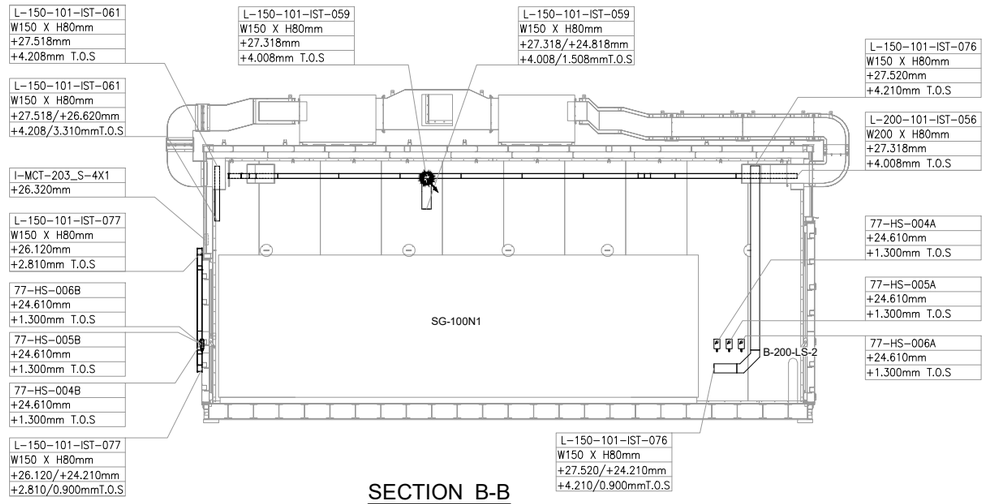
B-200 – LV SWITCHROOM

SCALE-1:1



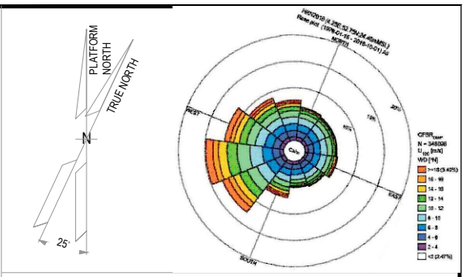
SECTION A-A

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-40114**

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-200 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-40114	001	01

File Name : 123A90-DDL-IN-DL-40114 REV:01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-04203	No.	MARSHALLING CABINET B400-FGS-002

B-200 LV Switch Gear Room

<01>

950-XZ-04203 (1, 2) — 1BK / 2BK — NOTE-2
C-950-XZ-04203/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 1 1BK, 2BK 2 2BK, SH

950-XL-04205 (1, 3) — 1BK / 2BK — NOTE-2
C-950-XL-04205/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 3 3BK, 2BK 4 4BK, SH

950-XL-04206 (1, 3) — 1BK / 2BK — NOTE-2
C-950-XL-04206/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 5 5BK, 2BK 6 6BK, SH

950-JE-04203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

B-200 OUTDOOR
1BK 12 / 2BK 22 — 77-HS-004B — 11 1BK / 21 2BK — NOTE-2
C-77-HS-004B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 7 7BK, 2BK 8 8BK, SH

C-77-HS-004A/77-HS-004B
~~C-77-HS-004B/77-HS-004A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77004

77-HY-004 (1, 2) — 1BK / 2BK — NOTE-2
C-77-HY-004/77-HS-004A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

B-200 INDOOR
1BK 12 / 2BK 22 — 77-HS-004A — 11 1BK / 21 2BK — NOTE-2

B-200 OUTDOOR
1BK 12 / 2BK 22 — 77-HS-005B — 11 1BK / 21 2BK — NOTE-2
C-77-HS-005B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 9 9BK, 2BK 10 10BK, SH

C-77-HS-005A/77-HS-005B
~~C-77-HS-005B/77-HS-005A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77005

77-HY-005 (1, 2) — 1BK / 2BK — NOTE-2
C-77-HY-00577-HS-005A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

B-200 INDOOR
1BK 12 / 2BK 22 — 77-HS-005A — 11 1BK / 21 2BK — NOTE-2

B-200 OUTDOOR
1BK 12 / 2BK 22 — 77-HS-006B — 11 1BK / 21 2BK — NOTE-2
C-77-HS-006B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 11 11BK, 2BK 12 12BK, SH, OS

C-77-HS-006A/77-HS-006B
~~C-77-HS-006B/77-HS-006A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77006

77-HY-006 (1, 2) — 1BK / 2BK — NOTE-2
C-77-HY-006/77-HS-006A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

B-200 INDOOR
1BK 12 / 2BK 22 — 77-HS-006A — 11 1BK / 21 2BK — NOTE-2

TB-950-JE-04203
1BK 1 — 950-XZ-04203
2BK 2
3BK 3 — 950-XL-04205
4BK 4
5BK 5 — 950-XL-04206
6BK 6
7BK 7 — 77-HY-004
8BK 8
9BK 9 — 77-HY-005
10BK 10
11BK 11 — 77-HY-006
12BK 12

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–04203

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 068	REV. 01

File Name : 123A90–DDL–IN–DG–40016_Rev.01

I-3

DRAWING NO. 123A90-DDL-IN-DD-40017

REV. 00



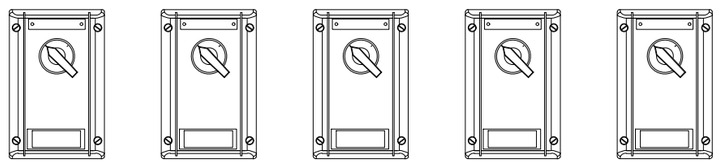
B-100
~~B-101~~



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)

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

A3 | DRAWING NO. 123A90-DDL-IN-DD-40017 | SHEET 046 | REV. 01

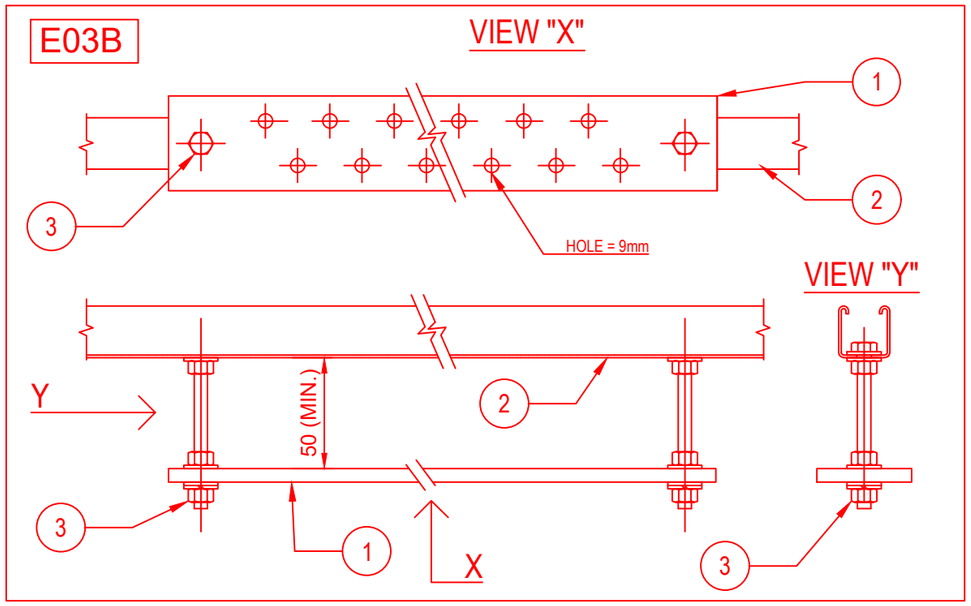
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40017**

REV.:	DATE:	SIGNATURE:
1_C	15/10/24	G.Randi

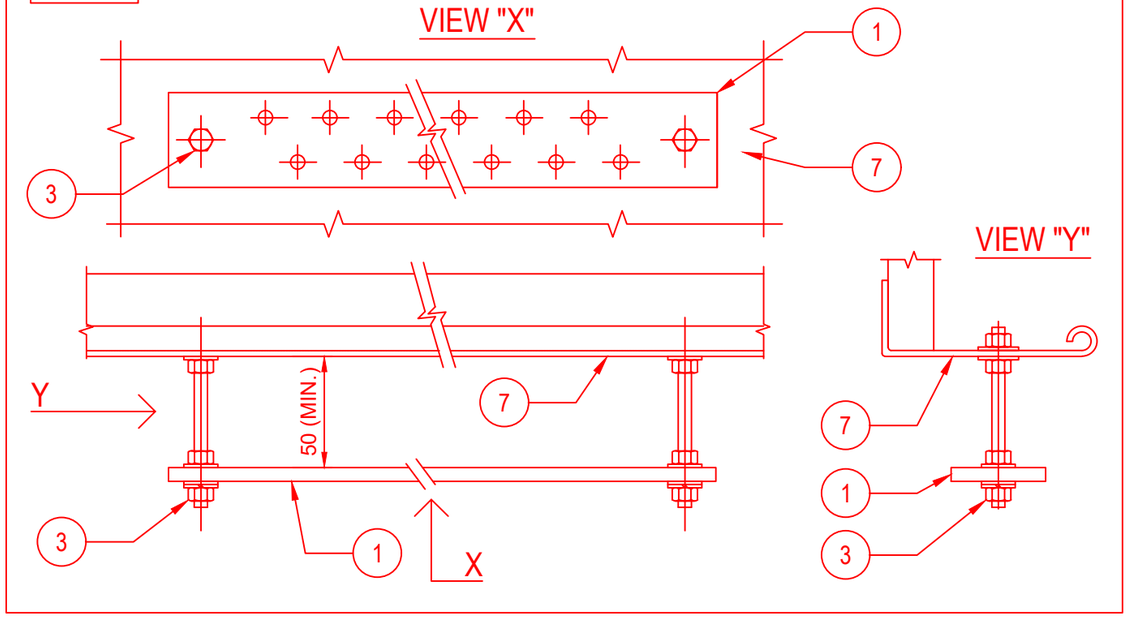
ROSETTI MARINO SpA

TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

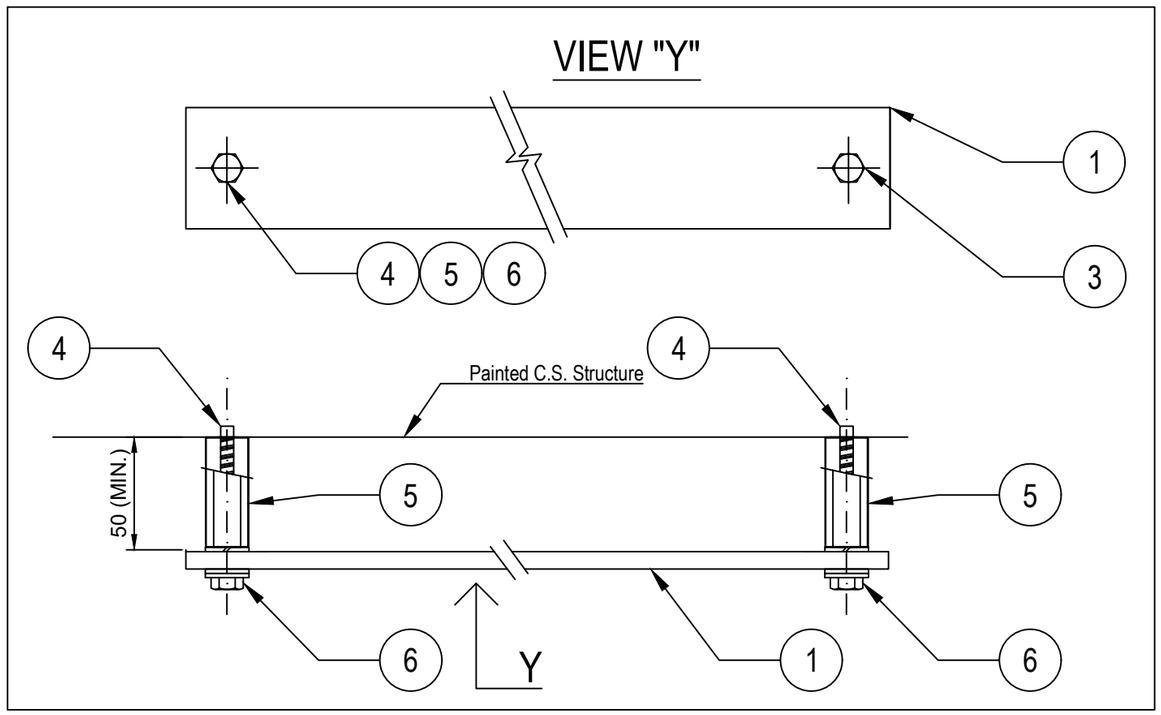


E03C



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_G	25/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

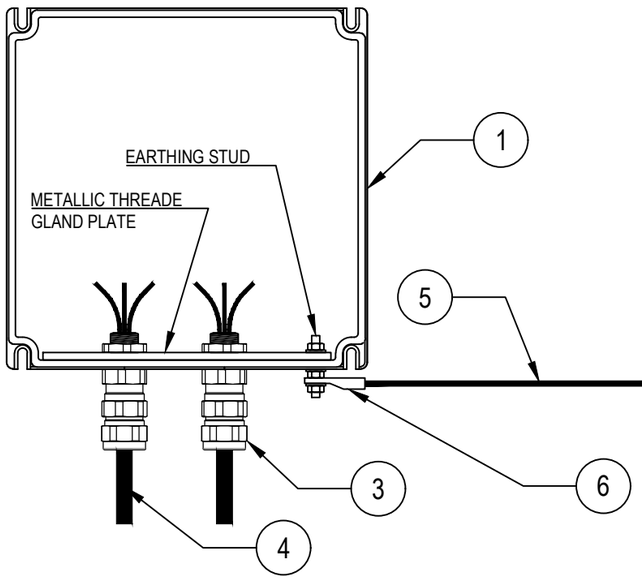
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F.to UNI A3: 420mmx297mm

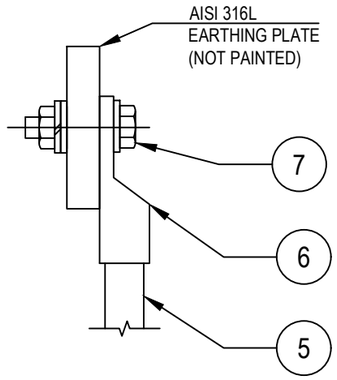
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E04

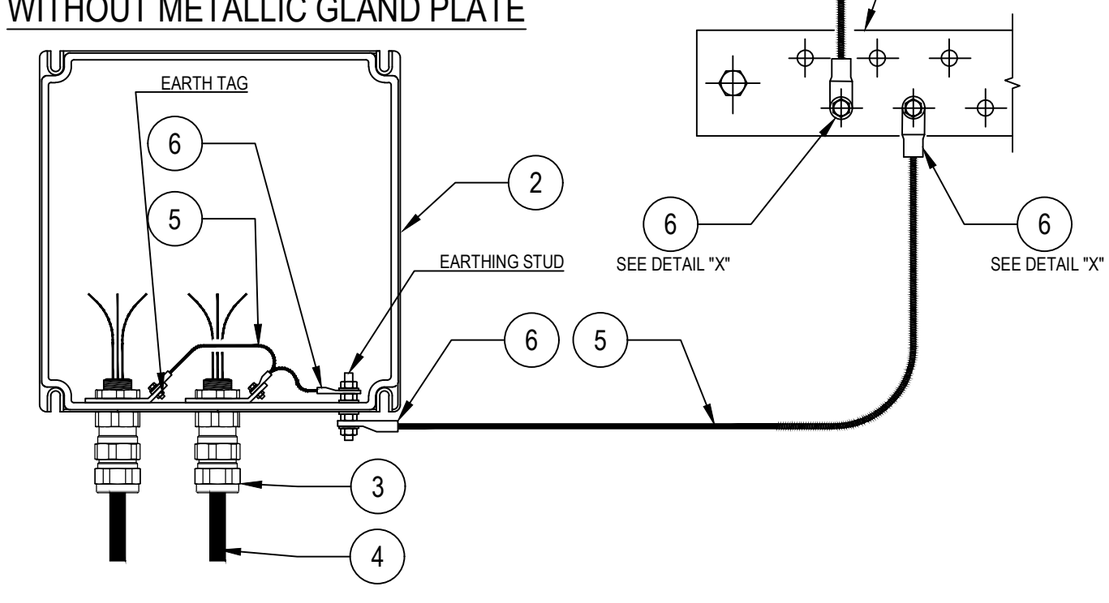
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



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_G	25/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE ARMOUR BY CABLE GLAND

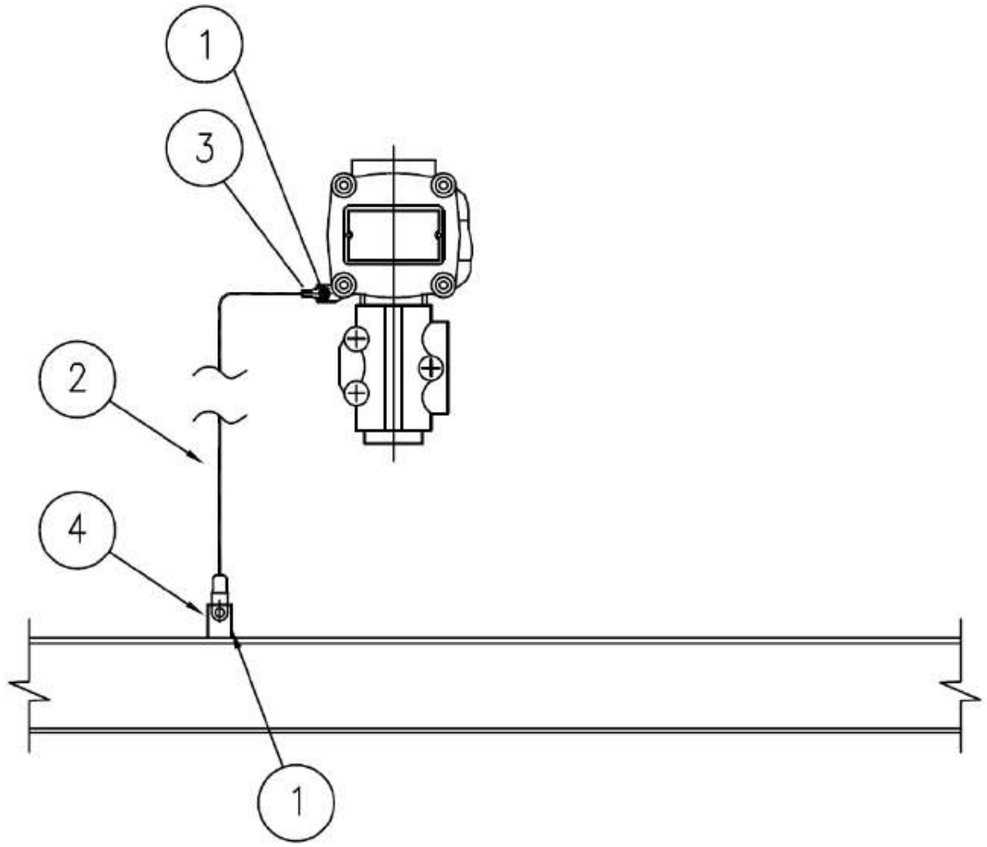
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

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_G	25/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

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

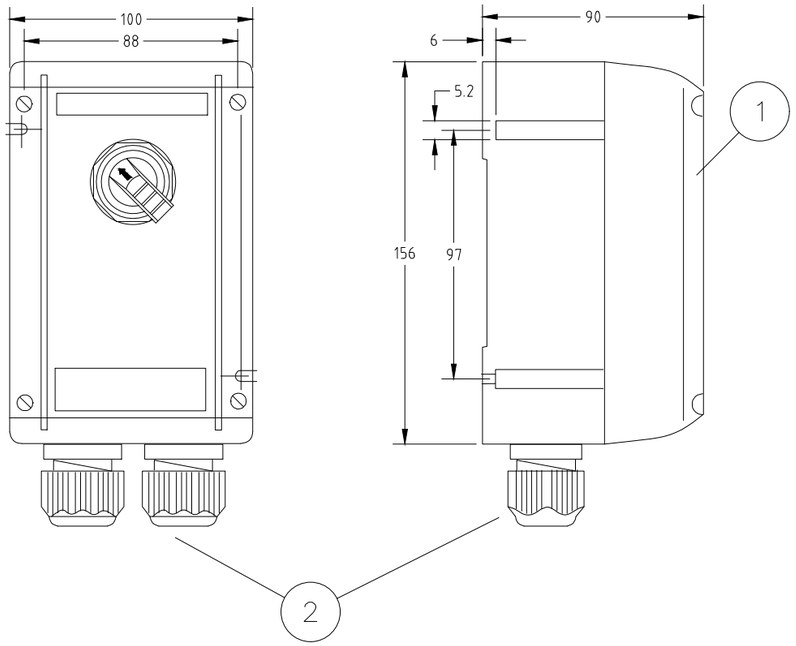
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PUSH BUTTON DPDT CONTACT

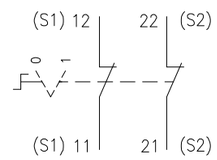
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

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

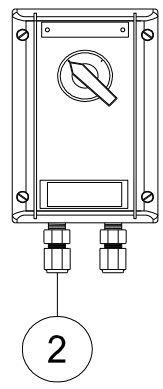
SHEET 014

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 01

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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PUSH BUTTON DPDT CONTACT

POS.	TAG NUMBER	SERVICE
1	77-HS-001A	B-100 Fire Damper AHU1 Inlet Air
2	77-HS-001B	B-100 Fire Damper AHU1 Inlet Air
3	77-HS-002A	B-100 Fire Damper AHU2 Inlet Air
4	77-HS-002B	B-100 Fire Damper AHU2 Inlet Air
5	77-HS-003A	B-100 Fire Damper Exhaust Air
6	77-HS-003B	B-100 Fire Damper Exhaust Air
7	77-HS-004A	B-200 Fire Damper AHU3 Inlet Air
8	77-HS-004B	B-200 Fire Damper AHU3 Inlet Air
9	77-HS-005A	B-200 Fire Damper AHU4 Inlet Air
10	77-HS-005B	B-200 Fire Damper AHU4 Inlet Air
11	77-HS-006A	B-200 Fire Damper Exhaust Air
12	77-HS-006B	B-200 Fire Damper Exhaust Air
13	77-HS-007A	B-300 Fire Damper AHU5 Inlet Air
14	77-HS-007B	B-300 Fire Damper AHU5 Inlet Air
15	77-HS-008A	B-300 Fire Damper AHU5 Return Air
16	77-HS-008B	B-300 Fire Damper AHU5 Return Air
17	77-HS-009A	B-300 Fire Damper AHU6 Inlet Air
18	77-HS-009B	B-300 Fire Damper AHU6 Inlet Air
19	77-HS-010A	B-300 Fire Damper AHU6 Return Air
20	77-HS-010B	B-300 Fire Damper AHU6 Return Air
21	77-HS-011A	B-300 Fire Damper Exhaust Air
22	77-HS-011B	B-300 Fire Damper Exhaust Air
23	77-HS-012A	B-400 Fire Damper AHU7 Inlet Air
24	77-HS-012B	B-400 Fire Damper AHU7 Inlet Air
25	77-HS-013A	B-400 Fire Damper AHU7 Return Air
26	77-HS-013B	B-400 Fire Damper AHU7 Return Air
27	77-HS-014A	B-400 Fire Damper AHU8 Inlet Air
28	77-HS-014B	B-400 Fire Damper AHU8 Inlet Air
29	77-HS-015A	B-400 Fire Damper AHU8 Return Air
30	77-HS-015B	B-400 Fire Damper AHU8 Return Air
31	77-HS-016A	B-400 Fire Damper Exhaust Air
32	77-HS-016B	B-400 Fire Damper Exhaust Air

File: 1724000821-IN-DS-00004-01.xlsx
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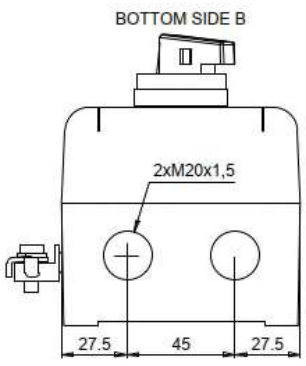


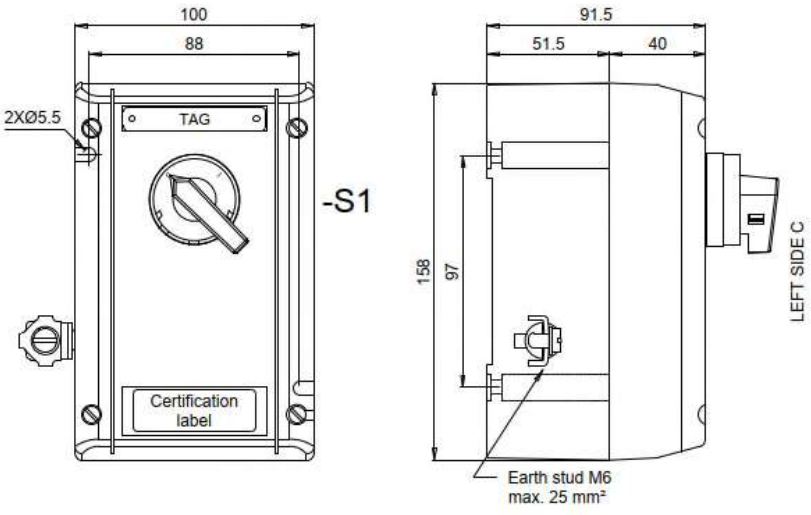
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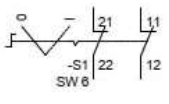
Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	⟨Ex⟩ II 2 G Ex ed ib m IIC T6 ⟨Ex⟩ 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

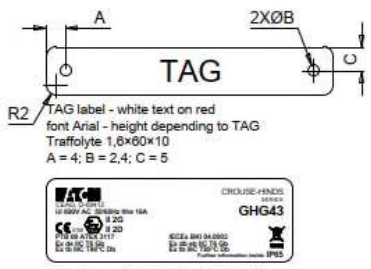




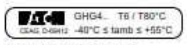


Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Adhesive certification label 51,5×17,5
GHG4301909R0013



Adhesive label 37×6,5
GHG6101937R0044

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-004B	: Hand Switch for Fire&Gas Damper HFD-77004			Dwg	
	S/Sys	77-20	: HVAC LV Switchgear Room B-200			Module	
TASK	code	C10002084		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00 Miscellaneous

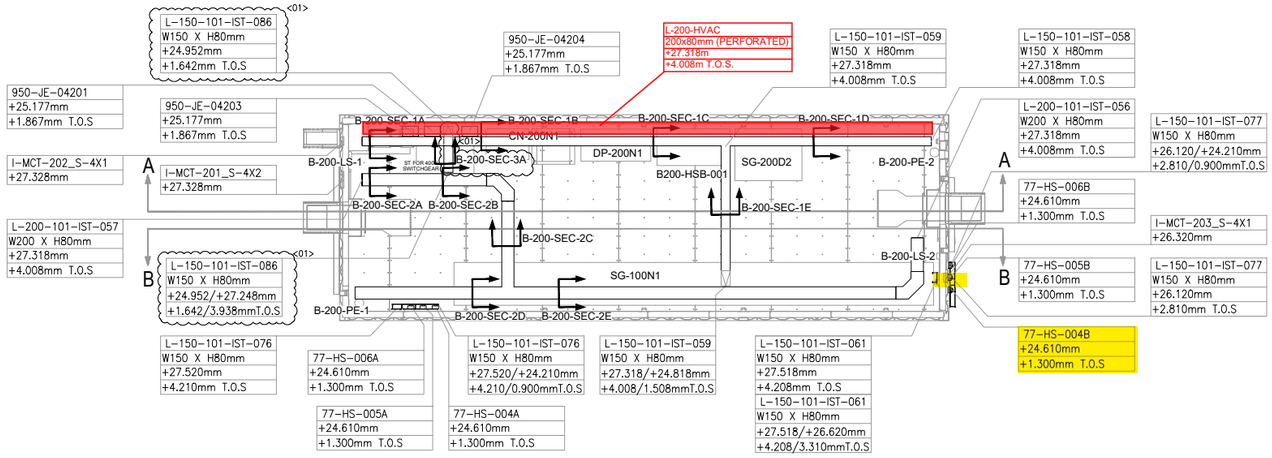
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (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	2024-10-28	2024-11-21	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-28T09:12:41.337Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-21T08:28:29.780Z	

DRAWING NO. 123A90-DDL-IN-DL-40114

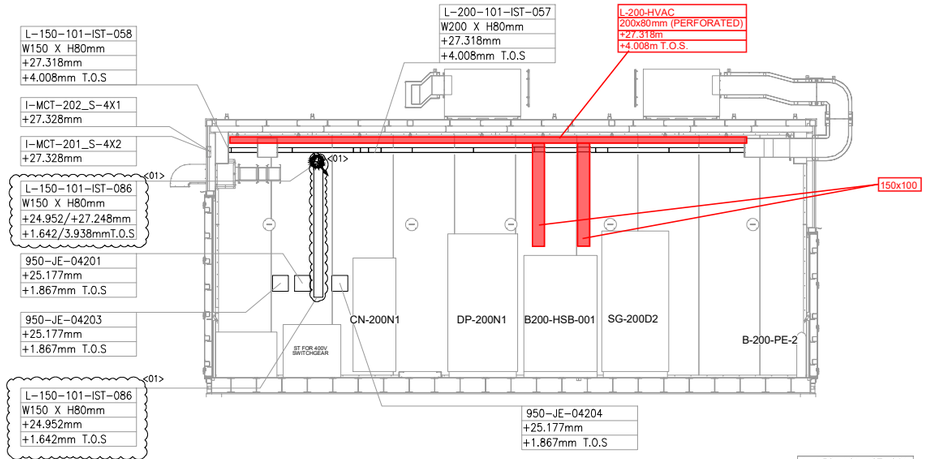
REV. 01



PLAN VIEW

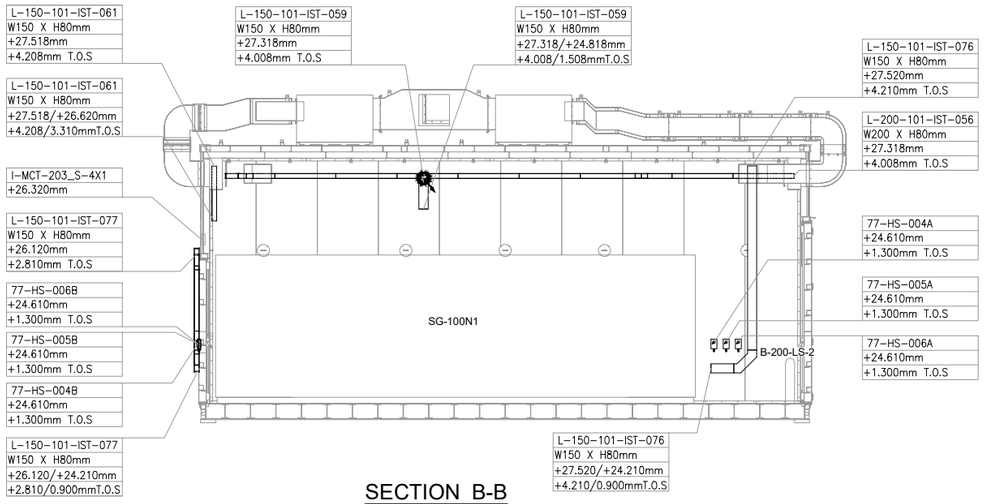
B-200 – LV SWITCHROOM

SCALE-1:1



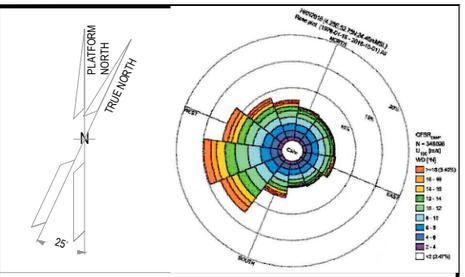
SECTION A-A

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-40114**

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-200 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-40114	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40114 REV:01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-04203	No.	MARSHALLING CABINET B400-FGS-002

B-200 LV Switch Gear Room

<01>

950-XZ-04203 (1BK, 2BK) — NOTE-2 — C-950-XZ-04203/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 1, 2BK 2, SH

950-XL-04205 (1BK, 3BK) — NOTE-2 — C-950-XL-04205/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 3, 2BK 4, SH

950-XL-04206 (1BK, 5BK) — NOTE-2 — C-950-XL-04206/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 5, 2BK 6, SH

950-JE-04203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-04203:
1BK 1 — 950-XZ-04203
2BK 2
3BK 3 — 950-XL-04205
4BK 4
5BK 5 — 950-XL-04206
6BK 6
7BK 7 — 77-HY-004
8BK 8
9BK 9 — 77-HY-005
10BK 10
11BK 11 — 77-HY-006
12BK 12

Shield Bar — I.E.

B-200 OUTDOOR
1BK 12 / 2BK 22 — 77-HS-004B — 11 1BK / 21 2BK — NOTE-2
C-77-HS-004B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 7, 2BK 8, SH

C-77-HS-004A/77-HS-004B
~~C-77-HS-004B/77-HS-004A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77004

77-HY-004 (1BK, 2BK) — NOTE-2 — C-77-HY-004/77-HS-004A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

B-200 INDOOR
1BK 12 / 2BK 22 — 77-HS-004A — 11 1BK / 21 2BK — NOTE-2

B-200 OUTDOOR
1BK 12 / 2BK 22 — 77-HS-005B — 11 1BK / 21 2BK — NOTE-2
C-77-HS-005B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 9, 2BK 10, SH

C-77-HS-005A/77-HS-005B
~~C-77-HS-005B/77-HS-005A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77005

77-HY-005 (1BK, 2BK) — NOTE-2 — C-77-HY-00577-HS-005A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

B-200 INDOOR
1BK 12 / 2BK 22 — 77-HS-005A — 11 1BK / 21 2BK — NOTE-2

B-200 OUTDOOR
1BK 12 / 2BK 22 — 77-HS-006B — 11 1BK / 21 2BK — NOTE-2
C-77-HS-006B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK 11, 2BK 12, SH, OS

C-77-HS-006A/77-HS-006B
~~C-77-HS-006B/77-HS-006A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77006

77-HY-006 (1BK, 2BK) — NOTE-2 — C-77-HY-006/77-HS-006A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

B-200 INDOOR
1BK 12 / 2BK 22 — 77-HS-006A — 11 1BK / 21 2BK — NOTE-2

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–04203

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

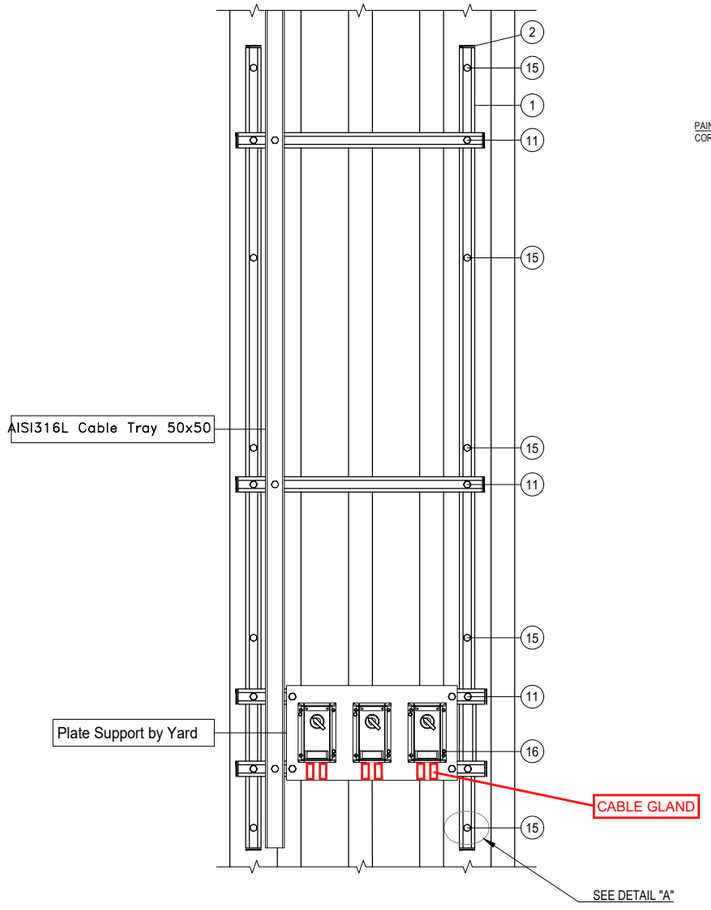
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File Name : 123A90–DDL–IN–DG–40016_Rev.01

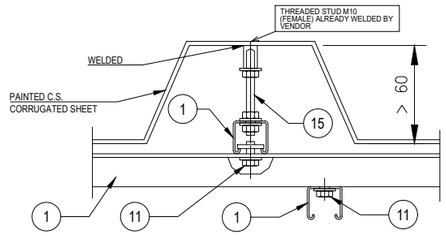
I-4

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-FDL-IN-DD-40017

REV.:	DATE:	SIGNATURE:
1_C	15/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

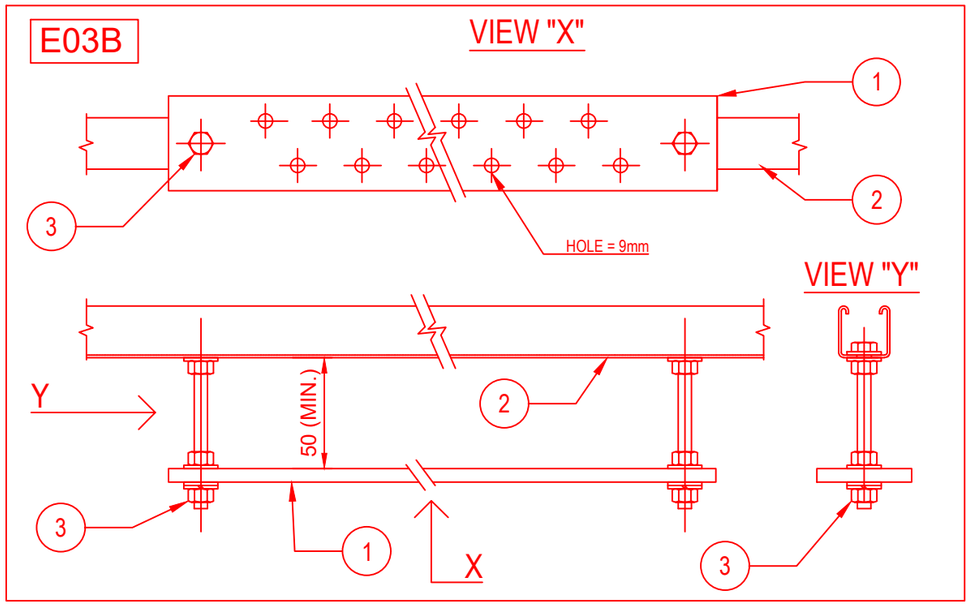
TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
HAND SWITCH OUTSIDE CONTAINERS

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

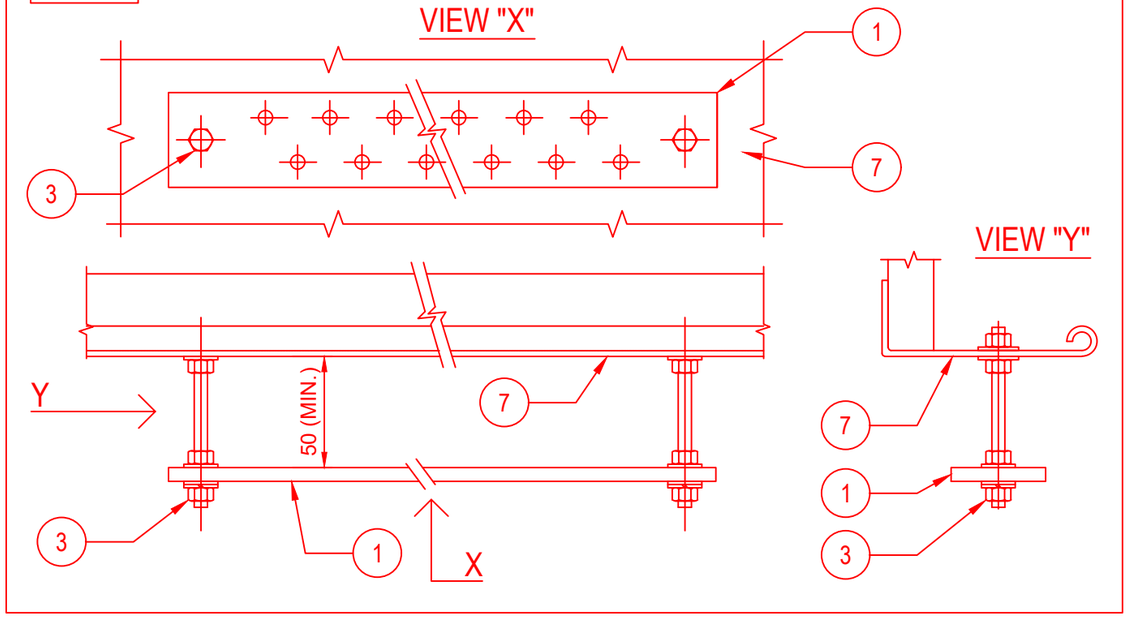
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TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

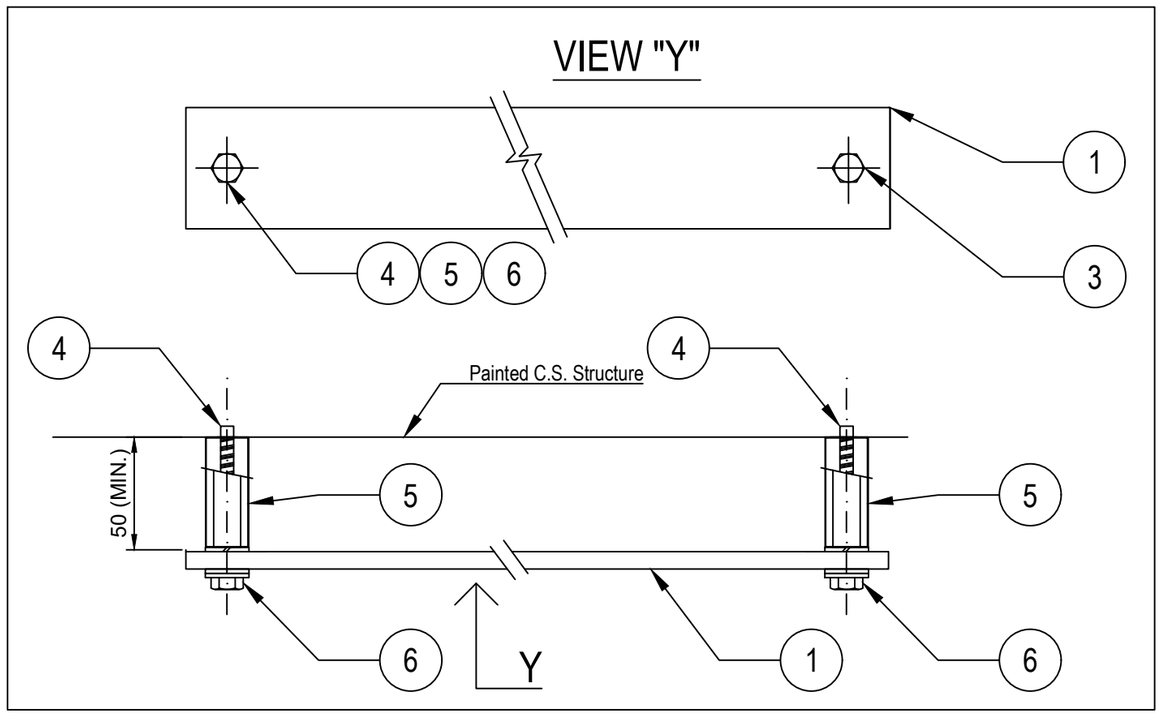


E03C



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_G	25/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

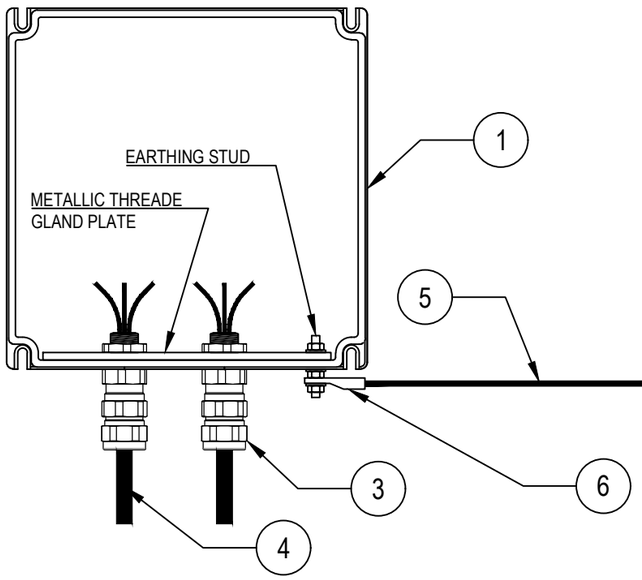
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

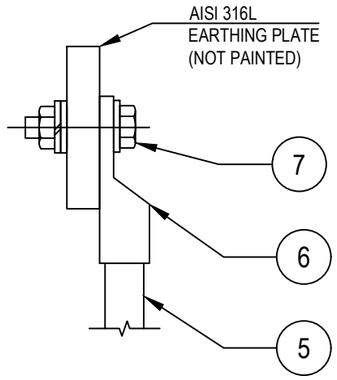
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E04

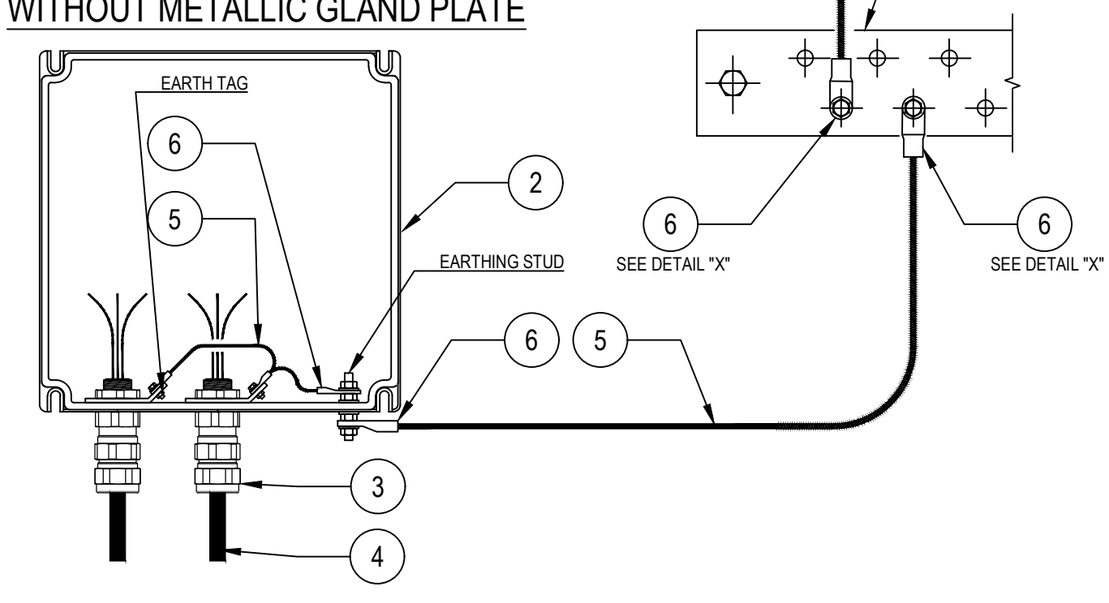
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



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_G	25/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE ARMOUR BY CABLE GLAND

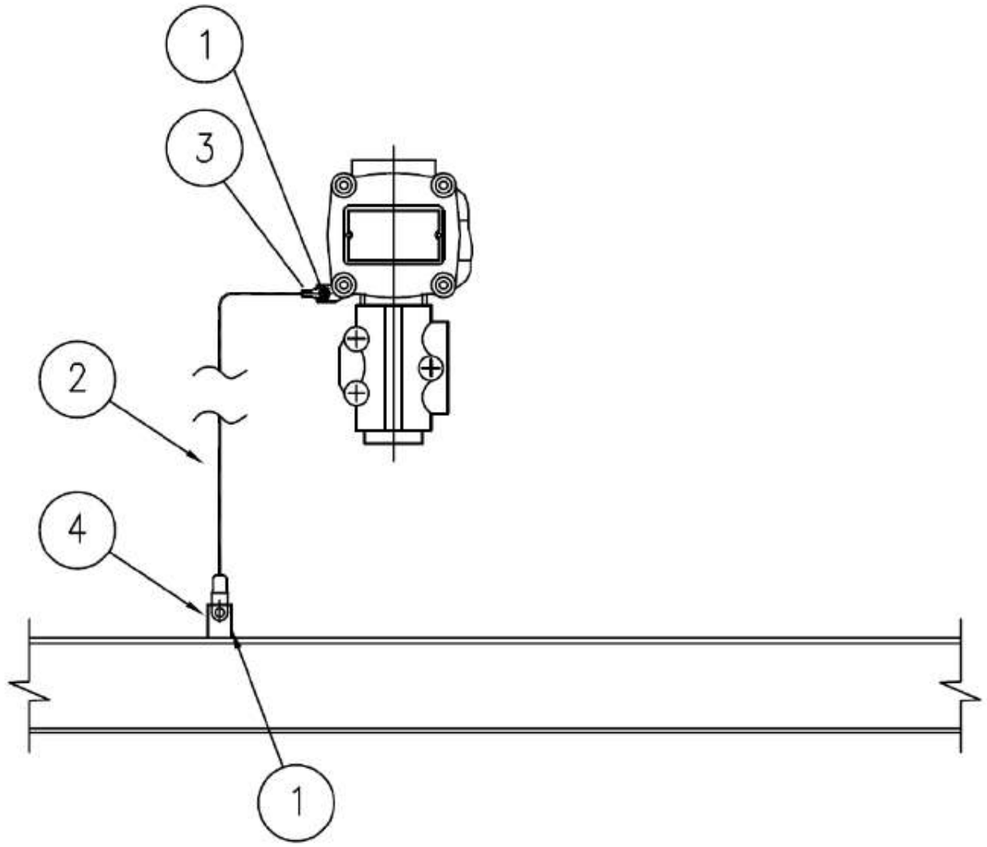
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

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_G	25/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

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

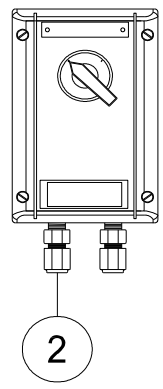
SHEET 027

REV. 02

F.to UNI A3: 420mmx297mm

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

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

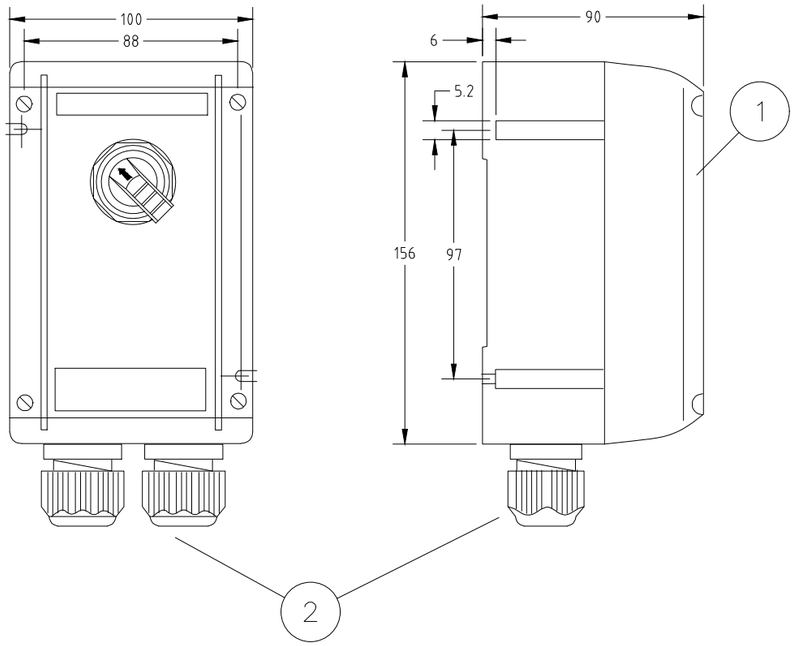
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PUSH BUTTON DPDT CONTACT

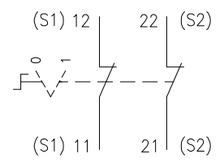
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

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

PUSH BUTTON DPDT CONTACT

POS.	TAG NUMBER	SERVICE
1	77-HS-001A	B-100 Fire Damper AHU1 Inlet Air
2	77-HS-001B	B-100 Fire Damper AHU1 Inlet Air
3	77-HS-002A	B-100 Fire Damper AHU2 Inlet Air
4	77-HS-002B	B-100 Fire Damper AHU2 Inlet Air
5	77-HS-003A	B-100 Fire Damper Exhaust Air
6	77-HS-003B	B-100 Fire Damper Exhaust Air
7	77-HS-004A	B-200 Fire Damper AHU3 Inlet Air
8	77-HS-004B	B-200 Fire Damper AHU3 Inlet Air
9	77-HS-005A	B-200 Fire Damper AHU4 Inlet Air
10	77-HS-005B	B-200 Fire Damper AHU4 Inlet Air
11	77-HS-006A	B-200 Fire Damper Exhaust Air
12	77-HS-006B	B-200 Fire Damper Exhaust Air
13	77-HS-007A	B-300 Fire Damper AHU5 Inlet Air
14	77-HS-007B	B-300 Fire Damper AHU5 Inlet Air
15	77-HS-008A	B-300 Fire Damper AHU5 Return Air
16	77-HS-008B	B-300 Fire Damper AHU5 Return Air
17	77-HS-009A	B-300 Fire Damper AHU6 Inlet Air
18	77-HS-009B	B-300 Fire Damper AHU6 Inlet Air
19	77-HS-010A	B-300 Fire Damper AHU6 Return Air
20	77-HS-010B	B-300 Fire Damper AHU6 Return Air
21	77-HS-011A	B-300 Fire Damper Exhaust Air
22	77-HS-011B	B-300 Fire Damper Exhaust Air
23	77-HS-012A	B-400 Fire Damper AHU7 Inlet Air
24	77-HS-012B	B-400 Fire Damper AHU7 Inlet Air
25	77-HS-013A	B-400 Fire Damper AHU7 Return Air
26	77-HS-013B	B-400 Fire Damper AHU7 Return Air
27	77-HS-014A	B-400 Fire Damper AHU8 Inlet Air
28	77-HS-014B	B-400 Fire Damper AHU8 Inlet Air
29	77-HS-015A	B-400 Fire Damper AHU8 Return Air
30	77-HS-015B	B-400 Fire Damper AHU8 Return Air
31	77-HS-016A	B-400 Fire Damper Exhaust Air
32	77-HS-016B	B-400 Fire Damper Exhaust Air

