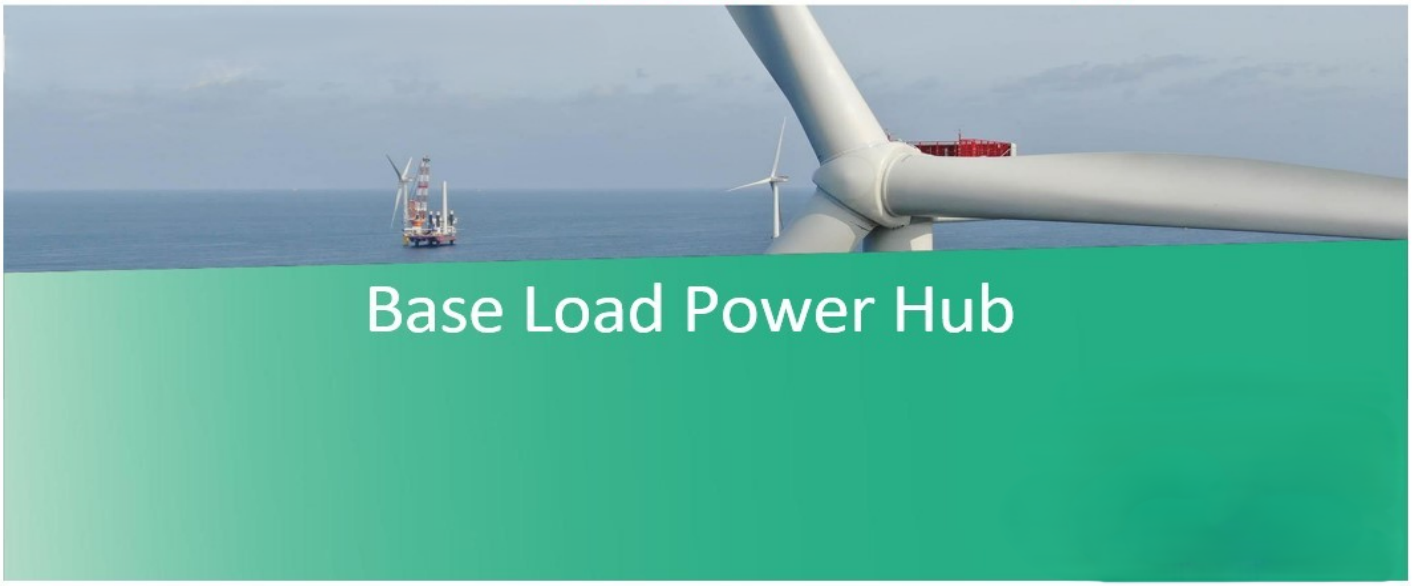
CROSSWIND

ROSETTI MARINO

PROVERLIS

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



MECHANICAL COMPLETION DOSSIER (ONSHORE)

SYSTEM	77 Heating & Ventilation
SUBSYSTEM	77-40 HVAC I&T Equipment Room B-400

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

Sub System N°:	77-40	Tick as appropriate	ONSHORE	O
Description:	HVAC I&T Equipment Room B-400		OFFSHORE	NA

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

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

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

ROSETTI MARINO

123A90 - HOLLANDSE KUST NOORD WIND PARK
BLPH Project

CROSSWIND

Ready For Commissioning (RFC) Certificate

COMPLETE	●	PARTIAL	

Revision:	2		Issued on:	2024-12-03	
System:	77	/	Heating & Ventilation		
SubSystem:	77-40	/	HVAC I&T Equipment Room B-400		

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: 7	B: 52

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	2024-12-04	2024-12-16	2024-12-16	2024-12-16
Signature	PROVERLIS Digitaly signed by Wolmer Borghi 2024-12-04T14:18:38.809Z	PROVERLIS Digitaly signed by Anthony Iveson 2024-12-16T13:17:24.616Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2024-12-16T13:33:23.194Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2024-12-16T13:33:40.931Z

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-40 & process: MC

Electrical	77-40 HVAC I&T Equipment Room B-400

ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
83026-CEL	LV Switchgear / HVAC panels - ITER	ONSHORE	C10000551	CPX09	100	2024-10-15	RFC 1
84317-CEL	AC UPS - PAS DB / UCP - HVAC ITER	ONSHORE	C10000593	CPX09	100	2024-11-23	RFC 2
B-400	I&T Equipment Room B-400	ONSHORE	C10002305	CZX01E	100	2024-10-15	RFC 1
B400-HSB-001	Distribution & HVAC Panel - I&T Equipment Room	ONSHORE	C10000840	CPX15	100	2024-10-15	RFC 1

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-40 & process: MC

Instrumental	77-40 HVAC I&T Equipment Room B-400

ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
77-HS-012A	Hand Switch for Fire&Gas Damper HFD-77012	ONSHORE	C10002099	CJX00	100	2024-10-15	RFC 1
77-HS-012B	Hand Switch for Fire&Gas Damper HFD-77012	ONSHORE	C10002100	CJX00	100	2024-10-15	RFC 1
77-HS-013A	Hand Switch for Fire&Gas Damper HFD-77013	ONSHORE	C10002101	CJX00	100	2024-10-15	RFC 1
77-HS-013B	Hand Switch for Fire&Gas Damper HFD-77013	ONSHORE	C10002102	CJX00	100	2024-10-15	RFC 1
77-HS-014A	Hand Switch for Fire&Gas Damper HFD-77014	ONSHORE	C10002103	CJX00	100	2024-10-15	RFC 1
77-HS-014B	Hand Switch for Fire&Gas Damper HFD-77014	ONSHORE	C10002104	CJX00	100	2024-10-15	RFC 1
77-HS-015A	Hand Switch for Fire&Gas Damper HFD-77015	ONSHORE	C10002105	CJX00	100	2024-10-15	RFC 1
77-HS-015B	Hand Switch for Fire&Gas Damper HFD-77015	ONSHORE	C10002106	CJX00	100	2024-10-15	RFC 1
77-HS-016A	Hand Switch for Fire&Gas Damper HFD-77016	ONSHORE	C10002107	CJX00	100	2024-10-15	RFC 1
77-HS-016B	Hand Switch for Fire&Gas Damper HFD-77016	ONSHORE	C10002108	CJX00	100	2024-10-15	RFC 1
B-400	I&T Equipment Room B-400	ONSHORE	C10002306	CZX01I	100	2024-10-15	RFC 1
C-77-HS-012A/77-HS-012B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000419	CJX10	100	2024-10-15	RFC 1
C-77-HS-012B/B400-FGS-002	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000418	CJX10	100	2024-11-23	RFC 2
C-77-HS-013A/77-HS-013B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000423	CJX10	100	2024-10-15	RFC 1
C-77-HS-013B/B400-FGS-002	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000422	CJX10	100	2024-11-23	RFC 2
C-77-HS-014A/77-HS-014B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000427	CJX10	100	2024-10-15	RFC 1
C-77-HS-014B/B400-FGS-002	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000426	CJX10	100	2024-11-23	RFC 2
C-77-HS-015A/77-HS-015B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000431	CJX10	100	2024-10-15	RFC 1
C-77-HS-015B/B400-FGS-002	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000430	CJX10	100	2024-11-23	RFC 2
C-77-HS-016A/77-HS-016B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000435	CJX10	100	2024-10-15	RFC 1
C-77-HS-016B/B400-FGS-002	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000434	CJX10	100	2024-11-23	RFC 2
C-77-HY-012/77-HS-012A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000420	CJX10	100	2024-10-15	RFC 1
C-77-HY-013/77-HS-013A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000424	CJX10	100	2024-10-15	RFC 1
C-77-HY-014/77-HS-014A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000428	CJX10	100	2024-10-15	RFC 1
C-77-HY-015/77-HS-015A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000432	CJX10	100	2024-10-15	RFC 1
C-77-HY-016/77-HS-016A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000436	CJX10	100	2024-10-15	RFC 1
C-77-XA-004/B400-SIS-001	UCP FAULT ALARM / MARSHALLING PCS	ONSHORE	C10000187	CJX10	100	2024-11-28	RFC 2
C-77-XS-004/B400-SIS-001	TRIP SIGNAL TO UCP / MARSHALLING PCS	ONSHORE	C10000183	CJX10	100	2024-11-28	RFC 2
C-77-ZSL-012/B400-FGS-003	PROXIMITY SWITCH / MARSHALLING PCS	ONSHORE	C10000421	CJX10	100	2024-11-22	RFC 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-40 & process: MC

Instrumental	77-40 HVAC I&T Equipment Room B-400

ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
C-77-ZSL-013/B400-FGS-003	PROXIMITY SWITCH / MARSHALLING PCS	ONSHORE	C10000425	CJX10	100	2024-11-22	RFC 2
C-77-ZSL-014/B400-FGS-003	PROXIMITY SWITCH / MARSHALLING PCS	ONSHORE	C10000429	CJX10	100	2024-11-22	RFC 2
C-77-ZSL-015/B400-FGS-003	PROXIMITY SWITCH / MARSHALLING PCS	ONSHORE	C10000433	CJX10	100	2024-11-22	RFC 2
C-77-ZSL-016/B400-FGS-003	PROXIMITY SWITCH / MARSHALLING PCS	ONSHORE	C10001433	CJX10	100	2024-11-22	RFC 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-40 & process: MC

Mechanical	77-40 HVAC I&T Equipment Room B-400						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
B-400	I&T Equipment Room B-400	ONSHORE	C10002307	CZX01M	100	2024-10-15	RFC 1

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-40 & process: MC

Telecom	77-40 HVAC I&T Equipment Room B-400						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
B400-HSB-001/B400-NET-001	Distribution & HVAC Panel/Network Cabinet	ONSHORE	C10004777	CIX09	100	2024-11-30	RFC 2

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-40 HVAC I&T Equipment Room B-400

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000518	A	B-400	Confirm with the compressor manufacturer whether starting the compressor without preheating the oil could cause damage	based on the manufacturer's response, either take no action or ensure the electric heater is powered by a UPS. If electric heaters are		SLinari 2024-10-30			
C30000519	A	B-400	Confirm with the compressor manufacturer whether starting the compressor without preheating the oil could cause damage	based on the manufacturer's response, either take no action or ensure the electric heater is powered by a UPS. If electric heaters are		SLinari 2024-10-30			
C30000551	A	B400-HSB-001	Make temperature and differental pressure trends visible on all HMIs	Update PLC software to apply the request		SLinari 2024-10-30			
C30000559	A	B-400	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			
C30000563	A	B-400	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			
C30000017	B	B-400	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			
C30000021	B	B-400	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
C30000049	B	B-400	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
C30000182	B	B-400 C10002307	Holes not used for heaters installation on shelter need to be restored. (see attachment)	-		Gtangianu 2024-10-15			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation
SUBSYSTEM 77-40 HVAC I&T Equipment Room B-400

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000194	B	B-400 C10002307	(Open during WD) Cleaning is required on rooftop	-		Ecarotenuto 2024-10-16			
C30000543	B	B-400	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			
C30000547	B	B-400	None pressure relief damper HDR-77-401 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			
C30000555	B	B-400	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 77-40 HVAC I&T Equipment Room B-400

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000531	A	B400-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			
C30000535	A	B400-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			
C30000025	B	B-400	Roof-top cables to be fixed with cable ties made by AISI 316L			SLinari 2024-08-02			
C30000029	B	B-400	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
C30000033	B	B-400	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
C30000037	B	B-400	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
C30000041	B	B-400	HVAC cable tags to be provided on the panel top. Alex Sistemi will supply all loose cable tags. RM will install it			SLinari 2024-08-02			
C30000045	B	B-400	Cable's tag to be provided / fixed at all MCTs (IN/OUT). Alex Sistemi will supply all loose cable tags. RM will instali it			SLinari 2024-08-02			
C30000053	B	B-400	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 77-40 HVAC I&T Equipment Room B-400

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000087	B	B-400	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
C30000091	B	B-400	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
C30000095	B	B-400	External ducts (inside) welding to be cleaned before re-installation			SLinari 2024-08-02			
C30000121	B	A5/+04-QF1 C10002879	New and definitive protection setting to be implemented on SG-200N1 drawer A5/+04.	Update the protection setting.	The definitive setting has been updated.	MGirotti 2024-10-01	MGirotti 2024-11-21	MGirotti 2024-11-21	2024-11-21
C30000179	B	83026-CEL C10000551	Cable to be fixed with proper cable ties o all internal and external routing.	-		Gtangianu 2024-10-15			
C30000180	B	83026-CEL C10000551	Missing cable tags on all internal and external routing and inside both panels (SG-200N1 - B400-HSB-001)	-		Gtangianu 2024-10-15			
C30000181	B	83026-CEL C10000551	Missing identification number of terminal trip XP1 inside the panel B400-HSB-001	-		Gtangianu 2024-10-15			
C30000183	B	B-400 C10002305	All HVAC cables need to be dressed and fixed properly inside internal cable trays	-		Gtangianu 2024-10-15			
C30000185	B	B400-HSB-001 C10000840	Black Thermoshrink is used on earthing connection inside the panel.	.		Gtangianu 2024-10-15	2024-12-03	Ecarotenuto 2024-12-03	2024-12-03

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation
SUBSYSTEM 77-40 HVAC I&T Equipment Room B-400

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000523	B	B400-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			
C30000527	B	B400-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			
C30000539	B	B400-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			
C30000811	B	84317-CEL C10000593	Missing SS cable tags on MCT B-300 side	.		Pschintu 2024-11-23			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-40 HVAC I&T Equipment Room B-400

Telecom

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001102	A	B400-HSB-001/ B400-NET-001 C10004777	The copper conductor of the cable armor must be individually connected to the earthing bar. B400-HSB-001. See 123A90-DDL-EL-DD-20090.	.		Ecarotenuto 2024-11-30	2024-12-04	Ecarotenuto 2024-12-04	2024-12-04
C30001101	B	B400-HSB-001/ B400-NET-001 C10004777	Missing cable tag by B400-HSB-001 side	.		Ecarotenuto 2024-11-30			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-40 HVAC I&T Equipment Room B-400

HVAC

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000057	B	B-400	All documentation listed in the SMIR, shall be re-issued in final revision and approved by RM and CW			SLinari 2024-08-02			
C30000061	B	B-400	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
C30000065	B	B-400	HVAC Systems to be completely checked on B-400. Unit hasn't been completed yet. All notes/remarks are indicated in the FAT		TEST COMPLETED . SEE REPORTS	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000067	B	B-400	B-400 HVAC Unit wirings must be completed at RM yard		COMPLETED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000071	B	B-400	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
C30000075	B	B-400	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
C30000079	B	B-400	Drain pipes and heating cables are missing, since they must be necessary instalied on site to avoid damages. To be completed at RM yard			SLinari 2024-08-02			
C30000083	B	B-400	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

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-40 HVAC I&T Equipment Room B-400

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000184	B	B-400 C10002306	77-TP-401 INSTRUMENT IS NOT ACCESIBLE FOR MAINTENANCE.	-	POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE	Gtangianu 2024-10-15	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000186	B	77-HS-012A C10002099	Fixing System of instrument on unistrut is not as per typical : 123A90-DDL-IN-DD-40017, sh.047 refer to POS.16. All bolts need to be replaced	-		Gtangianu 2024-10-15		Lmussi	
C30000187	B	77-HS-012A C10002099	EARTHING BAR SHALL BE CONNECTED TO EARTHING POINT IN N.1 POINT WITH 35sqmm Y/G CABLE. Point valid for both internal and	-		Gtangianu 2024-10-15			
C30000188	B	77-HS-012A C10002099	Elevation of instrument and cable tray L-150-101-IST-088 are not in accordance with Layout. See attachment	-		Gtangianu 2024-10-15			
C30000189	B	C-77-HY-016/77-HS-016A C10000436	Cable is not alligned at HS cable gland entry, to be better dressed.	-		Gtangianu 2024-10-15			
C30000190	B	C-77-HS-016A/77-HS-016B C10000435	Cable is not alligned at HS cable gland entry, to be better dressed	.		Gtangianu 2024-10-15			
C30000191	B	C-77-HS-014A/77-HS-014B C10000427	Missing SS cable tag on MCT entry external side.	-		Gtangianu 2024-10-15			
C30000192	B	C-77-HS-013A/77-HS-013B C10000423	Missing SS cable tag on MCT entry external side.	.		Gtangianu 2024-10-15			
C30000193	B	C-77-HS-012A/77-HS-012B C10000419	Missing plastic cable tags on MCT entry internal side. Point valid for all HS cables.	.		Gtangianu 2024-10-15			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation
SUBSYSTEM 77-40 HVAC I&T Equipment Room B-400

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000776	B	C-77-ZSL-012/B 400-FGS-003 C10000421	Missing core identification tags inside B400-HSB-001	.		Pschintu 2024-11-22			
C30000777	B	C-77-ZSL-012/B 400-FGS-003 C10000421	All cable tags are wrong.	.		Pschintu 2024-11-22			
C30000778	B	C-77-ZSL-013/B 400-FGS-003 C10000425	Missing core identification tags inside B400-HSB-001	.		Pschintu 2024-11-22			
C30000779	B	C-77-ZSL-013/B 400-FGS-003 C10000425	All cable tags are wrong.	.		Pschintu 2024-11-22			
C30000780	B	C-77-ZSL-014/B 400-FGS-003 C10000429	Missing core identification tags inside B400-HSB-001	.		Pschintu 2024-11-22			
C30000781	B	C-77-ZSL-014/B 400-FGS-003 C10000429	All cable tags are wrong.	.		Pschintu 2024-11-22			
C30000782	B	C-77-ZSL-015/B 400-FGS-003 C10000433	Missing core identification tags inside B400-HSB-001	.		Pschintu 2024-11-22			
C30000783	B	C-77-ZSL-015/B 400-FGS-003 C10000433	All cable tags are wrong.	.		Pschintu 2024-11-22			
C30000784	B	C-77-ZSL-016/B 400-FGS-003 C10001433	All cable tags are wrong.	.		Pschintu 2024-11-22			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-40 HVAC I&T Equipment Room B-400

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000785	B	C-77-ZSL-016/B 400-FGS-003 C10001433	Missing core identification tags inside B400-HSB-001	.		Pschintu 2024-11-22			
C30000796	B	C-77-HS-016B/ B400-FGS-002 C10000434	Missing cable tag inside the panel B400-FGS-002	.		Pschintu 2024-11-23			
C30000797	B	C-77-HS-012B/ B400-FGS-002 C10000418	Missing cable tag inside the panel B400-FGS-002	.		Pschintu 2024-11-23			
C30000798	B	C-77-HS-013B/ B400-FGS-002 C10000422	Missing cable tag inside the panel B400-FGS-002	.		Pschintu 2024-11-23			
C30000799	B	C-77-HS-014B/ B400-FGS-002 C10000426	Missing cable tag inside the panel B400-FGS-002	.		Pschintu 2024-11-23			
C30000800	B	C-77-HS-015B/ B400-FGS-002 C10000430	Missing cable tag inside the panel B400-FGS-002	.		Pschintu 2024-11-23			
C30000801	B	C-77-HS-016B/ B400-FGS-002 C10000434	Missing core identification tag inside the panel B400-FGS-002	.		Pschintu 2024-11-23			
C30000802	B	C-77-HS-012B/ B400-FGS-002 C10000418	Missing core identification tag inside the panel B400-FGS-002	.		Pschintu 2024-11-23			
C30000803	B	C-77-HS-013B/ B400-FGS-002 C10000422	Missing core identification tag inside the panel B400-FGS-002	.		Pschintu 2024-11-23			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation
SUBSYSTEM 77-40 HVAC I&T Equipment Room B-400

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000804	B	C-77-HS-015B/ B400-FGS-002 C10000430	Missing core identification tag inside the panel B400-FGS-002	.		Pschintu 2024-11-23			
C30000805	B	C-77-HS-014B/ B400-FGS-002 C10000426	Missing core identification tag inside the panel B400-FGS-002	.		Pschintu 2024-11-23			
C30000983	B	C-77-XS-004/B400-SIS-001 C10000183	Missing core identification tags on both cable termination	.		Pschintu 2024-11-28			
C30000984	B	C-77-XS-004/B400-SIS-001 C10000183	Missing cable tag all along the route	.		Pschintu 2024-11-28			
C30000986	B	C-77-XA-004/B400-SIS-001 C10000187	Missing core identification tags on both cable termination	.		Pschintu 2024-11-28			
C30000987	B	C-77-XA-004/B400-SIS-001 C10000187	Missing cable tag all along the route	.		Pschintu 2024-11-28			

Section 2 CONSOLIDATED PUNCH LISTS

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-40 HVAC I&T Equipment Room B-400

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000518	A	B-400	Confirm with the compressor manufacturer whether starting the compressor without preheating the oil could cause damage	based on the manufacturer's response, either take no action or ensure the electric heater is powered by a UPS. If electric heaters are	Probe installed. Compressor has been insulated. Temperature setting 20°C as	SLinari 2024-10-30	Vendor 2025-02-22	SLinari 2025-02-22	2025-02-22
C30000519	A	B-400	Confirm with the compressor manufacturer whether starting the compressor without preheating the oil could cause damage	based on the manufacturer's response, either take no action or ensure the electric heater is powered by a UPS. If electric heaters are	Probe installed. Compressor has been insulated. Temperature setting 20°C as	SLinari 2024-10-30	Vendor 2025-02-22	SLinari 2025-02-22	2025-02-22
C30000551	A	B400-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
C30000559	A	B-400	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			
C30000563	A	B-400	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			
C30000017	B	B-400	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
C30000021	B	B-400	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
C30000049	B	B-400	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
C30000182	B	B-400 C10002307	Holes not used for heaters installation on shelter need to be restored. (see attachment)	-		Gtangianu 2024-10-15			

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-40 HVAC I&T Equipment Room B-400

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000194	B	B-400 C10002307	(Open during WD) Cleaning is required on rooftop	-		Ecarotenuto 2024-10-16			
C30000543	B	B-400	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
C30000547	B	B-400	None pressure relief damper HDR-77-401 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			
C30000555	B	B-400	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

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-40 HVAC I&T Equipment Room B-400

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000531	A	B400-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
C30000535	A	B400-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	Check 100% of signals with Yokogawa. Communication work	SLinari 2024-10-30	Vendor 2025-02-22	SLinari 2025-02-22	2025-02-22
C30000025	B	B-400	Roof-top cables to be fixed with cable ties made by AISI 316L		ACTIVITY PERFORMED	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	2024-12-05
C30000029	B	B-400	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
C30000033	B	B-400	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
C30000037	B	B-400	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
C30000041	B	B-400	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
C30000045	B	B-400	Cable's tag to be provided / fixed at all MCTs (IN/OUT). Alex Sistemi will supply all loose cable tags. RM will instali it		ACTIVITY DONE - SEE PICTURE	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	2024-12-05
C30000053	B	B-400	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 77-40 HVAC I&T Equipment Room B-400

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000087	B	B-400	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
C30000091	B	B-400	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
C30000095	B	B-400	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
C30000121	B	A5/+04-QF1 C10002879	New and definitive protection setting to be implemented on SG-200N1 drawer A5/+04.	Update the protection setting.	The definitive setting has been updated.	MGirotti 2024-10-01	MGirotti 2024-11-21	MGirotti 2024-11-21	2024-11-21
C30000179	B	83026-CEL C10000551	Cable to be fixed with proper cable ties o all internal and external routing.	-		Gtangianu 2024-10-15	2025-01-07	Gtangianu 2025-01-07	2025-01-07
C30000180	B	83026-CEL C10000551	Missing cable tags on all internal and external routing and inside both panels (SG-200N1 - B400-HSB-001)	-		Gtangianu 2024-10-15	2025-01-30	APolo 2025-01-30	2025-01-30
C30000181	B	83026-CEL C10000551	Missing identification number of terminal trip XP1 inside the panel B400-HSB-001	-		Gtangianu 2024-10-15			
C30000183	B	B-400 C10002305	All HVAC cables need to be dressed and fixed properly inside internal cable trays	-		Gtangianu 2024-10-15	2025-02-15	Ecarotenuto 2025-02-15	2025-02-15
C30000185	B	B400-HSB-001 C10000840	Black Thermoshrink is used on earthing connection inside the panel.	.		Gtangianu 2024-10-15	2024-12-03	Ecarotenuto 2024-12-03	2024-12-03

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-40 HVAC I&T Equipment Room B-400

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000523	B	B400-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
C30000527	B	B400-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
C30000539	B	B400-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
C30000811	B	84317-CEL C10000593	Missing SS cable tags on MCT B-300 side	.		Pschintu 2024-11-23	2025-01-30	APolo 2025-01-30	2025-01-30

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-40 HVAC I&T Equipment Room B-400

Telecom									
CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001102	A	B400-HSB-001/ B400-NET-001 C10004777	The copper conductor of the cable armor must be individually connected to the earthing bar. B400-HSB-001. See 123A90-DDL-EL-DD-20090.	.		Ecarotenuto 2024-11-30	2024-12-04	Ecarotenuto 2024-12-04	2024-12-04
C30001101	B	B400-HSB-001/ B400-NET-001 C10004777	Missing cable tag by B400-HSB-001 side	.		Ecarotenuto 2024-11-30	2025-02-22	JKrizanic 2025-02-22	2025-02-22

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-40 HVAC I&T Equipment Room B-400

HVAC

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000057	B	B-400	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. C30000563	SLinari 2024-08-02	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000061	B	B-400	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
C30000065	B	B-400	HVAC Systems to be completely checked on B-400. Unit hasn't been completed yet. All notes/remarks are indicated in the FAT		TEST COMPLETED . SEE REPORTS	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000067	B	B-400	B-400 HVAC Unit wirings must be completed at RM yard		COMPLETED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000071	B	B-400	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
C30000075	B	B-400	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
C30000079	B	B-400	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 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000083	B	B-400	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 77-40 HVAC I&T Equipment Room B-400

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000184	B	B-400 C10002306	77-TP-401 INSTRUMENT IS NOT ACCESIBLE FOR MAINTENANCE.	-	POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE	Gtangianu 2024-10-15	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000186	B	77-HS-012A C10002099	Fixing System of instrument on unistrut is not as per typical : 123A90-DDL-IN-DD-40017, sh.047 refer to POS.16. All bolts need to be replaced	-		Gtangianu 2024-10-15	2024-11-23	Lmussi 2024-11-23	2024-11-23
C30000187	B	77-HS-012A C10002099	EARTHING BAR SHALL BE CONNECTED TO EARTHING POINT IN N.1 POINT WITH 35sqmm Y/G CABLE. Point valid for both internal and	-		Gtangianu 2024-10-15	2024-12-28	Gtangianu 2024-12-28	2024-12-28
C30000188	B	77-HS-012A C10002099	Elevation of instrument and cable tray L-150-101-IST-088 are not in accordance with Layout. See attachment	-		Gtangianu 2024-10-15	2025-01-30	APolo 2025-01-30	2025-01-30
C30000189	B	C-77-HY-016/77-HS-016A C10000436	Cable is not alligned at HS cable gland entry, to be better dressed.	-		Gtangianu 2024-10-15	2024-12-14	Ecarotenuto 2024-12-14	2024-12-14
C30000190	B	C-77-HS-016A/77-HS-016B C10000435	Cable is not alligned at HS cable gland entry, to be better dressed	.		Gtangianu 2024-10-15	2024-12-14	Ecarotenuto 2024-12-14	2024-12-14
C30000191	B	C-77-HS-014A/77-HS-014B C10000427	Missing SS cable tag on MCT entry external side.	-		Gtangianu 2024-10-15	2024-12-14	Ecarotenuto 2024-12-14	2024-12-14
C30000192	B	C-77-HS-013A/77-HS-013B C10000423	Missing SS cable tag on MCT entry external side.	.		Gtangianu 2024-10-15	2024-12-14	Ecarotenuto 2024-12-14	2024-12-14
C30000193	B	C-77-HS-012A/77-HS-012B C10000419	Missing plastic cable tags on MCT entry internal side. Point valid for all HS cables.	.		Gtangianu 2024-10-15	2024-12-14	Ecarotenuto 2024-12-14	2024-12-14

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-40 HVAC I&T Equipment Room B-400

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000776	B	C-77-ZSL-012/B 400-FGS-003 C10000421	Missing core identification tags inside B400-HSB-001	.		Pschintu 2024-11-22	2024-12-17	Gtangianu 2024-12-17	2024-12-17
C30000777	B	C-77-ZSL-012/B 400-FGS-003 C10000421	All cable tags are wrong.	.		Pschintu 2024-11-22	2025-01-03	Gtangianu 2025-01-03	2025-01-03
C30000778	B	C-77-ZSL-013/B 400-FGS-003 C10000425	Missing core identification tags inside B400-HSB-001	.		Pschintu 2024-11-22	2024-12-17	Gtangianu 2024-12-17	2024-12-17
C30000779	B	C-77-ZSL-013/B 400-FGS-003 C10000425	All cable tags are wrong.	.		Pschintu 2024-11-22	2025-01-03	Gtangianu 2025-01-03	2025-01-03
C30000780	B	C-77-ZSL-014/B 400-FGS-003 C10000429	Missing core identification tags inside B400-HSB-001	.		Pschintu 2024-11-22	2024-12-17	Gtangianu 2024-12-17	2024-12-17
C30000781	B	C-77-ZSL-014/B 400-FGS-003 C10000429	All cable tags are wrong.	.		Pschintu 2024-11-22	2025-01-03	Gtangianu 2025-01-03	2025-01-03
C30000782	B	C-77-ZSL-015/B 400-FGS-003 C10000433	Missing core identification tags inside B400-HSB-001	.		Pschintu 2024-11-22	2024-12-17	Gtangianu 2024-12-17	2024-12-17
C30000783	B	C-77-ZSL-015/B 400-FGS-003 C10000433	All cable tags are wrong.	.		Pschintu 2024-11-22	2025-01-03	Gtangianu 2025-01-03	2025-01-03
C30000784	B	C-77-ZSL-016/B 400-FGS-003 C10001433	All cable tags are wrong.	.		Pschintu 2024-11-22	2025-01-03	Gtangianu 2025-01-03	2025-01-03

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-40 HVAC I&T Equipment Room B-400

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000785	B	C-77-ZSL-016/B 400-FGS-003 C10001433	Missing core identification tags inside B400-HSB-001	.		Pschintu 2024-11-22			
C30000796	B	C-77-HS-016B/ B400-FGS-002 C10000434	Missing cable tag inside the panel B400-FGS-002	.		Pschintu 2024-11-23	2024-12-11	Pschintu 2024-12-11	2024-12-11
C30000797	B	C-77-HS-012B/ B400-FGS-002 C10000418	Missing cable tag inside the panel B400-FGS-002	.		Pschintu 2024-11-23	2024-12-11	Pschintu 2024-12-11	2024-12-11
C30000798	B	C-77-HS-013B/ B400-FGS-002 C10000422	Missing cable tag inside the panel B400-FGS-002	.		Pschintu 2024-11-23	2024-12-11	Pschintu 2024-12-11	2024-12-11
C30000799	B	C-77-HS-014B/ B400-FGS-002 C10000426	Missing cable tag inside the panel B400-FGS-002	.		Pschintu 2024-11-23	2024-12-11	Pschintu 2024-12-11	2024-12-11
C30000800	B	C-77-HS-015B/ B400-FGS-002 C10000430	Missing cable tag inside the panel B400-FGS-002	.		Pschintu 2024-11-23	2024-12-11	Pschintu 2024-12-11	2024-12-11
C30000801	B	C-77-HS-016B/ B400-FGS-002 C10000434	Missing core identification tag inside the panel B400-FGS-002	.		Pschintu 2024-11-23	2024-12-11	Pschintu 2024-12-11	2024-12-11
C30000802	B	C-77-HS-012B/ B400-FGS-002 C10000418	Missing core identification tag inside the panel B400-FGS-002	.		Pschintu 2024-11-23	2024-12-11	Pschintu 2024-12-11	2024-12-11
C30000803	B	C-77-HS-013B/ B400-FGS-002 C10000422	Missing core identification tag inside the panel B400-FGS-002	.		Pschintu 2024-11-23	2024-12-11	Pschintu 2024-12-11	2024-12-11

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-40 HVAC I&T Equipment Room B-400

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000804	B	C-77-HS-015B/ B400-FGS-002 C10000430	Missing core identification tag inside the panel B400-FGS-002	.		Pschintu 2024-11-23	2024-12-17	Gtangianu 2024-12-17	2024-12-17
C30000805	B	C-77-HS-014B/ B400-FGS-002 C10000426	Missing core identification tag inside the panel B400-FGS-002	.		Pschintu 2024-11-23	2024-12-17	Gtangianu 2024-12-17	2024-12-17
C30000983	B	C-77-XS-004/B400-SIS-001 C10000183	Missing core identification tags on both cable termination	.		Pschintu 2024-11-28			
C30000984	B	C-77-XS-004/B400-SIS-001 C10000183	Missing cable tag all along the route	.		Pschintu 2024-11-28	2025-02-04	Pschintu 2025-02-04	2025-02-04
C30000986	B	C-77-XA-004/B400-SIS-001 C10000187	Missing core identification tags on both cable termination	.		Pschintu 2024-11-28			
C30000987	B	C-77-XA-004/B400-SIS-001 C10000187	Missing cable tag all along the route	.		Pschintu 2024-11-28	2025-02-04	Pschintu 2025-02-04	2025-02-04

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000181

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000551	1.4 Discipline	Electrical
1.2 Item	83026-CEL	LV Switchgear / HVAC panels - ITER	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing identification number of terminal trip XP1 inside the panel B400-HSB-001

Name: Giovanni Tangianu

Date: 2024-10-15

Signature: Digitaly signed by Giovanni Tangianu 2024-10-15T13:47:07.316Z

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	2024-10-15
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2024-10-15T13:47:23.263Z

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

C30000182

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002307	1.4 Discipline	Mechanical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	77-40		HVAC I&T Equipment Room B-400

2 - OBSERVATION

Holes not used for heaters installation on shelter need to be restored. (see attachment)

Name: Giovanni Tangianu

Date: 2024-10-15

Signature: Digitaly signed by Giovanni Tangianu 2024-10-15T14:42:10.527Z

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	2024-10-15
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-15T14:42:27.871Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Name

Date

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


B-400

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000194

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002307	1.4 Discipline	Mechanical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	77-40		HVAC I&T Equipment Room B-400

2 - OBSERVATION

(Open during WD) Cleaning is required on rooftop

Name: Eleonora Carotenuto

Date: 2024-10-16

Signature: Digitaly signed by Eleonora Carotenuto 2024-10-16T10:02:19.580Z

3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Eleonora Carotenuto
3.4 Activity code	MC Mechanical Completion	Date	2024-10-16
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Eleonora Carotenuto 2024-10-16T10:05:55.805Z

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

C30000547

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	77-40		HVAC I&T Equipment Room B-400

2 - OBSERVATION

None pressure relief damper HDR-77-401 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

C30000555

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	77-40		HVAC I&T Equipment Room B-400

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

C30000559

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	77-40		HVAC I&T Equipment Room B-400

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

C30000563

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	77-40		HVAC I&T Equipment Room B-400

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

C30000785

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001433	1.4 Discipline	Instrumental
1.2 Item	C-77-ZSL-016/B400-FGS-003	PROXIMITY SWITCH / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing core identification tags inside B400-HSB-001

Name: Paolo Schintu

Date: 2024-11-22

Signature: Digitaly signed by Paolo Schintu 2024-11-22T16:10:16.191Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-22
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-22T16:10:25.689Z

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

C30000983

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000183	1.4 Discipline	Instrumental
1.2 Item	C-77-XS-004/B400-SIS-001	TRIP SIGNAL TO UCP / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing core identification tags on both cable termination

Name: Paolo Schintu

Date: 2024-11-28

Signature: Digitaly signed by Paolo Schintu 2024-11-28T10:10:38.309Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-28
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-28T10:10:50.453Z

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

C30000986

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000187	1.4 Discipline	Instrumental
1.2 Item	C-77-XA-004/B400-SIS-001	UCP FAULT ALARM / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing core identification tags on both cable termination

Name: Paolo Schintu

Date: 2024-11-28

Signature: Digitaly signed by Paolo Schintu 2024-11-28T10:24:25.968Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-28
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-28T10:24:36.821Z

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

C30000017

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

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 2025-02-06T16:05:25.327Z

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-02-06

Signature Digitaly signed by Stefano Linari 2025-02-06T16:05:42.115Z

6- CLEARANCE APPROVAL

Name

Date

Signature


B-400
I&T EQUIPMENT ROOM

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000021

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

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	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

DONE

Name ALEX SISTEMI

Date 2024-10-29

Signature PROVERLIS Digitaly signed by ALEX SISTEMI 2024-10-29T12:03:35.139Z

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T12:03:51.516Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000025

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

ACTIVITY PERFORMED

Name Stefano Linari

Date 2024-12-05

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-12-05T12:42:27.748Z

5 - CLEARANCE CHECK

ACTIVITY PERFORMED

Name Stefano Linari

Date 2024-12-05

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-12-05T12:42:40.571Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000029

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

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 2024-10-29T12:09:41.169Z

5 - CLEARANCE CHECK

EARTHING INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T12:10:03.277Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000033

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

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 PROVERLIS Digitaly signed by ALEX SISTEMI 2024-10-29T12:16:57.655Z

5 - CLEARANCE CHECK

EARTHING INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T12:17:14.415Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000037

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

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 2024-10-29T14:47:01.968Z

5 - CLEARANCE CHECK

installed anche checked

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T14:47:15.497Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000041

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

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 2024-12-05T10:57:46.533Z

5 - CLEARANCE CHECK

activity done - see picture

Name Stefano Linari

Date 2024-12-05

Signature Digitaly signed by Stefano Linari 2024-12-05T10:57:57.618Z

6- CLEARANCE APPROVAL

Name

Date

Signature


·B400-HSB-001·



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000045

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

ACTIVITY DONE - SEE PICTURE

Name Stefano Linari

Date 2024-12-05

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-12-05T12:26:15.669Z

5 - CLEARANCE CHECK

ACTIVITY DONE - SEE PICTURE

Name Stefano Linari

Date 2024-12-05

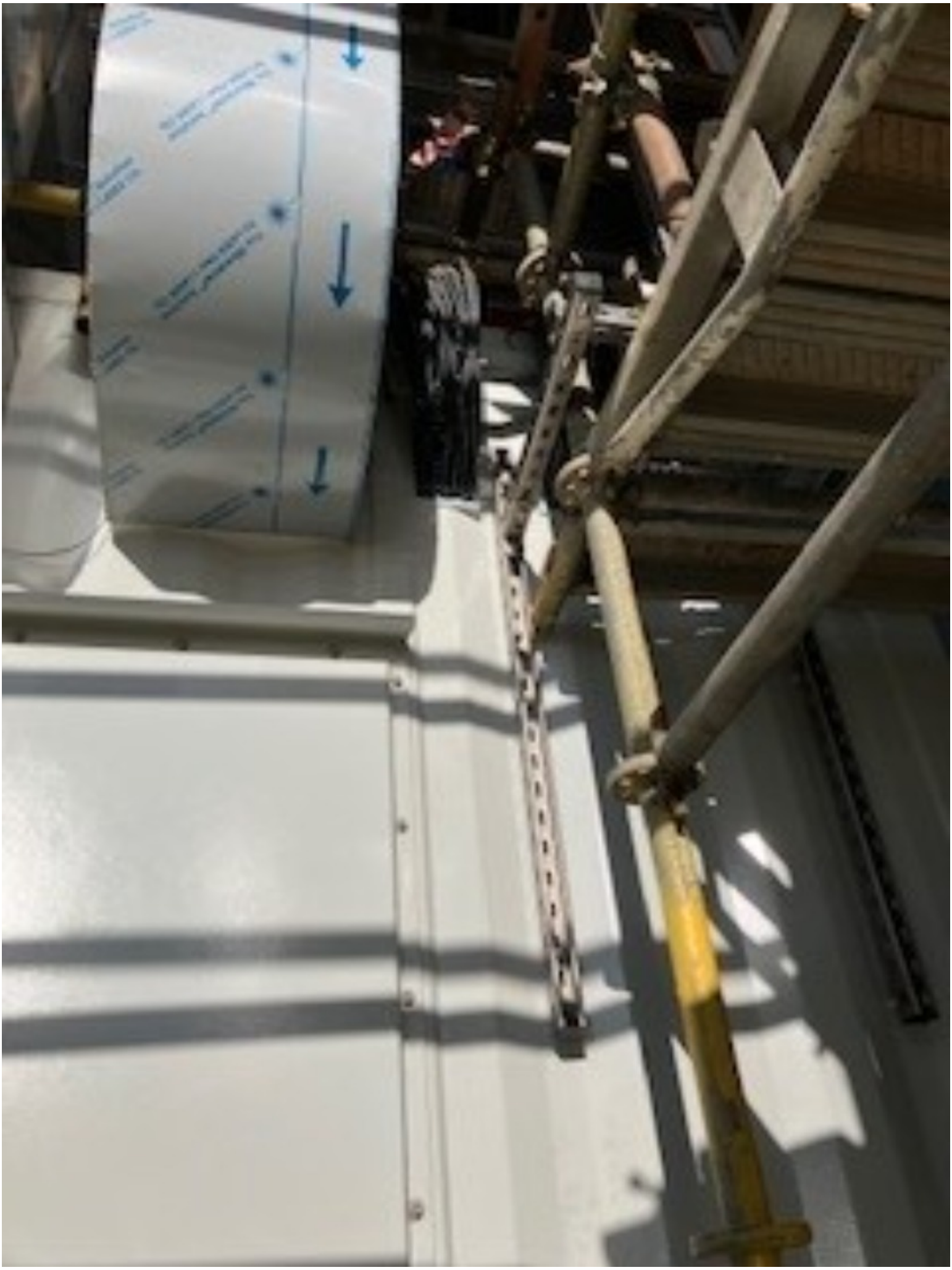
Signature PROVERLIS Digitaly signed by Stefano Linari 2024-12-05T12:26:29.605Z

6- CLEARANCE APPROVAL

Name

Date

Signature



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000049

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

CHECKED CEMBRE INSTALLATION MANUAL - ACCEPTED

Name ALEX SISTEMI

Date 2024-10-29

Signature Digitaly signed by ALEX SISTEMI 2024-10-29T12:38:12.982Z

5 - CLEARANCE CHECK

CHECKED CEMBRE INSTALLATION MANUAL - ACCEPTED

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T12:38:34.667Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000053

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

FIXED

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T12:41:59.219Z

5 - CLEARANCE CHECK

FIXED

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T12:42:14.012Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000057

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	HVAC
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

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. C30000563

Name Stefano Linari

Date 2025-02-06

Signature Digitaly signed by Stefano Linari 2025-02-06T15:52:42.238Z

5 - CLEARANCE CHECK

can be close - refer to PL n. C30000563

Name Stefano Linari

Date 2025-02-06

Signature Digitaly signed by Stefano Linari 2025-02-06T15:52:58.336Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000061

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	HVAC
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

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 2024-10-29T12:45:40.026Z

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T12:45:52.817Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000065

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	HVAC
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

2 - OBSERVATION

HVAC Systems to be completely checked on B-400. Unit hasn't been completed yet. All 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

TEST COMPLETED . SEE REPORTS

Name ALEX SISTEMI

Date 2024-10-29

Signature Digitaly signed by ALEX SISTEMI 2024-10-29T12:48:43.946Z

5 - CLEARANCE CHECK

TEST COMPLETED . SEE REPORTS

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T12:48:57.793Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000067

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	HVAC
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

2 - OBSERVATION

B-400 HVAC Unit wirings must 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

COMPLETED

Name ALEX SISTEMI

Date 2024-10-29

Signature Digitaly signed by ALEX SISTEMI 2024-10-29T12:50:51.209Z

5 - CLEARANCE CHECK

COMPLETED

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T12:51:08.985Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000071

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	HVAC
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

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 Digitaly signed by ALEX SISTEMI 2024-10-29T13:04:20.575Z

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T13:04:35.724Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000075

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	HVAC
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

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 2024-10-29T13:07:56.434Z

5 - CLEARANCE CHECK

PERFORMED - SEE REPORTS

Name Stefano Linari

Date 2024-10-29

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-10-29T13:08:09.081Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000079

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	HVAC
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

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 vendor alex sistemi

Date 2025-02-06

Signature Digitaly signed by vendor alex sistemi 2025-02-06T09:36:54.722Z

5 - CLEARANCE CHECK

installed

Name Stefano Linari

Date 2025-02-06

Signature Digitaly signed by Stefano Linari 2025-02-06T09:37:07.694Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000083

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	HVAC
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

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 2024-10-29T14:50:21.886Z

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T14:50:37.301Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000087

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

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 Digitaly signed by ALEX SISTEMI 2024-10-29T13:38:06.321Z

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T13:38:20.971Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000091

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T14:55:38.420Z

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature Digitaly signed by Stefano Linari 2024-10-29T14:56:09.371Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000095

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	90-04		I&T System Equipment Room B-400

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 2024-12-05T10:47:21.026Z

5 - CLEARANCE CHECK

ACTIVITY DONE - ALL DUCTS HAS BEEN INSTALLED

Name Stefano Linari

Date 2024-12-05

Signature PROVERLIS Digitaly signed by Stefano Linari 2024-12-05T10:47:35.816Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000121

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002879	1.4 Discipline	Electrical
1.2 Item	A5/+04-QF1	DRAWER HVAC PANELS ITER ROOM - A5/+04-QF1	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

New and definitive protection setting to be implemented on SG-200N1 drawer A5/+04.

Name: Mattia Girotti

Date: 2024-10-01

Signature: Digitaly signed by Mattia Girotti 2024-10-01T14:47:52.491Z

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal: Update the protection setting.

3.2 Material required:

3.3 Priority: B PL B

3.4 Activity code: COMM Commissioning

3.5 Action by: PRE-COMM

Name: Mattia Girotti

Date: 2024-10-01

Signature: Digitaly signed by Mattia Girotti 2024-10-01T14:48:14.955Z

4 - PERFORMED ACTION

The definitive setting has been updated.

Name: Mattia Girotti

Date: 2024-11-21

Signature: Digitaly signed by Mattia Girotti 2024-11-21T09:51:15.185Z

5 - CLEARANCE CHECK

Done.

Name: Mattia Girotti

Date: 2024-11-21

Signature: Digitaly signed by Mattia Girotti 2024-11-21T09:51:21.372Z

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

Page Name	Group Name	Variable Name	Variable Value	Variable Unit
Settings A				
	Overload Protection (L - ANSI 49)			
		PU nominal current In	63	
		Status	Enabled	
		Function	t=k/i^2	
		Prealarm I1	90	% I1
		Threshold I1	0.750	In
		Time t1 std	3.00	s
		Thermal memory (TM)	Disabled	
		TM Algorithm	RMS-independent	
		TM Time	Automatic	
		TM custom time	830	s
	Time-delayed overcurrent protection (S - ANSI 50 TD/68/51)			
		Status	Enabled	
		Trip enable	Enabled	
		BlockOnStartUp	--------	
		BlockOnOutOfFrequency	--------	
		BlockOnProgStatusA	--------	
		BlockOnProgStatusB	--------	
		BlockOnProgStatusC	--------	
		BlockOnProgStatusD	--------	
		Function	t=k	
		Threshold I2 (t=k)	4.00	In
		Time t2 (t=k) IEC - UL489	0.10	s
		Startup enable	Disabled	
		Startup time	0.10	s
		Startup threshold	0.60	In
		Set Startup th. on ProgStatusD	--------	
		Thermal memory status	Disabled	
		Zone Selectivity status	Disabled	
		Zone Selectivity time	0.04	s
		Zone Selectivity Type	Logic and Hardware	
	Second time-delayed overcurrent protection (S2 - ANSI 50 TD)			
		Status	Disabled	
		Trip enable	Enabled	
		BlockOnStartUp	--------	
		BlockOnOutOfFrequency	--------	
		BlockOnProgStatusA	--------	
		BlockOnProgStatusB	--------	
		BlockOnProgStatusC	--------	
		BlockOnProgStatusD	--------	
		Threshold I5 (t=k)	2.00	In
		Time t5 (t=k)	0.05	s
		Startup enable	Disabled	
		Startup time	0.10	s
		Startup threshold	2.00	In
		Set Startup th. on ProgStatusD	--------	
		Zone Selectivity status	Disabled	
		Zone Selectivity time	0.04	s
		Zone Selectivity Type	Logic and Hardware	
	Instantaneous overcurrent protection (I - ANSI 50)			
		Status	Enabled	
		Threshold I3	8.00	In
		Startup enable	Disabled	
		Startup time	0.10	s
		Startup threshold	1.50	In
		Set Startup th. on ProgStatusD	--------	
		BlockOnStartUp	--------	
		BlockOnOutOfFrequency	--------	
		BlockOnProgStatusA	--------	
		BlockOnProgStatusB	--------	
		BlockOnProgStatusC	--------	
		BlockOnProgStatusD	--------	
		Zone Selectivity status	Disabled	
		Zone Selectivity Type	Logic and Hardware	
	Second I			
		Prot Second I	---	
		Status	Disabled	
		Threshold I31	1.50	In
		Zone Selectivity status	Disabled	
		Zone Selectivity Type	Logic and Hardware	
		Second I Mode	Function Dependent	
		Function	Disabled	
		Delay On	0.00	s
		Delay Off	15.00	s
	Earth fault protection (G - ANSI 50N TD/68/51N)			
		Status	Enabled	
		Trip enable	Enabled	
		BlockOnStartUp	--------	
		BlockOnOutOfFrequency	--------	
		BlockOnProgStatusA	--------	
		BlockOnProgStatusB	--------	
		BlockOnProgStatusC	--------	
		BlockOnProgStatusD	--------	
		Function	t=k	
		Prealarm I4	90	% I4
		Threshold I4 (t=k)	0.200	In
		Time t4 (t=k) IEC - UL489	0.10	s

		Startup enable	Disabled	
		Startup time	0.10	s
		Startup threshold	0.20	In
		Set Startup th. on ProgStatusD	--------	
		Zone selectivity status	Disabled	
		Zone selectivity time	0.04	s
		Zone Selectivity Type	Logic and Hardware	
	Directional overcurrent protection (D - ANSI 67/68)			
		Status	Disabled	
		Trip enable	Disabled	
		tripOnlyForward	--------	
		tripOnlyBackward	--------	
		BlockOnStartUp	--------	
		BlockOnOutOfFrequency	--------	
		BlockOnProgStatusA	--------	
		BlockOnProgStatusB	--------	
		BlockOnProgStatusC	--------	
		BlockOnProgStatusD	--------	
		Threshold I7 FWD	2.00	In
		Time t7 FWD	0.20	s
		Threshold I7 BWD	2.00	In
		Time t7 BWD	0.20	s
		Startup enable	Disabled	
		Startup time	0.10	s
		Startup threshold FWD	2.00	In
		Startup threshold BWD	2.00	In
		Set Startup th. on ProgStatusD	--------	
		Zone Selectivity status	Disabled	
		Zone Selectivity time FWD	0.13	s
		Zone Selectivity time BWD	0.13	s
		Zone Selectivity Type	Logic and Hardware	
		Direction minimum angle	3.6	°
	Closing on short-circuit protection (MCR)			
		Status	Disabled	
		BlockOnOutOfFrequency	--------	
		BlockOnProgStatusA	--------	
		BlockOnProgStatusB	--------	
		BlockOnProgStatusC	--------	
		BlockOnProgStatusD	--------	
		Threshold I3	6.00	In
		Time t3	0.04	s
		Zone Selectivity status	Disabled	
		Zone Selectivity Type	Logic and Hardware	
	Over Temperature (T)			
		Trip enable	Disabled	

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000179

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000551	1.4 Discipline	Electrical
1.2 Item	83026-CEL	LV Switchgear / HVAC panels - ITER	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Cable to be fixed with proper cable ties o all internal and external routing.

Name: Giovanni Tangianu

Date: 2024-10-15

Signature: Digitaly signed by Giovanni Tangianu 2024-10-15T13:44:35.933Z

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	2024-10-15
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-15T13:44:54.760Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done.

Name: Giovanni Tangianu

Date: 2025-01-07

Signature: Digitaly signed by Giovanni Tangianu 2025-01-07T16:26:32.842Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000180

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000551	1.4 Discipline	Electrical
1.2 Item	83026-CEL	LV Switchgear / HVAC panels - ITER	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing cable tags on all internal and external routing and inside both panels (SG-200N1 - B400-HSB-001)

Name: Giovanni Tangianu

Date: 2024-10-15

Signature: Digitaly signed by Giovanni Tangianu 2024-10-15T13:46:24.969Z

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	2024-10-15
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-15T13:46:38.524Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-01-30

Signature: Digitaly signed by Alessio Polo 2025-01-30T16:28:53.238Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000183

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002305	1.4 Discipline	Electrical
1.2 Item	B-400	I&T Equipment Room B-400	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

All HVAC cables need to be dressed and fixed properly inside internal cable trays

Name: Giovanni Tangianu

Date: 2024-10-15

Signature: Digitaly signed by Giovanni Tangianu 2024-10-15T14:49:58.505Z

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	2024-10-15
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-15T14:50:15.657Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Eleonora Carotenuto

Date: 2025-02-15

Signature: Digitaly signed by Eleonora Carotenuto 2025-02-15T08:49:07.914Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000184

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002306	1.4 Discipline	Instrumental
1.2 Item	B-400	I&T Equipment Room B-400	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

77-TP-401 INSTRUMENT IS NOT ACCESIBLE FOR MAINTENANCE.

Name: Giovanni Tangianu

Date: 2024-10-15

Signature: Digitaly signed by Giovanni Tangianu 2024-10-15T14:54:51.724Z

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	2024-10-15
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2024-10-15T14:55:07.362Z

4 - PERFORMED ACTION

POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE

Name: ALEX SISTEMI

Date: 2024-10-29

Signature: Digitaly signed by ALEX SISTEMI 2024-10-29T13:43:47.094Z

5 - CLEARANCE CHECK

POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE

Name: Stefano Linari

Date: 2024-10-29

Signature: Digitaly signed by Stefano Linari 2024-10-29T13:44:00.797Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000185

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000840	1.4 Discipline	Electrical
1.2 Item	B400-HSB-001		Distribution & HVAC Panel - I&T Equipment Room
1.3 Subsystem	77-40		HVAC I&T Equipment Room B-400

2 - OBSERVATION

Black Thermoshrink is used on earthing connection inside the panel.

Name: Giovanni Tangianu

Date: 2024-10-15

Signature: Digitaly signed by Giovanni Tangianu 2024-10-15T14:13:22.938Z

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	2024-10-15
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2024-10-15T14:58:15.082Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Duplicate point. See PI n°C30000523

Name: Eleonora Carotenuto

Date: 2024-12-03

Signature: Digitaly signed by Eleonora Carotenuto 2024-12-03T15:44:24.264Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000186

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002099	1.4 Discipline	Instrumental
1.2 Item	77-HS-012A		Hand Switch for Fire&Gas Damper HFD-77012
1.3 Subsystem	77-40		HVAC I&T Equipment Room B-400

2 - OBSERVATION

Fixing System of instrument on unistrut is not as per typical : 123A90-DDL-IN-DD-40017, sh.047 refer to POS.16. All bolts need to be replaced with the proper ones M5x35. Point valid for all HS of B-400 (internal and external).

Name: Giovanni Tangianu

Date: 2024-10-15

Signature: Digitaly signed by Giovanni Tangianu 2024-10-15T15:15:23.270Z

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	2024-10-15
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-15T15:15:36.327Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done

Name: Luca Mussi

Date: 2024-11-20

Signature: Digitaly signed by Luca Mussi 2024-11-20T08:01:05.209Z

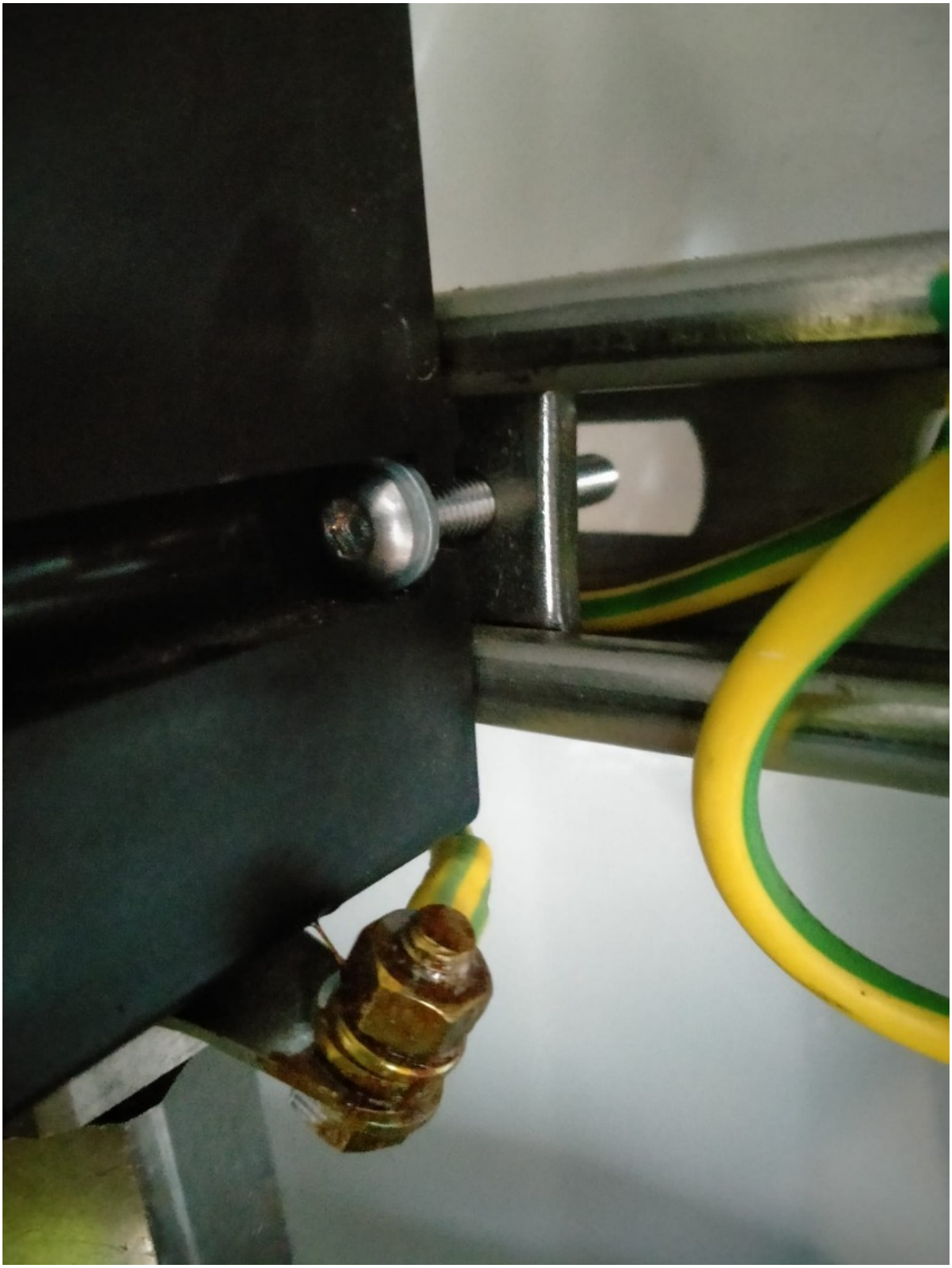
6- CLEARANCE APPROVAL

Name

Date

Signature


77-HS-012B
77-HS-014B
77-HS-015B





ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000187

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002099	1.4 Discipline	Instrumental
1.2 Item	77-HS-012A		Hand Switch for Fire&Gas Damper HFD-77012
1.3 Subsystem	77-40		HVAC I&T Equipment Room B-400

2 - OBSERVATION

EARTHING BAR SHALL BE CONNECTED TO EARTHING POINT IN N.1 POINT WITH 35sqmm Y/G CABLE. Point valid for both internal and external BTM installed on cable tray.

Name: Giovanni Tangianu

Date: 2024-10-15

Signature: Digitaly signed by Giovanni Tangianu 2024-10-15T15:19:26.513Z

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	2024-10-15
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-15T15:19:39.342Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2024-12-28

Signature: Digitaly signed by Giovanni Tangianu 2024-12-28T08:52:43.919Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000188

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002099	1.4 Discipline	Instrumental
1.2 Item	77-HS-012A		Hand Switch for Fire&Gas Damper HFD-77012
1.3 Subsystem	77-40		HVAC I&T Equipment Room B-400

2 - OBSERVATION

Elevation of instrument and cable tray L-150-101-IST-088 are not in accordance with Layout.
See attachment

Name: Giovanni Tangianu
Date: 2024-10-15
Signature: Digitaly signed by Giovanni Tangianu 2024-10-15T15:26:42.743Z

3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-10-15
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-15T15:26:54.699Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo
Date: 2025-01-30
Signature: Digitaly signed by Alessio Polo 2025-01-30T16:29:04.009Z

6- CLEARANCE APPROVAL

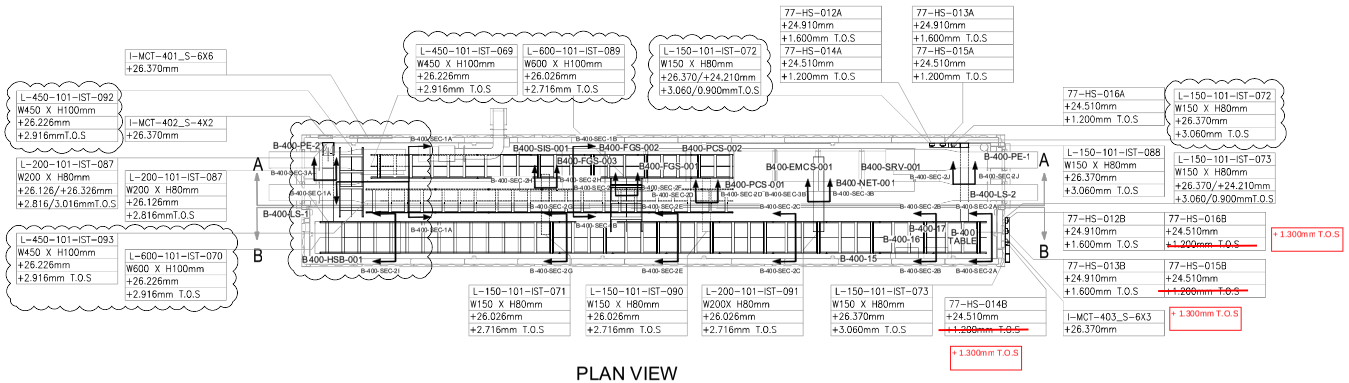
Name

Date

Signature

DRAWING NO. 123A90-DDL-IN-DL-40116

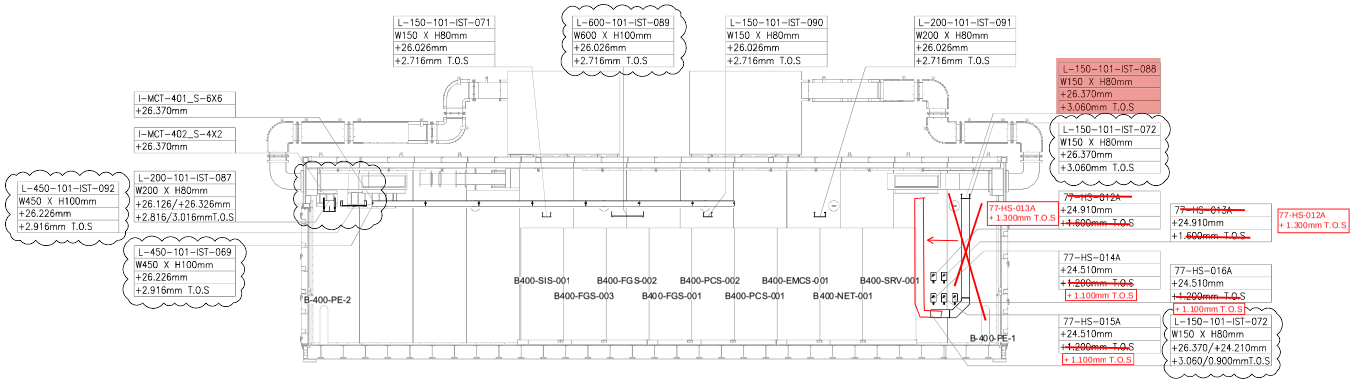
REV. 01



PLAN VIEW

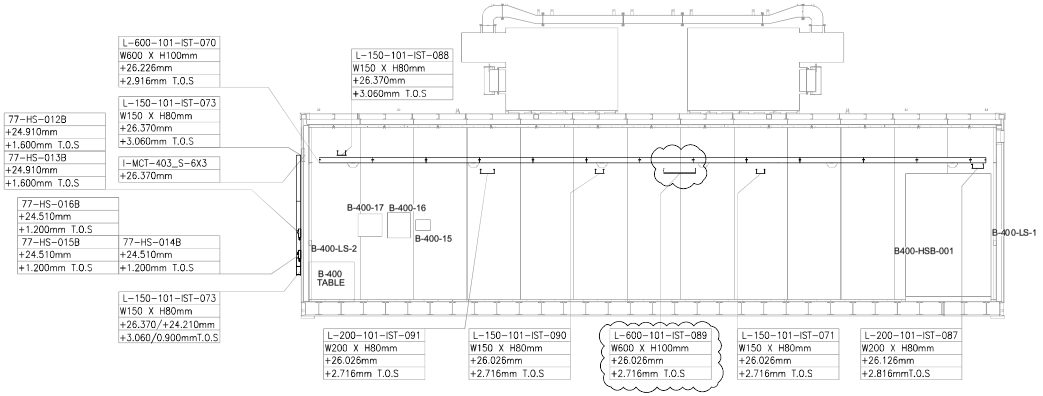
B-400 – I&T EQUIPMENT ROOM

SCALE–1:1



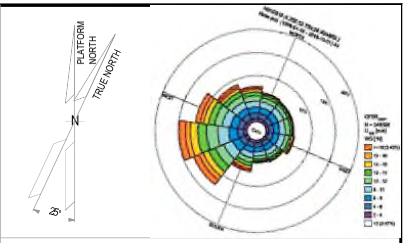
SECTION A-A

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

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-400 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-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV01.dwg

VALID FOR CONSTRUCTION

FDL DWG: 123A90-FDL-IN-DL-40116

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

ROSETTI MARINO SpA

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000189

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000436	1.4 Discipline	Instrumental
1.2 Item	C-77-HY-016/77-HS-016A	FIRE DAMPER / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Cable is not alligned at HS cable gland entry, to be better dressed.

Name: Giovanni Tangianu

Date: 2024-10-15

Signature: Digitaly signed by Giovanni Tangianu 2024-10-15T15:49:07.573Z

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	2024-10-15
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-15T15:49:22.060Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-14

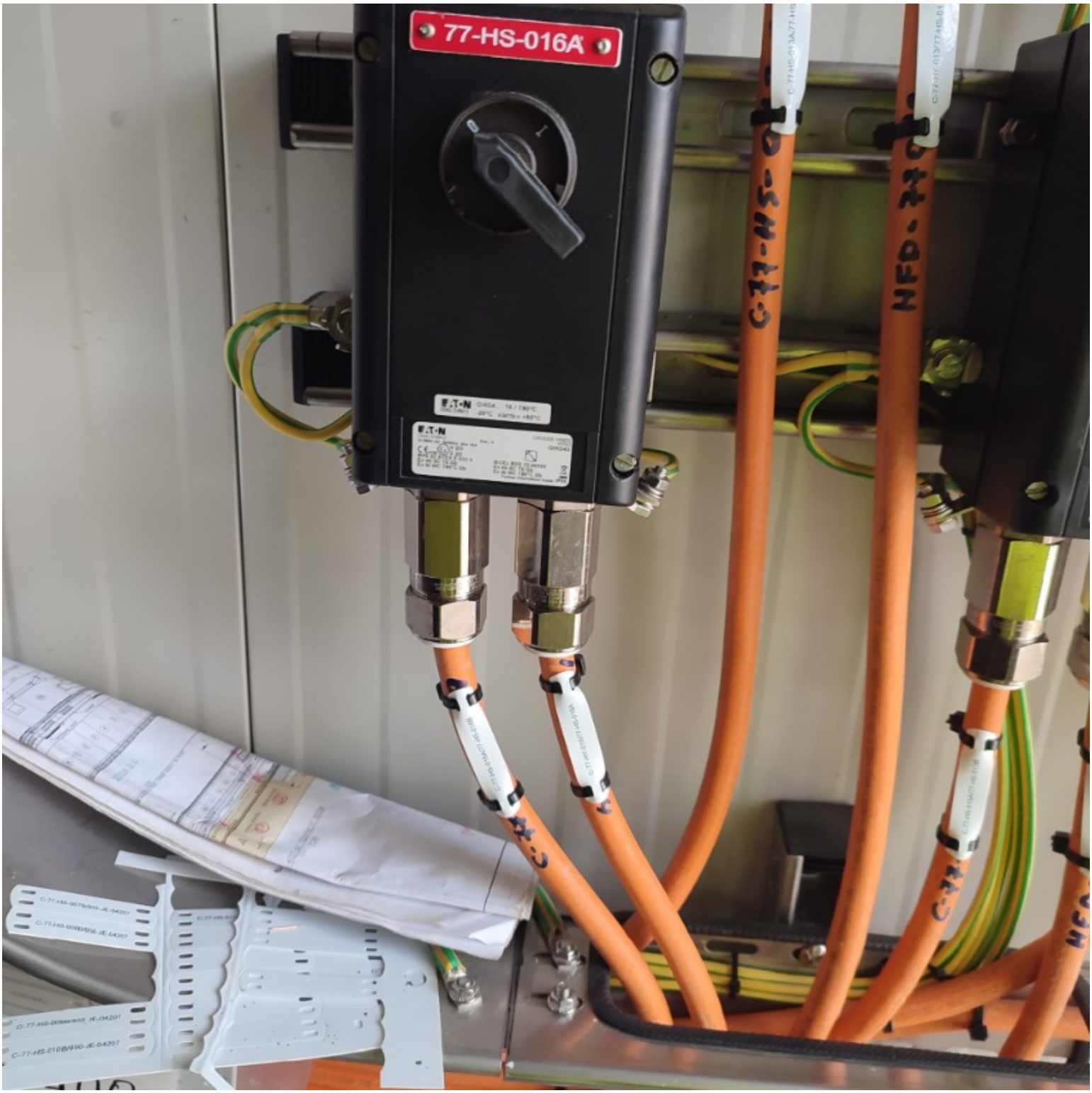
Signature: Digitaly signed by Eleonora Carotenuto 2024-12-14T09:50:14.413Z

6- CLEARANCE APPROVAL

Name

Date

Signature


77-HS-016A

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000190

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000435	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-016A/77-HS-016B	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Cable is not alligned at HS cable gland entry, to be better dressed

Name: Giovanni Tangianu

Date: 2024-10-15

Signature: Digitaly signed by Giovanni Tangianu 2024-10-15T15:50:00.097Z

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	2024-10-15
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-15T15:50:18.490Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-14

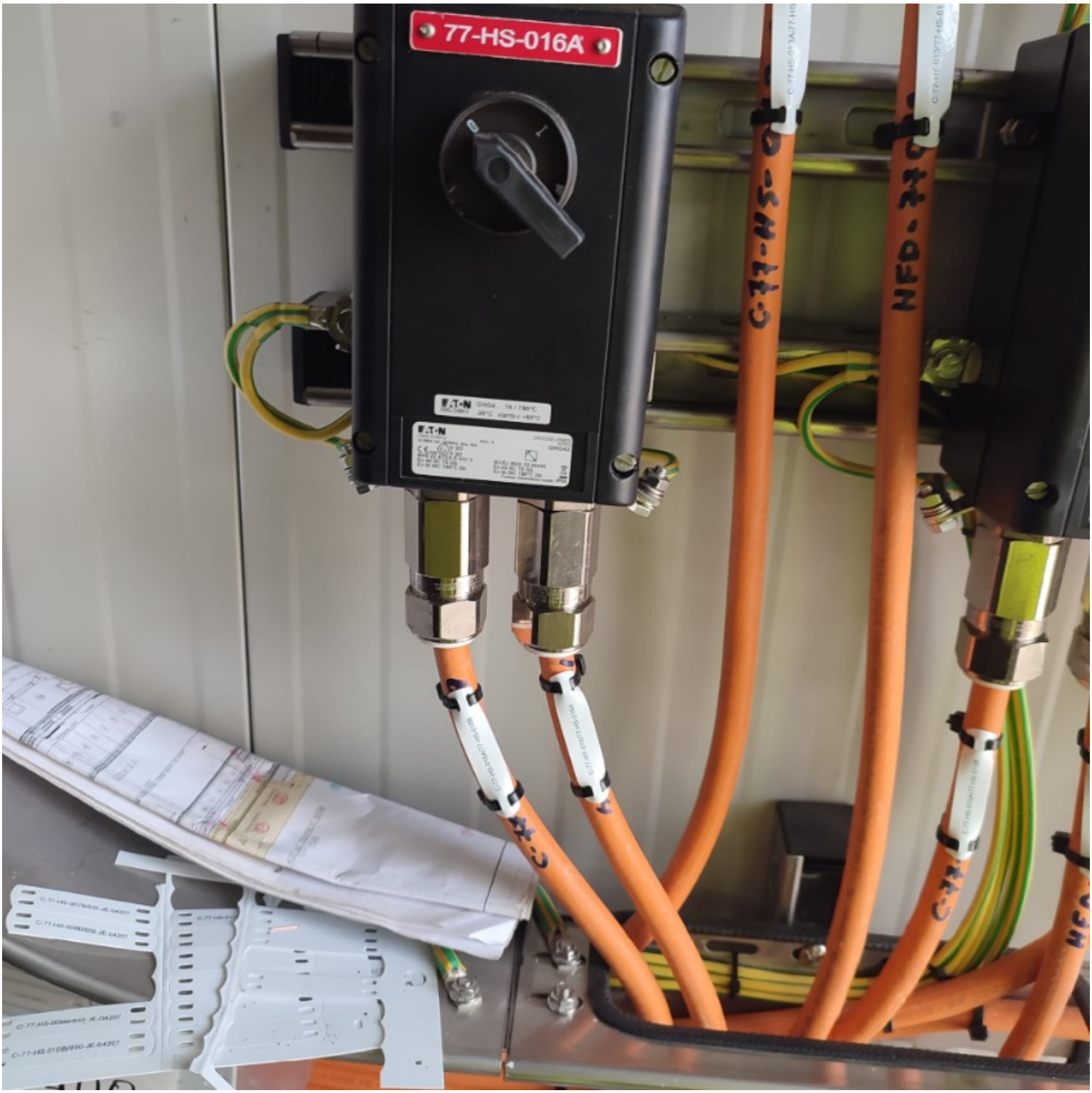
Signature: Digitaly signed by Eleonora Carotenuto 2024-12-14T09:50:27.212Z

6- CLEARANCE APPROVAL

Name

Date

Signature


77-HS-016A

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000191

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000427	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-014A/77-HS-014B	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing SS cable tag on MCT entry external side.

Name: Giovanni Tangianu

Date: 2024-10-15

Signature: Digitaly signed by Giovanni Tangianu 2024-10-15T16:02:57.577Z

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	2024-10-15
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-15T16:03:09.362Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-14

Signature: Digitaly signed by Eleonora Carotenuto 2024-12-14T09:50:41.236Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000192

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000423	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-013A/77-HS-013B	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing SS cable tag on MCT entry external side.

Name: Giovanni Tangianu

Date: 2024-10-15

Signature: Digitaly signed by Giovanni Tangianu 2024-10-15T16:05:42.801Z

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	2024-10-15
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-15T16:05:55.496Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-14

Signature: Digitaly signed by Eleonora Carotenuto 2024-12-14T09:51:00.649Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000193

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000419	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-012A/77-HS-012B	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing plastic cable tags on MCT entry internal side. Point valid for all HS cables.

Name: Giovanni Tangianu

Date: 2024-10-15

Signature: Digitaly signed by Giovanni Tangianu 2024-10-15T16:08:44.522Z

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	2024-10-15
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-15T16:08:56.648Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-14

Signature: Digitaly signed by Eleonora Carotenuto 2024-12-14T09:51:16.945Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000518

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	77-40		HVAC I&T Equipment Room B-400

2 - OBSERVATION

Confirm with the compressor manufacturer whether starting the compressor without preheating the oil could cause damage (HSS-77-404)

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal	based on the manufacturer's response, either take no action or ensure the electric heater is powered by a UPS. If electric heaters are needed, check the feasibility of supplying an amperometric transformere to monitor their absorbed currents		
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

Probe installed. Compressor has been insulated. Temperature setting 20°C as per Manufacturer instructions.

Name Vendor Crosswind

Date 2025-02-22

Signature Digitaly signed by ALEX SISTEMI 2025-02-22T07:34:54.312Z

5 - CLEARANCE CHECK

Name Stefano Linari

Date 2025-02-22

Signature Digitaly signed by Stefano Linari 2025-02-22T07:35:01.207Z

6- CLEARANCE APPROVAL

Name

Date 2025-02-22

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000519

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	77-40		HVAC I&T Equipment Room B-400

2 - OBSERVATION

Confirm with the compressor manufacturer whether starting the compressor without preheating the oil could cause damage (HSS-77-408)

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal	based on the manufacturer's response, either take no action or ensure the electric heater is powered by a UPS. If electric heaters are needed, check the feasibility of supplying an amperometric transformere to monitor their absorbed currents		
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

Probe installed. Compressor has been insulated. Temperature setting 20°C as per Manufacturer instructions.

Name Vendor Crosswind

Date 2025-02-22

Signature Digitaly signed by ALEX SISTEMI 2025-02-22T07:35:18.656Z

5 - CLEARANCE CHECK

Name Stefano Linari

Date 2025-02-22

Signature Digitaly signed by Stefano Linari 2025-02-22T07:35:31.120Z

6- CLEARANCE APPROVAL

Name

Date 2025-02-22

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000523

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B400-HSB-001		Distribution & HVAC Panel - I&T Equipment Room
1.3 Subsystem	77-40		HVAC I&T Equipment Room B-400

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 2025-02-25T15:21:38.170Z

5 - CLEARANCE CHECK

Name Stefano Linari

Date 2025-02-25

Signature Digitaly signed by Stefano Linari 2025-02-25T15:21:46.310Z

6- CLEARANCE APPROVAL

Name

Date 2025-02-25

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000527

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B400-HSB-001		Distribution & HVAC Panel - I&T Equipment Room
1.3 Subsystem	77-40		HVAC I&T Equipment Room B-400

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 2025-02-20T15:44:52.505Z

5 - CLEARANCE CHECK

Name: Stefano Linari

Date: 2025-02-20

Signature: Digitaly signed by Stefano Linari 2025-02-20T15:45:04.929Z

6- CLEARANCE APPROVAL

Name

Date: 2025-02-20

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000531

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B400-HSB-001		Distribution & HVAC Panel - I&T Equipment Room
1.3 Subsystem	77-40		HVAC I&T Equipment Room B-400

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 2025-02-22T07:37:25.936Z

5 - CLEARANCE CHECK

Name Stefano Linari

Date 2025-02-22

Signature Digitaly signed by Stefano Linari 2025-02-22T07:37:32.267Z

6- CLEARANCE APPROVAL

Name

Date 2025-02-22

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000535

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B400-HSB-001		Distribution & HVAC Panel - I&T Equipment Room
1.3 Subsystem	77-40		HVAC I&T Equipment Room B-400

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

Check 100% of signals with Yokogawa. Communication work

Name Vendor Crosswind

Date 2025-02-22

Signature PROVERLIS Digitaly signed by ALEX SISTEMI 2025-02-22T07:49:51.055Z

5 - CLEARANCE CHECK

Name Stefano Linari

Date 2025-02-22

Signature PROVERLIS Digitaly signed by Stefano Linari 2025-02-22T07:49:56.269Z

6- CLEARANCE APPROVAL

Name

Date 2025-02-22

Signature

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000539

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	B400-HSB-001		Distribution & HVAC Panel - I&T Equipment Room
1.3 Subsystem	77-40		HVAC I&T Equipment Room B-400

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 2025-02-25T10:07:32.212Z

5 - CLEARANCE CHECK

Name Stefano Linari

Date 2025-02-25

Signature Digitaly signed by Stefano Linari 2025-02-25T10:07:38.041Z

6- CLEARANCE APPROVAL

Name

Date 2025-02-25

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000543

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B-400		I&T Equipment Room B-400
1.3 Subsystem	77-40		HVAC I&T Equipment Room B-400

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 2025-02-20T15:47:51.827Z

5 - CLEARANCE CHECK

Name Stefano Linari

Date 2025-02-20

Signature Digitaly signed by Stefano Linari 2025-02-20T15:47:57.898Z

6- CLEARANCE APPROVAL

Name

Date 2025-02-20

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000551

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	B400-HSB-001		Distribution & HVAC Panel - I&T Equipment Room
1.3 Subsystem	77-40		HVAC I&T Equipment Room B-400

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 2025-02-20T15:50:13.692Z

5 - CLEARANCE CHECK

Name Stefano Linari

Date 2025-02-20

Signature Digitaly signed by Stefano Linari 2025-02-20T15:50:24.388Z

6- CLEARANCE APPROVAL

Name

Date 2025-02-20

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000776

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000421	1.4 Discipline	Instrumental
1.2 Item	C-77-ZSL-012/B400-FGS-003	PROXIMITY SWITCH / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing core identification tags inside B400-HSB-001

Name: Paolo Schintu

Date: 2024-11-22

Signature: Digitaly signed by Paolo Schintu 2024-11-22T14:58:09.629Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-22
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-22T14:58:24.406Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2024-12-17

Signature: Digitaly signed by Giovanni Tangianu 2024-12-17T14:38:09.794Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000777

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000421	1.4 Discipline	Instrumental
1.2 Item	C-77-ZSL-012/B400-FGS-003	PROXIMITY SWITCH / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

All cable tags are wrong.

Name: Paolo Schintu

Date: 2024-11-22

Signature: Digitaly signed by Paolo Schintu 2024-11-22T14:59:47.145Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-22
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-22T14:59:57.343Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done.

Name: Giovanni Tangianu

Date: 2025-01-03

Signature: Digitaly signed by Giovanni Tangianu 2025-01-03T15:10:54.003Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000778

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000425	1.4 Discipline	Instrumental
1.2 Item	C-77-ZSL-013/B400-FGS-003	PROXIMITY SWITCH / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing core identification tags inside B400-HSB-001

Name: Paolo Schintu

Date: 2024-11-22

Signature: Digitaly signed by Paolo Schintu 2024-11-22T16:00:38.508Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-22
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-22T16:00:53.616Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed

Name: Giovanni Tangianu

Date: 2024-12-17

Signature: Digitaly signed by Giovanni Tangianu 2024-12-17T14:38:29.742Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000779

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000425	1.4 Discipline	Instrumental
1.2 Item	C-77-ZSL-013/B400-FGS-003	PROXIMITY SWITCH / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

All cable tags are wrong.

Name: Paolo Schintu

Date: 2024-11-22

Signature: Digitaly signed by Paolo Schintu 2024-11-22T16:01:32.652Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-22
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-22T16:01:47.399Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done.

Name: Giovanni Tangianu

Date: 2025-01-03

Signature: Digitaly signed by Giovanni Tangianu 2025-01-03T15:11:06.369Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000780

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000429	1.4 Discipline	Instrumental
1.2 Item	C-77-ZSL-014/B400-FGS-003	PROXIMITY SWITCH / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing core identification tags inside B400-HSB-001

Name: Paolo Schintu

Date: 2024-11-22

Signature: Digitaly signed by Paolo Schintu 2024-11-22T16:02:38.629Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-22
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-22T16:02:52.266Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed

Name: Giovanni Tangianu

Date: 2024-12-17

Signature: Digitaly signed by Giovanni Tangianu 2024-12-17T14:38:40.526Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000781

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000429	1.4 Discipline	Instrumental
1.2 Item	C-77-ZSL-014/B400-FGS-003	PROXIMITY SWITCH / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

All cable tags are wrong.

Name: Paolo Schintu

Date: 2024-11-22

Signature: Digitaly signed by Paolo Schintu 2024-11-22T16:03:09.150Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-22
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-22T16:03:24.913Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done.

Name: Giovanni Tangianu

Date: 2025-01-03

Signature: Digitaly signed by Giovanni Tangianu 2025-01-03T15:11:18.016Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000782

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000433	1.4 Discipline	Instrumental
1.2 Item	C-77-ZSL-015/B400-FGS-003	PROXIMITY SWITCH / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing core identification tags inside B400-HSB-001

Name: Paolo Schintu

Date: 2024-11-22

Signature: Digitaly signed by Paolo Schintu 2024-11-22T16:04:30.561Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-22
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-22T16:04:41.405Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed

Name: Giovanni Tangianu

Date: 2024-12-17

Signature: Digitaly signed by Giovanni Tangianu 2024-12-17T14:38:51.677Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000783

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000433	1.4 Discipline	Instrumental
1.2 Item	C-77-ZSL-015/B400-FGS-003	PROXIMITY SWITCH / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

All cable tags are wrong.

Name: Paolo Schintu

Date: 2024-11-22

Signature: Digitaly signed by Paolo Schintu 2024-11-22T16:04:51.339Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-22
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-22T16:05:24.242Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done.

Name: Giovanni Tangianu

Date: 2025-01-03

Signature: Digitaly signed by Giovanni Tangianu 2025-01-03T15:11:29.612Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000784

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001433	1.4 Discipline	Instrumental
1.2 Item	C-77-ZSL-016/B400-FGS-003	PROXIMITY SWITCH / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

All cable tags are wrong.

Name: Paolo Schintu

Date: 2024-11-22

Signature: Digitaly signed by Paolo Schintu 2024-11-22T16:08:25.414Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-22
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-22T16:08:38.322Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done.

Name: Giovanni Tangianu

Date: 2025-01-03

Signature: Digitaly signed by Giovanni Tangianu 2025-01-03T15:11:42.049Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000796

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000434	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-016B/B400-FGS-002	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing cable tag inside the panel B400-FGS-002

Name: Paolo Schintu

Date: 2024-11-23

Signature: Digitaly signed by Paolo Schintu 2024-11-23T08:40:10.338Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-23
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-23T08:40:28.696Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done

Name: Paolo Schintu

Date: 2024-12-11

Signature: Digitaly signed by Paolo Schintu 2024-12-11T15:22:53.963Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000797

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000418	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-012B/B400-FGS-002	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing cable tag inside the panel B400-FGS-002

Name: Paolo Schintu

Date: 2024-11-23

Signature: Digitaly signed by Paolo Schintu 2024-11-23T08:42:15.170Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-23
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-23T08:42:26.014Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done

Name: Paolo Schintu

Date: 2024-12-11

Signature: Digitaly signed by Paolo Schintu 2024-12-11T15:23:09.826Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000798

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000422	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-013B/B400-FGS-002	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing cable tag inside the panel B400-FGS-002

Name: Paolo Schintu

Date: 2024-11-23

Signature: Digitaly signed by Paolo Schintu 2024-11-23T08:42:40.545Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-23
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-23T08:42:50.540Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done

Name: Paolo Schintu

Date: 2024-12-11

Signature: Digitaly signed by Paolo Schintu 2024-12-11T15:23:22.175Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000799

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000426	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-014B/B400-FGS-002	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing cable tag inside the panel B400-FGS-002

Name: Paolo Schintu

Date: 2024-11-23

Signature: Digitaly signed by Paolo Schintu 2024-11-23T08:42:58.876Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-23
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-23T08:43:09.671Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done

Name: Paolo Schintu

Date: 2024-12-11

Signature: Digitaly signed by Paolo Schintu 2024-12-11T15:23:37.152Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000800

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000430	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-015B/B400-FGS-002	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing cable tag inside the panel B400-FGS-002

Name: Paolo Schintu

Date: 2024-11-23

Signature: Digitaly signed by Paolo Schintu 2024-11-23T08:43:16.121Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-23
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-23T08:43:27.317Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done.

Name: Paolo Schintu

Date: 2024-12-11

Signature: Digitaly signed by Paolo Schintu 2024-12-11T15:23:52.564Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000801

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000434	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-016B/B400-FGS-002	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing core identification tag inside the panel B400-FGS-002

Name: Paolo Schintu

Date: 2024-11-23

Signature: Digitaly signed by Paolo Schintu 2024-11-23T08:43:37.707Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-23
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-23T08:43:48.571Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done.

Name: Paolo Schintu

Date: 2024-12-11

Signature: Digitaly signed by Paolo Schintu 2024-12-11T15:24:08.458Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000802

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000418	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-012B/B400-FGS-002	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing core identification tag inside the panel B400-FGS-002

Name: Paolo Schintu

Date: 2024-11-23

Signature: Digitaly signed by Paolo Schintu 2024-11-23T08:44:01.974Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-23
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-23T08:44:12.688Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done.

Name: Paolo Schintu

Date: 2024-12-11

Signature: Digitaly signed by Paolo Schintu 2024-12-11T15:24:24.716Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000803

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000422	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-013B/B400-FGS-002	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing core identification tag inside the panel B400-FGS-002

Name: Paolo Schintu

Date: 2024-11-23

Signature: Digitaly signed by Paolo Schintu 2024-11-23T08:47:06.585Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-23
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-23T08:47:17.078Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done.

Name: Paolo Schintu

Date: 2024-12-11

Signature: Digitaly signed by Paolo Schintu 2024-12-11T15:24:36.697Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000804

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000430	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-015B/B400-FGS-002	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing core identification tag inside the panel B400-FGS-002

Name: Paolo Schintu

Date: 2024-11-23

Signature: Digitaly signed by Paolo Schintu 2024-11-23T08:48:03.778Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-23
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-23T08:48:15.937Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed

Name: Giovanni Tangianu

Date: 2024-12-17

Signature: Digitaly signed by Giovanni Tangianu 2024-12-17T14:39:03.342Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000805

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000426	1.4 Discipline	Instrumental
1.2 Item	C-77-HS-014B/B400-FGS-002	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing core identification tag inside the panel B400-FGS-002

Name: Paolo Schintu

Date: 2024-11-23

Signature: Digitaly signed by Paolo Schintu 2024-11-23T08:54:06.903Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-23
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-23T08:54:19.595Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed

Name: Giovanni Tangianu

Date: 2024-12-17

Signature: Digitaly signed by Giovanni Tangianu 2024-12-17T14:39:14.128Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000811

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000593	1.4 Discipline	Electrical
1.2 Item	84317-CEL	AC UPS - PAS DB / UCP - HVAC ITER	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing SS cable tags on MCT B-300 side

Name: Paolo Schintu

Date: 2024-11-23

Signature: Digitaly signed by Paolo Schintu 2024-11-23T09:36:39.465Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-23
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-23T09:36:50.605Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-01-30

Signature: Digitaly signed by Alessio Polo 2025-01-30T16:29:48.505Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000984

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000183	1.4 Discipline	Instrumental
1.2 Item	C-77-XS-004/B400-SIS-001	TRIP SIGNAL TO UCP / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing cable tag all along the route

Name: Paolo Schintu

Date: 2024-11-28

Signature: Digitaly signed by Paolo Schintu 2024-11-28T10:11:19.829Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-28
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-28T10:11:31.732Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu

Date: 2025-02-04

Signature: Digitaly signed by Paolo Schintu 2025-02-04T11:25:50.562Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000987

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000187	1.4 Discipline	Instrumental
1.2 Item	C-77-XA-004/B400-SIS-001	UCP FAULT ALARM / MARSHALLING PCS	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing cable tag all along the route

Name: Paolo Schintu

Date: 2024-11-28

Signature: Digitaly signed by Paolo Schintu 2024-11-28T10:24:57.314Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-28
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-28T10:25:07.555Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu

Date: 2025-02-04

Signature: Digitaly signed by Paolo Schintu 2025-02-04T11:25:58.887Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001101

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004777	1.4 Discipline	Telecom
1.2 Item	B400-HSB-001/B400-NET-001	Distribution & HVAC Panel/Network Cabinet	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

Missing cable tag by B400-HSB-001 side

Name: Eleonora Carotenuto

Date: 2024-11-30

Signature: Digitaly signed by Eleonora Carotenuto 2024-11-30T11:59:46.684Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Eleonora Carotenuto
3.4 Activity code	MC Mechanical Completion	Date	2024-11-30
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Eleonora Carotenuto 2024-11-30T11:59:58.873Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic

Date: 2025-02-22

Signature: Digitaly signed by Josip Krizanic 2025-02-22T10:15:29.522Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001102

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004777	1.4 Discipline	Telecom
1.2 Item	B400-HSB-001/B400-NET-001	Distribution & HVAC Panel/Network Cabinet	
1.3 Subsystem	77-40	HVAC I&T Equipment Room B-400	

2 - OBSERVATION

The copper conductor of the cable armor must be individually connected to the earthing bar. B400-HSB-001. See 123A90-DDL-EL-DD-20090.

Name: Eleonora Carotenuto

Date: 2024-11-30

Signature: Digitaly signed by Eleonora Carotenuto 2024-11-30T12:02:35.517Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Eleonora Carotenuto
3.4 Activity code	MC Mechanical Completion	Date	2024-11-30
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Eleonora Carotenuto 2024-11-30T12:02:47.621Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-04

Signature: Digitaly signed by Eleonora Carotenuto 2024-12-04T10:15:40.073Z

6- CLEARANCE APPROVAL

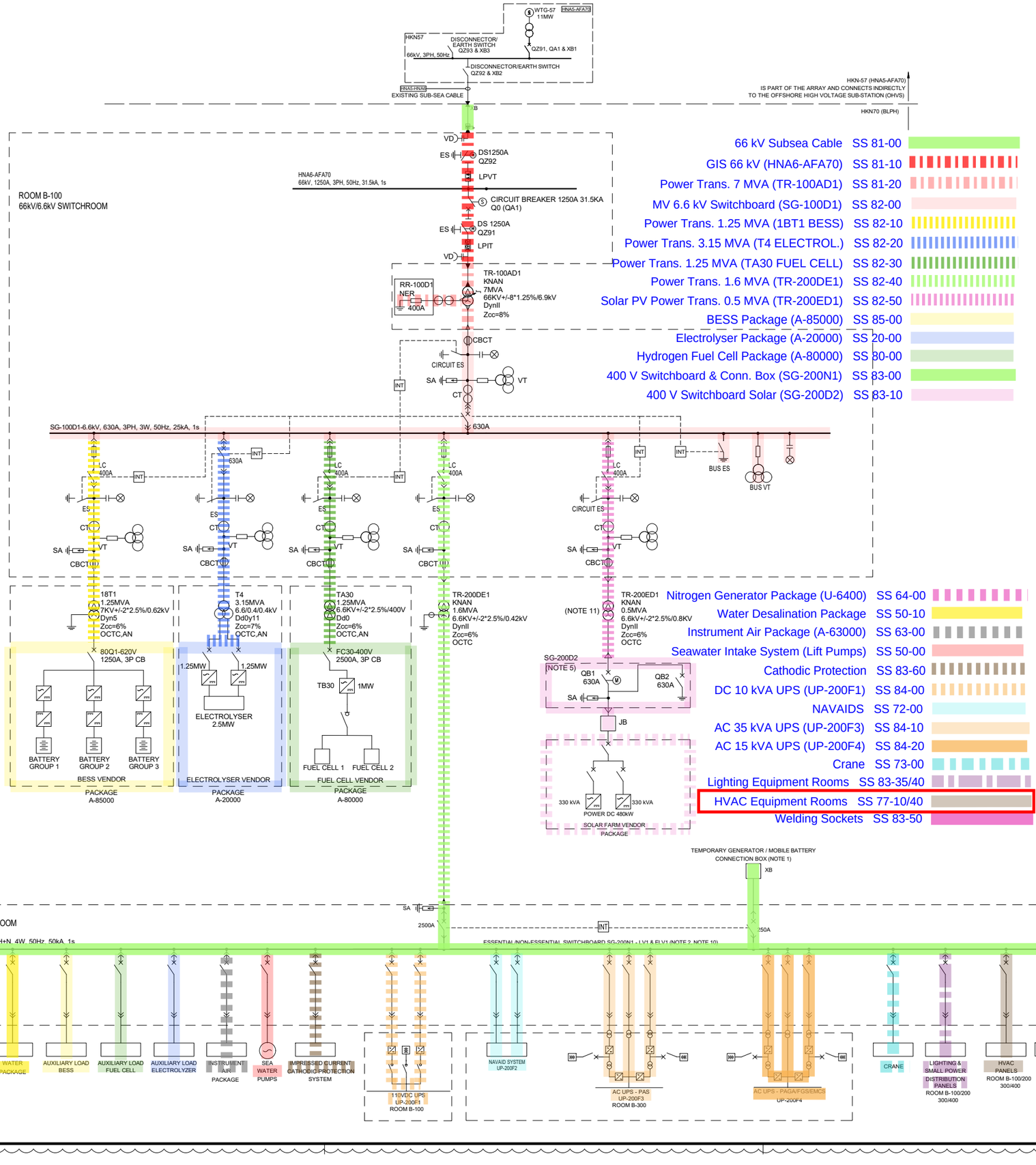
Name

Date

Signature

Section 3 SYSTEM,SUB-SYSTEM LIMIT DRAWINGS

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



SYMBOL LEGEND:

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

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

NOTES:

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

REFERENCES:

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

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

CROSSWIND

ROSETTI MARINO

TITLE :

OVERALL/KEY SINGLE LINE DIAGRAM

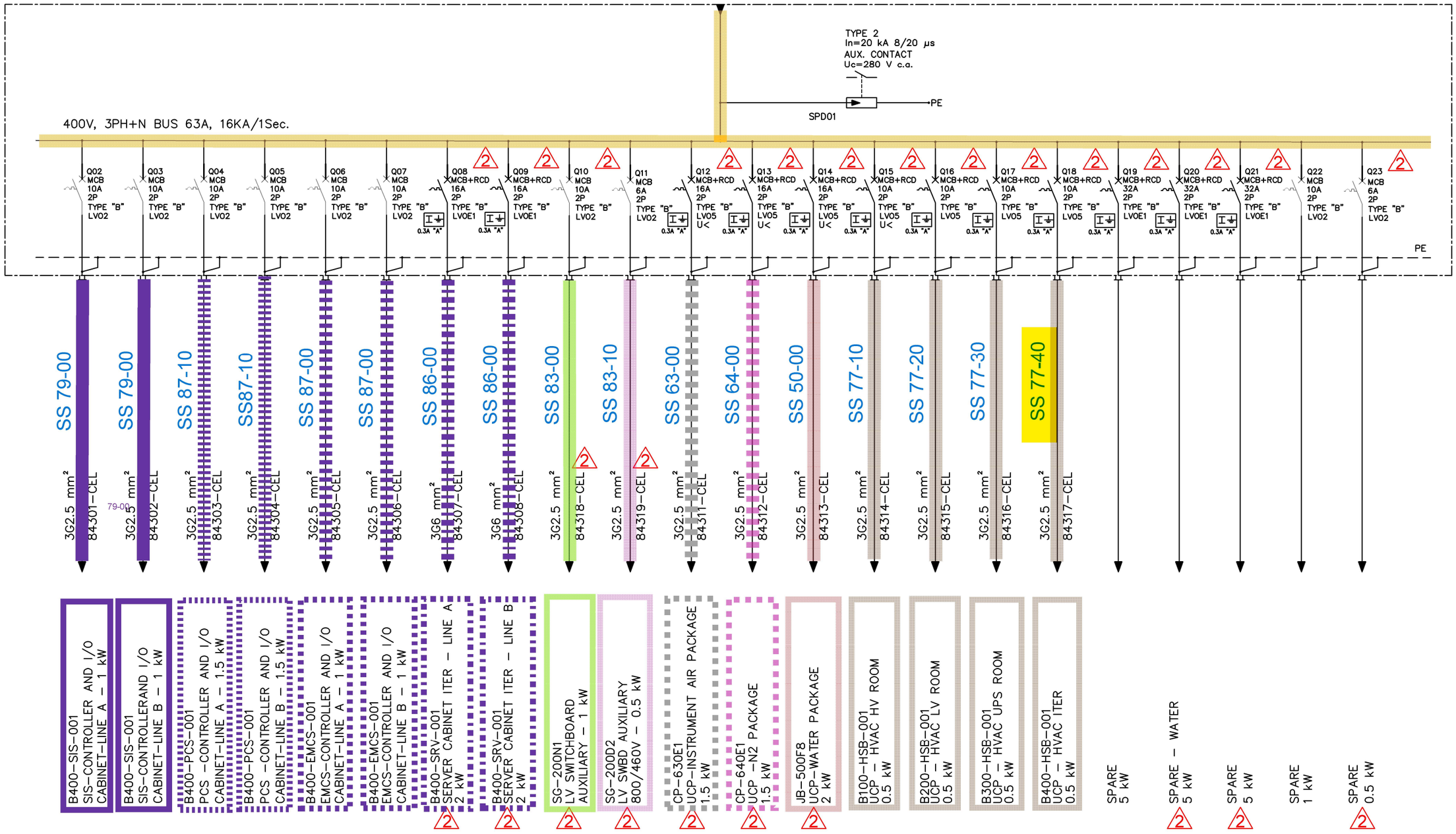
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE N/A
DRAWN GPA	CHECKED LMA/AMA	APPROVED LMA/MDO	DATE 26/03/2023
A1	DRAWING NO. 123A90-DDL-EL-DG-20158	SHEET 001	REV. 01

01

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

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

AC UPS DISTRIBUTION BOARD–PAS
DP–200F3



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

CROSSWIND

ROSETTI MARINO

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

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

SCALE : 1:X

A3

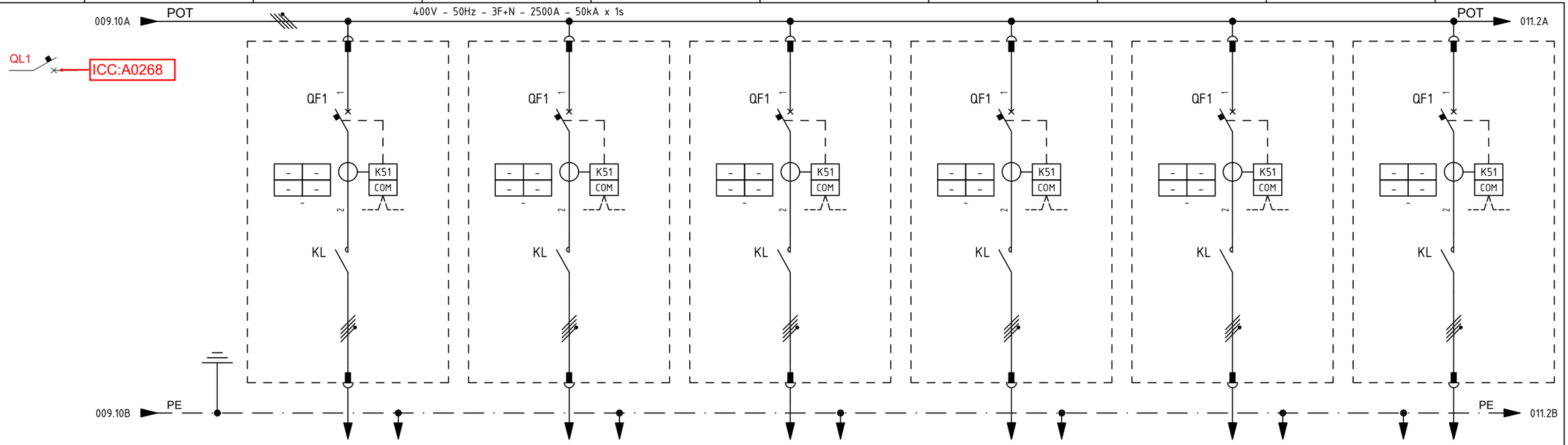
DRAWING NO. 123A90–DDL–EL–DG–20160

SHEET 005

REV. 02

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

F.to UNI A3: 420mmx297mm



ITEM			1	SPARE		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: 77-40 & process: MC & discipline : E

Electrical	77-40 HVAC I&T Equipment Room B-400						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
83026-CEL	LV Switchgear / HVAC panels - ITER	ONSHORE	C10000551	CPX09	100	2024-10-15	RFC 1
84317-CEL	AC UPS - PAS DB / UCP - HVAC ITER	ONSHORE	C10000593	CPX09	100	2024-11-23	RFC 2
B-400	I&T Equipment Room B-400	ONSHORE	C10002305	CZX01E	100	2024-10-15	RFC 1
B400-HSB-001	Distribution & HVAC Panel - I&T Equipment Room	ONSHORE	C10000840	CPX15	100	2024-10-15	RFC 1

ITEM	Tag	83026-CEL	: LV Switchgear / HVAC panels - ITER		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	77-40	: HVAC I&T Equipment Room B-400		Module	LD_B-200/LD_B-400	
TASK	code	C10000551	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Electrical	Form CPX09	LV Power Cable	

CABLE DATA

Type: Cu Cl.2/EPR/LSZH | Cores/Size mm²: 5G16 mm2 | Color: Grey

From: SG-200N1 | To: B400-HSB-001

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

REFER TO FINAL SHEET FOR ACCEPTANCE

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	83026-CEL	: LV Switchgear / HVAC panels - ITER		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	77-40	: HVAC I&T Equipment Room B-400		Module		
TASK	code	C10000551	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Electrical	Form	CPX09	LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0.6	
6		PH 2	0.6	
7		PH 3	0.6	
8	ARMOUR CONTINUITY Ω		NA	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0.7	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

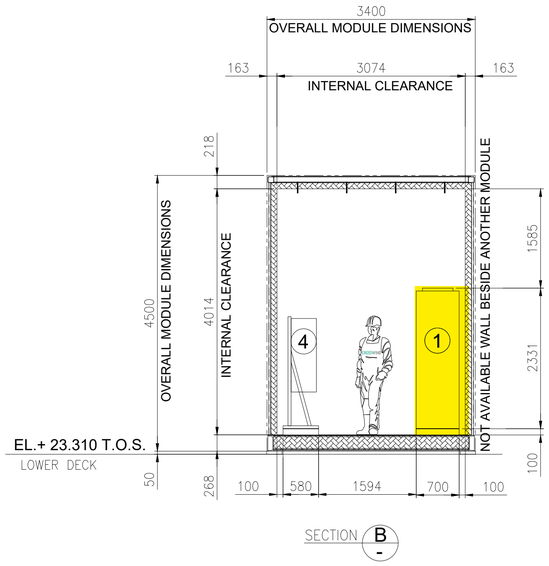
TESTING INSTRUMENTS USED

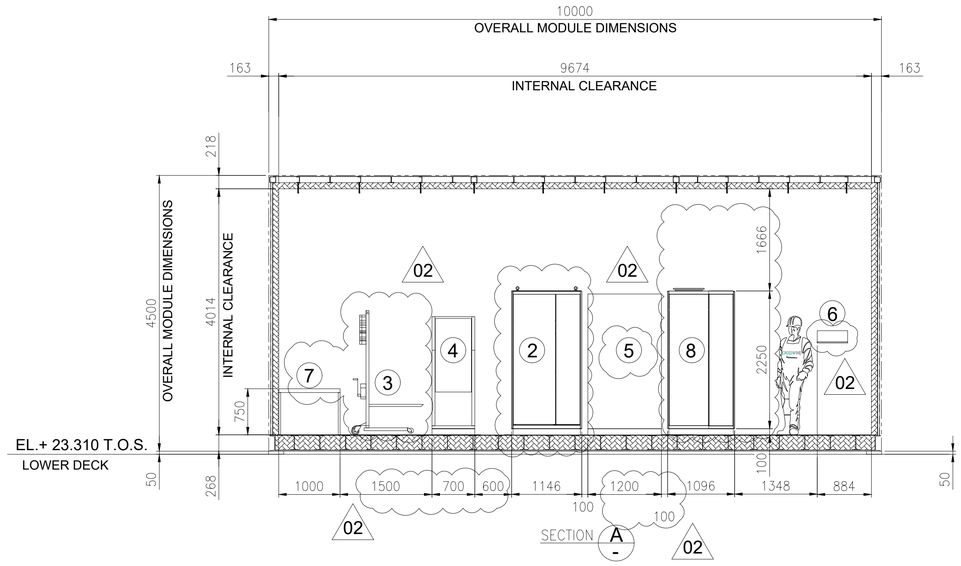
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

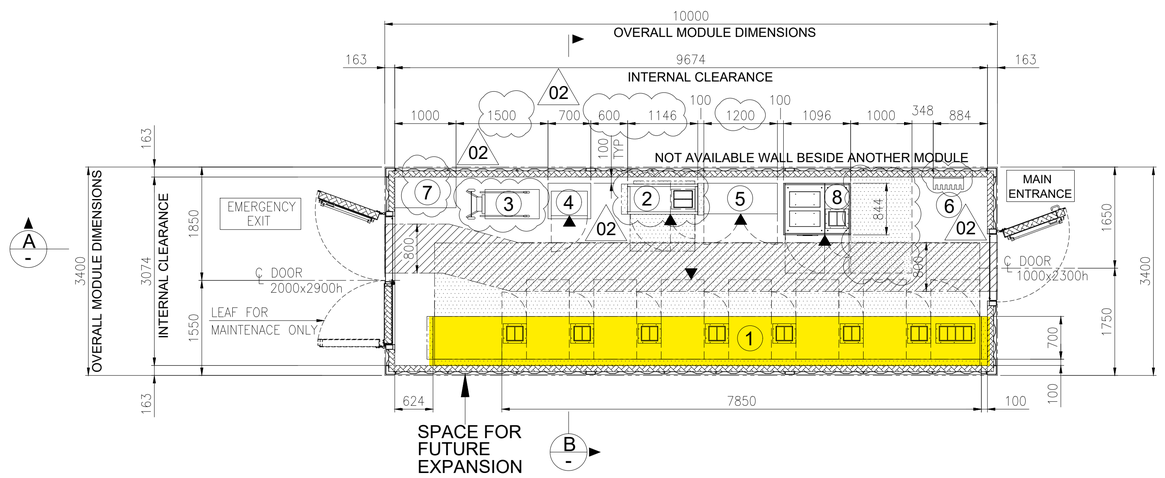
Comments:
CORE CONTINUITY PH 4= 0.6
CORES / ARMOUR+EARTH INS. PH 4 = >999 M

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:39:09.139Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T13:47:56.203Z	

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





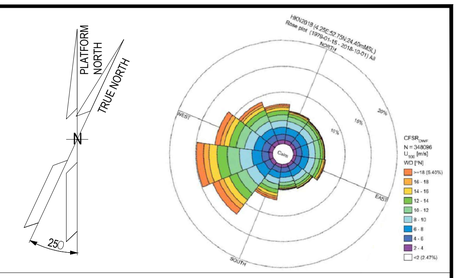


EQUIPMENT LAYOUT
"B-200" LV (400V) SWITCHGEAR ROOM
BOTTOM PLAN

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

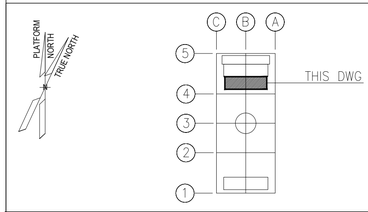
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR - WIDTH 800mm.
_____ MAINTENANCE AREA - VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

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

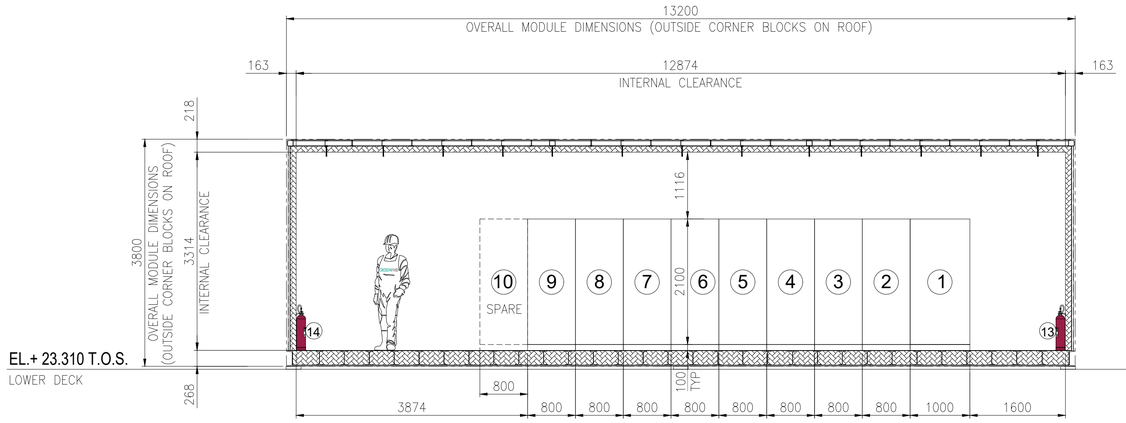
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LV SWITCHROOM

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

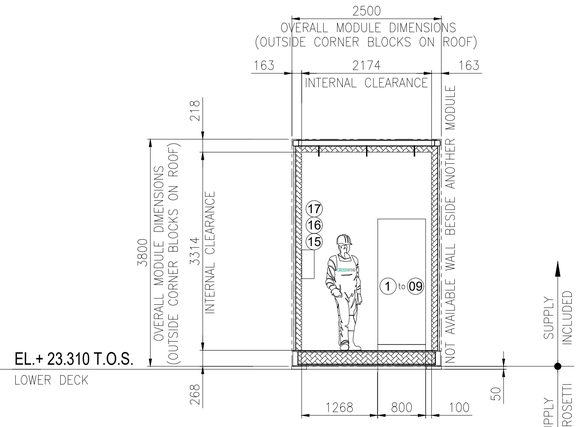
A1	DRAWING NO. 123A90-DDL-EL-DL-20105	SHEET 001	REV. 02

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

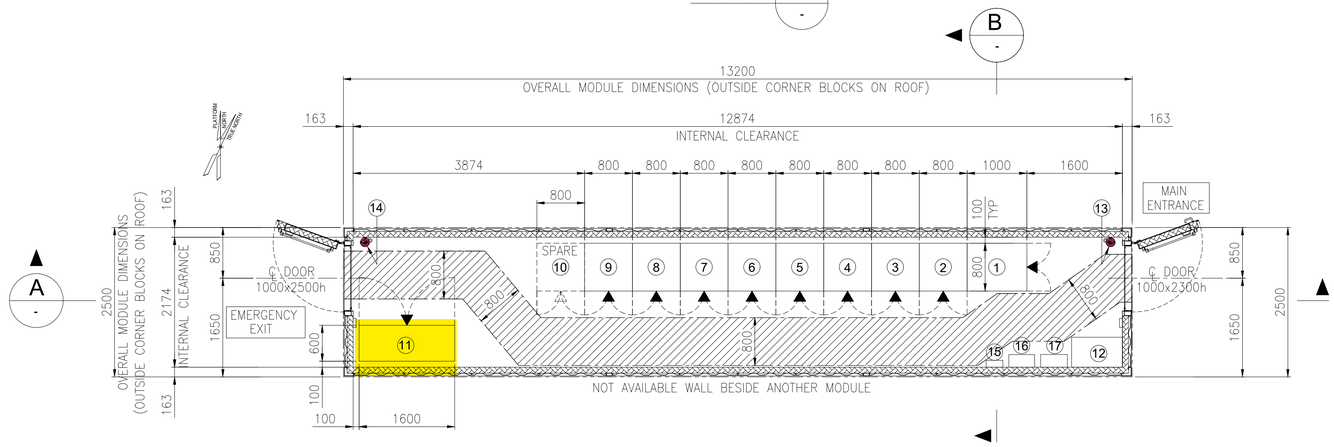
DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 03



SECTION A -



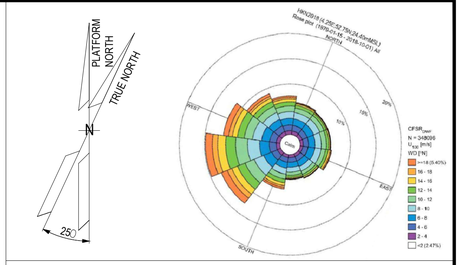
SECTION B -



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

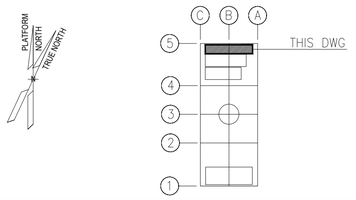
HOLDS

.

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

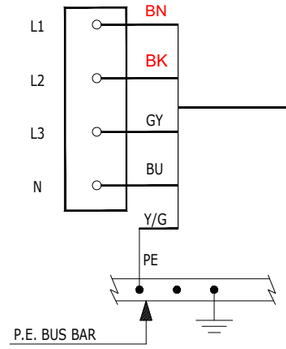
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:33,3
DRAWN MGA	CHECKED LCA	APPROVED DLO	DATE 27/05/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40012	SHEET 001	REV. 03

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

FROM	TO

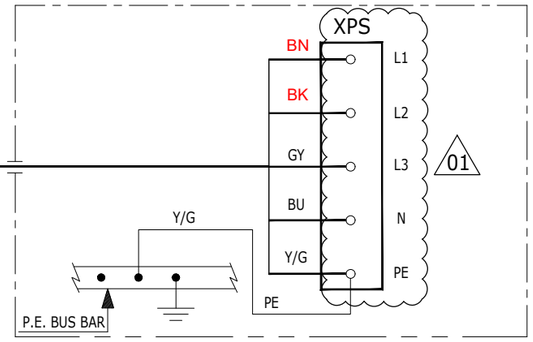
DESCRIPTION: LV SWITCHGEAR
TAG NUMBER: SG-200N1

COLUMN/CUBIC.: A5/+02

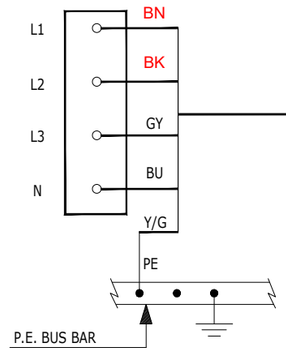


83024-CEL
5G16 mm²

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

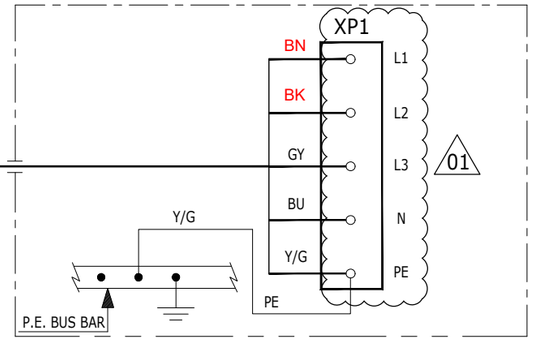


COLUMN/CUBIC.: A5/+03

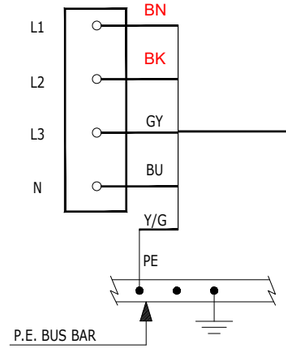


83025-CEL
5G16 mm²

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



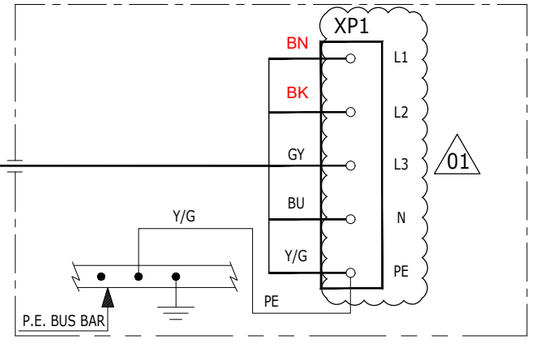
COLUMN/CUBIC.: A5/+04



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

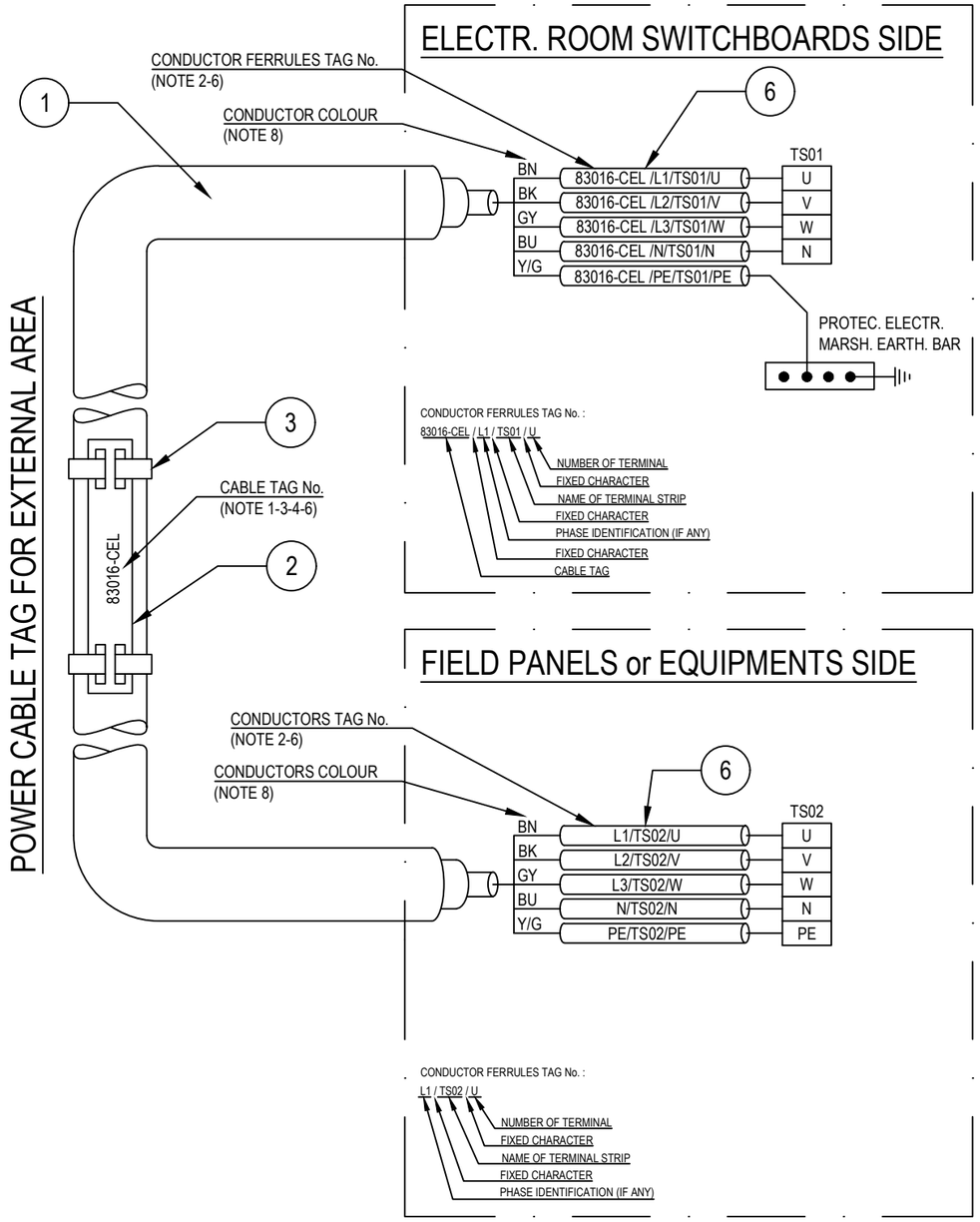
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:X

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

C02



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

NOTES:

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

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

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

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

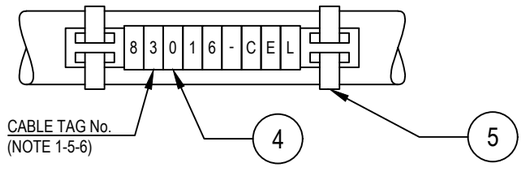
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

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

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

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20092
REV.: 2_A | DATE: 28/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

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

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

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

F.to UNI A3: 420mmx297mm

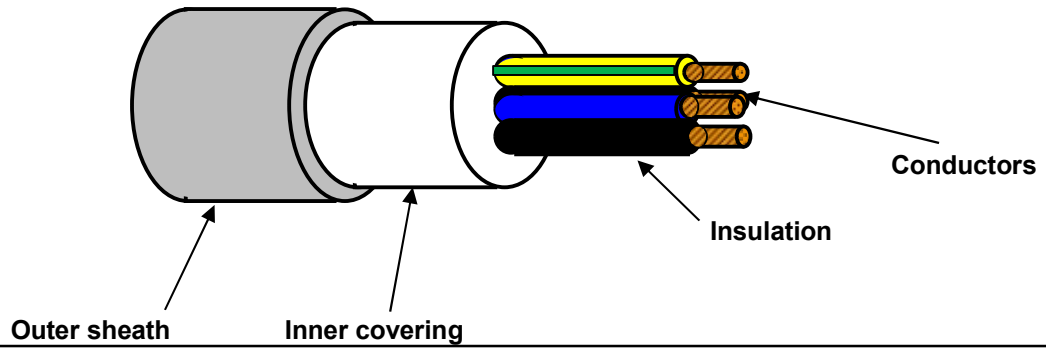
File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
83026-CEL	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						SG-200N1	LV 0,4 kV MCC Switchgear	Lower Deck (B-200)	B400-HSB-001	Distribution & HVAC Panel - I&T Equipment Room	Lower Deck (B-400)	ELECV15-5G16	Cable Cu Cl.2/EPR/LSZH 0,6/1kV 5G16mm² - Grey	n.a.			T1_M32_Single				L-450-101-LVT-026 / L-600-101-LVT-017 / L-600-101-LVT-019 / L-600-101-LVT-020 / E-MCT-204 / L-600-101-LVT-010 / L-750-101-LVT-015 / L-300-101-LVT-007 / E-MCT-402 / L-300-101-LVT-065 / L-150-101-LVT-156

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	84317-CEL	: AC UPS - PAS DB / UCP - HVAC ITER		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	77-40	: HVAC I&T Equipment Room B-400		Module	LD_B-300/LD_B-400	
TASK	code	C10000593	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 B400-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	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

REFER TO FINAL SHEET FOR ACCEPTANCE

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	84317-CEL	: AC UPS - PAS DB / UCP - HVAC ITER	Dwg	123A90-DDL-EL-LIS-20148		
	S/Sys	77-40	: HVAC I&T Equipment Room B-400	Module	LD_B-300/LD_B-400		
TASK	code	C10000593	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form CPX09	LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0.7	
6		PH 2	0.7	
7		PH 3	NA	
8	ARMOUR CONTINUITY Ω		0.7	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0.7	
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	

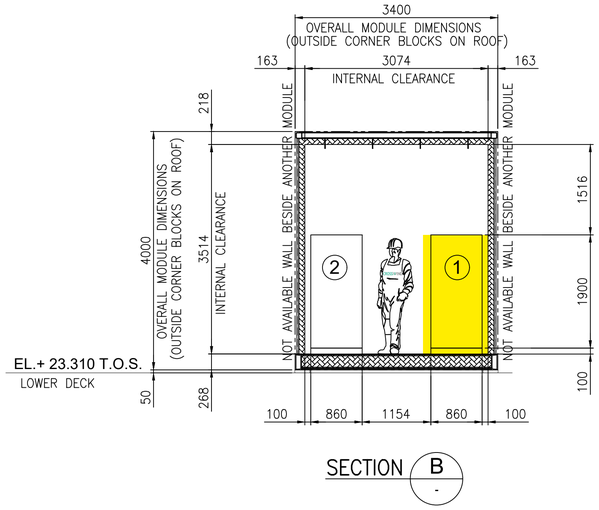
TESTING INSTRUMENTS USED

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

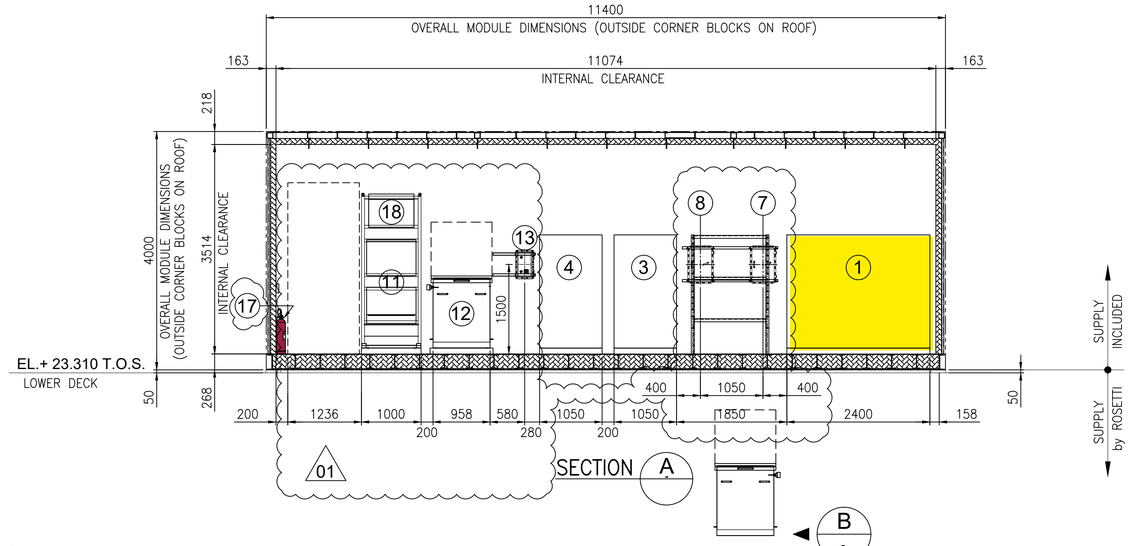
Comments: Note 4 : Refer to PL C30000679

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Paolo Schintu	
Date	2024-11-15	2024-11-23	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-15T12:13:08.255Z	PROVERLIS Digitaly signed by Paolo Schintu 2024-11-23T09:37:51.209Z	

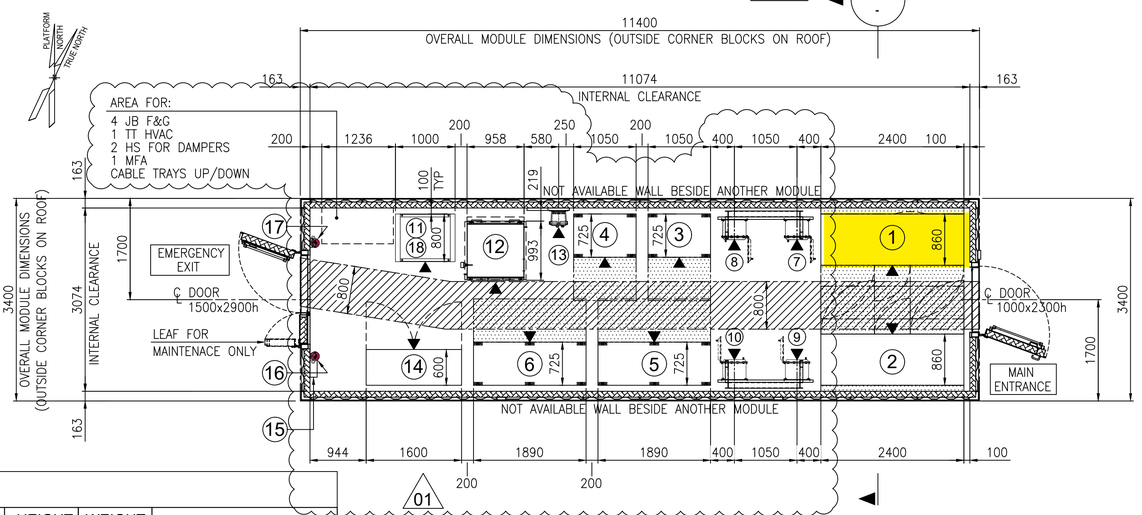
DRAWING NO. 123A90-DDL-EL-DL-20106 REV. 01



SECTION B -



SECTION A -



A -

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

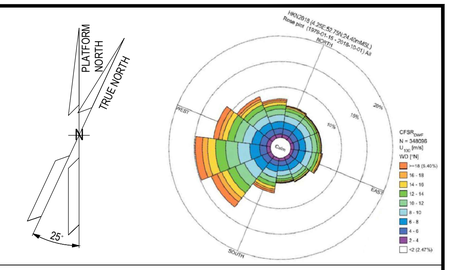
EQUIPMENT LIST

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

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

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

ROSETTI MARINO SpA



NOTES

01

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

LEGEND

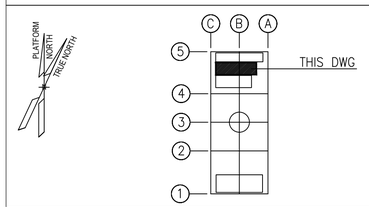
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

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

KEY PLAN



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

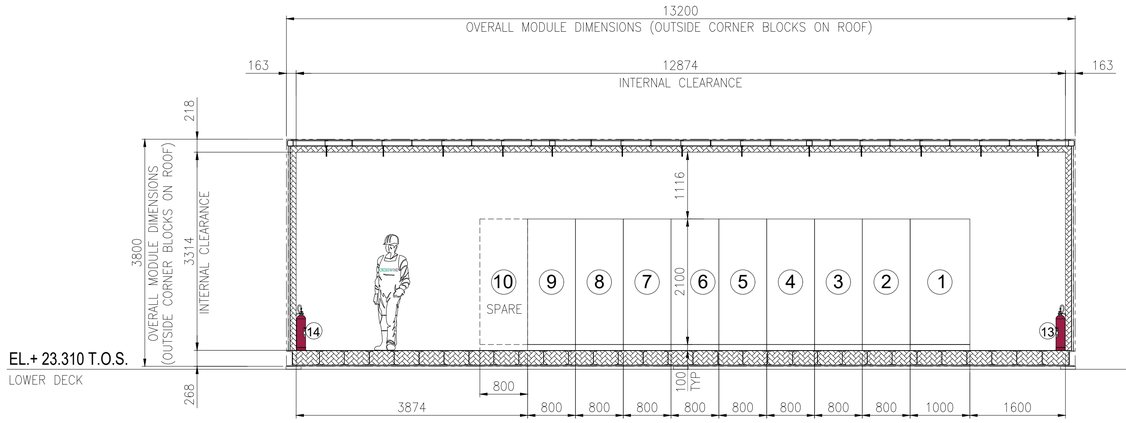
CROSSWIND | ROSETTI MARINO

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

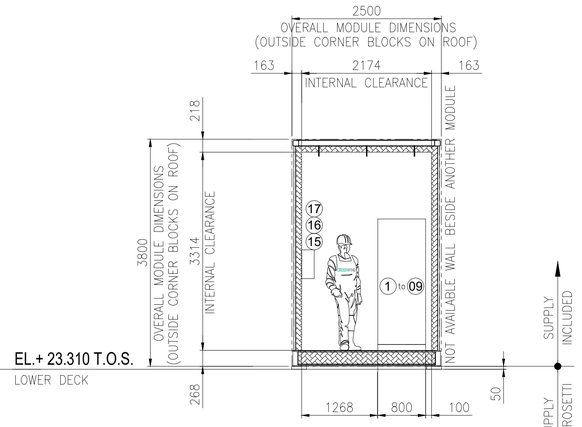
CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

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

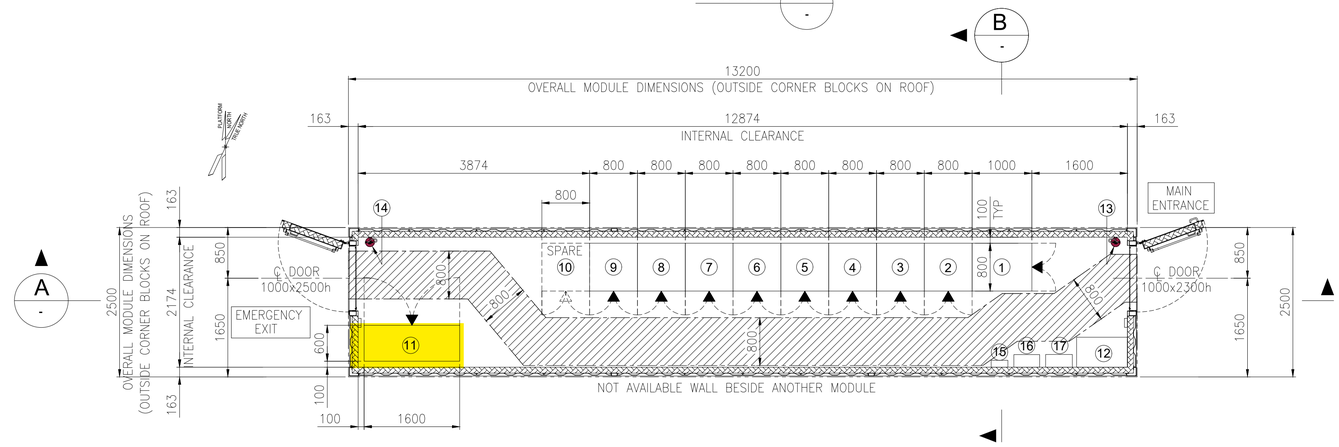
DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 03



SECTION A -



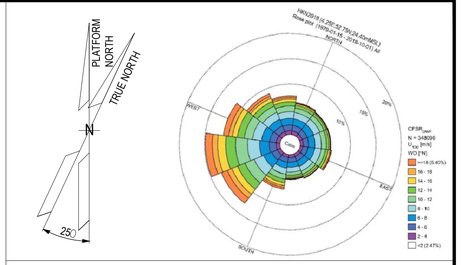
SECTION B -



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

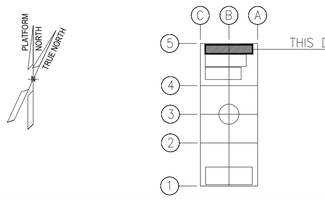
HOLDS

.

REFERENCE

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

KEY PLAN



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

CROSSWIND

ROSETTI MARINO

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

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

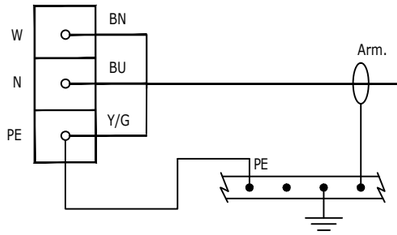
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40012**
REV.: 3_A | DATE: 07/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

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

FROM	TO

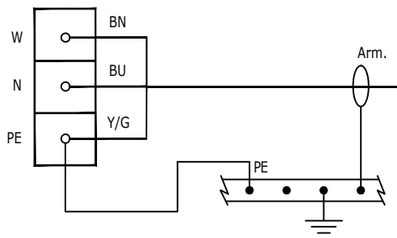
DESCRIPTION: AC UPS - PAS DB
TAG NUMBER: DP-200F3

-X41



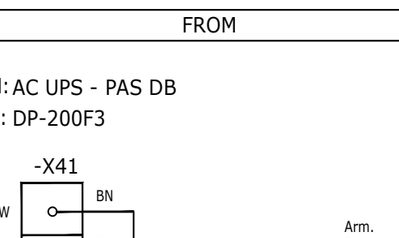
84316-CEL
3G2.5 mm²

-X42



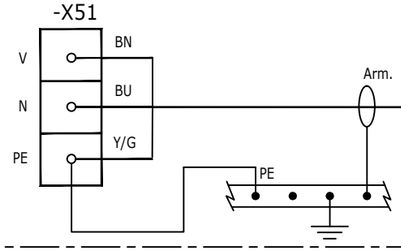
84317-CEL
3G2.5 mm²

-X49



84318-CEL
3G2.5 mm²

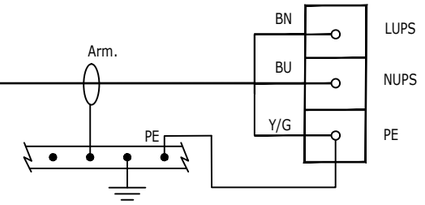
-X51



84319-CEL
3G2.5 mm²

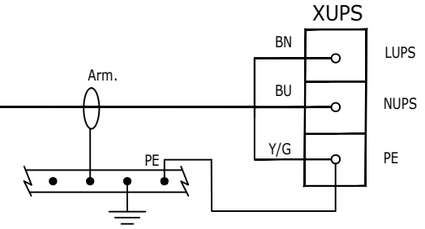
DESCRIPTION: UCP - HVAC UPS ROOM
TAG NUMBER: B300-HSB-001

XUPS



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

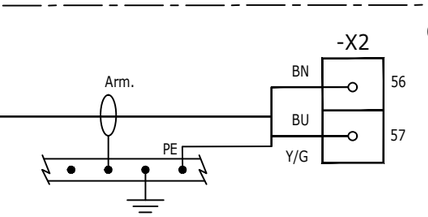
XUPS



DESCRIPTION: LV SWITCHBOARD AUXILIARY
TAG NUMBER: SG-200N1

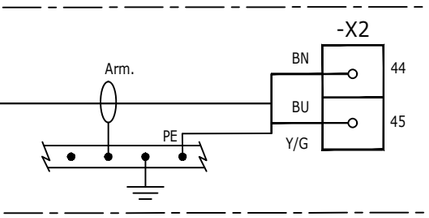
COLUMN: A2/02

-X2



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

-X2



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

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

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

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

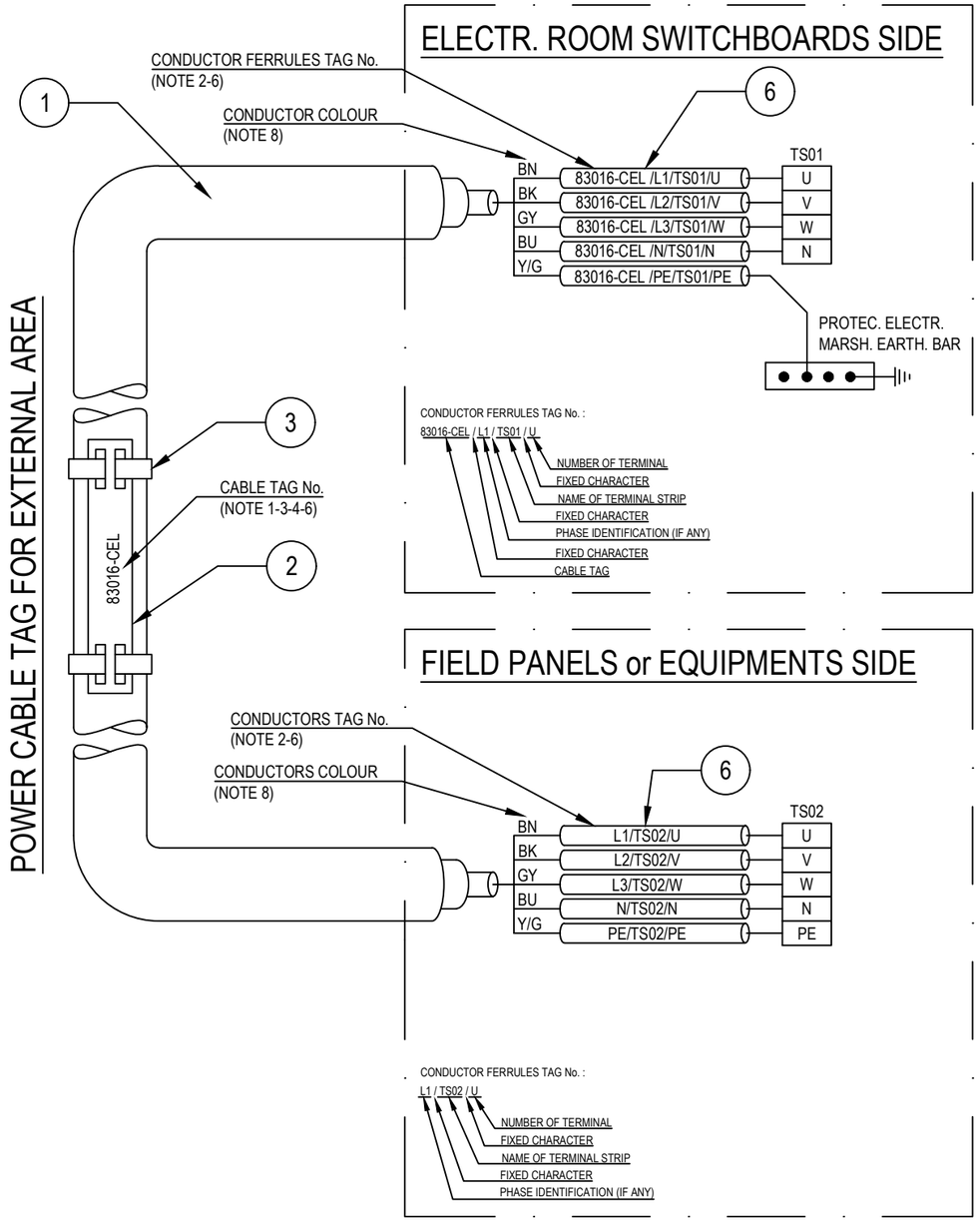
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:X

A3 | DRAWING NO. 123A90-DDL-EL-DG-20149 | SHEET 042 | REV. 02

F.to UNI A3: 420mmx297mm

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

C02



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

NOTES:

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

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

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

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

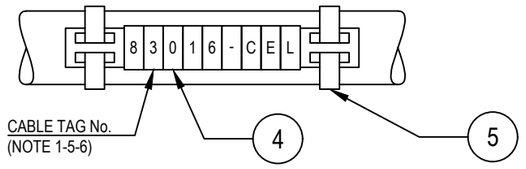
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

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

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

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20092
REV.: 2_A | DATE: 28/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

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

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

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

F.to UNI A3: 420mmx297mm

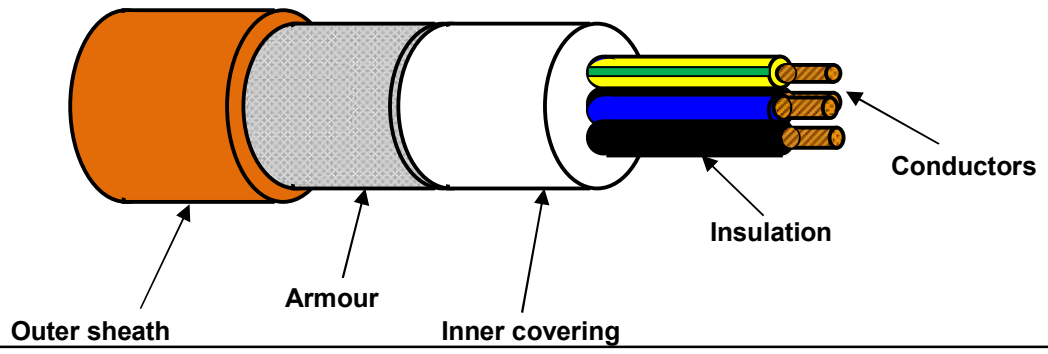
File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
84317-CEL	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						DP-200F3	AC UPS 35 kVA Distribution Board	Lower Deck (B-300)	B400-HSB-001	Distribution & HVAC Panel - I&T Equipment Room	Lower Deck (B-400)	ELECV19-3G2,5	Cable Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 3G2,5mm² - Orange	T2_M20_Double			T2_M20_Double				L-450-101-LVT-040 / L-600-101-LVT-036 / L-600-101-LVT-037 / L-600-101-LVT-035 / E-MCT-301 / L-300-101-LVT-006 / L-450-101-LVT-008 / L-300-101-LVT-009 / E-MCT-401 / L-300-101-LVT-065 / L-150-101-LVT-156

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.

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	B400-HSB-001	: Distribution & HVAC Panel - I&T Equipment Room	Dwg	123A90-DDL-IN-DL-40012		
	S/Sys	77-40	: HVAC I&T Equipment Room B-400	Module	LD_B-400		
TASK	code	C10000840	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.	OK
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° :	1629	Type:	LK1-40
Voltage :	400 **V**	Frequency :	50 **Hz**	Rating :	18 **kW**
IP Rating	54	N° of outgoers:	87	Specification:	1724000049-HV-DA-00029
SWBD & CUB ref:	1724000049-HV-DA-00029			Data Sheet :	1724000049-HV-DA-00029

TESTING AND MEASUREMENT INSTRUMENT USED

Type	Serial n°	Calibration certificate	Validity

TEST RESULTS

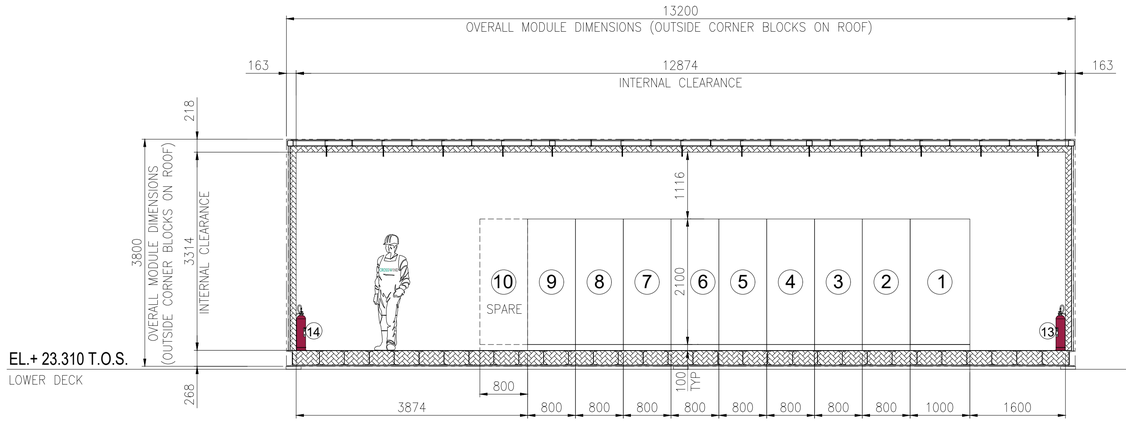
INSULATION RESISTANCE	TEST VOLTAGE	V	R/ S-T-EARTH	Mohm
			S/ R-T-EARTH	Mohm
			T/S-R-EARTH	Mohm

Comments:

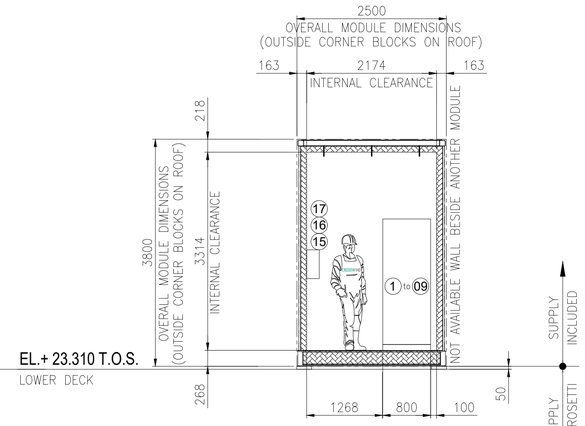
FAT will be completed at RM yard after MC phase

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	Alex Sistemi	RM (Rosetti Marino)	
Name	Alex sistemi	Giovanni Tangianu	
Date	2024-10-15	2024-10-15	
Signature	Firma Libera Sbloccata Alex sistemi 2024-10-15T16:04:32+0200	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T15:06:33.382Z	

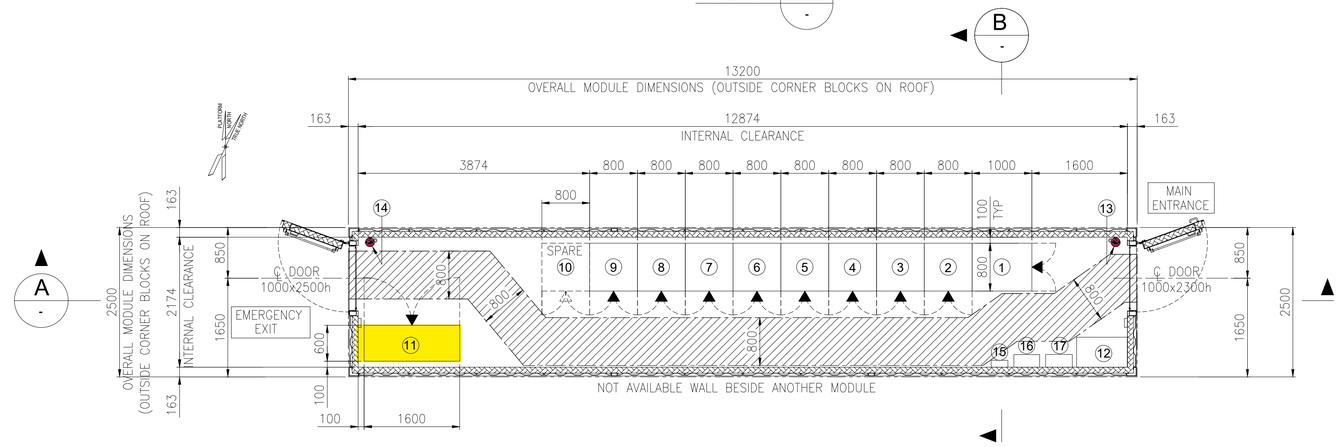
DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 03



SECTION A -



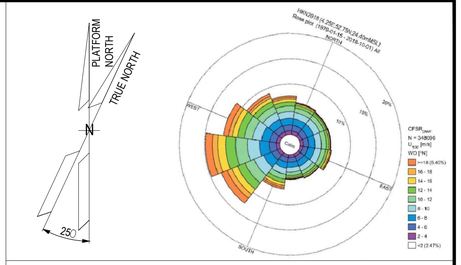
SECTION B -



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

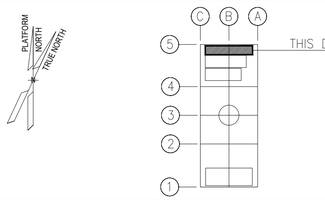
HOLDS

.

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

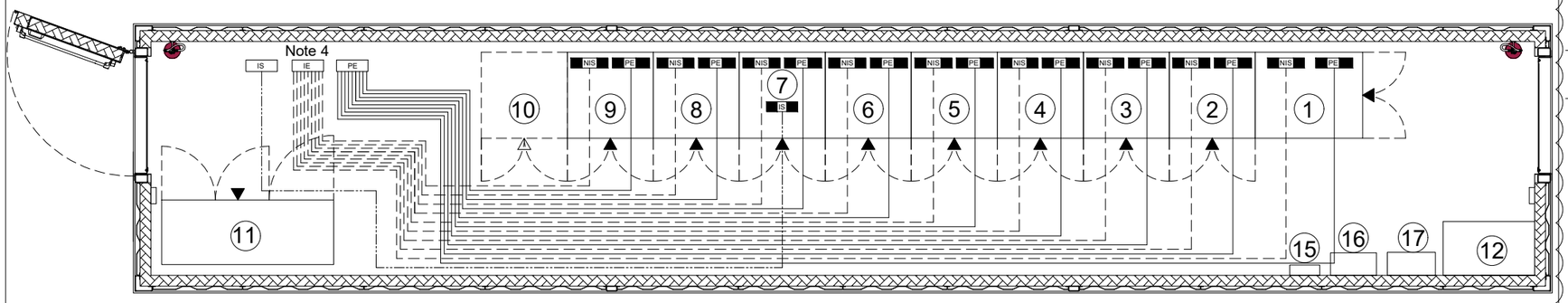
File Name : 123A90-DDL-IN-DL-40012 Rev.03.dwg

INSTRUMENT EQUIPMENT LIST		
REF.	TAG No.	DESCRIPTION
1	B400-SRV-001	SERVER CABINET
2	B400-NET-001	NETWORK CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET
4	B400-PCS-001	PCS SYSTEM CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET
6	B400-FGS-001	FGS SYSTEM CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1
8	B400-FGS-003	FGS MARSHALLING CABINET 2
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET
10	-	SPARE
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM
12	-	TABLE
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.
15	-	FIRST AID KIT
16	-	RESUSCITATION UNIT
17	-	CABINET INCLUDED N.10 ESCAPE MASK

NOTES

1 - THIS DOCUMENT 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 IN FIELD.
4 - THE EARTHING BUS BARS INSTALLATION SHALL BE PREFERABLY IN VERTICAL MODE.
5 - FOR EARTHING TYPICAL DETAILS AND Y/G CONDUCTOR CROSS SECTION SEE DOC. 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 - IN CASE OF CABLE CONNECTIONS BETWEEN TWO CABINETS, THE CABLE SCREEN SHALL BE CONNECTED TO IE AT MARSHALLING SIDE ONLY.

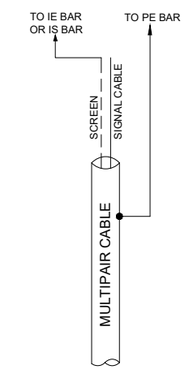
01



LEGEND

PE	EARTHING BUS BAR AISI 316L
NIS	INSULATED INSTRUMENT EARTH BUS BAR NOT INTRINSIC SAFETY DIM. 450x60x5mm AISI 316L
IS	INSULATED INSTRUMENT EARTH BUS BAR INTRINSIC SAFETY DIM. 450x60x5mm AISI 316L
— —	35sqmm Y/G INSULATED COPPER CONDUCTOR FOR PE (SEE NOTE 2)
——	35sqmm Y/G INSULATED COPPER CONDUCTOR FOR I.S. & NON I.S. (SEE NOTE 2)
▬	EARTHING BUS BAR 60x5mm AISI 316L (SEE NOTE 3)
PE	PROTECTIVE EARTH
IE	INSTRUMENT EARTH
IS	INTRINSICALLY SAFE EARTH

KEY



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40013**

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

ROSETTI MARINO SpA

01

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	14/05/24	MGA	LCA	DLO	ACCEPTED FOR CONSTRUCTION
00	19/01/24	INVIRAJ	AMBE/LCA	OYFO/MDO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING LAYOUT DRAWINGS(OFFSHORE ITER)
EQUIPMENT LAYOUT

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

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-IN-DL-40013	003	01

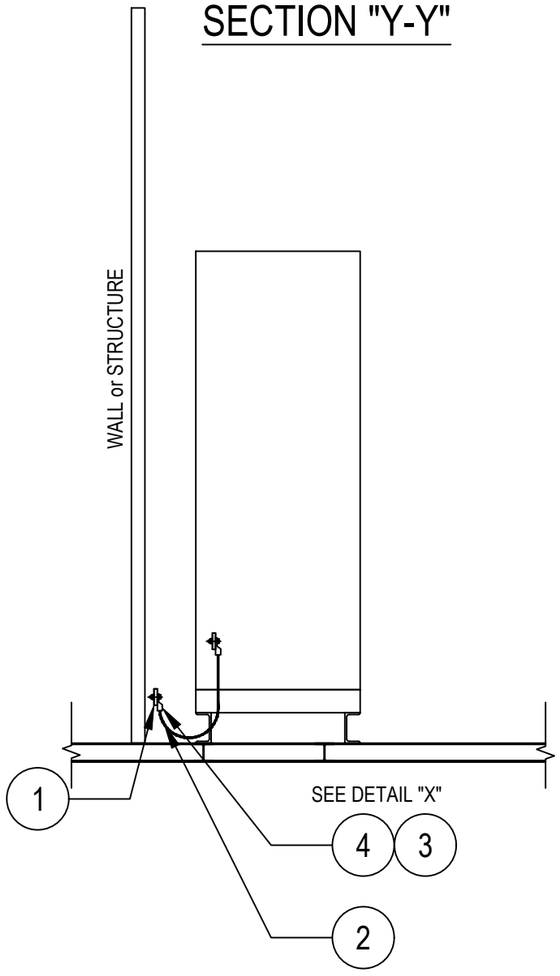
F.to UNI A3: 420mmx297mm

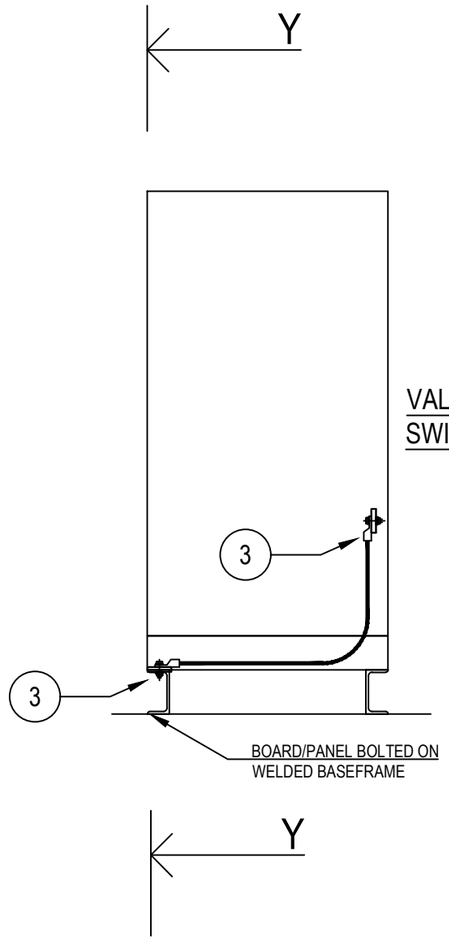
File Name : 123A90-DDL-IN-DL-430013 Rev. 01

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	

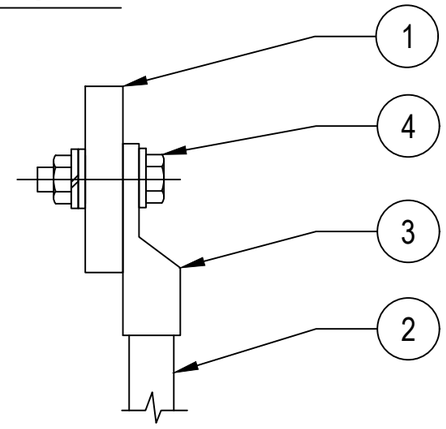
SECTION "Y-Y"





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_E	09/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR 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-400 HV-MV Switchgear Room

HVAC PANEL WIRING DIAGRAM

B400-HSB-001

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	28/06/24				ISSUE FOR REVIEW (IFR)
00	22/04/24				ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

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

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

SCALE : NTS

A3

DRAWING NO. 123A90-1724000049-HV-DA-00029

SHEET 001

REV. 03

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM
COVER

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 1

F.S. 2

LISTA FOGLI \ INDEX

Foglio Sheet	Descrizione Description	Revisioni Revisions 1	2	3	4	5	6	7	8	9	Foglio Sheet	Descrizione Description	Revisioni Revisions 1	2	3	4	5	6	7	8	9
1	COVER										27	PLC SECTION									
2	INDEX										28	PLC SECTION									
2A	INDEX										29	PLC SECTION									
3	SIMBOL LIST										30	PLC SECTION									
4	EXTERNAL VIEW										31	PLC SECTION									
5	INTERNAL VIEW										32	PLC SECTION									
6	POWER SECTION										33	PLC SECTION									
7	POWER SECTION										34	PLC SECTION									
8	POWER SECTION										35	PLC SECTION									
9	POWER SECTION A										36	PLC SECTION									
10	POWER SECTION A										37	PLC SECTION									
11	POWER SECTION A										38	PLC SECTION									
12	AUX SECTION A										39	PLC SECTION									
13	AUX SECTION A										40	PLC SECTION									
14	AUX SECTION A										41	PLC ARCHITECTURE									
15	AUX SECTION A										42	EH MODULATION A									
16	AUX SECTION A										43	EH MODULATION B									
17	POWER SECTION B										44	AVAILABLE SIGNAL									
18	POWER SECTION B										45	TERMINAL STRIP									
19	POWER SECTION B										46	TERMINAL STRIP									
20	AUX SECTION B										47	TERMINAL STRIP									
21	AUX SECTION B										48	TERMINAL STRIP									
22	AUX SECTION B										49	TERMINAL STRIP									
23	AUX SECTION B										50	MATERIAL LIST									
24	AUX SECTION B										51	MATERIAL LIST									
25	UPS POWER SUPPLY										52	MATERIAL LIST									
26	PLC SECTION										53	MATERIAL LIST									
26A	PLC SECTION										54	MATERIAL LIST									

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM
INDEX

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 2
F.S. 2A

LISTA FOGLI \ INDEX

Foglio Sheet	Descrizione Description	Revisioni Revisions 1	2	3	4	5	6	7	8	9	Foglio Sheet	Descrizione Description	Revisioni Revisions 1	2	3	4	5	6	7	8	9
55	MATERIAL LIST																				
56	MATERIAL LIST																				
57	MATERIAL LIST																				
58	MATERIAL LIST																				
59	MATERIAL LIST																				
60	MATERIAL LIST																				
61	MATERIAL LIST																				

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM
INDEX

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 2A
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	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	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-400 HV-MV SWITCHGEAR ROOM

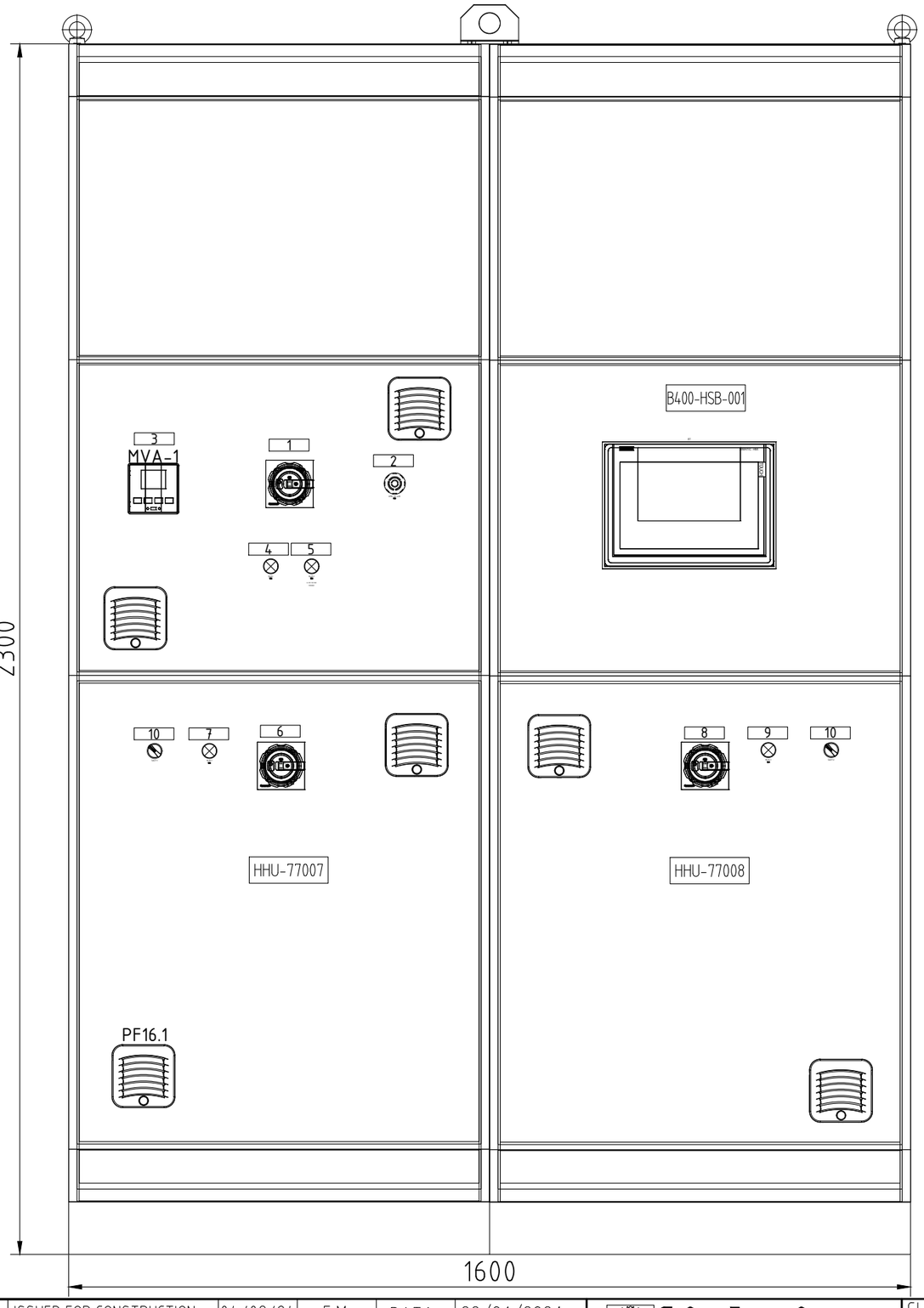
SIMBOL LIST

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 3
F.S. 4

EXTERNAL VIEW



LABEL	
1	MAIN SWITCH
2	ERGENCY POWER BUTTON
3	MULTIMETER
4	230V AC PRESENCE
5	24V DC PRESENCE
6	HHU-77007 MAIN SWITCH
7	HHU-77007 230VAC PRESENCE
8	HHU-77008 MAIN SWITCH
9	HHU-77008 230VAC PRESENCE
10	AUTO-0-MANUAL

CABINET QUOTE:
LENGHT 1600mm
HEIGHT 2300mm
DEPT 600mm

frigotermica
HVAC SYSTEM and EQUIPMENT
S.p.186–Cornegliano Laud. (Lo) Italy
tel. 0039–0371–69076
frigotermica@frigotermica.com

SERIAL n.: *Matricola n.:*	1629
TAG: *Codice identificativo:*	B400-HSB-001
POWER SUPPLY: *Alimenatzione:*	400 Vac 50Hz 3Ph+N
Icc: *Coorente cortocircuito:*	25 kA/1s
AUX. TENSION: *Tensione ausiliaria:*	24 Vdc
INTERNAL PROTECTION: *Protezione interna:*	IP54
MAIN BUS BAR RATING: *Barra principale:*	40 A
YEAR OF MANUFACTURE: *Anno produzione:*	2024
MANUFACTURER: *Costruzione:*	FRIGOTERMICA s.r.l.
CONTRACT n.: *Contratto:*	51/240554
PROJECT: *Progetto:*	BASE LOAD POWER HUB
WEIGHT: *Peso:*	1150 Kg

CE

FRIGOTERMICA JOB NUMBER: 4112

SCALE 1:10

REV.	MODIFICA	DATA	FIRMA		
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	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-400 HV-MV SWITCHGEAR ROOM
EXTERNAL VIEW

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 4
F.S. 5

INTERNAL VIEW

PLATE 700 x 470

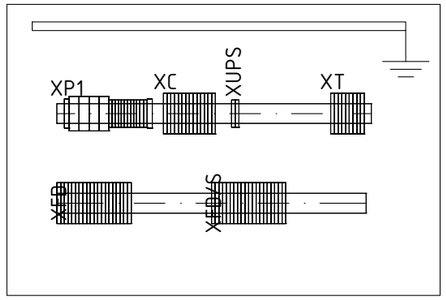


PLATE 700 x 470_2

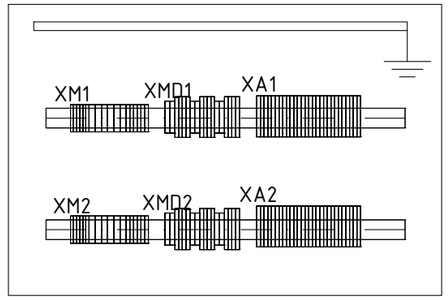


PLATE 700 x 570

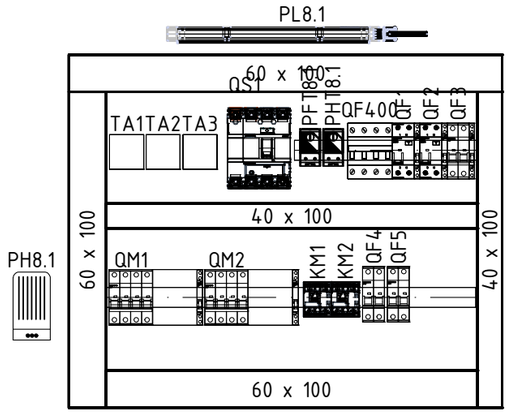


PLATE 700 x 570_2

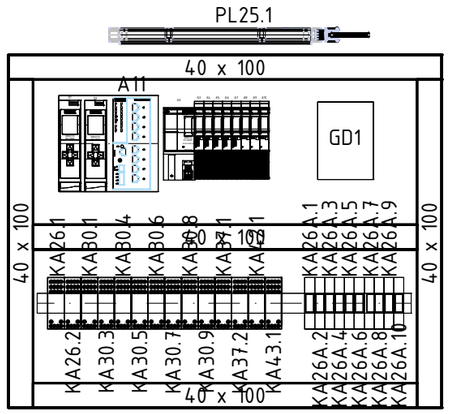


PLATE 700 x 870

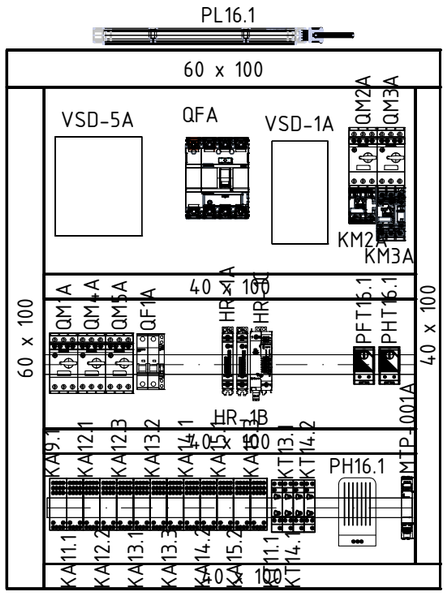
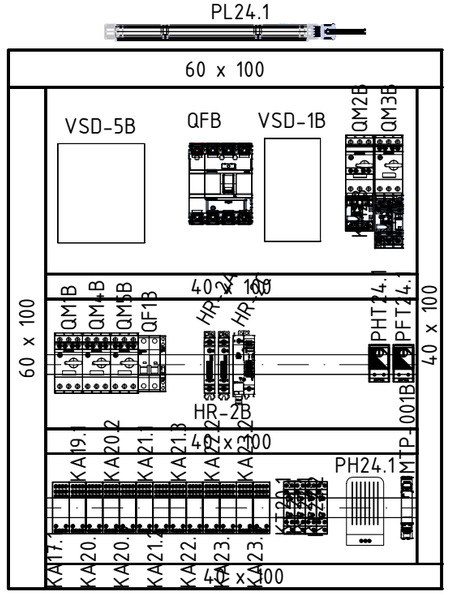


PLATE 700 x 870_2



SCALE 1:10

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

frigotermica
HVAC SYSTEM and EQUIPMENT
S.p.186–Cornegliano Laud. (Lo) Italy
tel. 0039–0371–69076
frigotermica@frigotermica.com

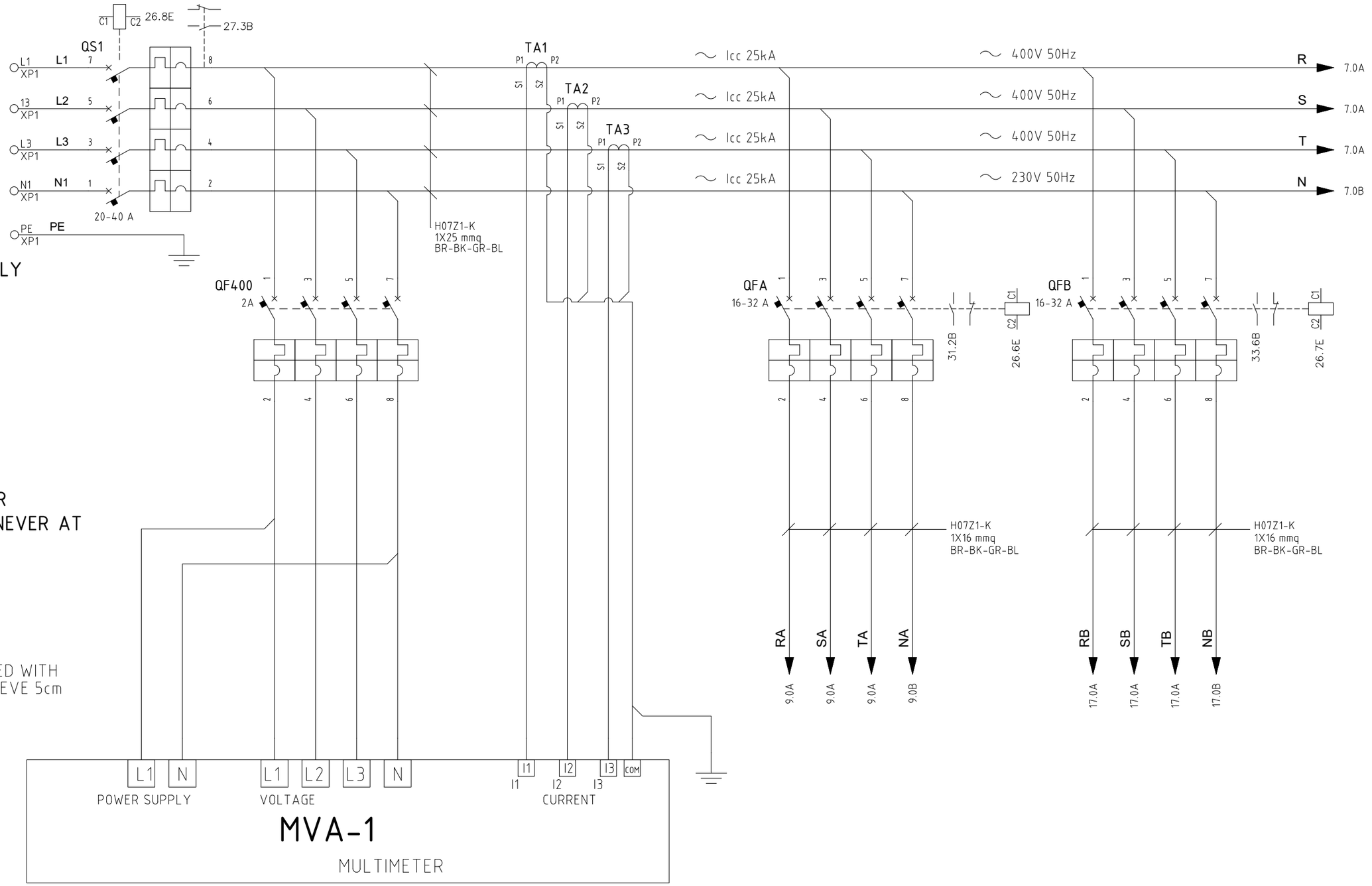
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
INTERNAL VIEW

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 5
F.S. 6



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

RATED POWER: 18 kW
RATED CURRENT: 29 A

ONLY UNIT HHU-77007 OR
HHU-77008 ACTIVATED, NEVER AT
SAME TIME

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

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

230V 1P + N
- ⟶ BROWN
- ⟶ BLU

24Vdc
- ⟶ RED
- ⟶ BLACK

PANEL INTERNAL CABLES TYPE: H07Z1-K OR FG17
UNIT INTERNAL CABLES TYPE: FG160M16 GREEN SHEATH NOT ARMOURED

REV.	MODIFICA	DATA	FIRMA		
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	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

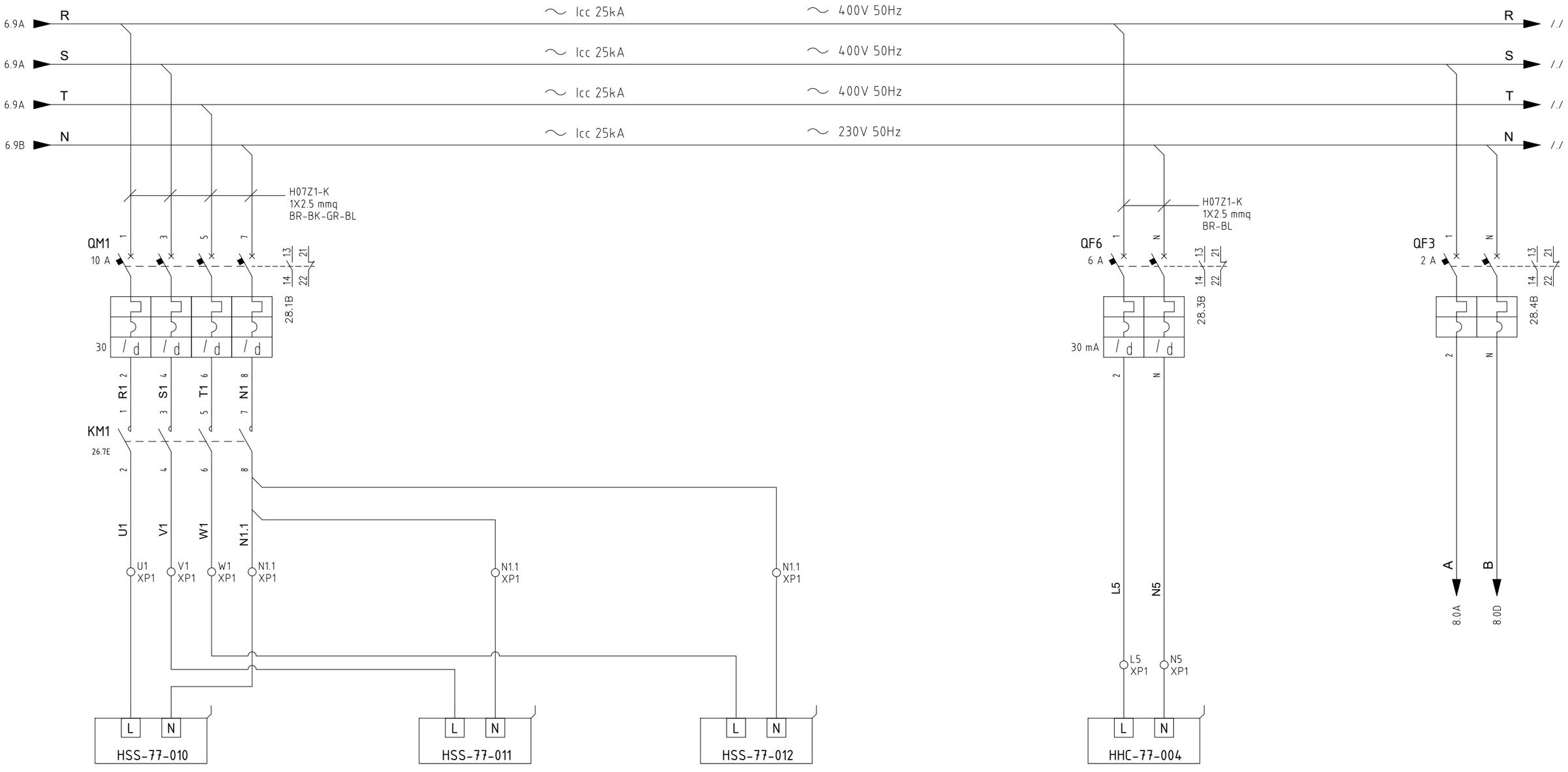
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
POWER SECTION

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 6
F.S. 7



HSS-77-010	
ELECTRICAL HEATER	
RATED	ABSORBED
2 kW	2 kW
8.7 A	8.7 A

HSS-77-011	
ELECTRICAL HEATER	
RATED	ABSORBED
2 kW	2 kW
8.7 A	8.7 A

HSS-77-012	
ELECTRICAL HEATER	
RATED	ABSORBED
2.7 kW	2 kW
8.7 A	8.7 A

HHC-77-004	
HEATIN CABLE	
RATED	ABSORBED
0.2 kW	0.2 kW
1.1 A	1.1 A

REV.		DATA	FIRMA		
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.
	MODIFICA	DATA	FIRMA	APPR.	M.G.