File: 1724000821-IN-DS-00004-01.xlsx
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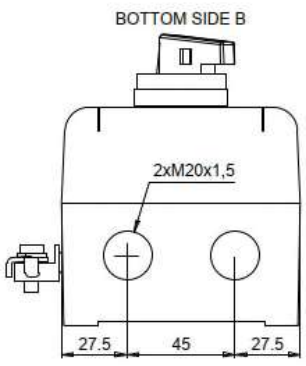


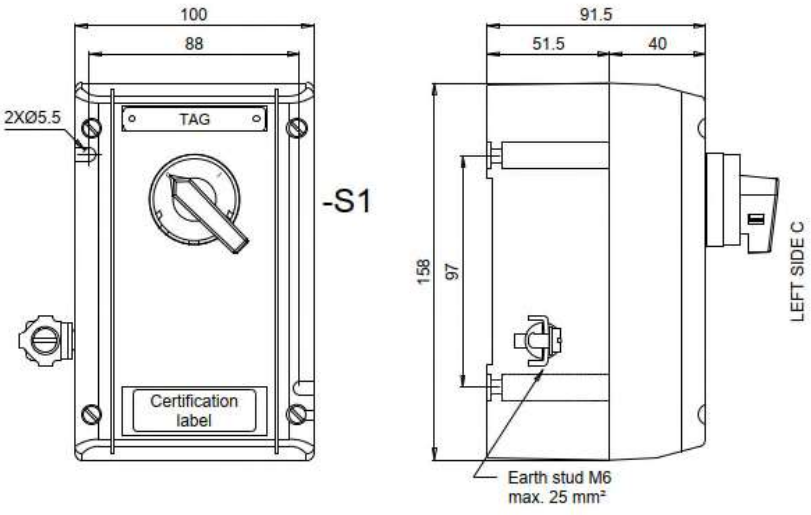
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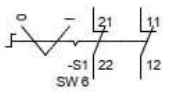
Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	⟨Ex⟩ II 2 G Ex ed ib m IIC T6 ⟨Ex⟩ 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

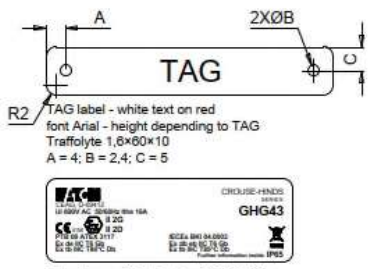




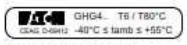


Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Adhesive certification label 51,5×17,5
GHG4301909R0013



Adhesive label 37×6,5
GHG6101937R0044

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-005A	: Hand Switch for Fire&Gas Damper HFD-77005			Dwg	
	S/Sys	77-20	: HVAC LV Switchgear Room B-200			Module	
TASK	code	C10002085		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00		Miscellaneous

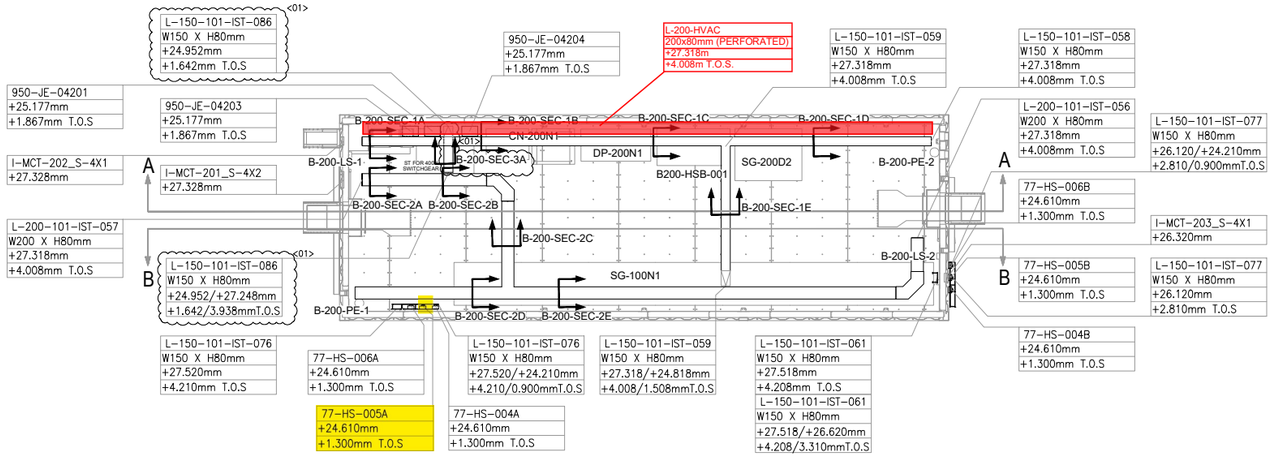
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (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	2024-10-28	2024-11-21	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-28T09:12:52.168Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-21T08:28:46.594Z	

DRAWING NO. 123A90-DDL-IN-DL-40114

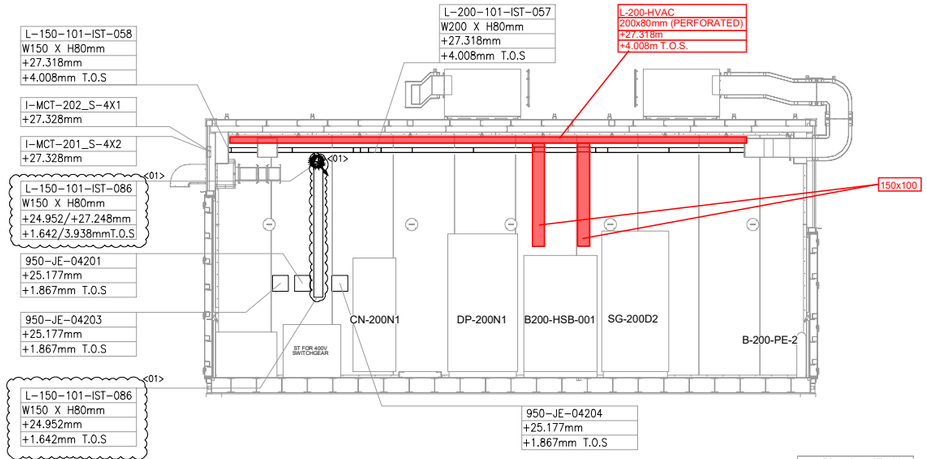
REV. 01



PLAN VIEW

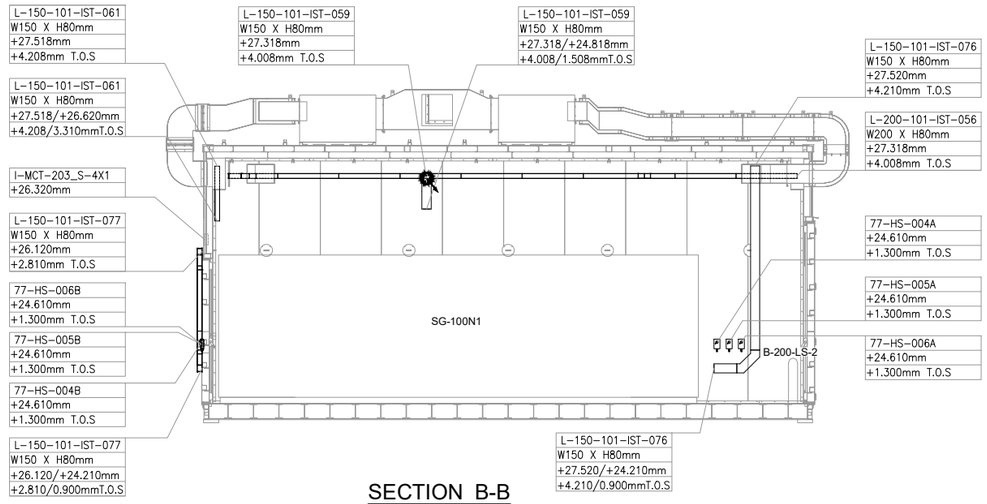
B-200 – LV SWITCHROOM

SCALE-1:1



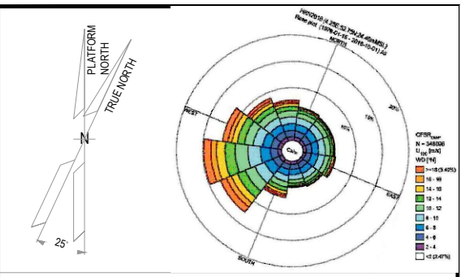
SECTION A-A

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-40114**

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-200 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-40114	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40114 REV:01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-04203	No.	MARSHALLING CABINET B400-FGS-002

B-200 LV Switch Gear Room

<01>

950-XZ-04203 (1BK, 2BK) — NOTE-2 — C-950-XZ-04203/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK/1, 2BK/2, SH

950-XL-04205 (1BK, 3BK) — NOTE-2 — C-950-XL-04205/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK/3, 2BK/4, SH

950-XL-04206 (1BK, 5BK) — NOTE-2 — C-950-XL-04206/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK/5, 2BK/6, SH

950-JE-04203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-04203:
1BK/1 — 950-XZ-04203
2BK/2, 3BK/3 — 950-XL-04205
4BK/4, 5BK/5 — 950-XL-04206
6BK/6, 7BK/7 — 77-HY-004
8BK/8, 9BK/9 — 77-HY-005
10BK/10, 11BK/11 — 77-HY-006
12BK/12

Shield Bar — I.E.

B-200 OUTDOOR
1BK 12 / 2BK 22 — 77-HS-004B — 11 1BK / 21 2BK — NOTE-2
C-77-HS-004B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK/7, 2BK/8, SH

C-77-HS-004A/77-HS-004B
~~C-77-HS-004B/77-HS-004A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77004

77-HY-004 (1, 2) 1BK/2BK — C-77-HY-004/77-HS-004A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-200 INDOOR
1BK 12 / 2BK 22 — 77-HS-004A — 11 1BK / 21 2BK — NOTE-2

B-200 OUTDOOR
1BK 12 / 2BK 22 — 77-HS-005B — 11 1BK / 21 2BK — NOTE-2
C-77-HS-005B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK/9, 2BK/10, SH

C-77-HS-005A/77-HS-005B
~~C-77-HS-005B/77-HS-005A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77005

77-HY-005 (1, 2) 1BK/2BK — C-77-HY-00577-HS-005A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-200 INDOOR
1BK 12 / 2BK 22 — 77-HS-005A — 11 1BK / 21 2BK — NOTE-2

B-200 OUTDOOR
1BK 12 / 2BK 22 — 77-HS-006B — 11 1BK / 21 2BK — NOTE-2
C-77-HS-006B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
→ TB-1: 1BK/11, 2BK/12, SH, OS

C-77-HS-006A/77-HS-006B
~~C-77-HS-006B/77-HS-006A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77006

77-HY-006 (1, 2) 1BK/2BK — C-77-HY-006/77-HS-006A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

B-200 INDOOR
1BK 12 / 2BK 22 — 77-HS-006A — 11 1BK / 21 2BK — NOTE-2

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–04203

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 068	REV. 01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

I-3

DRAWING NO. 123A90-DDL-IN-DD-40017

REV. 00



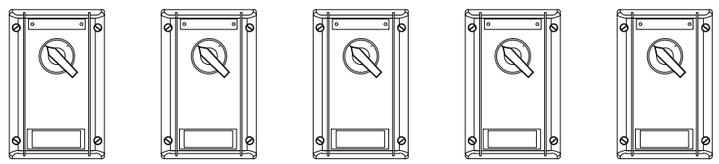
B-100
~~B-101~~



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)

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

A3 | DRAWING NO. 123A90-DDL-IN-DD-40017 | SHEET 046 | REV. 01

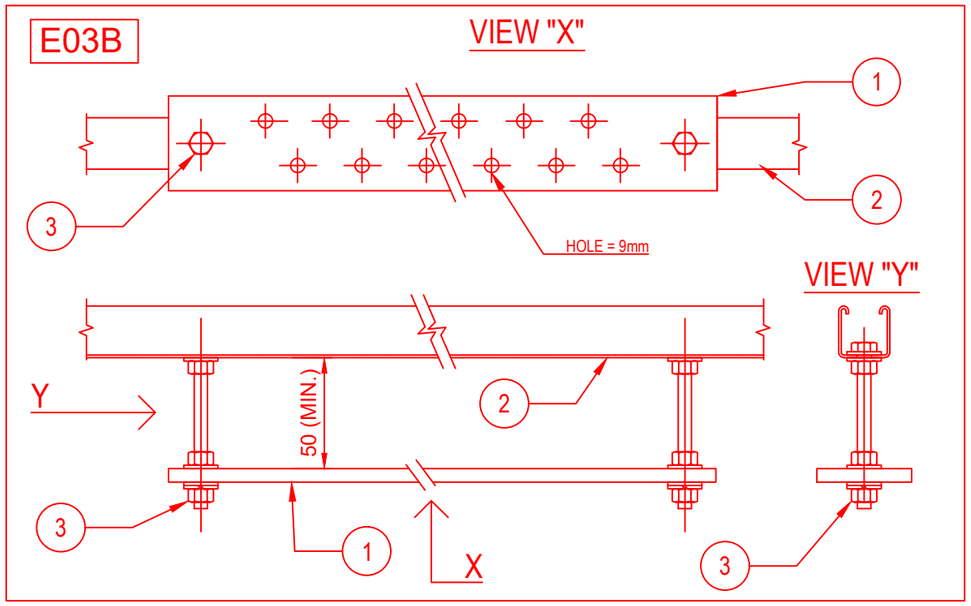
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40017**

REV.:	DATE:	SIGNATURE:
1_C	15/10/24	G.Randi

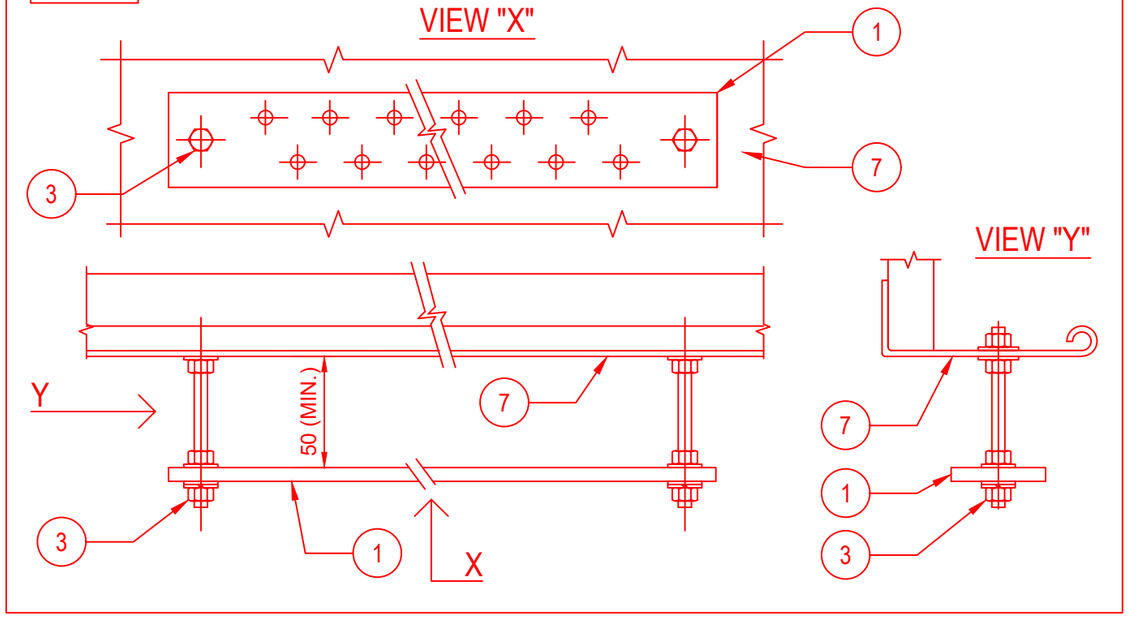
ROSETTI MARINO SpA

TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

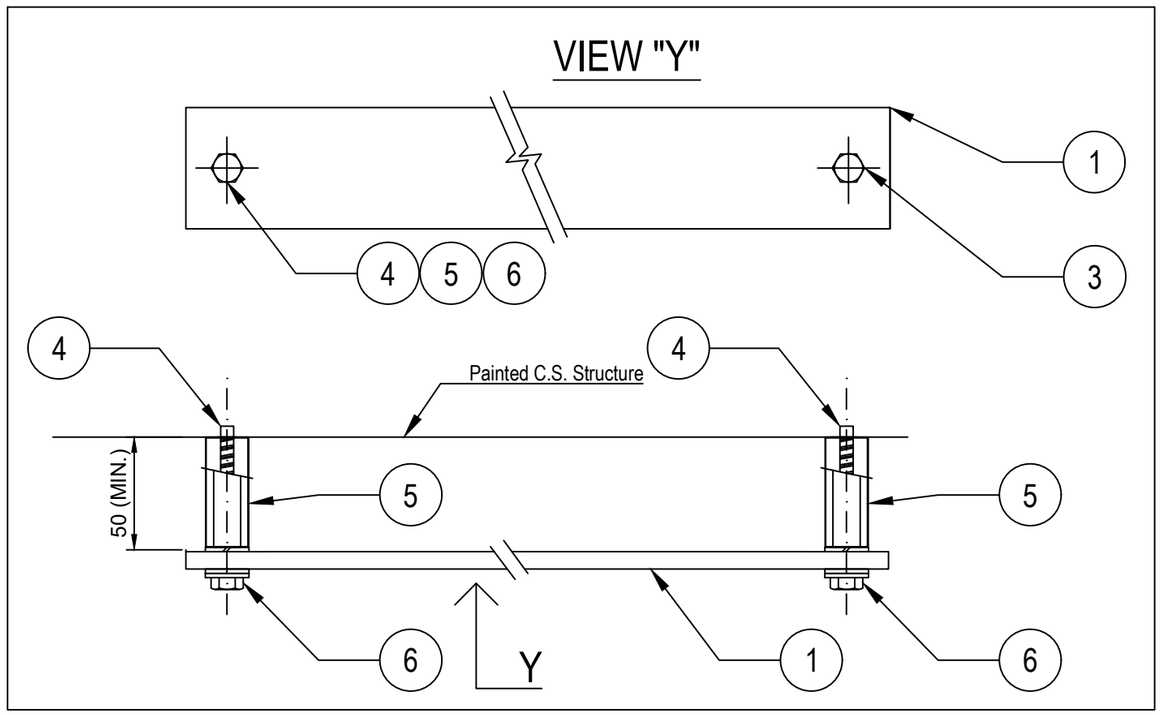


E03C



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_G	25/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

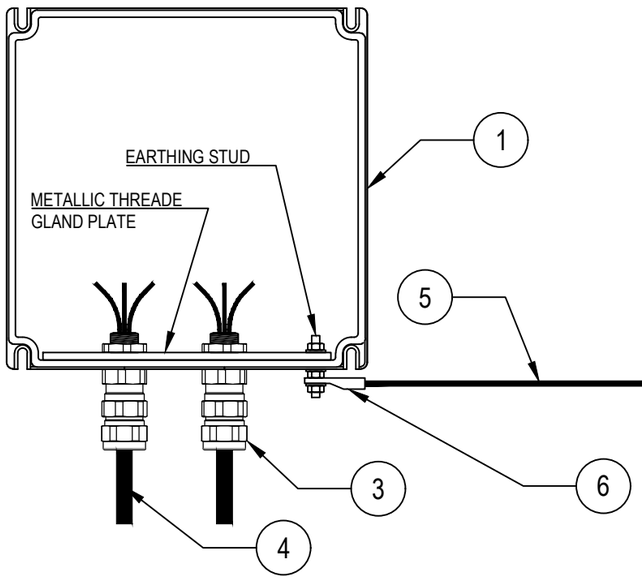
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

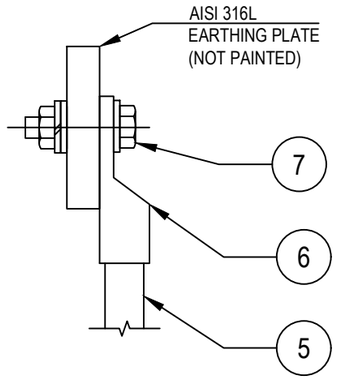
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E04

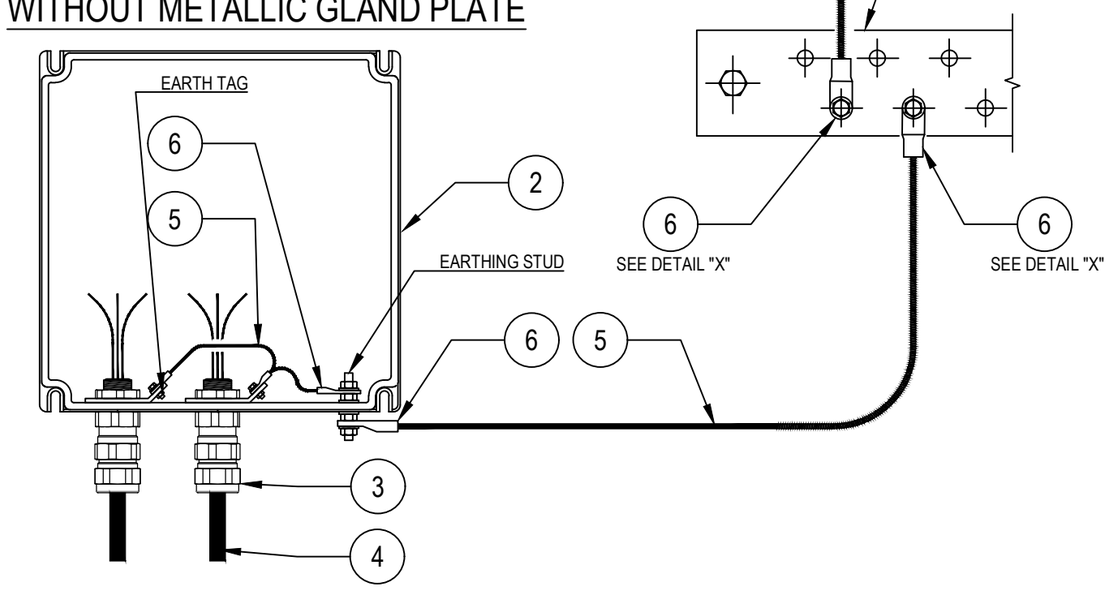
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



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_G	25/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE ARMOUR BY CABLE GLAND

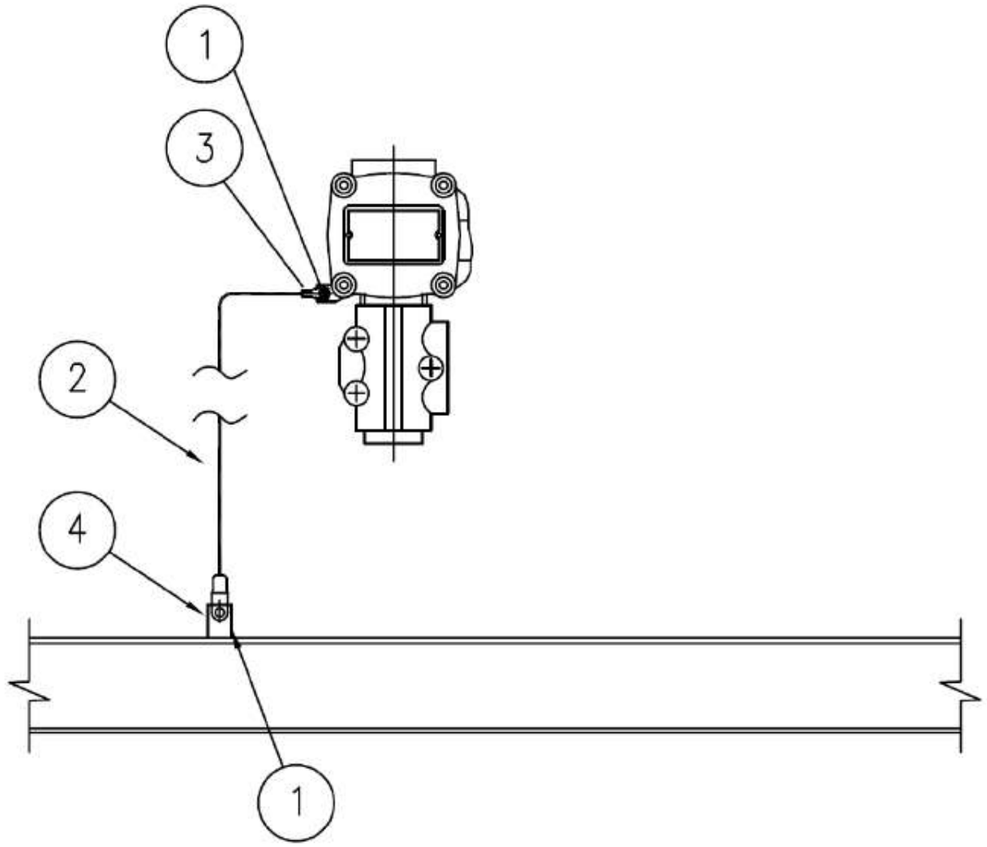
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

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_G	25/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

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

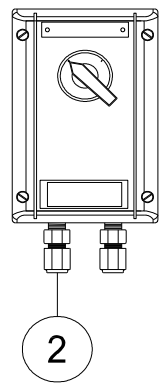
SHEET 027

REV. 02

F.to UNI A3: 420mmx297mm

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

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

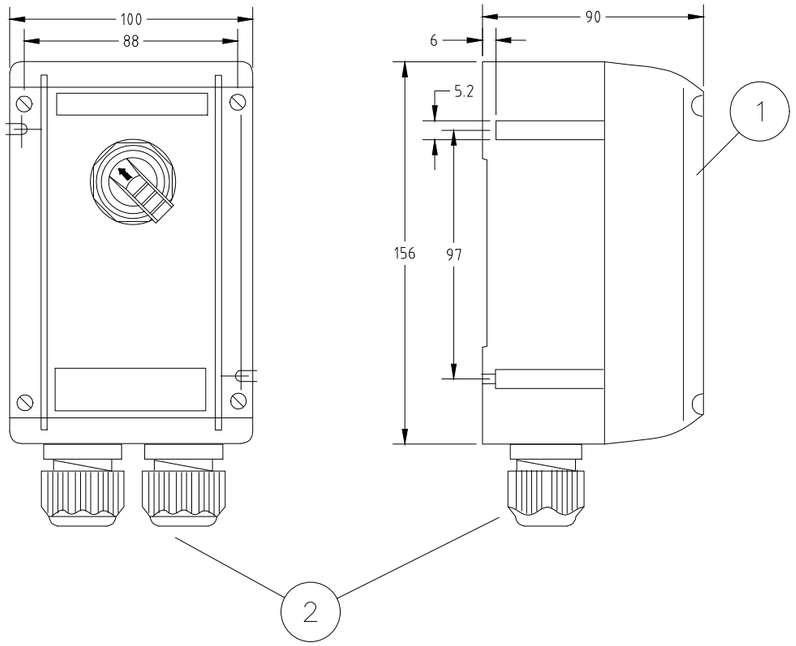
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PUSH BUTTON DPDT CONTACT

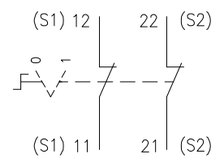
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

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

PUSH BUTTON DPDT CONTACT

POS.	TAG NUMBER	SERVICE
1	77-HS-001A	B-100 Fire Damper AHU1 Inlet Air
2	77-HS-001B	B-100 Fire Damper AHU1 Inlet Air
3	77-HS-002A	B-100 Fire Damper AHU2 Inlet Air
4	77-HS-002B	B-100 Fire Damper AHU2 Inlet Air
5	77-HS-003A	B-100 Fire Damper Exhaust Air
6	77-HS-003B	B-100 Fire Damper Exhaust Air
7	77-HS-004A	B-200 Fire Damper AHU3 Inlet Air
8	77-HS-004B	B-200 Fire Damper AHU3 Inlet Air
9	77-HS-005A	B-200 Fire Damper AHU4 Inlet Air
10	77-HS-005B	B-200 Fire Damper AHU4 Inlet Air
11	77-HS-006A	B-200 Fire Damper Exhaust Air
12	77-HS-006B	B-200 Fire Damper Exhaust Air
13	77-HS-007A	B-300 Fire Damper AHU5 Inlet Air
14	77-HS-007B	B-300 Fire Damper AHU5 Inlet Air
15	77-HS-008A	B-300 Fire Damper AHU5 Return Air
16	77-HS-008B	B-300 Fire Damper AHU5 Return Air
17	77-HS-009A	B-300 Fire Damper AHU6 Inlet Air
18	77-HS-009B	B-300 Fire Damper AHU6 Inlet Air
19	77-HS-010A	B-300 Fire Damper AHU6 Return Air
20	77-HS-010B	B-300 Fire Damper AHU6 Return Air
21	77-HS-011A	B-300 Fire Damper Exhaust Air
22	77-HS-011B	B-300 Fire Damper Exhaust Air
23	77-HS-012A	B-400 Fire Damper AHU7 Inlet Air
24	77-HS-012B	B-400 Fire Damper AHU7 Inlet Air
25	77-HS-013A	B-400 Fire Damper AHU7 Return Air
26	77-HS-013B	B-400 Fire Damper AHU7 Return Air
27	77-HS-014A	B-400 Fire Damper AHU8 Inlet Air
28	77-HS-014B	B-400 Fire Damper AHU8 Inlet Air
29	77-HS-015A	B-400 Fire Damper AHU8 Return Air
30	77-HS-015B	B-400 Fire Damper AHU8 Return Air
31	77-HS-016A	B-400 Fire Damper Exhaust Air
32	77-HS-016B	B-400 Fire Damper Exhaust Air

File: 1724000821-IN-DS-00004-01.xlsx
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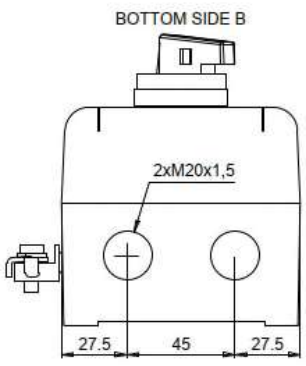


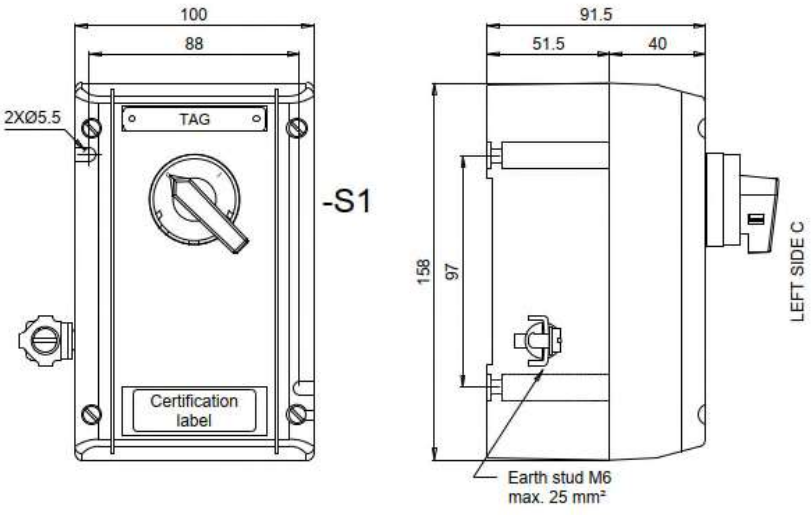
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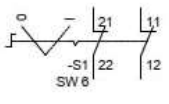
Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	⟨Ex⟩ II 2 G Ex ed ib m IIC T6 ⟨Ex⟩ 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

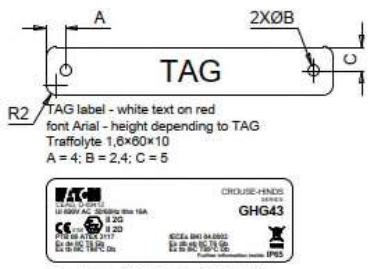




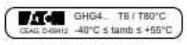


Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Adhesive certification label 51,5×17,5
GHG4301909R0013



Adhesive label 37×6,5
GHG6101937R0044

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-005B	: Hand Switch for Fire&Gas Damper HFD-77005			Dwg	
	S/Sys	77-20	: HVAC LV Switchgear Room B-200			Module	
TASK	code	C10002086		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX00		Miscellaneous

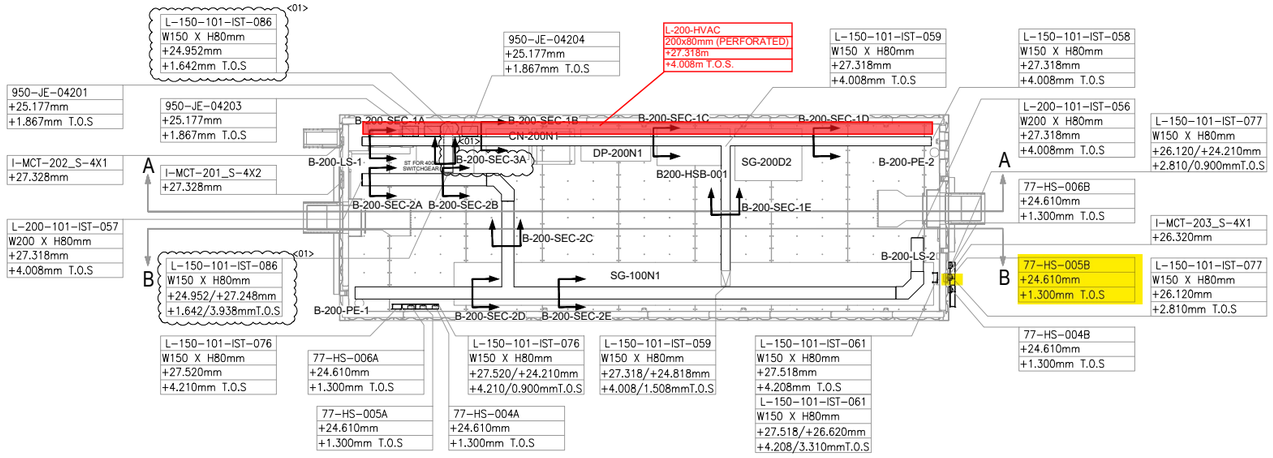
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (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	2024-10-28	2024-11-21	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-28T09:13:01.604Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-21T08:29:04.584Z	

DRAWING NO. 123A90-DDL-IN-DL-40114

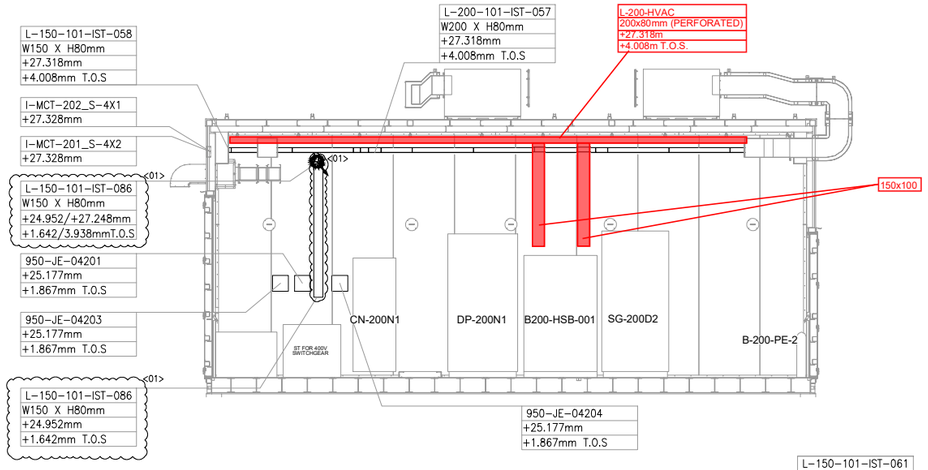
REV. 01



PLAN VIEW

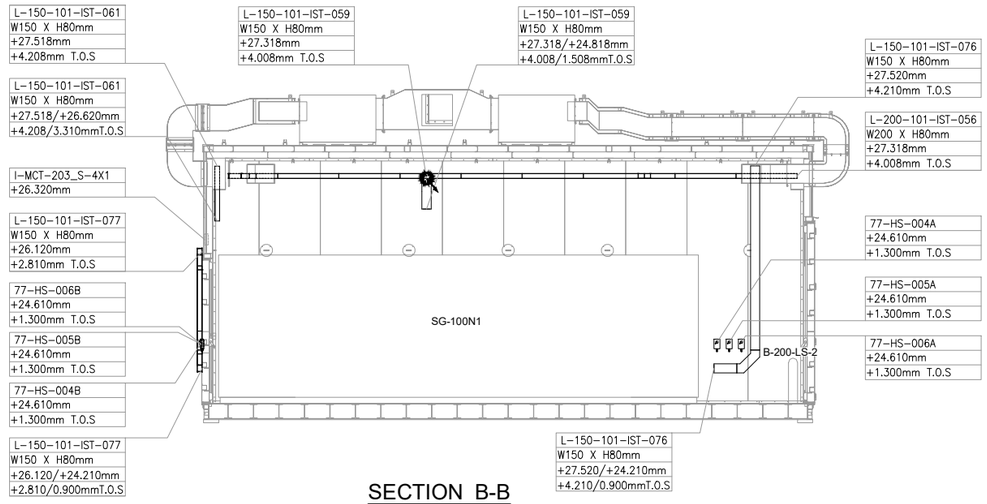
B-200 – LV SWITCHROOM

SCALE-1:1



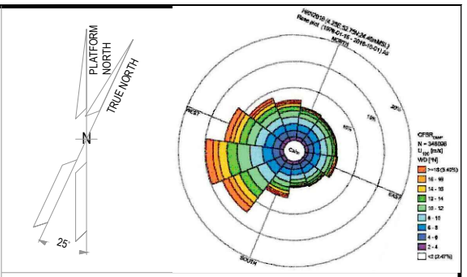
SECTION A-A

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-40114**

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-200 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-40114	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40114 REV:01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-04203	No.	MARSHALLING CABINET B400-FGS-002

B-200 LV Switch Gear Room

<01>

950-XZ-04203 (1BK, 2BK) — NOTE-2 — C-950-XZ-04203/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-XL-04205 (1BK, 3BK) — NOTE-2 — C-950-XL-04205/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-XL-04206 (1BK, 3BK) — NOTE-2 — C-950-XL-04206/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-JE-04203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

B-200 OUTDOOR
77-HS-004B (12, 22 / 11, 21) — NOTE-2
C-77-HS-004B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
C-77-HS-004A/77-HS-004B
~~C-77-HS-004B/77-HS-004A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77004
77-HY-004 (1, 2) — 1BK, 2BK — NOTE-2
C-77-HY-004/77-HS-004A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
B-200 INDOOR
77-HS-004A (12, 22 / 11, 21) — NOTE-2

B-200 OUTDOOR
77-HS-005B (12, 22 / 11, 21) — NOTE-2
C-77-HS-005B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
C-77-HS-005A/77-HS-005B
~~C-77-HS-005B/77-HS-005A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77005
77-HY-005 (1, 2) — 1BK, 2BK — NOTE-2
C-77-HY-00577-HS-005A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
B-200 INDOOR
77-HS-005A (12, 22 / 11, 21) — NOTE-2

B-200 OUTDOOR
77-HS-006B (12, 22 / 11, 21) — NOTE-2
C-77-HS-006B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
C-77-HS-006A/77-HS-006B
~~C-77-HS-006B/77-HS-006A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77006
77-HY-006 (1, 2) — 1BK, 2BK — NOTE-2
C-77-HY-006/77-HS-006A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
B-200 INDOOR
77-HS-006A (12, 22 / 11, 21) — NOTE-2

TB-1
1BK 1 1BK
2BK 2 2BK
SH
3BK 3 3BK
4BK 4 4BK
SH
5BK 5 5BK
6BK 6 6BK
SH
7BK 7 7BK
8BK 8 8BK
SH
9BK 9 9BK
10BK 10 10BK
SH
11BK 11 11BK
12BK 12 12BK
SH
OS

TB-950-JE-04203
1BK 1 950-XZ-04203
2BK 2
3BK 3 950-XL-04205
4BK 4
5BK 5 950-XL-04206
6BK 6
7BK 7 77-HY-004
8BK 8
9BK 9 77-HY-005
10BK 10
11BK 11 77-HY-006
12BK 12

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–04203

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

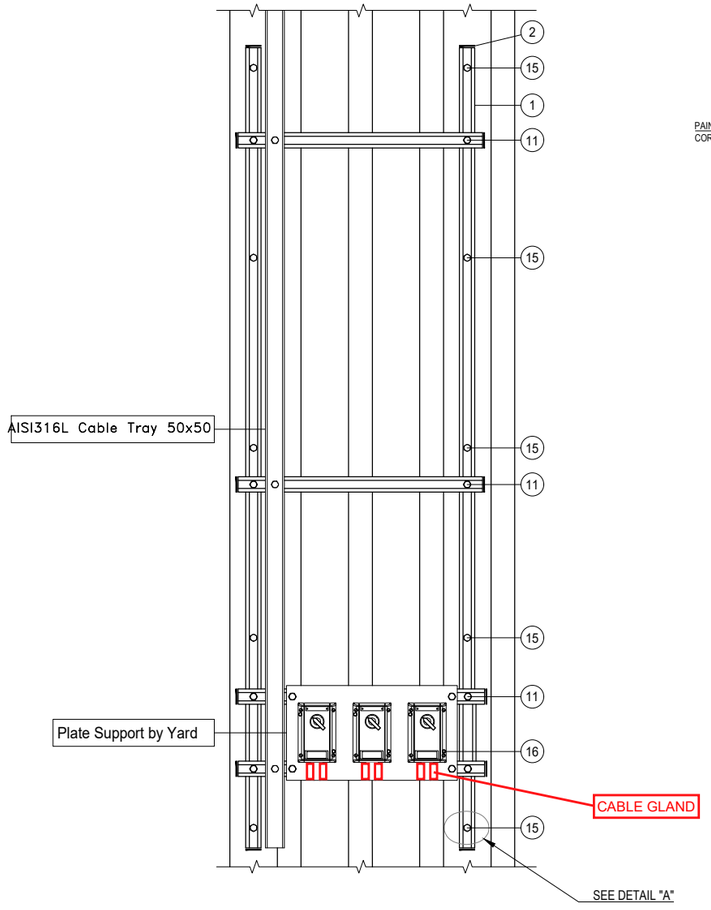
	DRAWING NO.	SHEET	REV.
A3	123A90–DDL–IN–DG–40016	068	01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

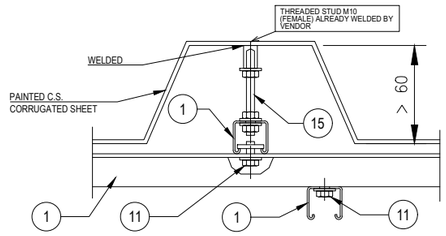
I-4

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-FDL-IN-DD-40017

REV.:	DATE:	SIGNATURE:
1_C	15/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

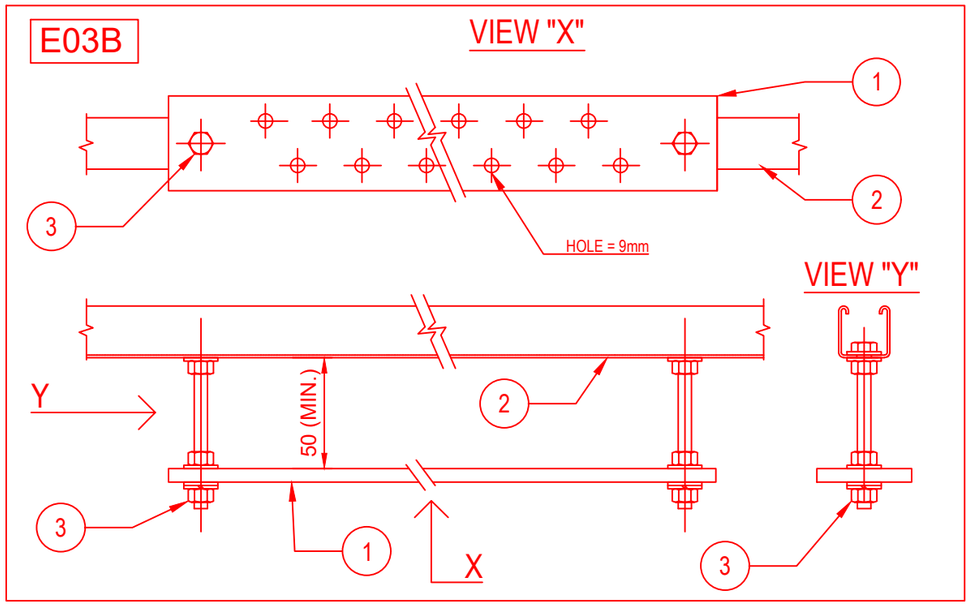
TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
HAND SWITCH OUTSIDE CONTAINERS

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

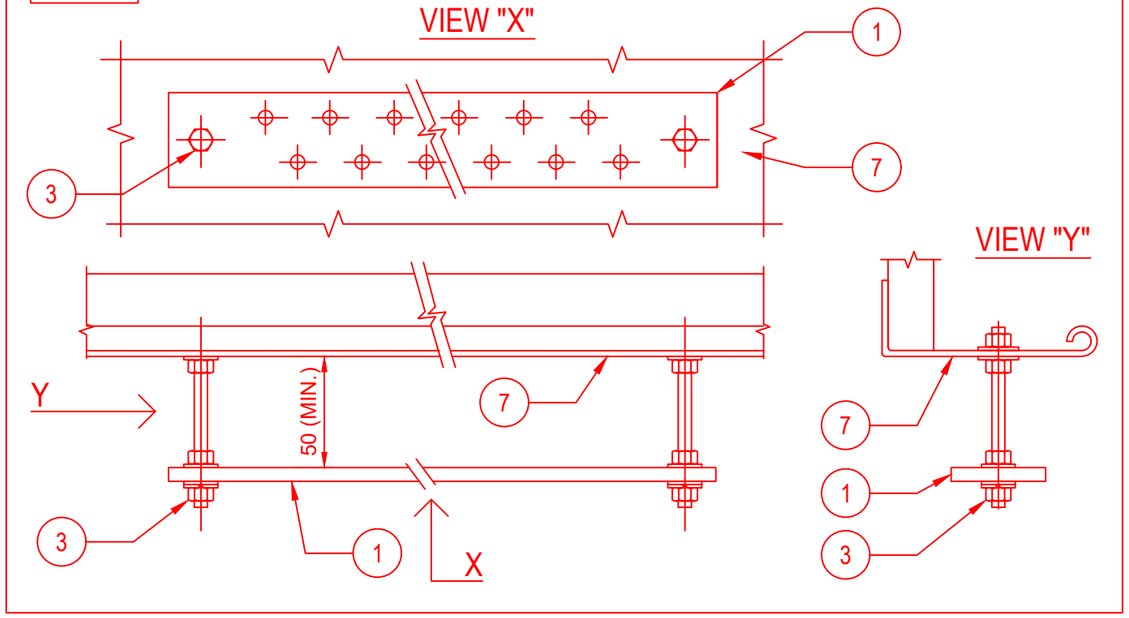
A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 047	REV. 01

TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

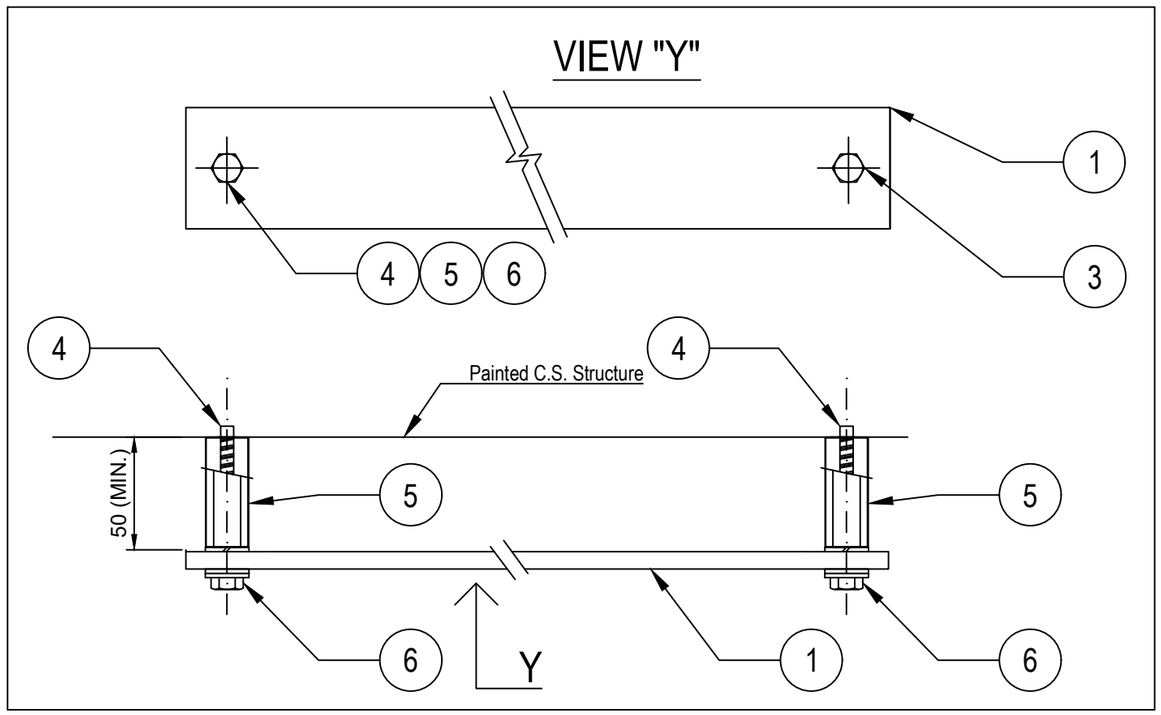


E03C



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_G	25/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

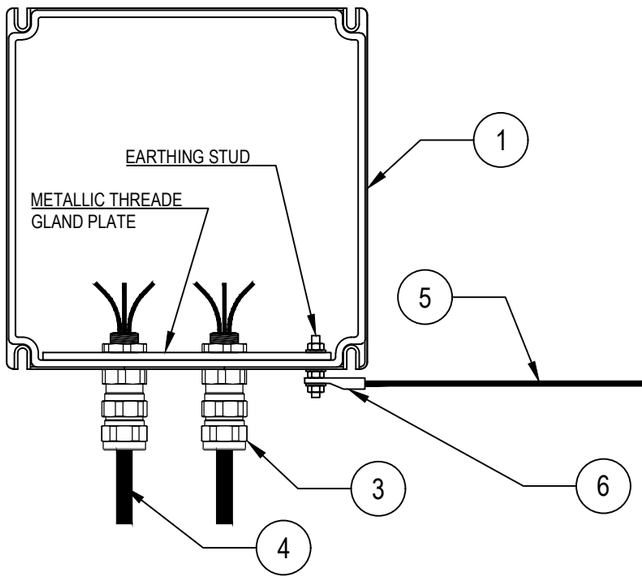
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

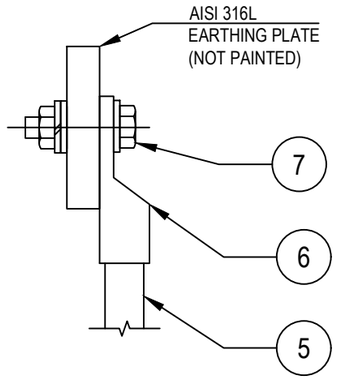
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E04

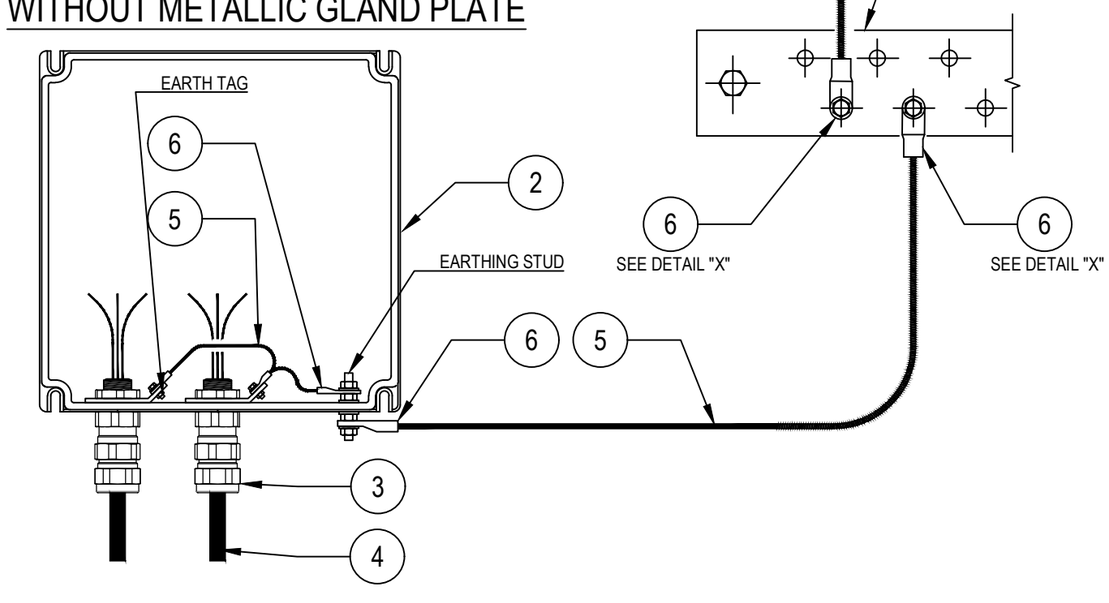
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



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_G	25/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE ARMOUR BY CABLE GLAND

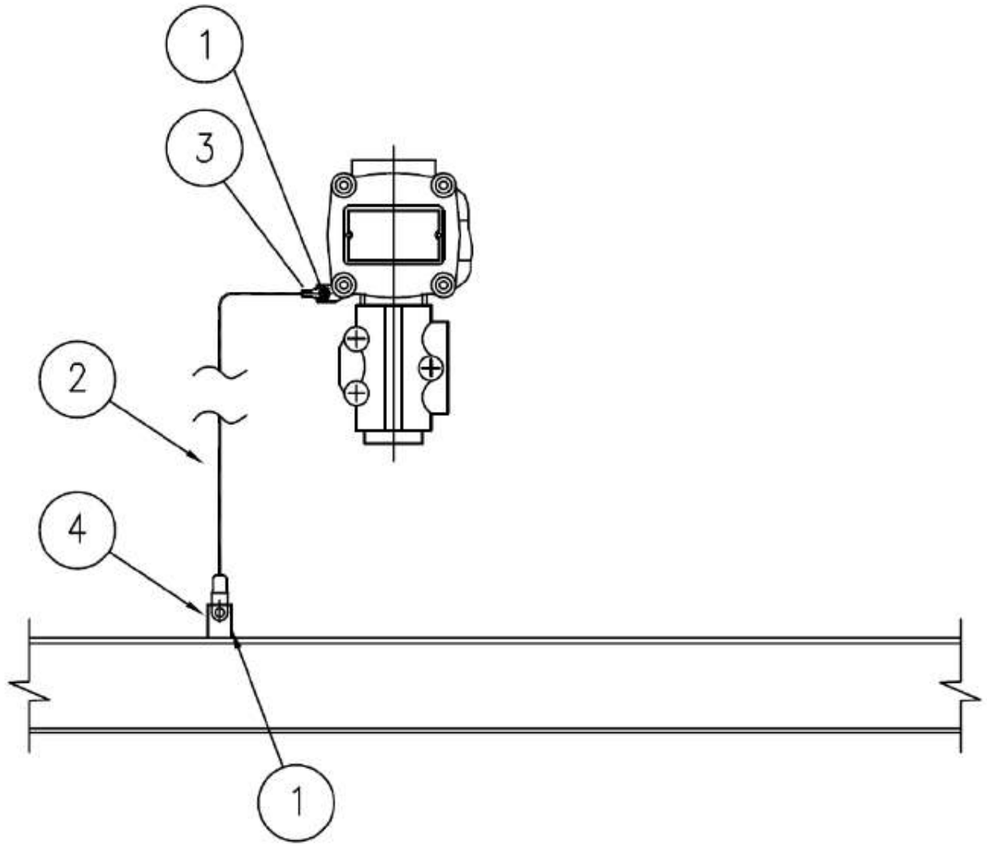
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

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_G	25/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

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

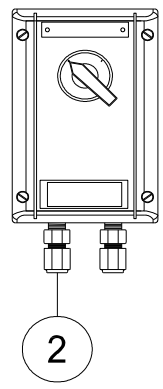
SHEET 027

REV. 02

F.to UNI A3: 420mmx297mm

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

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

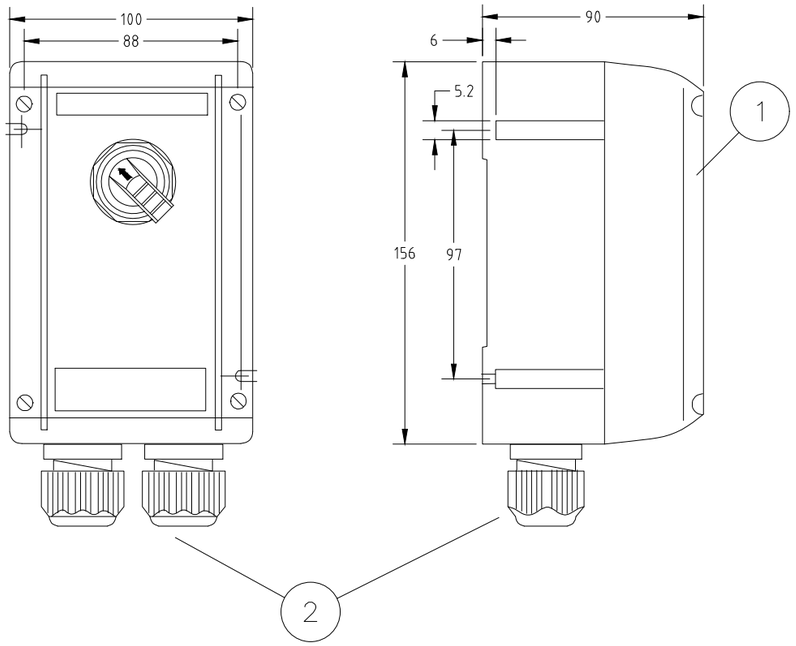
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PUSH BUTTON DPDT CONTACT

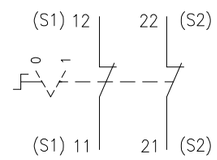
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

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

PUSH BUTTON DPDT CONTACT

POS.	TAG NUMBER	SERVICE
1	77-HS-001A	B-100 Fire Damper AHU1 Inlet Air
2	77-HS-001B	B-100 Fire Damper AHU1 Inlet Air
3	77-HS-002A	B-100 Fire Damper AHU2 Inlet Air
4	77-HS-002B	B-100 Fire Damper AHU2 Inlet Air
5	77-HS-003A	B-100 Fire Damper Exhaust Air
6	77-HS-003B	B-100 Fire Damper Exhaust Air
7	77-HS-004A	B-200 Fire Damper AHU3 Inlet Air
8	77-HS-004B	B-200 Fire Damper AHU3 Inlet Air
9	77-HS-005A	B-200 Fire Damper AHU4 Inlet Air
10	77-HS-005B	B-200 Fire Damper AHU4 Inlet Air
11	77-HS-006A	B-200 Fire Damper Exhaust Air
12	77-HS-006B	B-200 Fire Damper Exhaust Air
13	77-HS-007A	B-300 Fire Damper AHU5 Inlet Air
14	77-HS-007B	B-300 Fire Damper AHU5 Inlet Air
15	77-HS-008A	B-300 Fire Damper AHU5 Return Air
16	77-HS-008B	B-300 Fire Damper AHU5 Return Air
17	77-HS-009A	B-300 Fire Damper AHU6 Inlet Air
18	77-HS-009B	B-300 Fire Damper AHU6 Inlet Air
19	77-HS-010A	B-300 Fire Damper AHU6 Return Air
20	77-HS-010B	B-300 Fire Damper AHU6 Return Air
21	77-HS-011A	B-300 Fire Damper Exhaust Air
22	77-HS-011B	B-300 Fire Damper Exhaust Air
23	77-HS-012A	B-400 Fire Damper AHU7 Inlet Air
24	77-HS-012B	B-400 Fire Damper AHU7 Inlet Air
25	77-HS-013A	B-400 Fire Damper AHU7 Return Air
26	77-HS-013B	B-400 Fire Damper AHU7 Return Air
27	77-HS-014A	B-400 Fire Damper AHU8 Inlet Air
28	77-HS-014B	B-400 Fire Damper AHU8 Inlet Air
29	77-HS-015A	B-400 Fire Damper AHU8 Return Air
30	77-HS-015B	B-400 Fire Damper AHU8 Return Air
31	77-HS-016A	B-400 Fire Damper Exhaust Air
32	77-HS-016B	B-400 Fire Damper Exhaust Air

File: 1724000821-IN-DS-00004-01.xlsx
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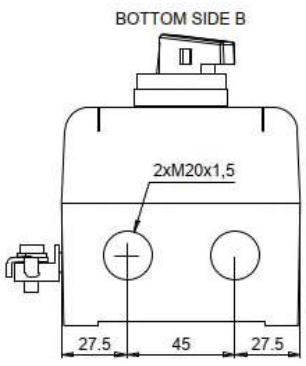


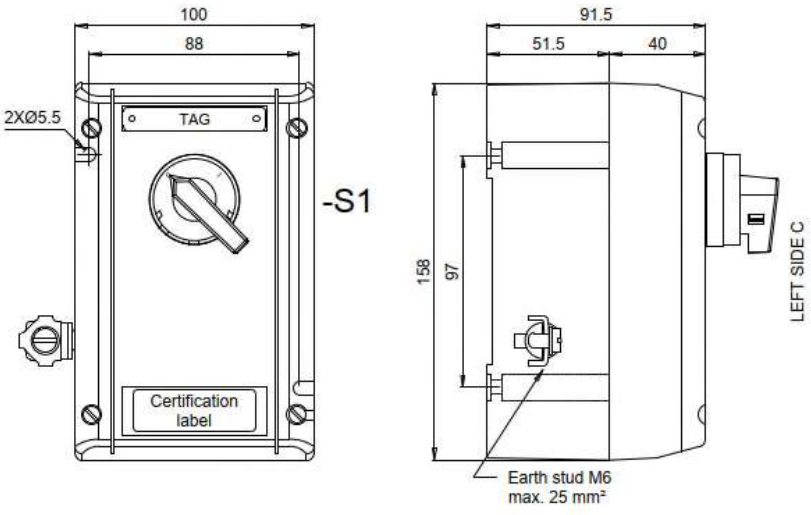
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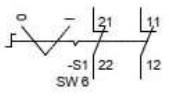
Technical data

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Marking accd. to 2014/34/EU	⟨Ex⟩ II 2 G Ex ed ib m IIC T6 ⟨Ex⟩ 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

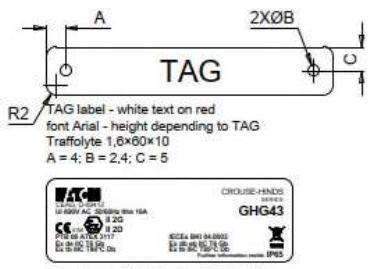




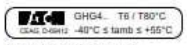


Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Adhesive certification label 51,5×17,5
GHG4301909R0013



Adhesive label 37×6,5
GHG6101937R0044

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-006A	: Hand Switch for Fire&Gas Damper HFD-77006			Dwg	
	S/Sys	77-20	: HVAC LV Switchgear Room B-200			Module	
TASK	code	C10002087		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00 Miscellaneous

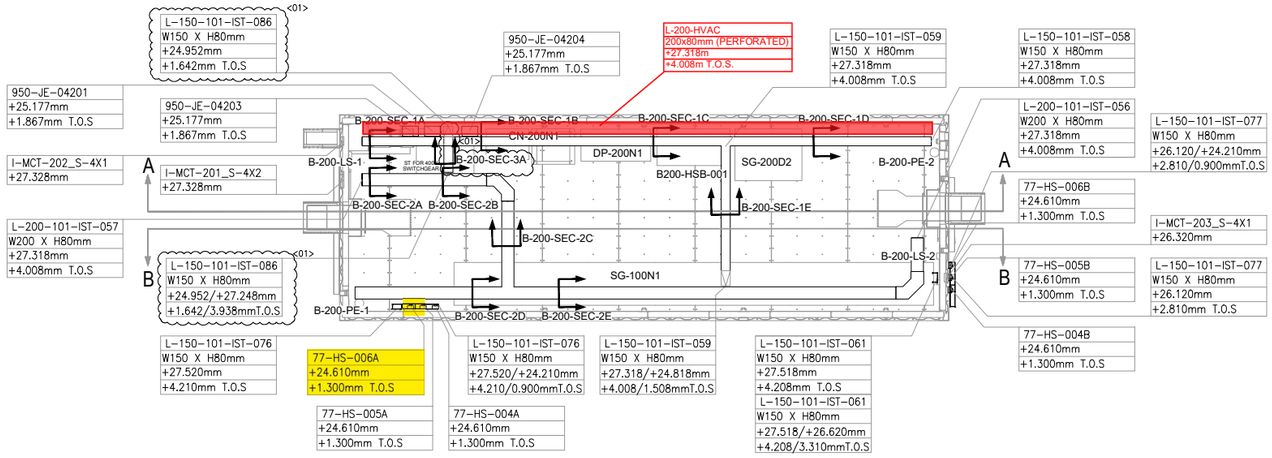
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (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	2024-10-28	2024-11-21	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-28T09:13:10.599Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-21T08:29:23.607Z	

DRAWING NO. 123A90-DDL-IN-DL-40114

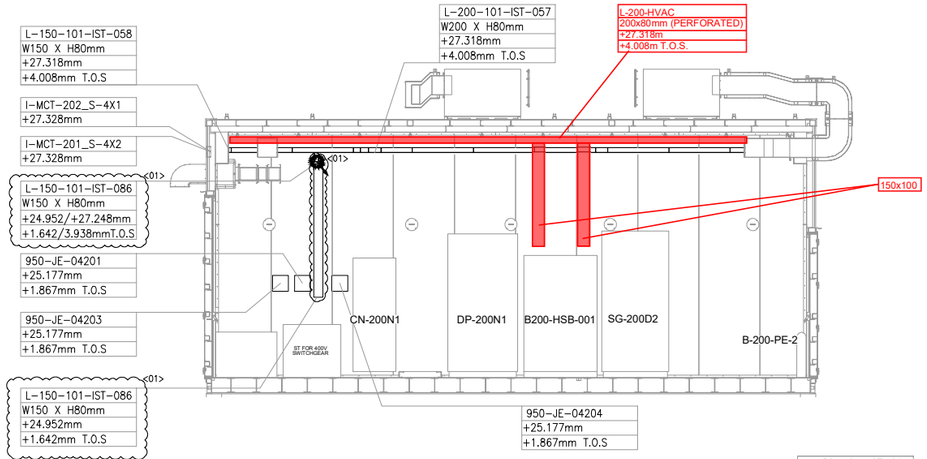
REV. 01



PLAN VIEW

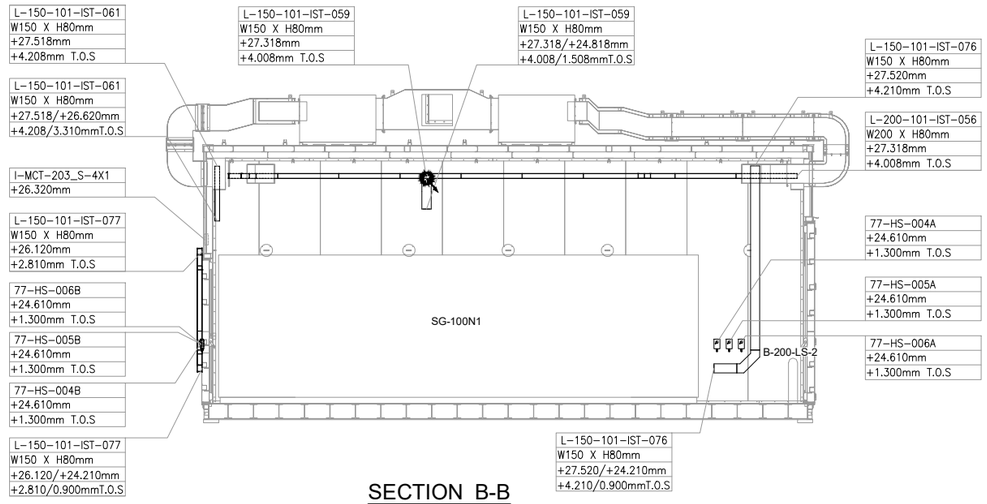
B-200 – LV SWITCHROOM

SCALE-1:1



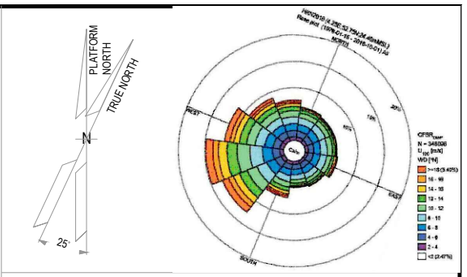
SECTION A-A

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-40114**

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-200 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-40114	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40114 REV:01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-04203	No.	MARSHALLING CABINET B400-FGS-002

B-200 LV Switch Gear Room

<01>

950-XZ-04203 (1BK, 2BK) — NOTE-2 — C-950-XZ-04203/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-XL-04205 (1BK, 3BK) — NOTE-2 — C-950-XL-04205/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-XL-04206 (1BK, 3BK) — NOTE-2 — C-950-XL-04206/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-JE-04203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

B-200 OUTDOOR
77-HS-004B (12, 22 / 11, 21) — NOTE-2 — C-77-HS-004B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
C-77-HS-004A/77-HS-004B
~~C-77-HS-004B/77-HS-004A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77004
77-HY-004 (1, 2) — NOTE-2 — C-77-HY-004/77-HS-004A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
B-200 INDOOR
77-HS-004A (12, 22 / 11, 21) — NOTE-2

B-200 OUTDOOR
77-HS-005B (12, 22 / 11, 21) — NOTE-2 — C-77-HS-005B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
C-77-HS-005A/77-HS-005B
~~C-77-HS-005B/77-HS-005A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77005
77-HY-005 (1, 2) — NOTE-2 — C-77-HY-00577-HS-005A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
B-200 INDOOR
77-HS-005A (12, 22 / 11, 21) — NOTE-2

B-200 OUTDOOR
77-HS-006B (12, 22 / 11, 21) — NOTE-2 — C-77-HS-006B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
C-77-HS-006A/77-HS-006B
~~C-77-HS-006B/77-HS-006A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77006
77-HY-006 (1, 2) — NOTE-2 — C-77-HY-006/77-HS-006A — 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
B-200 INDOOR
77-HS-006A (12, 22 / 11, 21) — NOTE-2

TB-1
1 — 950-XZ-04203
2 — 950-XL-04205
3 — 950-XL-04206
4 — 77-HY-004
5 — 77-HY-005
6 — 77-HY-006
7
8
9
10
11
12
SH
OS

TB-950-JE-04203
1 — 950-XZ-04203
2 — 950-XL-04205
3 — 950-XL-04206
4 — 77-HY-004
5 — 77-HY-005
6 — 77-HY-006
7
8
9
10
11
12

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–04203

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 068	REV. 01

File Name : 123A90–DDL–IN–DG–40016_Rev.01

I-3

DRAWING NO. 123A90-DDL-IN-DD-40017

REV. 00



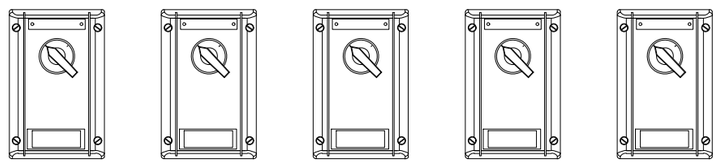
B-100
~~B-101~~



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)

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

A3 | DRAWING NO. 123A90-DDL-IN-DD-40017 | SHEET 046 | REV. 01

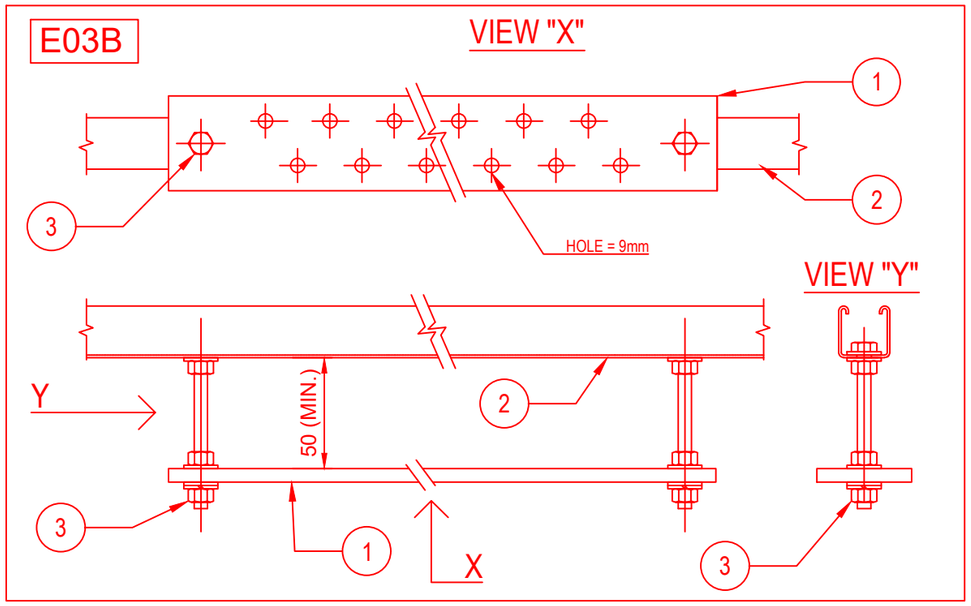
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40017**

REV.:	DATE:	SIGNATURE:
1_C	15/10/24	G.Randi

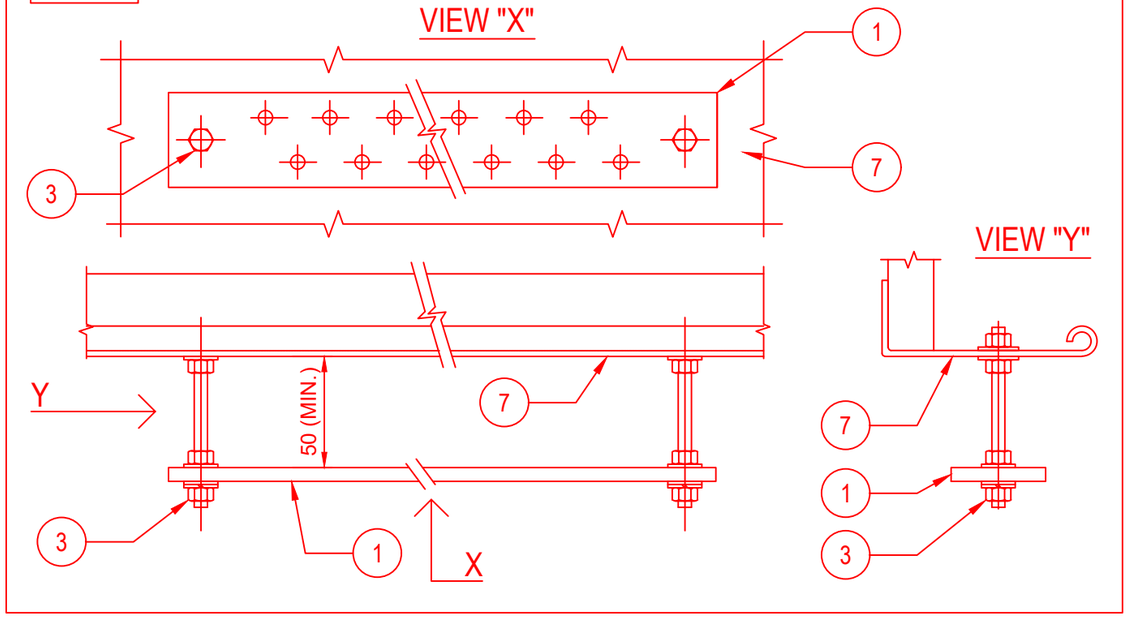
ROSETTI MARINO SpA

TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

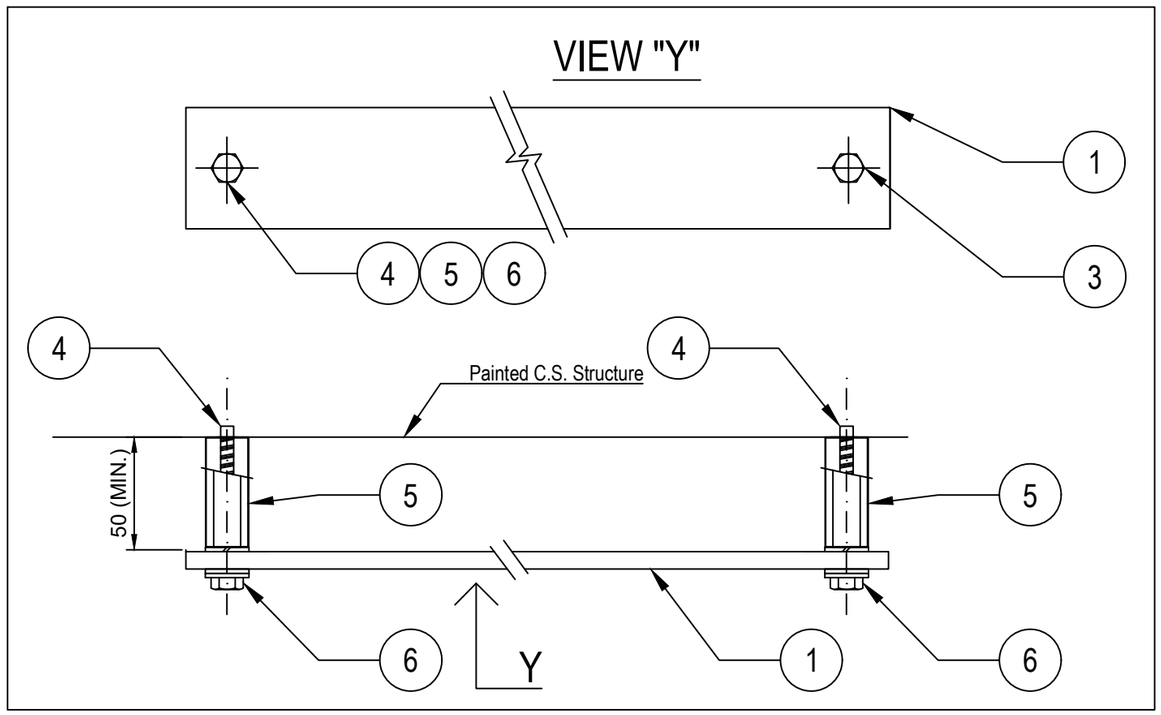


E03C



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_G	25/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

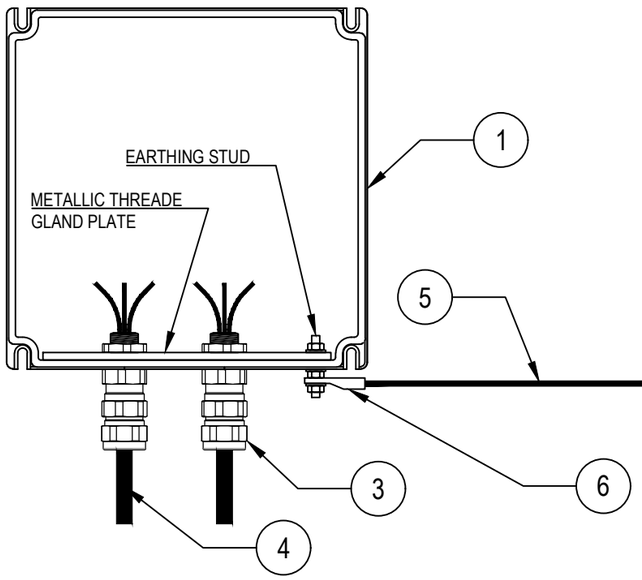
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

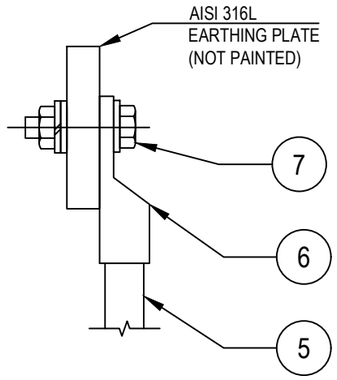
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E04

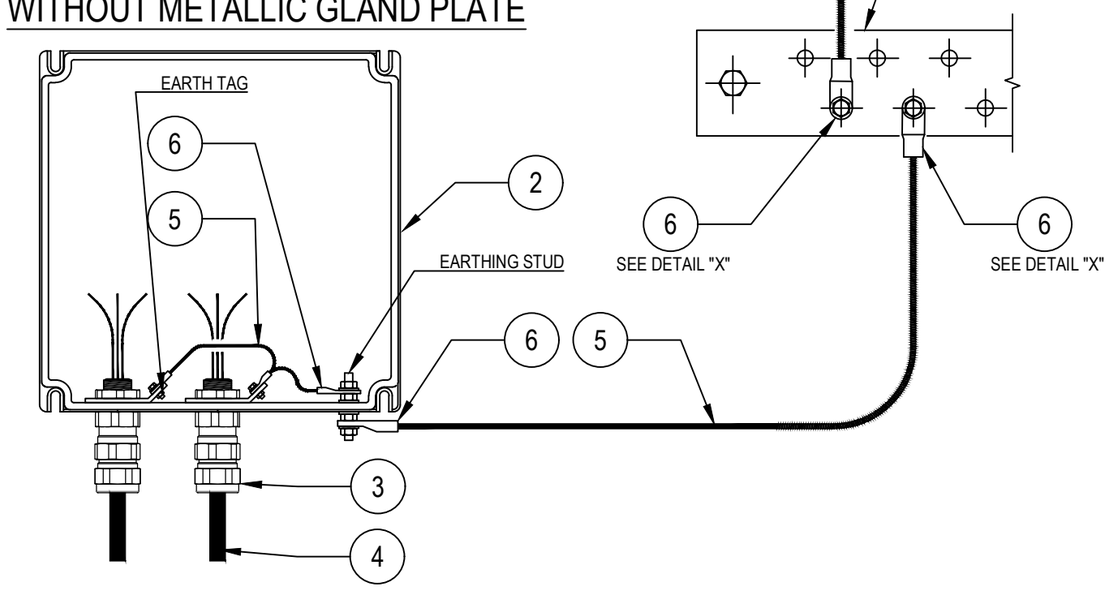
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



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_G	25/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE ARMOUR BY CABLE GLAND

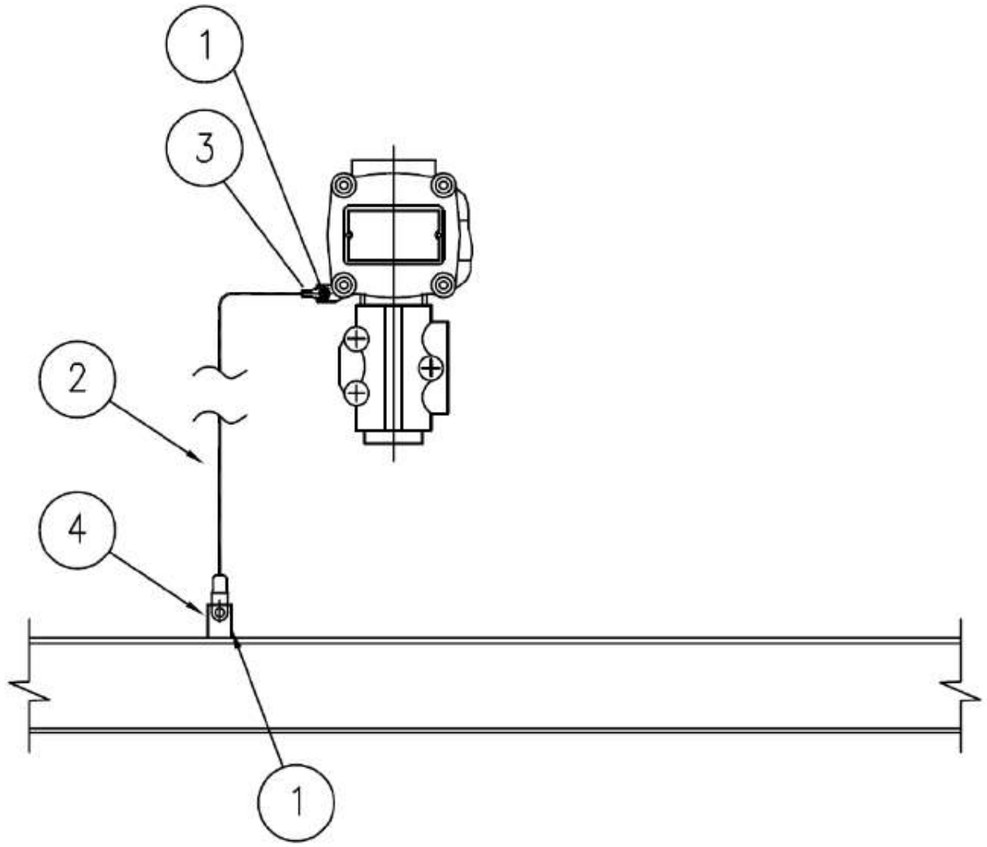
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

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_G	25/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

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

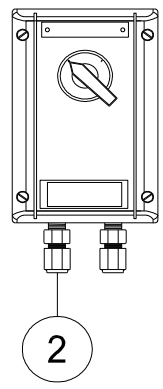
SHEET 027

REV. 02

F.to UNI A3: 420mmx297mm

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

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

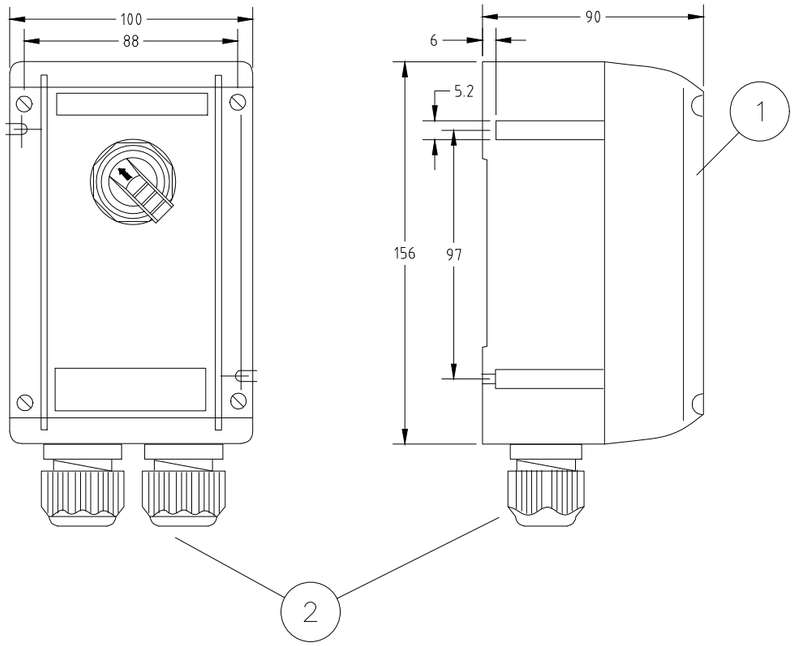
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Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

PUSH BUTTON DPDT CONTACT

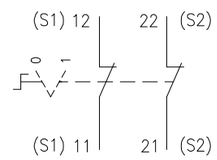
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

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

PUSH BUTTON DPDT CONTACT

POS.	TAG NUMBER	SERVICE
1	77-HS-001A	B-100 Fire Damper AHU1 Inlet Air
2	77-HS-001B	B-100 Fire Damper AHU1 Inlet Air
3	77-HS-002A	B-100 Fire Damper AHU2 Inlet Air
4	77-HS-002B	B-100 Fire Damper AHU2 Inlet Air
5	77-HS-003A	B-100 Fire Damper Exhaust Air
6	77-HS-003B	B-100 Fire Damper Exhaust Air
7	77-HS-004A	B-200 Fire Damper AHU3 Inlet Air
8	77-HS-004B	B-200 Fire Damper AHU3 Inlet Air
9	77-HS-005A	B-200 Fire Damper AHU4 Inlet Air
10	77-HS-005B	B-200 Fire Damper AHU4 Inlet Air
11	77-HS-006A	B-200 Fire Damper Exhaust Air
12	77-HS-006B	B-200 Fire Damper Exhaust Air
13	77-HS-007A	B-300 Fire Damper AHU5 Inlet Air
14	77-HS-007B	B-300 Fire Damper AHU5 Inlet Air
15	77-HS-008A	B-300 Fire Damper AHU5 Return Air
16	77-HS-008B	B-300 Fire Damper AHU5 Return Air
17	77-HS-009A	B-300 Fire Damper AHU6 Inlet Air
18	77-HS-009B	B-300 Fire Damper AHU6 Inlet Air
19	77-HS-010A	B-300 Fire Damper AHU6 Return Air
20	77-HS-010B	B-300 Fire Damper AHU6 Return Air
21	77-HS-011A	B-300 Fire Damper Exhaust Air
22	77-HS-011B	B-300 Fire Damper Exhaust Air
23	77-HS-012A	B-400 Fire Damper AHU7 Inlet Air
24	77-HS-012B	B-400 Fire Damper AHU7 Inlet Air
25	77-HS-013A	B-400 Fire Damper AHU7 Return Air
26	77-HS-013B	B-400 Fire Damper AHU7 Return Air
27	77-HS-014A	B-400 Fire Damper AHU8 Inlet Air
28	77-HS-014B	B-400 Fire Damper AHU8 Inlet Air
29	77-HS-015A	B-400 Fire Damper AHU8 Return Air
30	77-HS-015B	B-400 Fire Damper AHU8 Return Air
31	77-HS-016A	B-400 Fire Damper Exhaust Air
32	77-HS-016B	B-400 Fire Damper Exhaust Air

File: 1724000821-IN-DS-00004-01.xlsx
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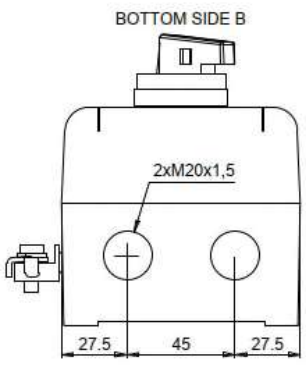


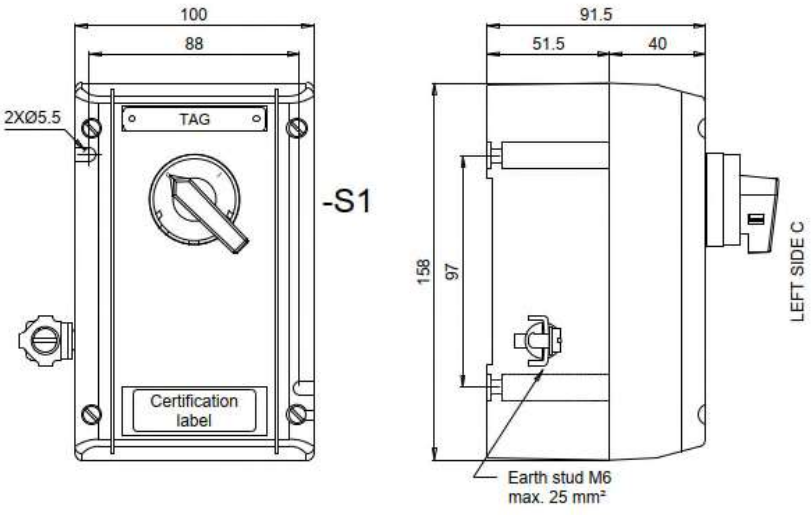
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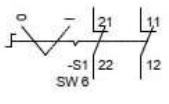
Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	⟨Ex⟩ II 2 G Ex ed ib m IIC T6 ⟨Ex⟩ 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

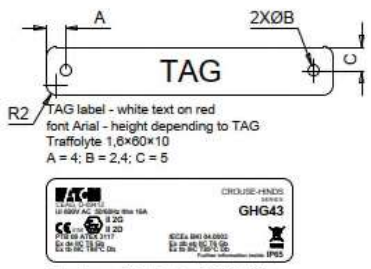




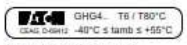


Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Adhesive certification label 51,5×17,5
GHG4301909R0013



Adhesive label 37×6,5
GHG6101937R0044

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-006B	: Hand Switch for Fire&Gas Damper HFD-77006			Dwg	
	S/Sys	77-20	: HVAC LV Switchgear Room B-200			Module	
TASK	code	C10002088		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX00		Miscellaneous

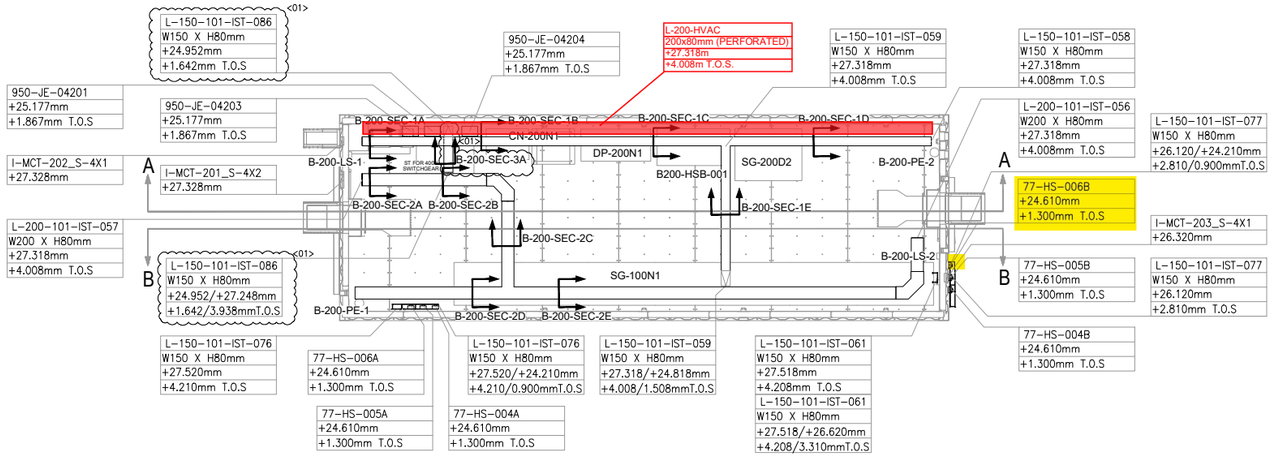
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (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	2024-10-28	2024-11-21	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-28T09:13:20.374Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-21T08:29:54.186Z	

DRAWING NO. 123A90-DDL-IN-DL-40114

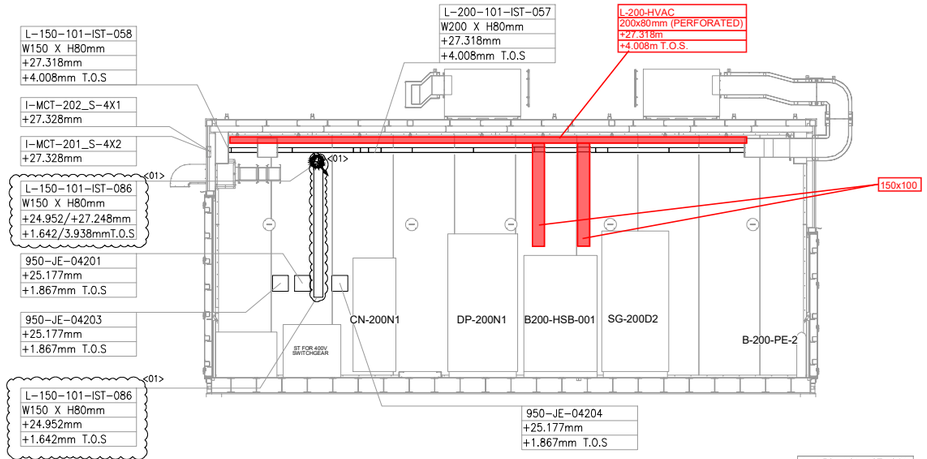
REV. 01



PLAN VIEW

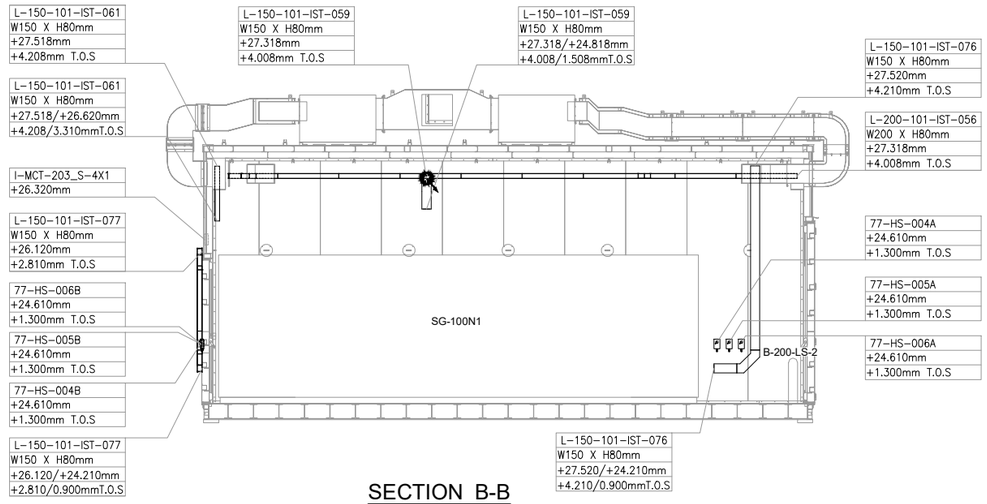
B-200 – LV SWITCHROOM

SCALE-1:1



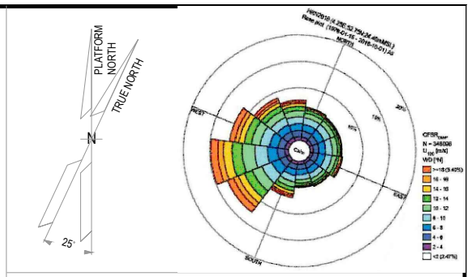
SECTION A-A

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-40114**

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-200 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-40114	001	01

File Name : 123A90-DDL-IN-DL-40114 REV:01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-04203	No.	MARSHALLING CABINET B400-FGS-002

B-200 LV Switch Gear Room

<01>

950-XZ-04203 (1BK, 2BK) — NOTE-2 — C-950-XZ-04203/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-XL-04205 (1BK, 3BK) — NOTE-2 — C-950-XL-04205/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-XL-04206 (1BK, 3BK) — NOTE-2 — C-950-XL-04206/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-JE-04203/B400-FGS-002
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

B-200 OUTDOOR
77-HS-004B (12, 22 / 11, 21, 1BK, 2BK) — NOTE-2 — C-77-HS-004B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
C-77-HS-004A/77-HS-004B
~~C-77-HS-004B/77-HS-004A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77004
77-HY-004 (1, 2, 1BK, 2BK) — NOTE-2 — C-77-HY-004/77-HS-004A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
B-200 INDOOR
77-HS-004A (12, 22 / 11, 21, 1BK, 2BK) — NOTE-2

B-200 OUTDOOR
77-HS-005B (12, 22 / 11, 21, 1BK, 2BK) — NOTE-2 — C-77-HS-005B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
C-77-HS-005A/77-HS-005B
~~C-77-HS-005B/77-HS-005A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77005
77-HY-005 (1, 2, 1BK, 2BK) — NOTE-2 — C-77-HY-00577-HS-005A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
B-200 INDOOR
77-HS-005A (12, 22 / 11, 21, 1BK, 2BK) — NOTE-2

B-200 OUTDOOR
77-HS-006B (12, 22 / 11, 21, 1BK, 2BK) — NOTE-2 — C-77-HS-006B/950-JE-04203
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
C-77-HS-006A/77-HS-006B
~~C-77-HS-006B/77-HS-006A~~
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

FIRE & GAS DAMPER HFD-77006
77-HY-006 (1, 2, 1BK, 2BK) — NOTE-2 — C-77-HY-006/77-HS-006A
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS
B-200 INDOOR
77-HS-006A (12, 22 / 11, 21, 1BK, 2BK) — NOTE-2

TB-1
1 (1BK) — 2 (2BK) — SH
3 (3BK) — 4 (4BK) — SH
5 (5BK) — 6 (6BK) — SH
7 (7BK) — 8 (8BK) — SH
9 (9BK) — 10 (10BK) — SH
11 (11BK) — 12 (12BK) — SH — OS

TB-950-JE-04203
1 — 950-XZ-04203
2 — 950-XL-04205
3 — 950-XL-04206
4 — 77-HY-004
5 — 77-HY-005
6 — 77-HY-006
7 — 8 — 9 — 10 — 11 — 12

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_H	28/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–04203

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

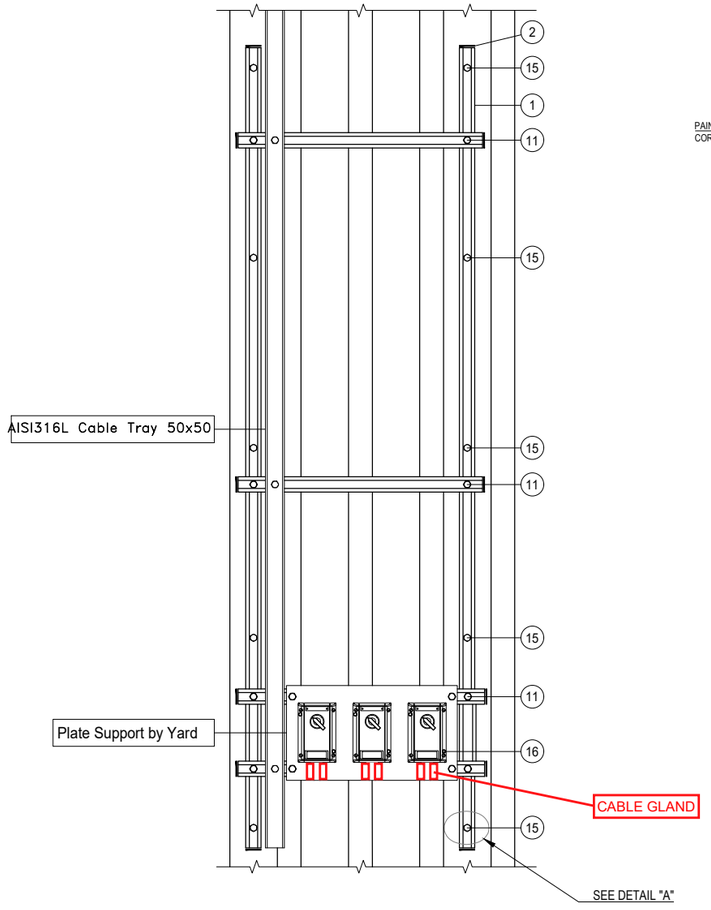
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File Name : 123A90–DDL–IN–DG–40016_Rev.01

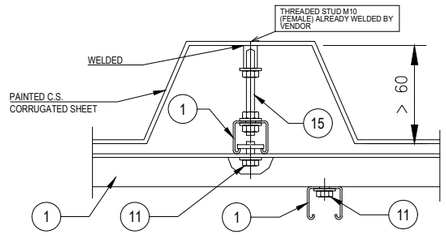
I-4

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-FDL-IN-DD-40017

REV.:	DATE:	SIGNATURE:
1_C	15/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

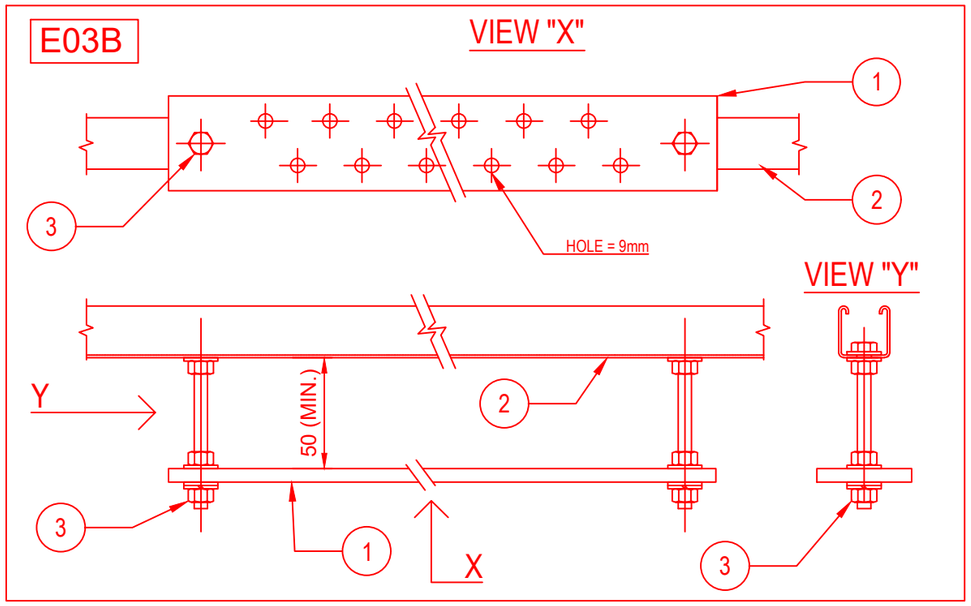
TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
HAND SWITCH OUTSIDE CONTAINERS

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

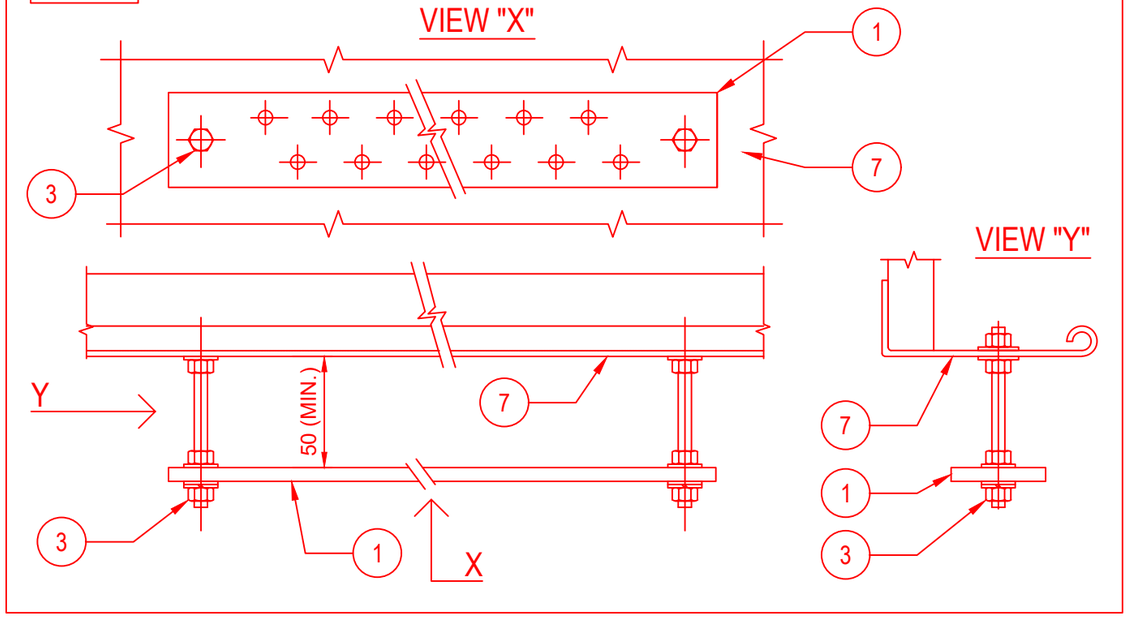
A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 047	REV. 01

TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

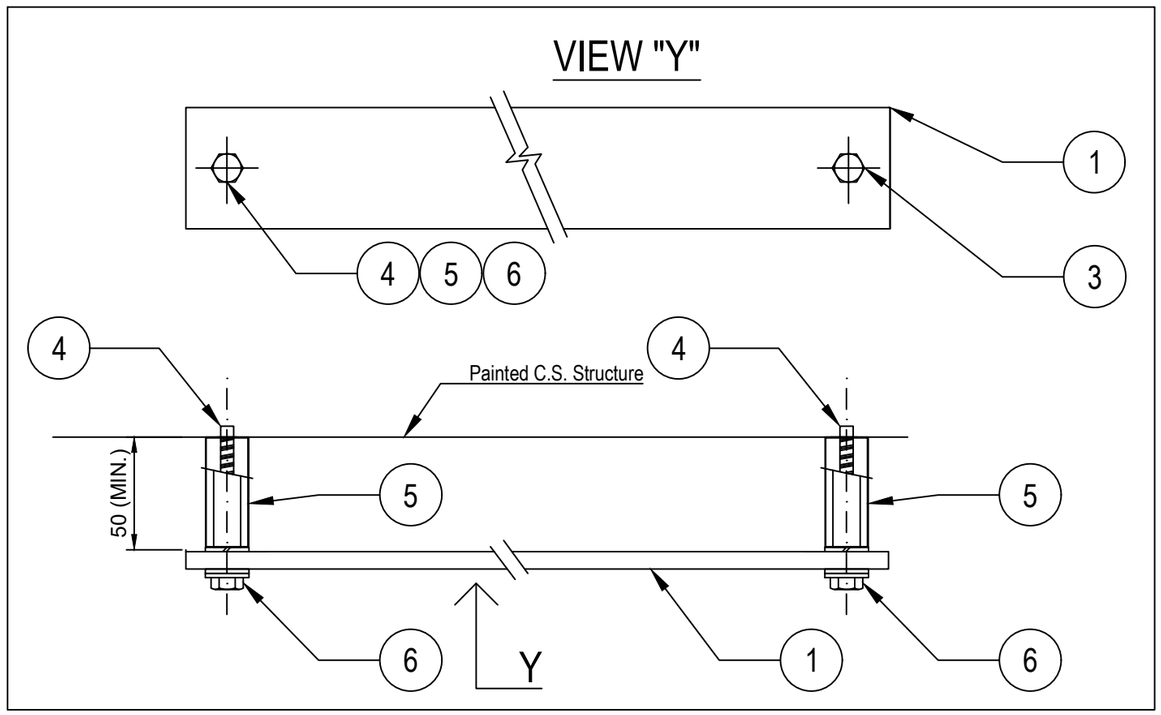


E03C



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_G	25/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