Frigotermica
HVAC SYSTEM and EQUIPMENT
S.p.186–Cornegliano Laud. (Lo) Italy
tel. 0039–0371–69076
frigotermica@frigotermica.com

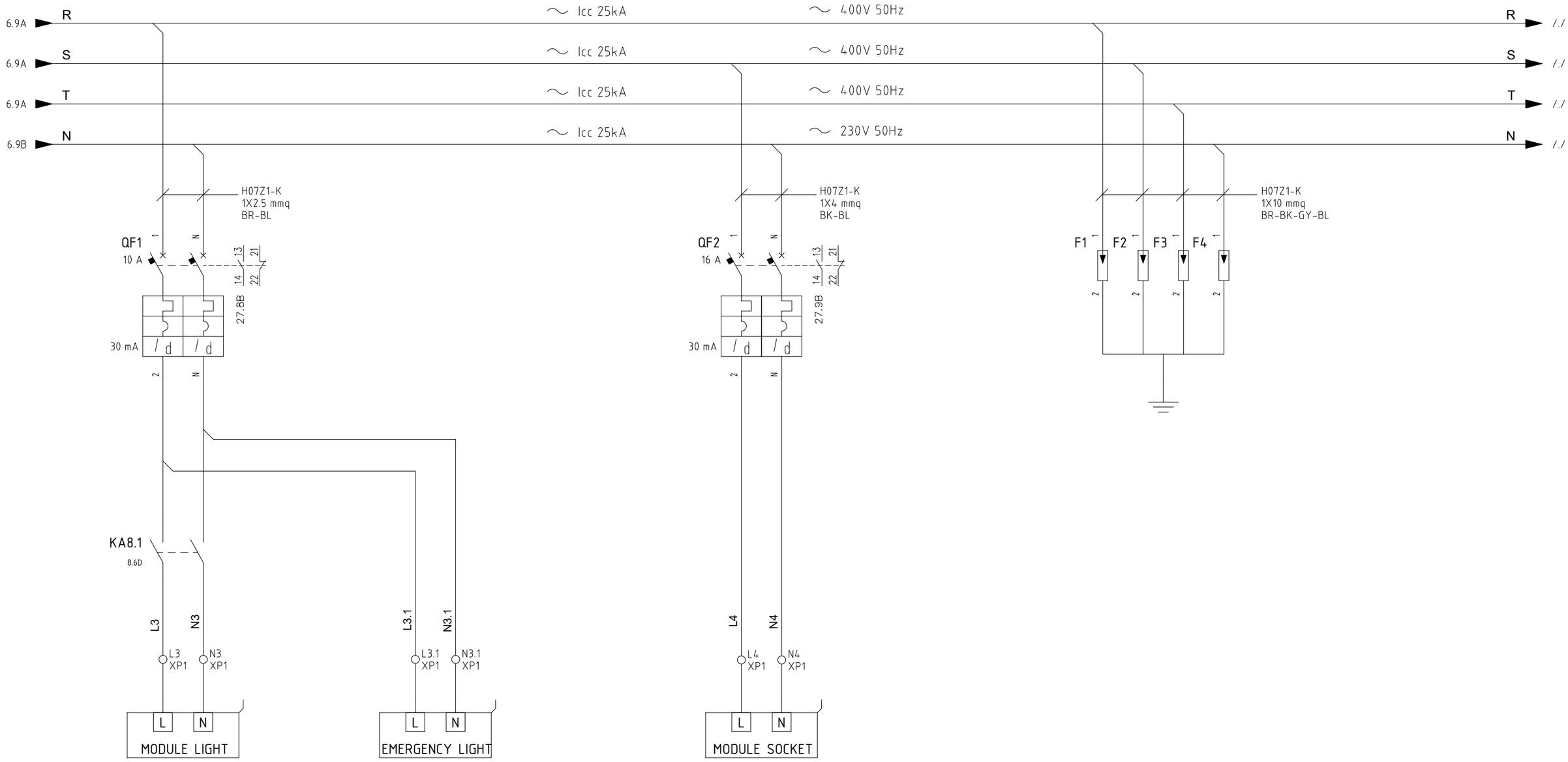
CLIENT:
CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
POWER SECTION

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 7
F.S. 7A



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

MODULE INTERNAL SOCKET	
RATED	ABSORBED
3.5 kW	3.5 kW
16 A	16 A

REV.	MODIFICA	DATA	FIRMA
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.
02	ISSUED FOR APPROVAL	03/07/24	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.

DATA	22/04/2024
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-400 HV-MV SWITCHGEAR ROOM

POWER SECTION
Power section

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 7A
F.S. 8

PANEL INTERNAL LIGHT POWER SECTION

PANEL ANTI CONDENSING HEATER POWER SECTION

PANEL FAN VENTILATION POWER SECTION

230V VOLTAGE PRESENCE LIGHT POWER SECTION

7.7D A

A ./.

PLS8.1 13 14

8.1

PL8.1 X1 X2

PHT8.1 13 14 t<

8.2

PH8.1

PFT8.1 13 14 t>

8.3

PF8.1

M 1~ A1

HL8.1 X1 X2 WH

KA26.2

8.4

KA8.1 A1 A2

7.8D B

B ./.

7A.1D
7A.1D

03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.
REV.	MODIFICA	DATA	FIRMA	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-400 HV-MV SWITCHGEAR ROOM

POWER SECTION

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 8
F.S. 9

HHU-77007
SECTION

RATED POWER: 15 kW
RATED CURRENT: 29.76 A

ABSORBED POWER: 10 kW
ABSORBED CURRENT: 18.3 A

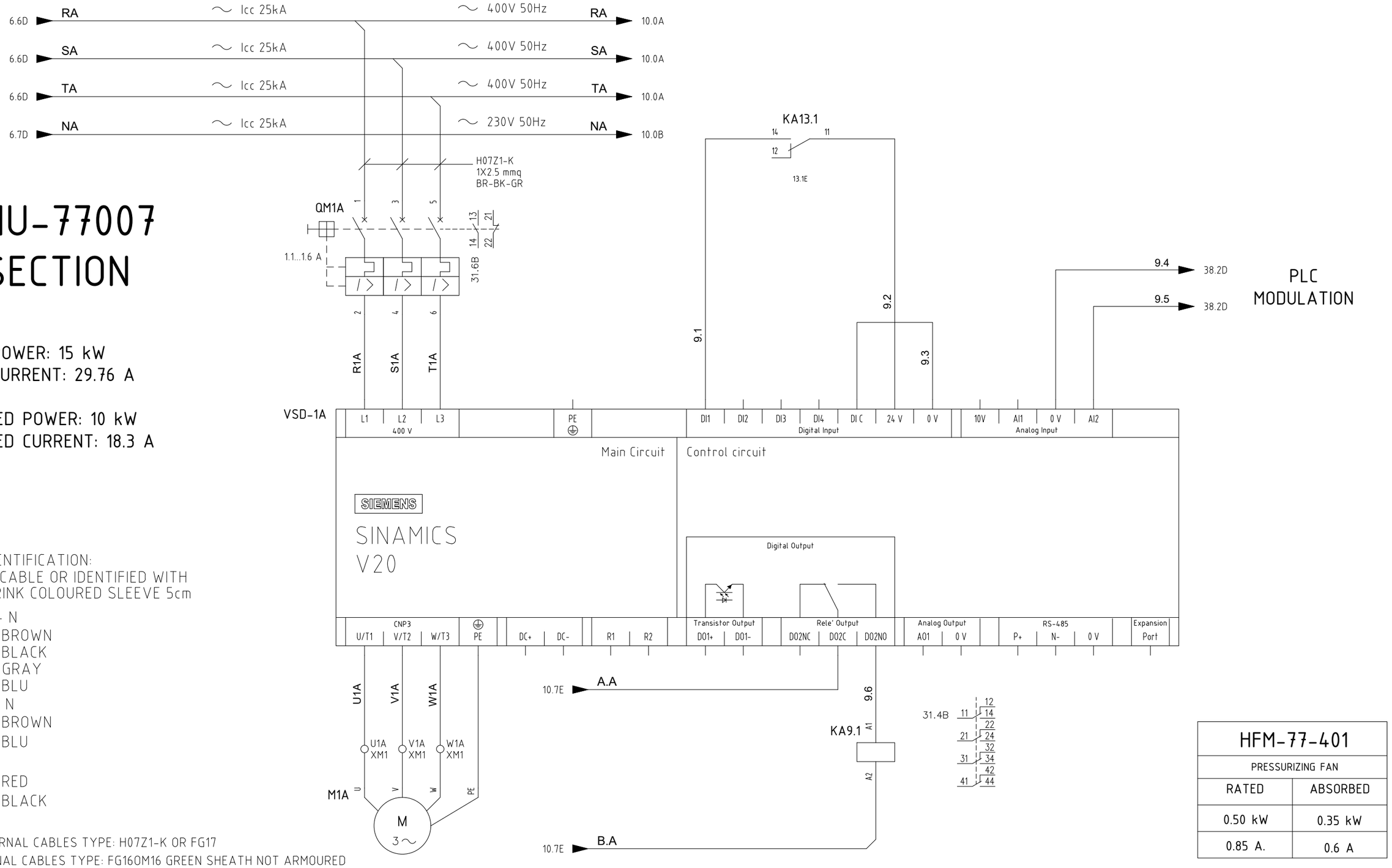
COLOR IDENTIFICATION:
COLORED CABLE OR IDENTIFIED WITH
HEAT SHRINK COLOURED SLEEVE 5cm

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

230V 1P + N
- ⟶ BROWN
- ⟶ BLU

24Vdc
- ⟶ RED
- ⟶ BLACK

PANEL INTERNAL CABLES TYPE: H07Z1-K OR FG17
UNIT INTERNAL CABLES TYPE: FG160M16 GREEN SHEATH NOT ARMOURED



HFM-77-401	
PRESSURIZING FAN	
RATED	ABSORBED
0.50 kW	0.35 kW
0.85 A.	0.6 A

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

frigotermica
HVAC SYSTEM and EQUIPMENT
S.p.186–Cornegliano Laud. (Lo) Italy
tel. 0039–0371–69076
frigotermica@frigotermica.com

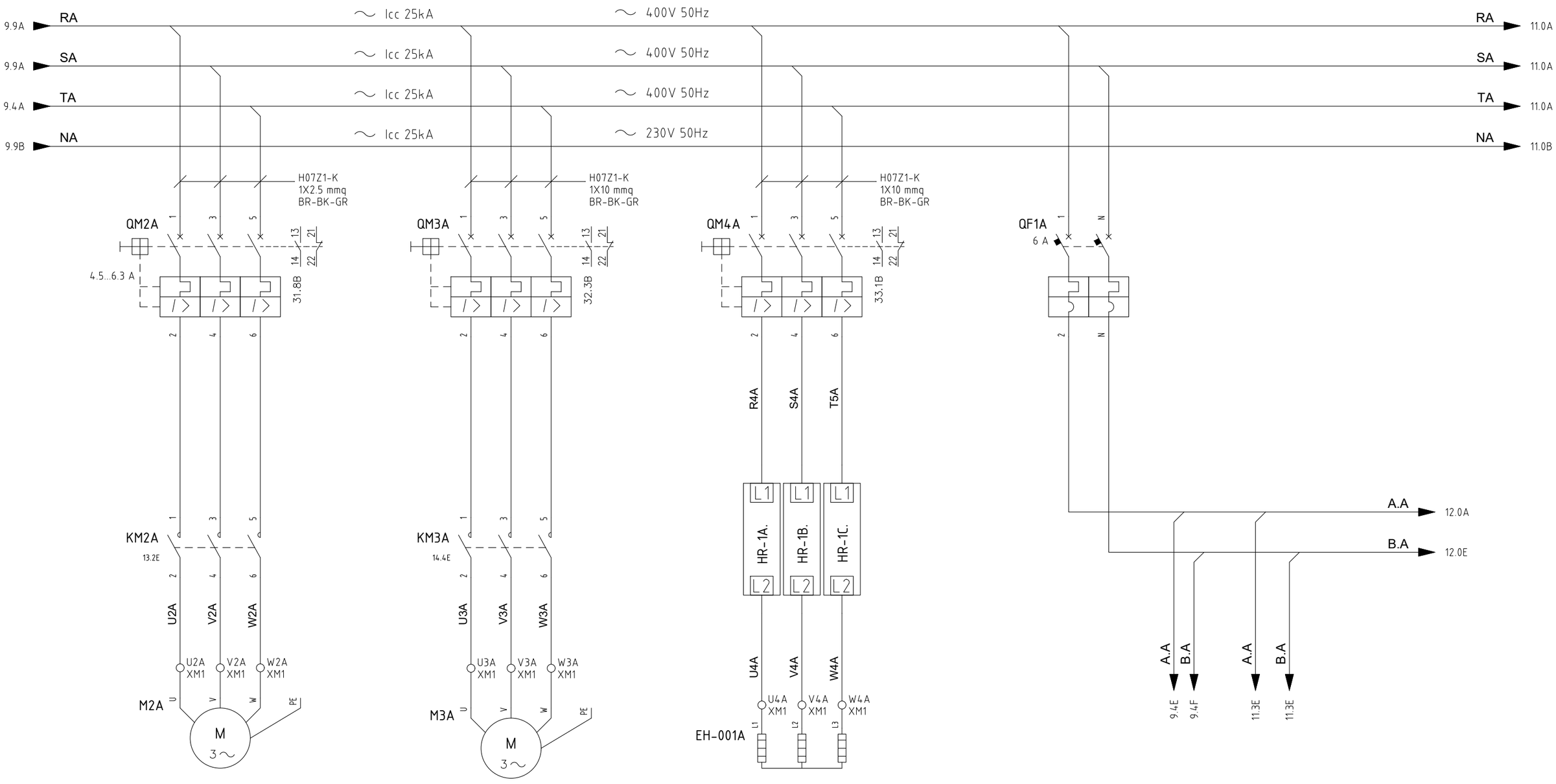
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
POWER SECTION A

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 9
F.S. 10



HFM-77-402	
SUPPLY FAN	
RATED	ABSORBED
3 kW	2.48 kW
5.10 A	4.21 A

HCO-77-401	
COMPRESSOR 1 A	
RATED	ABSORBED
9.8 kW	6.21 kW
16.8 A	11.5 A

HSS-77-401	
ELECTRICAL HEATER	
RATED	ABSORBED
9 kW	9 kW
13 A	13 A

REV.	MODIFICA	DATA	FIRMA		
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	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

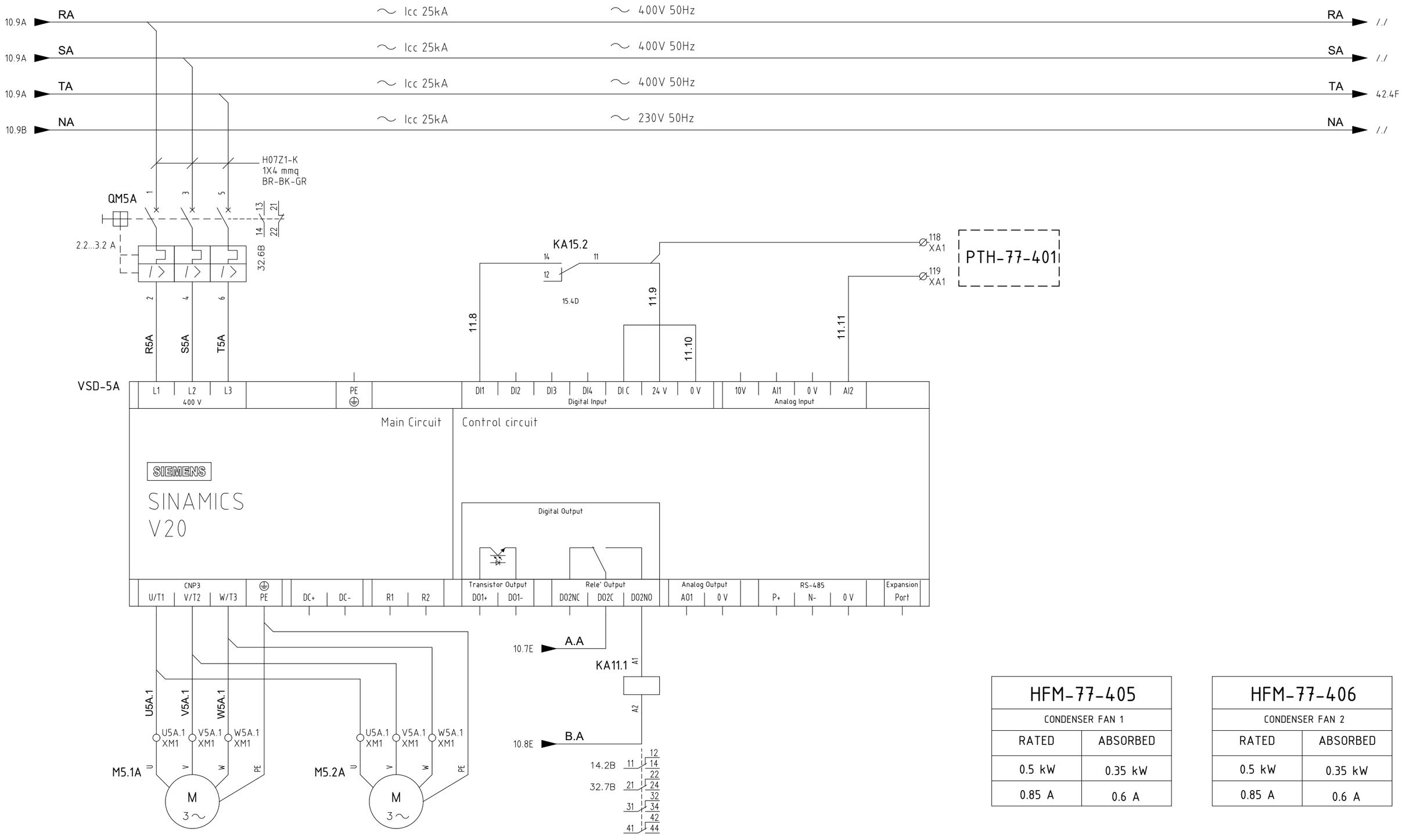
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
POWER SECTION A

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 10
F.S. 11



HFM-77-405	
CONDENSER FAN 1	
RATED	ABSORBED
0.5 kW	0.35 kW
0.85 A	0.6 A

HFM-77-406	
CONDENSER FAN 2	
RATED	ABSORBED
0.5 kW	0.35 kW
0.85 A	0.6 A

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

frigotermica
HVAC SYSTEM and EQUIPMENT
S.p.186–Cornegliano Laud. (Lo) Italy
tel. 0039–0371–69076
frigotermica@frigotermica.com

CLIENT: CROSSWIND

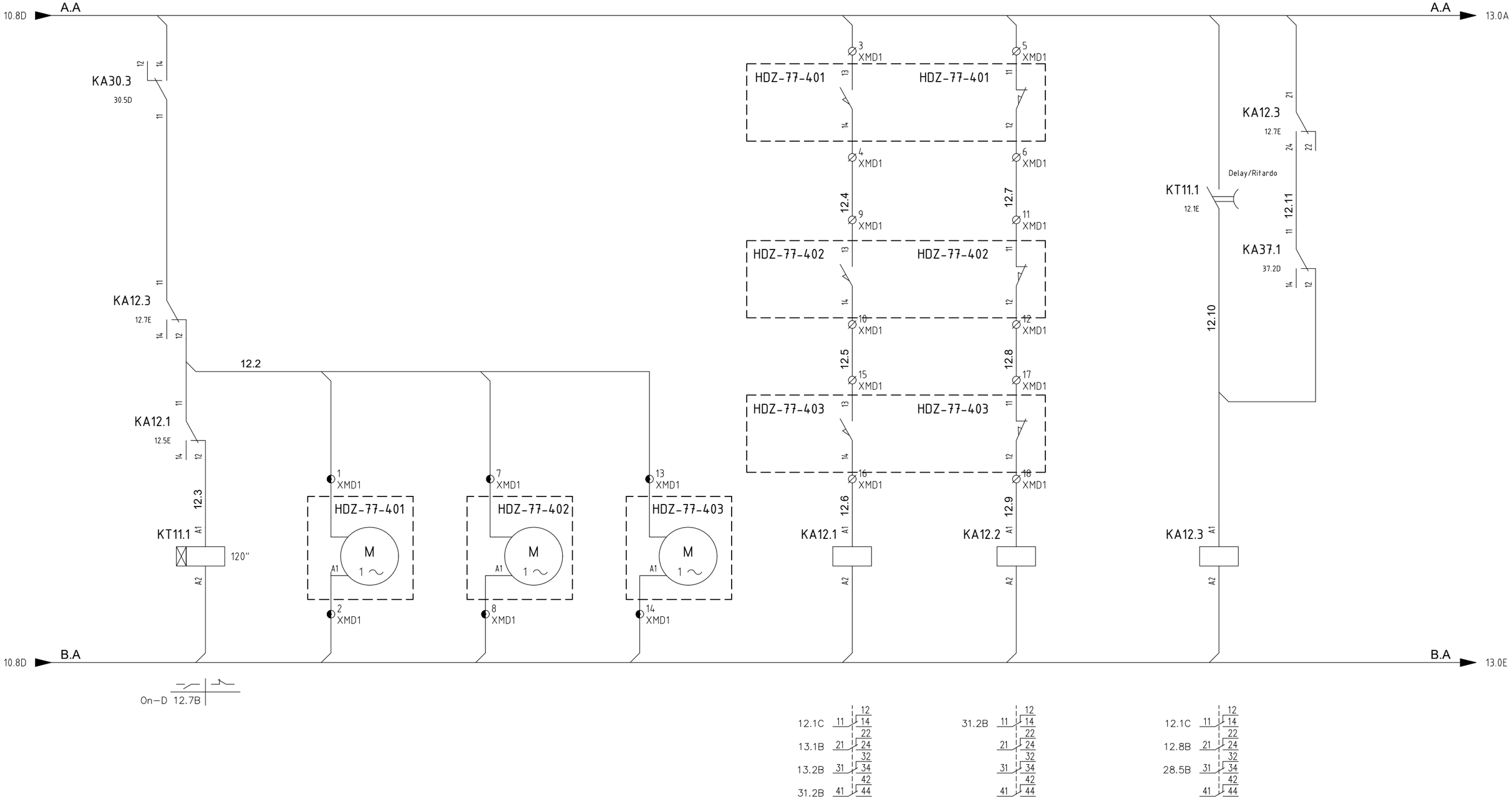
BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
POWER SECTION A

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 11
F.S. 12

START / STOP HHU-77007	MOTORISED DAMPER POWER SUPPLY	MOTORISED DAMPER OPEN SIGNAL HHU-77007	MOTORISED DAMPER CLOSED SIGNA HHU-77007	MOTORISED DAMPER NOT OPEN ALARM SIGNAL HHU-77007



REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM
AUX SECTION A

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 12
F.S. 13

1	2	4	5	7
PRESSURIZING FAN START / STOP HH-77007	SUPPLY AIR FAN START/STOP HH-77007	SUPPLY AIR FAN BROKEN BELT ALARM HHU-77007	SUPPLY AIR FAN MOTOR HEATER HHU-77007	PRESSURIZIN FAN OVERLOAD PROTECTION HHU-77007

12.9A A.A — A.A 14.0A

KA12.1 21 24 22 — 12.5E
13.1
KA13.3 11 14 12 — 13.8E
13.2
KA13.1 A1 A2

KA12.1 31 34 32 — 12.5E
13.3
KM2A A1 A2

100 XA1
PDSL-77-401 p> 13 14
101 XA1
KA37.1 21 24 22 — 37.2D
13.4
KT13.1 A1 A2

13.5
KA13.2 11 14 12 — 13.4E
Delay/Ritardo
KT13.1 — 13.3E

KM2A 21 22 — 13.2E
13.6
106 XA1
HSS-77-402
107 XA1

MTP-001A A1/11
SIEMENS
TRIPPED
T1 T2 A2 12 14 NC NO
13.7 13.8
102 XA1 103 XA1
TE-77-401

13.9
KA13.3 A1 A2

12.9E B.A — B.A 14.0E

9.5B 12 11 14 22 21 24 32 31 34 42 41 44
10.1D 2 1
10.1D 4 3
10.1D 6 5
14.1B 14 13
31.7B 44 43
13.5B 22 21 32 31
13.4B On-D
13.4C 12 11 14 22 21 24 32 31 34 42 41 44
29.4B
13.1C 12 11 14 22 21 24 32 31 34 42 41 44
29.1B

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM
AUX SECTION A

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 13
F.S. 14

PRESSURIZING FAN NìMOTOR HEATER
HHU-77007

COMPRESSOR START/STOP
HHU-77007

LOW PRESSURE ALARM
HHU-77007

HIGH PRESSURE ALARM
HHU-77007

COMPRESSOR OIL HEATER
HHU-77007

13.9A A.A

A.A 15.0A

KA30.4
30.6D

KA30.5
35.6D
PLC START

KM2A
13.2E

KA14.1
14.5E

KA14.2
14.7E

KA11.1
11.4E

KT14.1
14.2E
Delay/Ritardo

PSL-77-401

PSH-77-401

KA14.1
14.5E

KT14.2
14.4E
Delay/Ritardo

KA37.1
37.2D

KA14.2
14.7E

KA37.1
37.2D

KM3A
14.4E

108 XA1
HSS-77-403
109 XA1

KT14.1 120"
KM3A
KT14.2 10"
KA14.1
KA14.2

110 XA1
HSS-77-404
111 XA1

13.9E B.A

B.A 15.0E

On-D 14.4B

On-D 14.5C

10.3D 2 1
10.3D 4 3
10.3D 6 5
15.1B 14 13
32.2B 44 43
14.8B 22 21
32 31

14.2C 11 14
14.6B 21 24
32.5B 31 34
41 44

14.2D 11 14
14.8B 21 24
32.4B 31 34
41 44

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM
AUX SECTION A

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 14
F.S. 15

SOLENOID VALVE	FILTER CLOGGED	CONDENSING PRESSURE SWITCH	ELECTRICAL HEATER SECURITY THERMOSTATE	PRESS FAN FILTER CLOGGED
HHU-77007	HHU-77007	HHU-77007	HHU-77007	

14.9A A.A

A.A 16.0A

KM3A
14.4E
13
14
15.1
112 XA1
HSV-77-401 A1 A2
113 XA1

114 XA1
PDSH-77-401 p> 13 14
115 XA1
15.2
KA15.1 A1 A2
32.8B 11 12 14 21 22 24 31 32 34 41 42 44

116 XA1
PC-77-401 p> 13 14
117 XA1
15.3
KA15.2 A1 A2
11.3B 11 12 14 21 22 24 31 32 34 41 42 44

120 XA1
TSH-77-401 t> 11 12
121 XA1
15.4
122 XA1
TSHH-77-401 t> 11 12
123 XA1
15.5
KA15.3 A1 A2
32.8B 11 12 14 21 22 24 31 32 34 41 42 44

128 XA1
PDSH-77-402 p> 13 14
129 XA1
15.6
KA15.4 A1 A2
27.2B 11 12 14 21 22 24 31 32 34 41 42 44

14.9E B.A

B.A 16.0E

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

frigotermica
HVAC SYSTEM and EQUIPMENT
S.p.186–Cornegliano Laud. (Lo) Italy
tel. 0039–0371–69076
frigotermica@frigotermica.com

CLIENT: CROSSWIND

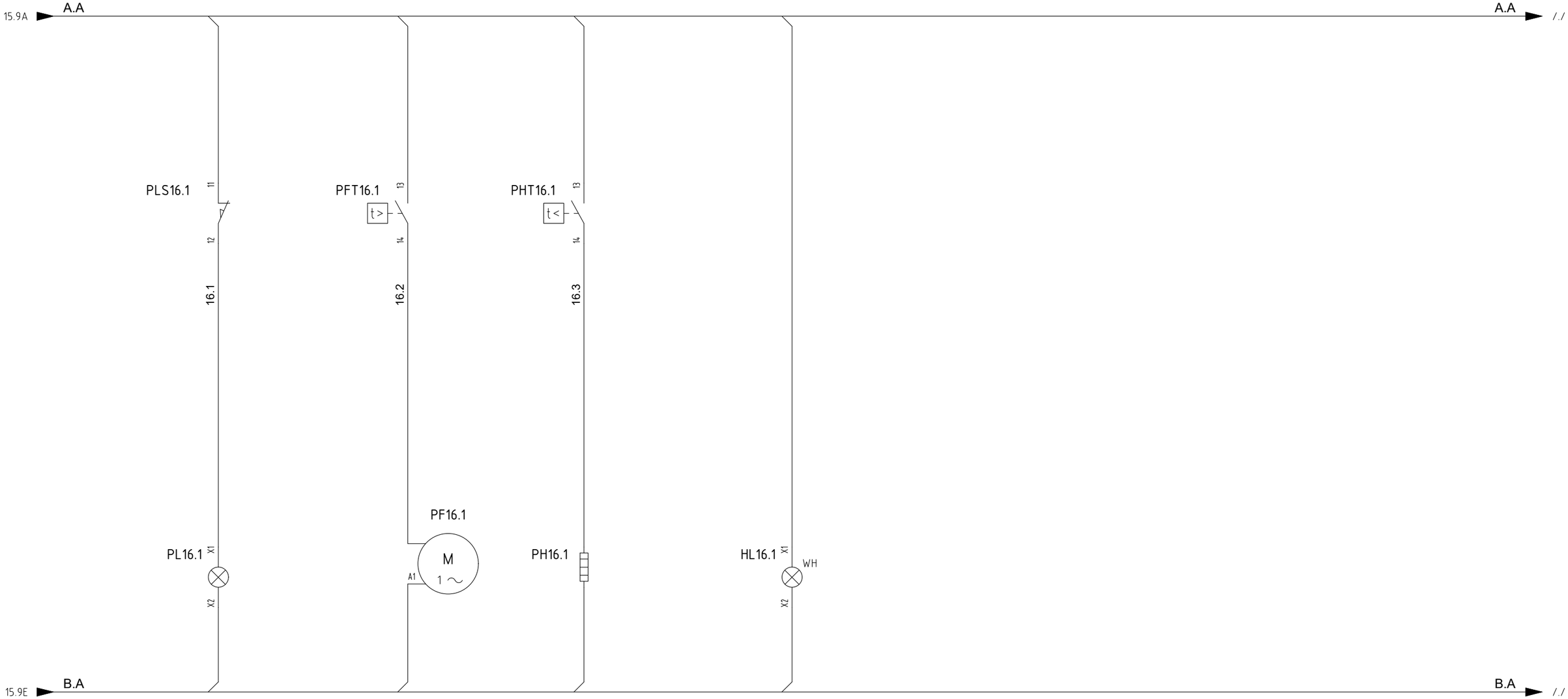
BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
AUX SECTION A

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 15
F.S. 16

PANEL INTERNAL LIGHT	PANEL FAN	PANEL HEATER	230V AUX VOLTAGE PRESENCE
HHU-77007	HHU-77007	HHU-77007	HHU-77007



REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM
AUX SECTION A

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 16
F.S. 17

HHU-77008
SECTION

RATED POWER: 15 kW
RATED CURRENT: 29.76 A

ABSORBED POWER: 10 kW
ABSORBED CURRENT: 18.3 A

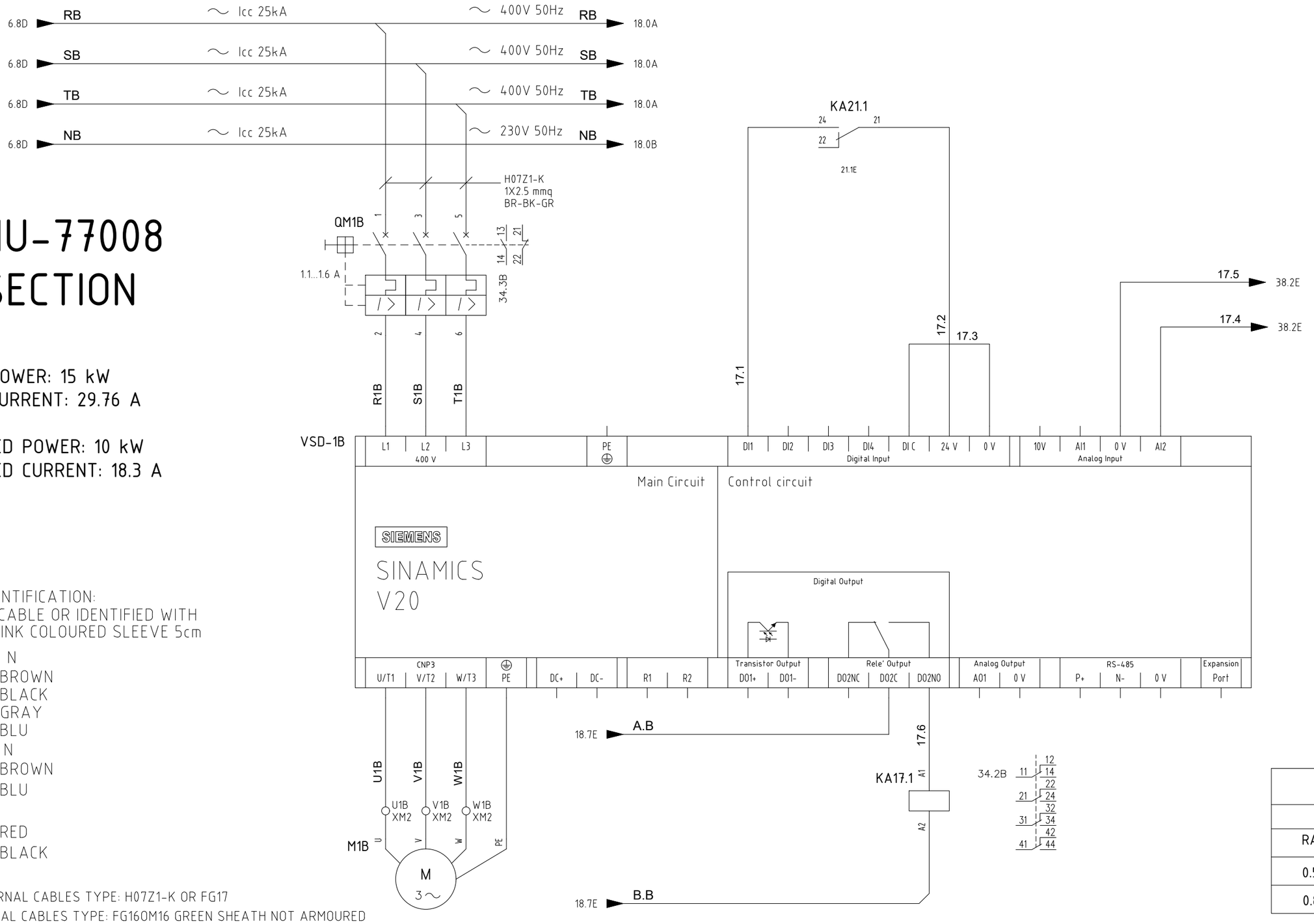
COLOR IDENTIFICATION:
COLORED CABLE OR IDENTIFIED WITH
HEAT SHRINK COLOURED SLEEVE 5cm

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

230V 1P + N
- ⟶ BROWN
- ⟶ BLU

24Vdc
- ⟶ RED
- ⟶ BLACK

PANEL INTERNAL CABLES TYPE: H07Z1-K OR FG17
UNIT INTERNAL CABLES TYPE: FG160M16 GREEN SHEATH NOT ARMOURED



HFM-77-403	
PRESSURIZING FAN	
RATED	ABSORBED
0.5 kW	0.35 kW
0.85 A	0.6 A

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

frigotermica
HVAC SYSTEM and EQUIPMENT
S.p.186–Cornegliano Laud. (Lo) Italy
tel. 0039–0371–69076
frigotermica@frigotermica.com

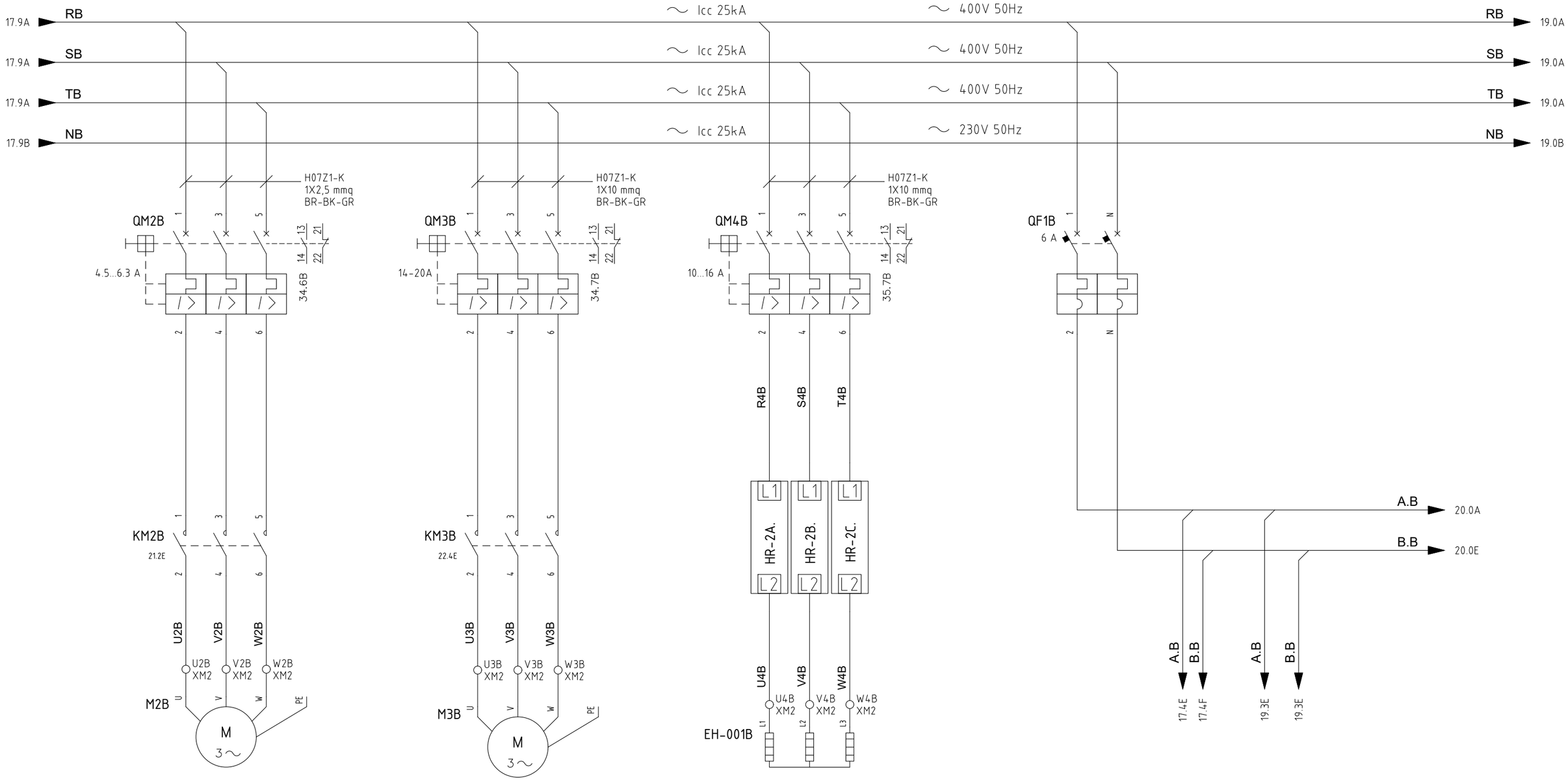
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
POWER SECTION B

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 17
F.S. 18



HFM-77-404	
SUPPLY FAN	
RATED	ABSORBED
3.00 kW	2.48 kW
5.10 A	4.21 A

HCO-77-402	
COMPRESSOR 1 A	
RATED	ABSORBED
9.80 kW	6.21 kW
16.8 A	11.5 A

HSS-77-405	
ELECTRICAL HEATER	
RATED	ABSORBED
9 kW	9 kW
13 A	13 A

REV.	MODIFICA	DATA	FIRMA		
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	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

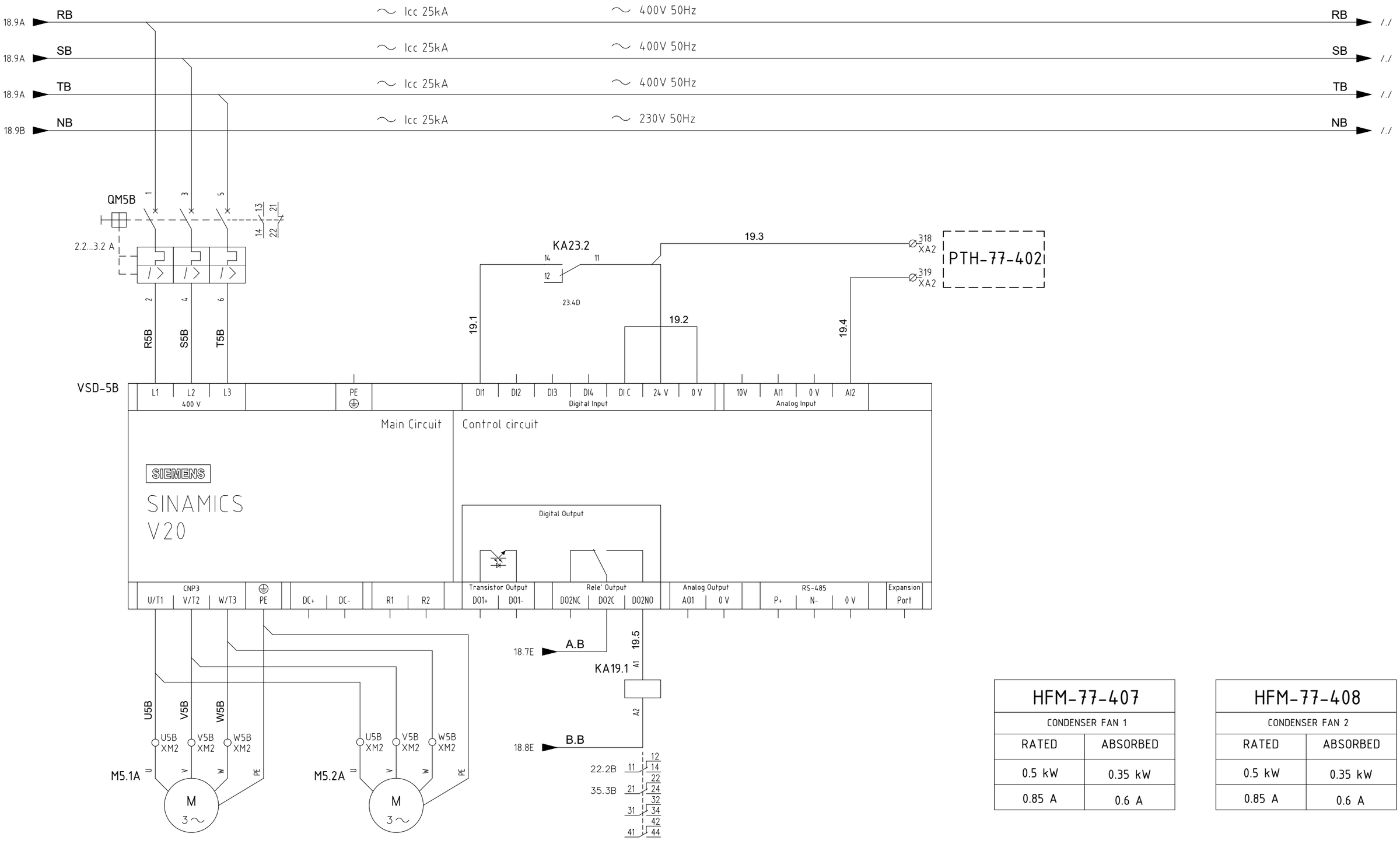
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
POWER SECTION B

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 18
F.S. 19



HFM-77-407	
CONDENSER FAN 1	
RATED	ABSORBED
0.5 kW	0.35 kW
0.85 A	0.6 A

HFM-77-408	
CONDENSER FAN 2	
RATED	ABSORBED
0.5 kW	0.35 kW
0.85 A	0.6 A

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM
POWER SECTION B

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 19
F.S. 20

START / STOP HHU-77008	MOTORISED DAMPER POWER SUPPLY	MOTORISED DAMPER OPEN SIGNAL HHU-77008	MOTORISED DAMPER CLOSED SIGNA HHU-77003B	MOTORISED DAMPER NOT OPEN ALARM SIGNAL HHU-77008

18.8D A.B

KA30.6
35.7D
UNIT B
START FROM PLC
12 14
11
20.1
11
KA20.3
20.7E
14 12
20.3
11
KA20.1
20.5E
14 12
20.4
A1
KT20.1
120"
A2

200 XMD2
HDZ-77-404
M 1~
A1
201 XMD2

206 XMD2
HDZ-77405
M 1~
A1
207 XMD2

212 XMD2
HDZ-77-406
M 1~
A1
213 XMD2

202 XMD2
HDZ-77-404
13 14
204 XMD2
HDZ-77-404
11 12

203 XMD2
20.5
208 XMD2
HDZ-77-405
13 14
205 XMD2
20.8
210 XMD2
HDZ-77-405
11 12

209 XMD2
20.6
214 XMD2
HDZ-77-406
13 14
211 XMD2
20.9
216 XMD2
HDZ-77-406
11 12

215 XMD2
20.7
A1
KA20.1
A2
217 XMD2
20.10
A1
KA20.2
A2

KA20.3
A1
A2

21
KA20.3
20.7E
24 22
Delay/Ritardo
KT20.1
20.1E
20.11
11
KA37.2
37.3D
14 12
20.12

18.8D B.B

On–D 20.7B

20.1C 11 12 14
21.1B 21 22 24
33.7B 31 32 34
41 42 44

33.7B 11 12 14
21 22 24
31 32 34
41 42 44

20.1C 11 12 14
20.8B 21 22 24
33.6B 31 32 34
41 42 44

A.B 21.0A
B.B 21.0E

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM
AUX SECTION B

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 20
F.S. 21

1	2	4	5	6	7
PRESSURIZING FAN START / STOP HH-77008	SUPPLY AIR FAN START/STOP HH-77008	SUPPLY AIR FAN BROKEN BELT ALARM HHU-77008	SUPPLY AIR FAN MOTOR HEATER HHU-77008		PRESSURIZIN FAN OVERLOAD PROTECTION HHU-77008

20.9A A.B

A.B 22.0A

KA20.1 21 24 22 — 20.5E
21.1
KA21.3 11 14 12 — 21.8E
21.2
KA21.1 A1 A2

KA21.1 11 14 12 — 21.1E
21.3
KM2B A1 A2

KA37.2 21 24 22 — 37.3D
21.12
KT21.1 A1 A2

300 XA2
PDSL-77-402 (p>) 13 14
301 XA2
21.4
KA21.2 21 24 22 — 21.4E
KA21.2 A1 A2

KT21.1 Delay/Ritardo — 21.3E

KM2B 21 22 — 21.2E
21.5

306 XA2
HSS-77-406
307 XA2

MTP-001B A1/11 SIEMENS
ϑ> + -
TRIPPED
T1 T2 A2 NC 12 NO 14
21.6 21.7
302 XA2 303 XA2
TE-77-402

21.8
KA21.3 A1 A2

20.9E B.B

B.B 22.0E

21.2B 11 12 14 / 17.5B 21 22 24 / 31 32 34 / 41 42 44

18.1D 2 1 / 18.1D 4 3 / 18.1D 6 5 / 22.1B 14 13 / 34.4B 44 43 / 21.5B 22 21 32 31

21.4B On–D

34.4B 11 12 14 / 21.4C 21 22 24 / 31 32 34 / 41 42 44

21.1C 11 12 14 / 33.8B 21 22 24 / 31 32 34 / 41 42 44

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM
AUX SECTION B

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 21
F.S. 22

PRESSURIZING FAN NìMOTOR HEATER
HHU-77008

COMPRESSOR START/STOP
HHU-77008

LOW PRESSURE ALARM
HHU-77008

HIGH PRESSURE ALARM
HHU-77008

COMPRESSOR OIL HEATER
HHU-77008

21.9A A.B

A.B 23.0A

KA30.8
30.9D

KA30.7
30.8D

KM2B
21.2E

KA22.1
22.5E

KA22.2
22.7E

KA19.1
19.4E

KT22.1
22.2E
Delay/Ritardo

PSL-77-402

PSH-77-402

KA22.1
22.5E

KT22.2
22.4E
Delay/Ritardo

KA37.2
37.3D

KA22.2
22.7E

KA37.2
37.3D

KM3B
22.4E

22.1 22.2 22.3 22.4 22.5 22.6 22.7 22.8 22.9 22.10 22.11 22.12 22.13

308 XA2
309 XA2
324 XA2
325 XA2
326 XA2
327 XA2
310 XA2
311 XA2

HSS-77-407
HSS-77-4080

KT22.1 A1 A2 120"
KM3B A1 A2
KT22.2 A1 A2 10"
KA22.1 A1 A2
KA22.2 A1 A2

21.9E B.B

B.B 23.0E

On-D 14.4B

On-D 14.5C

18.3D 2 1
18.3D 4 3
18.3D 6 5
23.1B 14 13
34.7B 44 43
22.8B 22 21
32 31

22.2C 11 12 14
22.6B 21 22 24
35.2B 31 32 34
41 42 44

22.2D 11 12 14
22.8B 21 22 24
34.8B 31 32 34
41 42 44

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM
AUX SECTION B

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 22
F.S. 23

SOLENOID VALVE	FILTER CLOGGED	CONDENSING PRESSURE SWITCH	ELECTRICAL HEATER SECURITY THERMOSTATE	PRESSURIZING FAN FILTER CLOGGED
HHU-77008	HHU-77008	HHU-77008	HHU-77008	

22.9A A.B

A.B 24.0A

KM3B
22.4E
13
14

23.1

312
XA2

HSV-77-402
A1
A2

313
XA2

314
XA2

PDSH-77-403
p>
13
14

315
XA2

23.2

KA23.1
A1
A2

35.4B
11 12 14
21 22 24
31 32 34
41 42 44

316
XA2

PC-77-402
p>
13
14

317
XA2

23.3

KA23.2
A1
A2

19.3B
11 12 14
21 22 24
31 32 34
41 42 44

320
XA2

TSH-77-402
t>
11
12

321
XA2

23.4

322
XA2

TSHH-77-402
t>
11
12

323
XA2

23.5

KA23.3
A1
A2

35.6B
11 12 14
21 22 24
31 32 34
41 42 44

328
XA2

pdsh-77-404
p>
13
14

329
XA2

23.6

KA23.4
A1
A2

27.5B
11 12 14
21 22 24
31 32 34
41 42 44

22.9E B.B

B.B 24.0E

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM
AUX SECTION B

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 23
F.S. 24

PANEL INTERNAL LIGHT
HHU-77008

PANEL FAN
HHU-77008

PANEL HEATER
HHU-77008

230V AUX VOLTAGE PRESENCE
HHU-77008

23.9A A.B

A.B /./

PLS24.1 11 12

PFT24.1 13 14 t>

PHT24.1 13 14 t<

PL24.1 X1 X2

PF24.1 M 1~ A1

PH24.1

HL24.1 X1 X2 WH

23.9E B.B

B.B /./

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM
AUX SECTION B

ROSETTI MARINO

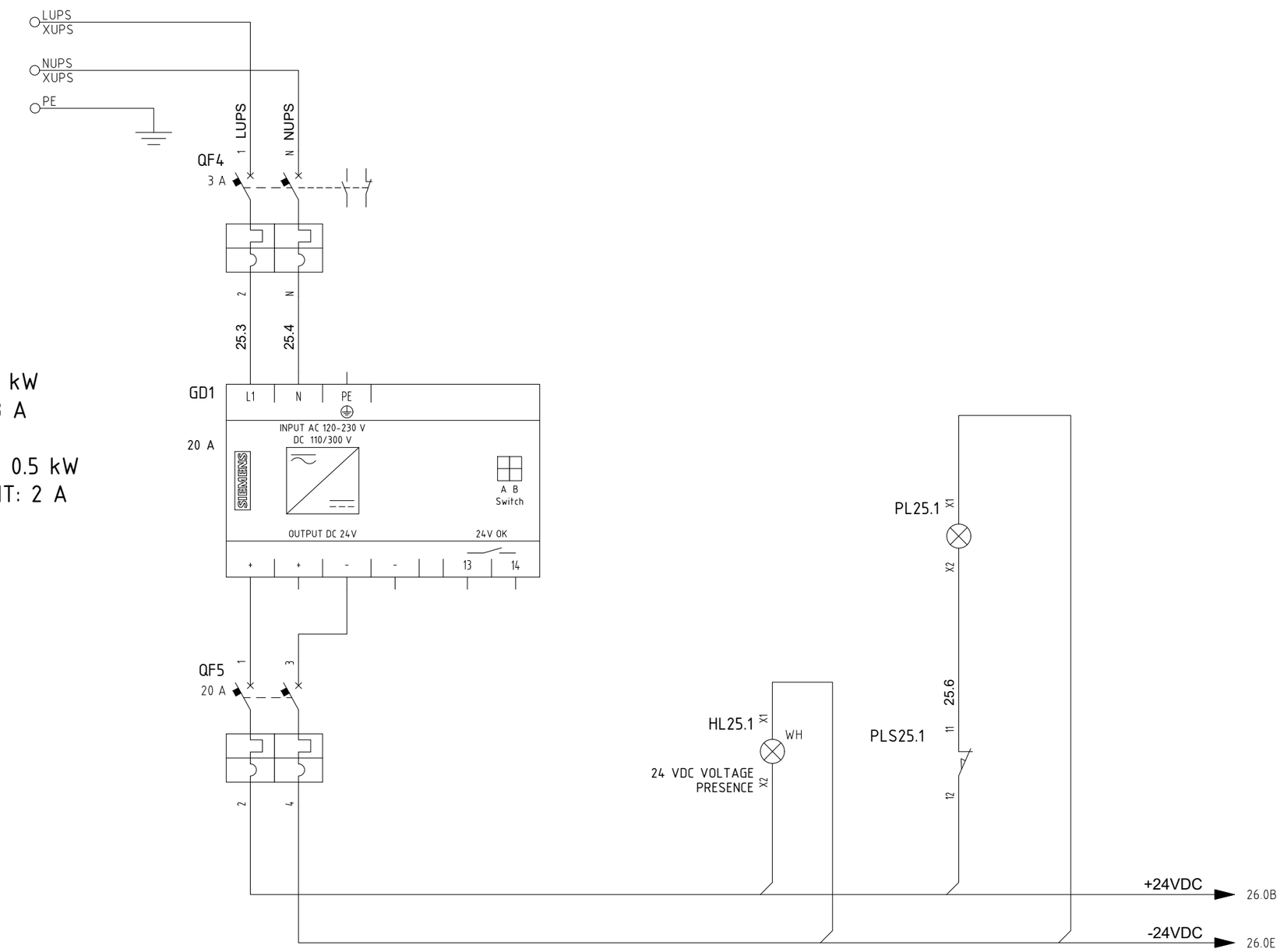
1724000049-HV-DA-00029

FG. 24
F.S. 25

POWER SUPPLY
FROM CLIENT
1PH + N + PE
230V 50Hz

RATED POWER: 0.7 kW
RATED CURRENT: 3 A

ABSORBED POWER: 0.5 kW
ABSORBED CURRENT: 2 A



REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM
UPS POWER SUPPLY

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 25
F.S. 26

0	1	2	3	4	5	6	7	8	9
	SHUT DOWN FROM CUSTOMER SIS		PANEL EMERGENCY BUTTON LIGHT	HHS-77003A SPACE HEATER START / STOP COMMAND	MODULE LIGHT	HPB-77-401 EMERGENCY POWER BUTTON HHU-77007	HPB-77-402 EMERGENCY POWER BUTTON HHU-77008	HPB-77-403 EMERGENCY POWER BUTTON B400-HSB-001	

25.7E +24VDC → +24VDC 26A.0A

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

500 XC — 26.1 — KA26.1 A1 — A2 — 26.2 — 501 XC

27.1B: 11-12, 21-22, 31-32, 41-42

HPB-77-403 33-34 (26.8B) — 26.3

KA30.9 11-12 (30.3D) — 26.4

504 XC / 506 XC — LIGHT PUSH BUTTON — 505 XC / 507 XC — 26.5

HPB-77-401 13-14 (31.1B) — 104 XA1 / 105 XA1 — 26.6

HPB-77-402 13-14 (33.5B) — 304 XA2 / 305 XA2 — 26.7

HPB-77-403 13-14 — RD X1 X2 — 26.8

EPB-002L X1 RD X2 — 26.3

KM1 A1 A2 — 26.4

KA26.2 A1 A2 — 26.5

QFA C1 C2 — 6.6B — 26.6

QFB C1 C2 — 6.8B — 26.7

QS1 C1 C2 — 6.2B — 26.8

25.7E -24VDC → -24VDC 26A.0E

7.0D 2-1
7.0D 4-3
7.0D 6-5
7.0D 8-7
28.2B 54-53, 62-61, 72-71, 84-83

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM
PLC SECTION

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 26
F.S. 26A

HFD-77012
CLOSED CONTACT

HFD-77013
CLOSED CONTACT

HFD-77014
CLOSED CONTACT

HFD-77015
CLOSED CONTACT

HFD-77016
CLOSED CONTACT

HFD-77012
OPEN CONTACT

HFD-77013
OPEN CONTACT

HFD-77014
OPEN CONTACT

HFD-77015
OPEN CONTACT

HFD-77016
OPEN CONTACT

26.9B +24VDC

+24VDC 27.0A

700 XFD
702 XFD
704 XFD
706 XFD
708 XFD
710 XFD
712 XFD
714 XFD
716 XFD
718 XFD

HFD-77012 11 12 HFD-77012 13 14
HFD-77013 11 12 HFD-77013 13 14
HFD-77014 11 12 HFD-77014 13 14
HFD-77015 13 14 HFD-77015 11 12
HFD-77016 13 14 HFD-77016 11 12

701 XFD
703 XFD
705 XFD
707 XFD
709 XFD
711 XFD
713 XFD
715 XFD
717 XFD
719 XFD

KA26A.1 A1 A2
KA26A.2 A1 A2
KA26A.3 A1 A2
KA26A.4 A1 A2
KA26A.5 A1 A2
KA26A.6 A1 A2
KA26A.7 A1 A2
KA26A.8 A1 A2
KA26A.9 A1 A2
KA26A.10 A1 A2

26.9E -24VDC

-24VDC 27.0A

34.2B 11 12 14 21 22 24 44.2B
34.3B 11 12 14 21 22 24 44.3B
34.4B 11 12 14 21 22 24 44.5B
34.4B 11 12 14 21 22 24 44.6B
34.5B 11 12 14 21 22 24 44.8B
34.6B 11 12 14 21 22 24 44.2E
39B.2B 11 12 14 21 22 24 44.3E
39B.3B 11 12 14 21 22 24 44.5E
39B.4B 11 12 14 21 22 24 44.6E
39B.4B 11 12 14 21 22 24 44.8E

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

Frigotermica
HVAC SYSTEM and EQUIPMENT
S.p.186–Cornegliano Laud. (Lo) Italy
tel. 0039–0371–69076
frigotermica@frigotermica.com

CLIENT: CROSSWIND

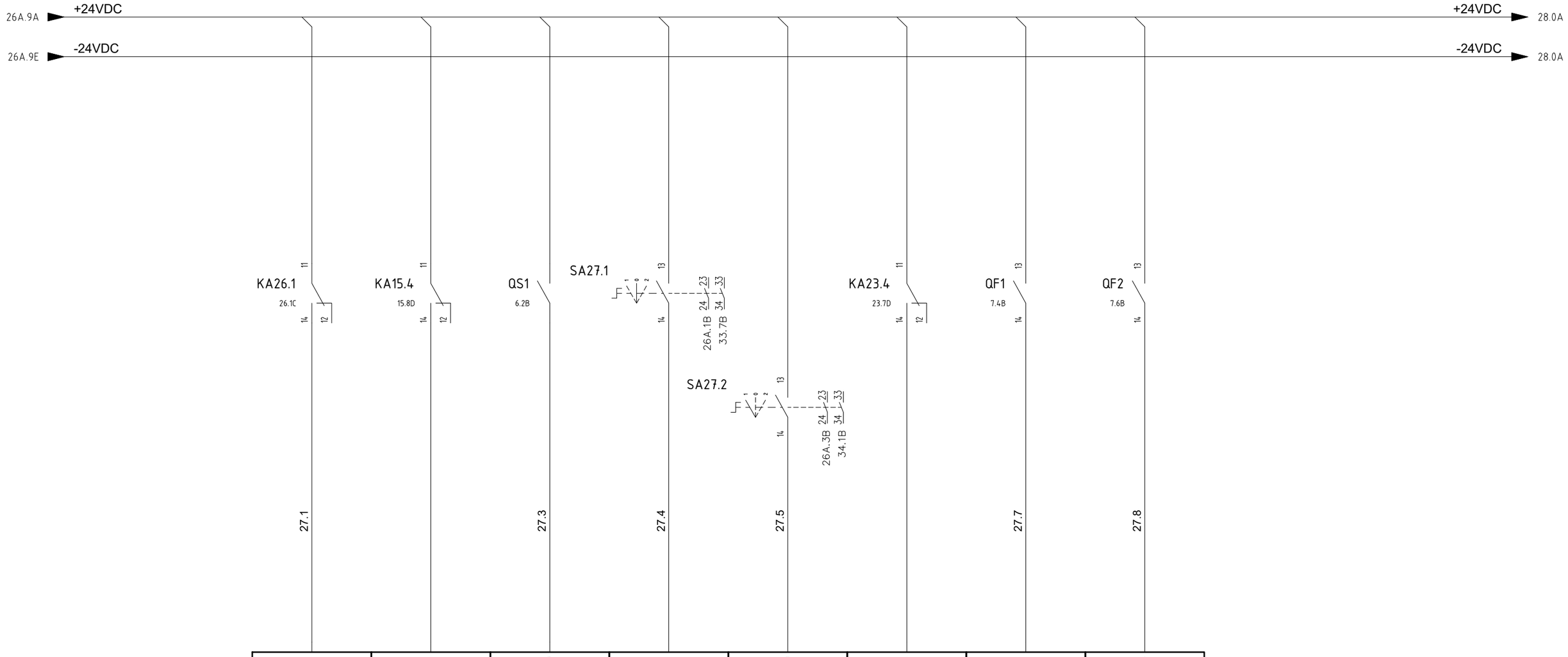
BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM

PLC SECTION
plc section

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 26A
F.S. 27



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: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:
SHUT DOWN FROM SIS 0=SHUT DOWN 1= NORMAL	HHU-77007 FRESH AIR FILTER CLOG.TRIP 0=OK 1 = CLOGGED	MAIN BRAKER TRIP	HHU-77007 AUTOMATIC MODE 1=AUTOMATIC 0= NOT AUTOMATIC	HHU-77008 AUTOMATIC MODE 1=AUTOMATIC 0=NOT AUTOMATIC	HHU-77008 FRESH AIR FILTER CLOG.TRIP 0=OK 1 = CLOGGED	MODULE LIGHT TRIP	MODULE SOCKET TRIP

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

frigotermica
HVAC SYSTEM and EQUIPMENT
S.p.186–Cornegliano Laud. (Lo) Italy
tel. 0039–0371–69076
frigotermica@frigotermica.com

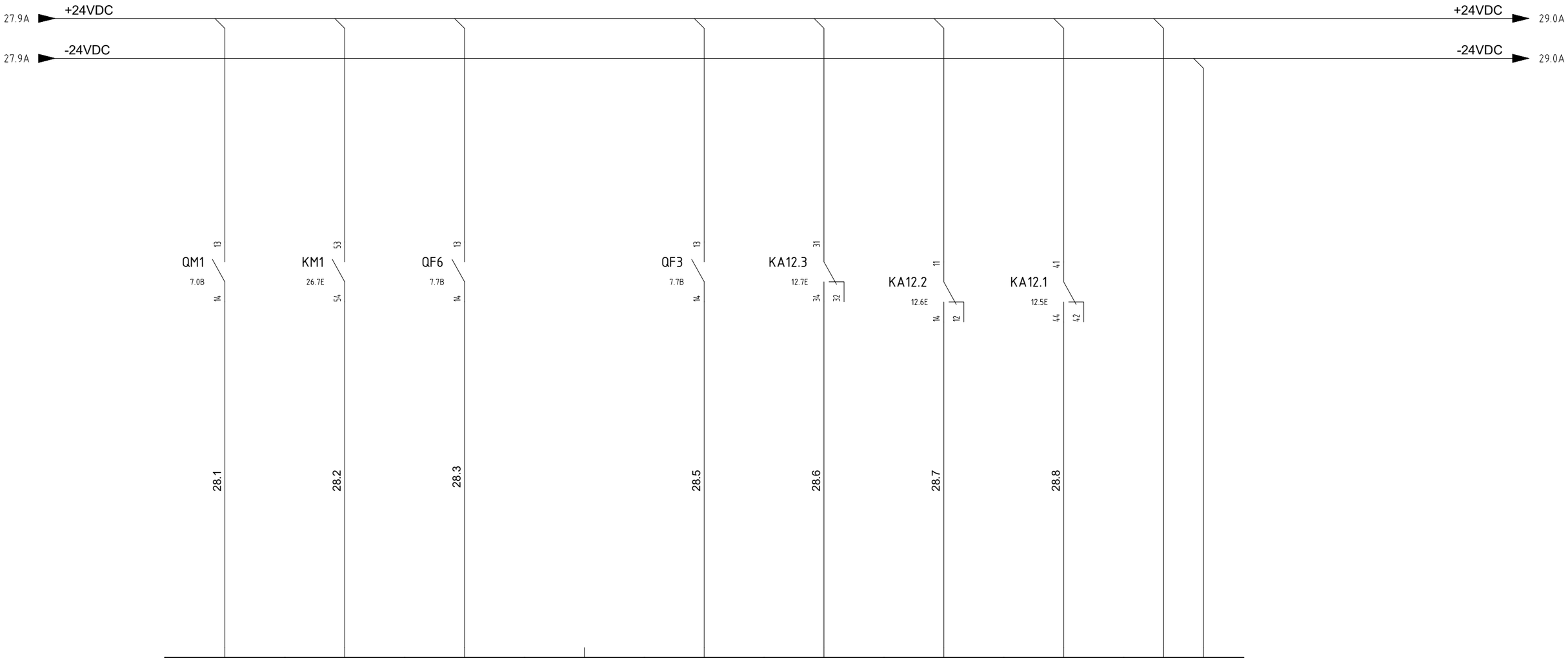
CLIENT:
CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
PLC SECTION

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 27
F.S. 28



9	10	11	12	13	14	15	16	L+ M
I1.0	I1.1	I1.2	I1.3	I1.4	I1.5	I1.6	I1.7	
CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4
Name: / Sheet:	Name: / Sheet:	Name: / Sheet:	Name: / Sheet:	Name: / Sheet:	Name: / Sheet:	Name: / Sheet:	Name: / Sheet:	Name: / Sheet:
HHS-77010/11/12 SPACE HEATER TRIP	HHS-77010/11/12 SPACE HEATER RUN SIGNAL	HEATING CABLE TRIP	SPARE	AUX SECTION TRIP	HHU-77007 MOTORISE DAMPER NOT OPEN FAULT	HHU-77007 MOTORISE DAMPER CLOSED	HHU-77007 MOTORISE DAMPER OPEN	

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

Frigotermica
HVAC SYSTEM and EQUIPMENT
S.p.186–Cornegliano Laud. (Lo) Italy
tel. 0039–0371–69076
frigotermica@frigotermica.com

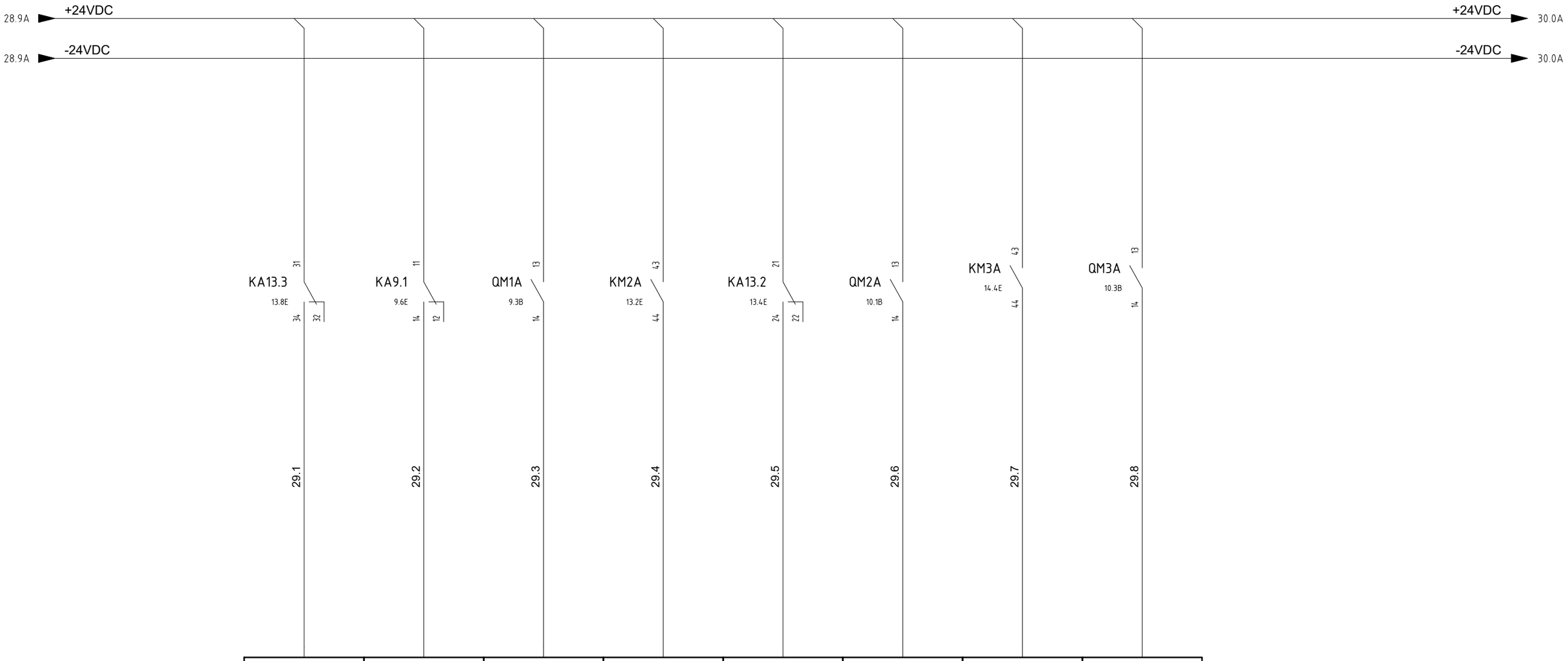
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
PLC SECTION

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 28
F.S. 29



1	2	3	4	5	6	7	8
I2.0	I2.1	I2.2	I2.3	I2.4	I2.5	I2.6	I2.7
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:
HHU-77007 PF-001A THERMIC PROT. RELAY	HHU-77007 PF-001A VSD-1A MALFUNCTION	HHU-77007 PF-001A TRIP	HHU-77007 SUPPLY FAN RUN SIGNAL	HHU-77007 SUPPLY FAN BROKEN BELT ALARM	HHU-77007 SUPPLY FAN TRIP	HHU-77007 COMPRESSOR RUNNING SIGNAL	HHU-77007 COMPRESSOR TRIP

REV.	MODIFICA	DATA	FIRMA		
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	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-400 HV-MV SWITCHGEAR ROOM
PLC SECTION

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 29
F.S. 30

29.9A +24VDC

29.9A -24VDC

+24VDC 31.0A

-24VDC 31.0A

KA14.2	KA14.1	QM5A	KA11.1	KA15.1	KA15.3	QM4A	KA42.1
14.7E	14.5E	11.1B	11.4E	15.3D	15.6D	10.4B	42.8C
31	31	13	21	11	11	13	11
34	34	14	24	14	14	14	14
32	32		22	12	12		12
30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8

9	10	11	12	13	14	15	16	L+ M
13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	
CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5
Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:
HHU-77007 COMPRESSOR HIGH PRESSURE ALARM	HHU-77007 COMPRESSOR LOW PRESSURE ALARM	HHU-77007 CONDENSER FAN TRIP	HHU-77007 CONDENSER FAN VSD-2A MALFUNCTION	HHU-77007 FILTER CLOGGED	HHU-77007 ELECTRICAL HEATER THERMOSTATE TRIP	HHU-77007 ELECTRICAL HEATER TRIP	HHU-77007 ELECTRICAL HEATER MODULATION FAULT	

REV.	MODIFICA	DATA	FIRMA
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.
02	ISSUED FOR APPROVAL	03/07/24	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.

DATA	22/04/2024
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

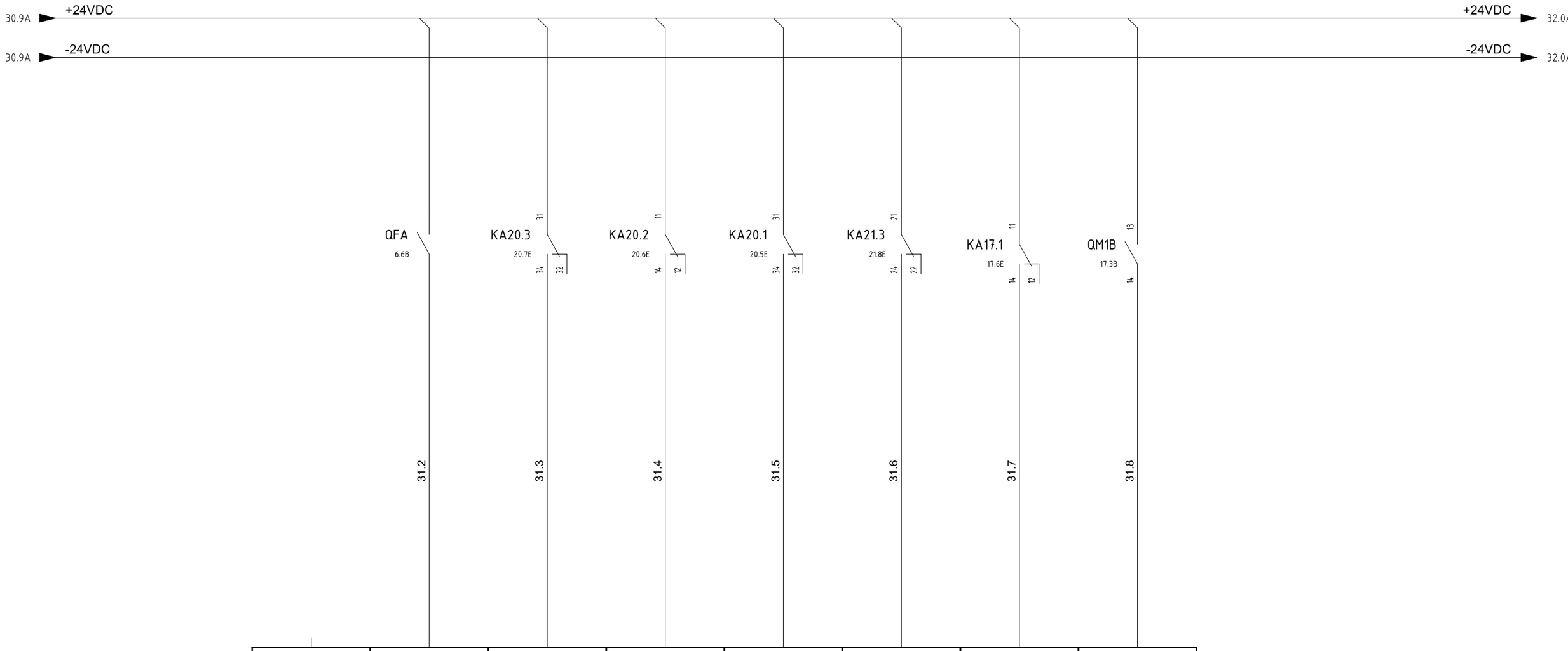
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
PLC SECTION

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 30
F.S. 31



1	2	3	4	5	6	7	8
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: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:
SPARE	HHU-77003A MAIN SWITCH OPEN	HHU-77003B MOTORISE DAMPER NOT OPEN	HHU-77003B MOTORISE DAMPER CLOSED	HHU-77003B MOTORISE DAMPER OPEN	HHU-77003B PF-001B THERMIC PROT. RELAY	HHU-77003B PF-001B VSD-1B MALFUNCTION	HHU-77003B PF-001B TRIP

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

Frigotermica
HVAC SYSTEM and EQUIPMENT
S.p.186–Cornegliano Laud. (Lo) Italy
tel. 0039–0371–69076
frigotermica@frigotermica.com

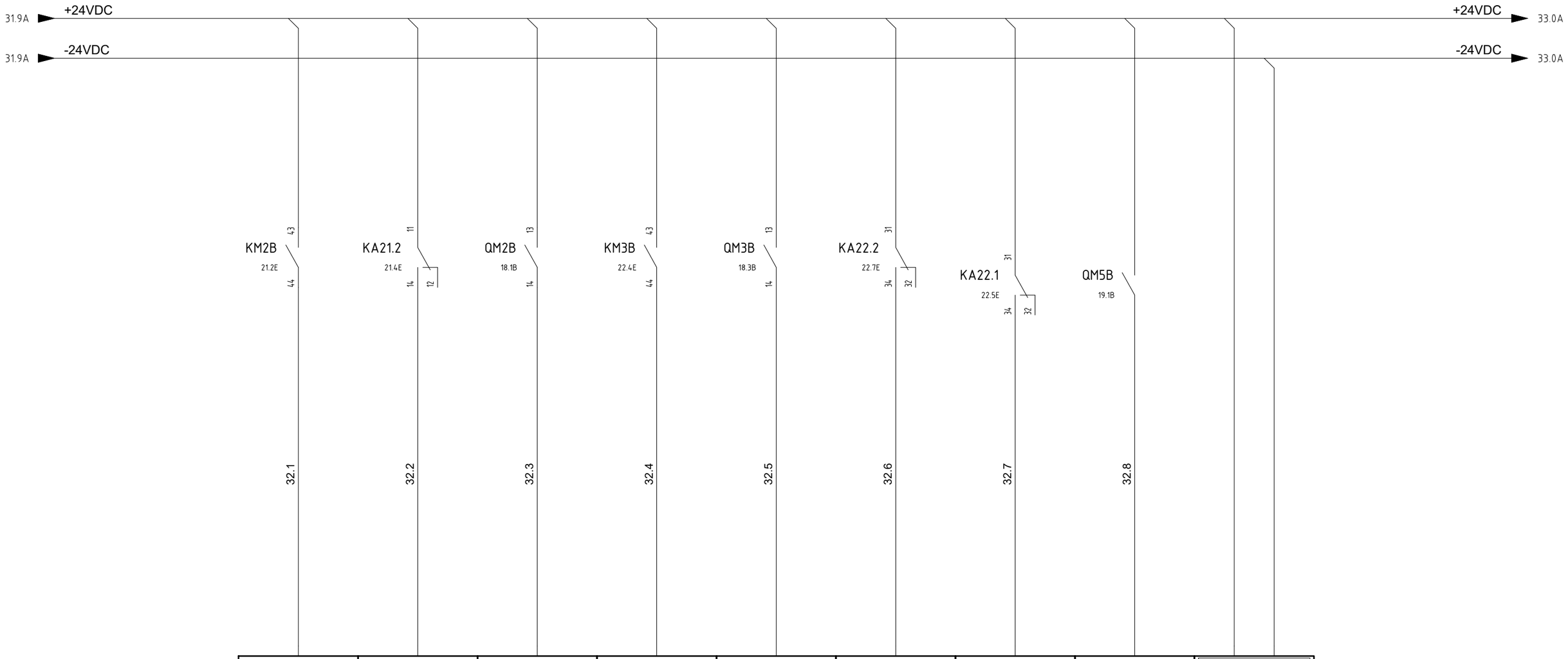
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
PLC SECTION

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 31
F.S. 32



9	10	11	12	13	14	15	16	L+ M
I5.0	I5.1	I5.2	I5.3	I5.4	I5.5	I5.6	I5.7	
CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6
Name: / Sheet:	Name: / Sheet:	Name: / Sheet:	Name: / Sheet:	Name: / Sheet:	Name: / Sheet:	Name: / Sheet:	Name: / Sheet:	Name: / Sheet:
HHU-77003B SUPPLY FAN RUN SIGNAL	HHU-77003B SUPPLY FAN BROKEN BELT ALARM	HHU-77003B SUPPLY FAN TRIP	HHU-77003B COMPRESSOR RUNNING SIGNAL	HHU-77003B COMPRESSOR TRIP	HHU-77003B COMPRESSOR HIGH PRESSURE ALARM	HHU-77003B COMPRESSOR LOW PRESSURE ALARM	HHU-77003B CONDENSER FAN TRIP	

REV.	MODIFICA	DATA	FIRMA
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.
02	ISSUED FOR APPROVAL	03/07/24	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.

DATA	22/04/2024
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

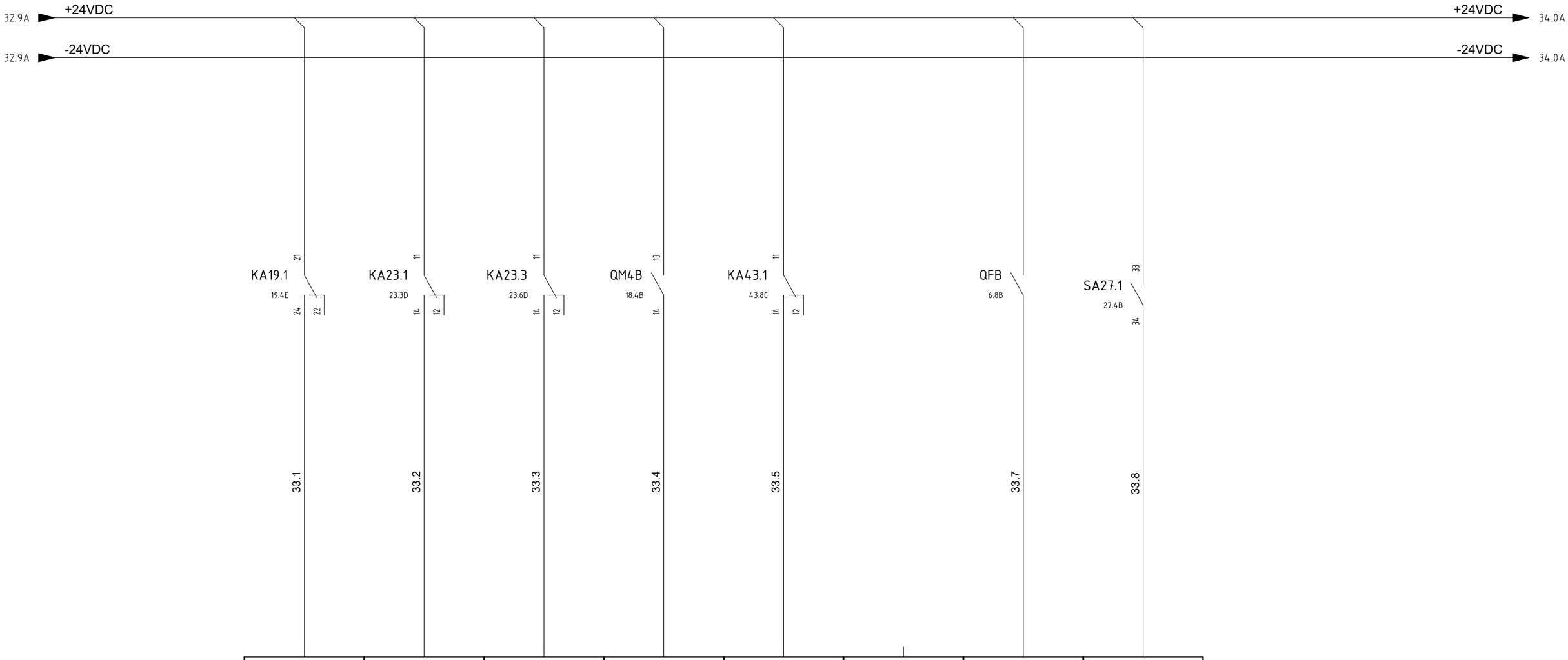
CLIENT:
CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
PLC SECTION

ROSETTI MARINO

1724000049-HV-DA-00029

F.G. 32
F.S. 33



1	2	3	4	5	6	7	8
I6.0	I6.1	I6.2	I6.3	I6.4	I6.5	I6.6	I6.7
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
Name: A6 Sheet:	Name: A6 Sheet:	Name: A6 Sheet:	Name: A6 Sheet:	Name: A6 Sheet:	Name: A6 Sheet:	Name: A6 Sheet:	Name: A6 Sheet:
HHU-77008 CONDENSER FAN VSD-2A MALFUNCTION	HHU-77008 FILTER CLOGGED	HHU-77008 ELECTRICAL HEATER THERMOSTATE TRIP	HHU-77008 ELECTRICAL HEATER TRIP	HHU-77008 ELECTRICAL HEATER MODULATION FAULT	SPARE	HHU-77008 MAIN SWITCH OPEN	HHU-77007 MANUAL MODE 0=NOT MANUAL 1= MANUAL

REV.	MODIFICA	DATA	FIRMA
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.
02	ISSUED FOR APPROVAL	03/07/24	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.

DATA	22/04/2024
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

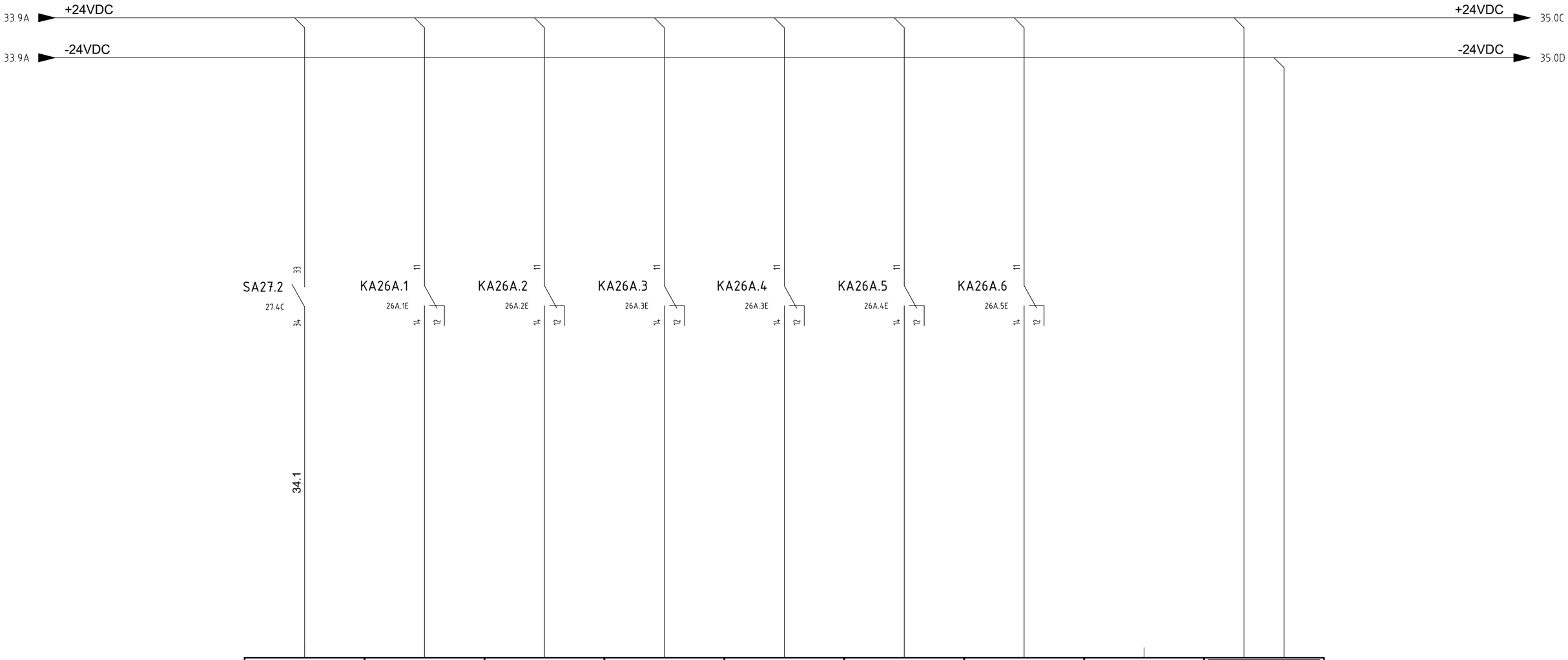
CLIENT:
CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
PLC SECTION

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 33
F.S. 34



9	10	11	12	13	14	15	16	L+ M
17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	
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	CPU: QUADRO GENERALE MOD. : 7
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:
HHU-77008 MANUAL MODE 0= NOT MANUAL 1= MANUAL	HFD-77012 CLOSE CONTACT 0= NOT CLOSED 1= CLOSED	HFD-77012 OPEN CONTACT 0=NOT OPEN 1= OPEN	HFD-77013 CLOSE CONTACT 0= NOT CLOSE 1= CLOSE	HFD-77013 OPEN CONTACT 0=NOT OPEN 1= OPEN	HFD-77014 CLOSE CONTACT 0= NOT CLOSE 1= CLOSE	HFD-77014 OPEN CONTACT 0=NOT CLOSE 1= CLOSE		

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM
PLC SECTION

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 34
F.S. 35

HVAC MALFUNCTION		SPARE		HHS-77010/11/12 SPACE HEATER START SIGNAL		SPARE		HHU-77007 HVAC UNIT A START SIGNAL		HHU-77007 PF-001A MOTOR HEATER		HHU-77007 COMPRESSOR START SIGNAL		HHU-77008 HVAC UNIT B START SIGNAL	
Name: A7	Sheet:	Name: A7	Sheet:	Name: A7	Sheet:	Name: A7	Sheet:	Name: A7	Sheet:	Name: A7	Sheet:	Name: A7	Sheet:	Name: A7	Sheet:
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		CPU: QUADRO GENERALE MOD. : 8		CPU: QUADRO GENERALE MOD. : 8		CPU: QUADRO GENERALE MOD. : 8	
Q0.0		Q0.1		Q0.2		Q0.3		Q0.4		Q0.5		Q0.6		Q0.7	
1		2		3		4		5		6		7		8	

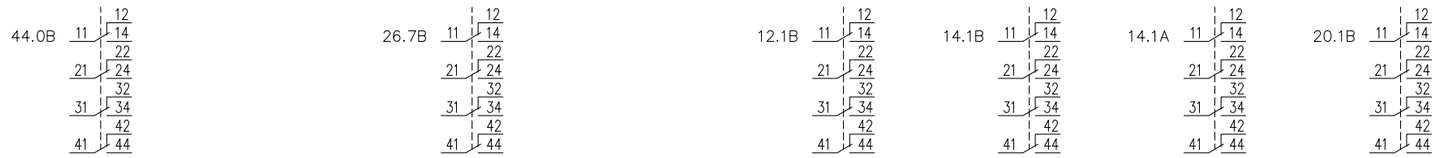
35.1 35.3 35.5 35.6 35.7 35.8

34.9A +24VDC → 36.0C +24VDC

34.9A -24VDC → 36.0D -24VDC

KA30.1 A1 A2 — KA30.9 A1 A2 — KA30.3 A1 A2 — KA30.4 A1 A2 — KA30.5 A1 A2 — KA30.6 A1 A2

44.0B 26.7B 12.1B 14.1B 14.1A 20.1B



REV.	MODIFICA	DATA	FIRMA		
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	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-400 HV-MV SWITCHGEAR ROOM
PLC SECTION

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 35
F.S. 36

HHU-77008 PF-001B MOTOR HEATER		HHU-77008 COMPRESSOR START SIGNAL		HVAC UNIT A / B ALARM RESET											
Name: A7	Sheet:	Name: A7	Sheet:	Name: A7	Sheet:	Name: A7	Sheet:	Name: A7	Sheet:	Name: A7	Sheet:	Name: A7	Sheet:	Name: A7	Sheet:
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		CPU: QUADRO GENERALE MOD. : 8		CPU: QUADRO GENERALE MOD. : 8		CPU: QUADRO GENERALE MOD. : 8	
Q0.8		Q0.9		Q0.10		Q0.11		Q0.12		Q0.13		Q0.14		Q0.15	
9		10		11		12		13		14		15		16	
														L+	M

36.1 36.2 36.3

35.9C +24VDC → 37.0A +24VDC

35.9D -24VDC → 37.0A -24VDC

KA30.7 A1 / A2

KA30.8 A1 / A2

KA37.1 A1 / A2 ALARM RESET RELAY

KA37.2 A1 / A2

22.1B 11 12 14 21 22 24 31 32 34 41 42 44

22.1A 11 12 14 21 22 24 31 32 34 41 42 44

12.8C 13.3B 14.6C 14.8C 11 12 14 21 22 24 31 32 34 41 42 44

20.8C 21.3B 22.6C 22.8C 11 12 14 21 22 24 31 32 34 41 42 44

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

frigotermica
HVAC SYSTEM and EQUIPMENT
S.p.186–Cornegliano Laud. (Lo) Italy
tel. 0039–0371–69076
frigotermica@frigotermica.com

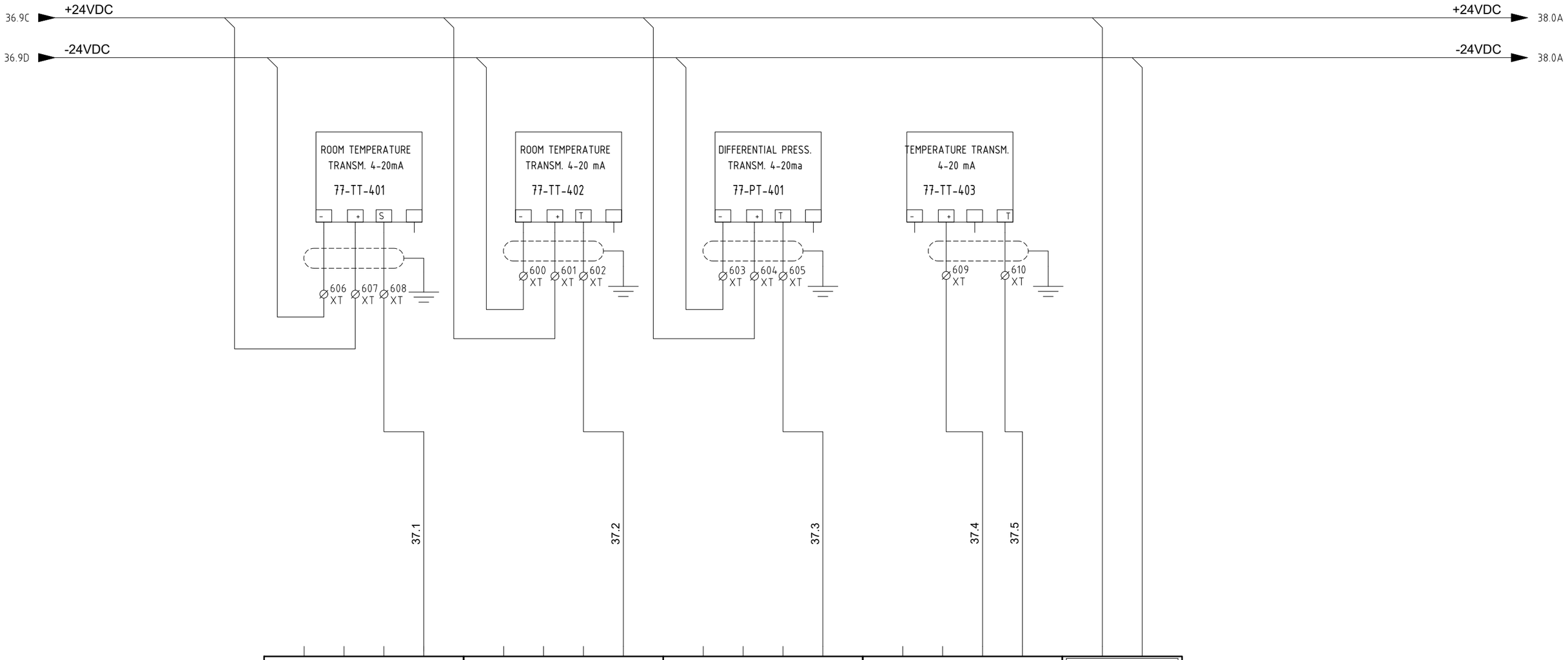
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
PLC SECTION

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 36
F.S. 37



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. : 9	CPU: QUADRO GENERALE MOD. : 9	CPU: QUADRO GENERALE MOD. : 9	CPU: QUADRO GENERALE MOD. : 9	CPU: QUADRO GENERALE MOD. : 9
Name: A8 / Sheet:	Name: A8 / Sheet:	Name: A8 / Sheet:	Name: A8 / Sheet:	Name: A8 / Sheet:
77-TT-401 TEMPERATURE TRANSM 4-20mA	77-TT-402 TEMPERATURE TRANSM 4-20mA	77-PT-401 DIFFERENTIAL PRESS. TRANSMITTER 4-20mA	77-TT-403 TEMPERATURE TRANSM 4-20 mA	

REV.	MODIFICA	DATA	FIRMA
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.
02	ISSUED FOR APPROVAL	03/07/24	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.

DATA	22/04/2024
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-400 HV-MV SWITCHGEAR ROOM
PLC SECTION

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 37
F.S. 38

37.9A +24VDC → 39.0A +24VDC

37.9A -24VDC → 39.0A -24VDC

HHU-77007 PF-001A VSD MODULATION		HHU-77008 PF-001B VSD MODULATION		HHU-77007 ELECTRICAL HEATER MODULATION		HHU-77008 ELECTRICAL HEATER MODULATION			
Name: A9	Sheet:	Name: A9	Sheet:	Name: A9	Sheet:	Name: A9	Sheet:	Name: A9	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	

9.8B 9.4

9.8C 9.5

17.8B 17.5

17.8C 17.4

42.8D 40.1

42.8D 40.2

43.8D 40.3

43.8D 40.4

REV.	MODIFICA	DATA	FIRMA		
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	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-400 HV-MV SWITCHGEAR ROOM
PLC SECTION

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 38
F.S. 39

38.9A +24VDC → +24VDC 40.0E

38.9A -24VDC → -24VDC 40.0F

Name: A10	Sheet:	Name: A10	Sheet:	Name: A10	Sheet:
CPU: QUADRO GENERALE MOD. : 11		CPU: QUADRO GENERALE MOD. : 11		CPU: QUADRO GENERALE MOD. : 11	
AQ1.0		AQ1.1		AQ1.2	
9 1 5 13		10 2 6 14		11 3 7 15	

Name: A10	Sheet:	Name: A10	Sheet:	Name: A10	Sheet:
CPU: QUADRO GENERALE MOD. : 11		CPU: QUADRO GENERALE MOD. : 11		CPU: QUADRO GENERALE MOD. : 11	
AQ1.3					
12 4 8 16				L+ M	

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM
PLC SECTION

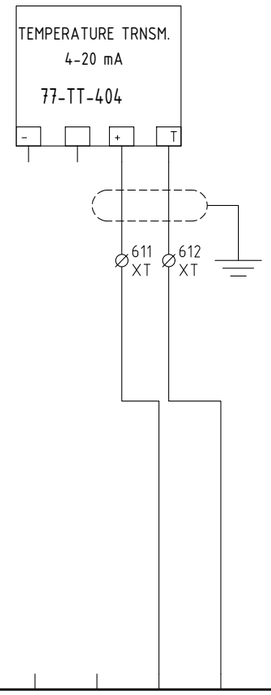
ROSETTI MARINO

1724000049-HV-DA-00029

FG. 39
F.S. 39A

38.9A +24VDC → +24VDC 40.0E

38.9A -24VDC → -24VDC 40.0F



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. : 12	CPU: QUADRO GENERALE MOD. : 12	CPU: QUADRO GENERALE MOD. : 12	CPU: QUADRO GENERALE MOD. : 12	CPU: QUADRO GENERALE MOD. : 12
Name: A11 / Sheet:	Name: A11 / Sheet:	Name: A11 / Sheet:	Name: A11 / Sheet:	Name: A11 / Sheet:
TT-004 TEMPERATURE TRANSM 4-20mA	SPARE	SPARE	SPARE	

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

frigotermica
HVAC SYSTEM and EQUIPMENT
S.p.186-Cornegliano Laud. (Lo) Italy
tel. 0039-0371-69076
frigotermica@frigotermica.com

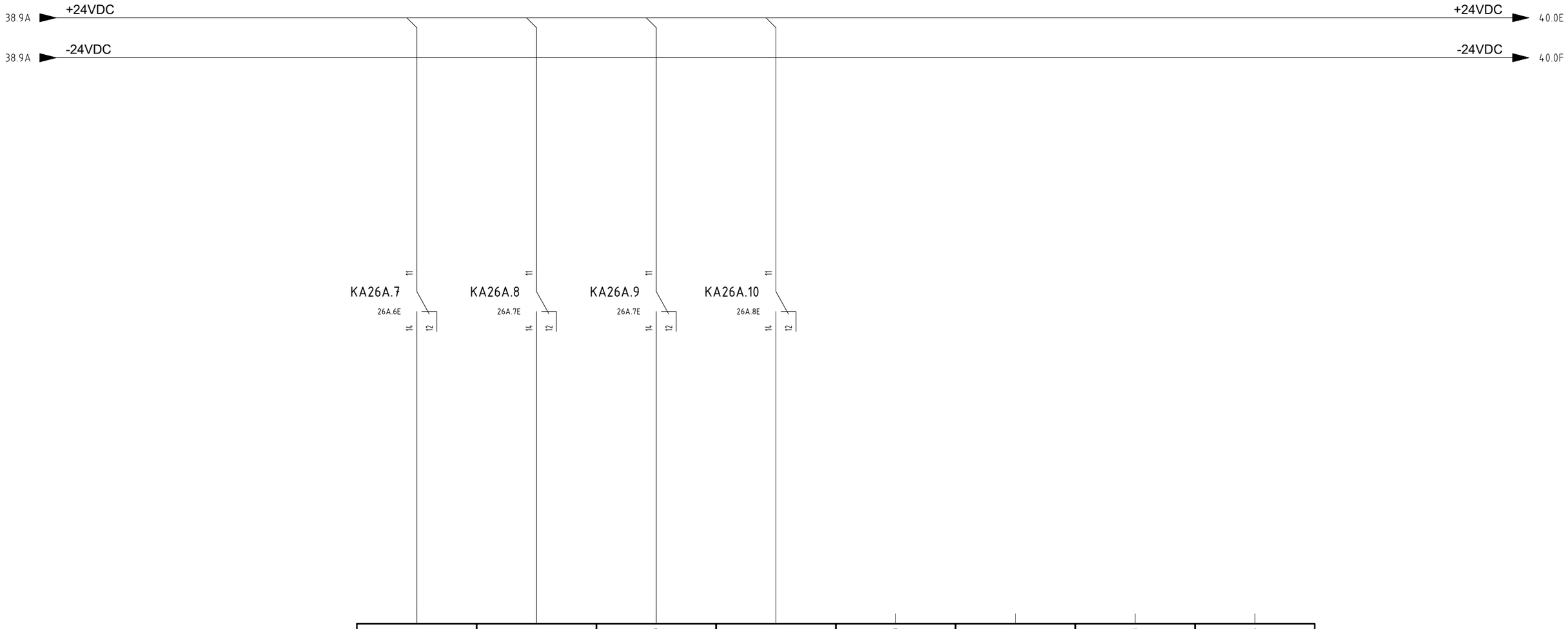
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
PLC SECTION

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 39A
F.S. 39B



1	2	3	4	5	6	7	8
I8.0	I8.1	I8.2	I8.3	I8.4	I8.5	I8.6	I8.7
CPU: QUADRO GENERALE MOD. : 13	CPU: QUADRO GENERALE MOD. : 13	CPU: QUADRO GENERALE MOD. : 13	CPU: QUADRO GENERALE MOD. : 13	CPU: QUADRO GENERALE MOD. : 13	CPU: QUADRO GENERALE MOD. : 13	CPU: QUADRO GENERALE MOD. : 13	CPU: QUADRO GENERALE MOD. : 13
Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:
HFD-77015 CLOSE CONTACT 0= NOT CLOSED 1= CLOSED	HFD-77015 OPEN CONTACT 0=NOT OPEN 1= OPEN	HFD-77016 CLOSE CONTACT 0= NOT CLOSE 1= CLOSE	HFD-77016 OPEN CONTACT 0=NOT OPEN 1= OPEN	SPARE *spare*	SPARE *spare*	SPARE *spare*	SPARE *spare*

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM

PLC SECTION
plc section

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 39B
F.S. 39C

38.9A +24VDC

38.9A -24VDC

+24VDC 40.0E

-24VDC 40.0F

9	10	11	12	13	14	15	16	L+ M
19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	
CPU: QUADRO GENERALE MOD. : 13	CPU: QUADRO GENERALE MOD. : 13	CPU: QUADRO GENERALE MOD. : 13	CPU: QUADRO GENERALE MOD. : 13	CPU: QUADRO GENERALE MOD. : 13	CPU: QUADRO GENERALE MOD. : 13	CPU: QUADRO GENERALE MOD. : 13	CPU: QUADRO GENERALE MOD. : 13	CPU: QUADRO GENERALE MOD. : 13
Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:
SPARE *spare*	SPARE *spare*	SPARE *spare*	SPARE *spare*	SPARE *spare*	SPARE *spare*	SPARE *spare*	SPARE *spare*	

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM

PLC SECTION
plc section

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 39C
F.S. 40

A1

SIEMENS

SIMATIC HMI

TOUCH

12"

X1 P1 PROFINET

X1 P2 PROFINET

X2 PROFIBUS DP

X60 Mini USB - Type B

X61 USB - Type A

X62 USB - Type A

X90 OUT Line OUT

X90 IN Line IN

DC 24V (X80)

L+ 1

M 2

FG

CABLE 1

CABLE 2

CABLE 3

CABLE 4

X1 P1 R PROFINET

X1 P2 R PROFINET

X1 P1 R PROFINET

X1 P2 R PROFINET

TO PAGE 41

D1

D2

SIEMENS

RUN

SIMATIC S7-1500

ESC OK

L+

M

L+

M

DC 24V (X80)

39.9A +24VDC

39.9A -24VDC

+24VDC 41.0E

-24VDC 41.0F

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM
PLC SECTION

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 40
F.S. 41

FROM
PAGE 40

CABLE 4

CABLE 5

CABLE 1

CABLE 2

MODBUS TCP/P TO
CLIENT

RJ45
CONNECTION
IN TERMINAL
STRIP

X1

X2

1	TD
2	TD_N
3	RD
4	GND
5	GND
6	RD_N
7	GND
8	GND

RJ45 — PROFINET IO - Port 1 RJ45

RJ45 — PROFINET IO - Port 2 RJ45

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

A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A13

BA 2xRJ45

SIEMENS

SIMATIC
ET 200SP
IM 155-6 PN/2 HF

X1
PROFINET
(LAN)
6ES7193-6RA00-0AA0

6ES7155-6AU01-0CN0

A3	DI 16x24VDC ST	6ES7131-6BH01-0BA0
A4	DI 16x24VDC ST	6ES7131-6BH01-0BA0
A5	DI 16x24VDC ST	6ES7131-6BH01-0BA0
A6	DI 16x24VDC ST	6ES7131-6BH01-0BA0
A7	DQ 16x24VDC/0,5A ST	6ES7132-6BH01-0BA0
A8	AI 4xU/I 2-wire ST	6ES7134-6HD01-0BA1
A9	AQ 4xU/I ST	6ES7135-6HD00-0BA1
A10	AQ 4xU/I ST	6ES7135-6HD00-0BA1
A11	AI 4xU/I 2-wire ST	6ES7134-6HD01-0BA1
A13	DI 16x24VDC ST	6ES7131-6BH01-0BA0

MAC ADDRESS

X80
24VDC

A12

SIEMENS

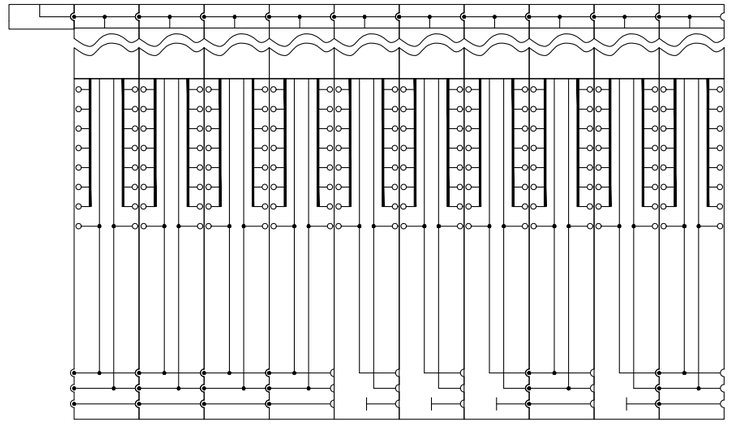
SCALANCE
XC208

208-0BA00-2AC2

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

1	F1
2	F2

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



40.9E +24VDC → +24VDC 42.0A

40.9F -24VDC → -24VDC 42.0A

REV.	MODIFICA	DATA	FIRMA		
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	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-400 HV-MV SWITCHGEAR ROOM
PLC ARCHITECTURE

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 41
F.S. 42

41.9E +24VDC

41.9F -24VDC

+24VDC 43.0A

-24VDC 43.0A

42.1

42.2

1/L1

HR-1A

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

GRP 3

2/T1

1/L1

HR-1B

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

GRP 3

2/T1

1/L1

HR-1C

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

GRM 1

2/T1

3/L2

FU42.1 TA:1 1 2

11.9A RA

KA42.1 A1 A2

33.2B 11 12 14 21 22 24 31 32 34 41 42 44

40.1 38.4D

40.2 38.4D

03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.
REV.	MODIFICA	DATA	FIRMA	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-400 HV-MV SWITCHGEAR ROOM
EH MODULATION A

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 42
F.S. 43

42.9A +24VDC → +24VDC /./

42.9A -24VDC → -24VDC /./

42.1

42.2

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

KA43.1 A1 A2

35.8B 11 12 14 21 22 24 31 32 34 41 42 44

40.3

40.4

38.4E

38.4E

3/L2

TB:1 1

FU43.1

2

11.9A RB

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

frigotermica
HVAC SYSTEM and EQUIPMENT
S.p.186–Cornegliano Laud. (Lo) Italy
tel. 0039–0371–69076
frigotermica@frigotermica.com

CLIENT: CROSSWIND

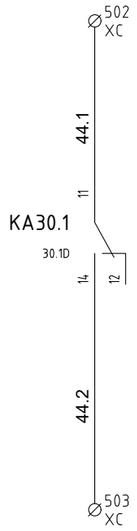
BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
EH MODULATION B

ROSETTI MARINO

1724000049-HV-DA-00029

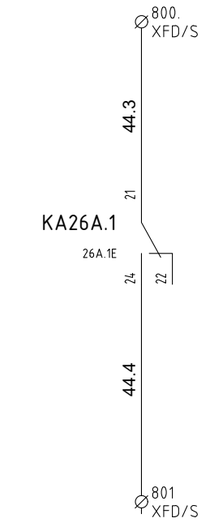
FG. 43
F.S. 44

AVAILABLE SIGNAL
GENERAL FAULT
TO DCS



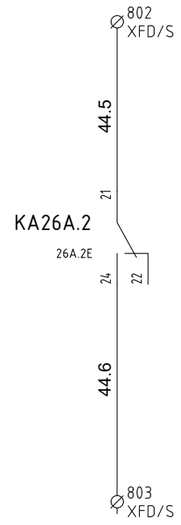
HVAC MALFUNCTION
0=MALF
1=NORMAL

HFD-77012
CLOSED SIGNAL



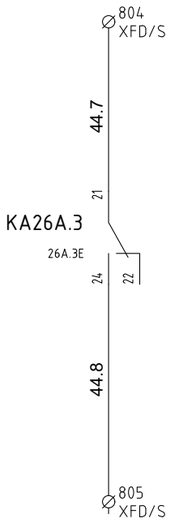
HFD-77014
OPEN SIGNAL

HFD-77012
OPEN SIGNAL



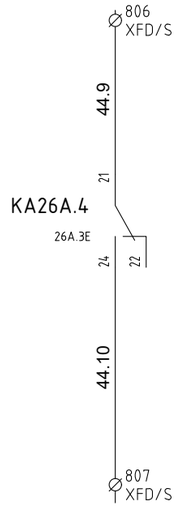
HFD-770153
CLOSED SIGNAL

HFD-77013
CLOSED SIGNAL



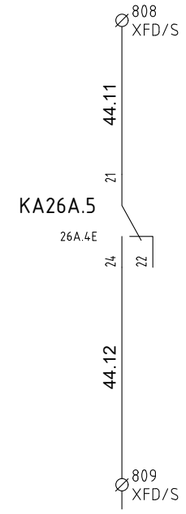
HFD-77015
OPEN SIGNAL

HFD-77013
OPEN SIGNAL

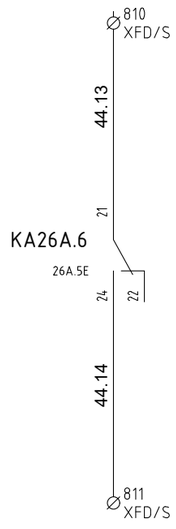


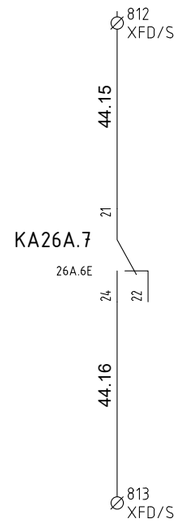
HFD-77016
CLOSED SIGNAL

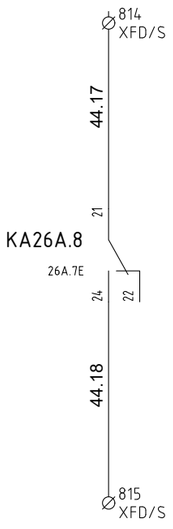
HFD-77014
CLOSED SIGNAL

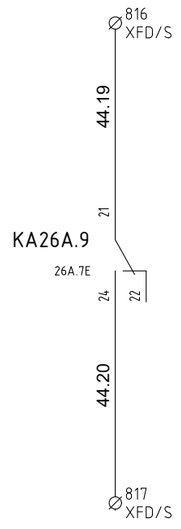


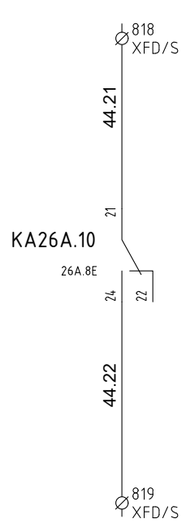
HFD-77016
OPEN SIGNAL











REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

frigotermica
HVAC SYSTEM and EQUIPMENT
S.p.186–Cornegliano Laud. (Lo) Italy
tel. 0039–0371–69076
frigotermica@frigotermica.com

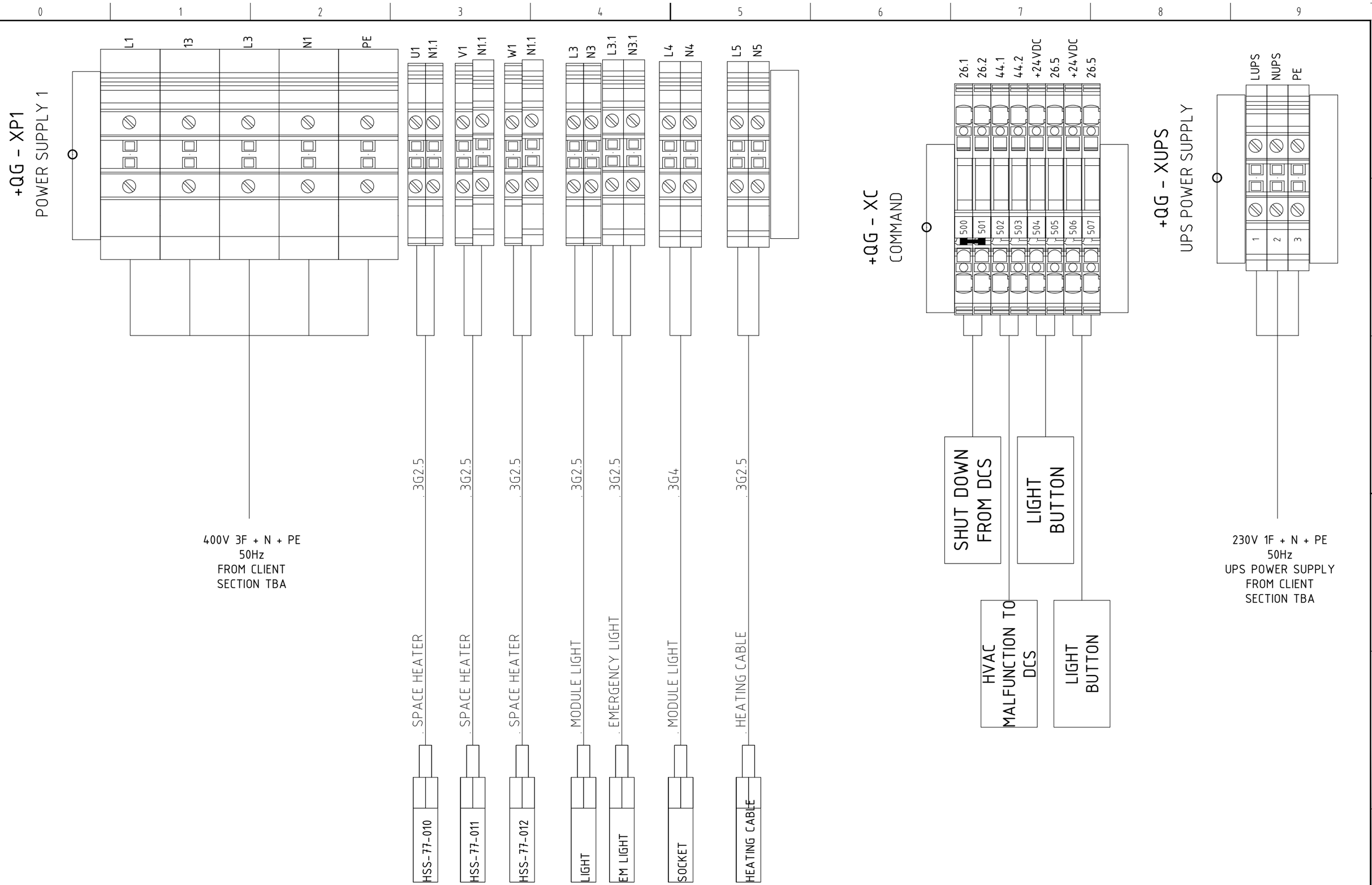
CLIENT:
CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
AVAILABLE SIGNAL

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 44
F.S. 45



REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

frigotermica
HVAC SYSTEM and EQUIPMENT
S.p.186–Cornegliano Laud. (Lo) Italy
tel. 0039–0371–69076
frigotermica@frigotermica.com

CLIENT: CROSSWIND

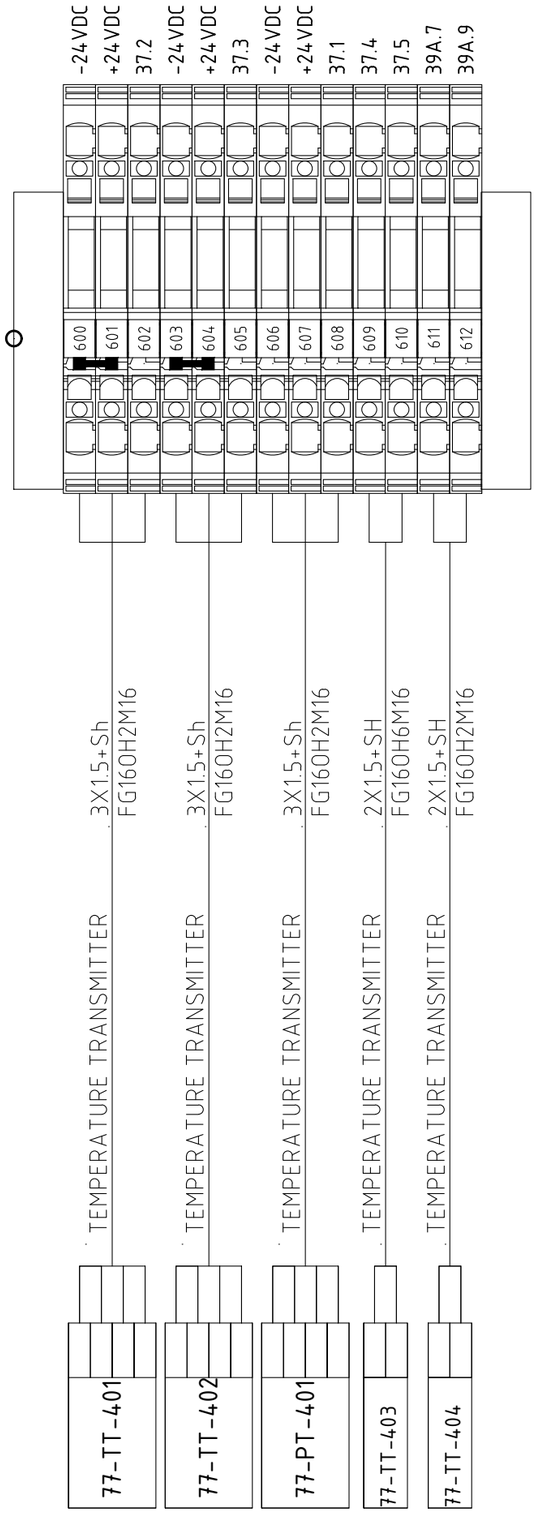
BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
TERMINAL STRIP

ROSETTI MARINO

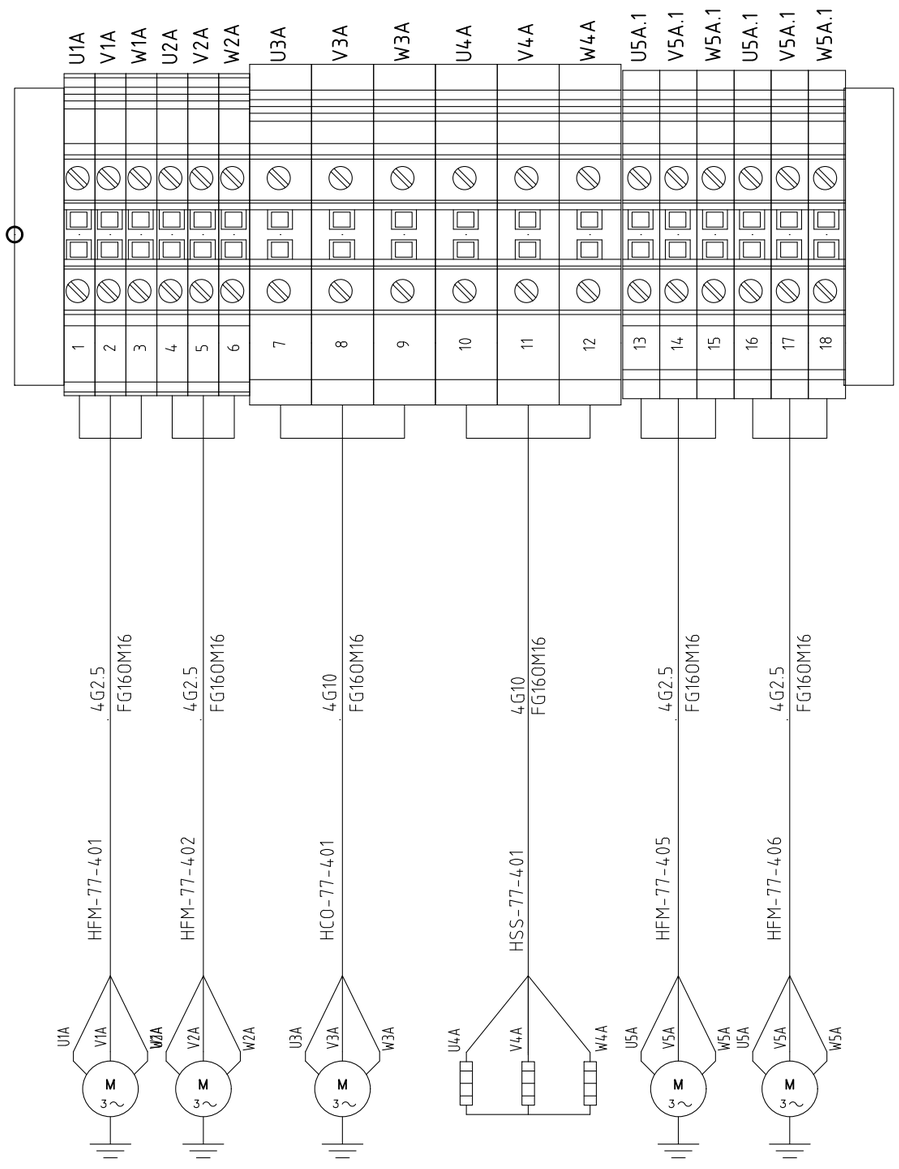
1724000049-HV-DA-00029

FG. 45
F.S. 46

+QG - XT
TRASMITTER



+QG - XM1
MOTOR 1



REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM
TERMINAL STRIP

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 46
F.S. 47

REV.	MODIFICA	DATA	FIRMA
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.
02	ISSUED FOR APPROVAL	03/07/24	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.

DATA	APPR.
22/04/2024	F.M.
DISEGN.	M.G.
VISTO	S.S.

frigotermica
HVAC SYSTEM and EQUIPMENT
S.p.186–Corneglano Laud. (Lo) Italy
tel. 0039–0371–69076
frigotermica@frigotermica.com

CLIENT:
CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
TERMINAL STRIP

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 47
F.S. 48

+QG - XMD1
MOTORISED DAMPER 1

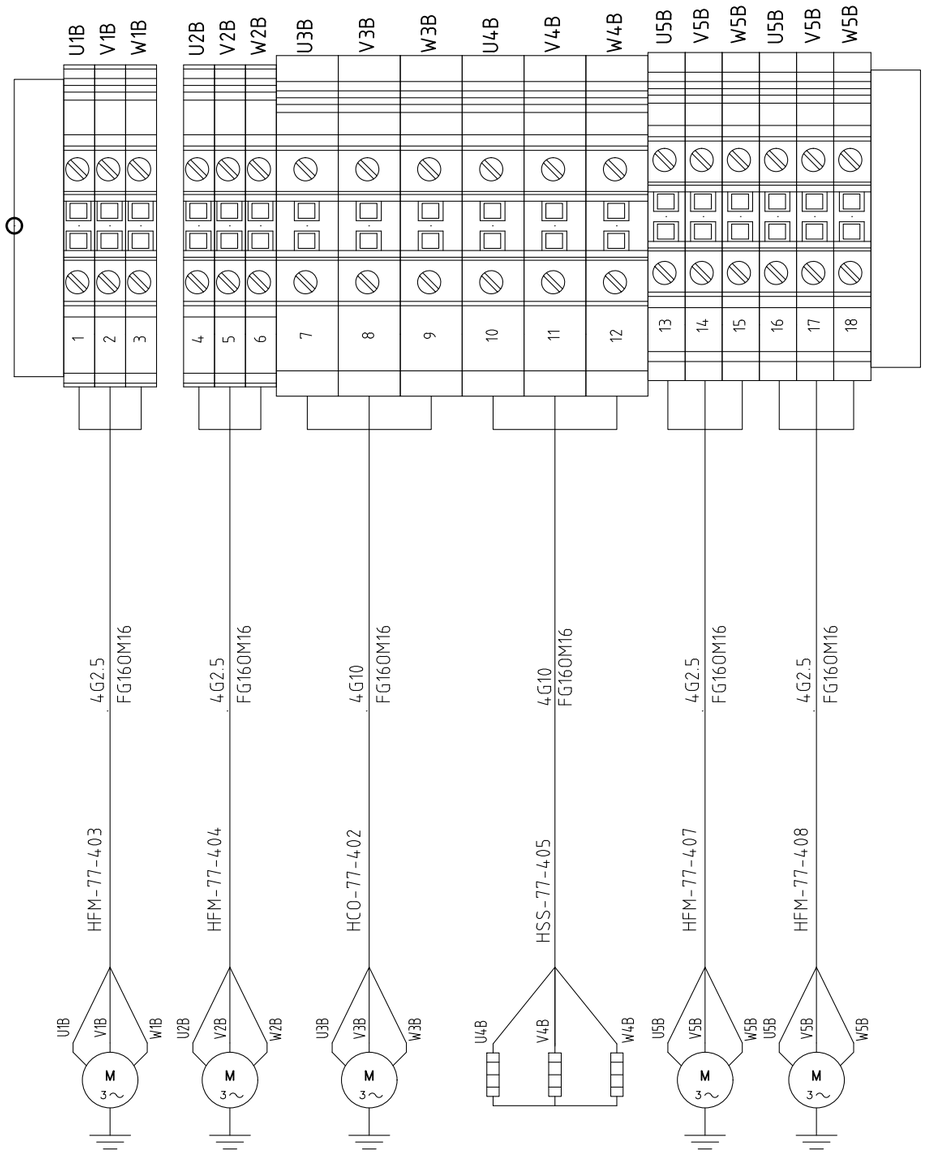
HDZ-77-401
HDZ-77-402
HDZ-77-403
240V
<5°
>85°
ZSC
ZSO

MOTORISED DAMPER POWER SUPPLY	3G1.5 FG16OM16	1 A.A 2 B.A
MOTORISED DAMPER SIGNAL	4X1.5 FG16OM16	3 A.A 4 12.4 5 A.A 6 12.7
MOTORISED DAMPER POWER SUPPLY	3G1.5 FG16OM16	7 A.A 8 B.A
MOTORISED DAMPER SIGNAL	4X1.5 FG16OM16	9 12.4 10 12.5 11 12.6 12 12.8
MOTORISED DAMPER POWER SUPPLY	3G1.5 FG16OM16	13 A.A 14 B.A
MOTORISED DAMPER SIGNAL	4X1.5 FG16OM16	15 12.8 16 12.6 17 12.10 18 12.9

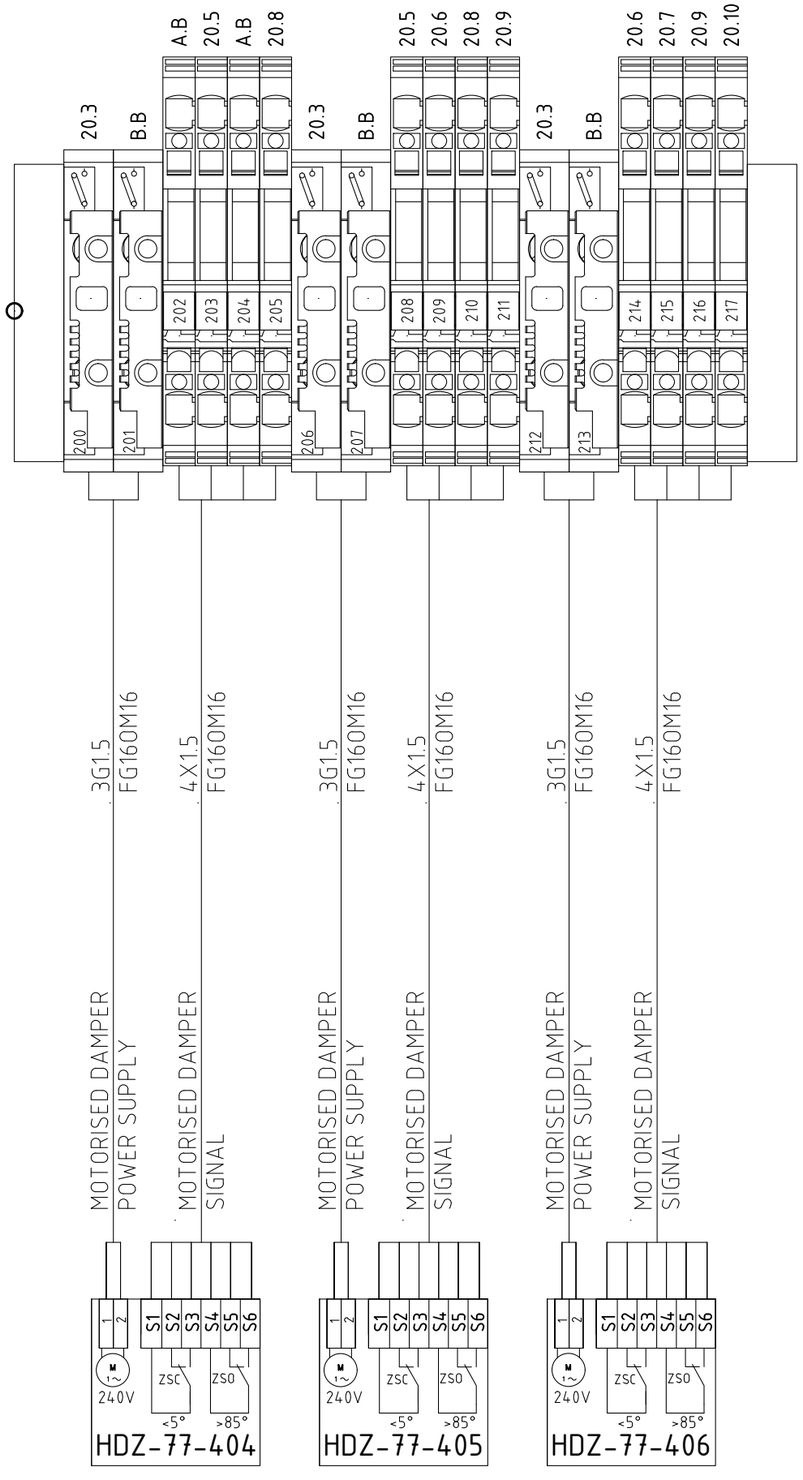
+QG - XA1
AUXILIARY 1

PDSL-77-401	DIFFERENTIAL PRESSURE SWITCH	2X1.5 FG16OM16	100 A.A 101 13.5
TE-77-401	PTC PRESS. FAN	2X1.5 FG16OM16	102 13.13 103 13.15
HPB-77-401	EM. POWER BUTTON	2X1.5 FG16OM16	106 12.3 107 B.A
HSS-77-402	SUPPLY AIR MOTOR HEATER	3G1.5 FG16OM16	108 14.1 109 B.A
HSS-77-403	PRESS. FAN MOTOR HEATER	3G1.5 FG16OM16	110 5 111 B.A
HSS-77-404	COMPRESSOR OIL HEATER	3G1.5 FG16OM16	112 15.1 113 B.A
HSV-77-401	SOLENOID VALVE	3G1.5 FG16OM16	114 A.A 115 15.2
PDSH-77-401	DIFF PRESSURE SWITCH FILTER CLOGGED	2X1.5 FG16OM16	116 A.A 117 15.3
PC-77-401	CONDENSING PRESSURE SWITCH	3G1.5 FG16OM16	118 11.5 119 11.7
PTH-77-401	CONDENSING PRESSURE TRASDUCER	3.1.5+Sh FG16OH2M16	120 A.A 121 15.4
TSH-77-401	HIGH TEMPERATURE THERMOSTATE	3G1.5 FG16OM16	122 15.11 123 15.5
TSHH-77-401	VERI HIGH TEMPERATURE THERMOSTATE	3G1.5 FG16OM16	124 A.A 125 14.8
PSL-77-401	LOW PRESSURE SWITCH	3G1.5 FG16OM16	126 A.A 127 14.11
PSL-77-401	HIGH PRESSURE SWITCH	3G1.5 FG16OM16	128 A.A 129 15.6
PDSH-77-402	DIFF PRESSURE SWITCH FILTER CLOGGED	2X1.5 FG16OM16	104 +24 VDC 105 26.6

+QG - XM2
MOTOR 2



+QG - XMD2
MOTORISED DAMPER 2



REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

frigotermica
HVAC SYSTEM and EQUIPMENT
S.p.186–Cornegliano Laud. (Lo) Italy
tel. 0039–0371–69076
frigotermica@frigotermica.com

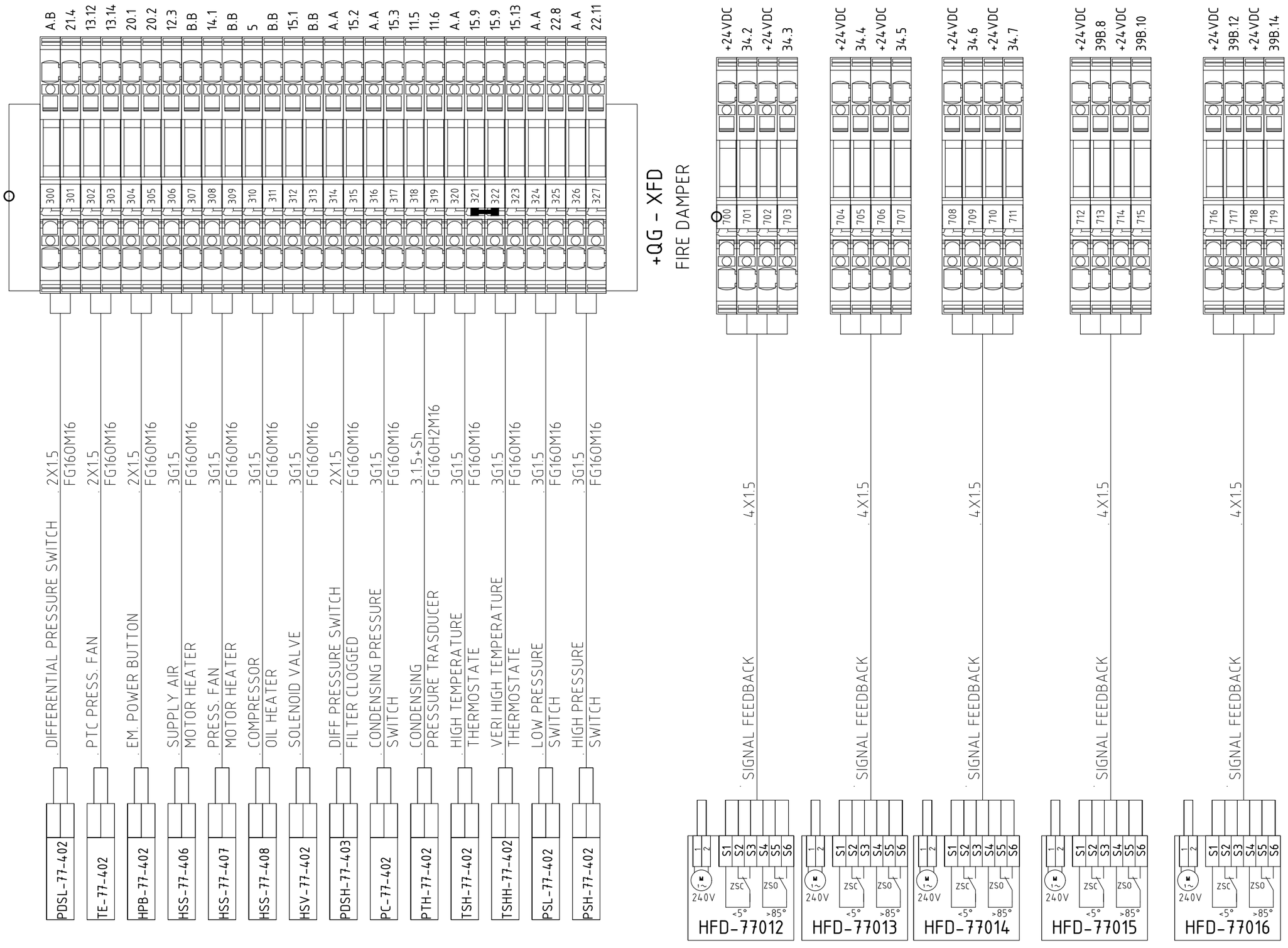
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-400 HV-MV SWITCHGEAR ROOM
TERMINAL STRIP

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 48
F.S. 49



REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM
TERMINAL STRIP

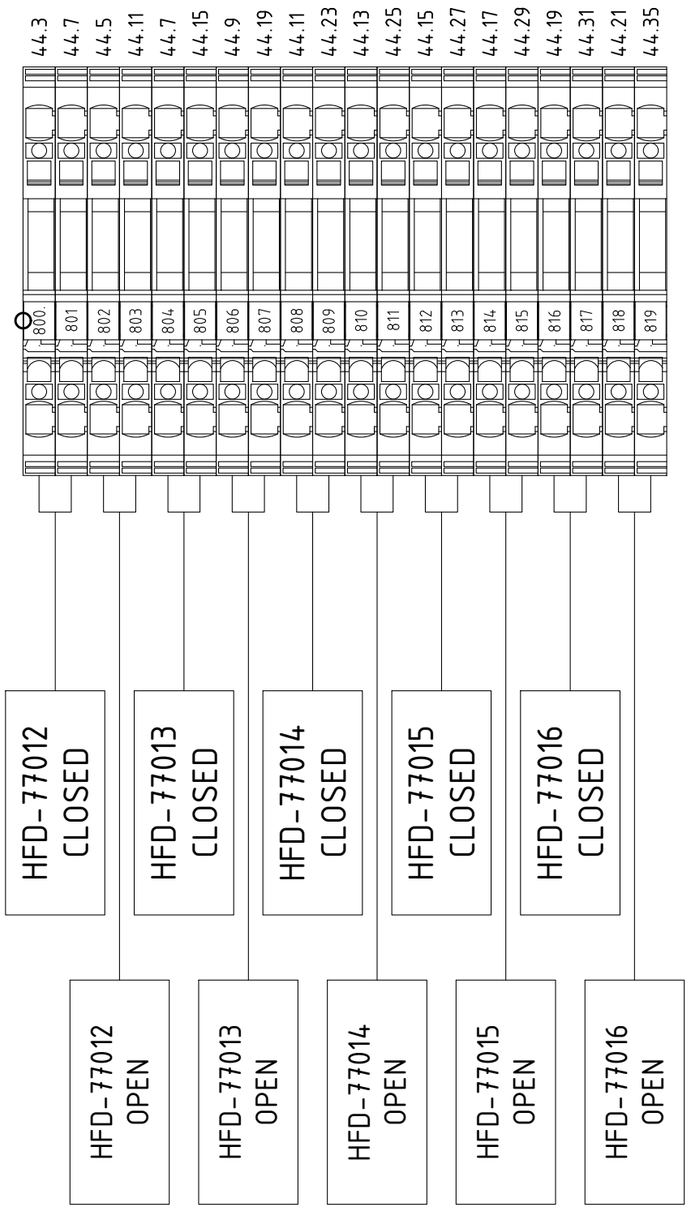
ROSETTI MARINO

1724000049-HV-DA-00029

FG. 49
F.S. 49A

+QG - XFD/S

FIRE DAMPERS SIGNAL TO SIS





REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM

TERMINAL STRIP

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 49A

F.S. 50

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
				Hq	4	9
	R5CQE2286R	cabinet comp. 2200x800x600 back	dkc	Hq	4	2
	R5CPFE8100	Modular cabinet compensation panel height 100 width 800	dkc			2
	R5TOE80	Rebate crossbar for modular doors, width 800	dkc			5
	RZPCE8900	Modular wiring panel L.800 H.900	dkc			2
	RZPCE8600	Modular wiring panel L.800 H.600	dkc			2
	RZPCE8500	Modular wiring panel L.800 H.500	dkc			2
	R5CPME8900	Solid modular cabinet door 800 width, 900 door height	dkc			2
	R5CPME8600	Solid modular cabinet door width 800, door height 600	dkc			2
	R5CPME8500	Solid modular cabinet door 800 width, 500 door height	dkc			2
	RZSOE545	Total horizontal support cabinet width 600	dkc			5
	rzdoe8545	PARTIAL HORIZONTAL PARTITION CABINET WIDTH 800 TOTAL DEPTH 545 MM	dkc			5
	RZA33	Lifting Ring	dkc			1
	R5LE2262	Side for cabinet depth 600mm height 2200mm2pcs	dkc			1
	R1ZPRO801	Flangefrontal/side H100 Length 800 2pcs	dkc			2
	R1ZPRO601	Front/side flange H100 length 600	dkc			2
	R1ZCOR1	Modular plinth corner H100 4pcs	dkc			2
	RZKE65	CQE cabinet union kit	dkc			1
	rzkre65	Flat Cooling Kit for CQE Cabinets	dkc			1
	rzksre65	L-shaped union reinforcement kit for CQE cabinets	dkc			1
	RZDVE2260	Vertical partition for QE 2200x600	dkc	Hq	4	1
	rztse02	Lifting brackets for CQE PZ2	dkc			1
32 x 15	534-2	DIN rail EN60715 32x15x1.5 closed	Arnocanali	Hq	5	1.1
32 x 15	PD32Z	Sendzimir rail 32x15x9 closed	Canloplast	Hq	5	4.95
40 x 100	E354	Can.cabl.40x100 SG S/4	Canloplast	Hq	5	9.33
60 x 100	E184	Can.Cabl.60x100 SG S/4	Canloplast	Hq	5	4.83
77-TT-403				Hq		1
77-TT-404				Hq		1
A1	6AV2124-0MC01-0AX0	SIMATIC HMI TP1200 Comfort. Touch control, 12" widescreen display	siemens	Hq	40	1
A2	6ES7155-6AU01-0CN0	IM 155-6 PN HF/2 V4.2 Interface Module	siemens	Hq	41	1
	6ES7193-6AR00-0AA0	BA 2xRJ45 (PROFINET busadapter with standard Ethernet socket for IM-PN)	siemens			1
A3	6ES7131-6BH01-0BA0	Digital Input Module: 16x24VDC ST	siemens	Hq	41	1
	6ES7193-6BP00-0BA0	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	41	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	41	1
	6ES7193-6BP00-0BA0	Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)	siemens			1
A6	6ES7131-6BH01-0BA0	Digital Input Module: 16x24VDC ST	siemens	Hq	41	1
	6ES7193-6BP00-0BA0	Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)	siemens			1
A7	6ES7132-6BH01-0BA0	Digital Output Module: DQ 16x24VDC/0.5A ST	siemens	Hq	41	1
	6ES7193-6BP00-0DA0	Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)	siemens			1
A8	6ES7134-6HD01-0BA1	Analog Input Module: AI 4XU/I 2-Wire ST	siemens	Hq	41	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	41	1
	6ES7193-6BP00-0DA0	Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)	siemens			1

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM

MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 50
F.S. 51

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
A10	*6ES7135-6HD00-0BA1*	*Analog Output Module: AQ 4XU/I ST*	*siemens*	*Hq*	41	1
	6ES7193-6BP00-0BA0	*Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)*	*siemens*			1
A11	*6ES7134-6HD01-0BA1*	*Analog Input Module: AI 4XU/I 2-Wire ST*	*siemens*	*Hq*	41	1
	6ES7193-6BP00-0DA0	*Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)*	*siemens*			1
A12	*6GK5208-0BA00-2AC2*	*XC208 Managed Switch with 8 RJ45 100Mbit/s Ports*	*siemens*	*Hq*	41	1
A13	*6ES7131-6BH01-0BA0*	*Digital Input Module: 16x24VDC ST*	*siemens*	*Hq*	41	1
	6ES7193-6BP00-0BA0	*Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)*	*siemens*			1
D1	*6ES7513-1RM03-0AB0*	*CPU 1513R-1PN*	*siemens*	*Hq*	40	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*	40	1
	6ES7954-8LF02-0AA0	*Memory card, 24 MB*	*siemens*			1
	6ES7590-1AB60-0AA0	*Profile rail S7-1500, 160 mm*	*siemens*			1
EM LIGHT				*Hq*		1
EPB-002	*3su1900-0dy30-0aa0*	*Protective collar for merge button, plastic, yellow, 22mm hole*	*siemens*	*Hq*	26	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
	3SU1401-1BH20-1AA0	*Red LED module for mounting on front plate, 24 ... 240 V AC/DC. Screw terminals*	*siemens*			1
EPB-002L	*3SU1401-1BH20-1AA0*	*Red LED module for mounting on front plate, 24 ... 240 V AC/DC. Screw terminals*	*siemens*	*Hq*	26	1
F1		*docker*		*Hq*	*7th*	1
F2		*docker*		*Hq*	*7th*	1
F3		*docker*		*Hq*	*7th*	1
F4		*docker*		*Hq*	*7th*	1
FU42.1	*SF900GR*	*SFR.4/GR Sectionable clamp*	*Cabur*	*Hq*	42	1
FU43.1	*SF900GR*	*SFR.4/GR Sectionable clamp*	*Cabur*	*Hq*	43	1
GD1	*6EP1336-3BA10*	*Sitop PSU8200 Single Phase, DC 24 V/20 A. Stabilized Power Supply Input: AC 120...230 V/DC 110-220 V, Output: DC 24 V/20 A*	*siemens*	*Hq*	25	1
HFD-77012		*NC Limit Switch*		*Hq*	*26th*	1
HFD-77012		*Limit Switch: No*		*Hq*	*26th*	1
HFD-77012				*Hq*	49	1
HFD-77013		*NC Limit Switch*		*Hq*	*26th*	1
HFD-77013		*Limit Switch: No*		*Hq*	*26th*	1
HFD-77013				*Hq*	49	1
HFD-77014		*NC Limit Switch*		*Hq*	*26th*	1
HFD-77014		*Limit Switch: No*		*Hq*	*26th*	1
HFD-77014				*Hq*	49	1
HFD-77015		*Limit Switch: No*		*Hq*	*26th*	1
HFD-77015		*NC Limit Switch*		*Hq*	*26th*	1
HFD-77015				*Hq*	49	1
HFD-77016		*Limit Switch: No*		*Hq*	*26th*	1
HFD-77016		*NC Limit Switch*		*Hq*	*26th*	1
HFD-77016				*Hq*	49	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

REV.	MODIFICA	DATA	FIRMA
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.
02	ISSUED FOR APPROVAL	03/07/24	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.

DATA	22/04/2024
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-400 HV-MV SWITCHGEAR ROOM

MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 51
F.S. 52

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
HL16.1	*3SU1001-6AA60-0AA0*	*Indicator light with smooth lens, white*	*siemens*	*Hq*	16	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
HL24.1	*3SU1001-6AA60-0AA0*	*Indicator light with smooth lens, white*	*siemens*	*Hq*	24	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
HL25.1	*3SU1001-6AA60-0AA0*	*Indicator light with smooth lens, white*	*siemens*	*Hq*	25	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
HR-1A	*GRP-H-25-48-D-1-0000*	*Static power slave unit for load control, logic/analog control. Maximum current 25A.*	*Gefran*	*Hq*	42	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*	42	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*	42	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*	43	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*	43	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*	43	1
HSS-77-010				*Hq*		1
HSS-77-011				*Hq*		1
HSS-77-012				*Hq*		1
KA8.1	*EPN520*	*Stepper Relay 16A 230V 2NA 1M*	*Hager*	*Hq*	8	1
KA9.1	*9404spa*	*Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20*	*Finder*	*Hq*	9	1
		Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC				
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI*	*Finder*			1
		Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable				
		Protection category: RT I. OPTIO				
KA11.1	*9404spa*	*Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20*	*Finder*	*Hq*	11	1
		Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC				
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI*	*Finder*			1
		Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable				
		Protection category: RT I. OPTIO				
KA12.1	*9404spa*	*Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20*	*Finder*	*Hq*	12	1
		Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC				
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI*	*Finder*			1
		Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable				
		Protection category: RT I. OPTIO				
KA12.2	*9404spa*	*Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20*	*Finder*	*Hq*	12	1
		Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC				
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI*	*Finder*			1
		Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable				
		Protection category: RT I. OPTIO				
KA12.3	*9404spa*	*Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20*	*Finder*	*Hq*	12	1
		Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC				

REV.	MODIFICA	DATA	FIRMA
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.
02	ISSUED FOR APPROVAL	03/07/24	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.

DATA	22/04/2024
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-400 HV-MV SWITCHGEAR ROOM

MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 52
F.S. 53

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
KA12.3	094913	*Latching and unhooking jumper*	*Finder*	*Hq*	12	1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA13.1	*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*	*Hq*	13	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA13.2	*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*	13	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA13.3	*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*	13	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA14.1	*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*	*Hq*	14	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA14.2	*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*	14	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA15.1	*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*	*Hq*	15	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA15.2	*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*	15	1
	094913	*Latching and unhooking jumper*	*Finder*			1

REV.	MODIFICA	DATA	FIRMA
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.
02	ISSUED FOR APPROVAL	03/07/24	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.

DATA	22/04/2024
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-400 HV-MV SWITCHGEAR ROOM

MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 53
F.S. 54

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
KA15.2	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*	*Hq*	15	1
KA15.3	*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*	15	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA15.4	*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*	15	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300040	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA17.1	*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*	*Hq*	17	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA19.1	*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*	*Hq*	19	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA20.1	*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*	*Hq*	20	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA20.2	*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*	20	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA20.3	*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*	20	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM

MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 54
F.S. 55

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
KA21.1	*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*	*Hq*	21	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA21.2	*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*	21	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA21.3	*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*	21	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA22.1	*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*	*Hq*	22	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA22.2	*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*	22	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA23.1	*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*	*Hq*	23	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA23.2	*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*	23	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA23.3	*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*	23	1
	094913	*Latching and unhooking jumper*	*Finder*			1

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM

MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 55
F.S. 56

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
KA23.3	553482300054	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*	*Hq*	23	1
KA23.4	*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*	23	1
	094913	*Latching and unhooking jumper*	*Finder*			1
	553482300040	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in fitting Power supply: AC volt AC: 230 V. Non-polarized monostable Protection category: RT I. OPTIO*	*Finder*			1
KA26.1	*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*	*Hq*	26	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
KA26.2	*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*	26	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
KA26A.1	465290240040	*mini relay. (A): 8 N° Contacts: 2 Contact configuration: CO Material Contacts: AGNI Electrical connection: plug-in fitting Power supply: DC Volt DC: 24 V. Non-polarized Monostable Protection category: RT II. Optional: PU*	*Finder*	*Hq*	*26th*	1
	9702spa	*Plinth with socket terminals Mounting: 35 mm blind bar (A): 8 Degree of protection: IP 20 Accessories: plastic or metal jumper, 8-pole comb, EMC signalling and protection modules, timer*	*Finder*			1
KA26A.2	465290240040	*mini relay. (A): 8 N° Contacts: 2 Contact configuration: CO Material Contacts: AGNI Electrical connection: plug-in fitting Power supply: DC Volt DC: 24 V. Non-polarized Monostable Protection category: RT II. Optional: PU*	*Finder*	*Hq*	*26th*	1
	9702spa	*Plinth with socket terminals Mounting: 35 mm blind bar (A): 8 Degree of protection: IP 20 Accessories: plastic or metal jumper, 8-pole comb, EMC signalling and protection modules, timer*	*Finder*			1
KA26A.3	465290240040	*mini relay. (A): 8 N° Contacts: 2 Contact configuration: CO Material Contacts: AGNI Electrical connection: plug-in fitting Power supply: DC Volt DC: 24 V. Non-polarized Monostable Protection category: RT II. Optional: PU*	*Finder*	*Hq*	*26th*	1
	9702spa	*Plinth with socket terminals Mounting: 35 mm blind bar (A): 8 Degree of protection: IP 20 Accessories: plastic or metal jumper, 8-pole comb, EMC signalling and protection modules, timer*	*Finder*			1
KA26A.4	465290240040	*mini relay. (A): 8 N° Contacts: 2 Contact configuration: CO Material Contacts: AGNI Electrical connection: plug-in fitting Power supply: DC Volt DC: 24 V. Non-polarized Monostable Protection category: RT II. Optional: PU*	*Finder*	*Hq*	*26th*	1
	9702spa	*Plinth with socket terminals Mounting: 35 mm blind bar (A): 8 Degree of protection: IP 20 Accessories: plastic or metal jumper, 8-pole comb, EMC signalling and protection modules, timer*	*Finder*			1
KA26A.5	465290240040	*mini relay. (A): 8 N° Contacts: 2 Contact configuration: CO Material Contacts: AGNI Electrical connection: plug-in fitting Power supply: DC Volt DC: 24 V. Non-polarized Monostable Protection category: RT II. Optional: PU*	*Finder*	*Hq*	*26th*	1

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM

MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 56
F.S. 57

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
KA26A.5	*9702spa*	*Plinth with socket terminals Mounting: 35 mm blind bar (A): 8 Degree of protection: IP 20 Accessories: plastic or metal jumper, 8-pole comb, EMC signalling and protection modules, timer*	*Finder*	*Hq*	*26th*	1
KA26A.6	465290240040	*miniature relay. (A): 8 N° Contacts: 2 Contact configuration: CO Material Contacts: AGNI Electrical connection: plug-in fitting Power supply: DC Volt DC: 24 V. Non-polarized Monostable Protection category: RT II. Optional: PU*	*Finder*	*Hq*	*26th*	1
	9702spa	*Plinth with socket terminals Mounting: 35 mm blind bar (A): 8 Degree of protection: IP 20 Accessories: plastic or metal jumper, 8-pole comb, EMC signalling and protection modules, timer*	*Finder*			1
KA26A.7	465290240040	*miniature relay. (A): 8 N° Contacts: 2 Contact configuration: CO Material Contacts: AGNI Electrical connection: plug-in fitting Power supply: DC Volt DC: 24 V. Non-polarized Monostable Protection category: RT II. Optional: PU*	*Finder*	*Hq*	*26th*	1
	9702spa	*Plinth with socket terminals Mounting: 35 mm blind bar (A): 8 Degree of protection: IP 20 Accessories: plastic or metal jumper, 8-pole comb, EMC signalling and protection modules, timer*	*Finder*			1
KA26A.8	465290240040	*miniature relay. (A): 8 N° Contacts: 2 Contact configuration: CO Material Contacts: AGNI Electrical connection: plug-in fitting Power supply: DC Volt DC: 24 V. Non-polarized Monostable Protection category: RT II. Optional: PU*	*Finder*	*Hq*	*26th*	1
	9702spa	*Plinth with socket terminals Mounting: 35 mm blind bar (A): 8 Degree of protection: IP 20 Accessories: plastic or metal jumper, 8-pole comb, EMC signalling and protection modules, timer*	*Finder*			1
KA26A.9	465290240040	*miniature relay. (A): 8 N° Contacts: 2 Contact configuration: CO Material Contacts: AGNI Electrical connection: plug-in fitting Power supply: DC Volt DC: 24 V. Non-polarized Monostable Protection category: RT II. Optional: PU*	*Finder*	*Hq*	*26th*	1
	9702spa	*Plinth with socket terminals Mounting: 35 mm blind bar (A): 8 Degree of protection: IP 20 Accessories: plastic or metal jumper, 8-pole comb, EMC signalling and protection modules, timer*	*Finder*			1
KA26A.10	465290240040	*miniature relay. (A): 8 N° Contacts: 2 Contact configuration: CO Material Contacts: AGNI Electrical connection: plug-in fitting Power supply: DC Volt DC: 24 V. Non-polarized Monostable Protection category: RT II. Optional: PU*	*Finder*	*Hq*	*26th*	1
	9702spa	*Plinth with socket terminals Mounting: 35 mm blind bar (A): 8 Degree of protection: IP 20 Accessories: plastic or metal jumper, 8-pole comb, EMC signalling and protection modules, timer*	*Finder*			1
KA30.1	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*	35	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
KA30.3	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*	35	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
KA30.4	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*	35	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

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM

MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 57
F.S. 58

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
KA30.5	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*	35	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
KA30.6	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*	35	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
KA30.7	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*	36	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
KA30.8	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*	36	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
KA30.9	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*	35	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
KA37.1	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*	36	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
KA37.2	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*	36	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
KA42.1	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*	42	1

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	F.M.	VISTO	S.S.