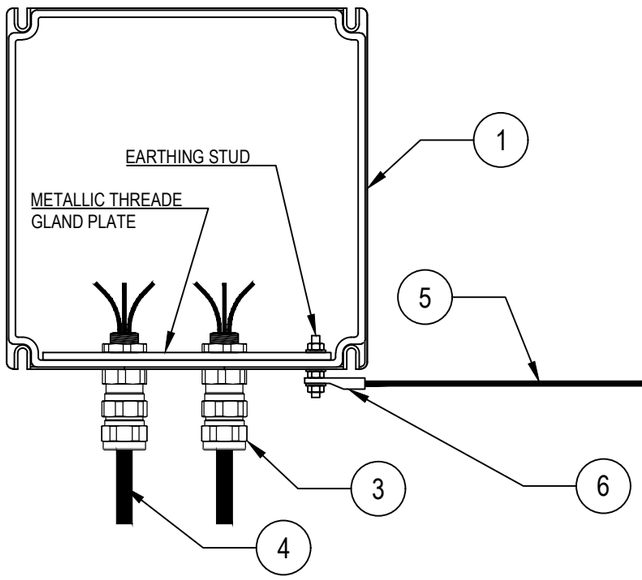
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

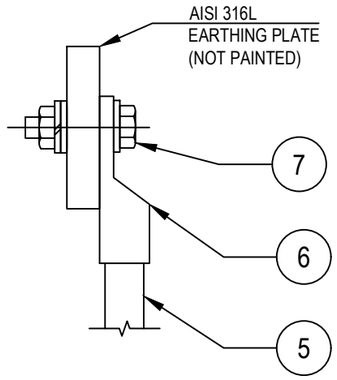
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E04

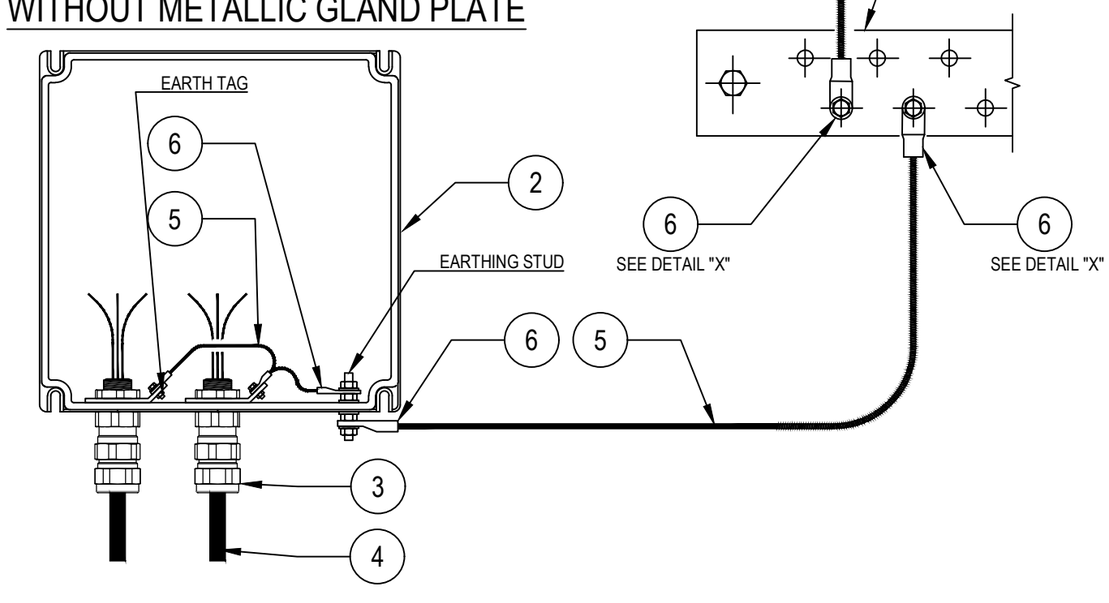
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



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_G	25/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE ARMOUR BY CABLE GLAND

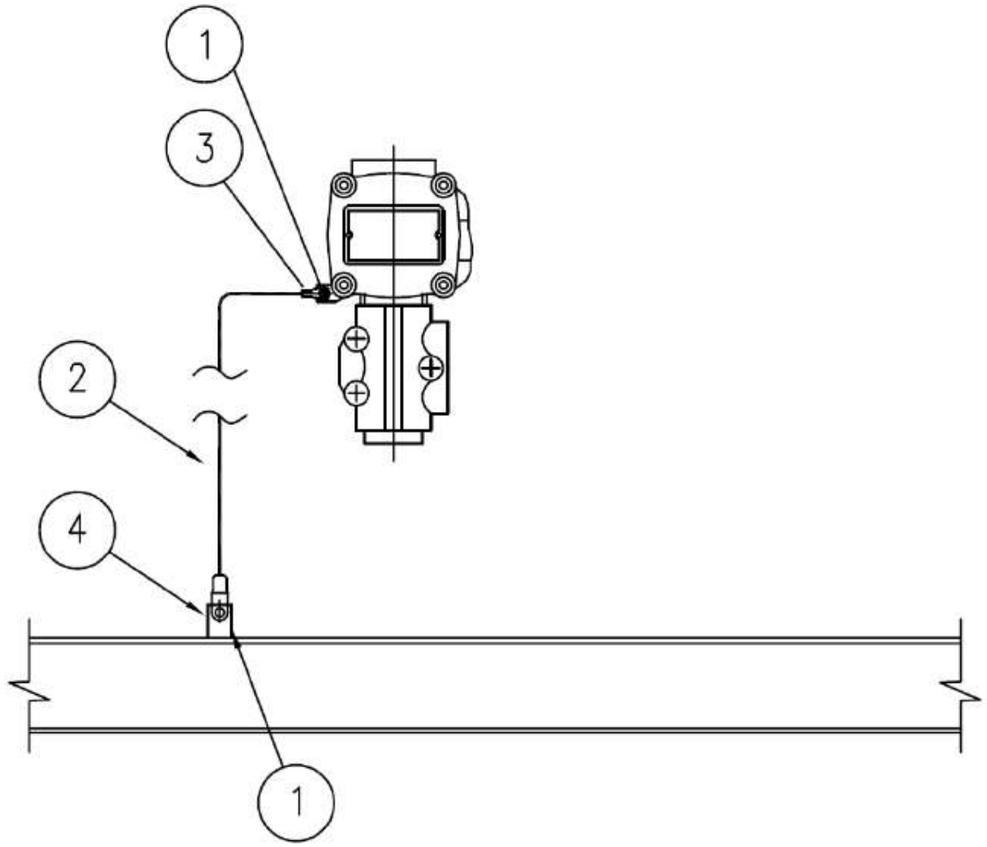
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

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_G	25/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

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

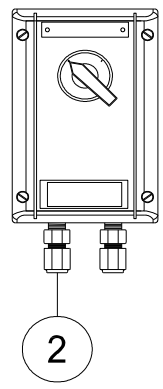
SHEET 027

REV. 02

F.to UNI A3: 420mmx297mm

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

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

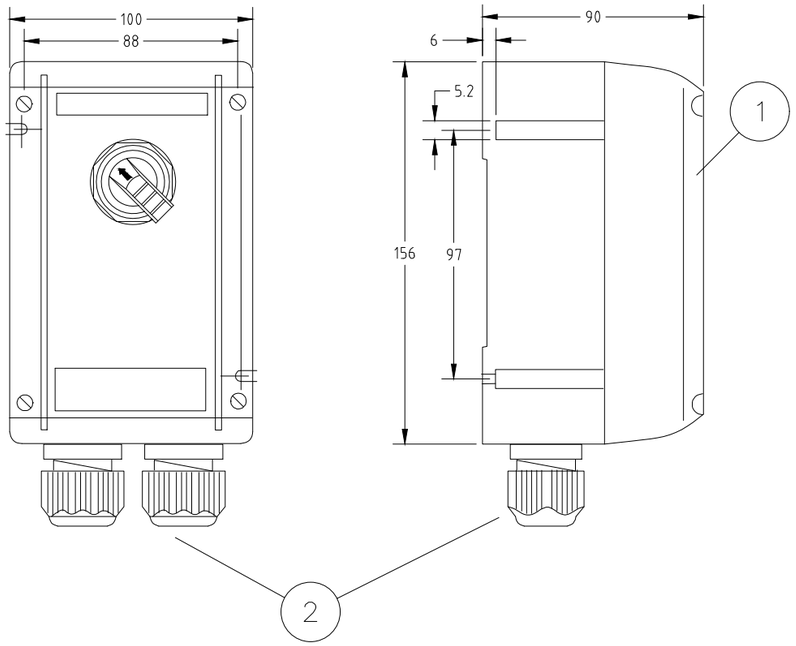
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PUSH BUTTON DPDT CONTACT

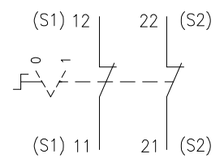
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

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

PUSH BUTTON DPDT CONTACT

POS.	TAG NUMBER	SERVICE
1	77-HS-001A	B-100 Fire Damper AHU1 Inlet Air
2	77-HS-001B	B-100 Fire Damper AHU1 Inlet Air
3	77-HS-002A	B-100 Fire Damper AHU2 Inlet Air
4	77-HS-002B	B-100 Fire Damper AHU2 Inlet Air
5	77-HS-003A	B-100 Fire Damper Exhaust Air
6	77-HS-003B	B-100 Fire Damper Exhaust Air
7	77-HS-004A	B-200 Fire Damper AHU3 Inlet Air
8	77-HS-004B	B-200 Fire Damper AHU3 Inlet Air
9	77-HS-005A	B-200 Fire Damper AHU4 Inlet Air
10	77-HS-005B	B-200 Fire Damper AHU4 Inlet Air
11	77-HS-006A	B-200 Fire Damper Exhaust Air
12	77-HS-006B	B-200 Fire Damper Exhaust Air
13	77-HS-007A	B-300 Fire Damper AHU5 Inlet Air
14	77-HS-007B	B-300 Fire Damper AHU5 Inlet Air
15	77-HS-008A	B-300 Fire Damper AHU5 Return Air
16	77-HS-008B	B-300 Fire Damper AHU5 Return Air
17	77-HS-009A	B-300 Fire Damper AHU6 Inlet Air
18	77-HS-009B	B-300 Fire Damper AHU6 Inlet Air
19	77-HS-010A	B-300 Fire Damper AHU6 Return Air
20	77-HS-010B	B-300 Fire Damper AHU6 Return Air
21	77-HS-011A	B-300 Fire Damper Exhaust Air
22	77-HS-011B	B-300 Fire Damper Exhaust Air
23	77-HS-012A	B-400 Fire Damper AHU7 Inlet Air
24	77-HS-012B	B-400 Fire Damper AHU7 Inlet Air
25	77-HS-013A	B-400 Fire Damper AHU7 Return Air
26	77-HS-013B	B-400 Fire Damper AHU7 Return Air
27	77-HS-014A	B-400 Fire Damper AHU8 Inlet Air
28	77-HS-014B	B-400 Fire Damper AHU8 Inlet Air
29	77-HS-015A	B-400 Fire Damper AHU8 Return Air
30	77-HS-015B	B-400 Fire Damper AHU8 Return Air
31	77-HS-016A	B-400 Fire Damper Exhaust Air
32	77-HS-016B	B-400 Fire Damper Exhaust Air

File: 1724000821-IN-DS-00004-01.xlsx
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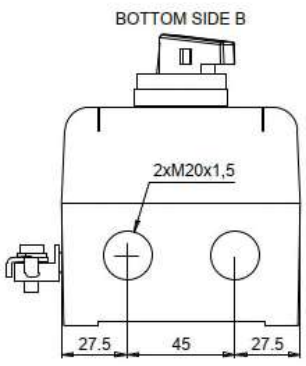


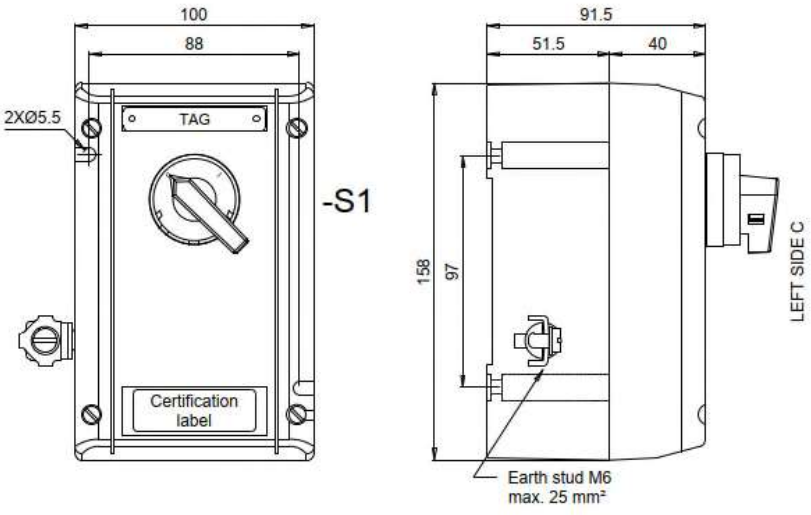
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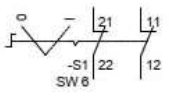
Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	⟨Ex⟩ II 2 G Ex ed ib m IIC T6 ⟨Ex⟩ 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

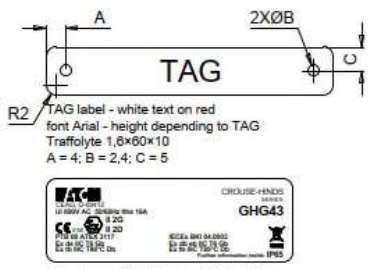




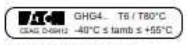


Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Adhesive certification label 51,5×17,5
GHG4301909R0013



Adhesive label 37×6,5
GHG6101937R0044

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-200	: Shelter LV (400V) Switchroom B-200			Dwg	
	S/Sys	77-20	: HVAC LV Switchgear Room B-200			Module	LD_B-200
TASK	code	C10002300		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.	PL
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:

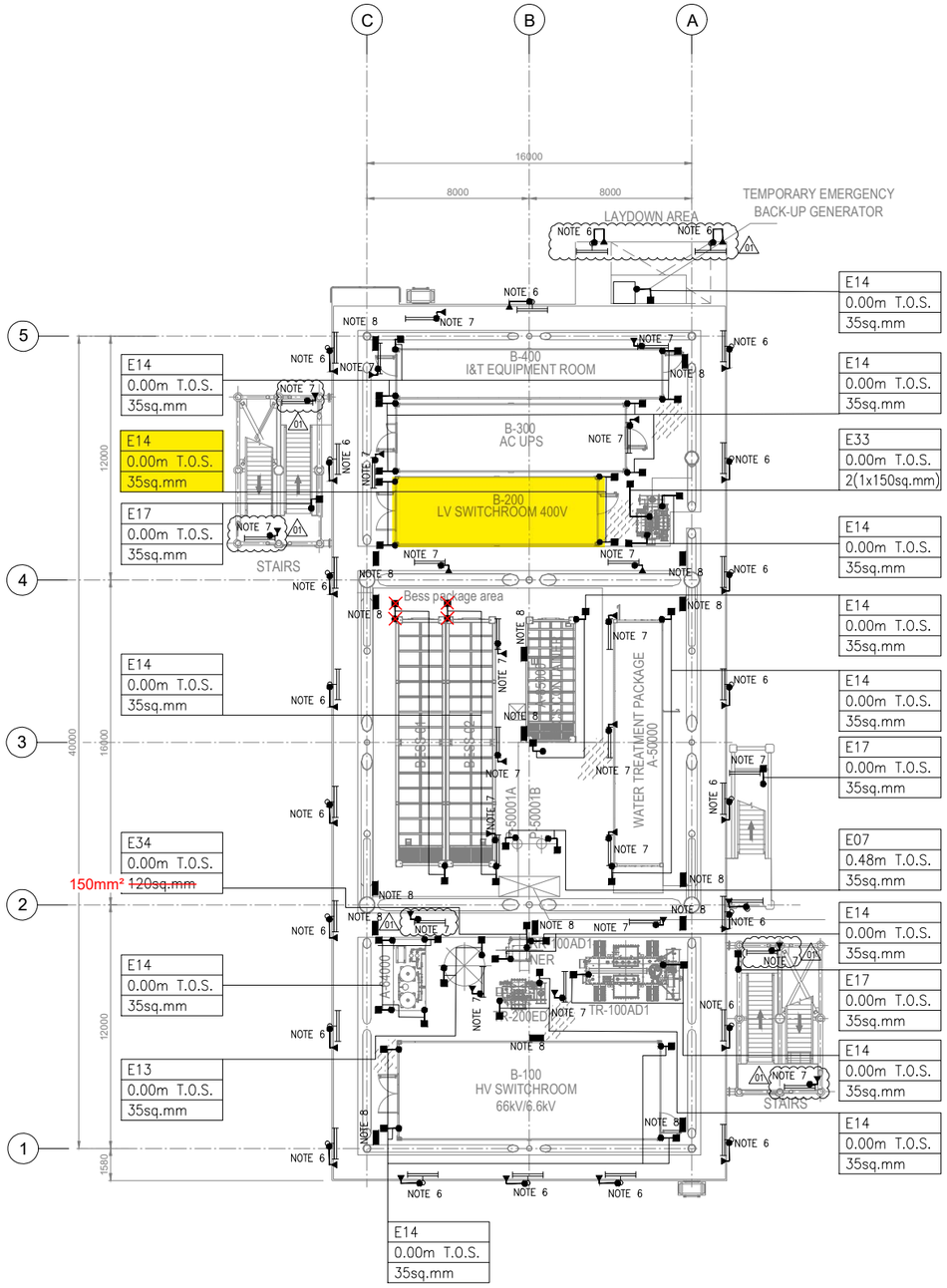
Point 2 PL: C30000023
Point 3 PL: C30000047 / C30000043

Point 8 PL: C30000035

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-10	2024-10-10	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-10T15:58:05.798Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-10T16:12:53.944Z	

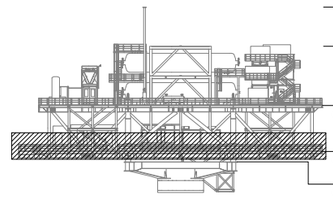
DRAWING NO. 123A90-DDL-EL-DL-20133

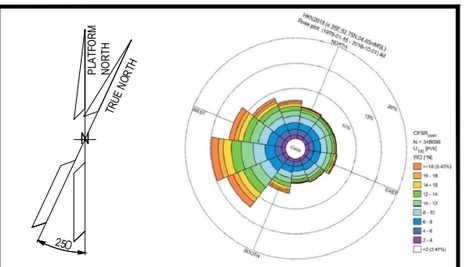
REV. 01



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

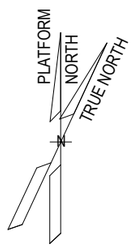
SHEET 001 OF 002

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

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

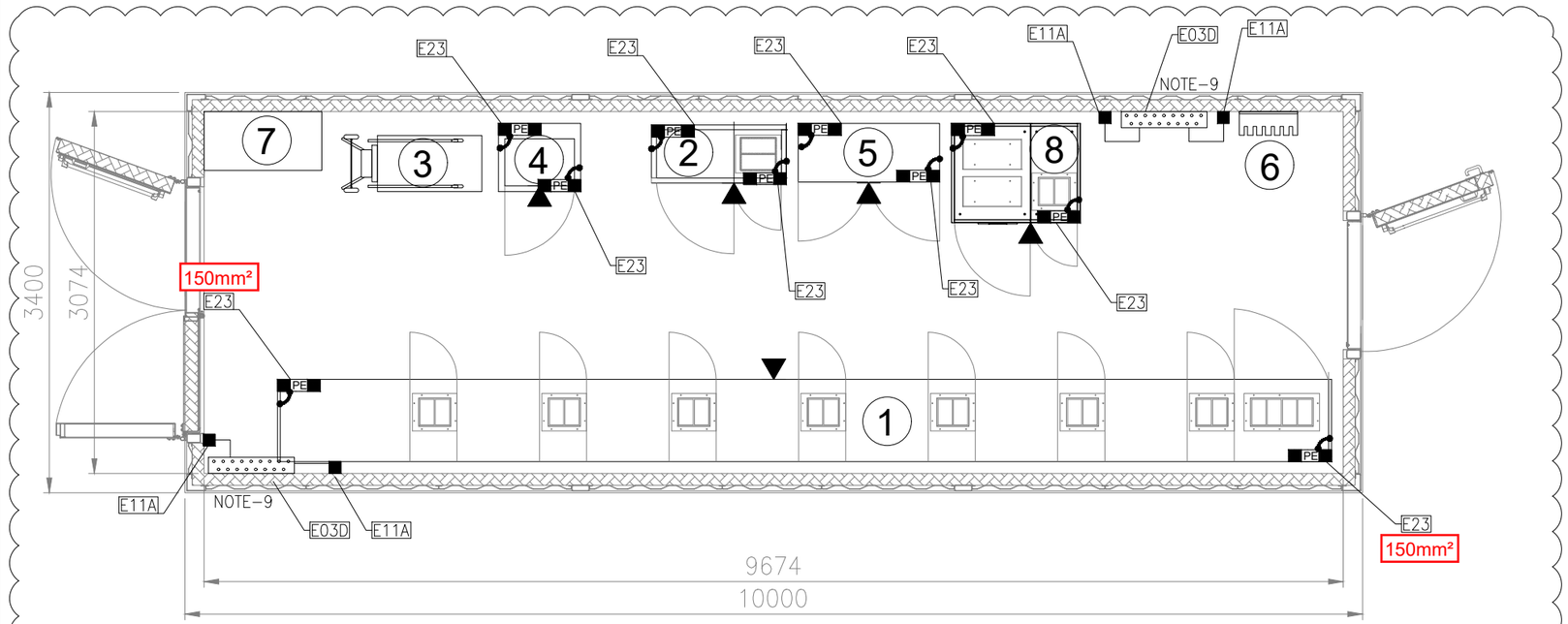
ROSETTI MARINO SpA

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



EQUIPMENT LIST		
REF.	TAG No.	DESCRIPTION
1	SG-200N1	400V SWITCHGEAR
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.
3		SERVICE TROLLEY FOR 400V SWITCHGEAR
4	CN-200N1	ICCP PANEL
5	B200-HSB-001	HVAC PANEL – LV ROOM
6		TOOL BOX
7		TABLE
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE

01



EARTHING LAYOUT
"B-200"LV SWITCHROOM
PLAN
EL.+ 23.310 T.O.S.

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 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

REFERENCE	
DOCUMENT NUMBER	DOCUMENT TITLE
123A90-DDL-EL-DD-20090	ELECTRICAL TYPICAL INSTALLATION DETAILS -EARTHING SYSTEM
123A90-DDL-EL-DL-20105	ELECTRICAL EQUIPMENT LAYOUT-LV SWITCHROOM
1724000049-AR-DD-00019	B-200 DETAILED DRAWINGS – E&I SHELTERS

01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20137**

REV.:	DATE:	SIGNATURE:
1_B	02/09/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING & LIGHTNING LAYOUT – LV SWITCHROOM
"B-200"LV SWITCHROOM

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

SCALE : 1:50

A3

DRAWING NO. 123A90-DDL-EL-DL-20137

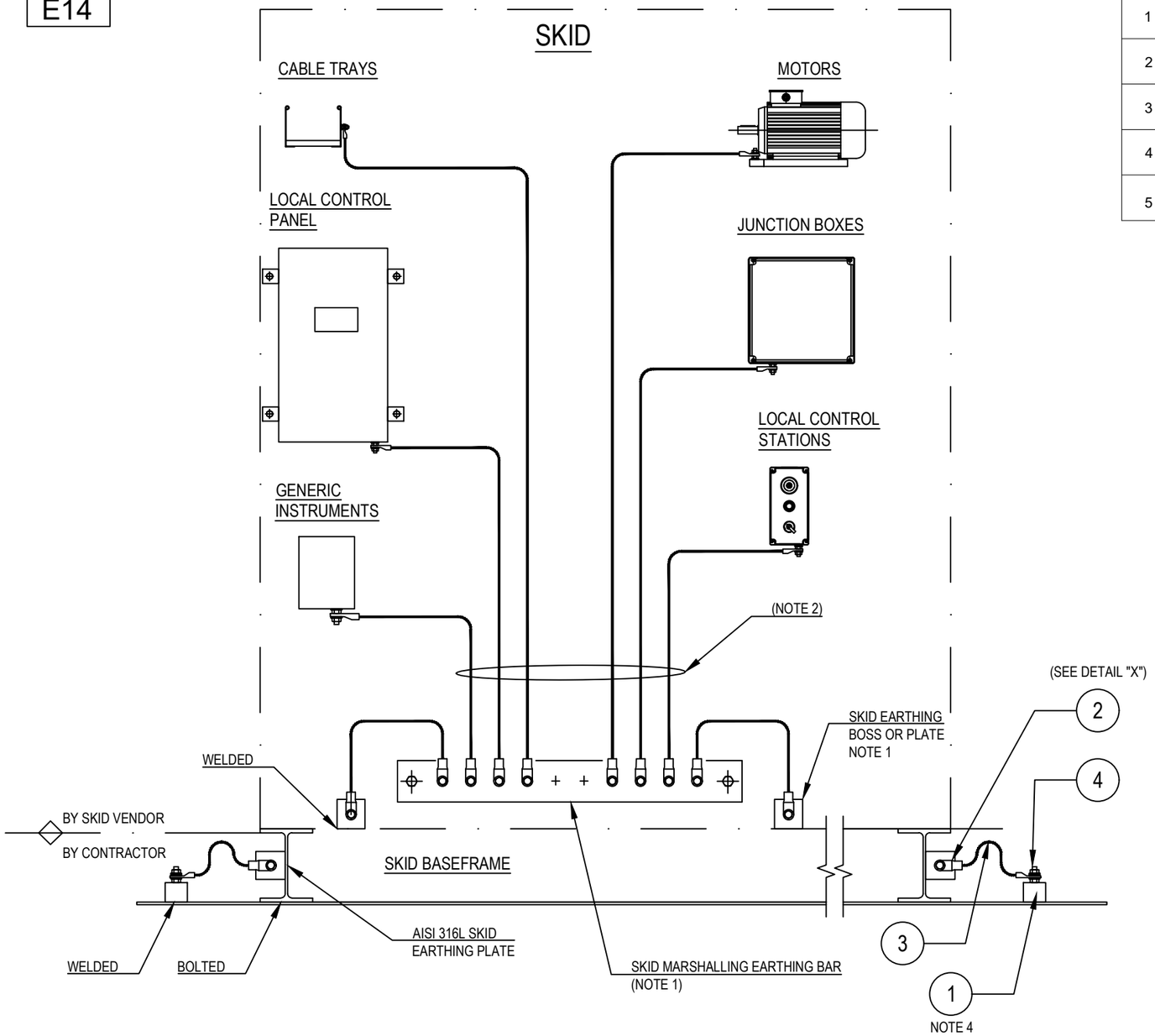
SHEET 003

REV. 01

File Name : 123A90-DDL-EL-DL-20137 Rev. 01

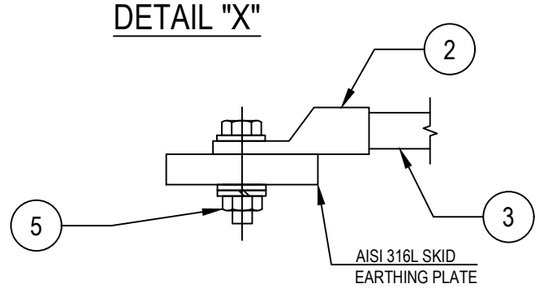
F.to UNI A3: 420mmx297mm

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_D	25/09/24	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

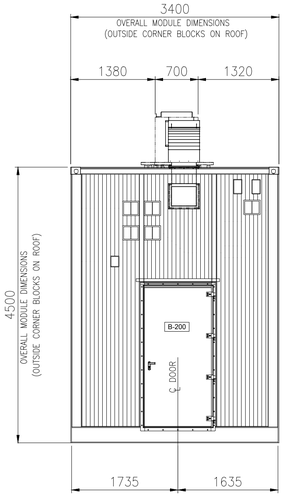
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

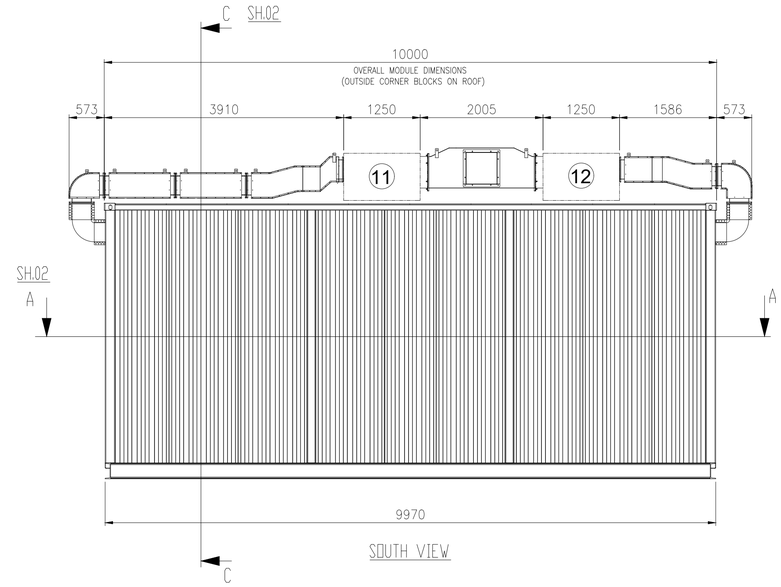
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DRAWING NO. 1724000049-AR-DA-00015

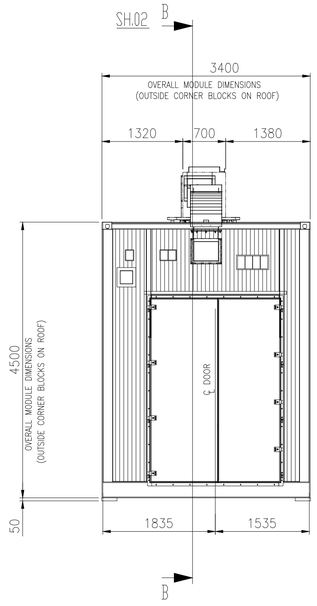
REV. 03



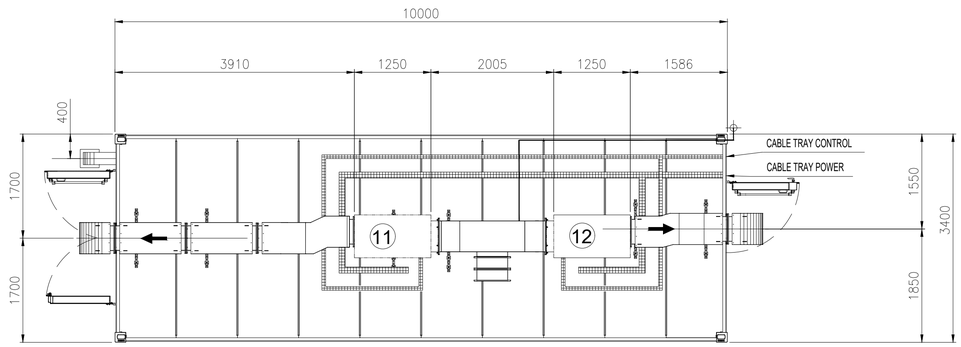
EAST VIEW



SOUTH VIEW



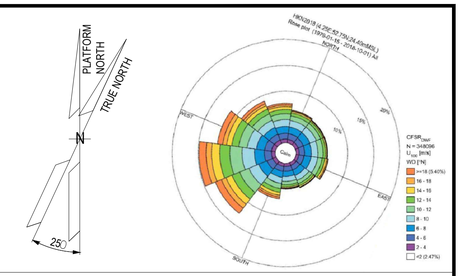
WEST VIEW



TOP VIEW

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	4900
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	600
3		*DELETED*				
4	CN-200N1	ICCP PANEL	700	580	1830	250
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	400
6	-	TOOL BOX	495	335	200	20
7	-	TABLE	1000	500	750	50
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	1000
9	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
10	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
11	HHU-77003	AIR HANDLING UNIT A	1250	850	900	140
12	HHU-77004	AIR HANDLING UNIT B	1250	850	900	140
13	HSS-77-004	SPACE HEATER 1	184	145	1100	5
14	HSS-77-005	SPACE HEATER 2	184	145	1100	5
15	HSS-77-006	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.

03

REFERENCE

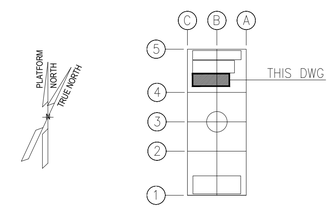
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00065
"B-200" DETAILED DRAWING	1724000049-AR-DD-00019
PAINTING PROCEDURE	1724000049-MAT-PRO-00005

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	19/07/24	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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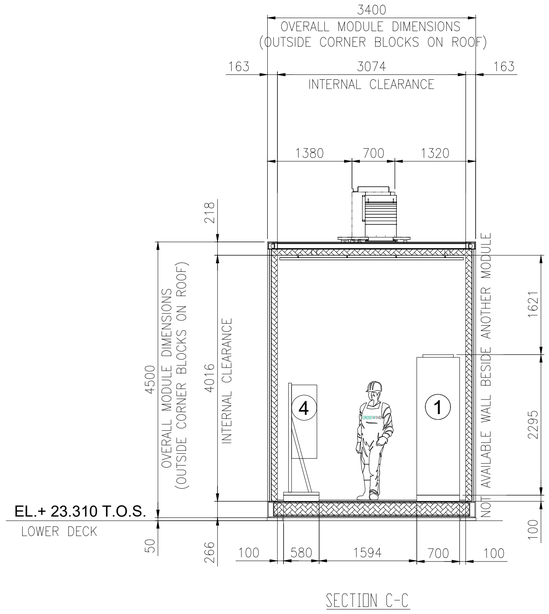
TITLE :
BASE LOAD POWER HUB (BLPH)
B-200 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 19/07/24
A1	DRAWING NO. 1724000049-AR-DA-00015	SHEET 001	REV. 03

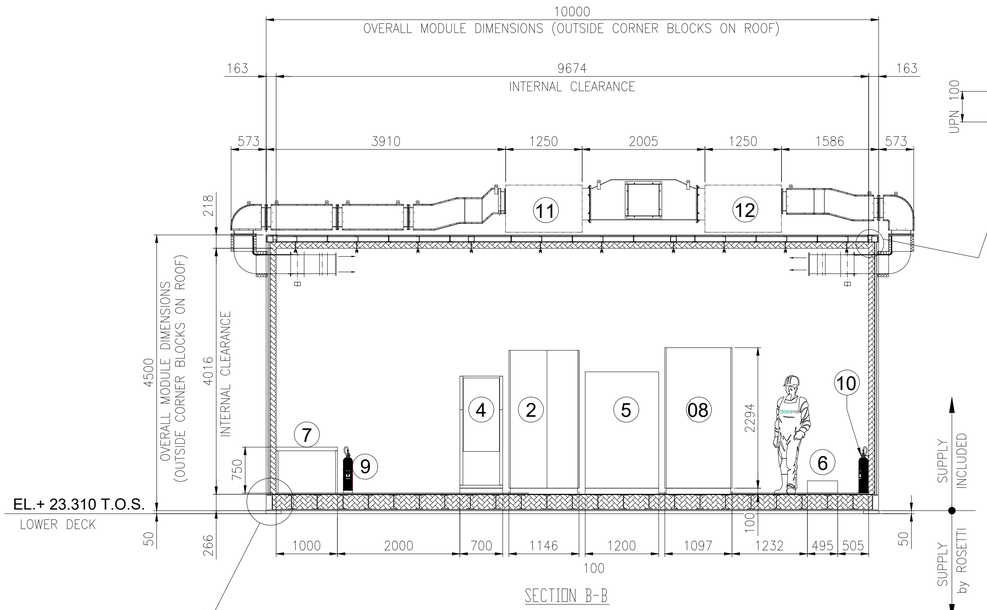
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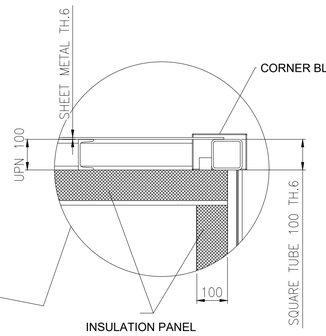
REV. 03

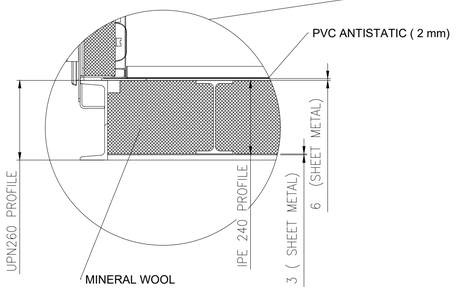


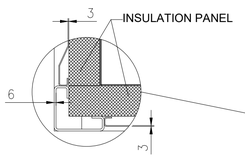
SECTION C-C

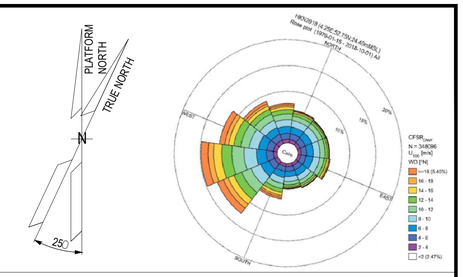


SECTION B-B









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

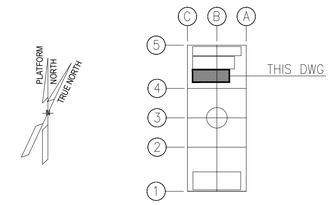
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00065
"B-200" DETAILED DRAWING	1724000049-AR-DD-00019
PAINTING PROCEDURE	1724000049-MAT-PRO-00005

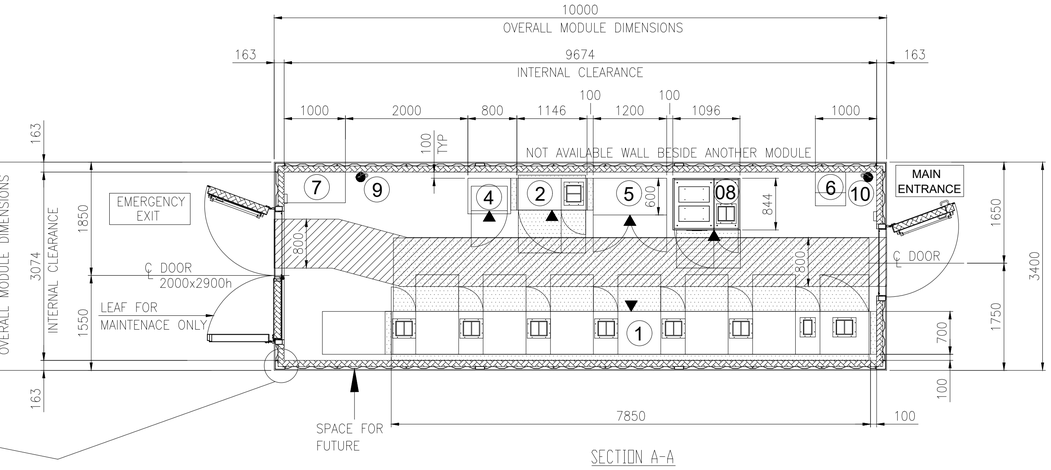
LEGEND

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

HOLDS

KEY PLAN



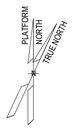


SECTION A-A

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	4900
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	600
3		*DELETED*				
4	CN-200N1	ICCP PANEL	700	580	1830	250
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	400
6	-	TOOL BOX	495	335	200	20
7	-	TABLE	1000	500	750	50
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	1000
9	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
10	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
11	HHU-77003	AIR HANDLING UNIT A	1250	850	900	140
12	HHU-77004	AIR HANDLING UNIT B	1250	850	900	140
13	HSS-77-004	SPACE HEATER 1	184	145	1100	5
14	HSS-77-005	SPACE HEATER 2	184	145	1100	5
15	HSS-77-006	SPACE HEATER 3	184	145	1100	5

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



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	19/07/24	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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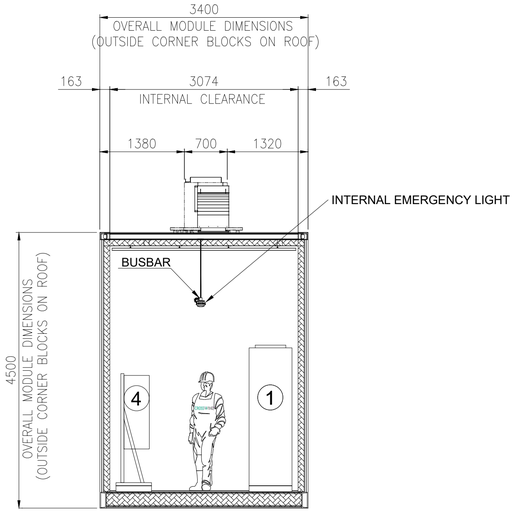
TITLE :
BASE LOAD POWER HUB (BLPH)
B-200 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 19/07/24
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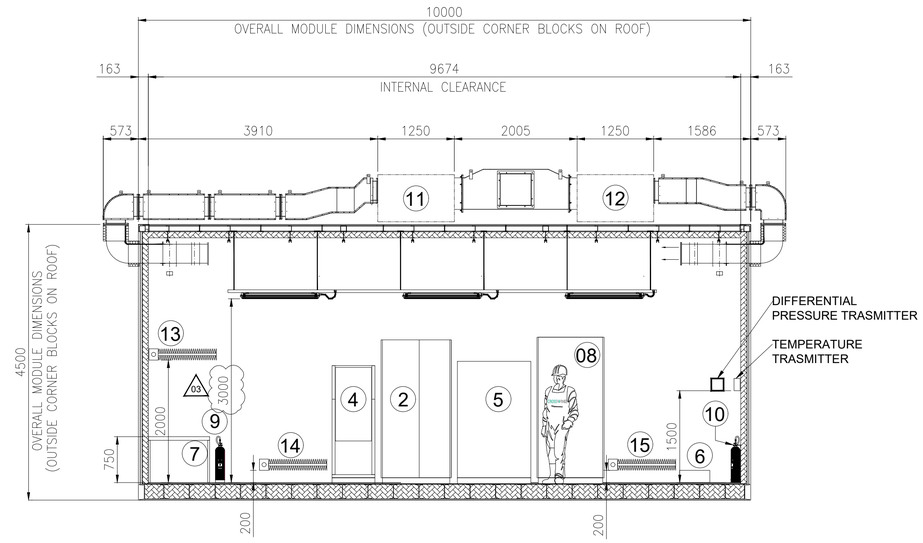
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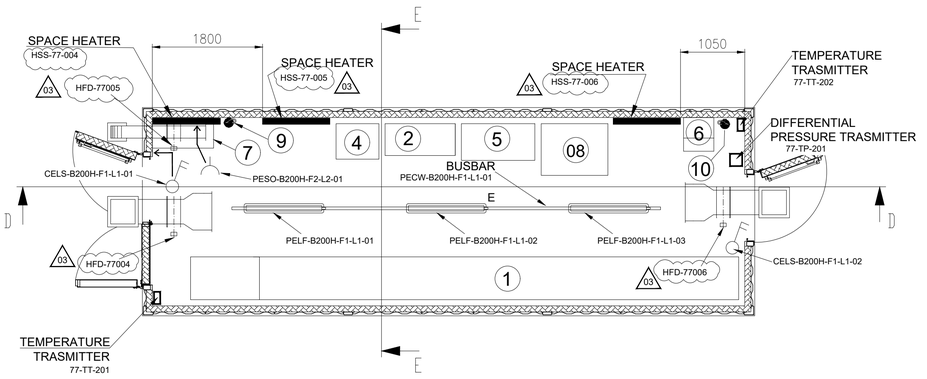
REV. 03



SECTION E-E

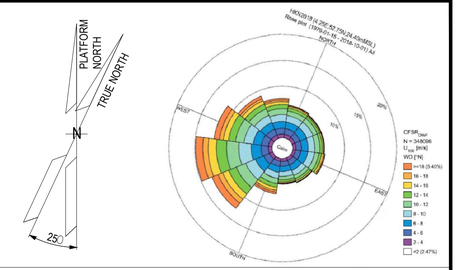


SECTION D-D



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	4900
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	600
3		*DELETED*				
4	CN-200N1	ICCP PANEL	700	580	1830	250
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	400
6	-	TOOL BOX	495	335	200	20
7	-	TABLE	1000	500	750	50
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	1000
9	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
10	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
11	HHU-77003	AIR HANDLING UNIT A	1250	850	900	140
12	HHU-77004	AIR HANDLING UNIT B	1250	850	900	140
13	HSS-77-004	SPACE HEATER 1	184	145	1100	5
14	HSS-77-005	SPACE HEATER 2	184	145	1100	5
15	HSS-77-006	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.

03

REFERENCE

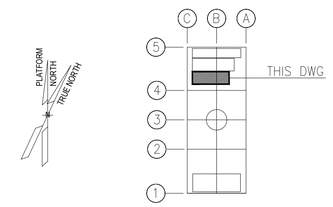
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00065
"B-200" DETAILED DRAWING	1724000049-AR-DD-00019
PAINTING PROCEDURE	1724000049-MAT-PRO-00005

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	19/07/24	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-200 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 19/07/24
A1	DRAWING NO. 1724000049-AR-DA-00015	SHEET 003	REV. 03

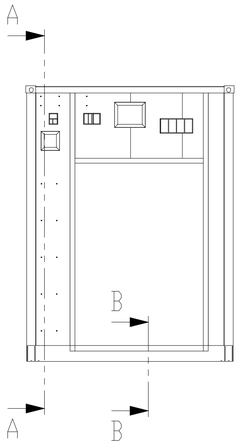
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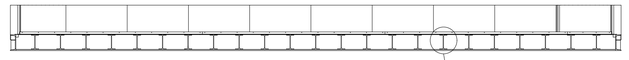
DRAWING NO. 1724000049-AR-DD-00019

REV. 02

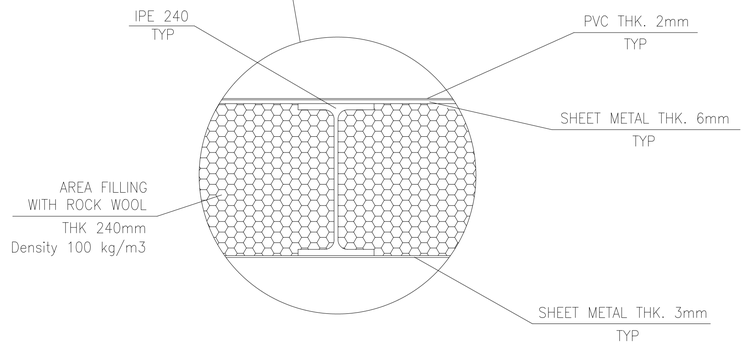
MODULE B-200

REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" STRUCTURAL CALCULATION	1724000049-ST-CA-00007
Weld Procedure Specifications (WPS), Weld Procedure Qualification Report (WPQR), Welding Map and Welders Qualifications	1724000049-WEL-RE-00003

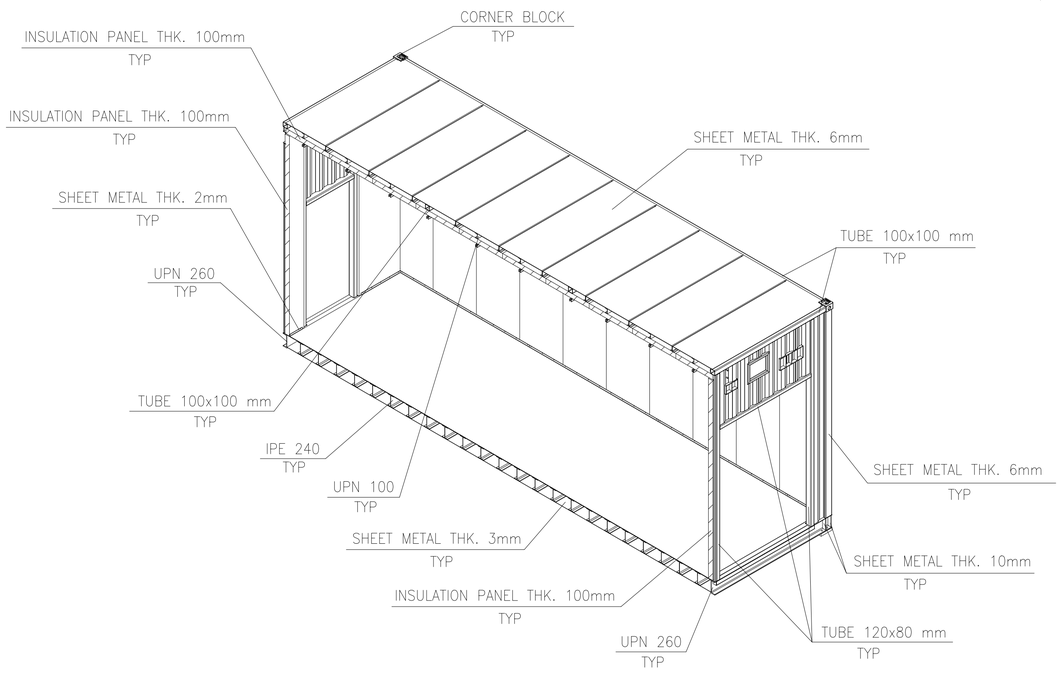




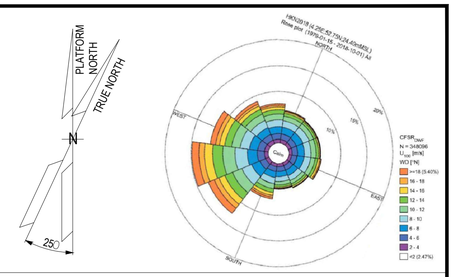
SECTION B-B



DETAIL "C"

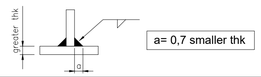


SECTION A-A



NOTES

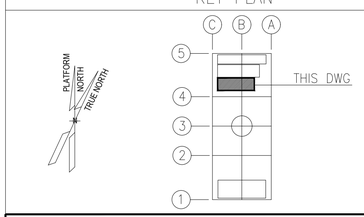
1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D.1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



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 CLIENT REVIEW (ICR)

CROSSWIND

ROSETTI MARINO

TITLE :

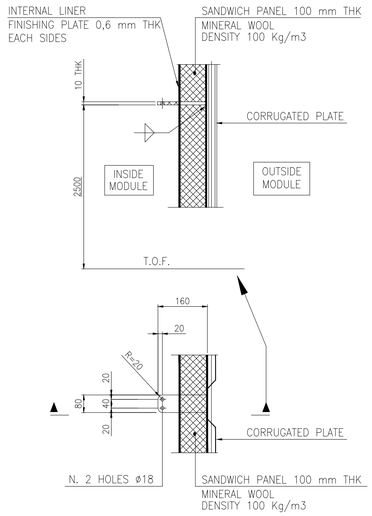
B-200 DETAILED DRAWINGS-E&I SHELTERS

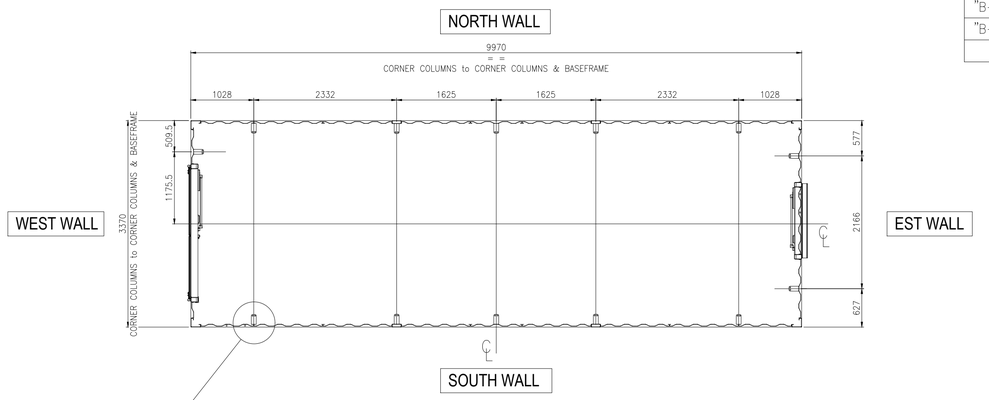
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00019	SHEET 001	REV. 02

File Name : 1724000049-AR-DD-00019-REV.02

DRAWING NO. 1724000049-AR-DD-00019 REV. 02

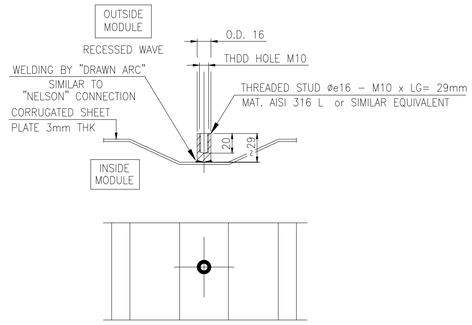
REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00015
"B-200" HVAC GENERAL ARRANGEMENT	1724000049-HV-DA-00065