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-400 HV-MV SWITCHGEAR ROOM

MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 58
F.S. 59

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
KA42.1	*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*	*Hq*	42	1
	094913	*Latching and unhooking jumper*	*Finder*			1
KA43.1	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*	43	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*	26	1
	3RH29111HA22	*Bloc.Aus.2L 2R 1L,1L,S00/S0,*	*siemens*			1
KM2A	*3RT2015-1AP01*	*Power contactor, AC-3 7 A, 3 kW / 400 V 1 NO, 230 V AC, 50 / 60 Hz 3 poles, size S00 Screw terminals*	*siemens*	*Hq*	13	1
	3RH29111HA22	*Bloc.Aus.2L 2R 1L,1L,S00/S0,*	*siemens*			1
KM2B	*3RT2015-1AP01*	*Power contactor, AC-3 7 A, 3 kW / 400 V 1 NO, 230 V AC, 50 / 60 Hz 3 poles, size S00 Screw terminals*	*siemens*	*Hq*	21	1
	3RH29111HA22	*Bloc.Aus.2L 2R 1L,1L,S00/S0,*	*siemens*			1
KM3A	*3RT20261AN20*	*cont.11kw,1L 1R,AC 220V 50/60Hz,S0 VT*	*siemens*	*Hq*	14	1
	3RH29111HA22	*Bloc.Aus.2L 2R 1L,1L,S00/S0,*	*siemens*			1
KM3B	*3RT20261AN20*	*cont.11kw,1L 1R,AC 220V 50/60Hz,S0 VT*	*siemens*	*Hq*	22	1
	3RH29111HA22	*Bloc.Aus.2L 2R 1L,1L,S00/S0,*	*siemens*			1
KT11.1	*dtmsmm1*	*Temporised Relay 1 C 230V*	*Microidea*	*Hq*	12	1
KT13.1	*dtmsmm1*	*Temporised Relay 1 C 230V*	*Microidea*	*Hq*	13	1
KT14.1	*dtmsmm1*	*Temporised Relay 1 C 230V*	*Microidea*	*Hq*	14	1
KT14.2	*dtmsmm1*	*Temporised Relay 1 C 230V*	*Microidea*	*Hq*	14	1
KT20.1	*dtmsmm1*	*Temporised Relay 1 C 230V*	*Microidea*	*Hq*	20	1
KT21.1	*dtmsmm1*	*Temporised Relay 1 C 230V*	*Microidea*	*Hq*	21	1
KT22.1	*dtmsmm1*	*Temporised Relay 1 C 230V*	*Microidea*	*Hq*	22	1
KT22.2	*dtmsmm1*	*Temporised Relay 1 C 230V*	*Microidea*	*Hq*	22	1
LIGHT				*Hq*		1
MTP-001A	*3RN2000-1AW30*	*Motor protection relay for PTC thermistor supervision 24/240 V AC/DC 1 changeover contact*	*siemens*	*Hq*	13	1
MTP-001B	*3RN2000-1AW30*	*Motor protection relay for PTC thermistor supervision 24/240 V AC/DC 1 changeover contact*	*siemens*	*Hq*	21	1
MVA-1	*DMG600*	*multimeter with icon-based LCD*	*Lovato*	*Hq*	6	1
PDSH-77-402		*Pressure-controlled (pressure switch) No*		*Hq*	15	1
PF8.1	*GSV1000220*	*Panel Fan 100x100 230V 24m³/h*	*Cosmotec*	*Hq*	8	1
	GSF10	*air intake filter 100x100*	*Cosmotec*			1
PF16.1	*GSF10*	*air intake filter 100x100*	*Cosmotec*	*Hq*	16	1
	GSV1000220	*Panel Fan 100x100 230V 24m³/h*	*Cosmotec*			1
PF24.1	*GSV1000220*	*Panel Fan 100x100 230V 24m³/h*	*Cosmotec*	*Hq*	24	1
	GSF10	*air intake filter 100x100*	*Cosmotec*			1
PFT8.1	*007026.00001*	*Thermostate Panel Fan*	*Fandis*	*Hq*	8	1
PFT16.1	*007026.00001*	*Thermostate Panel Fan*	*Fandis*	*Hq*	16	1
PFT24.1	*007026.00001*	*Thermostate Panel Fan*	*Fandis*	*Hq*	24	2
PH8.1	*050ra50*	*Anticondensing Heater 230V 50W*	*New Elfin*	*Hq*	8	1
PH16.1	*050ra50*	*Anticondensing Heater 230V 50W*	*New Elfin*	*Hq*	16	1
PH24.1	*050ra50*	*Anticondensing Heater 230V 50W*	*New Elfin*	*Hq*	24	1
PHT8.1	*007038.00001*	*Antcondensing Thermostat 230V*	*Fandis*	*Hq*	8	1

REV.	MODIFICA	DATA	FIRMA		
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	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-400 HV-MV SWITCHGEAR ROOM

MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 59
F.S. 60

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
PHT16.1	*007038.00001*	*Antcondensing Thermostat 230V*	*Fandis*	*Hq*	16	1
PHT24.1	*007038.00001*	*Antcondensing Thermostat 230V*	*Fandis*	*Hq*	24	1
PL8.1	*050PEL3C*	*230V lamp*	*New Elfin*	*Hq*	8	1
	050kfm	*Magnet kit*	*New Elfin*			1
PL16.1	*050PEL3C*	*230V lamp*	*New Elfin*	*Hq*	16	1
	050kfm	*Magnet kit*	*New Elfin*			1
PL24.1	*050PEL3C*	*230V lamp*	*New Elfin*	*Hq*	24	1
	050kfm	*Magnet kit*	*New Elfin*			1
PL25.1	*050PEL3C-24V*	*LED Linear Ceiling Light 24V AC/DC, 600LM 368mm*	*New Elfin*	*Hq*	25	1
	050kfm	*Magnet kit*	*New Elfin*			1
PLS8.1	*RAMC05*	*Micro Door Opening Switch 1 No & 1NC*	*dkc*	*Hq*	8	1
PLS16.1	*RAMC05*	*Micro Door Opening Switch 1 No & 1NC*	*dkc*	*Hq*	16	1
PLS24.1	*RAMC05*	*Micro Door Opening Switch 1 No & 1NC*	*dkc*	*Hq*	24	2
PLS25.1	*RAMC05*	*Micro Door Opening Switch 1 No & 1NC*	*dkc*	*Hq*	25	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*	*7th*	1
	5ST3010	*Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker*	*siemens*			1
QF1A	*5SY7506-7*	*Circuit breaker 230 V 15KA, 1P N, C, 6 A, D=70 mm*	*siemens*	*Hq*	10	1
	5ST3010	*Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker*	*siemens*			1
QF1B	*5SY7506-7*	*Circuit breaker 230 V 15KA, 1P N, C, 6 A, D=70 mm*	*siemens*	*Hq*	18	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*	*7th*	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*	7	1
	5ST3010	*Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker*	*siemens*			1
QF4	*5SY7503-7*	*Circuit breaker 230 V 15Ka, 1P N, C, 3 A, D=70 mm*	*siemens*	*Hq*	25	1
QF5	*5SY5220-7*	*Universal current circuit breaker 440 V DC - 400 V AC 10Ka, 2P, C, 20 A*	*siemens*	*Hq*	25	1
QF6	*5su1354-1kk06*	*RCD, 10 kA, 1P N, AC Type, 30 mA, C, In: 6 A, One AC: 230 V*	*siemens*	*Hq*	7	1
QF400	*5SY74027*	*Int. MT 4P C2 ICN 15KA, ICU 50KA*	*siemens*	*Hq*	6	1
QFA	*3VA1132-4GF42-0AA0*	*Switch 3VA1 IEC Chassis 160 Switching Capacity Class S ICU=36 KA 415 V 4-Pole, TM240 System Protection, ATAM, IN=32 A Overload Protection IR=22 A... 32 A Short-Circuit Protection II=5...10 x in N-Conductor Protection 100% terminal LUG*	*siemens*	*Hq*	6	1
	3VA9157-0FK21	*com. rinv. Door Lock x 3VA10/1 STD*	*siemens*			1
	3VA9988-0BL30	*bobsleigh. Launch SIN 24VAC 50/60 Hz/12-30 VDC*	*siemens*			1
	3VA9988-0AA11	*Cont. HP-type status*	*siemens*			1
	3VA9111-0WD40	*Cover x 3VA10/1 4P 1pcs.*	*siemens*			2
QFB	*3VA1132-4GF42-0AA0*	*Switch 3VA1 IEC Chassis 160 Switching Capacity Class S ICU=36 KA 415 V 4-Pole, TM240 System Protection, ATAM, IN=32 A Overload Protection IR=22 A... 32 A Short-Circuit Protection II=5...10 x in N-Conductor Protection 100% terminal LUG*	*siemens*	*Hq*	6	1
	3VA9157-0FK21	*com. rinv. Door Lock x 3VA10/1 STD*	*siemens*			1
	3VA9988-0BL30	*bobsleigh. Launch SIN 24VAC 50/60 Hz/12-30 VDC*	*siemens*			1
	3VA9988-0AA11	*Cont. HP-type status*	*siemens*			1
	3VA9111-0WD40	*Cover x 3VA10/1 4P 1pcs.*	*siemens*			2
QM1	*5SY7410-7*	*Circuit breaker 400 V 15kA, 4P, C, 10 A, D=70 mm*	*siemens*	*Hq*	7	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

REV.	MODIFICA	DATA	FIRMA		
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	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-400 HV-MV SWITCHGEAR ROOM

MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 60
F.S. 61

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
QM1A	3RV2011-1AA10	Circuit breaker size S00 for motor protection, class 10, trip A 1.1...1.6 A, trip N 21 A, screw terminal	siemens	Hq	9	1
	3RV2901-1E	Cross Auxiliary Contact Block 1No 1NC Screw Terminals for 3RV2 Circuit Breakers	siemens			1
QM1B	3RV2011-1AA10	Circuit breaker size S00 for motor protection, class 10, trip A 1.1...1.6 A, trip N 21 A, screw terminal	siemens	Hq	17	1
	3RV2901-1E	Cross Auxiliary Contact Block 1No 1NC Screw Terminals for 3RV2 Circuit Breakers	siemens			1
QM2A	3RV2011-1GA10	Circuit breaker size S00 for motor protection, class 10, trip A 4.5...6.3 A, trip N 82 A, screw terminal	siemens	Hq	10	1
	3RV2901-1E	Cross Auxiliary Contact Block 1No 1NC Screw Terminals for 3RV2 Circuit Breakers	siemens			1
	3RA19211DA00	El.Col. Electr.Mech. (1pack=1pcs)	siemens			1
QM2B	3RV2011-1GA10	Circuit breaker size S00 for motor protection, class 10, trip A 4.5...6.3 A, trip N 82 A, screw terminal	siemens	Hq	18	1
	3RV2901-1E	Cross Auxiliary Contact Block 1No 1NC Screw Terminals for 3RV2 Circuit Breakers	siemens			1
	3RA19211DA00	El.Col. Electr.Mech. (1pack=1pcs)	siemens			1
QM3A	3RV20214BA10	Int.aut.s0, 14-20a,vt	siemens	Hq	10	1
	3RV2901-1E	Cross Auxiliary Contact Block 1No 1NC Screw Terminals for 3RV2 Circuit Breakers	siemens			1
	3RA29211AA00	mod.coll.vt x 3rv2-3rt2 ac	siemens			1
QM3B	3RV20214BA10	Int.aut.s0, 14-20a,vt	siemens	Hq	18	1
	3RV2901-1E	Cross Auxiliary Contact Block 1No 1NC Screw Terminals for 3RV2 Circuit Breakers	siemens			1
	3RA29211AA00	mod.coll.vt x 3rv2-3rt2 ac	siemens			1
QM4A	3RV20114AA10	int.aut.s00, 11-16a,vt	siemens	Hq	10	1
	3RV2901-1E	Cross Auxiliary Contact Block 1No 1NC Screw Terminals for 3RV2 Circuit Breakers	siemens			1
QM4B	3RV2011-4AA10	Circuit breaker size S00 for motor protection, class 10, trip A 10...16 A, trip N 208 A, screw terminal	siemens	Hq	18	1
	3RV2901-1E	Cross Auxiliary Contact Block 1No 1NC Screw Terminals for 3RV2 Circuit Breakers	siemens			1
QM5A	3RV2011-1DA10	Circuit breaker size S00 for motor protection, class 10, trip A 2.2...3.2 A, trip N 42 A, screw terminal	siemens	Hq	11	1
	3RV2901-1E	Cross Auxiliary Contact Block 1No 1NC Screw Terminals for 3RV2 Circuit Breakers	siemens			1
QM5B	3RV2011-1DA10	Circuit breaker size S00 for motor protection, class 10, trip A 2.2...3.2 A, trip N 42 A, screw terminal	siemens	Hq	19	1
	3RV2901-1E	Cross Auxiliary Contact Block 1No 1NC Screw Terminals for 3RV2 Circuit Breakers	siemens			1
QS1	3VA1140-4GF42-0AA0	Switch 3VA1 IEC Chassis 160 Switching Capacity Class S ICU=36 KA 415 V 4-pole, TM240 system protection, ATAM, IN=40 A overload protection IR=28 A... 40 A Short-Circuit Protection II=5...10 x in N-Conductor Protection 100% terminal LUG	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
SA27.1		Three-position selector switch No rest 0		Hq	27	1
SA27.2		Three-position no-sleep selector switch 1		Hq	27	1
TA1	TAC022150X05	Amperometric transformer hole 22, transformation ratio 150/5 A	Frer	Hq	6	1
TA2	TAC022150X05	Amperometric transformer hole 22, transformation ratio 150/5 A	Frer	Hq	6	1
TA3	TAC022150X05	Amperometric transformer hole 22, transformation ratio 150/5 A	Frer	Hq	6	1
VSD-1A	6SL3210-5BE15-5CV0	SinamiCs V20 3AC380-480V 0.55kw with C3 filter	siemens	Hq	9	1
VSD-1B	6SL3210-5BE15-5CV0	SinamiCs V20 3AC380-480V 0.55kw with C3 filter	siemens	Hq	17	1

REV.	MODIFICA	DATA	FIRMA		
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	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-400 HV-MV SWITCHGEAR ROOM

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 61
F.S. 62

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
VSD-5A	*6SL3210-5BE21-1CV0*	*SinamiCs V20 3AC380-480V 1.1kw with C3 Filter*	*siemens*	*Hq*	11	1
VSD-5B	*6SL3210-5BE21-1CV0*	*SinamiCs V20 3AC380-480V 1.1kw with C3 Filter*	*siemens*	*Hq*	19	1
XA1	*CBS02GR*	*Sectionable clamp 2.5 mm2*	*Cabur*	*Hq*		30
	BT005	*BTU Terminal Block*	*Cabur*			2
XA2	*CBS02GR*	*Sectionable clamp 2.5 mm2*	*Cabur*	*Hq*		30
	BT005	*BTU Terminal Block*	*Cabur*			2
XC	*CBS02GR*	*Sectionable clamp 2.5 mm2*	*Cabur*	*Hq*		8
	BT005	*BTU Terminal Block*	*Cabur*			2
XFD	*CBS02GR*	*Sectionable clamp 2.5 mm2*	*Cabur*	*Hq*		20
XFD/S	*CBS02GR*	*Sectionable clamp 2.5 mm2*	*Cabur*	*Hq*		20
XM1	*CBC02GR*	*CBC.2/GR Thru-Clamp*	*Cabur*	*Hq*		6
	CBC10gr	*CBC.10/gr Thru-Clamp*	*Cabur*			6
	CBC04GR	*CBC.4/GR Feed-through clamp*	*Cabur*			6
	BT005	*BTU Terminal Block*	*Cabur*			2
XM2	*CBC02GR*	*CBC.2/GR Thru-Clamp*	*Cabur*	*Hq*		6
	CBC10gr	*CBC.10/gr Thru-Clamp*	*Cabur*			6
	CBC04GR	*CBC.4/GR Feed-through clamp*	*Cabur*			6
	BT005	*BTU Terminal Block*	*Cabur*			2
XMD1	*SF900GR*	*SFR.4/GR Sectionable clamp*	*Cabur*	*Hq*		6
	CBS02GR	*Sectionable clamp 2.5 mm2*	*Cabur*			12
	BT005	*BTU Terminal Block*	*Cabur*			2
XMD2	*SF900GR*	*SFR.4/GR Sectionable clamp*	*Cabur*	*Hq*		6
	CBS02GR	*Sectionable clamp 2.5 mm2*	*Cabur*			12
	BT005	*BTU Terminal Block*	*Cabur*			2
XP1	*CBC35gr*	*CBC.35/GR Feed-through clamp*	*Cabur*	*Hq*		5
	CBC02GR	*CBC.2/GR Thru-Clamp*	*Cabur*			6
	CBC04GR	*CBC.4/GR Feed-through clamp*	*Cabur*			6
	BT005	*BTU Terminal Block*	*Cabur*			2
XT	*CBS02GR*	*Sectionable clamp 2.5 mm2*	*Cabur*	*Hq*		13
	BT005	*BTU Terminal Block*	*Cabur*			2
XUPS	*CBC04GR*	*CBC.4/GR Feed-through clamp*	*Cabur*	*Hq*		2
	BT005	*BTU Terminal Block*	*Cabur*			2
pdsh-77-404		*Pressure-controlled (pressure switch) No*		*Hq*	23	1

REV.	MODIFICA	DATA	FIRMA		
03	ISSUED FOR CONSTRUCTION	04/09/24	F.M.	DATA	22/04/2024
02	ISSUED FOR APPROVAL	03/07/24	F.M.	DISEGN.	F.M.
01	ISSUED FOR APPROVAL	28/06/24	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-400 HV-MV SWITCHGEAR ROOM

Distinta Materiali
Bill of Materials

ROSETTI MARINO

1724000049-HV-DA-00029

FG. 62
F.S. /

ITEM	Tag	B-400	: I&T Equipment Room B-400		Dwg	1724000049-AR-DA-00017	
	S/Sys	77-40	: HVAC I&T Equipment Room B-400		Module	LD_B-400	
TASK	code	C10002305		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.	PL
3	Check that the equipment, including cables and glands, have been correctly installed (only visual inspection).	Note
4	Check that all equipment has been earthed and bonded.	OK
5	Check if accessibility and maintenance are possible and safe.	OK
6	Verify that all vendor punch list created during FAT are uploaded in the Database.	OK
7	Check identification tag plate.	Note
8	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

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

Point 2 PL: C30000025
Point 3 PL: C30000045 / C30000049

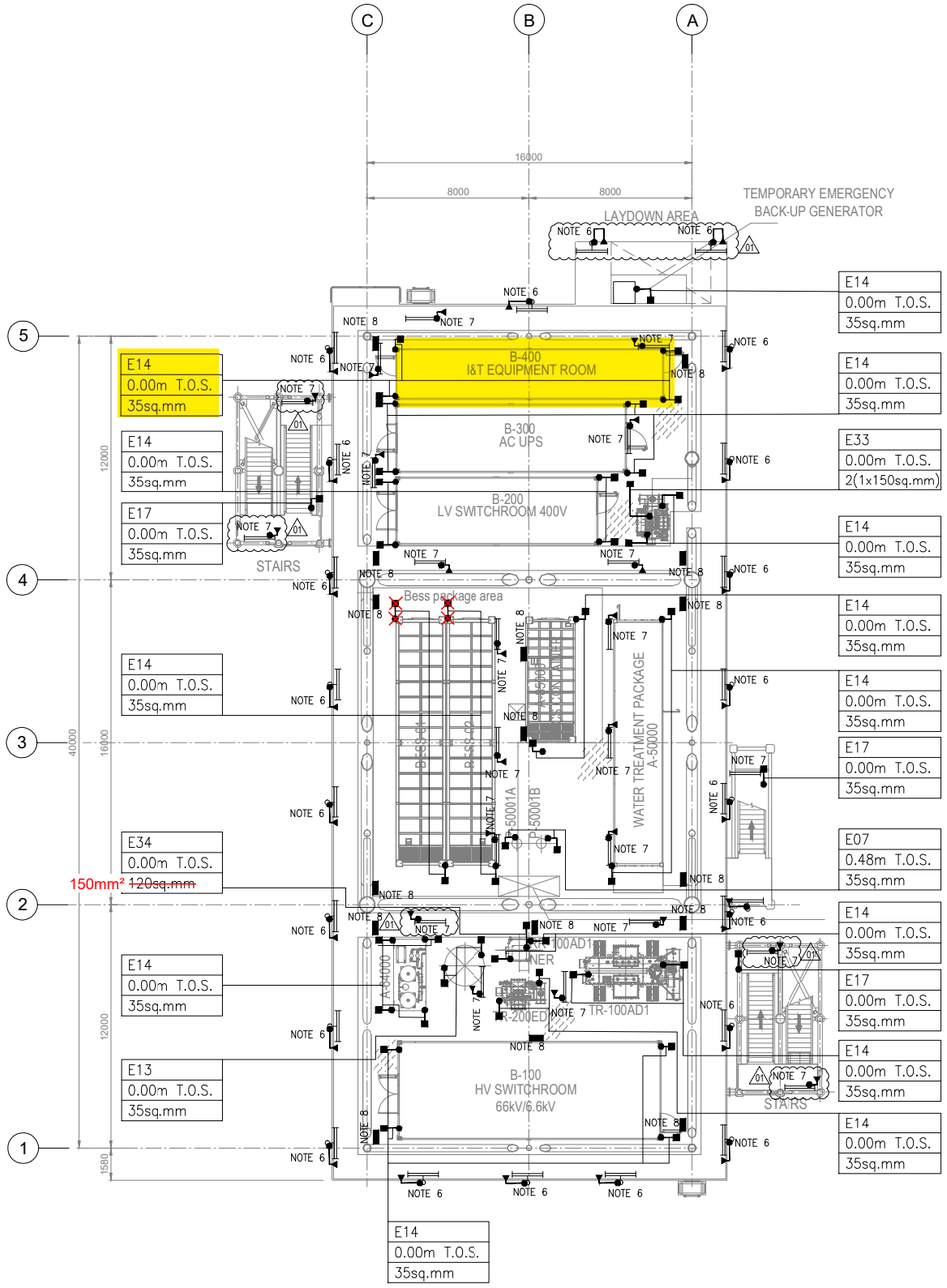
Point 7 PL: C30000037

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	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:41:44.449Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T14:52:08.753Z	

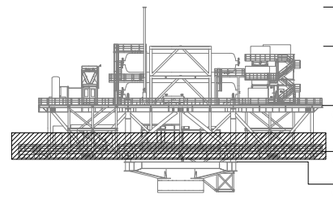
DRAWING NO. 123A90-DDL-EL-DL-20133

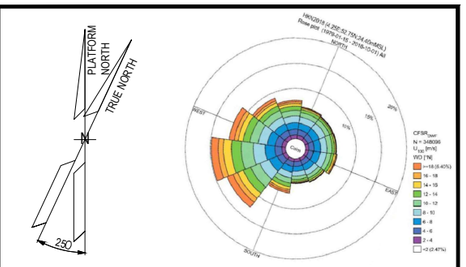
REV. 01



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

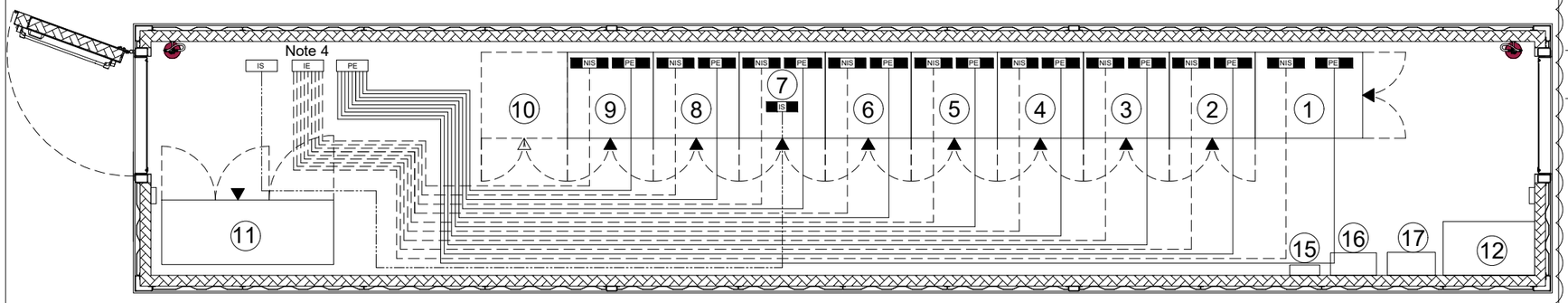
File Name : 123A90-DDL-EL-DL-20133

INSTRUMENT EQUIPMENT LIST		
REF.	TAG No.	DESCRIPTION
1	B400-SRV-001	SERVER CABINET
2	B400-NET-001	NETWORK CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET
4	B400-PCS-001	PCS SYSTEM CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET
6	B400-FGS-001	FGS SYSTEM CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1
8	B400-FGS-003	FGS MARSHALLING CABINET 2
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET
10	-	SPARE
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM
12	-	TABLE
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.
15	-	FIRST AID KIT
16	-	RESUSCITATION UNIT
17	-	CABINET INCLUDED N.10 ESCAPE MASK

NOTES

1 - THIS DOCUMENT 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 IN FIELD.
4 - THE EARTHING BUS BARS INSTALLATION SHALL BE PREFERABLY IN VERTICAL MODE.
5 - FOR EARTHING TYPICAL DETAILS AND Y/G CONDUCTOR CROSS SECTION SEE DOC. 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 - IN CASE OF CABLE CONNECTIONS BETWEEN TWO CABINETS, THE CABLE SCREEN SHALL BE CONNECTED TO IE AT MARSHALLING SIDE ONLY.

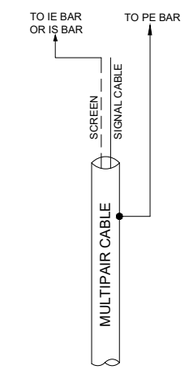
01



LEGEND

PE	EARTHING BUS BAR AISI 316L
NIS	INSULATED INSTRUMENT EARTH BUS BAR NOT INTRINSIC SAFETY DIM. 450x60x5mm AISI 316L
IS	INSULATED INSTRUMENT EARTH BUS BAR INTRINSIC SAFETY DIM. 450x60x5mm AISI 316L
— —	35sqmm Y/G INSULATED COPPER CONDUCTOR FOR PE (SEE NOTE 2)
——	35sqmm Y/G INSULATED COPPER CONDUCTOR FOR I.S. & NON I.S. (SEE NOTE 2)
▬	EARTHING BUS BAR 60x5mm AISI 316L (SEE NOTE 3)
PE	PROTECTIVE EARTH
IE	INSTRUMENT EARTH
IS	INTRINSICALLY SAFE EARTH

KEY



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40013**

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

ROSETTI MARINO SpA

01

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	14/05/24	MGA	LCA	DLO	ACCEPTED FOR CONSTRUCTION
00	19/01/24	INVIRAJ	AMBE/LCA	OYFO/MDO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING LAYOUT DRAWINGS(OFFSHORE ITER)
EQUIPMENT LAYOUT

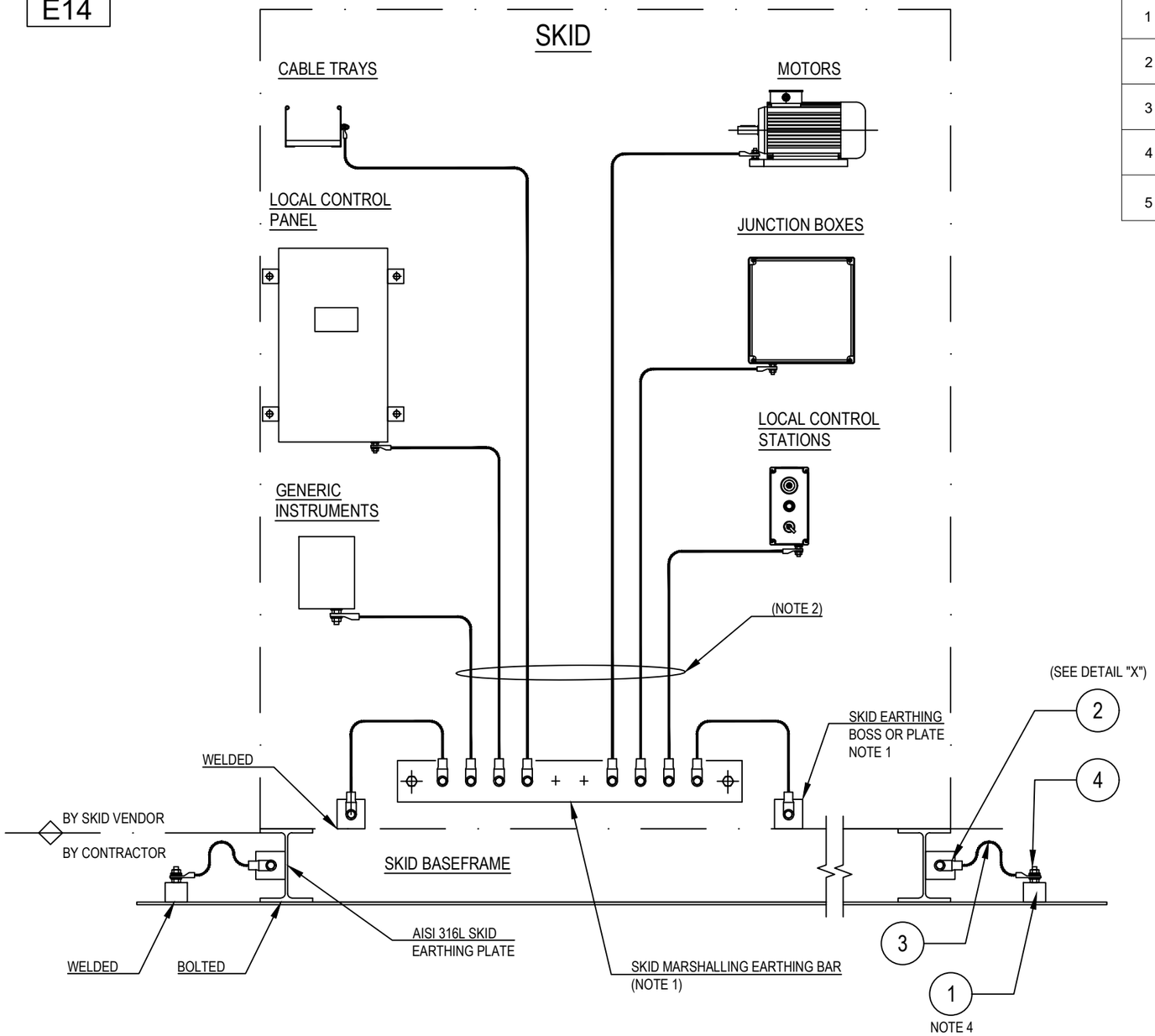
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-IN-DL-40013	003	01

F.to UNI A3: 420mmx297mm

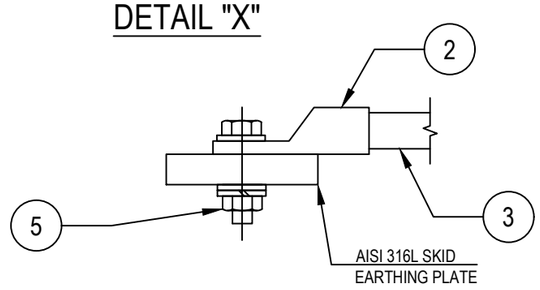
File Name : 123A90-DDL-IN-DL-430013 Rev. 01

E14



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

DETAIL "X"



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

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR SKID BASEFRAME

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

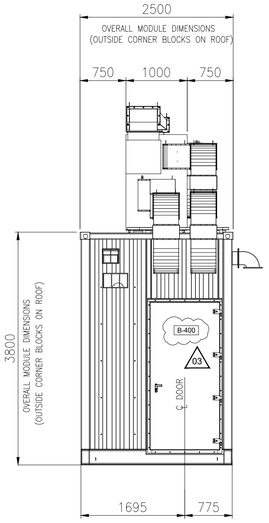
A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20090	014	02

F.to UNI A3: 420mmx297mm

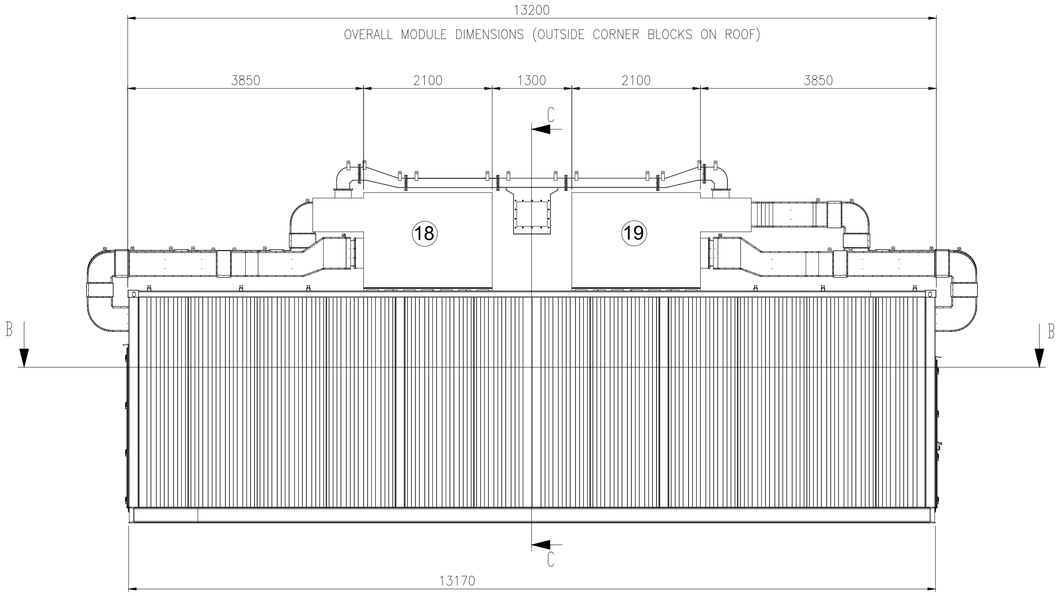
File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

DRAWING NO. 1724000049-AR-DA-00017

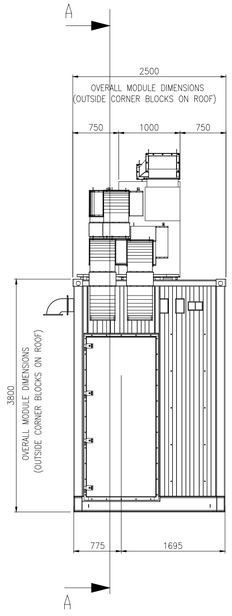
REV. 03



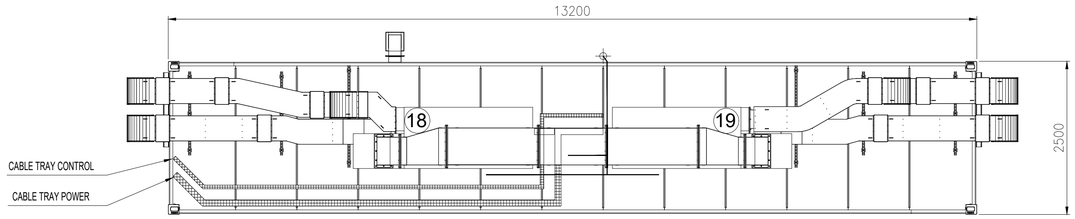
EAST VIEW



SOUTH VIEW



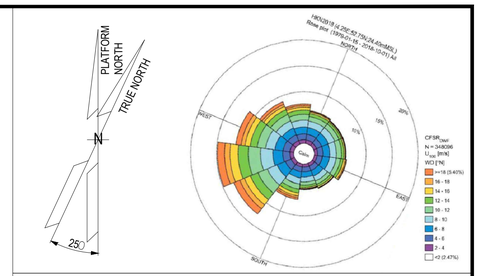
WEST VIEW



TOP VIEW

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-010	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-011 (03)	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-012	SPACE HEATER 3	184	145	1100	5	



NOTE

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

REFERENCE

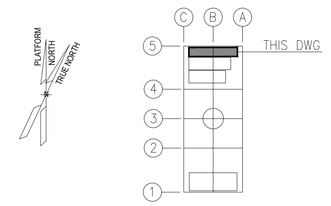
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007
(03) "B-400" FOUNDATION	1724000049-ST-DD-00013
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	04/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	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

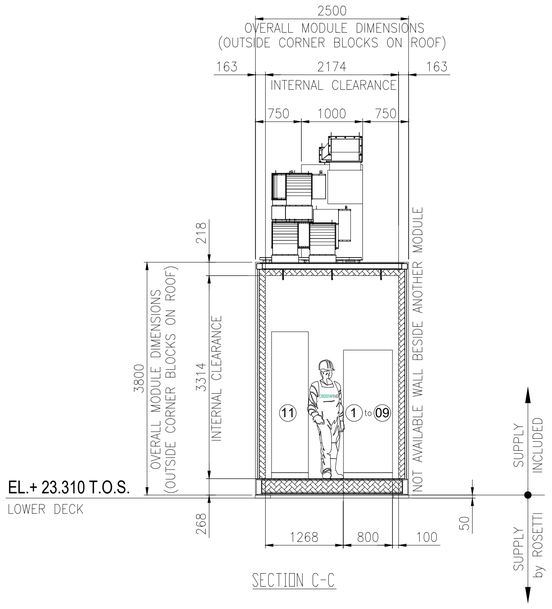


TITLE : BASE LOAD POWER HUB (BLPH)
B-400 GENERAL ARRANGEMENT DRAWINGS

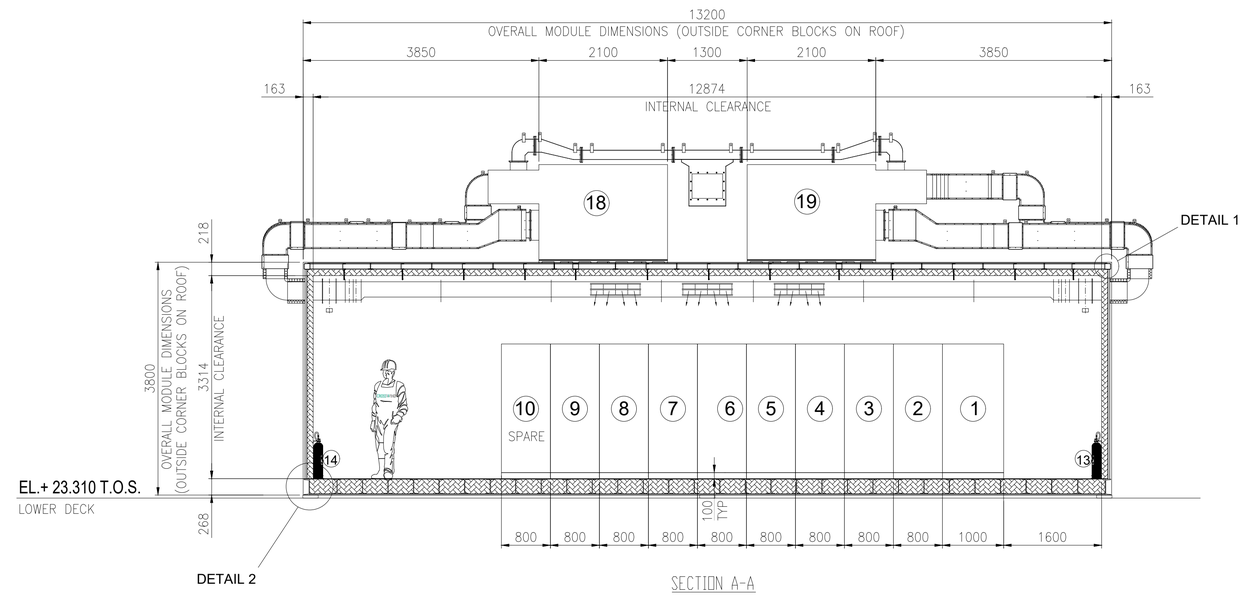
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 001	REV. 03

File Name : 1724000049-AR-DA-00017-REV.03

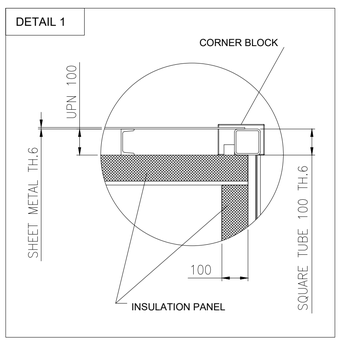
DRAWING NO. 1724000049-AR-DA-00017 REV. 03

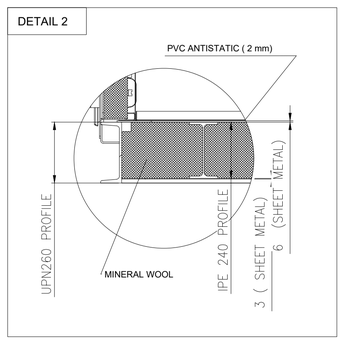


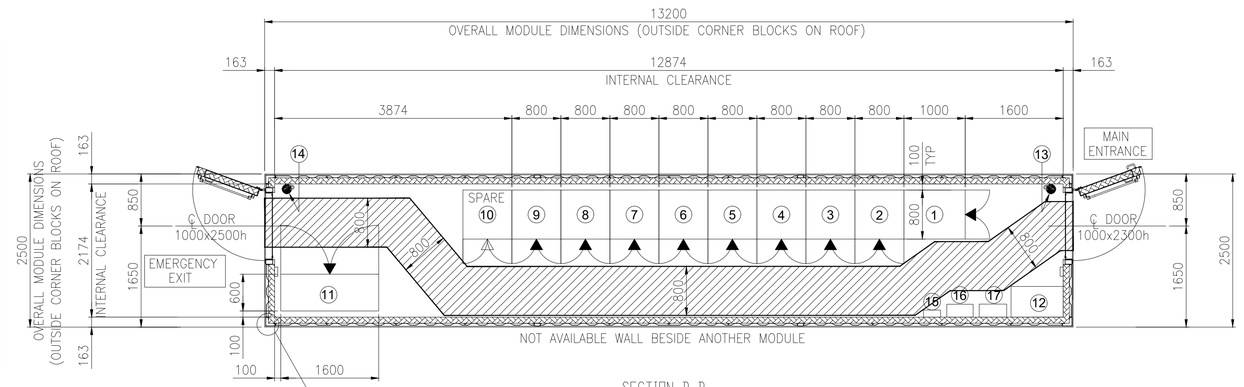
SECTION C-C



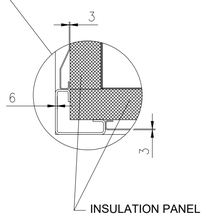
SECTION A-A







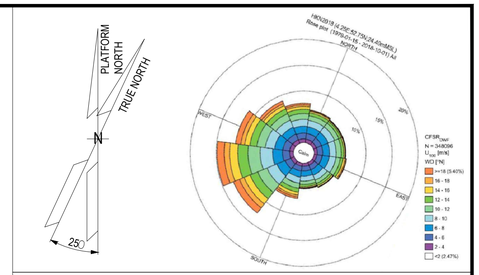
SECTION B-B



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

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-010	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-011 △03	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-012	SPACE HEATER 3	184	145	1100	5	



NOTE

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

REFERENCE

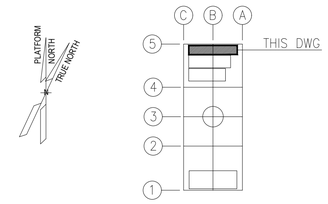
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007
△03 "B-400" FOUNDATION	1724000049-ST-DD-00013
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	04/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	M.G.	SKV	C.A.	ISSUE FOR REVIEW (IFR)
00	08/02/24	A.G.	SKV	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

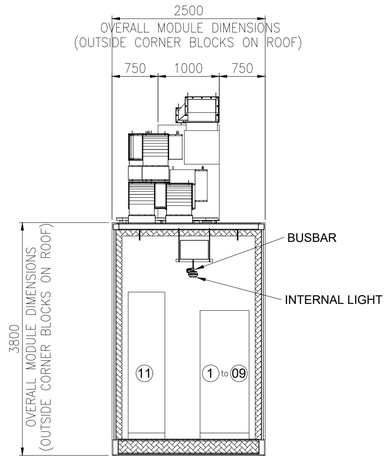
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-400 GENERAL ARRANGEMENT DRAWINGS

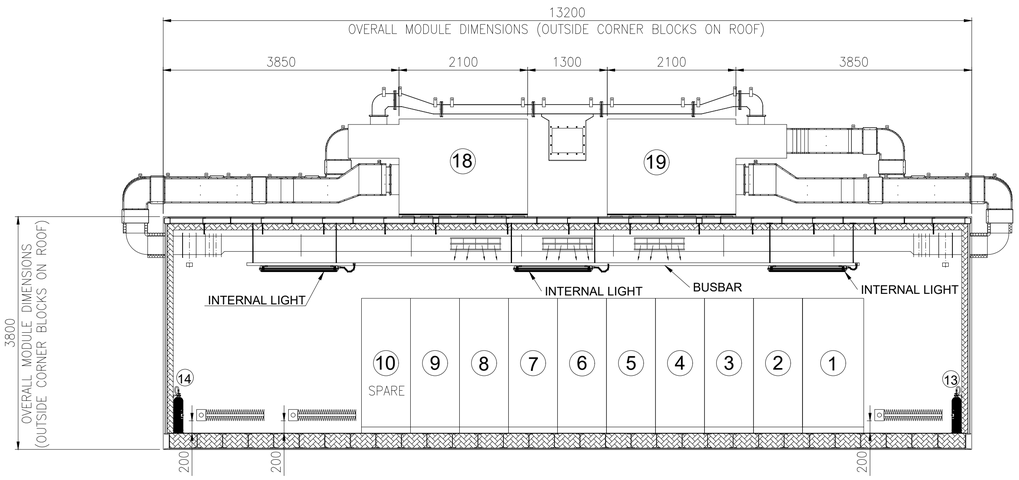
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 002	REV. 03

File Name : 1724000049-AR-DA-00017-REV.03

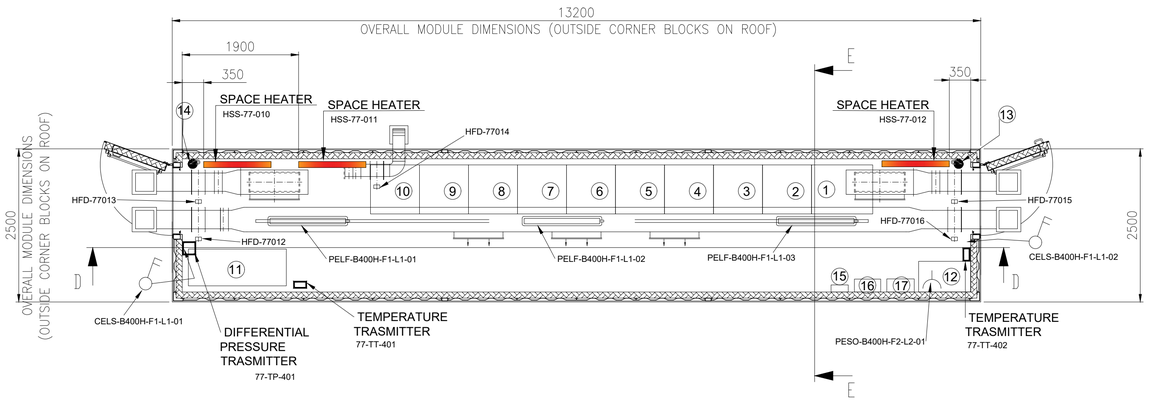
DRAWING NO. 1724000049-AR-DA-00017 REV. 03



SECTION E-E

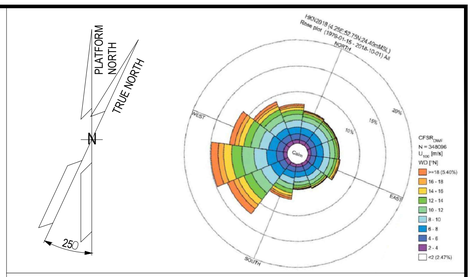


SECTION D-D



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-010	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-011 (03)	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-012	SPACE HEATER 3	184	145	1100	5	



NOTE

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

REFERENCE

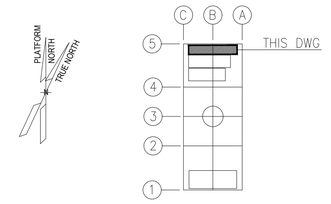
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007
(03) "B-400" FOUNDATION	1724000049-ST-DD-00013
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	04/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	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-400 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 003	REV. 03

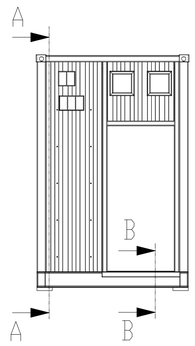
File Name : 1724000049-AR-DA-00017-REV.03

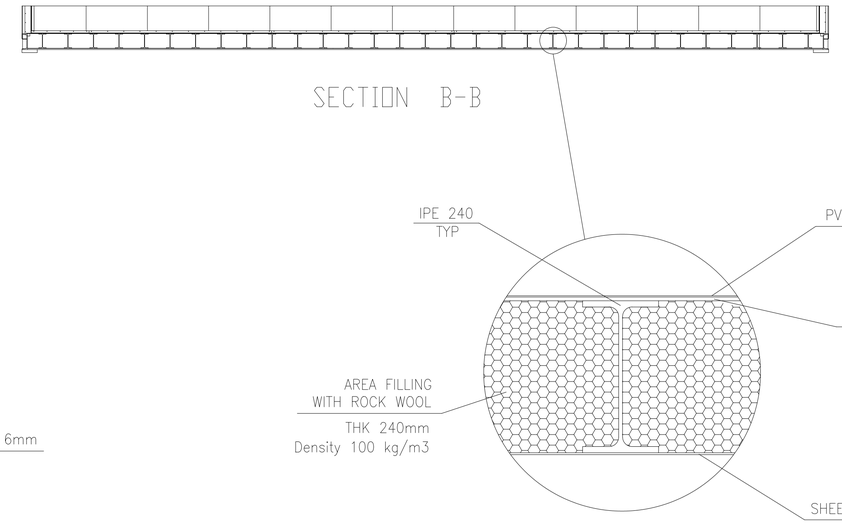
DRAWING NO. 1724000049-AR-DD-00021

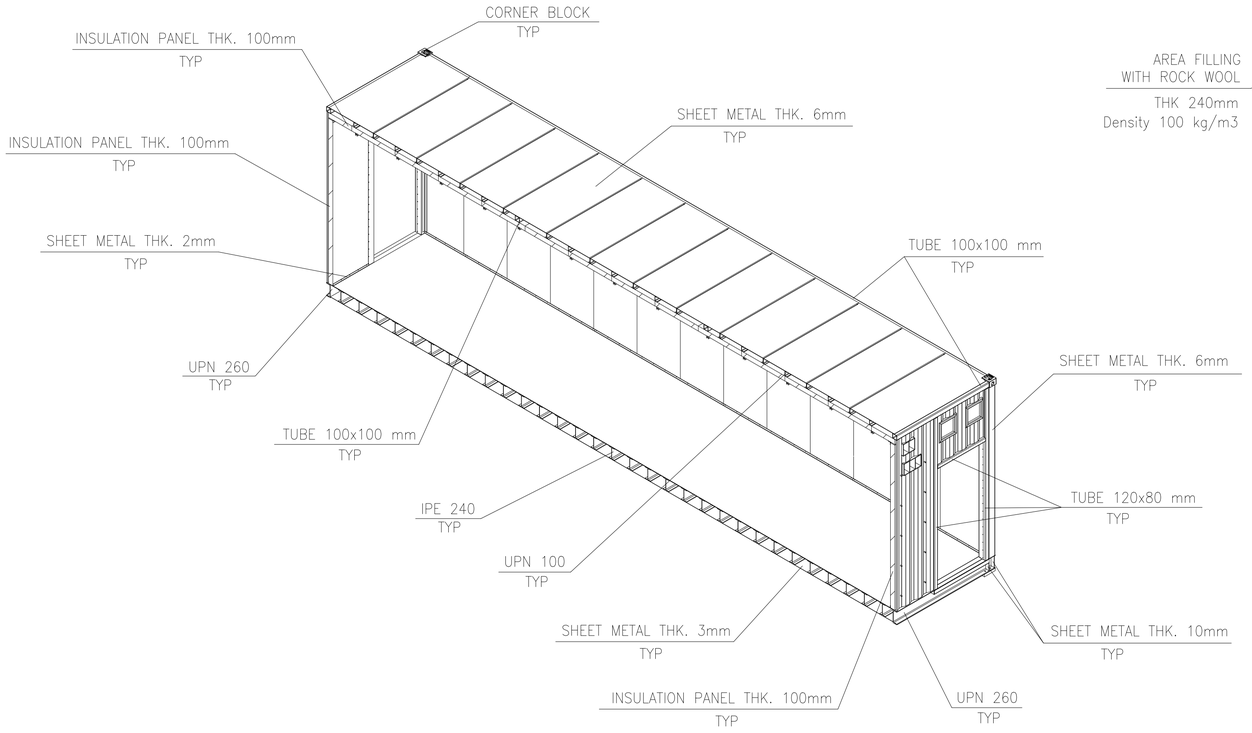
REV. 02

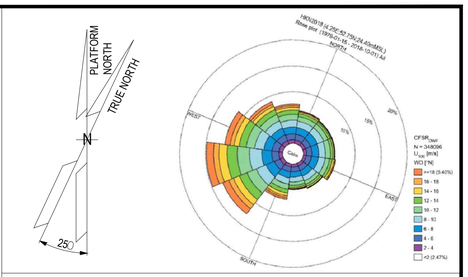
MODULE B-400

REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009
Weld Procedure Specifications (WPS), Weld Procedure Qualification Report (WPQR), Welding Map and Welders Qualifications	1724000049-WEL-RE-00003



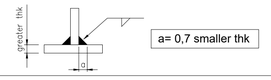






NOTES

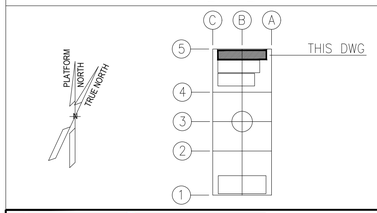
1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D.1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



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	30/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND | ROSETTI MARINO

TITLE :

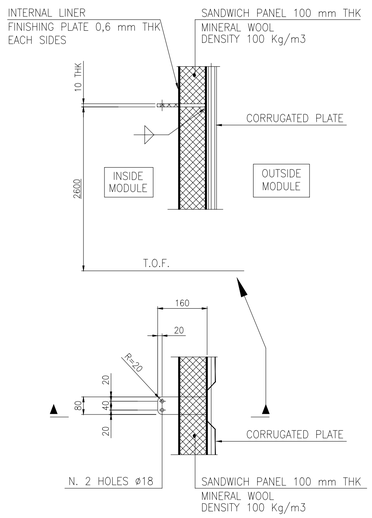
B-400 DETAILED DRAWINGS-E&I SHELTERS

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-00021	SHEET 001	REV. 02

File Name : 1724000049-AR-DD-00021-REV.02

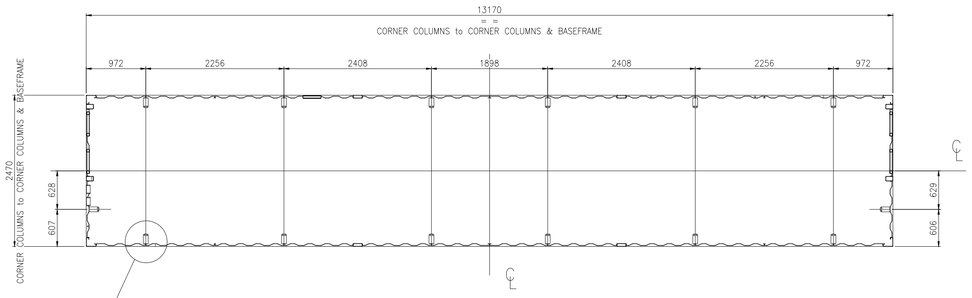
DRAWING NO. 1724000049-AR-DD-00021 REV. 02

REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00017
"B-400" HVAC GENERAL ARRANGEMENT	1724000049-HV-DA-00067



NORTH WALL

WEST WALL

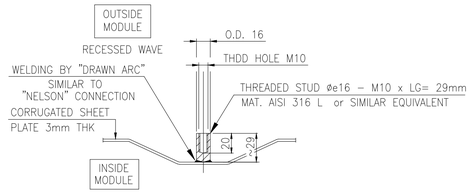


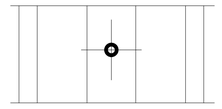
EST WALL

SOUTH WALL

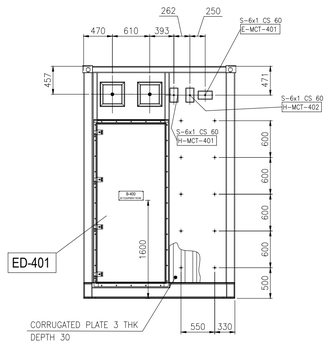
MODULE B-400

INTERNAL SEA FASTENING PLATES PLAN

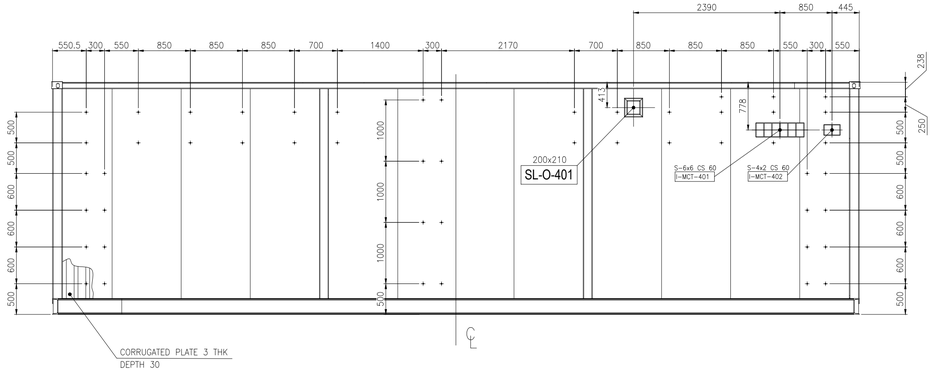




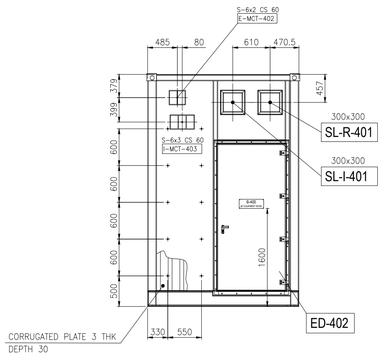
THREADED STUD INSTALLATION



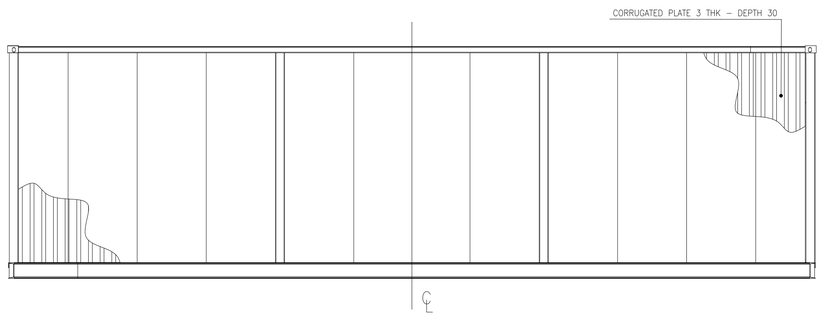
VIEW OF WEST WALL



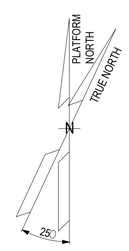
VIEW OF NORTH WALL

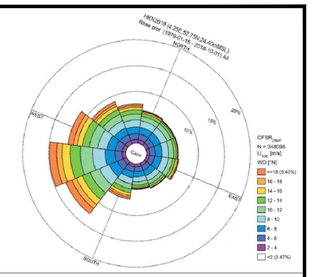


VIEW OF EAST WALL



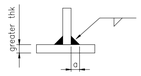
VIEW OF SOUTH WALL





NOTES

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



a= 0,7 smaller thk

LEGEND

- THREADED STUD ø16 - M10 x LG= 29mm
- T.O.F. — TOP OF FLOOR

MCT LEGEND:

MCT TYPE & SIZE — BRAND ROXTEC
MATERIAL — C.S.= PRIMED MILD STEEL; S.S.= AISI 316 L
MCT DEPTH
S 6x2 C.S. 60 — E-MCT-401
MCT SERVICE: E= ELECTRICAL; I= INSTRUMENTAL; H= HVAC
PROGRESSIVE NUMBER FROM 01
MODULE LOCATION: 1= B-100 3= B-300 2= B-200 4= B-400

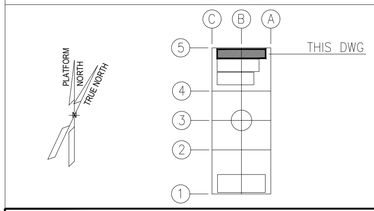
HVAC SLEEVE LEGEND:

300x300 — INTERNAL SIZE OF DUCT L x H (mm)
SL-I-401
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-401
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-401	238	140.5	60	6x1	
	E-MCT-402	271	238	60	6x2	
INSTRUMENTAL	I-MCT-401	793	238	60	6x6	
	I-MCT-402	271	179.5	60	4x2	
	I-MCT-403	411.5	238	60	6x3	
HVAC	H-MCT-401	140.5	238	60	6x1	
	H-MCT-402	140.5	238	60	6x1	

ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	11/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
01	08/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	30/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND — ROSETTI MARINO

TITLE :

B-400 DETAILED DRAWINGS-E&I SHELTERS

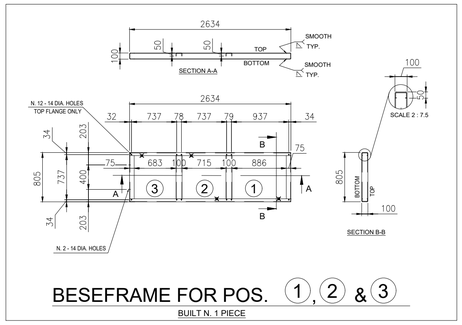
CONTRACT NO./TITLE CONTRACT_NO. 1724000049 | SCALE 1:50
DRAWN M.G. | CHECKED O.A. | APPROVED C.A. | DATE 11/07/24
A1 | DRAWING NO. 1724000049-AR-DD-00021 | SHEET 002 | REV. 02

File Name : 1724000049-AR-DD-00021-REV.02

DRAWING NO. 1724000049-AR-DD-00021

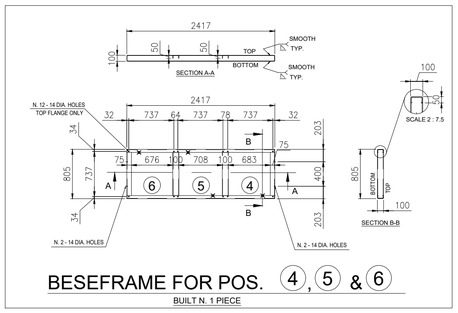
REV. 02

B-400
I&T EQUIPMENT ROOM
BASEFRAME LOCATION PLAN



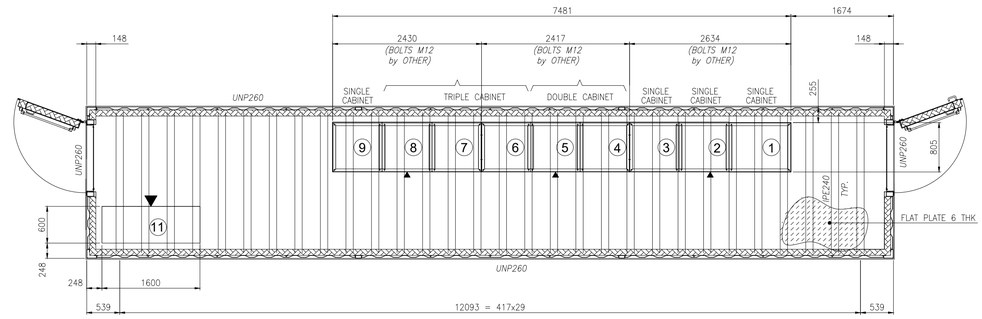
BESEFRAME FOR POS. (1), (2) & (3)

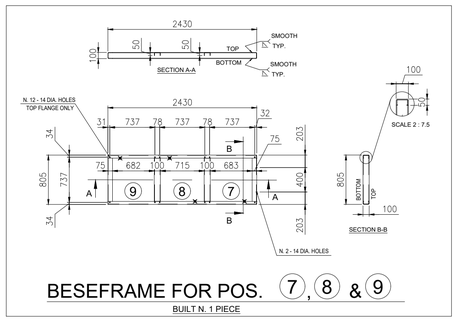
BUILT N. 1 PIECE



BESEFRAME FOR POS. (4), (5) & (6)

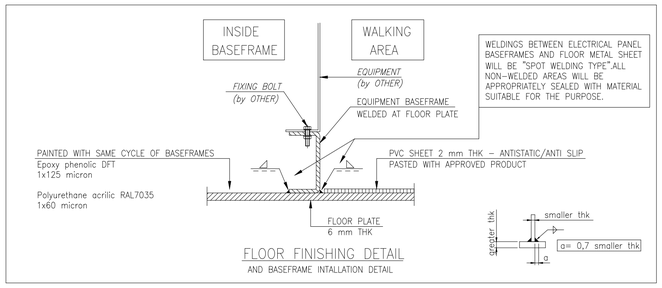
BUILT N. 1 PIECE





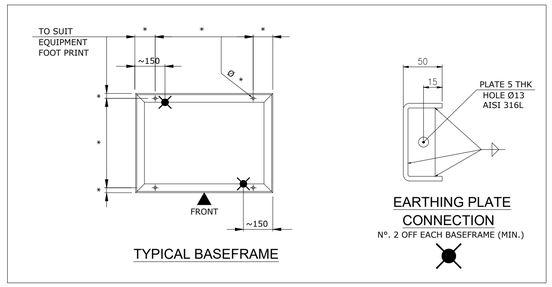
BESEFRAME FOR POS. (7), (8) & (9)

BUILT N. 1 PIECE



FLOOR FINISHING DETAIL

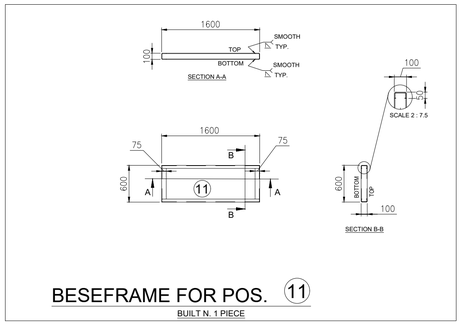
AND BASEFRAME INTALLATION DETAIL



TYPICAL BASEFRAME

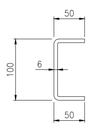
EARTHING PLATE CONNECTION

N°. 2 OFF EACH BASEFRAME (MIN.)



BESEFRAME FOR POS. (11)

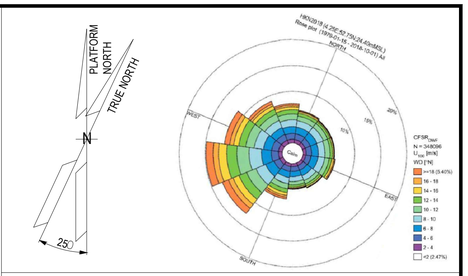
BUILT N. 1 PIECE



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

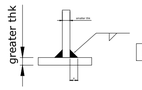
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	SCOPE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	ASI
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	ASI
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	ASI
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	ASI
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	ASI
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	ASI
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	ASI
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	ASI
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	ASI
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	ASI



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".



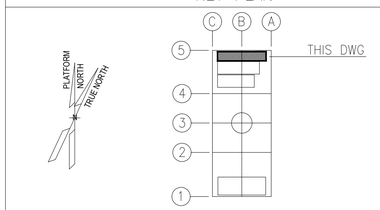
6. SURFACE TREATMENT ACCORDING DOCUMENT N. 1724000049-MAT-PRO-00004 - PAINTING PROCEDURE FINAL COLOUR LIGHT GREY RAL 7035.

LEGEND

ASI = ALEX SISTEMI

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	30/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND

ROSETTI MARINO

TITLE :

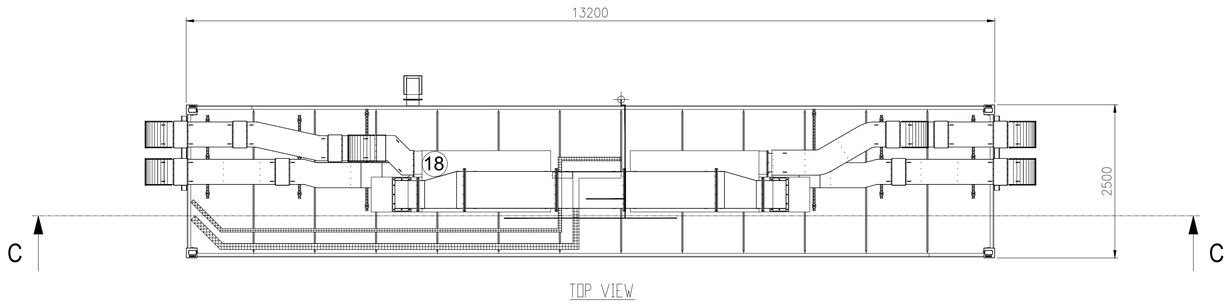
B-400 DETAILED DRAWINGS-E&I SHELTERS

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-00021	SHEET 003	REV. 02

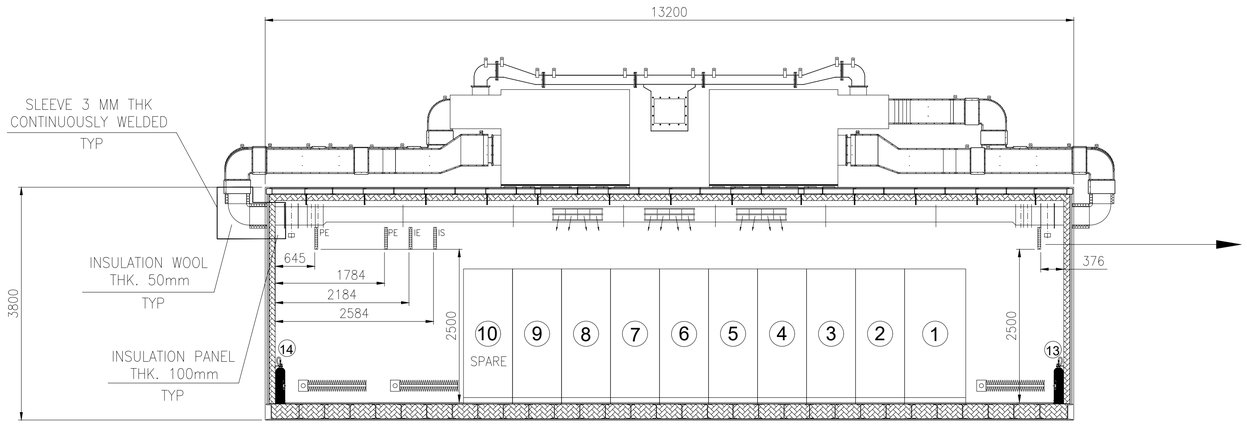
File Name : 1724000049-AR-DD-00021-REV.02

DRAWING NO. 1724000049-AR-DD-00021

REV. 02

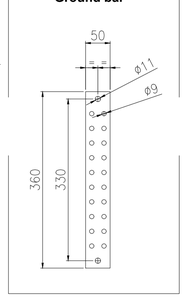


TOP VIEW



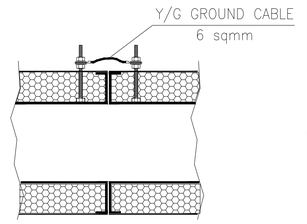
DET. 3

TYPICAL DETAIL
Ground bar



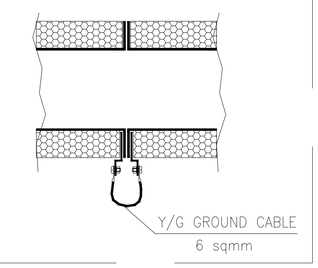
DET. 1

EXTERNAL DUCT



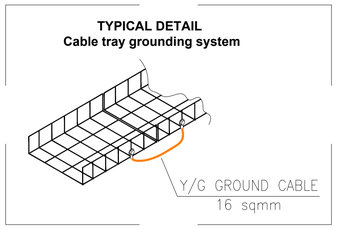
DET. 2

INTERNAL DUCT



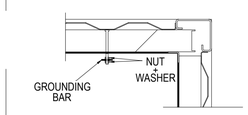
DET. 4

TYPICAL DETAIL
Cable tray grounding system



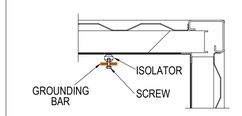
DET. 5

TYPICAL FASTENING DETAIL



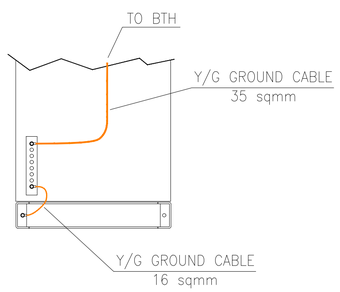
DET. 6

TYPICAL INSTALLATION BTH PI and IS



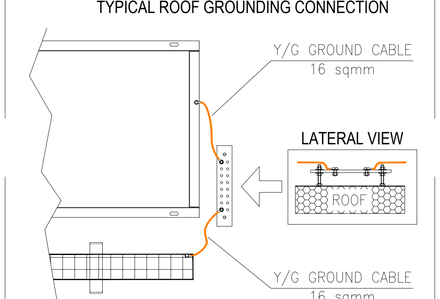
DET.8

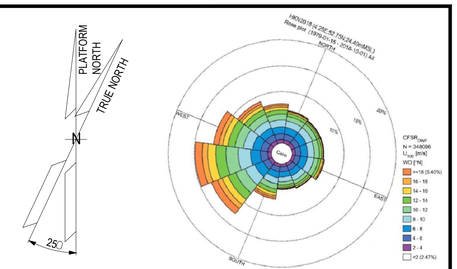
TYPICAL CABINET GROUNDING CONNECTION



DET. 7

TYPICAL ROOF GROUNDING CONNECTION





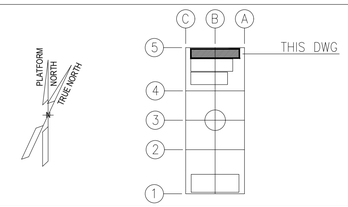
NOTES

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.

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	30/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND | ROSETTI MARINO

TITLE :

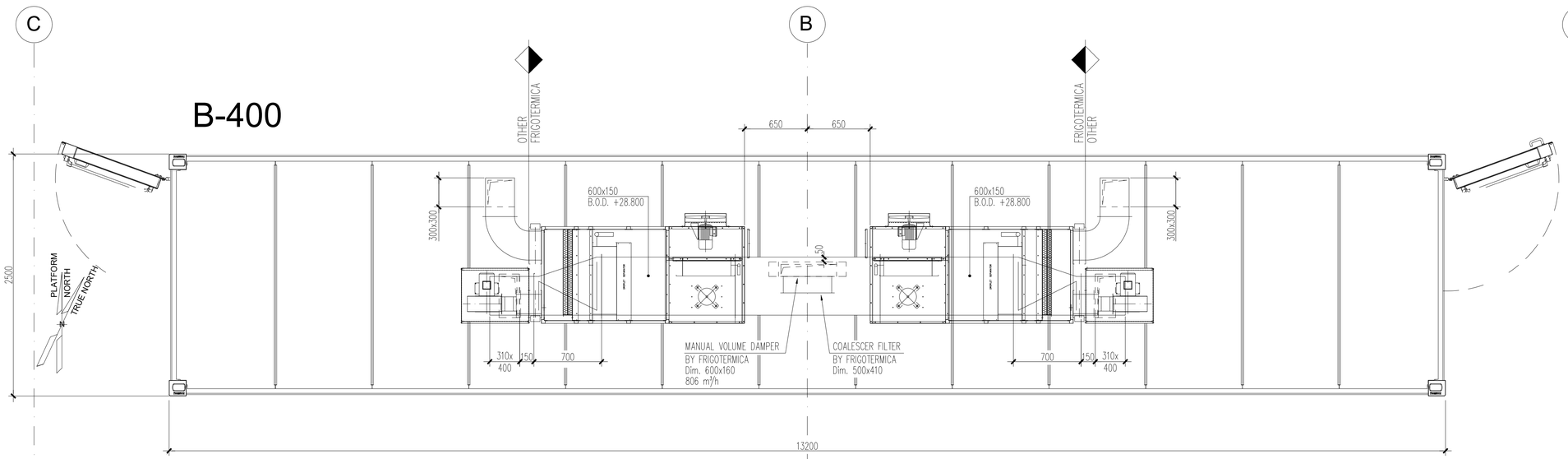
B-400 DETAILED DRAWINGS-E&I SHELTERS

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-00021	SHEET 004	REV. 02

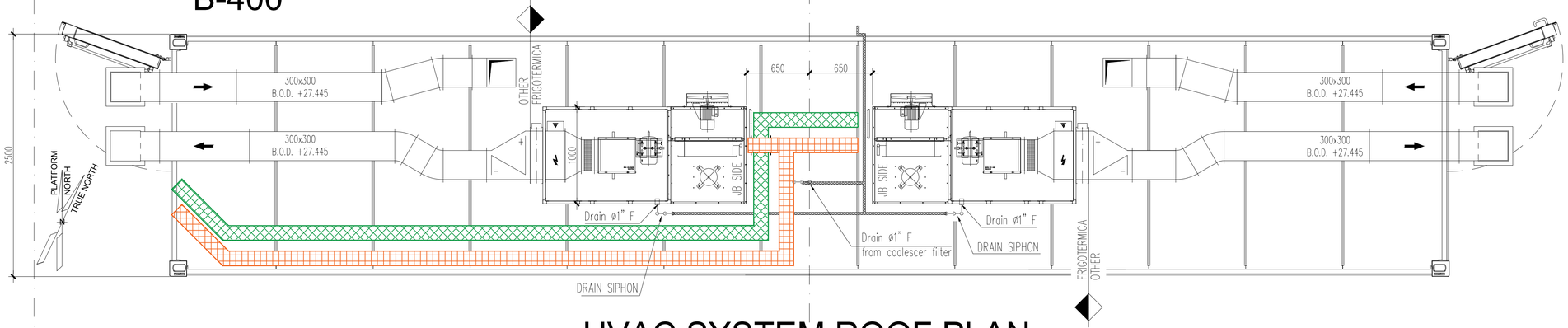
File Name : 1724000049-AR-DD-00021-REV.02

DRAWING NO. 1724000049-HV-DA-00067_0

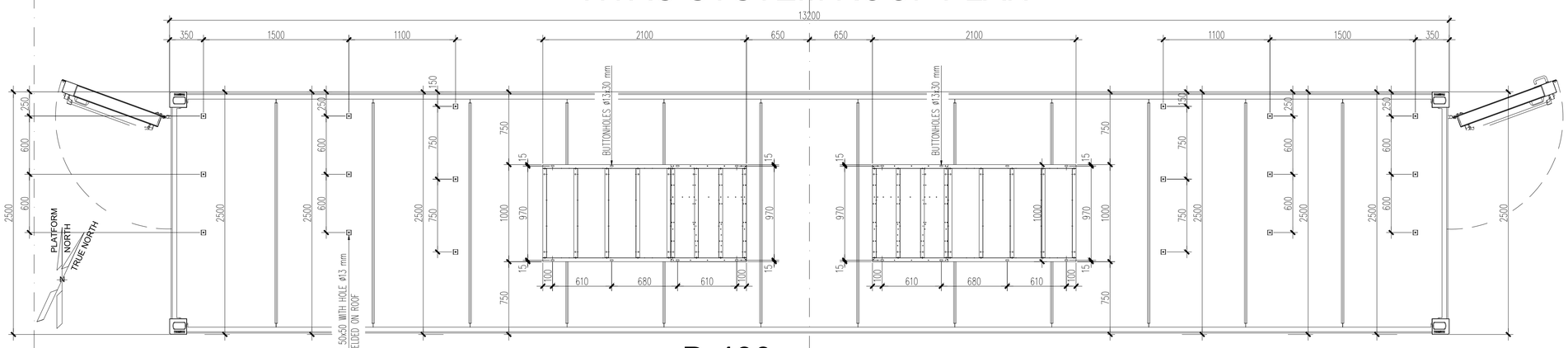
REV. 00



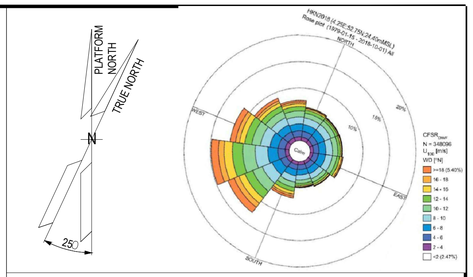
HVAC SYSTEM ROOF PLAN



HVAC SYSTEM ROOF PLAN

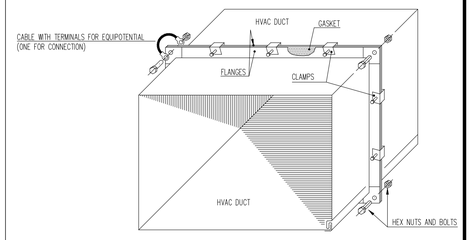


B-400
HVAC SUPPORT PLAN ON ROOF



NOTES

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

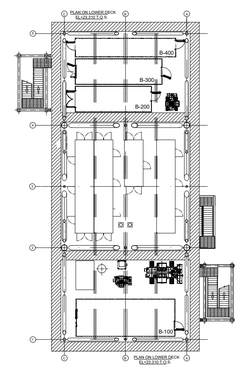


TYPICAL EQUIPOTENTIAL INSTALLING FOR FLANGE CONNECTION INDOOR AIR DUCT

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-400
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

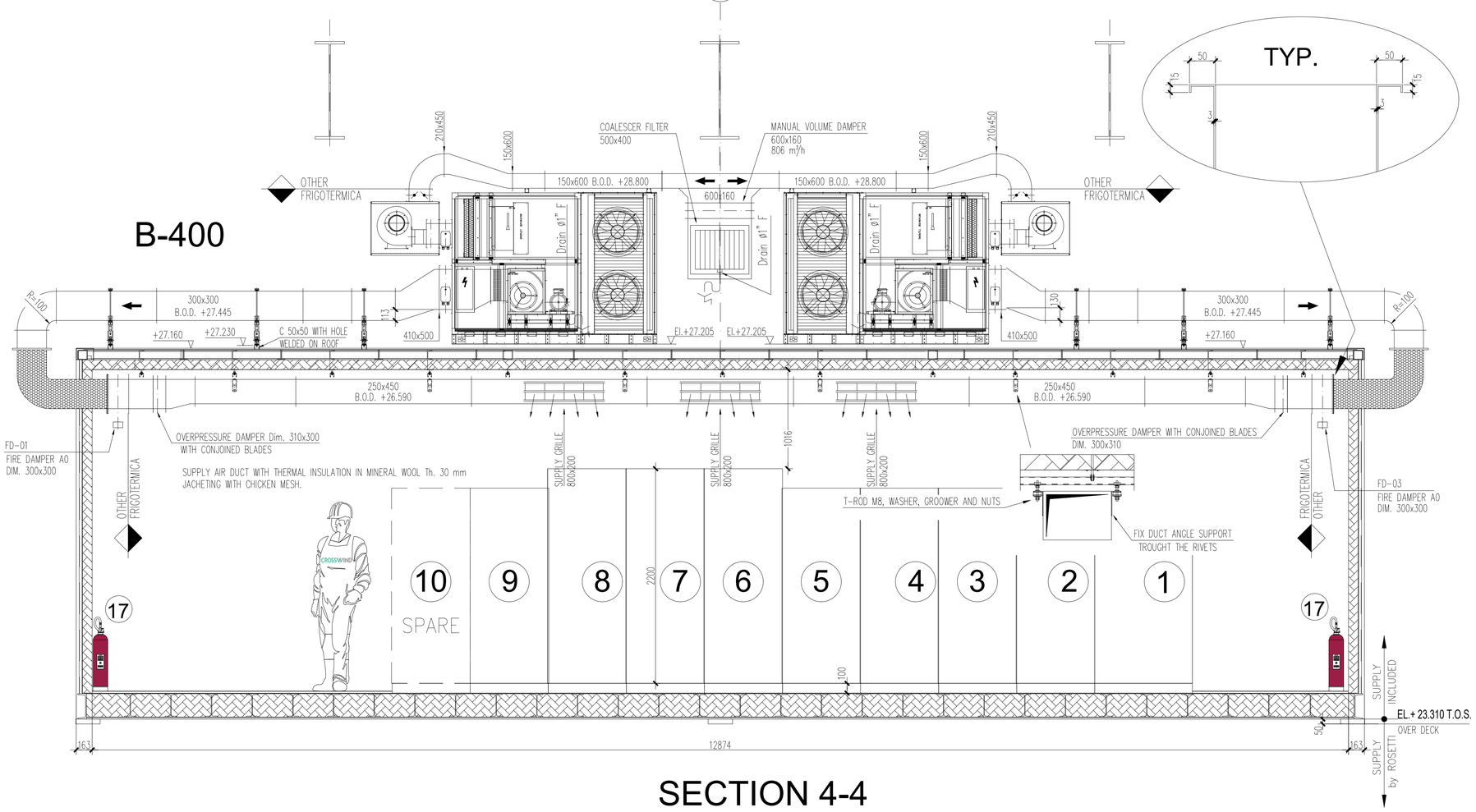
A1	DRAWING NO. 1724000049-HV-DA-00067	SHEET 001	REV. 00

File Name : 1724000049-HV-DA-00067_0

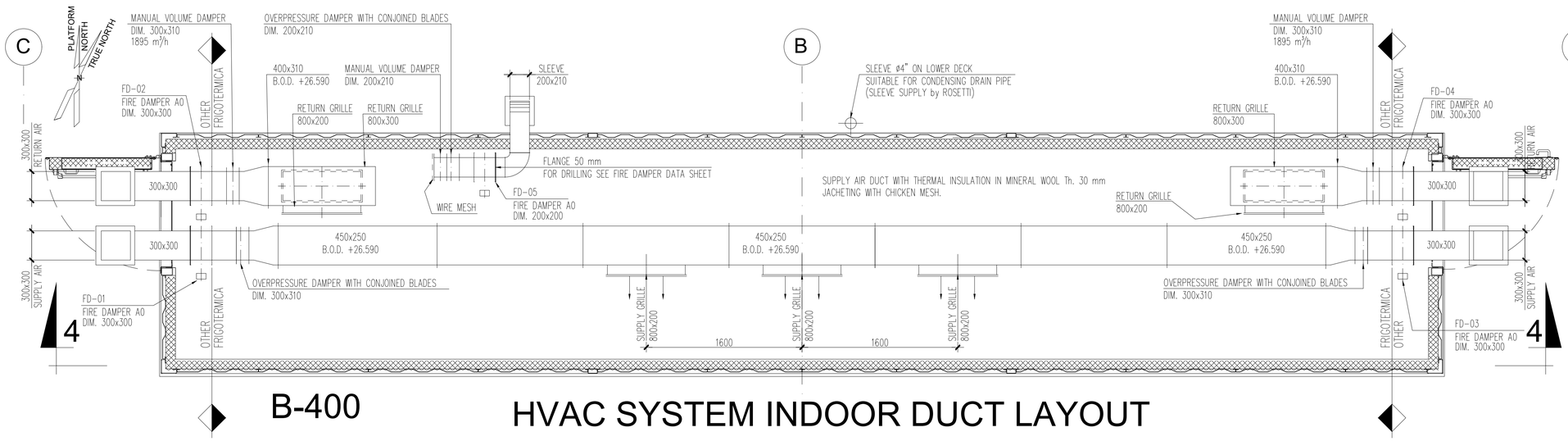
DRAWING NO. 1724000049-HV-DA-00067_0

REV. 00

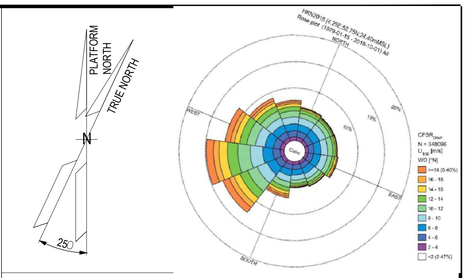
B-400



SECTION 4-4

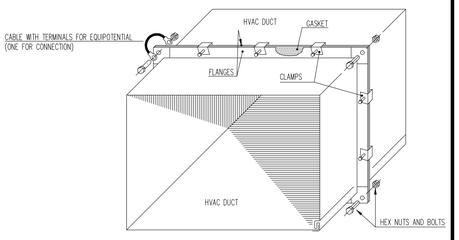


B-400 HVAC SYSTEM INDOOR DUCT LAYOUT



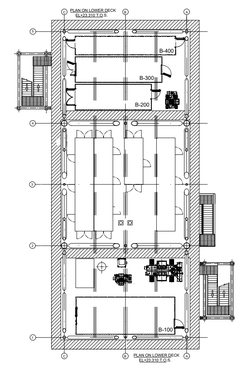
NOTES

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-400
HVAC SYSTEM – G.A. AND DETAILS

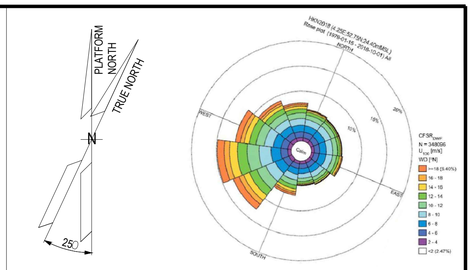
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 25
DRAWN S.Z.	CHECKED S.S.	APPROVED M.G.	DATE 13/06/2024
A1	DRAWING NO. 1724000049-HV-DA-00067	SHEET 002	REV. 00

File Name : 1724000049-HV-DA-00067_0

DRAWING NO.: 123A90-1724000049-HV-PID-00042

REV.: 01

BASE LOAD POWER HUB (BLPH)
B-400 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.C.	ISSUE FOR INFORMATION (IFI)
0	10/06/24	S.Z.	S.S.	M.C.	ISSUE FOR INFORMATION (IFI)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH) B-400 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-00042	SHEET 001	REV. 01

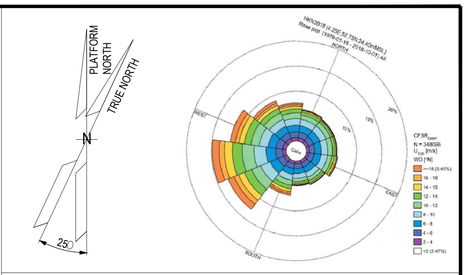
File Name : 123A90-1724000049-HV-PID-00042-REV.01

DRAWING NO. 123A90-1724000049-HV-PID-00042

REV. 01

REV.	SHEET NUMBER	DESCRIPTION	REF. CODE
02	001	FRONT PAGE	IFR
02	002	SUMMARY and GENERAL NOTES	IFR
02	003	P&ID HVAC System	IFR

GENERAL NOTES



NOTES

LEGEND

HOLDS

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)

ALEXSISTEMI spa

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
B-400 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-00042	SHEET 002	REV. 01

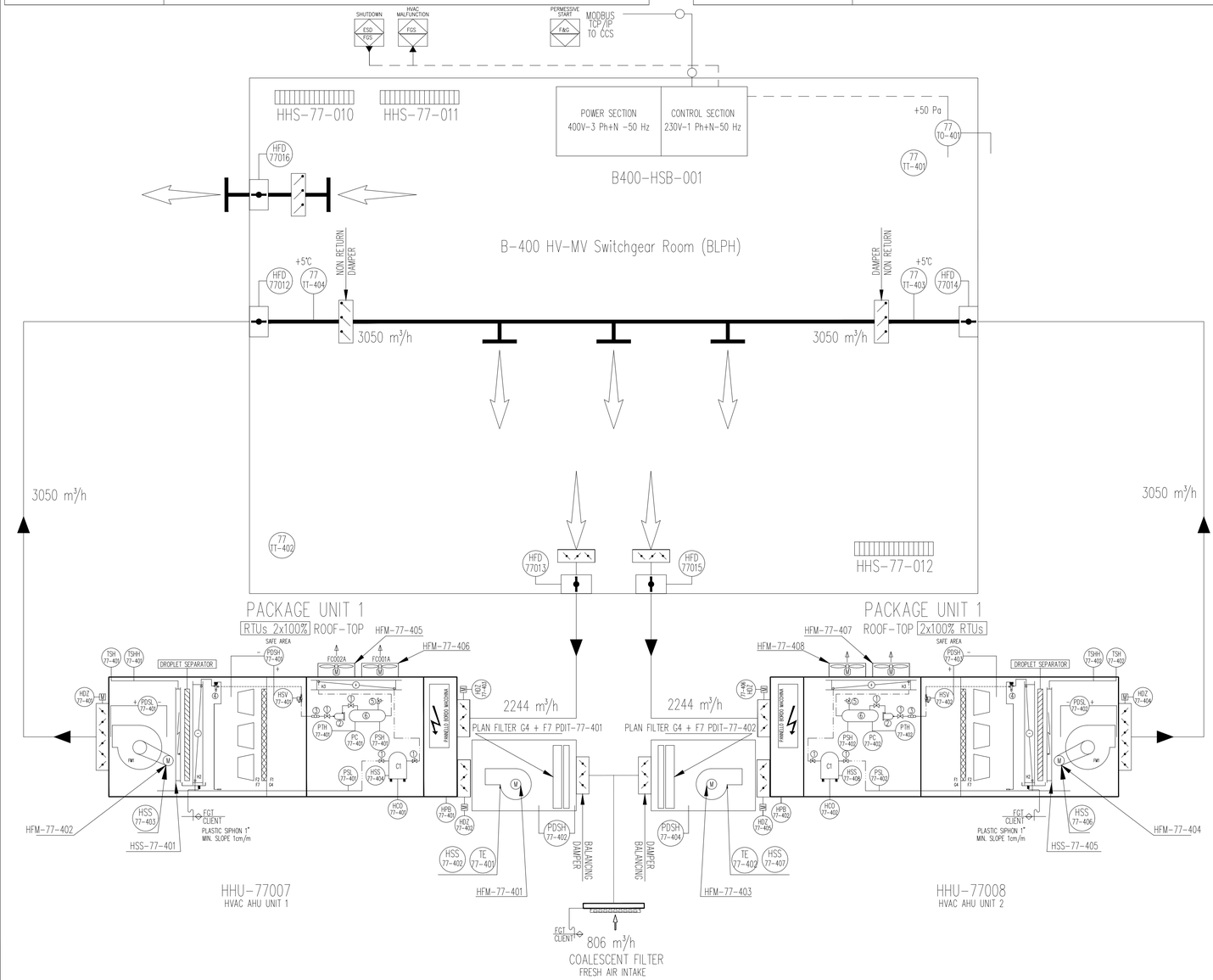
File Name : 123A90-1724000049-HV-PID-00042-REV.01

DRAWING NO. 123A90-1724000049-HV-PID-00042

REV. 01

ITEM	HVAC-ROOF TOP
DESCRIPTION	HVAC UNIT
MAKER	FRIGOTERMICA srl
MODEL	4112-TBA
SUPPLY AIR FLOW	847,2 l/s
COOLING COIL CAPACITY	12 kW AT +26°C Outdoor Temperature
HEATING COIL CAPACITY	8.6 kW
TENSIONE	400 V - 50 Hz - 3 Ph+N
EXECUTION	SAFE AREA
REFRIGERANT	R513a

ITEM	HVAC-PRESSURISING FAN
DESCRIPTION	HVAC UNIT
MAKER	FRIGOTERMICA srl
MODEL	4112-TBA
SUPPLY AIR FLOW	224 l/s
COOLING COIL CAPACITY	N.A.
HEATING COIL CAPACITY	N.A.
TENSIONE	400 V - 50 Hz - 3 Ph+N
EXECUTION	SAFE AREA
REFRIGERANT	N.A.



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

NOTES:

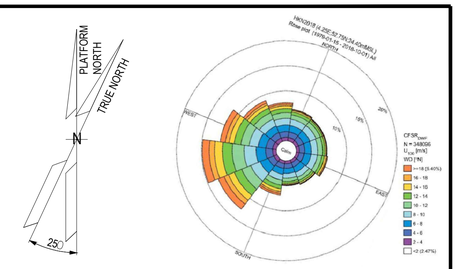
- HVAC POWER CABINET will energize what above shown.
- HVAC CONTROL CABINET will control all what above shown.
- HVAC POWER CABINET will energize light and socket.
- Outside drainage system shall be provided of heating cable with anti-freeze funcion to avoid ice inside pipes when outside temeprature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

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

LEGEND

HOLDS

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)

ALEXSISTEMI spa

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-400 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-00042	SHEET 003	REV. 01

File Name : 123A90-1724000049-HV-PID-00042-REV.01

B-400 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	a	
1		5G25	by Client	by Client	by Client	by Client	by Client	by Client	by Client	HVAC PANEL	by Client	B400-HSB-001	inside B400	N.A.	0	25,60	by Client	General power supply 400V 3ph+N+PE
2		3G4	by Client	by Client	by Client	by Client	by Client	by Client	by Client	HVAC PANEL	by Client	B400-HSB-001	inside B400	N.A.	0	11,10	by Client	UPS Power Supply 230V 1ph+N+PE
3	77401-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SPACE HEATER 1	2900.M20N	HSS-77-010	inside B400	N.A.	12,5	9,80	LOW VOLTAGE	
4	77402-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SPACE HEATER 2	2900.M20N	HSS-77-011	inside B400	N.A.	14,0	9,80	LOW VOLTAGE	
5	77403-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SPACE HEATER 3	2900.M20N	HSS-77-012	inside B400	N.A.	25,0	9,80	LOW VOLTAGE	
6	77404-CEL-L1	5G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	BLINDO	2900.M20N	PECW-B400H-F1-L1-01	inside B400	N.A.	8,5	11,60	LOW VOLTAGE	
7	77405-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO	N.A.	PECW-B400H-F1-L1-01	inside B400	LAMP (E) 2	2900.M20N	PELF-B400H-F1-L1-01	inside B400	N.A.	0,5	10,80	LOW VOLTAGE	
8	77406-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO	N.A.	PECW-B400H-F1-L1-01	inside B400	LAMP 1	2900.M20N	PELF-B400H-F1-L1-02	inside B400	N.A.	0,5	9,80	LOW VOLTAGE	
9	77407-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO	N.A.	PECW-B400H-F1-L1-01	inside B400	LAMP 3	2900.M20N	PELF-B400H-F1-L1-03	inside B400	N.A.	0,5	9,80	LOW VOLTAGE	
10	77408-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	MODULE SOCKET	2900.M20N	PESO-B400H-F2-L2-01	inside B400	N.A.	20,0	9,80	LOW VOLTAGE	
11	77401-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	MODULE SWITCH 1	2900.M20N	CELS-B400H-F1-L1-01	inside B400	N.A.	19,5	8,20	CONTROL	
12	77402-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	MODULE SWITCH 2	2900.M20N	CELS-B400H-F1-L1-02	inside B400	N.A.	8,5	8,20	CONTROL	
13		TBA	by Client	by Client	by Client	SIS	by Client	by Client	by Client	HVAC PANEL	by Client	B400-HSB-001	inside B400	N.A.	0		by Client	
14		TBA	by Client	by Client	by Client	SIS	by Client	by Client	by Client	HVAC PANEL	by Client	B400-HSB-001	inside B400	N.A.	0		by Client	
15		TBA	by Client	by Client	by Client	PCS	by Client	by Client	by Client	HVAC PANEL	by Client	B400-HSB-001	inside B400	N.A.	0		by Client	
16	77448-CEL-L1	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	TEMPERATURE TRANSMITTER 1	2900.M20N	77-TT-401	inside B400	N.A.	7,5	11,10	CONTROL	
17	77449-CEL-L1	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	TEMPERATURE TRANSMITTER 2	2900.M20N	77-TT-402	inside B400	N.A.	9,5	11,10	CONTROL	
18	77451-CEL-L1	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	TEMPERATURE TRANSMITTER 3	2900.M20N	77-TT-403	inside B400	N.A.	18,0	11,10	CONTROL	
19	77452-CEL-L1	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	TEMPERATURE TRANSMITTER 4	2900.M20N	77-TT-404	inside B400	N.A.	19,0	11,10	CONTROL	
20	77450-CEL-L1	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	DIFFERETIAL PRESSURE TRANSMITTER	2900.M20N	77-TP-401	inside B400	N.A.	7,5	11,10	CONTROL	
21	77409-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	PRESSURIZING FAN	2900.M20N	HFM-77-401	HHU-77007	HJB-77007-A	12	10,80	LOW VOLTAGE	
22	77410-CEL-L1	4G4	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SUPPLY FAN	2900.M20N	HFM-77-402	HHU-77007	HJB-77007-A	12	12,10	LOW VOLTAGE	
23	77411-CEL-L1	4G10	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	COMPRESSOR	2900.M25N	HCO-77-401	HHU-77007	HJB-77007-A	12	15,70	LOW VOLTAGE	
24	77412-CEL-L1	4G10	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	ELECTRICAL HEATER	2900.M25N	HSS-77-401	HHU-77007	HJB-77007-A	12	15,70	LOW VOLTAGE	
25	77413-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	CONDENSER FAN 1	2900.M20N	HFM-77-405	HHU-77007	HJB-77007-A	12	10,80	LOW VOLTAGE	
26	77414-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	CONDENSER FAN 2	2900.M20N	HFM-77-406	HHU-77007	HJB-77007-A	12	10,80	LOW VOLTAGE	
27	77415-CEL-L1	3G1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	POWER SUPPLY MOTORISED DAMPER	2900.M20N	HDZ-77-401	HHU-77007	HJB-77007-A	12	9,80	LOW VOLTAGE	
28	77408-CEC-L1	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SIGNAL MOTORISED DAMPER	2900.M20N	HDZ-77-401	HHU-77007	HJB-77007-B	12	9,70	CONTROL	
29	77416-CEL-L1	3G1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	POWER SUPPLY MOTORISED DAMPER	2900.M20N	HDZ-77-402	HHU-77007	HJB-77007-A	12	9,80	LOW VOLTAGE	
30	77409-CEC-L1	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SIGNAL MOTORISED DAMPER	2900.M20N	HDZ-77-402	HHU-77007	HJB-77007-B	12	9,70	CONTROL	
31	77417-CEL-L1	3G1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	POWER SUPPLY MOTORISED DAMPER	2900.M20N	HDZ-77-403	HHU-77007	HJB-77007-A	12	9,80	LOW VOLTAGE	
32	77410-CEC-L1	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SIGNAL MOTORISED DAMPER	2900.M20N	HDZ-77-403	HHU-77007	HJB-77007-B	12	9,70	CONTROL	
33	77411-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	LOW PRESSURE SWITCH	2900.M20N	PDSL-77-401	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
34	77412-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	PRESSURIZING FAN MOTOR PTC	2900.M20N	TE-77-401	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
35	77413-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	EMERGENCY BUTTON	2900.M20N	HPB-77-401	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
36	77414-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SUPPLY FAN MOTOR HEATER	2900.M20N	HSS-77-402	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
37	77415-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	PRESSURIZING FAN MOTOR HEATER	2900.M20N	HSS-77-403	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
38	77447-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	PDSH - FILTER 1 DIFFERENTIAL PRESSURE SWITCH HIGH PRESSURE	2900.M20N	PDSH-77-401	HHU-77007	HJB-77007-B	20,5	8,20	CONTROL	
39	77451-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	PDSH - FILTER 2 DIFFERENTIAL PRESSURE SWITCH HIGH PRESSURE	2900.M20N	PDSH-77-402	HHU-77007	HJB-77007-B	20,5	8,20	CONTROL	
40	77416-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	COMPRESSOR OIL HEATER	2900.M20N	HSS-77-404	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
41	77417-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SOLENOID VALVE	2900.M20N	HSV-77-401	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
42	77419-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	CONDENSING PRESSURE SWITCH	2900.M20N	PC-77-401	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
43	77420-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	CONDENSING PRESSURE TRASDUCER	2900.M20N	PTH-77-401	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
44	77421-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	ELERICAL HEATER HIGH TEMP	2900.M20N	TSH-77-401	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
45	77422-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	ELECTRICAL HEATER VERI HIGH TEMP	2900.M20N	TSHH-77-401	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
46	77423-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	LOW PRESSURE SWITCH	2900.M20N	PSL-77-401	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
47	77424-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	HIGH PRESSURE SWITCH	2900.M20N	PSH-77-401	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
48	77418-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	PRESSURIZING FAN	2900.M20N	HFM-77-403	HHU-77008	HJB-77008-A	12	10,80	LOW VOLTAGE	
49	77419-CEL-L1	4G4	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SUPPLY FAN	2900.M20N	HFM-77-404	HHU-77008	HJB-77008-A	12	12,10	LOW VOLTAGE	
50	77420-CEL-L1	4G10	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	COMPRESSOR	2900.M25N	HCO-77-402	HHU-77008	HJB-77008-A	12	15,70	LOW VOLTAGE	
51	77421-CEL-L1	4G10	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	ELECTRICAL HEATER	2900.M25N	HSS-77-405	HHU-77008	HJB-77008-A	12	15,70	LOW VOLTAGE	
52	77422-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	CONDENSER FAN 1	2900.M20N	HFM-77-407	HHU-77008	HJB-77008-A	12	10,80	LOW VOLTAGE	
53	77423-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	CONDENSER FAN 2	2900.M20N	HFM-77-408	HHU-77008	HJB-77008-A	12	10,80	LOW VOLTAGE	
54	77424-CEL-L1	3G1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	POWER SUPPLY MOTORISED DAMPER	2900.M20N	HDZ-77-404	HHU-77008	HJB-77008-A	12	9,80	LOW VOLTAGE	
55	77425-CEC-L1	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SIGNAL MOTORISED DAMPER	2900.M20N	HDZ-77-404	HHU-77008	HJB-77008-B	12	9,70	CONTROL	
56	77425-CEL-L1	3G1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	POWER SUPPLY MOTORISED DAMPER	2900.M20N	HDZ-77-405	HHU-77008	HJB-77008-A	12	9,80	LOW VOLTAGE	
57	77426-CEC-L1	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SIGNAL MOTORISED DAMPER	2900.M20N	HDZ-77-405	HHU-77008	HJB-77008-B	12	9,70	CONTROL	
58	77426-CEL-L1	3G1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	POWER SUPPLY MOTORISED DAMPER	2900.M20N	HDZ-77-406	HHU-77008	HJB-77008-A	12	9,80	LOW VOLTAGE	
59	77427-CEC-L1	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SIGNAL MOTORISED DAMPER	2900.M20N	HDZ-77-406	HHU-77008	HJB-77008-B	12	9,70	CONTROL	
60	77428-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	LOW PRESSURE SWITCH	2900.M20N	PDSL-77-402	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
61	77429-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	PRESSURIZING FAN MOTOR PTC	2900.M20N	TE-77-402	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
62	77430-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	EMERGENCY BUTTON	2900.M20N	HPB-77-402	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
63	77431-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SUPPLY FAN MOTOR HEATER	2900.M20N	HSS-77-406	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
64	77432-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	PRESSURIZING FAN MOTOR HEATER	2900.M20N	HSS-77-407	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
65	77448-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	PDSH - FILTER 1 DIFFERENTIAL PRESSURE SWITCH HIGH PRESSURE	2900.M20N	PDSH-77-403	HHU-77008	HJB-77008-B	20,5	8,20	CONTROL	
66	77452-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	PDSH - FILTER 2 DIFFERENTIAL PRESSURE SWITCH HIGH PRESSURE	2900.M20N	PDSH-77-404	HHU-77008	HJB-77008-B	20,5	8,20	CONTROL	
67	77433-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	COMPRESSOR OIL HEATER	2900.M20N	HSS-77-408	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
68	77434-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SOLENOID VALVE	2900.M20N	HSV-77-402	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
69	77436-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	CONDENSING PRESSURE SWITCH	2900.M20N	PC-77-402	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
70	77437-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	CONDENSING PRESSURE TRASDUCER	2900.M20N	PTH-77-402	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
71	77438-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	ELECTRICAL HEATER HIGH TEMP THERMOSTATE	2900.M20N	TSH-77-402	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
72	77439-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	ELECTRICAL HEATER VERI HIGH TEMP TRASMITTER	2900.M20N	TSHH-77-402	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
73	77440-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	LOW PRESSURE SWITCH	2900.M20N	PSL-77-402	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
74	77441-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	HIGH PRESSURE SWITCH	2900.M20N	PSH-77-402	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
75	77442-CEC-L2	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77012	inside B400	N.A.	11	9,70	CONTROL	
76	77443-CEC-L2	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77013	inside B400	N.A.	8	9,70	CONTROL	
77	77444-CEC-L2	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77014	inside B400	N.A.	7	9,70	CONTROL	
78	77445-CEC-L2	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77015	inside B400	N.A.	18	9,70	CONTROL	
79	77446-CEC-L2	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77016	inside B400	N.A.	19	9,70	CONTROL	

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Section 6 MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-40 & process: MC & discipline : I

Instrumental	77-40 HVAC I&T Equipment Room B-400

ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
77-HS-012A	Hand Switch for Fire&Gas Damper HFD-77012	ONSHORE	C10002099	CJX00	100	2024-10-15	RFC 1
77-HS-012B	Hand Switch for Fire&Gas Damper HFD-77012	ONSHORE	C10002100	CJX00	100	2024-10-15	RFC 1
77-HS-013A	Hand Switch for Fire&Gas Damper HFD-77013	ONSHORE	C10002101	CJX00	100	2024-10-15	RFC 1
77-HS-013B	Hand Switch for Fire&Gas Damper HFD-77013	ONSHORE	C10002102	CJX00	100	2024-10-15	RFC 1
77-HS-014A	Hand Switch for Fire&Gas Damper HFD-77014	ONSHORE	C10002103	CJX00	100	2024-10-15	RFC 1
77-HS-014B	Hand Switch for Fire&Gas Damper HFD-77014	ONSHORE	C10002104	CJX00	100	2024-10-15	RFC 1
77-HS-015A	Hand Switch for Fire&Gas Damper HFD-77015	ONSHORE	C10002105	CJX00	100	2024-10-15	RFC 1
77-HS-015B	Hand Switch for Fire&Gas Damper HFD-77015	ONSHORE	C10002106	CJX00	100	2024-10-15	RFC 1
77-HS-016A	Hand Switch for Fire&Gas Damper HFD-77016	ONSHORE	C10002107	CJX00	100	2024-10-15	RFC 1
77-HS-016B	Hand Switch for Fire&Gas Damper HFD-77016	ONSHORE	C10002108	CJX00	100	2024-10-15	RFC 1
B-400	I&T Equipment Room B-400	ONSHORE	C10002306	CZX01I	100	2024-10-15	RFC 1
C-77-HS-012A/77-HS-012B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000419	CJX10	100	2024-10-15	RFC 1
C-77-HS-012B/B400-FGS-002	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000418	CJX10	100	2024-11-23	RFC 2
C-77-HS-013A/77-HS-013B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000423	CJX10	100	2024-10-15	RFC 1
C-77-HS-013B/B400-FGS-002	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000422	CJX10	100	2024-11-23	RFC 2
C-77-HS-014A/77-HS-014B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000427	CJX10	100	2024-10-15	RFC 1
C-77-HS-014B/B400-FGS-002	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000426	CJX10	100	2024-11-23	RFC 2
C-77-HS-015A/77-HS-015B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000431	CJX10	100	2024-10-15	RFC 1
C-77-HS-015B/B400-FGS-002	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000430	CJX10	100	2024-11-23	RFC 2
C-77-HS-016A/77-HS-016B	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000435	CJX10	100	2024-10-15	RFC 1
C-77-HS-016B/B400-FGS-002	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000434	CJX10	100	2024-11-23	RFC 2
C-77-HY-012/77-HS-012A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000420	CJX10	100	2024-10-15	RFC 1
C-77-HY-013/77-HS-013A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000424	CJX10	100	2024-10-15	RFC 1
C-77-HY-014/77-HS-014A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000428	CJX10	100	2024-10-15	RFC 1
C-77-HY-015/77-HS-015A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000432	CJX10	100	2024-10-15	RFC 1
C-77-HY-016/77-HS-016A	FIRE DAMPER / MARSHALLING PCS	ONSHORE	C10000436	CJX10	100	2024-10-15	RFC 1
C-77-XA-004/B400-SIS-001	UCP FAULT ALARM / MARSHALLING PCS	ONSHORE	C10000187	CJX10	100	2024-11-28	RFC 2
C-77-XS-004/B400-SIS-001	TRIP SIGNAL TO UCP / MARSHALLING PCS	ONSHORE	C10000183	CJX10	100	2024-11-28	RFC 2
C-77-ZSL-012/B400-FGS-003	PROXIMITY SWITCH / MARSHALLING PCS	ONSHORE	C10000421	CJX10	100	2024-11-22	RFC 2

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-40 & process: MC & discipline : I

Instrumental	77-40 HVAC I&T Equipment Room B-400

ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
C-77-ZSL-013/B400-FGS-003	PROXIMITY SWITCH / MARSHALLING PCS	ONSHORE	C10000425	CJX10	100	2024-11-22	RFC 2
C-77-ZSL-014/B400-FGS-003	PROXIMITY SWITCH / MARSHALLING PCS	ONSHORE	C10000429	CJX10	100	2024-11-22	RFC 2
C-77-ZSL-015/B400-FGS-003	PROXIMITY SWITCH / MARSHALLING PCS	ONSHORE	C10000433	CJX10	100	2024-11-22	RFC 2
C-77-ZSL-016/B400-FGS-003	PROXIMITY SWITCH / MARSHALLING PCS	ONSHORE	C10001433	CJX10	100	2024-11-22	RFC 2

ITEM	Tag	C-77-XS-004/B400-SIS-001	:	TRIP SIGNAL TO UCP / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-40	:	HVAC I&T Equipment Room B-400	Module	LD_B-400	
TASK	code	C10000183	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: B400-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.	OK
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH		>999	MΩ
	CORE to CORE		>999	MΩ
	CORE to SCREEN		>999	MΩ
	CORE to ARMr		>999	MΩ
	SCREEN to EARTH		>999	MΩ
	SCREEN to ARMr		>999	MΩ
CONTINUITY	CORES		0.5	Ω
	SCREEN		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

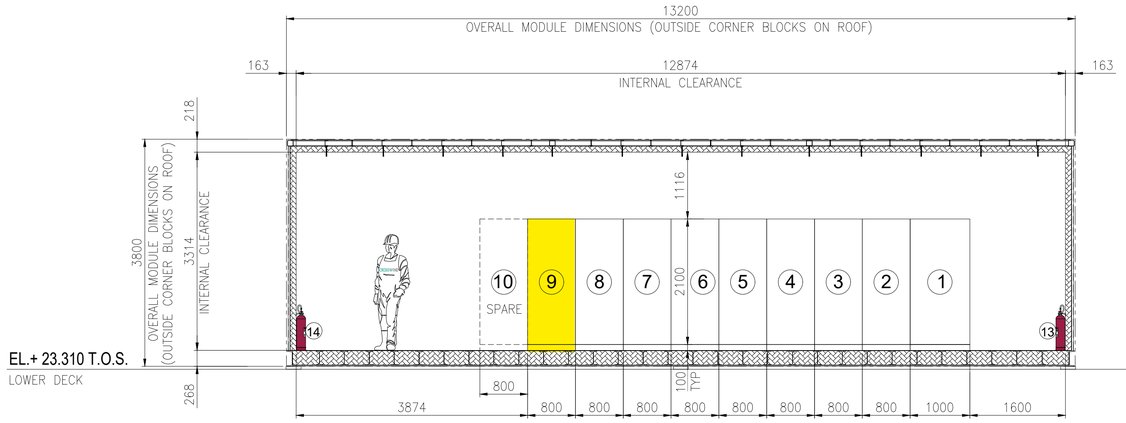
TESTING INSTRUMENTS USED

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

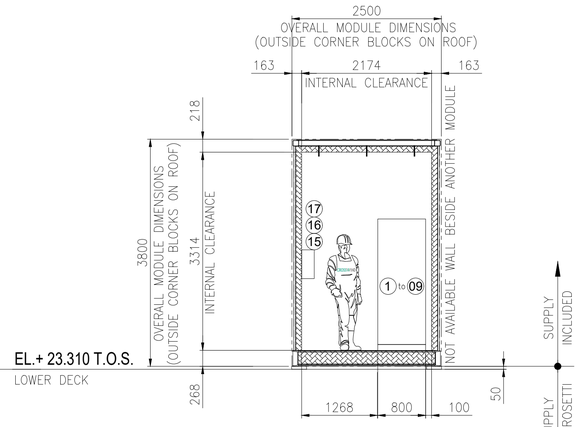
Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Paolo Schintu	
Date	2024-11-20	2024-11-28	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-20T17:13:22.946Z	PROVERLIS Digitaly signed by Paolo Schintu 2024-11-28T10:11:37.995Z	

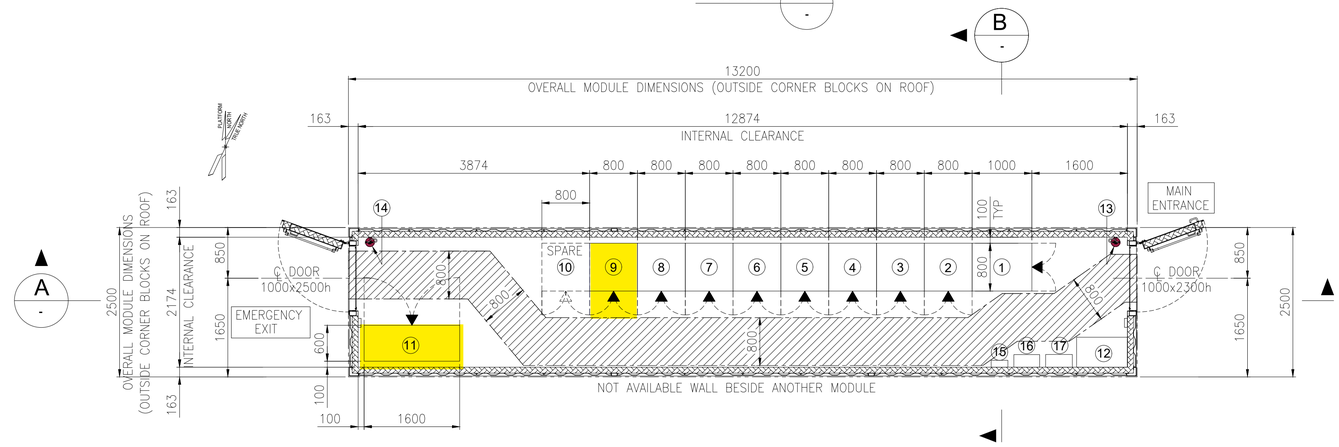
DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 03



SECTION A -



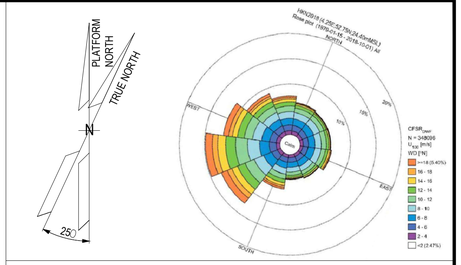
SECTION B -



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

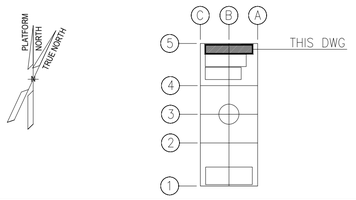
HOLDS

.

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.: 3_A | DATE: 07/10/24 | SIGNATURE: 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 6pr*2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	TB-XS-000 1BK 21, 2BK 22	77-XS-001
B-200 HVAC CONTROL P. UCP	77-XS-002	TB-XC 100 1BK, 101 2BK	NOTE-2	C-77-XS-002/B400-SIS-001 6pr*2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	TB-XS-000 1BK 23, 2BK 24	77-XS-002
B-300 HVAC CONTROL P. UCP	77-XS-003	TB-XC 500 1BK, 501 2BK	NOTE-2	C-77-XS-003/B400-SIS-001 6pr*2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	TB-XS-000 1BK 25, 2BK 26	77-XS-003
B-400 HVAC CONTROL P. UCP	77-XS-004	TB-XC 500 1BK, 501 2BK	NOTE-2	C-77-XS-004/B400-SIS-001 6pr*2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	TB-XS-000 1BK 27, 2BK 28	77-XS-004

Shield Bar

Shield Bar

Shield Bar

Shield Bar

I.E.

VALID FOR CONSTRUCTION

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

REV.:	DATE:	SIGNATURE:
1_K	18/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT– SAFETY SYSTEM WIRING DIAGRAMS
HVAC SYSTEM SHUTDOWN

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	021	01

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

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

REV. 01

NOTES:

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

<01>

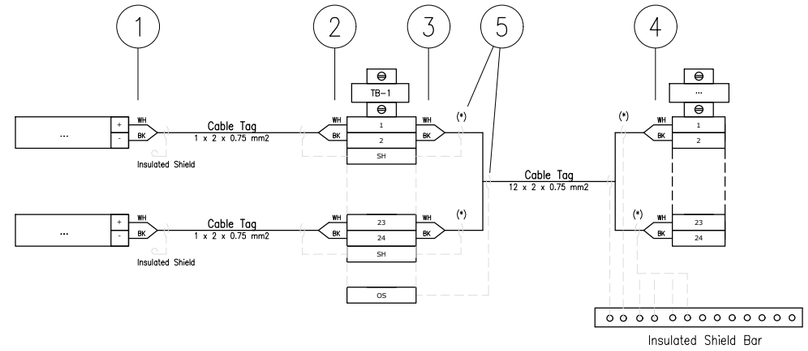
LEGENDS & SYMBOLS:

LEGEND:

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

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



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

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

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

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

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

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

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

REFERENCE DRAWINGS

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

CROSSWIND

ROSETTI MARINO

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

REV.:	DATE:	SIGNATURE:
1_K	18/11/24	G.Randi

ROSETTI MARINO SpA

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

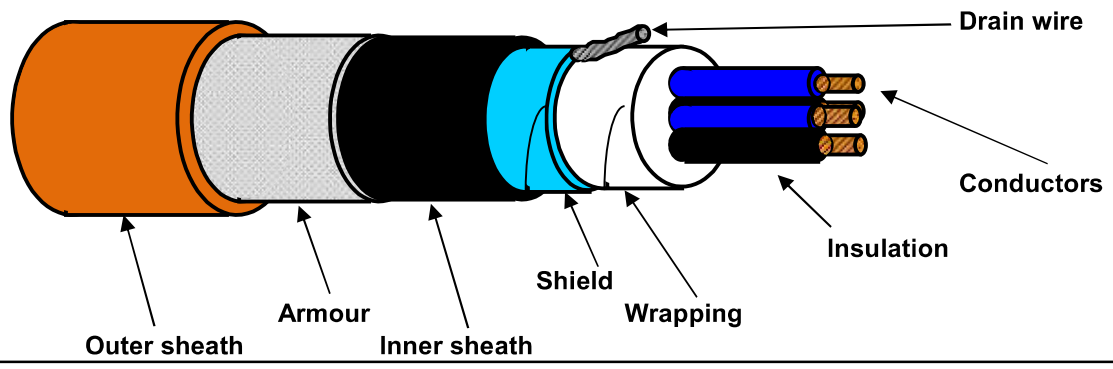
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-77-XS-004/B400-SIS-001	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						B400-HSB-001	Distribution & HVAC Panel - I&T Equipment Room	Lower Deck (B-400)	B400-SIS-001	Marshalling SIS	Lower Deck (B-400)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			n.a.				B-400-SEC-2I / B-400-SEC-2H

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-XA-004/B400-SIS-001	: UCP FAULT ALARM / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-40	: HVAC I&T Equipment Room B-400	Module	LD_B-400		
TASK	code	C10000187	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	B400-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.	OK
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH		>999	MΩ
	CORE to CORE		>999	MΩ
	CORE to SCREEN		>999	MΩ
	CORE to ARMr		>999	MΩ
	SCREEN to EARTH		>999	MΩ
	SCREEN to ARMr		>999	MΩ
CONTINUITY	CORES		0.5	Ω
	SCREEN		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

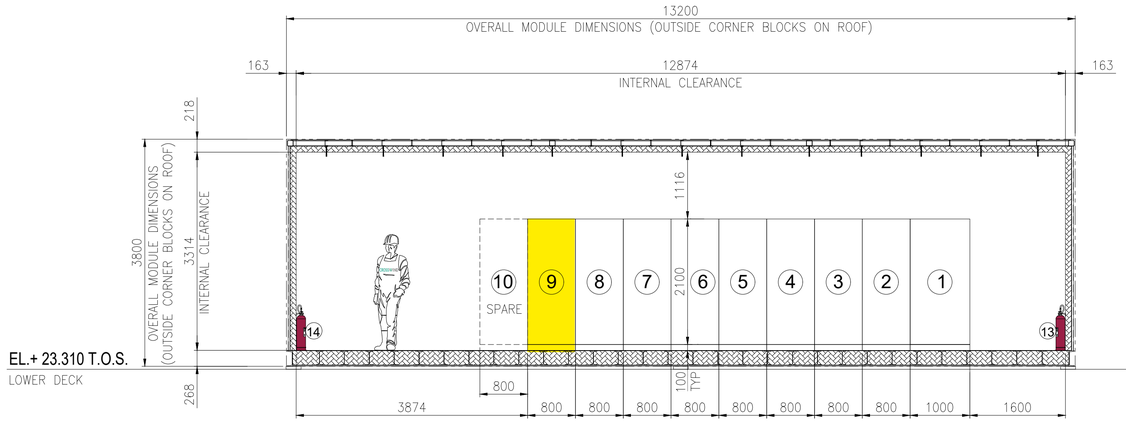
TYPE / SERIAL N°: MEGGER: KEW3125A SERIAL:W8330207

Calibration date: N° 7722/24 10/07/2024

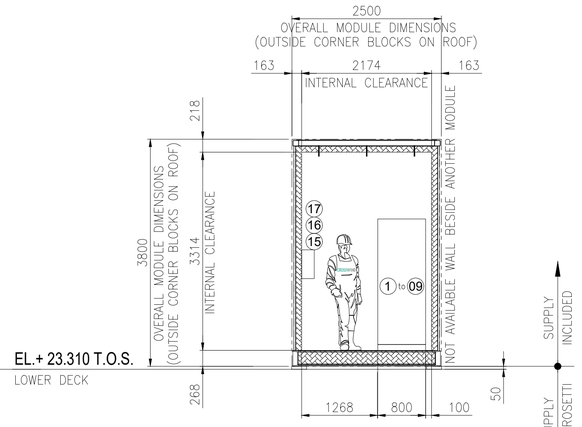
Comments

Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Paolo Schintu	
Date	2024-11-20	2024-11-28	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-20T17:15:26.172Z	PROVERLIS Digitaly signed by Paolo Schintu 2024-11-28T10:25:17.632Z	

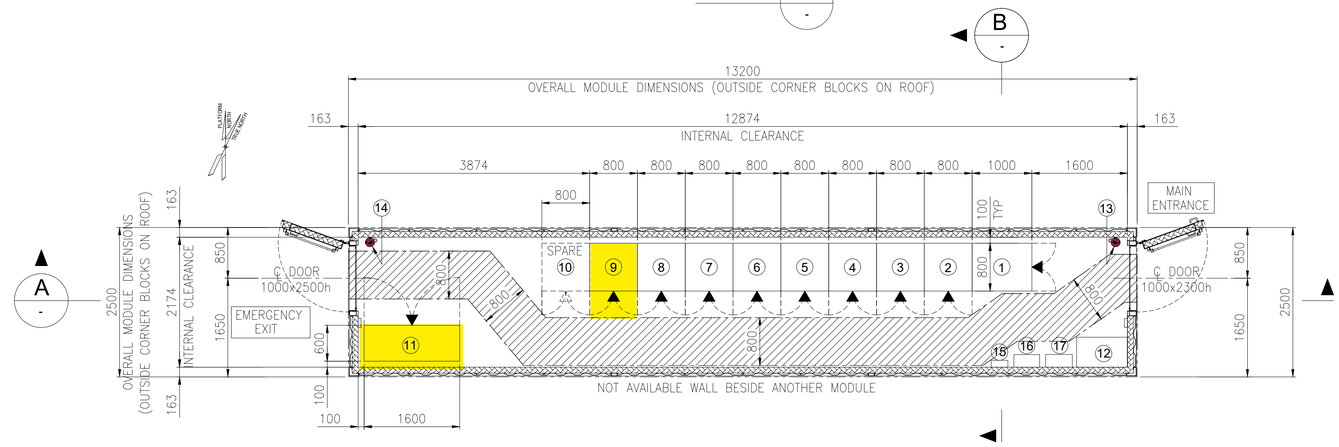
DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 03



SECTION A -



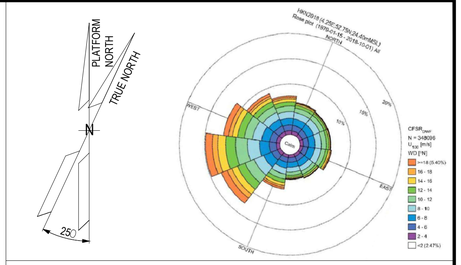
SECTION B -



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

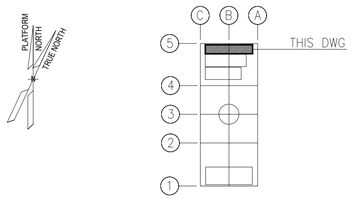
HOLDS

.

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.: 3_A | DATE: 07/10/24 | SIGNATURE: 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>

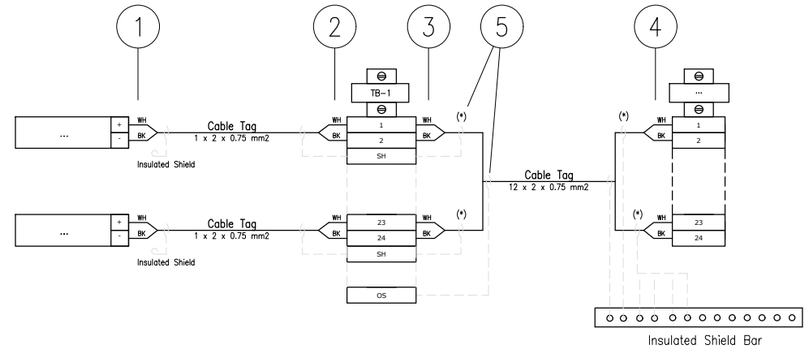
LEGENDS & SYMBOLS:

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

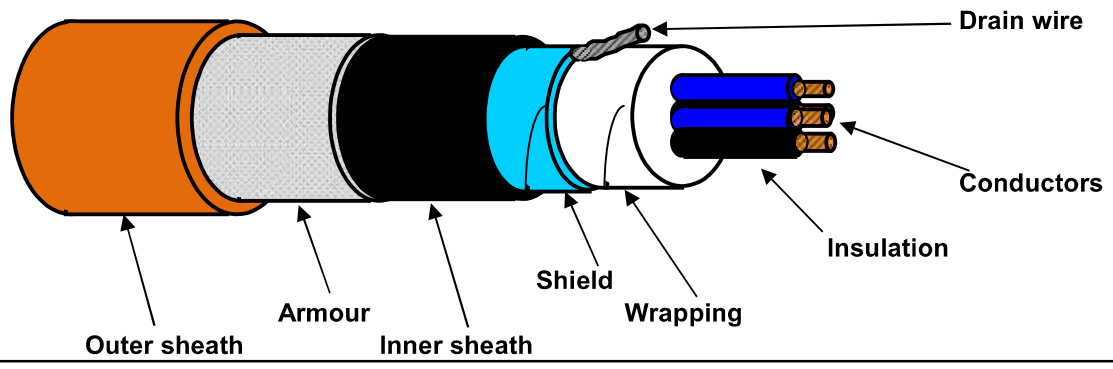
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-77-XA-004/B400-SIS-001	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						B400-HSB-001	Distribution & HVAC Panel - I&T Equipment Room	Lower Deck (B-400)	B400-SIS-001	Marshalling SIS	Lower Deck (B-400)	SMICV08-1X2X0,75	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 1x2x0,75mm² - Orange	T2_M20S_Double			n.a.				B-400-SEC-2I / B-400-SEC-2H

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 | PROVERLIS | CROSSWIND

ITEM	Tag	C-77-HS-012B/B400-FGS-002 : PUSH BUTTON / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-40 : HVAC I&T Equipment Room B-400			Module	LD_B-400_Ext/LD_B-400	
TASK	code	C10000418	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-012B	To	B400-FGS-002		

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	OK
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH		>999	MΩ
	CORE to CORE		>999	MΩ
	CORE to SCREEN		>999	MΩ
	CORE to ARMr		>999	MΩ
	SCREEN to EARTH		>999	MΩ
	SCREEN to ARMr		>999	MΩ
CONTINUITY	CORES		0.4	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

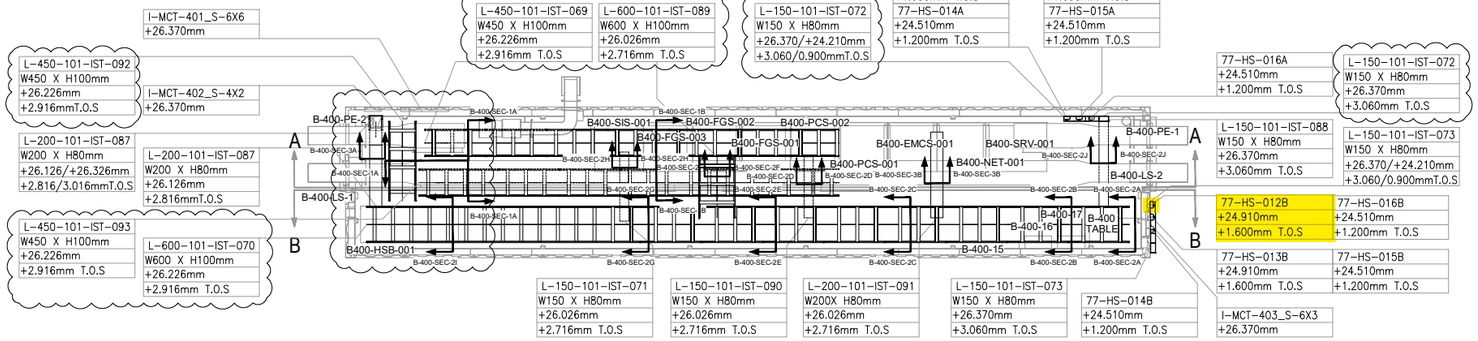
TYPE / SERIAL N°: MEGGER: KEW3125A SERIAL:W8330207 Calibration date: N° 7722/24 10/07/2024

Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Paolo Schintu	
Date	2024-11-12	2024-11-23	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-12T17:35:34.964Z	PROVERLIS Digitaly signed by Paolo Schintu 2024-11-23T08:55:57.714Z	

DRAWING NO. 123A90-DDL-IN-DL-40116

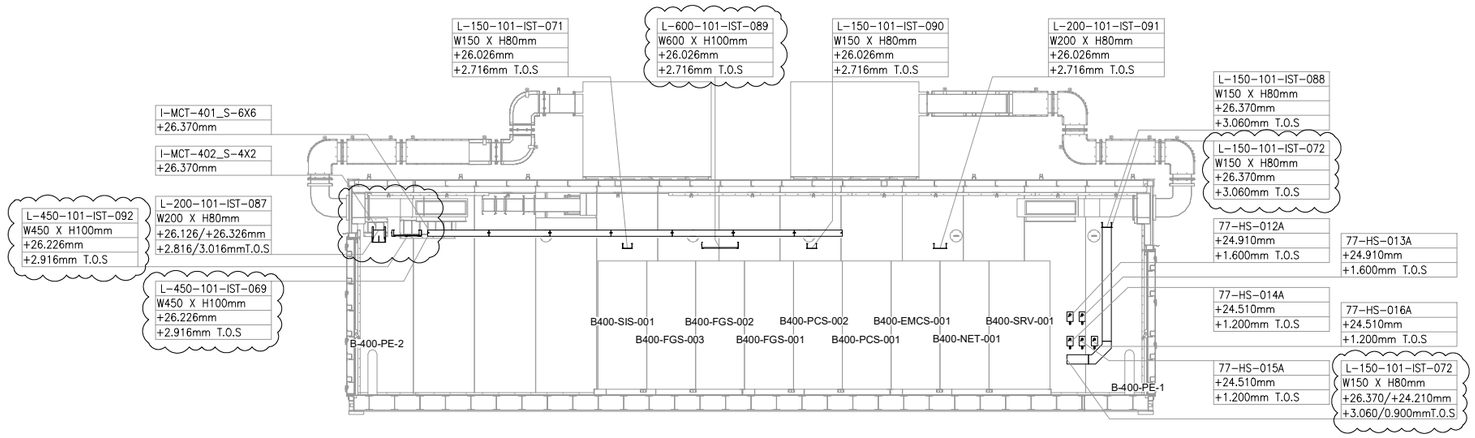
REV. 01



PLAN VIEW

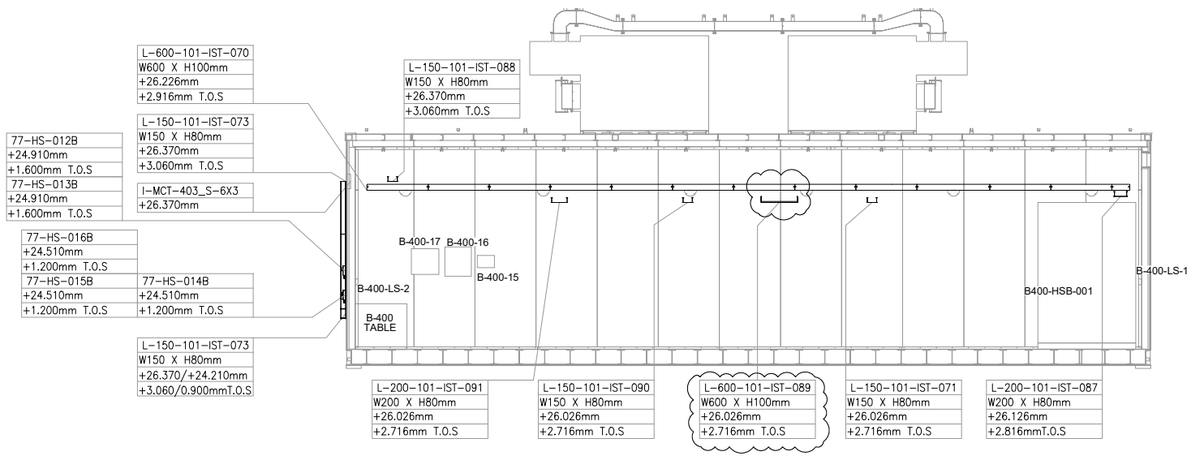
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



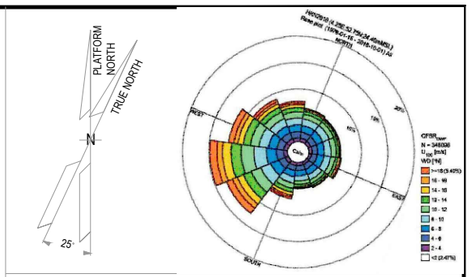
SECTION A-A

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

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-400 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-40116	SHEET 001	REV. 01

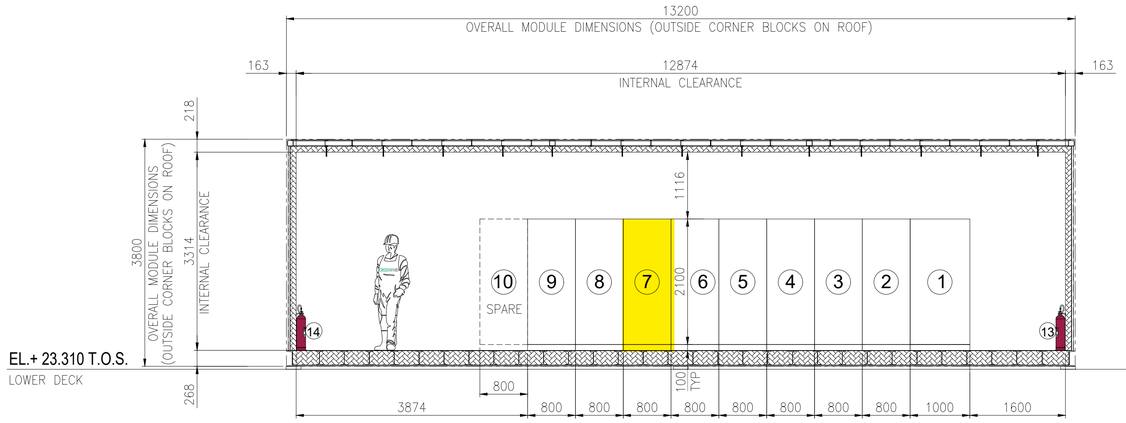
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40116**

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

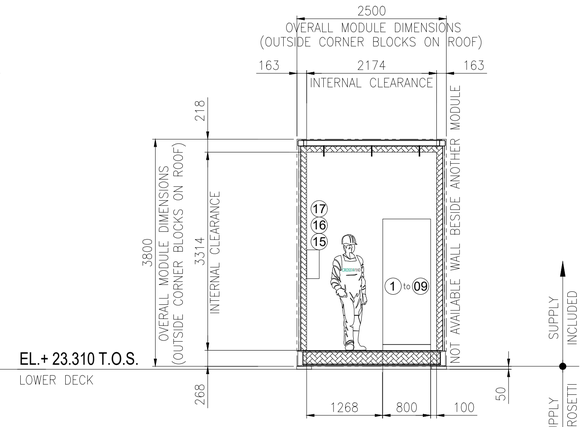
ROSETTI MARINO SpA

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

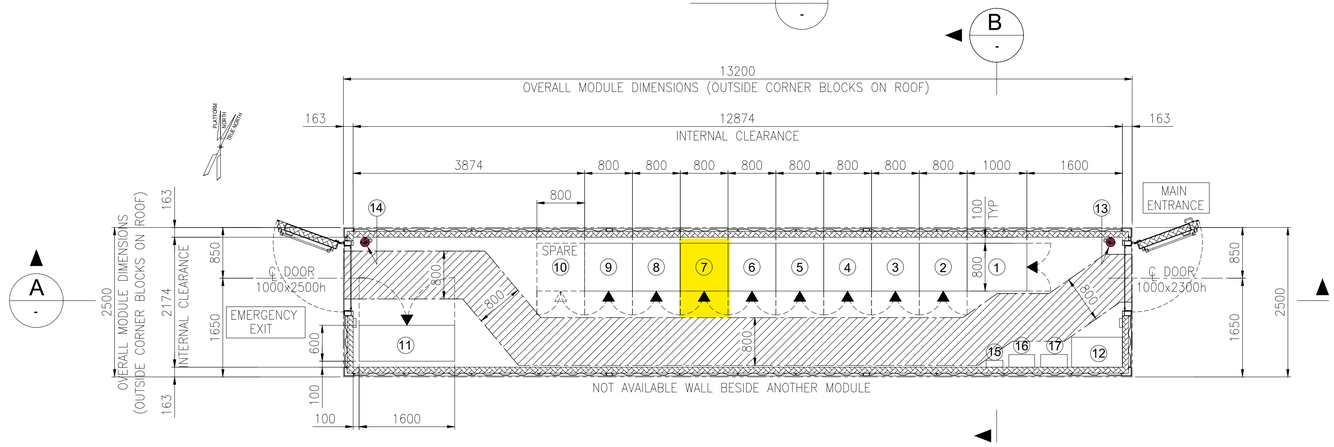
DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 03



SECTION A -



SECTION B -



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

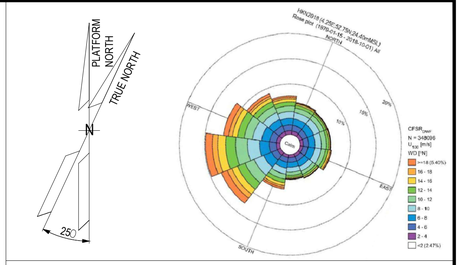
EQUIPMENT LIST

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	

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

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

ROSETTI MARINO SpA



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

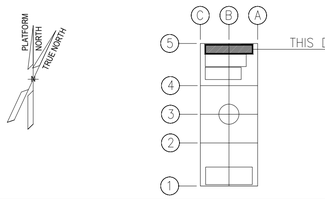
HOLDS

.

REFERENCE

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

KEY PLAN



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

CROSSWIND — ROSETTI MARINO

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

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

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

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

REV.: 01

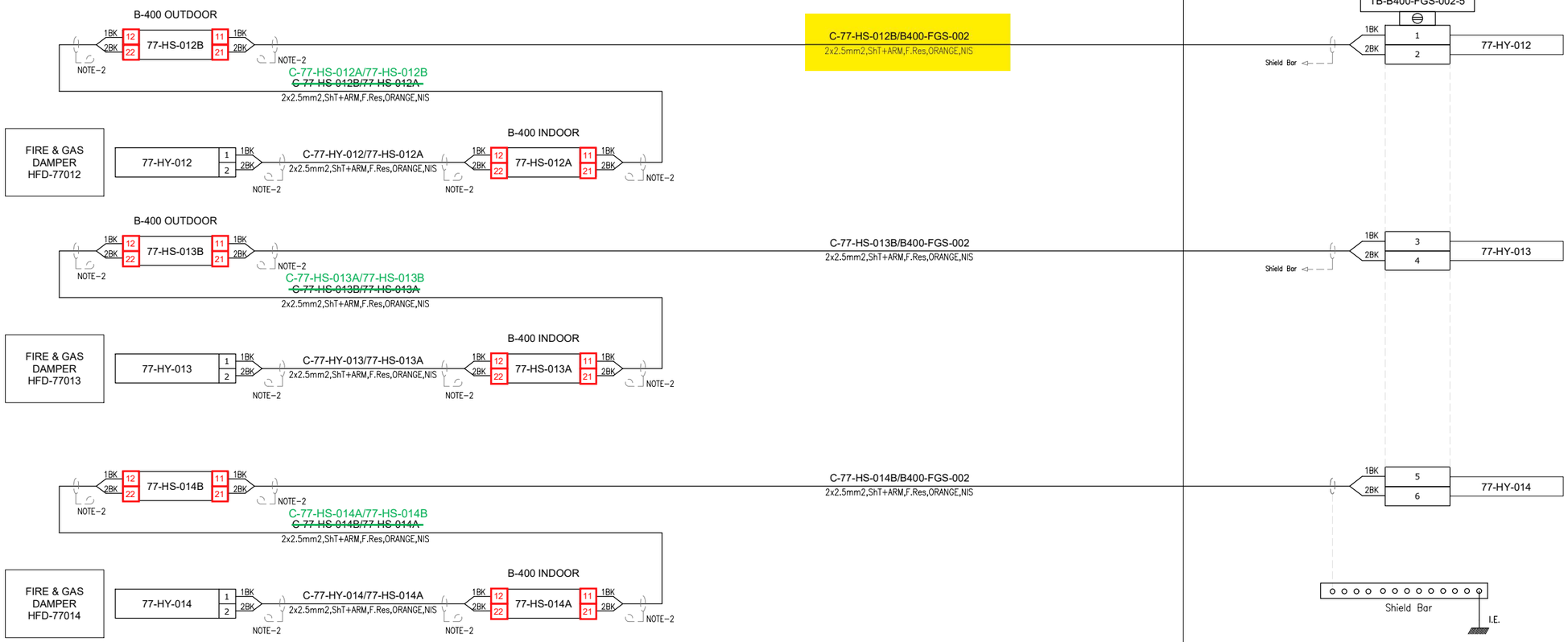
I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-FGS-002

<01>

B-400 ITER



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 COMMAND – B–400

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	076	01

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

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

REV. 01

NOTES:

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

<01>

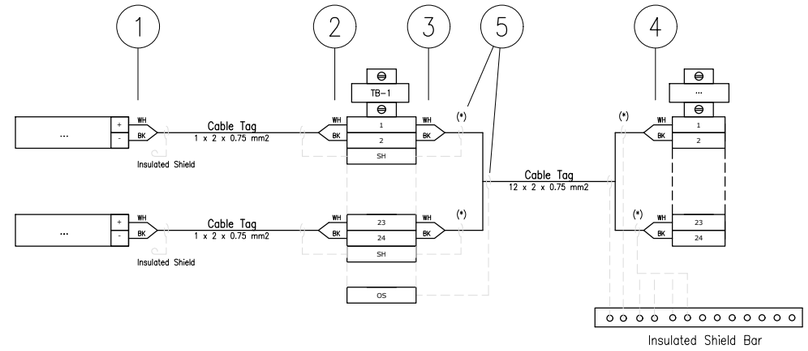
LEGENDS & SYMBOLS:

LEGEND:

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

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



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

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

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

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

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

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

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

REFERENCE DRAWINGS

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

CROSSWIND

ROSETTI MARINO

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

REV.:	DATE:	SIGNATURE:
1_K	18/11/24	G.Randi

ROSETTI MARINO SpA

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

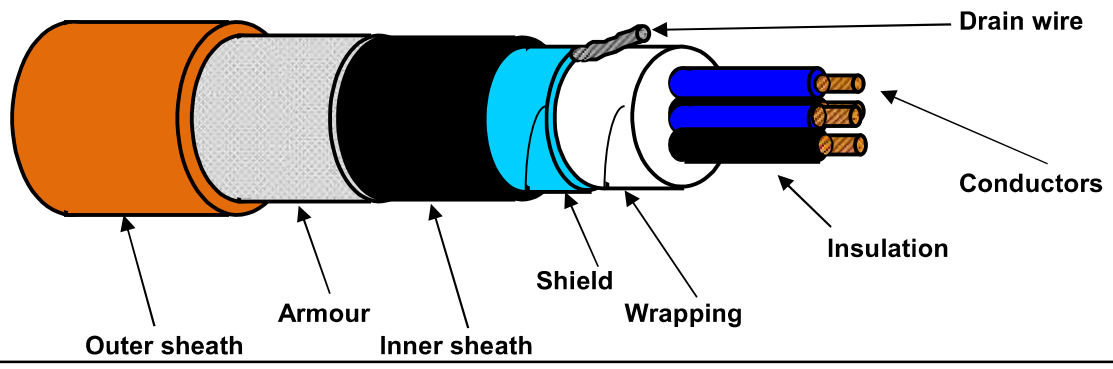
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-77-HS-012B/B400-FGS-002	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						77-HS-012B	Hand Switch	Lower Deck (B-400) Ext.	B400-FGS-002	Marshalling FGS	Lower Deck (B-400)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			n.a.				B-400-SEC-2A / B-400-SEC-2B / B-400-SEC-2C / B-400-SEC-2E / B-400-SEC-2F

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-012A/77-HS-012B : PUSH BUTTON / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-40 : HVAC I&T Equipment Room B-400			Module	LD_B-400/LD_B-400_Ext	
TASK	code	C10000419	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-012A	To	77-HS-012B		

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	OK
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	OK
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH		>999	MΩ
	CORE to CORE		>999	MΩ
	CORE to SCREEN		>999	MΩ
	CORE to ARMr		>999	MΩ
	SCREEN to EARTH		>999	MΩ
	SCREEN to ARMr		>999	MΩ
CONTINUITY	CORES		0.6	Ω
	SCREEN		0.6	Ω
	EARTH		0.6	Ω
	ARMr		0.6	Ω
	TEST VOLTS		500	V

TEST ALL CORES AND RECORD LOWEST VALUE

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

TESTING INSTRUMENTS USED

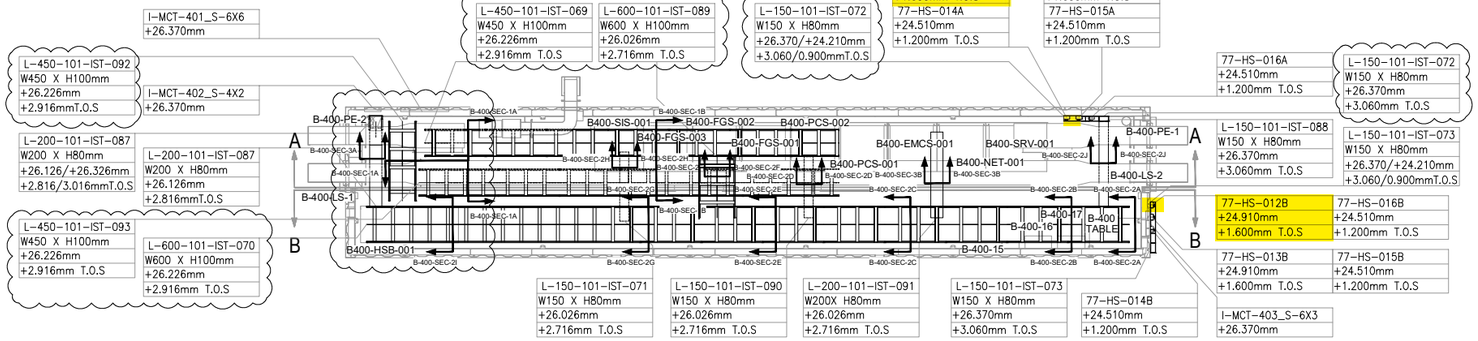
TYPE / SERIAL N°: KEW3125A / W8330207 Calibration date: 10-07-2024

Comments

Page 1/1	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:36:57.625Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T16:09:04.575Z	

DRAWING NO. 123A90-DDL-IN-DL-40116

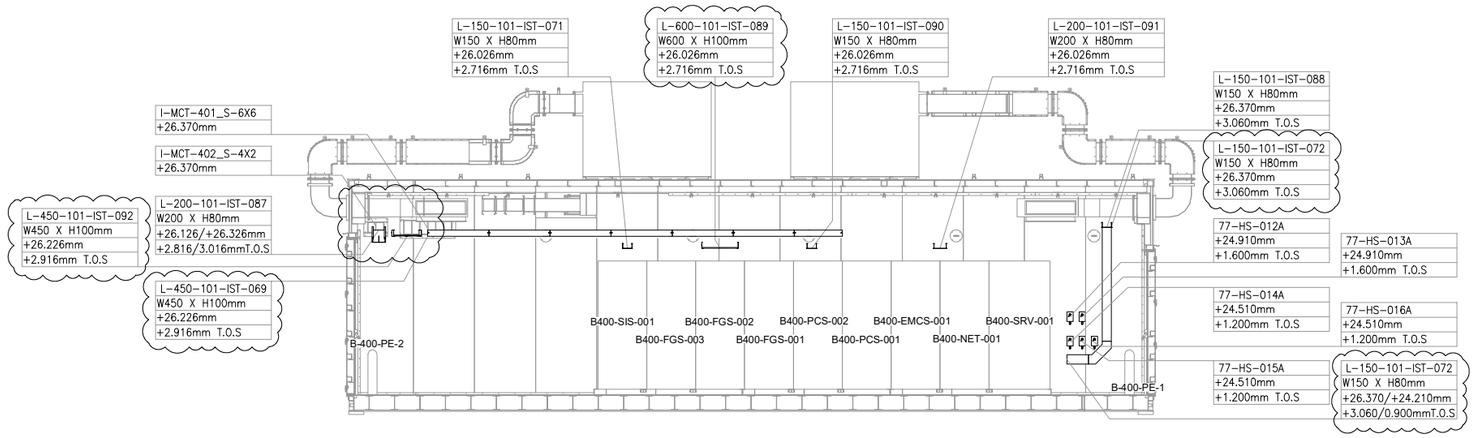
REV. 01



PLAN VIEW

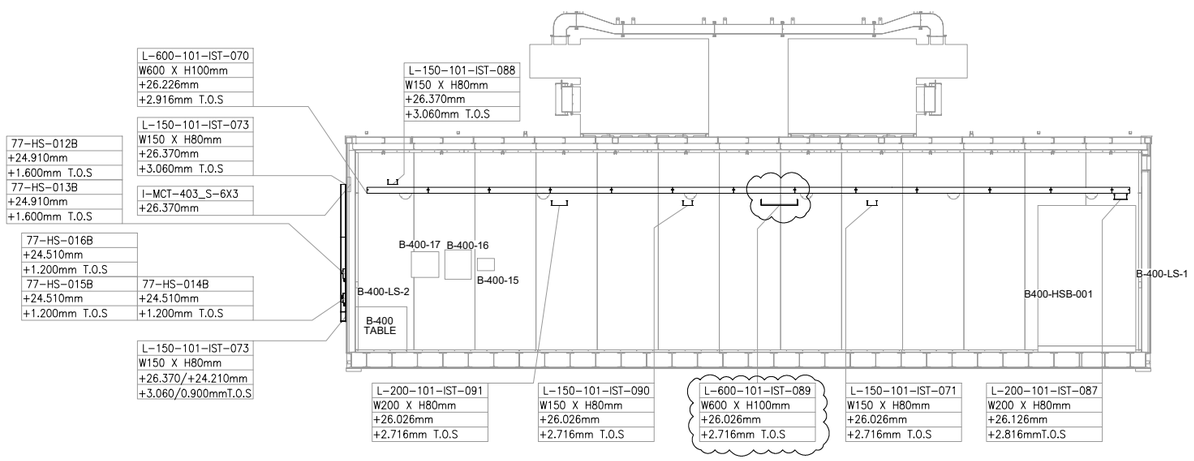
B-400 – I&T EQUIPMENT ROOM

SCALE–1:1



SECTION A-A

SCALE–1:1



SECTION B-B

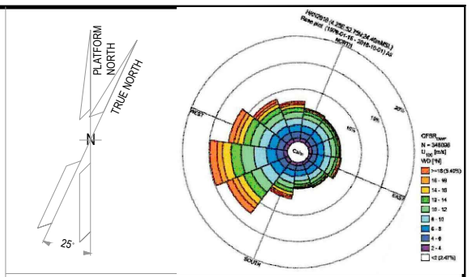
SCALE–1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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–400 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–40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

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

REV.: 01

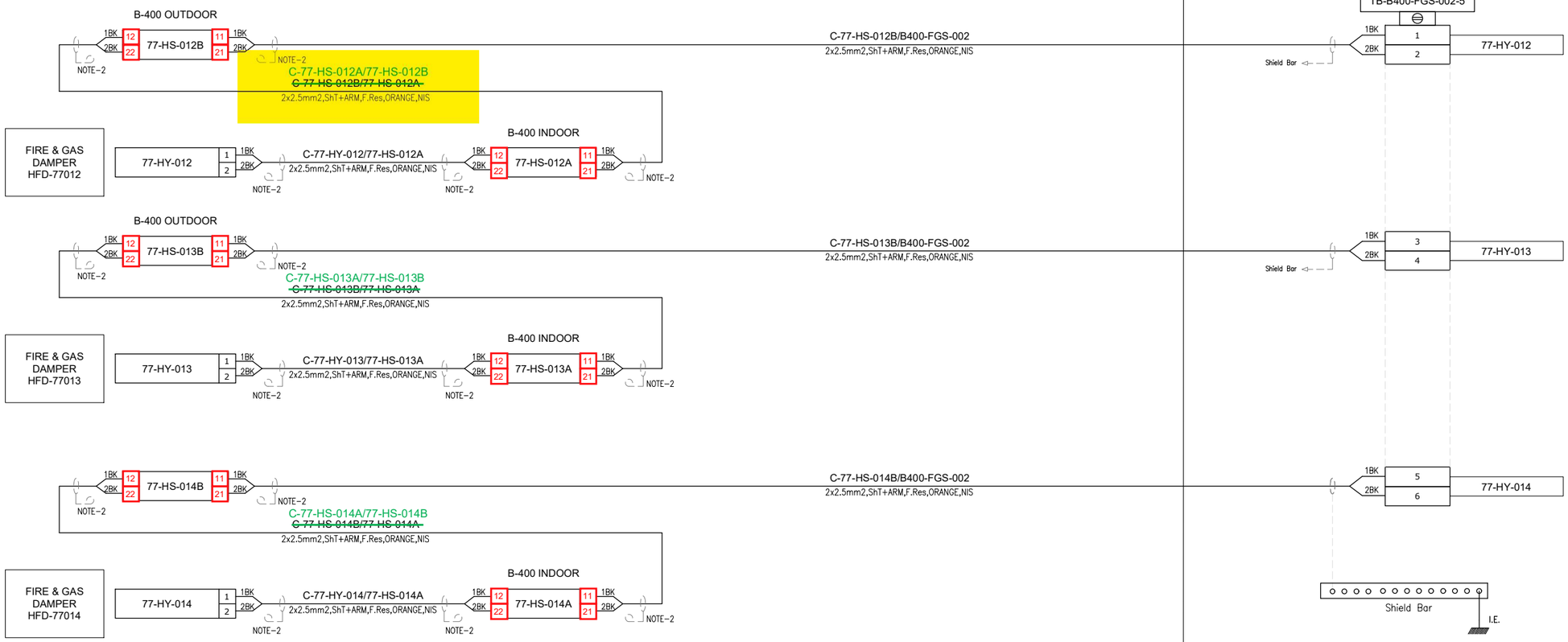
I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-FGS-002

<01>

B-400 ITER



VALID FOR CONSTRUCTION

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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
FIRE DAMPER COMMAND – B–400

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	076	01

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

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

REV. 01

NOTES:

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

<01>

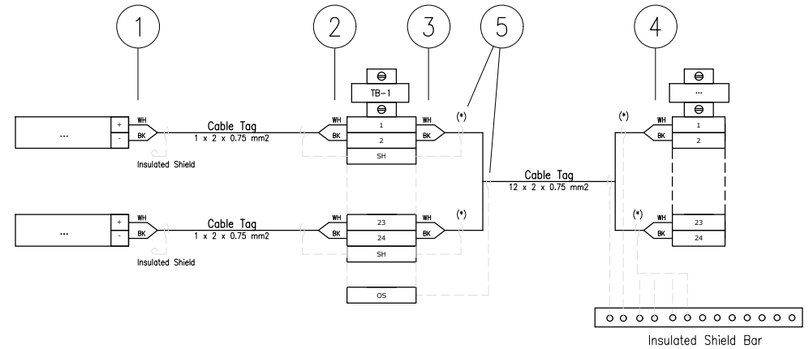
LEGENDS & SYMBOLS:

LEGEND:

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

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



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

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

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

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

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

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

REFERENCE DRAWINGS

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

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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

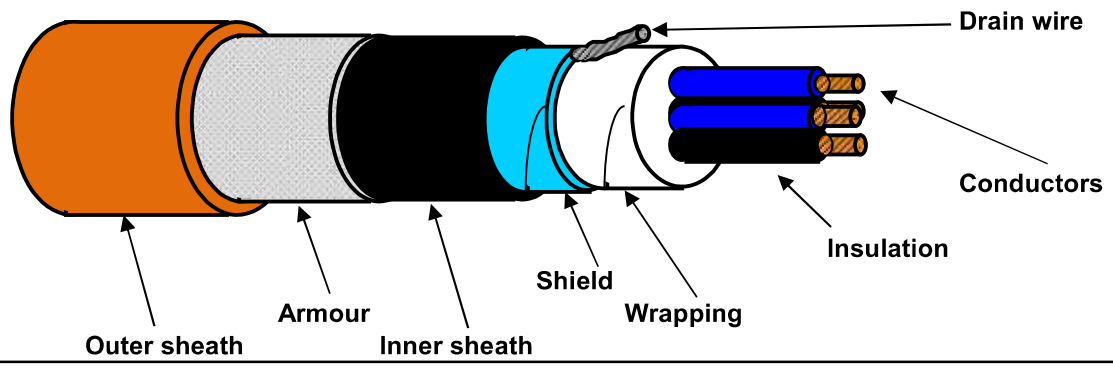
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-77-HS-012A/77-HS-012B	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						77-HS-012A	Hand Switch	Lower Deck (B-400)	77-HS-012B	Hand Switch	Lower Deck (B-400) Ext.	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			T2_M20_Double				B-400-SEC-2A / B-400-SEC-2J / I-MCT-403

Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250 V (300 V)

2X2,5 - INSTRUMENT CABLE - Fire Resistant - Not I.S.