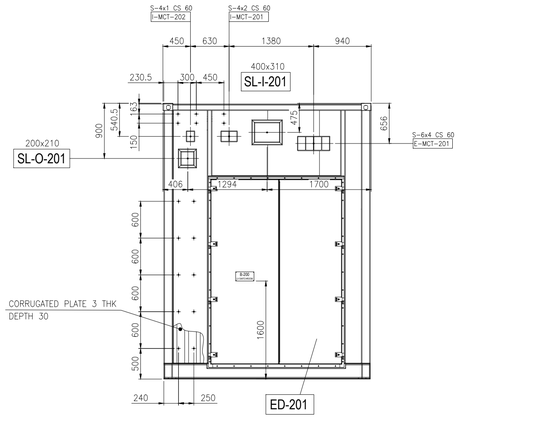


MODULE B-200

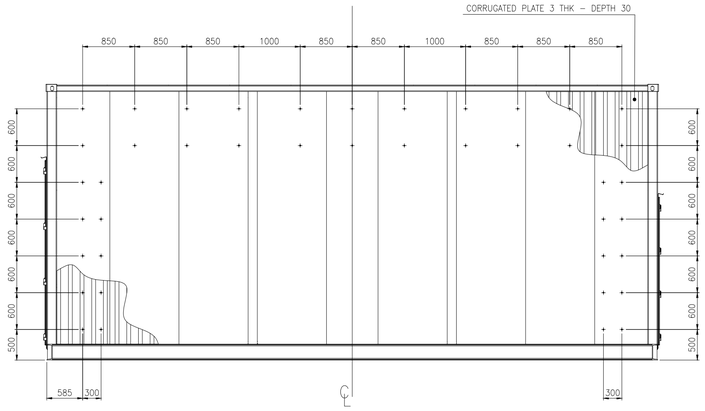
INTERNAL SEA FASTENING PLATES PLAN



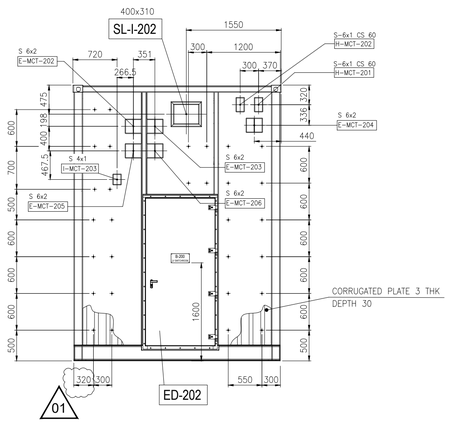
THREADED STUD INSTALLATION



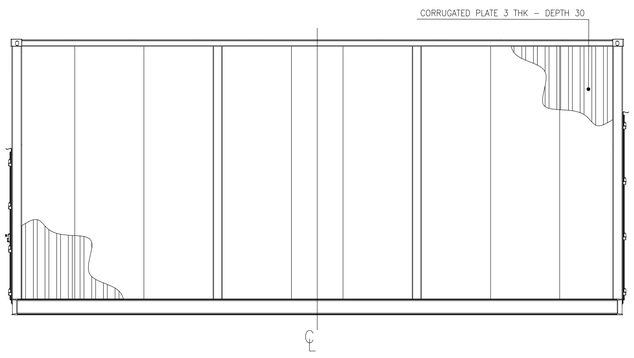
VIEW OF WEST WALL



VIEW OF NORTH WALL



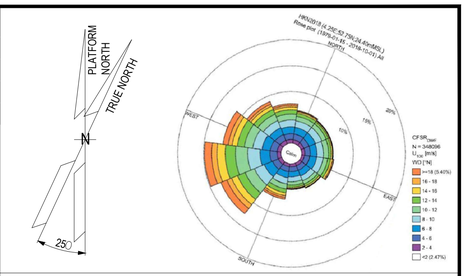
VIEW OF EAST WALL



VIEW OF SOUTH WALL

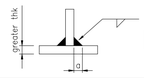
MCT LIST

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-201	532	238	60	6x4	
	E-MCT-202	271	238	60		6x2
	E-MCT-203	271	238	60		6x2
	E-MCT-204	271	238	60	6x2	
	E-MCT-205	271	238	60		6x2
	E-MCT-206	271	238	60		6x2
INSTRUMENTAL	I-MCT-201	271	179.5	60	4x2	
	I-MCT-202	140.5	179.5	60	4x1	
	I-MCT-203	140.5	179.5	60	4x1	
HVAC	H-MCT-201	140.5	238	60	6x1	
	H-MCT-202	140.5	238	60	6x1	



NOTES

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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-201
- MCT TYPE & SIZE: BRAND ROXTEC
- MATERIAL: C.S.= PRIMED MILD STEEL; S.S.= AISI 316 L
- MCT DEPTH: S 6x2 C.S. 60
- PROGRESSIVE NUMBER: FROM 01
- MCT SERVICE: E= ELECTRICAL; I= INSTRUMENTAL; H= HVAC
- MODULE LOCATION: 1= B-100 3= B-300 2= B-200 4= B-400

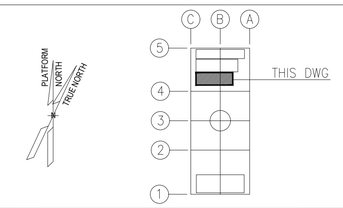
HVAC SLEEVE LEGEND:

300x300 SL-I-201
- INTERNAL SIZE OF DUCT: L x H (mm)
- PROGRESSIVE NUMBER: FROM 01
- SERVICE: I= AIR IN; R= RECYRCLE; O= OVERPRESSURE
- MODULE LOCATION: 1= B-100 3= B-300 2= B-200 4= B-400

DOOR LEGEND:

ED-201
- 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-200 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

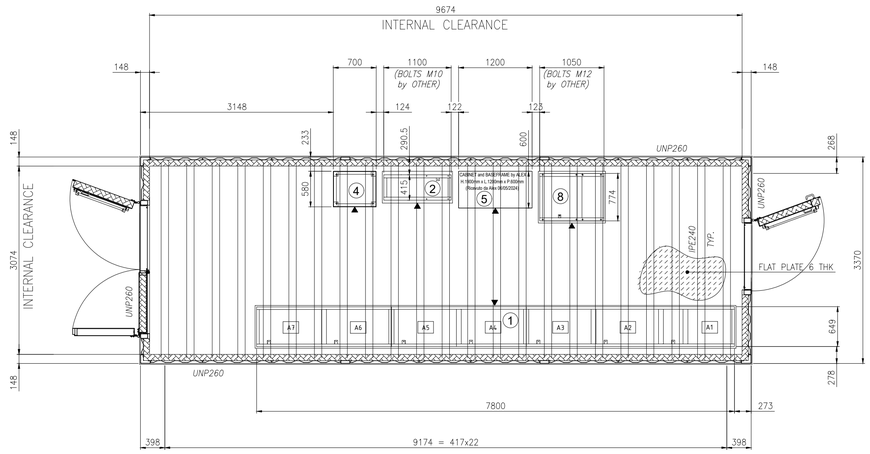
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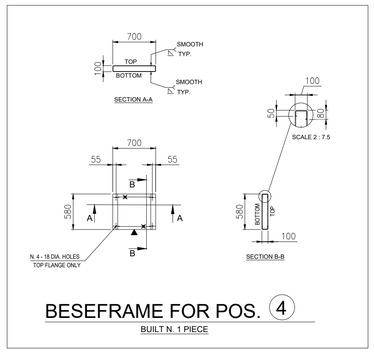
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DRAWING NO. 1724000049-AR-DD-00019

REV. 02

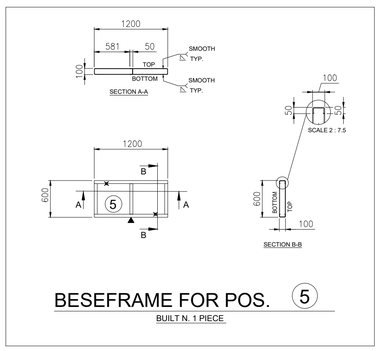
B-200
I&T EQUIPMENT ROOM
BASEFRAME LOCATION PLAN





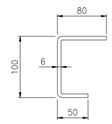
BESEFRAME FOR POS. 4

BUILT N. 1 PIECE

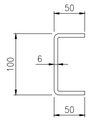


BESEFRAME FOR POS. 5

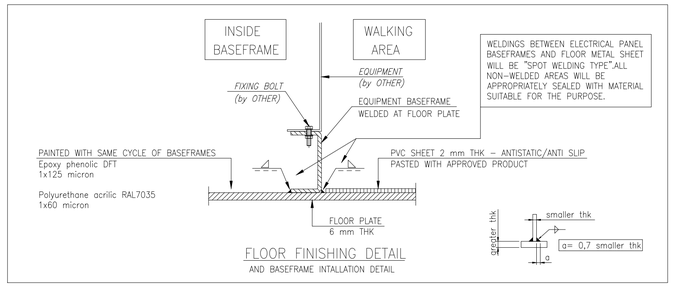
BUILT N. 1 PIECE



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

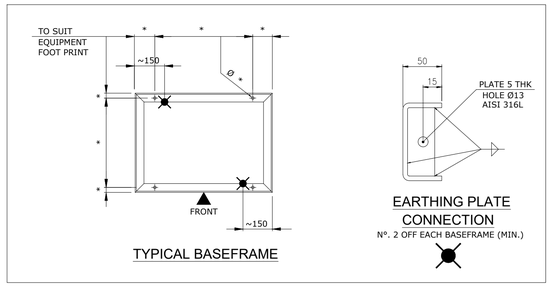


C 100x50x50 THK 6mm.
FROM BENT PLATE THK 6mm.
MAT. CARBON STEEL

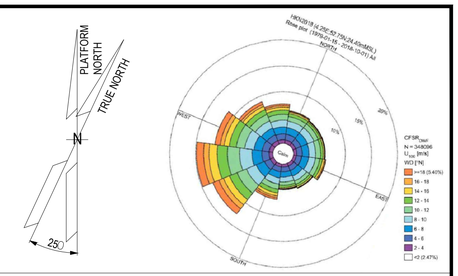


FLOOR FINISHING DETAIL

AND BASEFRAME INTALLATION DETAIL

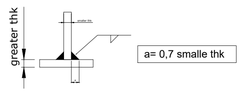


TYPICAL BASEFRAME



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.

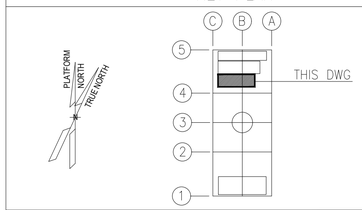
LEGEND

ASI = ALEX SISTEMI

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	SCOPE
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	4900	ROSETTI MARINO
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	600	ROSETTI MARINO
4	CN-200N1	ICCP PANEL	700	580	1830	250	ASI
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	TBD	ASI
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	1000	ROSETTI MARINO

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 :

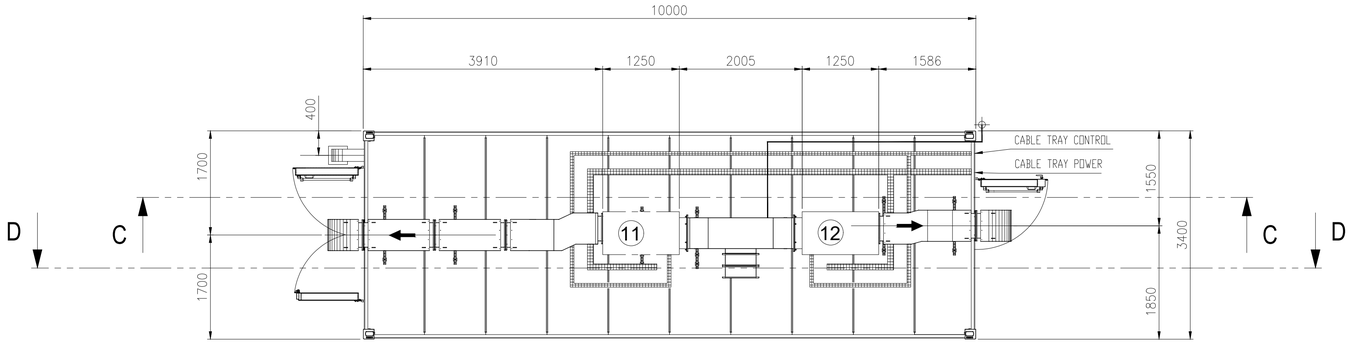
B-200 DETAILED DRAWINGS-E&I SHELTERS

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-00019	SHEET 003	REV. 02

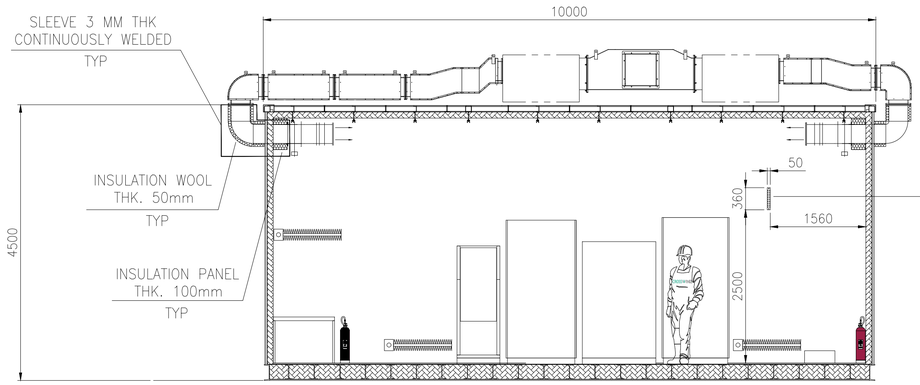
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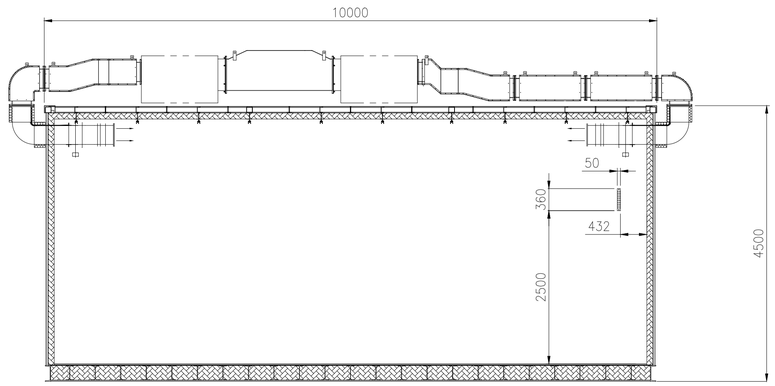
REV. 02



TOP VIEW



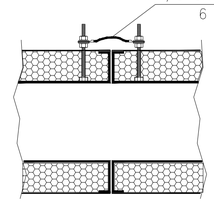
SECTION C-C



SECTION D-D

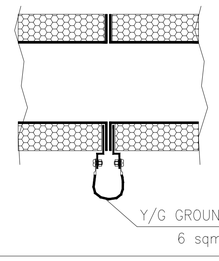
DET. 1

EXTERNAL DUCT



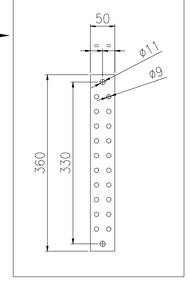
DET. 2

INTERNAL DUCT



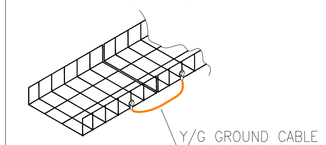
DET. 3

TYPICAL DETAIL
Ground bar



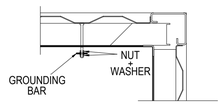
DET. 4

TYPICAL DETAIL
Cable tray grounding system



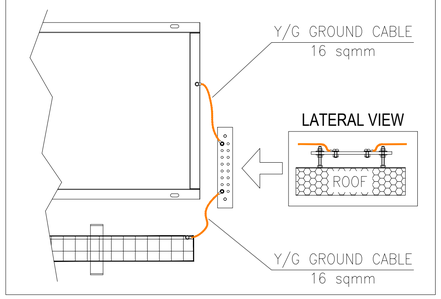
DET. 5

TYPICAL INSTALLATION BTH PE



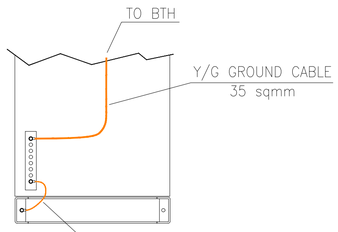
DET. 6

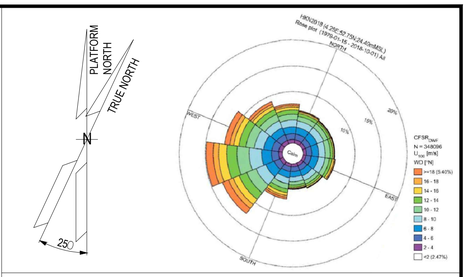
TYPICAL ROOF GROUNDING CONNECTION



DET. 7

TYPICAL CABINET GROUNDING CONNECTION



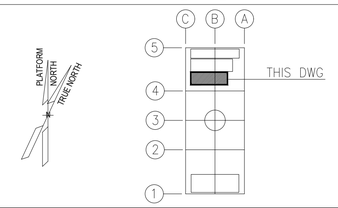


NOTES

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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 :

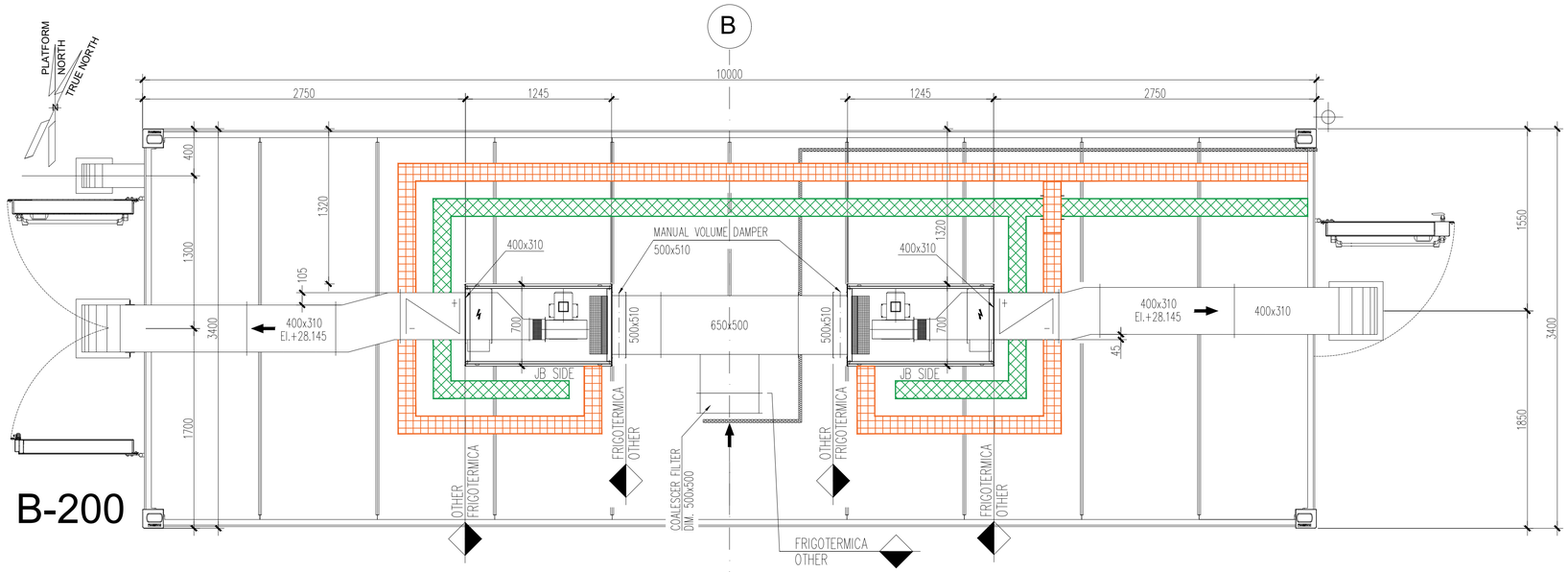
B-200 DETAILED DRAWINGS-E&I SHELTERS

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-00019	SHEET 004	REV. 02

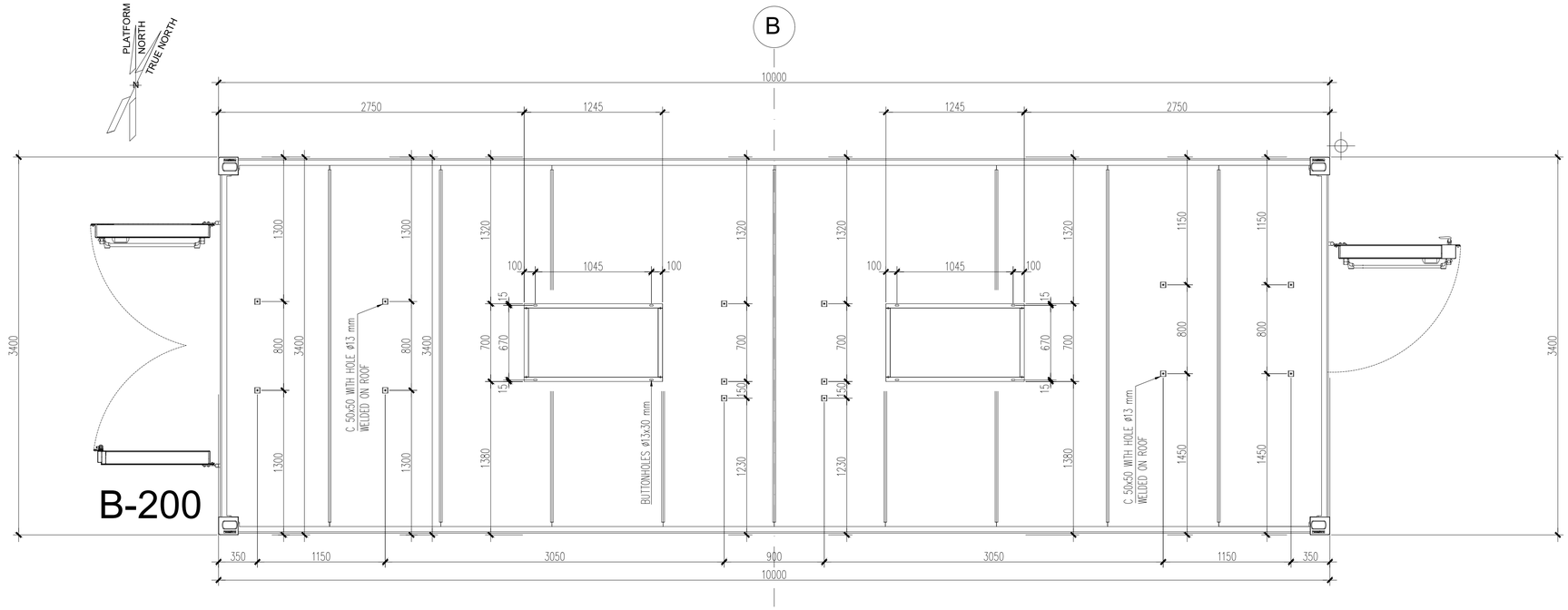
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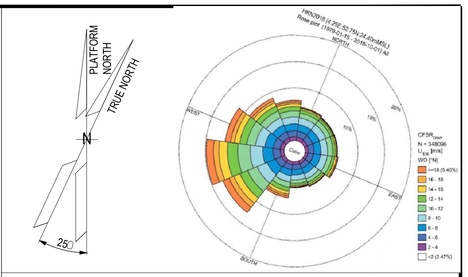
REV. 00



HVAC SYSTEM ROOF PLAN

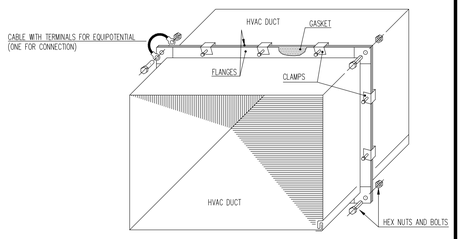


HVAC SUPPORT PLAN ON ROOF



NOTES

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

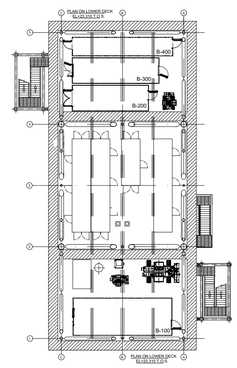


TYPICAL EQUIPOTENTIAL INSTALLING FOR FLANGE CONNECTION INDOOR AIR DUCT

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-200
HVAC SYSTEM - G.A. AND DETAILS

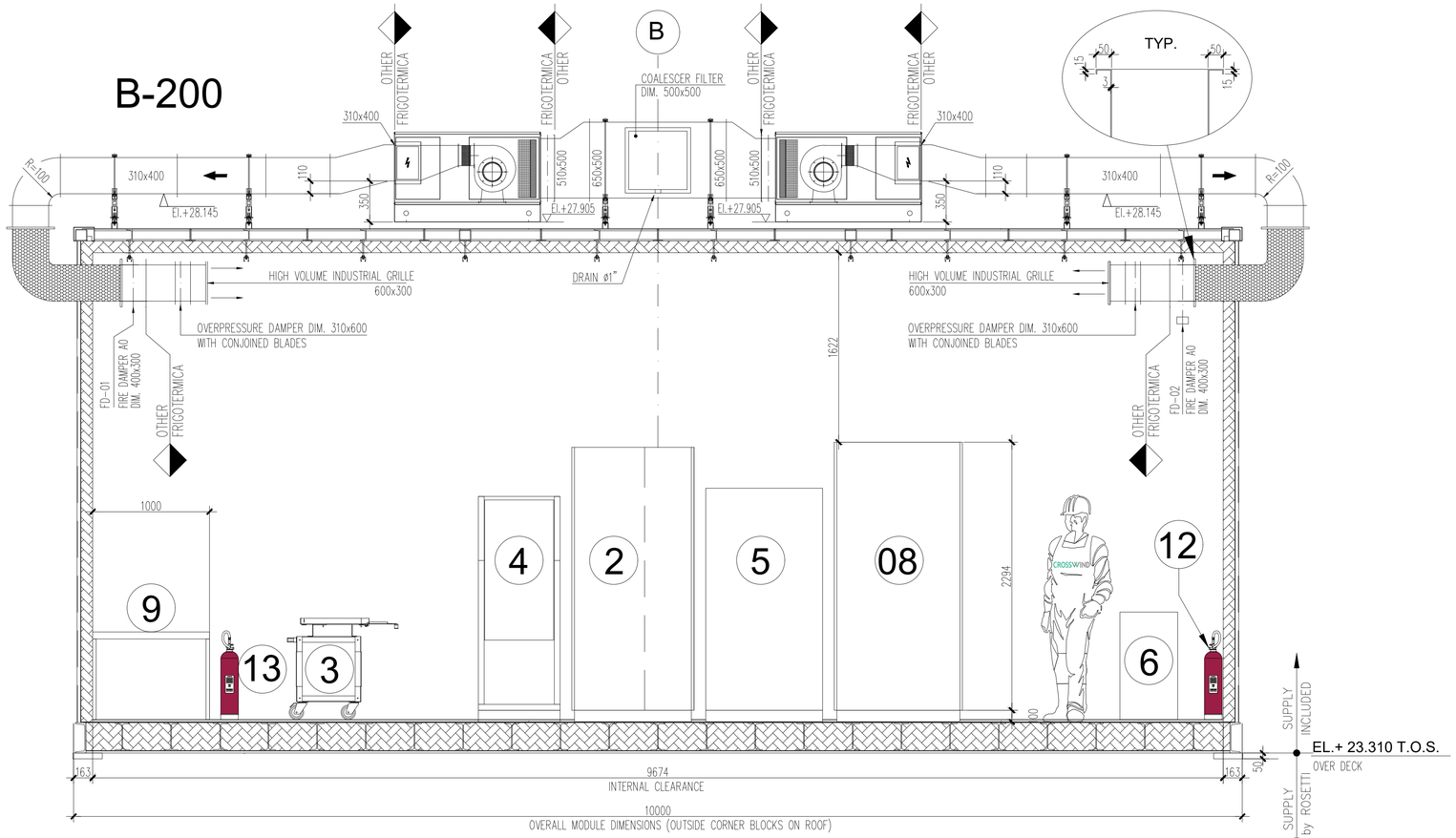
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 25
DRAWN S.Z.	CHECKED S.S.	APPROVED M.G.	DATE 13/06/2024
A1	DRAWING NO. 1724000049-HV-DA-00065	SHEET 001	REV. 00

File Name : 1724000049-HV-DA-00065_0

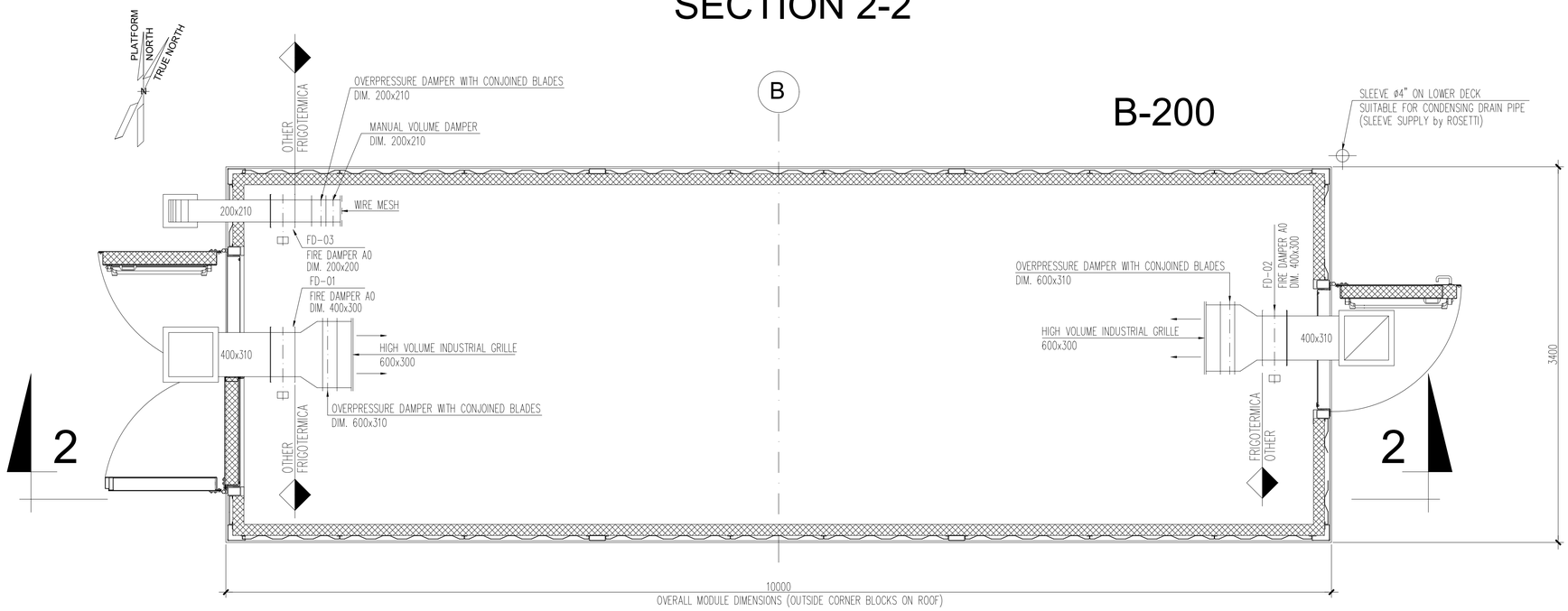
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REV. 00

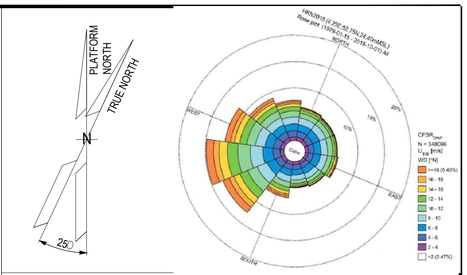
B-200



SECTION 2-2

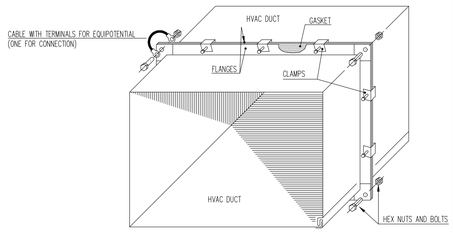


HVAC SYSTEM INDOOR DUCT LAYOUT



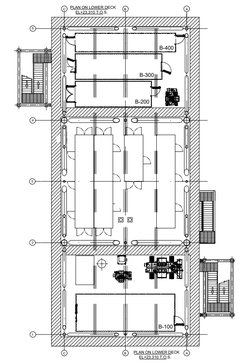
NOTES

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



TYPICAL EQUIPOTENTIAL INSTALLING FOR FLANGE CONNECTION INDOOR AIR DUCT

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-200
HVAC SYSTEM - G.A. AND DETAILS

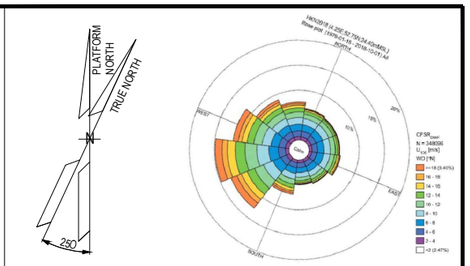
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 25
DRAWN S.Z.	CHECKED S.S.	APPROVED M.G.	DATE 13/06/2024
A1	DRAWING NO. 1724000049-HV-DA-00065	SHEET 002	REV. 00

File Name : 1724000049-HV-DA-00065_0

DRAWING NO. 123A90-1724000049-HV-PID-00040

REV. 01

BASE LOAD POWER HUB (BLPH)
B-200 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-200 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-00040	SHEET 001	REV. 01

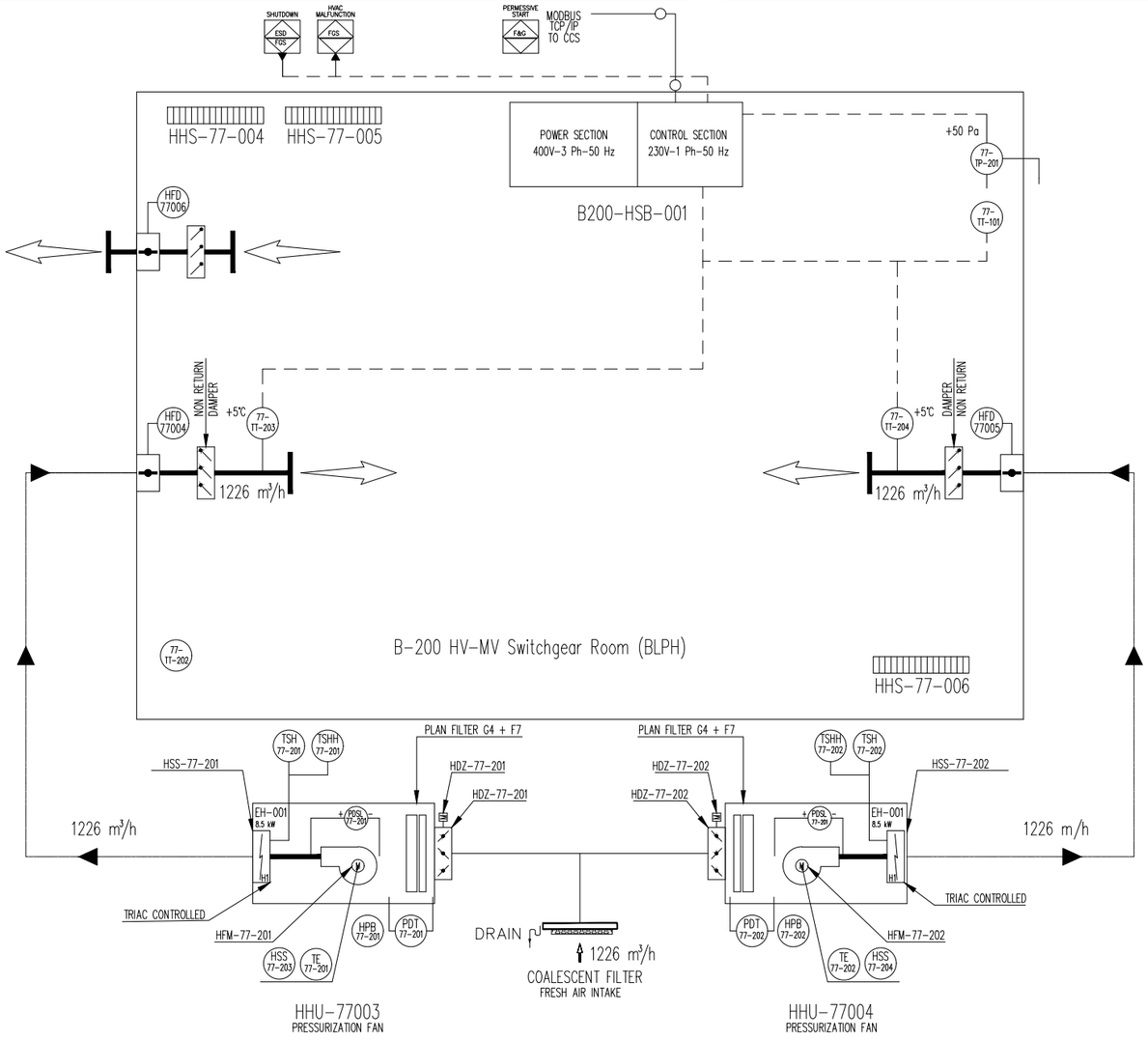
File Name : 123A90-1724000049-HV-PID-00040_REV.01

DRAWING NO. 123A90-1724000049-HV-PID-00040 | REV. 01

ITEM	HVAC-PRESSURISING FAN
DESCRIPTION	HVAC UNIT
MAKER	FRIGOTERMICA srl
MODEL	4112-TBA
SUPPLY AIR FLOW	1226 mc/h
COOLING COIL CAPACITY	N.A.
HEATING COIL CAPACITY	8.5 kW
TENSIONE	400 V - 50 Hz - 3 Ph+N
EXECUTION	SAFE AREA
REFRIGERANT	N.A.

LEGENDA

MD	MOTORISED DAMPER WITH SPRING RETURN	F1	AIR FILTER "G4"	MFD	MOTORISED FIRE DAMPER WITH SPRING RETURN
RD	REGULATION DAMPER	F2	BAG FILTER "F8"	EC	EVAPORATING COIL
OPD	OVERPRESSURE DAMPER	CC	CONDENSING COIL	LR	LIQUID RECEIVER
PSH	DIFFERENTIAL PRESSURE SWITCH HIGH PRESSURE	CF	CONDENSING FAN	MT	MOISTURE TRASMITTER
PSL	DIFFERENTIAL PRESSURE SWITCH LOW PRESSURE	SF	SUPPLY FAN	HPT	HIG PRESSURE TRASDUCER
TT	TEMPERATURE TRASMITTER	GV	GLOBE VALVE	TP	COMPRESSOR THERMIC PROTECTION
EPB	EMERGENCY PUSH BUTTON	DF	DRYER FILTER	TSH	SECURITI THERMOSTATE
OH	COMPRESSOR OIL HEATER	SG	SIGHT GLASS	PSH	HIGH PRESSURE SWITCH
SV	SOLENOID VALVE	TV	THERMOSTATIC VALVE	PSL	LOW PRESSURE SWITCH
C	REFRIGERANT COMPRESSOR	PRV	PRESSURE RELIEF VALVE	PC	CONDENSING PRESSURE SWITCH



OUTDOOR DESIGN CONDITIONS

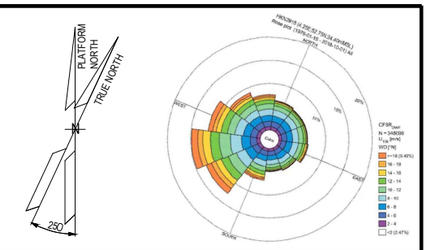
Safe Area
Min. design DB Temp: -8,4°C with RH 100 %
Max. design DB Temp: +25°C with RH 90 %

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-200 HV
P&ID HVAC System

CONTRACT NO./TITLE CW-1-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-00040	SHEET 001	REV. 01

File Name : 123A90-1724000049-HV-PID-00040-REV.01

B-200 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	B200-HSB-001	inside B200	N.A.	by Client	25,60	by Client	General power supply 400V 3ph+N+PE
2		4G4	by Client	by Client	by Client	by Client	by Client	by Client	by Client	HVAC PANEL	by Client	B200-HSB-001	inside B200	N.A.	by Client	12,10	by Client	UPS Power Supply 1ph+N+PE
3	77201-CEL-L1	5G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	BLINDO	2900.M20N	PECW-B200H-F1-L1-01	inside B200	N.A.	12,5	11,60	LOW VOLTAGE	
4	77202-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO	N.A.	PECW-B200H-F1-L1-01	inside B200	LAMP (E) 2	2900.M20N	PELF-B200H-F1-L1-01	inside B200	N.A.	0,5	10,80	LOW VOLTAGE	
5	77203-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO	N.A.	PECW-B200H-F1-L1-01	inside B200	LAMP 1	2900.M20N	PELF-B200H-F1-L1-02	inside B200	N.A.	0,5	9,80	LOW VOLTAGE	
6	77204-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO	N.A.	PECW-B200H-F1-L1-01	inside B200	LAMP 3	2900.M20N	PELF-B200H-F1-L1-03	inside B200	N.A.	0,5	9,80	LOW VOLTAGE	
7	77205-CEL-L2	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	MODULE SOCKET	2900.M20N	PESO-B200H-F2-L2-01	inside B200	N.A.	14,5	9,80	LOW VOLTAGE	
8	77201-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	MODULE SWITCH 1	2900.M20N	CELS-B200H-F1-L1-01	inside B200	N.A.	14,5	8,20	CONTROL	
9	77202-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	MODULE SWITCH 2	2900.M20N	CELS-B200H-F1-L1-02	inside B200	N.A.	14	8,20	CONTROL	
10	77206-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	SPACE HEATER	2900.M20N	HSS-77-004	inside B200	N.A.	11	9,80	LOW VOLTAGE	
11	77207-CEL-L2	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	SPACE HEATER	2900.M20N	HSS-77-005	inside B200	N.A.	12,5	9,80	LOW VOLTAGE	
12	77208-CEL-L3	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	SPACE HEATER	2900.M20N	HSS-77-006	inside B200	N.A.	14	9,80	LOW VOLTAGE	
13	77209-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PRESSURIZING FAN1	2900.M20N	HFM-77-201	HHU-77003	HJB-77003-A	20	10,80	LOW VOLTAGE	
14	77210-CEL-L1	4G6	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	ELECTRICAL HEATER	2900.M25N	HHS-77-201	HHU-77003	HJB-77003-A	20	13,80	LOW VOLTAGE	
15	77211-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PRESSURIZING FAN2	2900.M20N	HFM-77-202	HHU-77004	HJB-77004-A	15	10,80	LOW VOLTAGE	
16	77212-CEL-L1	4G6	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	ELECTRICAL HEATER	2900.M25N	HSS-77-202	HHU-77004	HJB-77004-A	15	13,80	LOW VOLTAGE	
17		TBA	by Client	0,6/1,0	by Client	SIS	by Client	by Client	by Client	HVAC PANEL	by Client	B200-HSB-001	inside B200	N.A.	by Client		by Client	
18		TBA	by Client	0,6/1,0	by Client	SIS	by Client	by Client	by Client	HVAC PANEL	by Client	B200-HSB-001	inside B200	N.A.	by Client		by Client	
19	77203-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PRESSURIZING FAN1 MOTOR PTC	2900.M20N	TE-77-201	HHU-77003	HJB-77003-B	20	8,20	CONTROL	
20	77204-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PRESSURIZING FAN 1 EMERGENCY BUTTON	2900.M20N	HPB-77-201	HHU-77003	HJB-77003-B	20	8,20	CONTROL	
21	77205-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	ELECTRICAL HEATER 1 PROTECTION THERMOSTATE	2900.M20N	TSH/TSHH-77-201	HHU-77003	HJB-77003-B	20	8,20	CONTROL	
22	77206-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PRESSURIZING FAN 1 MOTOR HEATER	2900.M20N	HSS-77-203	HHU-77003	HJB-77003-B	20	8,20	CONTROL	
23	77221-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PDT - FAN 1 FILTERS DIFFERENTIAL PRESSURE TRASMITTER	2900.M20N	PDT-77-201	HHU-77003	HJB-77003-B	20	11,10	CONTROL	
24	77222-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PDSL - FAN 1 DIFFERENTIAL PRESSURE SWITCH LOW PRESSURE	2900.M20N	PDSL-77-201	HHU-77003	HJB-77003-B	20	8,20	CONTROL	
25	77207-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PRESSURIZING FAN 2 MOTOR PTC	2900.M20N	TE-77-202	HHU-77004	HJB-77004-B	15	8,20	CONTROL	
26	77208-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PRESSURIZING FAN 2 EMERGENCY BUTTON	2900.M20N	HPB-77-202	HHU-77004	HJB-77004-B	15	8,20	CONTROL	
27	77213-CEL-L2	3G1,5	XLPE/UNEL S2	by Client	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	POWER SUPPLY MOTORISED DAMPER	2900.M20N	HDZ-77-201	HHU-77003	HJB-77003-A	20	9,80	LOW VOLTAGE	
28	77216-CEC-L2	4x1,5	XLPE/UNEL S2	by Client	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	SIGNAL MOTORISED DAMPER	2900.M20N	HDZ-77-201	HHU-77003	HJB-77003-B	20	9,70	CONTROL	
29	77209-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	ELECTRICAL HEATER 2 PROTECTION THERMOSTATE	2900.M20N	TSH/TSHH-77-202	HHU-77004	HJB-77004-B	15	8,20	CONTROL	
30	77210-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PRESSURIZING FAN 2 MOTOR HEATER	2900.M20N	HSS-77-204	HHU-77004	HJB-77004-B	15	8,20	CONTROL	
31	77223-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PDT - FAN 2 FILTERS DIFFERENTIAL PRESSURE TRASMITTER	2900.M20N	PDT-77-202	HHU-77004	HJB-77004-B	15	11,10	CONTROL	
32	77224-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	PDSL - FAN 2 DIFFERENTIAL PRESSURE SWITCH LOW PRESSURE	2900.M20N	PDSL-77-202	HHU-77004	HJB-77004-B	15	8,20	CONTROL	
33	77214-CEL-L2	3G1,5	XLPE/UNEL S2	by Client	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	POWER SUPPLY MOTORISED DAMPER	2900.M20N	HDZ-77-202	HHU-77004	HJB-77004-A	15	9,80	LOW VOLTAGE	
34	77217-CEC-L2	4x1,5	XLPE/UNEL S2	by Client	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	SIGNAL MOTORISED DAMPER	2900.M20N	HDZ-77-202	HHU-77004	HJB-77004-B	15	9,70	CONTROL	
35	77225-CEC-L2	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	TEMPERATURE TRASMITTER 1	2900.M20N	77-TT-201	inside B200	N.A.	11	11,10	CONTROL	
36	77226-CEC-L2	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	TEMPERATURE TRASMITTER 2	2900.M20N	77-TT-202	inside B200	N.A.	14	11,10	CONTROL	
37	77227-CEC-L2	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	TEMPERATURE TRASMITTER 3	2900.M20N	77-TT-203	inside B200	N.A.	11	11,10	CONTROL	Mounted on internal sleeve
38	77228-CEC-L2	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	TEMPERATURE TRASMITTER 4	2900.M20N	77-TT-204	inside B200	N.A.	12	11,10	CONTROL	Mounted on internal sleeve
39	C-77-TP-201/B100-HSB-001	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	DIFFERENTIAL PRESSURE TRASMITTER	2900.M20N	77-TP-201	inside B200	N.A.	11	11,10	CONTROL	
40	77218-CEC-L2	4x1,5	XLPE/UNEL S2	by Client	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77004	inside B200	N.A.	15	9,70	CONTROL	
41	77219-CEC-L2	4x1,5	XLPE/UNEL S2	by Client	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77005	inside B200	N.A.	12	9,70	CONTROL	
42	77220-CEC-L2	4x1,5	XLPE/UNEL S2	by Client	PVC	HVAC PANEL	N.A.	B200-HSB-001	inside B200	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77006	inside B200	N.A.	11	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: 77-20 & process: MC & discipline : M

Mechanical	77-20 HVAC LV Switchgear Room B-200						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
B-200	Shelter LV (400V) Switchroom B-200	ONSHORE	C10002301	CZX01M	100	2024-10-10	RFC 2

ITEM	Tag	B-200	: Shelter LV (400V) Switchroom B-200			Dwg	
	S/Sys	77-20	: HVAC LV Switchgear Room B-200			Module	LD_B-200
TASK	code	C10002301		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.	Note
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 : Refer to Punch list raised during first step of FAT:

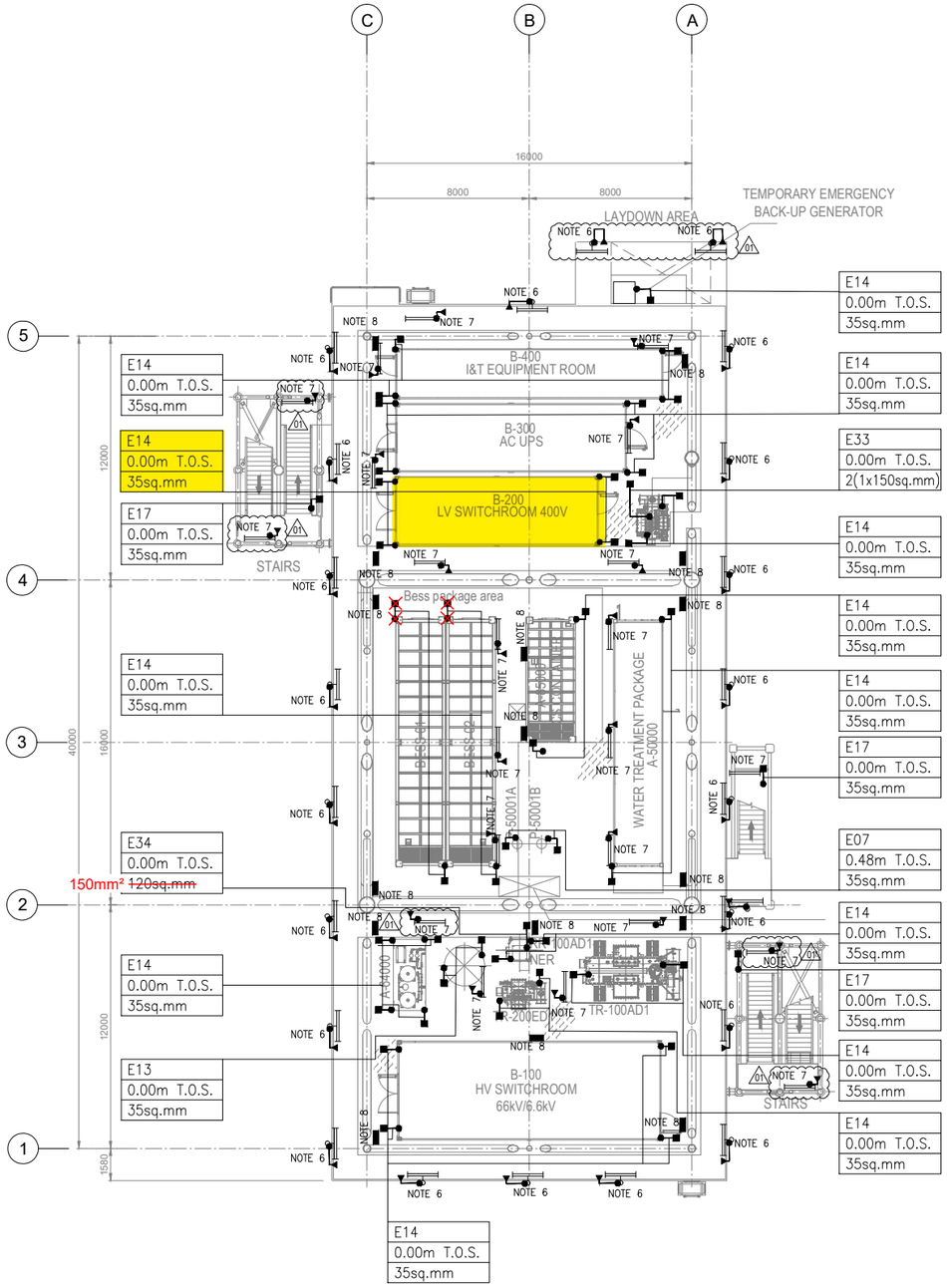
Point 1 PL: C30000069
Point 2 PL: C30000015 / C30000019
Point 3 PL: C30000093

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	2024-10-10	2024-10-10	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-10T15:58:18.185Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-10T16:19:16.215Z	

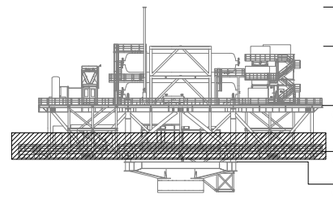
DRAWING NO. 123A90-DDL-EL-DL-20133

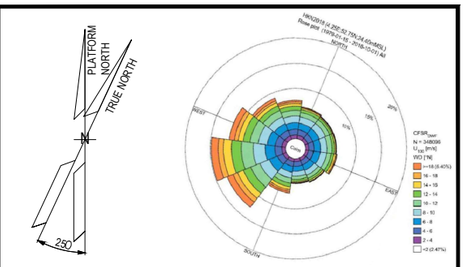
REV. 01



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

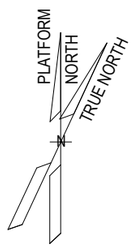
SHEET 001 OF 002

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

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

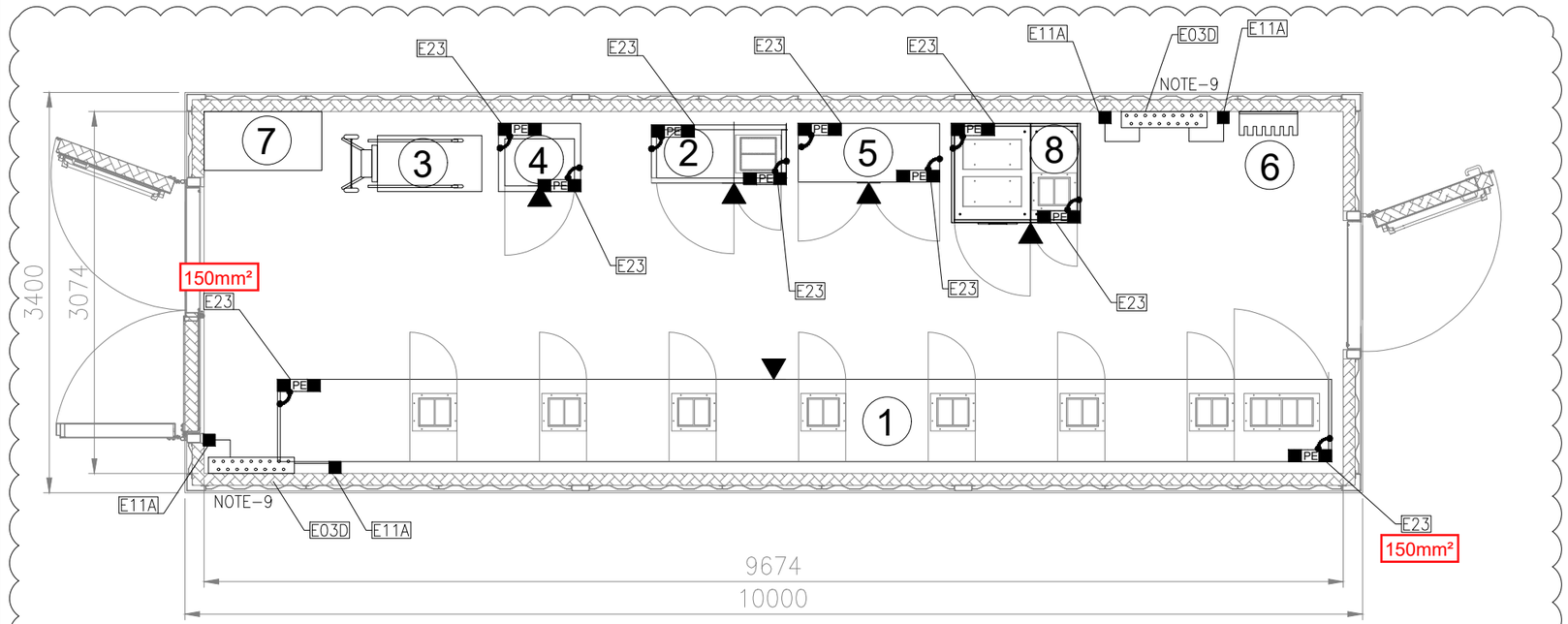
ROSETTI MARINO SpA

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



EQUIPMENT LIST		
REF.	TAG No.	DESCRIPTION
1	SG-200N1	400V SWITCHGEAR
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.
3		SERVICE TROLLEY FOR 400V SWITCHGEAR
4	CN-200N1	ICCP PANEL
5	B200-HSB-001	HVAC PANEL – LV ROOM
6		TOOL BOX
7		TABLE
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE

01



EARTHING LAYOUT
"B-200"LV SWITCHROOM
PLAN
EL.+ 23.310 T.O.S.

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 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

REFERENCE	
DOCUMENT NUMBER	DOCUMENT TITLE
123A90-DDL-EL-DD-20090	ELECTRICAL TYPICAL INSTALLATION DETAILS -EARTHING SYSTEM
123A90-DDL-EL-DL-20105	ELECTRICAL EQUIPMENT LAYOUT-LV SWITCHROOM
1724000049-AR-DD-00019	B-200 DETAILED DRAWINGS – E&I SHELTERS

01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20137**

REV.:	DATE:	SIGNATURE:
1_B	02/09/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING & LIGHTNING LAYOUT – LV SWITCHROOM
"B-200"LV SWITCHROOM

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

SCALE : 1:50

A3

DRAWING NO. 123A90-DDL-EL-DL-20137

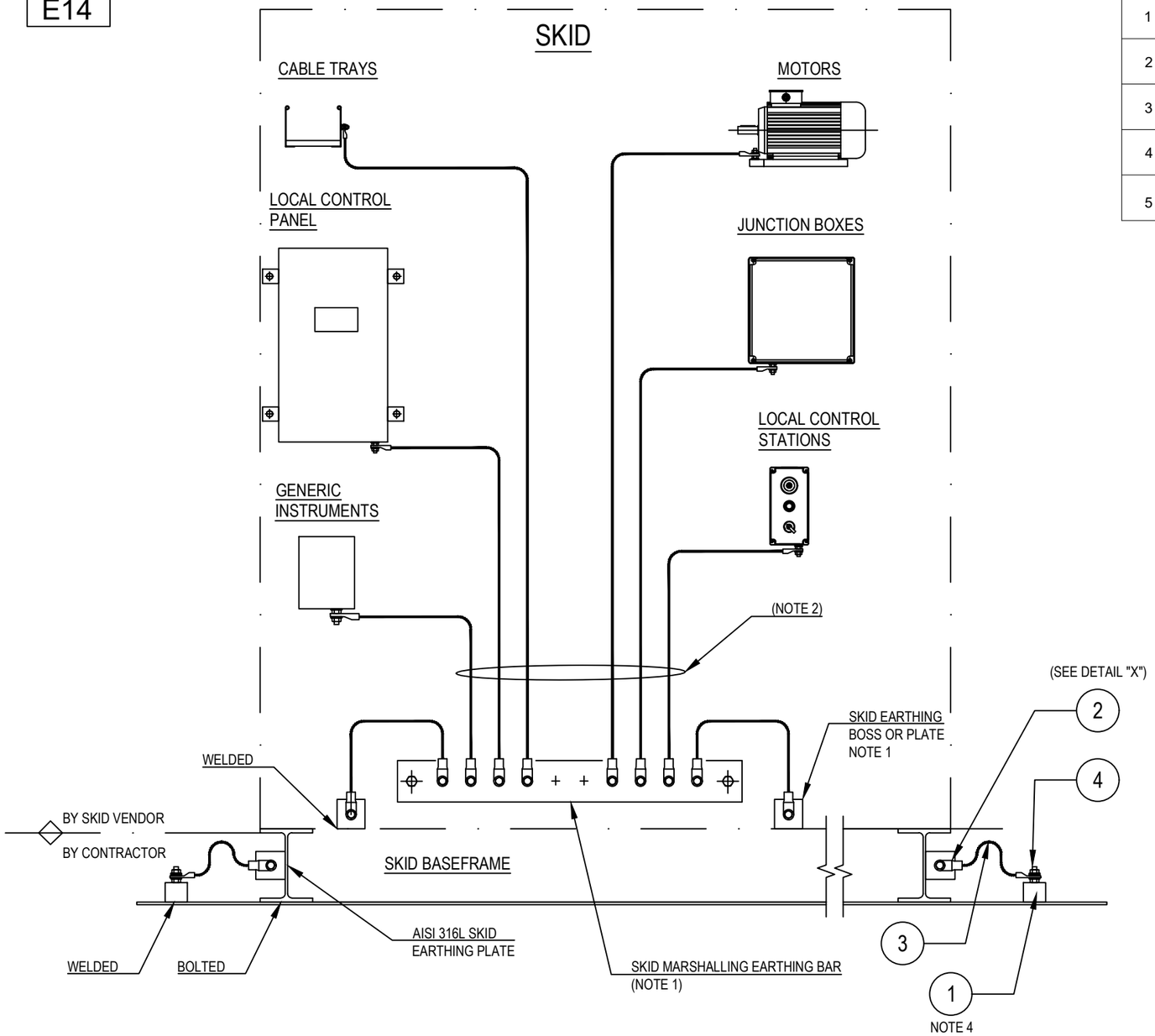
SHEET 003

REV. 01

File Name : 123A90-DDL-EL-DL-20137 Rev. 01

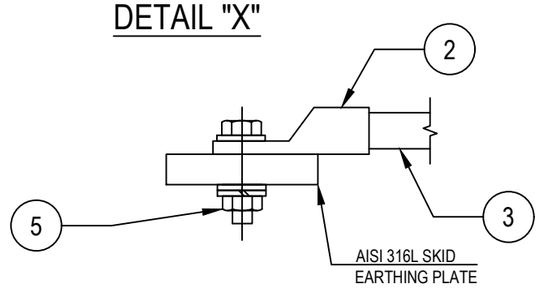
F.to UNI A3: 420mmx297mm

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_D	25/09/24	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

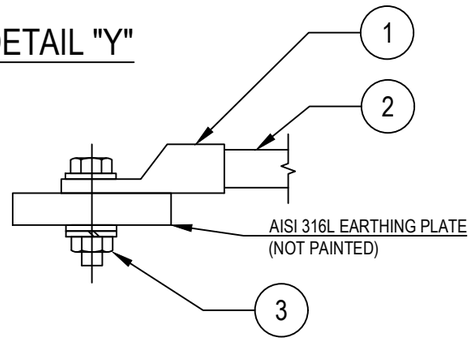
F.to UNI A3: 420mmx297mm

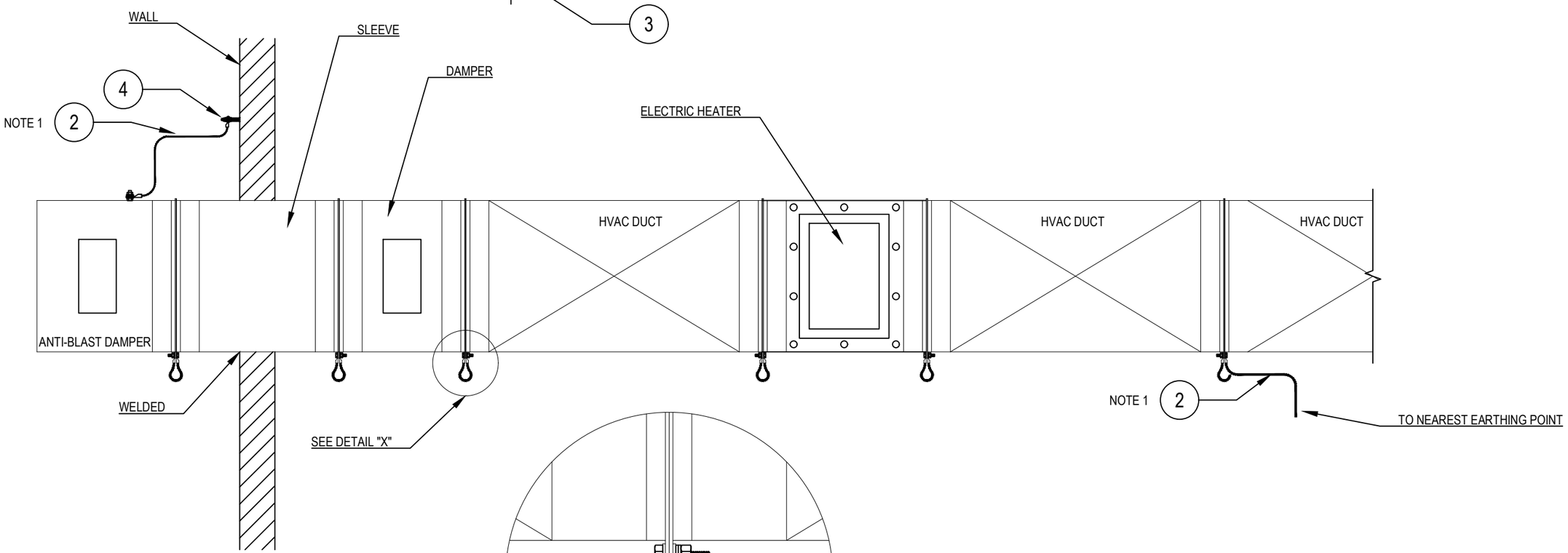
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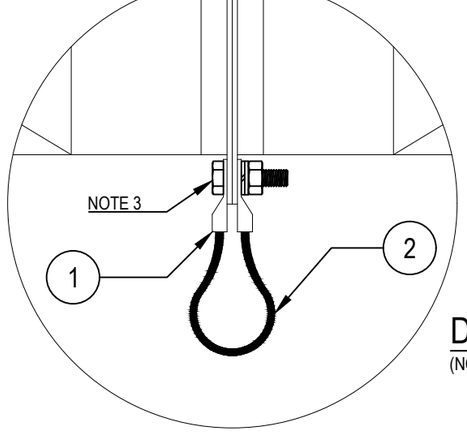
E26

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_D	25/09/24	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

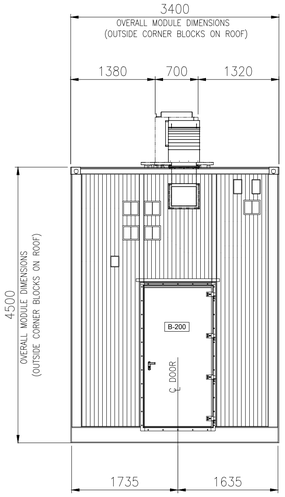
REV. 02

F.to UNI A3: 420mmx297mm

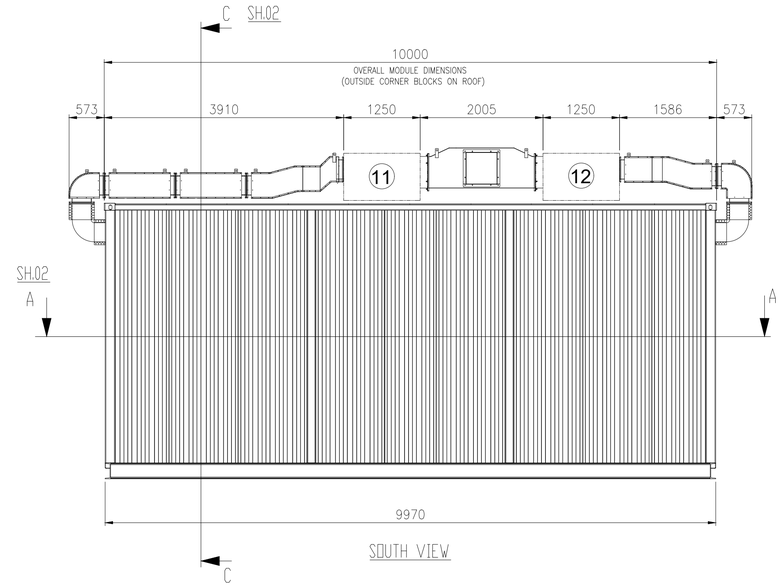
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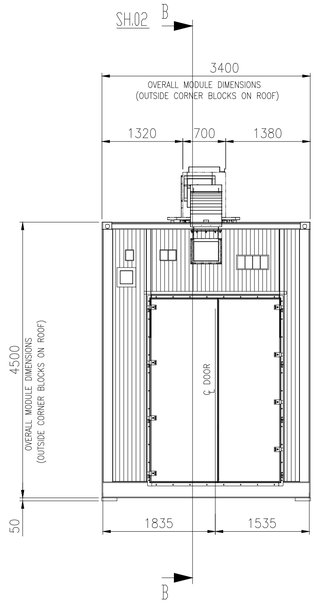
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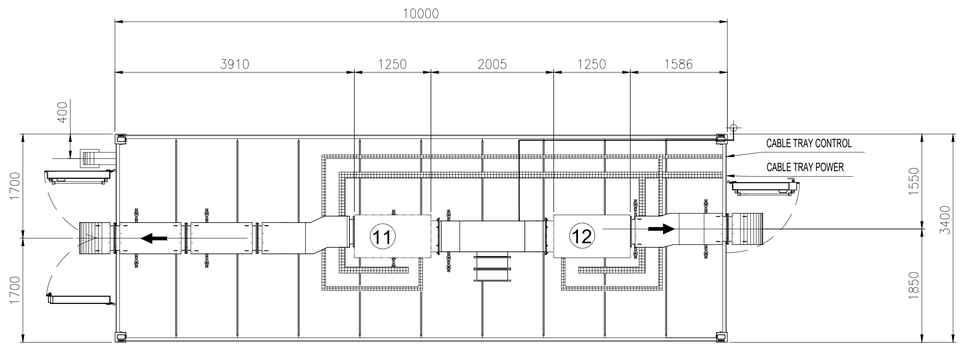
EAST VIEW



SOUTH VIEW



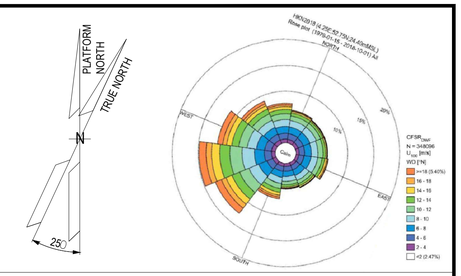
WEST VIEW



TOP VIEW

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	4900
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	600
3		*DELETED*				
4	CN-200N1	ICCP PANEL	700	580	1830	250
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	400
6	-	TOOL BOX	495	335	200	20
7	-	TABLE	1000	500	750	50
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	1000
9	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
10	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
11	HHU-77003	AIR HANDLING UNIT A	1250	850	900	140
12	HHU-77004	AIR HANDLING UNIT B	1250	850	900	140
13	HSS-77-004	SPACE HEATER 1	184	145	1100	5
14	HSS-77-005	SPACE HEATER 2	184	145	1100	5
15	HSS-77-006	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.

03

REFERENCE

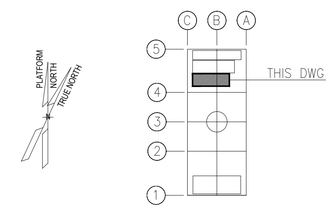
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00065
"B-200" DETAILED DRAWING	1724000049-AR-DD-00019
PAINTING PROCEDURE	1724000049-MAT-PRO-00005

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	19/07/24	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

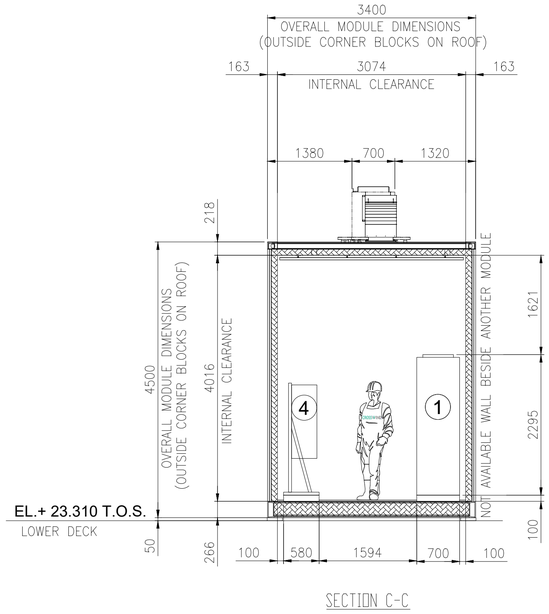
TITLE :
BASE LOAD POWER HUB (BLPH)
B-200 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 19/07/24
A1	DRAWING NO. 1724000049-AR-DA-00015	SHEET 001	REV. 03

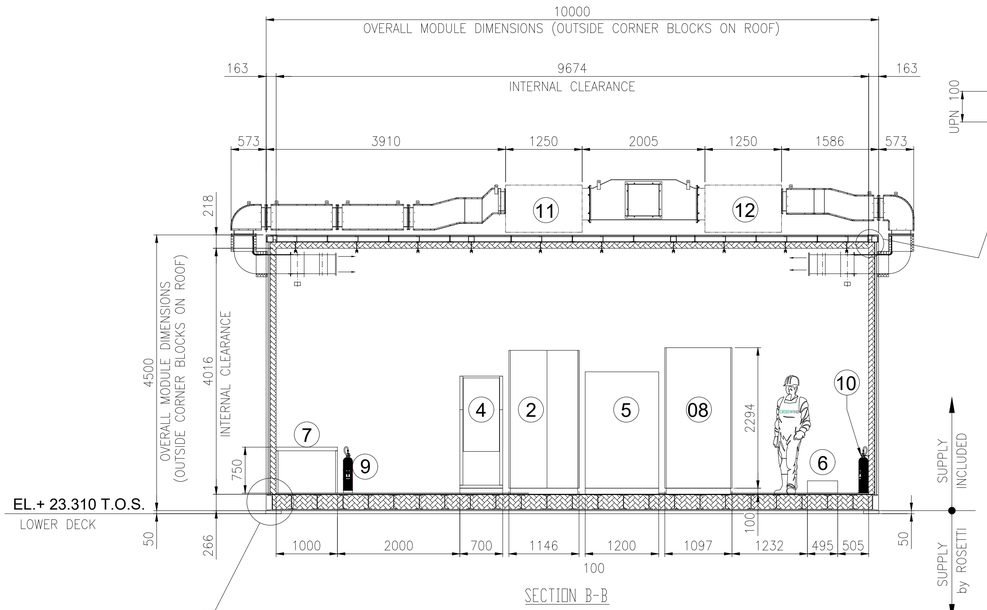
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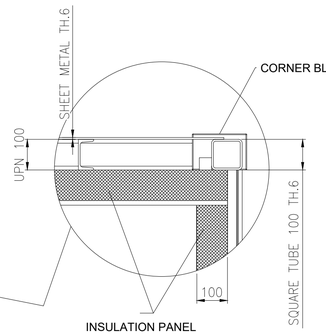
REV. 03

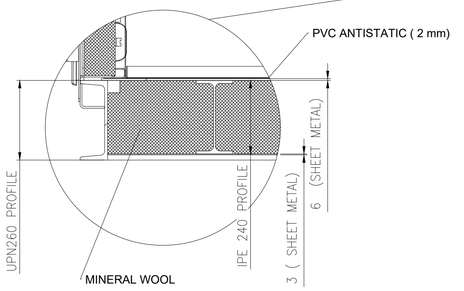


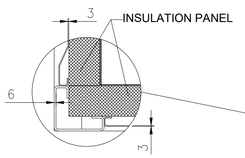
SECTION C-C

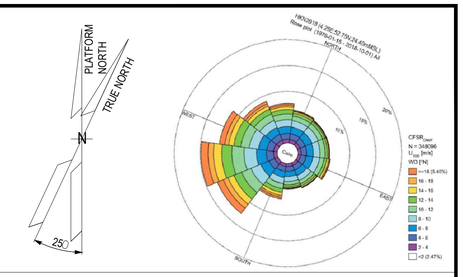


SECTION B-B









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

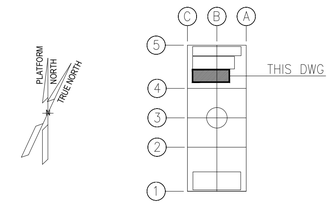
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00065
"B-200" DETAILED DRAWING	1724000049-AR-DD-00019
PAINTING PROCEDURE	1724000049-MAT-PRO-00005

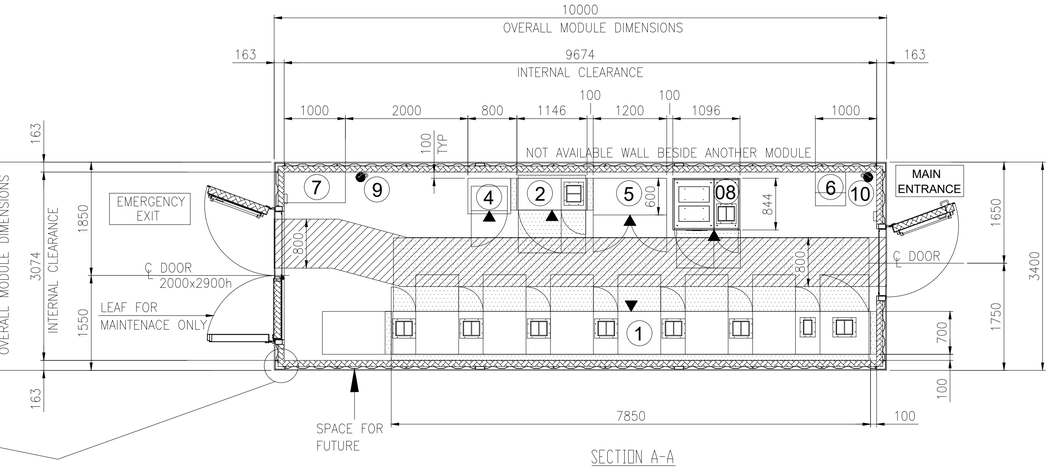
LEGEND

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

HOLDS

KEY PLAN



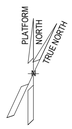


SECTION A-A

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	4900
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	600
3		*DELETED*				
4	CN-200N1	ICCP PANEL	700	580	1830	250
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	400
6	-	TOOL BOX	495	335	200	20
7	-	TABLE	1000	500	750	50
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	1000
9	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
10	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
11	HHU-77003	AIR HANDLING UNIT A	1250	850	900	140
12	HHU-77004	AIR HANDLING UNIT B	1250	850	900	140
13	HSS-77-004	SPACE HEATER 1	184	145	1100	5
14	HSS-77-005	SPACE HEATER 2	184	145	1100	5
15	HSS-77-006	SPACE HEATER 3	184	145	1100	5

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



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	19/07/24	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

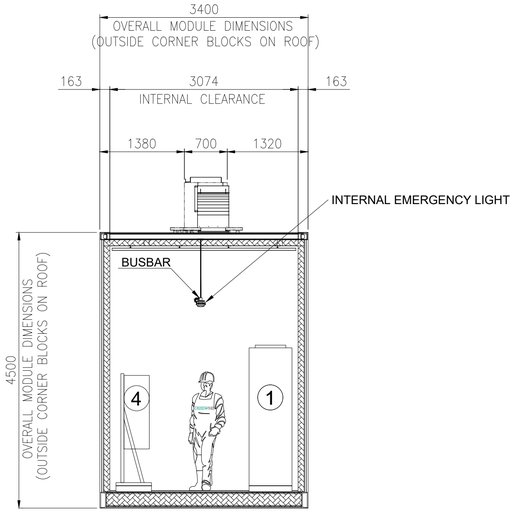
TITLE :
BASE LOAD POWER HUB (BLPH)
B-200 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 19/07/24
A1	DRAWING NO. 1724000049-AR-DA-00015		SHEET 002 / REV. 03

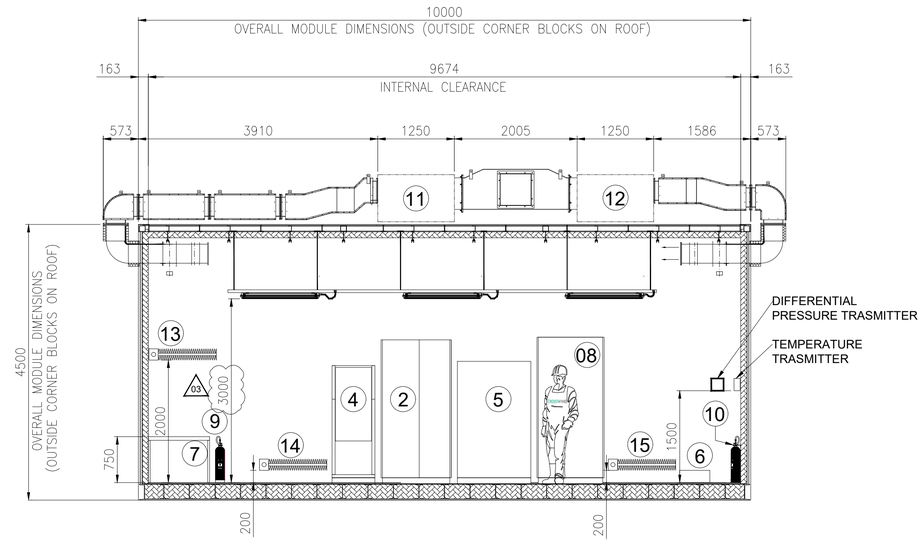
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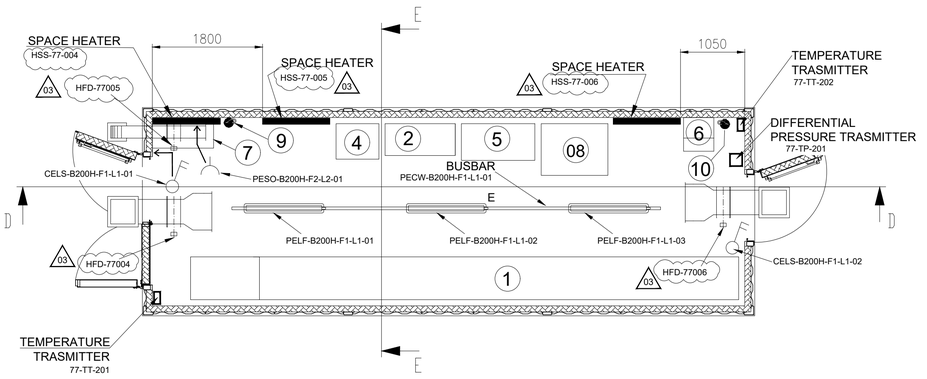
REV. 03



SECTION E-E

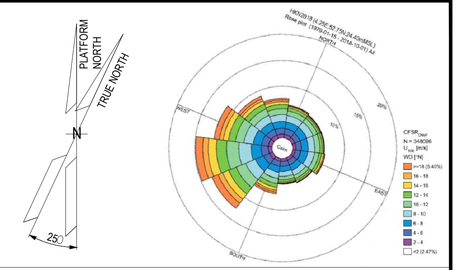


SECTION D-D



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	4900
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	600
3		*DELETED*				
4	CN-200N1	ICCP PANEL	700	580	1830	250
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	400
6	-	TOOL BOX	495	335	200	20
7	-	TABLE	1000	500	750	50
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	1000
9	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
10	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
11	HHU-77003	AIR HANDLING UNIT A	1250	850	900	140
12	HHU-77004	AIR HANDLING UNIT B	1250	850	900	140
13	HSS-77-004	SPACE HEATER 1	184	145	1100	5
14	HSS-77-005	SPACE HEATER 2	184	145	1100	5
15	HSS-77-006	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.

03

REFERENCE

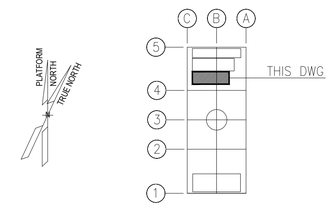
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00065
"B-200" DETAILED DRAWING	1724000049-AR-DD-00019
PAINTING PROCEDURE	1724000049-MAT-PRO-00005

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	19/07/24	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-200 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 19/07/24
A1	DRAWING NO. 1724000049-AR-DA-00015	SHEET 003	REV. 03

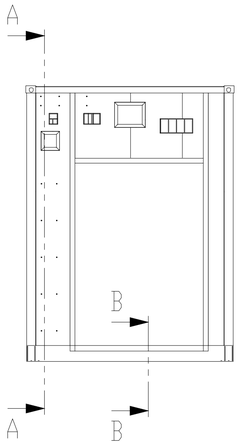
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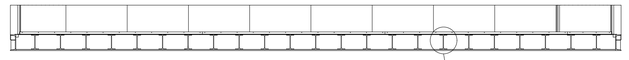
DRAWING NO. 1724000049-AR-DD-00019

REV. 02

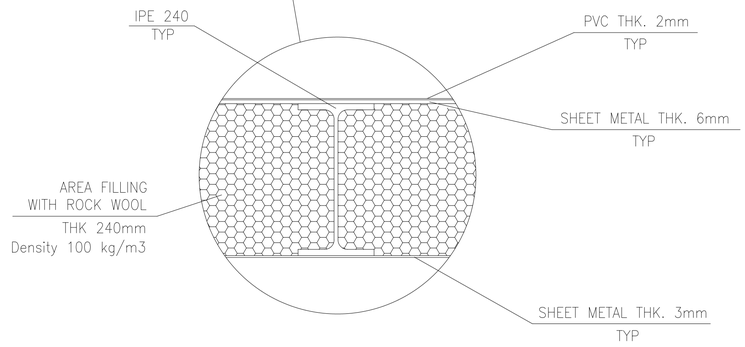
MODULE B-200

REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" STRUCTURAL CALCULATION	1724000049-ST-CA-00007
Weld Procedure Specifications (WPS), Weld Procedure Qualification Report (WPQR), Welding Map and Welders Qualifications	1724000049-WEL-RE-00003

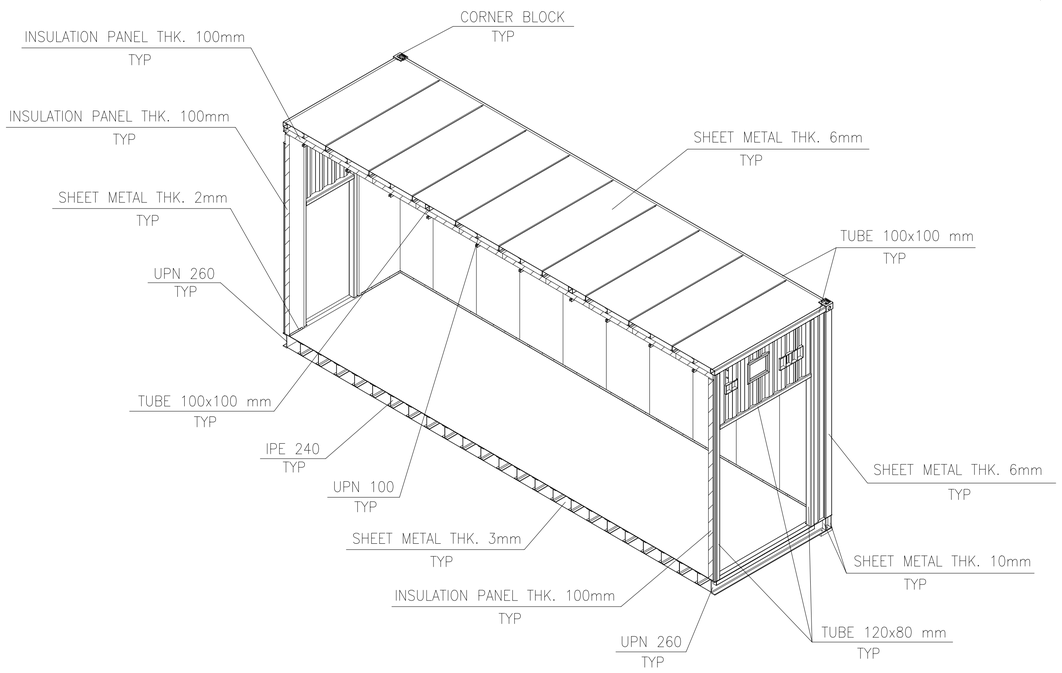




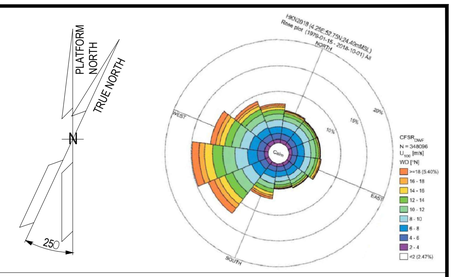
SECTION B-B



DETAIL "C"

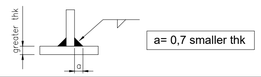


SECTION A-A



NOTES

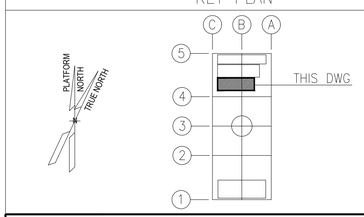
1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D.1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



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 CLIENT REVIEW (ICR)

CROSSWIND

ROSETTI MARINO

TITLE :

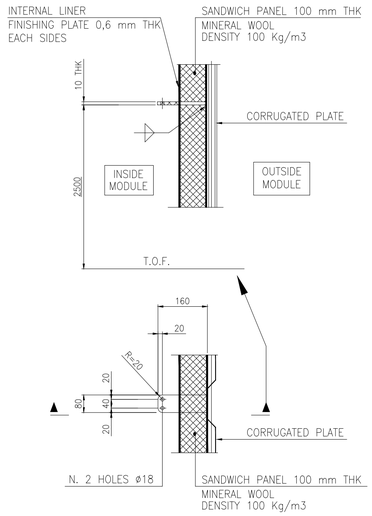
B-200 DETAILED DRAWINGS-E&I SHELTERS

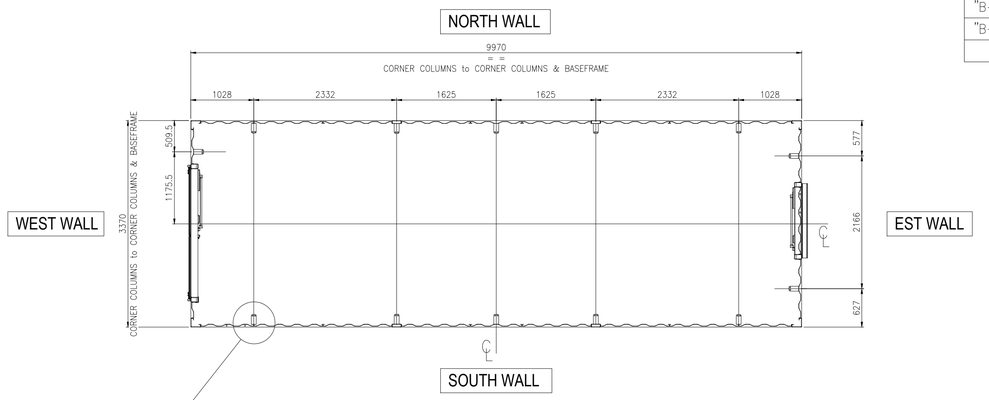
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00019	SHEET 001	REV. 02

File Name : 1724000049-AR-DD-00019-REV.02

DRAWING NO. 1724000049-AR-DD-00019 REV. 02

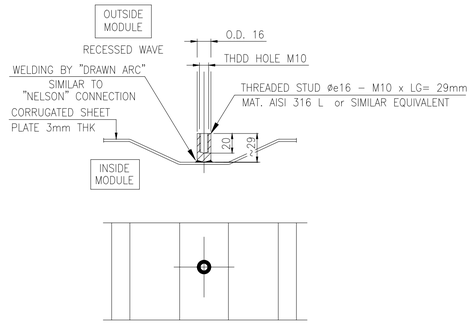
REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00015
"B-200" HVAC GENERAL ARRANGEMENT	1724000049-HV-DA-00065



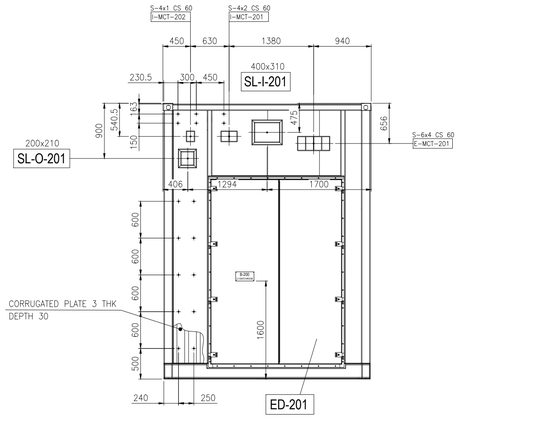


MODULE B-200

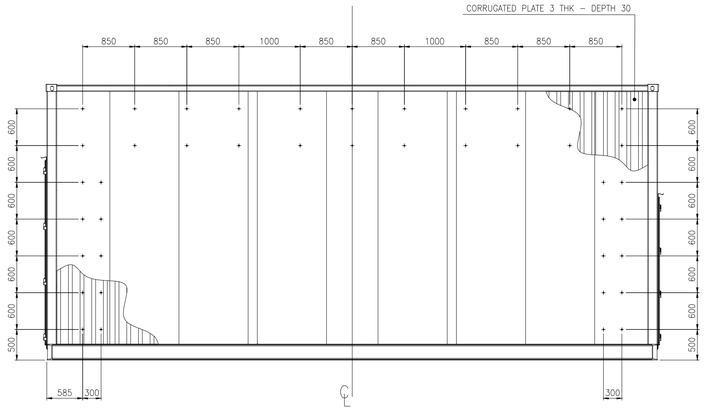
INTERNAL SEA FASTENING PLATES PLAN



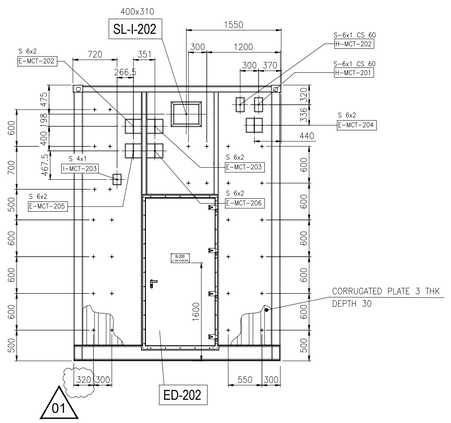
THREADED STUD INSTALLATION



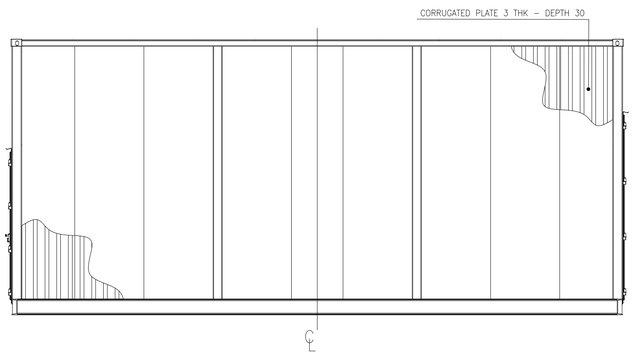
VIEW OF WEST WALL



VIEW OF NORTH WALL



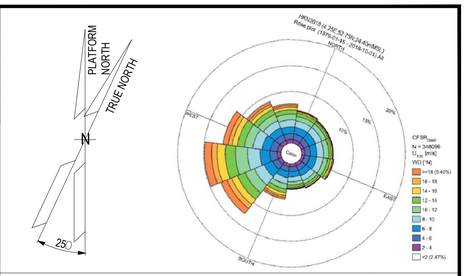
VIEW OF EAST WALL



VIEW OF SOUTH WALL

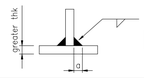
MCT LIST

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-201	532	238	60	6x4	
	E-MCT-202	271	238	60		6x2
	E-MCT-203	271	238	60		6x2
	E-MCT-204	271	238	60	6x2	
	E-MCT-205	271	238	60		6x2
	E-MCT-206	271	238	60		6x2
INSTRUMENTAL	I-MCT-201	271	179.5	60	4x2	
	I-MCT-202	140.5	179.5	60	4x1	
	I-MCT-203	140.5	179.5	60	4x1	
HVAC	H-MCT-201	140.5	238	60	6x1	
	H-MCT-202	140.5	238	60	6x1	



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-201
- MCT TYPE & SIZE: BRAND ROXTEC
- MATERIAL: C.S.= PRIMED MILD STEEL; S.S.= AISI 316 L
- MCT DEPTH: S 6x2 C.S. 60
- PROGRESSIVE NUMBER: FROM 01
- MCT SERVICE: E= ELECTRICAL; I= INSTRUMENTAL; H= HVAC
- MODULE LOCATION: 1= B-100 3= B-300 2= B-200 4= B-400

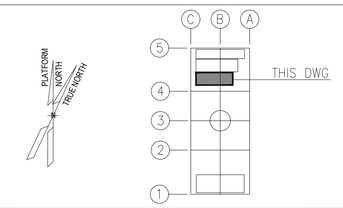
HVAC SLEEVE LEGEND:

300x300 SL-I-201
- INTERNAL SIZE OF DUCT: L x H (mm)
- PROGRESSIVE NUMBER: FROM 01
- SERVICE: I= AIR IN; R= RECYRCLE; O= OVERPRESSURE
- MODULE LOCATION: 1= B-100 3= B-300 2= B-200 4= B-400

DOOR LEGEND:

ED-201
- 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-200 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

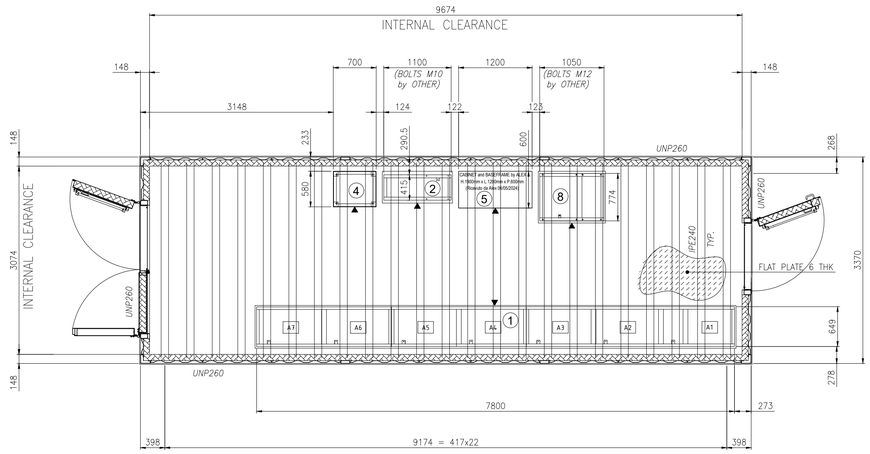
A1	DRAWING NO. 1724000049-AR-DD-00019	SHEET 002	REV. 02

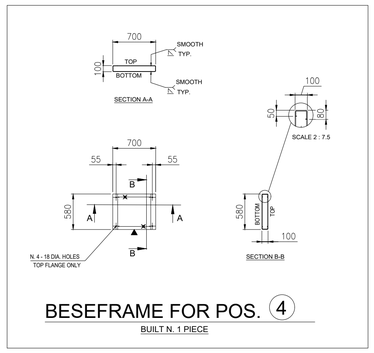
File Name : 1724000049-AR-DD-00019-REV.02

DRAWING NO. 1724000049-AR-DD-00019

REV. 02

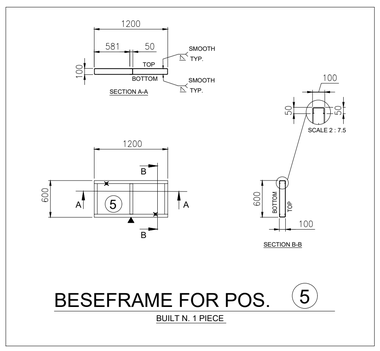
B-200
I&T EQUIPMENT ROOM
BASEFRAME LOCATION PLAN





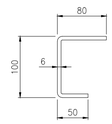
BESEFRAME FOR POS. 4

BUILT N. 1 PIECE

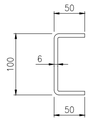


BESEFRAME FOR POS. 5

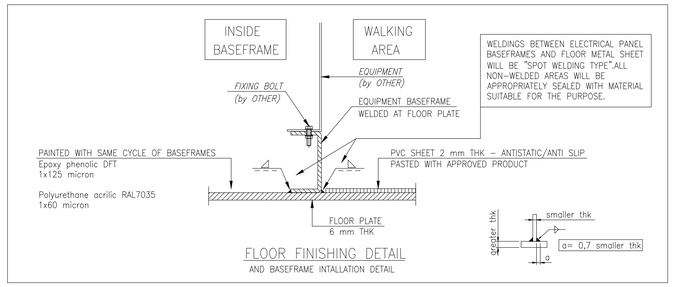
BUILT N. 1 PIECE



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

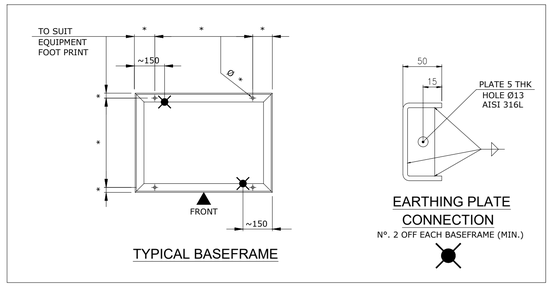


C 100x50x50 THK 6mm.
FROM BENT PLATE THK 6mm.
MAT. CARBON STEEL

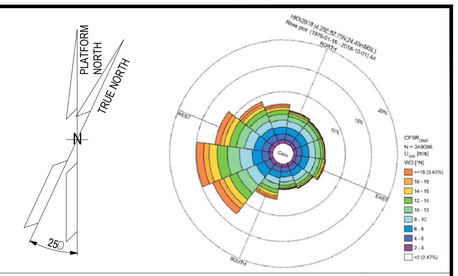


FLOOR FINISHING DETAIL

AND BASEFRAME INTALLATION DETAIL

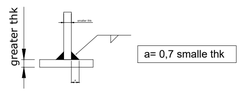


TYPICAL BASEFRAME



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.

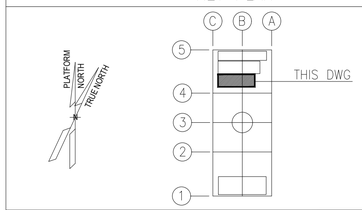
LEGEND

ASI = ALEX SISTEMI

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	SCOPE
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	4900	ROSETTI MARINO
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	600	ROSETTI MARINO
4	CN-200N1	ICCP PANEL	700	580	1830	250	ASI
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	TBD	ASI
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	1000	ROSETTI MARINO

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 :

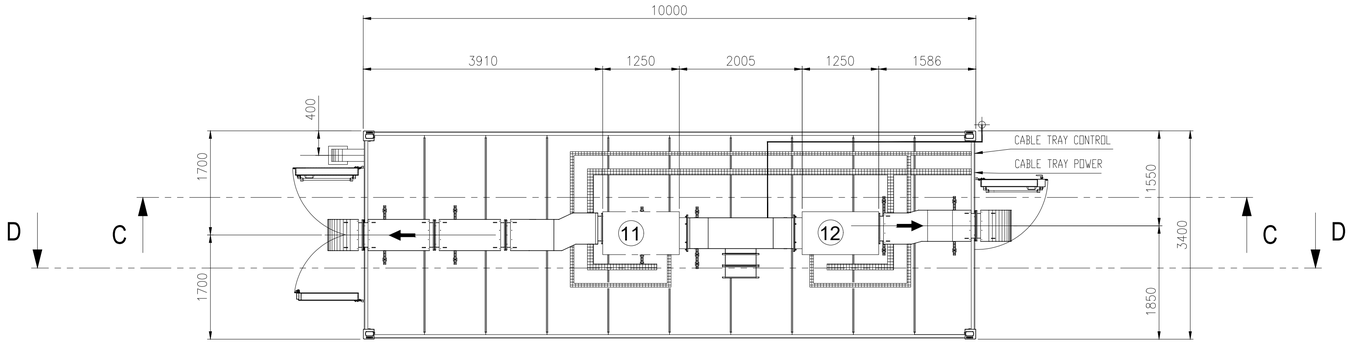
B-200 DETAILED DRAWINGS-E&I SHELTERS

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-00019	SHEET 003	REV. 02

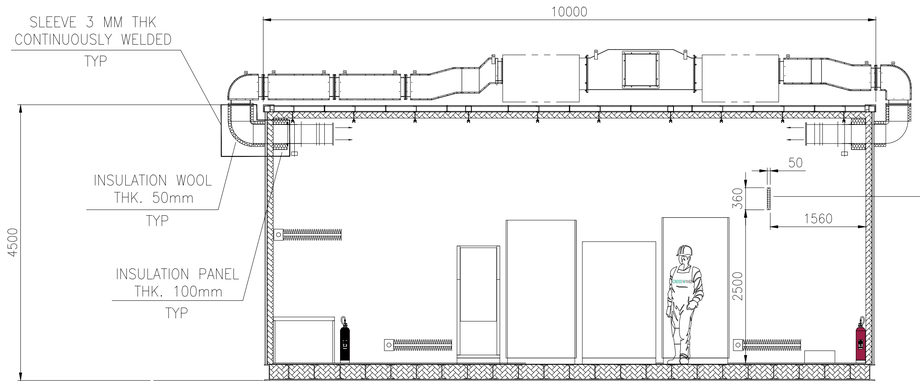
File Name : 1724000049-AR-DD-00019-REV.02

DRAWING NO. 1724000049-AR-DD-00019

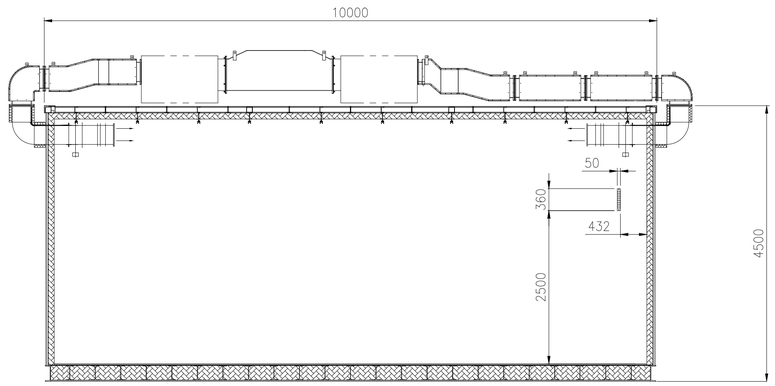
REV. 02



TOP VIEW



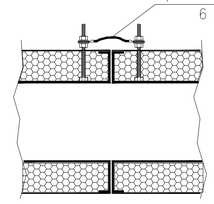
SECTION C-C



SECTION D-D

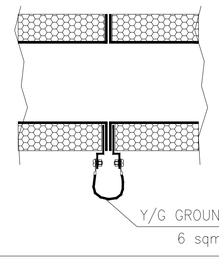
DET. 1

EXTERNAL DUCT



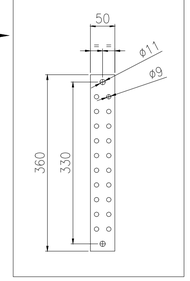
DET. 2

INTERNAL DUCT



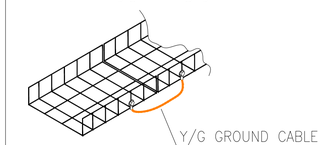
DET. 3

TYPICAL DETAIL
Ground bar



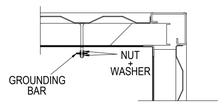
DET. 4

TYPICAL DETAIL
Cable tray grounding system



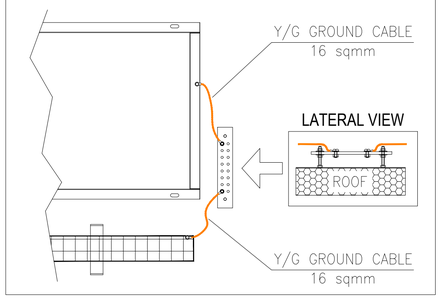
DET. 5

TYPICAL INSTALLATION BTH PE



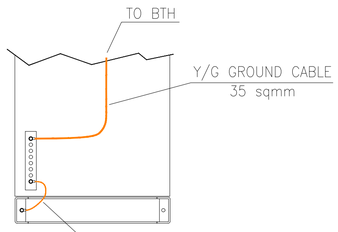
DET. 6

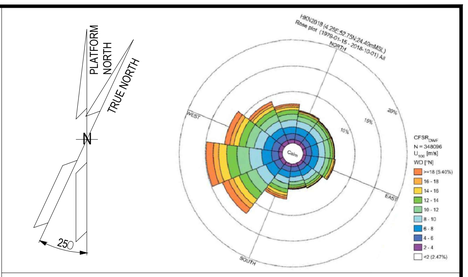
TYPICAL ROOF GROUNDING CONNECTION



DET. 7

TYPICAL CABINET GROUNDING CONNECTION



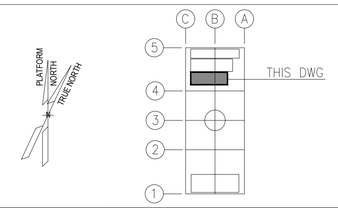


NOTES

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 :