TECHNICAL FEATURES

Conductors :	**7-STRANDED** plain/bare soft annealed copper wires	**IEC 60228 Class 2**
Insulation :	Mica/Glass Tape (MGT) plus XLPE, Nominal Thickness 0,6 mm	
Cores colour code :	**Black NUMBERED (from 1 to 2)**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not required	
Total Assembling :	8/1mt	
Overall Wrapping:	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Drain wire :	7-Stranded **TINNED** annealed copper drain wire, **size 1,0 sqmm**, in continuous contact with the shield	
Overall Shield :	by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Inner sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,1 mm	
Inner sheath color code:	**Black**	
Armour :	Galvanized Steel Wire Braid Armour (coverage ≥ 90%)	
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, moisture/abrasion/UV Resistant,	
	Average Thickness 1,3 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - 2X2,5 SQMM - MGT/XLPE/OS/LSZH/SWB/LSZH - 150/250 V - IEC 60331.21 -**	
(every 1000 mm)	**IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**	
Under armour diameter :	(10,3 ± 10%) mm	
Over armour diameter :	(11,5 ± 10%) mm	
Outer diameter :	(14,1 ± 10%) mm	
Bending radius :	cable outer diameter x 10 (in fixed installation)	
Voltage Test :	1,5 kV a.c. for 5' (Between Cores) / 1,5 kV a.c. for 5' (Between Cores - Shield)	
Conductors DC Resistance :	≤ 7,86 Ω/km (@ 20°C)	
Insulation Resistance :	≥ 1000 MΩ x Km (@ 20°C)	
Applicable Standards		
Design Guidelines :	**IEC 60092.376**	
ON COMPLETE CABLE		
Fire Resistant test :	**IEC 60331.21**	
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22	
Acid Gas generation :	IEC 60754.1/2	
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)	
Hazardous Areas :	IEC 60079.14 par.9.3.2a	
Temperature Range :		
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)	
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)	
ON COMPLETE CABLE		
During Operation :	(-20°C up to +90°C) (in fixed installation)	
During installation :	(- 5°C up to +50°C)	
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner sheath together with correct ATEX approved equipment or accessories.**	

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	04/04/2024	Messa			
Checked :	04/04/2024	Spaccasassi			
Approved :	04/04/2024	Cucinotta			

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

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

ITEM	Tag	C-77-HY-012/77-HS-012A	: FIRE DAMPER / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-40	: HVAC I&T Equipment Room B-400	Module	LD_B-400/LD_B-400_Ext		
TASK	code	C10000420	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-77012 | To: 77-HS-012A

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.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH	>999	MΩ
	CORE to CORE	>999	MΩ
	CORE to SCREEN	>999	MΩ
	CORE to ARMr	>999	MΩ
	SCREEN to EARTH	>999	MΩ
	SCREEN to ARMr	>999	MΩ
CONTINUITY	CORES	0.6	Ω
	SCREEN	0.6	Ω
	EARTH	0.5	Ω
	ARMr	0.6	Ω
	TEST VOLTS	500	V

TEST ALL CORES AND RECORD LOWEST VALUE

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

TESTING INSTRUMENTS USED

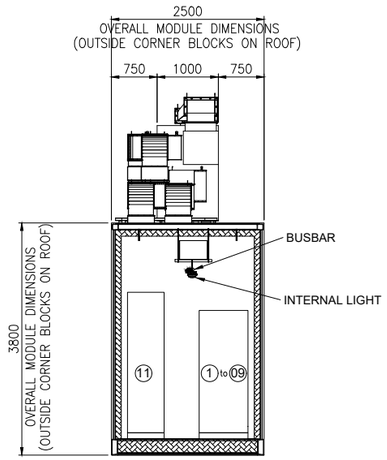
TYPE / SERIAL N°: KEW3125A / W8330207 | Calibration date: 10-07-2024

Comments

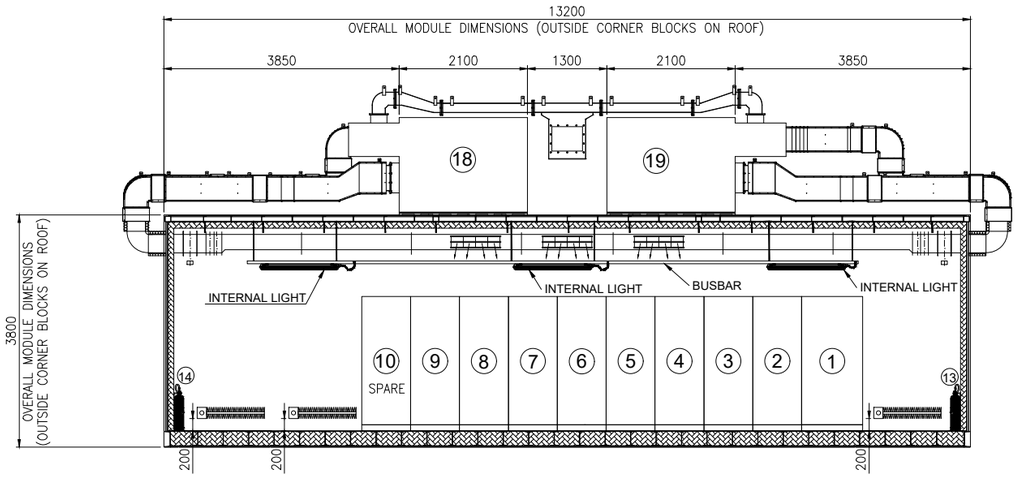
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:37:11.092Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T16:07:11.568Z	

DRAWING NO. 1724000049-AR-DA-00017

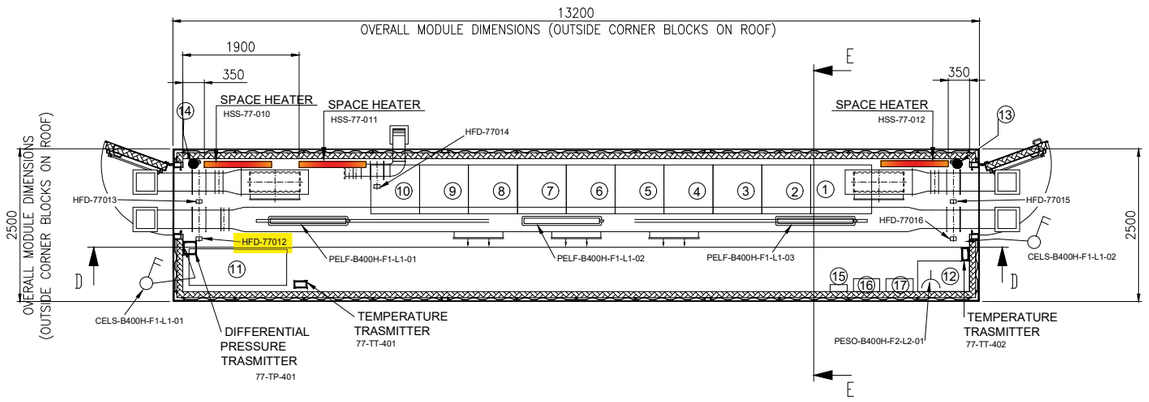
REV. 03



SECTION E-E

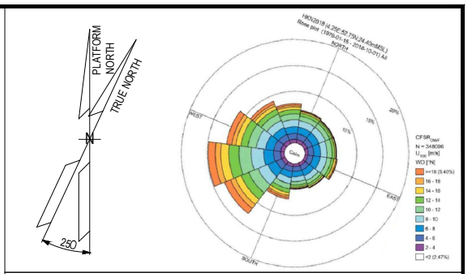


SECTION D-D



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-010	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-011 (03)	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-012	SPACE HEATER 3	184	145	1100	5	



NOTE

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

REFERENCE

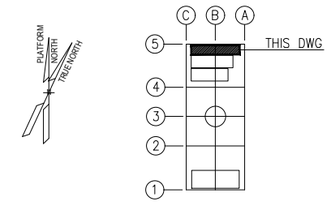
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007
(03) "B-400" FOUNDATION	1724000049-ST-DD-00013
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	04/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	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

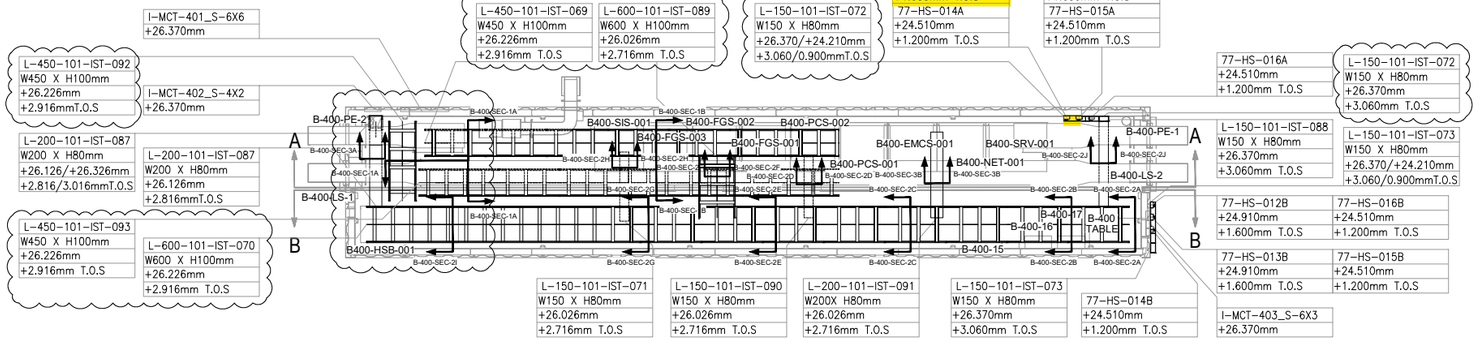
TITLE : BASE LOAD POWER HUB (BLPH)
B-400 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 003	REV. 03

File Name : 1724000049-AR-DA-00017-REV.03

DRAWING NO. 123A90-DDL-IN-DL-40116

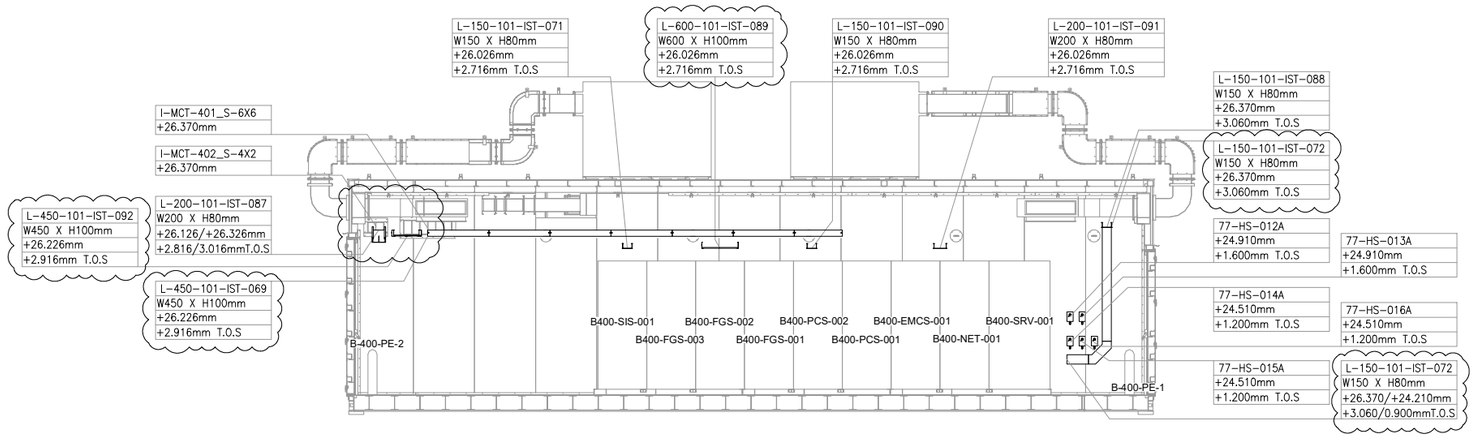
REV. 01



PLAN VIEW

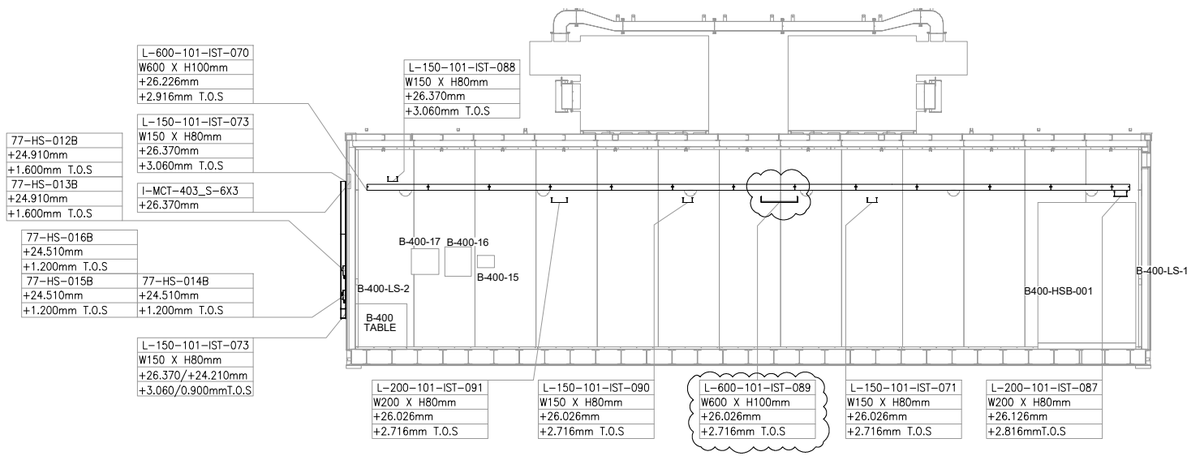
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



SECTION B-B

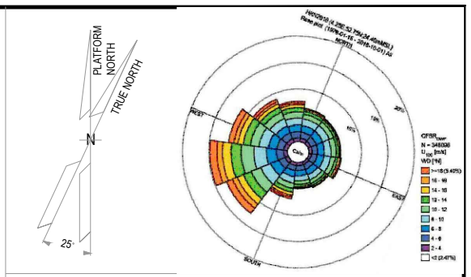
SCALE-1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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-400 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-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

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

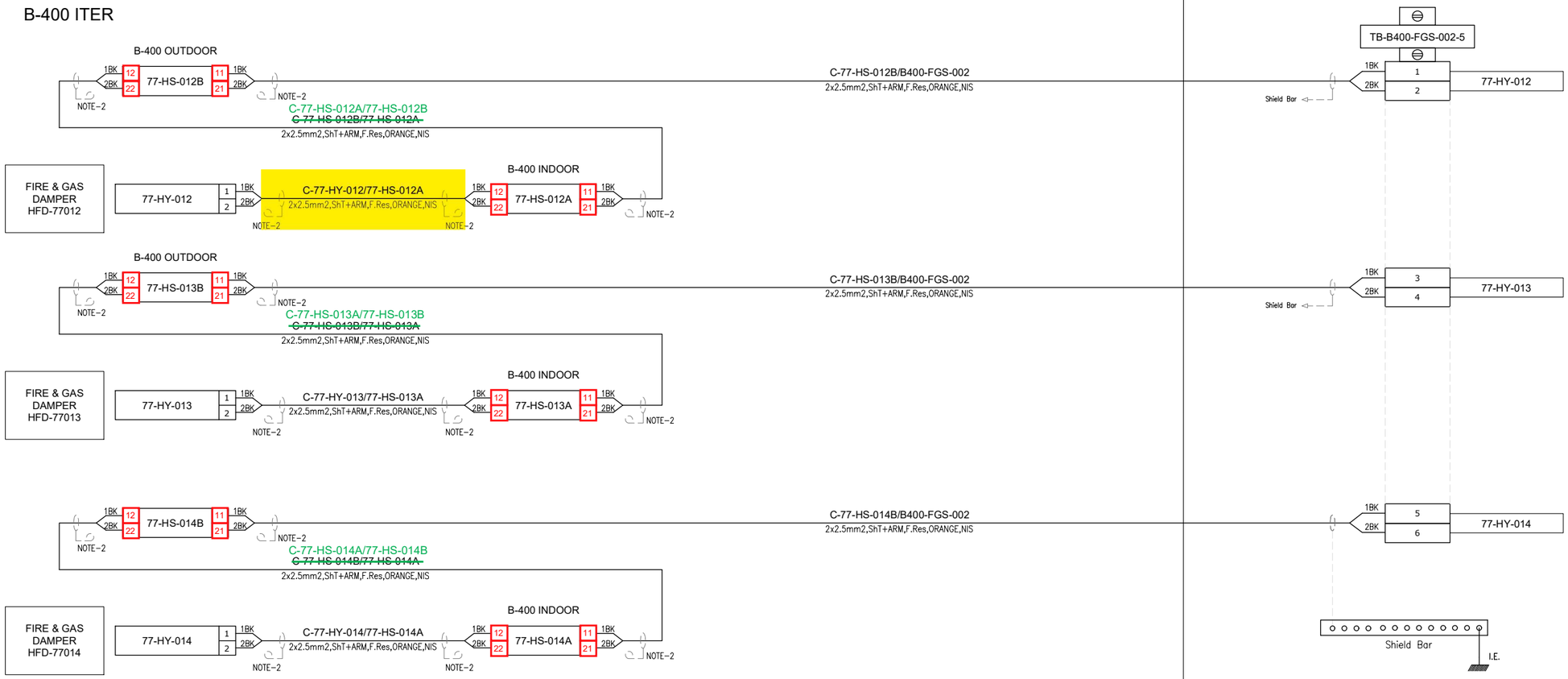
REV.: 01

I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET
B400-FGS-002

<01>

B-400 ITER



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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
FIRE DAMPER COMMAND – B–400

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 076 / REV. 01

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

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

REV. 01

NOTES:

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

<01>

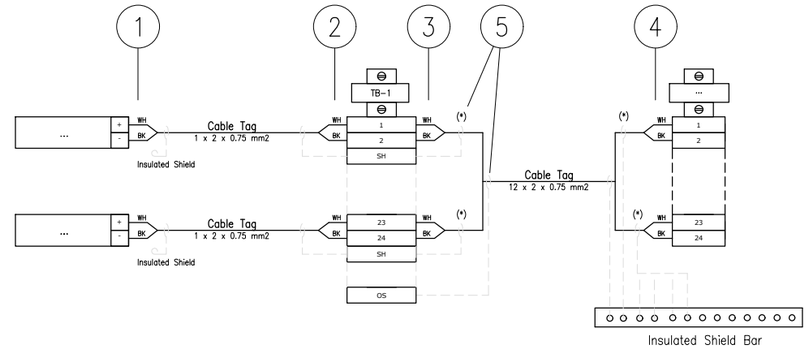
LEGENDS & SYMBOLS:

LEGEND:

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

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



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

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

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

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

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

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

REFERENCE DRAWINGS

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

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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

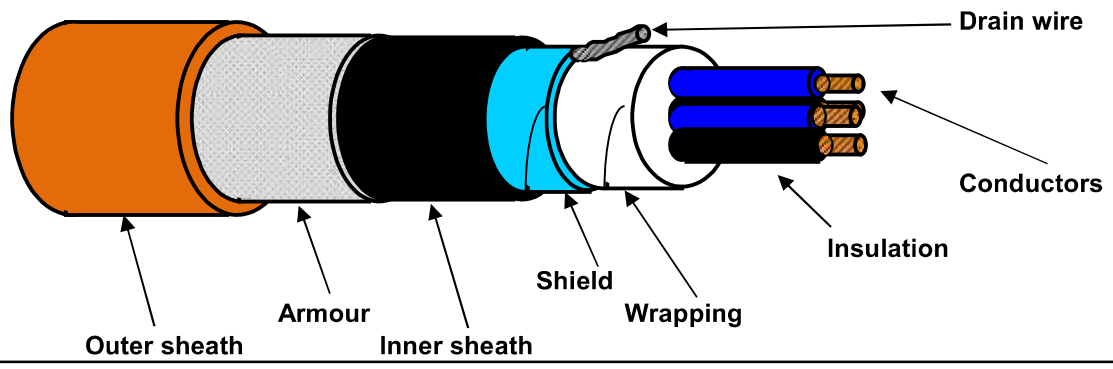
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-77-HY-012/77-HS-012A	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						HFD-77012	Fire Damper	Lower Deck (B-400)	77-HS-012A	Hand Switch	Lower Deck (B-400)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			T2_M20_Double				B-400-SEC-2I / B-400-SEC-2G / B-400-SEC-2E / B-400-SEC-2C / B-400-SEC-2B / B-400-SEC-2J / I-MCT-403

Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250 V (300 V)

2X2,5 - INSTRUMENT CABLE - Fire Resistant - Not I.S.



TECHNICAL FEATURES

Conductors :	**7-STRANDED** plain/bare soft annealed copper wires	**IEC 60228 Class 2**
Insulation :	Mica/Glass Tape (MGT) plus XLPE, Nominal Thickness 0,6 mm	
Cores colour code :	**Black NUMBERED (from 1 to 2)**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not required	
Total Assembling :	8/1mt	
Overall Wrapping:	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Drain wire :	7-Stranded **TINNED** annealed copper drain wire, **size 1,0 sqmm**, in continuous contact with the shield	
Overall Shield :	by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Inner sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,1 mm	
Inner sheath color code:	**Black**	
Armour :	Galvanized Steel Wire Braid Armour (coverage ≥ 90%)	
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, moisture/abrasion/UV Resistant,	
	Average Thickness 1,3 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - 2X2,5 SQMM - MGT/XLPE/OS/LSZH/SWB/LSZH - 150/250 V - IEC 60331.21 -**	
(every 1000 mm)	**IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**	
Under armour diameter :	(10,3 ± 10%) mm	
Over armour diameter :	(11,5 ± 10%) mm	
Outer diameter :	(14,1 ± 10%) mm	
Bending radius :	cable outer diameter x 10 (in fixed installation)	
Voltage Test :	1,5 kV a.c. for 5' (Between Cores) / 1,5 kV a.c. for 5' (Between Cores - Shield)	
Conductors DC Resistance :	≤ 7,86 Ω/km (@ 20°C)	
Insulation Resistance :	≥ 1000 MΩ x Km (@ 20°C)	
Applicable Standards		
Design Guidelines :	**IEC 60092.376**	
ON COMPLETE CABLE		
Fire Resistant test :	**IEC 60331.21**	
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22	
Acid Gas generation :	IEC 60754.1/2	
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)	
Hazardous Areas :	IEC 60079.14 par.9.3.2a	
Temperature Range :		
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)	
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)	
ON COMPLETE CABLE		
During Operation :	(-20°C up to +90°C) (in fixed installation)	
During installation :	(- 5°C up to +50°C)	
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner sheath together with correct ATEX approved equipment or accessories.**	

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	04/04/2024	Messa			
Checked :	04/04/2024	Spaccasassi			
Approved :	04/04/2024	Cucinotta			

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

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

ITEM	Tag	C-77-ZSL-012/B400-FGS-003 : PROXIMITY SWITCH / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-40 : HVAC I&T Equipment Room B-400			Module	LD_B-400	
TASK	code	C10000421	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: 77-ZSL-012 | 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.	OK
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH		>999	MΩ
	CORE to CORE		>999	MΩ
	CORE to SCREEN		>999	MΩ
	CORE to ARMr		>999	MΩ
	SCREEN to EARTH		>999	MΩ
	SCREEN to ARMr		>999	MΩ
CONTINUITY	CORES		0.4	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

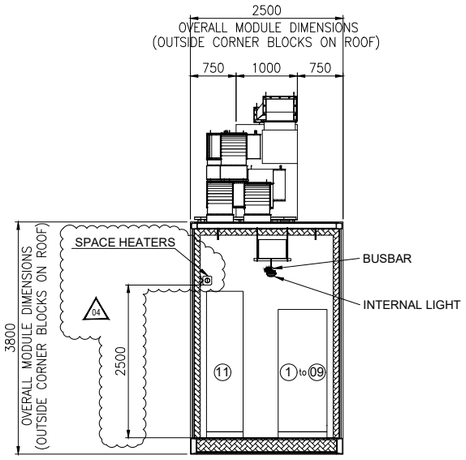
TYPE / SERIAL N°: MEGGER: KEW3125A SERIAL:W8330207 | Calibration date: N° 7722/24 10/07/2024

Comments

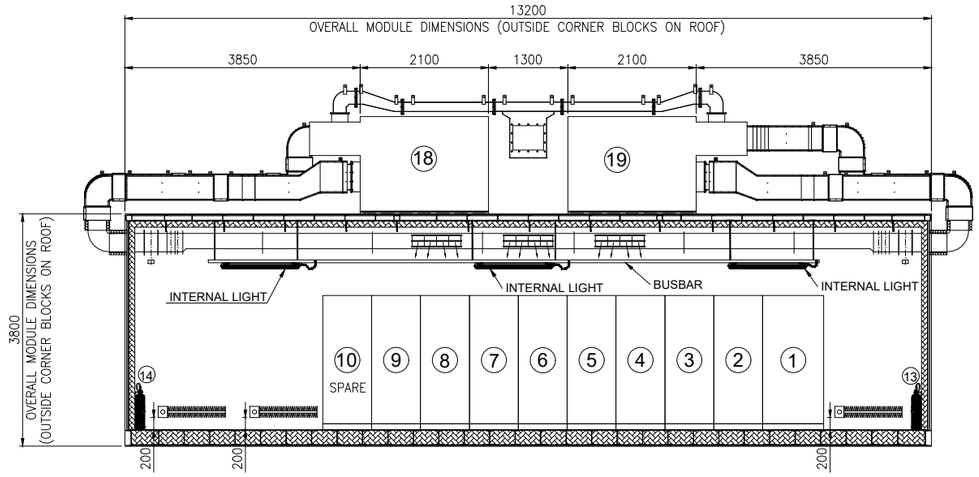
Page 1/1	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Paolo Schintu	
Date	2024-11-12	2024-11-22	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-12T17:36:02.939Z	PROVERLIS Digitaly signed by Paolo Schintu 2024-11-22T15:00:13.902Z	

DRAWING NO. 1724000049-AR-DA-00017

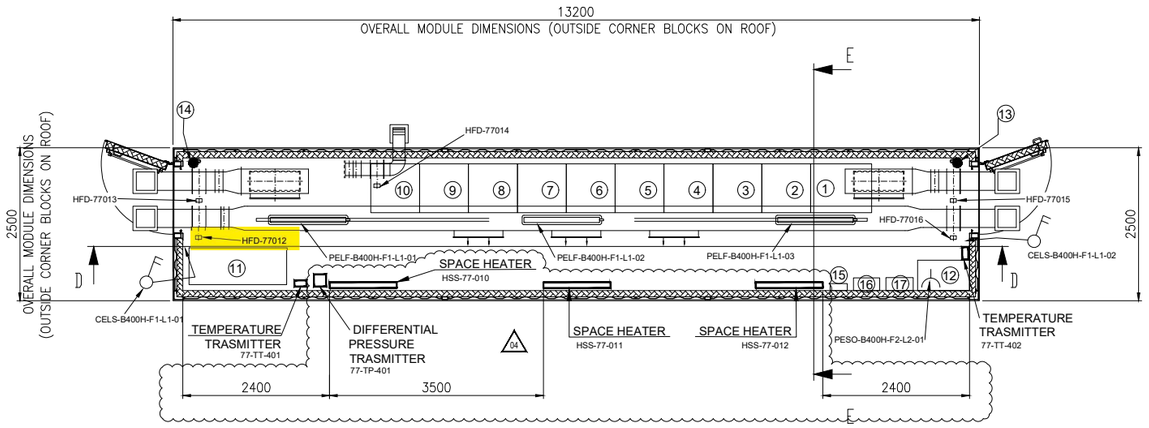
REV. 04



SECTION E-E



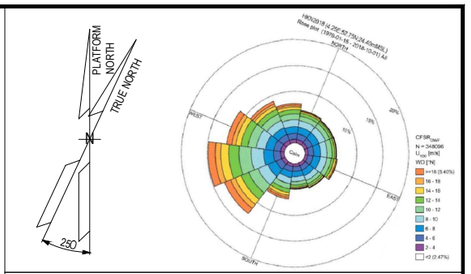
SECTION D-D



"B-400" I&T EQUIPMENT ROOM PLAN

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-010	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-011	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-012	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 FINAL ONE WILL BE CONFIRMED IN THE AS-BUILT ISSUE.

REFERENCE

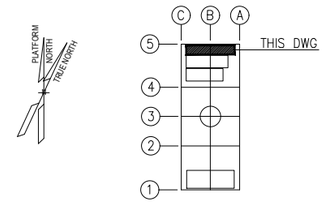
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007
"B-400" FOUNDATION	1724000049-ST-DD-00013
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009

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
04	22/10/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	04/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	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

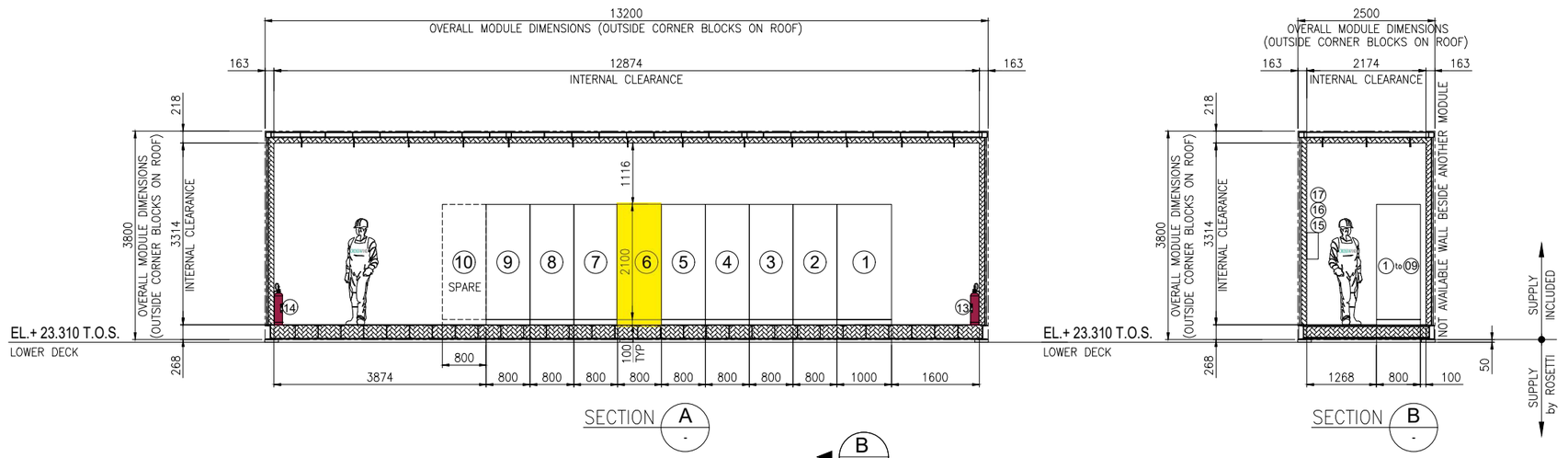
TITLE : BASE LOAD POWER HUB (BLPH)
B-400 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 22/10/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 003	REV. 04

File Name : 1724000049-AR-DA-00017-REV.04

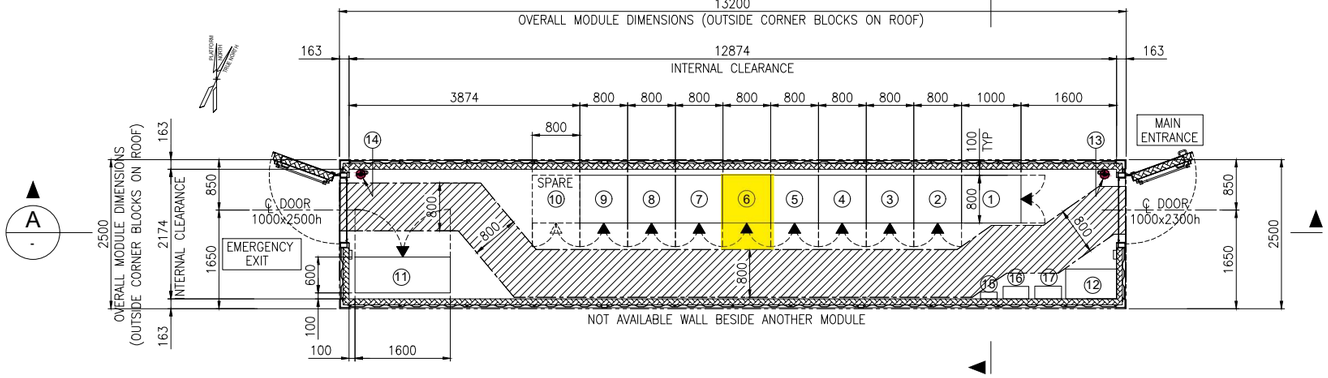
DRAWING NO. 123A90-DDL-IN-DL-40012

REV. 03



SECTION A -

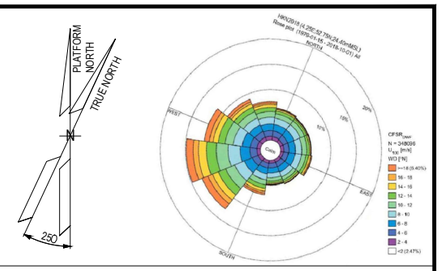
SECTION B -



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

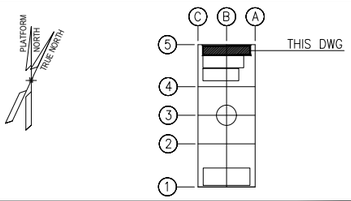
HOLDS

.

REFERENCE

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

KEY PLAN



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

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

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

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

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

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

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

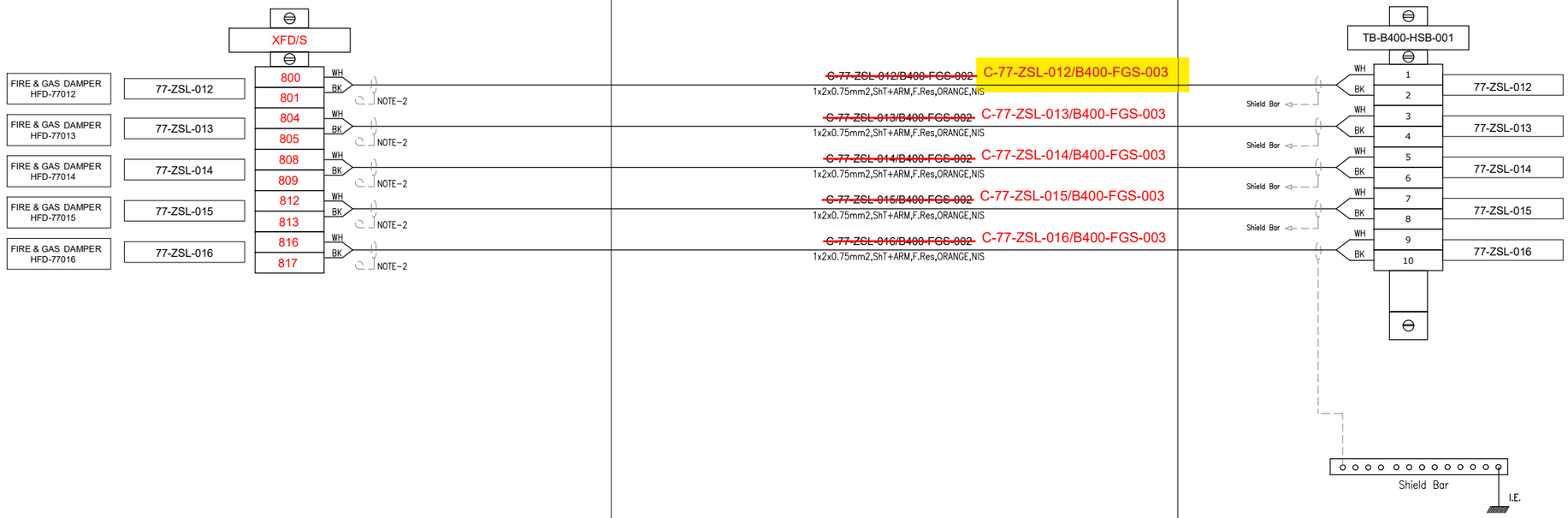
DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		I&T EQUIPMENT ROOM (ITER)
B-400 - ITER	CABLE NO	MARSHALLING CABINET
		~~B400-FGS-002~~ B400-FGS-003

<01>

HVAC Panel B400-HSB-001



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–400

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 059	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>

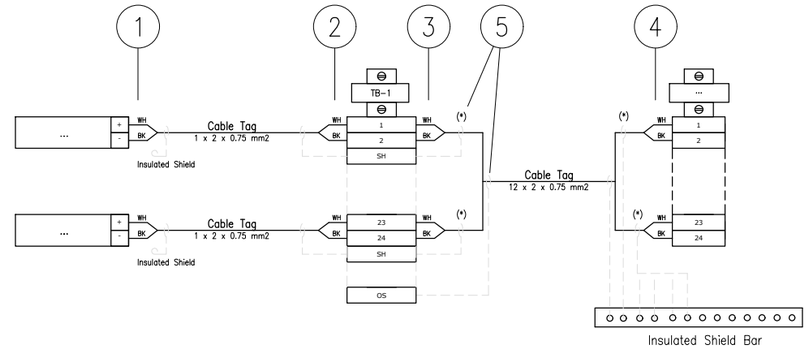
LEGENDS & SYMBOLS:

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

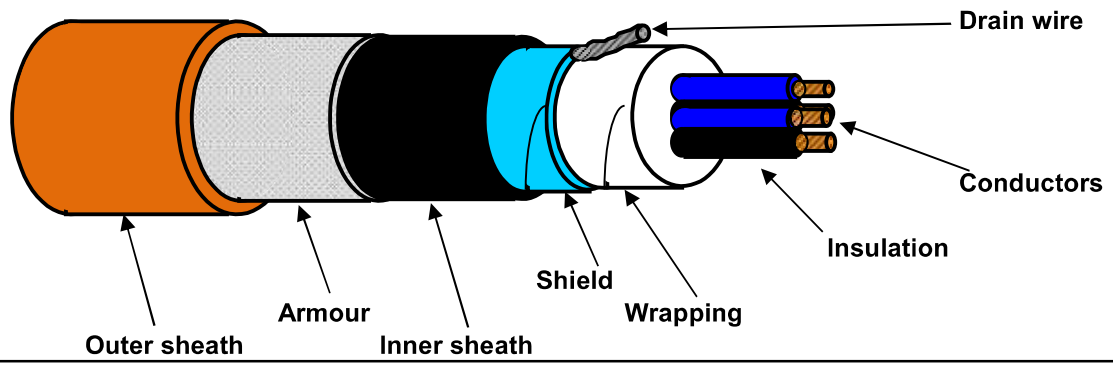
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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
C-77-ZSL-012/B400-FGS-003	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						77-ZSL-012	Proximity Switch	Lower Deck (B-400)		B400-FGS-003	Marshalling FGS	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.				B-400-SEC-2I / B-400-SEC-2G / B-400-SEC-2F

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 — PROVERLIS — CROSSWIND

ITEM	Tag	C-77-HS-013B/B400-FGS-002 : PUSH BUTTON / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-40 : HVAC I&T Equipment Room B-400			Module	LD_B-400_Ext/LD_B-400	
TASK	code	C10000422	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-013B	To	B400-FGS-002		

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	OK
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH	>999	MΩ
	CORE to CORE	>999	MΩ
	CORE to SCREEN	>999	MΩ
	CORE to ARMr	>999	MΩ
	SCREEN to EARTH	>999	MΩ
	SCREEN to ARMr	>999	MΩ
CONTINUITY	CORES	0.4	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

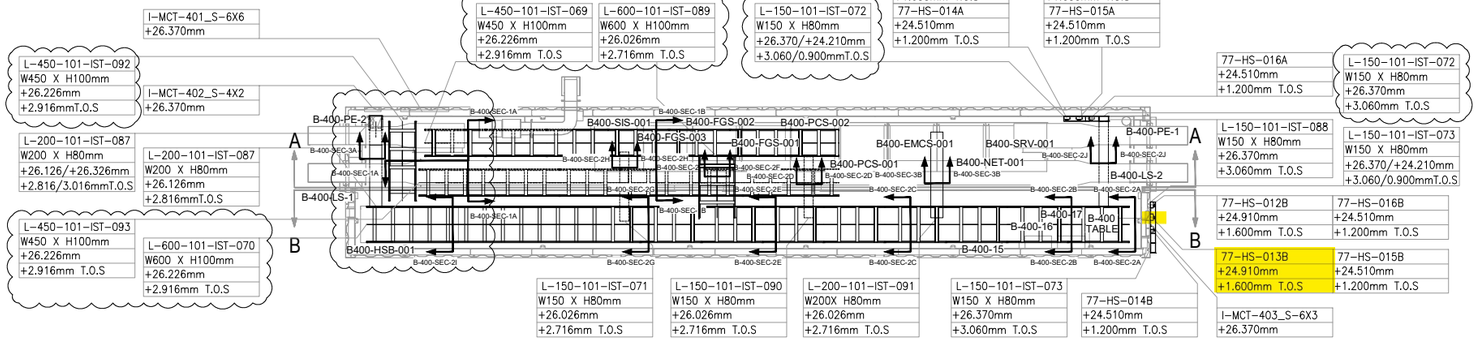
TYPE / SERIAL N°: MEGGER: KEW3125A SERIAL:W8330207 Calibration date: N° 7722/24 10/07/2024

Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Paolo Schintu	
Date	2024-11-12	2024-11-23	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-12T17:36:17.924Z	PROVERLIS Digitaly signed by Paolo Schintu 2024-11-23T09:01:04.931Z	

DRAWING NO. 123A90-DDL-IN-DL-40116

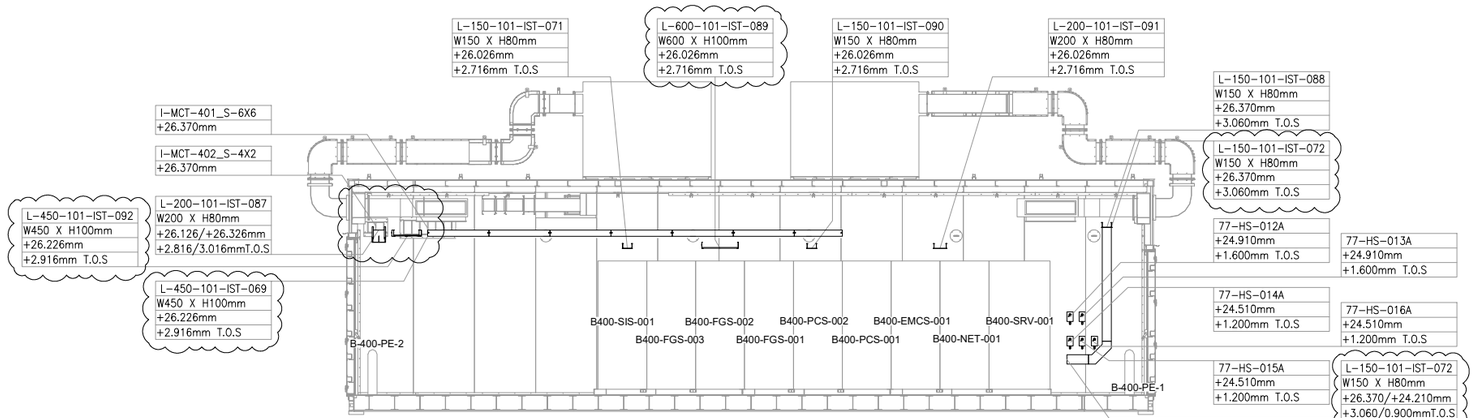
REV. 01



PLAN VIEW

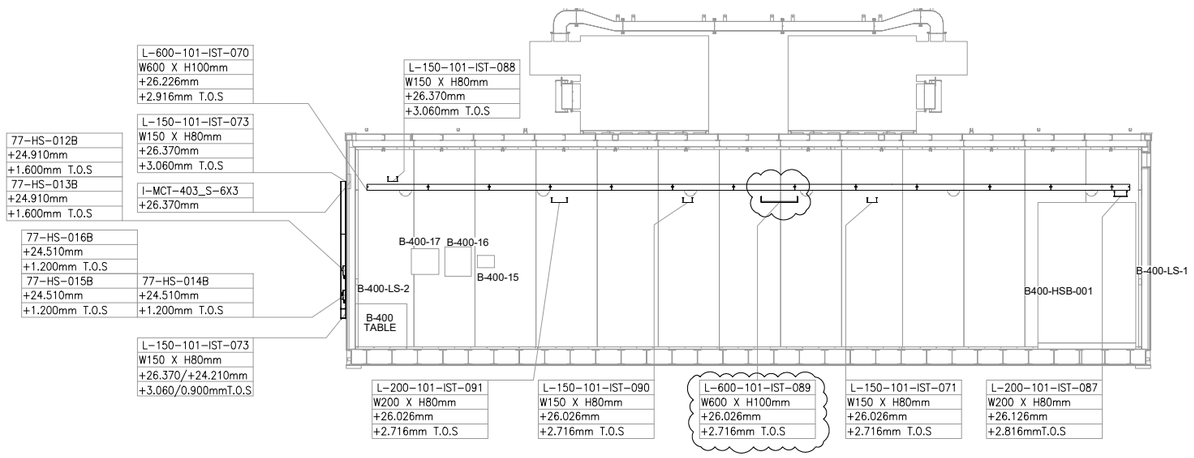
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



SECTION B-B

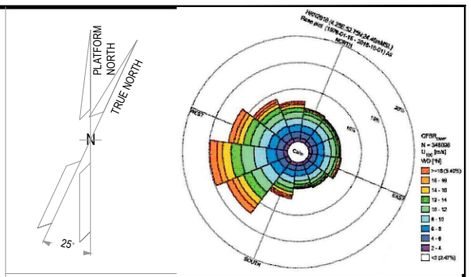
SCALE-1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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

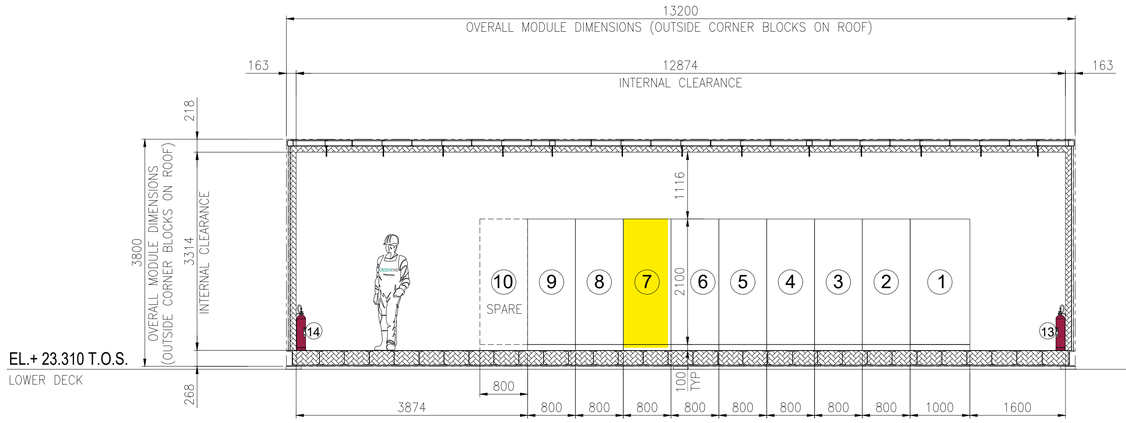
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B-400 Container Lower Deck – TOS EL. 23.310m

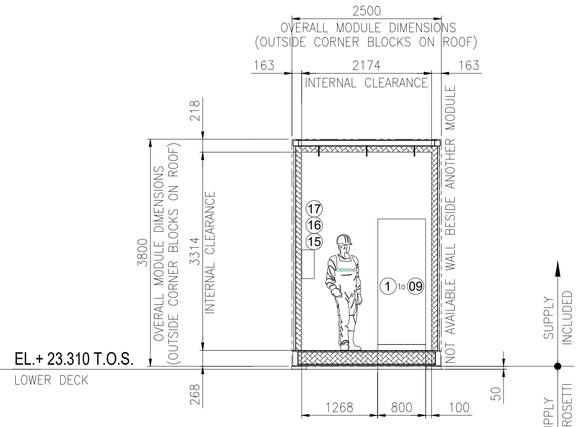
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

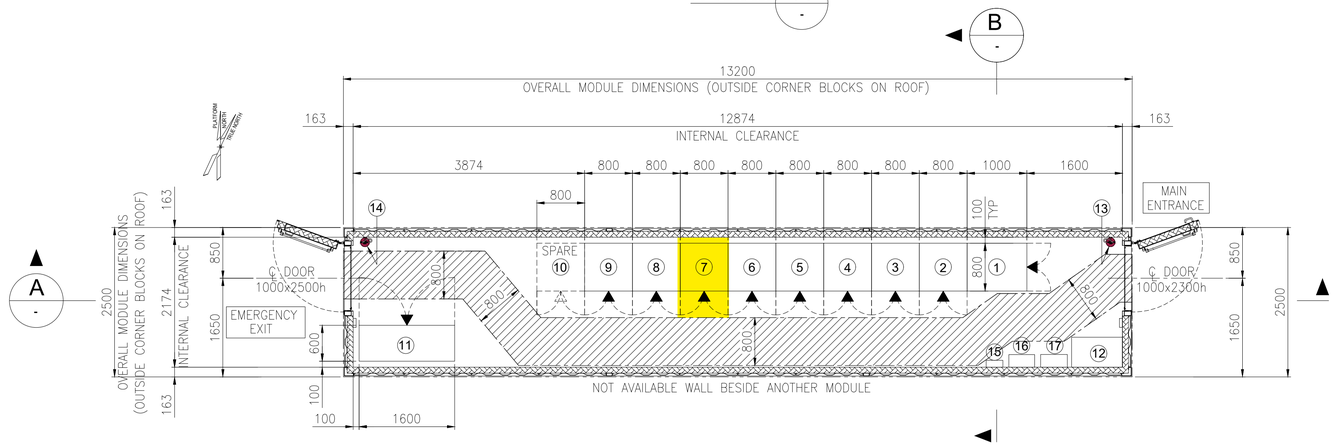
DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 03



SECTION A -



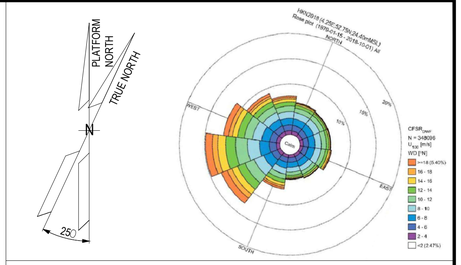
SECTION B -



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

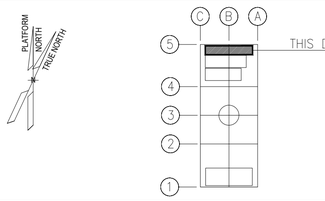
HOLDS

.

REFERENCE

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

KEY PLAN



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

CROSSWIND | ROSETTI MARINO

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

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

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40012**
REV.: 3_A | DATE: 07/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

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

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

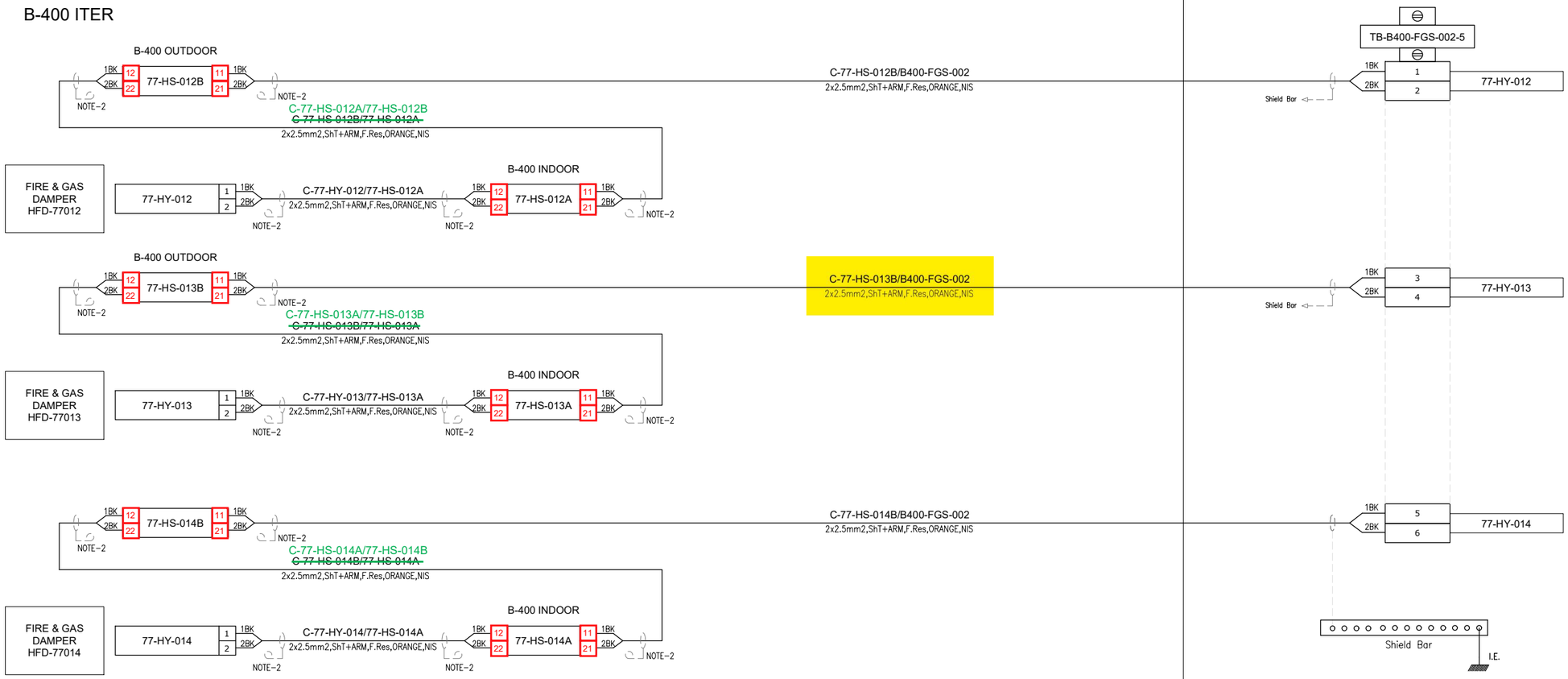
REV.: 01

I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET
B400-FGS-002

<01>

B-400 ITER



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 COMMAND – B–400

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	076	01

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

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

REV. 01

NOTES:

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

<01>

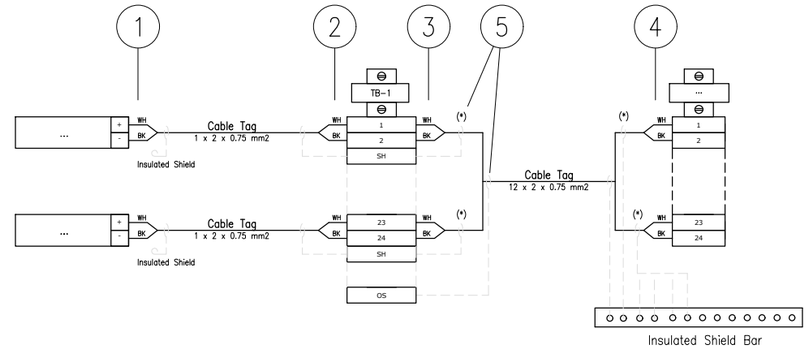
LEGENDS & SYMBOLS:

LEGEND:

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

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



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

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

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

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

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

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

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

REFERENCE DRAWINGS

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

CROSSWIND

ROSETTI MARINO

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

REV.:	DATE:	SIGNATURE:
1_K	18/11/24	G.Randi

ROSETTI MARINO SpA

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

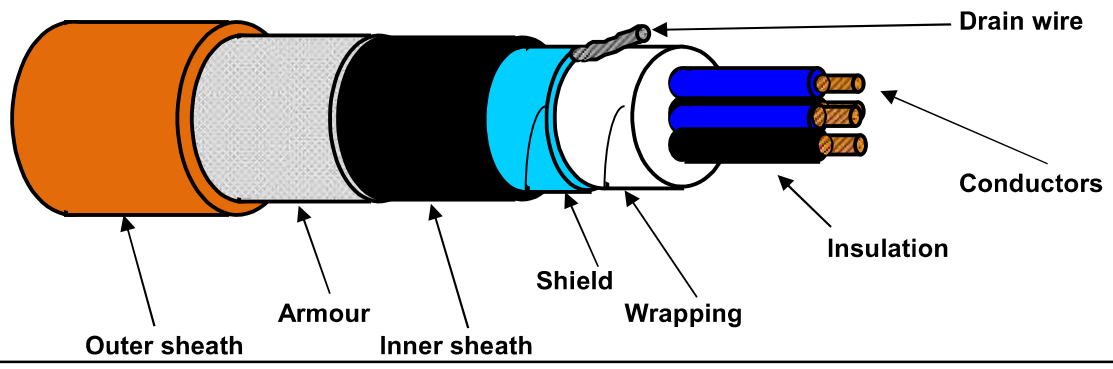
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-77-HS-013B/B400-FGS-002	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						77-HS-013B	Hand Switch	Lower Deck (B-400) Ext.	B400-FGS-002	Marshalling FGS	Lower Deck (B-400)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			n.a.				B-400-SEC-2A / B-400-SEC-2B / B-400-SEC-2C / B-400-SEC-2E / B-400-SEC-2F

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-013A/77-HS-013B : PUSH BUTTON / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-40 : HVAC I&T Equipment Room B-400			Module	LD_B-400/LD_B-400_Ext	
TASK	code	C10000423	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-013A	To	77-HS-013B		

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	OK
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	OK
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH		>999	MΩ
	CORE to CORE		>999	MΩ
	CORE to SCREEN		>999	MΩ
	CORE to ARMr		>999	MΩ
	SCREEN to EARTH		>999	MΩ
	SCREEN to ARMr		>999	MΩ
CONTINUITY	CORES		0.7	Ω
	SCREEN		0.7	Ω
	EARTH		0.7	Ω
	ARMr		0.6	Ω
	TEST VOLTS		500	V

TEST ALL CORES AND RECORD LOWEST VALUE

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

TESTING INSTRUMENTS USED

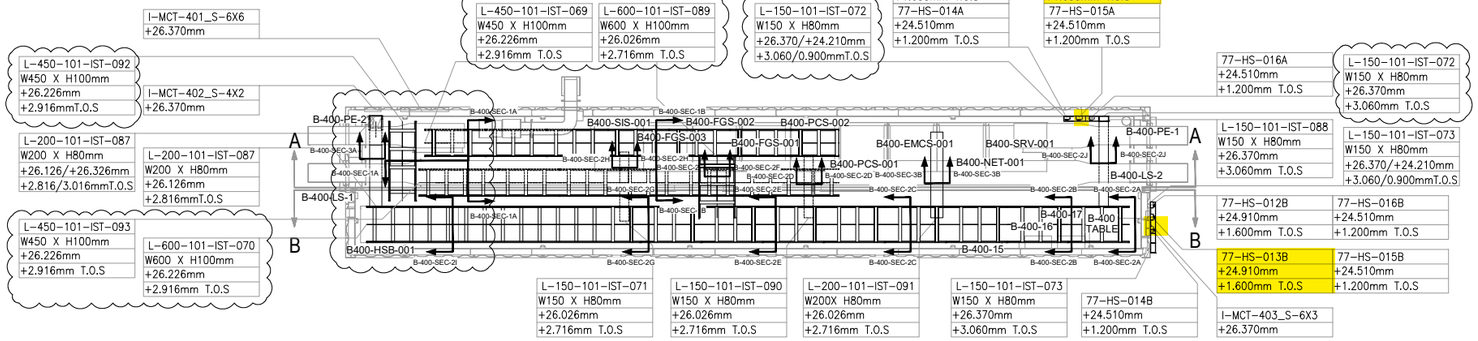
TYPE / SERIAL N°: KEW3125A / W8330207 Calibration date: 10-07-2024

Comments

Page 1/1	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:37:21.935Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T16:06:03.655Z	

DRAWING NO. 123A90-DDL-IN-DL-40116

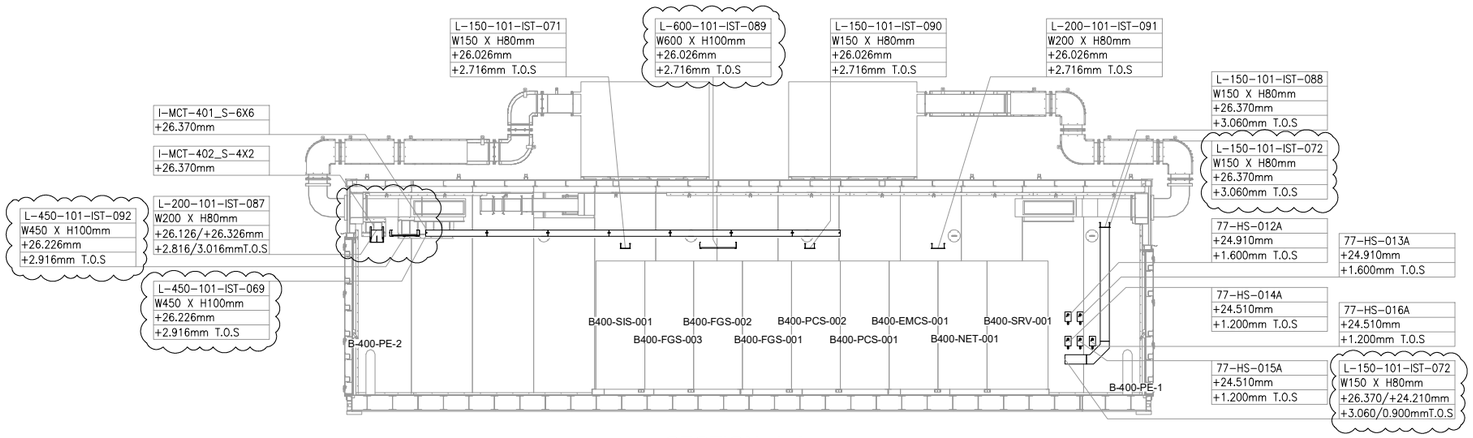
REV. 01



PLAN VIEW

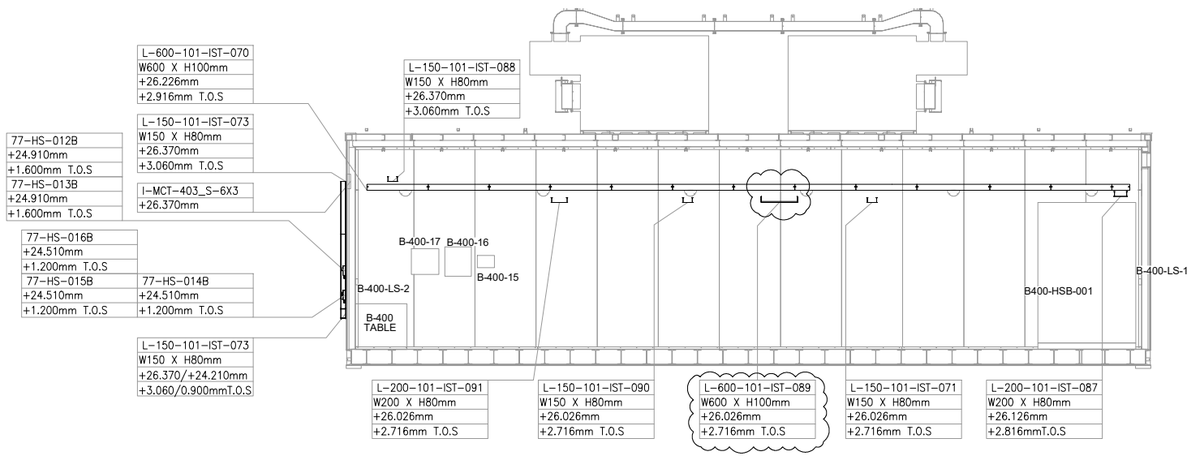
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



SECTION B-B

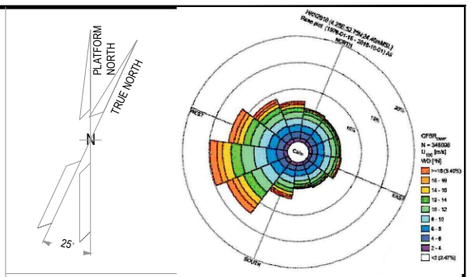
SCALE-1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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-400 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-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

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

REV.: 01

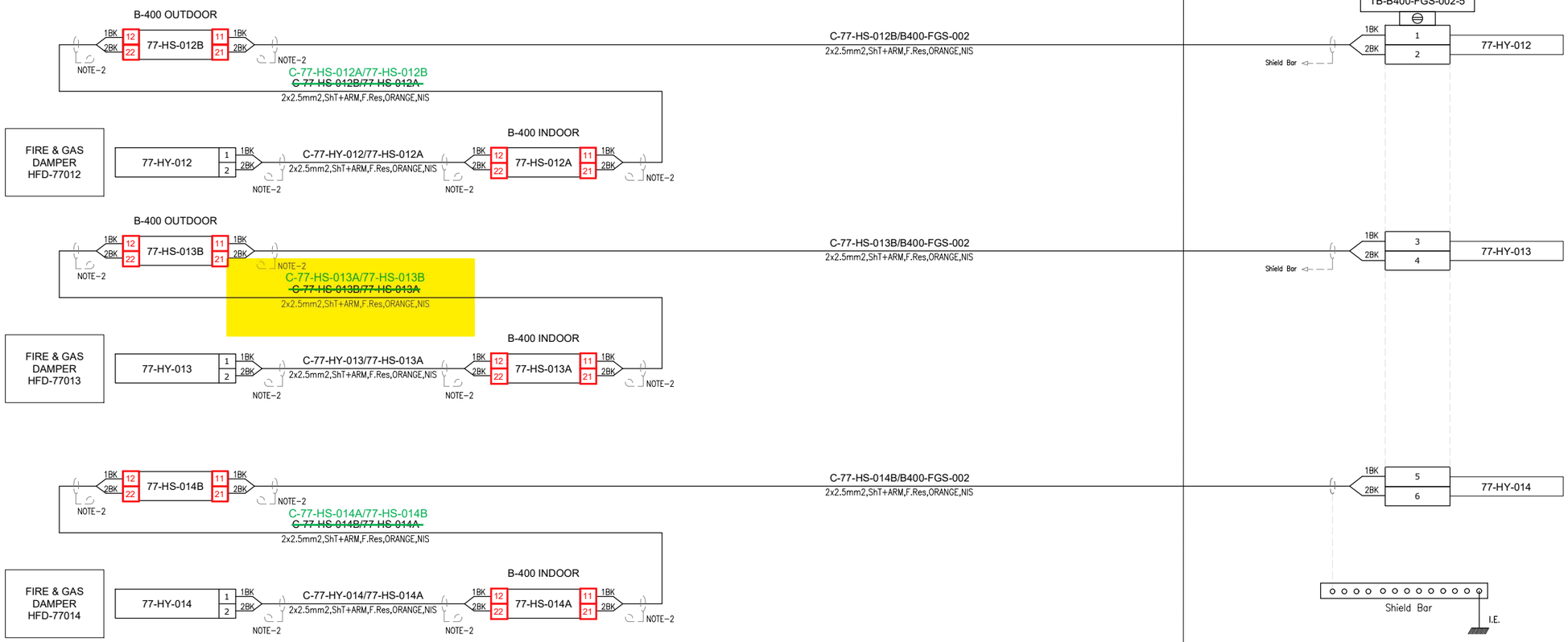
I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-FGS-002

<01>

B-400 ITER



VALID FOR CONSTRUCTION

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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
FIRE DAMPER COMMAND – B–400

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	076	01

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

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

REV. 01

NOTES:

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

<01>

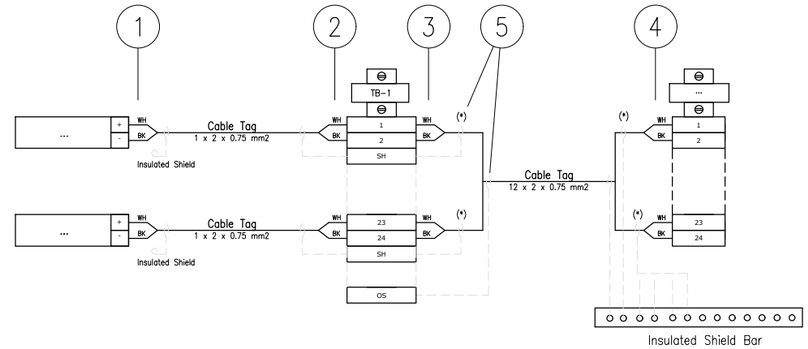
LEGENDS & SYMBOLS:

LEGEND:

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

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



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

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

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

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

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

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

REFERENCE DRAWINGS

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

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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

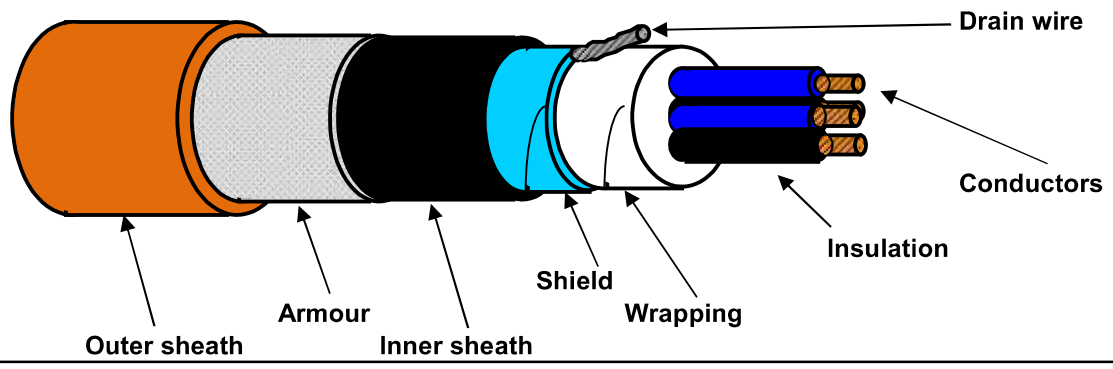
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-77-HS-013A/77-HS-013B	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						77-HS-013A	Hand Switch	Lower Deck (B-400)	77-HS-013B	Hand Switch	Lower Deck (B-400) Ext.	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			T2_M20_Double				B-400-SEC-2A / B-400-SEC-2J / I-MCT-403

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-HY-013/77-HS-013A	: FIRE DAMPER / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-40	: HVAC I&T Equipment Room B-400	Module	LD_B-400		
TASK	code	C10000424	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-77013 | To: 77-HS-013A

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.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH	>999	MΩ
	CORE to CORE	>999	MΩ
	CORE to SCREEN	>999	MΩ
	CORE to ARMr	>999	MΩ
	SCREEN to EARTH	>999	MΩ
	SCREEN to ARMr	>999	MΩ
CONTINUITY	CORES	0.6	Ω
	SCREEN	0.5	Ω
	EARTH	0.5	Ω
	ARMr	0.5	Ω
	TEST VOLTS	500	V

TEST ALL CORES AND RECORD LOWEST VALUE

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

TESTING INSTRUMENTS USED

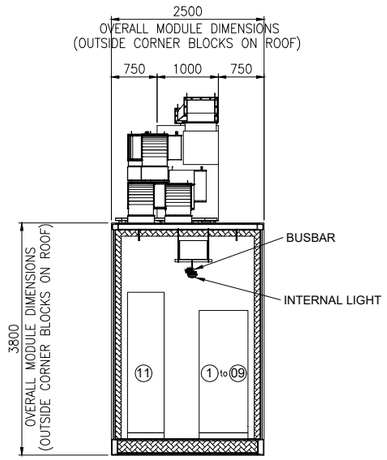
TYPE / SERIAL N°: KEW3125A / W8330207 | Calibration date: 10-07-2024

Comments

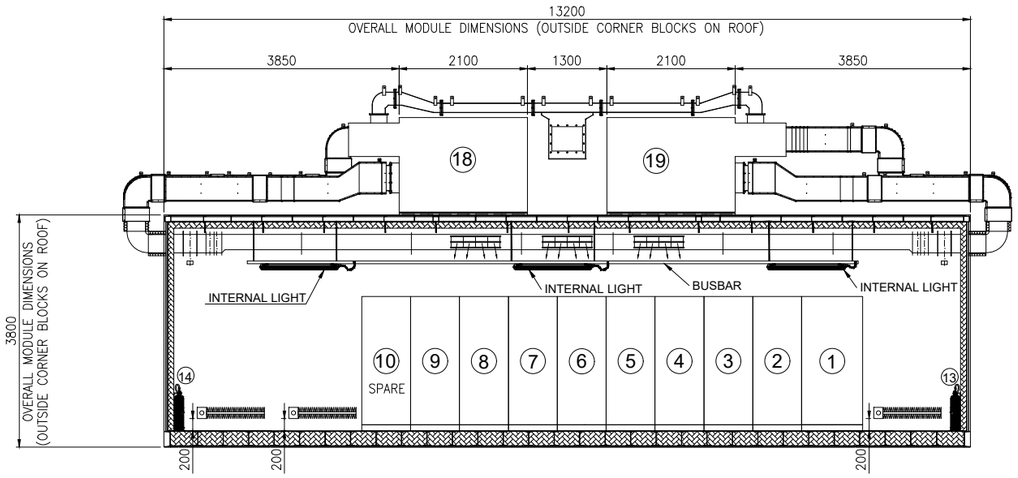
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:37:34.406Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T16:04:31.489Z	

DRAWING NO. 1724000049-AR-DA-00017

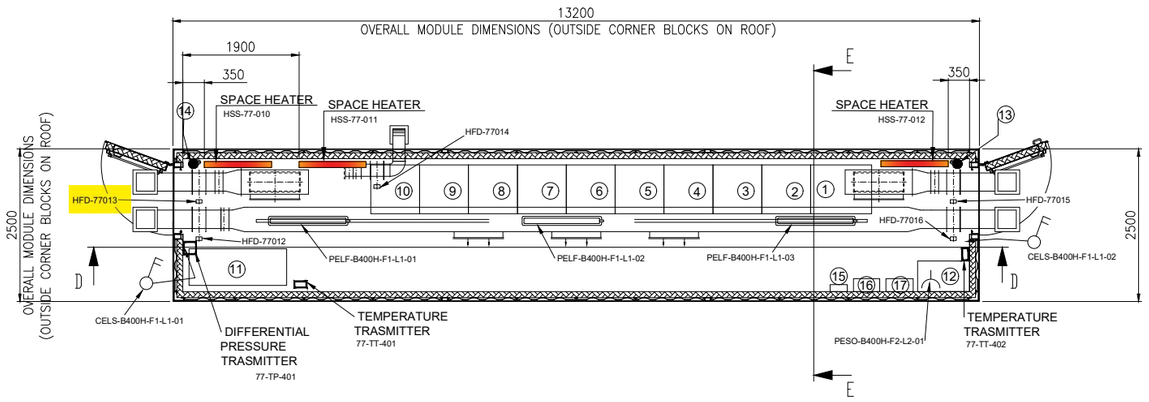
REV. 03



SECTION E-E

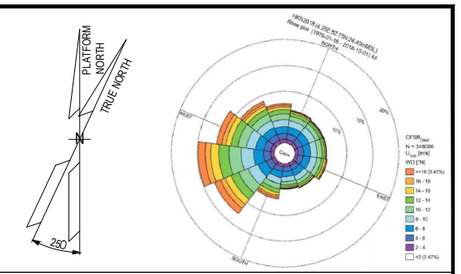


SECTION D-D



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-010	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-011 (03)	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-012	SPACE HEATER 3	184	145	1100	5	



NOTE

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

REFERENCE

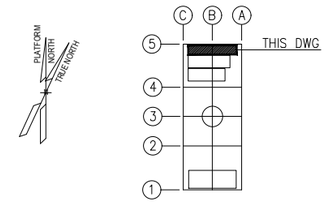
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007
(03) "B-400" FOUNDATION	1724000049-ST-DD-00013
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	04/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	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

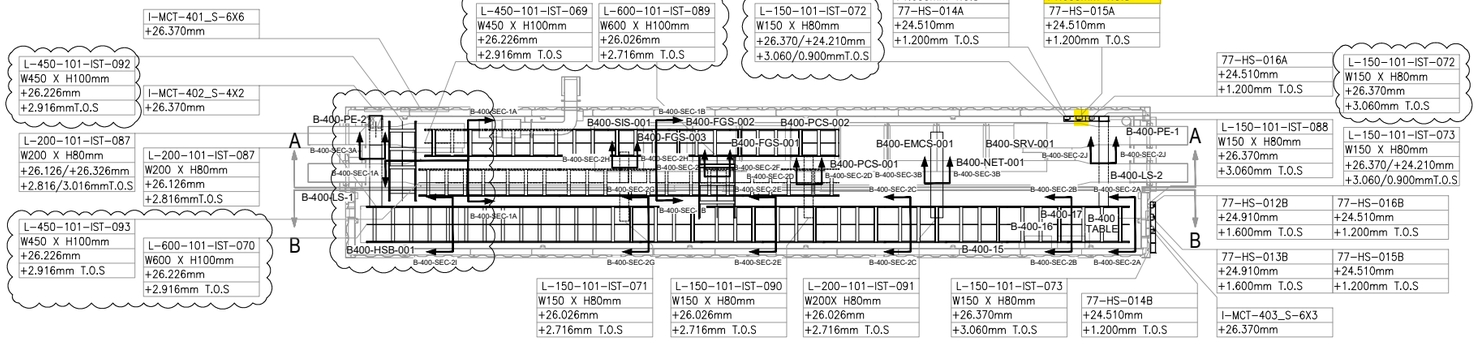
TITLE : BASE LOAD POWER HUB (BLPH)
B-400 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 003	REV. 03

File Name : 1724000049-AR-DA-00017-REV.03

DRAWING NO. 123A90-DDL-IN-DL-40116

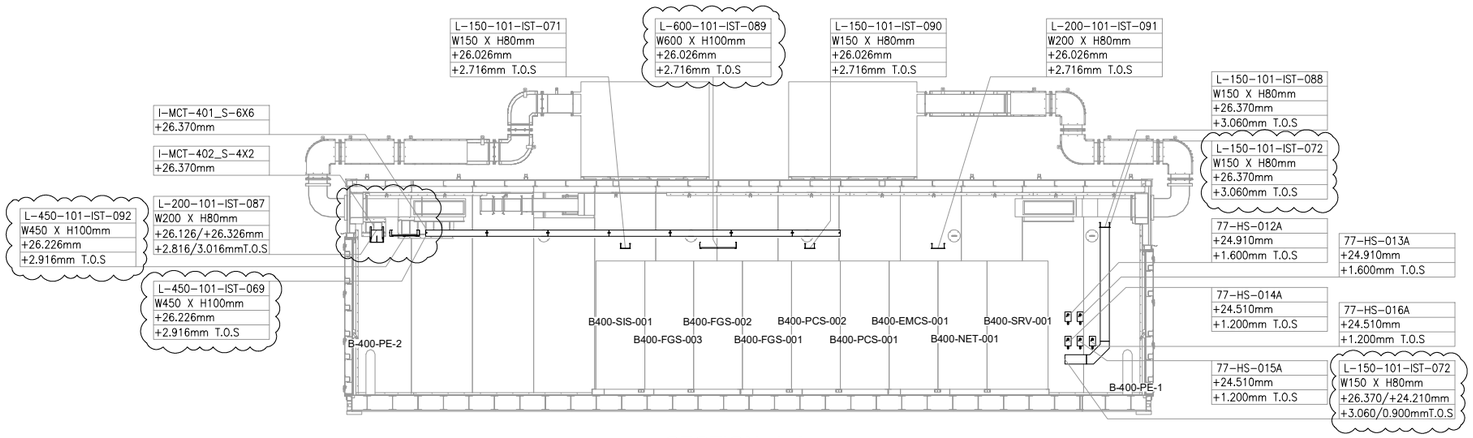
REV. 01



PLAN VIEW

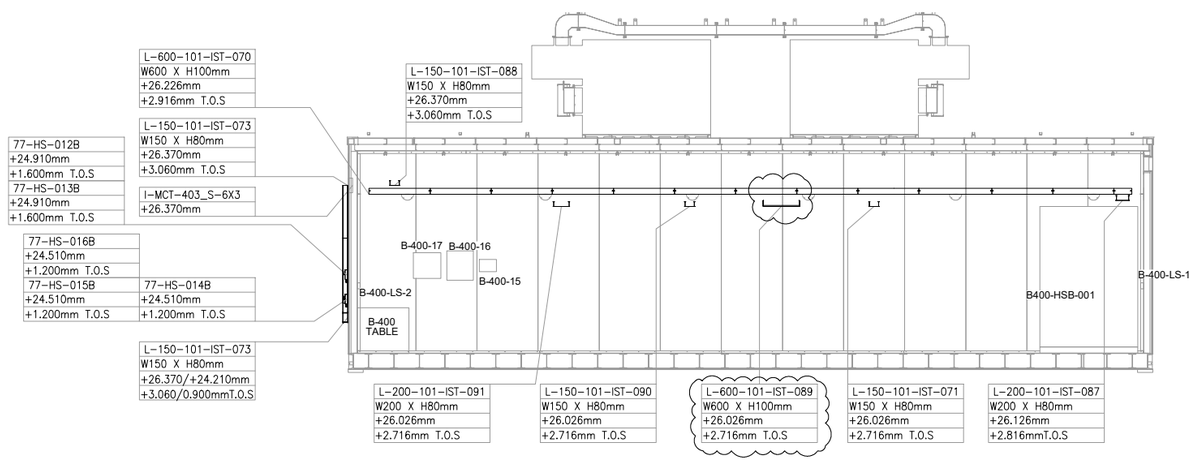
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



SECTION B-B

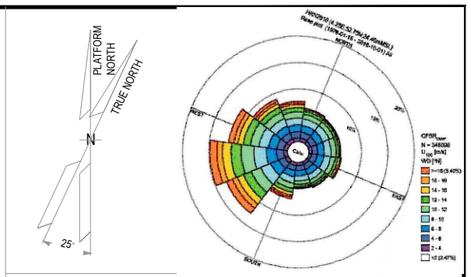
SCALE-1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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-400 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-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

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

REV.: 01

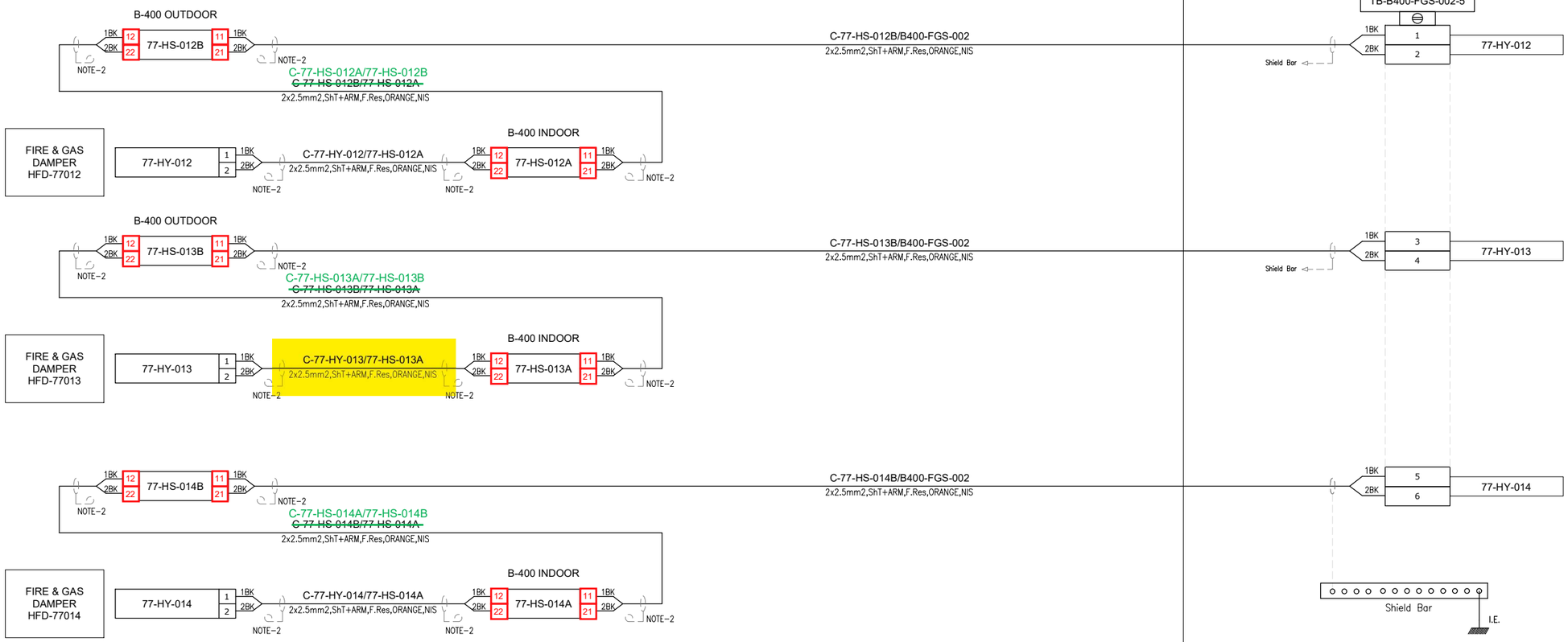
I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-FGS-002

<01>

B-400 ITER



VALID FOR CONSTRUCTION

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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
FIRE DAMPER COMMAND – B–400

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	076	01

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

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

REV. 01

NOTES:

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

<01>

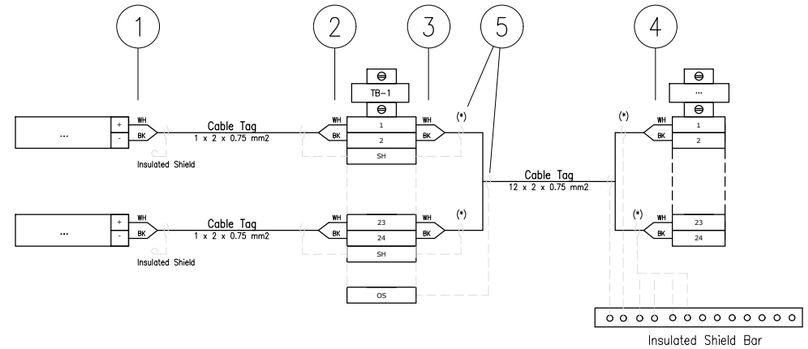
LEGENDS & SYMBOLS:

LEGEND:

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

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



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

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

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

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

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

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

REFERENCE DRAWINGS

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

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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

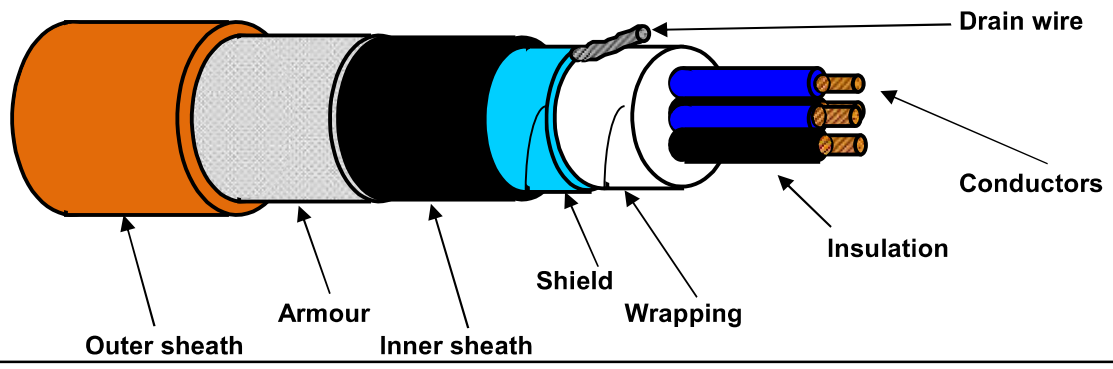
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-77-HY-013/77-HS-013A	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						HFD-77013	Fire Damper	Lower Deck (B-400)	77-HS-013A	Hand Switch	Lower Deck (B-400)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			T2_M20_Double				B-400-SEC-2I / B-400-SEC-2G / B-400-SEC-2E / B-400-SEC-2C / B-400-SEC-2B / B-400-SEC-2J / I-MCT-403

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-ZSL-013/B400-FGS-003	: PROXIMITY SWITCH / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-40	: HVAC I&T Equipment Room B-400	Module	LD_B-400		
TASK	code	C10000425	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	77-ZSL-013	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.	OK
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH		>999	MΩ
	CORE to CORE		>999	MΩ
	CORE to SCREEN		>999	MΩ
	CORE to ARMr		>999	MΩ
	SCREEN to EARTH		>999	MΩ
	SCREEN to ARMr		>999	MΩ
CONTINUITY	CORES		0.4	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

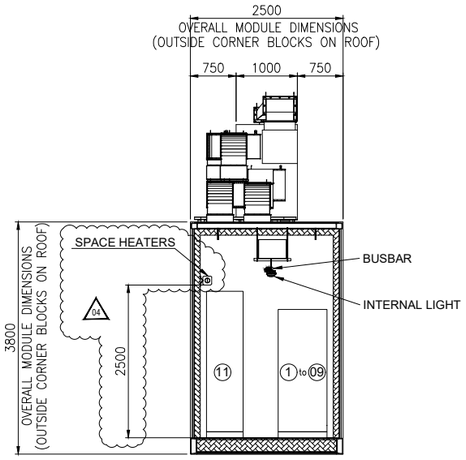
TYPE / SERIAL N°: MEGGER: KEW3125A SERIAL:W8330207 Calibration date: N° 7722/24 10/07/2024

Comments

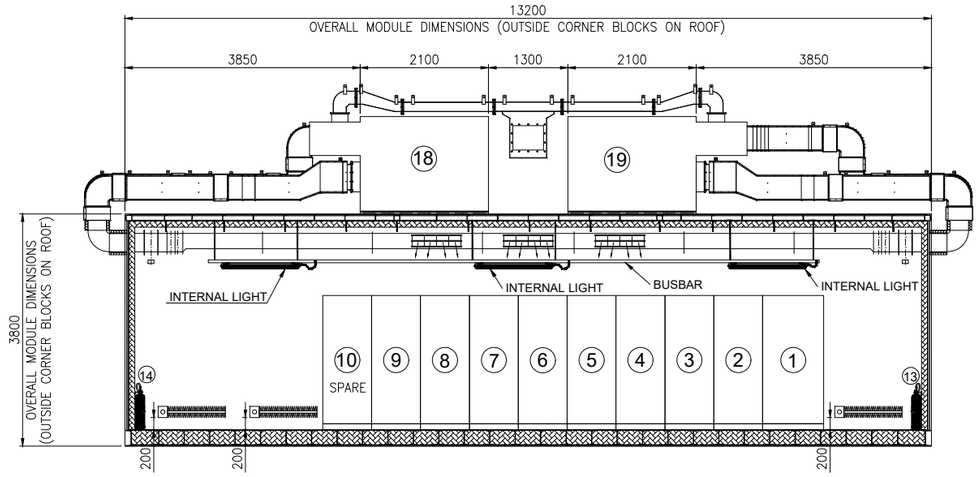
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Paolo Schintu	
Date	2024-11-12	2024-11-22	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-12T17:36:29.292Z	PROVERLIS Digitaly signed by Paolo Schintu 2024-11-22T16:02:07.650Z	

DRAWING NO. 1724000049-AR-DA-00017

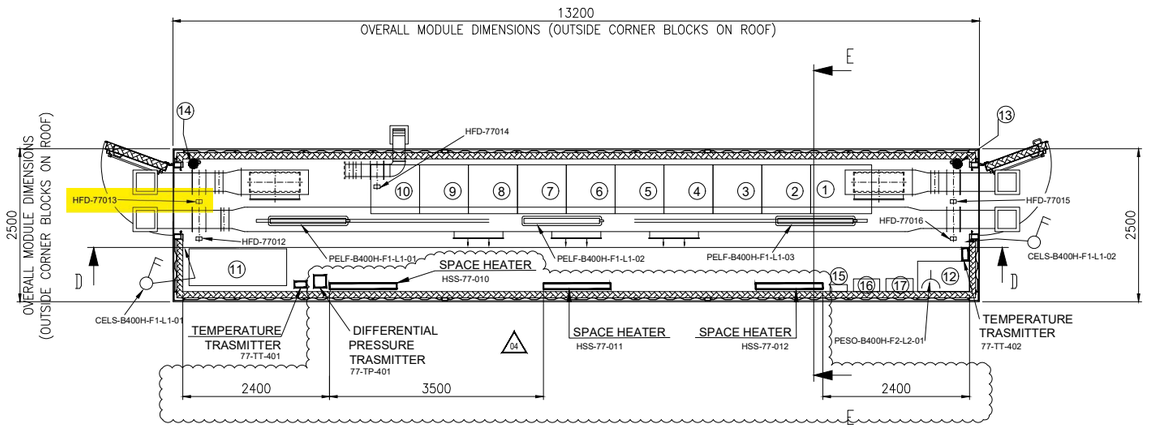
REV. 04



SECTION E-E



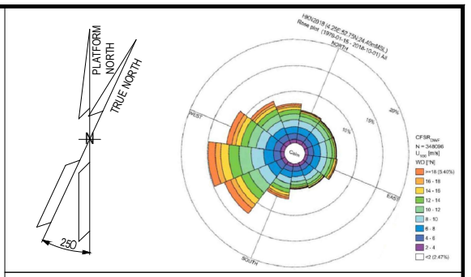
SECTION D-D



"B-400" I&T EQUIPMENT ROOM PLAN

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-010	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-011	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-012	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 FINAL ONE WILL BE CONFIRMED IN THE AS-BUILT ISSUE.

REFERENCE

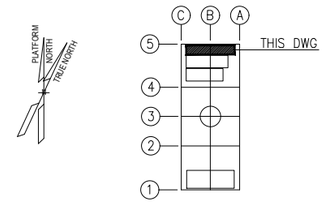
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007
"B-400" FOUNDATION	1724000049-ST-DD-00013
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009

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
04	22/10/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	04/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	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

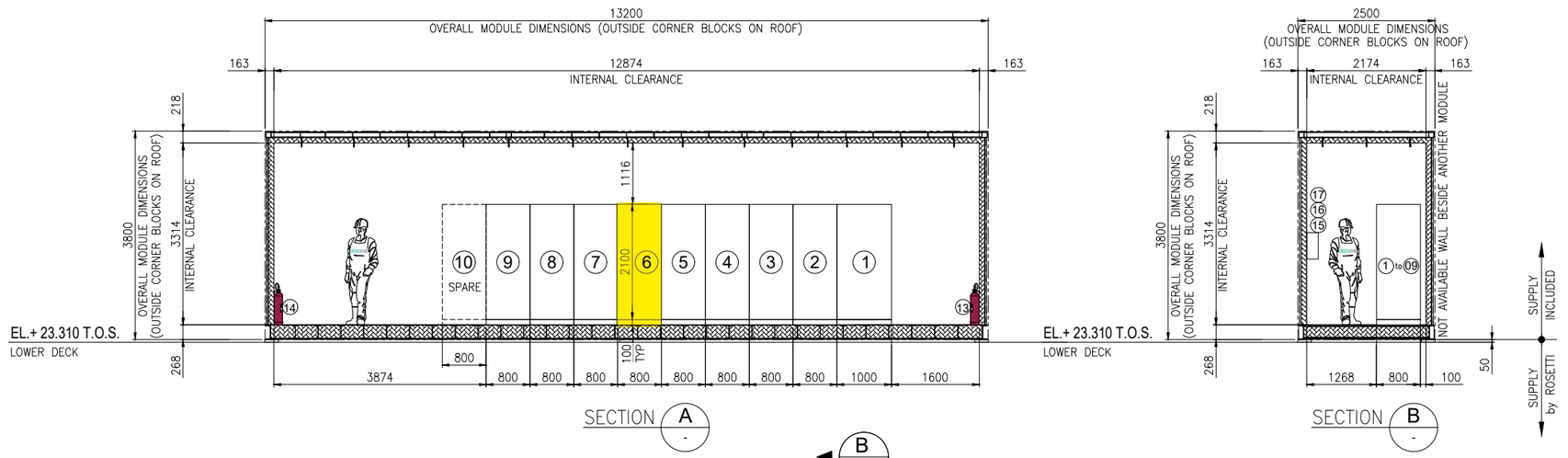
TITLE : BASE LOAD POWER HUB (BLPH)
B-400 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 22/10/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 003	REV. 04

File Name : 1724000049-AR-DA-00017-REV.04

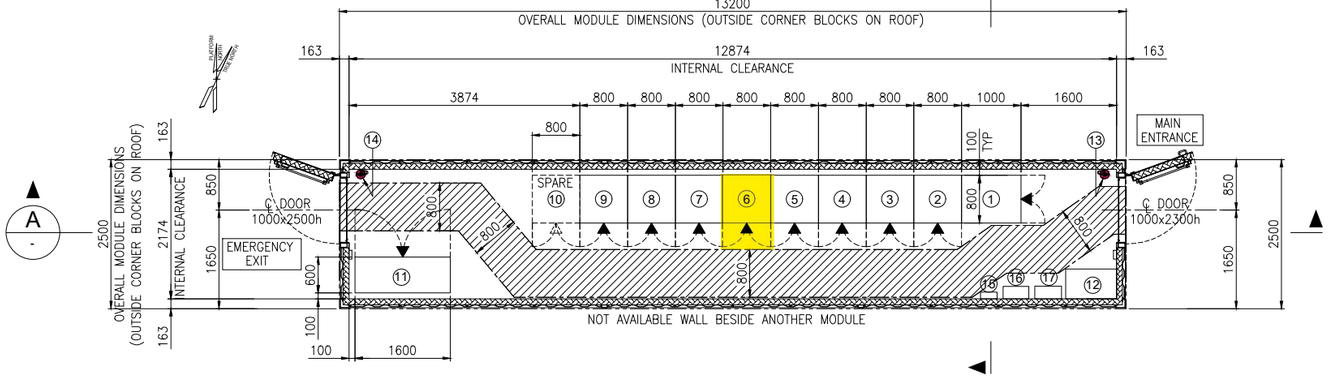
DRAWING NO. 123A90-DDL-IN-DL-40012

REV. 03



SECTION A -

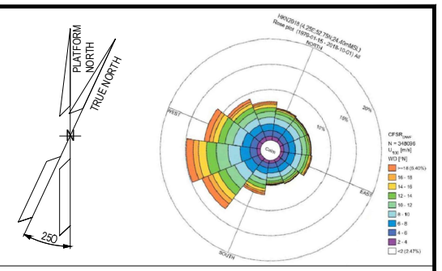
SECTION B -



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

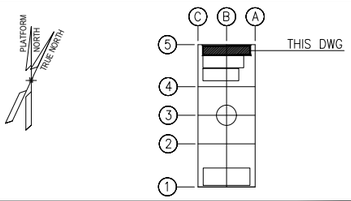
HOLDS

.

REFERENCE

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

KEY PLAN



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

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

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

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

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

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

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

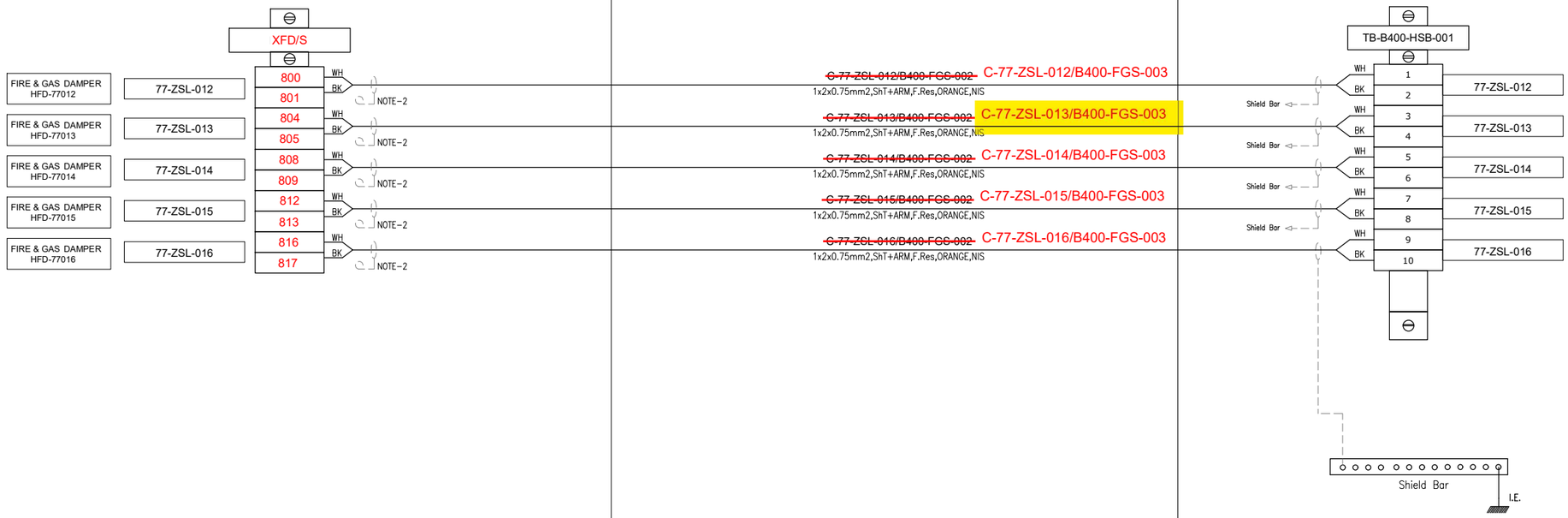
DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		I&T EQUIPMENT ROOM (ITER)
B-400 - ITER	CABLE NO	MARSHALLING CABINET
		~~B400-FGS-002~~
		B400-FGS-003

<01>

HVAC Panel B400-HSB-001



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–400

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 059	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>

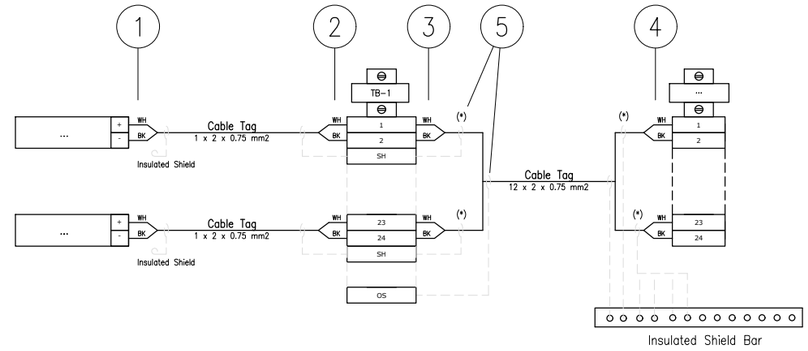
LEGENDS & SYMBOLS:

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

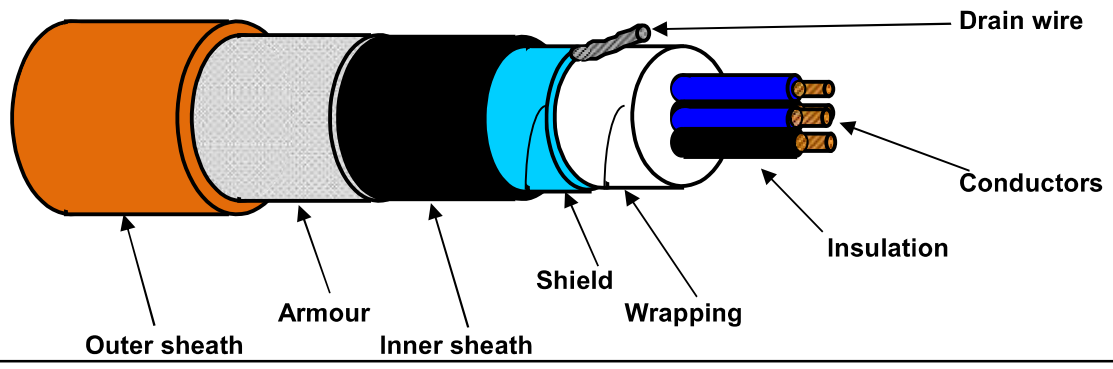
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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
C-77-ZSL-013/B400-FGS-003	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						77-ZSL-013	Proximity Switch	Lower Deck (B-400)		B400-FGS-003	Marshalling FGS	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.				B-400-SEC-2I / B-400-SEC-2G / B-400-SEC-2F

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 | PROVERLIS | CROSSWIND

ITEM	Tag	C-77-HS-014B/B400-FGS-002 : PUSH BUTTON / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-40 : HVAC I&T Equipment Room B-400			Module	LD_B-400_Ext/LD_B-400	
TASK	code	C10000426	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-014B | To: B400-FGS-002

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	OK
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH		>999	MΩ
	CORE to CORE		>999	MΩ
	CORE to SCREEN		>999	MΩ
	CORE to ARMr		>999	MΩ
	SCREEN to EARTH		>999	MΩ
	SCREEN to ARMr		>999	MΩ
CONTINUITY	CORES		0.4	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

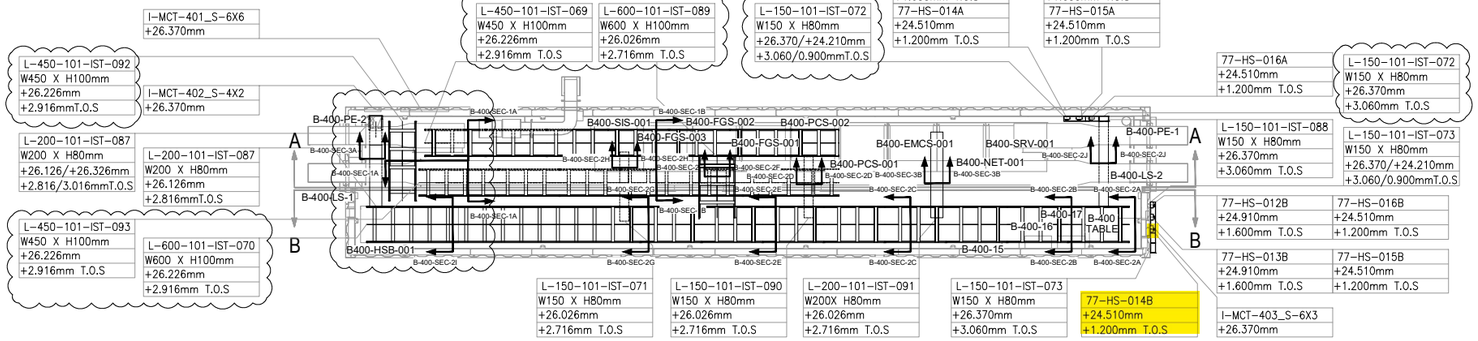
TYPE / SERIAL N°: MEGGER: KEW3125A SERIAL:W8330207 Calibration date: N° 7722/24 10/07/2024

Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Paolo Schintu	
Date	2024-11-12	2024-11-23	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-12T17:37:09.477Z	PROVERLIS Digitaly signed by Paolo Schintu 2024-11-23T09:04:19.379Z	

DRAWING NO. 123A90-DDL-IN-DL-40116

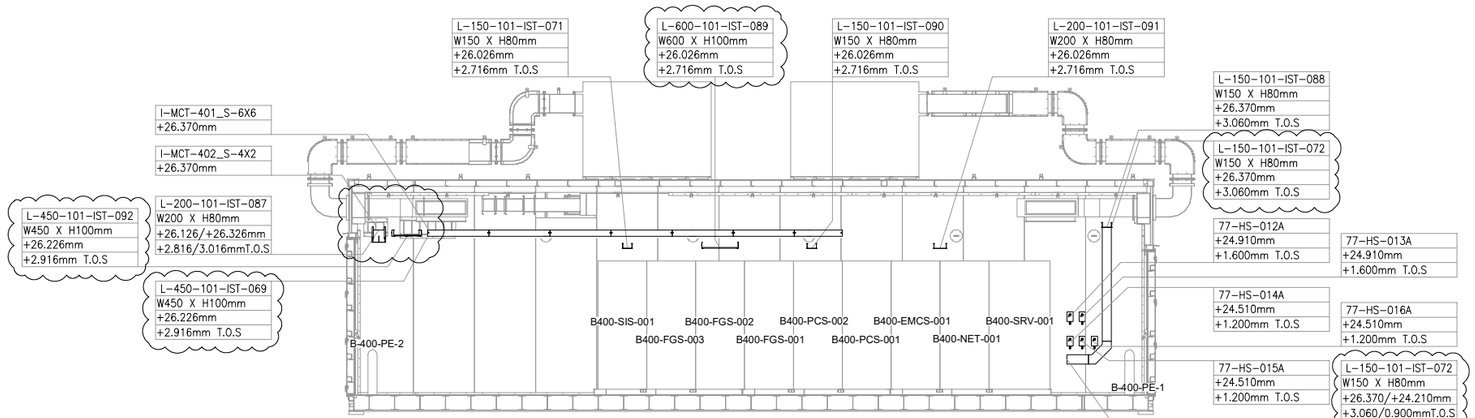
REV. 01



PLAN VIEW

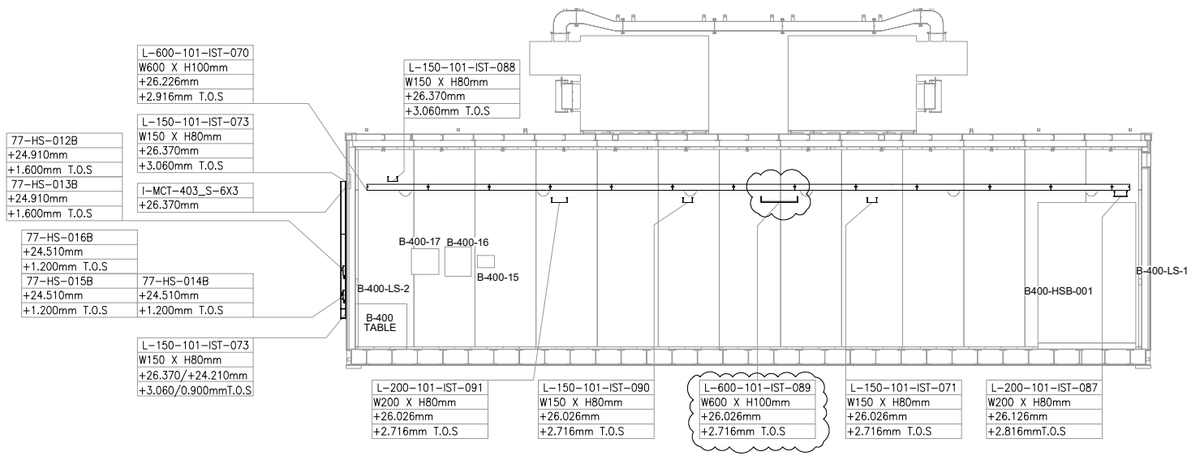
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



SECTION B-B

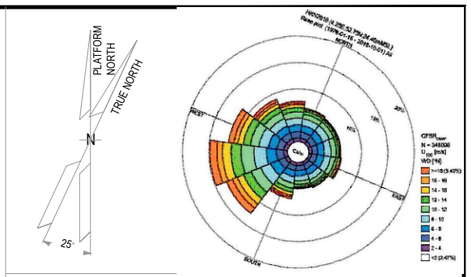
SCALE-1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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

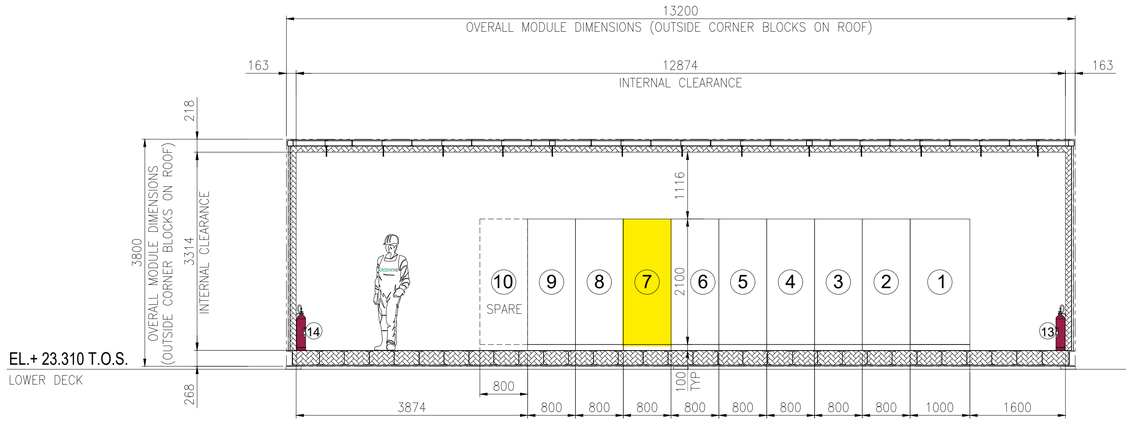
TITLE : BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B-400 Container Lower Deck – TOS EL. 23.310m

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

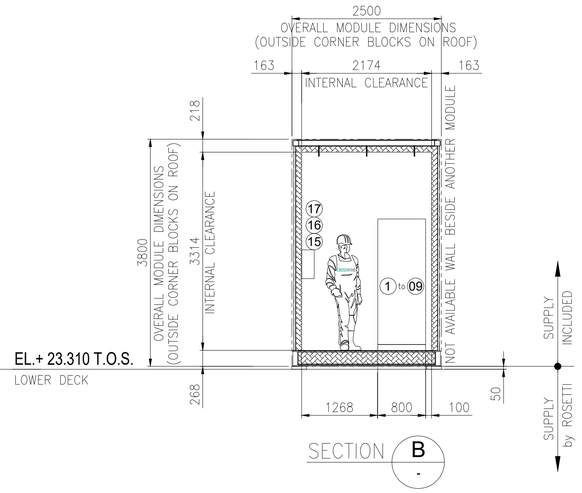
A1	DRAWING NO. 123A90-DDL-IN-DL-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

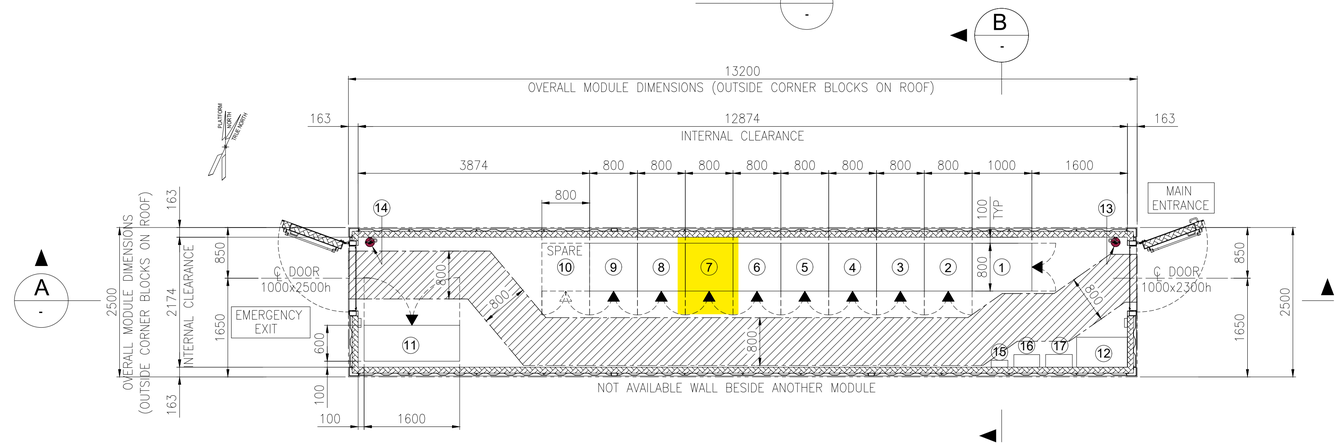
DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 03



SECTION A -



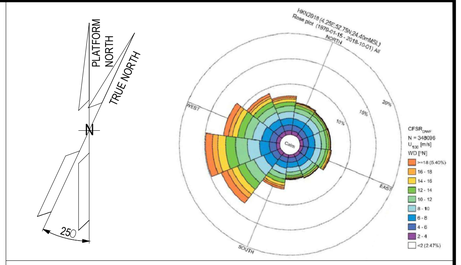
SECTION B -



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

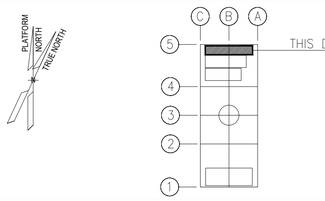
HOLDS

.

REFERENCE

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

KEY PLAN



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

CROSSWIND

ROSETTI MARINO

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

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

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

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

ROSETTI MARINO SpA

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

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

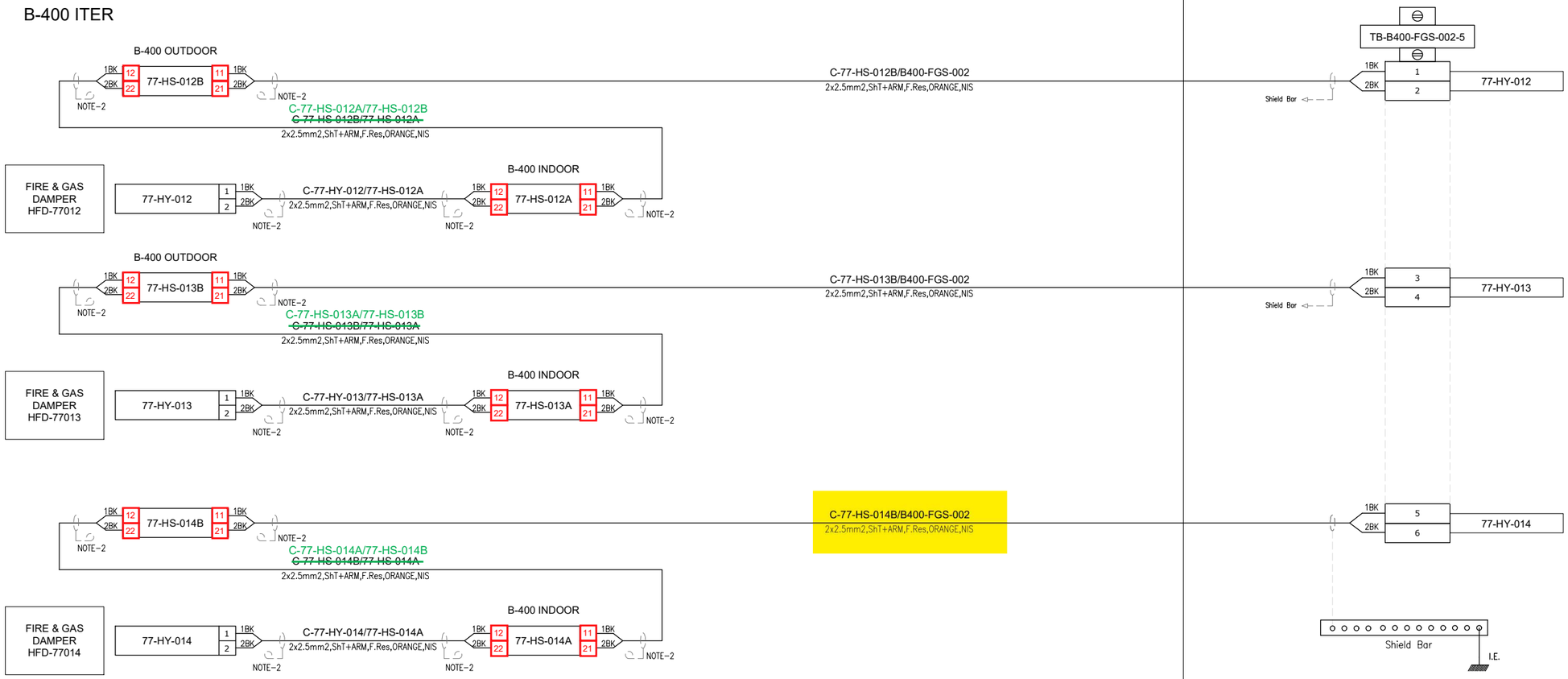
REV.: 01

I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET
B400-FGS-002

<01>

B-400 ITER



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 COMMAND – B–400

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	076	01

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

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

REV. 01

NOTES:

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

<01>

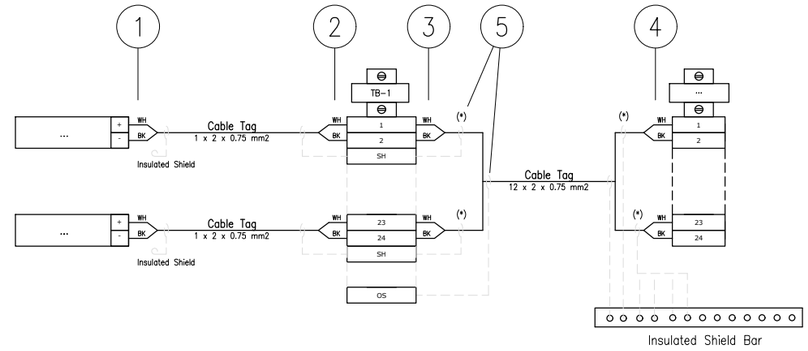
LEGENDS & SYMBOLS:

LEGEND:

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

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



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

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

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

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

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

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

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

REFERENCE DRAWINGS

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

CROSSWIND

ROSETTI MARINO

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

REV.:	DATE:	SIGNATURE:
1_K	18/11/24	G.Randi

ROSETTI MARINO SpA

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

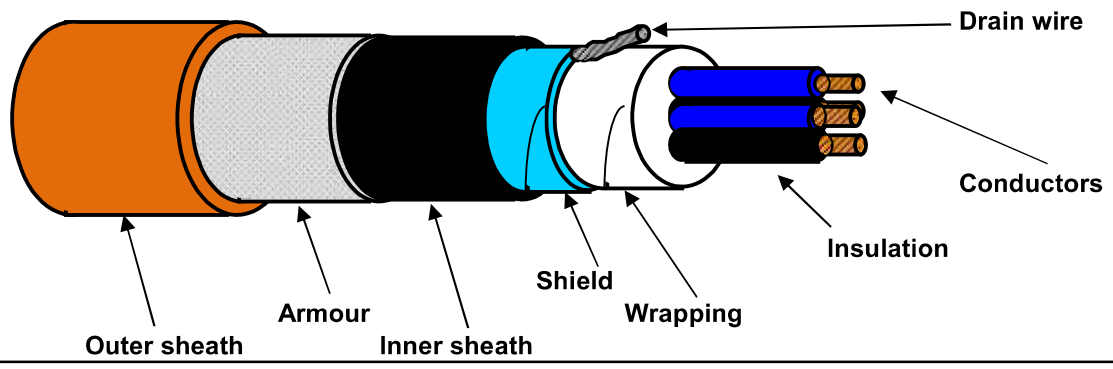
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-77-HS-014B/B400-FGS-002	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						77-HS-014B	Hand Switch	Lower Deck (B-400) Ext.	B400-FGS-002	Marshalling FGS	Lower Deck (B-400)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			n.a.				B-400-SEC-2A / B-400-SEC-2B / B-400-SEC-2C / B-400-SEC-2E / B-400-SEC-2F

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-014A/77-HS-014B : PUSH BUTTON / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-40 : HVAC I&T Equipment Room B-400			Module	LD_B-400/LD_B-400_Ext	
TASK	code	C10000427	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-014A	To	77-HS-014B		

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	OK
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	OK
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH		>999	MΩ
	CORE to CORE		>999	MΩ
	CORE to SCREEN		>999	MΩ
	CORE to ARMr		>999	MΩ
	SCREEN to EARTH		>999	MΩ
	SCREEN to ARMr		>999	MΩ
CONTINUITY	CORES		0.6	Ω
	SCREEN		0.6	Ω
	EARTH		0.6	Ω
	ARMr		0.7	Ω
	TEST VOLTS		500	V

TEST ALL CORES AND RECORD LOWEST VALUE

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

TESTING INSTRUMENTS USED

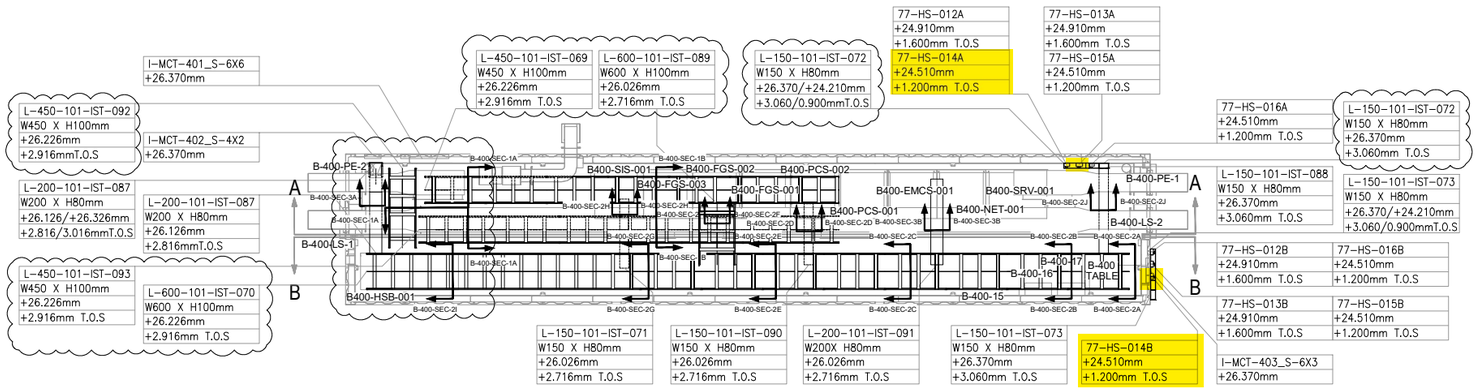
TYPE / SERIAL N°: KEW3125A / W8330207 Calibration date: 10-07-2024

Comments

Page 1/1	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:37:44.007Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T16:03:17.158Z	

DRAWING NO. 123A90-DDL-IN-DL-40116

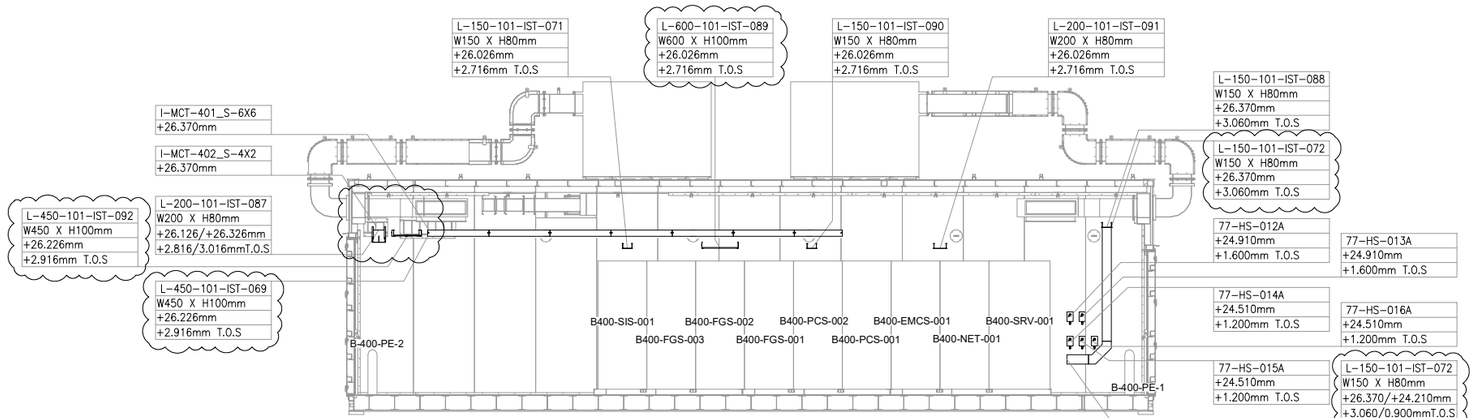
REV. 01



PLAN VIEW

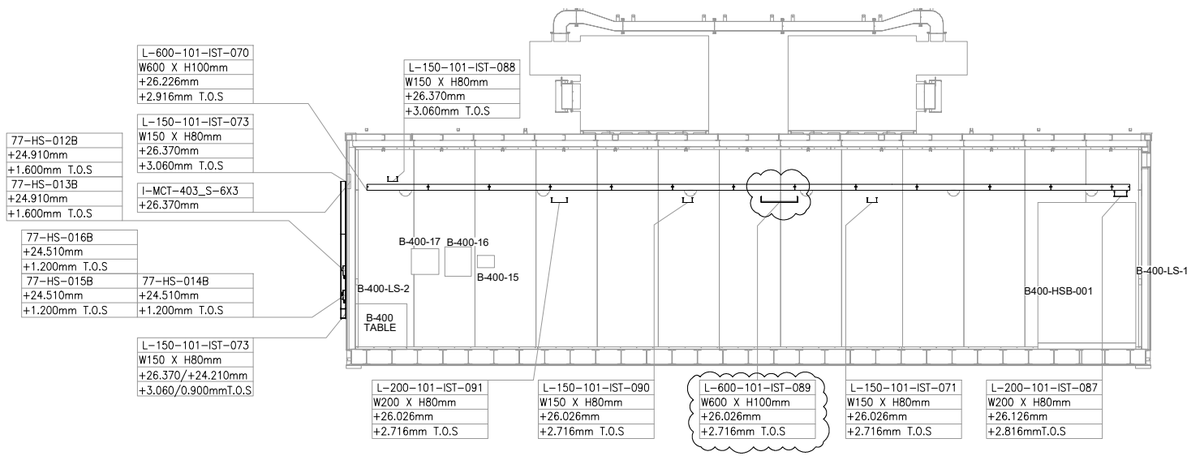
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



SECTION B-B

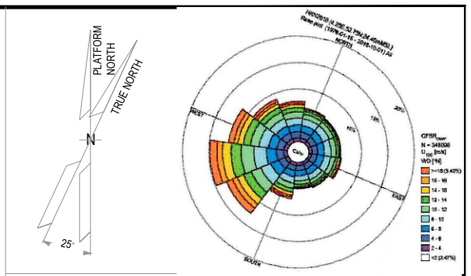
SCALE-1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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-400 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-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

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

REV.: 01

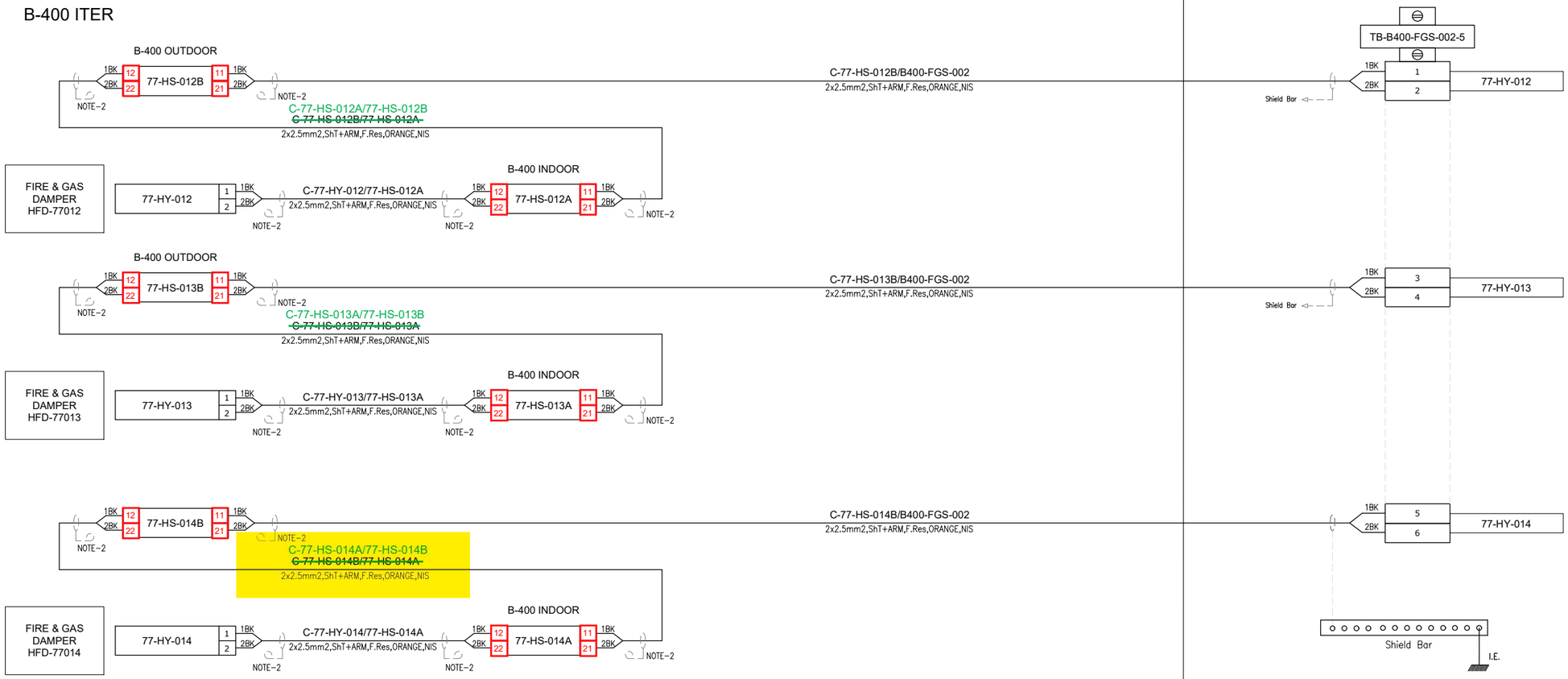
I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-FGS-002

<01>

B-400 ITER



VALID FOR CONSTRUCTION

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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
FIRE DAMPER COMMAND – B–400

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	076	01

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

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

REV. 01

NOTES:

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

<01>

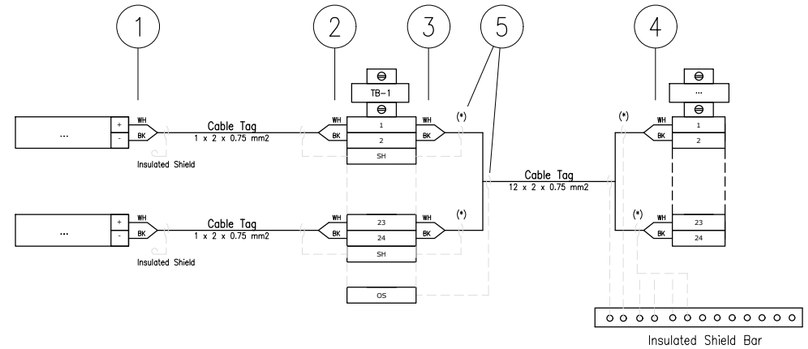
LEGENDS & SYMBOLS:

LEGEND:

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

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



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

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

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

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

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

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

REFERENCE DRAWINGS

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

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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

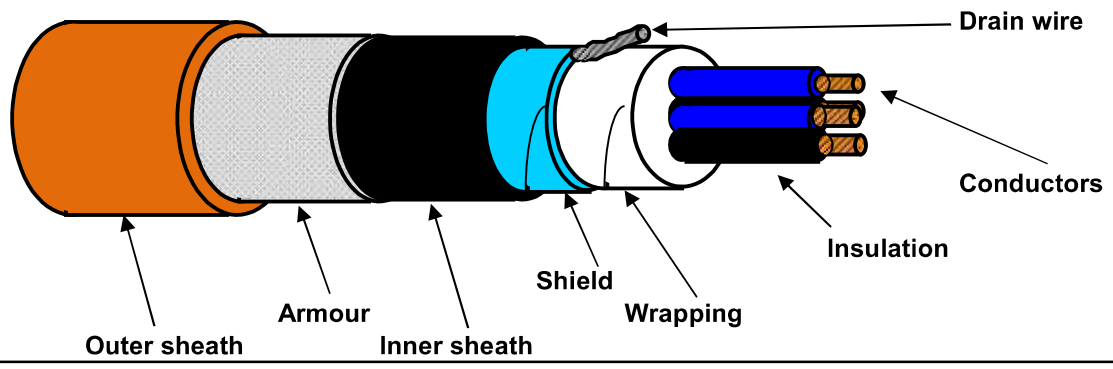
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-77-HS-014A/77-HS-014B	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						77-HS-014A	Hand Switch	Lower Deck (B-400)	77-HS-014B	Hand Switch	Lower Deck (B-400) Ext.	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			T2_M20_Double				B-400-SEC-2A / B-400-SEC-2J / I-MCT-403

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-HY-014/77-HS-014A	: FIRE DAMPER / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-40	: HVAC I&T Equipment Room B-400	Module	LD_B-400		
TASK	code	C10000428	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-77014	To	77-HS-014A		

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.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH	>999	MΩ
	CORE to CORE	>999	MΩ
	CORE to SCREEN	>999	MΩ
	CORE to ARMr	>999	MΩ
	SCREEN to EARTH	>999	MΩ
	SCREEN to ARMr	>999	MΩ
CONTINUITY	CORES	0.6	Ω
	SCREEN	0.5	Ω
	EARTH	0.6	Ω
	ARMr	0.6	Ω
	TEST VOLTS	500	V

TEST ALL CORES AND RECORD LOWEST VALUE

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

TESTING INSTRUMENTS USED

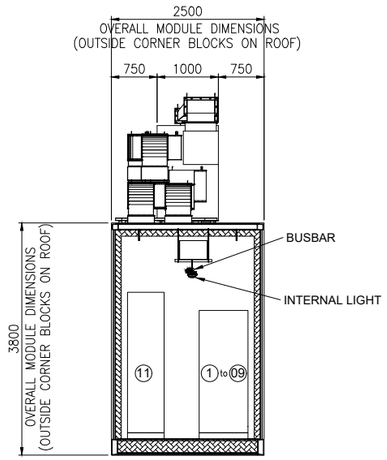
TYPE / SERIAL N°: KEW3125A / W8330207 Calibration date: 10-07-2024

Comments

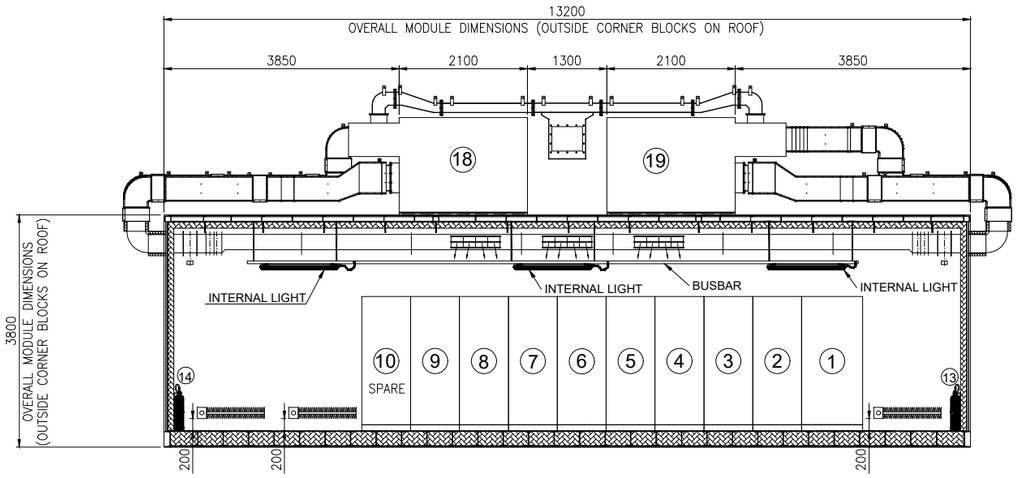
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:37:54.472Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T16:03:48.887Z	

DRAWING NO. 1724000049-AR-DA-00017

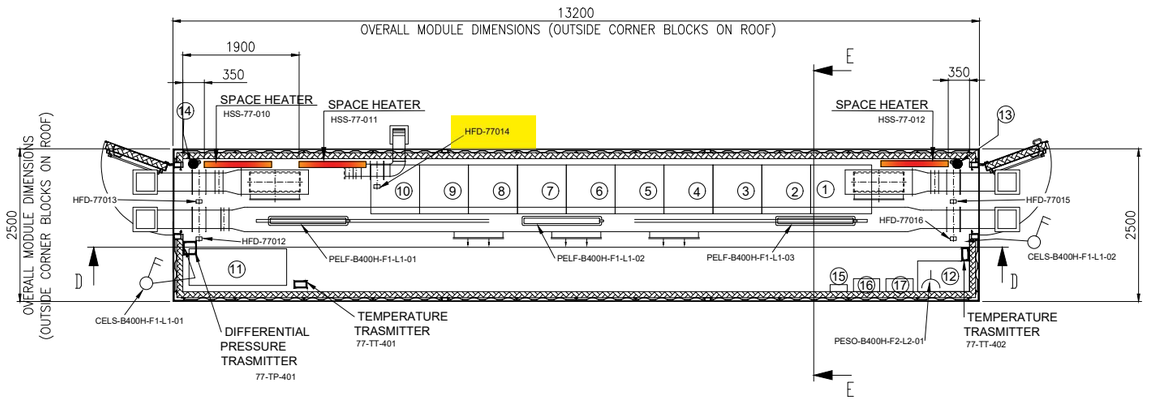
REV. 03



SECTION E-E

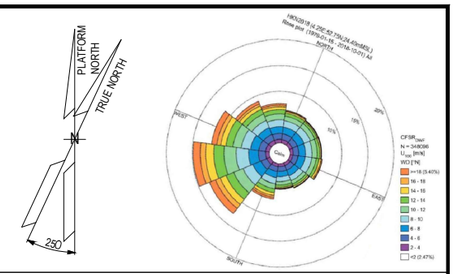


SECTION D-D



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-010	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-011 (03)	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-012	SPACE HEATER 3	184	145	1100	5	



NOTE

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

REFERENCE

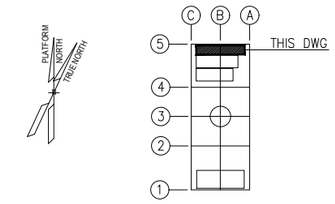
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007
(03) "B-400" FOUNDATION	1724000049-ST-DD-00013
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	04/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	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

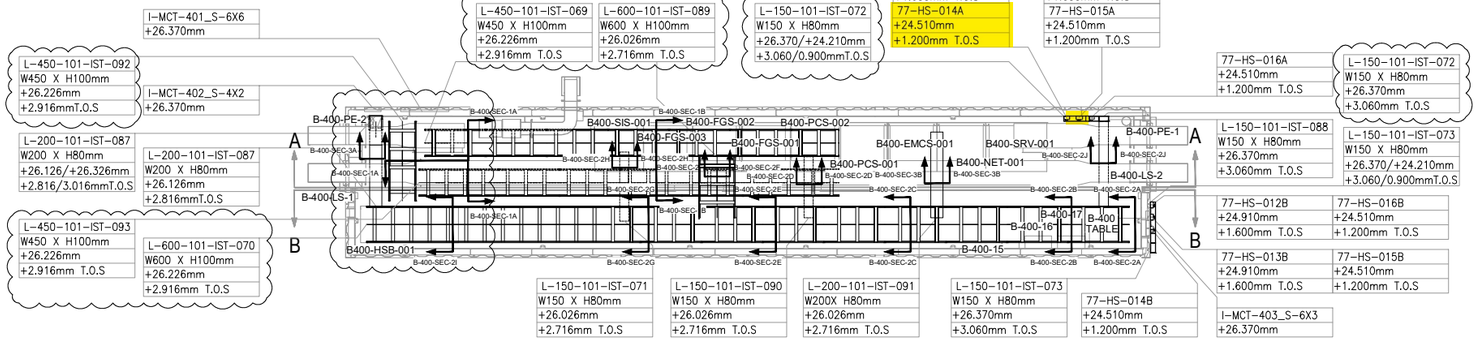
TITLE : BASE LOAD POWER HUB (BLPH)
B-400 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 003	REV. 03

File Name : 1724000049-AR-DA-00017-REV.03

DRAWING NO. 123A90-DDL-IN-DL-40116

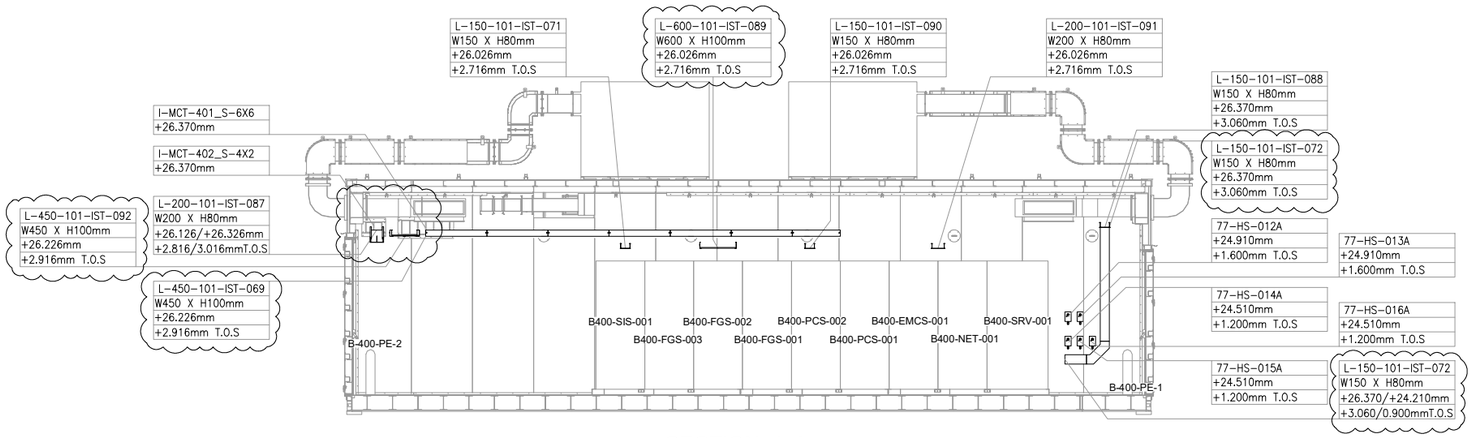
REV. 01



PLAN VIEW

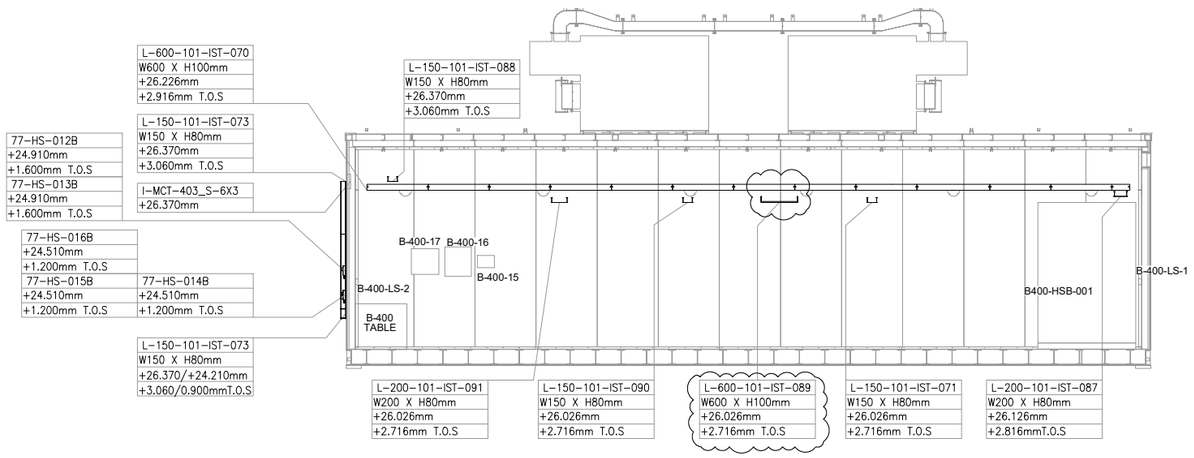
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



SECTION B-B

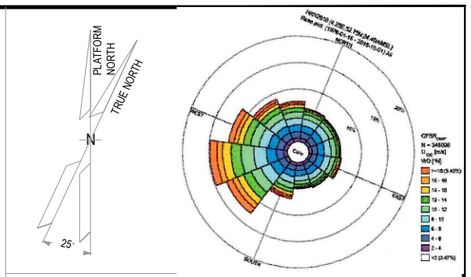
SCALE-1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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-400 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-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

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

REV.: 01

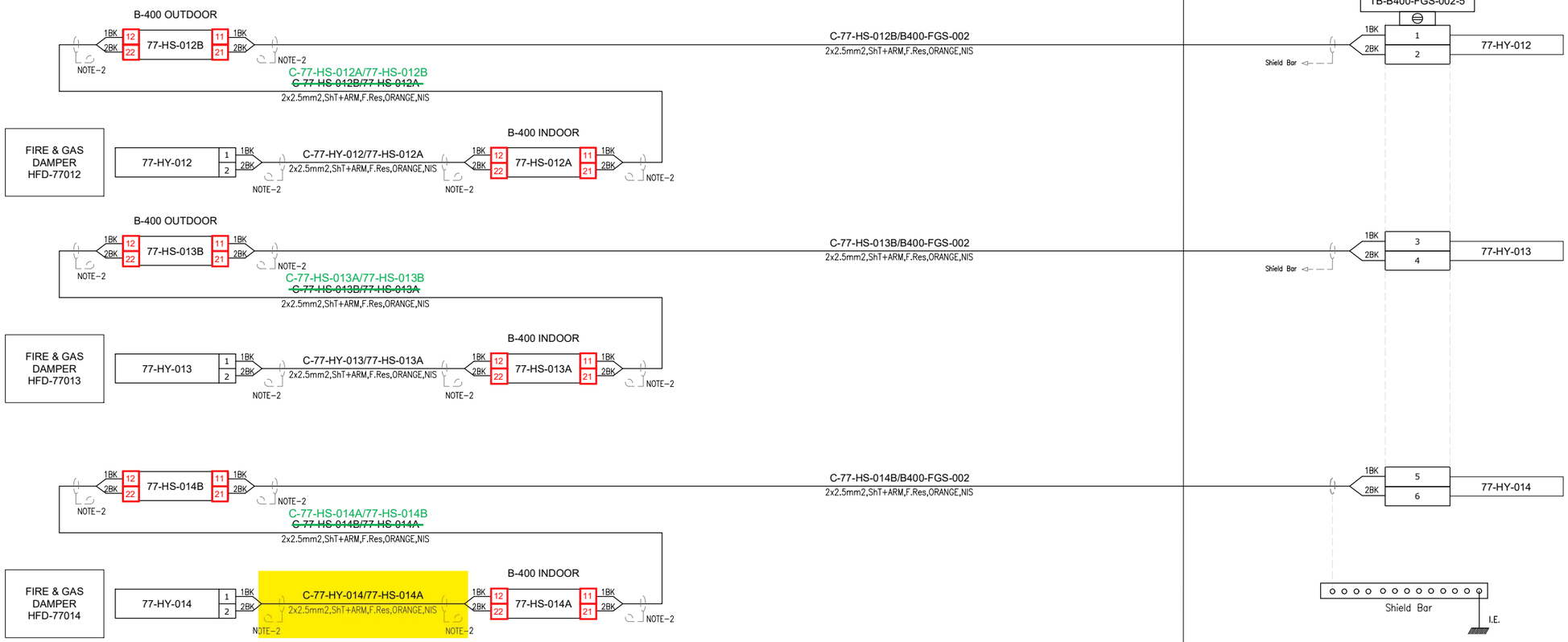
I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-FGS-002

<01>

B-400 ITER



VALID FOR CONSTRUCTION

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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
FIRE DAMPER COMMAND – B–400

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	076	01

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

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

REV. 01

NOTES:

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

<01>

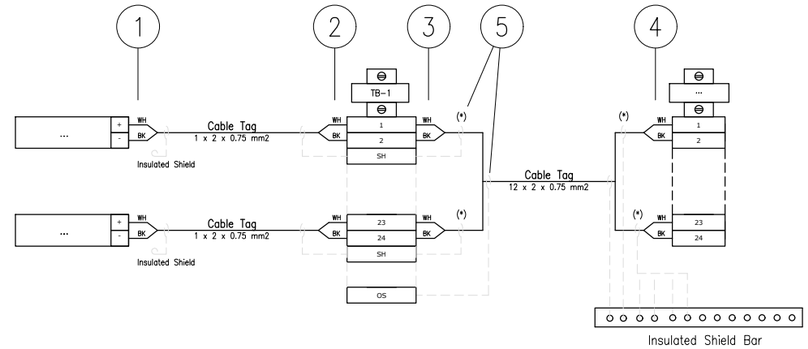
LEGENDS & SYMBOLS:

LEGEND:

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

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



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

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

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

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

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

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

REFERENCE DRAWINGS

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

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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

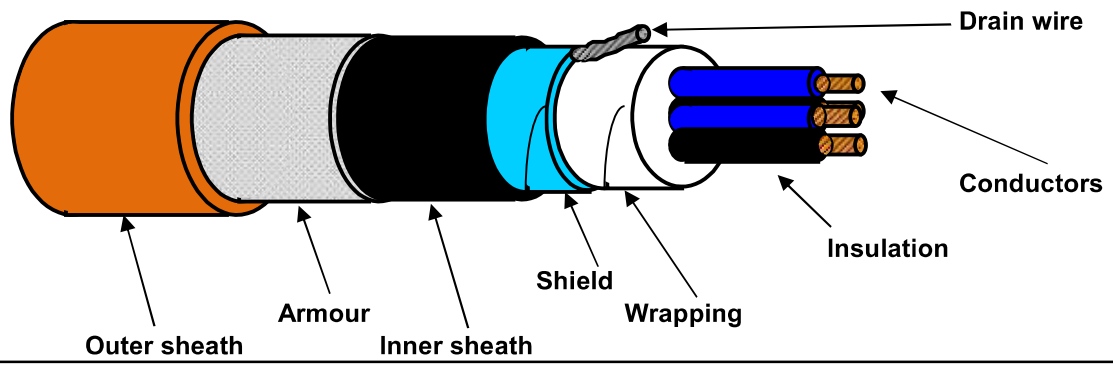
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-77-HY-014/77-HS-014A	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						HFD-77014	Fire Damper	Lower Deck (B-400)	77-HS-014A	Hand Switch	Lower Deck (B-400)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			T2_M20_Double				B-400-SEC-2J / I-MCT-403

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-ZSL-014/B400-FGS-003 : PROXIMITY SWITCH / MARSHALLING PCS				Dwg	123A90-DDL-IN-LIS-40091
	S/Sys	77-40 : HVAC I&T Equipment Room B-400				Module	LD_B-400
TASK	code	C10000429		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: 77-ZSL-014 | 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.	OK
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH	>999	MΩ
	CORE to CORE	>999	MΩ
	CORE to SCREEN	>999	MΩ
	CORE to ARMr	>999	MΩ
	SCREEN to EARTH	>999	MΩ
	SCREEN to ARMr	>999	MΩ
CONTINUITY	CORES	0.4	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

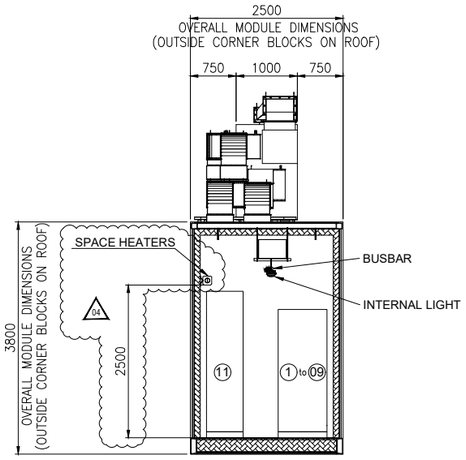
TYPE / SERIAL N°: MEGGER: KEW3125A SERIAL:W8330207 | Calibration date: N° 7722/24 10/07/2024

Comments

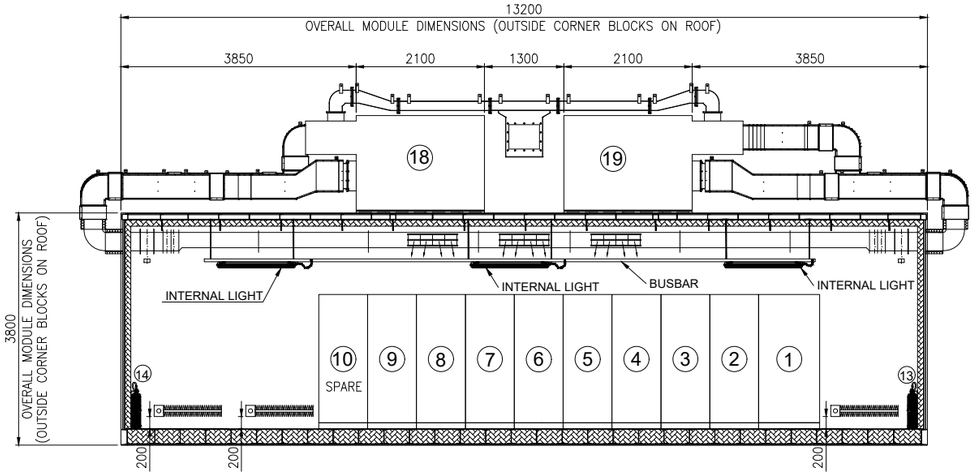
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Paolo Schintu	
Date	2024-11-12	2024-11-22	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-12T17:41:12.134Z	PROVERLIS Digitaly signed by Paolo Schintu 2024-11-22T16:04:09.064Z	

DRAWING NO. 1724000049-AR-DA-00017

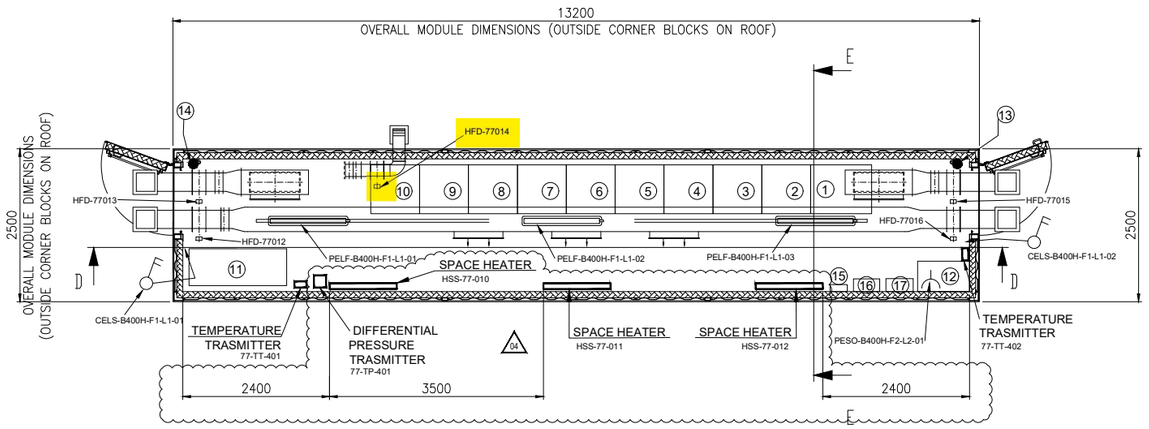
REV. 04



SECTION E-E



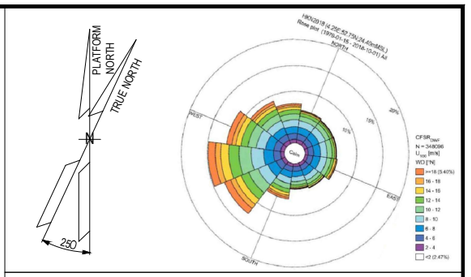
SECTION D-D



"B-400" I&T EQUIPMENT ROOM PLAN

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-010	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-011	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-012	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 FINAL ONE WILL BE CONFIRMED IN THE AS-BUILT ISSUE.

REFERENCE

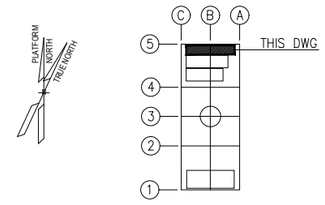
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007
"B-400" FOUNDATION	1724000049-ST-DD-00013
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009

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
04	22/10/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	04/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	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

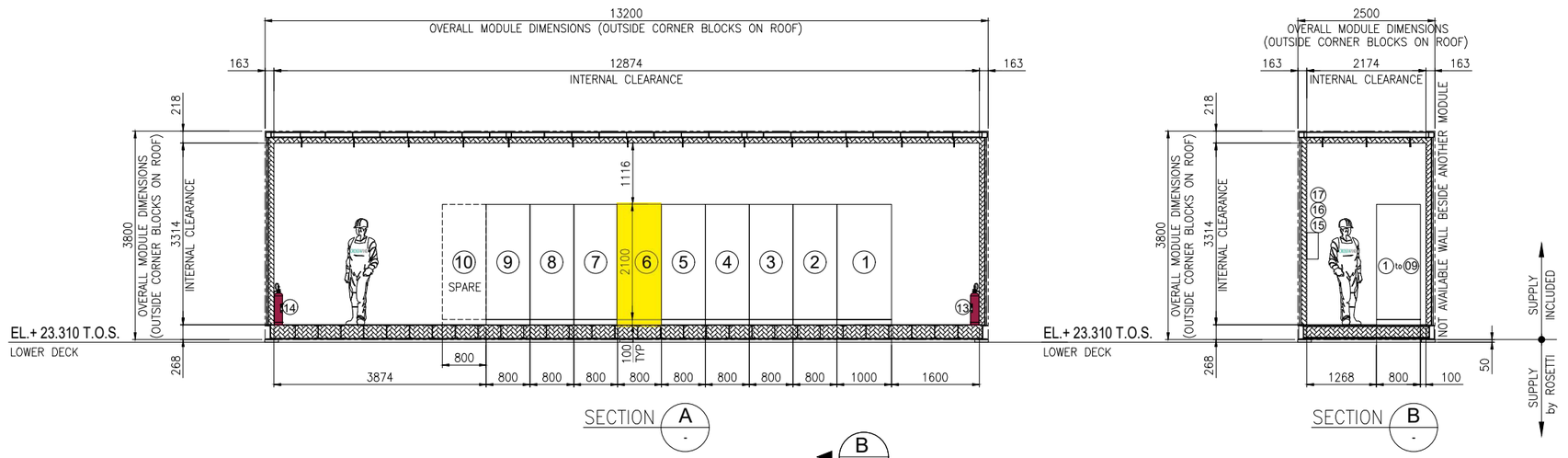
TITLE : BASE LOAD POWER HUB (BLPH)
B-400 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 22/10/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 003	REV. 04

File Name : 1724000049-AR-DA-00017-REV.04

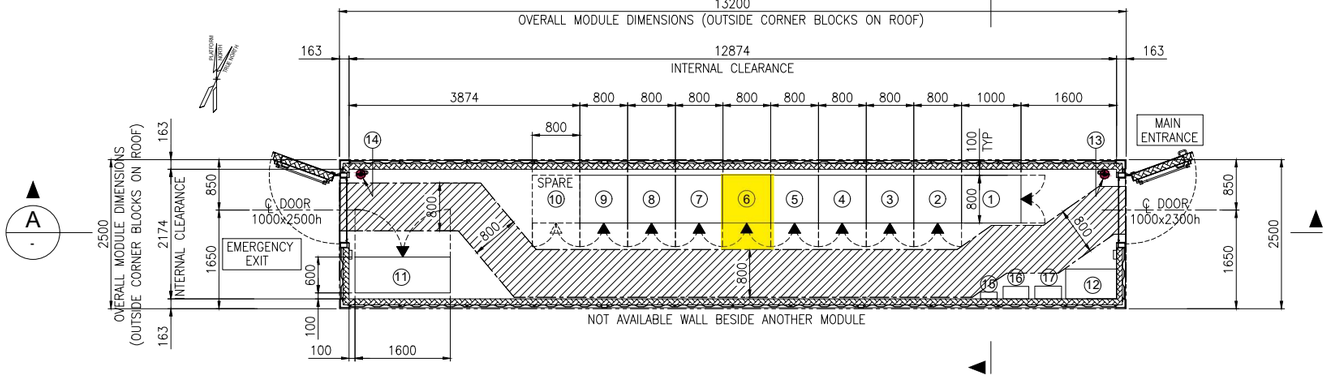
DRAWING NO. 123A90-DDL-IN-DL-40012

REV. 03



SECTION A -

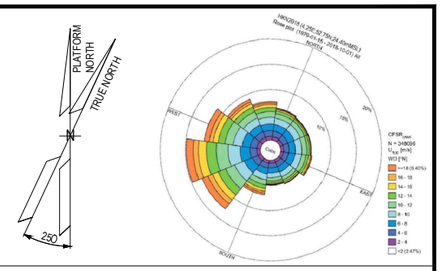
SECTION B -



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

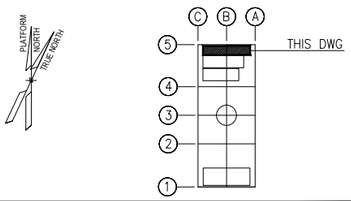
HOLDS

.

REFERENCE

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

KEY PLAN



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

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

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

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

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

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

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

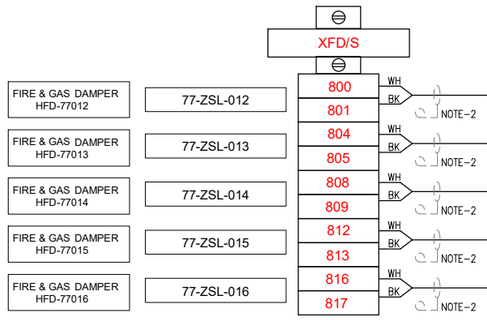
DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		I&T EQUIPMENT ROOM (ITER)
B-400 - ITER	CABLE NO	MARSHALLING CABINET
		~~B400-FGS-002~~ B400-FGS-003

<01>

HVAC Panel B400-HSB-001



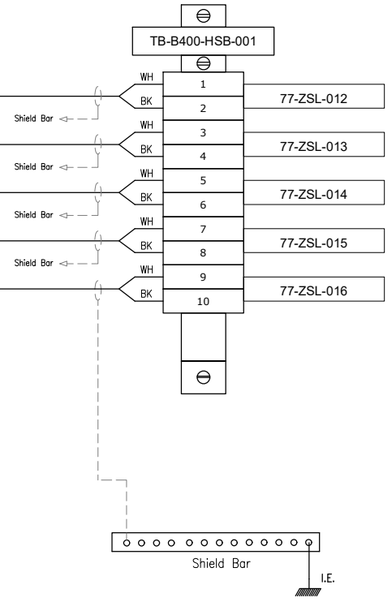
~~C-77-ZSL-012/B400-FGS-002~~ C-77-ZSL-012/B400-FGS-003
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

~~C-77-ZSL-013/B400-FGS-002~~ C-77-ZSL-013/B400-FGS-003
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

~~C-77-ZSL-014/B400-FGS-002~~ C-77-ZSL-014/B400-FGS-003
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

~~C-77-ZSL-015/B400-FGS-002~~ C-77-ZSL-015/B400-FGS-003
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

~~C-77-ZSL-016/B400-FGS-002~~ C-77-ZSL-016/B400-FGS-003
1x2x0.75mm2,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–400

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 059	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>

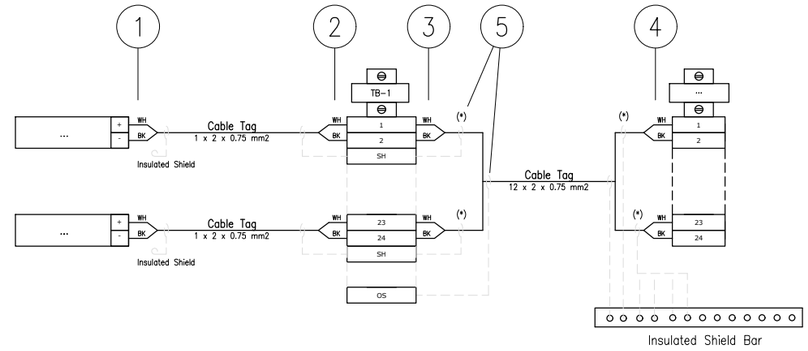
LEGENDS & SYMBOLS:

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

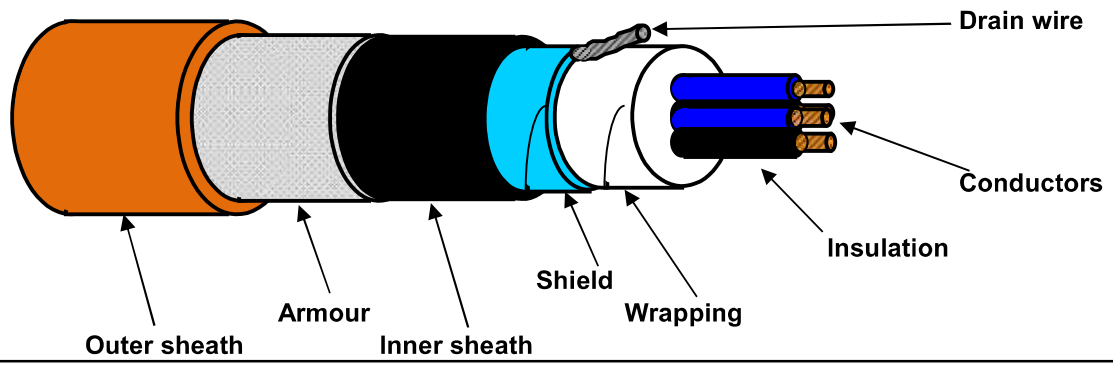
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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
C-77-ZSL-014/B400-FGS-003	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						77-ZSL-014	Proximity Switch	Lower Deck (B-400)		B400-FGS-003	Marshalling FGS	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.				B-400-SEC-2J / B-400-SEC-2B / B-400-SEC-2C / B-400-SEC-2E / B-400-SEC-2F

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-015B/B400-FGS-002 : PUSH BUTTON / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-40 : HVAC I&T Equipment Room B-400			Module	LD_B-400_Ext/LD_B-400	
TASK	code	C10000430	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-015B — To: B400-FGS-002

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	OK
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH	>999	MΩ
	CORE to CORE	>999	MΩ
	CORE to SCREEN	>999	MΩ
	CORE to ARMr	>999	MΩ
	SCREEN to EARTH	>999	MΩ
	SCREEN to ARMr	>999	MΩ
CONTINUITY	CORES	0.4	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

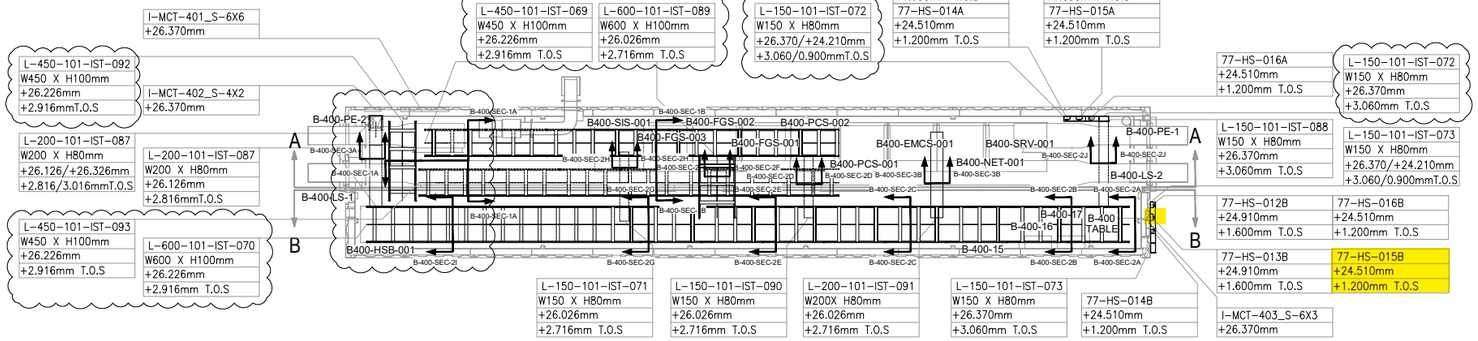
TYPE / SERIAL N°: MEGGER: KEW3125A SERIAL:W8330207 — Calibration date: N° 7722/24 10/07/2024

Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Paolo Schintu	
Date	2024-11-12	2024-11-23	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-12T17:43:10.212Z	PROVERLIS Digitaly signed by Paolo Schintu 2024-11-23T09:05:13.723Z	

DRAWING NO. 123A90-DDL-IN-DL-40116

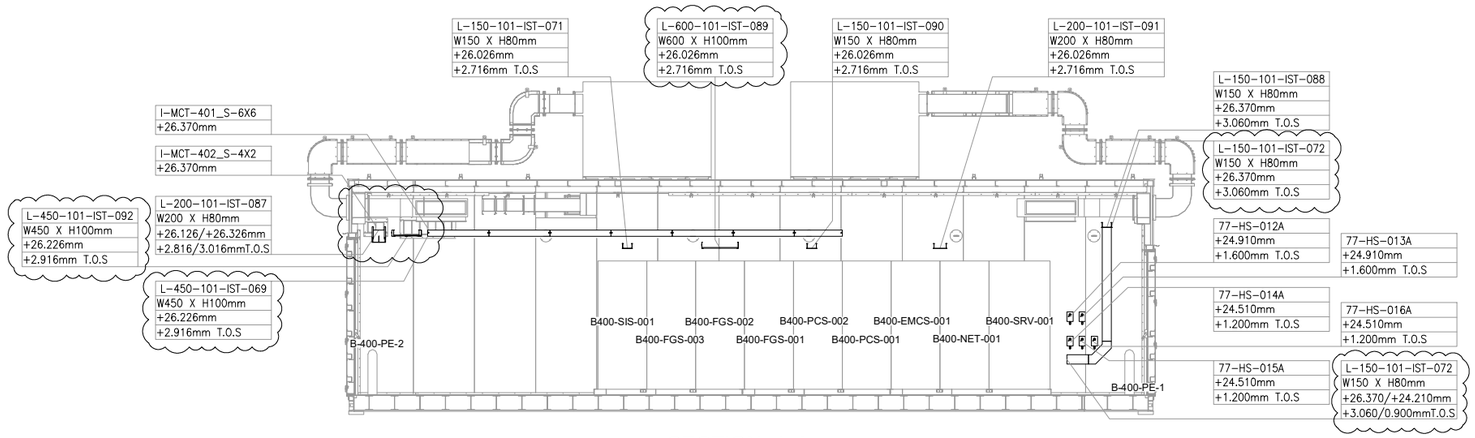
REV. 01



PLAN VIEW

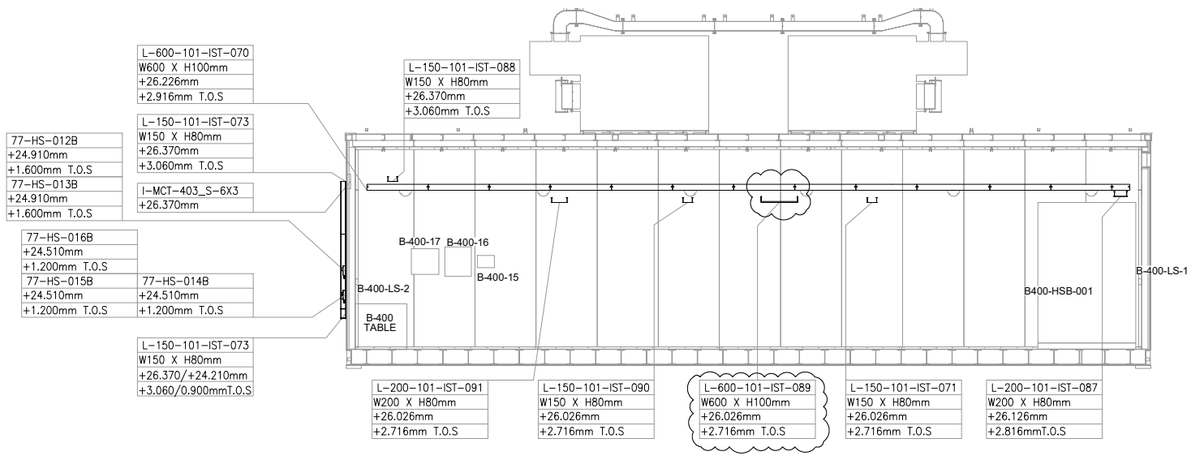
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



SECTION B-B

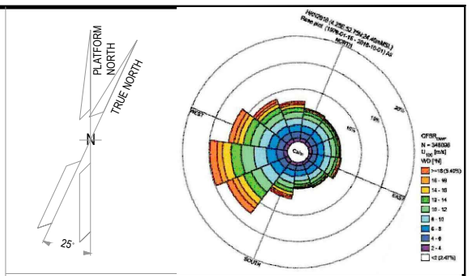
SCALE-1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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

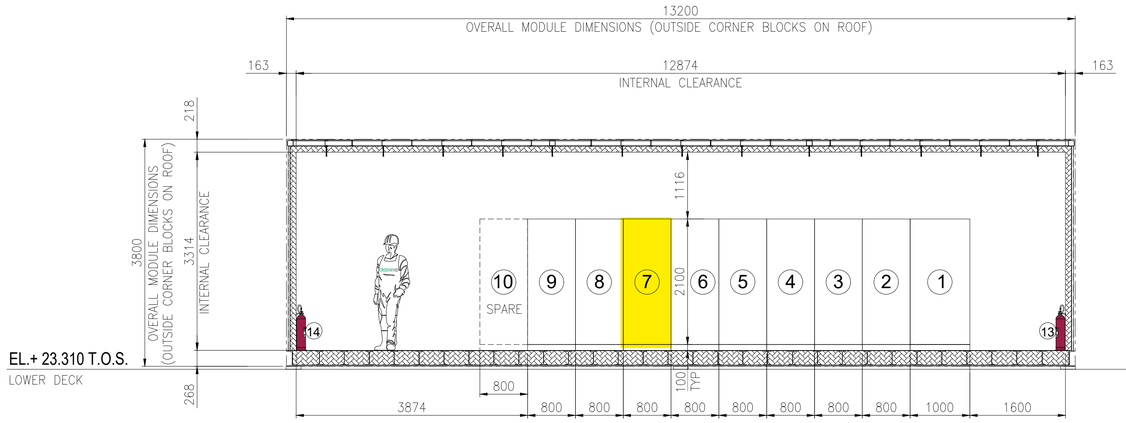
TITLE : BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B-400 Container Lower Deck – TOS EL. 23.310m

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

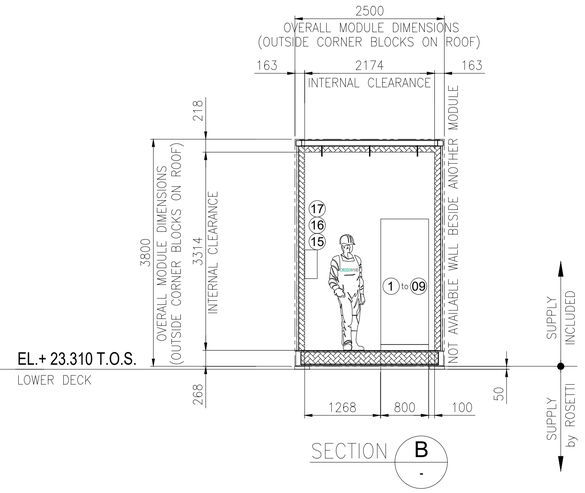
A1	DRAWING NO. 123A90-DDL-IN-DL-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

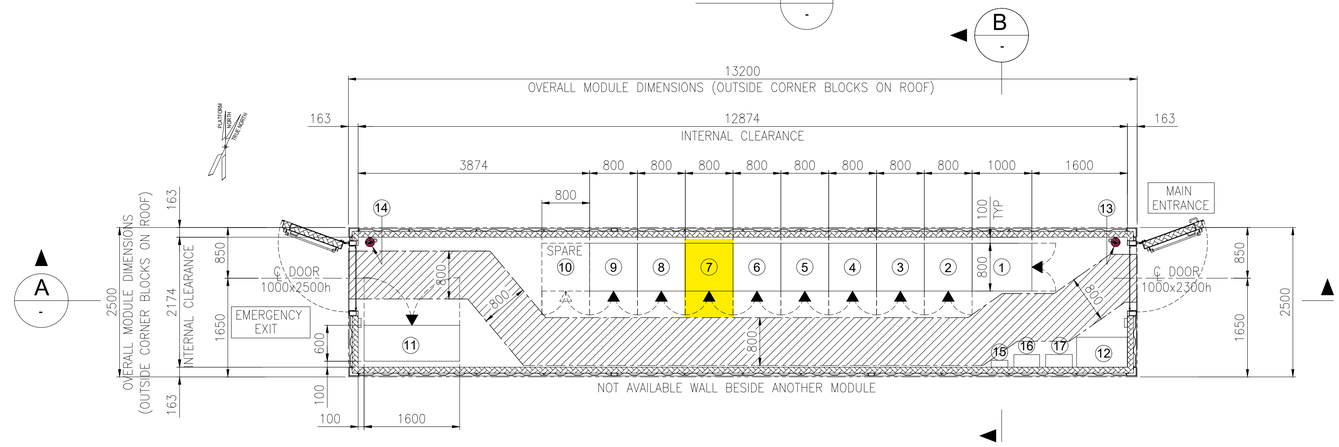
DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 03



SECTION A -



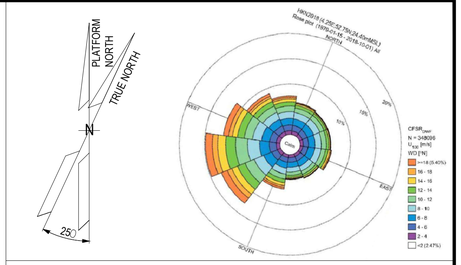
SECTION B -



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

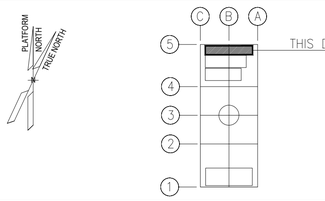
HOLDS

.

REFERENCE

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

KEY PLAN



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

CROSSWIND — ROSETTI MARINO

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

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

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

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

ROSETTI MARINO SpA

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

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

REV. 01

I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-FGS-002

<01>

B-400 ITER

B-400 OUTDOOR

1BK 12 / 2BK 22 — 77-HS-015B — 1BK 11 / 2BK 21 — NOTE-2

NOTE-2

C-77-HS-015A/77-HS-015B

~~C-77-HS-015B/77-HS-015A~~

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

C-77-HS-015B/B400-FGS-002

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

TB-B400-FGS-002-4

1BK 1 / 2BK 2 — 77-HY-015

Shield Bar

FIRE & GAS DAMPER HFD-77015

77-HY-015 (1 / 2) — 1BK 2BK — C-77-HY-015/77-HS-015A 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — 1BK 2BK — 77-HS-015A 12 / 22 — 1BK 11 / 2BK 21 — NOTE-2

NOTE-2 NOTE-2

B-400 INDOOR

B-400 OUTDOOR

1BK 12 / 2BK 22 — 77-HS-016B — 1BK 11 / 2BK 21 — NOTE-2

NOTE-2

C-77-HS-016A/77-HS-016B

~~C-77-HS-016B/77-HS-016A~~

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

C-77-HS-016B/B400-FGS-002

~~C-77-HS-013B/B400-FGS-002~~

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

1BK 3 / 2BK 4 — 77-HY-016

Shield Bar — I.E.

FIRE & GAS DAMPER HFD-77016

77-HY-016 (1 / 2) — 1BK 2BK — C-77-HY-016/77-HS-016A 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — 1BK 2BK — 77-HS-016A 12 / 22 — 1BK 11 / 2BK 21 — NOTE-2

NOTE-2 NOTE-2

B-400 INDOOR

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 COMMAND – B–400

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 077	REV. 01

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

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

REV. 01

NOTES:

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

<01>

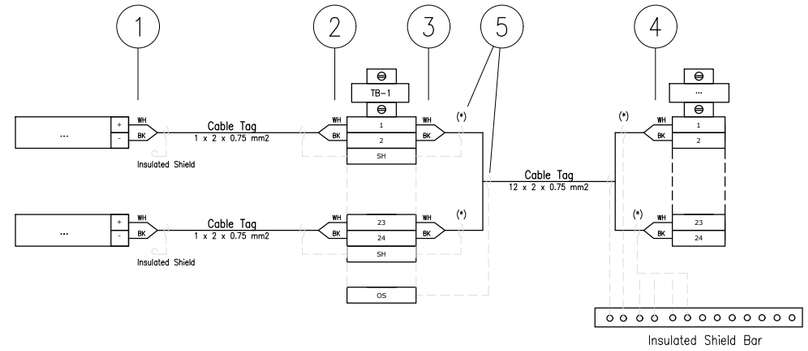
LEGENDS & SYMBOLS:

LEGEND:

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

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



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

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

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

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

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

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

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

REFERENCE DRAWINGS

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

CROSSWIND

ROSETTI MARINO

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

REV.:	DATE:	SIGNATURE:
1_K	18/11/24	G.Randi

ROSETTI MARINO SpA

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

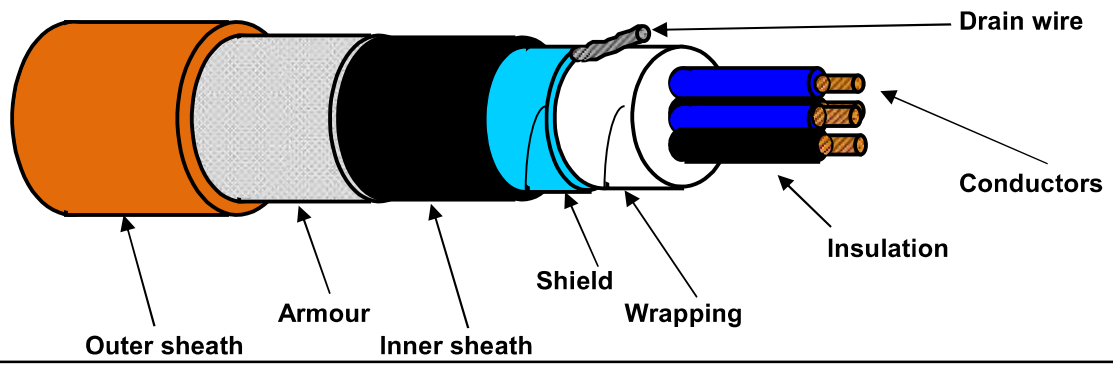
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-77-HS-015B/B400-FGS-002	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						77-HS-015B	Hand Switch	Lower Deck (B-400) Ext.	B400-FGS-002	Marshalling FGS	Lower Deck (B-400)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			n.a.				B-400-SEC-2A / B-400-SEC-2B / B-400-SEC-2C / B-400-SEC-2E / B-400-SEC-2F

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-015A/77-HS-015B : PUSH BUTTON / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-40 : HVAC I&T Equipment Room B-400			Module	LD_B-400	
TASK	code	C10000431	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-015A	To	77-HS-015B		

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.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH	>999	MΩ
	CORE to CORE	>999	MΩ
	CORE to SCREEN	>999	MΩ
	CORE to ARMr	>999	MΩ
	SCREEN to EARTH	>999	MΩ
	SCREEN to ARMr	>999	MΩ
CONTINUITY	CORES	0.6	Ω
	SCREEN	0.6	Ω
	EARTH	0.7	Ω
	ARMr	0.6	Ω
	TEST VOLTS	500	V

TEST ALL CORES AND RECORD LOWEST VALUE

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

TESTING INSTRUMENTS USED

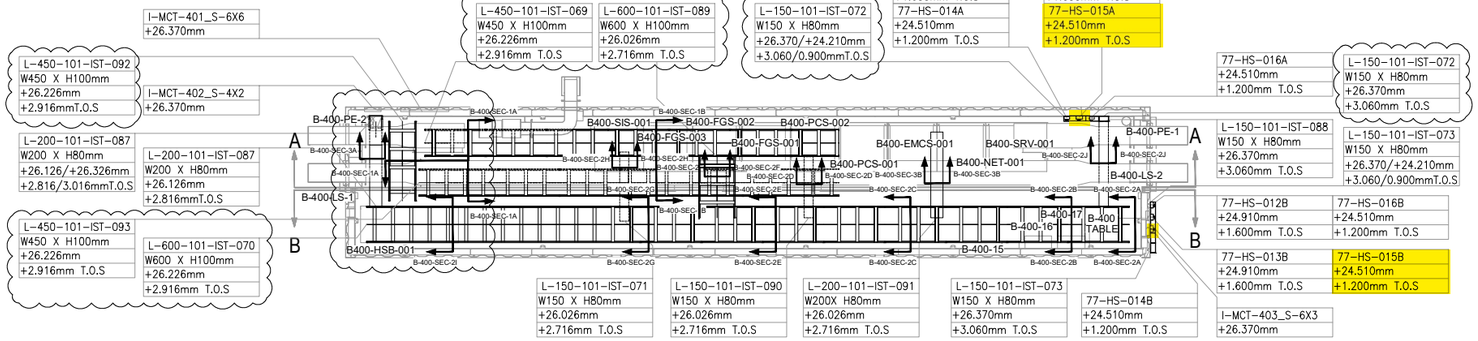
TYPE / SERIAL N°: KEW3125A / W8330207 Calibration date: 10-07-2024

Comments

Page 1/1	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:38:05.102Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T16:03:36.156Z	

DRAWING NO. 123A90-DDL-IN-DL-40116

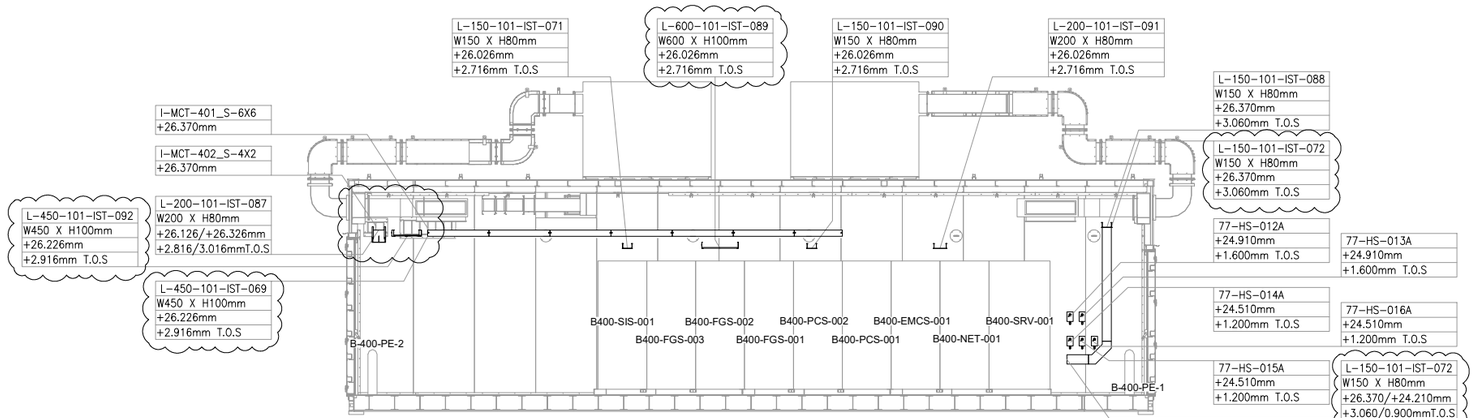
REV. 01



PLAN VIEW

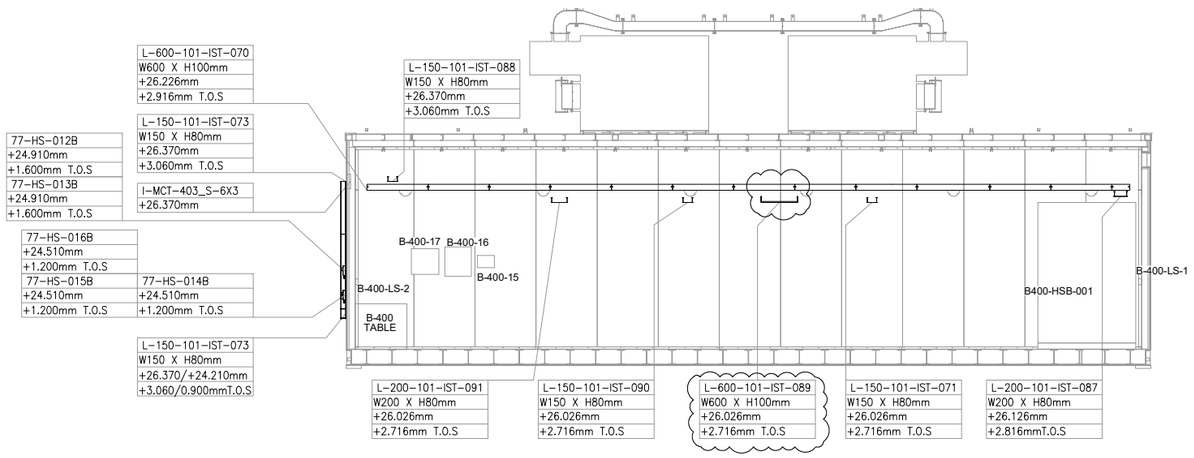
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



SECTION B-B

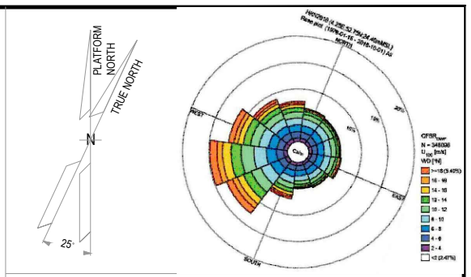
SCALE-1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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-400 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-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

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

REV. 01

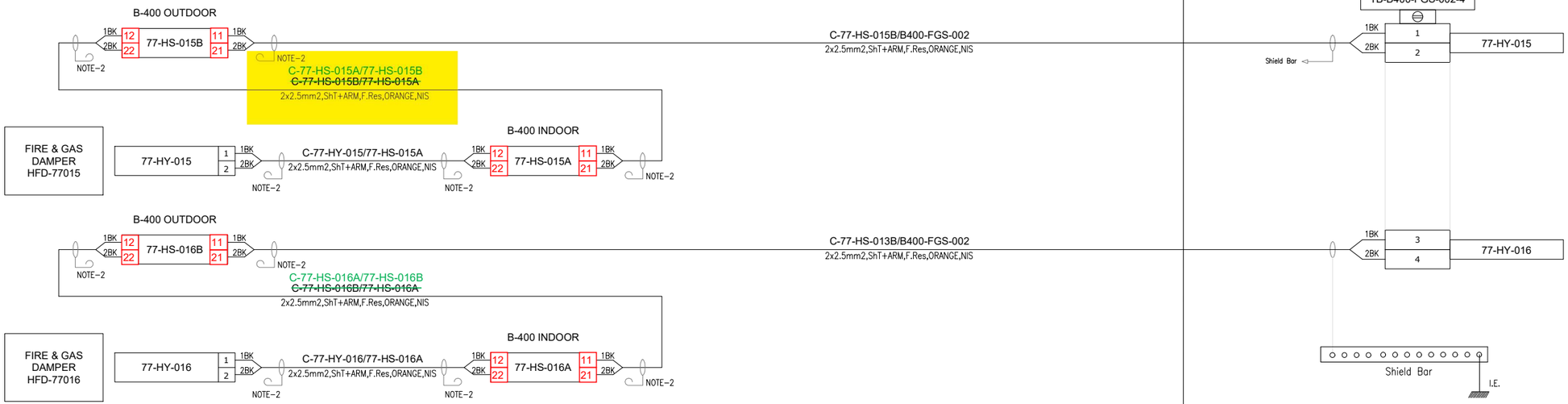
I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-FGS-002

<01>

B-400 ITER



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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
FIRE DAMPER COMMAND – B–400

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 077	REV. 01

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

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

REV. 01

NOTES:

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

<01>

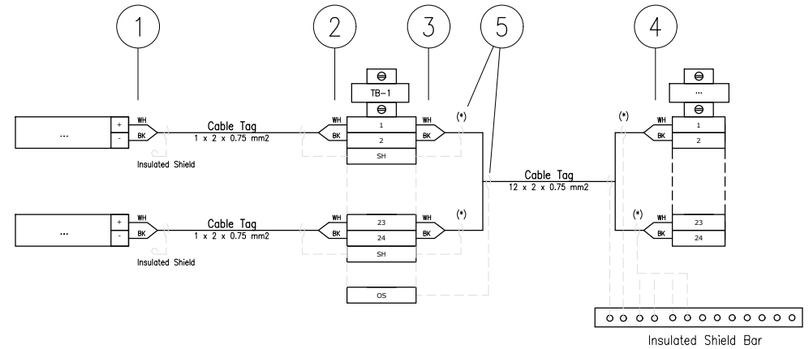
LEGENDS & SYMBOLS:

LEGEND:

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

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



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

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

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

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

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

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

REFERENCE DRAWINGS

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

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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

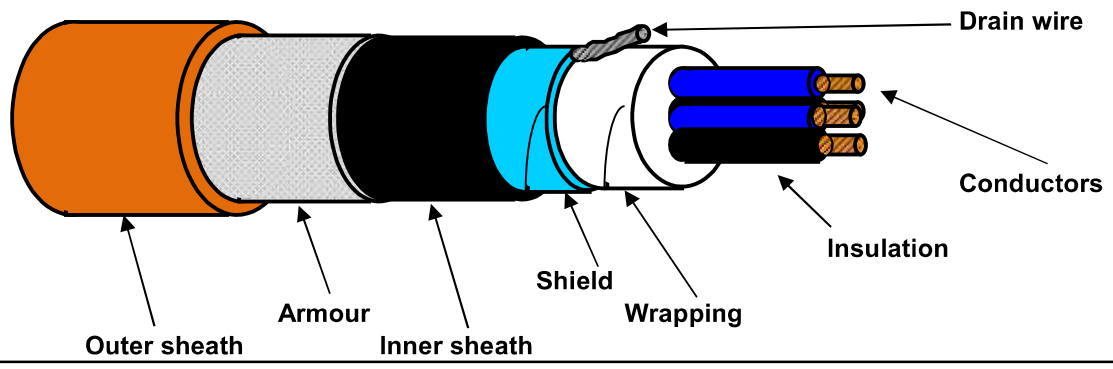
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-77-HS-015A/77-HS-015B	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						77-HS-015A	Hand Switch	Lower Deck (B-400)	77-HS-015B	Hand Switch	Lower Deck (B-400) Ext.	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			T2_M20_Double				B-400-SEC-2A / B-400-SEC-2J / I-MCT-403

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-HY-015/77-HS-015A	: FIRE DAMPER / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-40	: HVAC I&T Equipment Room B-400	Module	LD_B-400		
TASK	code	C10000432	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-77015 | To: 77-HS-015A

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.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH	>999	MΩ
	CORE to CORE	>999	MΩ
	CORE to SCREEN	>999	MΩ
	CORE to ARMr	>999	MΩ
	SCREEN to EARTH	>999	MΩ
	SCREEN to ARMr	>999	MΩ
CONTINUITY	CORES	0.5	Ω
	SCREEN	0.5	Ω
	EARTH	0.5	Ω
	ARMr	0.6	Ω
	TEST VOLTS	500	V

TEST ALL CORES AND RECORD LOWEST VALUE

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

TESTING INSTRUMENTS USED

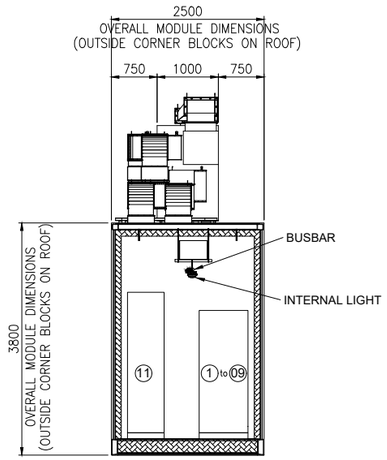
TYPE / SERIAL N°: KEW3125A / W8330207 | Calibration date: 10-07-2024

Comments

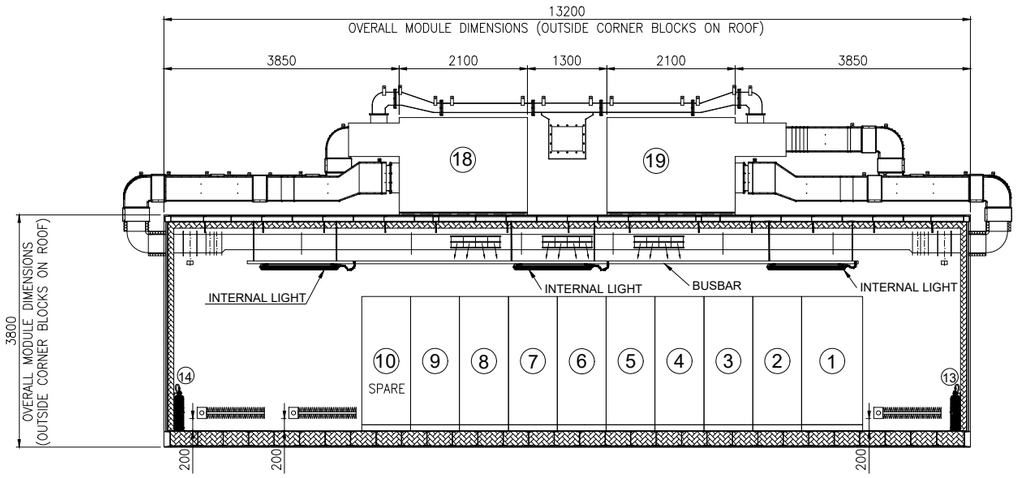
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:38:26.331Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T16:00:21.590Z	

DRAWING NO. 1724000049-AR-DA-00017

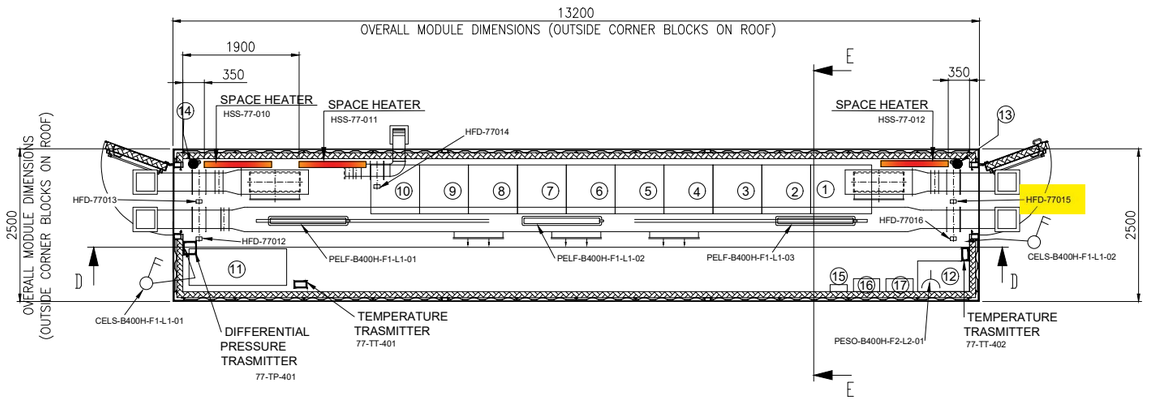
REV. 03



SECTION E-E

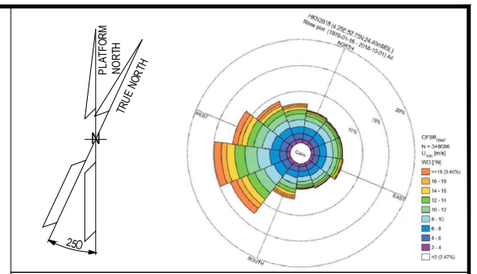


SECTION D-D



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-010	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-011 (03)	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-012	SPACE HEATER 3	184	145	1100	5	



NOTE

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

REFERENCE

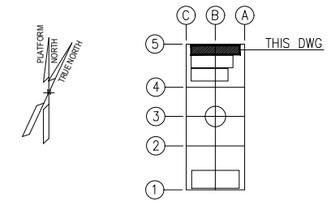
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007
(03) "B-400" FOUNDATION	1724000049-ST-DD-00013
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	04/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	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

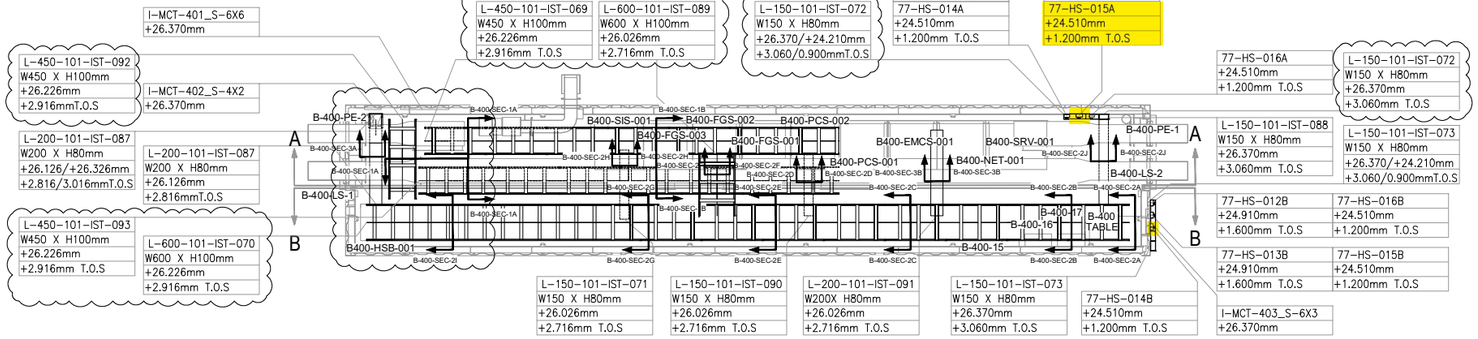
TITLE : BASE LOAD POWER HUB (BLPH)
B-400 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 003	REV. 03

File Name : 1724000049-AR-DA-00017-REV.03

DRAWING NO. 123A90-DDL-IN-DL-40116

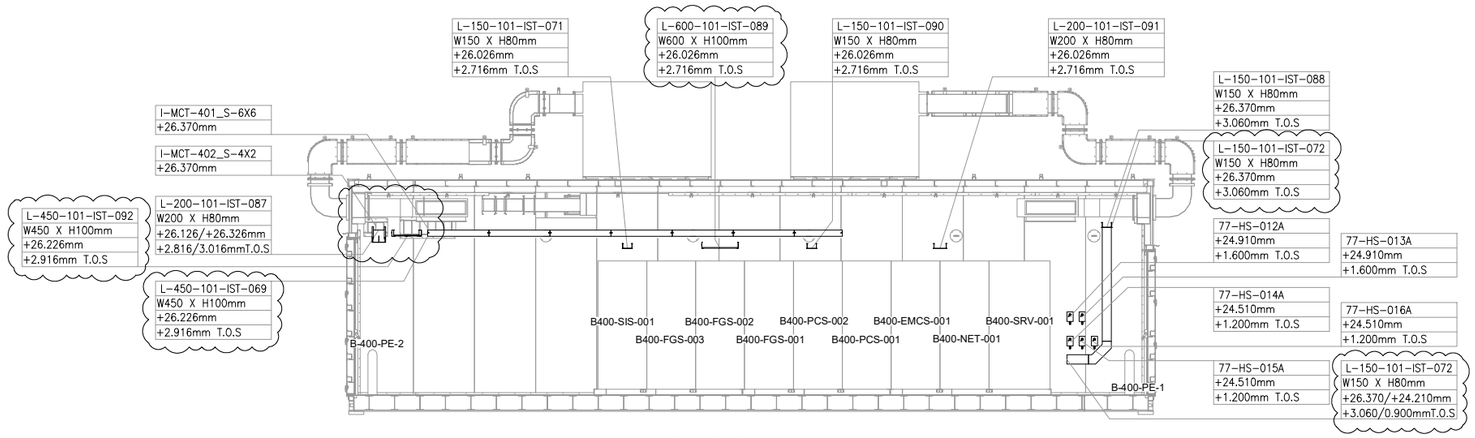
REV. 01



PLAN VIEW

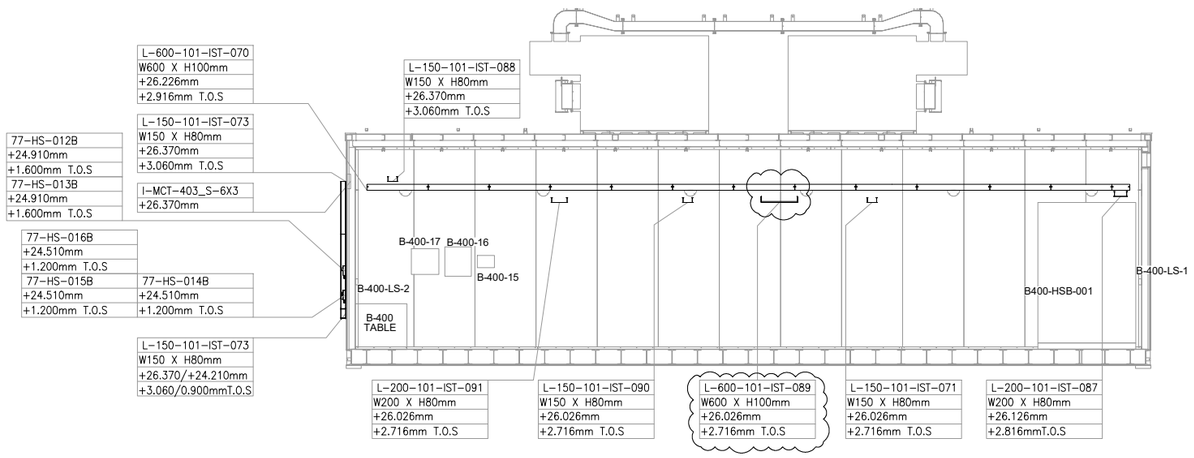
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



SECTION B-B

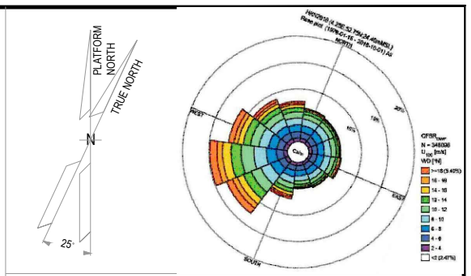
SCALE-1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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-400 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-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

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

REV. 01

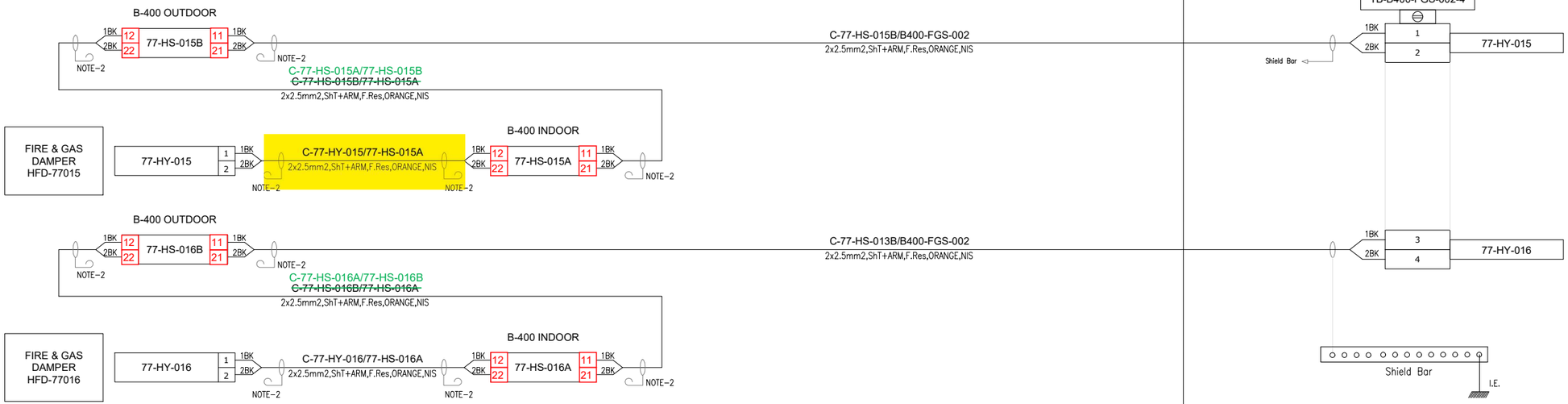
I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-FGS-002

<01>

B-400 ITER



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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
FIRE DAMPER COMMAND – B–400

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 077	REV. 01

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

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

REV. 01

NOTES:

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

<01>

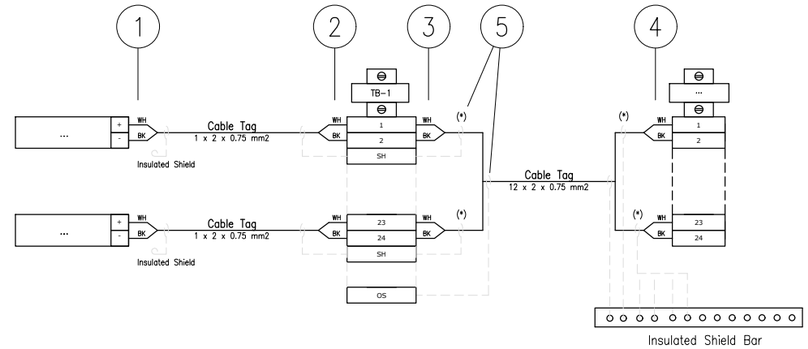
LEGENDS & SYMBOLS:

LEGEND:

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

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



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

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

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

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

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

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

REFERENCE DRAWINGS

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

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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

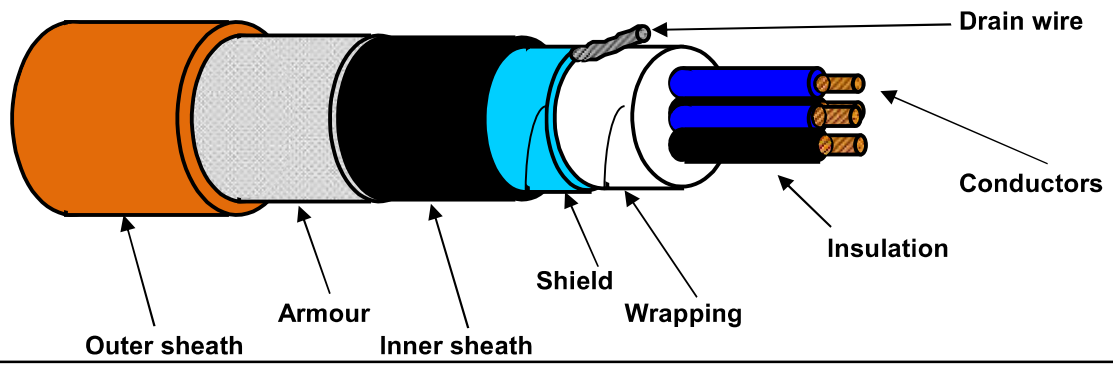
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-77-HY-015/77-HS-015A	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						HFD-77015	Fire Damper	Lower Deck (B-400)	77-HS-015A	Hand Switch	Lower Deck (B-400)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			T2_M20_Double				B-400-SEC-2J / I-MCT-403

Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250 V (300 V)

2X2,5 - INSTRUMENT CABLE - Fire Resistant - Not I.S.



TECHNICAL FEATURES

Conductors :	**7-STRANDED** plain/bare soft annealed copper wires	**IEC 60228 Class 2**
Insulation :	Mica/Glass Tape (MGT) plus XLPE, Nominal Thickness 0,6 mm	
Cores colour code :	**Black NUMBERED (from 1 to 2)**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not required	
Total Assembling :	8/1mt	
Overall Wrapping:	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Drain wire :	7-Stranded **TINNED** annealed copper drain wire, **size 1,0 sqmm**, in continuous contact with the shield	
Overall Shield :	by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Inner sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,1 mm	
Inner sheath color code:	**Black**	
Armour :	Galvanized Steel Wire Braid Armour (coverage ≥ 90%)	
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, moisture/abrasion/UV Resistant,	
	Average Thickness 1,3 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - 2X2,5 SQMM - MGT/XLPE/OS/LSZH/SWB/LSZH - 150/250 V - IEC 60331.21 -**	
(every 1000 mm)	**IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**	
Under armour diameter :	(10,3 ± 10%) mm	
Over armour diameter :	(11,5 ± 10%) mm	
Outer diameter :	(14,1 ± 10%) mm	
Bending radius :	cable outer diameter x 10 (in fixed installation)	
Voltage Test :	1,5 kV a.c. for 5' (Between Cores) / 1,5 kV a.c. for 5' (Between Cores - Shield)	
Conductors DC Resistance :	≤ 7,86 Ω/km (@ 20°C)	
Insulation Resistance :	≥ 1000 MΩ x Km (@ 20°C)	
Applicable Standards		
Design Guidelines :	**IEC 60092.376**	
ON COMPLETE CABLE		
Fire Resistant test :	**IEC 60331.21**	
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22	
Acid Gas generation :	IEC 60754.1/2	
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)	
Hazardous Areas :	IEC 60079.14 par.9.3.2a	
Temperature Range :		
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)	
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)	
ON COMPLETE CABLE		
During Operation :	(-20°C up to +90°C) (in fixed installation)	
During installation :	(- 5°C up to +50°C)	
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner sheath together with correct ATEX approved equipment or accessories.**	

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	04/04/2024	Messa			
Checked :	04/04/2024	Spaccasassi			
Approved :	04/04/2024	Cucinotta			

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

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

ITEM	Tag	C-77-ZSL-015/B400-FGS-003 : PROXIMITY SWITCH / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-40 : HVAC I&T Equipment Room B-400			Module	LD_B-400	
TASK	code	C10000433	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: 77-ZSL-015 | 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.	OK
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH		>999	MΩ
	CORE to CORE		>999	MΩ
	CORE to SCREEN		>999	MΩ
	CORE to ARMr		>999	MΩ
	SCREEN to EARTH		>999	MΩ
	SCREEN to ARMr		>999	MΩ
CONTINUITY	CORES		0.4	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

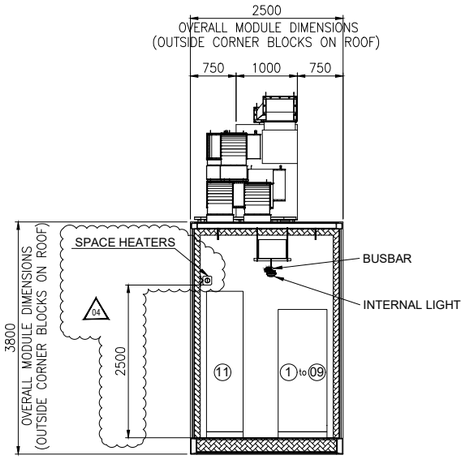
TYPE / SERIAL N°: MEGGER: KEW3125A SERIAL:W8330207 Calibration date: N° 7722/24 10/07/2024

Comments

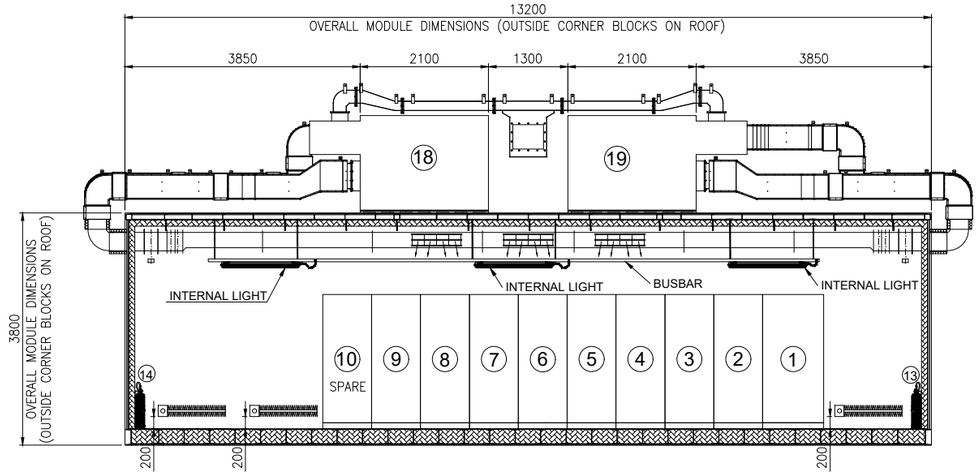
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Paolo Schintu	
Date	2024-11-12	2024-11-22	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-12T17:43:56.618Z	PROVERLIS Digitaly signed by Paolo Schintu 2024-11-22T16:06:51.710Z	

DRAWING NO. 1724000049-AR-DA-00017

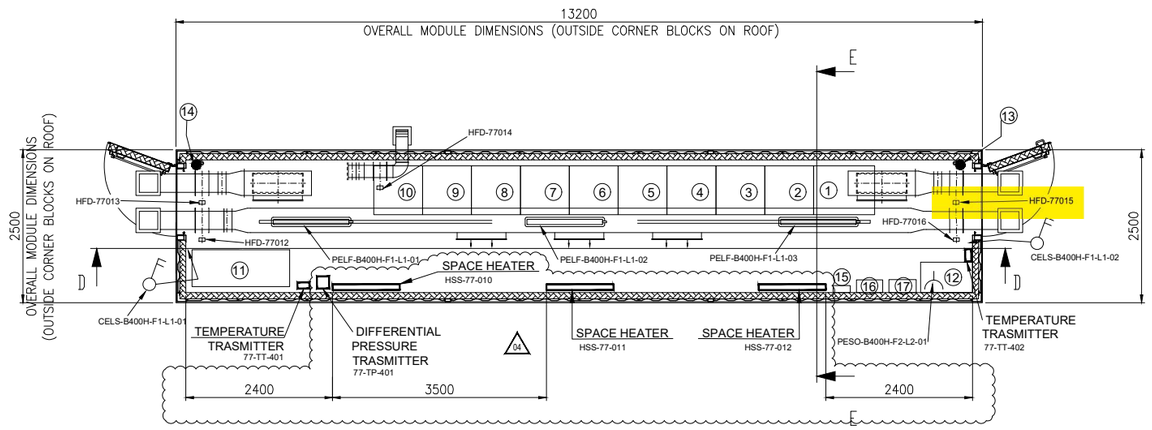
REV. 04



SECTION E-E



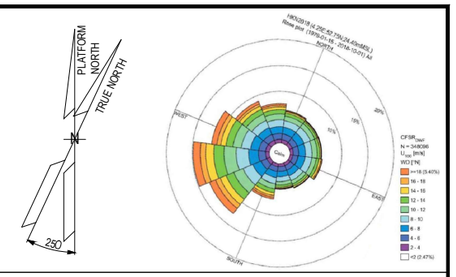
SECTION D-D



"B-400" I&T EQUIPMENT ROOM PLAN

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-010	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-011	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-012	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 FINAL ONE WILL BE CONFIRMED IN THE AS-BUILT ISSUE.

REFERENCE

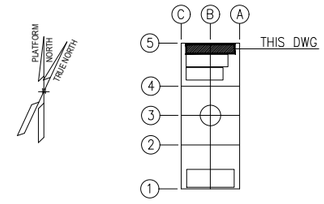
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007
"B-400" FOUNDATION	1724000049-ST-DD-00013
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009

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
04	22/10/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	04/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	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

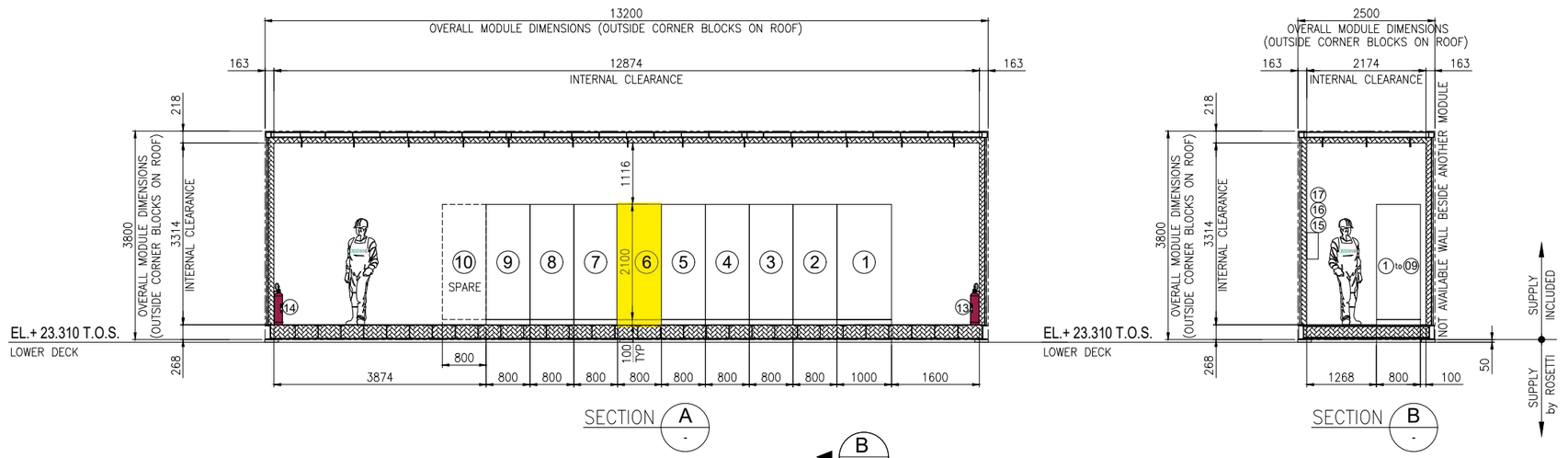
TITLE : BASE LOAD POWER HUB (BLPH)
B-400 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 22/10/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 003	REV. 04

File Name : 1724000049-AR-DA-00017-REV.04

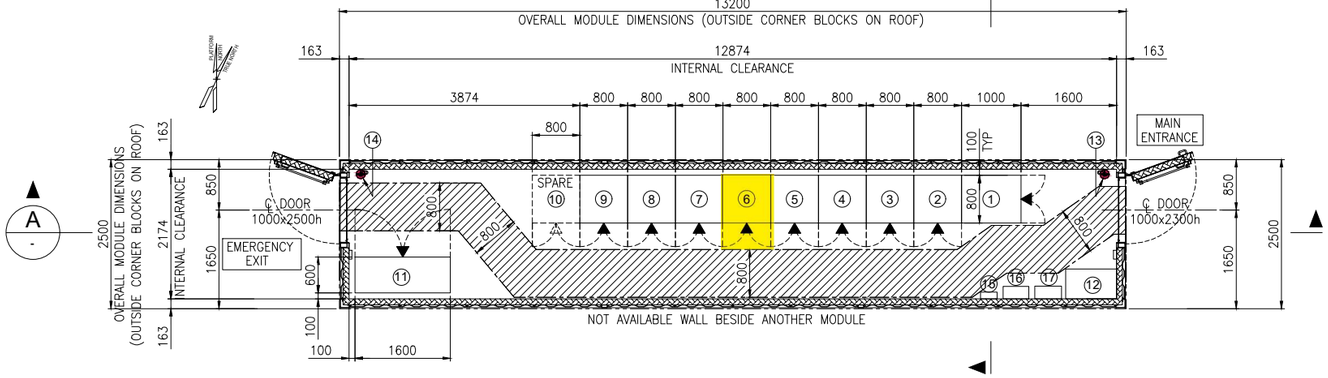
DRAWING NO. 123A90-DDL-IN-DL-40012

REV. 03



SECTION A -

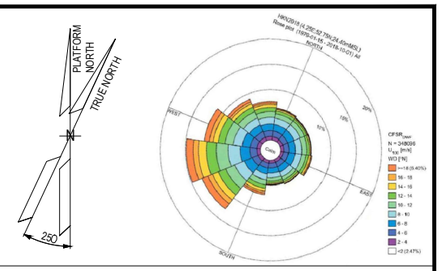
SECTION B -



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

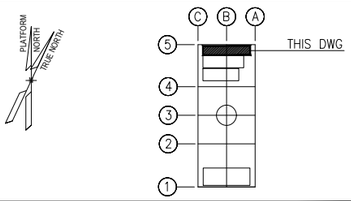
HOLDS

.

REFERENCE

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

KEY PLAN



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

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

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

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

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

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

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

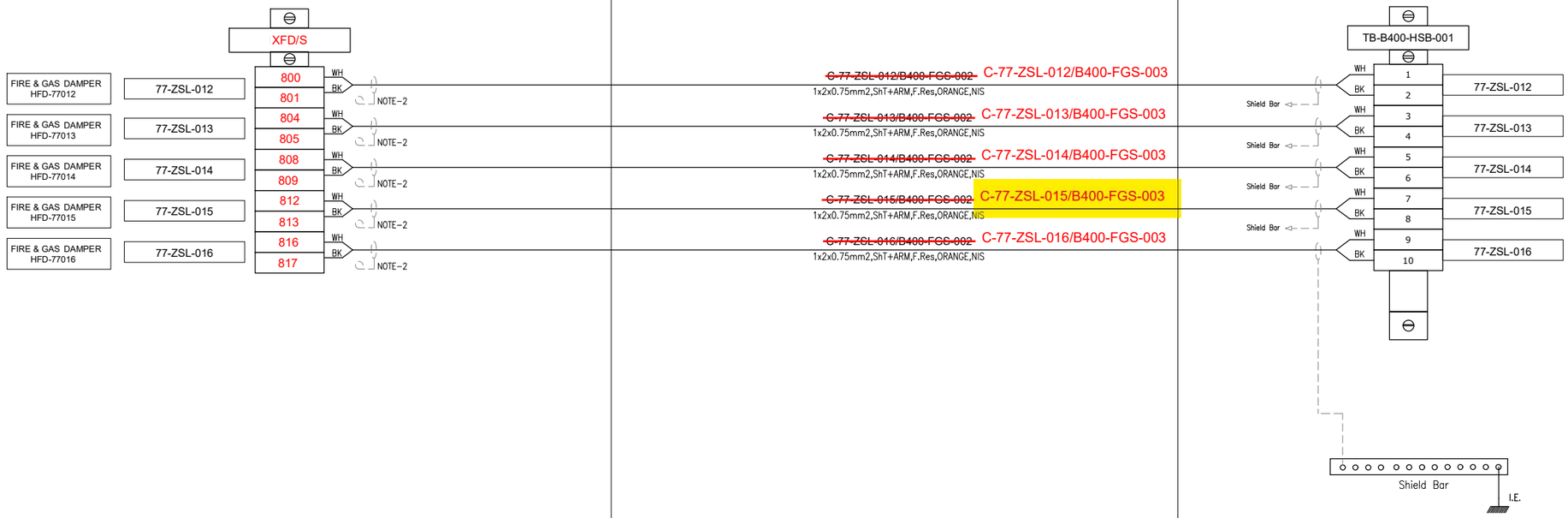
DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		I&T EQUIPMENT ROOM (ITER)
B-400 - ITER	CABLE NO	MARSHALLING CABINET
		~~B400-FGS-002~~
		B400-FGS-003

<01>

HVAC Panel B400-HSB-001



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–400

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 059	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>

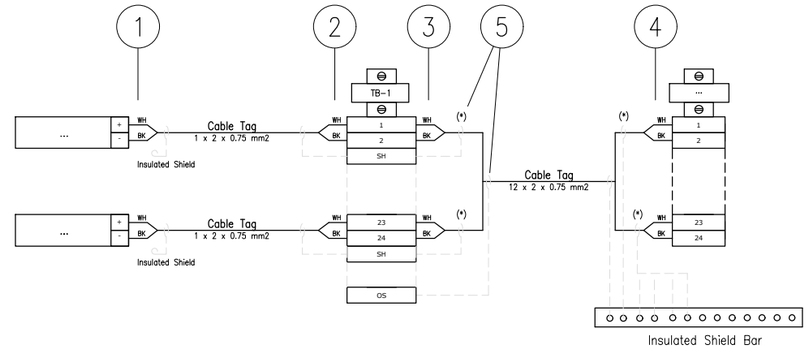
LEGENDS & SYMBOLS:

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

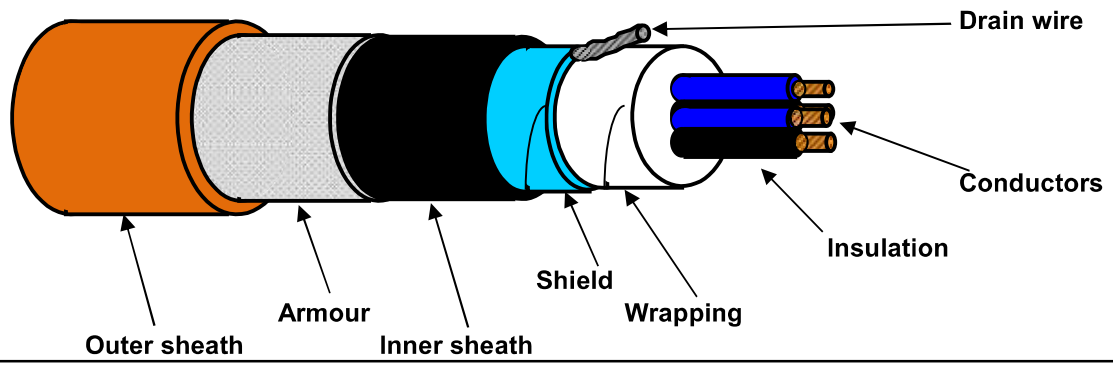
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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
C-77-ZSL-015/B400-FGS-003	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						77-ZSL-015	Proximity Switch	Lower Deck (B-400)		B400-FGS-003	Marshalling FGS	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.				B-400-SEC-2J / B-400-SEC-2B / B-400-SEC-2C / B-400-SEC-2E / B-400-SEC-2F

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 — PROVERLIS — CROSSWIND

ITEM	Tag	C-77-HS-016B/B400-FGS-002 : PUSH BUTTON / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-40 : HVAC I&T Equipment Room B-400			Module	LD_B-400_Ext/LD_B-400	
TASK	code	C10000434	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-016B	To	B400-FGS-002		

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	OK
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH	>999	MΩ
	CORE to CORE	>999	MΩ
	CORE to SCREEN	>999	MΩ
	CORE to ARMr	>999	MΩ
	SCREEN to EARTH	>999	MΩ
	SCREEN to ARMr	>999	MΩ
CONTINUITY	CORES	0.4	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

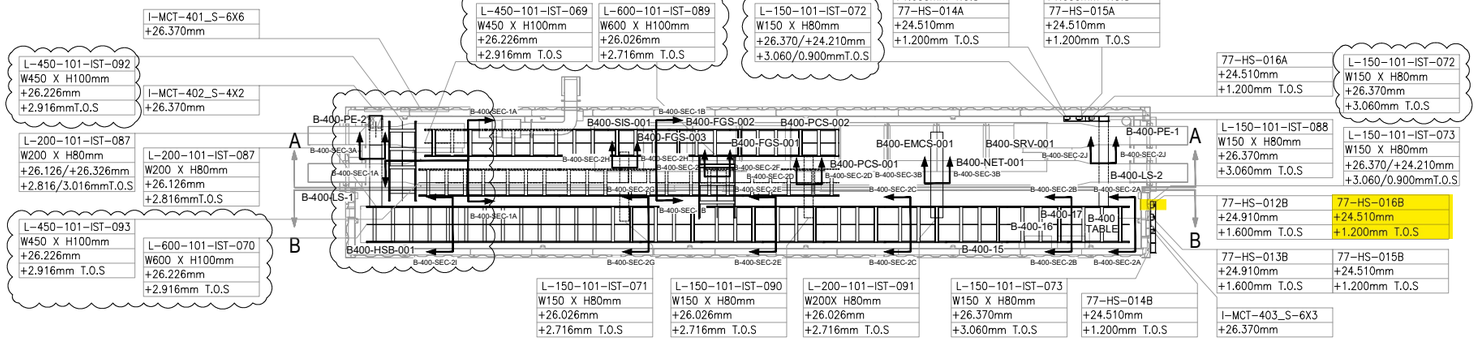
TYPE / SERIAL N°: MEGGER: KEW3125A SERIAL:W8330207 Calibration date: N° 7722/24 10/07/2024

Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Paolo Schintu	
Date	2024-11-12	2024-11-23	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-12T17:45:04.058Z	PROVERLIS Digitaly signed by Paolo Schintu 2024-11-23T09:05:23.605Z	

DRAWING NO. 123A90-DDL-IN-DL-40116

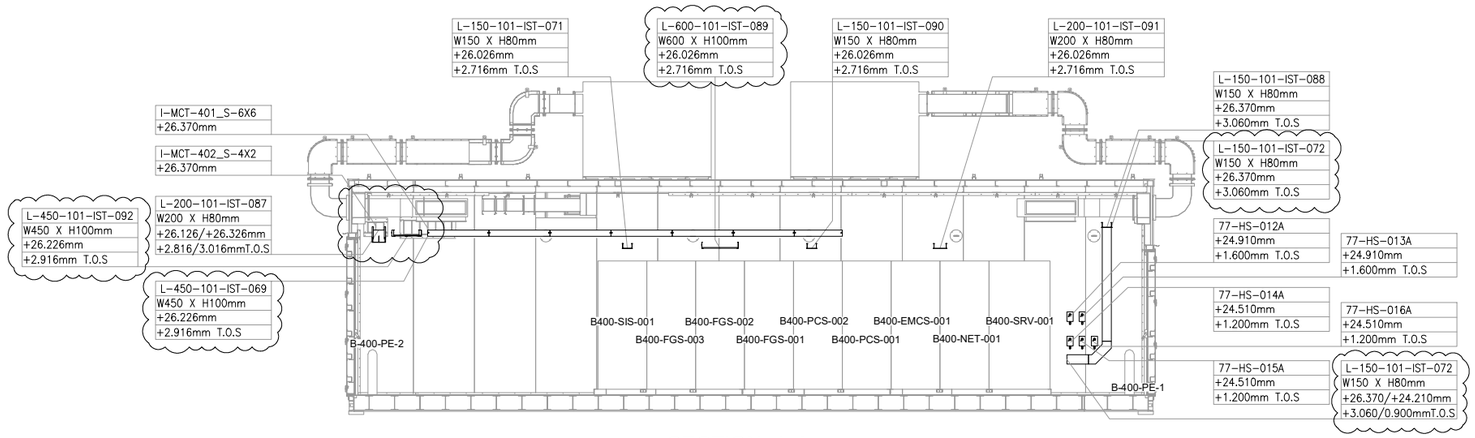
REV. 01



PLAN VIEW

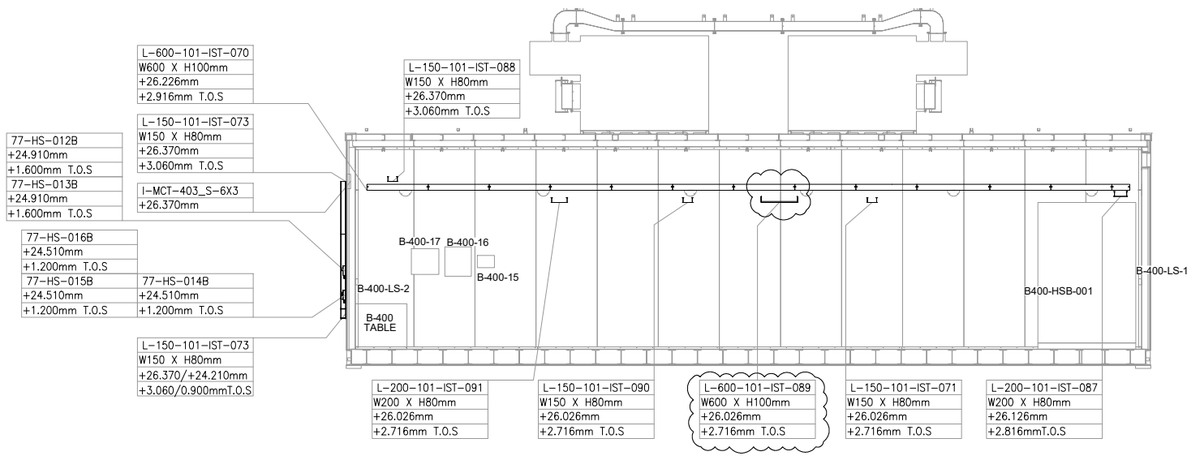
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



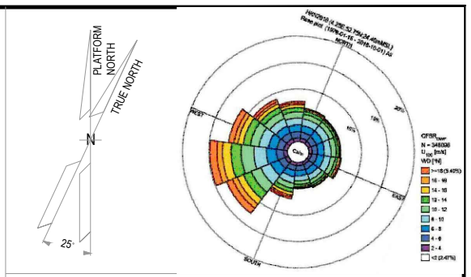
SECTION A-A

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

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-400 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-40116	SHEET 001	REV. 01

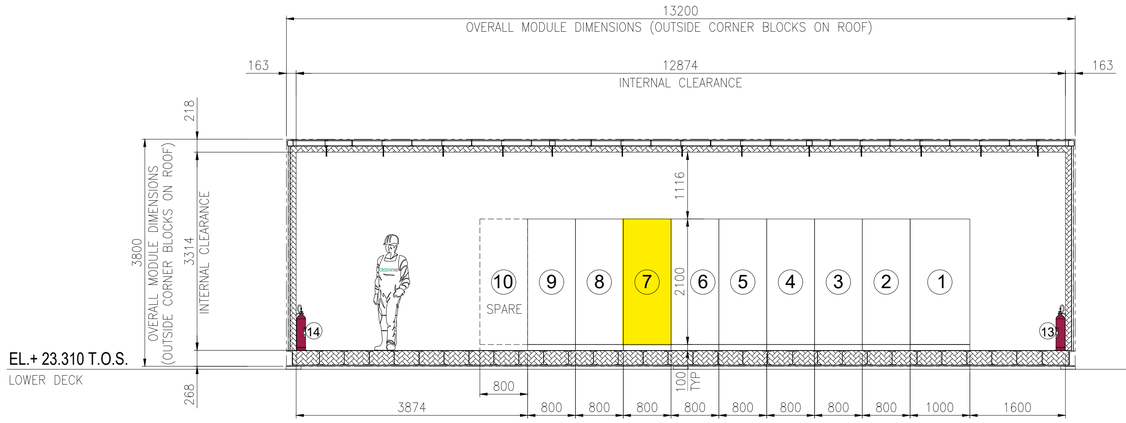
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40116**

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

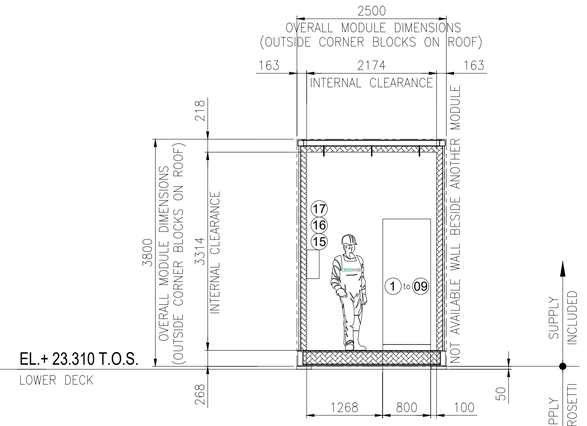
ROSETTI MARINO SpA

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

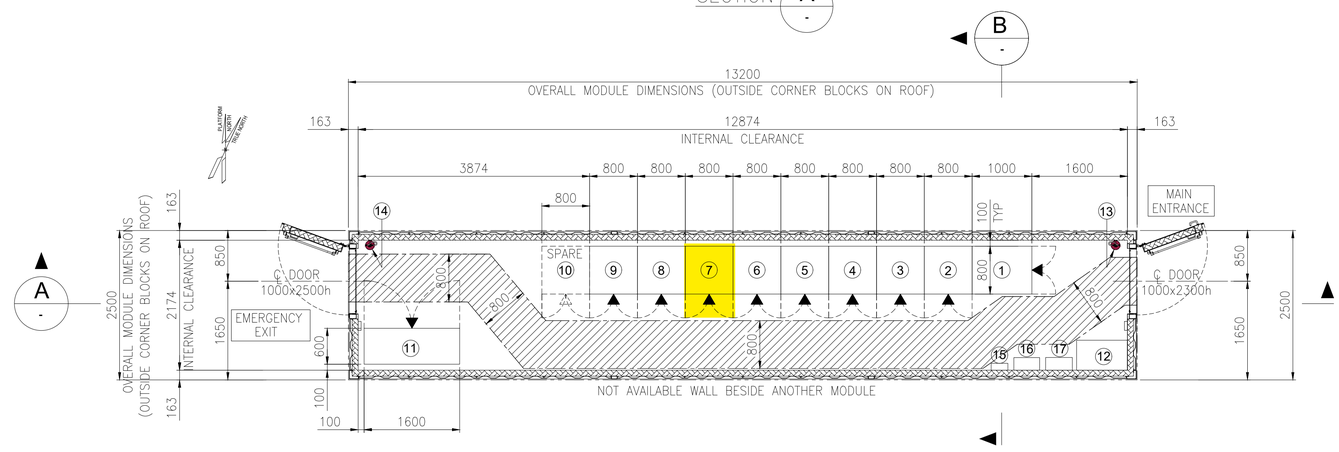
DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 03



SECTION A -



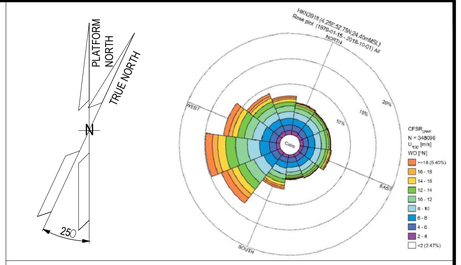
SECTION B -



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

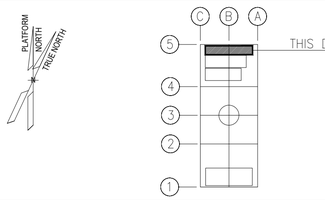
HOLDS

.

REFERENCE

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

KEY PLAN



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

CROSSWIND | ROSETTI MARINO

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

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

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40012**
REV.: 3_A | DATE: 07/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

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

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

REV. 01

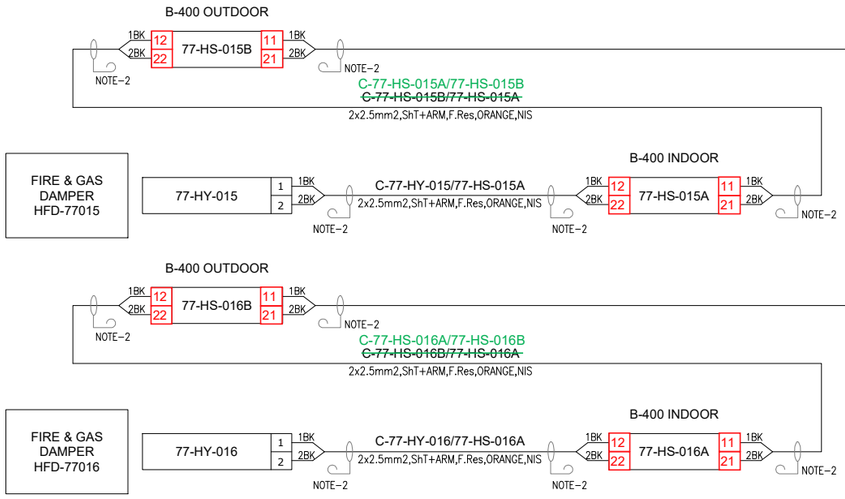
I&T EQUIPMENT ROOM (ITER)

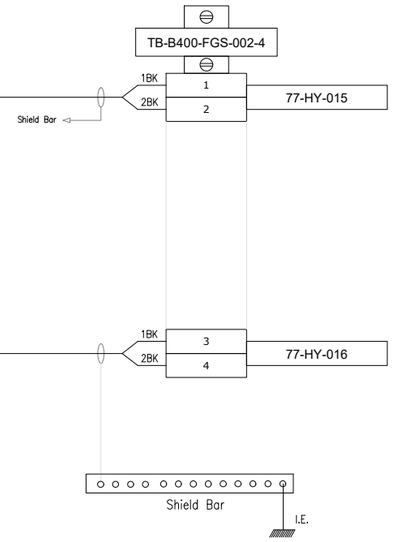
MARSHALLING CABINET

B400-FGS-002

<01>

B-400 ITER





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 COMMAND – B–400

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	077	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>

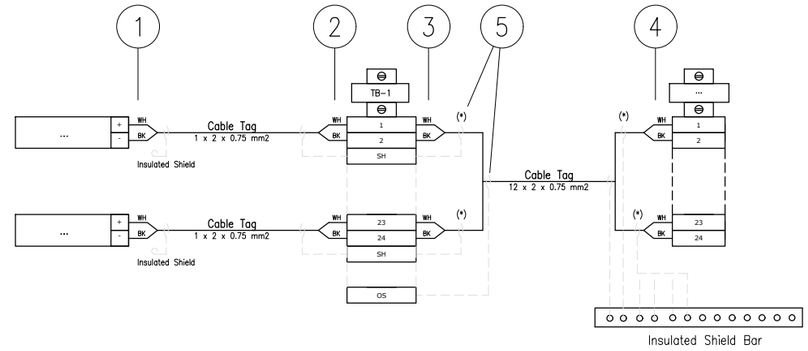
LEGENDS & SYMBOLS:

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

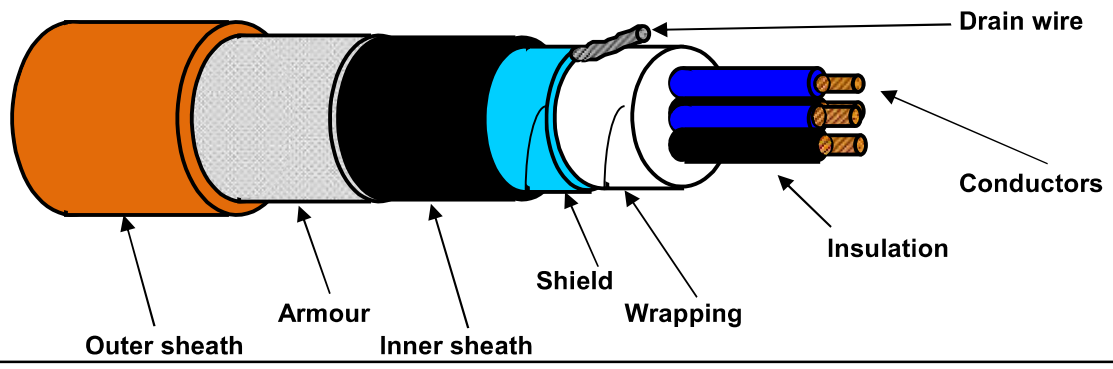
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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

Tag Number	Category	Discipline	Eng Statu	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Sectior	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Stan	From Gland	From Entr	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-77-HS-016B/B400-FGS-002	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						77-HS-016B	Hand Switch	Lower Deck (B-400) Ext.		B400-FGS-002	Marshalling FGS	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.				B-400-SEC-2A / B-400-SEC-2B / B-400-SEC-2C / B-400-SEC-2E / B-400-SEC-2F

Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250 V (300 V)

2X2,5 - INSTRUMENT CABLE - Fire Resistant - Not I.S.



TECHNICAL FEATURES

Conductors :	**7-STRANDED** plain/bare soft annealed copper wires	**IEC 60228 Class 2**
Insulation :	Mica/Glass Tape (MGT) plus XLPE, Nominal Thickness 0,6 mm	
Cores colour code :	**Black NUMBERED (from 1 to 2)**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not required	
Total Assembling :	8/1mt	
Overall Wrapping:	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Drain wire :	7-Stranded **TINNED** annealed copper drain wire, **size 1,0 sqmm**, in continuous contact with the shield	
Overall Shield :	by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Inner sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,1 mm	
Inner sheath color code:	**Black**	
Armour :	Galvanized Steel Wire Braid Armour (coverage ≥ 90%)	
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, moisture/abrasion/UV Resistant,	
	Average Thickness 1,3 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - 2X2,5 SQMM - MGT/XLPE/OS/LSZH/SWB/LSZH - 150/250 V - IEC 60331.21 -**	
(every 1000 mm)	**IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**	
Under armour diameter :	(10,3 ± 10%) mm	
Over armour diameter :	(11,5 ± 10%) mm	
Outer diameter :	(14,1 ± 10%) mm	
Bending radius :	cable outer diameter x 10 (in fixed installation)	
Voltage Test :	1,5 kV a.c. for 5' (Between Cores) / 1,5 kV a.c. for 5' (Between Cores - Shield)	
Conductors DC Resistance :	≤ 7,86 Ω/km (@ 20°C)	
Insulation Resistance :	≥ 1000 MΩ x Km (@ 20°C)	
Applicable Standards		
Design Guidelines :	**IEC 60092.376**	
ON COMPLETE CABLE		
Fire Resistant test :	**IEC 60331.21**	
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22	
Acid Gas generation :	IEC 60754.1/2	
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)	
Hazardous Areas :	IEC 60079.14 par.9.3.2a	
Temperature Range :		
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)	
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)	
ON COMPLETE CABLE		
During Operation :	(-20°C up to +90°C) (in fixed installation)	
During installation :	(- 5°C up to +50°C)	
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner sheath together with correct ATEX approved equipment or accessories.**	

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	04/04/2024	Messa			
Checked :	04/04/2024	Spaccasassi			
Approved :	04/04/2024	Cucinotta			

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

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

ITEM	Tag	C-77-HS-016A/77-HS-016B	: PUSH BUTTON / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-40	: HVAC I&T Equipment Room B-400	Module	LD_B-400/LD_B-400_Ext		
TASK	code	C10000435	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-016A To: 77-HS-016B

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.	PL
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.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH	>999	MΩ
	CORE to CORE	>999	MΩ
	CORE to SCREEN	>999	MΩ
	CORE to ARMr	>999	MΩ
	SCREEN to EARTH	>999	MΩ
	SCREEN to ARMr	>999	MΩ
CONTINUITY	CORES	0.7	Ω
	SCREEN	0.6	Ω
	EARTH	0.6	Ω
	ARMr	0.6	Ω
	TEST VOLTS	500	V

TEST ALL CORES AND RECORD LOWEST VALUE

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

TESTING INSTRUMENTS USED

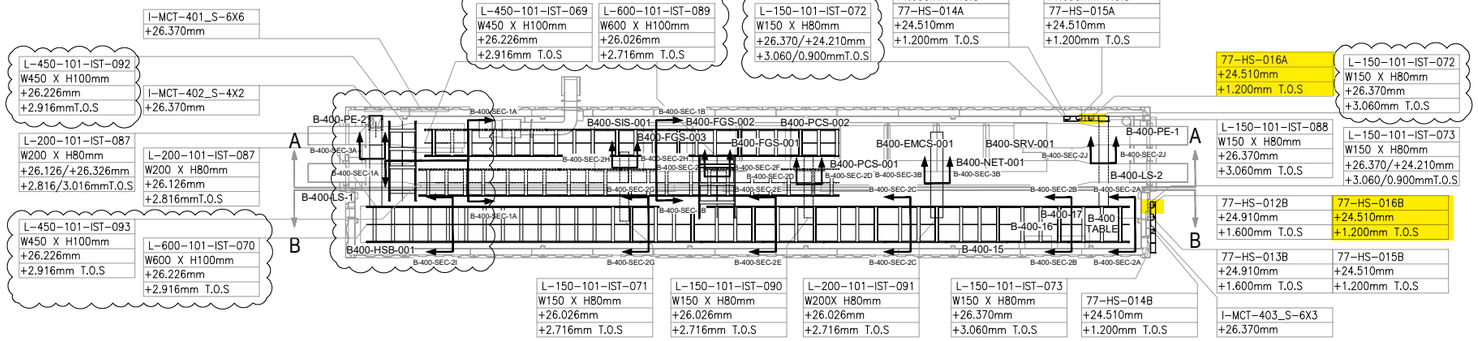
TYPE / SERIAL N°: KEW3125A / W8330207 Calibration date: 10-07-2024

Comments

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:38:36.120Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T15:59:25.376Z	

DRAWING NO. 123A90-DDL-IN-DL-40116

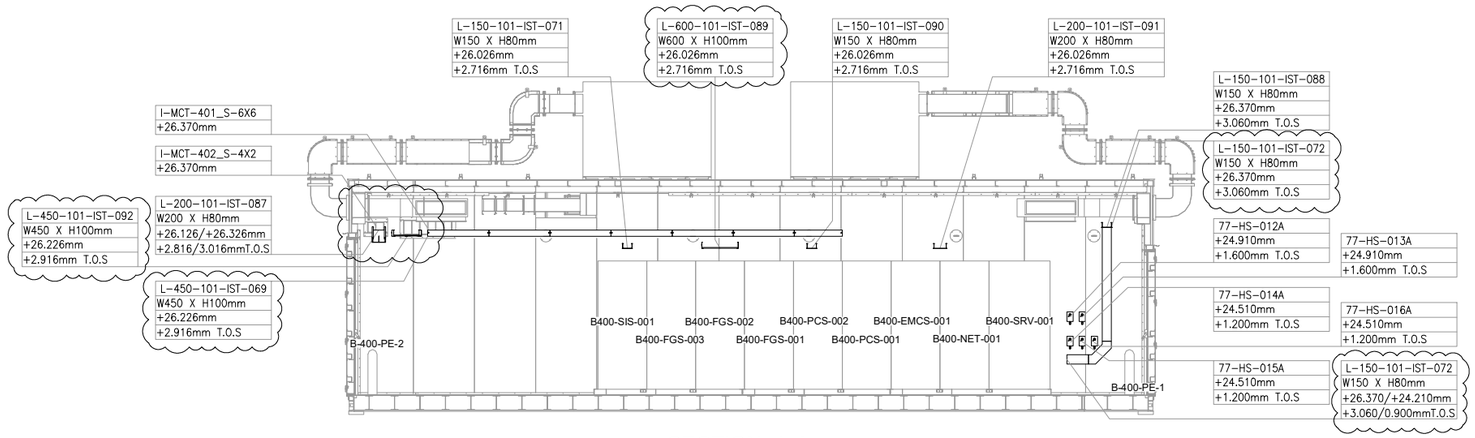
REV. 01



PLAN VIEW

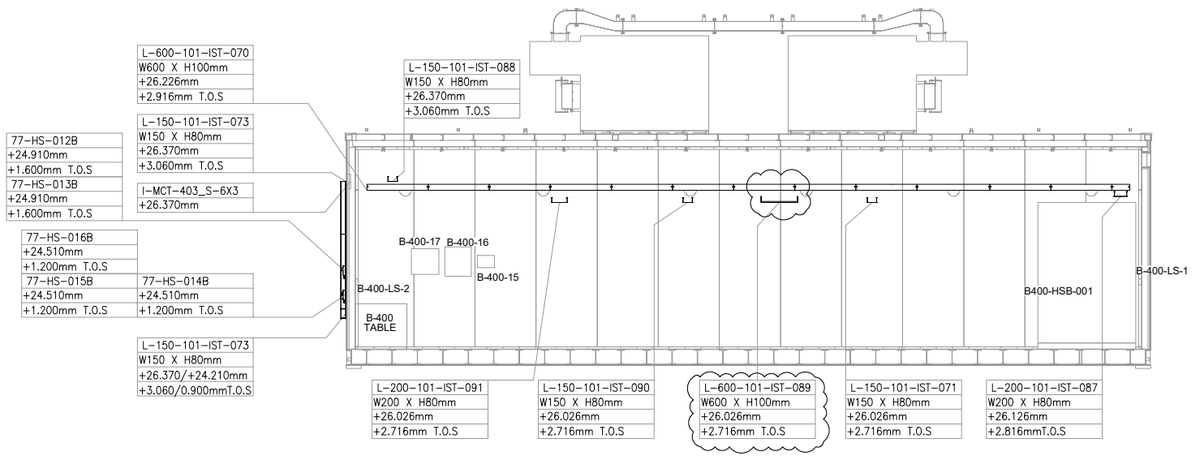
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



SECTION B-B

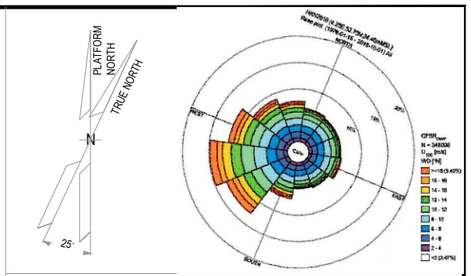
SCALE-1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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-400 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-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

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

REV. 01

I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-FGS-002

<01>

B-400 ITER



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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
FIRE DAMPER COMMAND – B–400

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 077	REV. 01

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

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

REV. 01

NOTES:

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

<01>

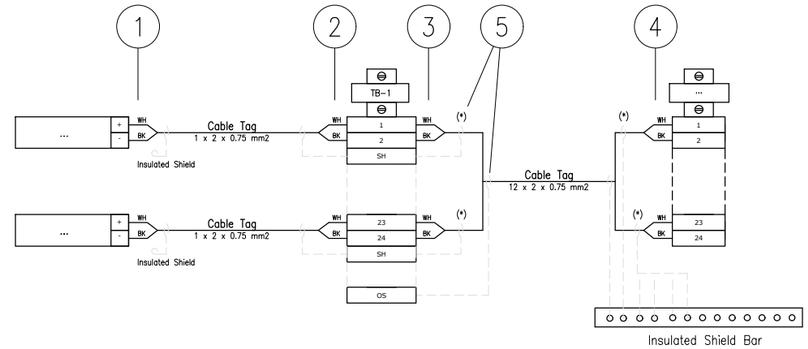
LEGENDS & SYMBOLS:

LEGEND:

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

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



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

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

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

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

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

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

REFERENCE DRAWINGS

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

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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

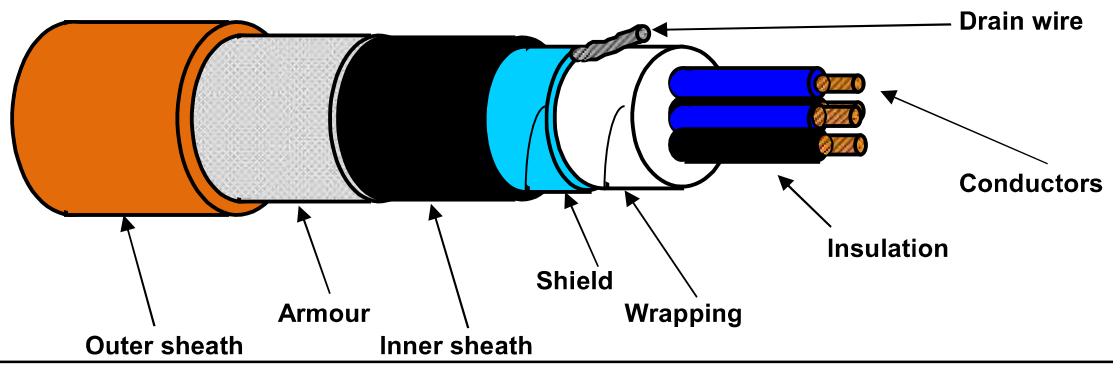
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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

Tag Number	Info	Category	Discipline	Eng Status	NativeDoc	Grouping	Entity Type	Main Function	Secondary Function	Module	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.	PO Position	RFID	Eng Gross Qty	Over All Gross Qty	UM	Overall Prj Part Number	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-77-HS-016A/77-HS-016B		Cable	IN	VFC	123A90-DDL-IN-LIS-40091	Int-Ext						77-HS-016A	Hand Switch	Lower Deck (B-400)		77-HS-016B	Hand Switch	Lower Deck (B-400) Ext.		SMICV12-2X2,5	Cable Cu CI.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	120		6	6	m		M20	T2_M20_Double			T2_M20_Double				I-MCT-403	B-400-SEC-2A / B-400-SEC-21 /

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-HY-016/77-HS-016A	: FIRE DAMPER / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	77-40	: HVAC I&T Equipment Room B-400	Module	LD_B-400		
TASK	code	C10000436	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-77016 | To: 77-HS-016A

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.	PL
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.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH	>999	MΩ
	CORE to CORE	>999	MΩ
	CORE to SCREEN	>999	MΩ
	CORE to ARMr	>999	MΩ
	SCREEN to EARTH	>999	MΩ
	SCREEN to ARMr	>999	MΩ
CONTINUITY	CORES	0.7	Ω
	SCREEN	0.7	Ω
	EARTH	0.6	Ω
	ARMr	0.7	Ω
	TEST VOLTS	500	V

TEST ALL CORES AND RECORD LOWEST VALUE

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

TESTING INSTRUMENTS USED

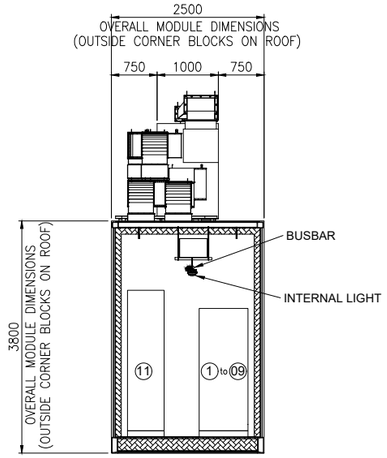
TYPE / SERIAL N°: KEW3125A / W8330207 | Calibration date: 10-07-2024

Comments

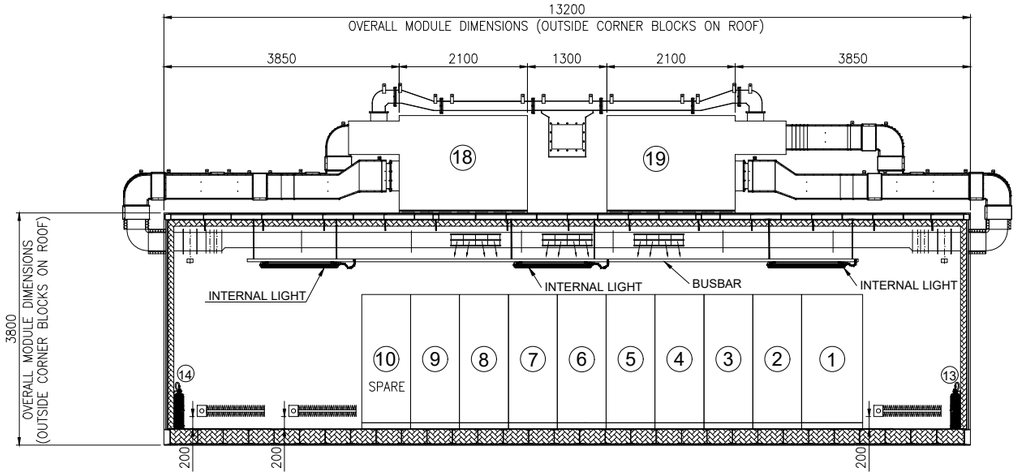
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:38:53.865Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T15:59:08.945Z	

DRAWING NO. 1724000049-AR-DA-00017

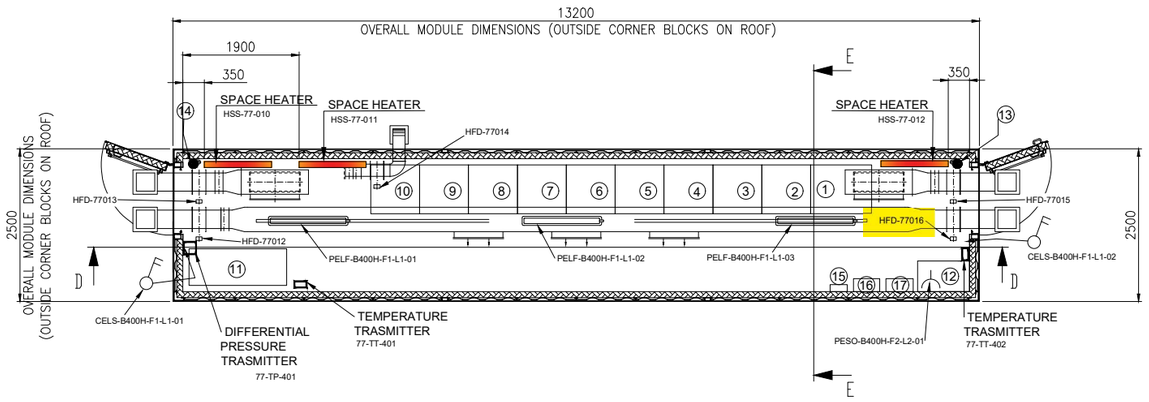
REV. 03



SECTION E-E

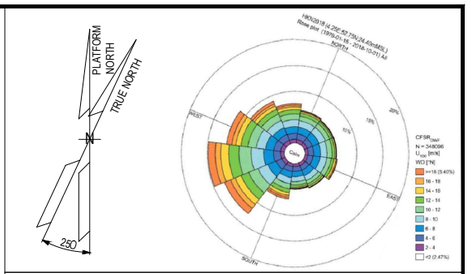


SECTION D-D



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-010	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-011 (03)	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-012	SPACE HEATER 3	184	145	1100	5	



NOTE

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

REFERENCE

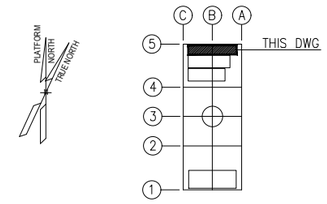
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007
(03) "B-400" FOUNDATION	1724000049-ST-DD-00013
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	04/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	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

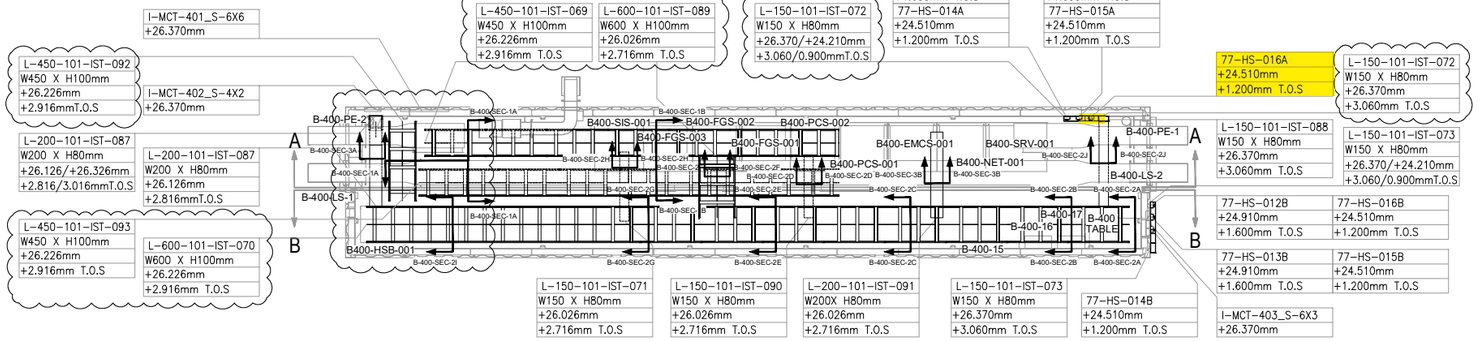
TITLE : BASE LOAD POWER HUB (BLPH)
B-400 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 003	REV. 03

File Name : 1724000049-AR-DA-00017-REV.03

DRAWING NO. 123A90-DDL-IN-DL-40116

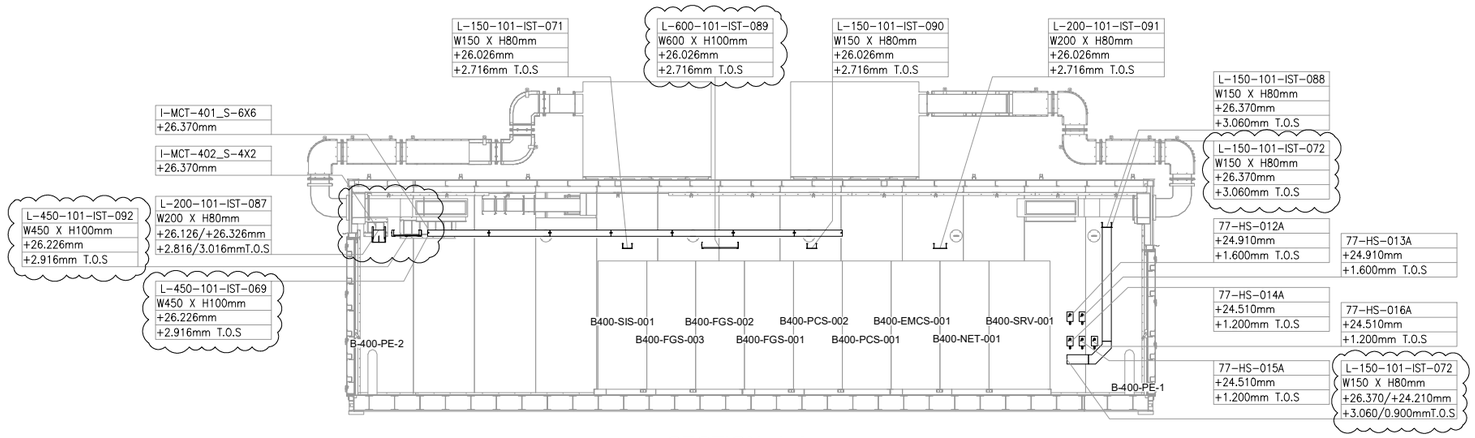
REV. 01



PLAN VIEW

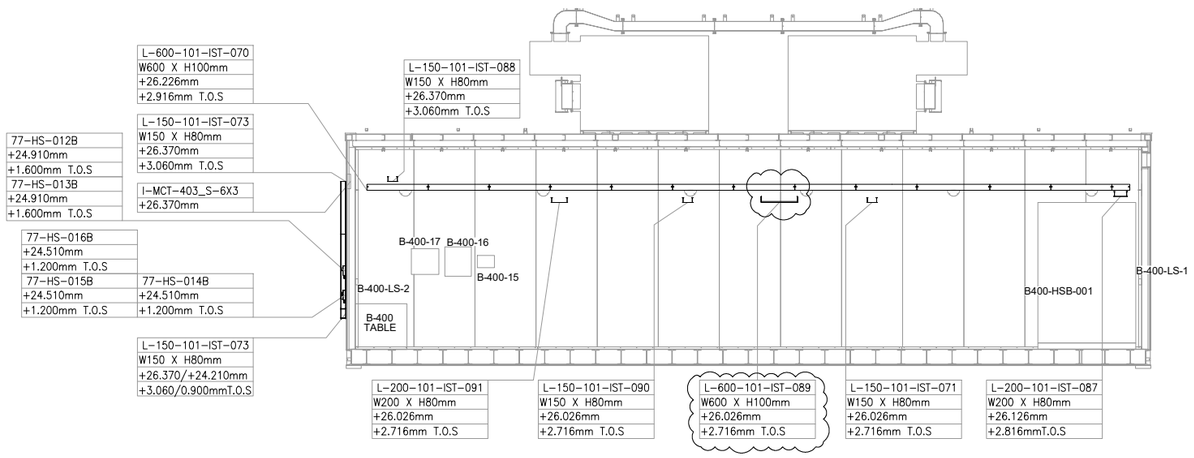
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



SECTION B-B

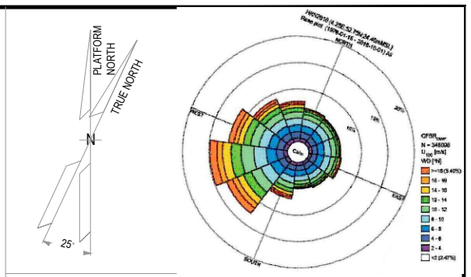
SCALE-1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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-400 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-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

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

REV. 01

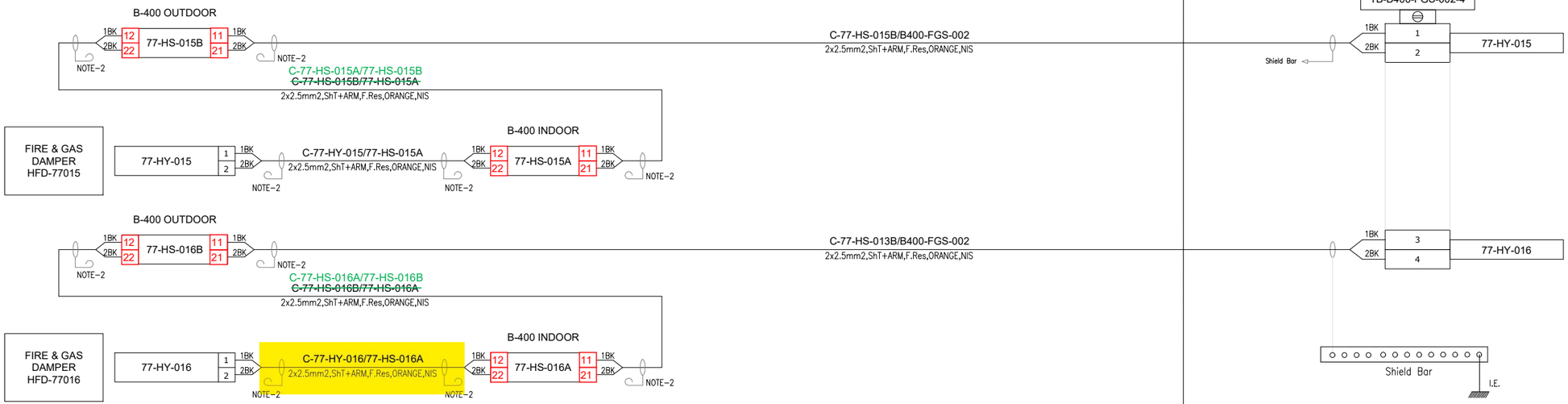
I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-FGS-002

<01>

B-400 ITER



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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
FIRE DAMPER COMMAND – B–400

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 077	REV. 01

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

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

REV. 01

NOTES:

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

<01>

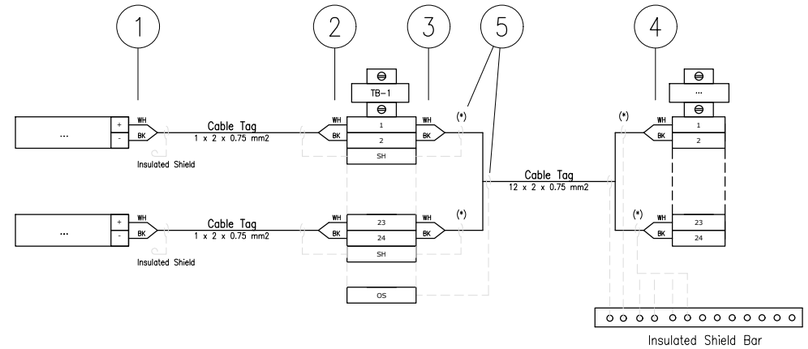
LEGENDS & SYMBOLS:

LEGEND:

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

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



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

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

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

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

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

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

REFERENCE DRAWINGS

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

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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

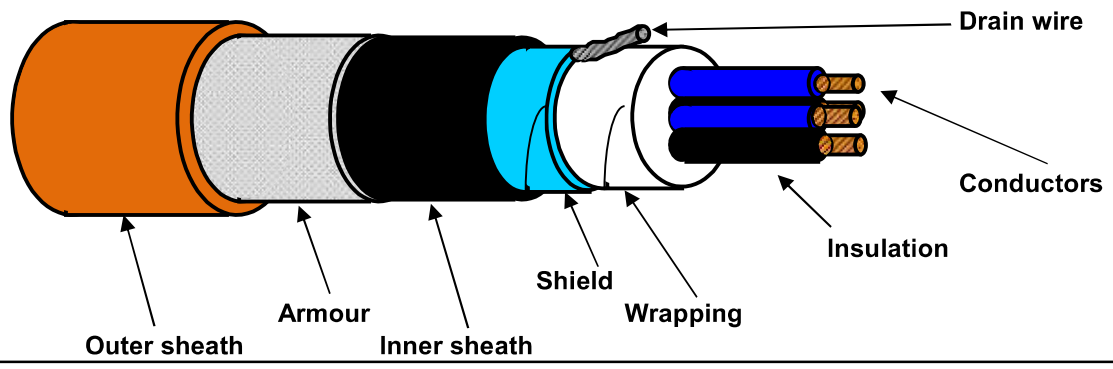
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-77-HY-016/77-HS-016A	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						HFD-77016	Fire Damper	Lower Deck (B-400)	77-HS-016A	Hand Switch	Lower Deck (B-400)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			T2_M20_Double				B-400-SEC-1A / B-400-SEC-2H / B-400-SEC-2G / B-400-SEC-2E / B-400-SEC-2C / B-400-SEC-2B / B-400-SEC-2J / I-MCT-403

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-ZSL-016/B400-FGS-003 : PROXIMITY SWITCH / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-40 : HVAC I&T Equipment Room B-400			Module	LD_B-400	
TASK	code	C10001433	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	77-ZSL-016	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.	OK
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH		>999	MΩ
	CORE to CORE		>999	MΩ
	CORE to SCREEN		>999	MΩ
	CORE to ARMr		>999	MΩ
	SCREEN to EARTH		>999	MΩ
	SCREEN to ARMr		>999	MΩ
CONTINUITY	CORES		0.4	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

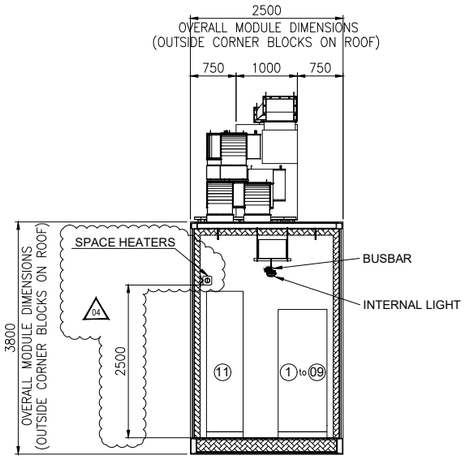
TYPE / SERIAL N°: MEGGER: KEW3125A SERIAL:W8330207 Calibration date: N° 7722/24 10/07/2024

Comments

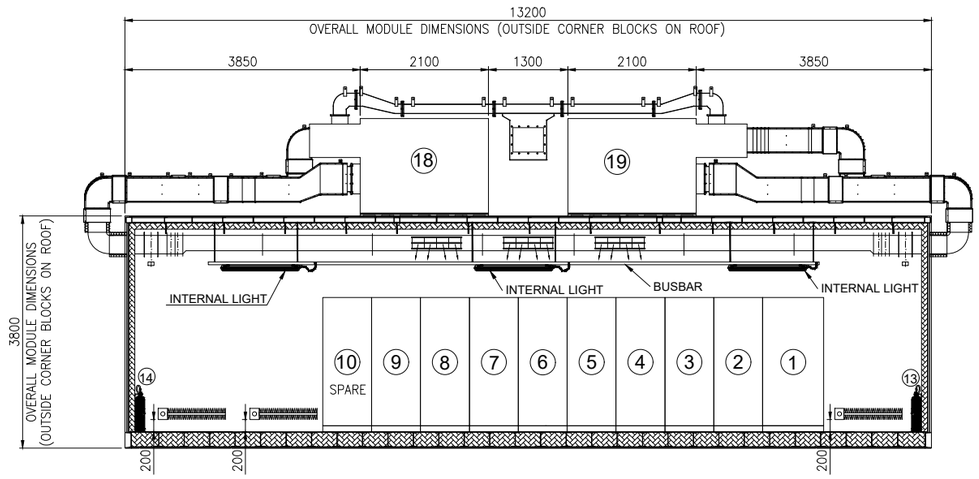
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Paolo Schintu	
Date	2024-11-12	2024-11-22	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-12T17:48:00.489Z	PROVERLIS Digitaly signed by Paolo Schintu 2024-11-22T16:10:34.650Z	

DRAWING NO. 1724000049-AR-DA-00017

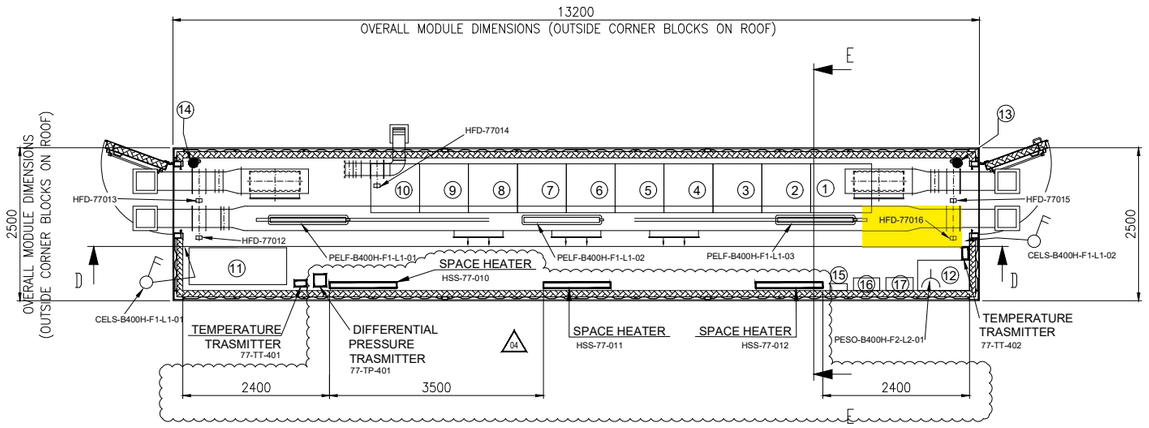
REV. 04



SECTION E-E



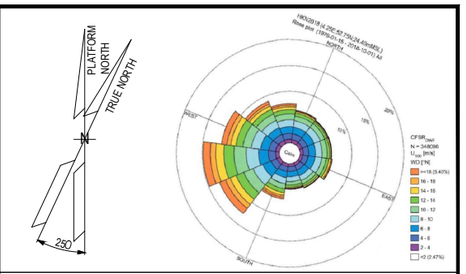
SECTION D-D



"B-400" I&T EQUIPMENT ROOM PLAN

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-010	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-011	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-012	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 FINAL ONE WILL BE CONFIRMED IN THE AS-BUILT ISSUE.

REFERENCE

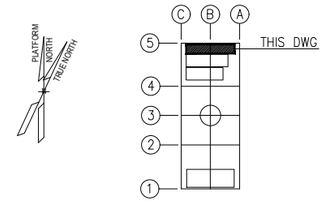
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007
"B-400" FOUNDATION	1724000049-ST-DD-00013
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009

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
04	22/10/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	04/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	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

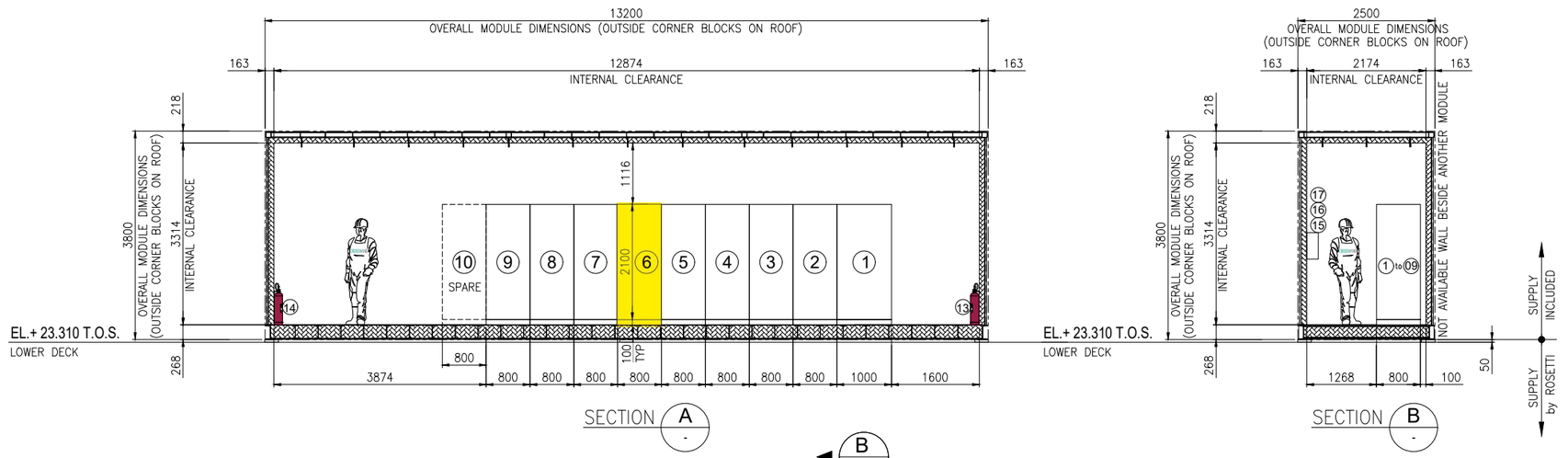
TITLE : BASE LOAD POWER HUB (BLPH)
B-400 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 22/10/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 003	REV. 04

File Name : 1724000049-AR-DA-00017-REV.04

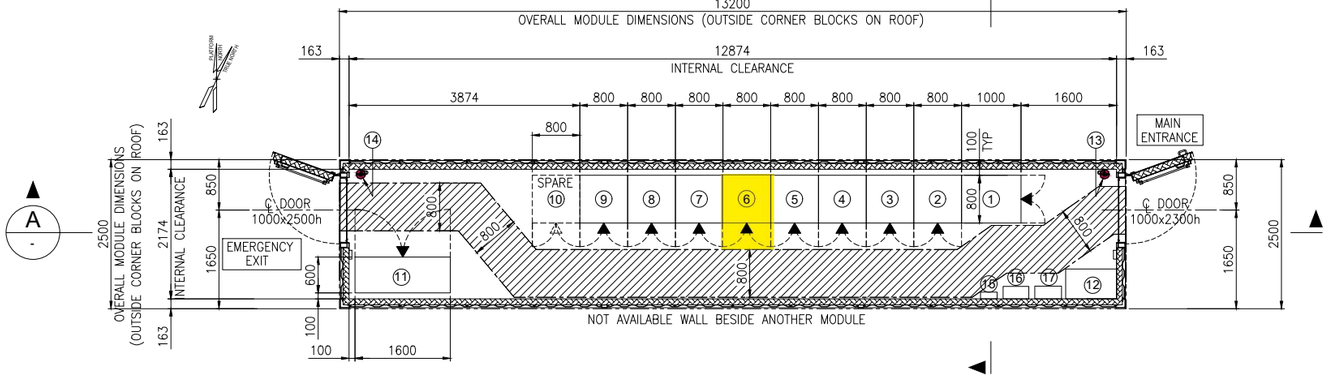
DRAWING NO. 123A90-DDL-IN-DL-40012

REV. 03



SECTION A -

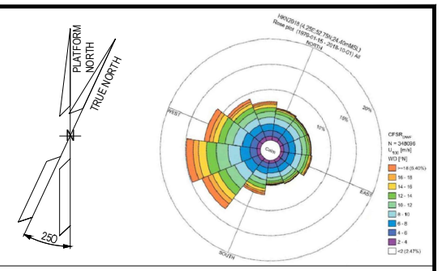
SECTION B -



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

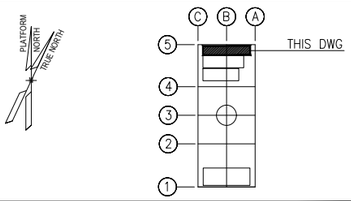
HOLDS

.

REFERENCE

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

KEY PLAN



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

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

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

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

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

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

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

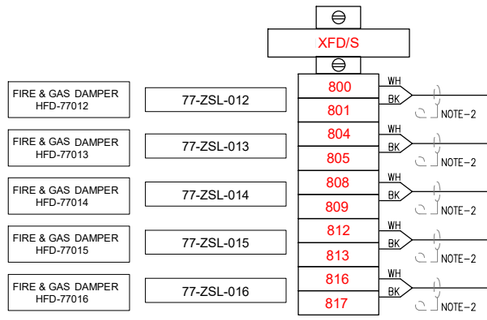
DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		I&T EQUIPMENT ROOM (ITER)
B-400 - ITER	CABLE NO	MARSHALLING CABINET
		~~B400-FGS-002~~ B400-FGS-003

<01>

HVAC Panel B400-HSB-001



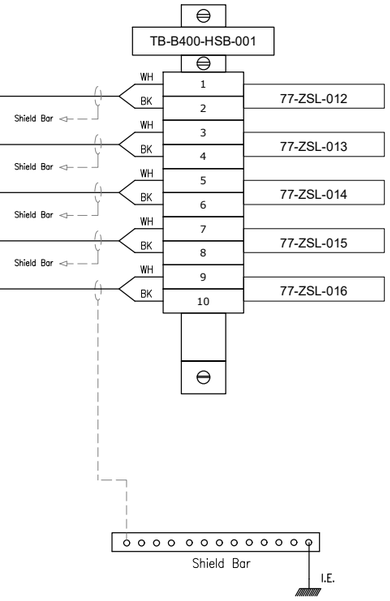
~~C-77-ZSL-012/B400-FGS-002~~ C-77-ZSL-012/B400-FGS-003
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

~~C-77-ZSL-013/B400-FGS-002~~ C-77-ZSL-013/B400-FGS-003
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

~~C-77-ZSL-014/B400-FGS-002~~ C-77-ZSL-014/B400-FGS-003
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

~~C-77-ZSL-015/B400-FGS-002~~ C-77-ZSL-015/B400-FGS-003
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

~~C-77-ZSL-016/B400-FGS-002~~ C-77-ZSL-016/B400-FGS-003
1x2x0.75mm2,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–400

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 059	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>

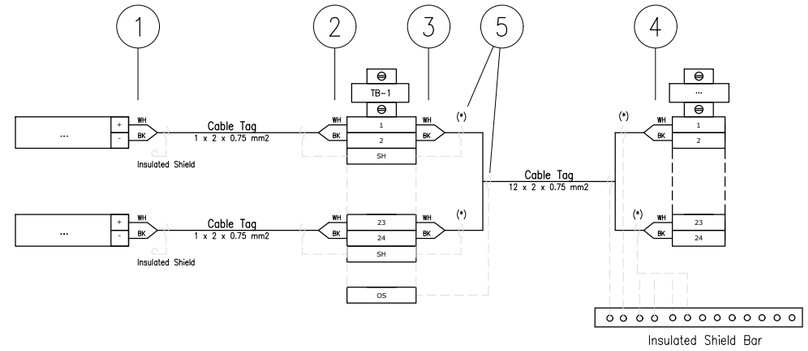
LEGENDS & SYMBOLS:

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

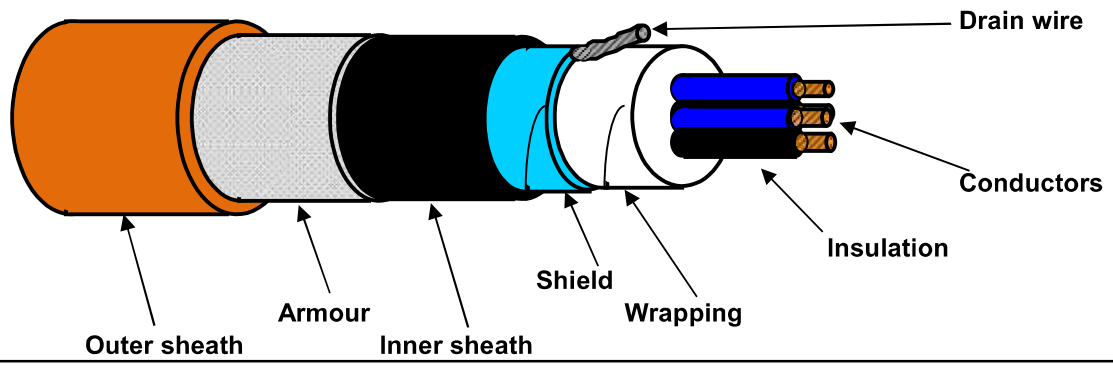
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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
C-77-ZSL-016/B400-FGS-003	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						77-ZSL-016	Proximity Switch	Lower Deck (B-400)		B400-FGS-003	Marshalling FGS	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.				B-400-SEC-1A / B-400-SEC-1B

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.

ITEM	Tag	77-HS-012A	: Hand Switch for Fire&Gas Damper HFD-77012		Dwg	123A90-DDL-IN-DL-40116	
	S/Sys	77-40	: HVAC I&T Equipment Room B-400		Module	LD_B-400	
TASK	code	C10002099	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Instrumental	Form	CJX00	Miscellaneous

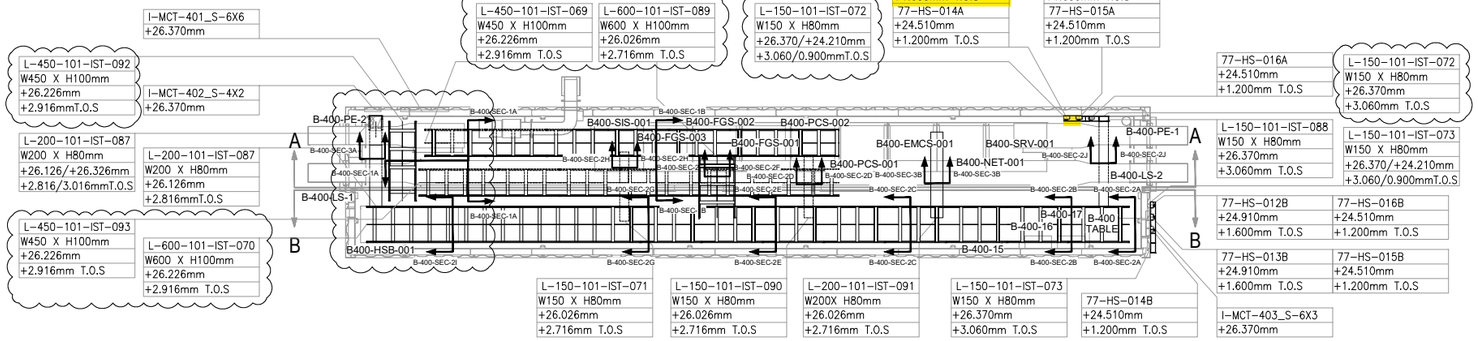
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	PL
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	NA
7	Check identification (tag number, tag plates).	OK
8	Check supporting and protection against vibrations.	PL
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	PL
10	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:40:14.803Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T15:27:18.114Z	

DRAWING NO. 123A90-DDL-IN-DL-40116

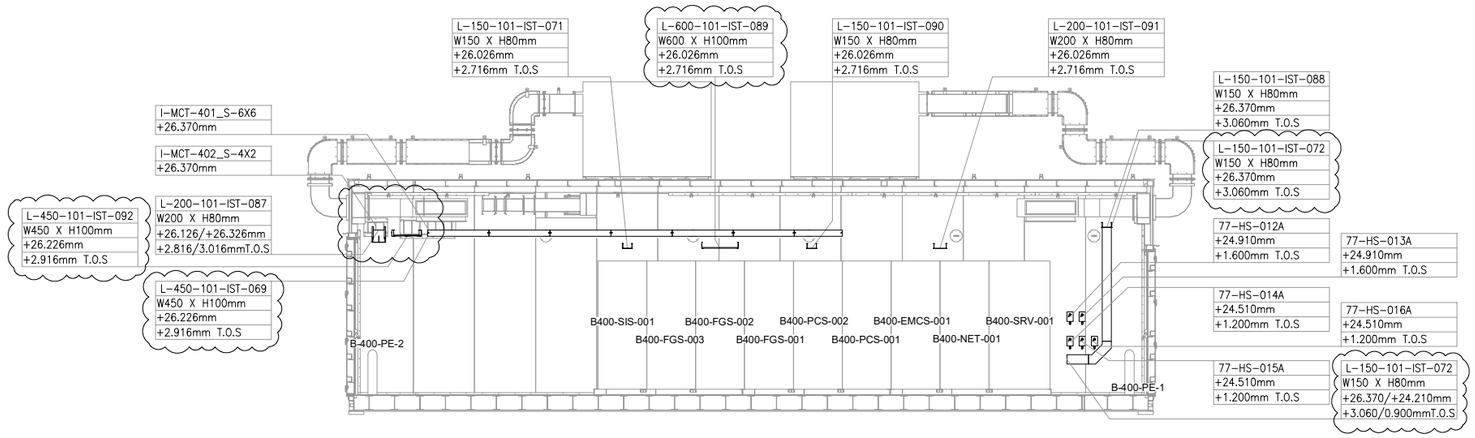
REV. 01



PLAN VIEW

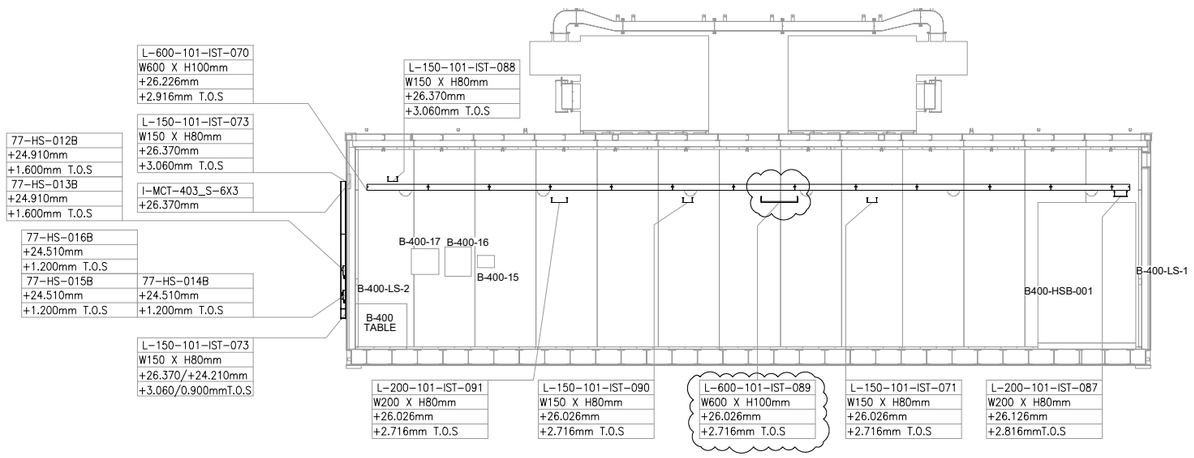
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



SECTION B-B

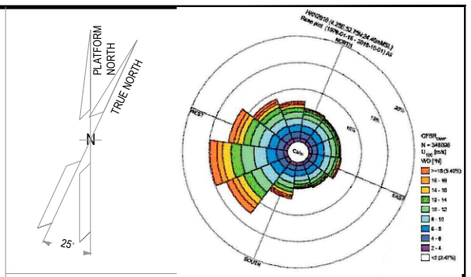
SCALE-1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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-400 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-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

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

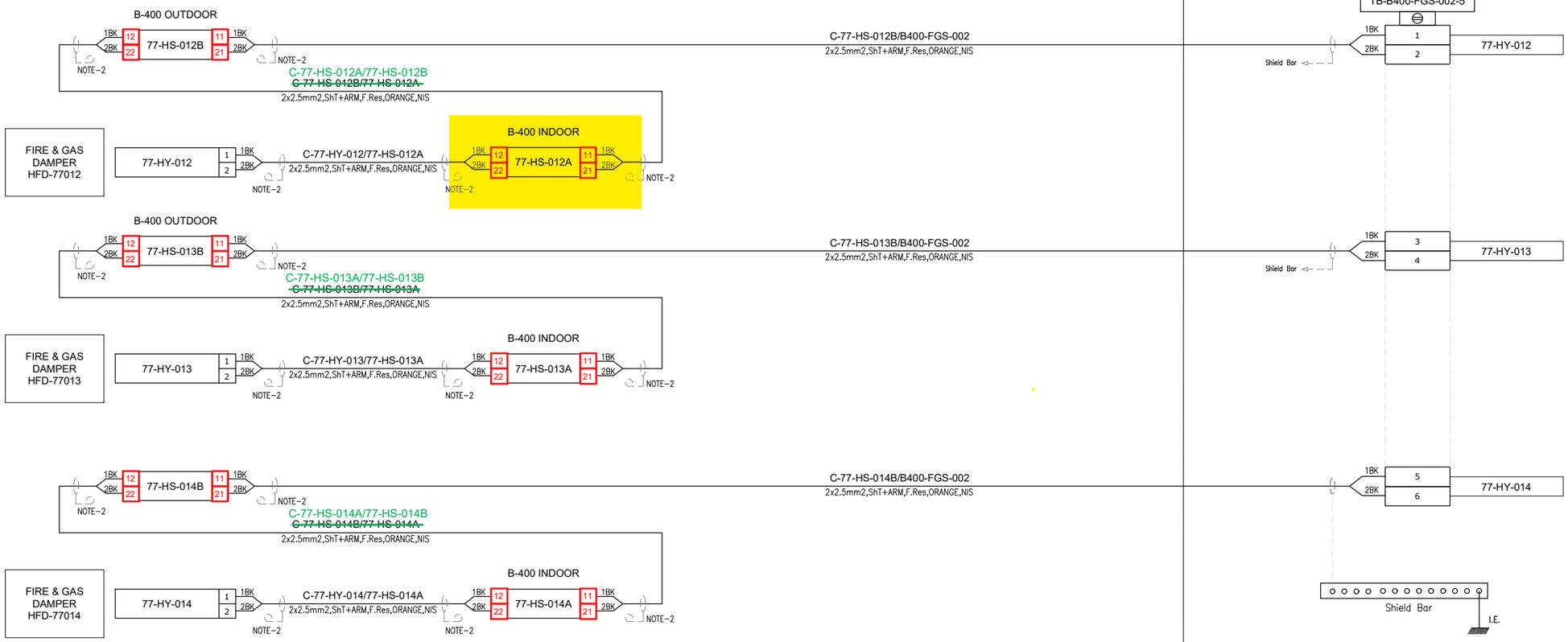
REV.: 01

I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET
B400-FGS-002

<01>

B-400 ITER



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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
FIRE DAMPER COMMAND – B–400

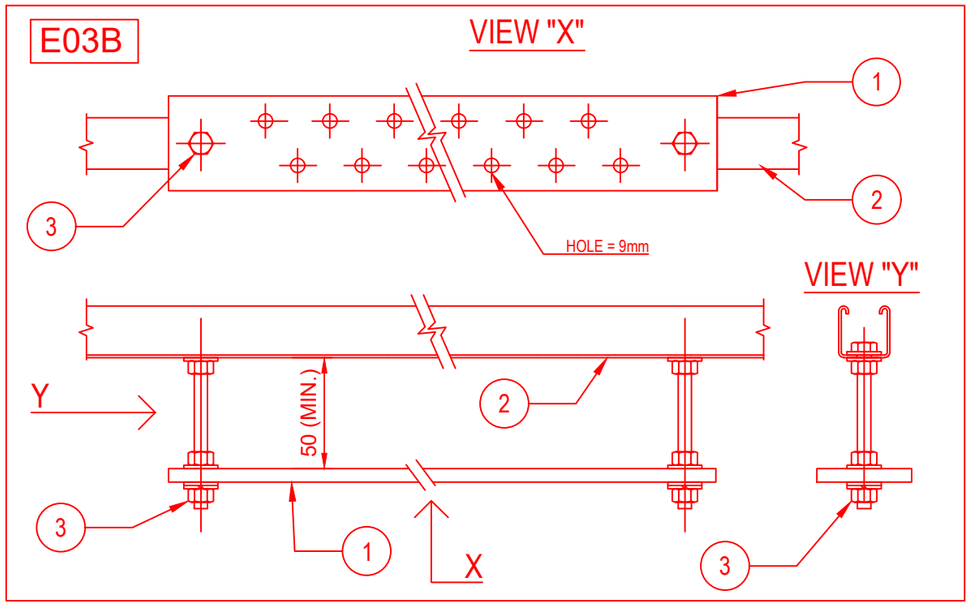
CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

	DRAWING NO.	SHEET	REV.
A3	123A90–DDL–IN–DG–40016	076	01

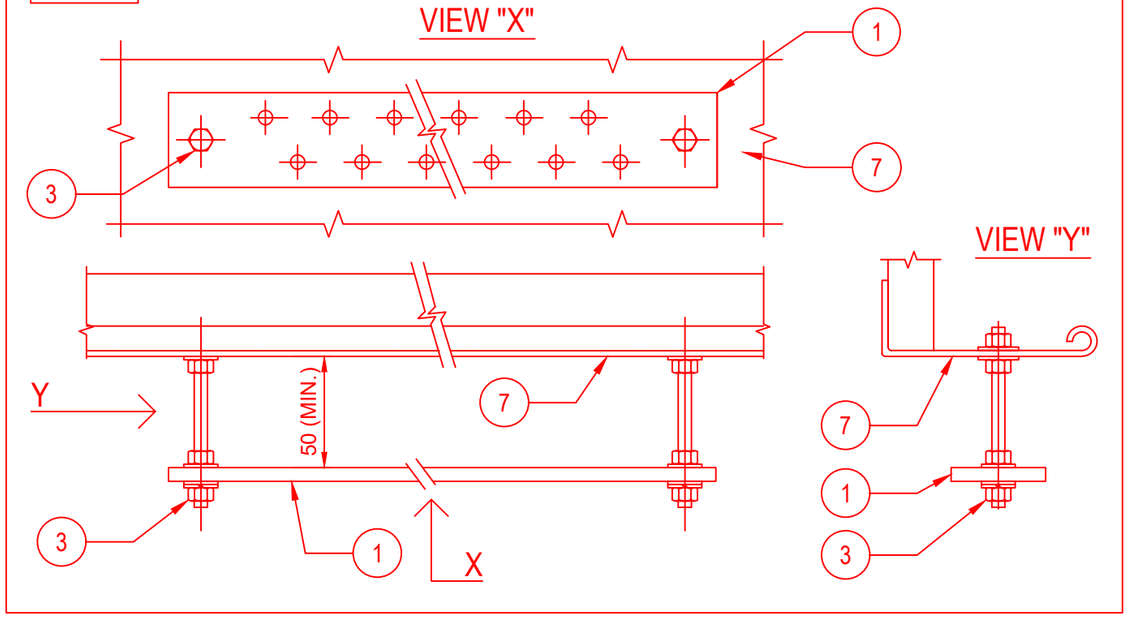
File Name : 123A90-DDL-IN-DG-40016_Rev.01

TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

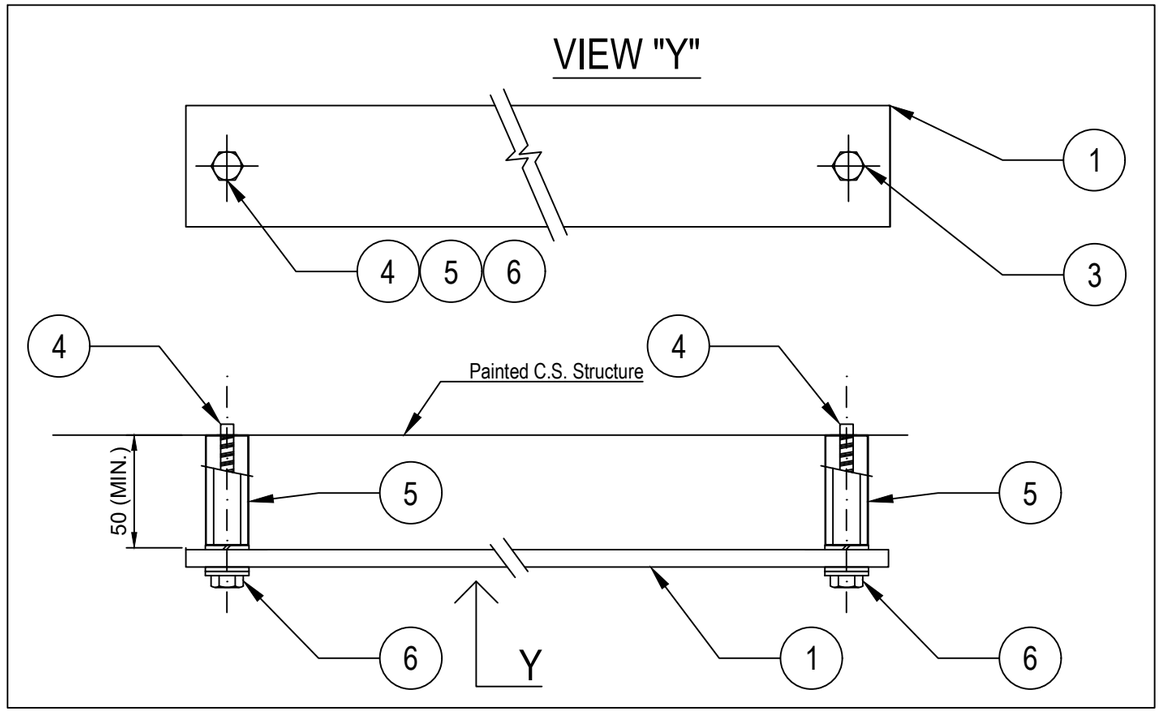


E03C



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_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

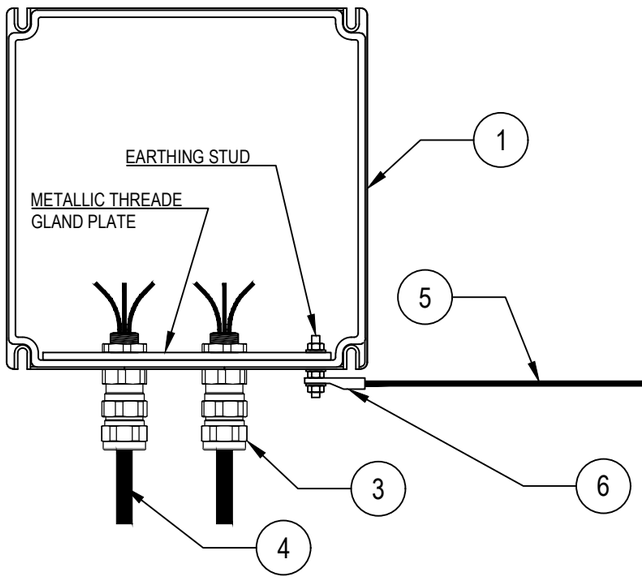
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

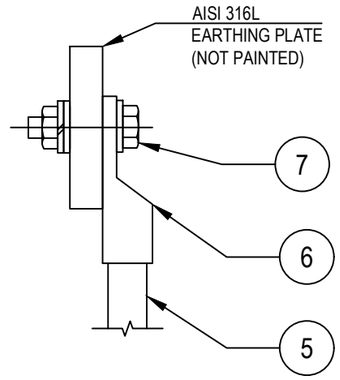
File Name : 123A90-DDL-EL-DD-20090 REV.02 RLMU.DWG

E04

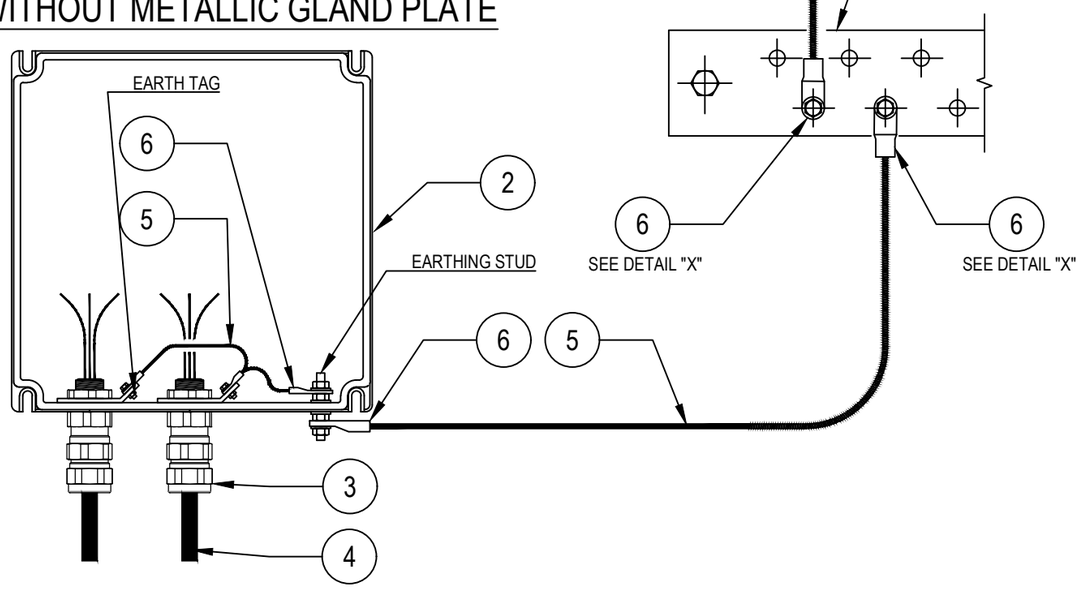
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



DETAIL "X"



DETAIL OF NON METALLIC ENCLOSURE WITHOUT METALLIC GLAND PLATE



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX WITH PLATE (EX)	GRP			
2	JUNCTION BOX WITHOUT GLAND PLATE (EX)	GRP			
3	DOUBLE SEAL CABLE GLAND (EX) FOR ARMOURED CABLE	NICK.PL.BRASS			~~NOTE 2~~
4	ARMOURED CABLE				
5	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		NOTE 1
6	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$		NOTE 1
7	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L			

NOTES:
1) FOR EARTHING BAR SEE TYPICAL DETAILS E03
~~2) CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE ARMOUR BY CABLE GLAND

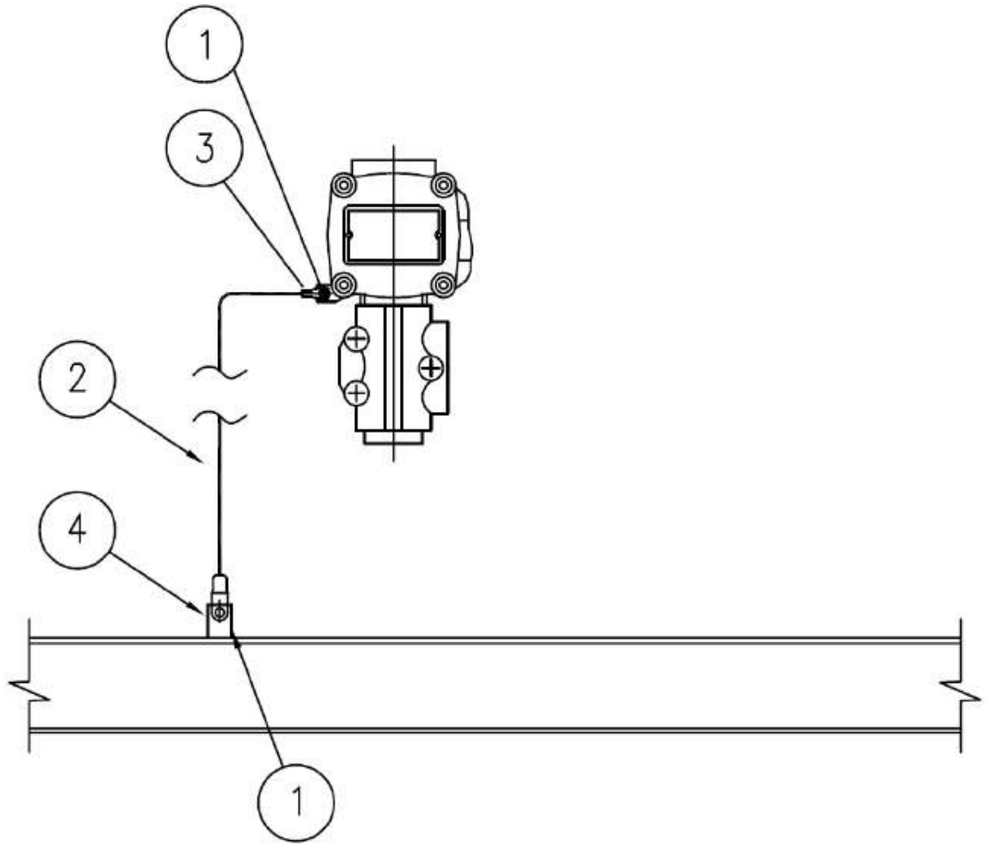
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

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

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

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

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 027 | REV. 02

F.to UNI A3: 420mmx297mm

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

I-3

DRAWING NO. 123A90-DDL-IN-DD-40017

REV. 00



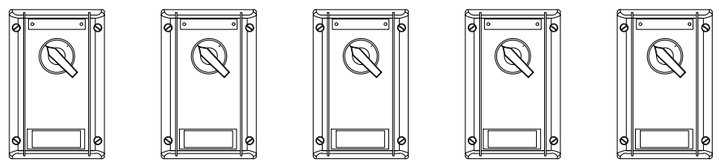
B-100
~~B-101~~



B-200
~~B-201~~



B-300
~~B-301~~



B-400
~~B-401~~

POS.	DESCRIPTION	Q.TY
-	SELFING TAPPING SCREW	-

CONTAINER	ITEM	DESCRIPTION	TAGNAME
B-100 ~~B-101~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-011A~~ 77-HS-001A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-012A~~ 77-HS-002A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-013A~~ 77-HS-003A
B-200 ~~B-201~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-014A~~ 77-HS-004A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-015A~~ 77-HS-005A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-016A~~ 77-HS-006A
B-300 ~~B-301~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-017A~~ 77-HS-007A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-018A~~ 77-HS-008A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-019A~~ 77-HS-009A
	4	HAND SWITCH FOR DAMPER TEST	77-HS-010A
	5	HAND SWITCH FOR DAMPER TEST	77-HS-011A
B-400 ~~B-401~~	1	HAND SWITCH FOR DAMPER TEST	77-HS-012A
	2	HAND SWITCH FOR DAMPER TEST	77-HS-013A
	3	HAND SWITCH FOR DAMPER TEST	77-HS-014A
	4	HAND SWITCH FOR DAMPER TEST	77-HS-015A
	5	HAND SWITCH FOR DAMPER TEST	77-HS-016A

NOTES

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/09/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	11/07/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-123A90-FDL-IN-DD-40017**

REV.:	DATE:	SIGNATURE:
1_B	18/09/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

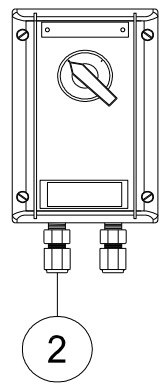
ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
HAND SWITCH INSIDE CONTAINERS

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 046	REV. 01

ELECTRICAL HOOK-UP FOR HAND SWITCH TEST OF THE DAMPERS



INSTRUMENT TAG	
1	77-HS-001A
2	77-HS-001B
3	77-HS-002A
4	77-HS-002B
5	77-HS-003A
6	77-HS-003B
7	77-HS-004A
8	77-HS-004B
9	77-HS-005A
10	77-HS-005B
11	77-HS-006A
12	77-HS-006B
13	77-HS-007A
14	77-HS-007B
15	77-HS-008A
16	77-HS-008B
17	77-HS-009A
18	77-HS-009B
19	77-HS-010A
20	77-HS-010B
21	77-HS-011A
22	77-HS-011B
23	77-HS-012A
24	77-HS-012B
25	77-HS-013A
26	77-HS-013B
27	77-HS-014A
28	77-HS-014B
29	77-HS-015A
30	77-HS-015B
31	77-HS-016A
32	77-HS-016B

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-HD-40079
REV.: 2_A | DATE: 08/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

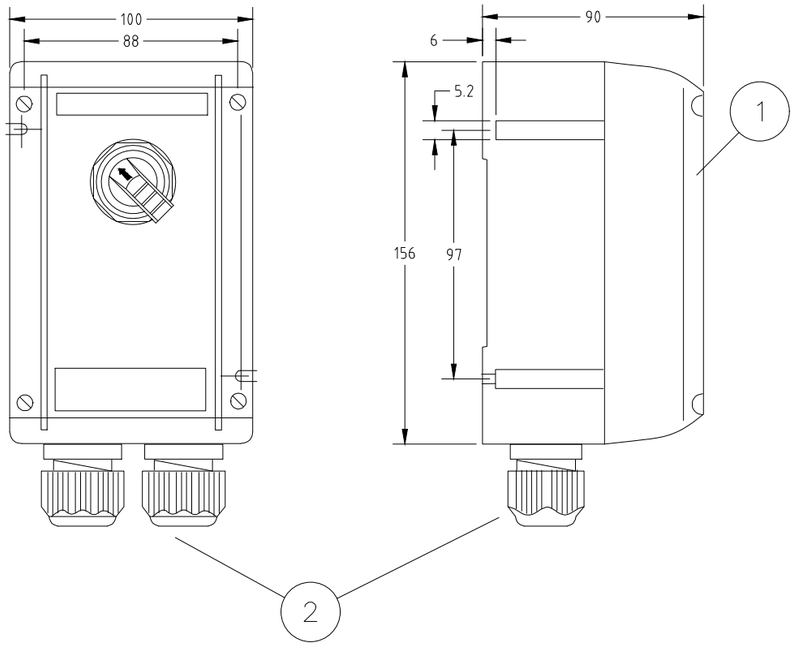
This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

PUSH BUTTON DPDT CONTACT

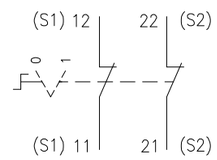
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

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



Type 434...

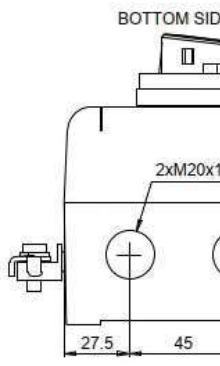


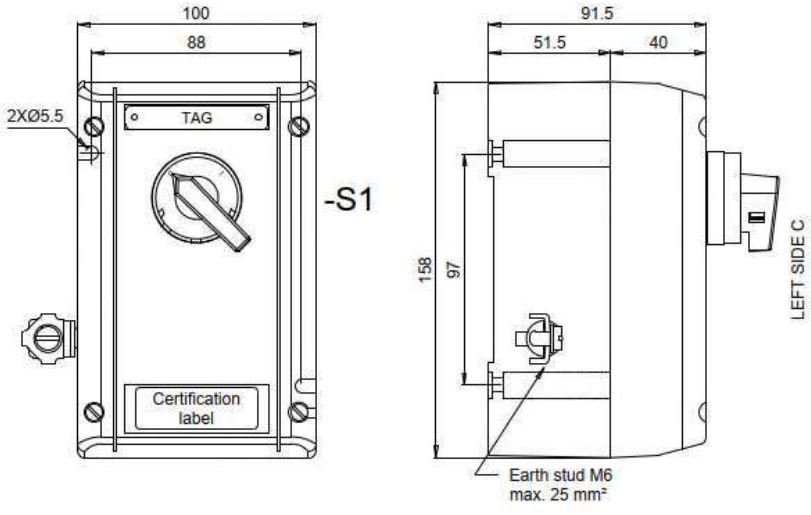
Type 432...

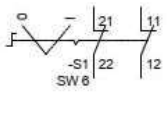
Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ib m IIC T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEx Certificate of Conformity	IECEx BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 up to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 110 V / I_e 0.5 A	Ex23 AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.5 A
Connecting terminals	2 x 4 mm²	
Protection class	I	
Degree of protection accd. to EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	2 x M25 cable gland incl. 1 blanking plug or optional 2 x M20 thread with internal brass plate	
Enclosure material	Polyamide	
Enclosure colour	black	

	Type 432
Dimensions (L x W x H)	156 x 100 x 90 mm
Weight (empty)	0.47 kg

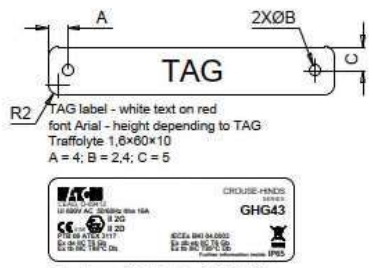






Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Techical data:
Manufactured by Eaton Crouse-Hinds Division
Model: GHG 432
Certificate No.
PTB 00 ATEX 3117
IECEx BKI 04.0003
Marking: ATEX and IECEx
II 2G Ex de IIC T6 Gb
II 2D Ex tb IIIC T80°C Db
-40°C ≤ tamb ≤ +55°C
Ui 690V
IP65

Specific characteristics:
- Polyamide (PA), black
- Closed with stainless steel screw
- Bottom with internal earth plate in brass
- M6 internal/external stainless steel earth stud

Components:
- No. 1 black selector switch with 2 position 2NC

Entries bottom side B:
- No. 2 M20 threaded taped with transit tape

No.1 1,6×60×10 mm white text on red background traffolyte tag fixed with stainless steel screws on the cover, sealed on the back with PU adhesive and engraved

Also a certification label fixed with back self adhesive on the cover

Quantity: 32

ITEM	Tag	77-HS-012B	: Hand Switch for Fire&Gas Damper HFD-77012		Dwg	123A90-DDL-IN-DL-40116	
	S/Sys	77-40	: HVAC I&T Equipment Room B-400		Module	LD_B-400	
TASK	code	C10002100	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Instrumental	Form	CJX00	Miscellaneous

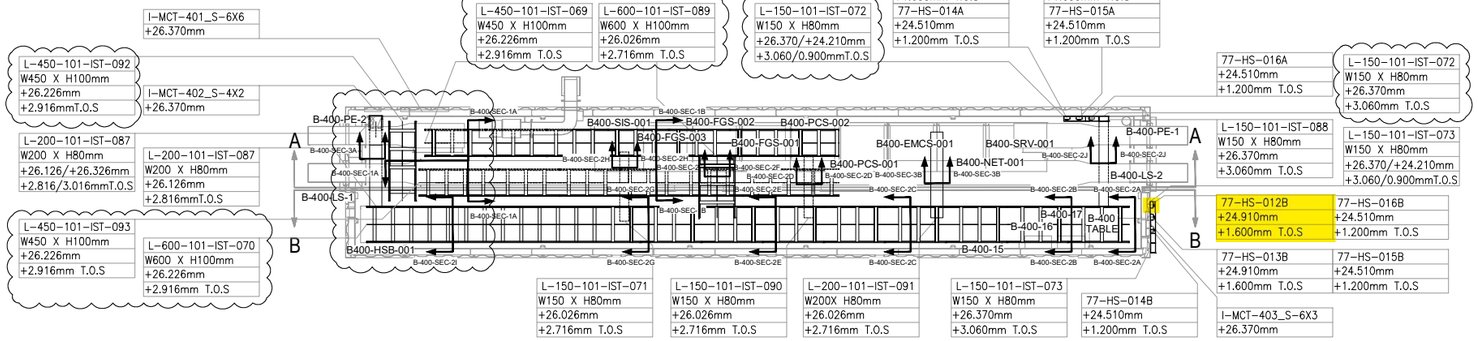
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	NA
7	Check identification (tag number, tag plates).	OK
8	Check supporting and protection against vibrations.	OK
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	OK
10	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:40:24.328Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T15:39:19.752Z	

DRAWING NO. 123A90-DDL-IN-DL-40116

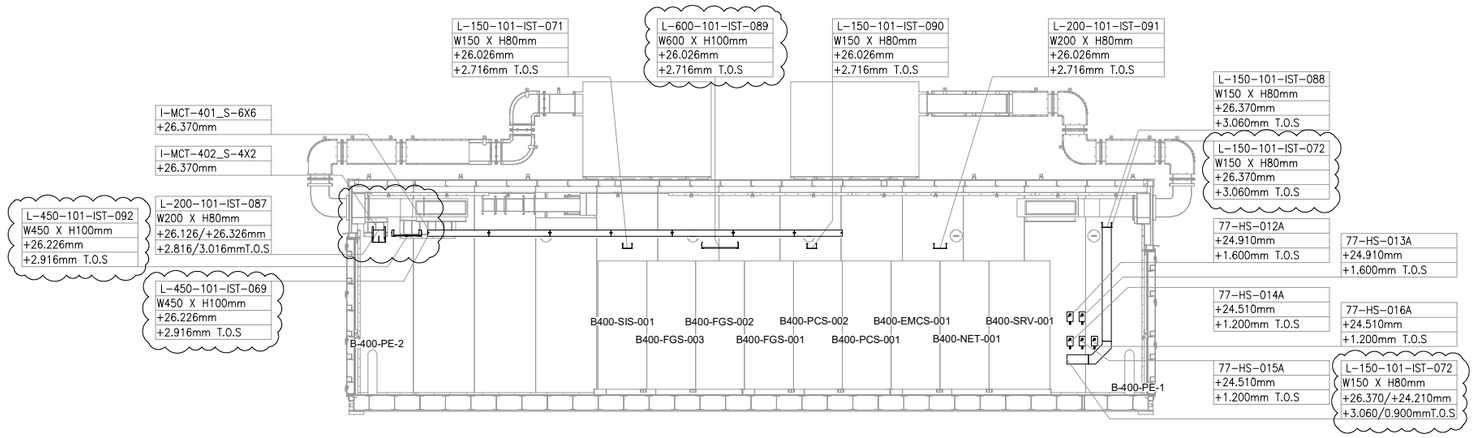
REV. 01



PLAN VIEW

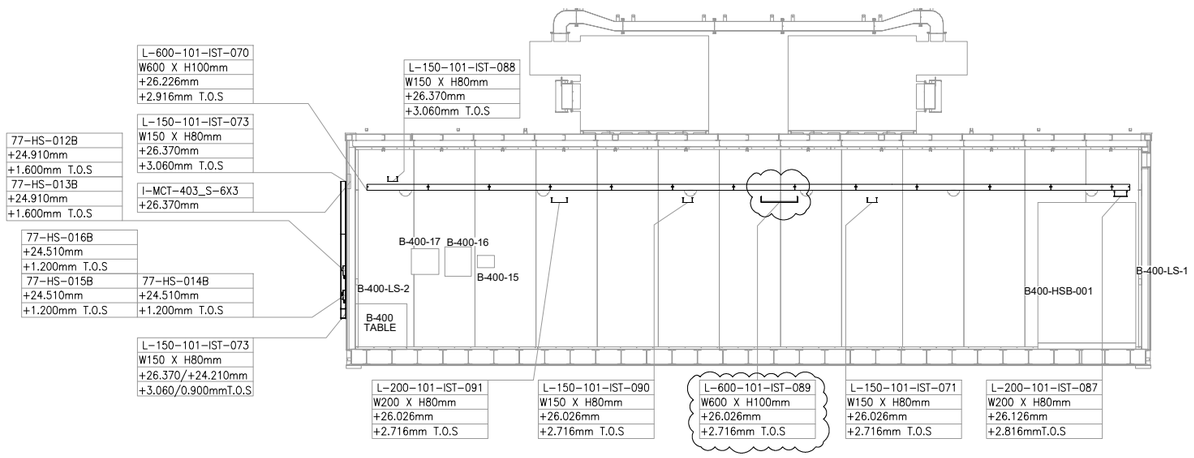
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



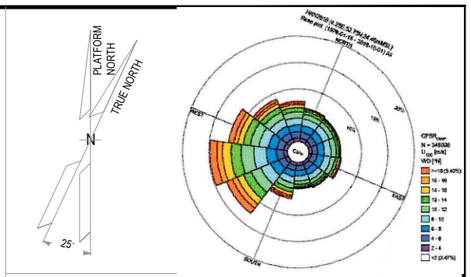
SECTION A-A

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

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-400 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-40116	SHEET 001	REV. 01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

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

REV.: 01

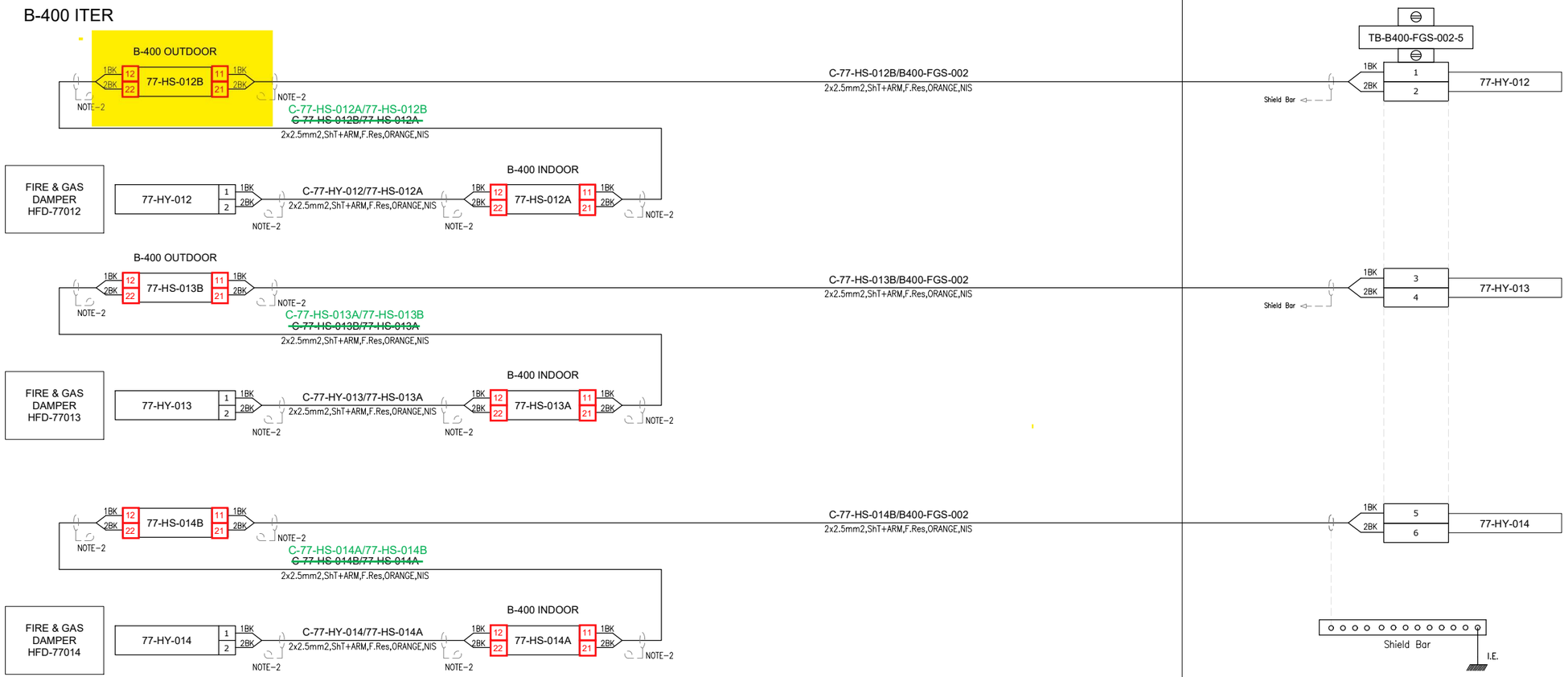
I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-FGS-002

<01>

B-400 ITER



VALID FOR CONSTRUCTION

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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
FIRE DAMPER COMMAND – B–400

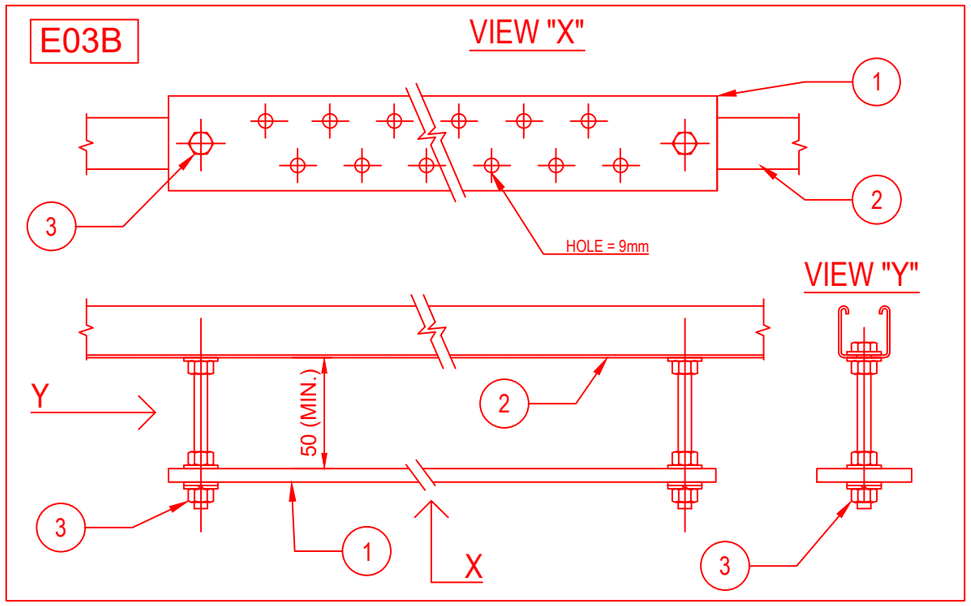
CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

	DRAWING NO.	SHEET	REV.
A3	123A90–DDL–IN–DG–40016	076	01

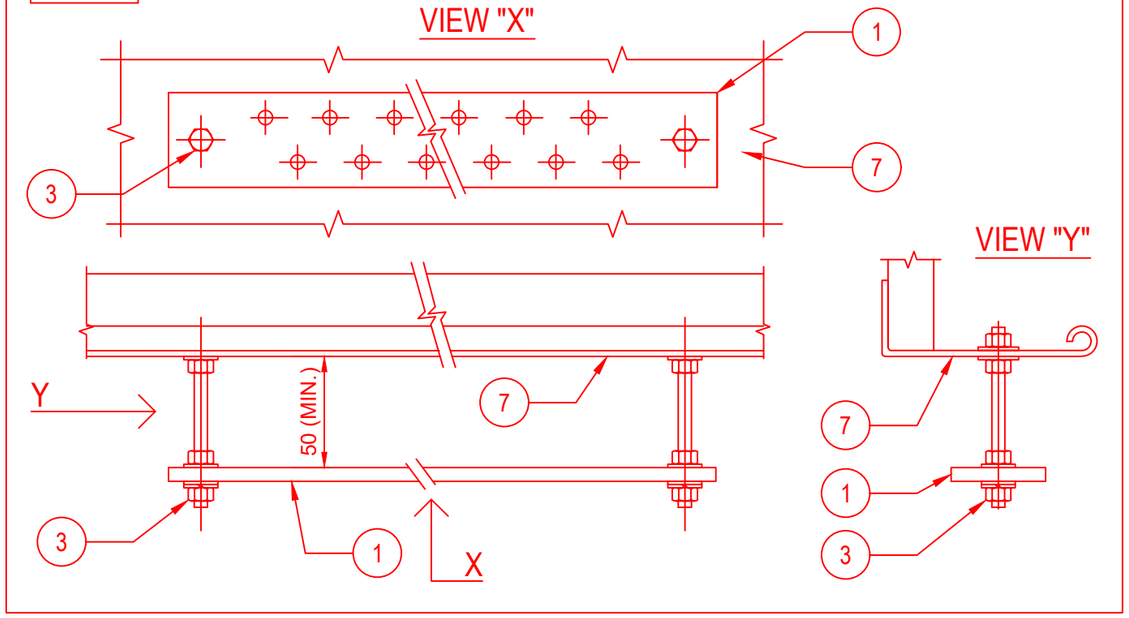
File Name : 123A90-DDL-IN-DG-40016_Rev.01

TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

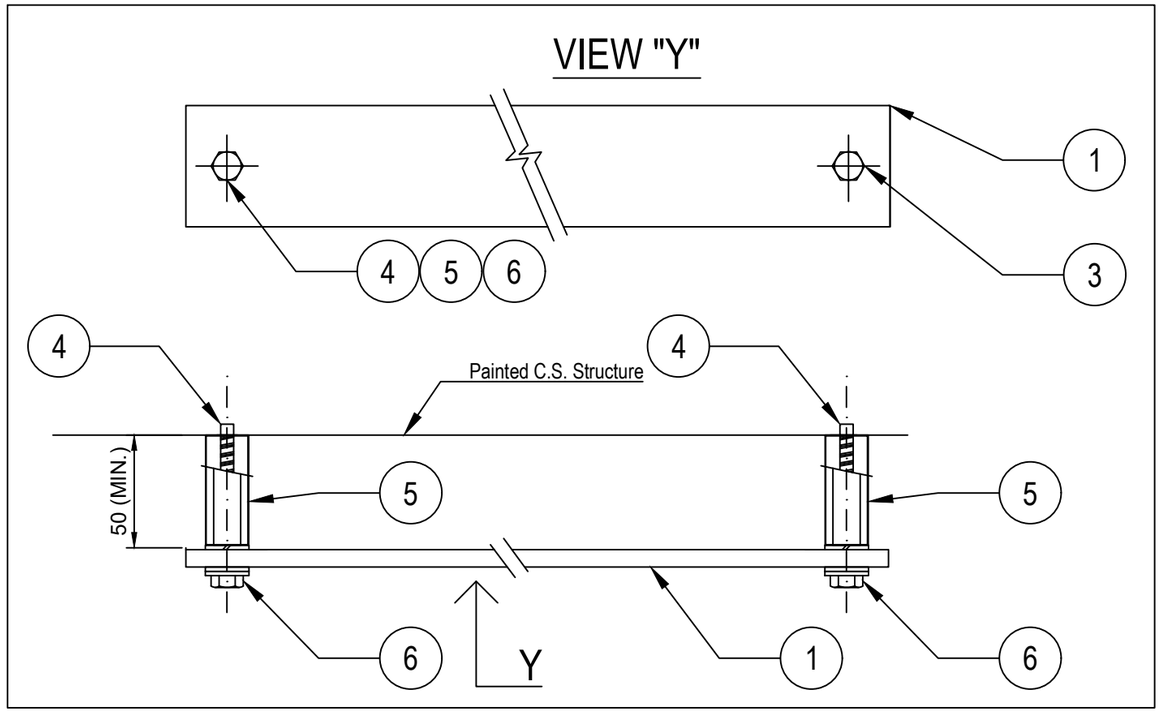


E03C



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_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

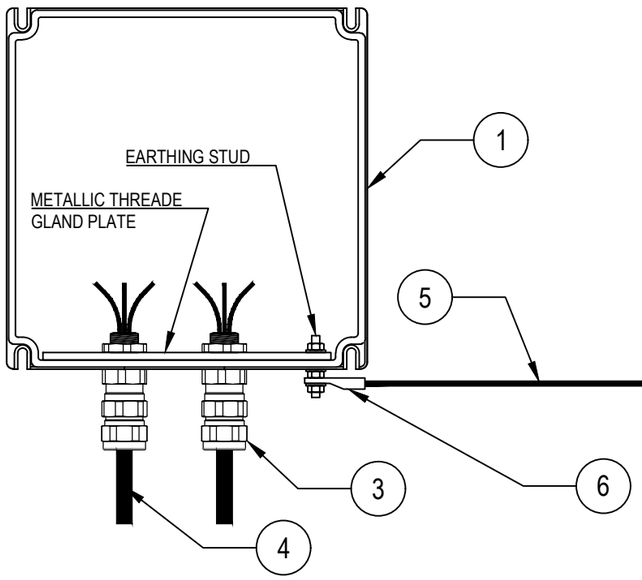
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

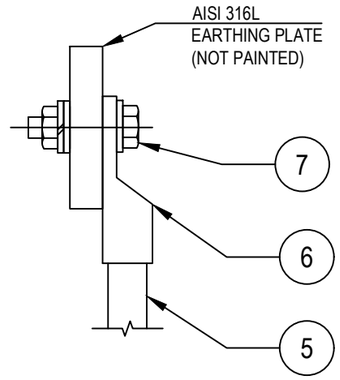
File Name : 123A90-DDL-EL-DD-20090 REV.02 RLMU.DWG

E04

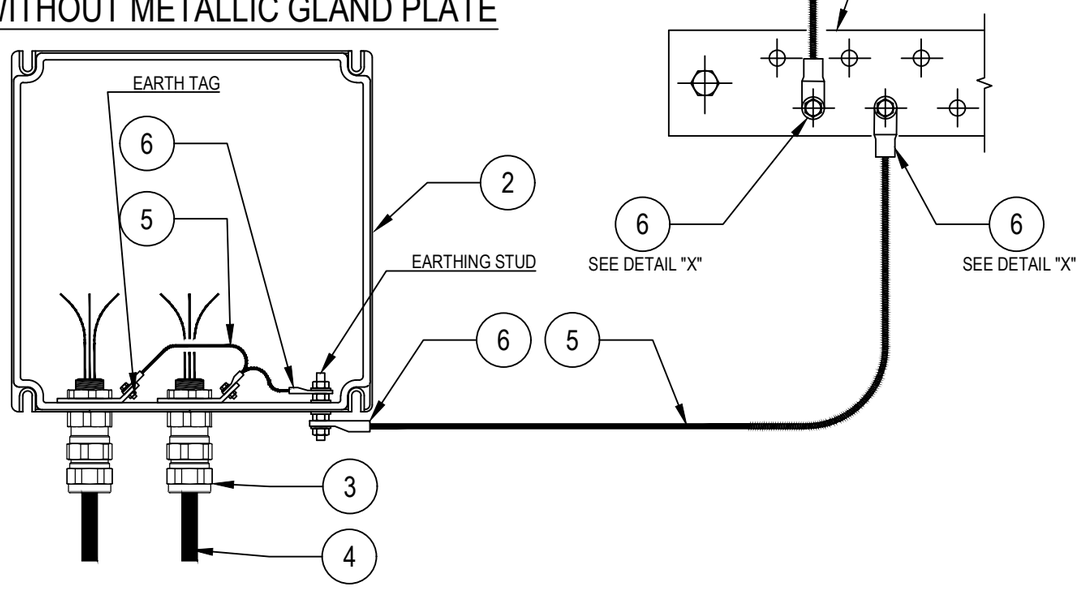
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



DETAIL "X"



DETAIL OF NON METALLIC ENCLOSURE WITHOUT METALLIC GLAND PLATE



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX WITH PLATE (EX)	GRP			
2	JUNCTION BOX WITHOUT GLAND PLATE (EX)	GRP			
3	DOUBLE SEAL CABLE GLAND (EX) FOR ARMOURED CABLE	NICK.PL.BRASS			~~NOTE 2~~
4	ARMOURED CABLE				
5	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		NOTE 1
6	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$		NOTE 1
7	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L			

NOTES:
1) FOR EARTHING BAR SEE TYPICAL DETAILS E03
~~2) CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE ARMOUR BY CABLE GLAND

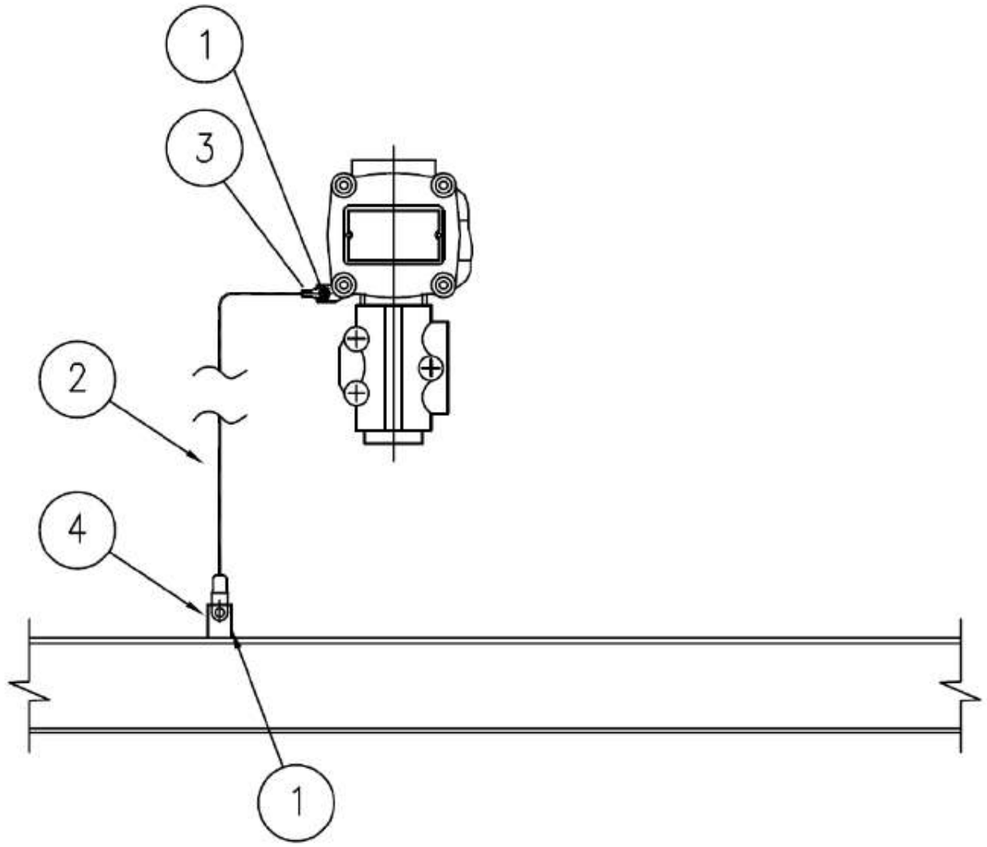
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

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

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

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

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 027 | REV. 02

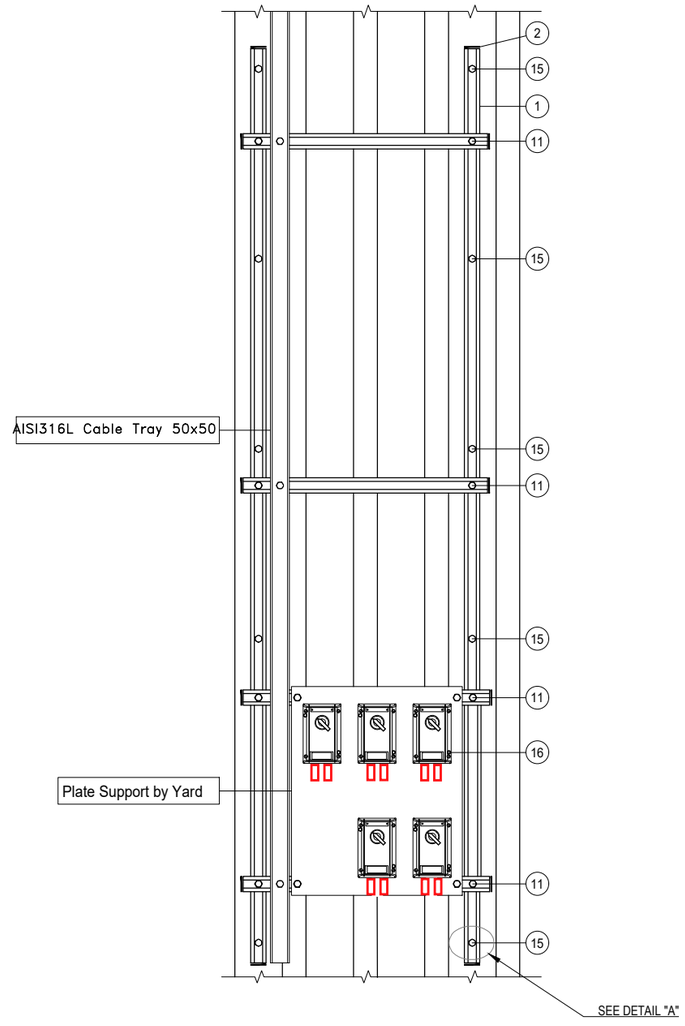
F.to UNI A3: 420mmx297mm

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

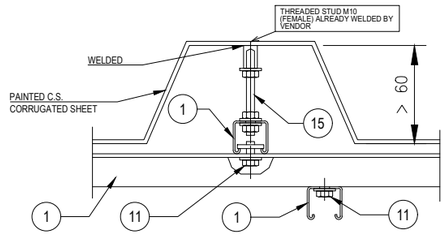
I-5

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	10

CONTAINER	ITEM	DESCRIPTION	TAGNAME
B-300 ~~B-301~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-017B~~ 77-HS-007B
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-018B~~ 77-HS-008B
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-019B~~ 77-HS-009B
	4	HAND SWITCH FOR DAMPER TEST	77-HS-010B
	5	HAND SWITCH FOR DAMPER TEST	77-HS-011B
B-400 ~~B-401~~	1	HAND SWITCH FOR DAMPER TEST	77-HS-012B
	2	HAND SWITCH FOR DAMPER TEST	77-HS-013B
	3	HAND SWITCH FOR DAMPER TEST	77-HS-014B
	4	HAND SWITCH FOR DAMPER TEST	77-HS-015B
	5	HAND SWITCH FOR DAMPER TEST	77-HS-016B

NOTES

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/09/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	11/07/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-123A90-FDL-IN-DD-40017

REV.:	DATE:	SIGNATURE:
1_B	18/09/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

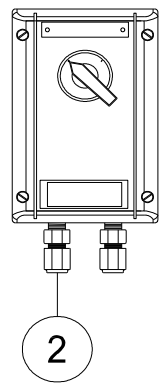
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
HAND SWITCH OUTSIDE CONTAINERS

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 048	REV. 01

ELECTRICAL HOOK-UP FOR HAND SWITCH TEST OF THE DAMPERS



INSTRUMENT TAG	
1	77-HS-001A
2	77-HS-001B
3	77-HS-002A
4	77-HS-002B
5	77-HS-003A
6	77-HS-003B
7	77-HS-004A
8	77-HS-004B
9	77-HS-005A
10	77-HS-005B
11	77-HS-006A
12	77-HS-006B
13	77-HS-007A
14	77-HS-007B
15	77-HS-008A
16	77-HS-008B
17	77-HS-009A
18	77-HS-009B
19	77-HS-010A
20	77-HS-010B
21	77-HS-011A
22	77-HS-011B
23	77-HS-012A
24	77-HS-012B
25	77-HS-013A
26	77-HS-013B
27	77-HS-014A
28	77-HS-014B
29	77-HS-015A
30	77-HS-015B
31	77-HS-016A
32	77-HS-016B

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-HD-40079
REV.: 2_A | DATE: 08/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

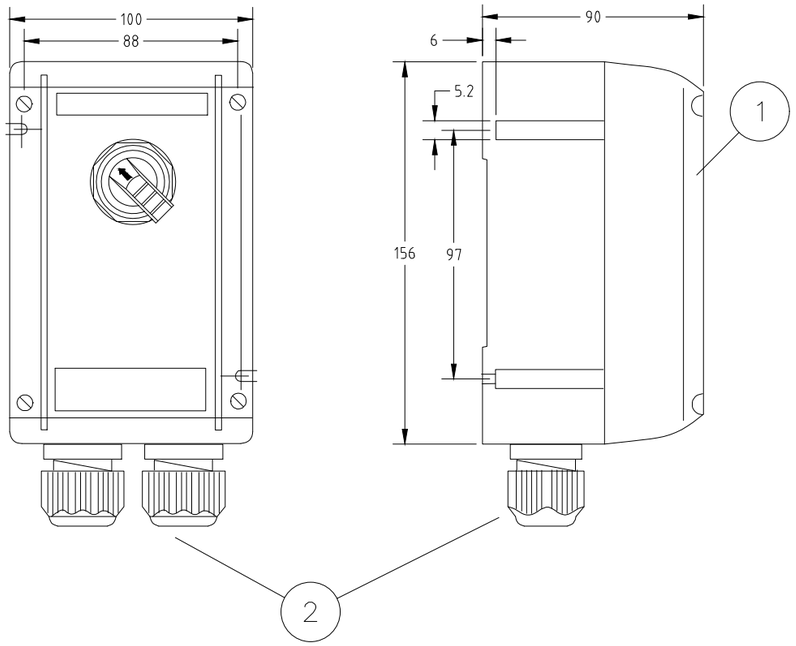
This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

PUSH BUTTON DPDT CONTACT

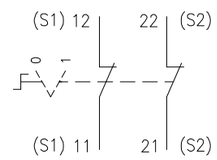
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

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



Type 434...