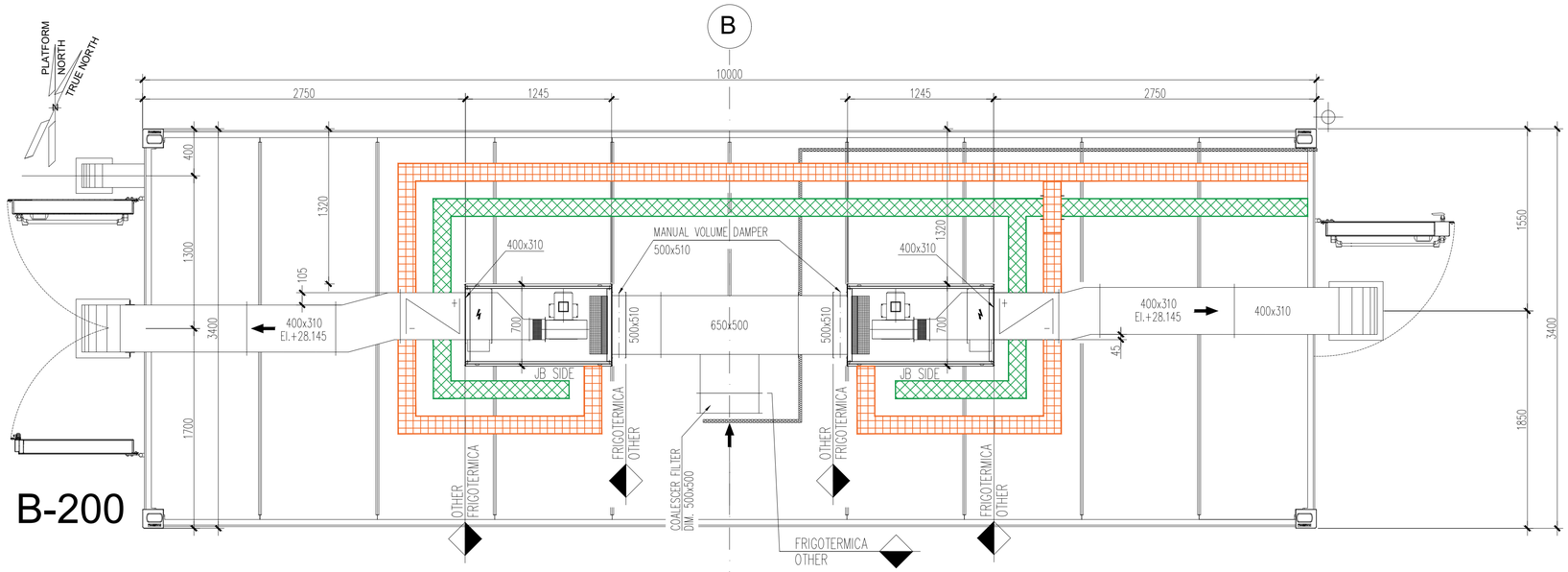
B-200 DETAILED DRAWINGS-E&I SHELTERS

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-00019	SHEET 004	REV. 02

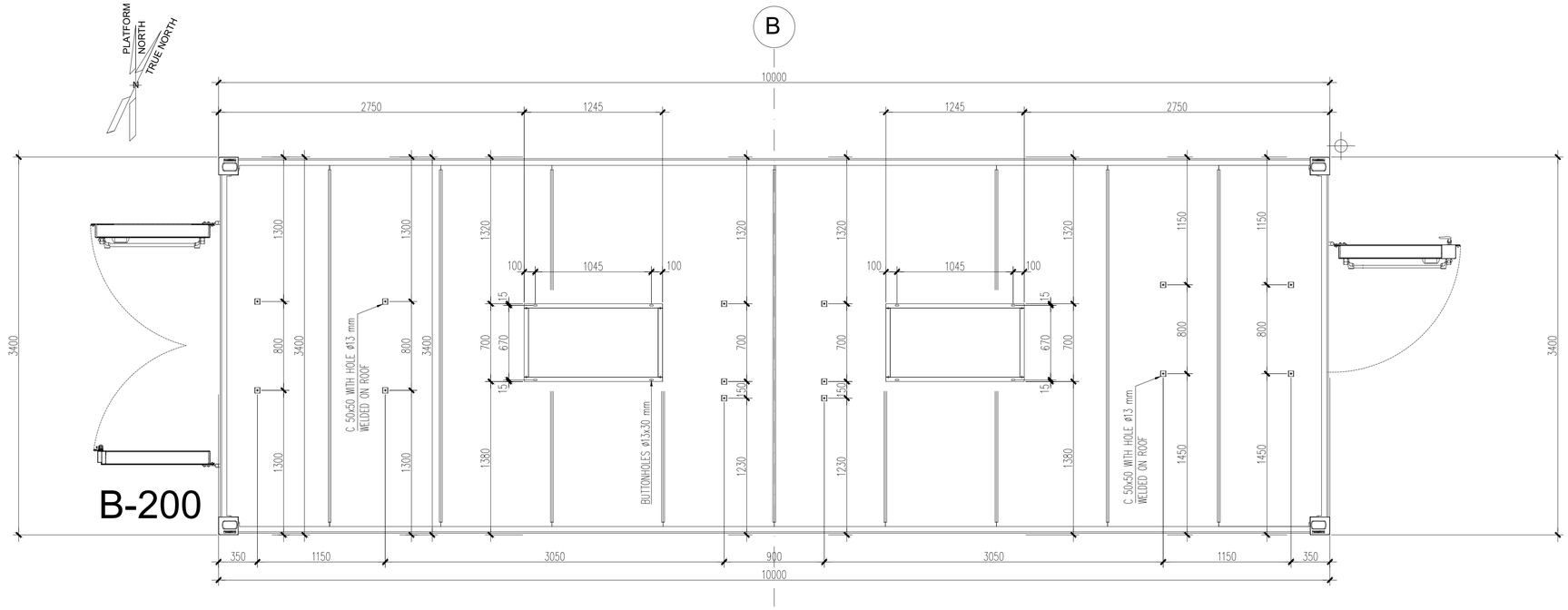
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DRAWING NO. 1724000049-HV-DA-00065_0

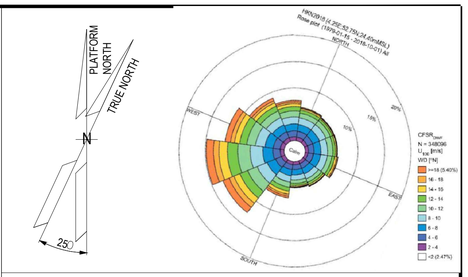
REV. 00



HVAC SYSTEM ROOF PLAN

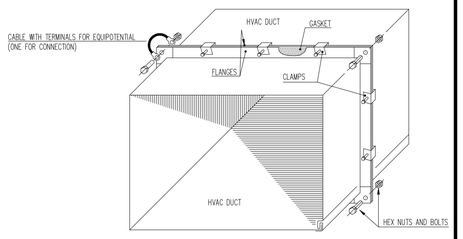


HVAC SUPPORT PLAN ON ROOF



NOTES

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

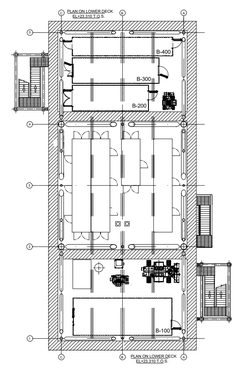


TYPICAL EQUIPOTENTIAL INSTALLING FOR FLANGE CONNECTION INDOOR AIR DUCT

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-200
HVAC SYSTEM - G.A. AND DETAILS

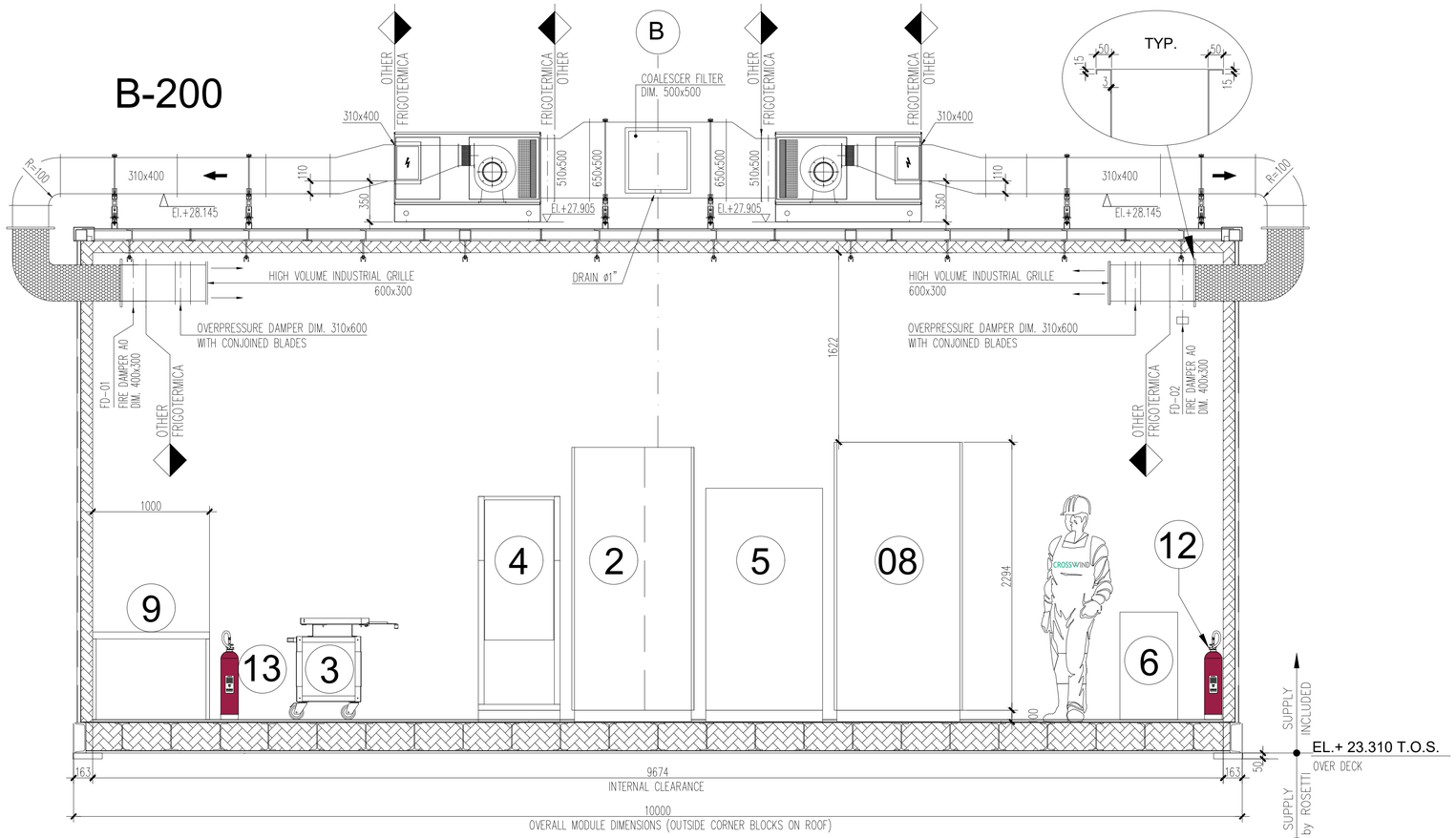
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DRAWN S.Z.	CHECKED S.S.	APPROVED M.G.	DATE 13/06/2024
A1	DRAWING NO. 1724000049-HV-DA-00065	SHEET 001	REV. 00

File Name : 1724000049-HV-DA-00065_0

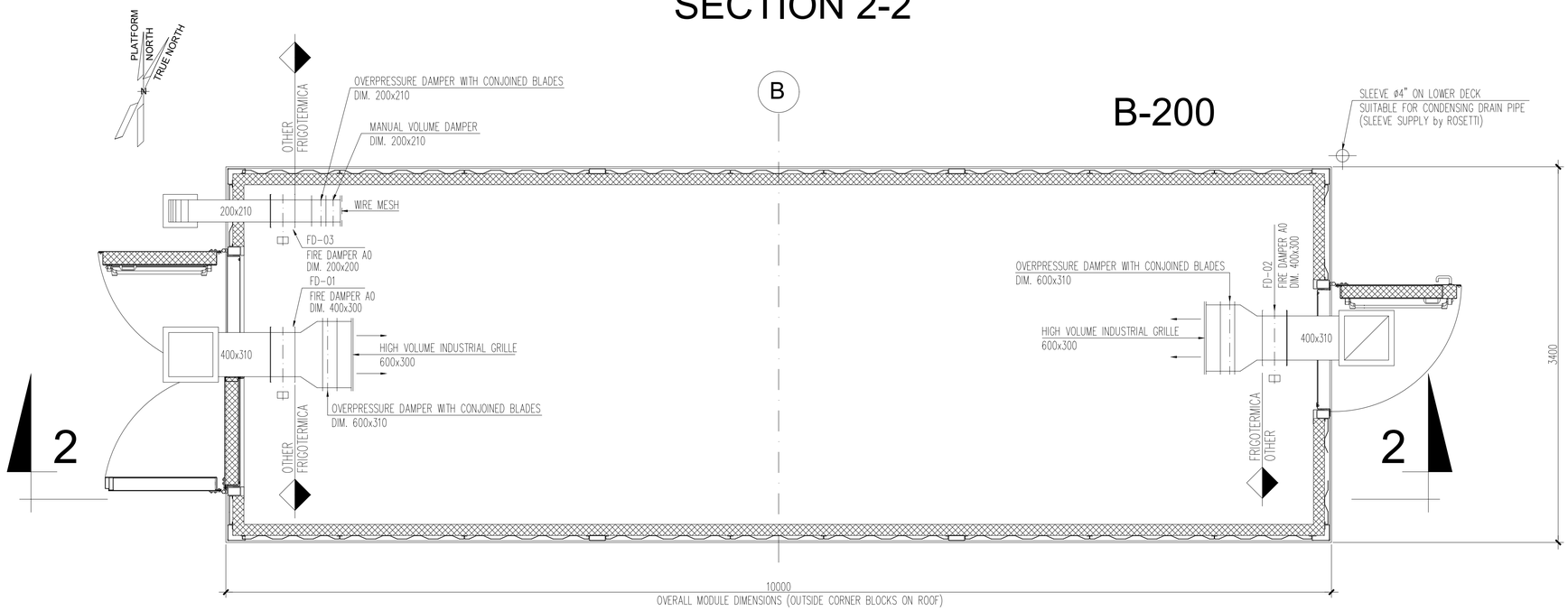
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REV. 00

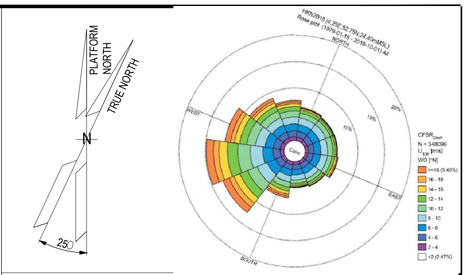
B-200



SECTION 2-2

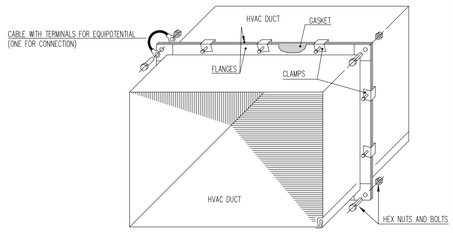


HVAC SYSTEM INDOOR DUCT LAYOUT



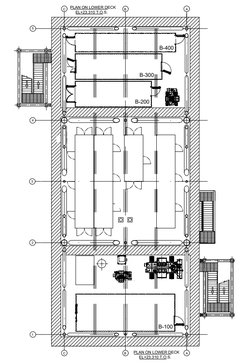
NOTES

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



TYPICAL EQUIPOTENTIAL INSTALLING FOR FLANGE CONNECTION INDOOR AIR DUCT

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-200
HVAC SYSTEM - G.A. AND DETAILS

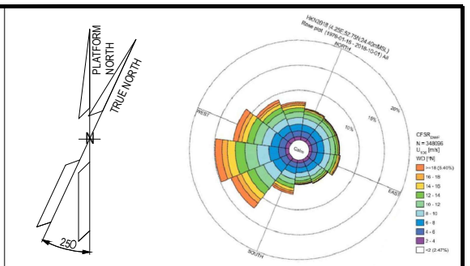
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 25
DRAWN S.Z.	CHECKED S.S.	APPROVED M.G.	DATE 13/06/2024
A1	DRAWING NO. 1724000049-HV-DA-00065	SHEET 002	REV. 00

File Name : 1724000049-HV-DA-00065_0

DRAWING NO. 123A90-1724000049-HV-PID-00040

REV. 01

BASE LOAD POWER HUB (BLPH)
B-200 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-200 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-00040	SHEET 001	REV. 01

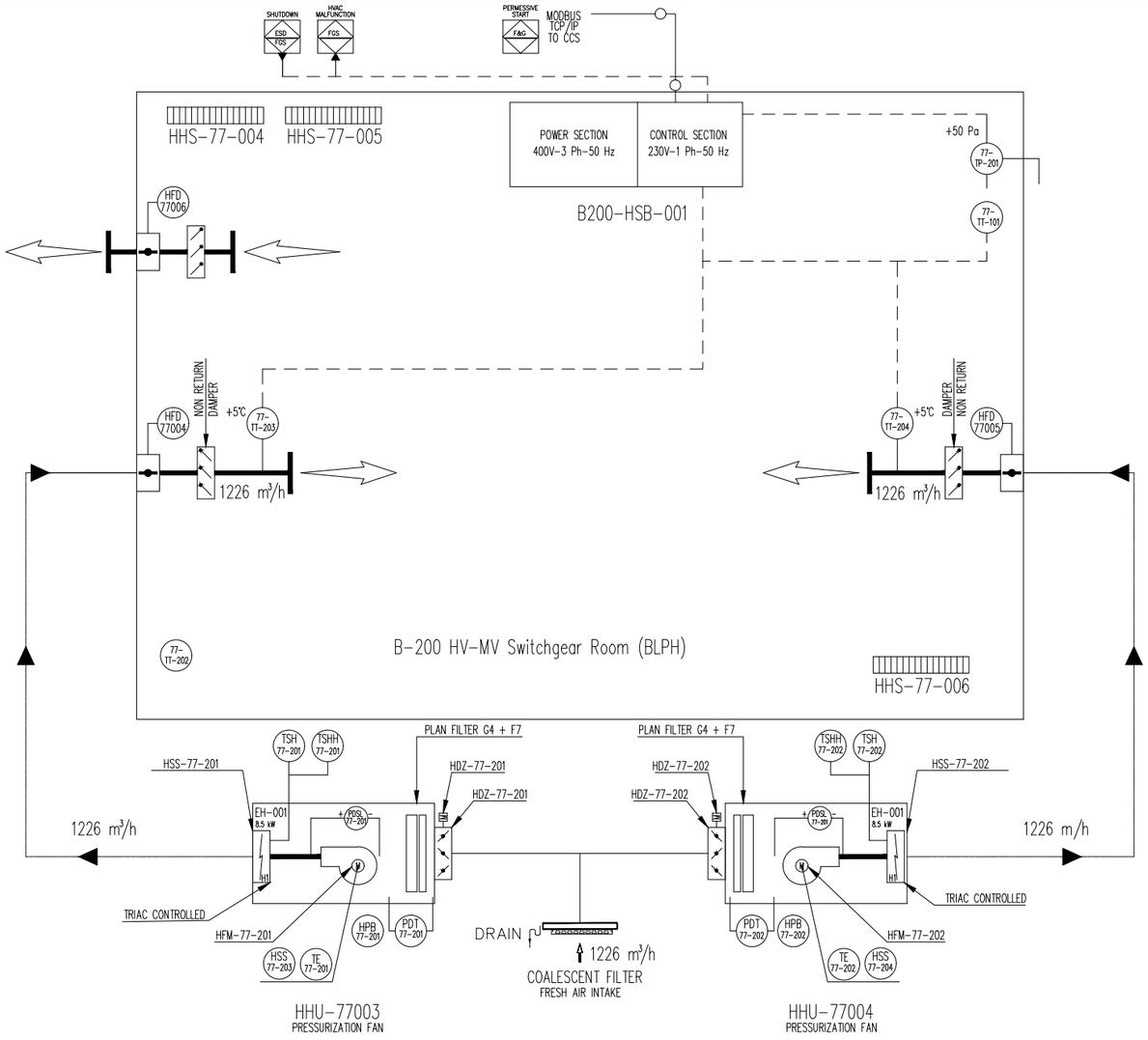
File Name : 123A90-1724000049-HV-PID-00040_REV.01

DRAWING NO. 123A90-1724000049-HV-PID-00040 | REV. 01

ITEM	HVAC-PRESSURISING FAN
DESCRIPTION	HVAC UNIT
MAKER	FRIGOTERMICA srl
MODEL	4112-TBA
SUPPLY AIR FLOW	1226 mc/h
COOLING COIL CAPACITY	N.A.
HEATING COIL CAPACITY	8.5 kW
TENSIONE	400 V - 50 Hz - 3 Ph+N
EXECUTION	SAFE AREA
REFRIGERANT	N.A.

LEGENDA

MD	MOTORISED DAMPER WITH SPRING RETURN	F1	AIR FILTER "G4"	MFD	MOTORISED FIRE DAMPER WITH SPRING RETURN
RD	REGULATION DAMPER	F2	BAG FILTER "F8"	EC	EVAPORATING COIL
OPD	OVERPRESSURE DAMPER	CC	CONDENSING COIL	LR	LIQUID RECEIVER
PSH	DIFFERENTIAL PRESSURE SWITCH HIGH PRESSURE	CF	CONDENSING FAN	MT	MOISTURE TRASMITTER
PSL	DIFFERENTIAL PRESSURE SWITCH LOW PRESSURE	SF	SUPPLY FAN	HPT	HIG PRESSURE TRASDUCER
TT	TEMPERATURE TRASMITTER	GV	GLOBE VALVE	TP	COMPRESSOR THERMIC PROTECTION
EPB	EMERGENCY PUSH BUTTON	DF	DRYER FILTER	TSH	SECURITI THERMOSTATE
OH	COMPRESSOR OIL HEATER	SG	SIGHT GLASS	PSH	HIGH PRESSURE SWITCH
SV	SOLENOID VALVE	TV	THERMOSTATIC VALVE	PSL	LOW PRESSURE SWITCH
C	REFRIGERANT COMPRESSOR	PRV	PRESSURE RELIEF VALVE	PC	CONDENSING PRESSURE SWITCH



OUTDOOR DESIGN CONDITIONS

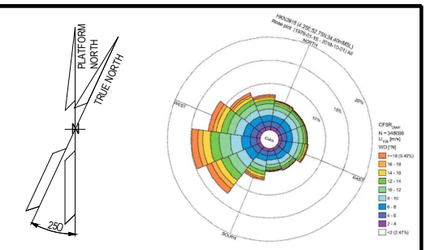
Safe Area
Min. design DB Temp: -8,4°C with RH 100 %
Max. design DB Temp: +25°C with RH 90 %

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-200 HV
P&ID HVAC System

CONTRACT NO./TITLE CW-1-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-00040	SHEET 001	REV. 01

File Name : 123A90-1724000049-HV-PID-00040-REV.01

Section 8 MECHANICAL COMPLETION STATUS INDEX - TELECOMMUNICATION DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-20 & process: MC & discipline : T

Telecom	77-20 HVAC LV Switchgear Room B-200						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
B200-HSB-001/B400-NET-001	COMMUNICATION / NETWORK CABINET	ONSHORE	C10004354	CIX09	100	2024-11-22	RFC 2

ROSETTI MARINO | CROSSWIND

ITEM	Tag	B200-HSB-001/B400-NET-001 : COMMUNICATION / NETWORK CABINET			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-20 : HVAC LV Switchgear Room B-200			Module	LD_B-200/LD_B-400	
TASK	code	C10004354	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	B200-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 MAREINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-11-12	2024-11-22	
Signature	Digitaly signed by Carmelo Bongiovanni 2024-11-12T17:50:22.468Z	Digitaly signed by Giovanni Tangianu 2024-11-22T16:17:39.388Z	

ROSETTI MARINO

Cable ID: B200-HSB-001/B400-NET-001

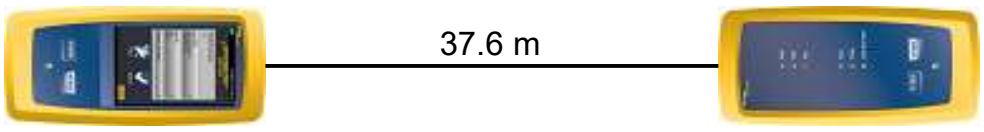
Test Limit: ISO11801 PL2 Class Ea
Limits Version: V7.6
Date / Time: 21-11-2024 16:36:44
Headroom 3.9 dB (NEXT 3,6-4,5)
Cable Type: Cat 6A S/FTP
NVP: 77.0%

Main: Versiv
S/N: 2226344
Software Version: V6.7 Build 1
Calibration Date: 12-12-2022
Adapter: DSX-8000 (DSX-PLA804)
S/N: 22340270

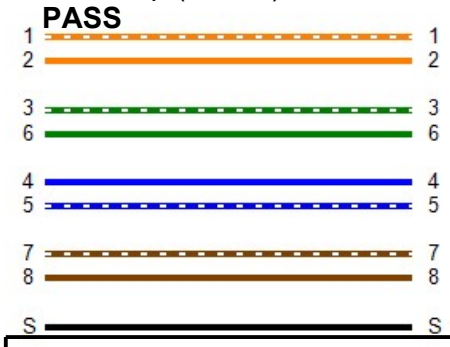
Test Summary: PASS

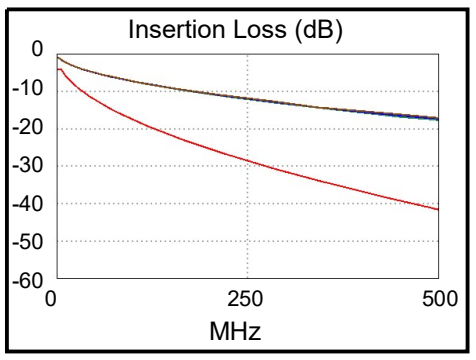
Remote: Versiv
S/N: 2226336
Software Version: V6.7 Build 1
Calibration Date: 12-12-2022
Adapter: DSX-8000R (DSX-PLA804)
S/N: 22340257

Length (m), Limit 90.0	[Pair 4,5]	37.6
Prop. Delay (ns), Limit 496	[Pair 1,2]	167
Delay Skew (ns), Limit 43	[Pair 1,2]	4
Resistance (ohms), Limit 20.60	[Pair 3,6]	5.37
Insertion Loss Margin (dB)	[Pair 3,6]	23.8
Frequency (MHz)	[Pair 3,6]	500.0
Limit (dB)	[Pair 3,6]	41.6

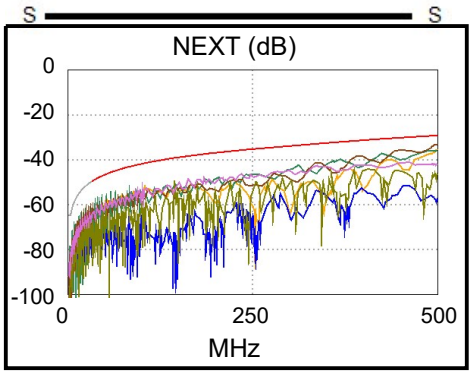


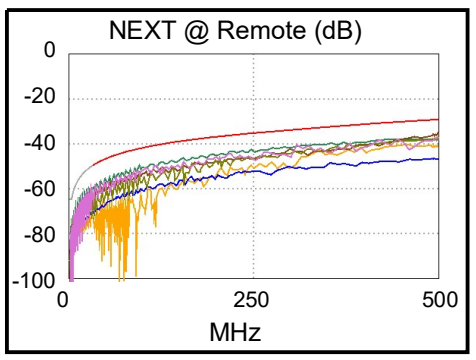
Wire Map (T568B)
PASS



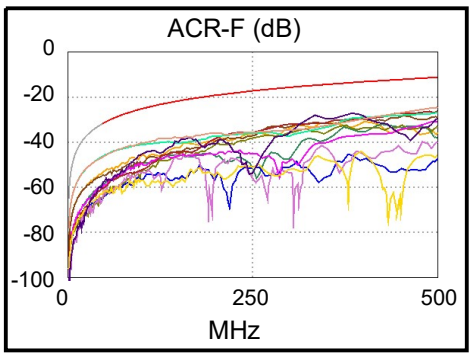


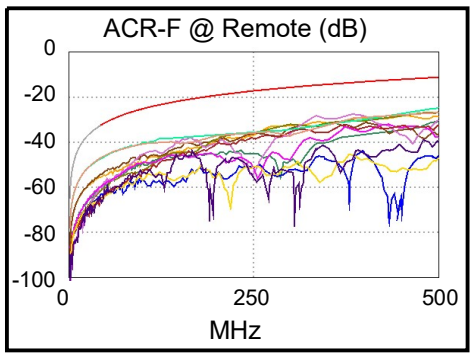
	Worst Case Margin		Worst Case Value	
PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	3,6-4,5	3,6-4,5
NEXT (dB)	3.9	6.0	3.9	6.0
Freq. (MHz)	499.0	499.0	499.0	499.0
Limit (dB)	29.3	29.3	29.3	29.3
Worst Pair	4,5	4,5	4,5	4,5
PS NEXT (dB)	4.6	5.5	4.6	5.5
Freq. (MHz)	499.0	499.0	499.0	499.0
Limit (dB)	26.4	26.4	26.4	26.4



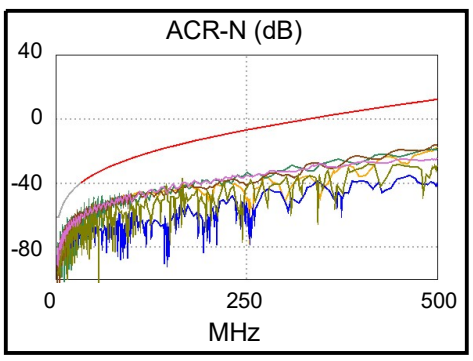


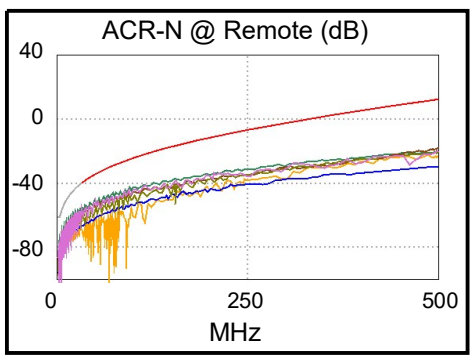
PASS	MAIN	SR	MAIN	SR
Worst Pair	7,8-4,5	4,5-7,8	7,8-4,5	4,5-7,8
ACR-F (dB)	13.1	13.3	13.1	13.3
Freq. (MHz)	500.0	500.0	500.0	500.0
Limit (dB)	11.3	11.3	11.3	11.3
Worst Pair	3,6	4,5	4,5	4,5
PS ACR-F (dB)	14.1	14.5	15.3	14.5
Freq. (MHz)	379.0	500.0	500.0	500.0
Limit (dB)	10.7	8.3	8.3	8.3



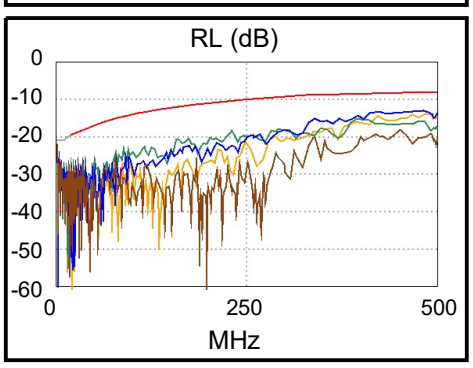


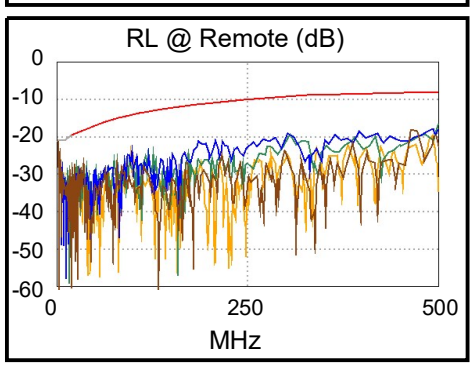
PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2-4,5	1,2-4,5	3,6-4,5	3,6-4,5
ACR-N (dB)	17.5	14.8	28.3	30.3
Freq. (MHz)	33.8	33.8	500.0	499.0
Limit (dB)	39.4	39.4	-12.4	-12.3
Worst Pair	4,5	4,5	3,6	4,5
PS ACR-N (dB)	16.7	14.9	28.6	29.9
Freq. (MHz)	33.8	33.8	500.0	500.0
Limit (dB)	36.9	36.9	-15.3	-15.3





PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5	3,6	4,5	3,6
RL (dB)	4.2	8.4	4.2	8.5
Freq. (MHz)	474.0	23.3	474.0	500.0
Limit (dB)	8.0	19.2	8.0	8.0





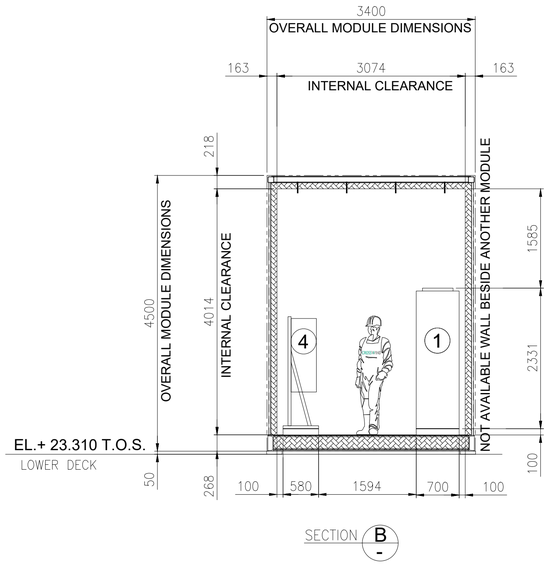
Compliant Network Standards:

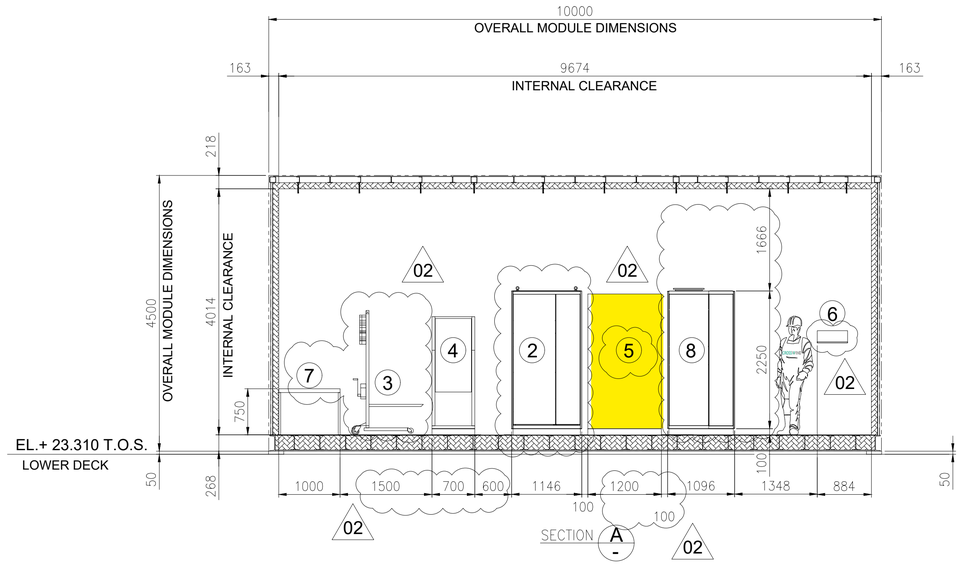
10BASE-T	100BASE-TX	100BASE-T4
1000BASE-T	2.5GBASE-T	5GBASE-T
10GBASE-T	ATM-25	ATM-51
ATM-155	100VG-AnyLan	TR-4
TR-16 Active	TR-16 Passive	

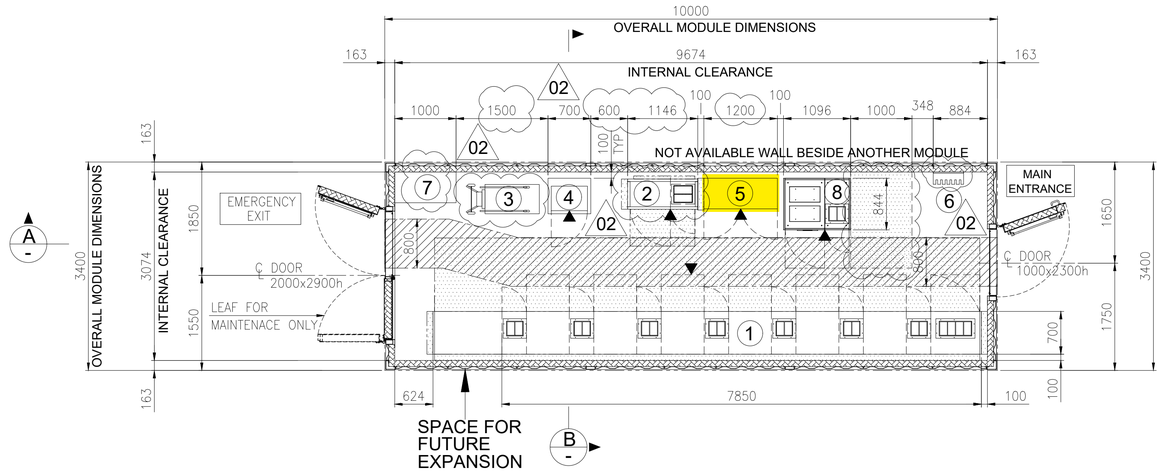
LinkWare™ PC Version 11.4

FLUKE networks

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





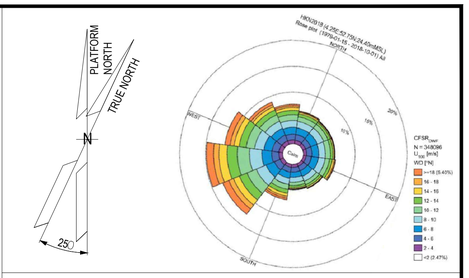


EQUIPMENT LAYOUT
"B-200" LV (400V) SWITCHGEAR ROOM
BOTTOM PLAN

1

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	
3	-	SERVICE TROLLEY FOR 400V SWITCHGEAR	1034	490	2030	
4	CN-200N1	ICCP PANEL	700	580	1830	
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	02
6	-	TOOL BOX	495	200	200	
7	-	TABLE	1000	500	750	
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DELETED.
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
4. FOR OTHER ITEMS, CORRECT LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND DEDICATED PROJECT DOCUMENTATION.
5. HEIGHT OF ALL PANELS IN THE EQUIPMENT LIST TABLE IS WITHOUT THE BASE FRAME (100mm)

02

LEGEND

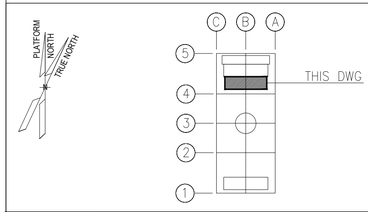
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR - WIDTH 800mm.
_____ MAINTENANCE AREA - VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

REFERENCES

DOCUMENT TITLE	DOCUMENT NUMBER
SG-200N1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00007
SG-200D2 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00008
DP-200N1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00009
AC UPS – GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS	1724000372-EL-DA-00004
AC UPS – BATTERY LAYOUT INTERCONNECTING DIAGRAM	1724000372-EL-DG-00011
B-200 -GENERAL ARRANGEMENT DRAWINGS - E&I SHELTER	1724000049-AR-DA-00015
ICCC PANEL GENERAL ARRANGEMENT DRAWING	144671-CORR-TF-FAB-DWG-0003

02

KEY PLAN



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

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

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

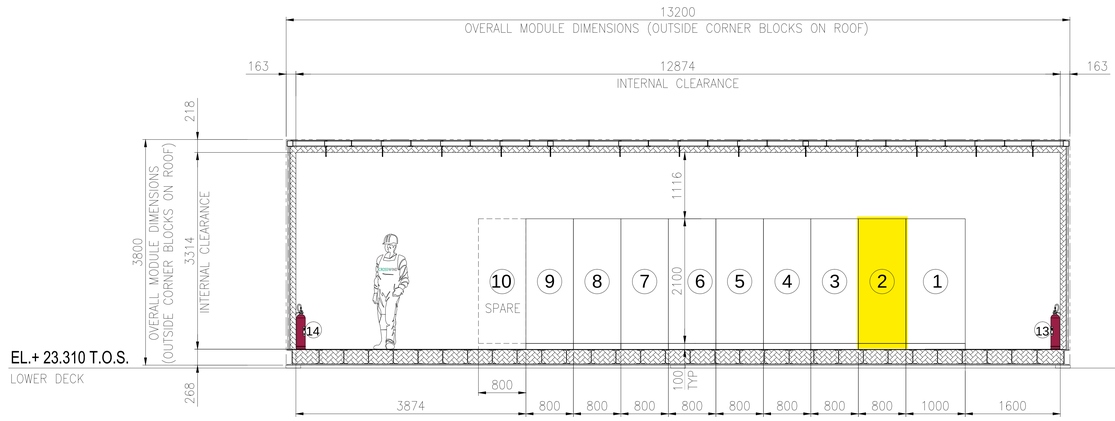
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LV SWITCHROOM

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN FMO	CHECKED LMA/AMA	APPROVED LMA/MDO	DATE 27/05/2024
A1	DRAWING NO. 123A90-DDL-EL-DL-20105	SHEET 001	REV. 02

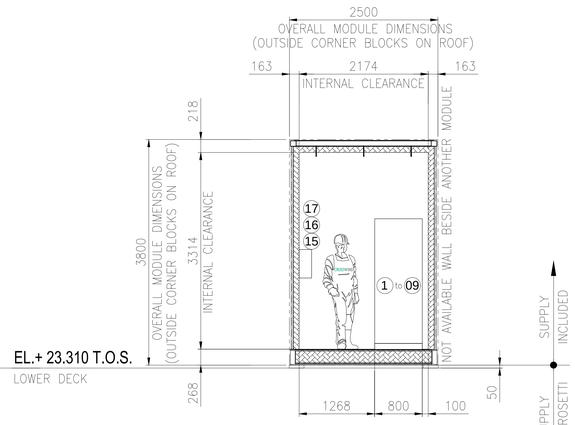
File Name : 123A90-DDL-EL-DL-20105_REV02.dwg

DRAWING NO. 123A90-DDL-IN-DL-40012

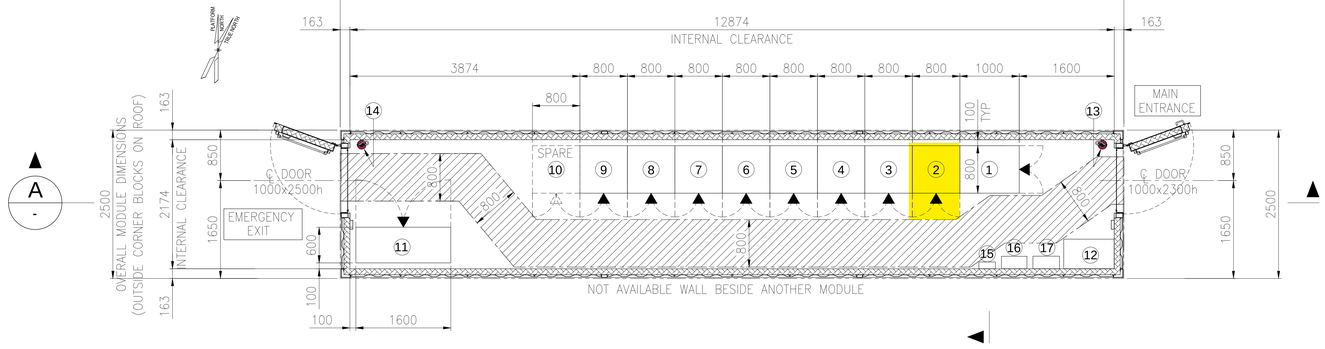
REV. 02



SECTION A -



SECTION B -

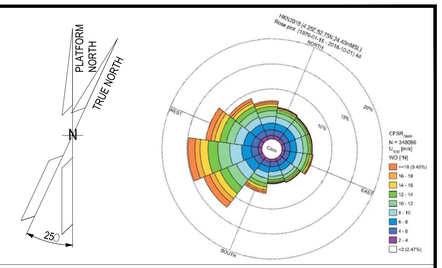


EQUIPMENT LAYOUT
"B-400" I&T EQUIPMENT ROOM
BOTTOM PLAN

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 ENCLOUSURE
_____ FRONT OF EQUIPMENT

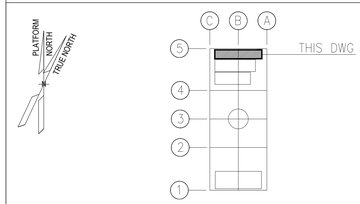
HOLDS

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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
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

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DL-40012

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

ROSETTI MARINO SpA

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-40015

REV. 01

LV SWITCHROOM (B-200)

I&T EQUIPMENT ROOM (ITER B400)

NETWORK CABINET - B400-NET-001

<01>

HVAC CABINET
B200-HSB-001

ITEM: SCALANCE XC208
PORT: P3 LAN

Ref. Vendor Doc.: 1724000049-HV-DA-00027

RJ45

B200-HSB-001/B400-NET-001
CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS

RJ45

SWITCH: COOP-01
PORT: P12

~~EMCS SYSTEM - B400-EMCS-001~~

400V SWITCHGEAR
SG-200N1

ITEM: REF615 PROTECTION FUNCTION (ABB)
PORT: X1

Ref. Vendor Doc.: 1723002197-EL-DG-00030

RJ45

SG-200N1/B400-NET-001.01
~~SG-200N1/B400-EMCS-001.01~~
CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS

RJ45

SWITCH: COOP-01
PORT: P15

400V SWITCHGEAR
SG-200N1

ITEM: REF615 PROTECTION FUNCTION (ABB)
PORT: X3

Ref. Vendor Doc.: 1723002197-EL-DG-00030

RJ45

SG-200N1/B400-NET-001.02
~~SG-200N1/B400-EMCS-001.02~~
CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS

RJ45

SWITCH: COOP-01
PORT: P04

400V SWITCHGEAR
SG-200N1

ITEM: ETH. SWITCH RSP25 SW1
PORT: ETH/SFP - PORT 1

Ref. Vendor Doc.: 1723002197-EL-DG-00030

RJ45

SG-200N1/B400-NET-001.03
~~SG-200N1/B400-EMCS-001.03~~
CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS

RJ45

SWITCH: COOP-01
PORT: P02

ACB PANEL
SG-200D2

ITEM: ETH. SWITCH RSP25 SW1
PORT: ETH/SFP - PORT 1

Ref. Vendor Doc.: 1723002197-EL-DG-00032

RJ45

SG-200D2/B400-NET-001
~~SG-200D2/B400-EMCS-001~~
CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS

RJ45

SWITCH: COOP-01
PORT: P21

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.	SHEET	REV.
	123A90-DDL-IN-DG-40015	034	01

File Name : 123A90-DDL-IN-DG-40015_Rev.01

DRAWING NO. 123A90-DDL-IN-DG-40015

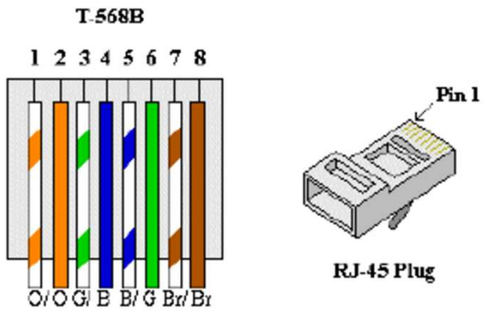
REV. 01

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

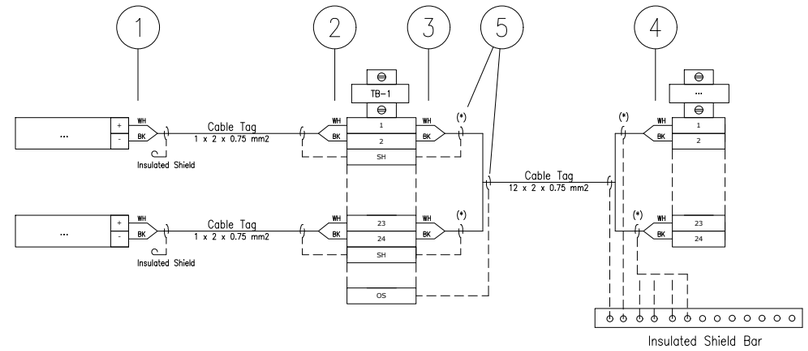
LEGENDS & SYMBOLS:

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

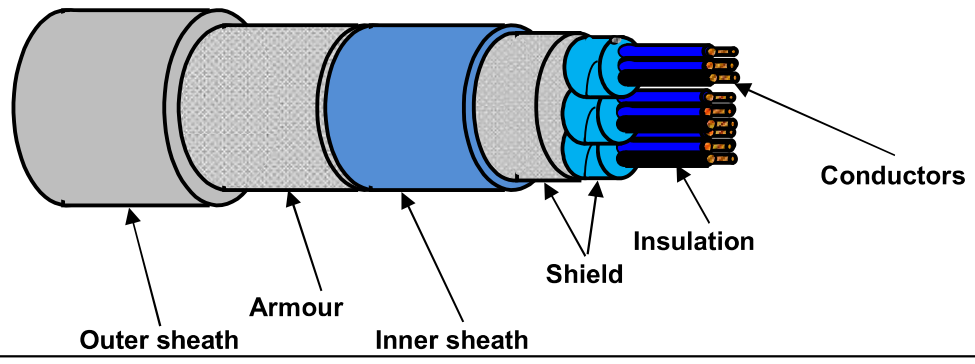
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Tag Number	Category	Discipline	Eng Status	NativeDoc	Parent Tag	Grouping	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
B200-HSB-001/B400-NET-001	Cable	IN	VFC	123A90-DDL-IN-LIS-40091		Int-Ext				B200-HSB-001	Distribution & HVAC Panel - LV Room	Lower Deck (B-200)	B400-NET-001	Network Cabinet / EMCS System	Lower Deck (B-400)	TELCV03-4X2X23AWG	Cable CAT 6A S/FTP 4x2x23AWG Armoured LSZH - Grey	M20S	n.a.			n.a.				I-MCT-202 / B-200-SEC-1C / B-200-SEC-1B / B-200-SEC-1A / L-SEC-5 / 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.

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.

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

ALEXSISTEMI spa

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV = ISO 9001 =

Doc. Name: **Dimensional Check and Visual Inspection**		*Report No.06*
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:** LV (400V) SWITCH ROOM B-200
S/N: B200	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION : ON SITE ☒ OFF SITE ☐

DATE OF TEST: 23/07/2024

REFERENCE DRAWING: 1724000049-AR-DA-00015 / 1724000049-ST-DD-00011 / 1724000049-AR-DD-00019

REFERENCE DOCUMENT: ISO 17637 / EEMUA 158

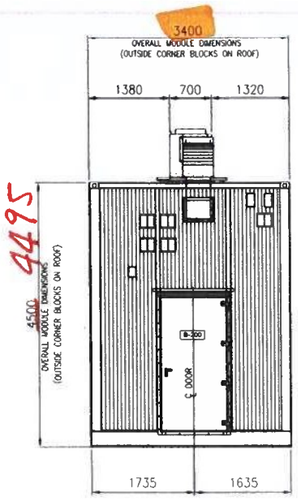
Inspection List	YES	NO	N.A.
Verificare tutte le quote di seguito indicate a disegno:			
NORTH VIEW	✓		
EAST VIEW	✓		
SOUT VIEW	✓		
WEST VIEW	✓		
TOP VIEW	✓		
SECTION A-A	✓		
SECTION B-B	✓		
SECTION C-C	✓		
SECTION D-D	✓		
SECTION E-E	✓		
BASEFRAME LOCATION	✓		

Comments:

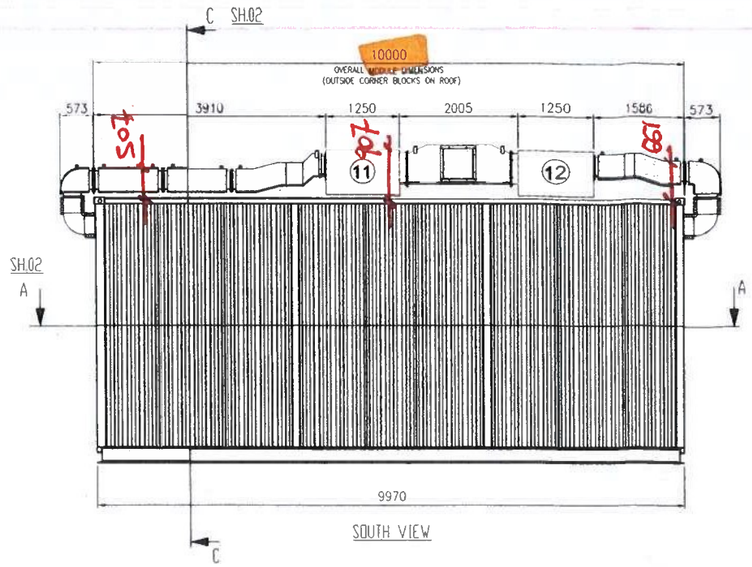
DWG attached.

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	COICEA CATALIN ROSETTI MARINO (R)			

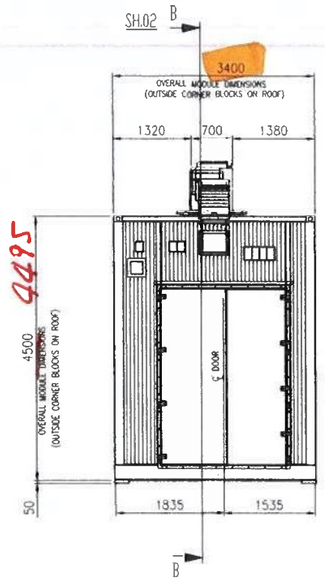
DRAWING NO. 1724000049-AR-DA-00015 REV 02



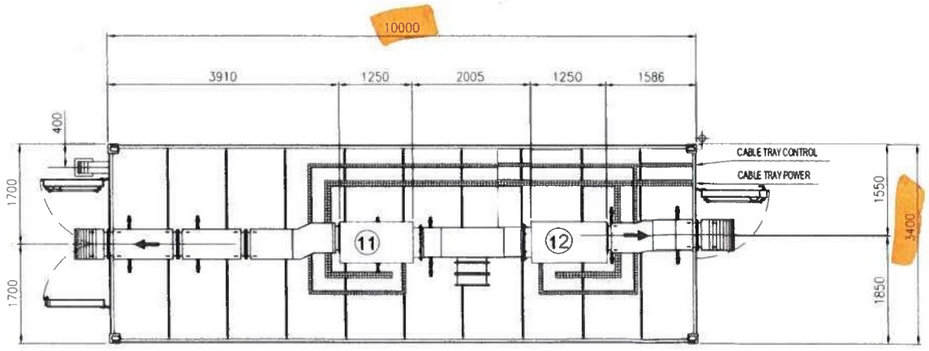
EAST VIEW



SOUTH VIEW



WEST VIEW



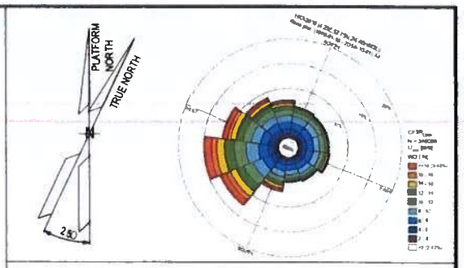
TOP VIEW

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	4900
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	600
3		*DELETED*				
4	CN-200N1	ICCP PANEL	700	580	1830	250
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	400
6	-	TOOL BOX	495	335	200	20
7	-	TABLE	1000	500	750	50
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	1000
9	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
10	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
11	HHU-77003	AIR HANDLING UNIT A	1250	850	900	140
12	HHU-77004	AIR HANDLING UNIT B	1250	850	900	140
13	HSS-77-001	SPACE HEATER 1	184	145	1100	5
14	HSS-77-002	SPACE HEATER 2	184	145	1100	5
15	HSS-77-003	SPACE HEATER 3	184	145	1100	5

MASTER COPY
INTERNAL TEST

02



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~~

remove Note 2 and 3 typical for all sh.