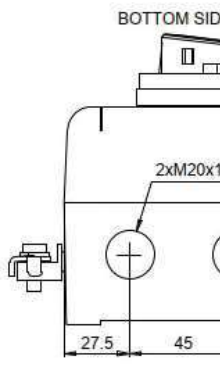


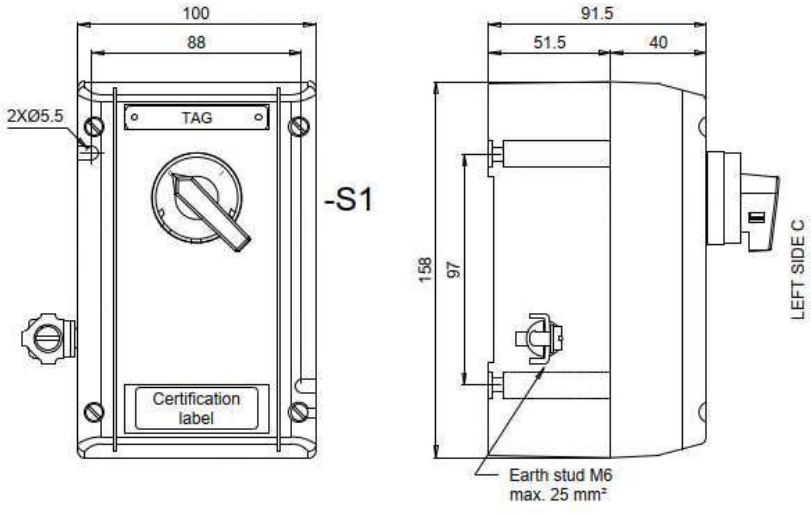
Type 432...

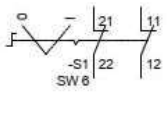
Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ib m IIC T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEx Certificate of Conformity	IECEx BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 up to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 110 V / I_e 0.5 A	Ex23 AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.5 A
Connecting terminals	2 x 4 mm²	
Protection class	I	
Degree of protection accd. to EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	2 x M25 cable gland incl. 1 blanking plug or optional 2 x M20 thread with internal brass plate	
Enclosure material	Polyamide	
Enclosure colour	black	

	Type 432
Dimensions (L x W x H)	156 x 100 x 90 mm
Weight (empty)	0.47 kg

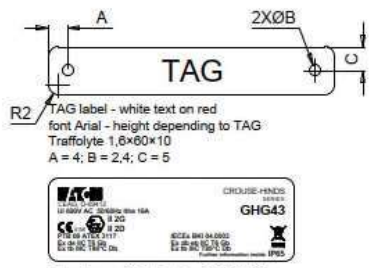






Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Techical data:
Manufactured by Eaton Crouse-Hinds Division
Model: GHG 432
Certificate No.
PTB 00 ATEX 3117
IECEx BKI 04.0003
Marking: ATEX and IECEx
II 2G Ex de IIC T6 Gb
II 2D Ex tb IIIC T80°C Db
-40°C ≤ tamb ≤ +55°C
Ui 690V
IP65

Specific characteristics:
- Polyamide (PA), black
- Closed with stainless steel screw
- Bottom with internal earth plate in brass
- M6 internal/external stainless steel earth stud

Components:
- No. 1 black selector switch with 2 position 2NC

Entries bottom side B:
- No. 2 M20 threaded taped with transit tape

No.1 1,6×60×10 mm white text on red background traffolyte tag fixed with stainless steel screws on the cover, sealed on the back with PU adhesive and engraved

Also a certification label fixed with back self adhesive on the cover

Quantity: 32

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	77-HS-013A	: Hand Switch for Fire&Gas Damper HFD-77013			Dwg	123A90-DDL-IN-DL-40116
	S/Sys	77-40	: HVAC I&T Equipment Room B-400			Module	LD_B-400
TASK	code	C10002101		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX00		Miscellaneous

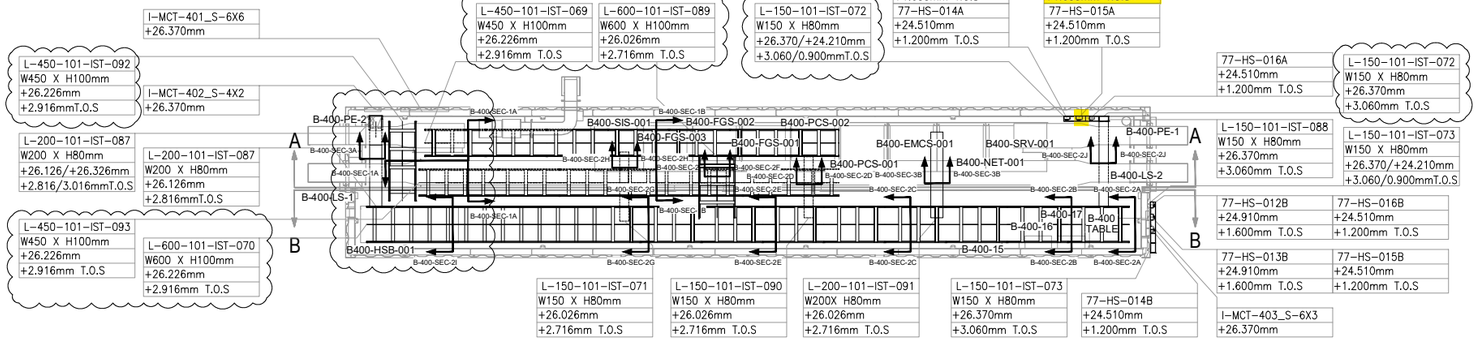
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	NA
7	Check identification (tag number, tag plates).	OK
8	Check supporting and protection against vibrations.	OK
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	OK
10	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:40:33.373Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T15:39:12.171Z	

DRAWING NO. 123A90-DDL-IN-DL-40116

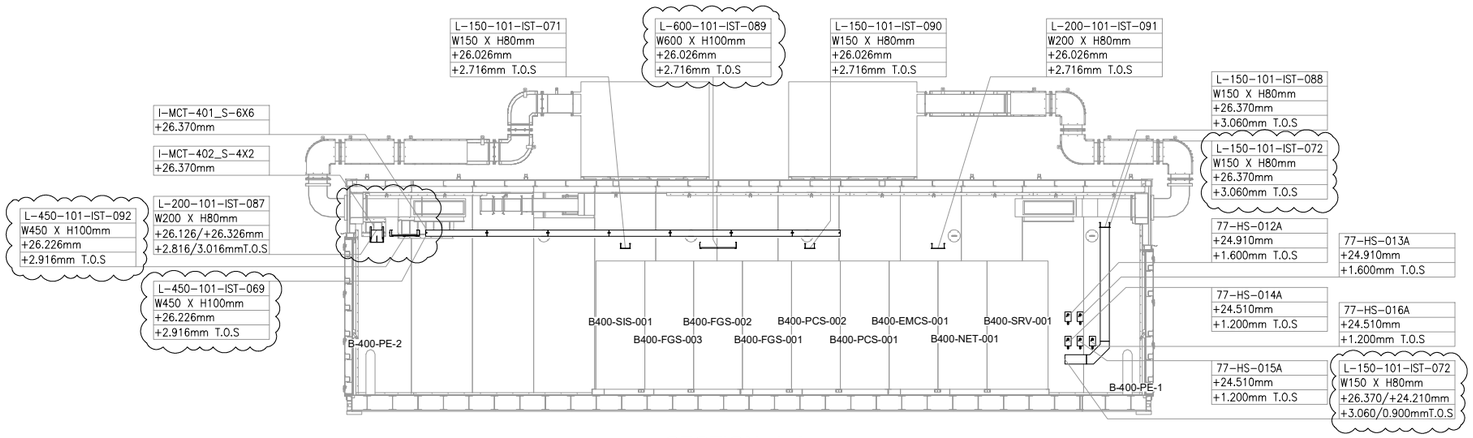
REV. 01



PLAN VIEW

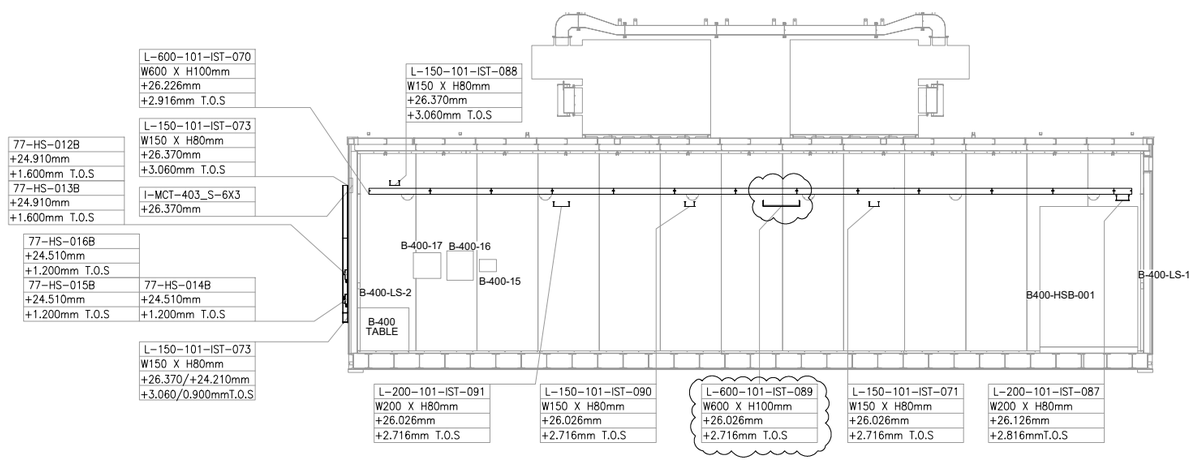
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



SECTION B-B

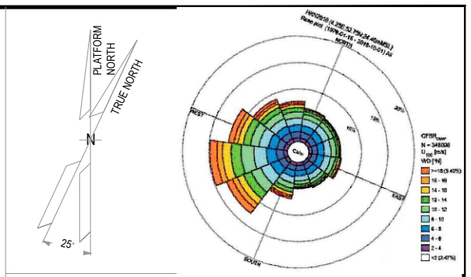
SCALE-1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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-400 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-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

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

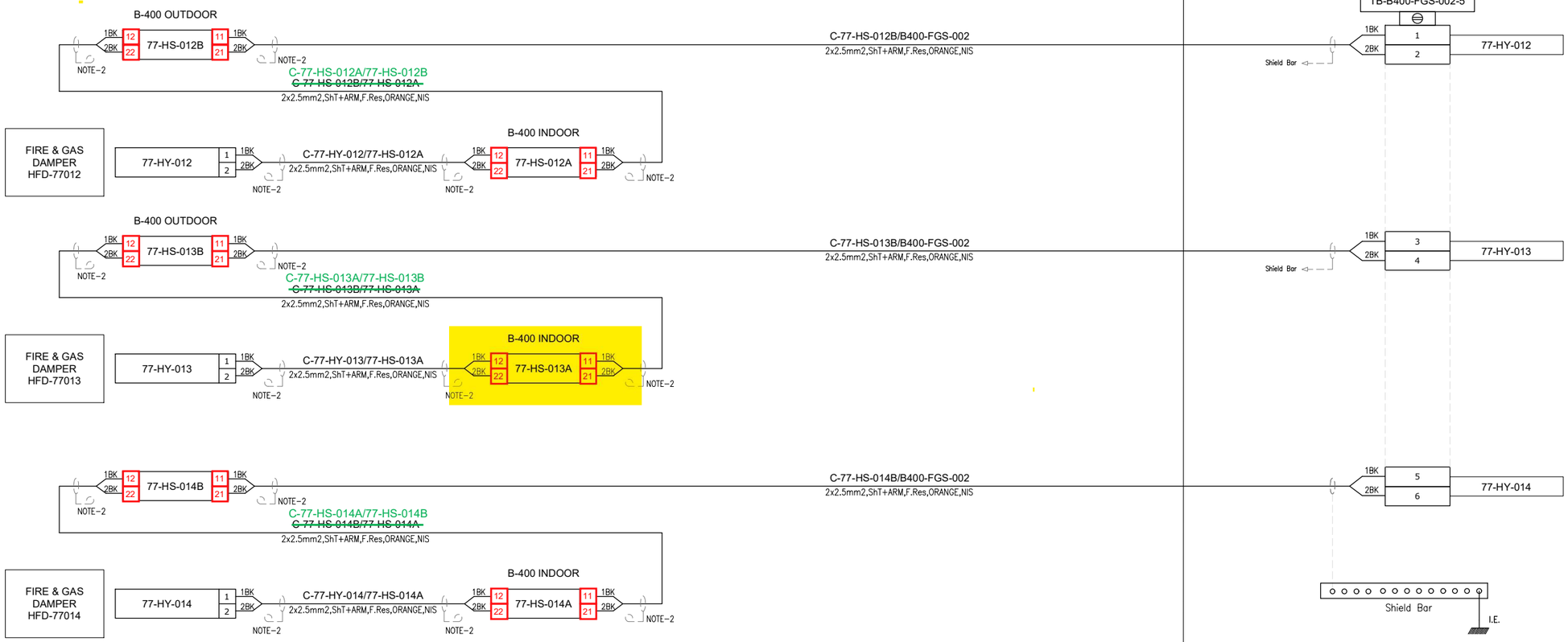
REV.: 01

I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET
B400-FGS-002

<01>

B-400 ITER



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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
FIRE DAMPER COMMAND – B–400

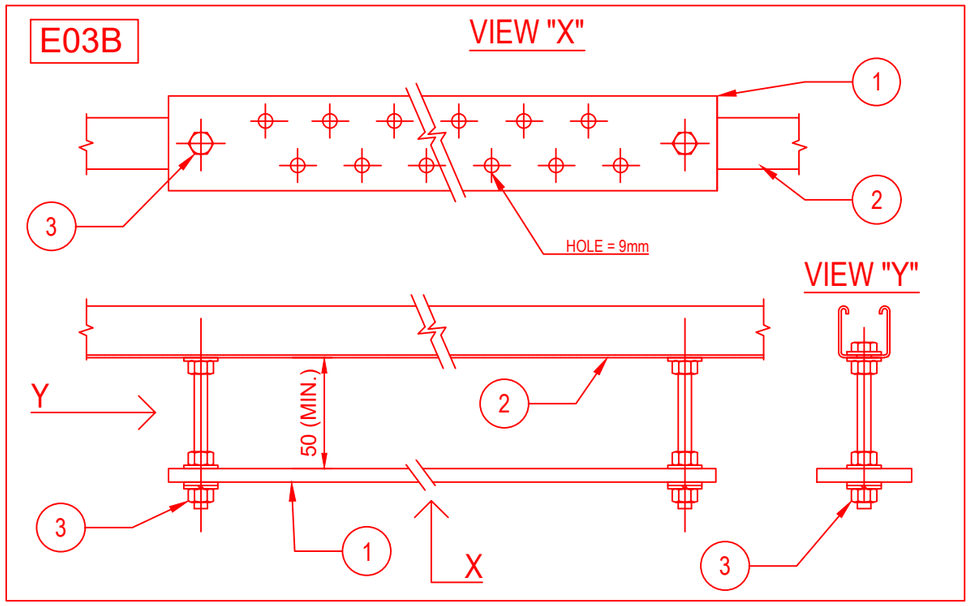
CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

	DRAWING NO.	SHEET	REV.
A3	123A90–DDL–IN–DG–40016	076	01

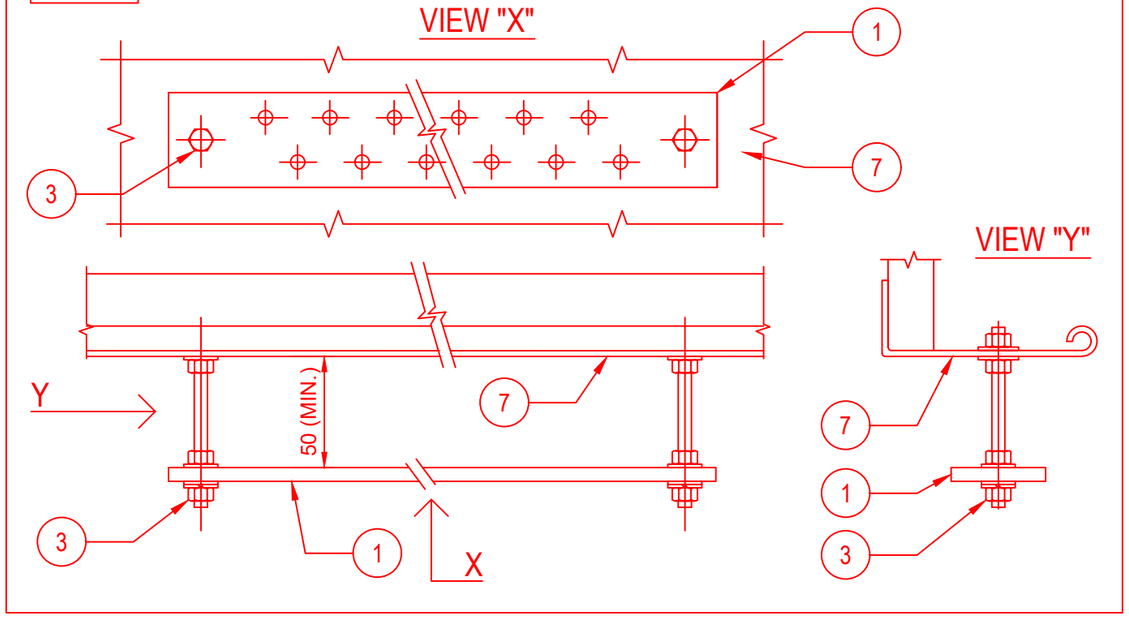
File Name : 123A90-DDL-IN-DG-40016_Rev.01

TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

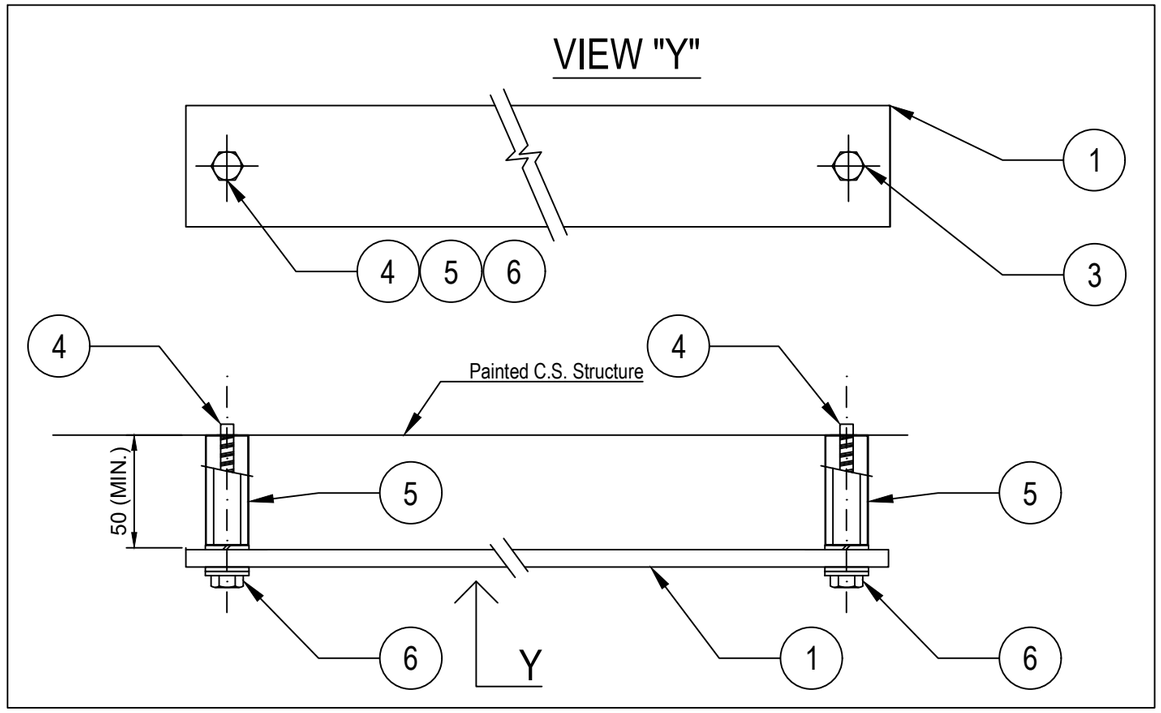


E03C



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_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

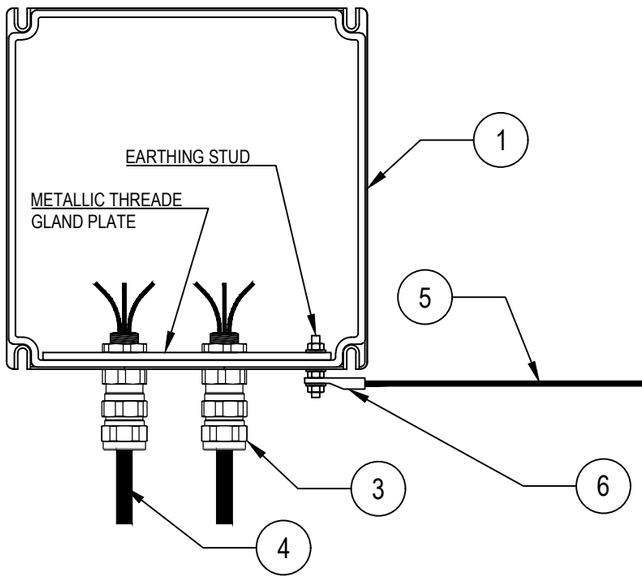
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

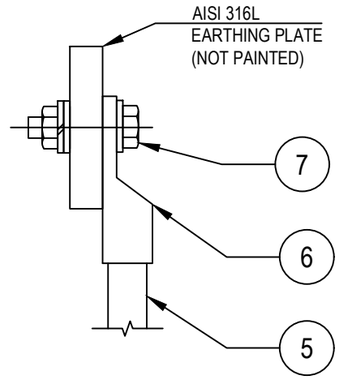
File Name : 123A90-DDL-EL-DD-20090 REV.02 RLMU.DWG

E04

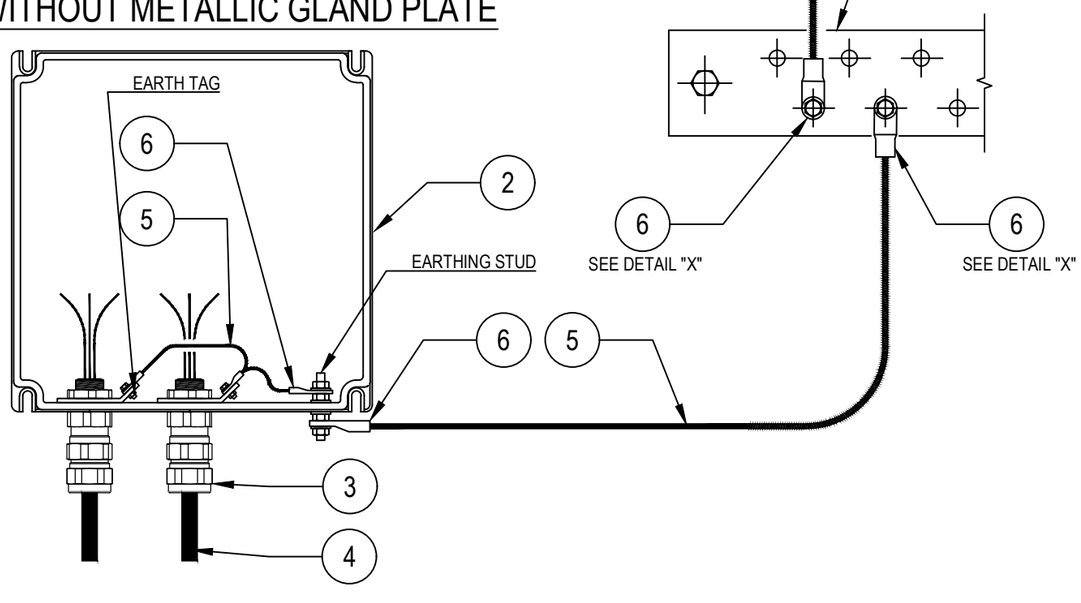
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



DETAIL "X"



DETAIL OF NON METALLIC ENCLOSURE WITHOUT METALLIC GLAND PLATE



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX WITH PLATE (EX)	GRP			
2	JUNCTION BOX WITHOUT GLAND PLATE (EX)	GRP			
3	DOUBLE SEAL CABLE GLAND (EX) FOR ARMOURED CABLE	NICK.PL.BRASS			~~NOTE 2~~
4	ARMOURED CABLE				
5	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		NOTE 1
6	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$		NOTE 1
7	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L			

NOTES:
1) FOR EARTHING BAR SEE TYPICAL DETAILS E03
~~2) CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE ARMOUR BY CABLE GLAND

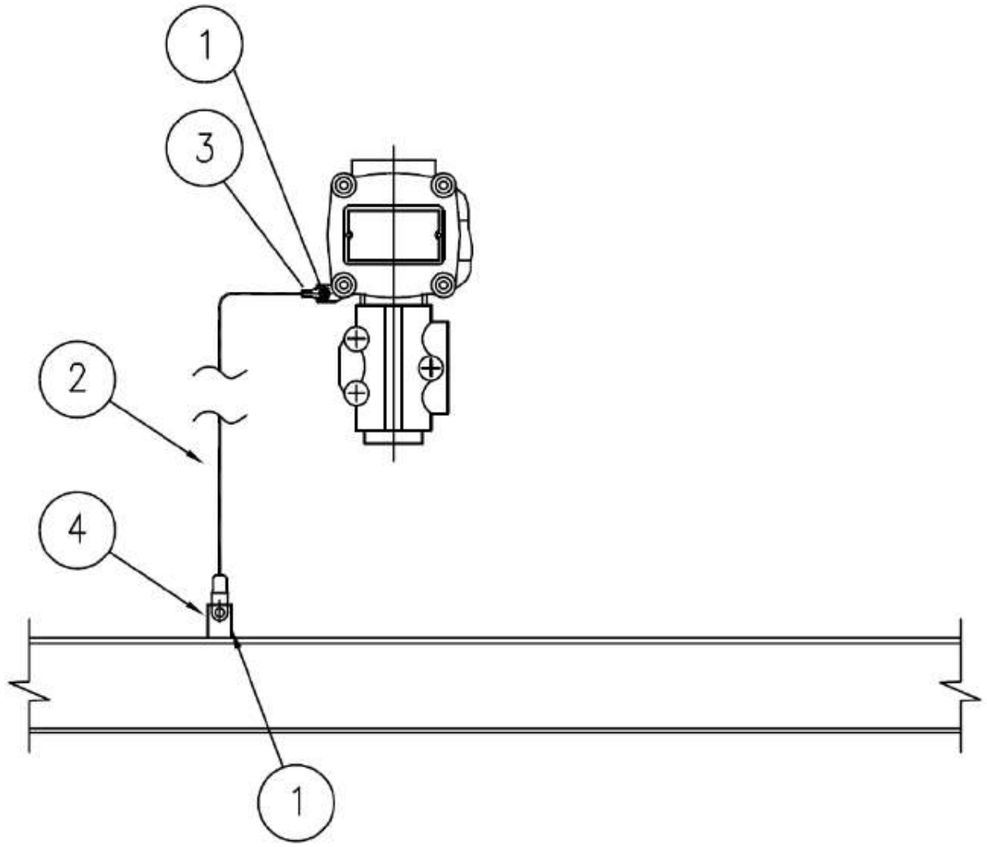
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

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

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

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

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 027 | REV. 02

F.to UNI A3: 420mmx297mm

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

I-3

DRAWING NO. 123A90-DDL-IN-DD-40017

REV. 00



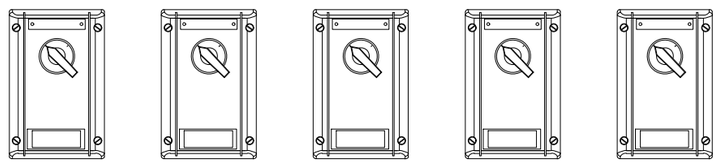
B-100
~~B-101~~



B-200
~~B-201~~



B-300
~~B-301~~



B-400
~~B-401~~

POS.	DESCRIPTION	Q.TY
-	SELFING TAPPING SCREW	-

CONTAINER	ITEM	DESCRIPTION	TAGNAME
B-100 ~~B-101~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-011A~~ 77-HS-001A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-012A~~ 77-HS-002A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-013A~~ 77-HS-003A
B-200 ~~B-201~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-014A~~ 77-HS-004A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-015A~~ 77-HS-005A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-016A~~ 77-HS-006A
B-300 ~~B-301~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-017A~~ 77-HS-007A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-018A~~ 77-HS-008A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-019A~~ 77-HS-009A
	4	HAND SWITCH FOR DAMPER TEST	77-HS-010A
	5	HAND SWITCH FOR DAMPER TEST	77-HS-011A
B-400 ~~B-401~~	1	HAND SWITCH FOR DAMPER TEST	77-HS-012A
	2	HAND SWITCH FOR DAMPER TEST	77-HS-013A
	3	HAND SWITCH FOR DAMPER TEST	77-HS-014A
	4	HAND SWITCH FOR DAMPER TEST	77-HS-015A
	5	HAND SWITCH FOR DAMPER TEST	77-HS-016A

NOTES

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/09/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	11/07/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-123A90-FDL-IN-DD-40017**

REV.:	DATE:	SIGNATURE:
1_B	18/09/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

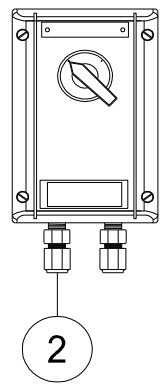
ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
HAND SWITCH INSIDE CONTAINERS

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 046	REV. 01

ELECTRICAL HOOK-UP FOR HAND SWITCH TEST OF THE DAMPERS



INSTRUMENT TAG	
1	77-HS-001A
2	77-HS-001B
3	77-HS-002A
4	77-HS-002B
5	77-HS-003A
6	77-HS-003B
7	77-HS-004A
8	77-HS-004B
9	77-HS-005A
10	77-HS-005B
11	77-HS-006A
12	77-HS-006B
13	77-HS-007A
14	77-HS-007B
15	77-HS-008A
16	77-HS-008B
17	77-HS-009A
18	77-HS-009B
19	77-HS-010A
20	77-HS-010B
21	77-HS-011A
22	77-HS-011B
23	77-HS-012A
24	77-HS-012B
25	77-HS-013A
26	77-HS-013B
27	77-HS-014A
28	77-HS-014B
29	77-HS-015A
30	77-HS-015B
31	77-HS-016A
32	77-HS-016B

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-HD-40079
REV.: 2_A | DATE: 08/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

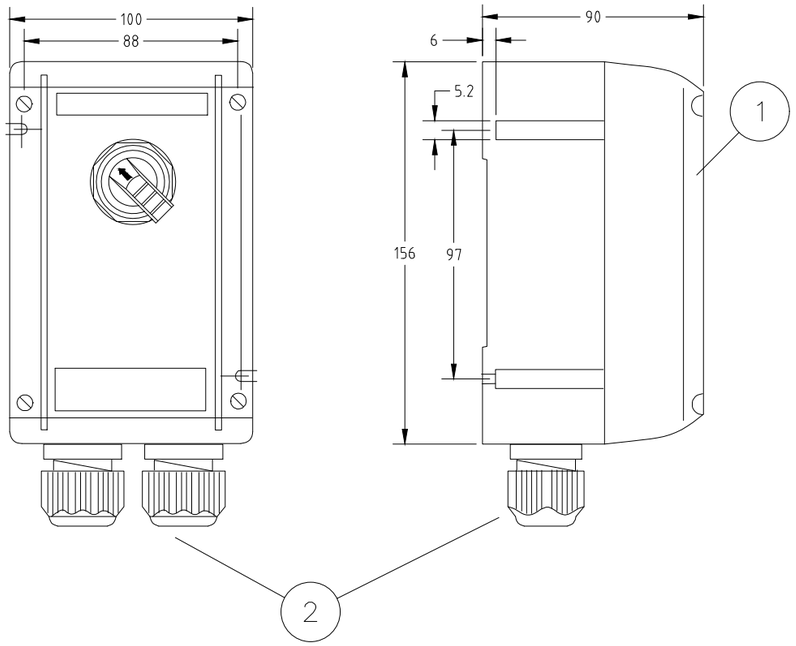
This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

PUSH BUTTON DPDT CONTACT

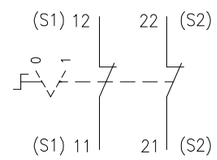
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

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



Type 434...

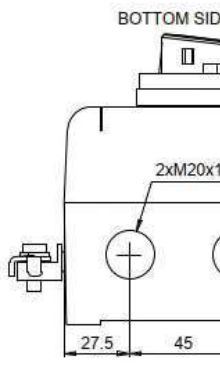


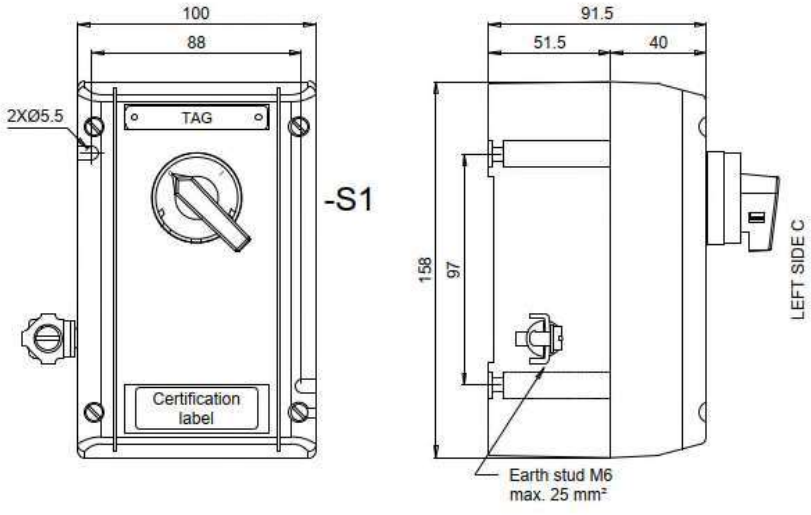
Type 432...

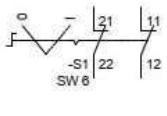
Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ib m IIC T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEx Certificate of Conformity	IECEx BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 up to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 110 V / I_e 0.5 A	Ex23 AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.5 A
Connecting terminals	2 x 4 mm²	
Protection class	I	
Degree of protection accd. to EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	2 x M25 cable gland incl. 1 blanking plug or optional 2 x M20 thread with internal brass plate	
Enclosure material	Polyamide	
Enclosure colour	black	

	Type 432
Dimensions (L x W x H)	156 x 100 x 90 mm
Weight (empty)	0.47 kg

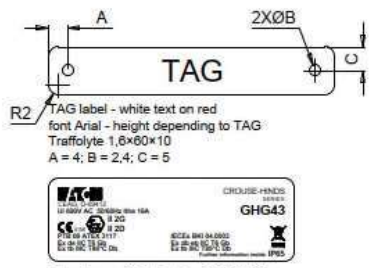






Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Techical data:
Manufactured by Eaton Crouse-Hinds Division
Model: GHG 432
Certificate No.
PTB 00 ATEX 3117
IECEx BKI 04.0003
Marking: ATEX and IECEx
II 2G Ex de IIC T6 Gb
II 2D Ex tb IIIC T80°C Db
-40°C ≤ tamb ≤ +55°C
Ui 690V
IP65

Specific characteristics:
- Polyamide (PA), black
- Closed with stainless steel screw
- Bottom with internal earth plate in brass
- M6 internal/external stainless steel earth stud

Components:
- No. 1 black selector switch with 2 position 2NC

Entries bottom side B:
- No. 2 M20 threaded taped with transit tape

No.1 1,6×60×10 mm white text on red background traffolyte tag fixed with stainless steel screws on the cover, sealed on the back with PU adhesive and engraved

Also a certification label fixed with back self adhesive on the cover

Quantity: 32

ITEM	Tag	77-HS-013B	: Hand Switch for Fire&Gas Damper HFD-77013		Dwg	123A90-DDL-IN-DL-40116	
	S/Sys	77-40	: HVAC I&T Equipment Room B-400		Module	LD_B-400	
TASK	code	C10002102	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Instrumental	Form	CJX00	Miscellaneous

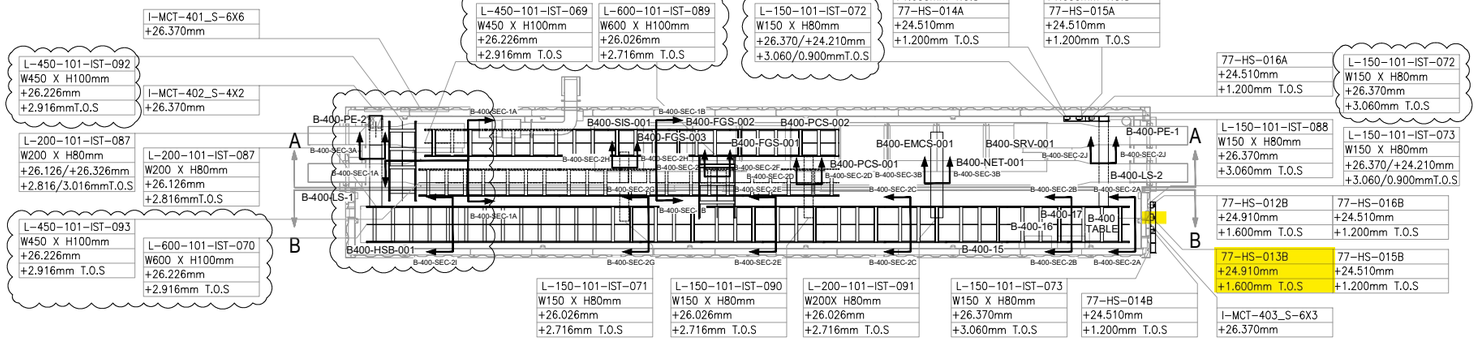
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	NA
7	Check identification (tag number, tag plates).	OK
8	Check supporting and protection against vibrations.	OK
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	OK
10	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:40:42.247Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T15:39:05.280Z	

DRAWING NO. 123A90-DDL-IN-DL-40116

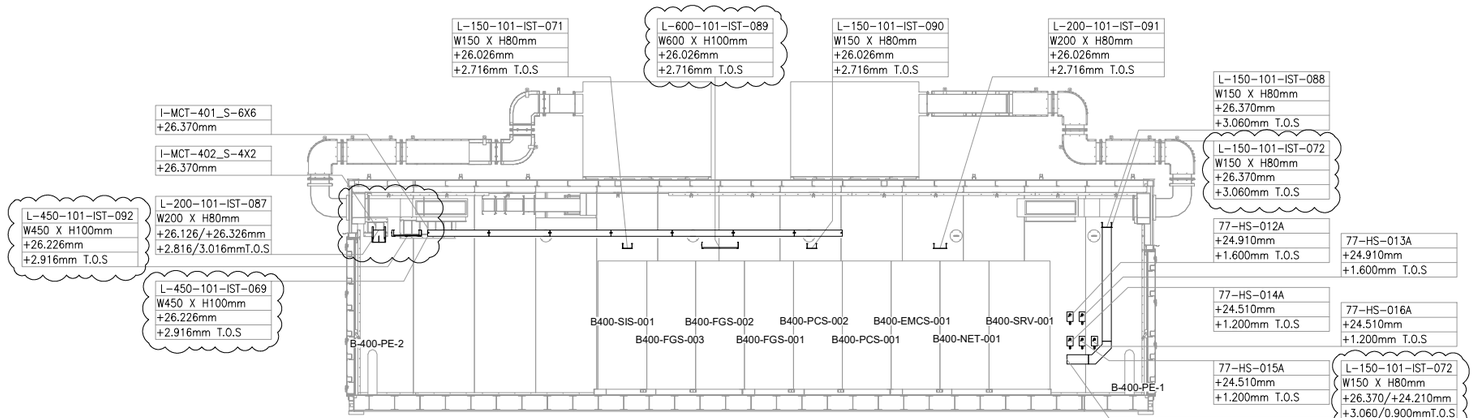
REV. 01



PLAN VIEW

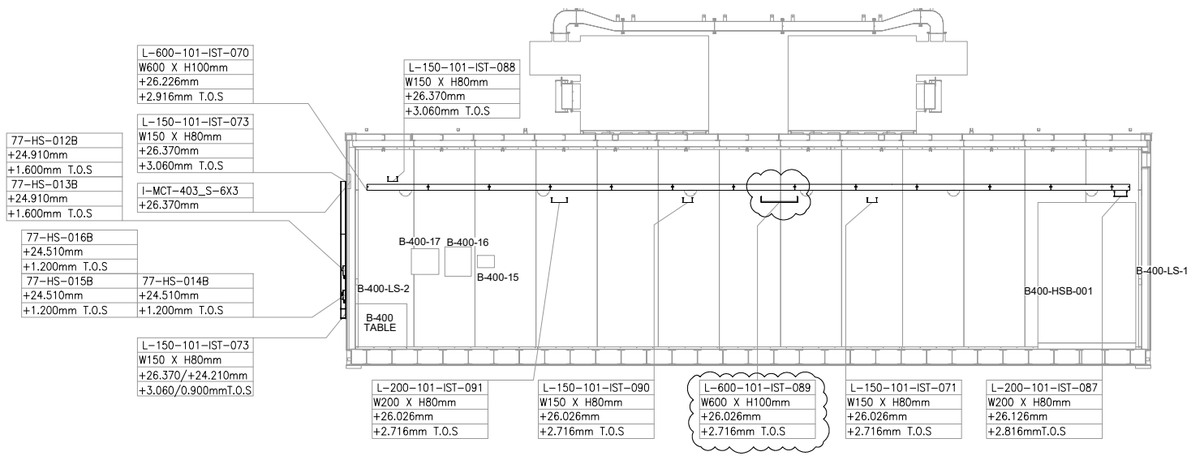
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



SECTION B-B

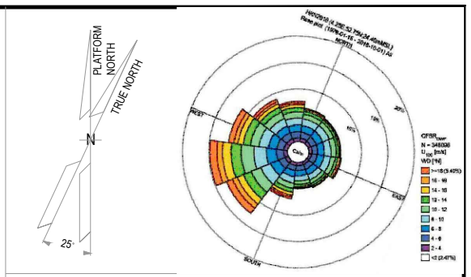
SCALE-1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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-400 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-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

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

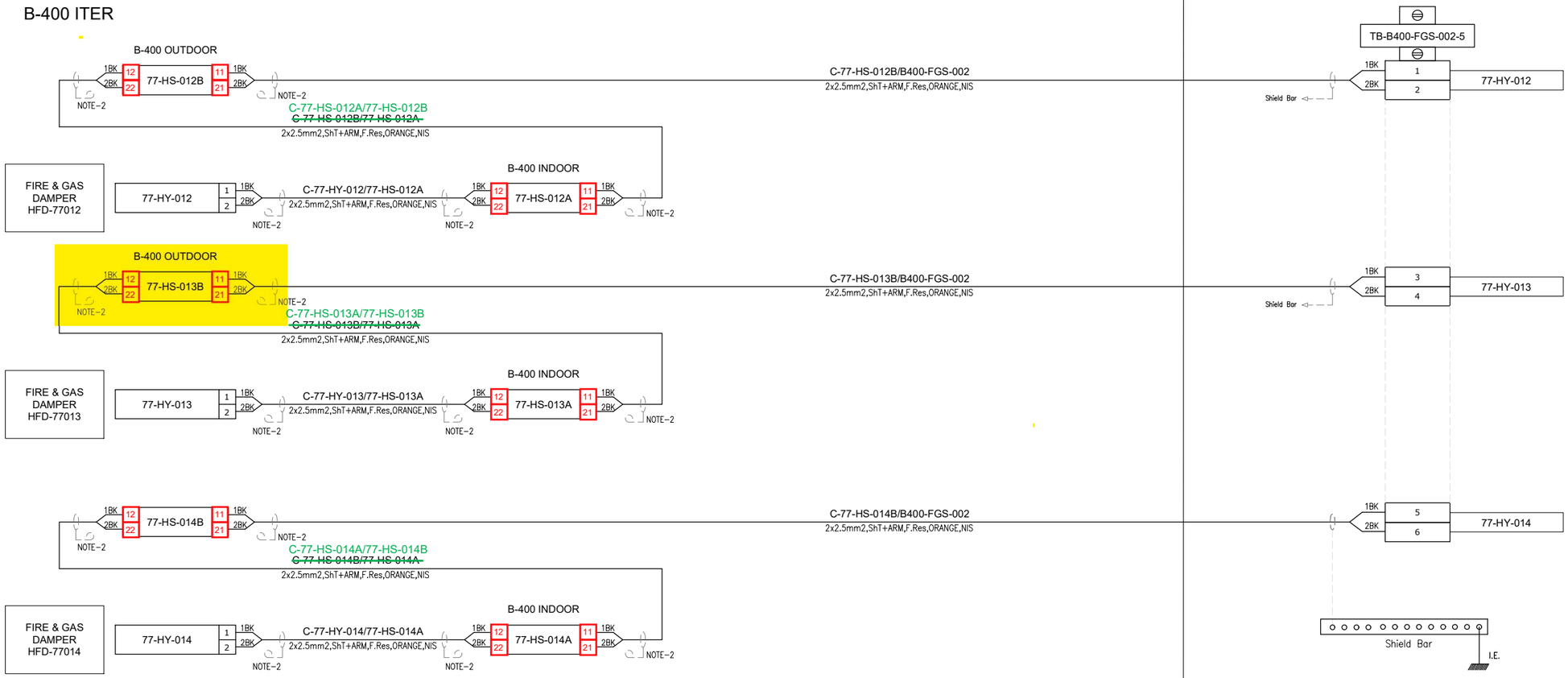
REV.: 01

I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET
B400-FGS-002

<01>

B-400 ITER



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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
FIRE DAMPER COMMAND – B–400

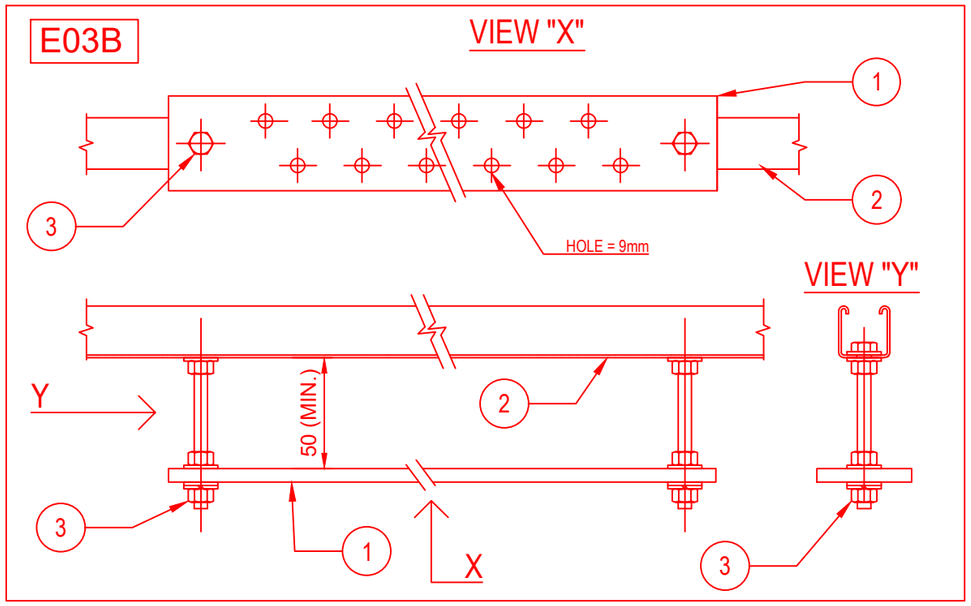
CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

	DRAWING NO.	SHEET	REV.
A3	123A90–DDL–IN–DG–40016	076	01

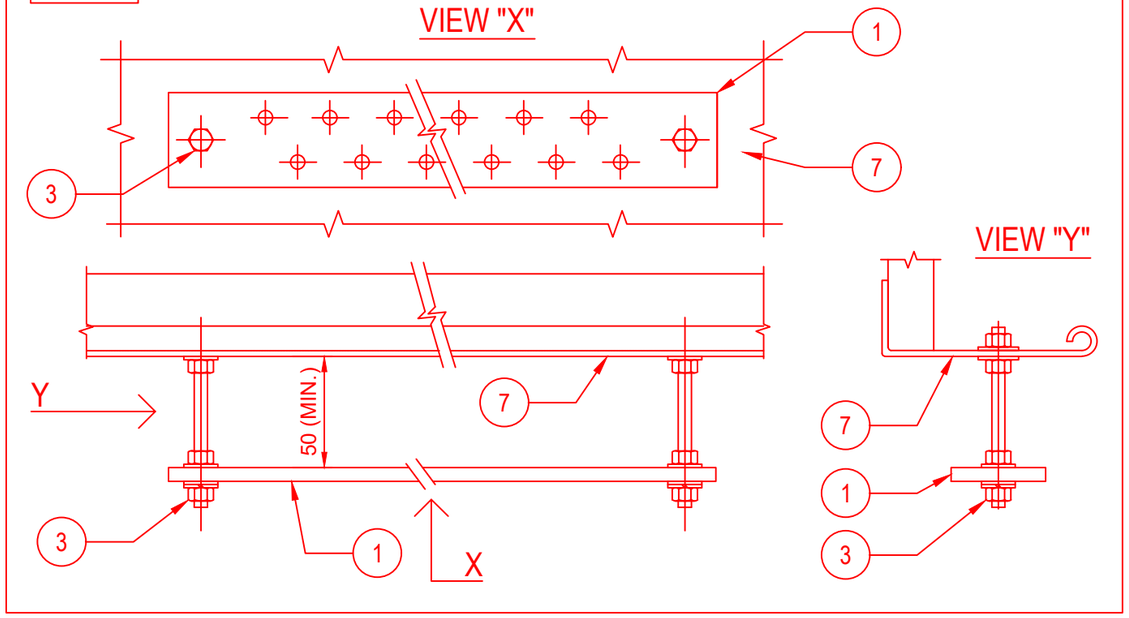
File Name : 123A90-DDL-IN-DG-40016_Rev.01

TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

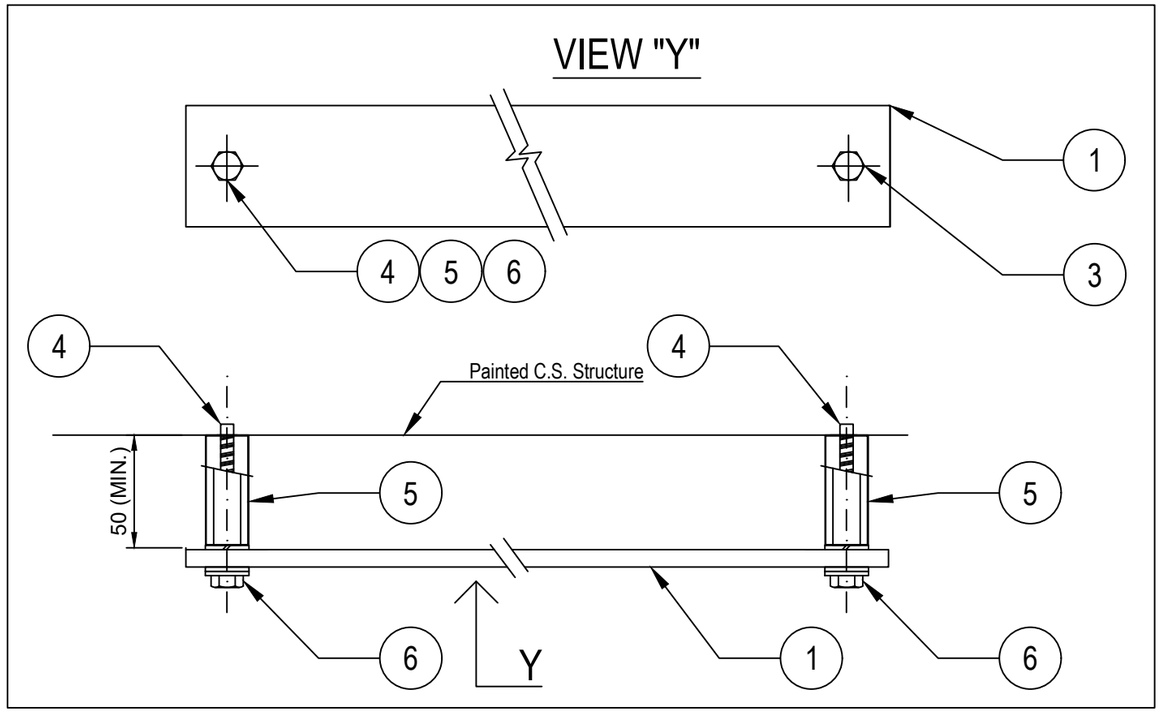


E03C



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_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

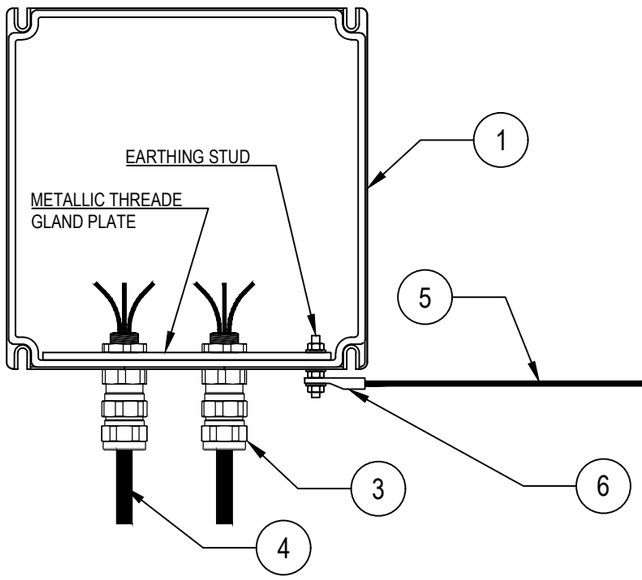
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

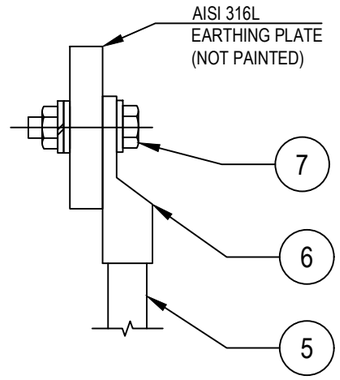
File Name : 123A90-DDL-EL-DD-20090 REV.02 RLMU.DWG

E04

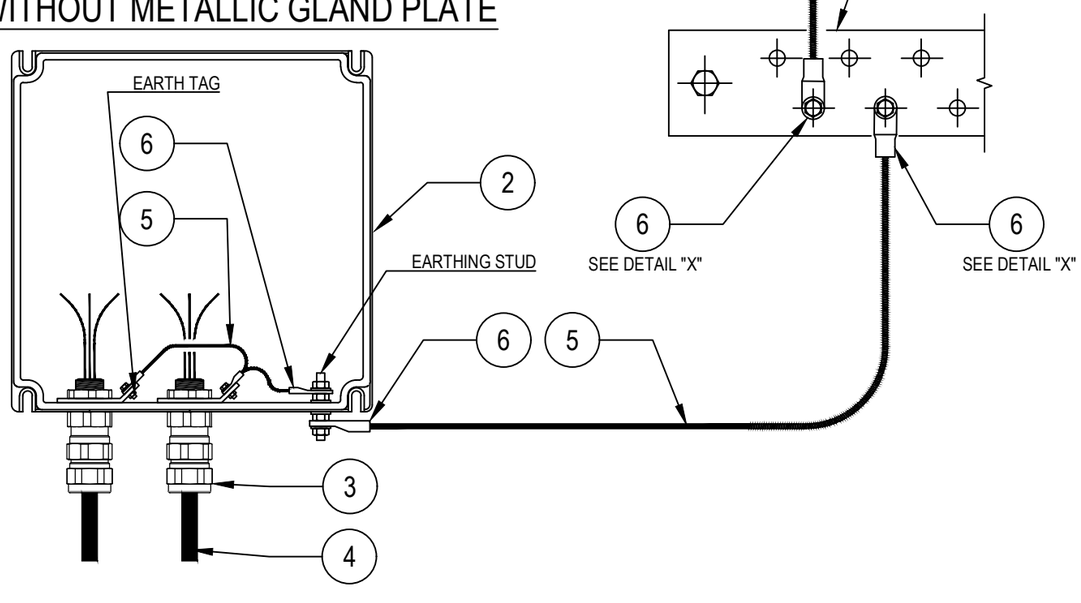
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



DETAIL "X"



DETAIL OF NON METALLIC ENCLOSURE WITHOUT METALLIC GLAND PLATE



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX WITH PLATE (EX)	GRP			
2	JUNCTION BOX WITHOUT GLAND PLATE (EX)	GRP			
3	DOUBLE SEAL CABLE GLAND (EX) FOR ARMOURED CABLE	NICK.PL.BRASS			~~NOTE 2~~
4	ARMOURED CABLE				
5	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		NOTE 1
6	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$		NOTE 1
7	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L			

NOTES:
1) FOR EARTHING BAR SEE TYPICAL DETAILS E03
~~2) CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE ARMOUR BY CABLE GLAND

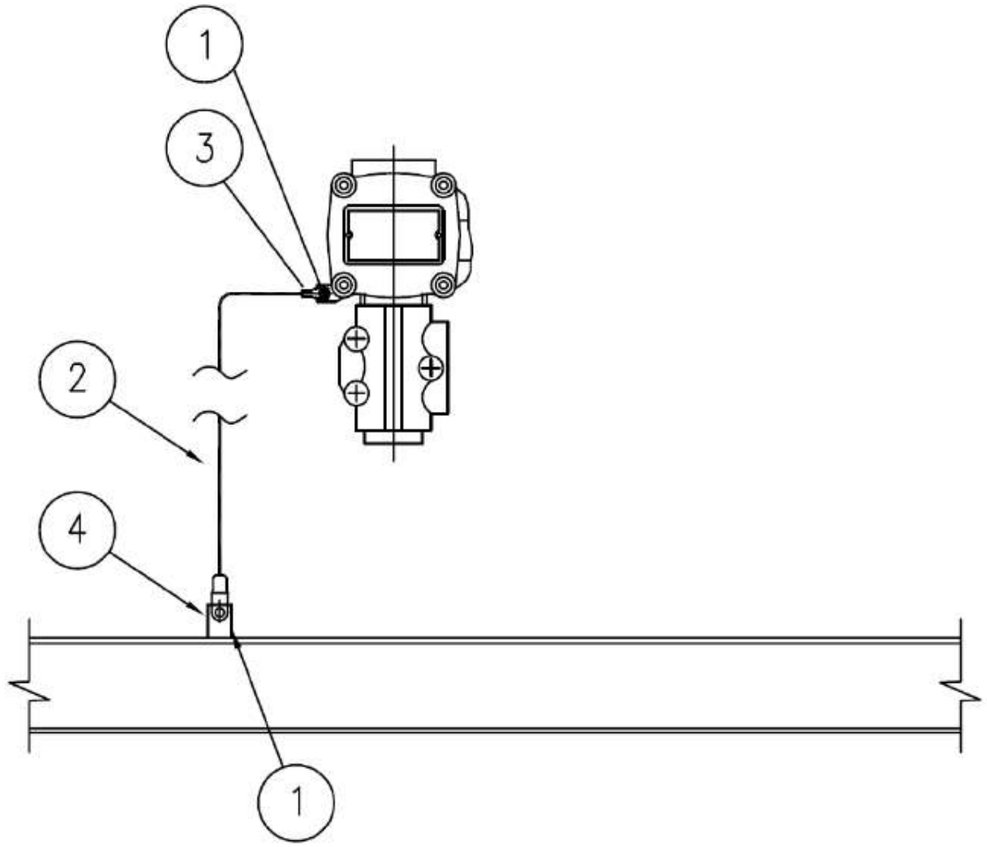
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

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

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

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

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 027 | REV. 02

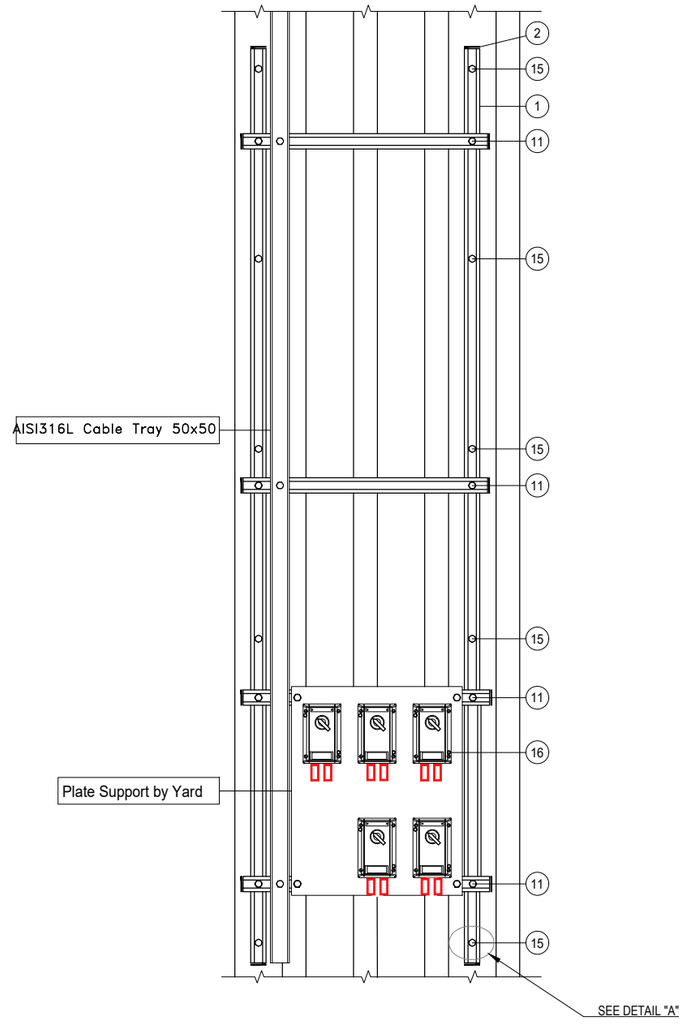
F.to UNI A3: 420mmx297mm

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

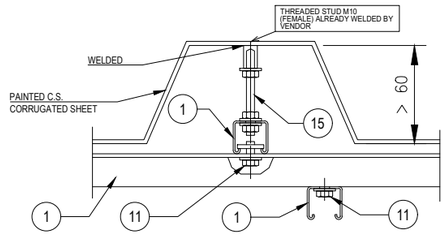
I-5

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	10

CONTAINER	ITEM	DESCRIPTION	TAGNAME
B-300 ~~B-301~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-017B~~ 77-HS-007B
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-018B~~ 77-HS-008B
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-019B~~ 77-HS-009B
	4	HAND SWITCH FOR DAMPER TEST	77-HS-010B
	5	HAND SWITCH FOR DAMPER TEST	77-HS-011B
B-400 ~~B-401~~	1	HAND SWITCH FOR DAMPER TEST	77-HS-012B
	2	HAND SWITCH FOR DAMPER TEST	77-HS-013B
	3	HAND SWITCH FOR DAMPER TEST	77-HS-014B
	4	HAND SWITCH FOR DAMPER TEST	77-HS-015B
	5	HAND SWITCH FOR DAMPER TEST	77-HS-016B

NOTES

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/09/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	11/07/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-123A90-FDL-IN-DD-40017

REV.:	DATE:	SIGNATURE:
1_B	18/09/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

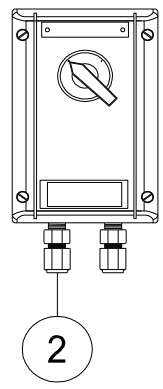
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
HAND SWITCH OUTSIDE CONTAINERS

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 048	REV. 01

ELECTRICAL HOOK-UP FOR HAND SWITCH TEST OF THE DAMPERS



INSTRUMENT TAG	
1	77-HS-001A
2	77-HS-001B
3	77-HS-002A
4	77-HS-002B
5	77-HS-003A
6	77-HS-003B
7	77-HS-004A
8	77-HS-004B
9	77-HS-005A
10	77-HS-005B
11	77-HS-006A
12	77-HS-006B
13	77-HS-007A
14	77-HS-007B
15	77-HS-008A
16	77-HS-008B
17	77-HS-009A
18	77-HS-009B
19	77-HS-010A
20	77-HS-010B
21	77-HS-011A
22	77-HS-011B
23	77-HS-012A
24	77-HS-012B
25	77-HS-013A
26	77-HS-013B
27	77-HS-014A
28	77-HS-014B
29	77-HS-015A
30	77-HS-015B
31	77-HS-016A
32	77-HS-016B

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-HD-40079
REV.: 2_A | DATE: 08/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

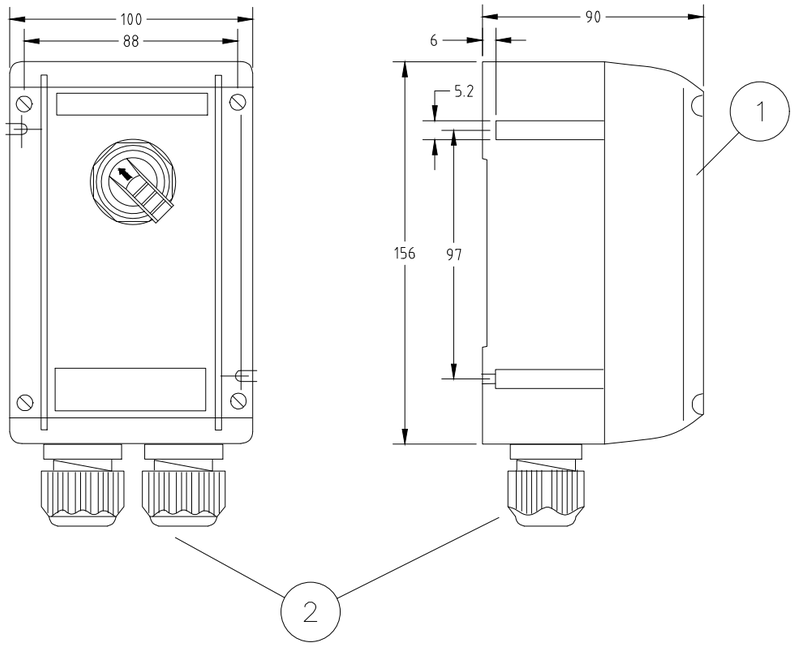
This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

PUSH BUTTON DPDT CONTACT

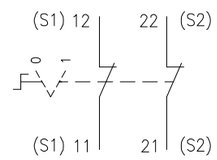
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

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



Type 434...

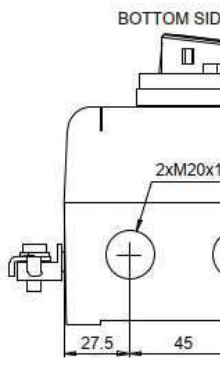


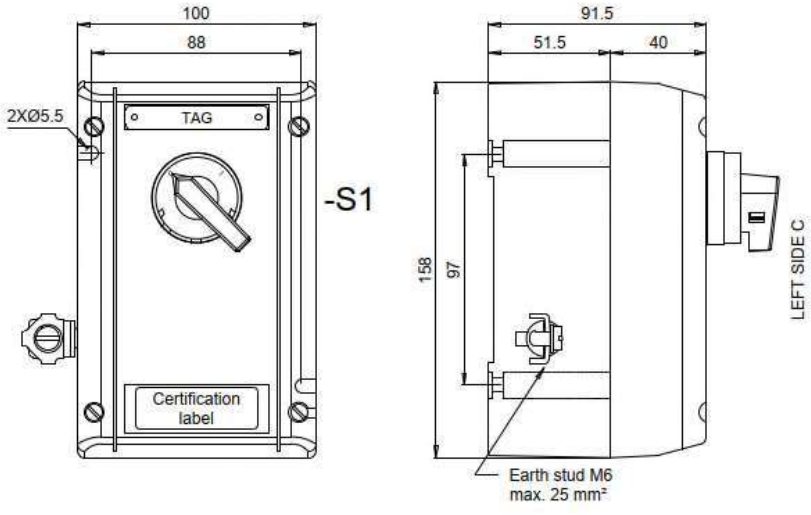
Type 432...

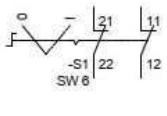
Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ib m IIC T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEx Certificate of Conformity	IECEx BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 up to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 110 V / I_e 0.5 A	Ex23 AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.5 A
Connecting terminals	2 x 4 mm²	
Protection class	I	
Degree of protection accd. to EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	2 x M25 cable gland incl. 1 blanking plug or optional 2 x M20 thread with internal brass plate	
Enclosure material	Polyamide	
Enclosure colour	black	

	Type 432
Dimensions (L x W x H)	156 x 100 x 90 mm
Weight (empty)	0.47 kg

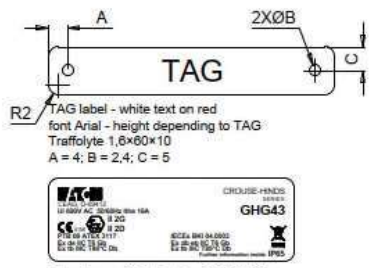






Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Techical data:
Manufactured by Eaton Crouse-Hinds Division
Model: GHG 432
Certificate No.
PTB 00 ATEX 3117
IECEx BKI 04.0003
Marking: ATEX and IECEx
II 2G Ex de IIC T6 Gb
II 2D Ex tb IIIC T80°C Db
-40°C ≤ tamb ≤ +55°C
Ui 690V
IP65

Specific characteristics:
- Polyamide (PA), black
- Closed with stainless steel screw
- Bottom with internal earth plate in brass
- M6 internal/external stainless steel earth stud

Components:
- No. 1 black selector switch with 2 position 2NC

Entries bottom side B:
- No. 2 M20 threaded taped with transit tape

No.1 1,6×60×10 mm white text on red background traffolyte tag fixed with stainless steel screws on the cover, sealed on the back with PU adhesive and engraved

Also a certification label fixed with back self adhesive on the cover

Quantity: 32

ITEM	Tag	77-HS-014A	: Hand Switch for Fire&Gas Damper HFD-77014			Dwg	123A90-DDL-IN-DL-40116
	S/Sys	77-40	: HVAC I&T Equipment Room B-400			Module	LD_B-400
TASK	code	C10002103		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX00		Miscellaneous

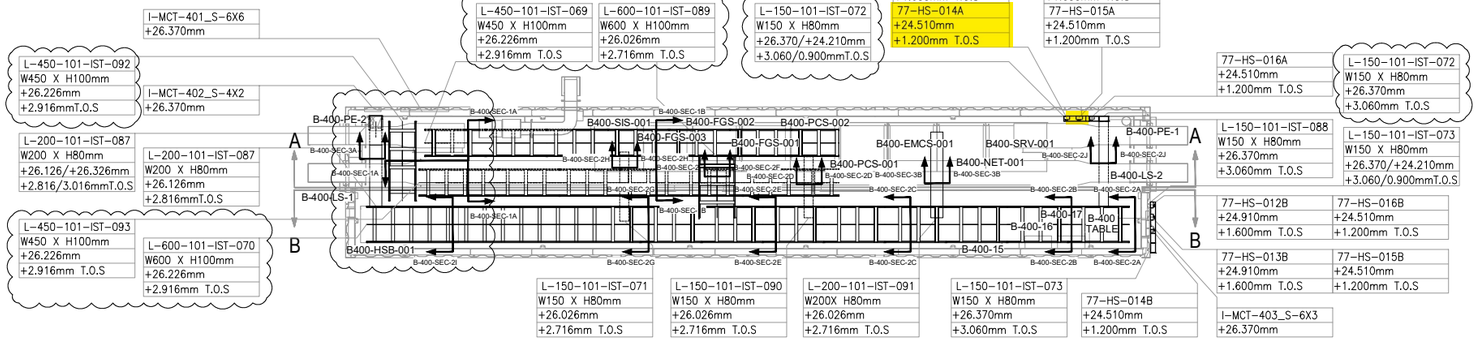
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	NA
7	Check identification (tag number, tag plates).	OK
8	Check supporting and protection against vibrations.	OK
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	OK
10	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:40:51.718Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T15:38:56.294Z	

DRAWING NO. 123A90-DDL-IN-DL-40116

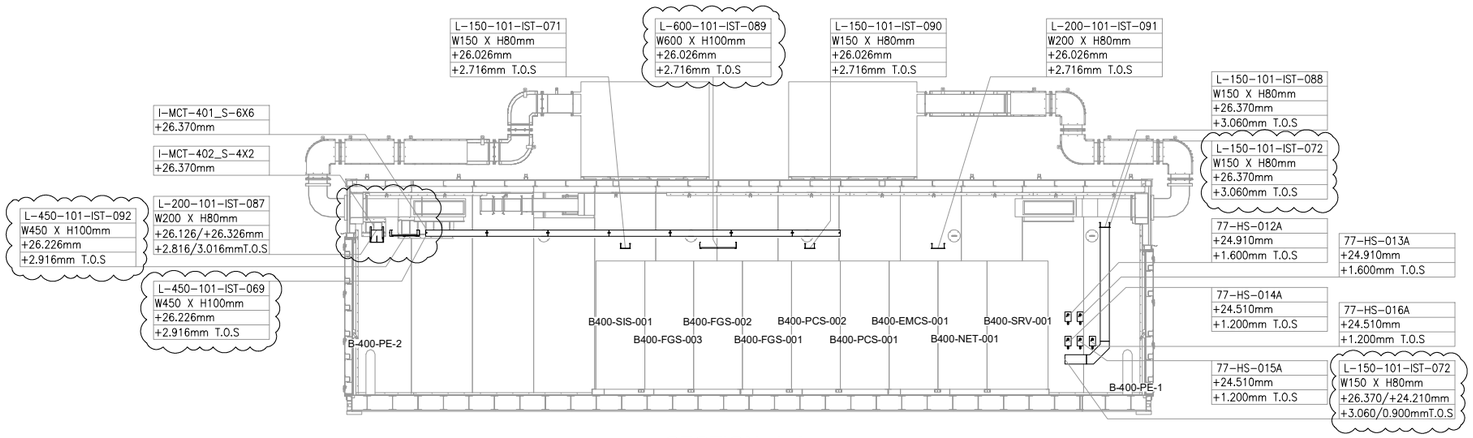
REV. 01



PLAN VIEW

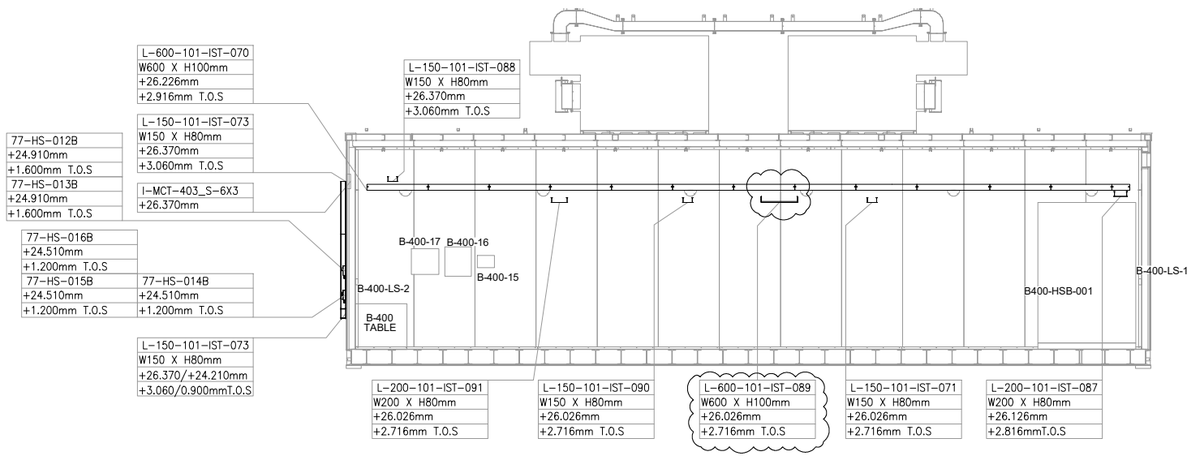
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



SECTION B-B

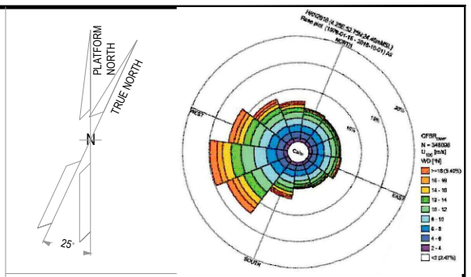
SCALE-1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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-400 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-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

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

REV.: 01

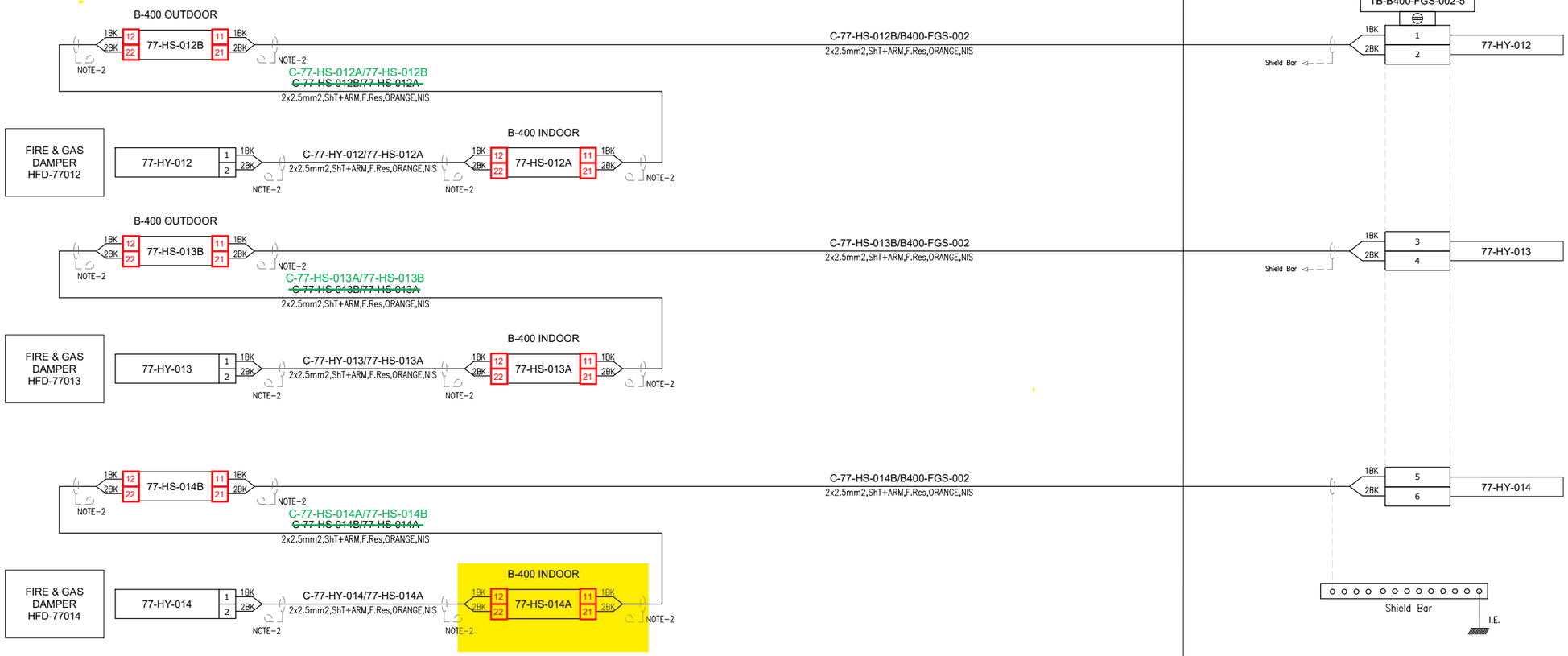
I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-FGS-002

<01>

B-400 ITER



VALID FOR CONSTRUCTION

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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
FIRE DAMPER COMMAND – B–400

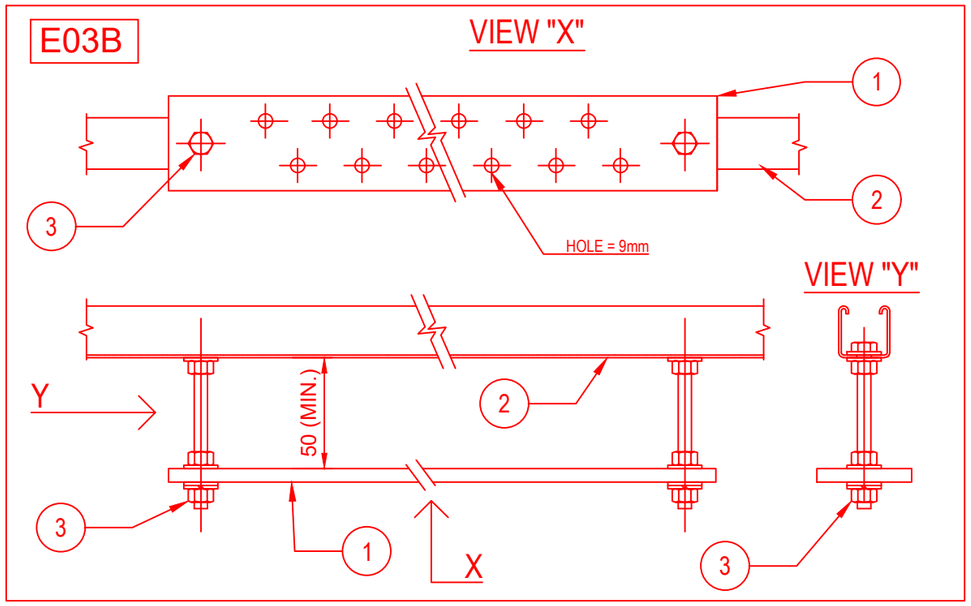
CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

	DRAWING NO.	SHEET	REV.
A3	123A90–DDL–IN–DG–40016	076	01

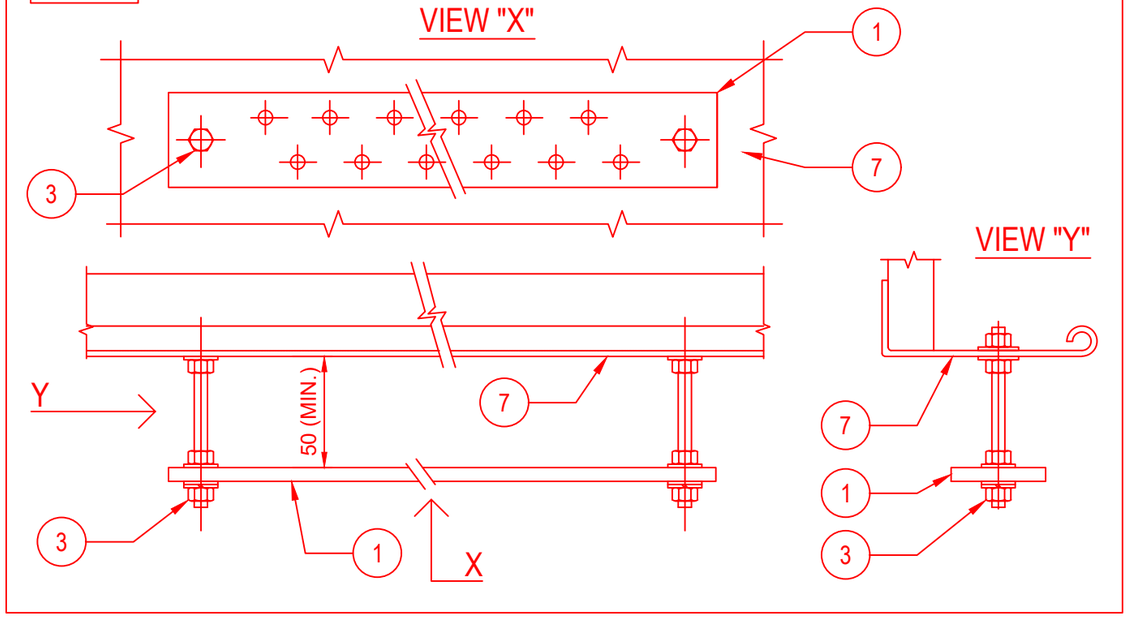
File Name : 123A90-DDL-IN-DG-40016_Rev.01

TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

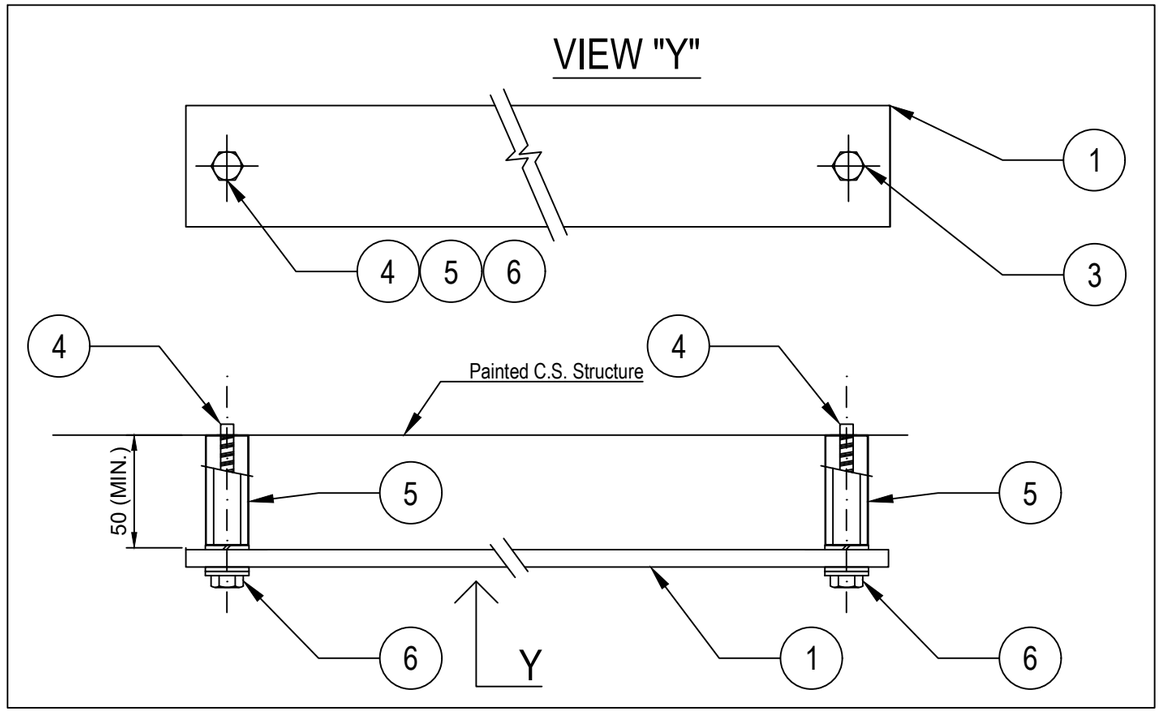


E03C



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_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

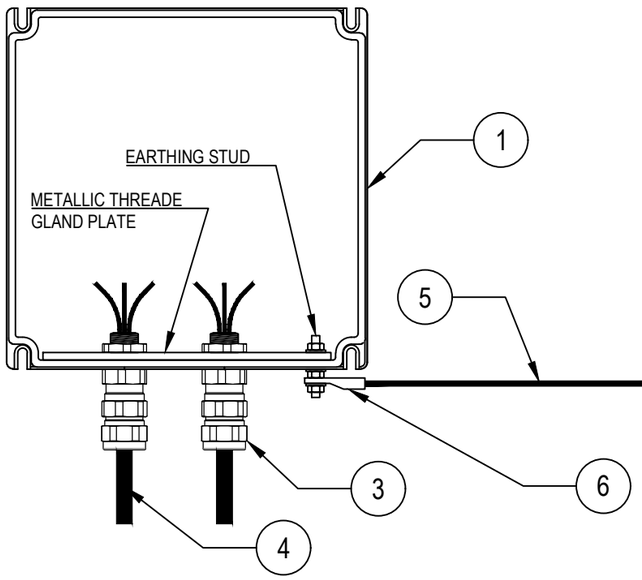
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

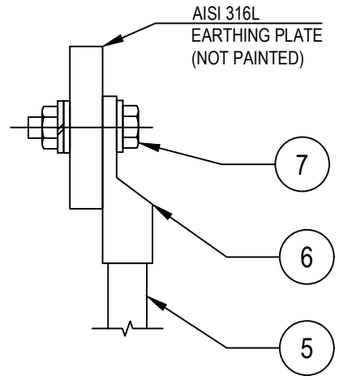
File Name : 123A90-DDL-EL-DD-20090 REV.02 RLMU.DWG

E04

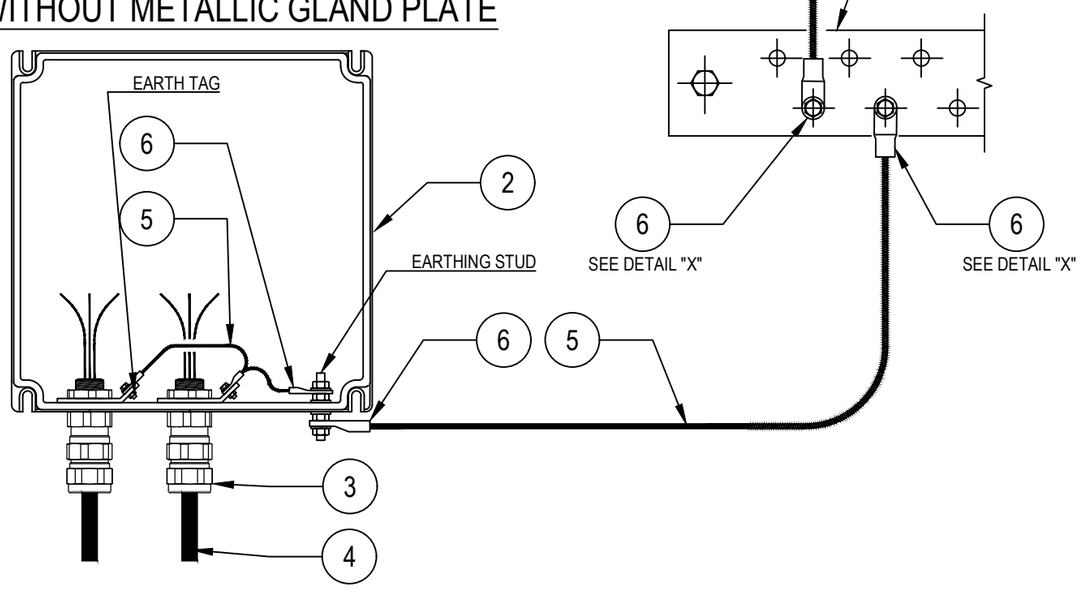
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



DETAIL "X"



DETAIL OF NON METALLIC ENCLOSURE WITHOUT METALLIC GLAND PLATE



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX WITH PLATE (EX)	GRP			
2	JUNCTION BOX WITHOUT GLAND PLATE (EX)	GRP			
3	DOUBLE SEAL CABLE GLAND (EX) FOR ARMOURED CABLE	NICK.PL.BRASS			~~NOTE 2~~
4	ARMOURED CABLE				
5	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		NOTE 1
6	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$		NOTE 1
7	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L			

NOTES:
1) FOR EARTHING BAR SEE TYPICAL DETAILS E03
~~2) CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE ARMOUR BY CABLE GLAND

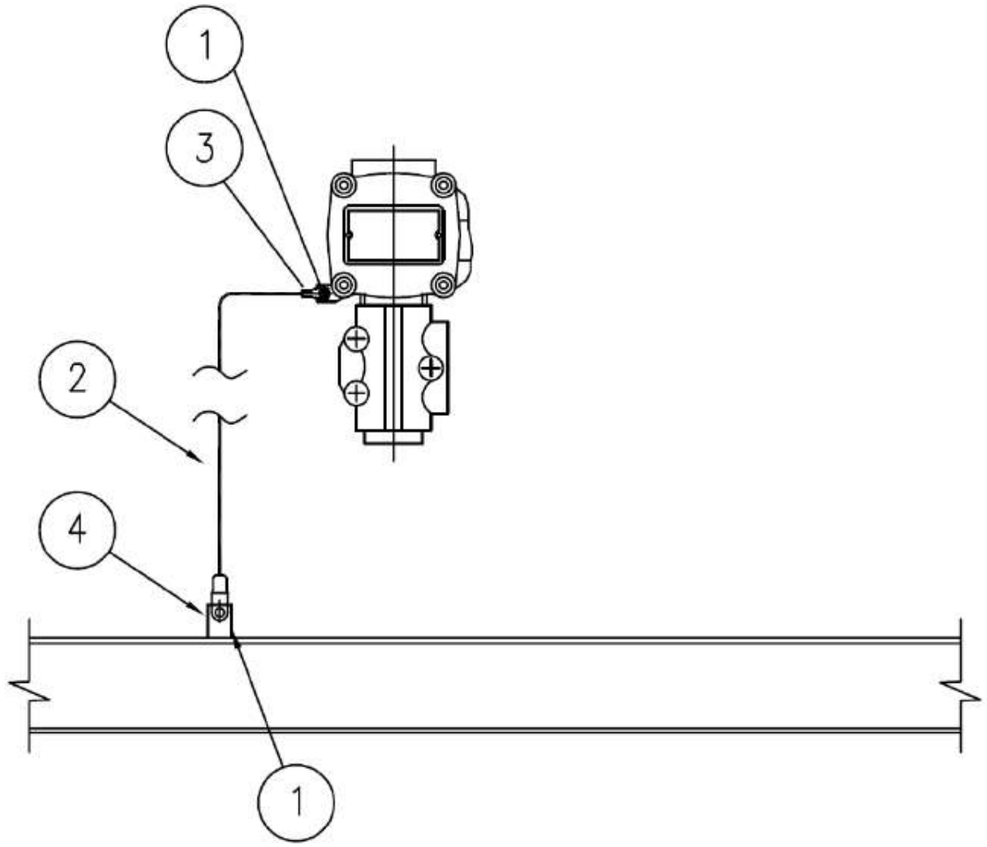
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

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

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

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

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 027 | REV. 02

F.to UNI A3: 420mmx297mm

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

I-3

DRAWING NO. 123A90-DDL-IN-DD-40017

REV. 00



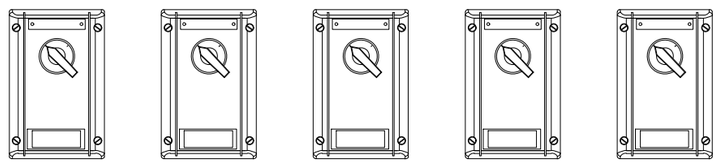
B-100
~~B-101~~



B-200
~~B-201~~



B-300
~~B-301~~



B-400
~~B-401~~

POS.	DESCRIPTION	Q.TY
-	SELFING TAPPING SCREW	-

CONTAINER	ITEM	DESCRIPTION	TAGNAME
B-100 ~~B-101~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-011A~~ 77-HS-001A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-012A~~ 77-HS-002A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-013A~~ 77-HS-003A
B-200 ~~B-201~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-014A~~ 77-HS-004A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-015A~~ 77-HS-005A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-016A~~ 77-HS-006A
B-300 ~~B-301~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-017A~~ 77-HS-007A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-018A~~ 77-HS-008A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-019A~~ 77-HS-009A
	4	HAND SWITCH FOR DAMPER TEST	77-HS-010A
	5	HAND SWITCH FOR DAMPER TEST	77-HS-011A
B-400 ~~B-401~~	1	HAND SWITCH FOR DAMPER TEST	77-HS-012A
	2	HAND SWITCH FOR DAMPER TEST	77-HS-013A
	3	HAND SWITCH FOR DAMPER TEST	77-HS-014A
	4	HAND SWITCH FOR DAMPER TEST	77-HS-015A
	5	HAND SWITCH FOR DAMPER TEST	77-HS-016A

NOTES

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/09/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	11/07/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-123A90-FDL-IN-DD-40017**

REV.:	DATE:	SIGNATURE:
1_B	18/09/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

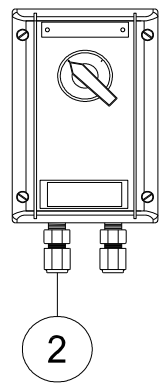
ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
HAND SWITCH INSIDE CONTAINERS

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 046	REV. 01

ELECTRICAL HOOK-UP FOR HAND SWITCH TEST OF THE DAMPERS



INSTRUMENT TAG	
1	77-HS-001A
2	77-HS-001B
3	77-HS-002A
4	77-HS-002B
5	77-HS-003A
6	77-HS-003B
7	77-HS-004A
8	77-HS-004B
9	77-HS-005A
10	77-HS-005B
11	77-HS-006A
12	77-HS-006B
13	77-HS-007A
14	77-HS-007B
15	77-HS-008A
16	77-HS-008B
17	77-HS-009A
18	77-HS-009B
19	77-HS-010A
20	77-HS-010B
21	77-HS-011A
22	77-HS-011B
23	77-HS-012A
24	77-HS-012B
25	77-HS-013A
26	77-HS-013B
27	77-HS-014A
28	77-HS-014B
29	77-HS-015A
30	77-HS-015B
31	77-HS-016A
32	77-HS-016B

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-HD-40079
REV.: 2_A | DATE: 08/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

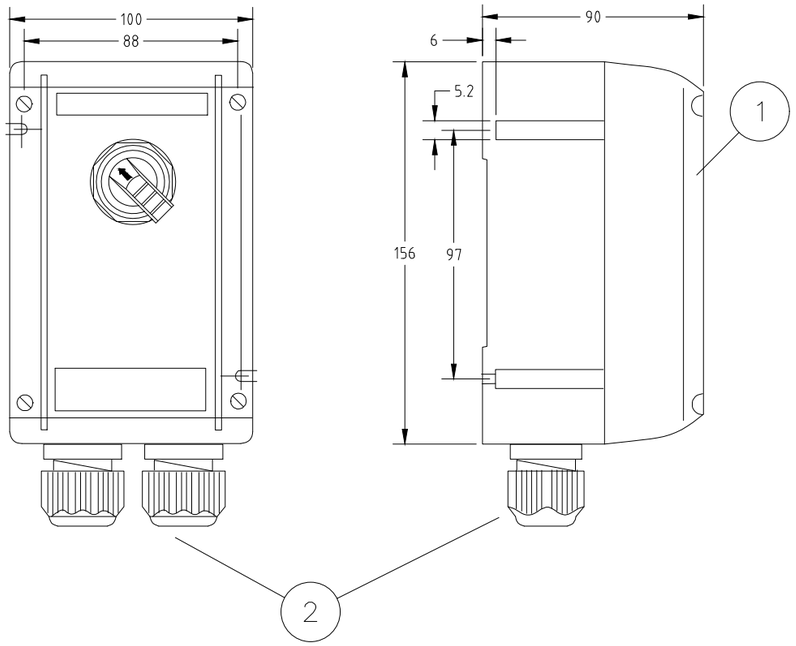
This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

PUSH BUTTON DPDT CONTACT

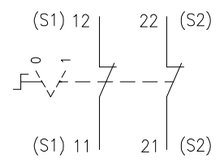
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

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



Type 434...

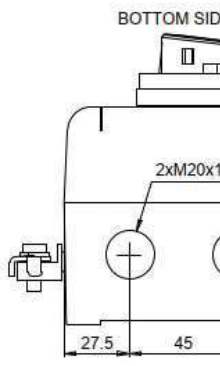


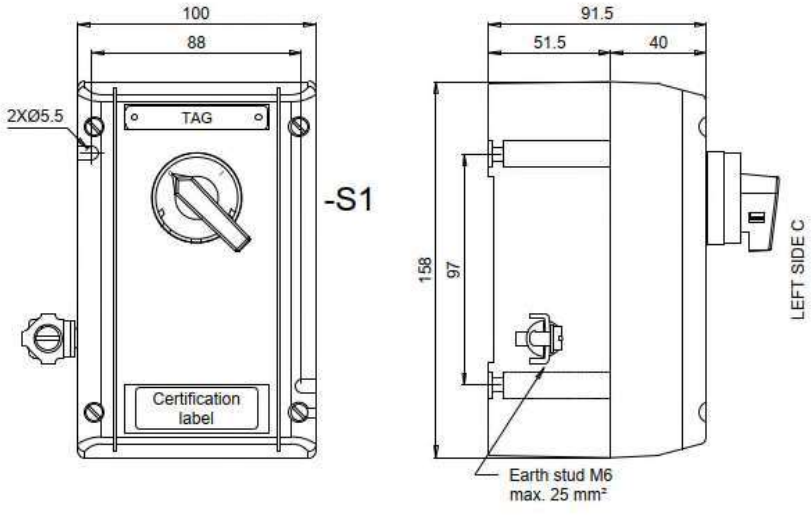
Type 432...

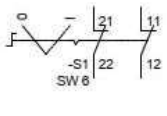
Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ib m IIC T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEx Certificate of Conformity	IECEx BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 up to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 110 V / I_e 0.5 A	Ex23 AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.5 A
Connecting terminals	2 x 4 mm²	
Protection class	I	
Degree of protection accd. to EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	2 x M25 cable gland incl. 1 blanking plug or optional 2 x M20 thread with internal brass plate	
Enclosure material	Polyamide	
Enclosure colour	black	

	Type 432
Dimensions (L x W x H)	156 x 100 x 90 mm
Weight (empty)	0.47 kg

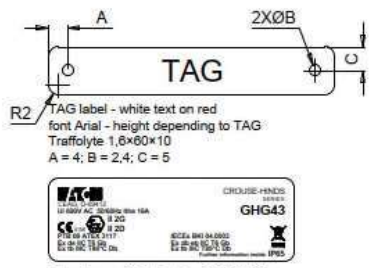






Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Techical data:
Manufactured by Eaton Crouse-Hinds Division
Model: GHG 432
Certificate No.
PTB 00 ATEX 3117
IECEx BKI 04.0003
Marking: ATEX and IECEx
II 2G Ex de IIC T6 Gb
II 2D Ex tb IIIC T80°C Db
-40°C ≤ tamb ≤ +55°C
Ui 690V
IP65

Specific characteristics:
- Polyamide (PA), black
- Closed with stainless steel screw
- Bottom with internal earth plate in brass
- M6 internal/external stainless steel earth stud

Components:
- No. 1 black selector switch with 2 position 2NC

Entries bottom side B:
- No. 2 M20 threaded taped with transit tape

No.1 1,6×60×10 mm white text on red background traffolyte tag fixed with stainless steel screws on the cover, sealed on the back with PU adhesive and engraved

Also a certification label fixed with back self adhesive on the cover

Quantity: 32

ITEM	Tag	77-HS-014B	: Hand Switch for Fire&Gas Damper HFD-77014		Dwg	123A90-DDL-IN-DL-40116	
	S/Sys	77-40	: HVAC I&T Equipment Room B-400		Module	LD_B-400	
TASK	code	C10002104	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Instrumental	Form	CJX00	Miscellaneous

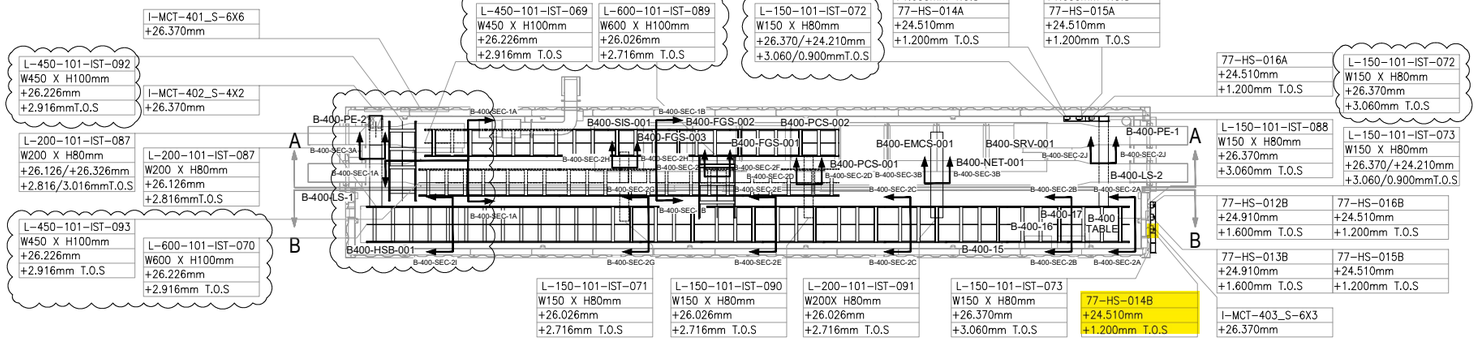
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	NA
7	Check identification (tag number, tag plates).	OK
8	Check supporting and protection against vibrations.	OK
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	OK
10	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:41:00.672Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T15:38:47.152Z	

DRAWING NO. 123A90-DDL-IN-DL-40116

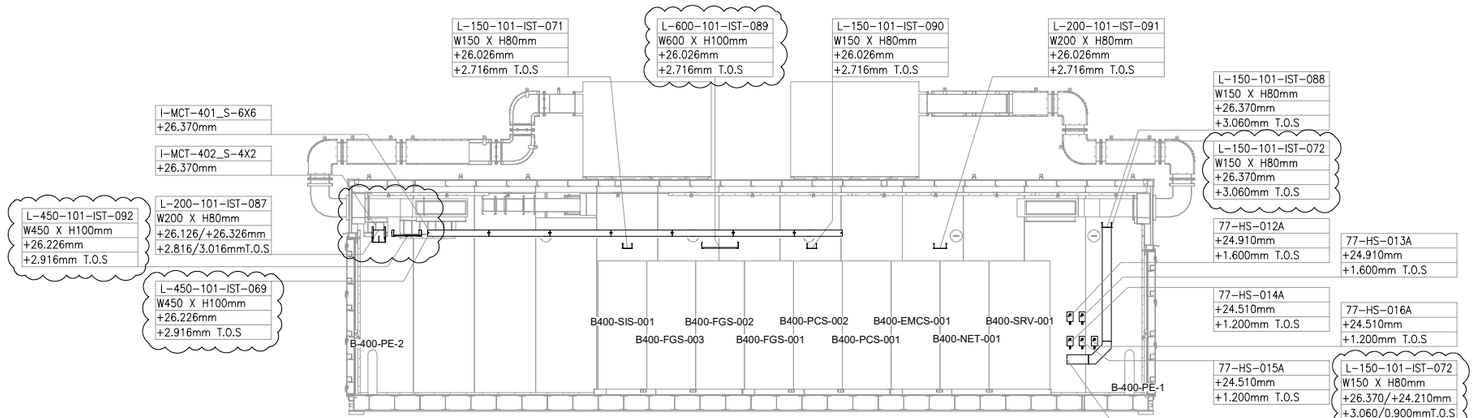
REV. 01



PLAN VIEW

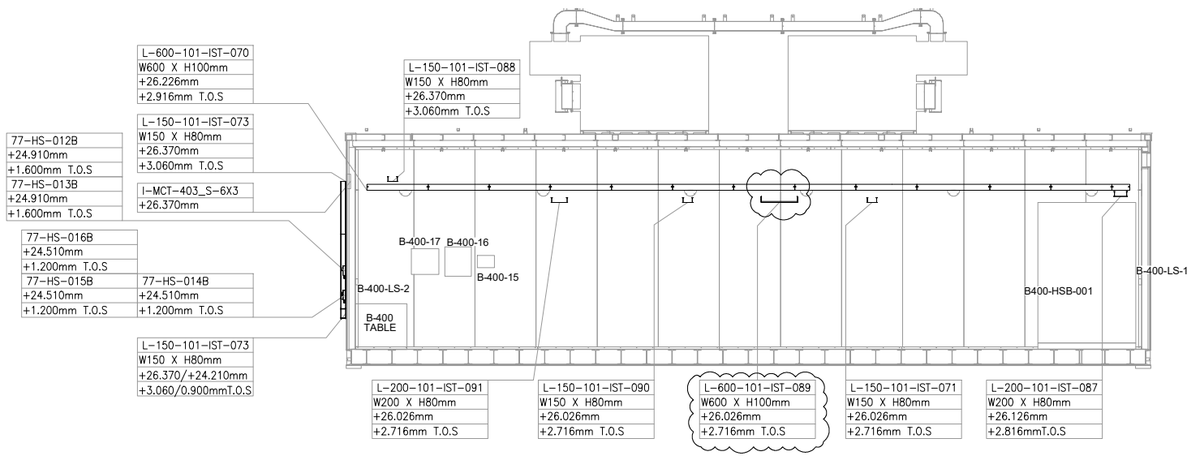
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



SECTION B-B

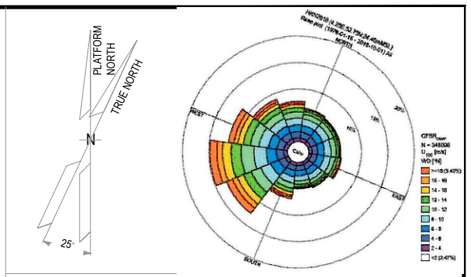
SCALE-1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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-400 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-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

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

REV.: 01

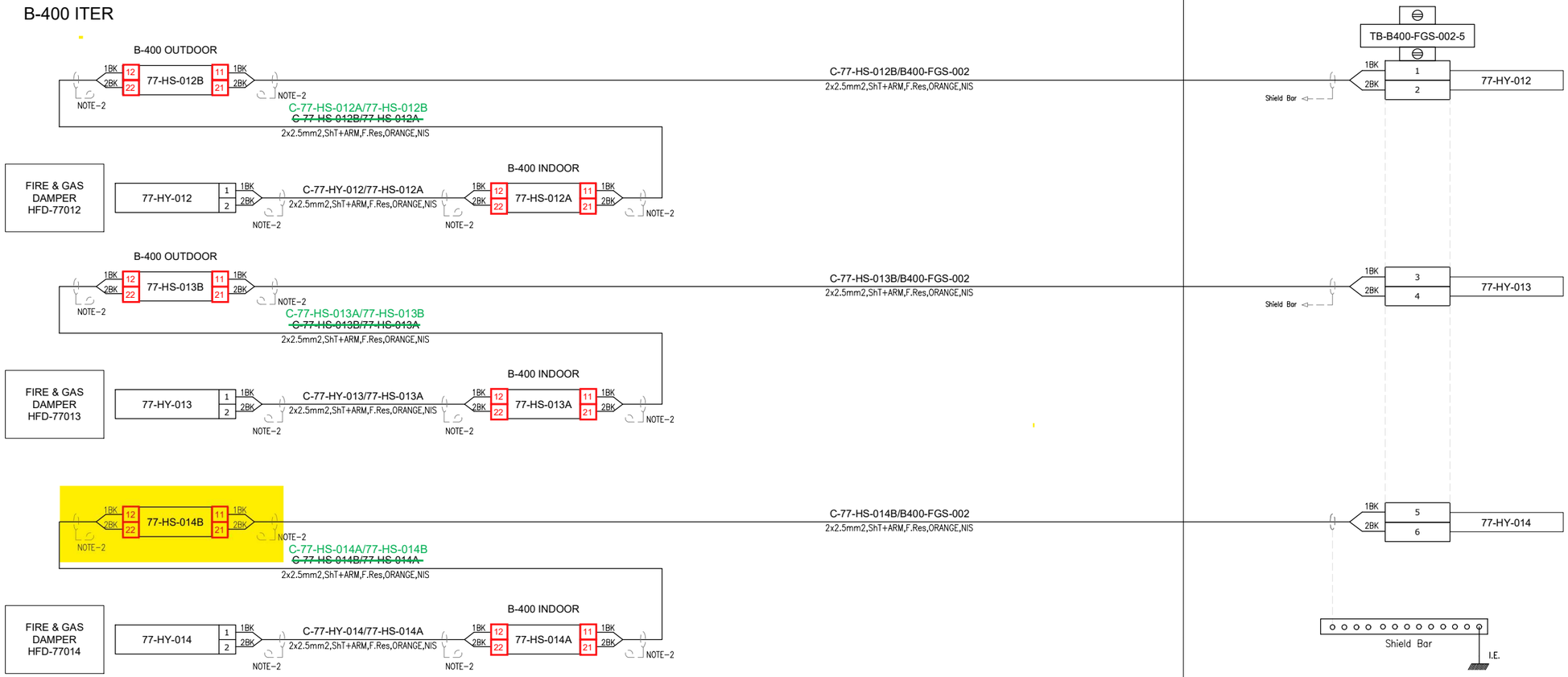
I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-FGS-002

<01>

B-400 ITER



VALID FOR CONSTRUCTION

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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
FIRE DAMPER COMMAND – B–400

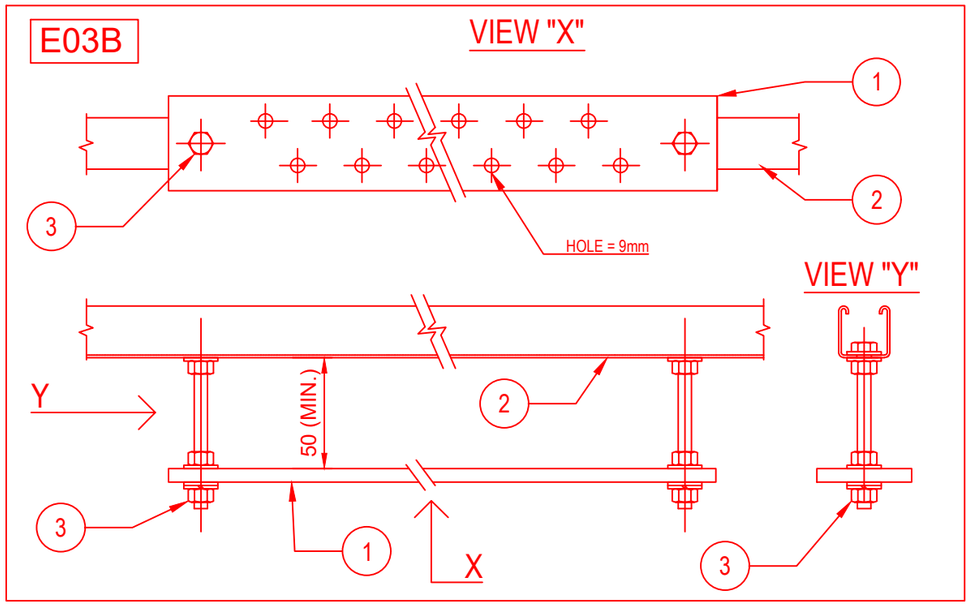
CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

	DRAWING NO.	SHEET	REV.
A3	123A90–DDL–IN–DG–40016	076	01

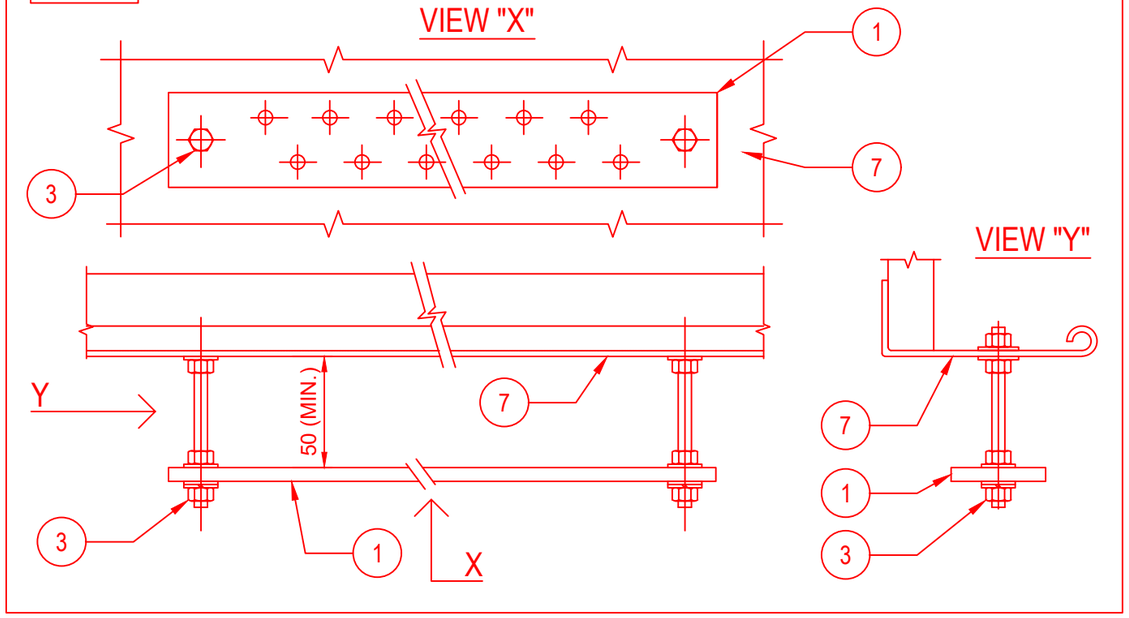
File Name : 123A90-DDL-IN-DG-40016_Rev.01

TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

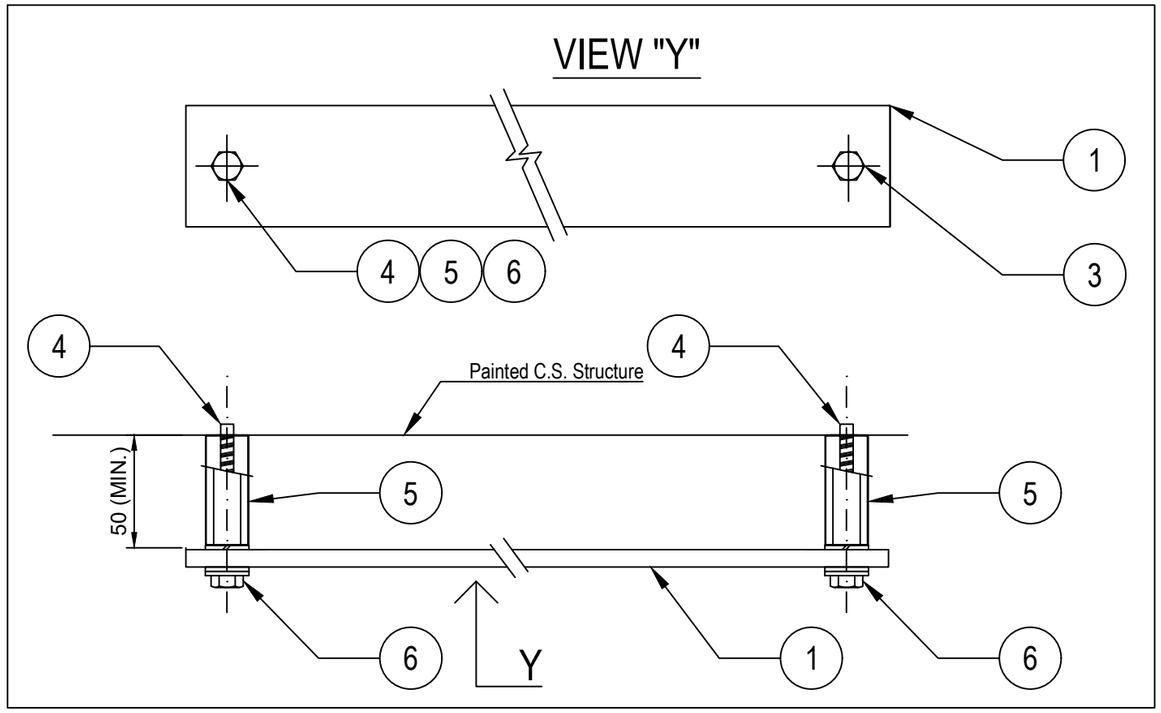


E03C



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_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

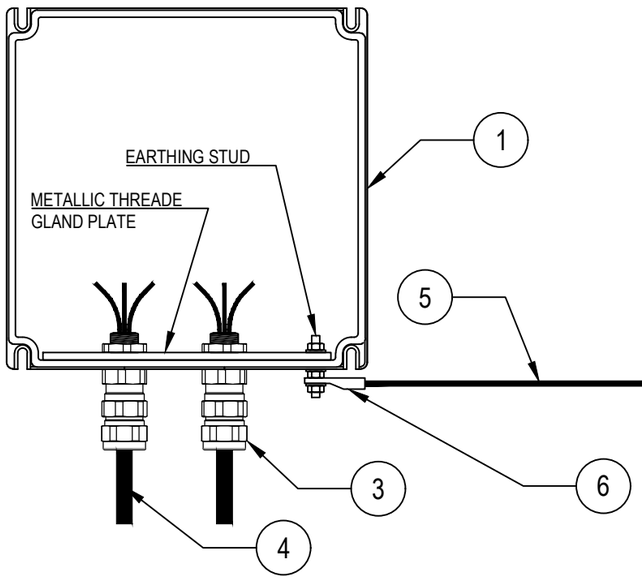
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

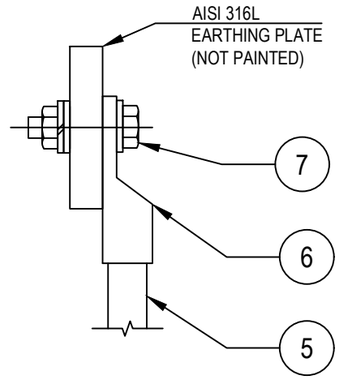
File Name : 123A90-DDL-EL-DD-20090 REV.02 RLMU.DWG

E04

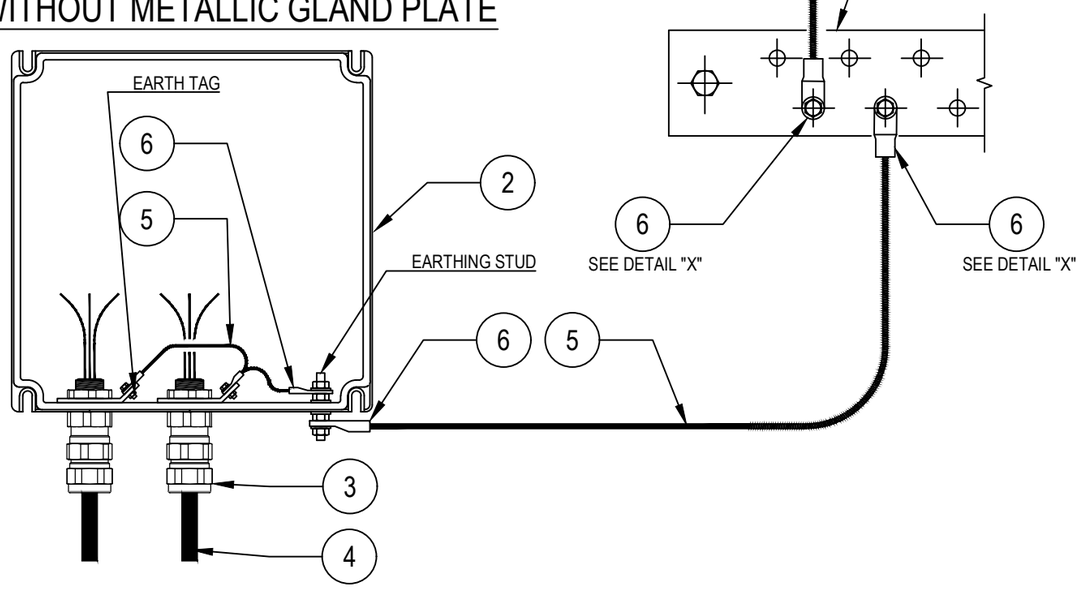
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



DETAIL "X"



DETAIL OF NON METALLIC ENCLOSURE WITHOUT METALLIC GLAND PLATE



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX WITH PLATE (EX)	GRP			
2	JUNCTION BOX WITHOUT GLAND PLATE (EX)	GRP			
3	DOUBLE SEAL CABLE GLAND (EX) FOR ARMOURED CABLE	NICK.PL.BRASS			~~NOTE 2~~
4	ARMOURED CABLE				
5	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		NOTE 1
6	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$		NOTE 1
7	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L			

NOTES:
1) FOR EARTHING BAR SEE TYPICAL DETAILS E03
~~2) CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE ARMOUR BY CABLE GLAND

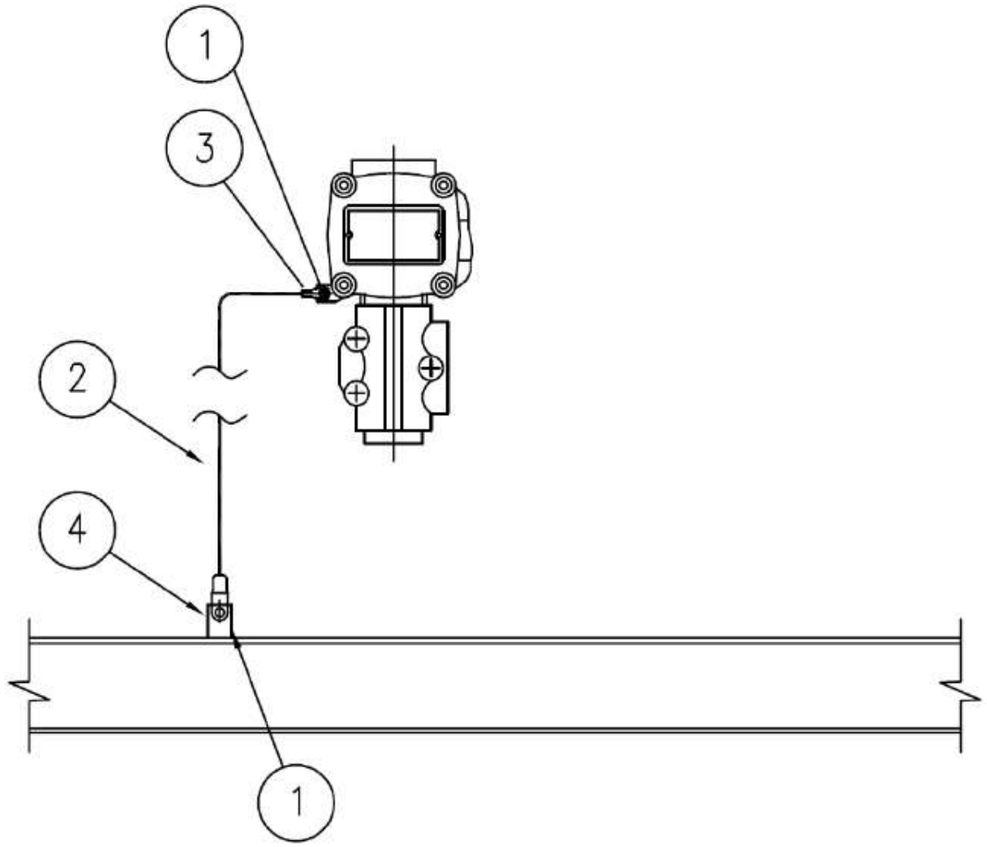
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

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

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

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

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 027 | REV. 02

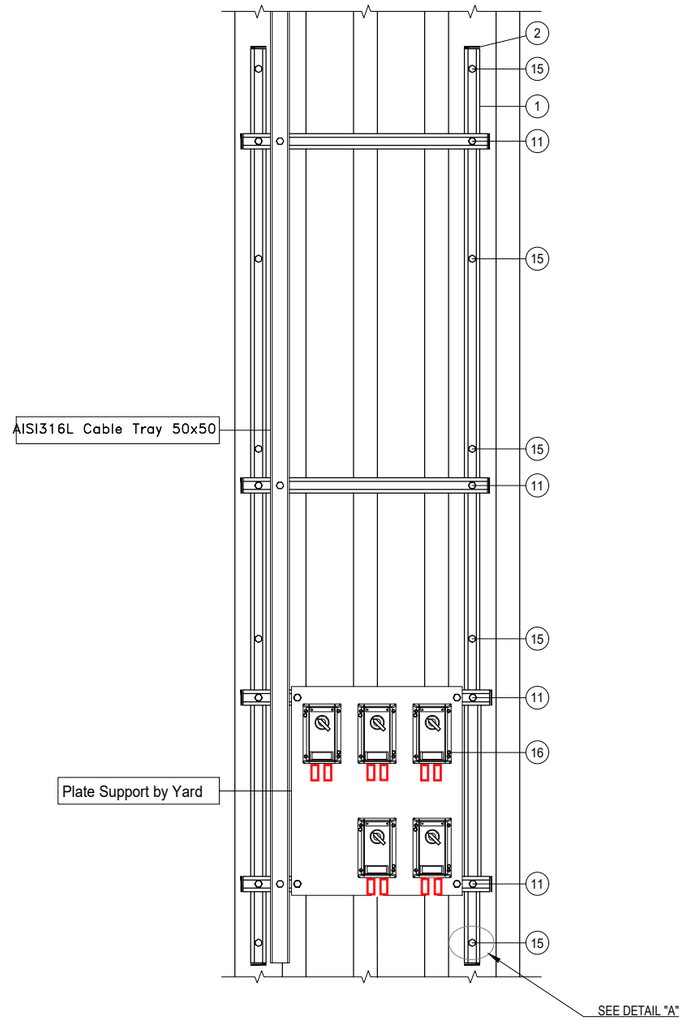
F.to UNI A3: 420mmx297mm

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

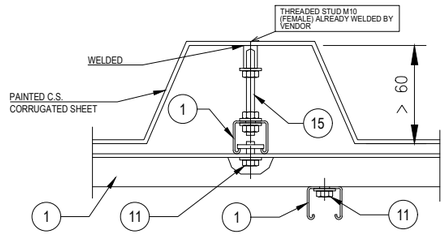
I-5

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	10

CONTAINER	ITEM	DESCRIPTION	TAGNAME
B-300 ~~B-301~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-017B~~ 77-HS-007B
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-018B~~ 77-HS-008B
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-019B~~ 77-HS-009B
	4	HAND SWITCH FOR DAMPER TEST	77-HS-010B
	5	HAND SWITCH FOR DAMPER TEST	77-HS-011B
B-400 ~~B-401~~	1	HAND SWITCH FOR DAMPER TEST	77-HS-012B
	2	HAND SWITCH FOR DAMPER TEST	77-HS-013B
	3	HAND SWITCH FOR DAMPER TEST	77-HS-014B
	4	HAND SWITCH FOR DAMPER TEST	77-HS-015B
	5	HAND SWITCH FOR DAMPER TEST	77-HS-016B

NOTES

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/09/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	11/07/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-123A90-FDL-IN-DD-40017

REV.:	DATE:	SIGNATURE:
1_B	18/09/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

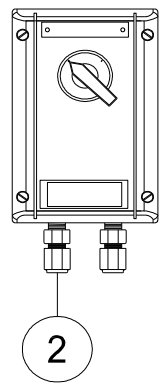
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
HAND SWITCH OUTSIDE CONTAINERS

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 048	REV. 01

ELECTRICAL HOOK-UP FOR HAND SWITCH TEST OF THE DAMPERS



INSTRUMENT TAG	
1	77-HS-001A
2	77-HS-001B
3	77-HS-002A
4	77-HS-002B
5	77-HS-003A
6	77-HS-003B
7	77-HS-004A
8	77-HS-004B
9	77-HS-005A
10	77-HS-005B
11	77-HS-006A
12	77-HS-006B
13	77-HS-007A
14	77-HS-007B
15	77-HS-008A
16	77-HS-008B
17	77-HS-009A
18	77-HS-009B
19	77-HS-010A
20	77-HS-010B
21	77-HS-011A
22	77-HS-011B
23	77-HS-012A
24	77-HS-012B
25	77-HS-013A
26	77-HS-013B
27	77-HS-014A
28	77-HS-014B
29	77-HS-015A
30	77-HS-015B
31	77-HS-016A
32	77-HS-016B

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-HD-40079
REV.: 2_A | DATE: 08/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

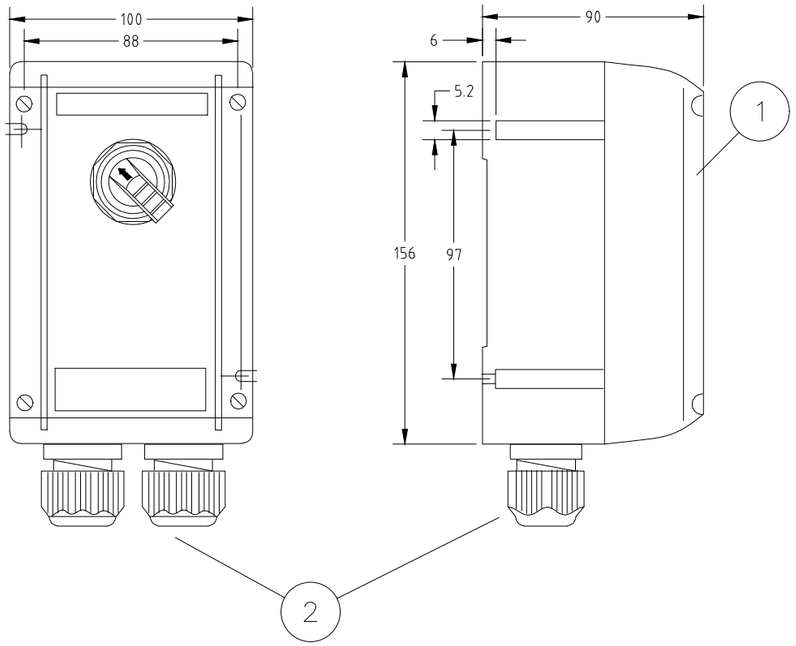
This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

PUSH BUTTON DPDT CONTACT

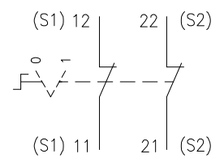
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

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



Type 434...

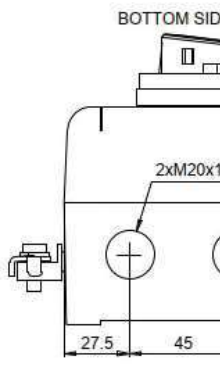


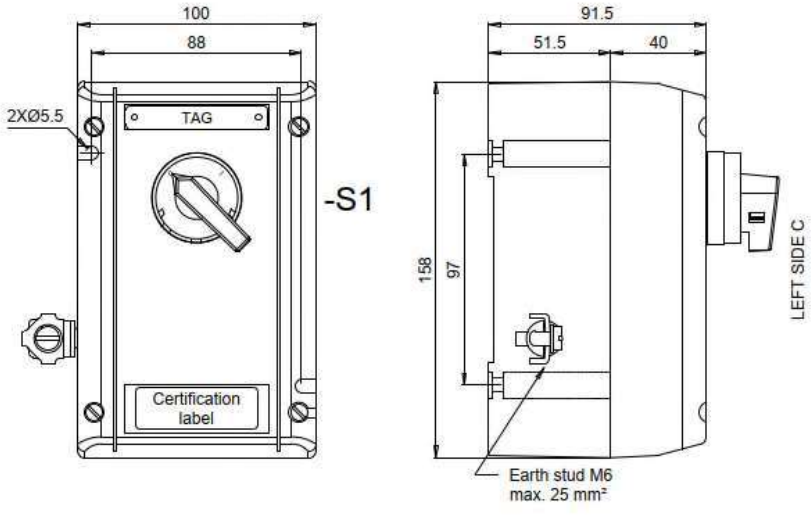
Type 432...

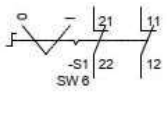
Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ib m IIC T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEx Certificate of Conformity	IECEx BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 up to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 110 V / I_e 0.5 A	Ex23 AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.5 A
Connecting terminals	2 x 4 mm²	
Protection class	I	
Degree of protection accd. to EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	2 x M25 cable gland incl. 1 blanking plug or optional 2 x M20 thread with internal brass plate	
Enclosure material	Polyamide	
Enclosure colour	black	

	Type 432
Dimensions (L x W x H)	156 x 100 x 90 mm
Weight (empty)	0.47 kg

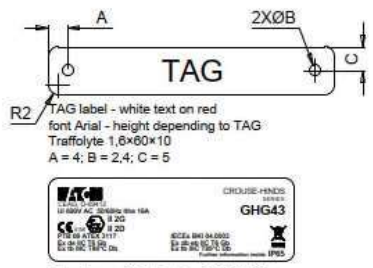






Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Techical data:
Manufactured by Eaton Crouse-Hinds Division
Model: GHG 432
Certificate No.
PTB 00 ATEX 3117
IECEx BKI 04.0003
Marking: ATEX and IECEx
II 2G Ex de IIC T6 Gb
II 2D Ex tb IIIC T80°C Db
-40°C ≤ tamb ≤ +55°C
Ui 690V
IP65

Specific characteristics:
- Polyamide (PA), black
- Closed with stainless steel screw
- Bottom with internal earth plate in brass
- M6 internal/external stainless steel earth stud

Components:
- No. 1 black selector switch with 2 position 2NC

Entries bottom side B:
- No. 2 M20 threaded taped with transit tape

No.1 1,6×60×10 mm white text on red background traffolyte tag fixed with stainless steel screws on the cover, sealed on the back with PU adhesive and engraved

Also a certification label fixed with back self adhesive on the cover

Quantity: 32

ROSETTI MARINO — CROSSWIND

ITEM	Tag	77-HS-015A	: Hand Switch for Fire&Gas Damper HFD-77015			Dwg	123A90-DDL-IN-DL-40116
	S/Sys	77-40	: HVAC I&T Equipment Room B-400			Module	LD_B-400
TASK	code	C10002105		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00 Miscellaneous

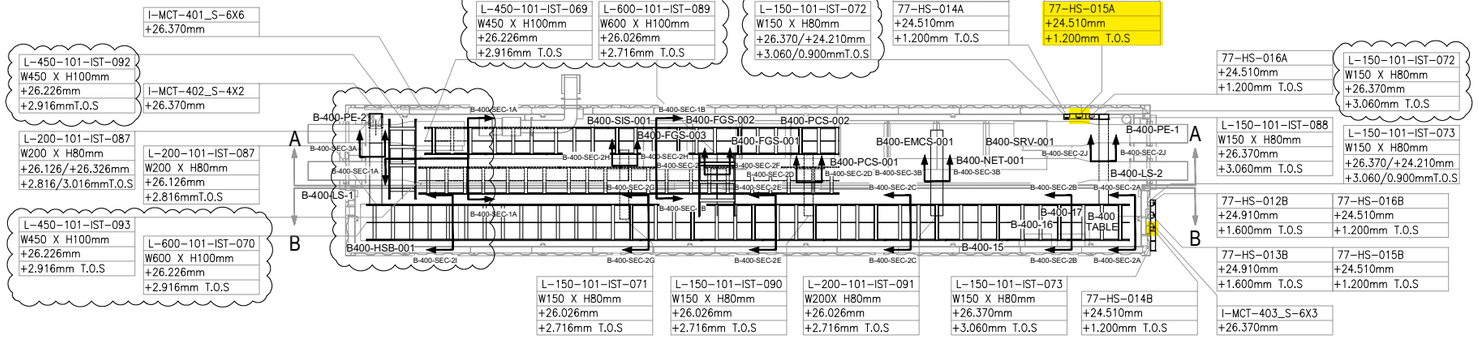
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	NA
7	Check identification (tag number, tag plates).	OK
8	Check supporting and protection against vibrations.	OK
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	OK
10	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:41:09.251Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T15:38:39.515Z	

DRAWING NO. 123A90-DDL-IN-DL-40116

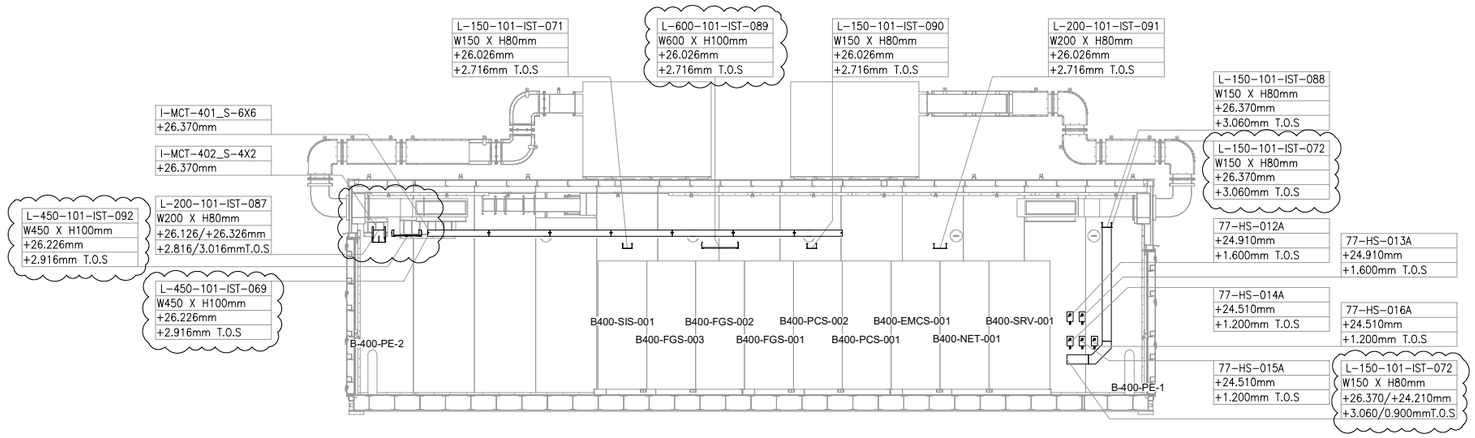
REV. 01



PLAN VIEW

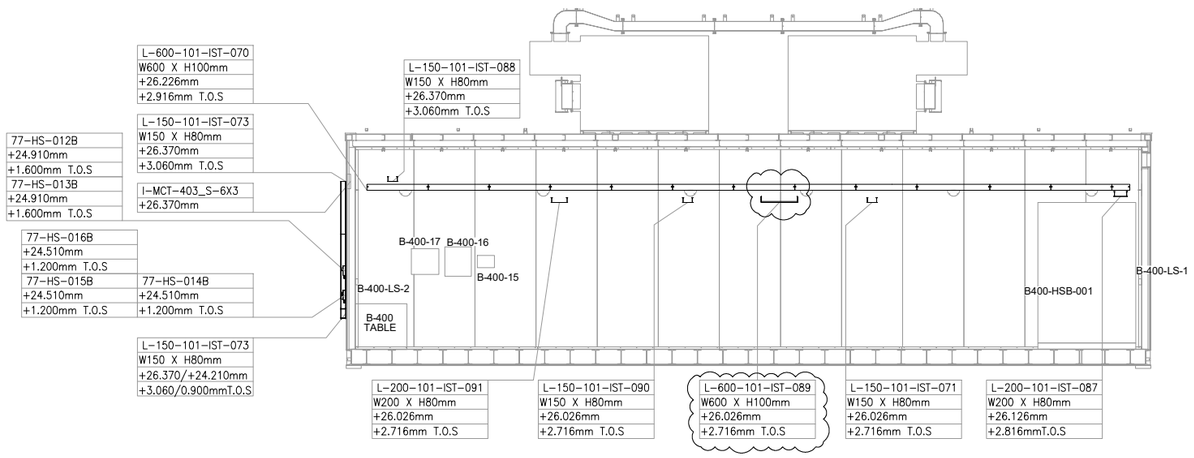
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



SECTION B-B

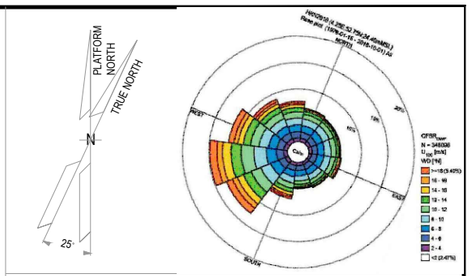
SCALE-1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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-400 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-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

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

REV. 01

I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-FGS-002

<01>

B-400 ITER



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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
FIRE DAMPER COMMAND – B–400

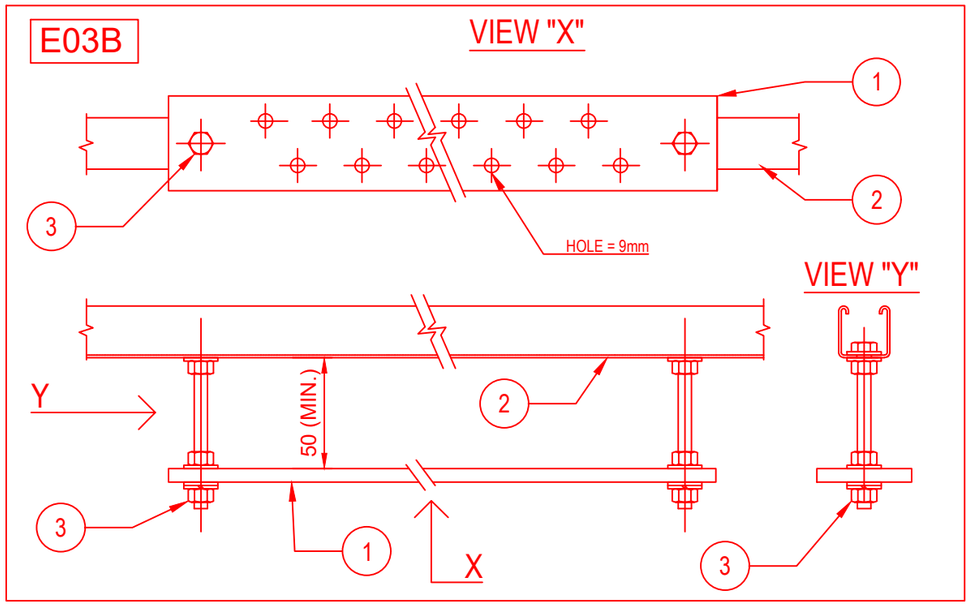
CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

A3	DRAWING NO. 123A90–DDL–IN–DG–40016	SHEET 077	REV. 01

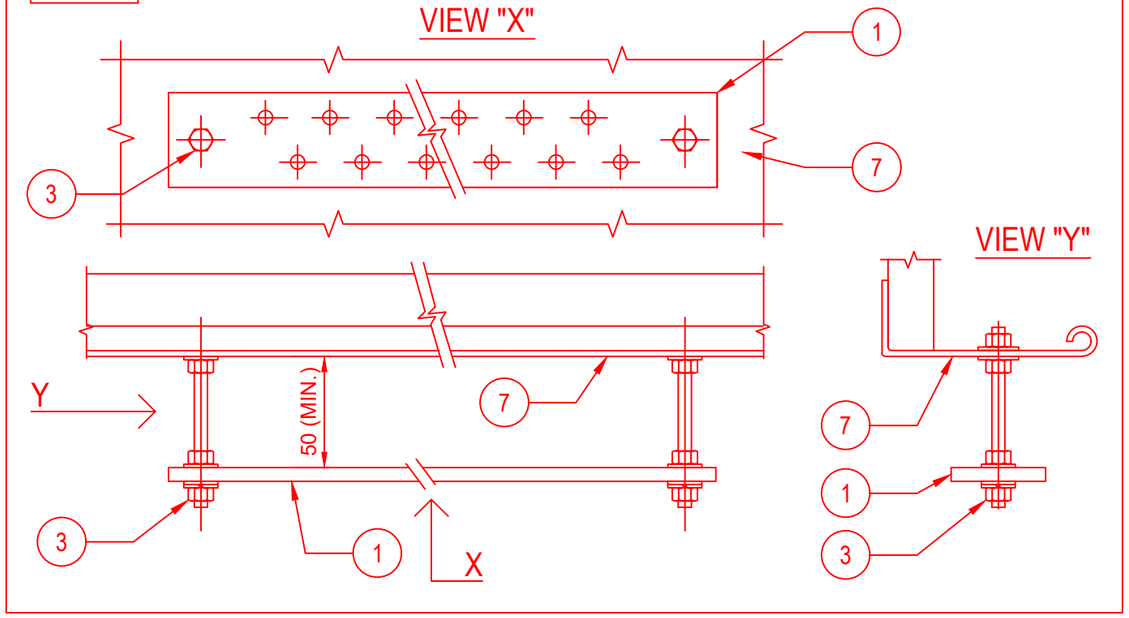
File Name : 123A90-DDL-IN-DG-40016_Rev.01

TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

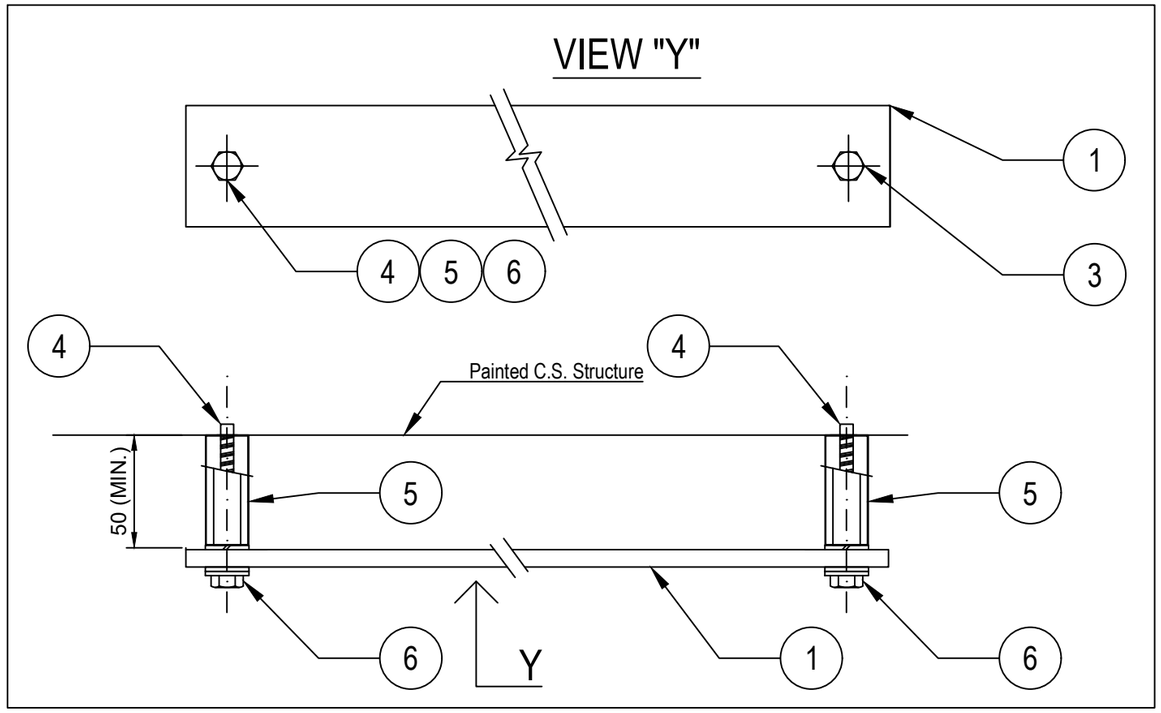


E03C



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_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

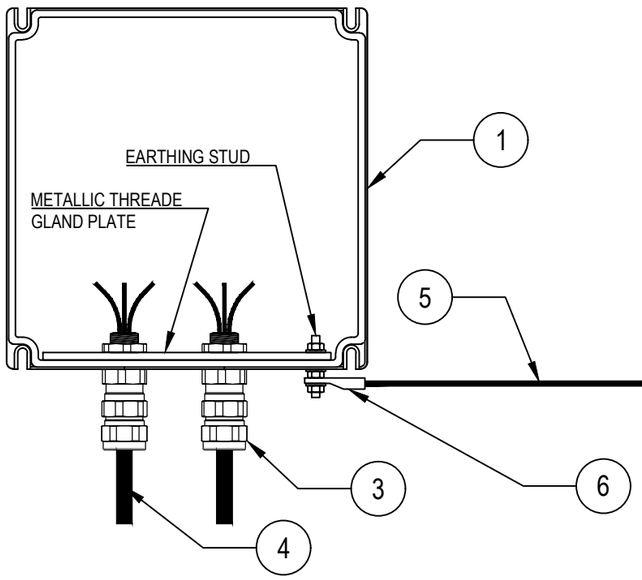
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

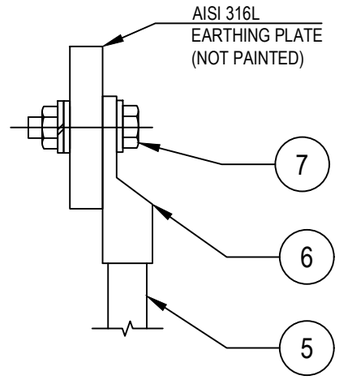
File Name : 123A90-DDL-EL-DD-20090 REV.02 RLMU.DWG

E04

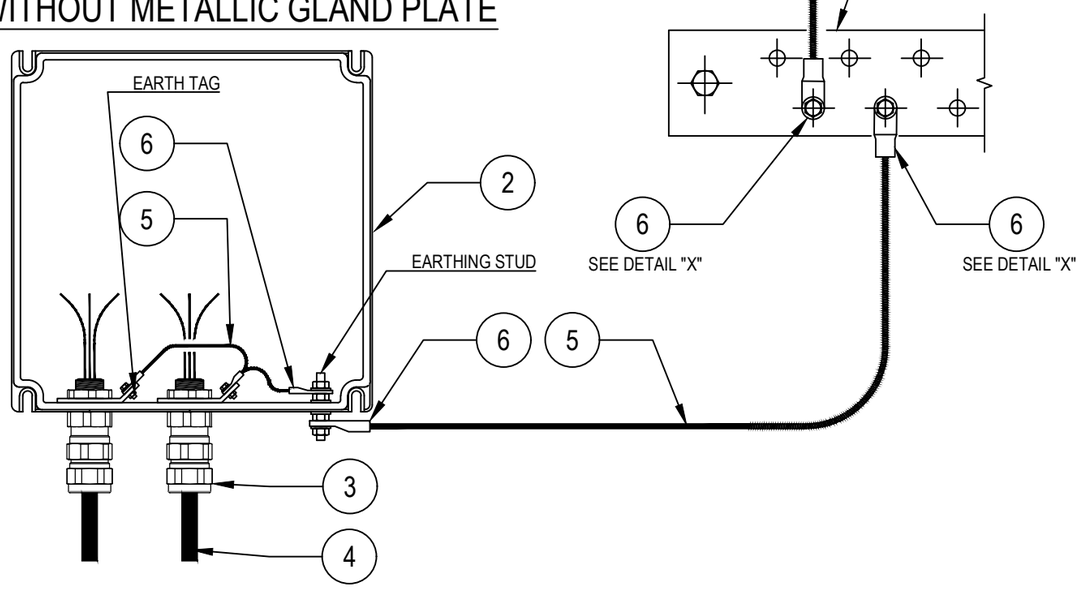
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



DETAIL "X"



DETAIL OF NON METALLIC ENCLOSURE WITHOUT METALLIC GLAND PLATE



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX WITH PLATE (EX)	GRP			
2	JUNCTION BOX WITHOUT GLAND PLATE (EX)	GRP			
3	DOUBLE SEAL CABLE GLAND (EX) FOR ARMOURED CABLE	NICK.PL.BRASS			~~NOTE 2~~
4	ARMOURED CABLE				
5	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		NOTE 1
6	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$		NOTE 1
7	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L			

NOTES:
1) FOR EARTHING BAR SEE TYPICAL DETAILS E03
~~2) CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE ARMOUR BY CABLE GLAND

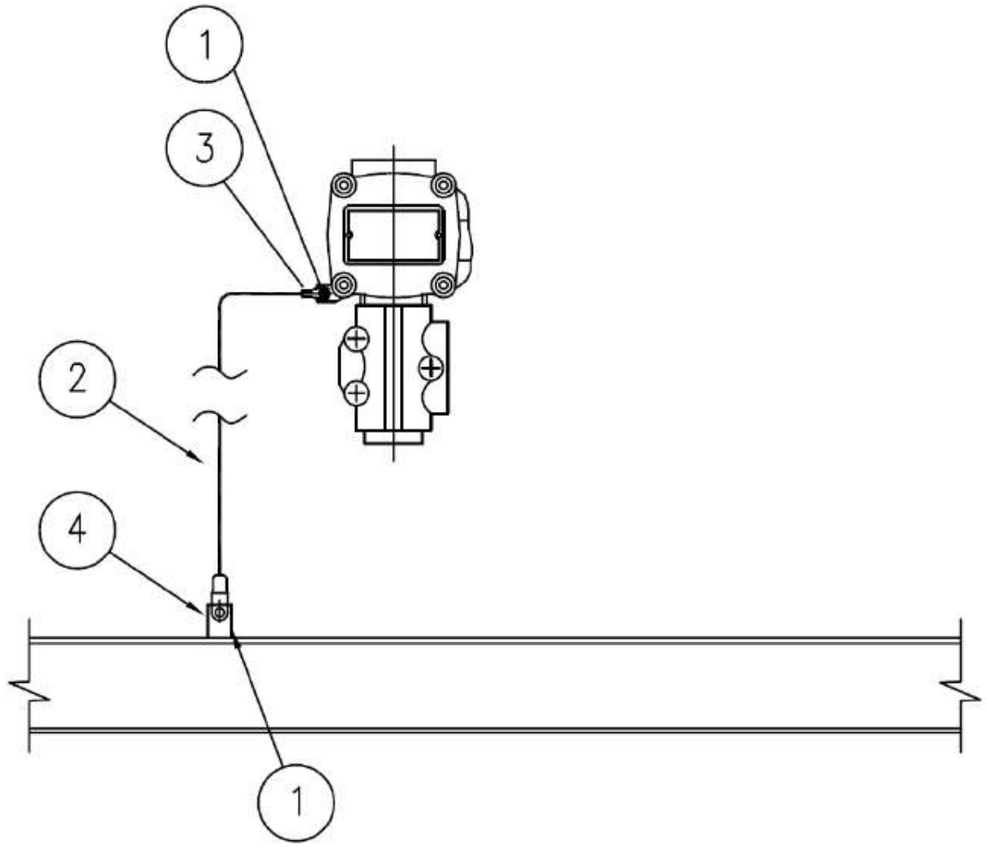
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

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

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

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

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 027 | REV. 02

F.to UNI A3: 420mmx297mm

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

I-3

DRAWING NO. 123A90-DDL-IN-DD-40017

REV. 00



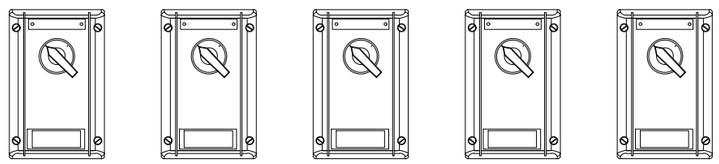
B-100
~~B-101~~



B-200
~~B-201~~



B-300
~~B-301~~



B-400
~~B-401~~

POS.	DESCRIPTION	Q.TY
-	SELFING TAPPING SCREW	-

CONTAINER	ITEM	DESCRIPTION	TAGNAME
B-100 ~~B-101~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-011A~~ 77-HS-001A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-012A~~ 77-HS-002A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-013A~~ 77-HS-003A
B-200 ~~B-201~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-014A~~ 77-HS-004A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-015A~~ 77-HS-005A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-016A~~ 77-HS-006A
B-300 ~~B-301~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-017A~~ 77-HS-007A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-018A~~ 77-HS-008A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-019A~~ 77-HS-009A
	4	HAND SWITCH FOR DAMPER TEST	77-HS-010A
	5	HAND SWITCH FOR DAMPER TEST	77-HS-011A
B-400 ~~B-401~~	1	HAND SWITCH FOR DAMPER TEST	77-HS-012A
	2	HAND SWITCH FOR DAMPER TEST	77-HS-013A
	3	HAND SWITCH FOR DAMPER TEST	77-HS-014A
	4	HAND SWITCH FOR DAMPER TEST	77-HS-015A
	5	HAND SWITCH FOR DAMPER TEST	77-HS-016A

NOTES

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/09/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	11/07/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-123A90-FDL-IN-DD-40017**

REV.:	DATE:	SIGNATURE:
1_B	18/09/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

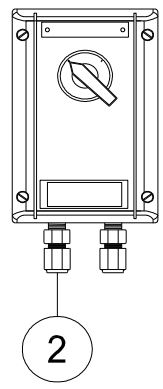
ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
HAND SWITCH INSIDE CONTAINERS

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 046	REV. 01

ELECTRICAL HOOK-UP FOR HAND SWITCH TEST OF THE DAMPERS



INSTRUMENT TAG	
1	77-HS-001A
2	77-HS-001B
3	77-HS-002A
4	77-HS-002B
5	77-HS-003A
6	77-HS-003B
7	77-HS-004A
8	77-HS-004B
9	77-HS-005A
10	77-HS-005B
11	77-HS-006A
12	77-HS-006B
13	77-HS-007A
14	77-HS-007B
15	77-HS-008A
16	77-HS-008B
17	77-HS-009A
18	77-HS-009B
19	77-HS-010A
20	77-HS-010B
21	77-HS-011A
22	77-HS-011B
23	77-HS-012A
24	77-HS-012B
25	77-HS-013A
26	77-HS-013B
27	77-HS-014A
28	77-HS-014B
29	77-HS-015A
30	77-HS-015B
31	77-HS-016A
32	77-HS-016B

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-HD-40079
REV.: 2_A | DATE: 08/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

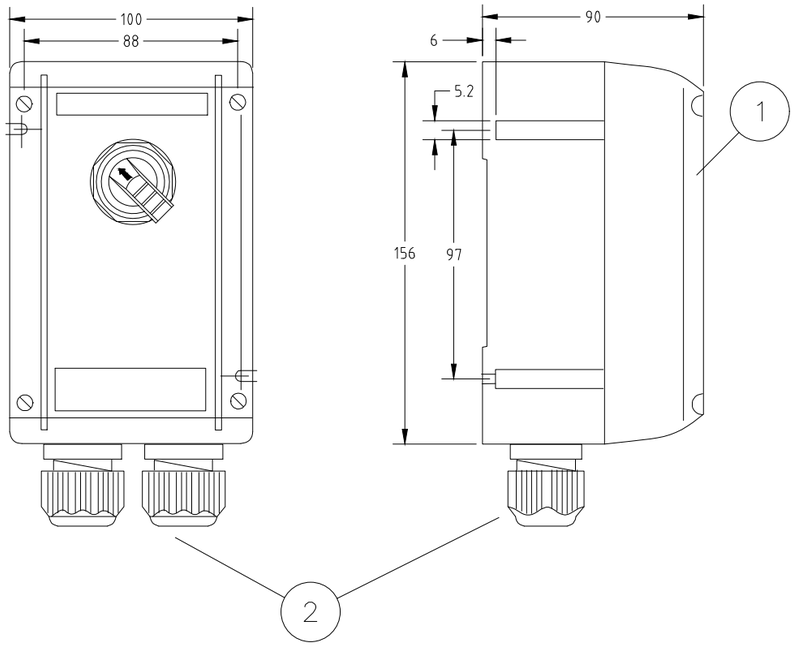
This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

PUSH BUTTON DPDT CONTACT

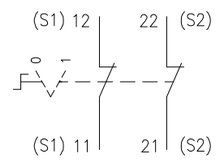
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

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



Type 434...

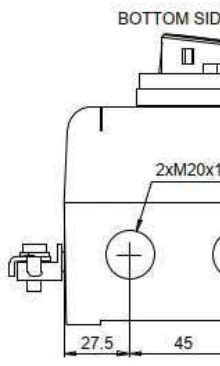


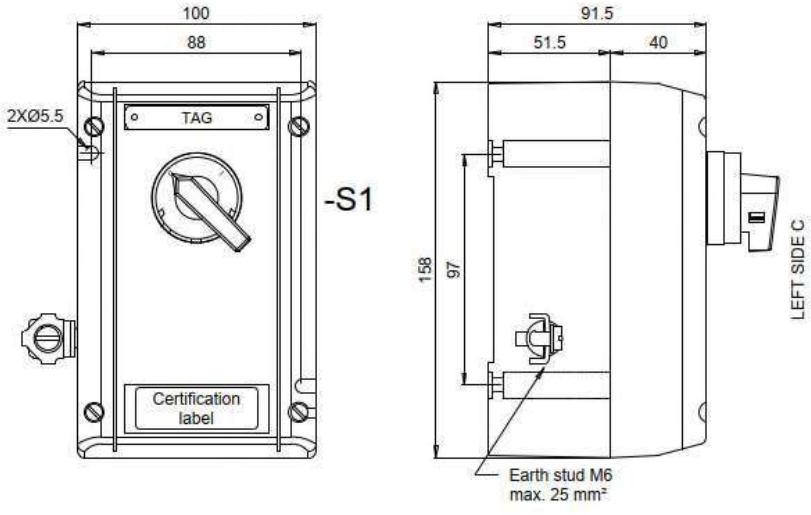
Type 432...

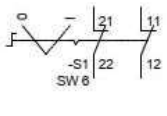
Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ib m IIC T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEx Certificate of Conformity	IECEx BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 up to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 110 V / I_e 0.5 A	Ex23 AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.5 A
Connecting terminals	2 x 4 mm²	
Protection class	I	
Degree of protection accd. to EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	2 x M25 cable gland incl. 1 blanking plug or optional 2 x M20 thread with internal brass plate	
Enclosure material	Polyamide	
Enclosure colour	black	

	Type 432
Dimensions (L x W x H)	156 x 100 x 90 mm
Weight (empty)	0.47 kg

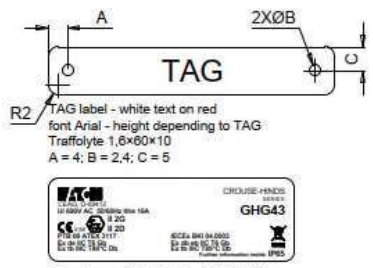






Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Techical data:
Manufactured by Eaton Crouse-Hinds Division
Model: GHG 432
Certificate No.
PTB 00 ATEX 3117
IECEx BKI 04.0003
Marking: ATEX and IECEx
II 2G Ex de IIC T6 Gb
II 2D Ex tb IIIC T80°C Db
-40°C ≤ tamb ≤ +55°C
Ui 690V
IP65

Specific characteristics:
- Polyamide (PA), black
- Closed with stainless steel screw
- Bottom with internal earth plate in brass
- M6 internal/external stainless steel earth stud

Components:
- No. 1 black selector switch with 2 position 2NC

Entries bottom side B:
- No. 2 M20 threaded taped with transit tape

No.1 1,6×60×10 mm white text on red background traffolyte tag fixed with stainless steel screws on the cover, sealed on the back with PU adhesive and engraved

Also a certification label fixed with back self adhesive on the cover

Quantity: 32

ITEM	Tag	77-HS-015B	: Hand Switch for Fire&Gas Damper HFD-77015			Dwg	123A90-DDL-IN-DL-40116
	S/Sys	77-40	: HVAC I&T Equipment Room B-400			Module	LD_B-400
TASK	code	C10002106		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00 Miscellaneous

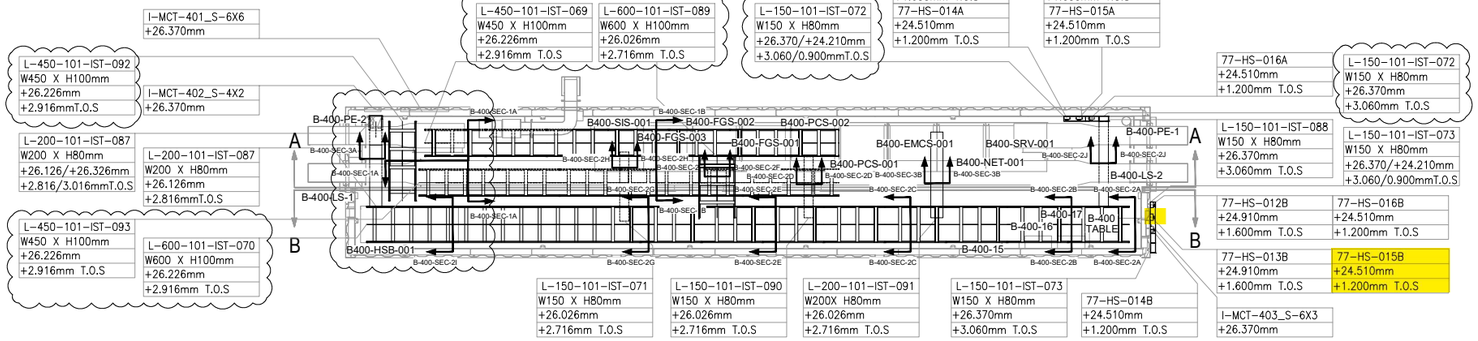
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	NA
7	Check identification (tag number, tag plates).	OK
8	Check supporting and protection against vibrations.	OK
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	OK
10	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:41:17.942Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T15:38:26.036Z	

DRAWING NO. 123A90-DDL-IN-DL-40116

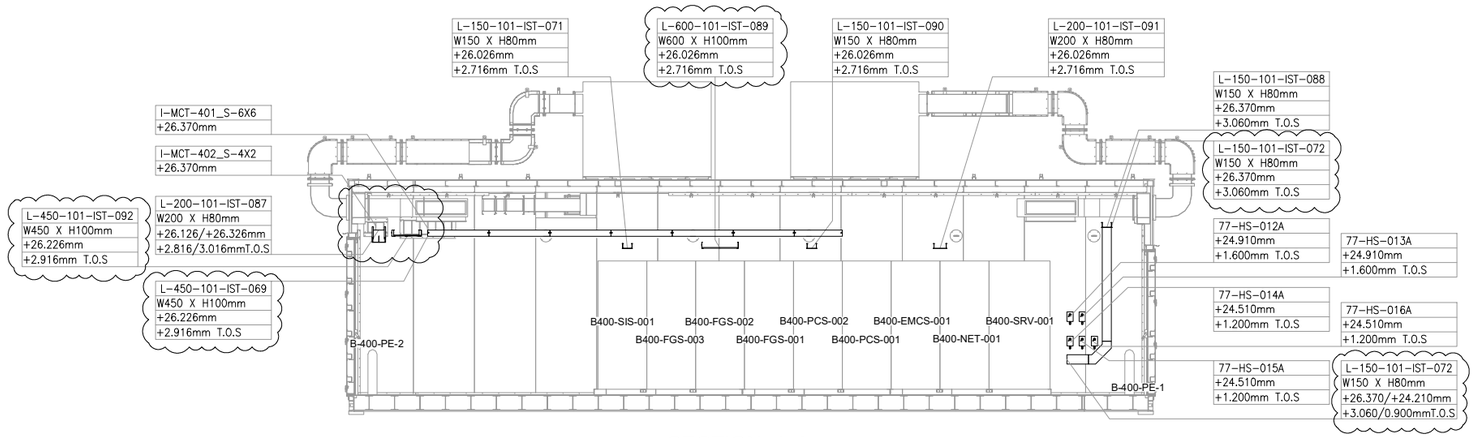
REV. 01



PLAN VIEW

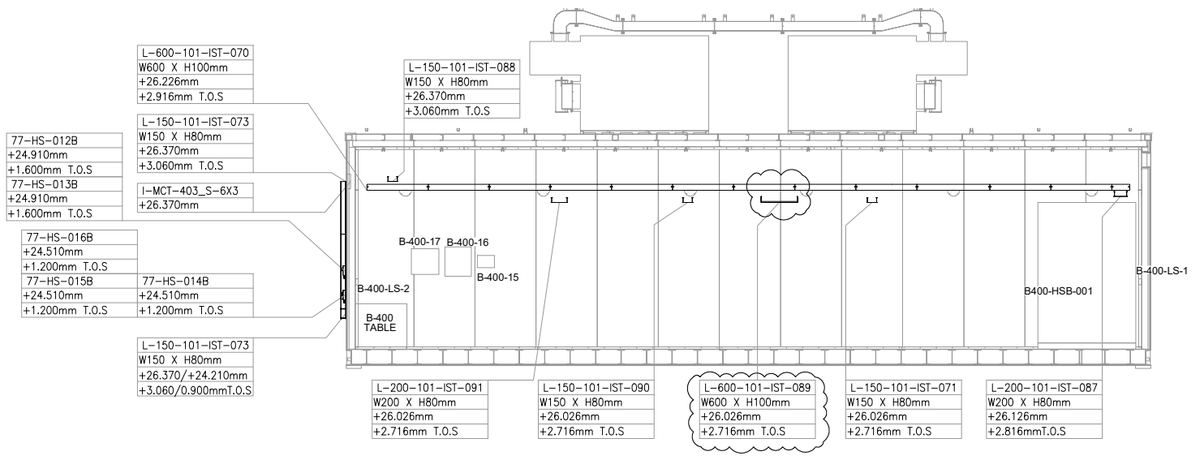
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



SECTION B-B

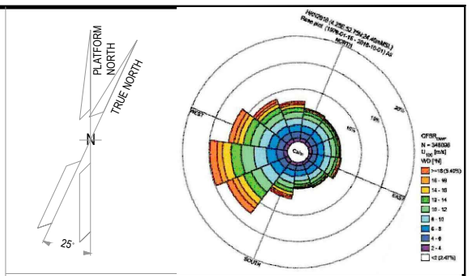
SCALE-1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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-400 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-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

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

REV. 01

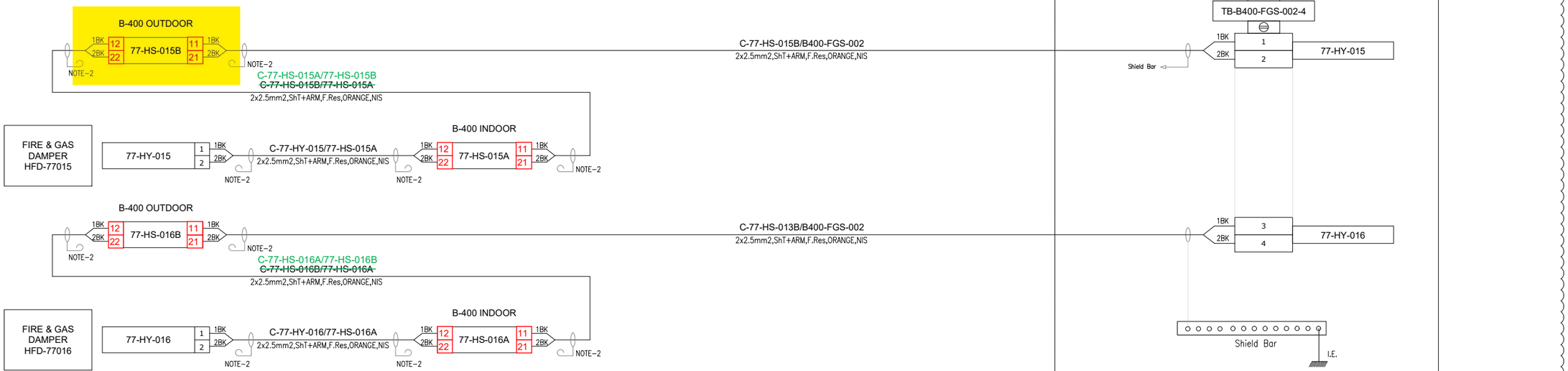
I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-FGS-002

<01>

B-400 ITER



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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
FIRE DAMPER COMMAND – B–400

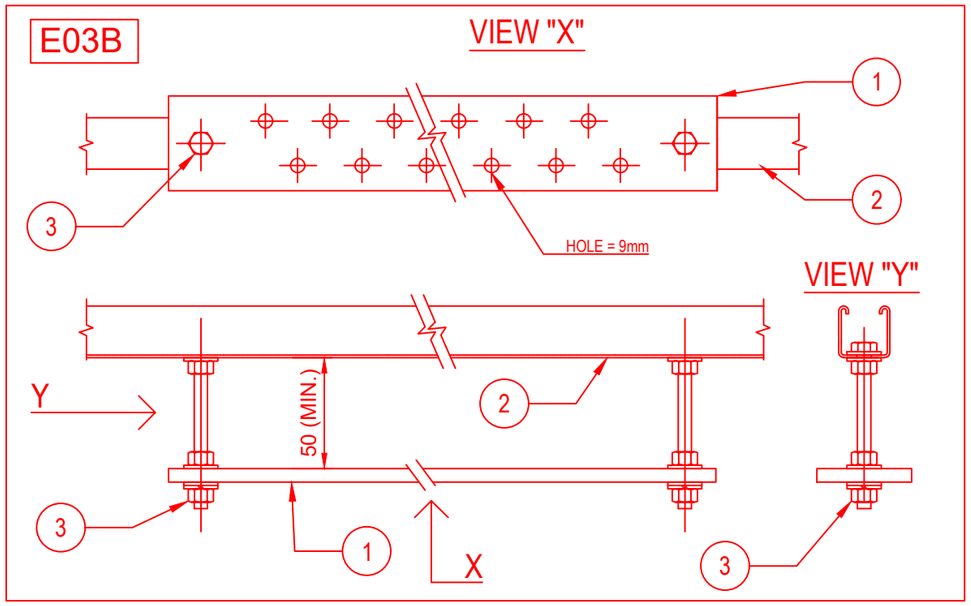
CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

	DRAWING NO.	SHEET	REV.
A3	123A90–DDL–IN–DG–40016	077	01

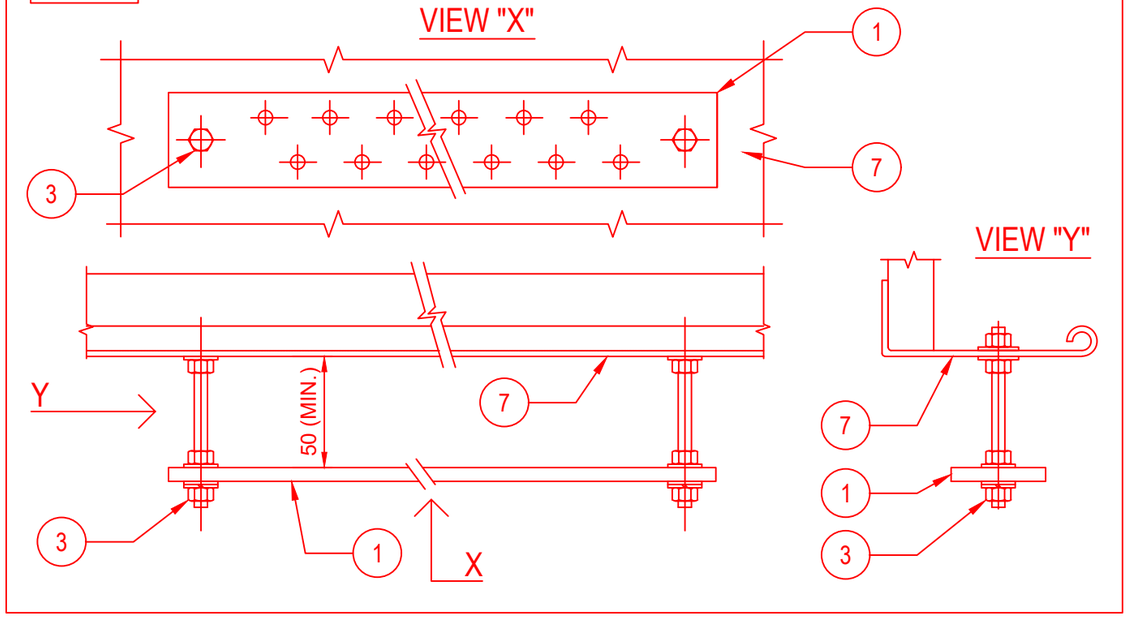
File Name : 123A90-DDL-IN-DG-40016_Rev.01

TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

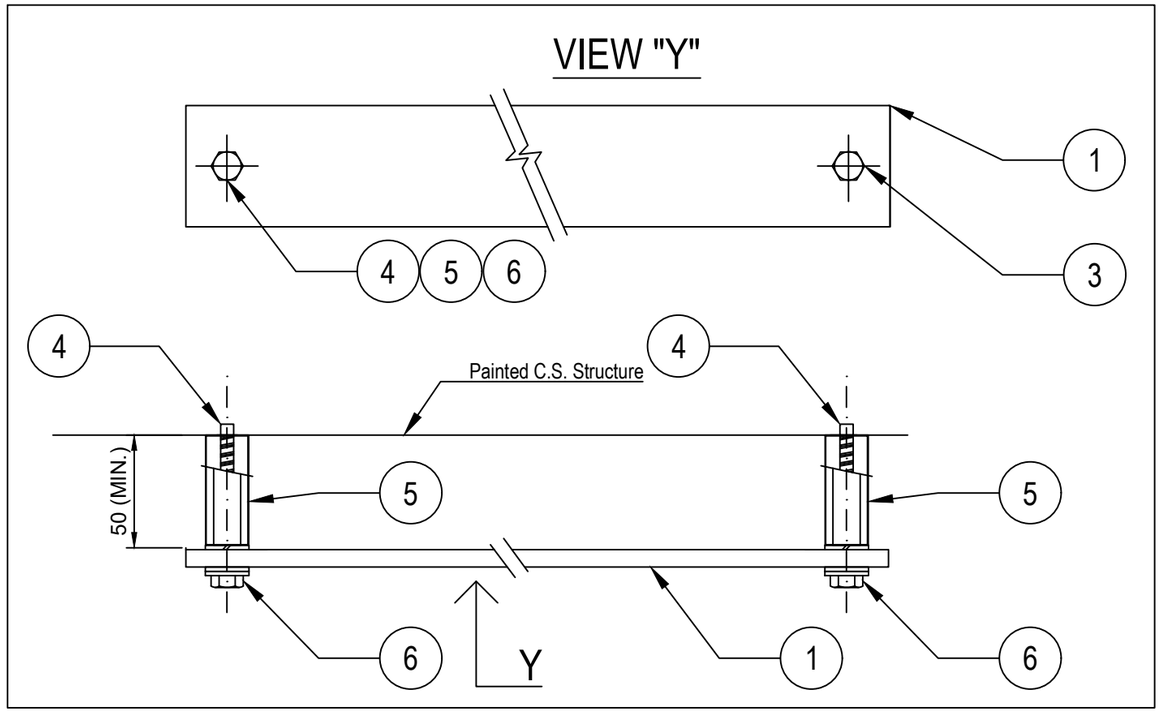


E03C



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_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

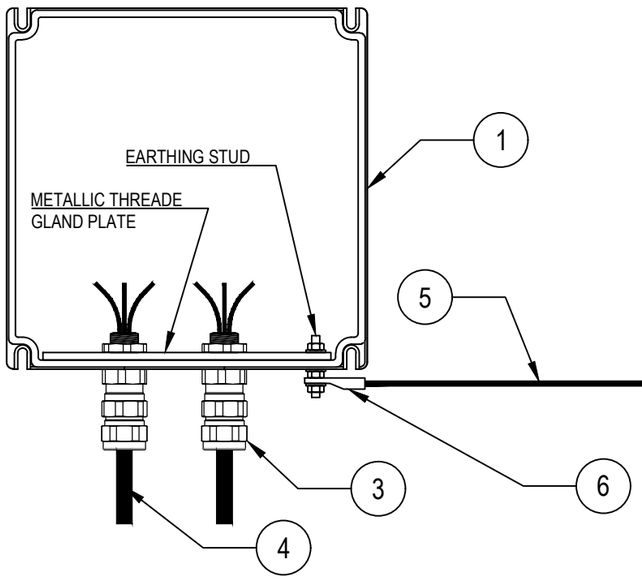
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

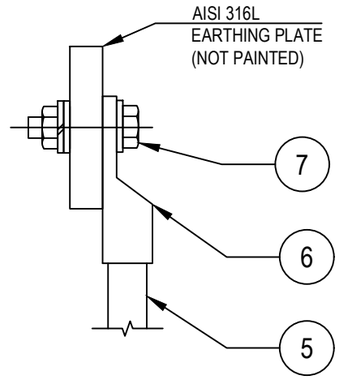
File Name : 123A90-DDL-EL-DD-20090 REV.02 RLMU.DWG

E04

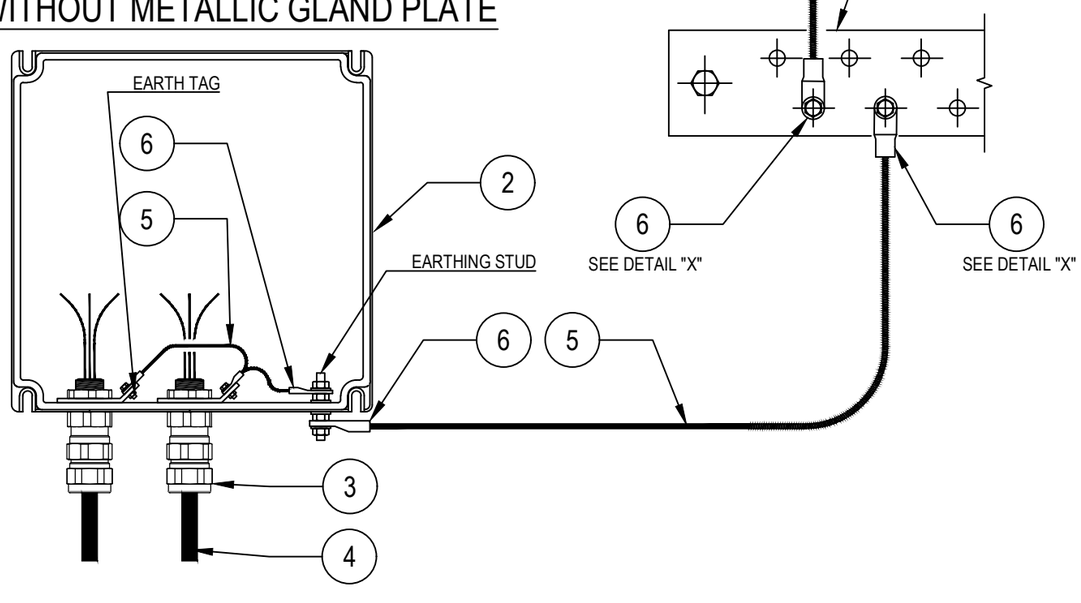
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



DETAIL "X"



DETAIL OF NON METALLIC ENCLOSURE WITHOUT METALLIC GLAND PLATE



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX WITH PLATE (EX)	GRP			
2	JUNCTION BOX WITHOUT GLAND PLATE (EX)	GRP			
3	DOUBLE SEAL CABLE GLAND (EX) FOR ARMOURED CABLE	NICK.PL.BRASS			~~NOTE 2~~
4	ARMOURED CABLE				
5	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		NOTE 1
6	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$		NOTE 1
7	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L			

NOTES:
1) FOR EARTHING BAR SEE TYPICAL DETAILS E03
~~2) CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE ARMOUR BY CABLE GLAND

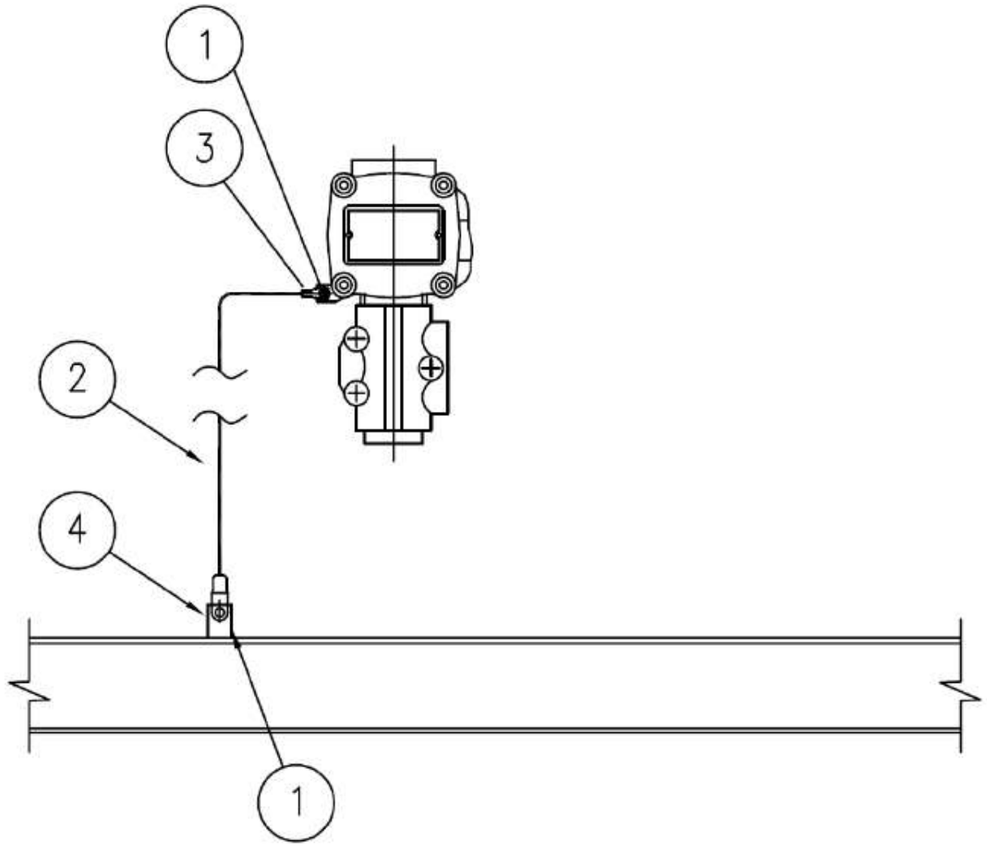
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

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

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

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

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 027 | REV. 02

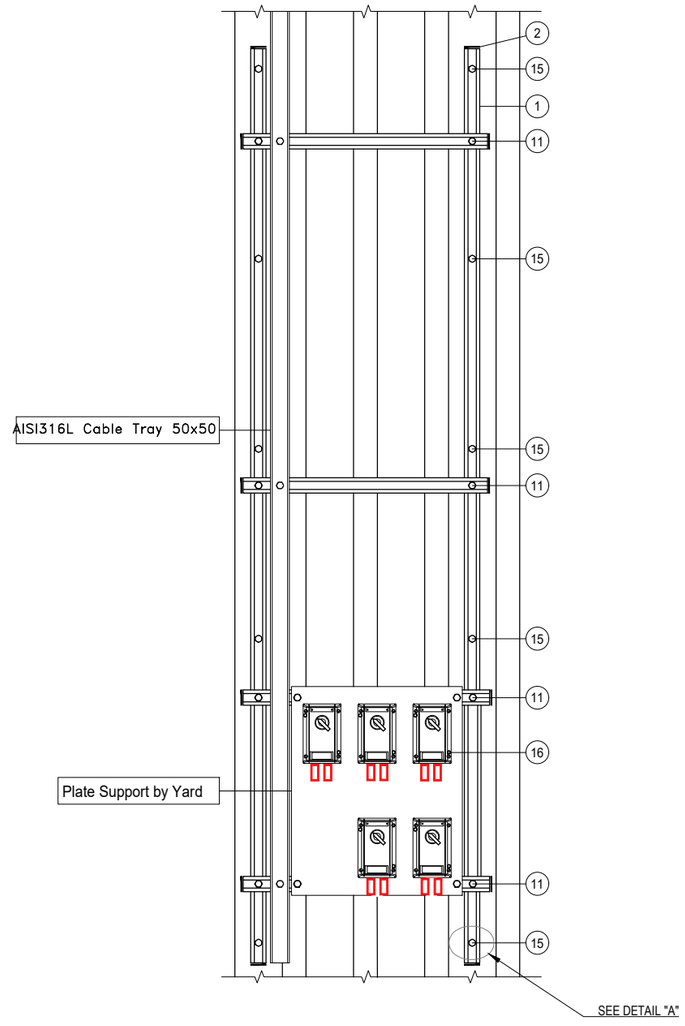
F.to UNI A3: 420mmx297mm

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

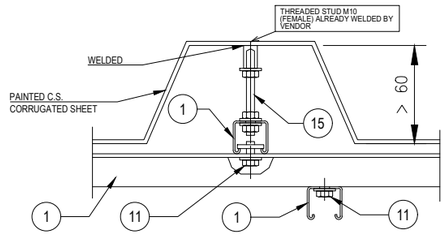
I-5

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	10

CONTAINER	ITEM	DESCRIPTION	TAGNAME
B-300 ~~B-301~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-017B~~ 77-HS-007B
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-018B~~ 77-HS-008B
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-019B~~ 77-HS-009B
	4	HAND SWITCH FOR DAMPER TEST	77-HS-010B
	5	HAND SWITCH FOR DAMPER TEST	77-HS-011B
B-400 ~~B-401~~	1	HAND SWITCH FOR DAMPER TEST	77-HS-012B
	2	HAND SWITCH FOR DAMPER TEST	77-HS-013B
	3	HAND SWITCH FOR DAMPER TEST	77-HS-014B
	4	HAND SWITCH FOR DAMPER TEST	77-HS-015B
	5	HAND SWITCH FOR DAMPER TEST	77-HS-016B

NOTES

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/09/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	11/07/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-123A90-FDL-IN-DD-40017

REV.:	DATE:	SIGNATURE:
1_B	18/09/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

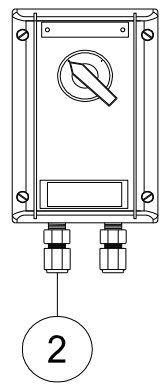
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
HAND SWITCH OUTSIDE CONTAINERS

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 048	REV. 01

ELECTRICAL HOOK-UP FOR HAND SWITCH TEST OF THE DAMPERS



INSTRUMENT TAG	
1	77-HS-001A
2	77-HS-001B
3	77-HS-002A
4	77-HS-002B
5	77-HS-003A
6	77-HS-003B
7	77-HS-004A
8	77-HS-004B
9	77-HS-005A
10	77-HS-005B
11	77-HS-006A
12	77-HS-006B
13	77-HS-007A
14	77-HS-007B
15	77-HS-008A
16	77-HS-008B
17	77-HS-009A
18	77-HS-009B
19	77-HS-010A
20	77-HS-010B
21	77-HS-011A
22	77-HS-011B
23	77-HS-012A
24	77-HS-012B
25	77-HS-013A
26	77-HS-013B
27	77-HS-014A
28	77-HS-014B
29	77-HS-015A
30	77-HS-015B
31	77-HS-016A
32	77-HS-016B

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-HD-40079
REV.: 2_A | DATE: 08/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

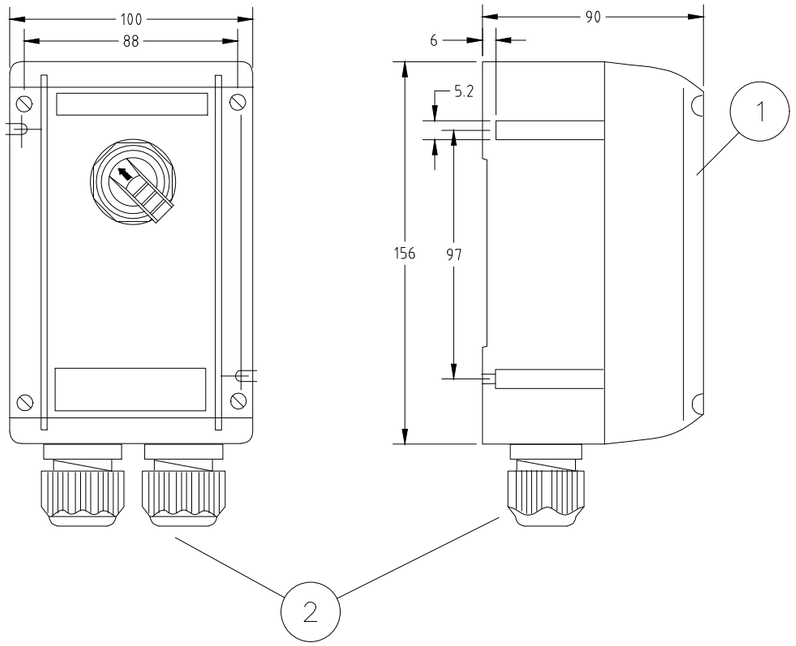
This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

PUSH BUTTON DPDT CONTACT

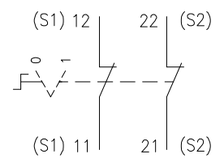
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

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



Type 434...

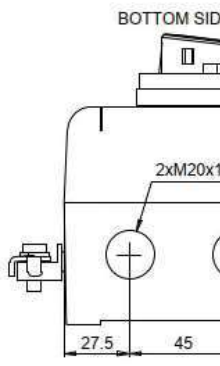


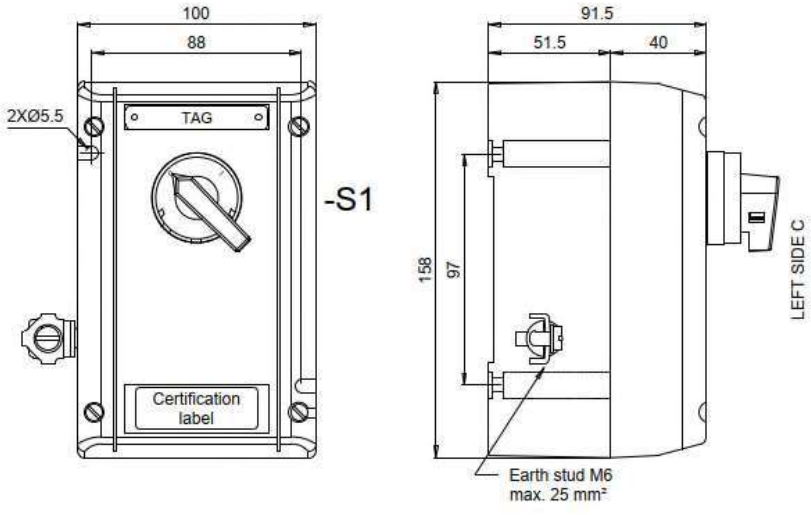
Type 432...

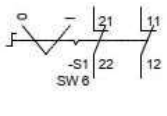
Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ib m IIC T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEx Certificate of Conformity	IECEx BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 up to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 110 V / I_e 0.5 A	Ex23 AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.5 A
Connecting terminals	2 x 4 mm²	
Protection class	I	
Degree of protection accd. to EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	2 x M25 cable gland incl. 1 blanking plug or optional 2 x M20 thread with internal brass plate	
Enclosure material	Polyamide	
Enclosure colour	black	

	Type 432
Dimensions (L x W x H)	156 x 100 x 90 mm
Weight (empty)	0.47 kg

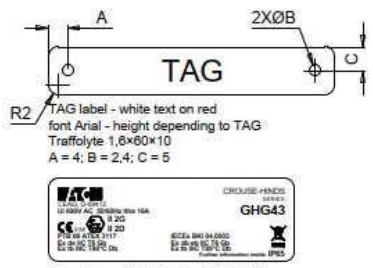






Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Techical data:
Manufactured by Eaton Crouse-Hinds Division
Model: GHG 432
Certificate No.
PTB 00 ATEX 3117
IECEx BKI 04.0003
Marking: ATEX and IECEx
II 2G Ex de IIC T6 Gb
II 2D Ex tb IIIC T80°C Db
-40°C ≤ tamb ≤ +55°C
Ui 690V
IP65

Specific characteristics:
- Polyamide (PA), black
- Closed with stainless steel screw
- Bottom with internal earth plate in brass
- M6 internal/external stainless steel earth stud

Components:
- No. 1 black selector switch with 2 position 2NC

Entries bottom side B:
- No. 2 M20 threaded taped with transit tape

No.1 1,6×60×10 mm white text on red background traffolyte tag fixed with stainless steel screws on the cover, sealed on the back with PU adhesive and engraved

Also a certification label fixed with back self adhesive on the cover

Quantity: 32

ROSETTI MARINO | CROSSWIND

ITEM	Tag	77-HS-016A	: Hand Switch for Fire&Gas Damper HFD-77016			Dwg	123A90-DDL-IN-DL-40116
	S/Sys	77-40	: HVAC I&T Equipment Room B-400			Module	LD_B-400
TASK	code	C10002107		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00 Miscellaneous

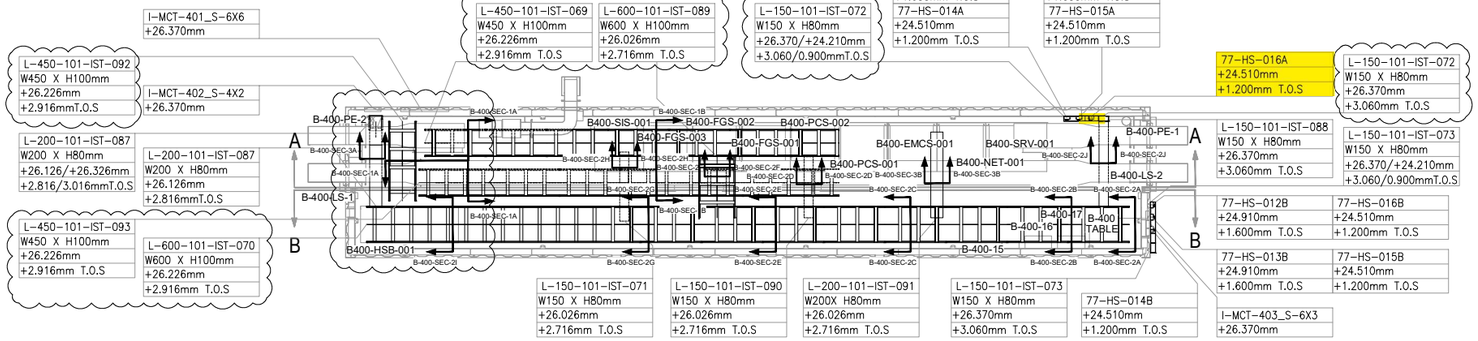
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	NA
7	Check identification (tag number, tag plates).	OK
8	Check supporting and protection against vibrations.	OK
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	OK
10	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:41:26.643Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T15:40:00.334Z	

DRAWING NO. 123A90-DDL-IN-DL-40116

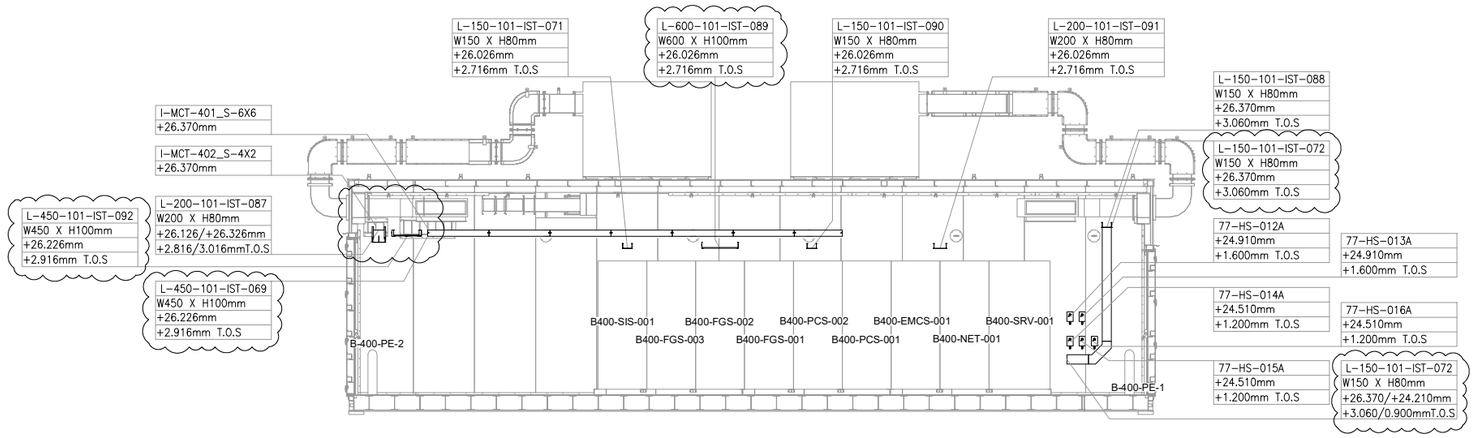
REV. 01



PLAN VIEW

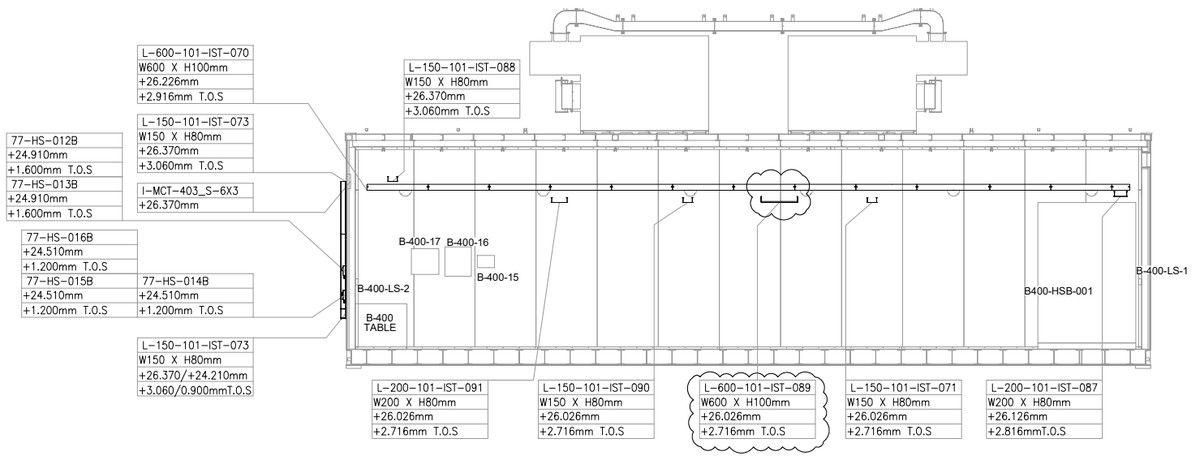
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



SECTION A-A

SCALE-1:1



SECTION B-B

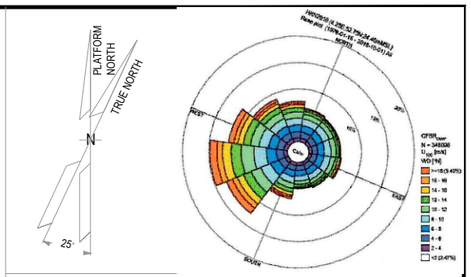
SCALE-1:1

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA



NOTES

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

LEGEND

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-400 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-40116	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

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

REV. 01

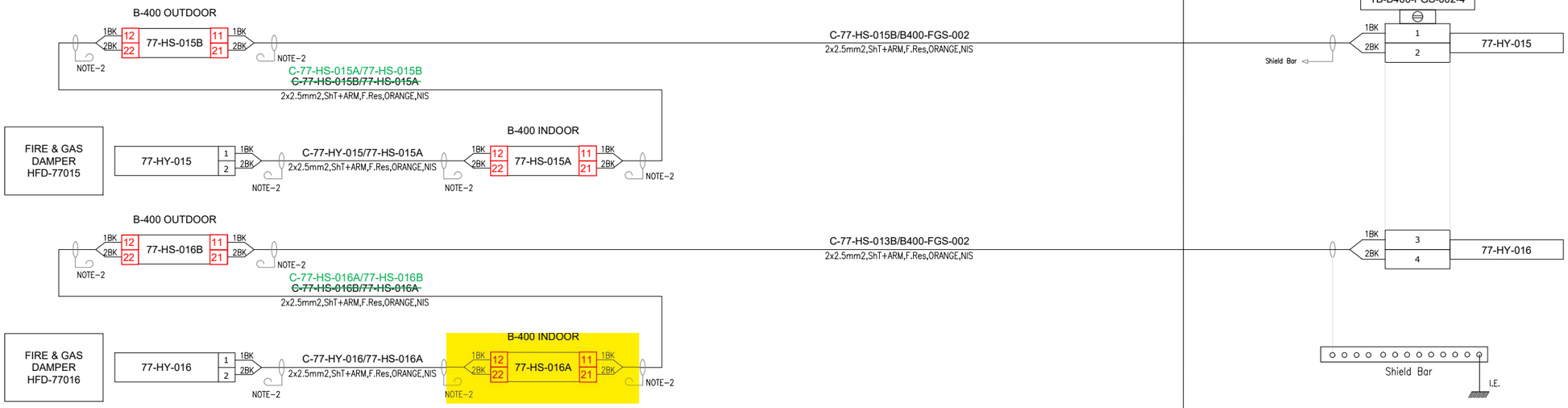
I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-FGS-002

<01>

B-400 ITER



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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
FIRE DAMPER COMMAND – B–400

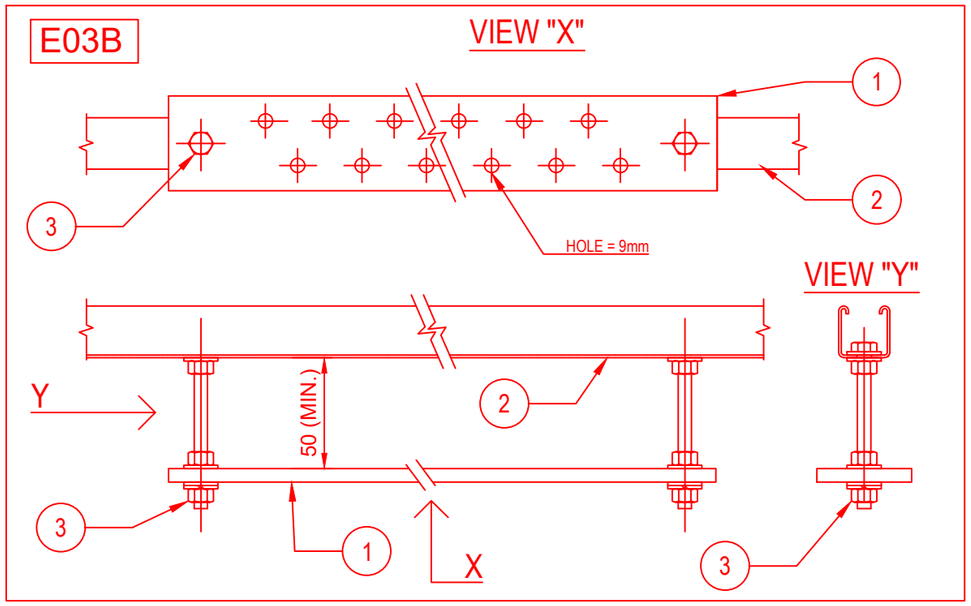
CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

A3	DRAWING NO. 123A90–DDL–IN–DG–40016	SHEET 077	REV. 01

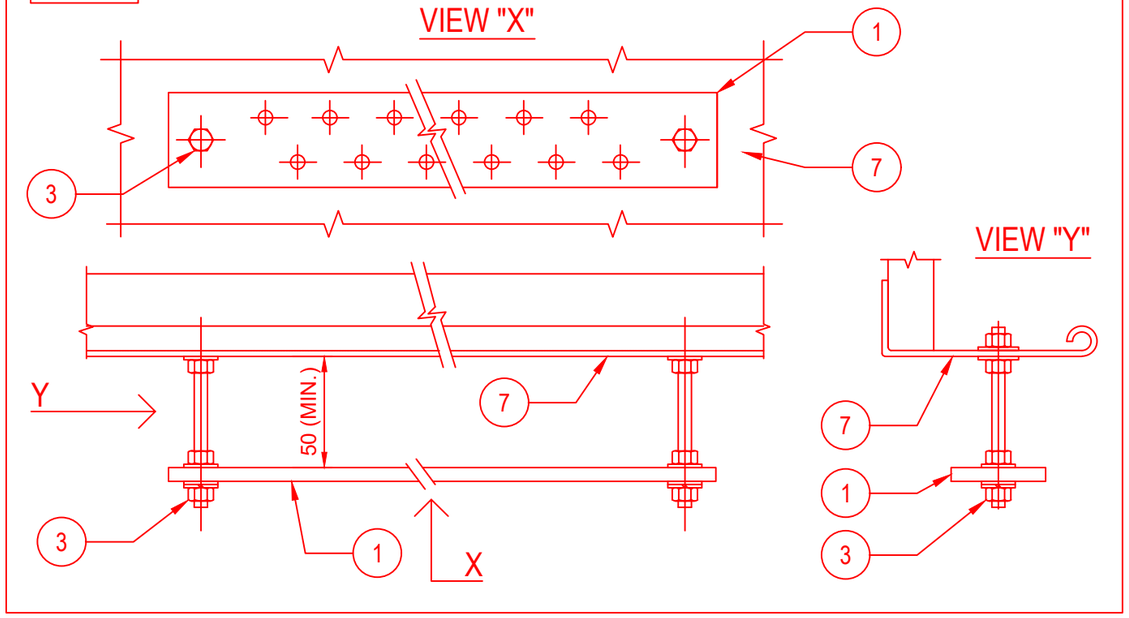
File Name : 123A90-DDL-IN-DG-40016_Rev.01

TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

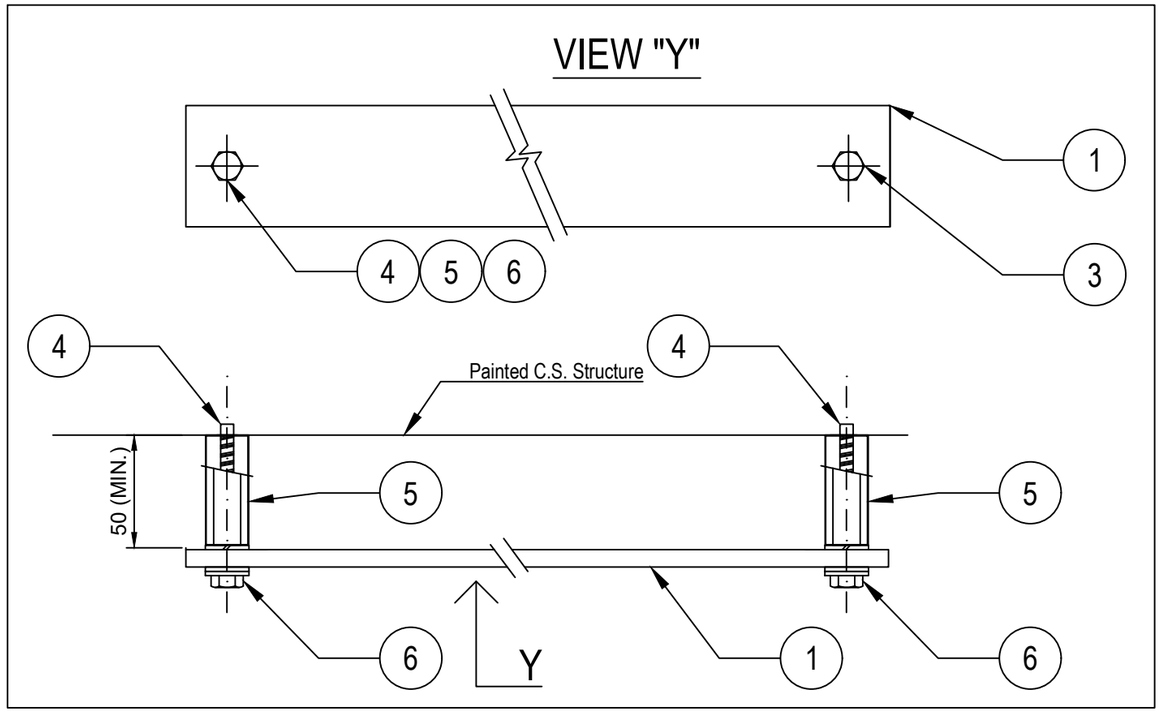


E03C



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_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

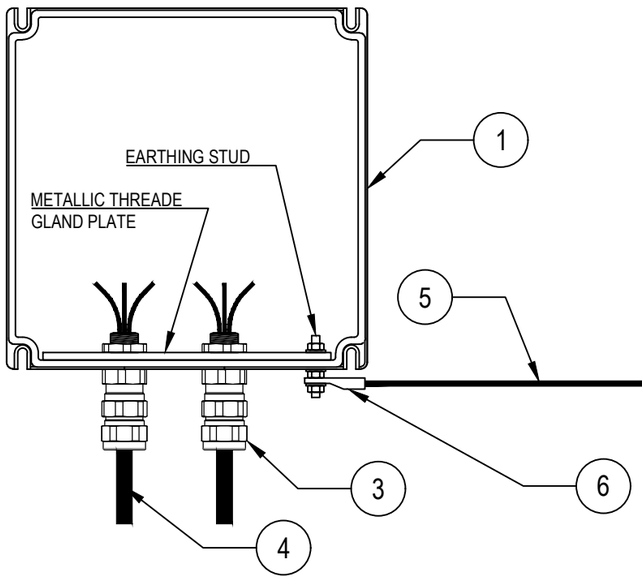
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

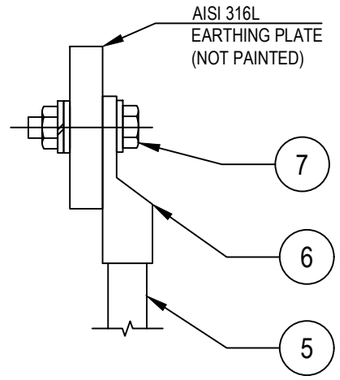
File Name : 123A90-DDL-EL-DD-20090 REV.02 RLMU.DWG

E04

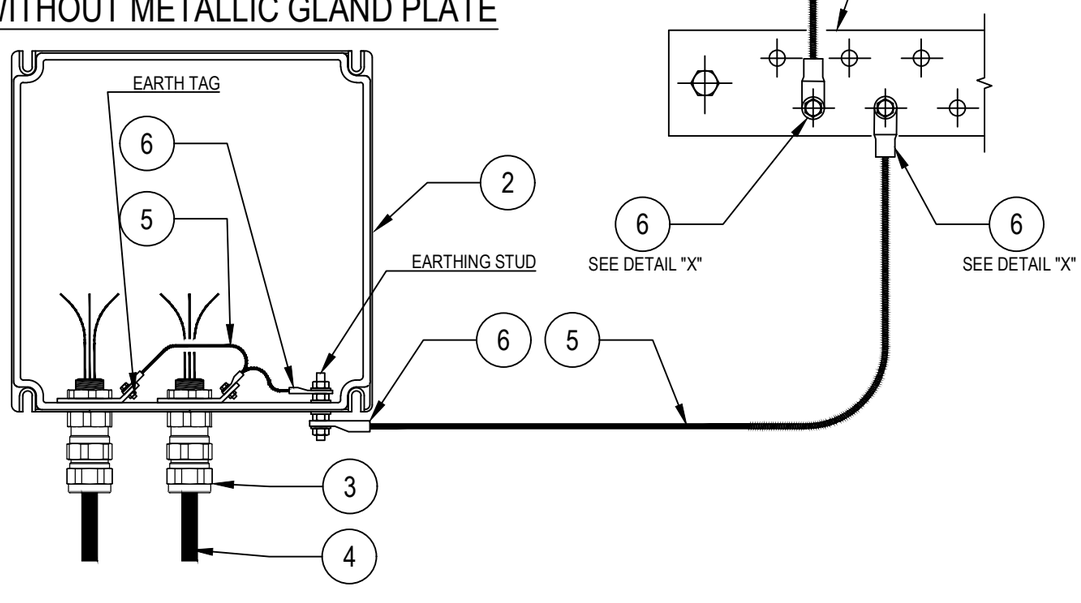
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



DETAIL "X"



DETAIL OF NON METALLIC ENCLOSURE WITHOUT METALLIC GLAND PLATE



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX WITH PLATE (EX)	GRP			
2	JUNCTION BOX WITHOUT GLAND PLATE (EX)	GRP			
3	DOUBLE SEAL CABLE GLAND (EX) FOR ARMOURED CABLE	NICK.PL.BRASS			~~NOTE 2~~
4	ARMOURED CABLE				
5	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		NOTE 1
6	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$		NOTE 1
7	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L			

NOTES:
1) FOR EARTHING BAR SEE TYPICAL DETAILS E03
~~2) CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE ARMOUR BY CABLE GLAND

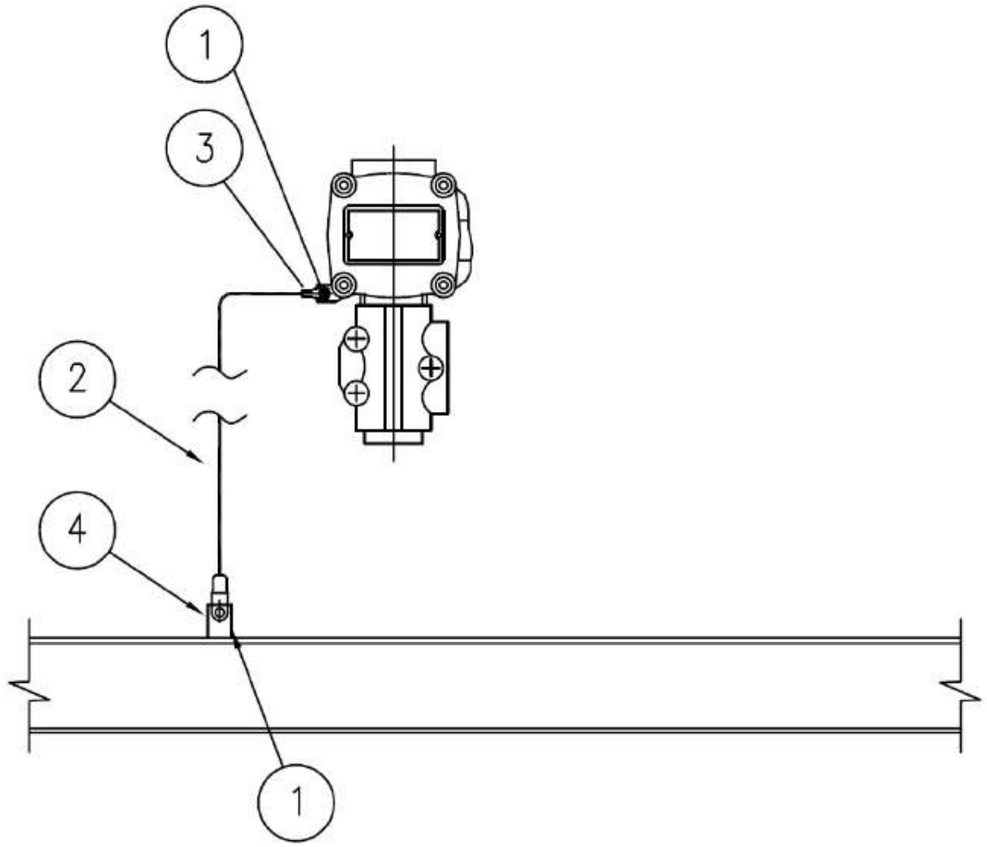
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

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

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

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

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 027 | REV. 02

F.to UNI A3: 420mmx297mm

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

I-3

DRAWING NO. 123A90-DDL-IN-DD-40017

REV. 00



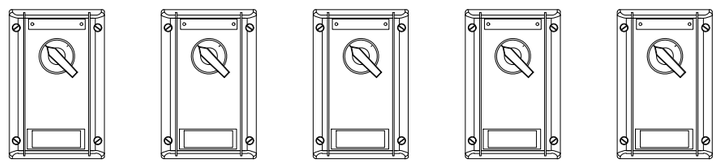
B-100
~~B-101~~



B-200
~~B-201~~



B-300
~~B-301~~



B-400
~~B-401~~

POS.	DESCRIPTION	Q.TY
-	SELFING TAPPING SCREW	-

CONTAINER	ITEM	DESCRIPTION	TAGNAME
B-100 ~~B-101~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-011A~~ 77-HS-001A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-012A~~ 77-HS-002A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-013A~~ 77-HS-003A
B-200 ~~B-201~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-014A~~ 77-HS-004A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-015A~~ 77-HS-005A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-016A~~ 77-HS-006A
B-300 ~~B-301~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-017A~~ 77-HS-007A
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-018A~~ 77-HS-008A
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-019A~~ 77-HS-009A
	4	HAND SWITCH FOR DAMPER TEST	77-HS-010A
	5	HAND SWITCH FOR DAMPER TEST	77-HS-011A
B-400 ~~B-401~~	1	HAND SWITCH FOR DAMPER TEST	77-HS-012A
	2	HAND SWITCH FOR DAMPER TEST	77-HS-013A
	3	HAND SWITCH FOR DAMPER TEST	77-HS-014A
	4	HAND SWITCH FOR DAMPER TEST	77-HS-015A
	5	HAND SWITCH FOR DAMPER TEST	77-HS-016A

NOTES

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/09/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	11/07/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-123A90-FDL-IN-DD-40017**

REV.:	DATE:	SIGNATURE:
1_B	18/09/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

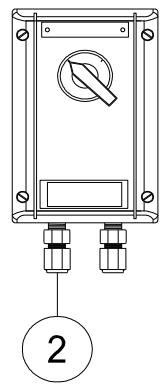
ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
HAND SWITCH INSIDE CONTAINERS

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 046	REV. 01

ELECTRICAL HOOK-UP FOR HAND SWITCH TEST OF THE DAMPERS



INSTRUMENT TAG	
1	77-HS-001A
2	77-HS-001B
3	77-HS-002A
4	77-HS-002B
5	77-HS-003A
6	77-HS-003B
7	77-HS-004A
8	77-HS-004B
9	77-HS-005A
10	77-HS-005B
11	77-HS-006A
12	77-HS-006B
13	77-HS-007A
14	77-HS-007B
15	77-HS-008A
16	77-HS-008B
17	77-HS-009A
18	77-HS-009B
19	77-HS-010A
20	77-HS-010B
21	77-HS-011A
22	77-HS-011B
23	77-HS-012A
24	77-HS-012B
25	77-HS-013A
26	77-HS-013B
27	77-HS-014A
28	77-HS-014B
29	77-HS-015A
30	77-HS-015B
31	77-HS-016A
32	77-HS-016B

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-HD-40079
REV.: 2_A | DATE: 08/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

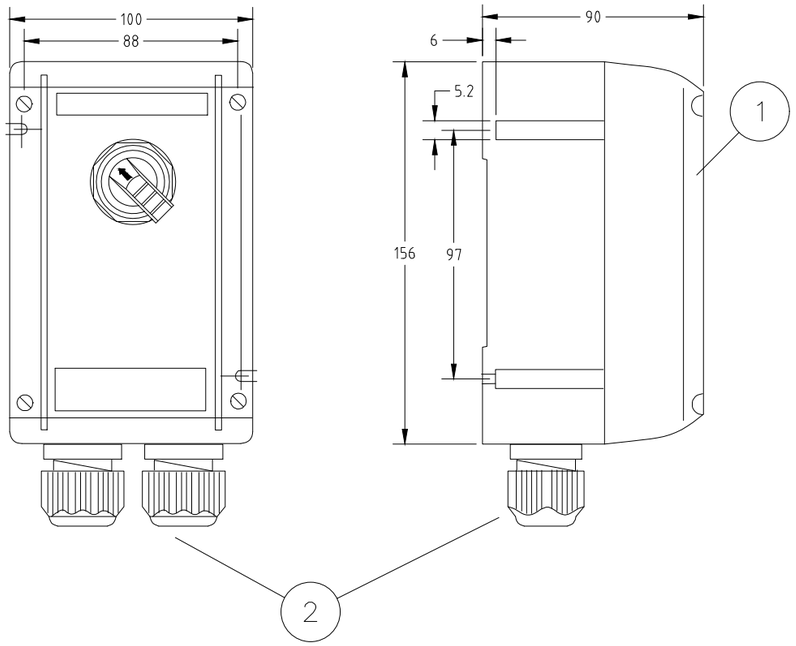
This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

PUSH BUTTON DPDT CONTACT

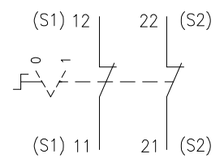
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

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



Type 434...

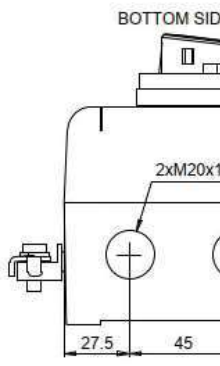


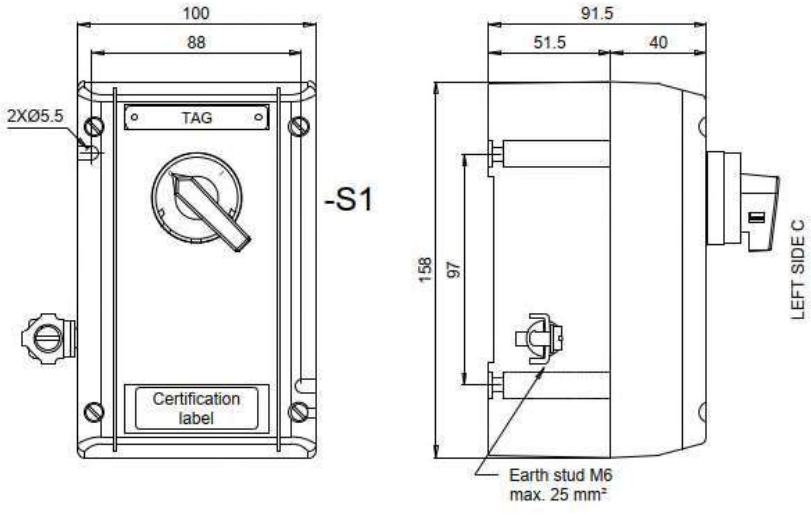
Type 432...

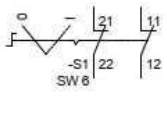
Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ib m IIC T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEx Certificate of Conformity	IECEx BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 up to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 110 V / I_e 0.5 A	Ex23 AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.5 A
Connecting terminals	2 x 4 mm²	
Protection class	I	
Degree of protection accd. to EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	2 x M25 cable gland incl. 1 blanking plug or optional 2 x M20 thread with internal brass plate	
Enclosure material	Polyamide	
Enclosure colour	black	

	Type 432
Dimensions (L x W x H)	156 x 100 x 90 mm
Weight (empty)	0.47 kg

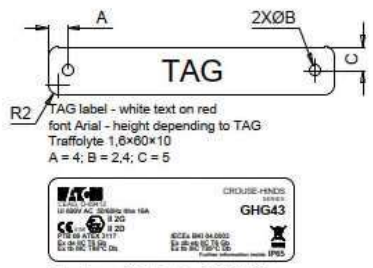






Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Techical data:
Manufactured by Eaton Crouse-Hinds Division
Model: GHG 432
Certificate No.
PTB 00 ATEX 3117
IECEx BKI 04.0003
Marking: ATEX and IECEx
II 2G Ex de IIC T6 Gb
II 2D Ex tb IIIC T80°C Db
-40°C ≤ tamb ≤ +55°C
Ui 690V
IP65

Specific characteristics:
- Polyamide (PA), black
- Closed with stainless steel screw
- Bottom with internal earth plate in brass
- M6 internal/external stainless steel earth stud

Components:
- No. 1 black selector switch with 2 position 2NC

Entries bottom side B:
- No. 2 M20 threaded taped with transit tape

No.1 1,6×60×10 mm white text on red background traffolyte tag fixed with stainless steel screws on the cover, sealed on the back with PU adhesive and engraved

Also a certification label fixed with back self adhesive on the cover

Quantity: 32

ITEM	Tag	77-HS-016B	: Hand Switch for Fire&Gas Damper HFD-77016		Dwg	123A90-DDL-IN-DL-40116	
	S/Sys	77-40	: HVAC I&T Equipment Room B-400		Module	LD_B-400	
TASK	code	C10002108	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Instrumental	Form	CJX00	Miscellaneous

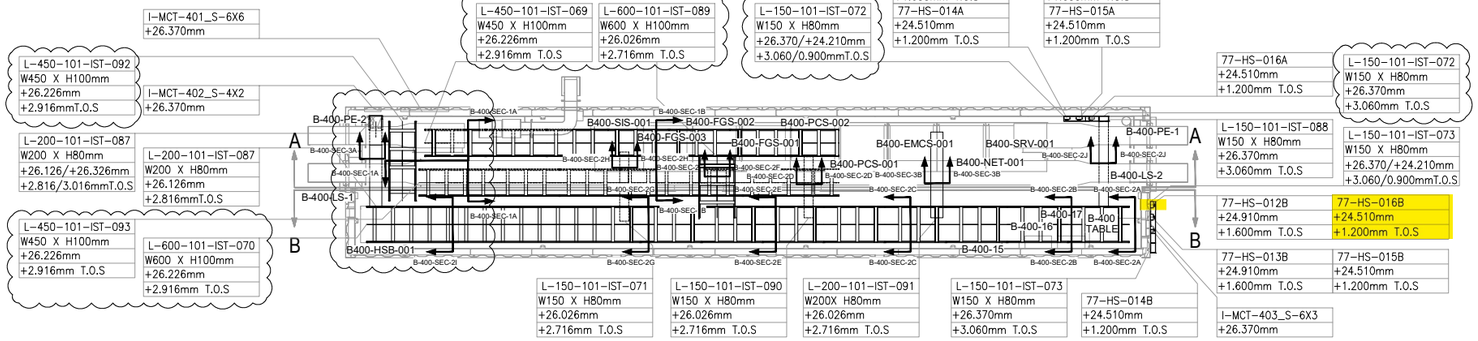
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	NA
7	Check identification (tag number, tag plates).	OK
8	Check supporting and protection against vibrations.	OK
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	OK
10	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:41:35.353Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T16:11:32.805Z	

DRAWING NO. 123A90-DDL-IN-DL-40116

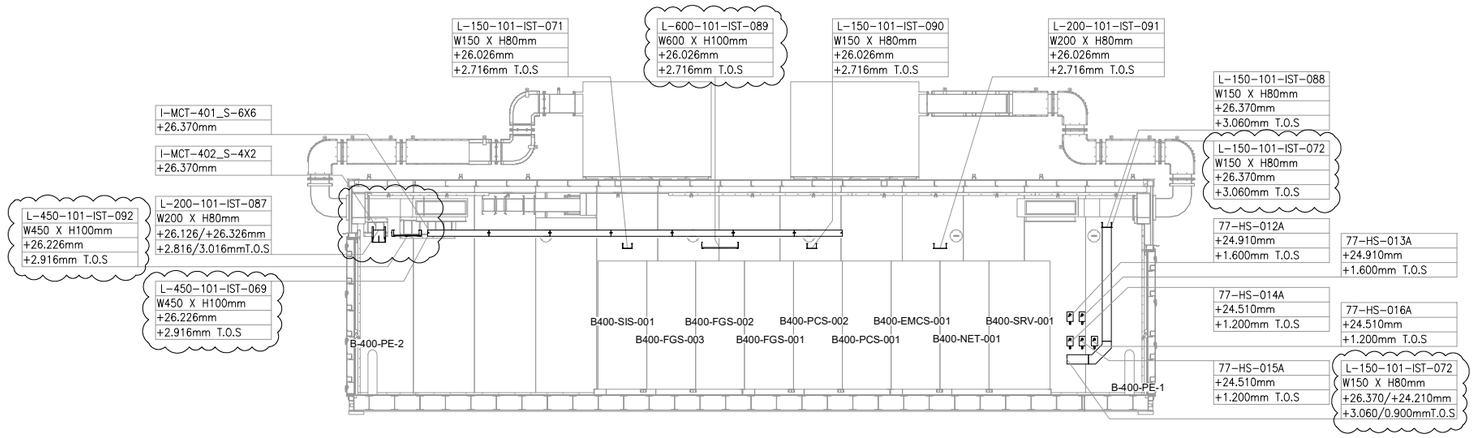
REV. 01



PLAN VIEW

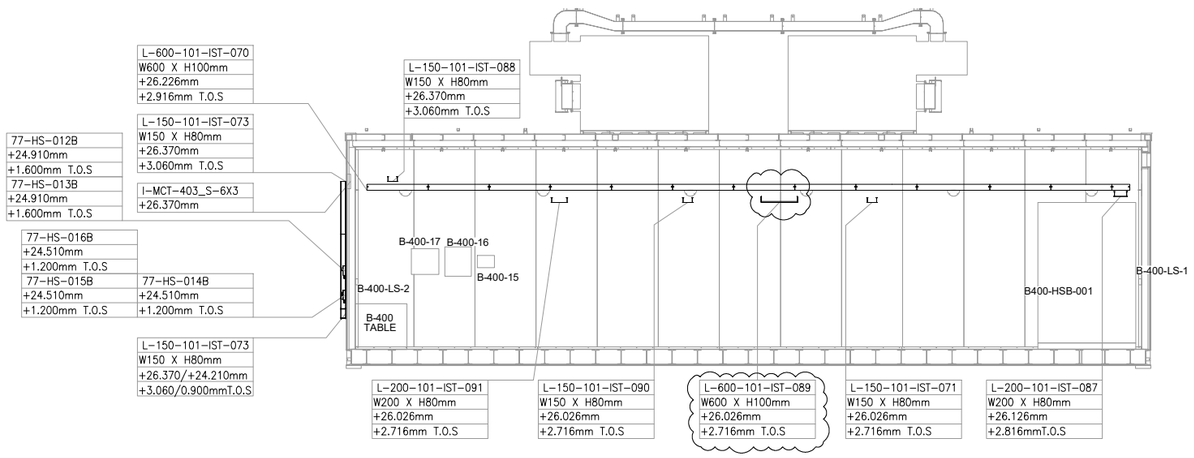
B-400 – I&T EQUIPMENT ROOM

SCALE-1:1



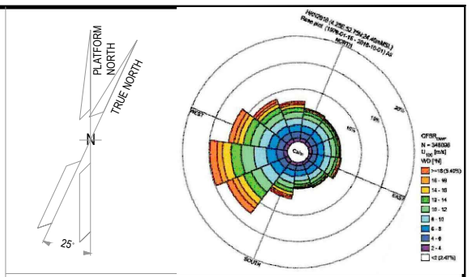
SECTION A-A

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

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-400 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-40116	SHEET 001	REV. 01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40116**

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

ROSETTI MARINO SpA

File Name : 123A90-DDL-IN-DL-40116 REV.01.dwg

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

REV. 01

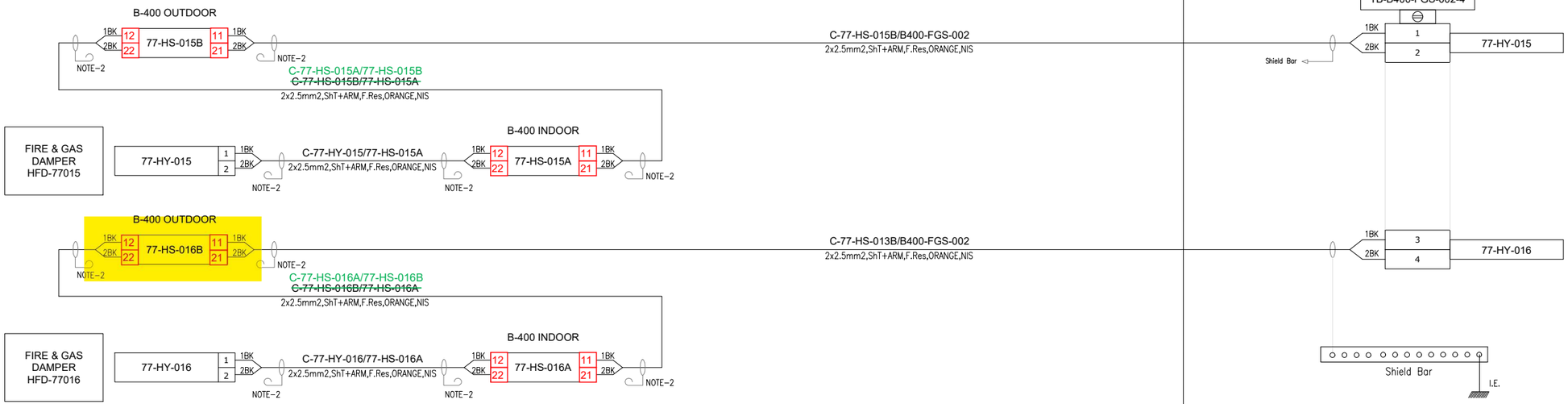
I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-FGS-002

<01>

B-400 ITER



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

REV.:	DATE:	SIGNATURE:
1_D	14/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
FIRE DAMPER COMMAND – B–400

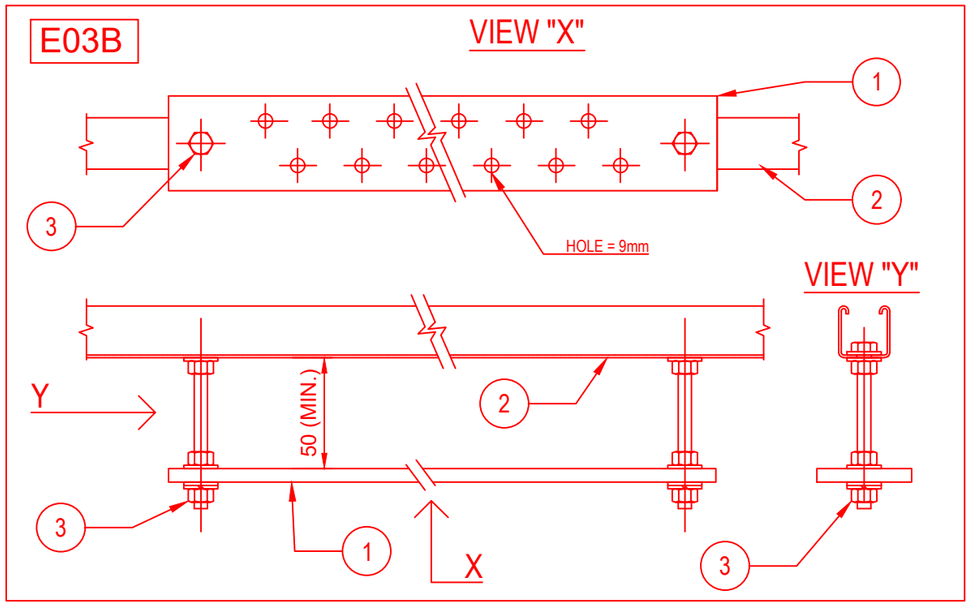
CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

	DRAWING NO.	SHEET	REV.
A3	123A90–DDL–IN–DG–40016	077	01

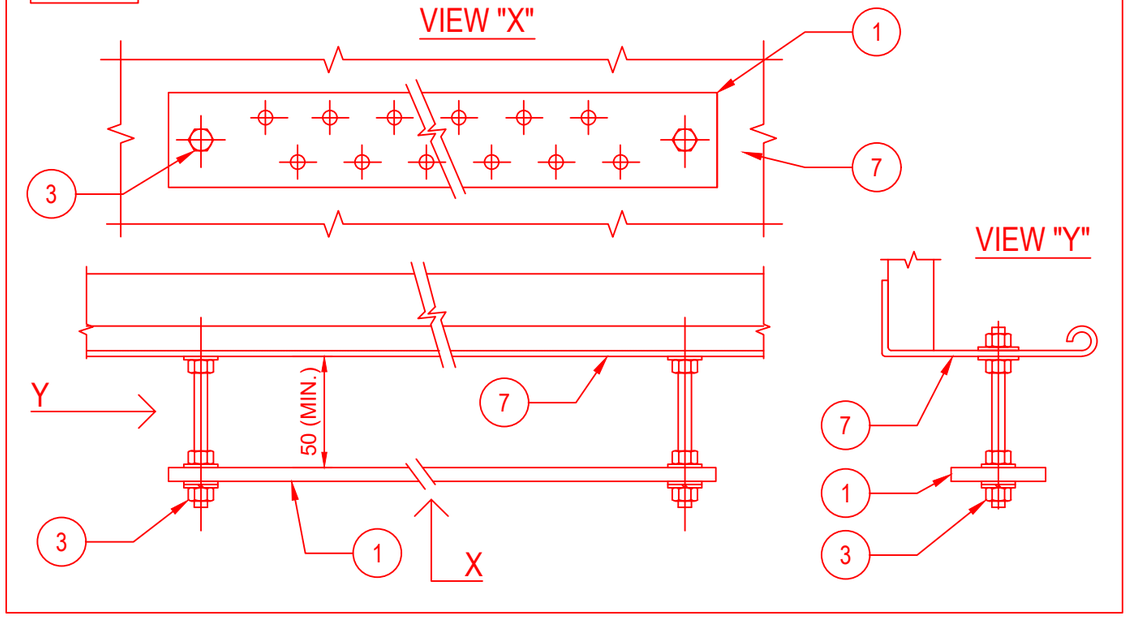
File Name : 123A90-DDL-IN-DG-40016_Rev.01

TYPICAL DETAIL VALID FOR EXTERNAL USE ONLY

E03B

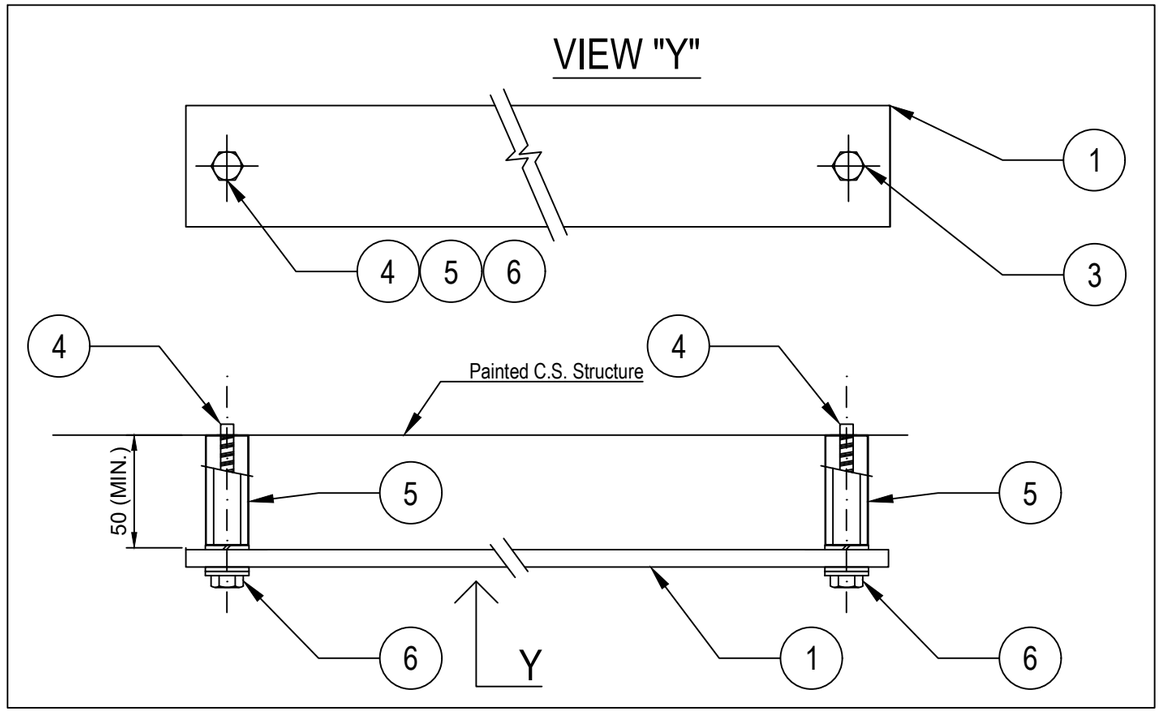


E03C



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_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING BAR INSTALLED ON WELDED PROFILE OR THREADED STUD

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

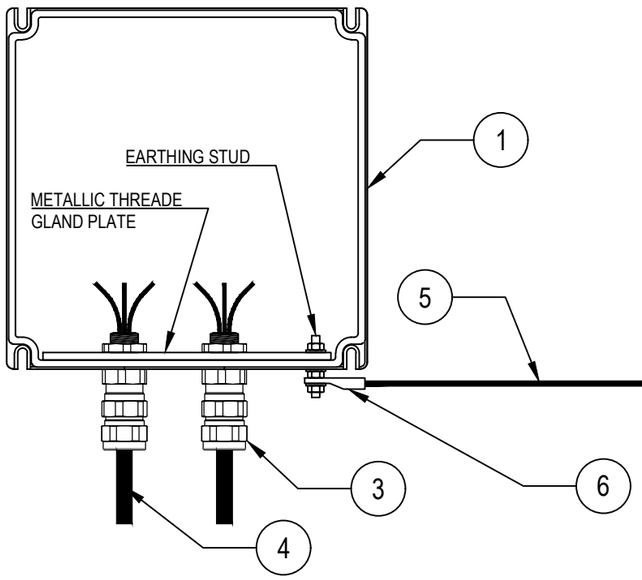
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

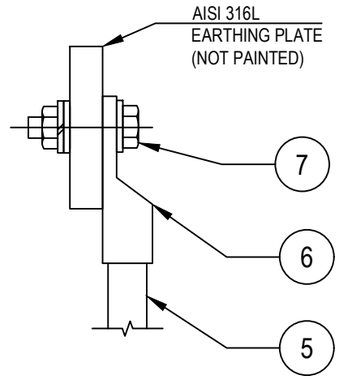
File Name : 123A90-DDL-EL-DD-20090 REV.02 RLMU.DWG

E04

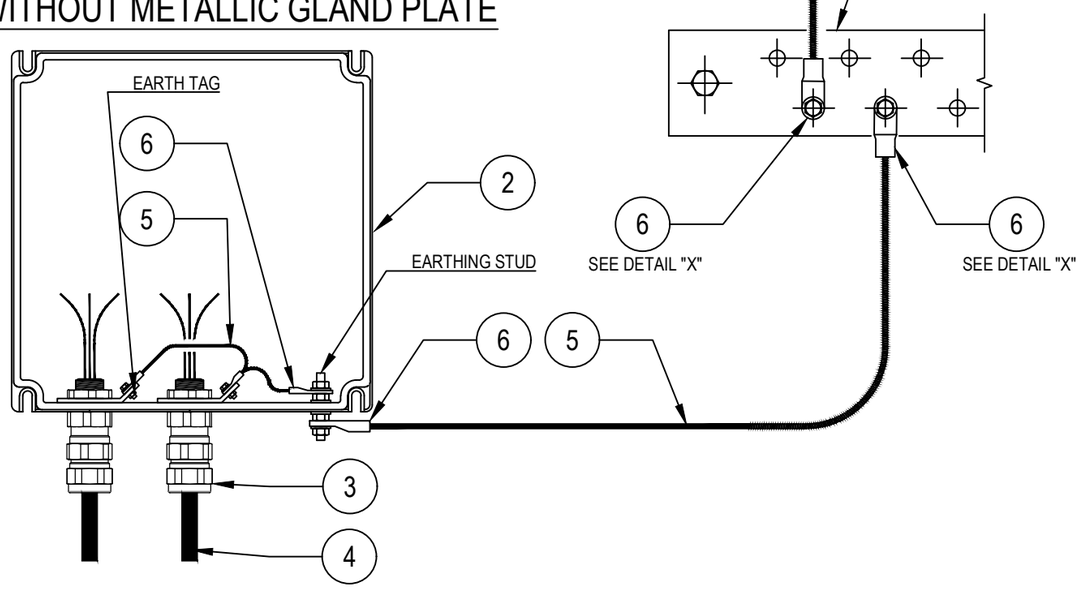
DETAIL OF NON METALLIC ENCLOSURE WITH METALLIC GLAND PLATE



DETAIL "X"



DETAIL OF NON METALLIC ENCLOSURE WITHOUT METALLIC GLAND PLATE



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX WITH PLATE (EX)	GRP			
2	JUNCTION BOX WITHOUT GLAND PLATE (EX)	GRP			
3	DOUBLE SEAL CABLE GLAND (EX) FOR ARMOURED CABLE	NICK.PL.BRASS			~~NOTE 2~~
4	ARMOURED CABLE				
5	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		NOTE 1
6	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$		NOTE 1
7	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L			

NOTES:
1) FOR EARTHING BAR SEE TYPICAL DETAILS E03
~~2) CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE ARMOUR BY CABLE GLAND

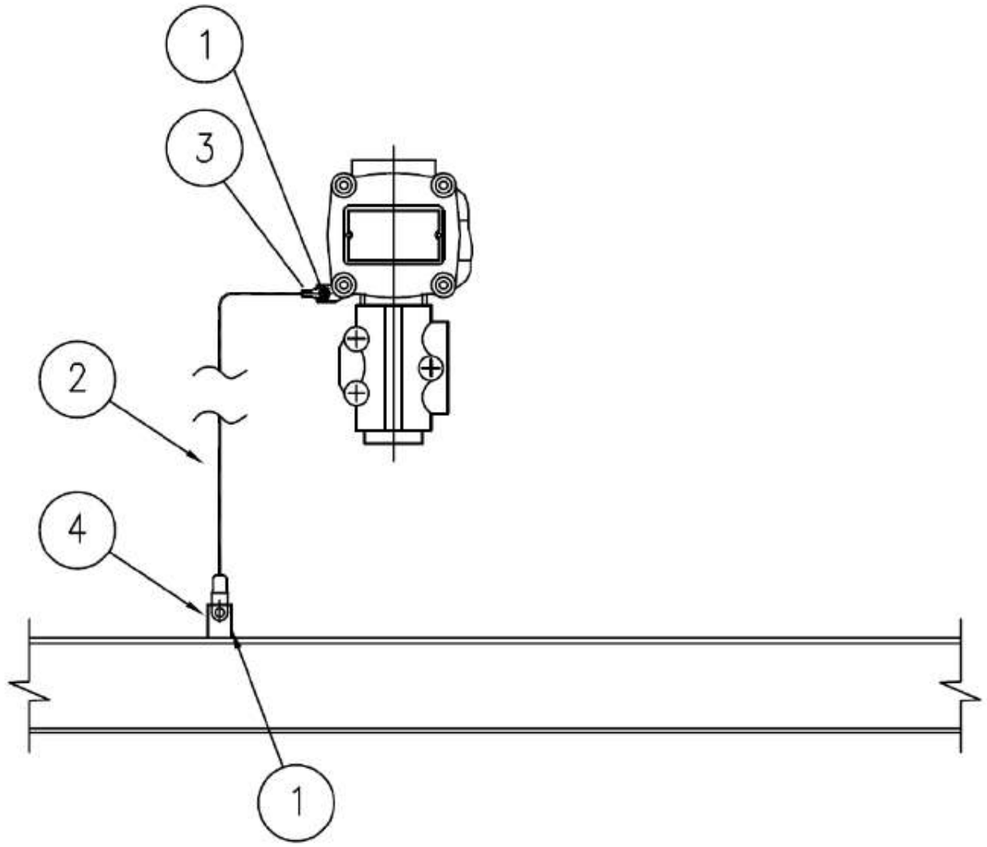
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

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

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

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

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 027 | REV. 02

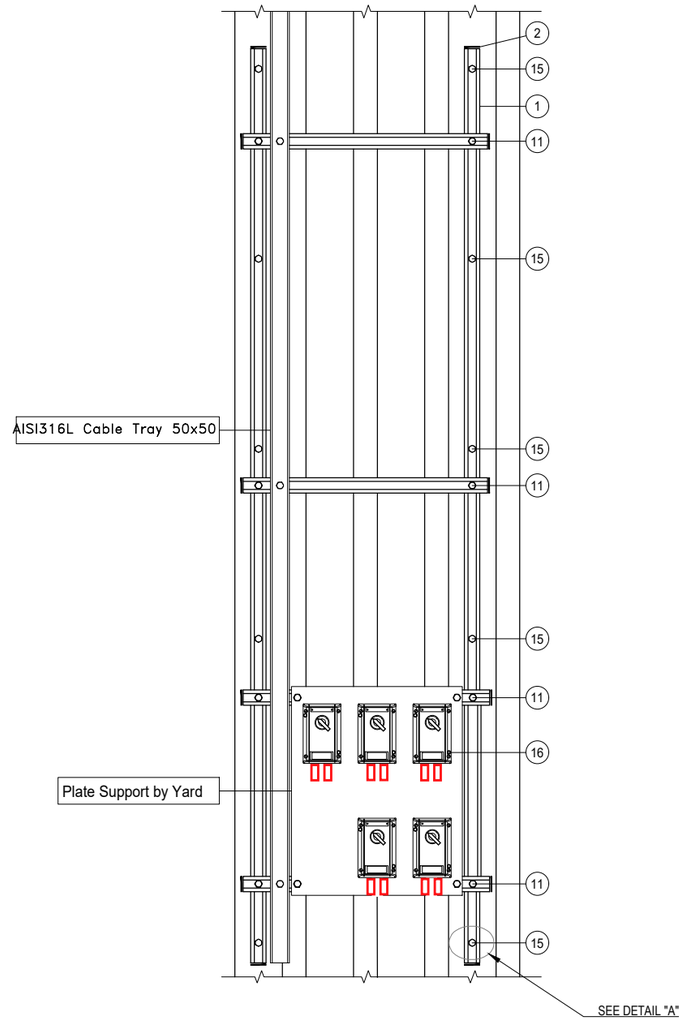
F.to UNI A3: 420mmx297mm

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

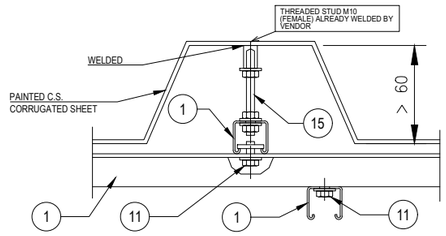
I-5

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	10

CONTAINER	ITEM	DESCRIPTION	TAGNAME
B-300 ~~B-301~~	1	HAND SWITCH FOR DAMPER TEST	~~77-HS-017B~~ 77-HS-007B
	2	HAND SWITCH FOR DAMPER TEST	~~77-HS-018B~~ 77-HS-008B
	3	HAND SWITCH FOR DAMPER TEST	~~77-HS-019B~~ 77-HS-009B
	4	HAND SWITCH FOR DAMPER TEST	77-HS-010B
	5	HAND SWITCH FOR DAMPER TEST	77-HS-011B
B-400 ~~B-401~~	1	HAND SWITCH FOR DAMPER TEST	77-HS-012B
	2	HAND SWITCH FOR DAMPER TEST	77-HS-013B
	3	HAND SWITCH FOR DAMPER TEST	77-HS-014B
	4	HAND SWITCH FOR DAMPER TEST	77-HS-015B
	5	HAND SWITCH FOR DAMPER TEST	77-HS-016B

NOTES

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/09/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	11/07/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-123A90-FDL-IN-DD-40017

REV.:	DATE:	SIGNATURE:
1_B	18/09/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

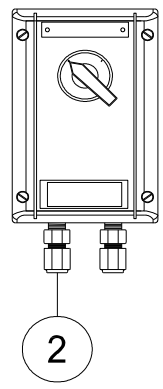
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
HAND SWITCH OUTSIDE CONTAINERS

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 048	REV. 01

ELECTRICAL HOOK-UP FOR HAND SWITCH TEST OF THE DAMPERS



INSTRUMENT TAG	
1	77-HS-001A
2	77-HS-001B
3	77-HS-002A
4	77-HS-002B
5	77-HS-003A
6	77-HS-003B
7	77-HS-004A
8	77-HS-004B
9	77-HS-005A
10	77-HS-005B
11	77-HS-006A
12	77-HS-006B
13	77-HS-007A
14	77-HS-007B
15	77-HS-008A
16	77-HS-008B
17	77-HS-009A
18	77-HS-009B
19	77-HS-010A
20	77-HS-010B
21	77-HS-011A
22	77-HS-011B
23	77-HS-012A
24	77-HS-012B
25	77-HS-013A
26	77-HS-013B
27	77-HS-014A
28	77-HS-014B
29	77-HS-015A
30	77-HS-015B
31	77-HS-016A
32	77-HS-016B

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-HD-40079
REV.: 2_A | DATE: 08/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

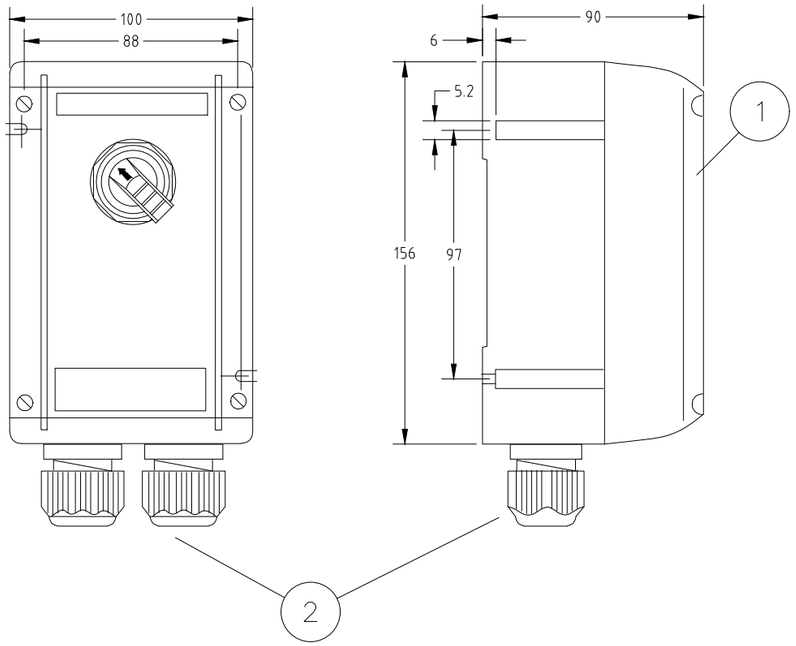
This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

PUSH BUTTON DPDT CONTACT

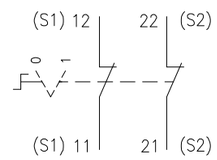
ITEM	DESCRIPTIONS	NR
1	Control Station, CO.SI.ME GHG 432	1
2	Cable Gland M20 Ex eb Polyamide	2
3		
4		
5		
6		
7		
8		
9		
10		

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



Type 434...

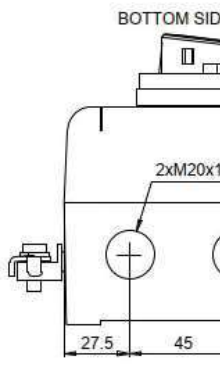


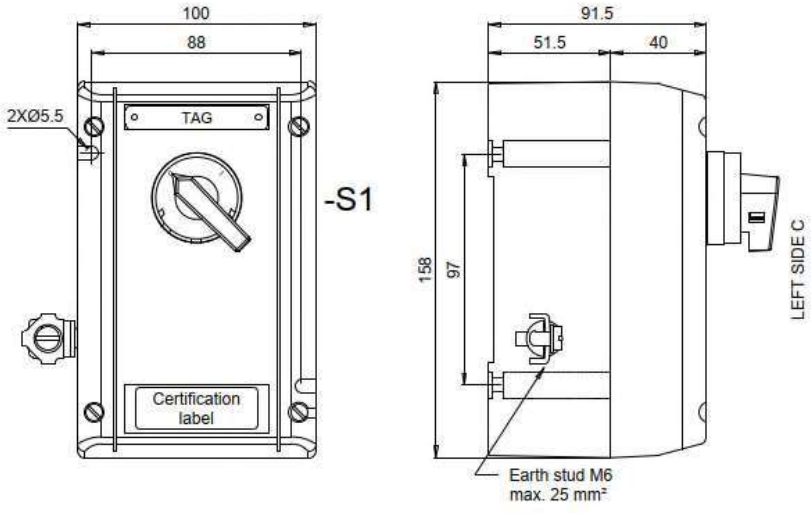
Type 432...

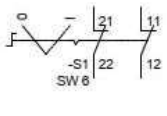
Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ib m IIC T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEx Certificate of Conformity	IECEx BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 up to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 110 V / I_e 0.5 A	Ex23 AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.5 A
Connecting terminals	2 x 4 mm²	
Protection class	I	
Degree of protection accd. to EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	2 x M25 cable gland incl. 1 blanking plug or optional 2 x M20 thread with internal brass plate	
Enclosure material	Polyamide	
Enclosure colour	black	

	Type 432
Dimensions (L x W x H)	156 x 100 x 90 mm
Weight (empty)	0.47 kg

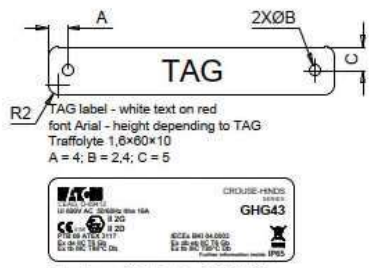






Contact arrangement		
	21-22	11-12
0	X	X
I		

X	Contact close
(none)	Contact open



Techical data:
Manufactured by Eaton Crouse-Hinds Division
Model: GHG 432
Certificate No.
PTB 00 ATEX 3117
IECEx BKI 04.0003
Marking: ATEX and IECEx
II 2G Ex de IIC T6 Gb
II 2D Ex tb IIIC T80°C Db
-40°C ≤ tamb ≤ +55°C
Ui 690V
IP65

Specific characteristics:
- Polyamide (PA), black
- Closed with stainless steel screw
- Bottom with internal earth plate in brass
- M6 internal/external stainless steel earth stud

Components:
- No. 1 black selector switch with 2 position 2NC

Entries bottom side B:
- No. 2 M20 threaded taped with transit tape

No.1 1,6×60×10 mm white text on red background traffolyte tag fixed with stainless steel screws on the cover, sealed on the back with PU adhesive and engraved

Also a certification label fixed with back self adhesive on the cover

Quantity: 32

ITEM	Tag	B-400	: I&T Equipment Room B-400		Dwg	1724000049-AR-DA-00017	
	S/Sys	77-40	: HVAC I&T Equipment Room B-400		Module	LD_B-400	
TASK	code	C10002306		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.	OK
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: C30000025
Point 3 PL: C30000045 / C30000049

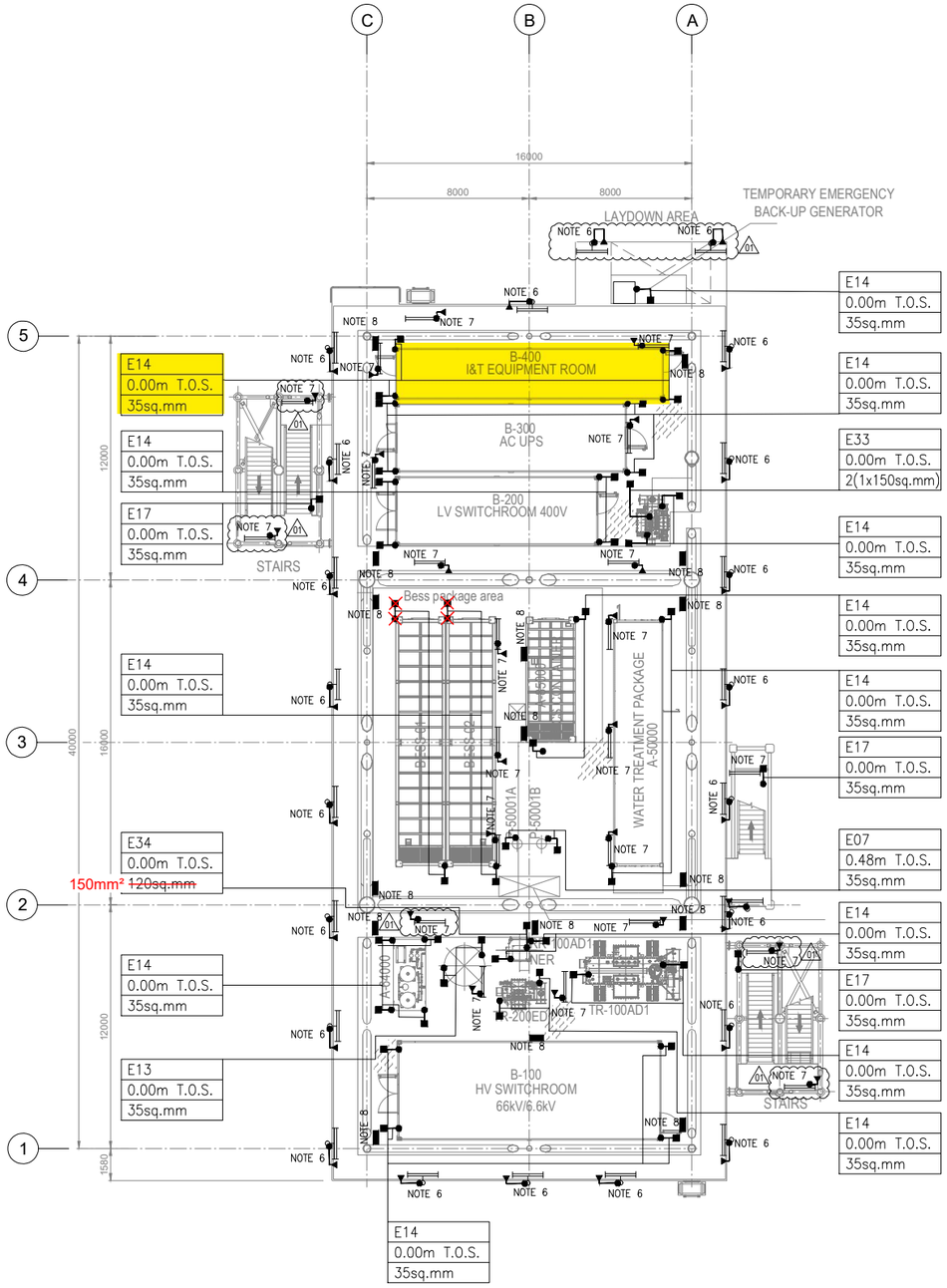
Point 8 PL: C30000037

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	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:41:52.736Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T14:55:32.356Z	

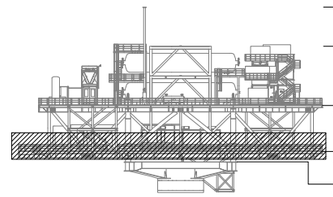
DRAWING NO. 123A90-DDL-EL-DL-20133

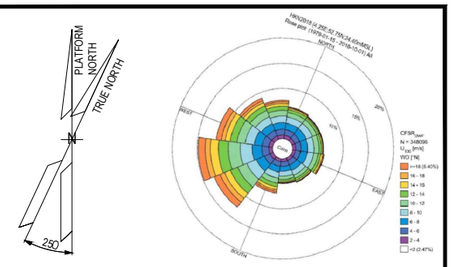
REV. 01



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

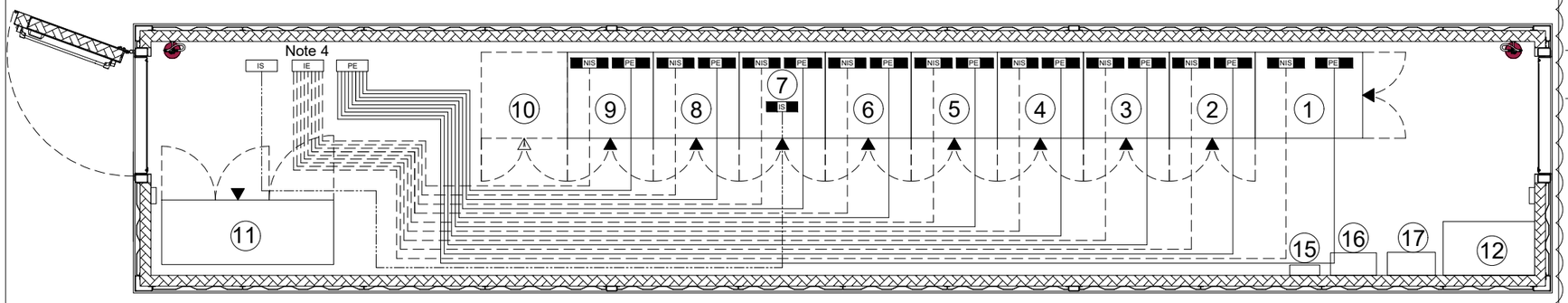
File Name : 123A90-DDL-EL-DL-20133

INSTRUMENT EQUIPMENT LIST		
REF.	TAG No.	DESCRIPTION
1	B400-SRV-001	SERVER CABINET
2	B400-NET-001	NETWORK CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET
4	B400-PCS-001	PCS SYSTEM CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET
6	B400-FGS-001	FGS SYSTEM CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1
8	B400-FGS-003	FGS MARSHALLING CABINET 2
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET
10	-	SPARE
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM
12	-	TABLE
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.
15	-	FIRST AID KIT
16	-	RESUSCITATION UNIT
17	-	CABINET INCLUDED N.10 ESCAPE MASK

NOTES

1 - THIS DOCUMENT 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 IN FIELD.
4 - THE EARTHING BUS BARS INSTALLATION SHALL BE PREFERABLY IN VERTICAL MODE.
5 - FOR EARTHING TYPICAL DETAILS AND Y/G CONDUCTOR CROSS SECTION SEE DOC. 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 - IN CASE OF CABLE CONNECTIONS BETWEEN TWO CABINETS, THE CABLE SCREEN SHALL BE CONNECTED TO IE AT MARSHALLING SIDE ONLY.

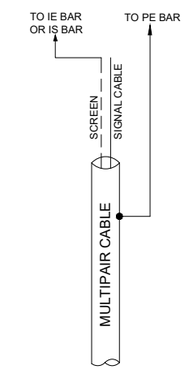
01



LEGEND

PE	EARTHING BUS BAR AISI 316L
NIS	INSULATED INSTRUMENT EARTH BUS BAR NOT INTRINSIC SAFETY DIM. 450x60x5mm AISI 316L
IS	INSULATED INSTRUMENT EARTH BUS BAR INTRINSIC SAFETY DIM. 450x60x5mm AISI 316L
— —	35sqmm Y/G INSULATED COPPER CONDUCTOR FOR PE (SEE NOTE 2)
——	35sqmm Y/G INSULATED COPPER CONDUCTOR FOR I.S. & NON I.S. (SEE NOTE 2)
▬	EARTHING BUS BAR 60x5mm AISI 316L (SEE NOTE 3)
PE	PROTECTIVE EARTH
IE	INSTRUMENT EARTH
IS	INTRINSICALLY SAFE EARTH

KEY



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40013**

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

ROSETTI MARINO SpA

01

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	14/05/24	MGA	LCA	DLO	ACCEPTED FOR CONSTRUCTION
00	19/01/24	INVIRAJ	AMBE/LCA	OYFO/MDO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING LAYOUT DRAWINGS(OFFSHORE ITER)
EQUIPMENT LAYOUT

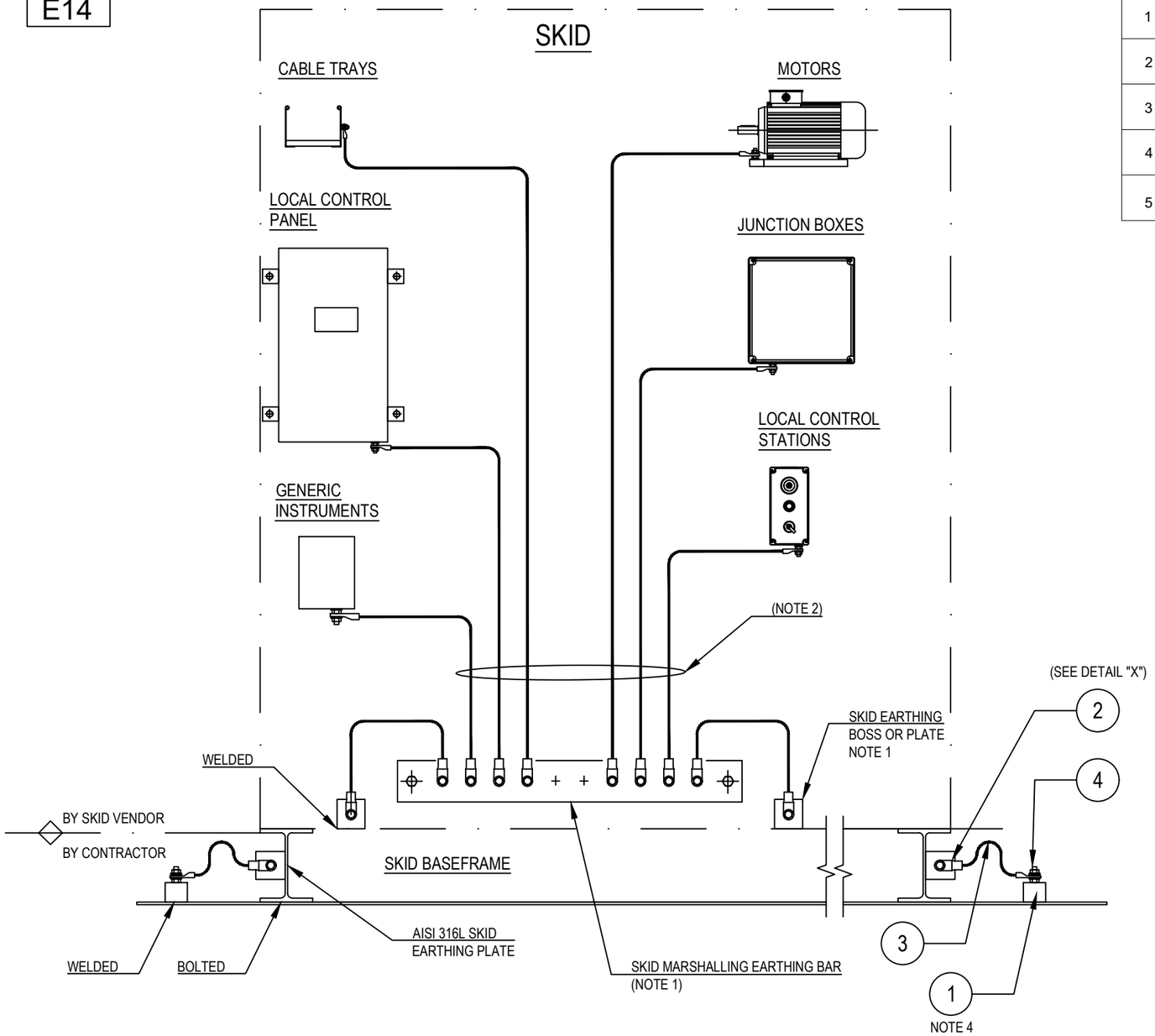
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-IN-DL-40013	003	01

F.to UNI A3: 420mmx297mm

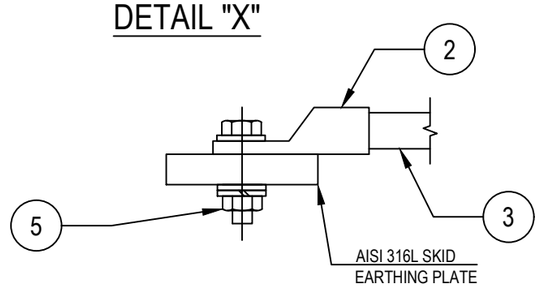
File Name : 123A90-DDL-IN-DL-430013 Rev. 01

E14



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

DETAIL "X"



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

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR SKID BASEFRAME

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

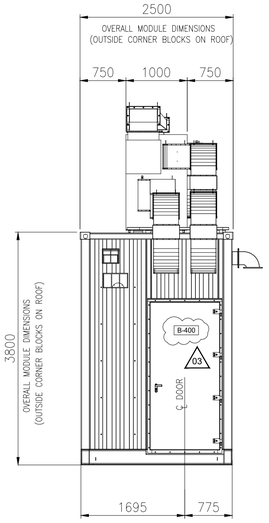
A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20090	014	02

F.to UNI A3: 420mmx297mm

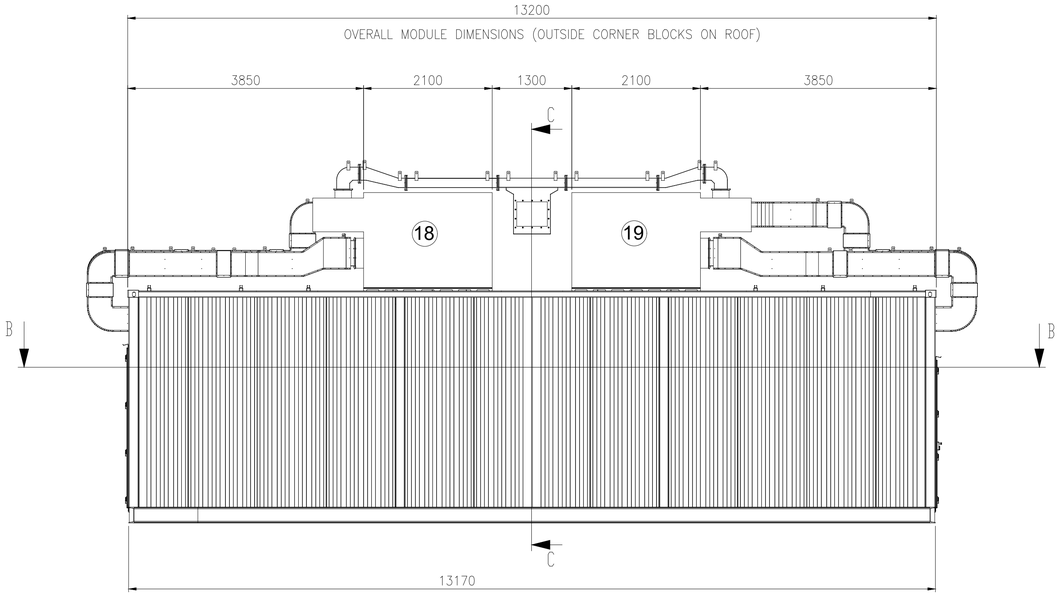
File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

DRAWING NO. 1724000049-AR-DA-00017

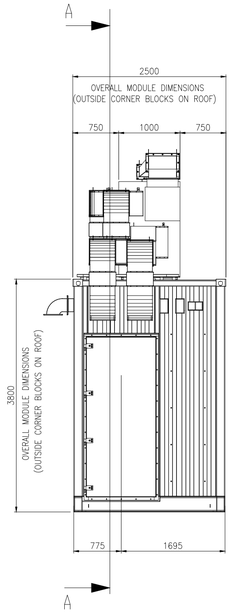
REV. 03



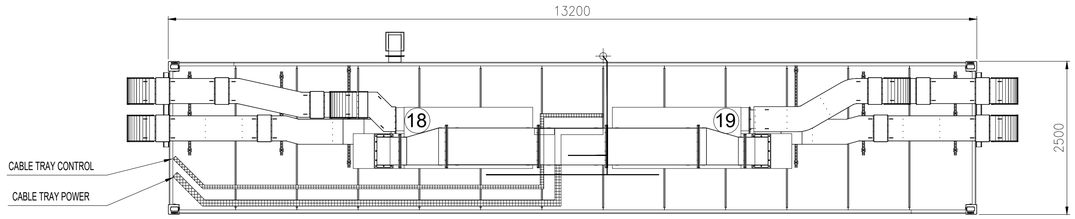
EAST VIEW



SOUTH VIEW



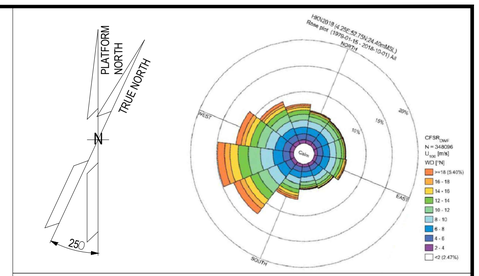
WEST VIEW



TOP VIEW

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-010	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-011 (03)	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-012	SPACE HEATER 3	184	145	1100	5	



NOTE

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

REFERENCE

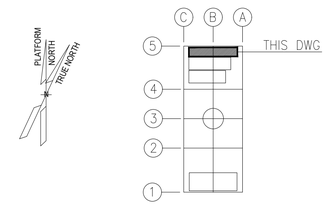
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007
(03) "B-400" FOUNDATION	1724000049-ST-DD-00013
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	04/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	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

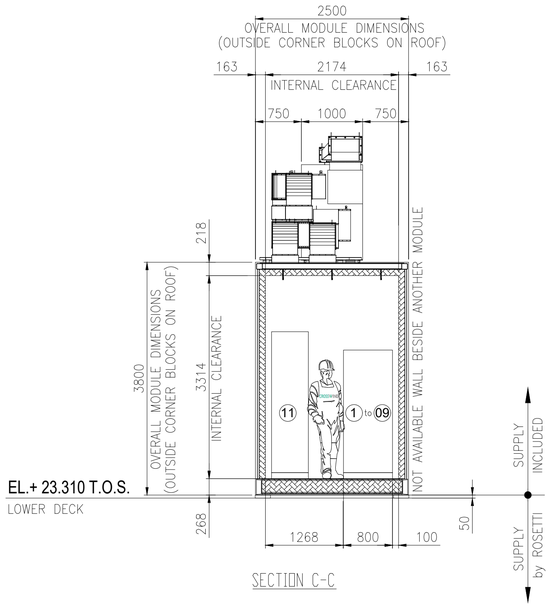


TITLE : BASE LOAD POWER HUB (BLPH)
B-400 GENERAL ARRANGEMENT DRAWINGS

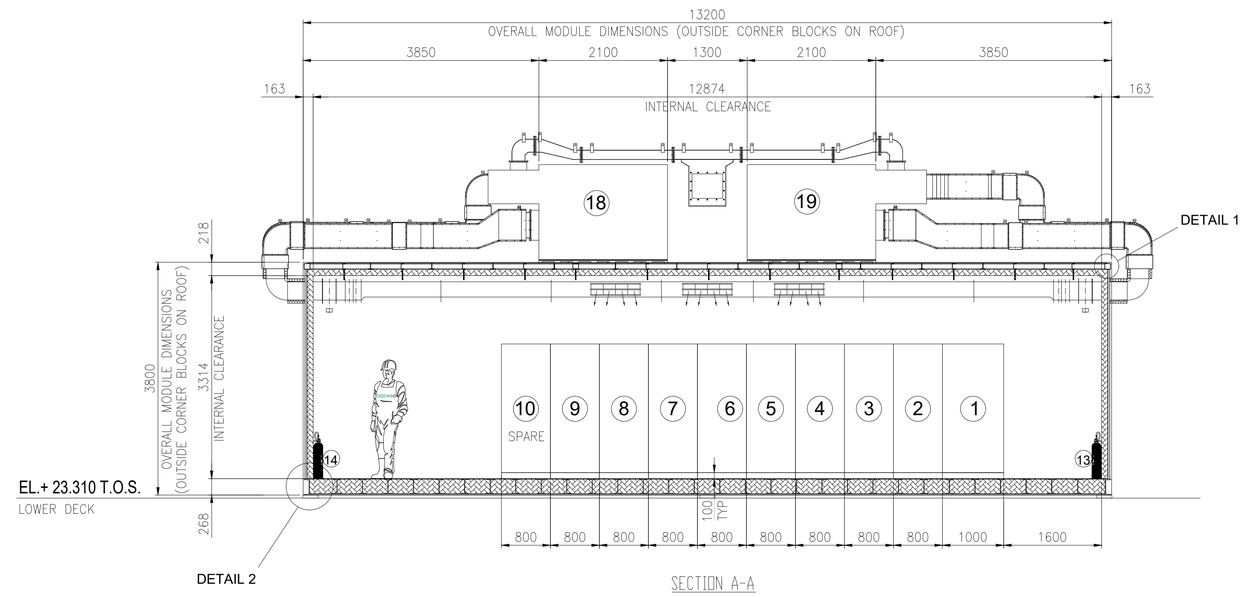
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 001	REV. 03

File Name : 1724000049-AR-DA-00017-REV.03

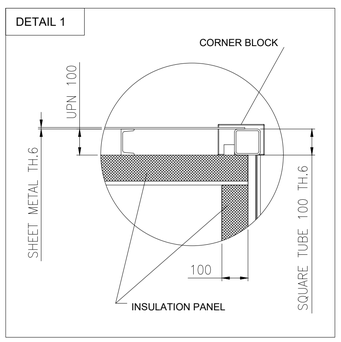
DRAWING NO. 1724000049-AR-DA-00017 REV. 03

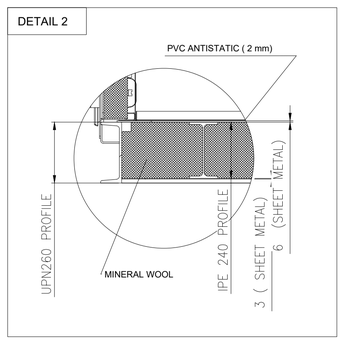


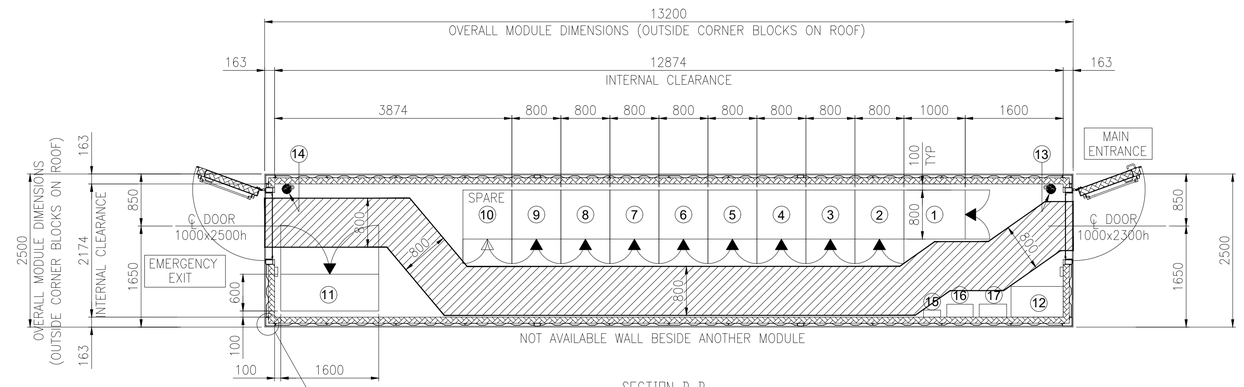
SECTION C-C



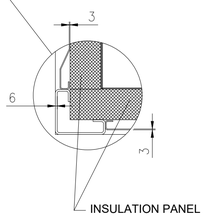
SECTION A-A







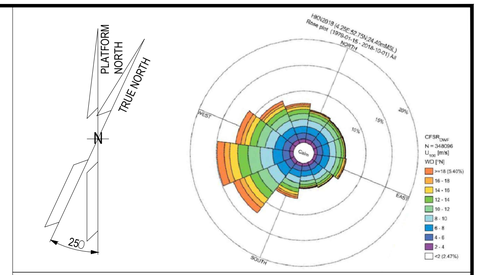
SECTION B-B



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

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-010	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-011 △03	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-012	SPACE HEATER 3	184	145	1100	5	



NOTE

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

REFERENCE

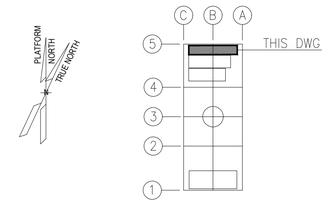
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007
△03 "B-400" FOUNDATION	1724000049-ST-DD-00013
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	04/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	M.G.	SKV	C.A.	ISSUE FOR REVIEW (IFR)
00	08/02/24	A.G.	SKV	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

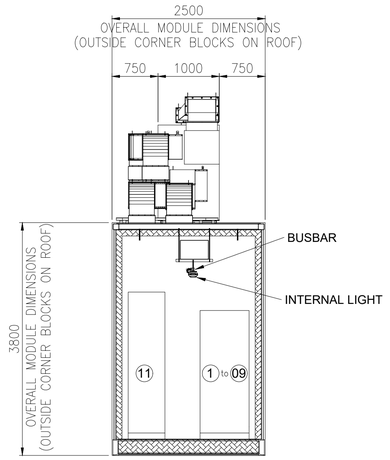
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-400 GENERAL ARRANGEMENT DRAWINGS

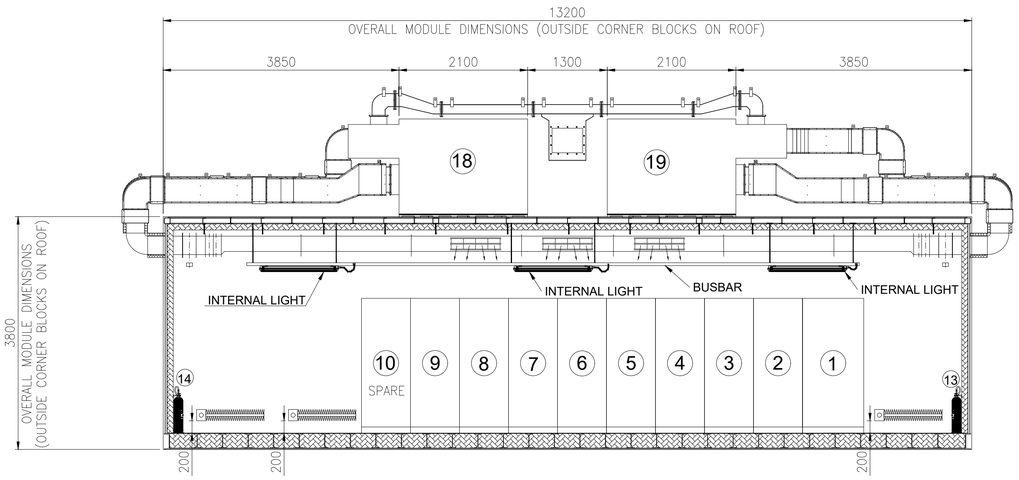
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 002	REV. 03

File Name : 1724000049-AR-DA-00017-REV.03

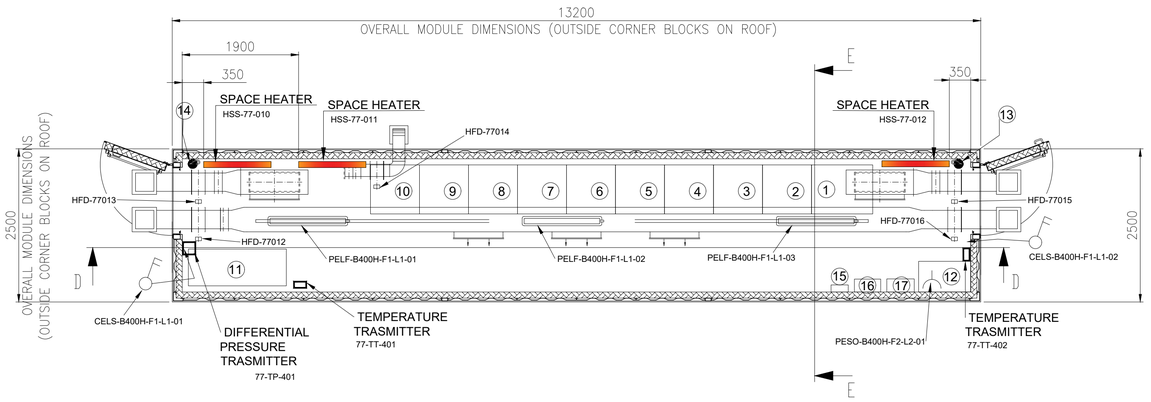
DRAWING NO. 1724000049-AR-DA-00017 REV. 03



SECTION E-E

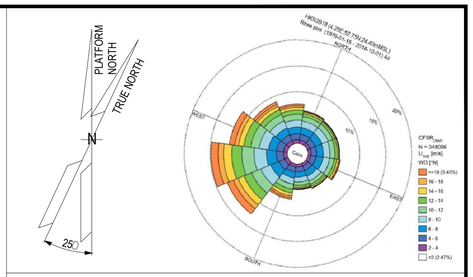


SECTION D-D



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-010	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-011 (03)	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-012	SPACE HEATER 3	184	145	1100	5	



NOTE

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

REFERENCE

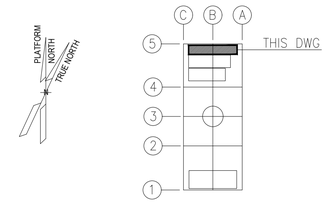
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007
(03) "B-400" FOUNDATION	1724000049-ST-DD-00013
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	04/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	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-400 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 003	REV. 03

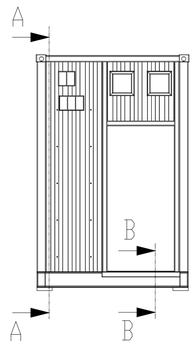
File Name : 1724000049-AR-DA-00017-REV.03

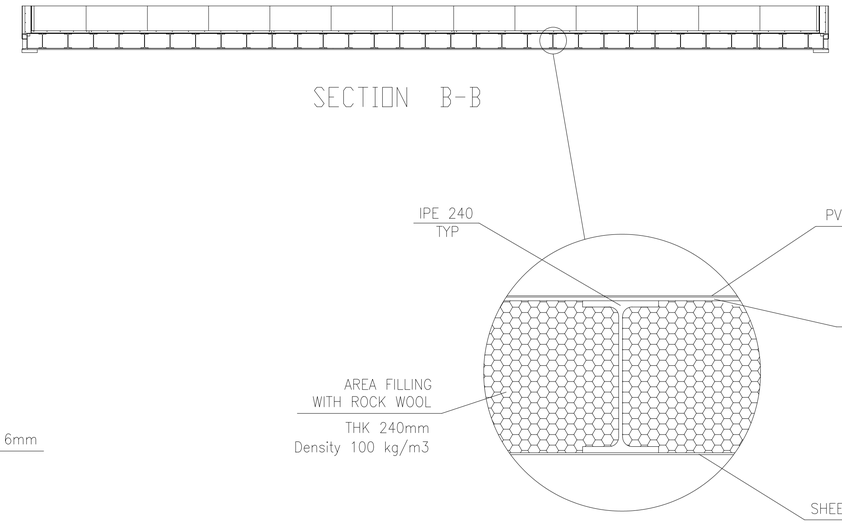
DRAWING NO. 1724000049-AR-DD-00021

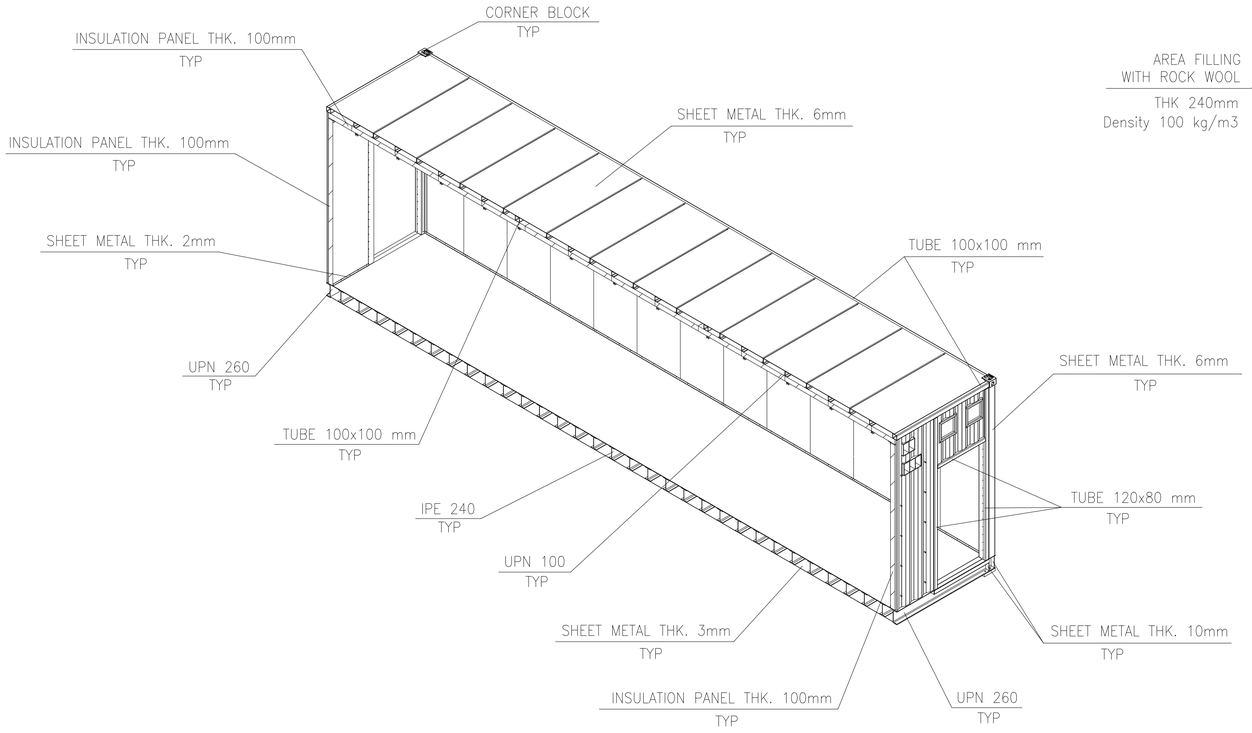
REV. 02

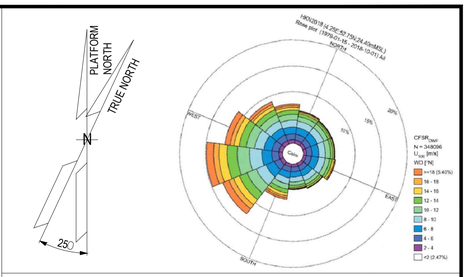
MODULE B-400

REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009
Weld Procedure Specifications (WPS), Weld Procedure Qualification Report (WPQR), Welding Map and Welders Qualifications	1724000049-WEL-RE-00003



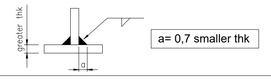






NOTES

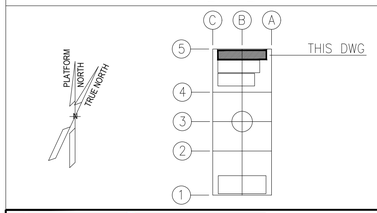
1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D.1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



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	30/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND | ROSETTI MARINO

TITLE :

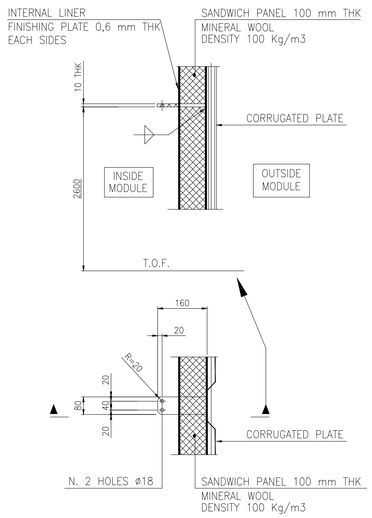
B-400 DETAILED DRAWINGS-E&I SHELTERS

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-00021	SHEET 001	REV. 02

File Name : 1724000049-AR-DD-00021-REV.02

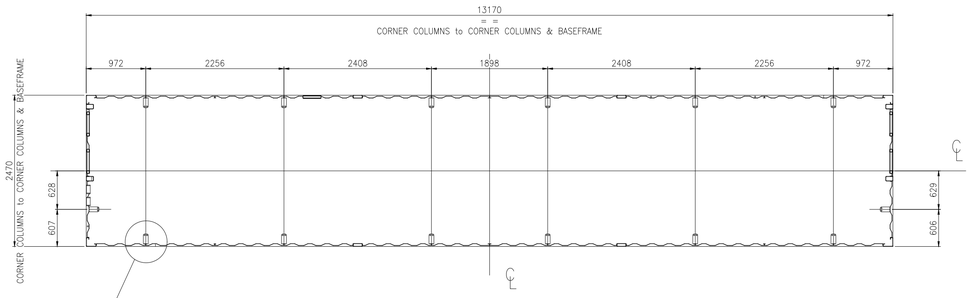
DRAWING NO. 1724000049-AR-DD-00021 REV. 02

REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00017
"B-400" HVAC GENERAL ARRANGEMENT	1724000049-HV-DA-00067



NORTH WALL

WEST WALL

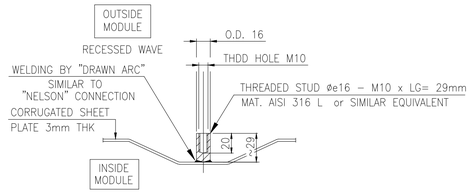


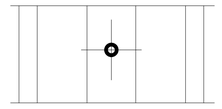
EST WALL

SOUTH WALL

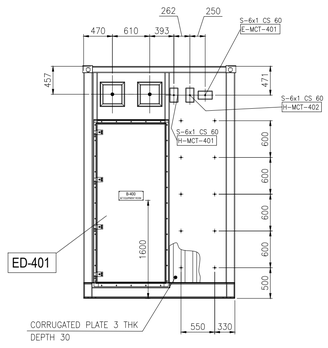
MODULE B-400

INTERNAL SEA FASTENING PLATES PLAN

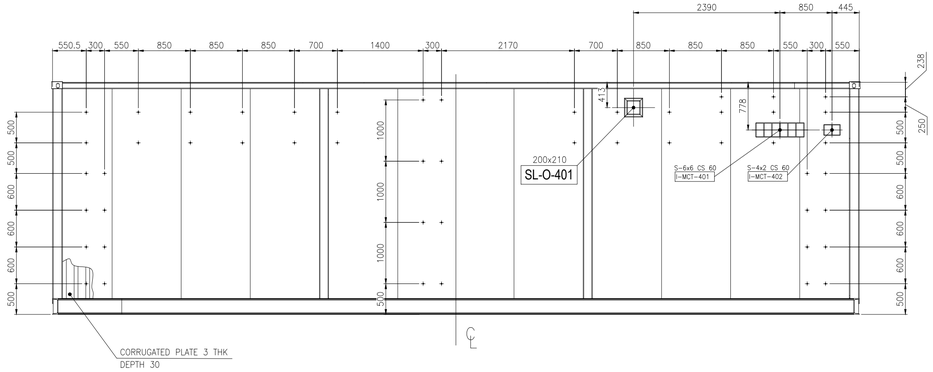




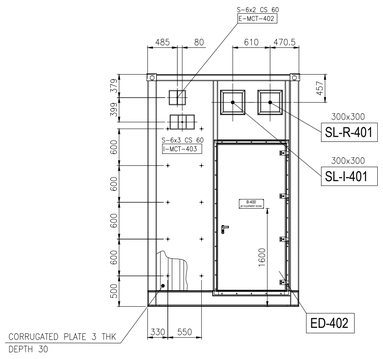
THREADED STUD INSTALLATION



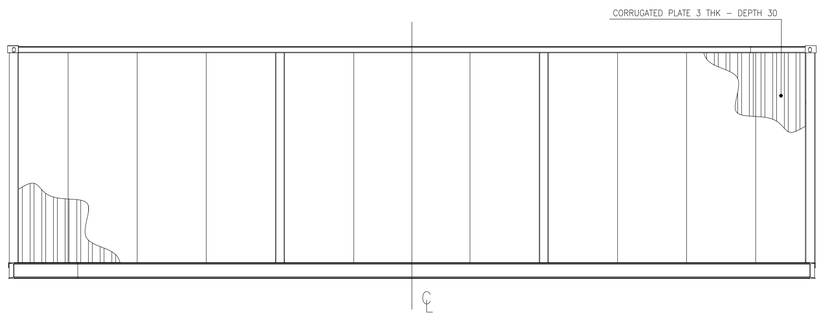
VIEW OF WEST WALL



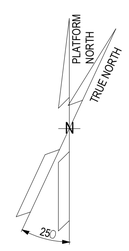
VIEW OF NORTH WALL

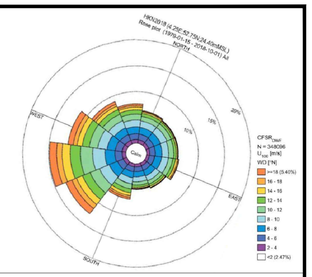


VIEW OF EAST WALL



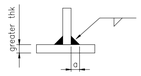
VIEW OF SOUTH WALL





NOTES

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



a= 0,7 smaller thk

LEGEND

- THREADED STUD ø16 - M10 x LG= 29mm
- T.O.F. — TOP OF FLOOR

MCT LEGEND:

MCT TYPE & SIZE — BRAND ROXTEC
MATERIAL — C.S.= PRIMED MILD STEEL; S.S.= AISI 316 L
MCT DEPTH
S 6x2 C.S. 60 — E-MCT-401
MCT SERVICE: E= ELECTRICAL; I= INSTRUMENTAL; H= HVAC
PROGRESSIVE NUMBER FROM 01
MODULE LOCATION: 1= B-100 3= B-300 2= B-200 4= B-400

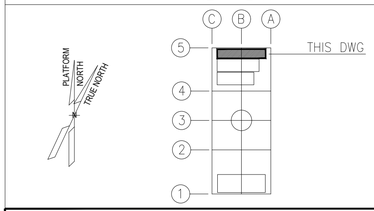
HVAC SLEEVE LEGEND:

300x300 — INTERNAL SIZE OF DUCT L x H (mm)
SL-I-401
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-401
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-401	238	140.5	60	6x1	
	E-MCT-402	271	238	60	6x2	
INSTRUMENTAL	I-MCT-401	793	238	60	6x6	
	I-MCT-402	271	179.5	60	4x2	
	I-MCT-403	411.5	238	60	6x3	
HVAC	H-MCT-401	140.5	238	60	6x1	
	H-MCT-402	140.5	238	60	6x1	

ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	11/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
01	08/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	30/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND — ROSETTI MARINO

TITLE :

B-400 DETAILED DRAWINGS-E&I SHELTERS

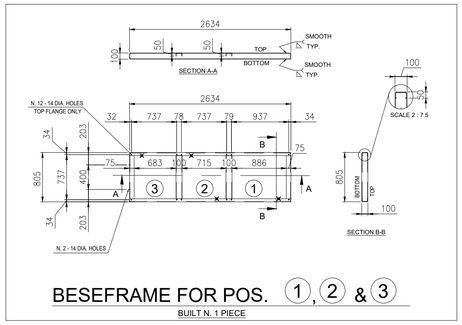
CONTRACT NO./TITLE CONTRACT_NO. 1724000049 | SCALE 1:50
DRAWN M.G. | CHECKED O.A. | APPROVED C.A. | DATE 11/07/24
A1 | DRAWING NO. 1724000049-AR-DD-00021 | SHEET 002 | REV. 02

File Name : 1724000049-AR-DD-00021-REV.02

DRAWING NO. 1724000049-AR-DD-00021

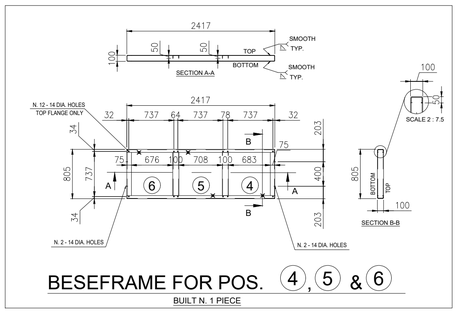
REV. 02

B-400
I&T EQUIPMENT ROOM
BASEFRAME LOCATION PLAN



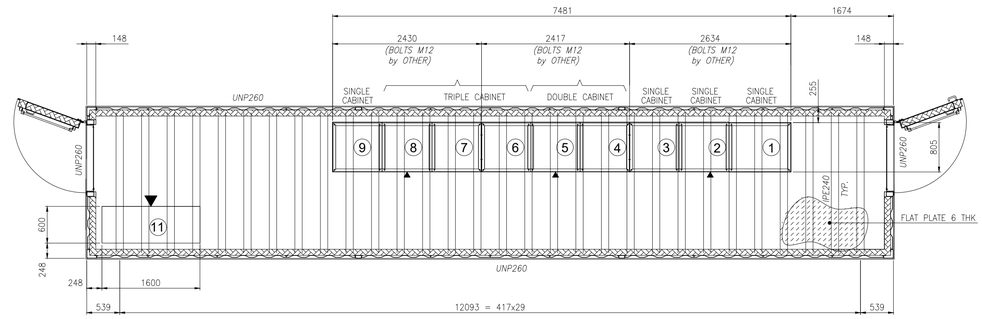
BESEFRAME FOR POS. (1), (2) & (3)

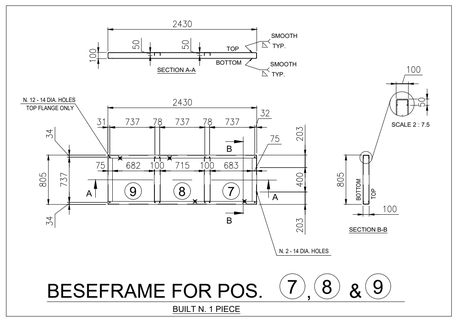
BUILT N. 1 PIECE



BESEFRAME FOR POS. (4), (5) & (6)

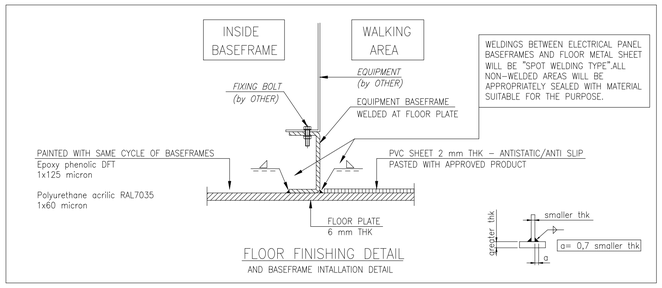
BUILT N. 1 PIECE





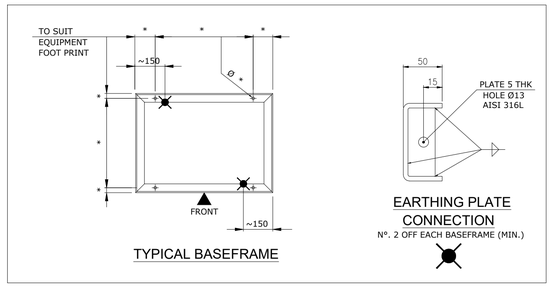
BESEFRAME FOR POS. (7), (8) & (9)

BUILT N. 1 PIECE



FLOOR FINISHING DETAIL

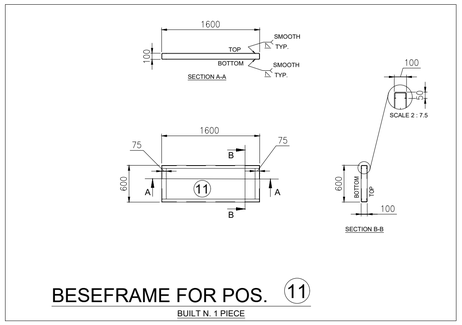
AND BASEFRAME INTALLATION DETAIL



TYPICAL BASEFRAME

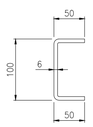
EARTHING PLATE CONNECTION

N°. 2 OFF EACH BASEFRAME (MIN.)



BESEFRAME FOR POS. (11)

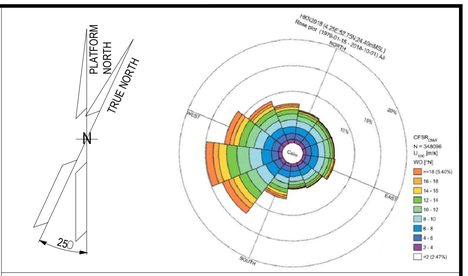
BUILT N. 1 PIECE



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

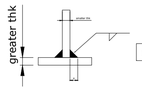
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	SCOPE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	ASI
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	ASI
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	ASI
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	ASI
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	ASI
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	ASI
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	ASI
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	ASI
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	ASI
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	ASI



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".



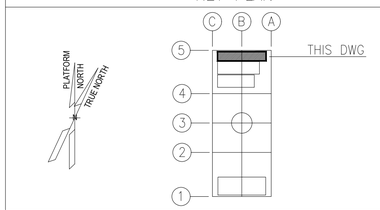
6. SURFACE TREATMENT ACCORDING DOCUMENT N. 1724000049-MAT-PRO-00004 - PAINTING PROCEDURE FINAL COLOUR LIGHT GREY RAL 7035.

LEGEND

ASI = ALEX SISTEMI

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	30/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND

ROSETTI MARINO

TITLE :

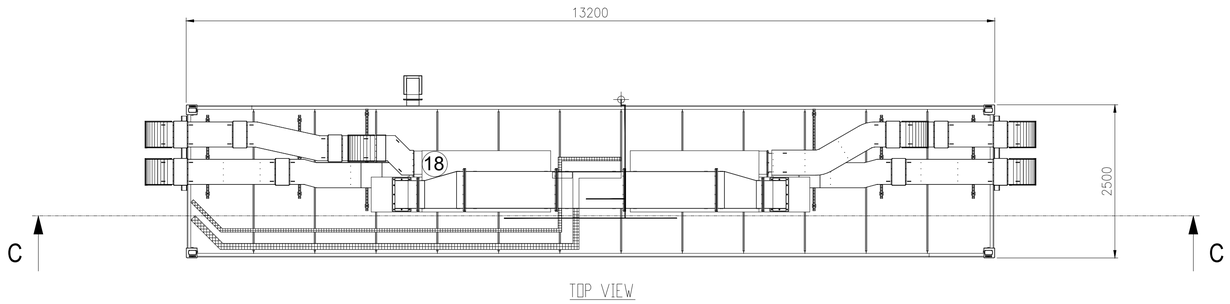
B-400 DETAILED DRAWINGS-E&I SHELTERS

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-00021	SHEET 003	REV. 02

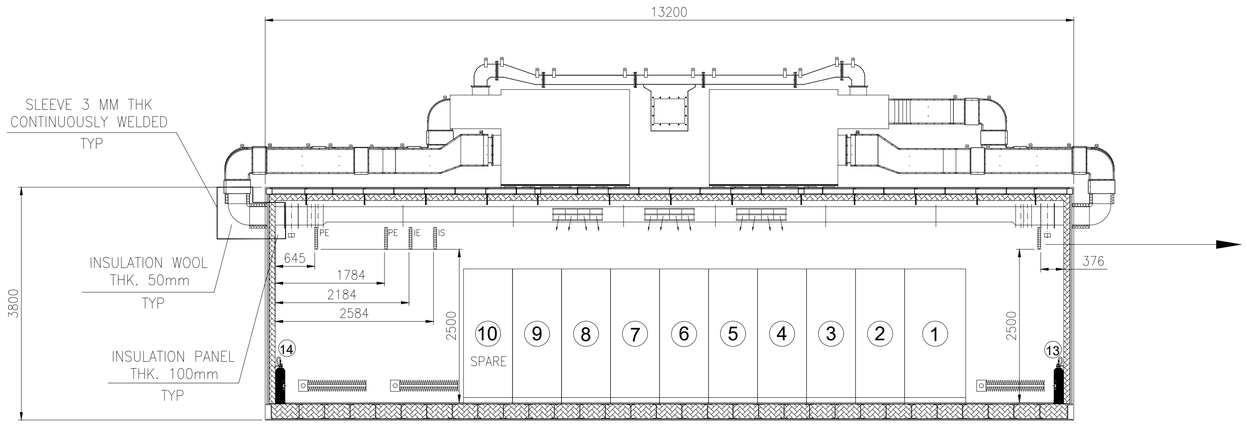
File Name : 1724000049-AR-DD-00021-REV.02

DRAWING NO. 1724000049-AR-DD-00021

REV. 02

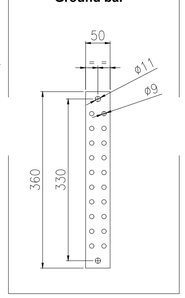


TOP VIEW



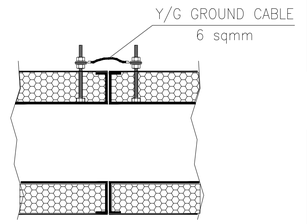
DET. 3

TYPICAL DETAIL
Ground bar



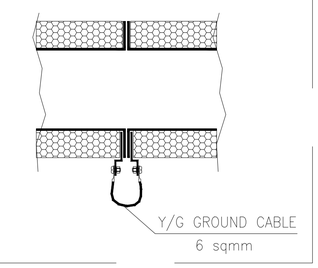
DET. 1

EXTERNAL DUCT



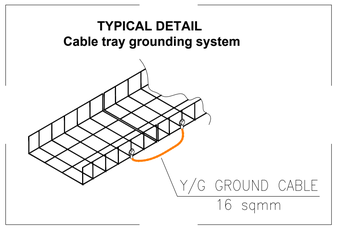
DET. 2

INTERNAL DUCT



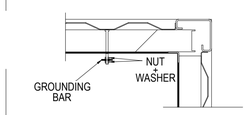
DET. 4

TYPICAL DETAIL
Cable tray grounding system



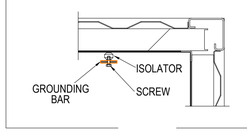
DET. 5

TYPICAL FASTENING DETAIL



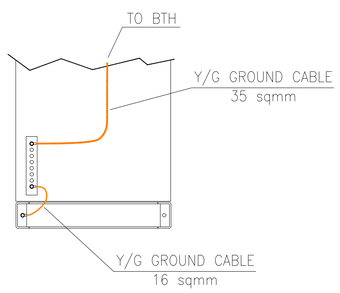
DET. 6

TYPICAL INSTALLATION BTH PI and IS



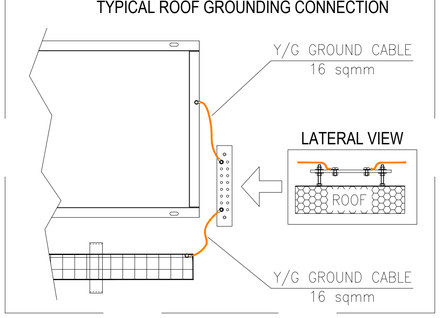
DET.8

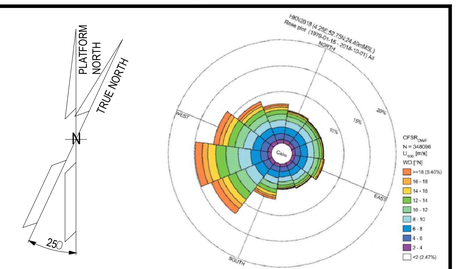
TYPICAL CABINET GROUNDING CONNECTION



DET. 7

TYPICAL ROOF GROUNDING CONNECTION





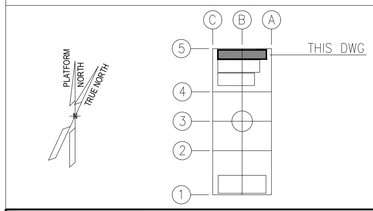
NOTES

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.