REFERENCE

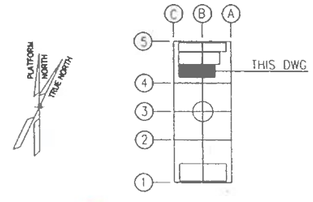
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"B-200" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00065
"B-200" DETAILED DRAWING	1724000049-AR-DD-00019
PAINTING PROCEDURE	1724000049-MAT-PRO-00005

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

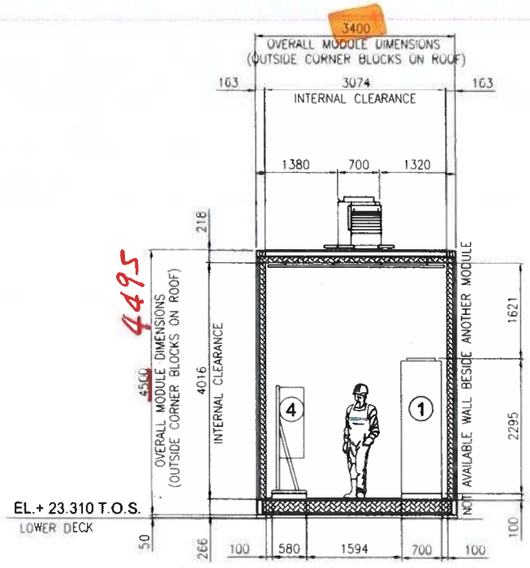
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-200 GENERAL ARRANGEMENT DRAWINGS

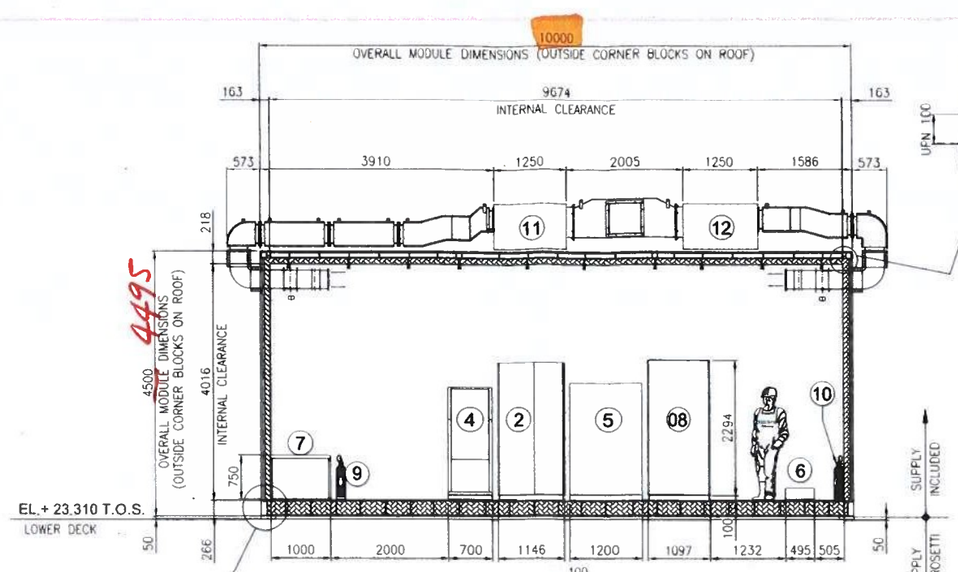
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A1	DRAWING NO. 1724000049-AR-DA-00015		SHEET 001 / REV. 02

File Name : 1724000049-AR-DA-00015-REV.02

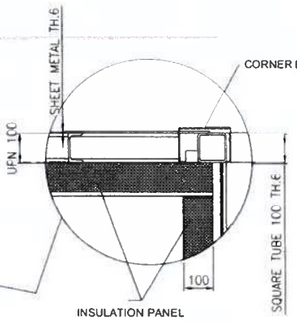
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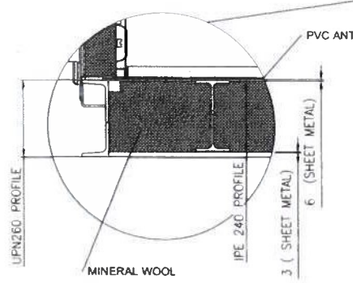


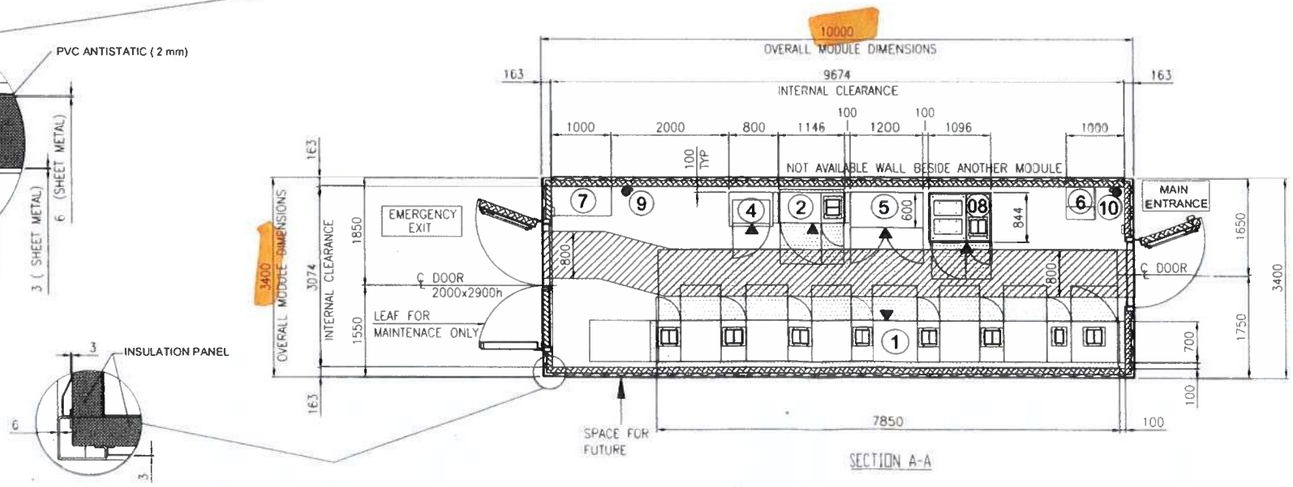
SECTION C-C



SECTION B-B







SECTION A-A

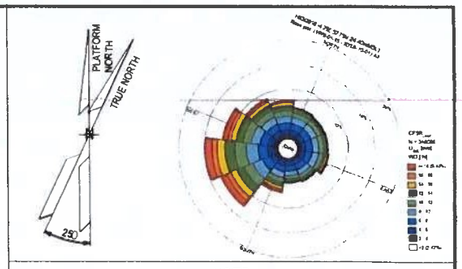
EQUIPMENT LAYOUT
"B-200" LV (400V) SWITCHGEAR ROOM
BOTTOM PLAN

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	4900
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	600
3		*DELETED*				
4	CN-200N1	ICCP PANEL	700	580	1830	250
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	400
6	-	TOOL BOX	495	335	200	20
7	-	TABLE	1000	500	750	50
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	1000
9	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
10	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
11	HHU-77003	AIR HANDLING UNIT A	1250	850	900	140
12	HHU-77004	AIR HANDLING UNIT B	1250	850	900	140
13	HSS-77-001	SPACE HEATER 1	184	145	1100	5
14	HSS-77-002	SPACE HEATER 2	184	145	1100	5
15	HSS-77-003	SPACE HEATER 3	184	145	1100	5

MASTER COPY
INTERNAL TEST

02



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

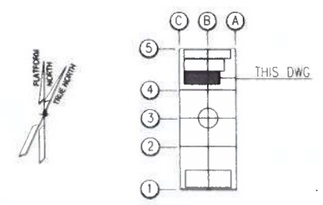
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00065
"B-200" DETAILED DRAWING	1724000049-AR-DD-00019
PAINTING PROCEDURE	1724000049-MAT-PRO-00005

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

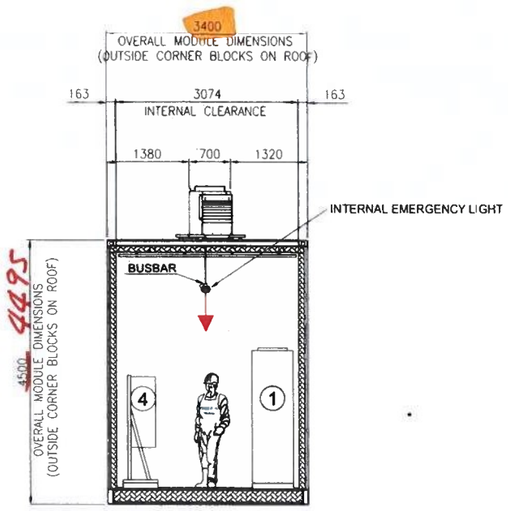
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-200 GENERAL ARRANGEMENT DRAWINGS

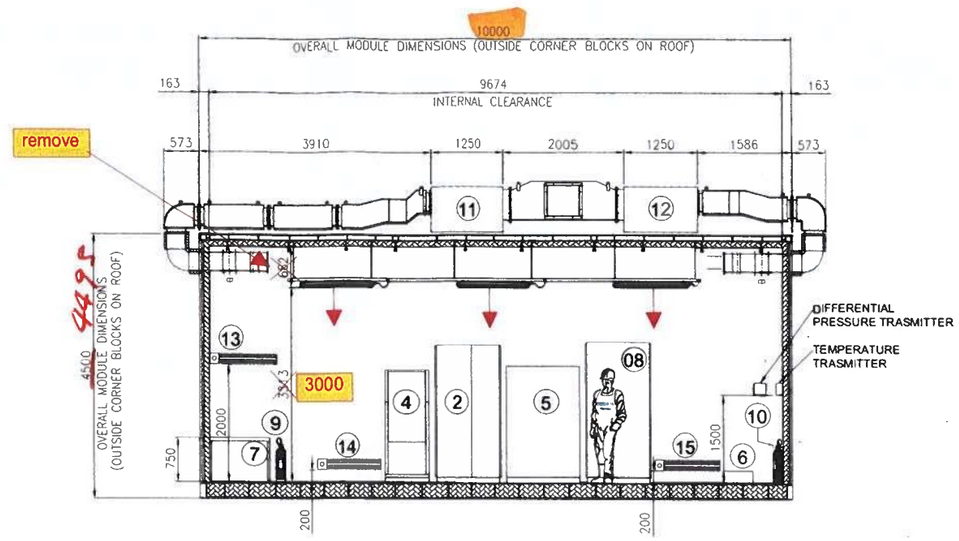
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File Name : 1724000049-AR-DA-00015-REV.02

DRAWING NO 1724000049-AR-DA-00015 REV. 02



SECTION E-E



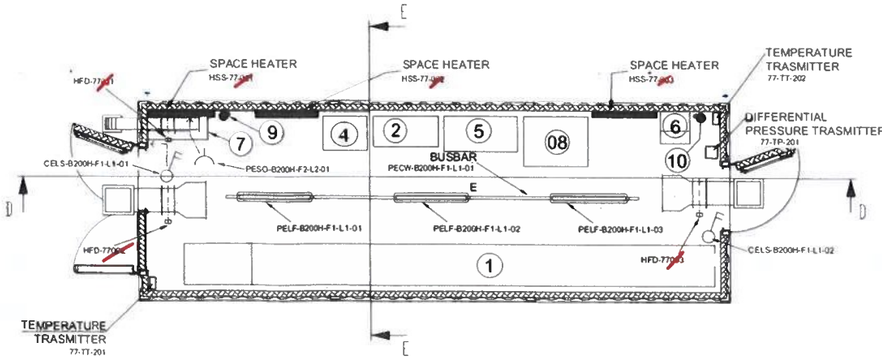
SECTION D-D

Verify that TAGs used on this document are the same used on all other documents, without doubles TAG

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

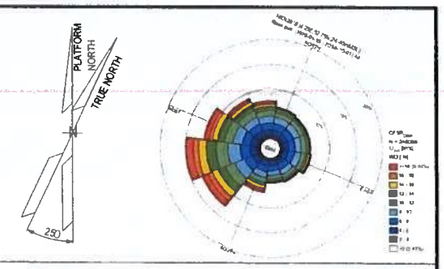


EQUIPMENT LIST

REF	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)
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3		*DELETED*				
4	CN-200N1	ICCP PANEL	700	580	1830	250
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	400
6	-	TOOL BOX	495	335	200	20
7	-	TABLE	1000	500	750	50
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	1000
9	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
10	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
11	HHU-77003	AIR HANDLING UNIT A	1250	850	900	140
12	HHU-77004	AIR HANDLING UNIT B	1250	850	900	140
13	HSS-77-~~001~~	SPACE HEATER 1	184	145	1100	5
14	HSS-77-~~002~~	SPACE HEATER 2	184	145	1100	5
15	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.)



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

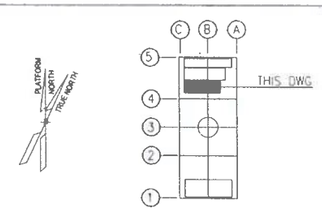
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00065
"B-200" DETAILED DRAWING	1724000049-AR-DD-00019
PAINTING PROCEDURE	1724000049-MAT-PRO-00005

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

Next revision: 03 Accepted For Construction (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-200 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-00015	SHEET 003	REV 02

File Name 1724000049-AR-DA-00015-REV.02

02

MASTER COPY
INTERNAL TEST

DRAWING NO. 1724000049-ST-DD-00011 REV 01

10000

OVERALL MODULE DIMENSIONS (OUTSIDE CORNER BLOCKS ON ROOF)

250 4650 250 4650 250

250 UNP260 250

UNP260 UNP260

3370 2983 120 735 120 735

250 250 250 250 250 250

250 2923 250

3400

OVERALL MODULE DIMENSIONS (OUTSIDE CORNER BLOCKS ON ROOF)

UNP260

No. 2 HOLES Ø18
FOR M16 SCREW
AT EACH CORNER
(SCREW SUPPLY by ROSETTI)

HOLES 40 9890 9970 40

80 170 250

25 100 11.5 120 30

11.5 250

TYPICAL CORNER PLATE POSITION

TYPICAL CENTRAL PLATE POSITION

ALEX SISTEMI

50 Ø18

EL.+23.310 TOS
LOWER DECK

ROSETTI MARINO

M16

TYPICAL FIXING DETAIL
SCALE 1 : 10

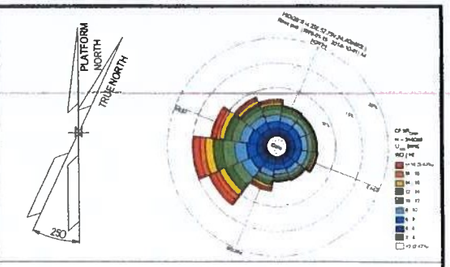
ROSETTI MARINO

1	NO-COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
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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-200



NOTE

1) ALL DIMENSIONS ARE IM MM.

REFERENCE

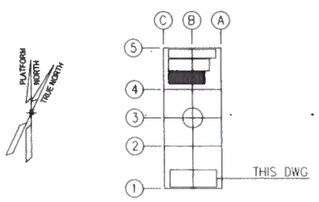
DOCUMENT TITLE	DOCUMENT NUMBER
B-200 STRUCTURAL CALCULATION - E&I SHELTERS	1724000049-ST-CA-00007

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-200 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-00011	SHEET 001/002	REV. 01

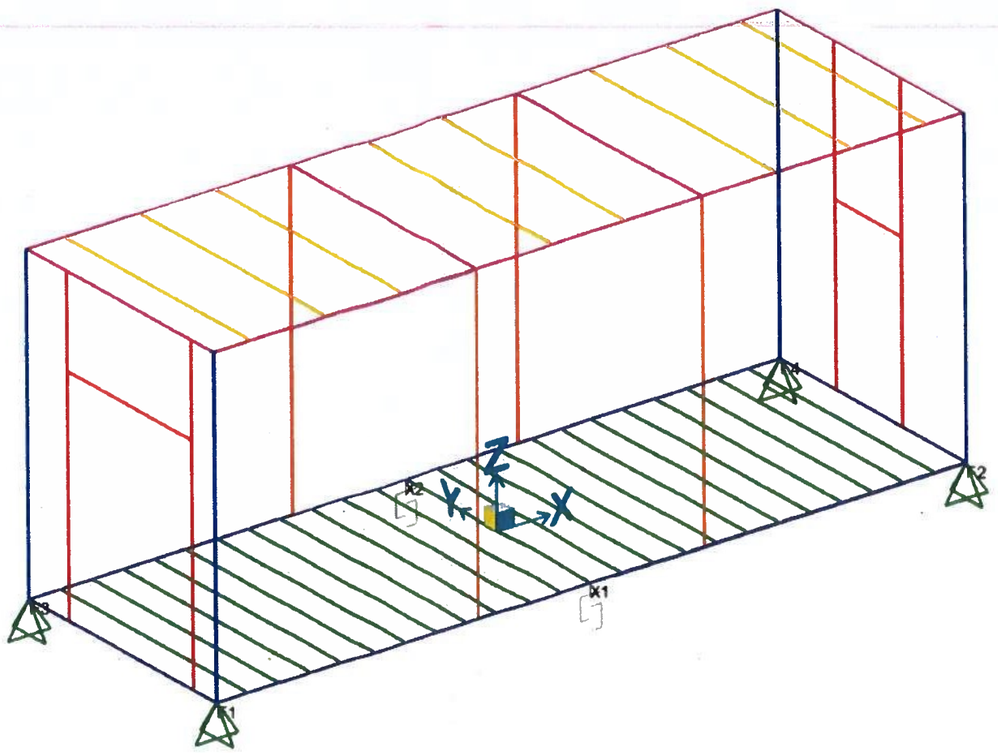
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MASTER COPY
INTERNAL TEST

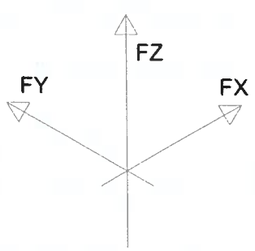
DRAWING NO 1724000049-ST-DD-00011 REV 01

TABLE: Joint Reactions

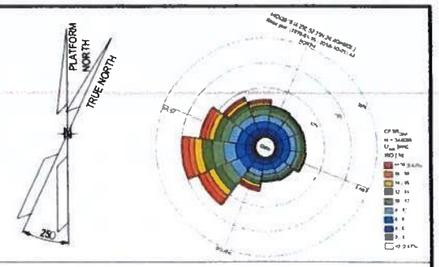
Joint	OutputCase	CaseType	StepType	Fx	Fy	Fz	Mx	My	Mz
Text	Text	Text	Text	KN	KN	KN	KN-m	KN-m	KN-m
F1	DEAD	NonStatic	Last Step	7,06	3,99	20,50	0,00	0,00	0,00
F1	SD	NonStatic	Last Step	13,01	4,55	19,04	0,00	0,00	0,00
F1	LIVE	NonStatic	Last Step	14,07	5,34	39,40	0,00	0,00	0,00
F1	WIND X	NonStatic	Last Step	-11,37	2,10	-9,99	0,00	0,00	0,00
F1	WIND Y	NonStatic	Last Step	-11,97	-27,03	-35,97	0,00	0,00	0,00
F1	NOT X	NonStatic	Last Step	-0,06	-0,01	-0,02	0,00	0,00	0,00
F1	NOT Y	NonStatic	Last Step	-0,03	-0,06	-0,07	0,00	0,00	0,00
F1	SLU LIVE	Combination		49,68	19,93	114,19	0,00	0,00	0,00
F1	SLU WIND X	Combination		22,69	12,58	70,68	0,00	0,00	0,00
F1	SLU WIND Y	Combination		21,98	-22,38	39,50	0,00	0,00	0,00
F1	SLE LIVE	Combination		34,05	13,81	78,85	0,00	0,00	0,00
F1	SLE WIND X	Combination		5,01	2,47	18,67	0,00	0,00	0,00
F1	SLE WIND Y	Combination		4,60	-17,93	0,48	0,00	0,00	0,00
F2	DEAD	NonStatic	Last Step	-7,04	3,97	20,19	0,00	0,00	0,00
F2	SD	NonStatic	Last Step	-13,96	6,14	38,62	0,00	0,00	0,00
F2	LIVE	NonStatic	Last Step	-13,28	3,92	24,14	0,00	0,00	0,00
F2	WIND X	NonStatic	Last Step	-3,45	-2,84	-3,91	0,00	0,00	0,00
F2	WIND Y	NonStatic	Last Step	11,75	-27,17	-35,34	0,00	0,00	0,00
F2	NOT X	NonStatic	Last Step	-0,06	0,01	0,02	0,00	0,00	0,00
F2	NOT Y	NonStatic	Last Step	0,03	-0,06	-0,07	0,00	0,00	0,00
F2	SLU LIVE	Combination		-50,06	20,16	120,32	0,00	0,00	0,00
F2	SLU WIND X	Combination		-45,73	6,00	93,00	0,00	0,00	0,00
F2	SLU WIND Y	Combination		-27,49	-23,20	55,28	0,00	0,00	0,00
F2	SLE LIVE	Combination		-34,31	13,96	82,90	0,00	0,00	0,00
F2	SLE WIND X	Combination		-20,96	-0,94	44,26	0,00	0,00	0,00
F2	SLE WIND Y	Combination		-10,32	-17,97	22,25	0,00	0,00	0,00
F3	DEAD	NonStatic	Last Step	7,04	-3,98	20,19	0,00	0,00	0,00
F3	SD	NonStatic	Last Step	12,77	-4,86	18,96	0,00	0,00	0,00
F3	LIVE	NonStatic	Last Step	14,04	-5,08	38,74	0,00	0,00	0,00
F3	WIND X	NonStatic	Last Step	-11,51	-2,08	-10,05	0,00	0,00	0,00
F3	WIND Y	NonStatic	Last Step	5,77	-18,59	22,08	0,00	0,00	0,00
F3	NOT X	NonStatic	Last Step	-0,06	0,01	-0,02	0,00	0,00	0,00
F3	NOT Y	NonStatic	Last Step	0,03	-0,06	0,07	0,00	0,00	0,00
F3	SLU LIVE	Combination		49,32	-20,17	112,85	0,00	0,00	0,00
F3	SLU WIND X	Combination		27,47	-26,58	86,97	0,00	0,00	0,00
F3	SLU WIND Y	Combination		48,20	-46,39	125,52	0,00	0,00	0,00
F3	SLE LIVE	Combination		33,81	-13,98	77,93	0,00	0,00	0,00
F3	SLE WIND X	Combination		9,99	-16,56	35,77	0,00	0,00	0,00
F3	SLE WIND Y	Combination		22,09	-28,12	58,25	0,00	0,00	0,00
F4	DEAD	NonStatic	Last Step	-7,06	-3,98	20,32	0,00	0,00	0,00
F4	SD	NonStatic	Last Step	-11,82	-5,83	29,87	0,00	0,00	0,00
F4	LIVE	NonStatic	Last Step	-14,83	-4,17	30,77	0,00	0,00	0,00
F4	WIND X	NonStatic	Last Step	-3,46	2,81	-3,85	0,00	0,00	0,00
F4	WIND Y	NonStatic	Last Step	-5,55	-18,31	21,44	0,00	0,00	0,00
F4	NOT X	NonStatic	Last Step	-0,06	-0,01	0,02	0,00	0,00	0,00
F4	NOT Y	NonStatic	Last Step	-0,03	-0,06	0,06	0,00	0,00	0,00
F4	SLU LIVE	Combination		-49,27	-20,26	117,50	0,00	0,00	0,00
F4	SLU WIND X	Combination		-49,44	-19,65	104,31	0,00	0,00	0,00
F4	SLU WIND Y	Combination		-51,96	-45,00	134,66	0,00	0,00	0,00
F4	SLE LIVE	Combination		-33,80	-14,04	81,05	0,00	0,00	0,00
F4	SLE WIND X	Combination		-24,09	-12,55	52,86	0,00	0,00	0,00
F4	SLE WIND Y	Combination		-25,56	-27,34	70,57	0,00	0,00	0,00
X1	DEAD	NonStatic	Last Step	0,00	0,00	22,31	0,00	0,00	0,00
X1	SD	NonStatic	Last Step	0,00	0,01	48,86	0,00	0,00	0,00
X1	LIVE	NonStatic	Last Step	0,00	0,01	37,09	0,00	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	0,02	157,92	0,00	0,00	0,00
X1	SLU WIND X	Combination		0,00	0,02	141,23	0,00	0,00	0,00
X1	SLU WIND Y	Combination		0,00	0,02	141,23	0,00	0,00	0,00
X1	SLE LIVE	Combination		0,00	0,01	108,26	0,00	0,00	0,00
X1	SLE WIND X	Combination		0,00	0,01	71,17	0,00	0,00	0,00
X1	SLE WIND Y	Combination		0,00	0,01	71,17	0,00	0,00	0,00
X2	DEAD	NonStatic	Last Step	0,00	0,00	22,38	0,00	0,00	0,00
X2	SD	NonStatic	Last Step	0,00	-0,01	43,73	0,00	0,00	0,00
X2	LIVE	NonStatic	Last Step	0,00	-0,01	40,88	0,00	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	-0,02	156,02	0,00	0,00	0,00
X2	SLU WIND X	Combination		0,00	-0,02	137,62	0,00	0,00	0,00
X2	SLU WIND Y	Combination		0,00	-0,02	137,62	0,00	0,00	0,00
X2	SLE LIVE	Combination		0,00	-0,01	107,00	0,00	0,00	0,00
X2	SLE WIND X	Combination		0,00	-0,01	66,11	0,00	0,00	0,00
X2	SLE WIND Y	Combination		0,00	-0,01	66,11	0,00	0,00	0,00







MASTER COPY
INTERNAL TEST



NOTE

1) ALL DIMENSIONS ARE IM MM.

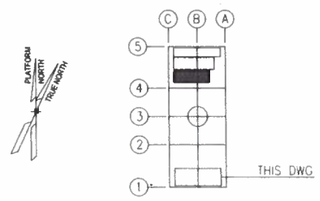
REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
B-200 STRUCTURAL CALCULATION - E&I SHELTERS	1724000049-ST-CA-00007

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

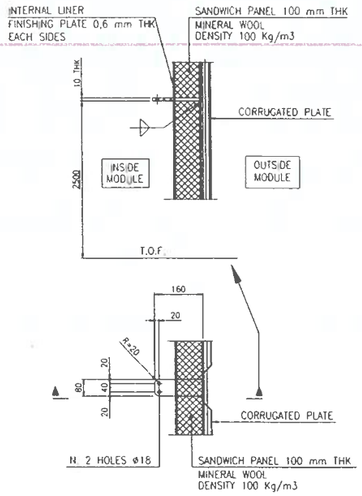
TITLE :
B-200 FOUNDATION DRAWING - E&I SHELTERS

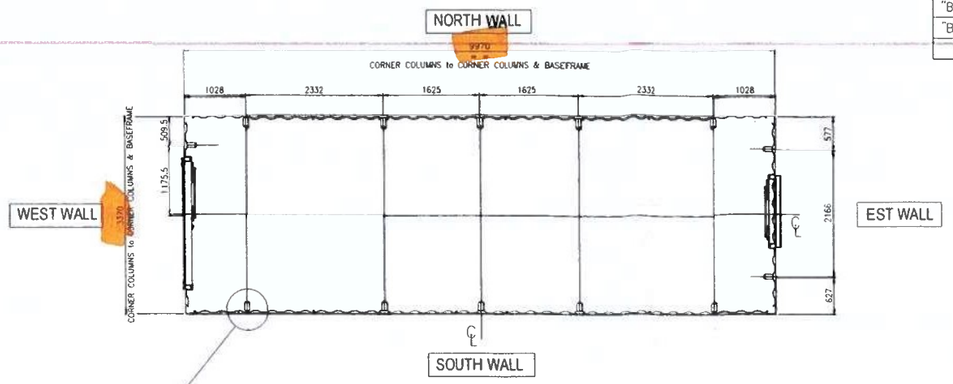
CONTRACT NO /TITLE CONTRACT_NO. 1724000049			SCALE N.A.
DRAWN M.G.	CHECKED M.R.	APPROVED O.A.	DATE 03/06/24
A1	DRAWING NO 1724000049-ST-DD-00011		SHEET 002/002 REV. 01

File Name: 1724000049-ST-DD-00011-REV 01

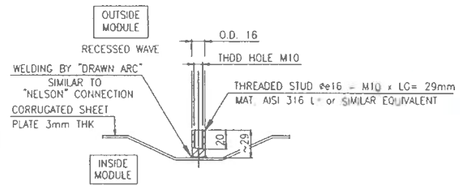
DRAWING NO. 1724000049-AR-DD-00019 REV 02

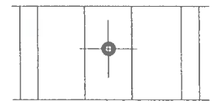
REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00015
"B-200" HVAC GENERAL ARRANGEMENT	1724000049-HV-DA-00065



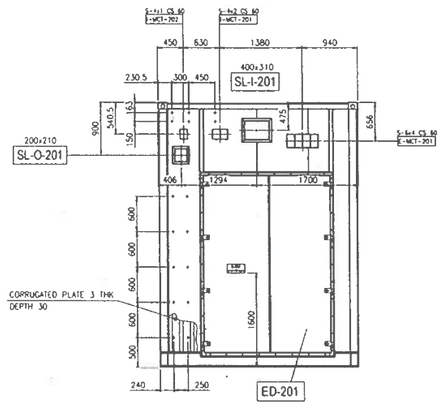


MODULE B-200
INTERNAL SEA FASTENING PLATES
PLAN

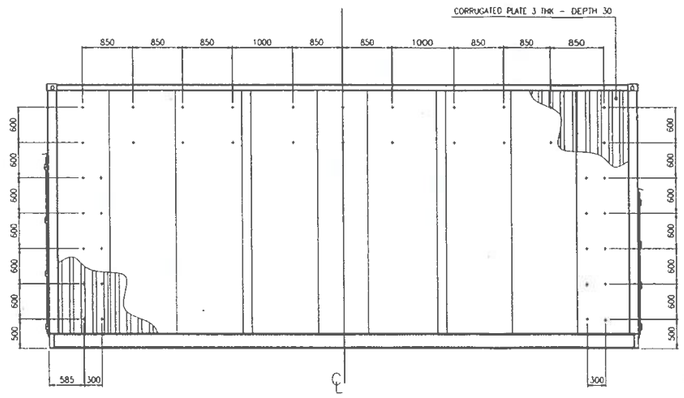




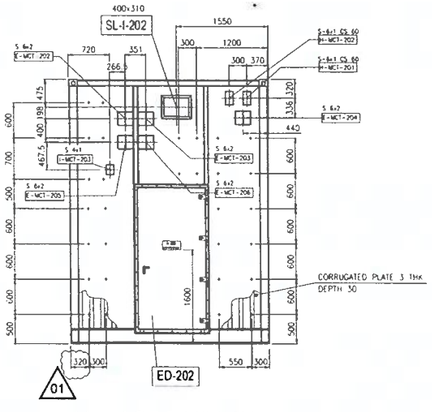
THREADED STUD INSTALLATION



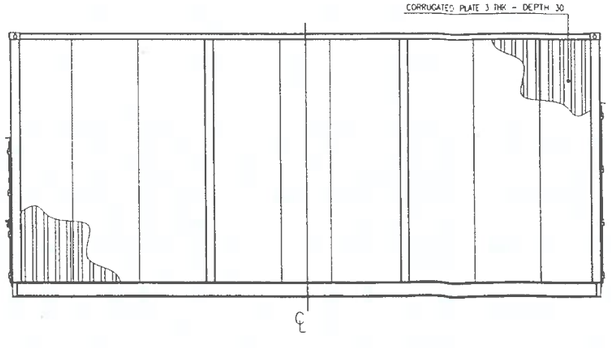
VIEW OF WEST WALL



VIEW OF NORTH WALL

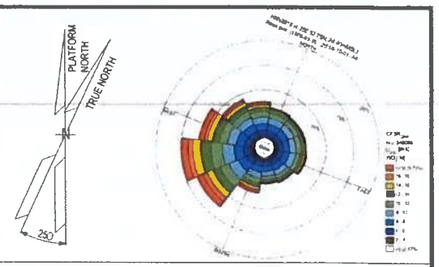


VIEW OF EAST WALL



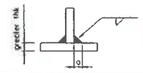
VIEW OF SOUTH WALL

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.



a= 0,7 smaller thk

LEGEND

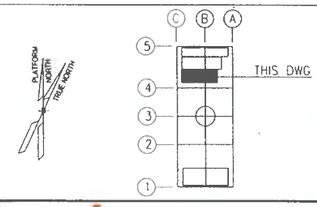
THREADED STUD Øe16 - M10 x LG= 29mm
T.O.F. TOP OF FLOOR

MCT LEGEND: E-MCT-201
- MCT TYPE & SIZE / BRAND ROXTEC
- MATERIAL: C.S.= PRIMED MILD STEEL; S.S.= AISI 316 L
- S 6x2 C.S. 60 — MCT DEPTH
- MCT SERVICE: E= ELECTRICAL; I= INSTRUMENTAL; H= HVAC
- PROGRESSIVE NUMBER FROM 01
- MODULE LOCATION: 1= B-100 2= B-200 3= B-300 4= B-400

HVAC SLEEVE LEGEND: SL-I-201
- 300x300 — INTERNAL SIZE OF DUCT L x H (mm)
- SERVICE: I= AIR IN; R= RECYCLE; O= OVERPRESSURE
- PROGRESSIVE NUMBER FROM 01
- MODULE LOCATION: 1= B-100 2= B-200 3= B-300 4= B-400

DOOR LEGEND: ED-201
- EXTERNAL DOOR
- PROGRESSIVE NUMBER FROM 01
- MODULE LOCATION: 1= B-100 2= B-200 3= B-300 4= B-400

KEY PLAN



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-201	532	238	60	6x4	
	E-MCT-202	271	238	60		6x2
	E-MCT-203	271	238	60		6x2
	E-MCT-204	271	238	60	6x2	
	E-MCT-205	271	238	60		6x2
	E-MCT-206	271	238	60		6x2
INSTRUMENTAL	I-MCT-201	271	179.5	60	4x2	
	I-MCT-202	140.5	179.5	60	4x1	
	I-MCT-203	140.5	179.5	60	4x1	
HVAC	H-MCT-201	140.5	238	60	6x1	
	H-MCT-202	140.5	238	60	6x1	

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 CLIENT REVIEW (ICR)

CROSSWIND — ROSETTI MARINO

TITLE :
B-200 DETAILED DRAWINGS-E&I SHELTERS

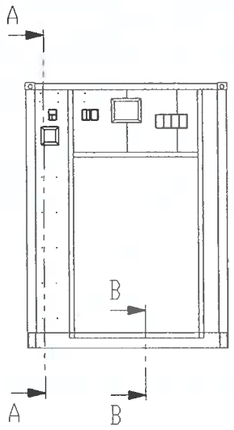
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO 1724000049-AR-DD-00019	SHEET 002	REV 02

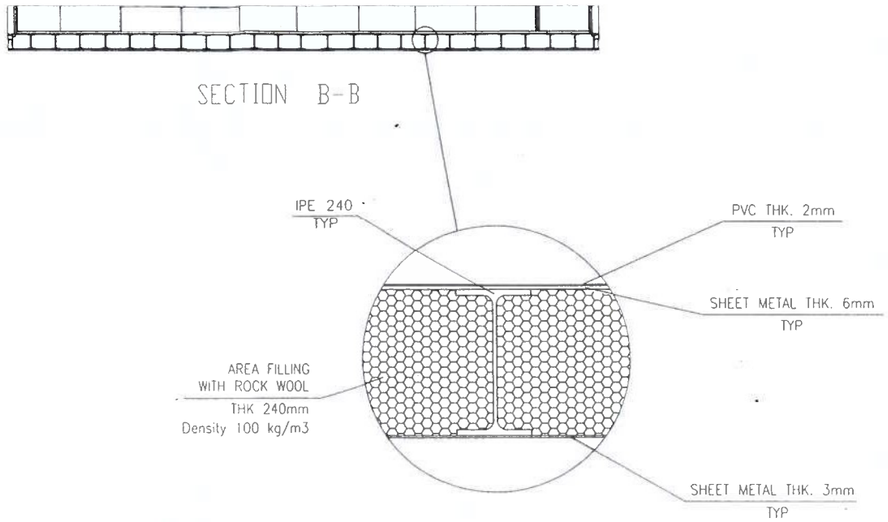
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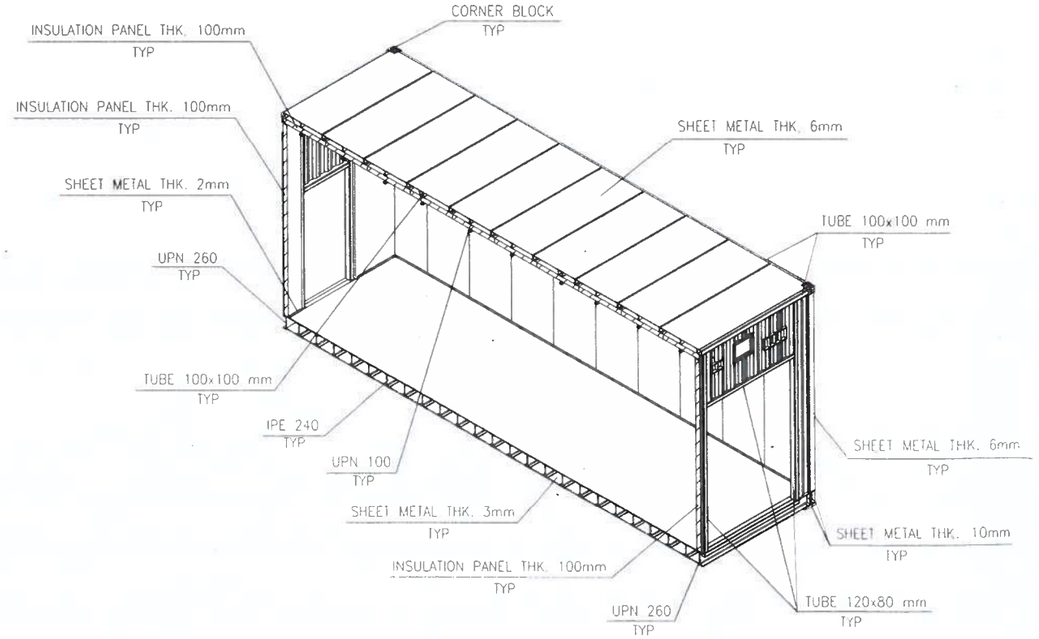
MODULE B-200

REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" STRUCTURAL CALCULATION	1724000049-ST-CA-00007
Weld Procedure Specifications (WPS), Weld Procedure Qualification Report (WPQR), Welding Map and Welders Qualifications	1724000049-WEL-RE-00003



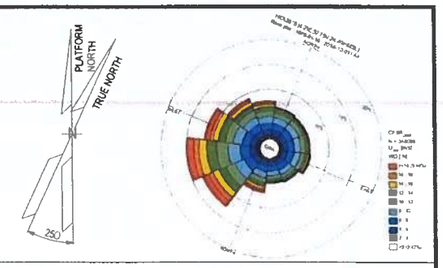


DETAIL "C"



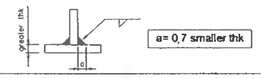
SECTION A-A

MASTER COPY
INTERNAL TEST



NOTES

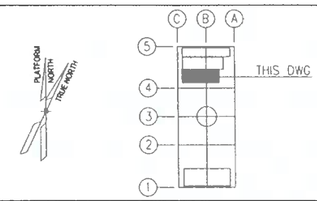
1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D.1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



LEGEND

HOLDS

KEY PLAN



ALEX

REV.	DATE	DRN	CHK'D	APP'D	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

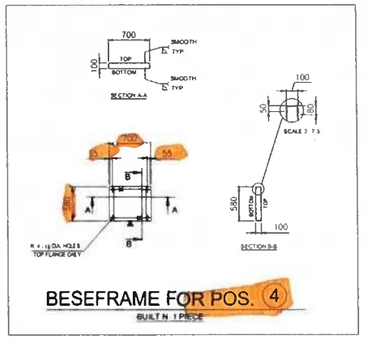
TITLE :
B-200 DETAILED DRAWINGS-E&I SHELTERS

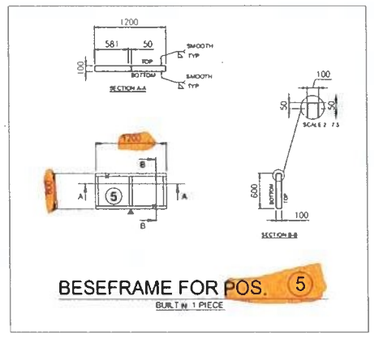
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DRAWN M.C.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00019	SHEET 001	REV 02

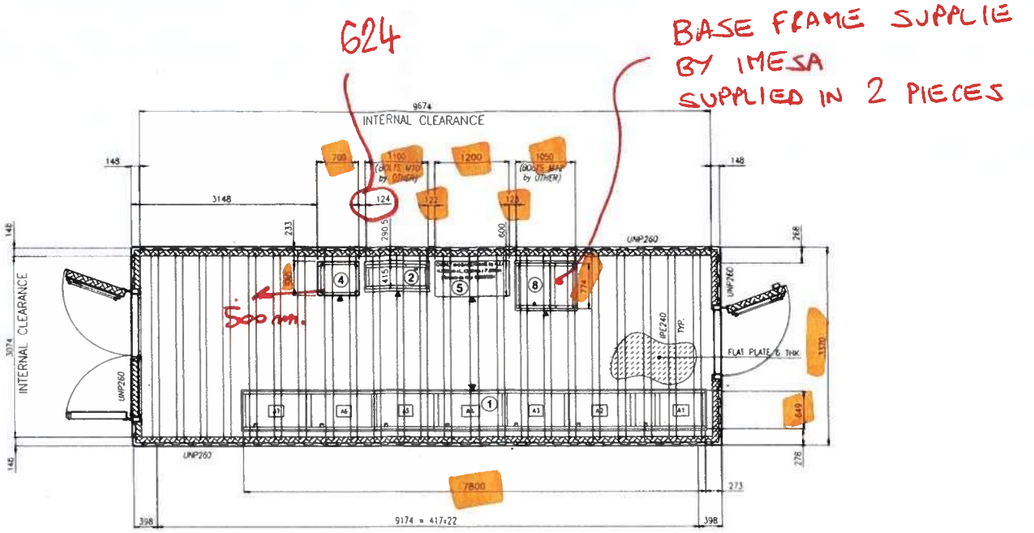
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DRAWING NO. 1724000049-AR-DD-00019 REV. 02

B-200
I&T EQUIPMENT ROOM
BASEFRAME LOCATION PLAN



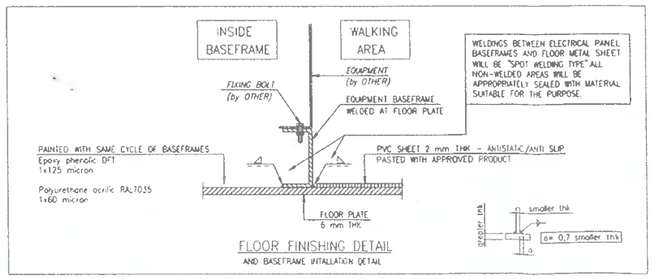




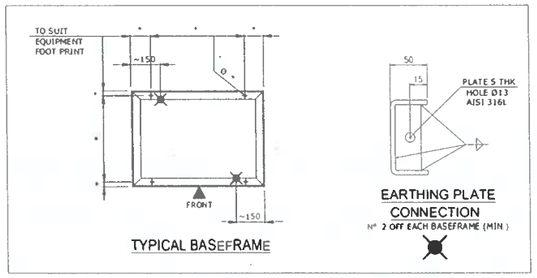


C 100x80x50 THK 6mm.
FROM BENT PLATE THK 6mm.
MAT. CARBON STEEL

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



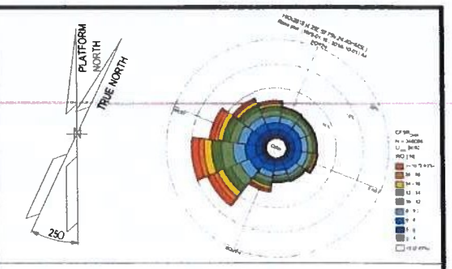
FLOOR FINISHING DETAIL
AND BASEFRAME INTALLATION DETAIL



TYPICAL BASEFRAME

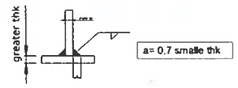
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	SCOPE
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	4900	ROSETTI MARINO
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	600	ROSETTI MARINO
4	CN-200N1	ICCP PANEL	700	580	1830	250	ASI
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	TBD	ASI
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	1000	ROSETTI MARINO

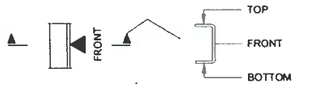


NOTES

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".

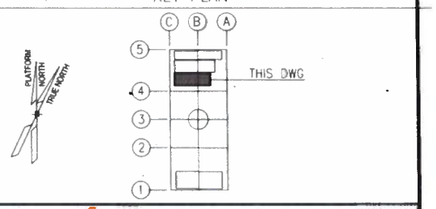


6. SURFACE TREATMENT ACCORDING DOCUMENT N. 1724000049-MAT-PRO-00004 - PAINTING PROCEDURE FINAL COLOUR LIGHT GREY RAL 7035.

LEGEND

ASI = ALEX SISTEMI

KEY PLAN



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 CLIENT REVIEW (ICR)

CROSSWIND

ROSETTI MARINO

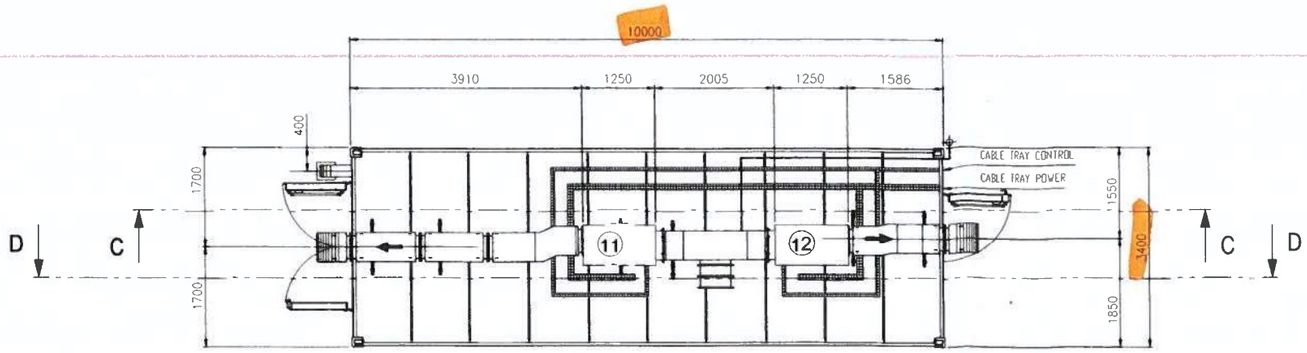
TITLE :
B-200 DETAILED DRAWINGS-E&I SHELTERS

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-00019 | SHEET 003 | REV. 02

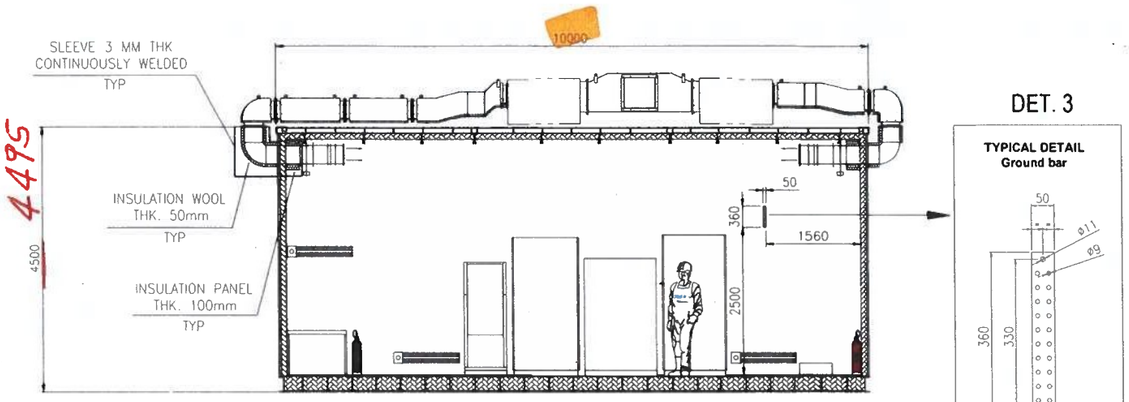
File Name : 1724000049-AR-DD-00019-REV.02

MASTER COPY
INTERNAL TEST

DRAWING NO. 1724000049-AR-DD-00019 REV. 02

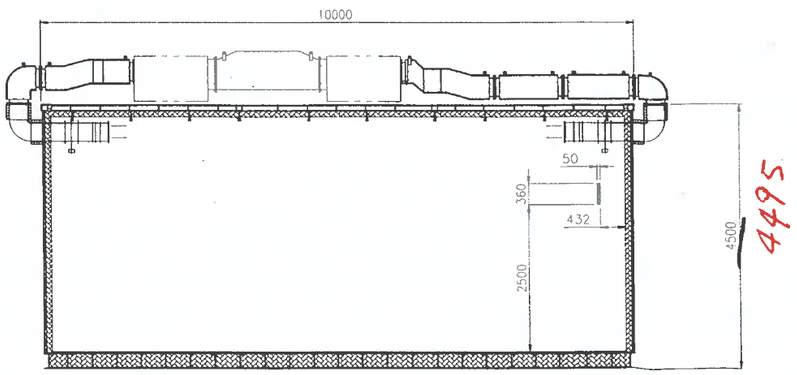


TOP VIEW



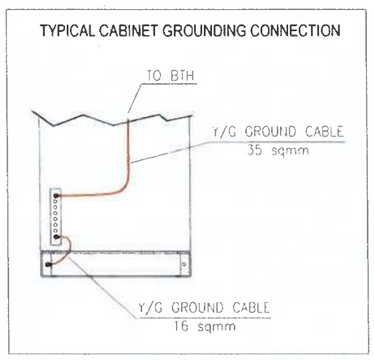
SECTION C-C

DET. 3

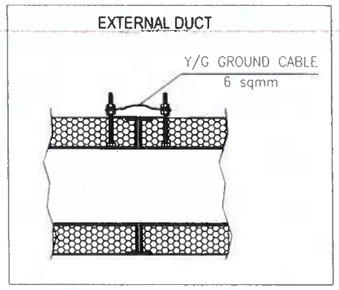


SECTION D-D

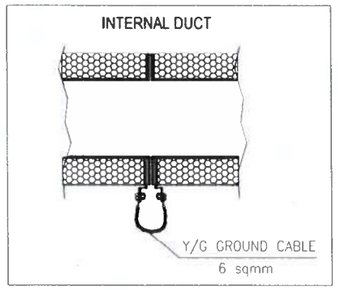
DET. 7



DET. 1

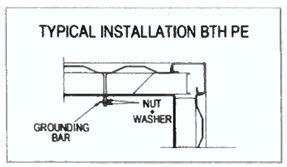


DET. 2

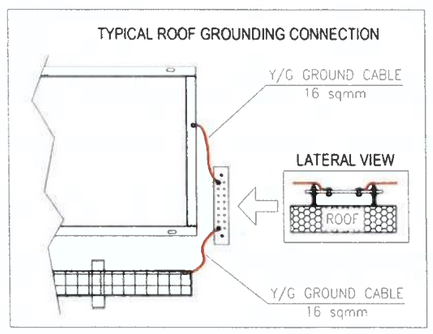


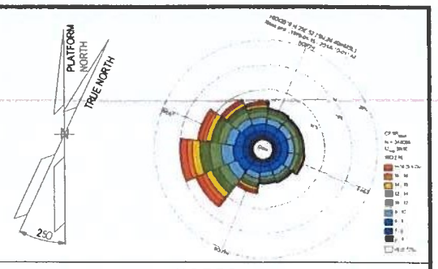
DET. 4

DET. 5



DET. 6



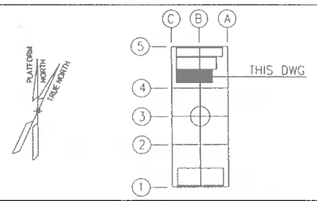


NOTES

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.

LEGEND

KEY PLAN



ALEX

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	11/07/24	M.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-200 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 00019	SHEET 004	REV 02

File Name : 1724000049-AR-DD-00019-REV.02

ALEXSISTEMI spa

Doc. Name: PAINTING CHECK		Report No.06 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:** LV (400V) SWITCH ROOM B-200
S/N: B200	**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	COICEU CATALIN ROSETTI MARINO (R)			

ALEXSISTEMI spa

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV = ISO 9001 =

Doc. Name: CHECK AND FUNCTIONAL TEST		Report No.06
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:** LV (400V) SWITCH ROOM B-200
S/N: B200	**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	X		

Comments:

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	COICEA CATALIN ROSETTI MARINO			

Mod.1.4.9

ALEXSISTEMI spa

Doc. Name: ELECTRICAL TESTS			Report No.06 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:** LV (400 V) SWITCH ROOM B-200
S/N: B200	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 23/07/2024

REFERENCE DRAWING:

- 1724000049-AR-DA-00015 - B-200 GENERAL ARRANGMENT DRAWINGS - E&I SHELTERS
- 1724000049-HV-DA-00065 - MODULE B-200 – HVAC SYSTEM–G.A. AND DETAILS
- 1724000049-HV-DA-00027 - B-200 HVAC and LIGHTING PANEL WIRING DRAWINGS and GENERAL ARRANGEMENT (INCL INTERCONNECTING) - E&I SHELTERS

REFERENCE DOCUMENT:

- 1724000049-HV-PID-00040 - B-200 PID - E&I SHELTERS
- 1724000049-HV-LIS-00048 - B-200 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.06 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-1-WPA-2023-05	**Description:** LV (400 V) SWITCH ROOM B-200
S/N: B200	**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.02 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:** LV (400 V) SWITCH ROOM B-200
S/N: B200	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 23/07/2024

REFERENCE DRAWING:

- 1724000049-AR-DA-00015 - B-200 GENERAL ARRANGMENT DRAWINGS - E&I SHELTERS
- 1724000049-HV-DA-00065 - MODULE B-200 – HVAC SYSTEM–G.A. AND DETAILS
- 1724000049-HV-DA-00027 - B-200 HVAC and LIGHTING PANEL WIRING DRAWINGS and GENERAL ARRANGEMENT (INCL INTERCONNECTING) - E&I SHELTERS

REFERENCE DOCUMENT:

- 1724000049-HV-PID-00040 - B-200 PID - E&I SHELTERS
- 1724000049-HV-CA-00036 - B-200 HVAC CALCULATION REPORT (Incl HVAC SYS CALC and HEAT DISSIPATION CALC) - E&I SHELTERS
- 1724000049-HV-LIS-00048 - B-200 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.02 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:** LV (400 V) SWITCH ROOM B-200
S/N: B200	**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