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	30/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND | ROSETTI MARINO

TITLE :

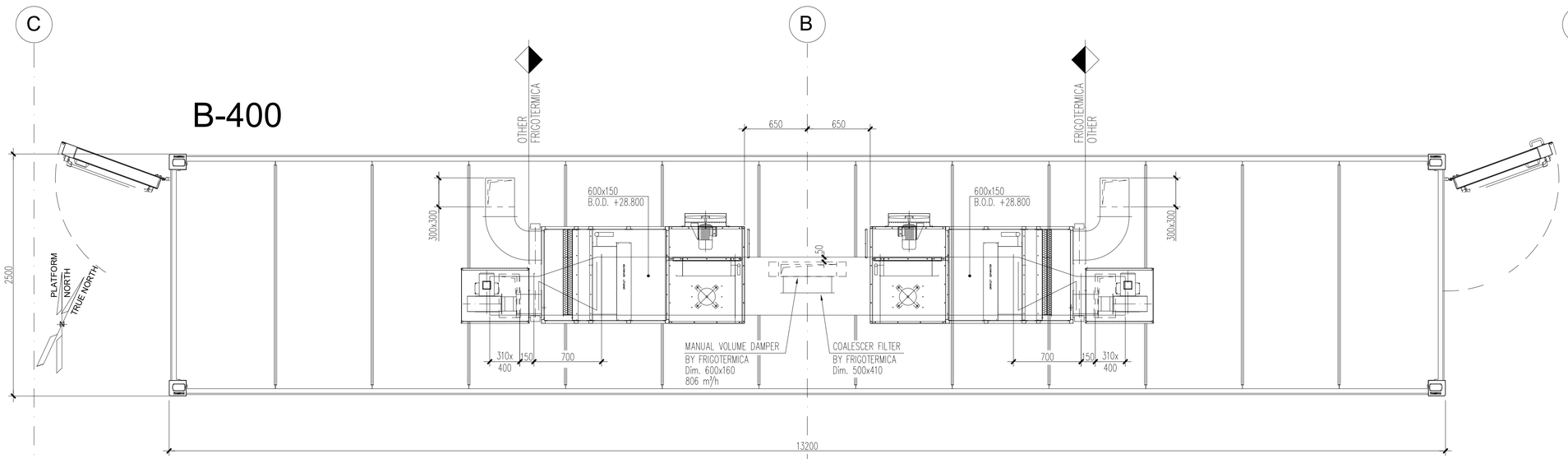
B-400 DETAILED DRAWINGS-E&I SHELTERS

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-00021	SHEET 004	REV. 02

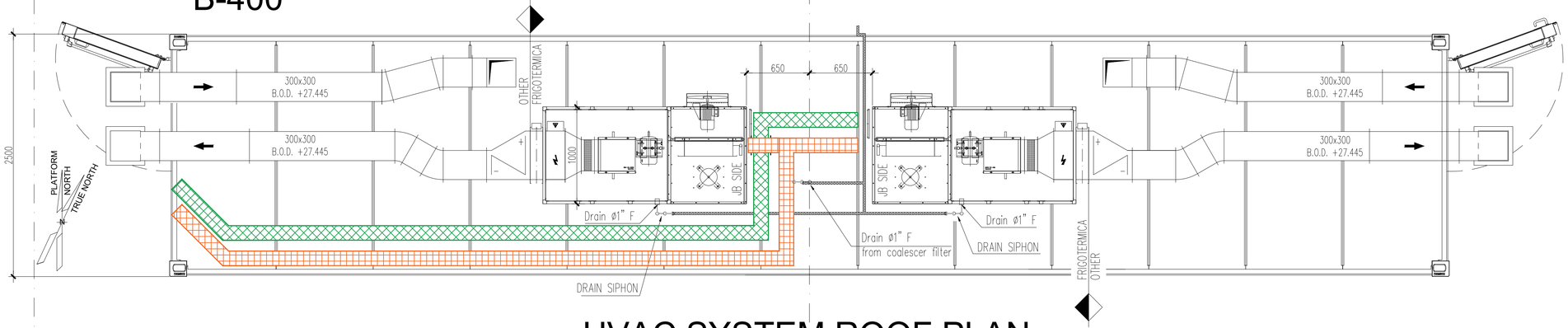
File Name : 1724000049-AR-DD-00021-REV.02

DRAWING NO. 1724000049-HV-DA-00067_0

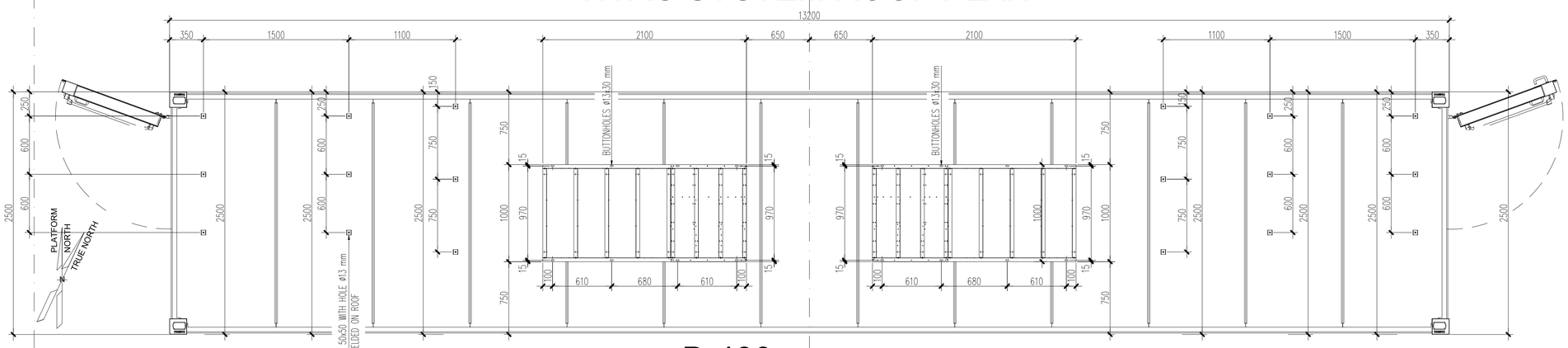
REV. 00



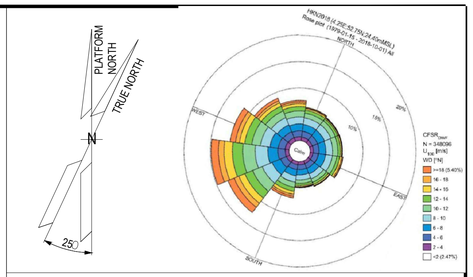
HVAC SYSTEM ROOF PLAN



HVAC SYSTEM ROOF PLAN

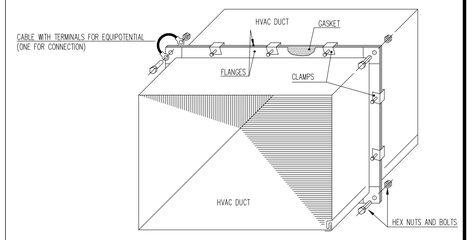


B-400
HVAC SUPPORT PLAN ON ROOF



NOTES

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

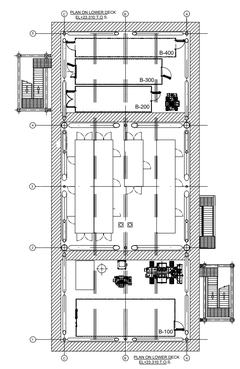


TYPICAL EQUIPOTENTIAL INSTALLING FOR FLANGE CONNECTION INDOOR AIR DUCT

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-400
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

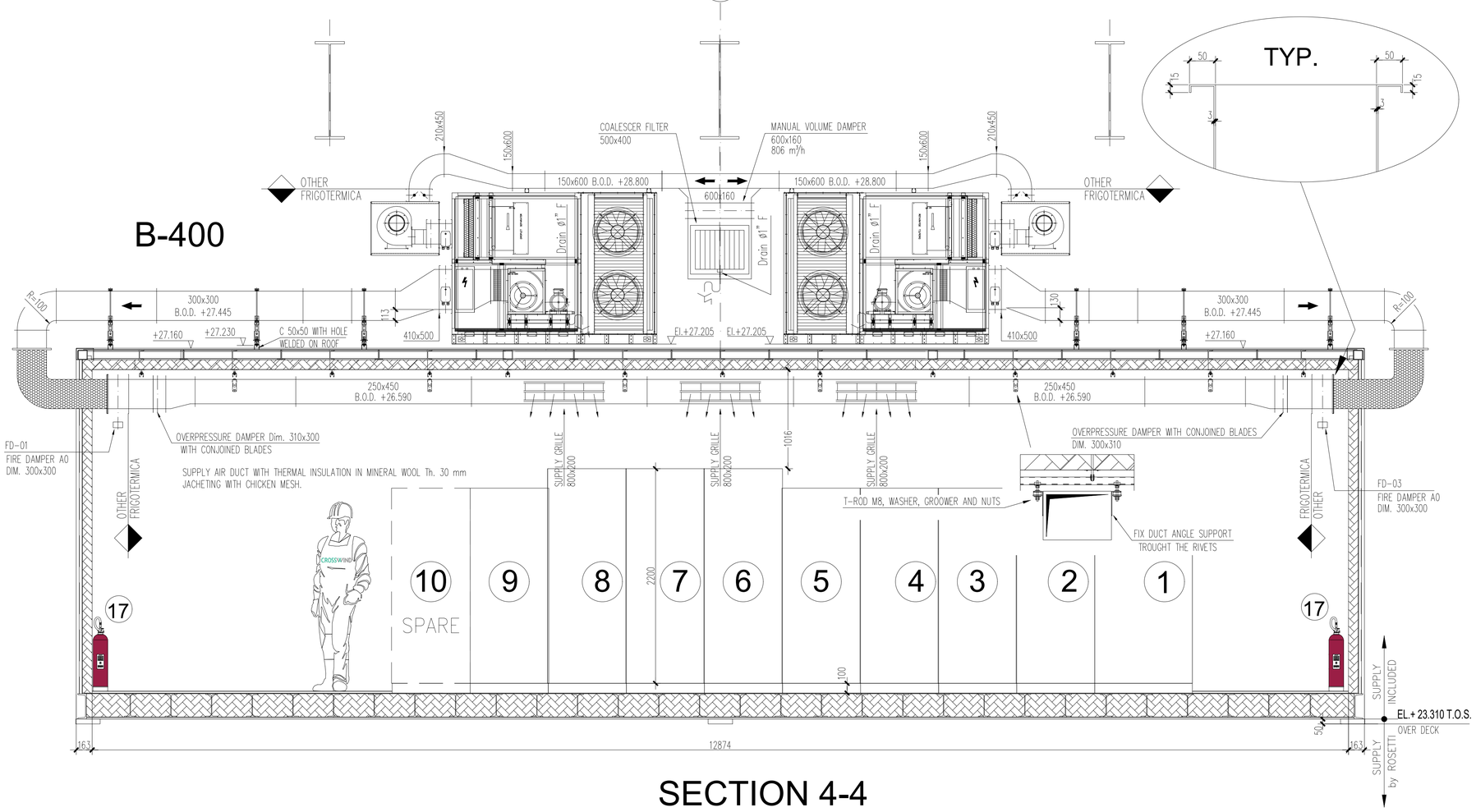
A1	DRAWING NO. 1724000049-HV-DA-00067	SHEET 001	REV. 00

File Name : 1724000049-HV-DA-00067_0

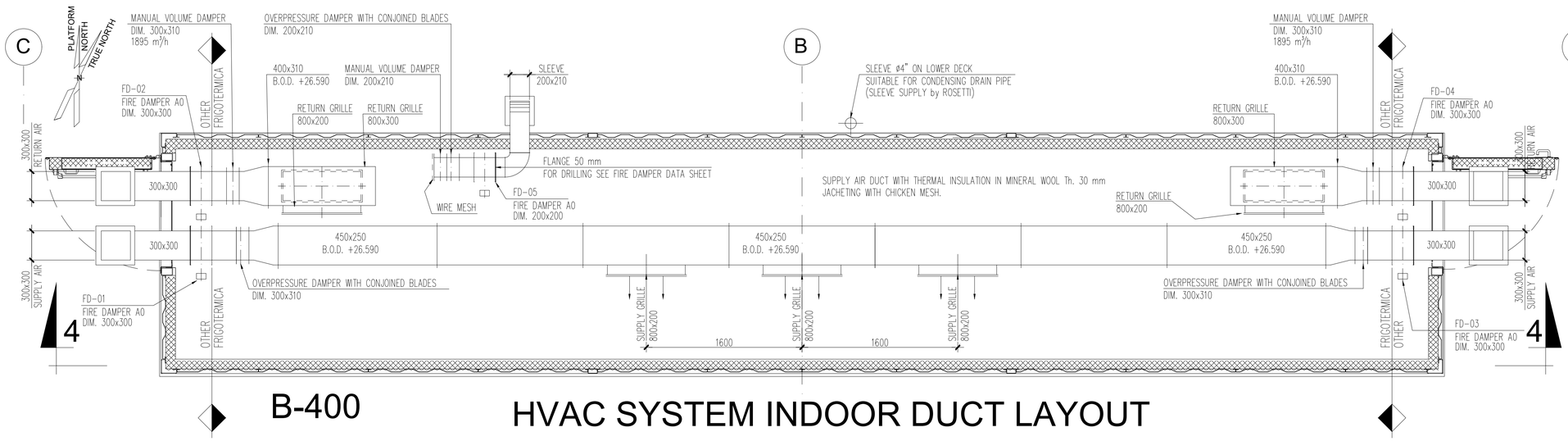
DRAWING NO. 1724000049-HV-DA-00067_0

REV. 00

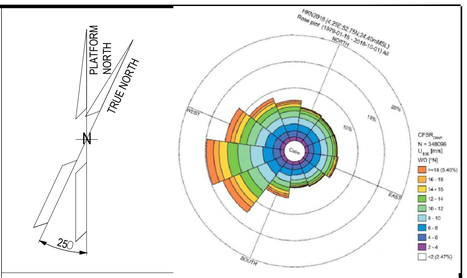
B-400



SECTION 4-4

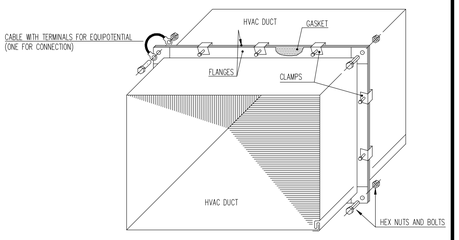


B-400 HVAC SYSTEM INDOOR DUCT LAYOUT



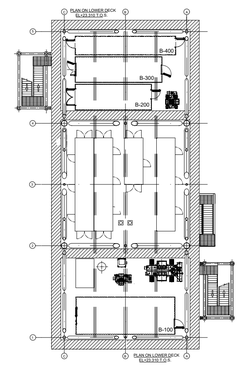
NOTES

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-400
HVAC SYSTEM – G.A. AND DETAILS

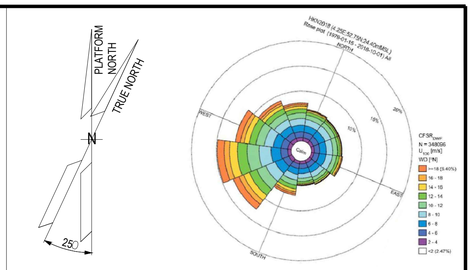
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 25
DRAWN S.Z.	CHECKED S.S.	APPROVED M.G.	DATE 13/06/2024
A1	DRAWING NO. 1724000049-HV-DA-00067	SHEET 002	REV. 00

File Name : 1724000049-HV-DA-00067_0

DRAWING NO.: 123A90-1724000049-HV-PID-00042

REV.: 01

BASE LOAD POWER HUB (BLPH)
B-400 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.C.	ISSUE FOR INFORMATION (IFI)
0	10/06/24	S.Z.	S.S.	M.C.	ISSUE FOR INFORMATION (IFI)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH) B-400 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-00042	SHEET 001	REV. 01

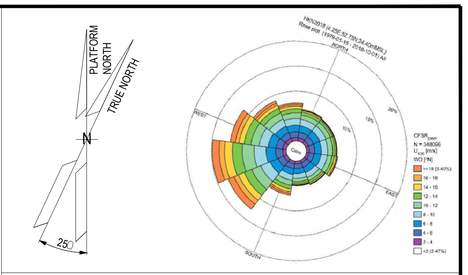
File Name : 123A90-1724000049-HV-PID-00042-REV.01

DRAWING NO. 123A90-1724000049-HV-PID-00042

REV. 01

REV.	SHEET NUMBER	DESCRIPTION	REF. CODE
02	001	FRONT PAGE	IFR
02	002	SUMMARY and GENERAL NOTES	IFR
02	003	P&ID HVAC System	IFR

GENERAL NOTES



NOTES

LEGEND

HOLDS

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)

ALEXSISTEMI spa

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
B-400 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-00042	SHEET 002	REV. 01

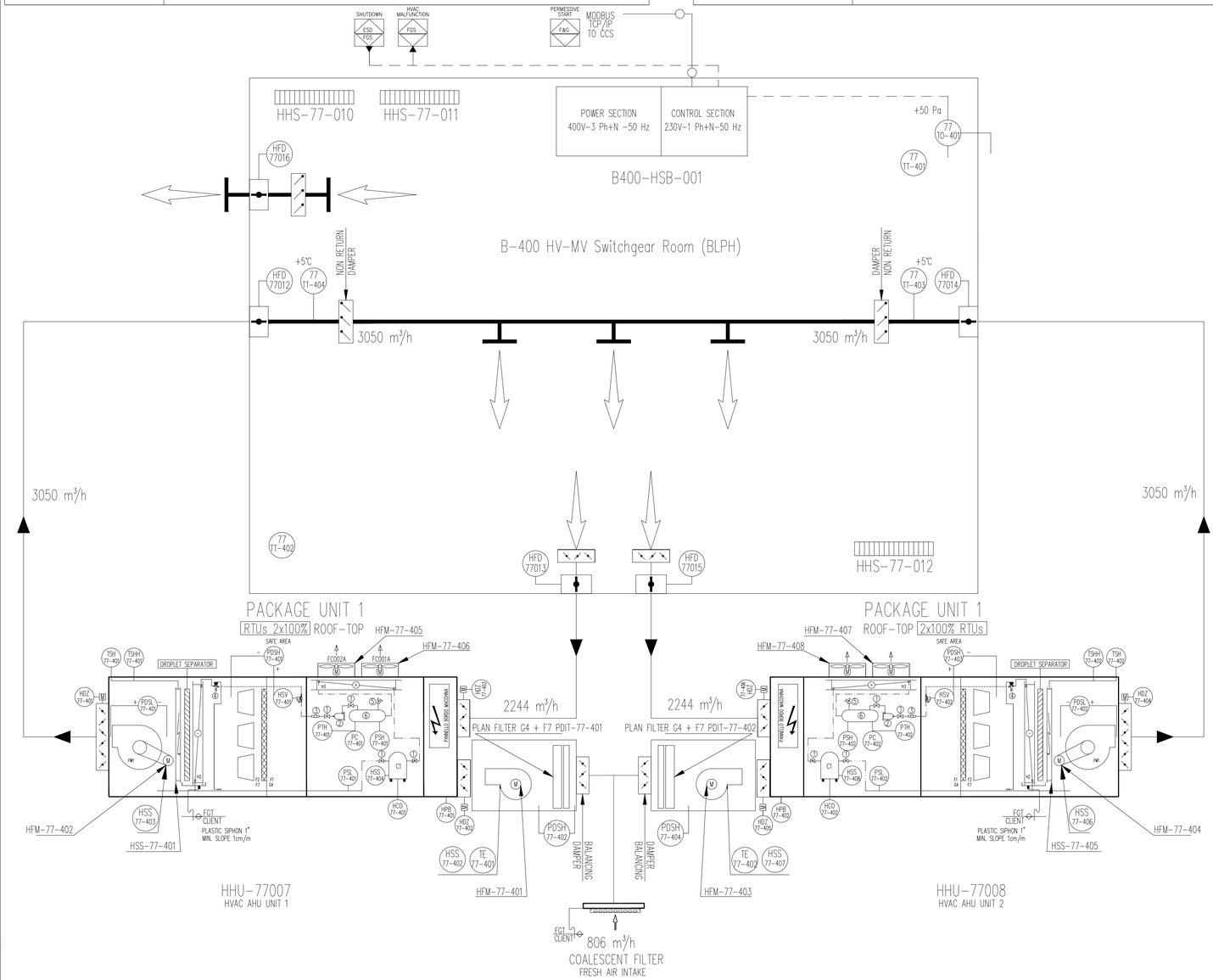
File Name : 123A90-1724000049-HV-PID-00042-REV.01

DRAWING NO. 123A90-1724000049-HV-PID-00042

REV. 01

ITEM	HVAC-ROOF TOP
DESCRIPTION	HVAC UNIT
MAKER	FRIGOTERMICA srl
MODEL	4112-TBA
SUPPLY AIR FLOW	847,2 l/s
COOLING COIL CAPACITY	12 kW AT +26°C Outdoor Temperature
HEATING COIL CAPACITY	8.6 kW
TENSIONE	400 V - 50 Hz - 3 Ph+N
EXECUTION	SAFE AREA
REFRIGERANT	R513a

ITEM	HVAC-PRESSURISING FAN
DESCRIPTION	HVAC UNIT
MAKER	FRIGOTERMICA srl
MODEL	4112-TBA
SUPPLY AIR FLOW	224 l/s
COOLING COIL CAPACITY	N.A.
HEATING COIL CAPACITY	N.A.
TENSIONE	400 V - 50 Hz - 3 Ph+N
EXECUTION	SAFE AREA
REFRIGERANT	N.A.



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

NOTES:

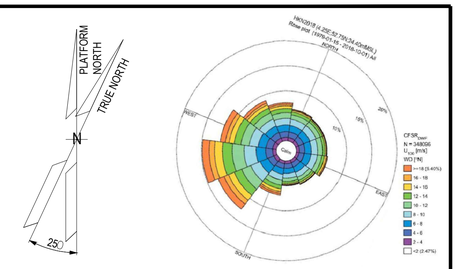
- HVAC POWER CABINET will energize what above shown.
- HVAC CONTROL CABINET will control all what above shown.
- HVAC POWER CABINET will energize light and socket.
- Outside drainage system shall be provided of heating cable with anti-freeze funcion to avoid ice inside pipes when outside temeprature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

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

LEGEND

HOLDS

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)

ALEXSISTEMI spa

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-400 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-00042	SHEET 003	REV. 01

File Name : 123A90-1724000049-HV-PID-00042-REV.01

B-400 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	a	
1		5G25	by Client	by Client	by Client	by Client	by Client	by Client	by Client	HVAC PANEL	by Client	B400-HSB-001	inside B400	N.A.	0	25,60	by Client	General power supply 400V 3ph+N+PE
2		3G4	by Client	by Client	by Client	by Client	by Client	by Client	by Client	HVAC PANEL	by Client	B400-HSB-001	inside B400	N.A.	0	11,10	by Client	UPS Power Supply 230V 1ph+N+PE
3	77401-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SPACE HEATER 1	2900.M20N	HSS-77-010	inside B400	N.A.	12,5	9,80	LOW VOLTAGE	
4	77402-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SPACE HEATER 2	2900.M20N	HSS-77-011	inside B400	N.A.	14,0	9,80	LOW VOLTAGE	
5	77403-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SPACE HEATER 3	2900.M20N	HSS-77-012	inside B400	N.A.	25,0	9,80	LOW VOLTAGE	
6	77404-CEL-L1	5G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	BLINDO	2900.M20N	PECW-B400H-F1-L1-01	inside B400	N.A.	8,5	11,60	LOW VOLTAGE	
7	77405-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO	N.A.	PECW-B400H-F1-L1-01	inside B400	LAMP (E) 2	2900.M20N	PELF-B400H-F1-L1-01	inside B400	N.A.	0,5	10,80	LOW VOLTAGE	
8	77406-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO	N.A.	PECW-B400H-F1-L1-01	inside B400	LAMP 1	2900.M20N	PELF-B400H-F1-L1-02	inside B400	N.A.	0,5	9,80	LOW VOLTAGE	
9	77407-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	BLINDO	N.A.	PECW-B400H-F1-L1-01	inside B400	LAMP 3	2900.M20N	PELF-B400H-F1-L1-03	inside B400	N.A.	0,5	9,80	LOW VOLTAGE	
10	77408-CEL-L1	3G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	MODULE SOCKET	2900.M20N	PESO-B400H-F2-L2-01	inside B400	N.A.	20,0	9,80	LOW VOLTAGE	
11	77401-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	MODULE SWITCH 1	2900.M20N	CELS-B400H-F1-L1-01	inside B400	N.A.	19,5	8,20	CONTROL	
12	77402-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	MODULE SWITCH 2	2900.M20N	CELS-B400H-F1-L1-02	inside B400	N.A.	8,5	8,20	CONTROL	
13		TBA	by Client	by Client	by Client	SIS	by Client	by Client	by Client	HVAC PANEL	by Client	B400-HSB-001	inside B400	N.A.	0		by Client	
14		TBA	by Client	by Client	by Client	SIS	by Client	by Client	by Client	HVAC PANEL	by Client	B400-HSB-001	inside B400	N.A.	0		by Client	
15		TBA	by Client	by Client	by Client	PCS	by Client	by Client	by Client	HVAC PANEL	by Client	B400-HSB-001	inside B400	N.A.	0		by Client	
16	77448-CEL-L1	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	TEMPERATURE TRANSMITTER 1	2900.M20N	77-TT-401	inside B400	N.A.	7,5	11,10	CONTROL	
17	77449-CEL-L1	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	TEMPERATURE TRANSMITTER 2	2900.M20N	77-TT-402	inside B400	N.A.	9,5	11,10	CONTROL	
18	77451-CEL-L1	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	TEMPERATURE TRANSMITTER 3	2900.M20N	77-TT-403	inside B400	N.A.	18,0	11,10	CONTROL	
19	77452-CEL-L1	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	TEMPERATURE TRANSMITTER 4	2900.M20N	77-TT-404	inside B400	N.A.	19,0	11,10	CONTROL	
20	77450-CEL-L1	3x1,5+Sh	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	DIFFERETIAL PRESSURE TRANSMITTER	2900.M20N	77-TP-401	inside B400	N.A.	7,5	11,10	CONTROL	
21	77409-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	PRESSURIZING FAN	2900.M20N	HFM-77-401	HHU-77007	HJB-77007-A	12	10,80	LOW VOLTAGE	
22	77410-CEL-L1	4G4	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SUPPLY FAN	2900.M20N	HFM-77-402	HHU-77007	HJB-77007-A	12	12,10	LOW VOLTAGE	
23	77411-CEL-L1	4G10	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	COMPRESSOR	2900.M25N	HCO-77-401	HHU-77007	HJB-77007-A	12	15,70	LOW VOLTAGE	
24	77412-CEL-L1	4G10	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	ELECTRICAL HEATER	2900.M25N	HSS-77-401	HHU-77007	HJB-77007-A	12	15,70	LOW VOLTAGE	
25	77413-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	CONDENSER FAN 1	2900.M20N	HFM-77-405	HHU-77007	HJB-77007-A	12	10,80	LOW VOLTAGE	
26	77414-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	CONDENSER FAN 2	2900.M20N	HFM-77-406	HHU-77007	HJB-77007-A	12	10,80	LOW VOLTAGE	
27	77415-CEL-L1	3G1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	POWER SUPPLY MOTORISED DAMPER	2900.M20N	HDZ-77-401	HHU-77007	HJB-77007-A	12	9,80	LOW VOLTAGE	
28	77408-CEC-L1	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SIGNAL MOTORISED DAMPER	2900.M20N	HDZ-77-401	HHU-77007	HJB-77007-B	12	9,70	CONTROL	
29	77416-CEL-L1	3G1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	POWER SUPPLY MOTORISED DAMPER	2900.M20N	HDZ-77-402	HHU-77007	HJB-77007-A	12	9,80	LOW VOLTAGE	
30	77409-CEC-L1	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SIGNAL MOTORISED DAMPER	2900.M20N	HDZ-77-402	HHU-77007	HJB-77007-B	12	9,70	CONTROL	
31	77417-CEL-L1	3G1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	POWER SUPPLY MOTORISED DAMPER	2900.M20N	HDZ-77-403	HHU-77007	HJB-77007-A	12	9,80	LOW VOLTAGE	
32	77410-CEC-L1	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SIGNAL MOTORISED DAMPER	2900.M20N	HDZ-77-403	HHU-77007	HJB-77007-B	12	9,70	CONTROL	
33	77411-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	LOW PRESSURE SWITCH	2900.M20N	PDSL-77-401	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
34	77412-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	PRESSURIZING FAN MOTOR PTC	2900.M20N	TE-77-401	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
35	77413-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	EMERGENCY BUTTON	2900.M20N	HPB-77-401	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
36	77414-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SUPPLY FAN MOTOR HEATER	2900.M20N	HSS-77-402	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
37	77415-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	PRESSURIZING FAN MOTOR HEATER	2900.M20N	HSS-77-403	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
38	77447-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	PDSH - FILTER 1 DIFFERENTIAL PRESSURE SWITCH HIGH PRESSURE	2900.M20N	PDSH-77-401	HHU-77007	HJB-77007-B	20,5	8,20	CONTROL	
39	77451-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	PDSH - FILTER 2 DIFFERENTIAL PRESSURE SWITCH HIGH PRESSURE	2900.M20N	PDSH-77-402	HHU-77007	HJB-77007-B	20,5	8,20	CONTROL	
40	77416-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	COMPRESSOR OIL HEATER	2900.M20N	HSS-77-404	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
41	77417-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SOLENOID VALVE	2900.M20N	HSV-77-401	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
42	77419-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	CONDENSING PRESSURE SWITCH	2900.M20N	PC-77-401	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
43	77420-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	CONDENSING PRESSURE TRASDUCER	2900.M20N	PTH-77-401	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
44	77421-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	ELERICAL HEATER HIGH TEMP	2900.M20N	TSH-77-401	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
45	77422-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	ELECTRICAL HEATER VERI HIGH TEMP	2900.M20N	TSHH-77-401	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
46	77423-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	LOW PRESSURE SWITCH	2900.M20N	PSL-77-401	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
47	77424-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	HIGH PRESSURE SWITCH	2900.M20N	PSH-77-401	HHU-77007	HJB-77007-B	12	8,20	CONTROL	
48	77418-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	PRESSURIZING FAN	2900.M20N	HFM-77-403	HHU-77008	HJB-77008-A	12	10,80	LOW VOLTAGE	
49	77419-CEL-L1	4G4	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SUPPLY FAN	2900.M20N	HFM-77-404	HHU-77008	HJB-77008-A	12	12,10	LOW VOLTAGE	
50	77420-CEL-L1	4G10	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	COMPRESSOR	2900.M25N	HCO-77-402	HHU-77008	HJB-77008-A	12	15,70	LOW VOLTAGE	
51	77421-CEL-L1	4G10	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	ELECTRICAL HEATER	2900.M25N	HSS-77-405	HHU-77008	HJB-77008-A	12	15,70	LOW VOLTAGE	
52	77422-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	CONDENSER FAN 1	2900.M20N	HFM-77-407	HHU-77008	HJB-77008-A	12	10,80	LOW VOLTAGE	
53	77423-CEL-L1	4G2,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	CONDENSER FAN 2	2900.M20N	HFM-77-408	HHU-77008	HJB-77008-A	12	10,80	LOW VOLTAGE	
54	77424-CEL-L1	3G1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	POWER SUPPLY MOTORISED DAMPER	2900.M20N	HDZ-77-404	HHU-77008	HJB-77008-A	12	9,80	LOW VOLTAGE	
55	77425-CEC-L1	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SIGNAL MOTORISED DAMPER	2900.M20N	HDZ-77-404	HHU-77008	HJB-77008-B	12	9,70	CONTROL	
56	77425-CEL-L1	3G1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	POWER SUPPLY MOTORISED DAMPER	2900.M20N	HDZ-77-405	HHU-77008	HJB-77008-A	12	9,80	LOW VOLTAGE	
57	77426-CEC-L1	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SIGNAL MOTORISED DAMPER	2900.M20N	HDZ-77-405	HHU-77008	HJB-77008-B	12	9,70	CONTROL	
58	77426-CEL-L1	3G1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	POWER SUPPLY MOTORISED DAMPER	2900.M20N	HDZ-77-406	HHU-77008	HJB-77008-A	12	9,80	LOW VOLTAGE	
59	77427-CEC-L1	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SIGNAL MOTORISED DAMPER	2900.M20N	HDZ-77-406	HHU-77008	HJB-77008-B	12	9,70	CONTROL	
60	77428-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	LOW PRESSURE SWITCH	2900.M20N	PDSL-77-402	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
61	77429-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	PRESSURIZING FAN MOTOR PTC	2900.M20N	TE-77-402	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
62	77430-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	EMERGENCY BUTTON	2900.M20N	HPB-77-402	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
63	77431-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SUPPLY FAN MOTOR HEATER	2900.M20N	HSS-77-406	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
64	77432-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	PRESSURIZING FAN MOTOR HEATER	2900.M20N	HSS-77-407	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
65	77448-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	PDSH - FILTER 1 DIFFERENTIAL PRESSURE SWITCH HIGH PRESSURE	2900.M20N	PDSH-77-403	HHU-77008	HJB-77008-B	20,5	8,20	CONTROL	
66	77452-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	PDSH - FILTER 2 DIFFERENTIAL PRESSURE SWITCH HIGH PRESSURE	2900.M20N	PDSH-77-404	HHU-77008	HJB-77008-B	20,5	8,20	CONTROL	
67	77433-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	COMPRESSOR OIL HEATER	2900.M20N	HSS-77-408	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
68	77434-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	SOLENOID VALVE	2900.M20N	HSV-77-402	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
69	77436-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	CONDENSING PRESSURE SWITCH	2900.M20N	PC-77-402	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
70	77437-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	CONDENSING PRESSURE TRASDUCER	2900.M20N	PTH-77-402	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
71	77438-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	ELECTRICAL HEATER HIGH TEMP THERMOSTATE	2900.M20N	TSH-77-402	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
72	77439-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	ELECTRICAL HEATER VERI HIGH TEMP TRASMITTER	2900.M20N	TSHH-77-402	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
73	77440-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	LOW PRESSURE SWITCH	2900.M20N	PSL-77-402	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
74	77441-CEC-L1	2x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	HIGH PRESSURE SWITCH	2900.M20N	PSH-77-402	HHU-77008	HJB-77008-B	12	8,20	CONTROL	
75	77442-CEC-L2	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77012	inside B400	N.A.	11	9,70	CONTROL	
76	77443-CEC-L2	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77013	inside B400	N.A.	8	9,70	CONTROL	
77	77444-CEC-L2	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77014	inside B400	N.A.	7	9,70	CONTROL	
78	77445-CEC-L2	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77015	inside B400	N.A.	18	9,70	CONTROL	
79	77446-CEC-L2	4x1,5	XLPE/UNEL S2	0,6/1,0	PVC	HVAC PANEL	N.A.	B400-HSB-001	inside B400	Fire and Gas Damper (included actuator)	2900.M20N	HFD-77016	inside B400	N.A.	19	9,70	CONTROL	

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Section 7 MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-40 & process: MC & discipline : M

Mechanical	77-40 HVAC I&T Equipment Room B-400						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
B-400	I&T Equipment Room B-400	ONSHORE	C10002307	CZX01M	100	2024-10-15	RFC 1

ITEM	Tag	B-400	: I&T Equipment Room B-400		Dwg	1724000049-AR-DA-00017	
	S/Sys	77-40	: HVAC I&T Equipment Room B-400		Module	LD_B-400	
TASK	code	C10002307		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Mechanical Form CZX01M		Package - M

1	Check that the nameplate details and tag number are complete and correct.	OK
2	Check that the holding down arrangements are correct.	Note
3	Check for all interface piping/mechanical reinstated on site by contractor.	Note
4	Check that the package Mechanical equipment is complete and not damaged.	PL
5	Check all the equipment for correct lubrication, for oil leaks and cleanliness.	Note
6	Check for the free rotation of rotating equipment.	Note
7	Check the insulation, painting and for correct tagging and identification.	Note
8	Check that the earthing system of the equipment is as per specification.	OK
9	Check that the Package is fixed and tightened to the structures.	OK
10	Check the release note, FAT report and outstanding Punch list for the Package	Note
11	If required produce Red Line Mark Up for "AS BUILT".	

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

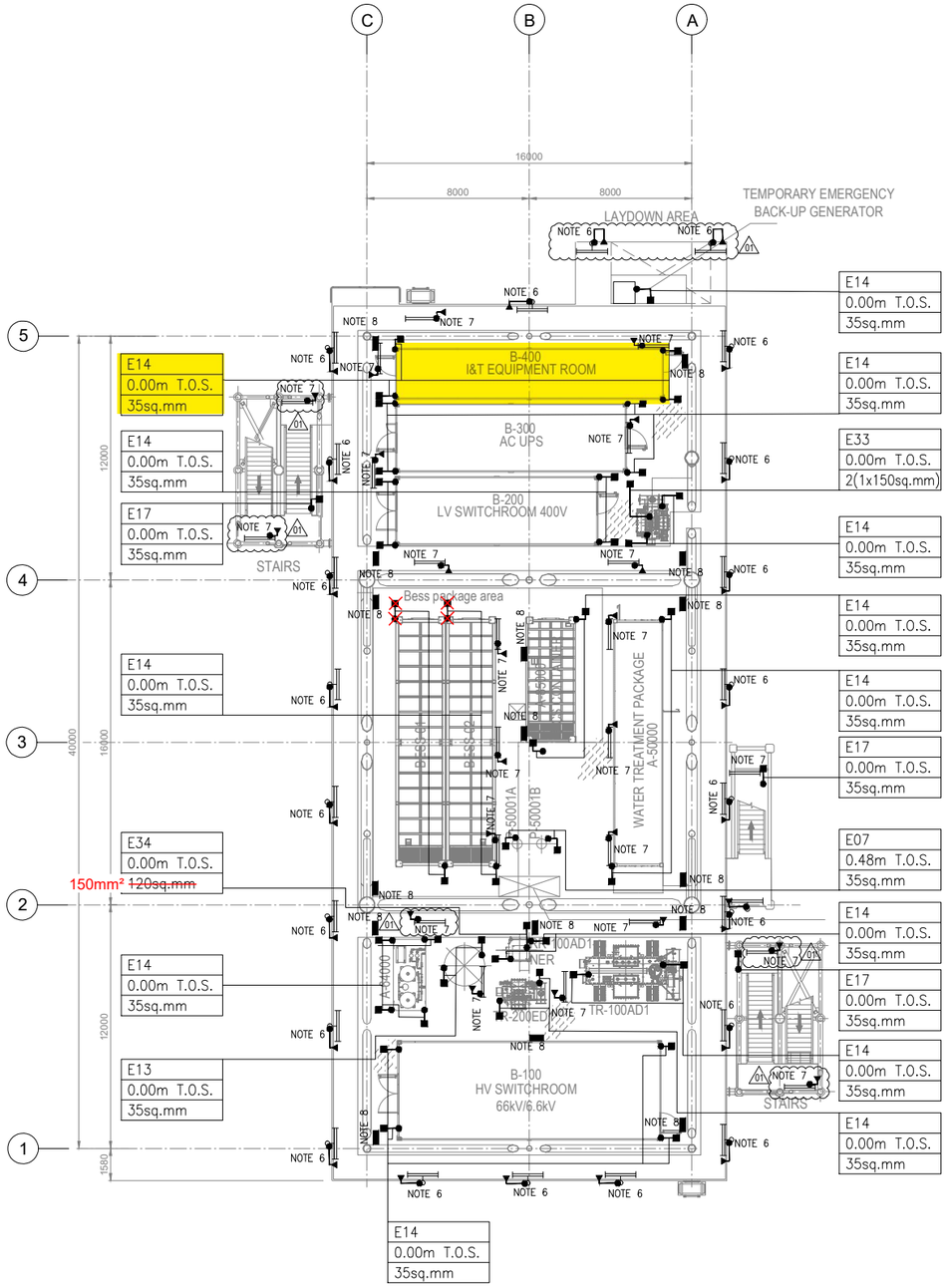
Point 2 PL: C30000017 / C30000021
Point 3 PL: C30000053 / C30000079 / C30000091 / C30000095

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	2024-10-14	2024-10-15	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T16:42:01.220Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-15T14:43:28.159Z	

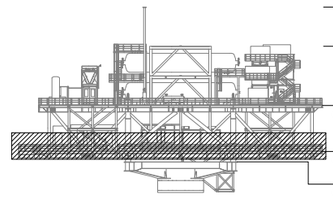
DRAWING NO. 123A90-DDL-EL-DL-20133

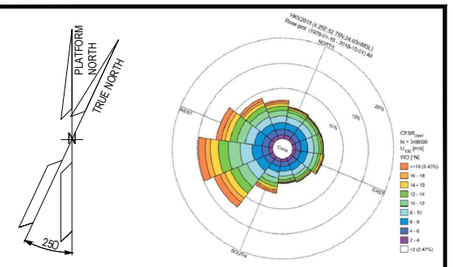
REV. 01



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

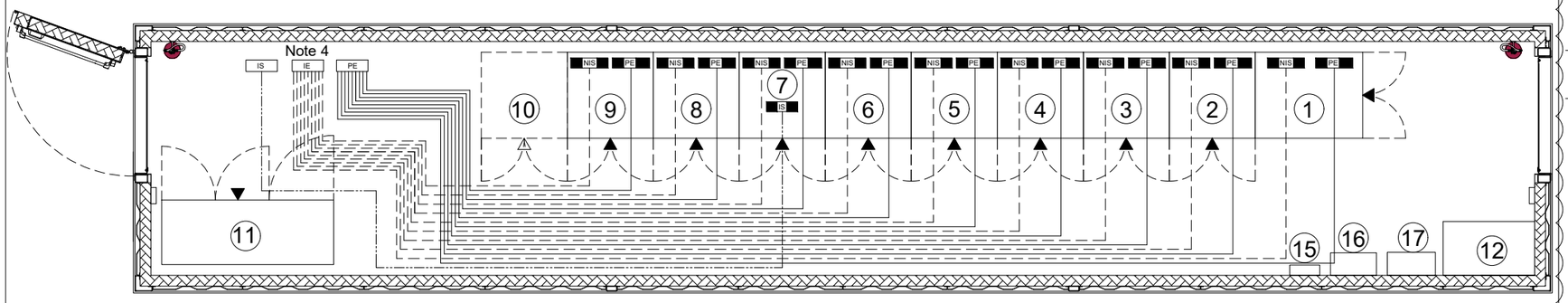
File Name : 123A90-DDL-EL-DL-20133

INSTRUMENT EQUIPMENT LIST		
REF.	TAG No.	DESCRIPTION
1	B400-SRV-001	SERVER CABINET
2	B400-NET-001	NETWORK CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET
4	B400-PCS-001	PCS SYSTEM CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET
6	B400-FGS-001	FGS SYSTEM CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1
8	B400-FGS-003	FGS MARSHALLING CABINET 2
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET
10	-	SPARE
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM
12	-	TABLE
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.
15	-	FIRST AID KIT
16	-	RESUSCITATION UNIT
17	-	CABINET INCLUDED N.10 ESCAPE MASK

NOTES

1 - THIS DOCUMENT 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 IN FIELD.
4 - THE EARTHING BUS BARS INSTALLATION SHALL BE PREFERABLY IN VERTICAL MODE.
5 - FOR EARTHING TYPICAL DETAILS AND Y/G CONDUCTOR CROSS SECTION SEE DOC. 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 - IN CASE OF CABLE CONNECTIONS BETWEEN TWO CABINETS, THE CABLE SCREEN SHALL BE CONNECTED TO IE AT MARSHALLING SIDE ONLY.

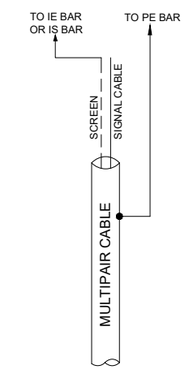
01



LEGEND

PE	EARTHING BUS BAR AISI 316L
NIS	INSULATED INSTRUMENT EARTH BUS BAR NOT INTRINSIC SAFETY DIM. 450x60x5mm AISI 316L
IS	INSULATED INSTRUMENT EARTH BUS BAR INTRINSIC SAFETY DIM. 450x60x5mm AISI 316L
— —	35sqmm Y/G INSULATED COPPER CONDUCTOR FOR PE (SEE NOTE 2)
——	35sqmm Y/G INSULATED COPPER CONDUCTOR FOR I.S. & NON I.S. (SEE NOTE 2)
▬	EARTHING BUS BAR 60x5mm AISI 316L (SEE NOTE 3)
PE	PROTECTIVE EARTH
IE	INSTRUMENT EARTH
IS	INTRINSICALLY SAFE EARTH

KEY



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40013**

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

ROSETTI MARINO SpA

01

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	14/05/24	MGA	LCA	DLO	ACCEPTED FOR CONSTRUCTION
00	19/01/24	INVIRAJ	AMBE/LCA	OYFO/MDO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING LAYOUT DRAWINGS(OFFSHORE ITER)
EQUIPMENT LAYOUT

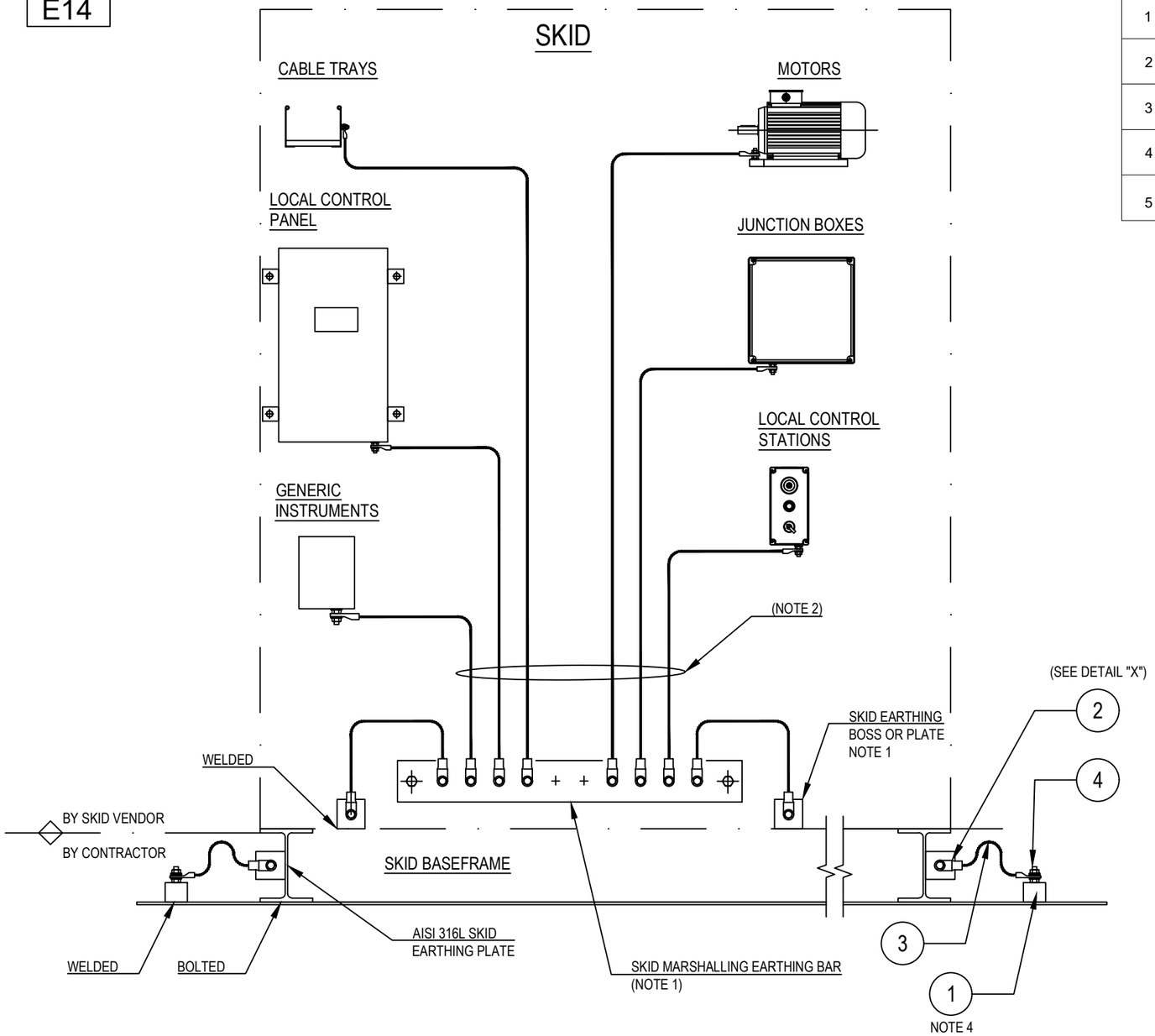
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-IN-DL-40013	003	01

F.to UNI A3: 420mmx297mm

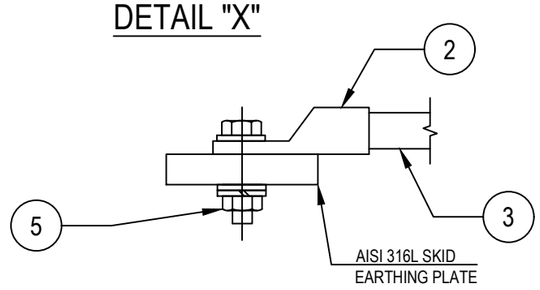
File Name : 123A90-DDL-IN-DL-430013 Rev. 01

E14



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

DETAIL "X"



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

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

REV.:	DATE:	SIGNATURE:
2_E	09/10/24	G.Randi

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR SKID BASEFRAME

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

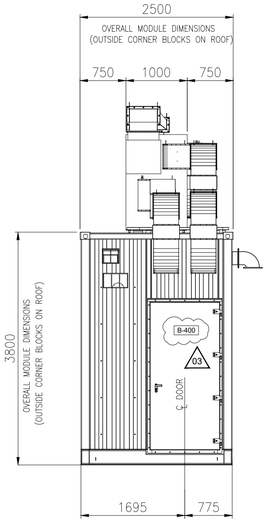
A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20090	014	02

F.to UNI A3: 420mmx297mm

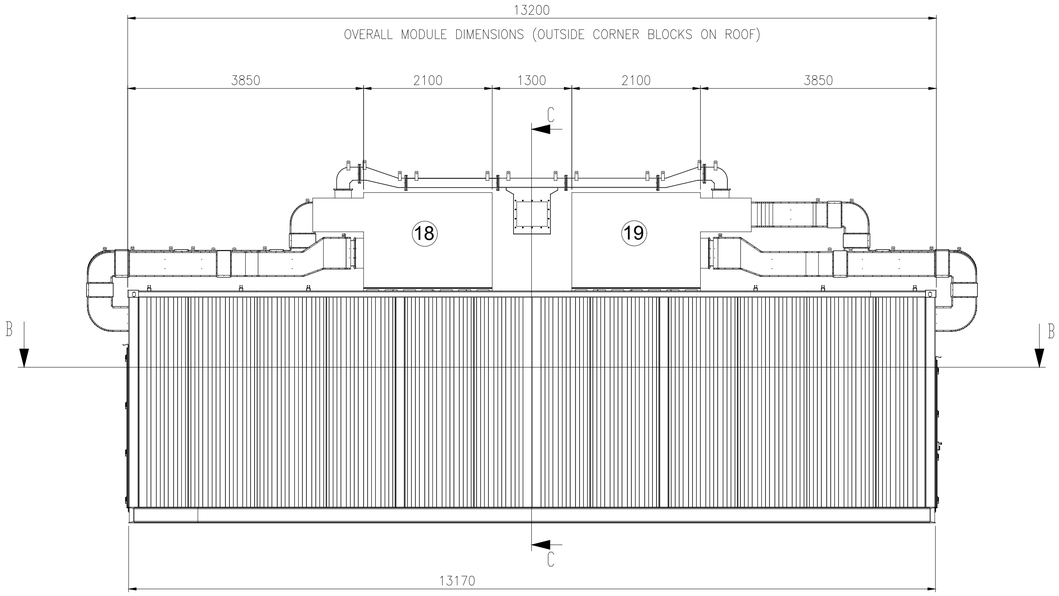
File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

DRAWING NO. 1724000049-AR-DA-00017

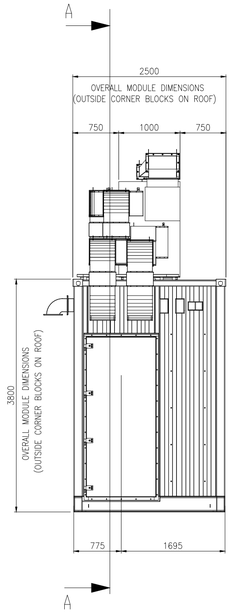
REV. 03



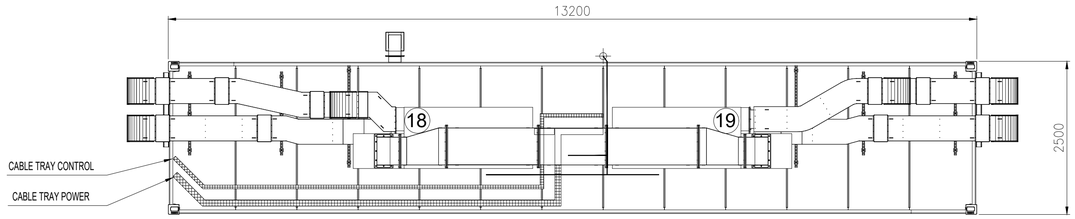
EAST VIEW



SOUTH VIEW



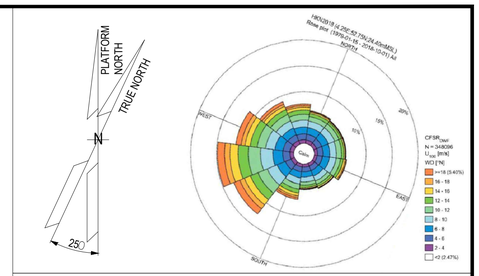
WEST VIEW



TOP VIEW

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-010	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-011 (03)	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-012	SPACE HEATER 3	184	145	1100	5	



NOTE

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

REFERENCE

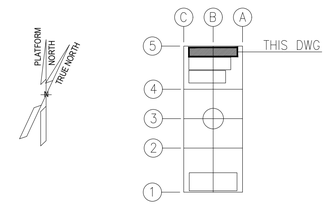
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007
(03) "B-400" FOUNDATION	1724000049-ST-DD-00013
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	04/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	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

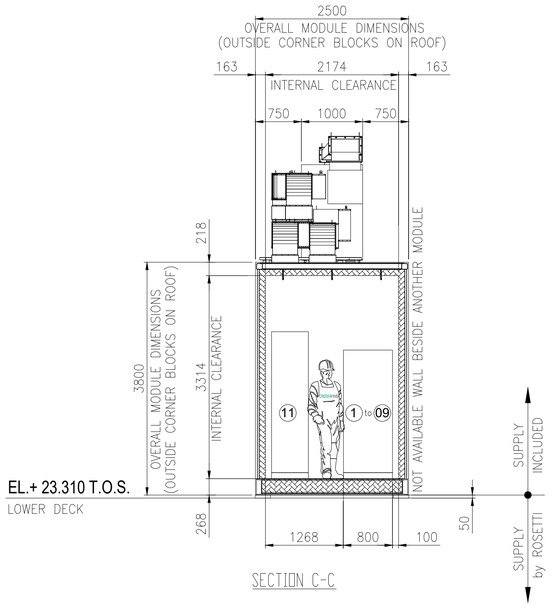


TITLE : BASE LOAD POWER HUB (BLPH)
B-400 GENERAL ARRANGEMENT DRAWINGS

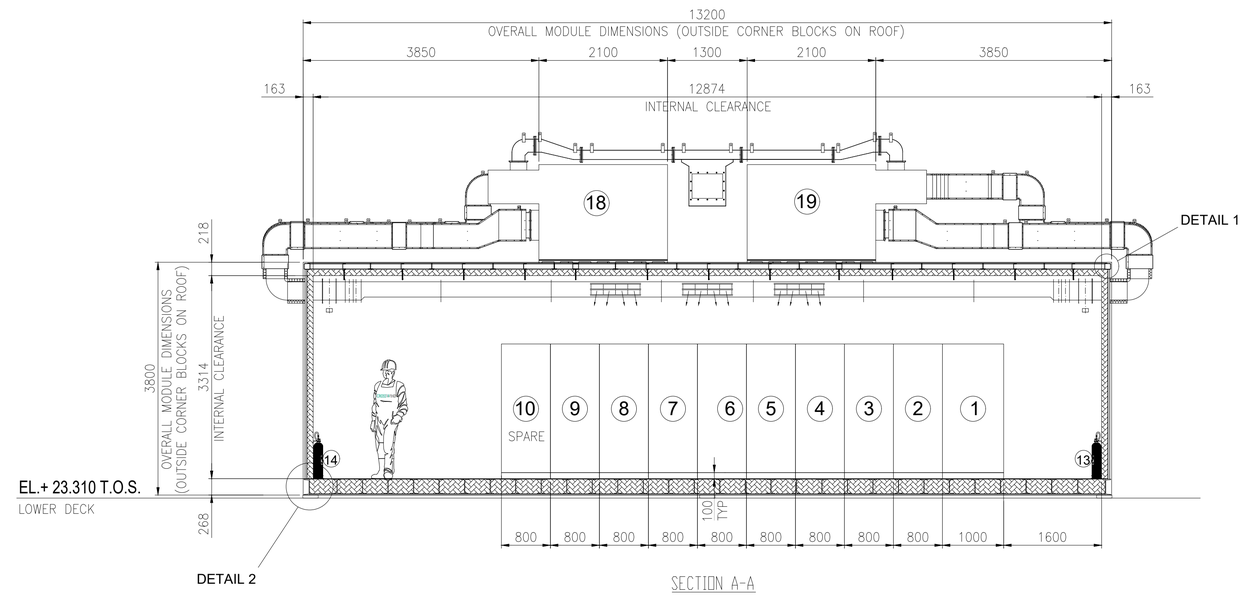
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 001	REV. 03

File Name : 1724000049-AR-DA-00017-REV.03

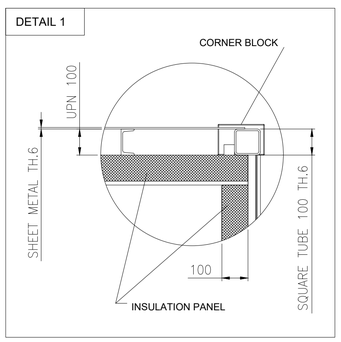
DRAWING NO. 1724000049-AR-DA-00017 REV. 03

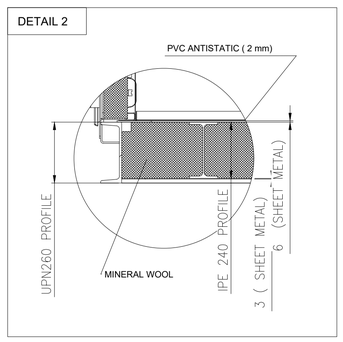


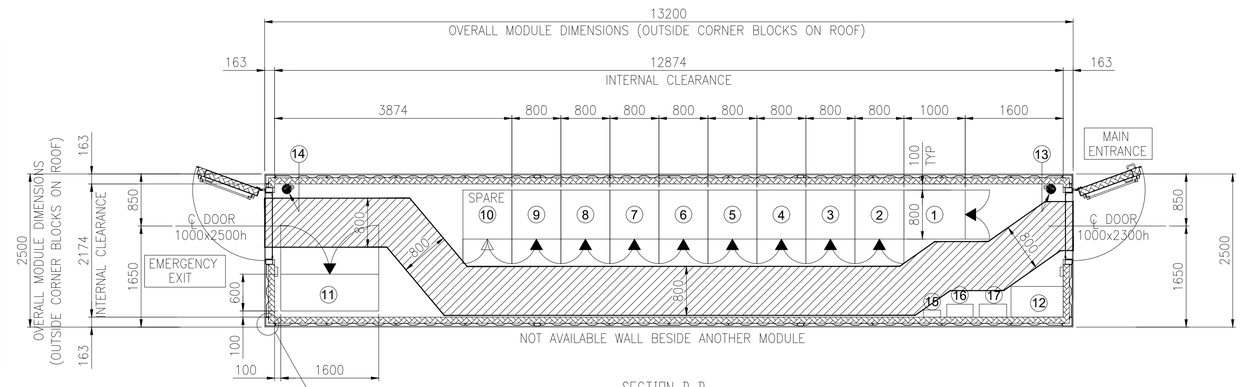
SECTION C-C



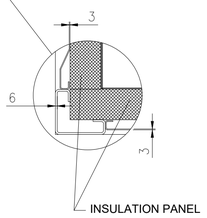
SECTION A-A







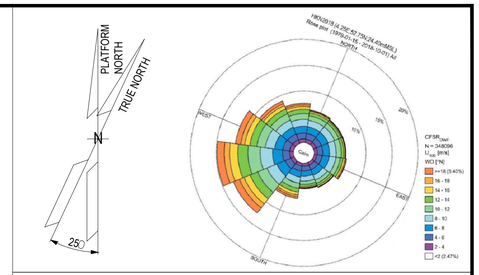
SECTION B-B



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

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-010	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-011 △03	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-012	SPACE HEATER 3	184	145	1100	5	



NOTE

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

REFERENCE

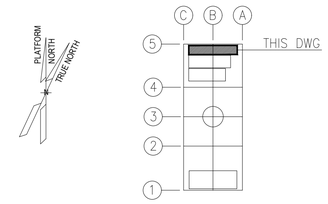
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007
△03 "B-400" FOUNDATION	1724000049-ST-DD-00013
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	04/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	M.G.	SKV	C.A.	ISSUE FOR REVIEW (IFR)
00	08/02/24	A.G.	SKV	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

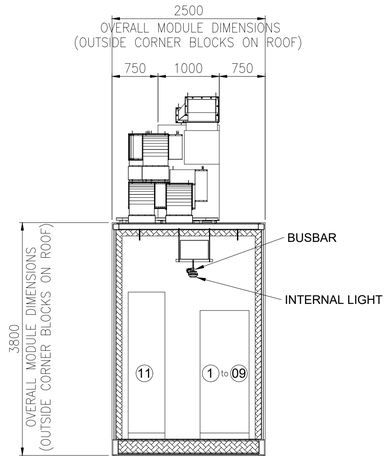
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-400 GENERAL ARRANGEMENT DRAWINGS

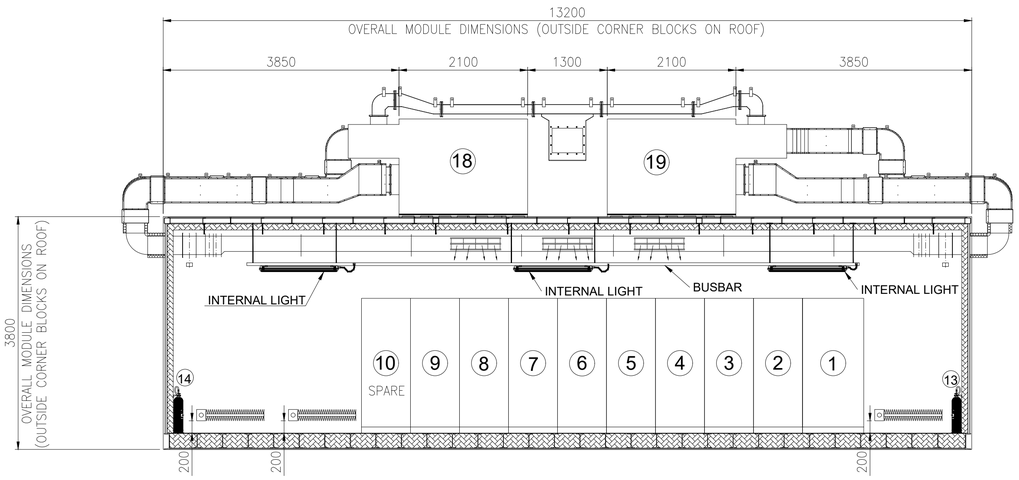
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 002	REV. 03

File Name : 1724000049-AR-DA-00017-REV.03

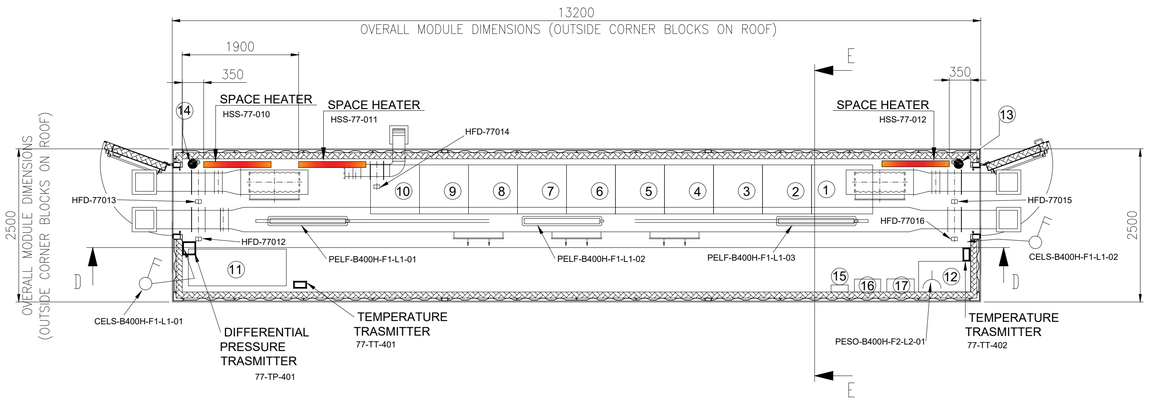
DRAWING NO. 1724000049-AR-DA-00017 REV. 03



SECTION E-E

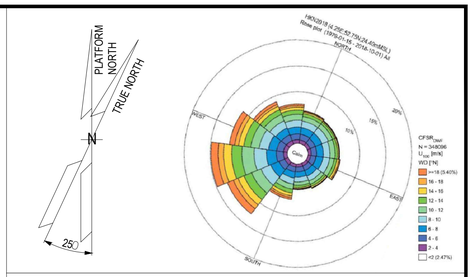


SECTION D-D



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-010	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-011 (03)	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-012	SPACE HEATER 3	184	145	1100	5	



NOTE

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

REFERENCE

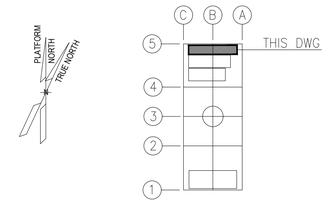
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007
(03) "B-400" FOUNDATION	1724000049-ST-DD-00013
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	23/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
02	04/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	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-400 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 23/07/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 003	REV. 03

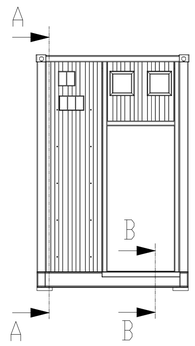
File Name : 1724000049-AR-DA-00017-REV.03

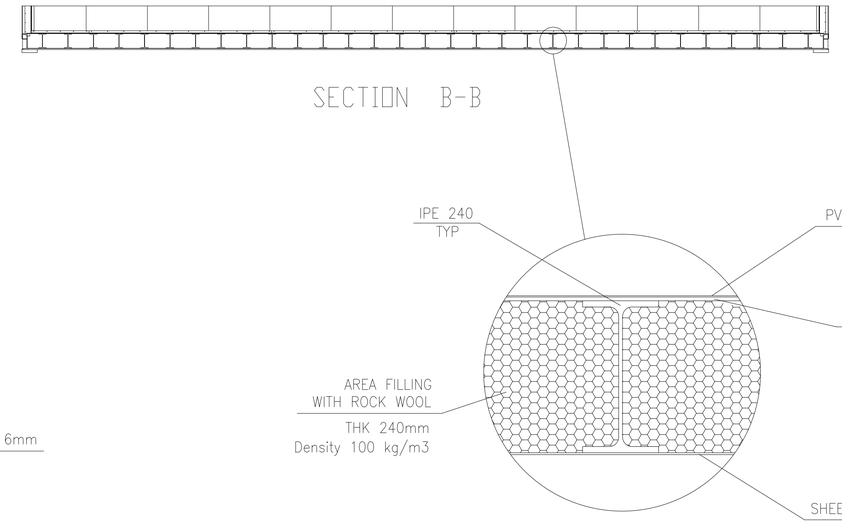
DRAWING NO. 1724000049-AR-DD-00021

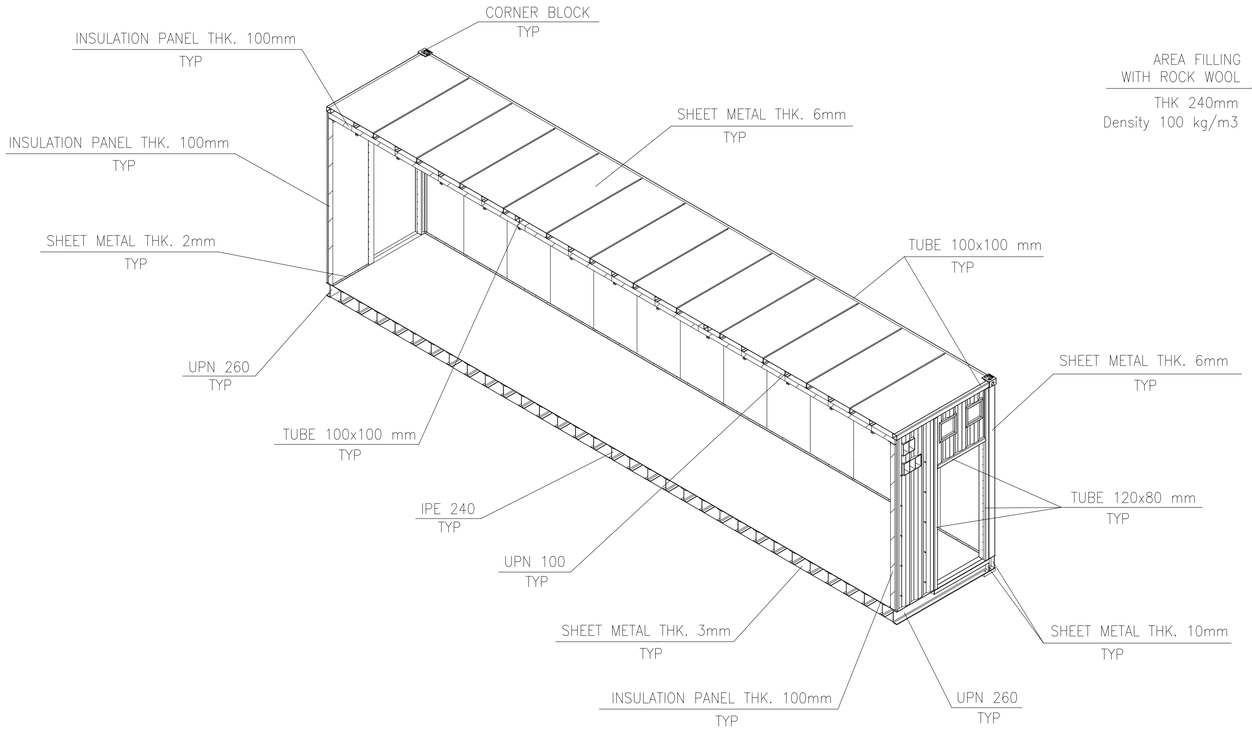
REV. 02

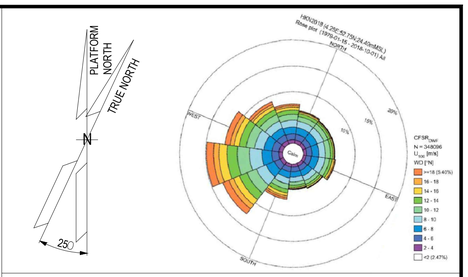
MODULE B-400

REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009
Weld Procedure Specifications (WPS), Weld Procedure Qualification Report (WPQR), Welding Map and Welders Qualifications	1724000049-WEL-RE-00003



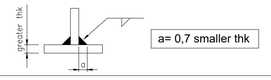






NOTES

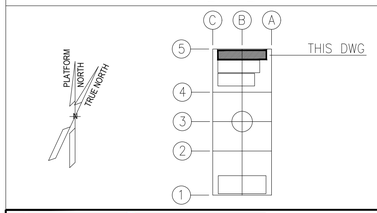
1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D.1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



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	30/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND | ROSETTI MARINO

TITLE :

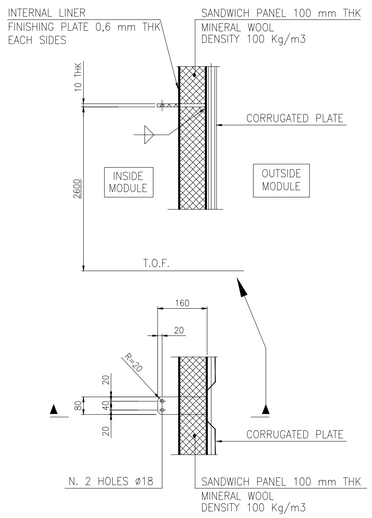
B-400 DETAILED DRAWINGS-E&I SHELTERS

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-00021	SHEET 001	REV. 02

File Name : 1724000049-AR-DD-00021-REV.02

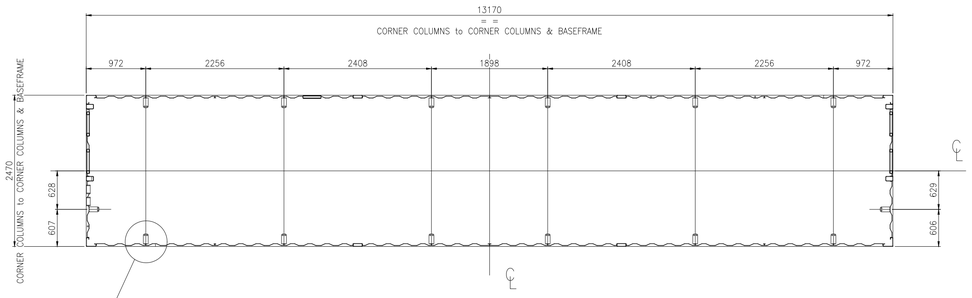
DRAWING NO. 1724000049-AR-DD-00021 REV. 02

REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00017
"B-400" HVAC GENERAL ARRANGEMENT	1724000049-HV-DA-00067



NORTH WALL

WEST WALL

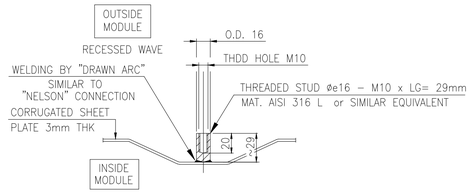


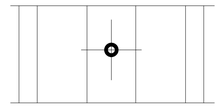
EST WALL

SOUTH WALL

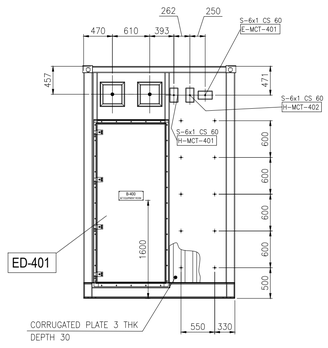
MODULE B-400

INTERNAL SEA FASTENING PLATES PLAN

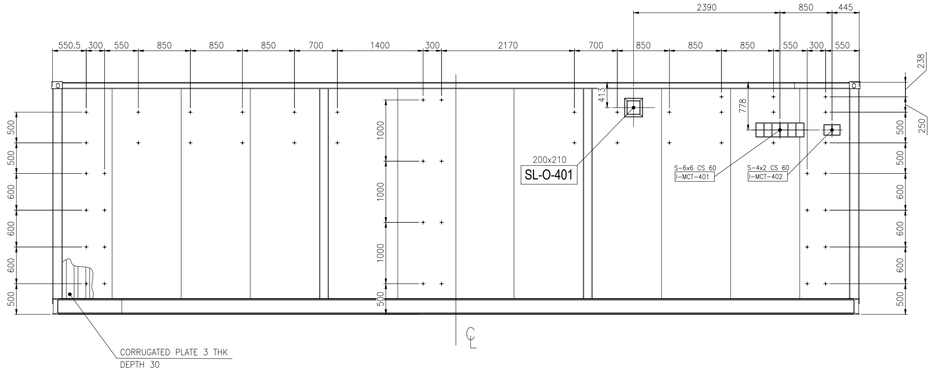




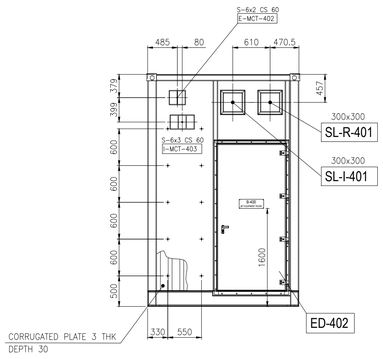
THREADED STUD INSTALLATION



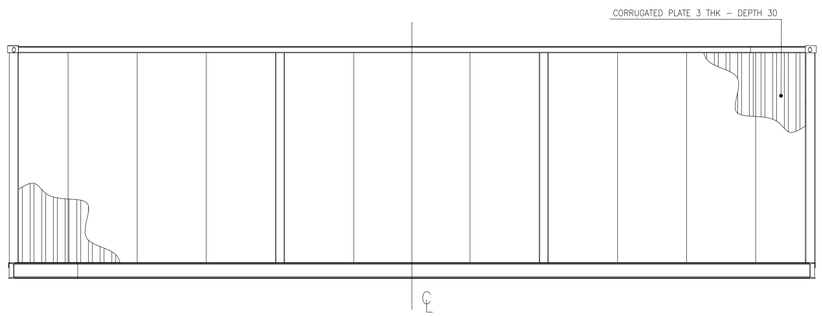
VIEW OF WEST WALL



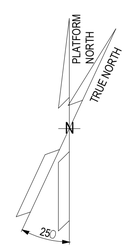
VIEW OF NORTH WALL

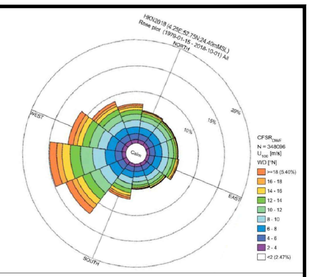


VIEW OF EAST WALL



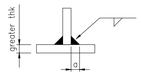
VIEW OF SOUTH WALL





NOTES

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



a= 0,7 smaller thk

LEGEND

- THREADED STUD ø16 - M10 x LG= 29mm
- T.O.F. — TOP OF FLOOR

MCT LEGEND:

MCT TYPE & SIZE — BRAND ROXTEC
MATERIAL — C.S.= PRIMED MILD STEEL; S.S.= AISI 316 L
MCT DEPTH
S 6x2 C.S. 60 — E-MCT-401
MCT SERVICE: E= ELECTRICAL; I= INSTRUMENTAL; H= HVAC
PROGRESSIVE NUMBER FROM 01
MODULE LOCATION: 1= B-100 3= B-300 2= B-200 4= B-400

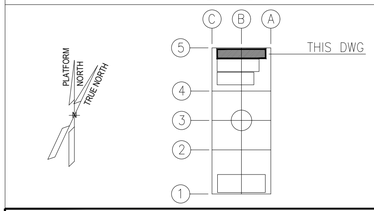
HVAC SLEEVE LEGEND:

300x300 — INTERNAL SIZE OF DUCT L x H (mm)
SL-I-401
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-401
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-401	238	140.5	60	6x1	
	E-MCT-402	271	238	60	6x2	
INSTRUMENTAL	I-MCT-401	793	238	60	6x6	
	I-MCT-402	271	179.5	60	4x2	
	I-MCT-403	411.5	238	60	6x3	
HVAC	H-MCT-401	140.5	238	60	6x1	
	H-MCT-402	140.5	238	60	6x1	

ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	11/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
01	08/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	30/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND — ROSETTI MARINO

TITLE :

B-400 DETAILED DRAWINGS-E&I SHELTERS

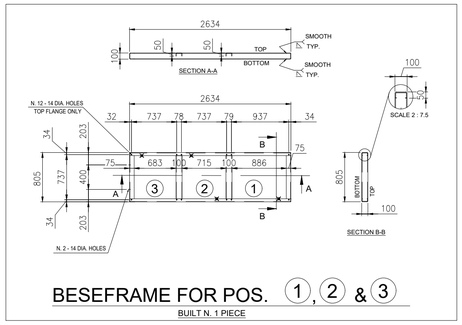
CONTRACT NO./TITLE CONTRACT_NO. 1724000049 | SCALE 1:50
DRAWN M.G. | CHECKED O.A. | APPROVED C.A. | DATE 11/07/24
A1 | DRAWING NO. 1724000049-AR-DD-00021 | SHEET 002 | REV. 02

File Name : 1724000049-AR-DD-00021-REV.02

DRAWING NO. 1724000049-AR-DD-00021

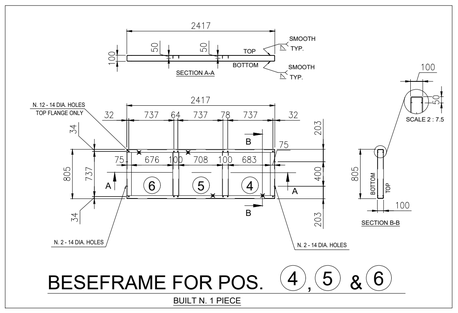
REV. 02

B-400
I&T EQUIPMENT ROOM
BASEFRAME LOCATION PLAN



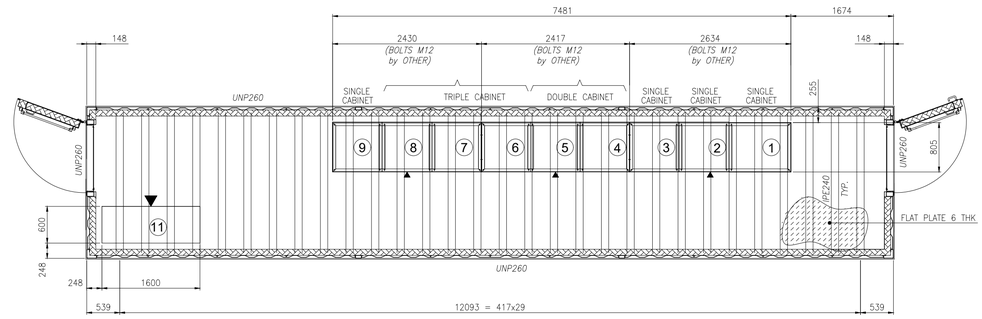
BESEFRAME FOR POS. (1), (2) & (3)

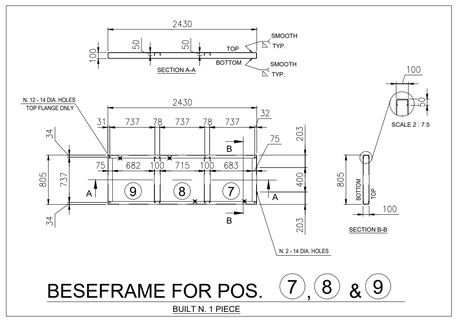
BUILT N. 1 PIECE



BESEFRAME FOR POS. (4), (5) & (6)

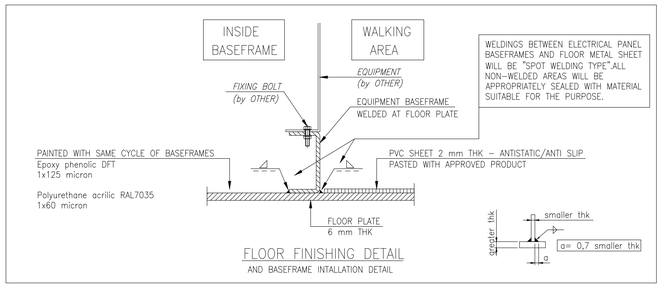
BUILT N. 1 PIECE





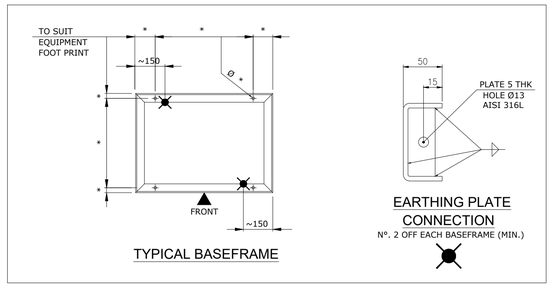
BESEFRAME FOR POS. (7), (8) & (9)

BUILT N. 1 PIECE



FLOOR FINISHING DETAIL

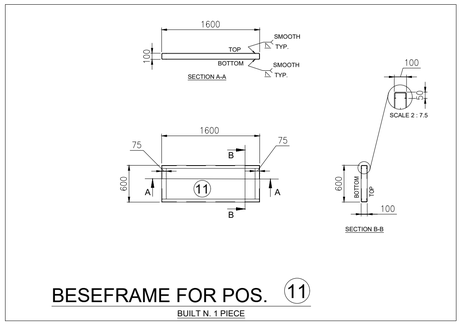
AND BASEFRAME INTALLATION DETAIL



TYPICAL BASEFRAME

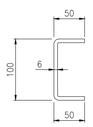
EARTHING PLATE CONNECTION

N°. 2 OFF EACH BASEFRAME (MIN.)



BESEFRAME FOR POS. (11)

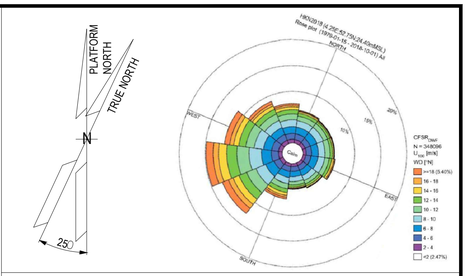
BUILT N. 1 PIECE



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

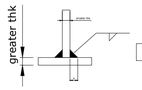
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	SCOPE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	ASI
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	ASI
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	ASI
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	ASI
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	ASI
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	ASI
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	ASI
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	ASI
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	ASI
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	ASI



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".



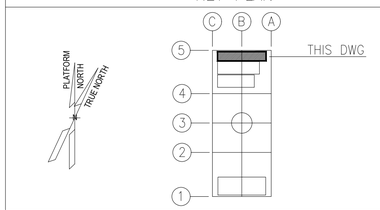
6. SURFACE TREATMENT ACCORDING DOCUMENT N. 1724000049-MAT-PRO-00004 - PAINTING PROCEDURE FINAL COLOUR LIGHT GREY RAL 7035.

LEGEND

ASI = ALEX SISTEMI

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	30/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND

ROSETTI MARINO

TITLE :

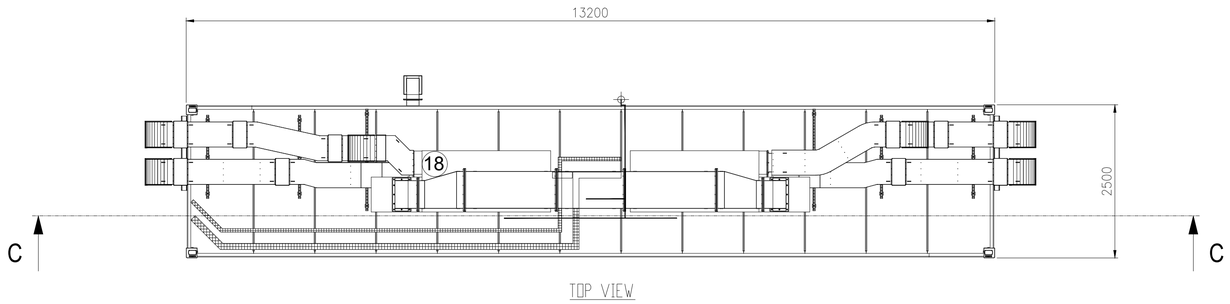
B-400 DETAILED DRAWINGS-E&I SHELTERS

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-00021	SHEET 003	REV. 02

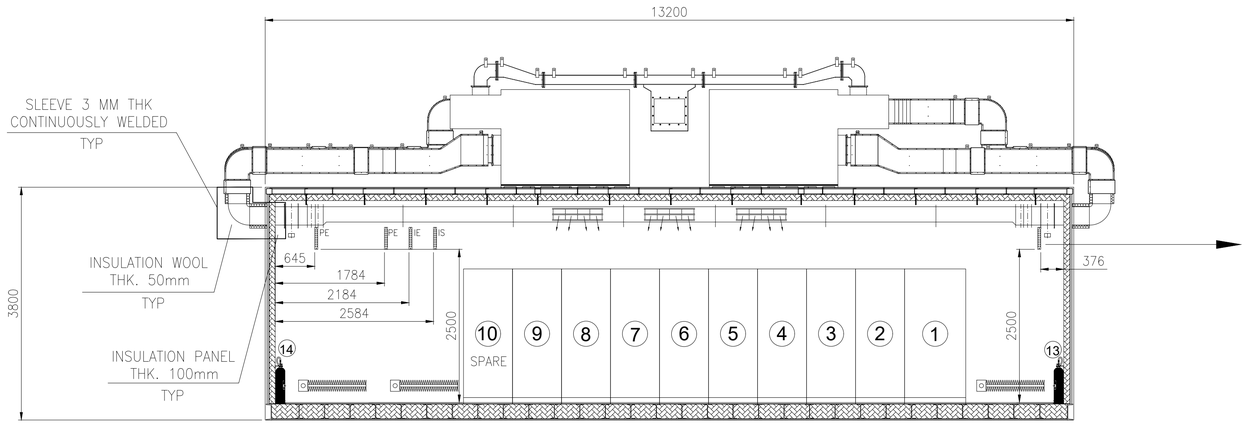
File Name : 1724000049-AR-DD-00021-REV.02

DRAWING NO. 1724000049-AR-DD-00021

REV. 02

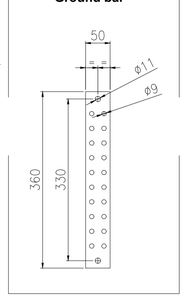


TOP VIEW



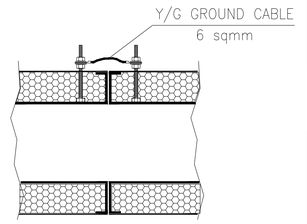
DET. 3

TYPICAL DETAIL
Ground bar



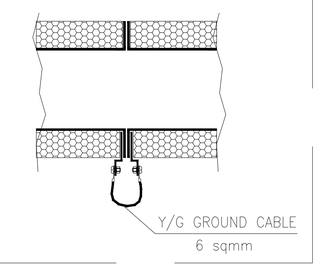
DET. 1

EXTERNAL DUCT



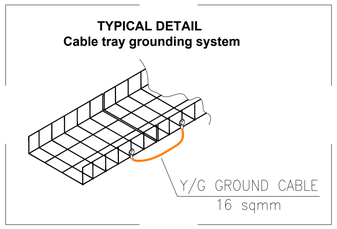
DET. 2

INTERNAL DUCT



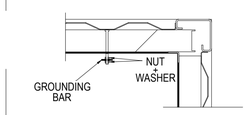
DET. 4

TYPICAL DETAIL
Cable tray grounding system



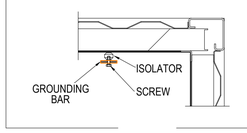
DET. 5

TYPICAL FASTENING DETAIL



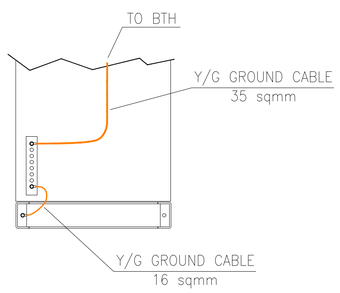
DET. 6

TYPICAL INSTALLATION BTH PI and IS



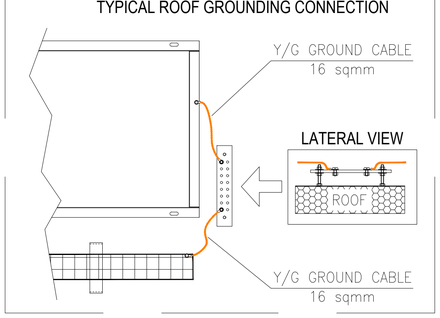
DET.8

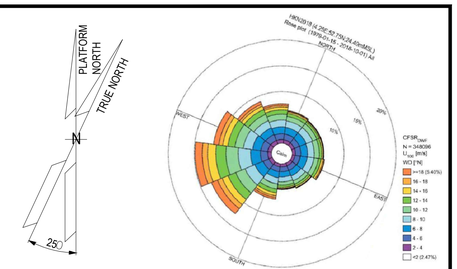
TYPICAL CABINET GROUNDING CONNECTION



DET. 7

TYPICAL ROOF GROUNDING CONNECTION





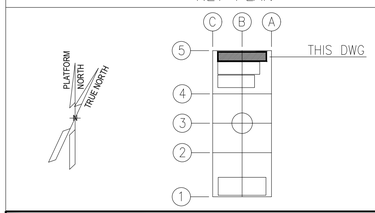
NOTES

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.

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	30/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND | ROSETTI MARINO

TITLE :

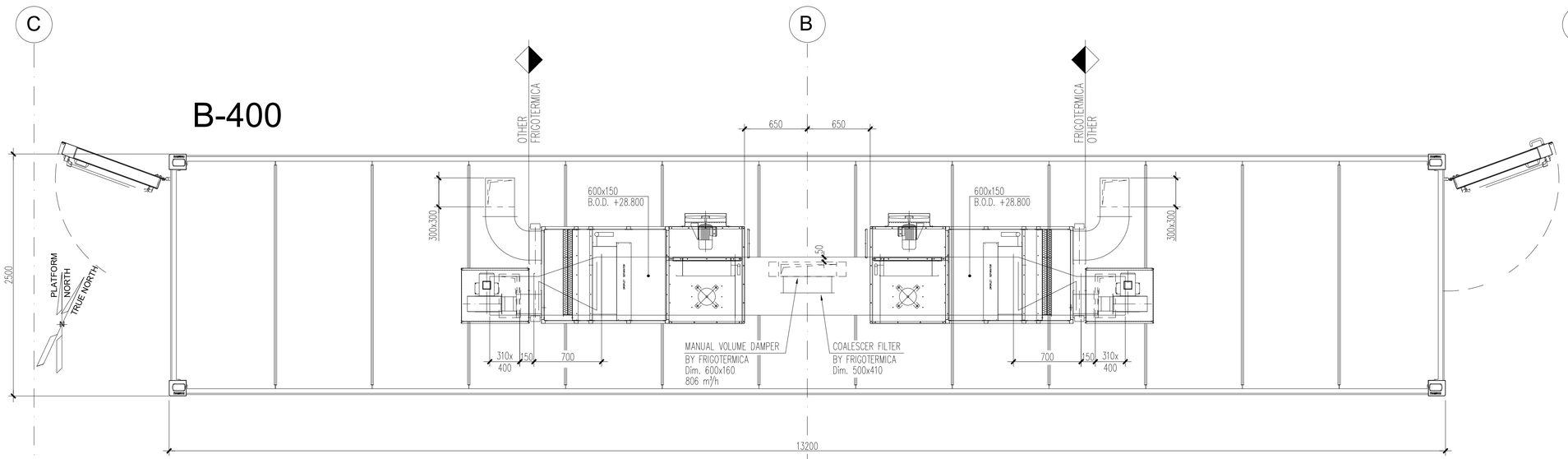
B-400 DETAILED DRAWINGS-E&I SHELTERS

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-00021	SHEET 004	REV. 02

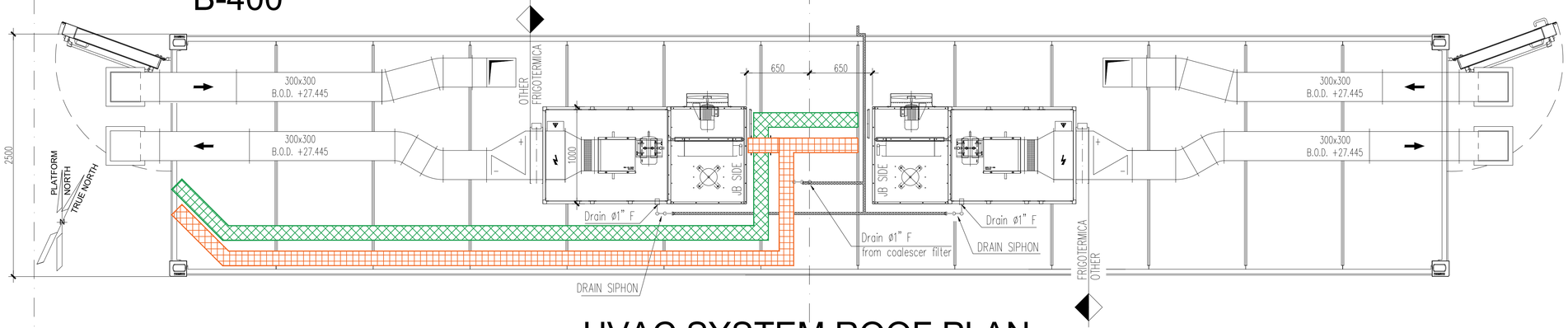
File Name : 1724000049-AR-DD-00021-REV.02

DRAWING NO. 1724000049-HV-DA-00067_0

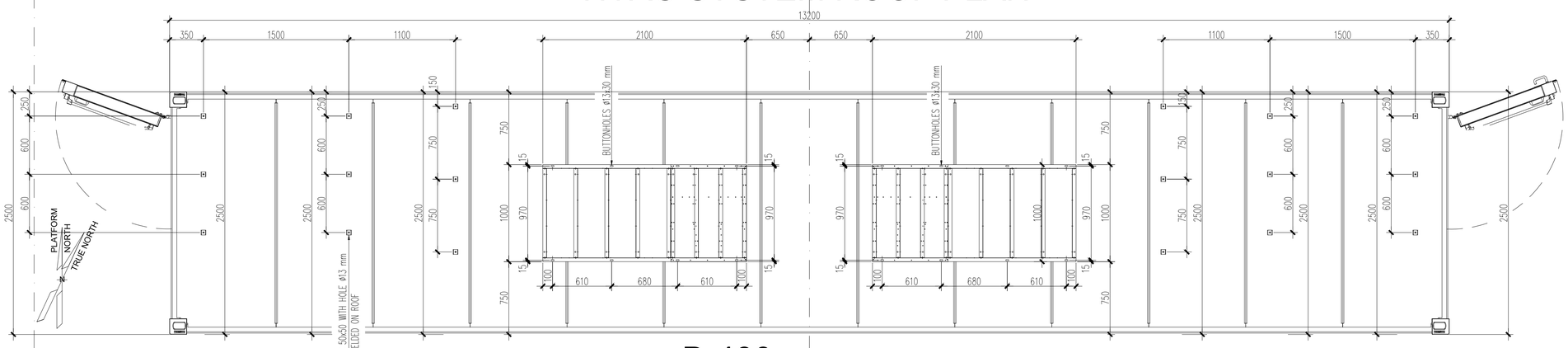
REV. 00



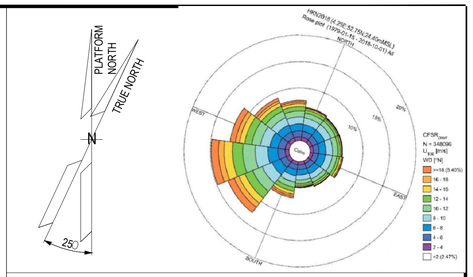
HVAC SYSTEM ROOF PLAN



HVAC SYSTEM ROOF PLAN

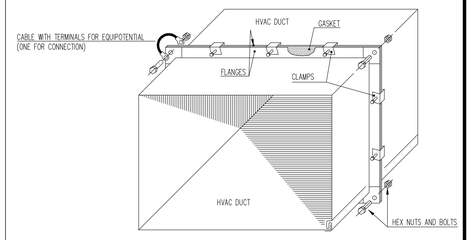


B-400
HVAC SUPPORT PLAN ON ROOF



NOTES

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

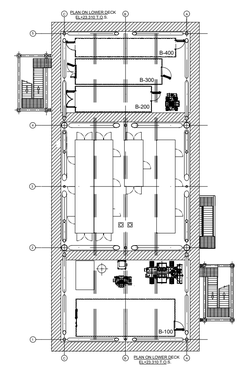


TYPICAL EQUIPOTENTIAL INSTALLING FOR FLANGE CONNECTION INDOOR AIR DUCT

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-400
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

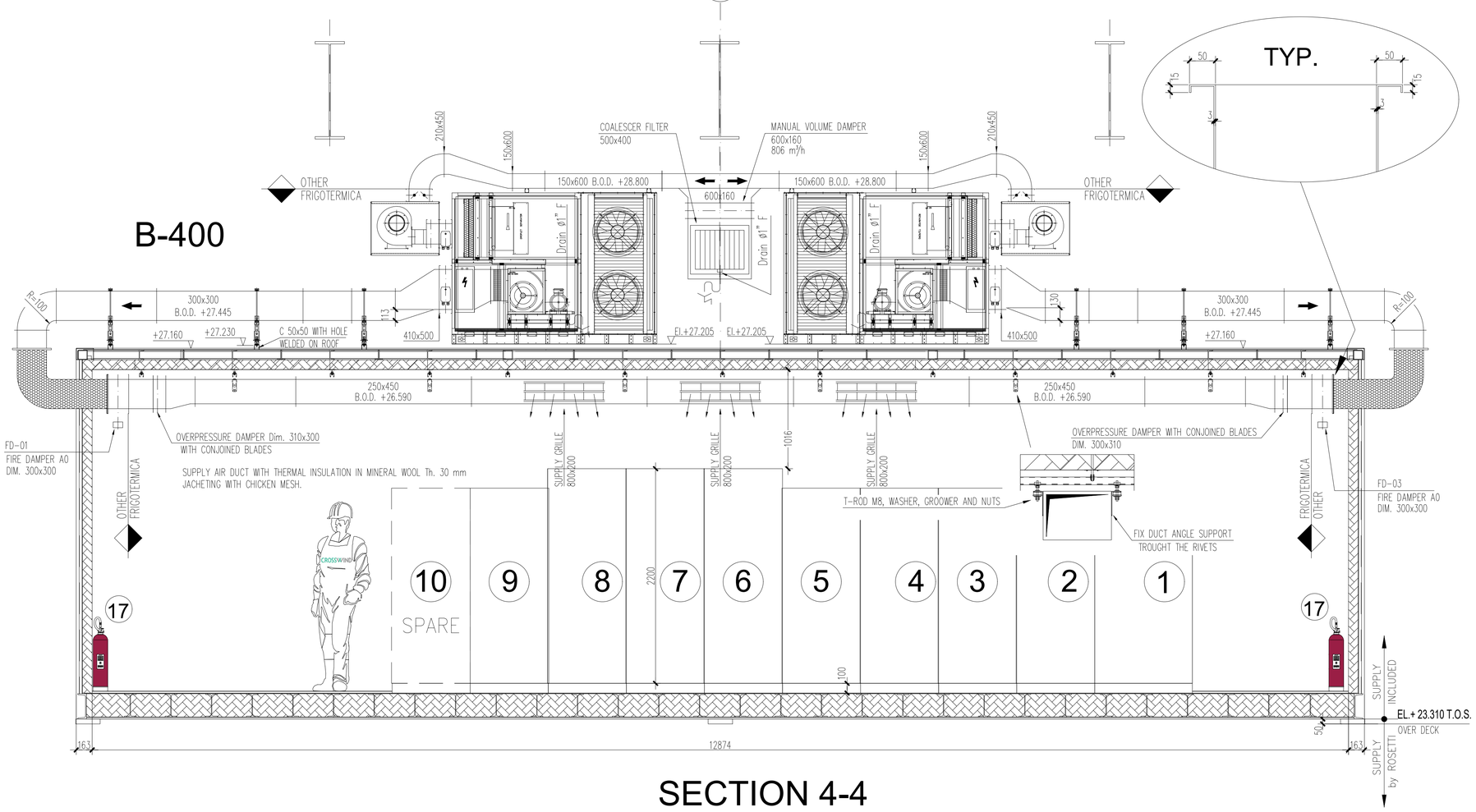
A1	DRAWING NO. 1724000049-HV-DA-00067	SHEET 001	REV. 00

File Name : 1724000049-HV-DA-00067_0

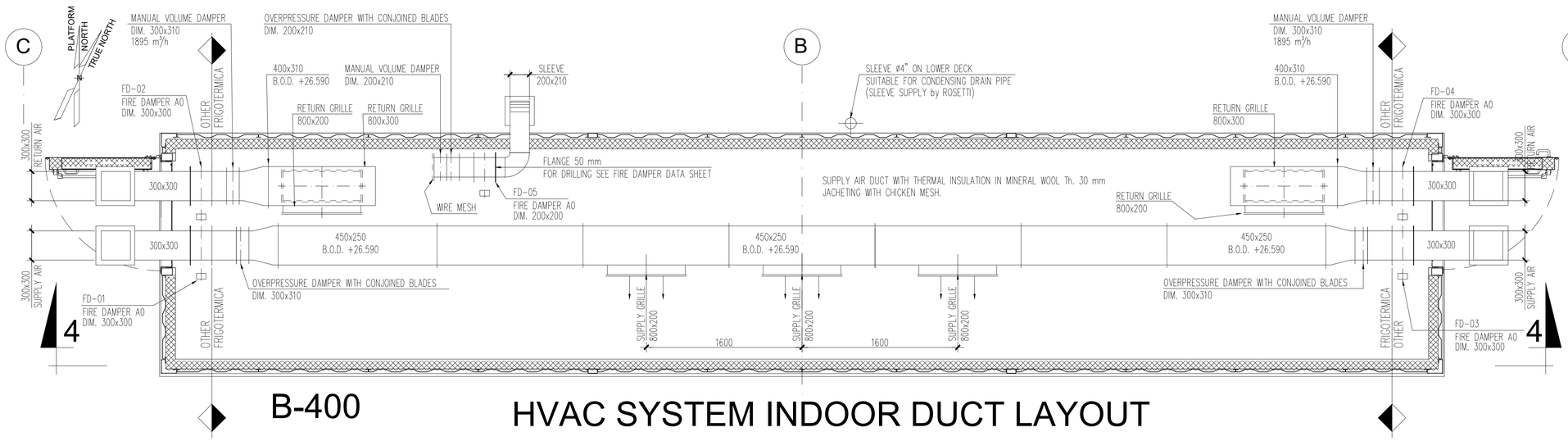
DRAWING NO. 1724000049-HV-DA-00067_0

REV. 00

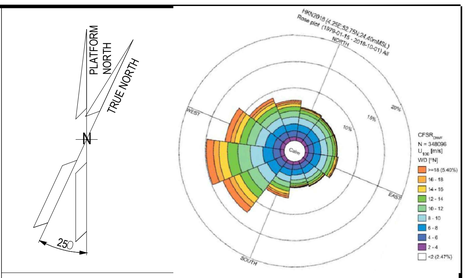
B-400



SECTION 4-4

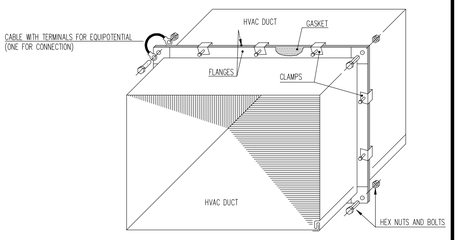


B-400 HVAC SYSTEM INDOOR DUCT LAYOUT



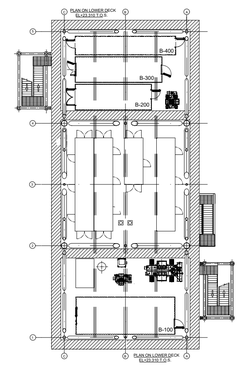
NOTES

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-400
HVAC SYSTEM – G.A. AND DETAILS

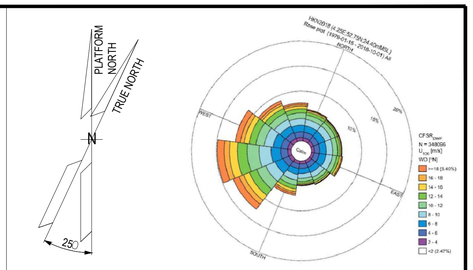
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 25
DRAWN S.Z.	CHECKED S.S.	APPROVED M.G.	DATE 13/06/2024
A1	DRAWING NO. 1724000049-HV-DA-00067	SHEET 002	REV. 00

File Name : 1724000049-HV-DA-00067_0

DRAWING NO.: 123A90-1724000049-HV-PID-00042

REV.: 01

BASE LOAD POWER HUB (BLPH)
B-400 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.C.	ISSUE FOR INFORMATION (IFI)
0	10/06/24	S.Z.	S.S.	M.C.	ISSUE FOR INFORMATION (IFI)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH) B-400 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-00042	SHEET 001	REV. 01

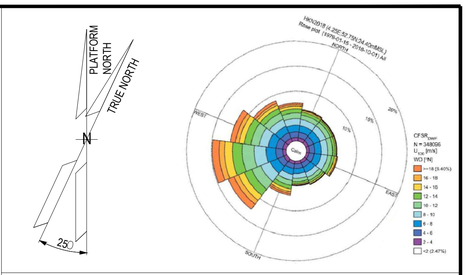
File Name : 123A90-1724000049-HV-PID-00042-REV.01

DRAWING NO. 123A90-1724000049-HV-PID-00042

REV. 01

REV.	SHEET NUMBER	DESCRIPTION	REF. CODE
02	001	FRONT PAGE	IFR
02	002	SUMMARY and GENERAL NOTES	IFR
02	003	P&ID HVAC System	IFR

GENERAL NOTES



NOTES

LEGEND

HOLDS

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)

ALEXSISTEMI spa

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
B-400 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-00042	SHEET 002	REV. 01

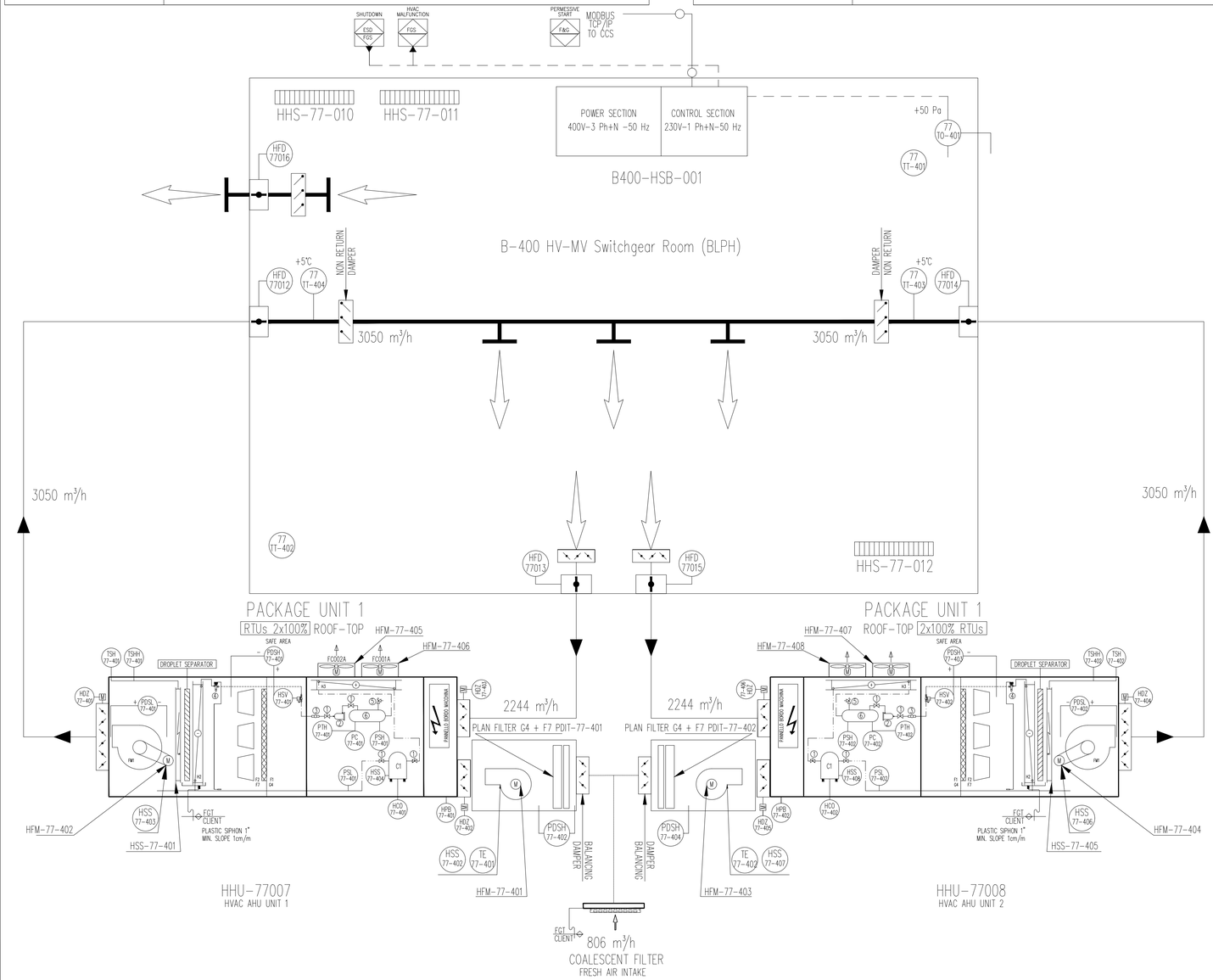
File Name : 123A90-1724000049-HV-PID-00042-REV.01

DRAWING NO. 123A90-1724000049-HV-PID-00042

REV. 01

ITEM	HVAC-ROOF TOP
DESCRIPTION	HVAC UNIT
MAKER	FRIGOTERMICA srl
MODEL	4112-TBA
SUPPLY AIR FLOW	847,2 l/s
COOLING COIL CAPACITY	12 kW AT +26°C Outdoor Temperature
HEATING COIL CAPACITY	8.6 kW
TENSIONE	400 V - 50 Hz - 3 Ph+N
EXECUTION	SAFE AREA
REFRIGERANT	R513a

ITEM	HVAC-PRESSURISING FAN
DESCRIPTION	HVAC UNIT
MAKER	FRIGOTERMICA srl
MODEL	4112-TBA
SUPPLY AIR FLOW	224 l/s
COOLING COIL CAPACITY	N.A.
HEATING COIL CAPACITY	N.A.
TENSIONE	400 V - 50 Hz - 3 Ph+N
EXECUTION	SAFE AREA
REFRIGERANT	N.A.



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

NOTES:

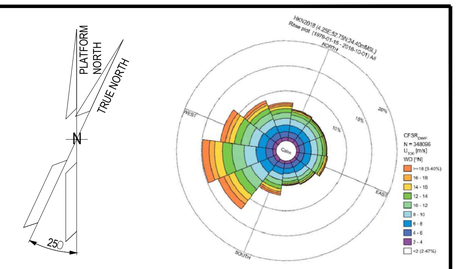
- HVAC POWER CABINET will energize what above shown.
- HVAC CONTROL CABINET will control all what above shown.
- HVAC POWER CABINET will energize light and socket.
- Outside drainage system shall be provided of heating cable with anti-freeze funcion to avoid ice inside pipes when outside temeprature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

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

LEGEND

HOLDS

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)

ALEXSISTEMI spa

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-400 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-00042	SHEET 003	REV. 01

File Name : 123A90-1724000049-HV-PID-00042-REV.01

Section 8 MECHANICAL COMPLETION STATUS INDEX - TELECOMMUNICATION DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-40 & process: MC & discipline : T

Telecom	77-40 HVAC I&T Equipment Room B-400						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
B400-HSB-001/B400-NET-001	Distribution & HVAC Panel/Network Cabinet	ONSHORE	C10004777	CIX09	100	2024-11-30	RFC 2

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	B400-HSB-001/B400-NET-001 : Distribution & HVAC Panel/Network Cabinet			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	77-40 : HVAC I&T Equipment Room B-400			Module	LD_B-400	
TASK	code	C10004777	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	B400-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.	OK
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	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.	PL
12	To roll up that measured lenght complies with pulled lenght.	OK
13	To roll up the cable complies with Cat. 5E performance requirements (250 Mhz).	OK
14	Attach LAN tester print out to this test sheet.	OK
15	if required produce Red Line Mark Up for "AS BUILT"	

Comments: Nota 4: refer to PL C3000680

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Eleonora Carotenuto	
Date	2024-11-29	2024-11-30	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-11-29T15:16:21.594Z	PROVERLIS Digitaly signed by Eleonora Carotenuto 2024-11-30T12:03:12.246Z	

ROSETTI MARINO

Cable ID: B400-HSB-001/B400-NET-001

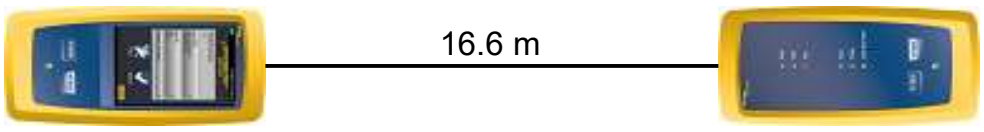
Test Limit: ISO11801 PL2 Class Ea
Limits Version: V7.6
Date / Time: 22-11-2024 16:06:25
Headroom 3.9 dB (NEXT 3,6-4,5)
Cable Type: Cat 6A S/FTP
NVP: 77.0%

Main: Versiv
S/N: 2226344
Software Version: V6.7 Build 1
Calibration Date: 12-12-2022
Adapter: DSX-8000 (DSX-PLA804)
S/N: 22340270

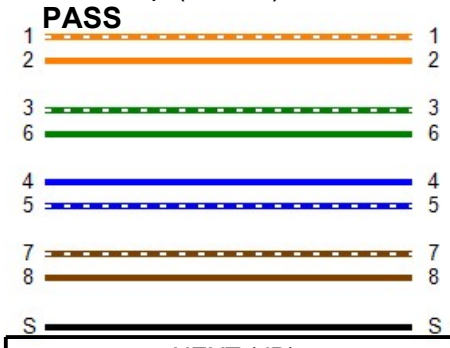
Test Summary: PASS

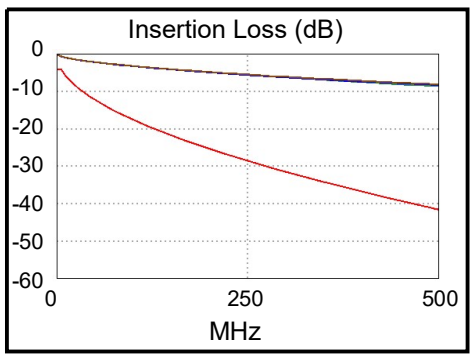
Remote: Versiv
S/N: 2226336
Software Version: V6.7 Build 1
Calibration Date: 12-12-2022
Adapter: DSX-8000R (DSX-PLA804)
S/N: 22340257

Length (m), Limit 90.0	[Pair 3,6]	16.6
Prop. Delay (ns), Limit 496	[Pair 1,2]	73
Delay Skew (ns), Limit 43	[Pair 1,2]	1
Resistance (ohms), Limit 20.60	[Pair 3,6]	2.43
Insertion Loss Margin (dB)	[Pair 3,6]	33.0
Frequency (MHz)	[Pair 3,6]	500.0
Limit (dB)	[Pair 3,6]	41.6

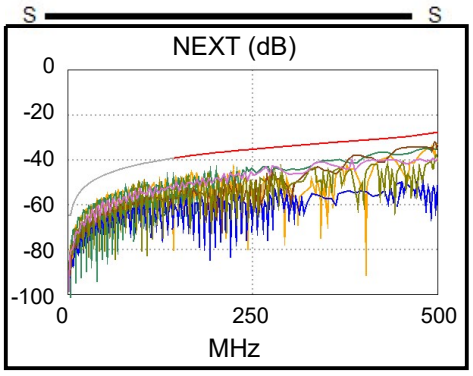


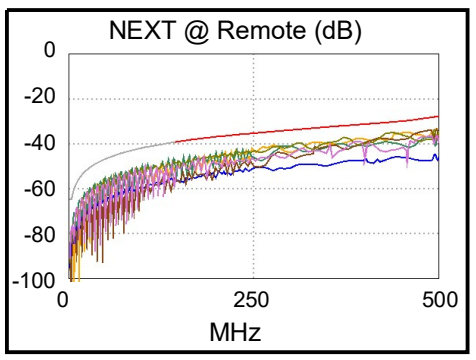
Wire Map (T568B)
PASS



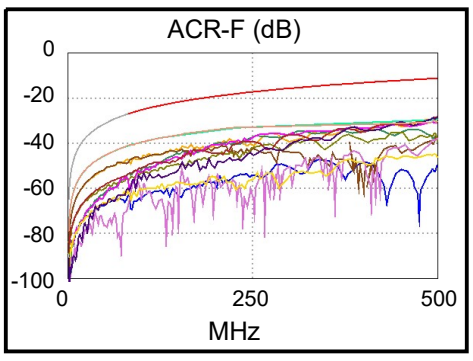


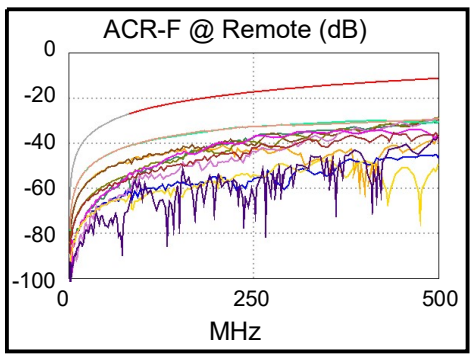
PASS	MAIN	SR	MAIN	SR
	Worst Case Margin		Worst Case Value	
Worst Pair	3,6-4,5	3,6-7,8	3,6-4,5	1,2-3,6
NEXT (dB)	3.9	4.3	4.0	5.3
Freq. (MHz)	445.0	429.0	496.0	497.0
Limit (dB)	30.3	30.7	28.0	28.0
Worst Pair	4,5	3,6	4,5	3,6
PS NEXT (dB)	4.1	3.8	4.7	4.6
Freq. (MHz)	444.0	446.0	496.0	497.0
Limit (dB)	27.5	27.5	25.2	25.1



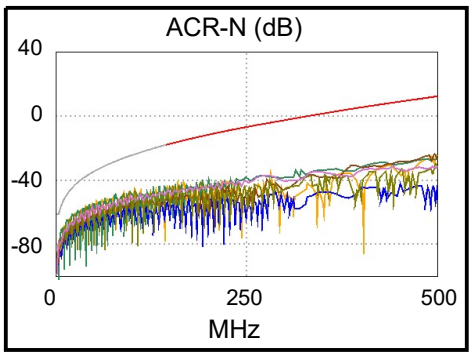


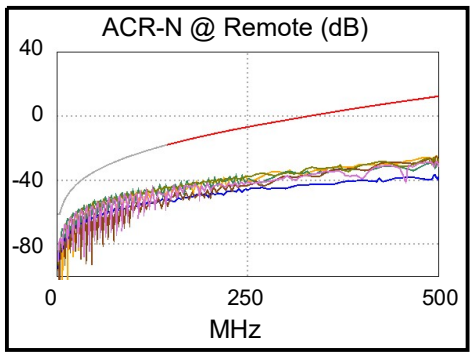
PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5-7,8	7,8-4,5	4,5-3,6	3,6-4,5
ACR-F (dB)	13.6	13.5	17.0	17.3
Freq. (MHz)	4.3	4.3	500.0	500.0
Limit (dB)	52.7	52.7	11.3	11.3
Worst Pair	3,6	4,5	3,6	4,5
PS ACR-F (dB)	15.6	16.1	15.6	16.4
Freq. (MHz)	500.0	4.3	500.0	500.0
Limit (dB)	8.3	49.7	8.3	8.3



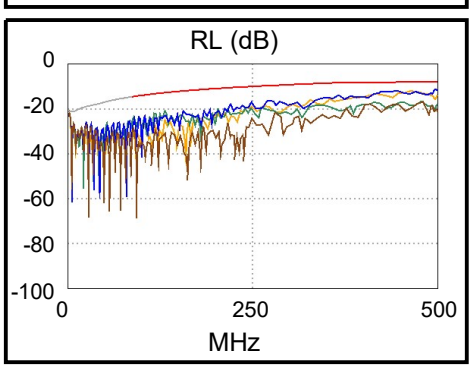


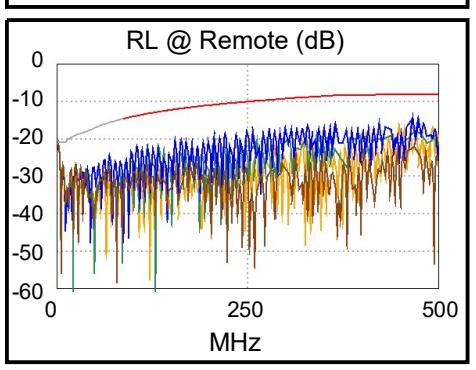
PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2-3,6	1,2-4,5	3,6-4,5	1,2-3,6
ACR-N (dB)	25.4	24.5	35.8	37.0
Freq. (MHz)	153.0	142.0	496.0	497.0
Limit (dB)	16.8	18.2	-12.1	-12.2
Worst Pair	3,6	4,5	3,6	3,6
PS ACR-N (dB)	25.6	25.2	36.5	36.3
Freq. (MHz)	153.5	155.0	498.0	497.0
Limit (dB)	14.2	14.0	-15.1	-15.1





PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5	4,5	4,5	4,5
RL (dB)	3.3	6.4	3.3	6.4
Freq. (MHz)	497.0	466.0	497.0	466.0
Limit (dB)	8.0	8.0	8.0	8.0





Compliant Network Standards:

10BASE-T	100BASE-TX	100BASE-T4
1000BASE-T	2.5GBASE-T	5GBASE-T
10GBASE-T	ATM-25	ATM-51
ATM-155	100VG-AnyLan	TR-4
TR-16 Active	TR-16 Passive	

LinkWare™ PC Version 11.4

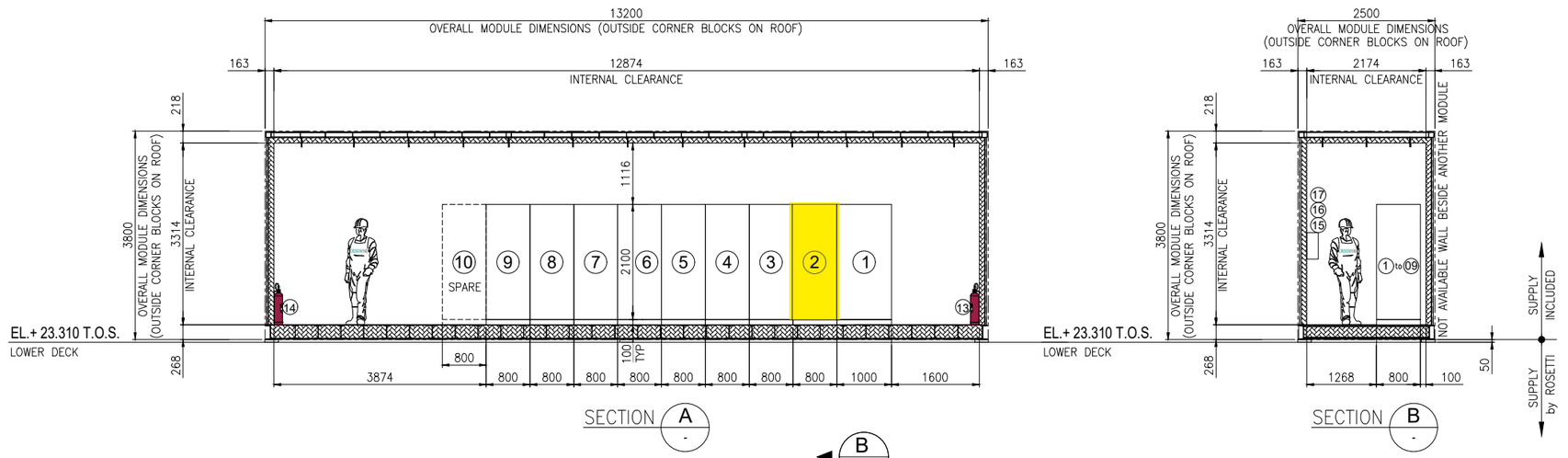
Project: CROSSWIND
Site: Not Set
Floor: Not Set
Rack: Not Set
ROSETTI - CROSSWIND RAME 22.11.2024.flw

Building: Not Set
Room: Not Set
Patch: Not Set

FLUKE networks

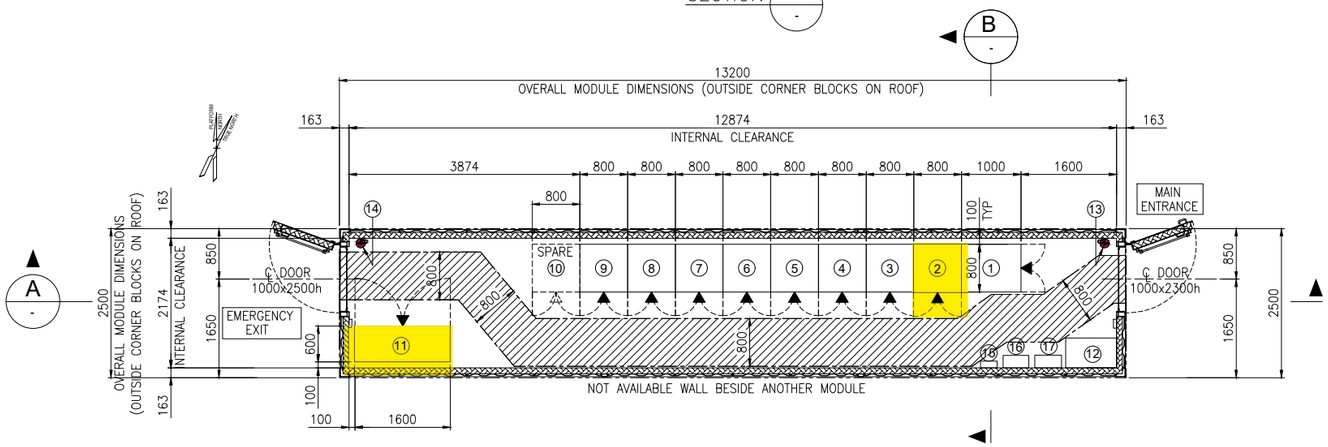
DRAWING NO. 123A90-DDL-IN-DL-40012

REV. 03



SECTION A -

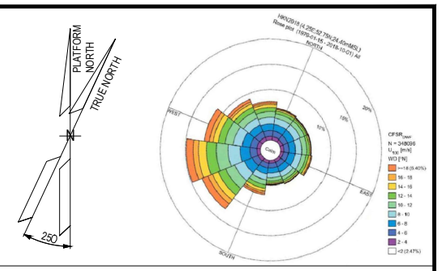
SECTION B -



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

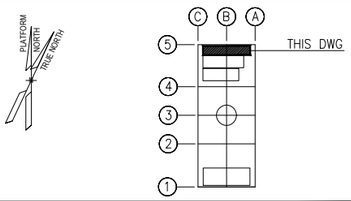
HOLDS

.

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.: 3_A | DATE: 07/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

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

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

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

DRAWING NO. 123A90-DDL-IN-DG-40015

REV. 01

I&T EQUIPMENT ROOM (ITER B400)

HVAC CABINET
B400-HSB-001

ITEM: SCALANCE XC208

PORT: P3 LAN

RJ45

Ref. Vendor Doc.: 1724000049-HV-DA-00029

B400-HSB-001/B400-NET-001
CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,~~GREEN~~NIS
GREY

NETWORK CABINET - B400-NET-001

<01>

RJ45

SWITCH: COOP-01
PORT: P14

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40015**

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

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
COMMUNICATION – CAT-6

CONTRACT NO./TITLE			SCALE 1:1
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 036	REV. 01

File Name : 123A90-DDL-IN-DG-40015_Rev.01

DRAWING NO. 123A90-DDL-IN-DG-40015

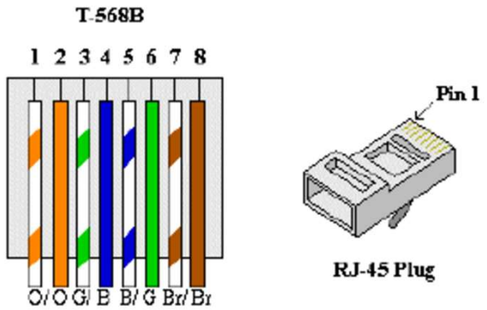
REV. 01

NOTES:

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

<01>

7. CAT. 6A CABLE SHALL BE TERMINATED MEETING REQUIREMENTS OF STANDARD EIA/TIA 568B:



RJ-45 Plug

8. FOR OPTICAL FIBERS, USE THE FOLLOWING COLOR CODING:
   01) RED
   02) GREEN
   03) BLUE
   04) YELLOW
   05) GREY
   06) PURPLE
   07) BROWN
   08) ORANGE
   09) WHITE
   10) PINK
   11) BLACK
   12) TURQUOISE

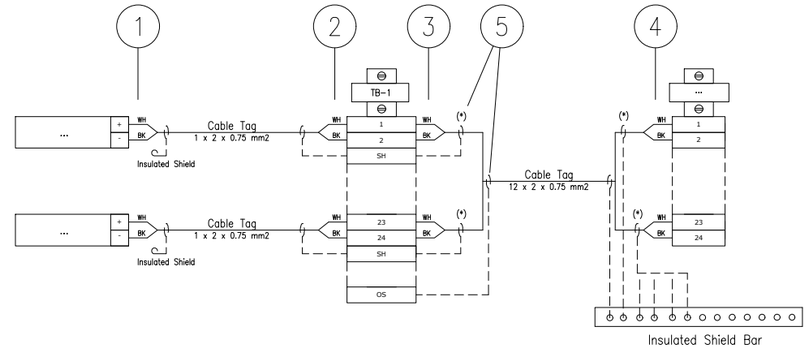
LEGENDS & SYMBOLS:

LEGEND:

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

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



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

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

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

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

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

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

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

REFERENCE DRAWINGS

PIPING AND INSTRUMENT DIAGRAM	123A90-DDL-PR-PID-80009
INSTRUMENT INDEX	123A90-DDL-IN-LIS-40088 Rev.01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40015**

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

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE 1:1
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 003	REV. 01

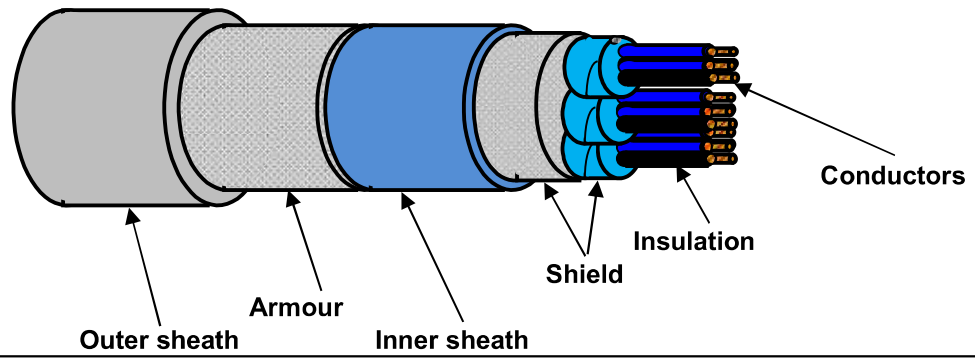
File Name : 123A90-DDL-IN-DG-40015_Rev.01

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Sect	To Tag	To Main Function	To Area	To Tag Sectior	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
B400-HSB-001/B400-NET-001	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						B400-HSB-001	Distribution & HVAC Panel - I&T Equipment Room	Lower Deck (B-400)		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-301 / B-300-SEC-1D / B-300-SEC-1C / B-300-SEC-1A / I-SEC-4 / I-SEC-1B / I-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

Doc. Name: PAINTING CHECK		Report No.04 Mod 1.4.2
OUR JOB X176-24X	Date 26/07/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** I&T EQUIPMENT ROOM B-400
S/N: B400	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 26/07/2024

REFERENCE DRAWING:

REFERENCE DOCUMENT: 1724000049-MAT-PRO-00004

Inspection List	YES	NO	N.A.
1 Verification of paint and color code according to design specification			
Visual Check External Color walls, roof, base frame RAL 7035	✓		
Visual Check External Color doors RAL 7035	✓		
Layer thickness of external coating µm 320 total	✓		
Visual Check Internal Equipment Baseframe RAL 7035	✓		

Comments:

** Touch-up and cleaning are required before proceeding with packaging*

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	COICEA CATALIN ROSETTI MARINO	CROSSWIND		

ALEXSISTEMI spa

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV = ISO 9001 =

Doc. Name: CHECK AND FUNCTIONAL TEST		Report No.04
OUR JOB X176-24X	Date 26/07/2024	Page 1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** I&T EQUIPMENT ROOM B-400
S/N: B400	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION : ON SITE ☒ OFF SITE ☐

DATE OF TEST: 26/07/2024

REFERENCE DRAWING:

REFERENCE DOCUMENT: ECA-00-ELE-DEB- 0001 Rev.7 Electrical Design Criteria

Inspection List		YES	NO	N.A.
Functional Test of Doors :				
Opening/Closing doors, doors locking		✓		

Comments:

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	COICEVA CATALIN ROSETTI MARINO (IX)	CROSSWIND		

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** I&T EQUIPMENT ROOM B-400
S/N: B400	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 26/07/2024

REFERENCE DRAWING:

- 1724000049-AR-DA-00017 - B-400 GENERAL ARRANGMENT DRAWINGS - E&I SHELTERS
- 1724000049-HV-DA-00067 - MODULE B-400 – HVAC SYSTEM–G.A. AND DETAILS
- 1724000049-HV-DA-00029 - B-400 HVAC and LIGHTING PANEL WIRING DRAWINGS and GENERAL ARRANGEMENT (INCL INTERCONNECTING) - E&I SHELTERS

REFERENCE DOCUMENT:

- 1724000049-HV-PID-00042 - B-400 PID - E&I SHELTERS
- 1724000049-HV-LIS-00050 - B-400 HVAC COMPONENTS LIST AND DS - E&I SHELTERS
- 1724000049-HV-RE-00055 - HVAC SYST DESCRIPTION (MANAGEMENT LOGICS) - E&I SHELTERS
- 1724000049-QC-PRO-00056 (FAT Procedure)
- ECA-00-ELE-DEB-0001 Rev.7 Electrical Design Criteria

Inspection List	YES	NO	N.A.
Functional Test of Electrical System			
- Check of Lighting System, Control Panel, and socket/switch.			X
- Cable tag and wiring			X
- Cable tray and conduit installation			X
- Grounding System Installation			X
Functional Test of Grounding System			
- Check the functionality of Grounding System (less than 200 mΩ)			X

Comments:

The items listed above are marked as N.A. because FAT activities have not been conducted. The HVAC system supply and installation were not completed by the specified date, making it impossible to perform all the functional tests outlined in the table.

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** I&T EQUIPMENT ROOM B-400
S/N: B400	**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	ROSETTI MARINO	CROSSWIND 29/07/24		

ALEXSISTEMI spa

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV = ISO 9001 =

Doc. Name:
Dimensional Check and Visual Inspection *Report No.08*

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:** I&T EQUIPMENT ROOM B-400
S/N: B400	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION : ON SITE ☒ OFF SITE ☐

DATE OF TEST: 23/07/2024

REFERENCE DRAWING: 1724000049-AR-DA-00017 / 1724000049-ST-DD-00013 / 1724000049-AR-DD-00021

REFERENCE DOCUMENT: ISO 17637 / EEMUA 158

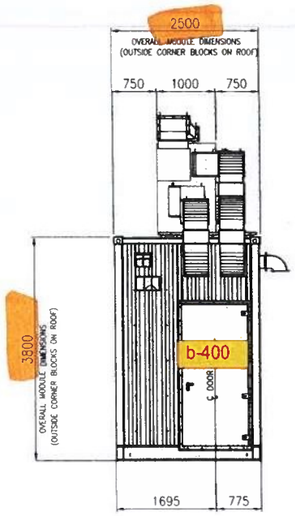
Inspection List	YES	NO	N.A.
Verificare tutte le quote di seguito indicate a disegno:			
NORTH VIEW	✓		
EAST VIEW	✓		
SOUT VIEW	✓		
WEST VIEW	✓		
TOP VIEW	✓		
SECTION A-A	✓		
SECTION B-B	✓		
SECTION C-C	✓		
SECTION D-D	✓		
SECTION E-E	✓		
BASEFRAME LOCATION	✓		

Comments:

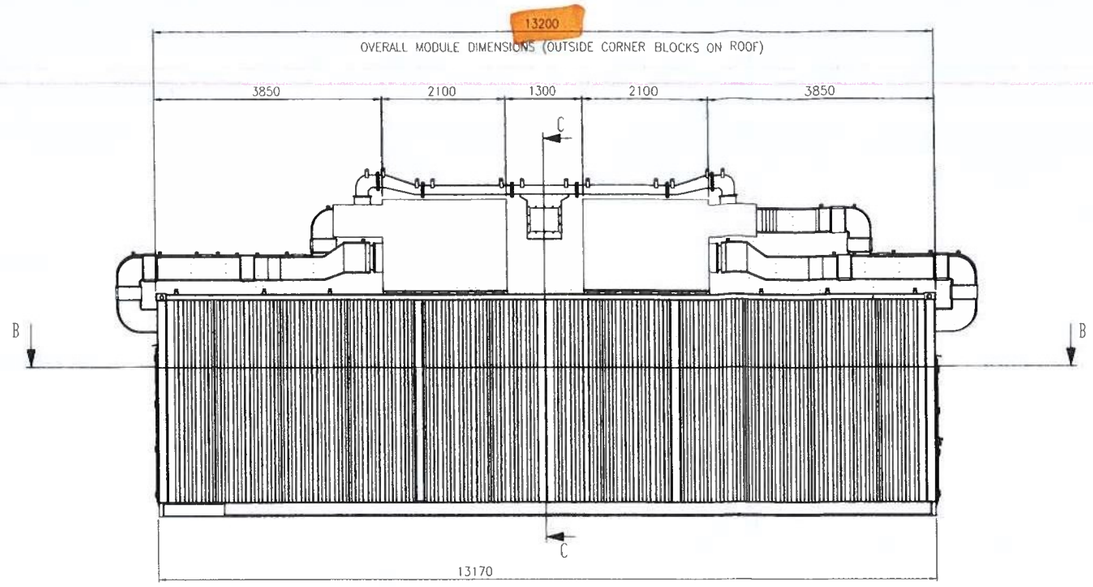
DWG attached.

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	COICEA CATALIN ROSETTI MARINO			

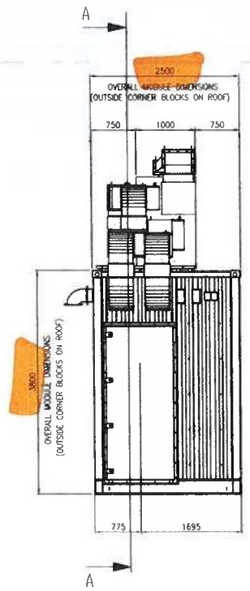
DRAWING NO 1724000049-AR-DA-00017 REV 02



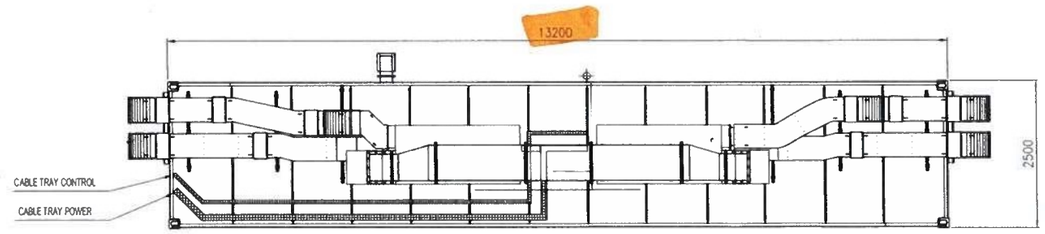
EAST VIEW



SOUTH VIEW



WEST VIEW



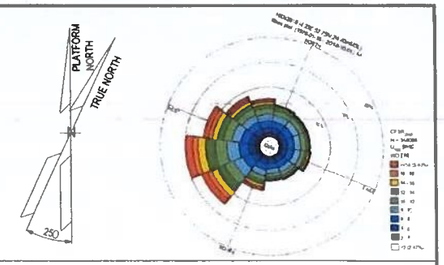
TOP VIEW

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINLGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINLGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINLGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINLGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-001	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-002	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-003	SPACE HEATER 3	184	145	1100	5	

MASTER COPY
INTERNAL TEST

02



NOTE

1) ALL DIMENSIONS ARE IM MM.

REFERENCE

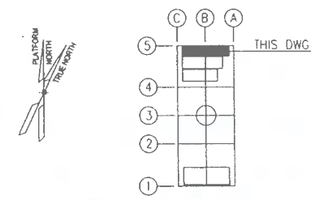
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007

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	04/07/24	M.G	SKV	C.A	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	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

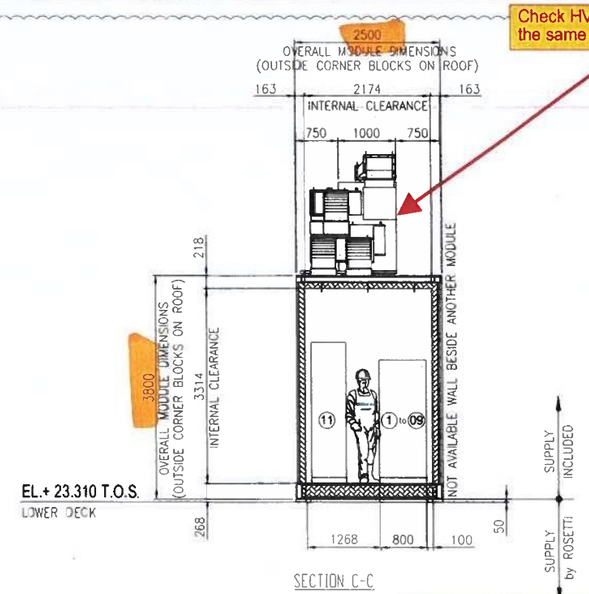
TITLE
BASE LOAD POWER HUB (BLPH)
B-400 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO /TITLE CONTRACT_NO 1724000049			SCALE 1:50
DRAWN M.G	CHECKED SKV	APPROVED C.A.	DATE 04/07/24
A1	DRAWING NO 1724000049-AR-DA-00017	SHEET 001	REV 02

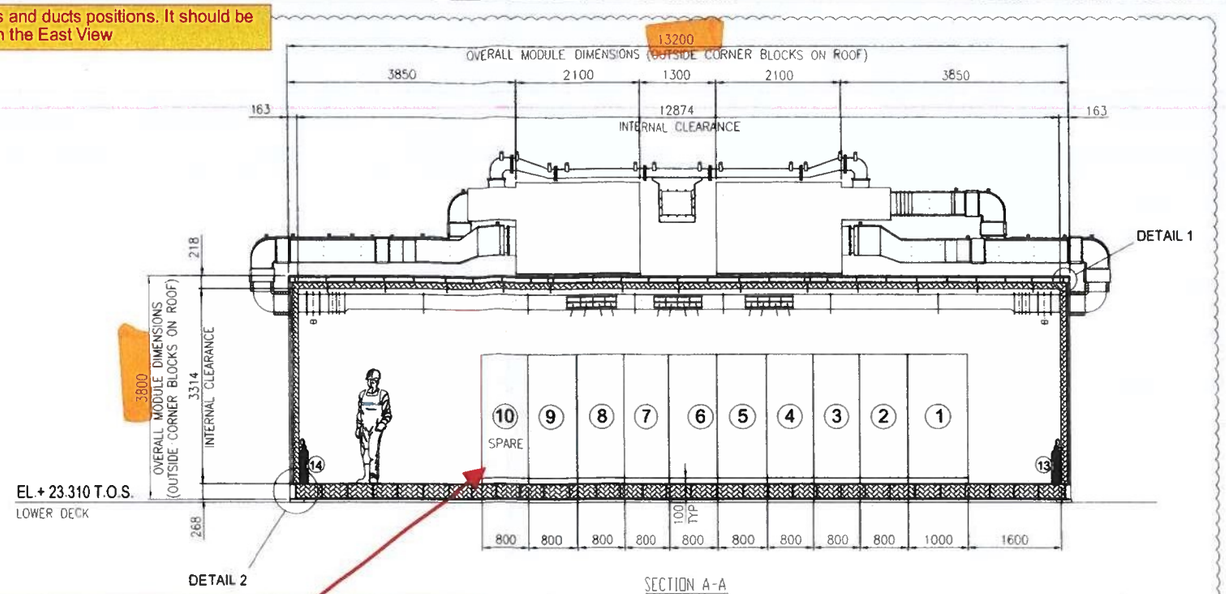
File Name 1724000049-AR-DA-00017-REV 02

DRAWING NO. 1724000049-AR-DA-00017 REV. 02

Check HVAC units and ducts positions. It should be the same shown in the East View

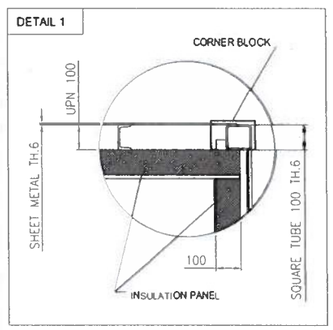


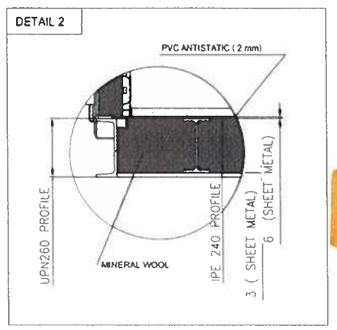
SECTION C-C

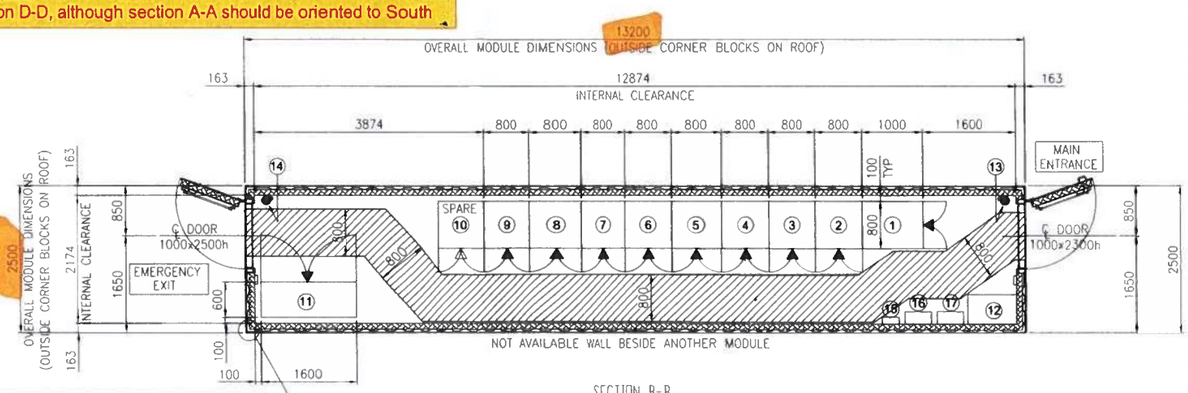


SECTION A-A

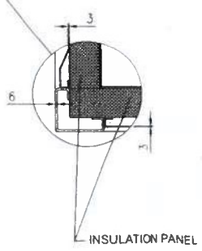
Check numbering and position of items.
This section view is similar to section D-D, although section A-A should be oriented to South







SECTION B-B



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

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINLGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINLGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINLGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINLGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	~~HSS-77-001~~	SPACE HEATER 1	184	145	1100	5	
21	~~HSS-77-002~~	SPACE HEATER 2	184	145	1100	5	
22	~~HSS-77-003~~	SPACE HEATER 3	184	145	1100	5	

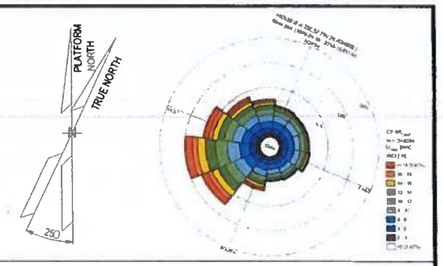
Revise TAGs according to all documents (P&IDs, HVAC & Lighting Panel, HVAC GA & Details, etc.)

1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED

NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.

Sign	Date
R. Bossi	10/07/2024

MASTER COPY
INTERNAL TEST



NOTE

1) ALL DIMENSIONS ARE IM MM

REFERENCE

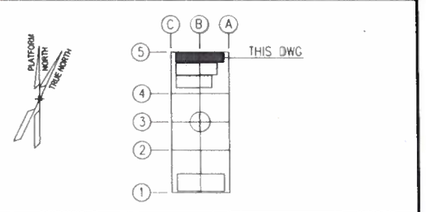
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007

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 Constructiion (AFC)

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	04/07/24	M.G.	SKV	C.A.	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	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

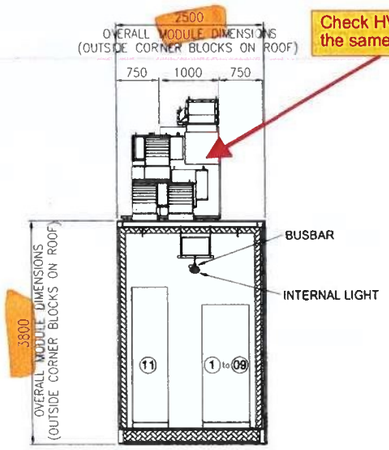
TITLE: BASE LOAD POWER HUB (BLPH)
B-400 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 04/07/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 002	REV 02

File Name 1724000049-AR-DA-00017-REV 02

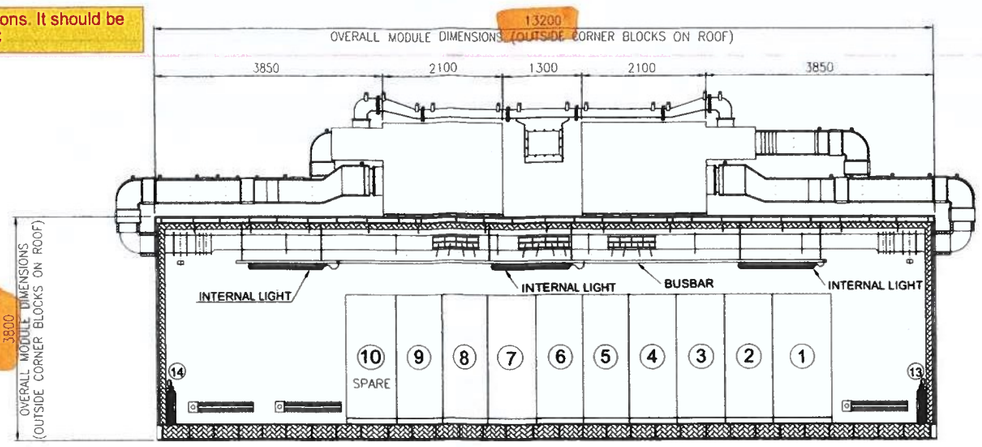
02

DRAWING NO. 1724000049-AR-DA-00017 REV. 02

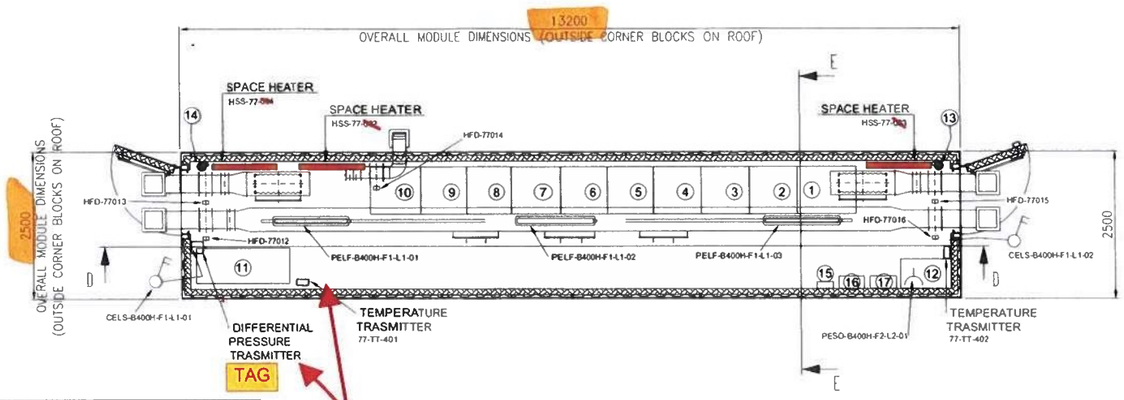


SECTION E-E

Check HVAC units and ducts positions. It should be the same shown in the Section C-C



SECTION D-D



Evaluate if move Differential Pressure Transmitter next to Temperature Transmitter

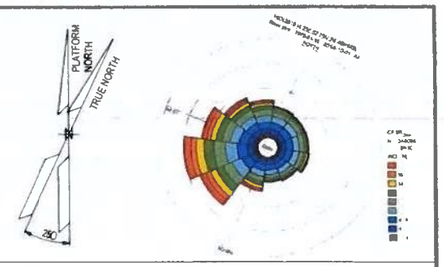
Note for lighting system:
The position of the lamps indicated is to be considered the theoretical one, the fina one will be confirmed in the As-Built issue.

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	SINLGLE CABINET
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	SINLGLE CABINET
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	SINLGLE CABINET
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	DOUBLE CABINET
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	TRIPLE CABINET
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	SINLGLE CABINET
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	
12	-	TABLE	850	500	750	50	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
15	-	FIRST AID KIT	280	115	200	10	
16	-	RESUSCITATION UNIT	430	210	480	10	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	15	
18	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850	
19	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850	
20	HSS-77-001	SPACE HEATER 1	184	145	1100	5	
21	HSS-77-002	SPACE HEATER 2	184	145	1100	5	
22	HSS-77-003	SPACE HEATER 3	184	145	1100	5	

MASTER COPY
INTERNAL TEST

02



NOTE

1) ALL DIMENSIONS ARE IM MM.

REFERENCE

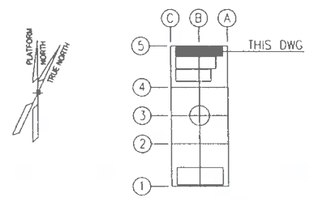
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007

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	04/07/24	M.G	SKV	C.A	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/05/24	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-400 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G	CHECKED SKV	APPROVED C.A.	DATE 04/07/24
A1	DRAWING NO. 1724000049-AR-DA-00017	SHEET 003	REV 02

File Name 1724000049-AR-DA-00017-REV 02

DRAWING NO. 1724000049-ST-DD-00013 | REV. 01

13170
13090
40
40
13200
OVERALL MODULE DIMENSIONS (OUTSIDE CORNER BLOCKS ON ROOF)

250 | 6275 | 200 | 6275 | 250

2470
735 120 1298 735

250 UNP260 250 UNP260 250 UNP260 250

250 2023 250
2500
OVERALL MODULE DIMENSIONS (OUTSIDE CORNER BLOCKS ON ROOF)

250 250 200 250

B-400

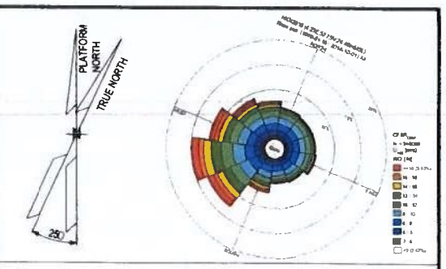
No. 2 HOLES Ø18
FOR M16 SCREW
AT EACH CORNER
(SCREW SUPPLY by ROSETTI)

ROSETTI MARINO

1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED

NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.

Sign	Date
R. Bossi	07/06/2024



NOTE

1) ALL DIMENSIONS ARE IM MM

REFERENCE

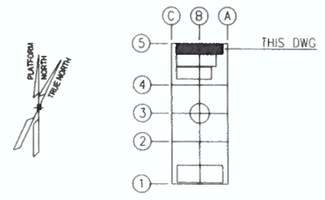
DOCUMENT TITLE	DOCUMENT NUMBER
B-400 STRUCTURAL CALCULATION - E&I SHELTERS	1724000049-ST-CA-00009

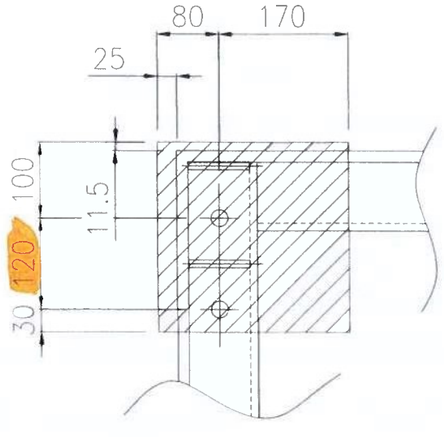
LEGEND

Plate 50 mm thk. welded on Lower Deck - Supply by Rosetti

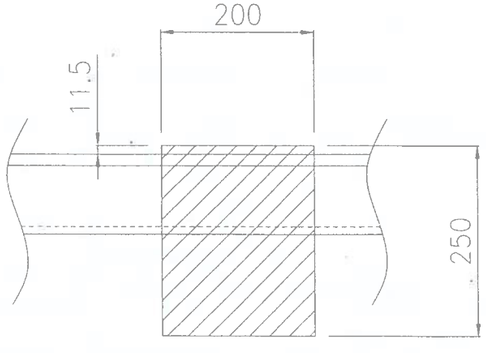
HOLDS

KEY PLAN

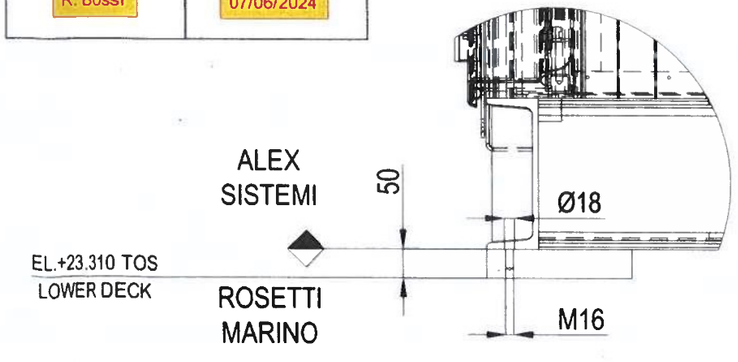




TYPICAL CORNER PLATE POSITION



TYPICAL CENTRAL PLATE POSITION



TYPICAL FIXING DETAIL
SCALE 1 : 10

MASTER COPY
INTERNAL TEST

ALEX SISTEMI

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-400 FOUNDATION DRAWING - E&I SHELTERS

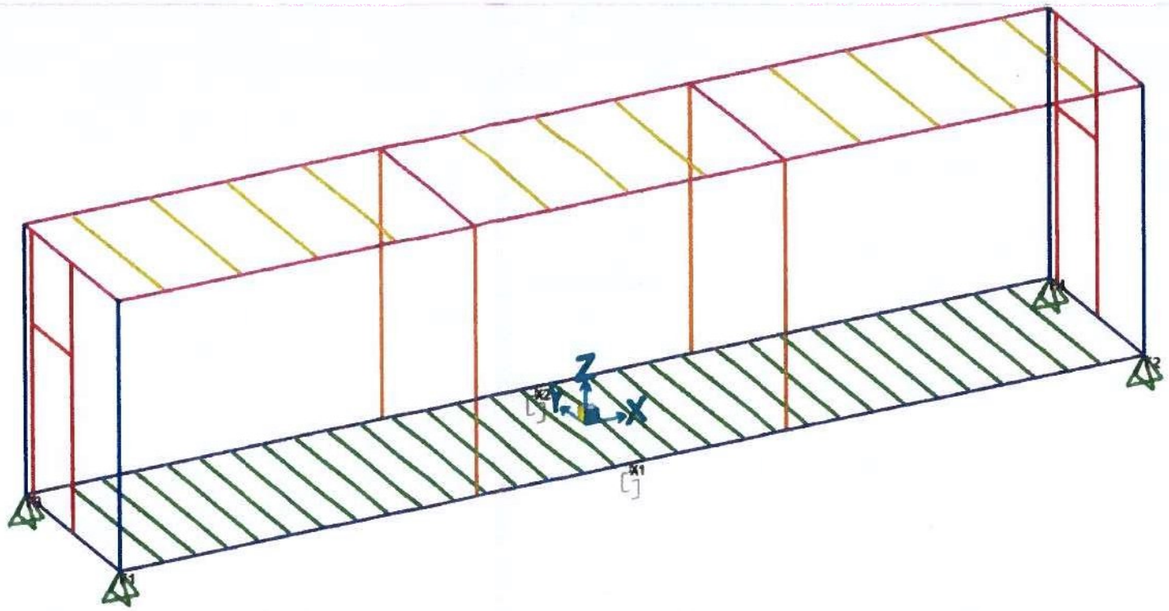
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE N.A.
DRAWN M.G.	CHECKED M.R.	APPROVED O.A.	DATE 03/06/24
A1	DRAWING NO. 1724000049-ST-DD-00013		SHEET 001/002 REV. 01

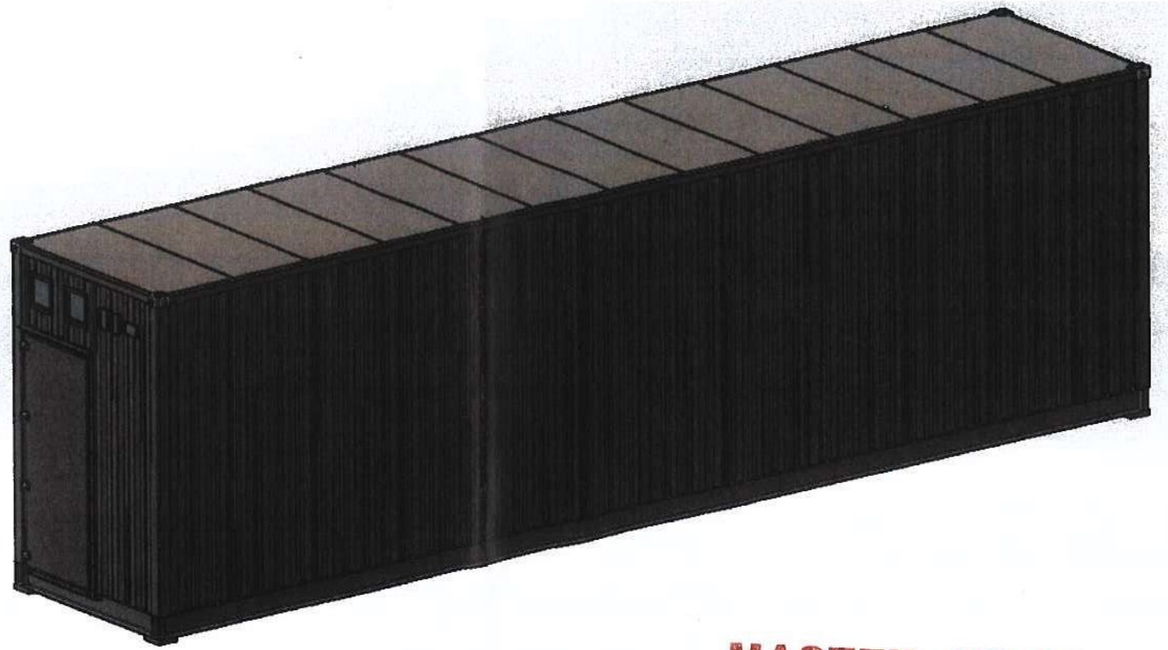
File Name: 1724000049-ST-DD-00013-REV.01

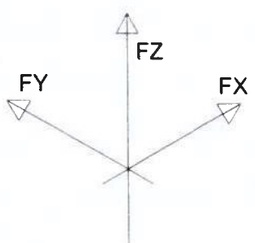
DRAWING NO 1724000049-ST-DD-00013 REV. 01

TABLE: Joint Reactions

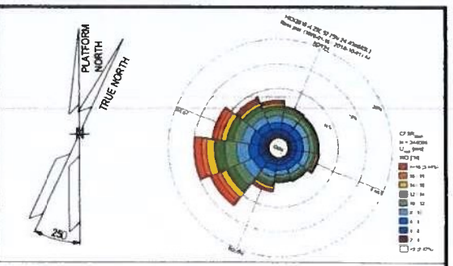
Joint	OutputCase	CaseType	StepType	Fx	Fy	Fz	Mx	My	Mz
Text	Text	Text	Text	KN	KN	KN	KN-m	KN-m	KN-m
F3	DEAD	NonStatic	Last Step	7,70	-3,33	18,50	0,00	0,00	0,00
F3	SD	NonStatic	Last Step	6,05	-2,10	13,16	0,00	0,00	0,00
F3	LIVE	NonStatic	Last Step	19,91	-7,03	38,05	0,00	0,00	0,00
F3	WIND X	NonStatic	Last Step	-9,76	0,24	-7,81	0,00	0,00	0,00
F3	WIND Y	NonStatic	Last Step	10,42	-22,47	29,38	0,00	0,00	0,00
F3	NOT X	NonStatic	Last Step	-0,06	0,01	-0,01	0,00	0,00	0,00
F3	NOT Y	NonStatic	Last Step	0,05	-0,06	0,07	0,00	0,00	0,00
F3	SLU LIVE	Combination		48,93	-18,09	100,94	0,00	0,00	0,00
F3	SLU WIND X	Combination		28,46	-21,30	80,91	0,00	0,00	0,00
F3	SLU WIND Y	Combination		52,67	-48,55	125,54	0,00	0,00	0,00
F3	SLE LIVE	Combination		33,65	-12,51	69,77	0,00	0,00	0,00
F3	SLE WIND X	Combination		7,11	-11,98	32,72	0,00	0,00	0,00
F3	SLE WIND Y	Combination		21,23	-27,87	58,75	0,00	0,00	0,00
F4	DEAD	NonStatic	Last Step	-7,69	-3,32	18,50	0,00	0,00	0,00
F4	SD	NonStatic	Last Step	-5,26	-1,66	9,47	0,00	0,00	0,00
F4	LIVE	NonStatic	Last Step	-20,38	-7,26	40,24	0,00	0,00	0,00
F4	WIND X	NonStatic	Last Step	0,99	1,65	-5,48	0,00	0,00	0,00
F4	WIND Y	NonStatic	Last Step	-10,40	-22,48	29,40	0,00	0,00	0,00
F4	NOT X	NonStatic	Last Step	-0,06	-0,01	0,01	0,00	0,00	0,00
F4	NOT Y	NonStatic	Last Step	-0,05	-0,06	0,07	0,00	0,00	0,00
F4	SLU LIVE	Combination		-48,60	-17,77	98,72	0,00	0,00	0,00
F4	SLU WIND X	Combination		-41,06	-18,77	81,20	0,00	0,00	0,00
F4	SLU WIND Y	Combination		-54,73	-47,73	123,06	0,00	0,00	0,00
F4	SLE LIVE	Combination		-33,44	-12,30	68,29	0,00	0,00	0,00
F4	SLE WIND X	Combination		-15,19	-10,13	31,39	0,00	0,00	0,00
F4	SLE WIND Y	Combination		-23,16	-27,02	55,80	0,00	0,00	0,00
X1	DEAD	NonStatic	Last Step	0,00	0,00	25,06	0,00	0,00	0,00
X1	SD	NonStatic	Last Step	0,00	0,00	15,16	0,00	0,00	0,00
X1	LIVE	NonStatic	Last Step	0,00	0,02	67,30	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	6,26	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	0,01	0,00	0,00	0,00
X1	SLU LIVE	Combination		0,00	0,03	156,29	0,00	0,00	0,00
X1	SLU WIND X	Combination		0,00	0,02	127,88	0,00	0,00	0,00
X1	SLU WIND Y	Combination		0,00	0,02	135,40	0,00	0,00	0,00
X1	SLE LIVE	Combination		0,00	0,02	107,54	0,00	0,00	0,00
X1	SLE WIND X	Combination		0,00	0,00	42,11	0,00	0,00	0,00
X1	SLE WIND Y	Combination		0,00	0,00	46,50	0,00	0,00	0,00
X2	DEAD	NonStatic	Last Step	0,00	0,00	24,89	0,00	0,00	0,00
X2	SD	NonStatic	Last Step	0,00	0,00	17,19	0,00	0,00	0,00
X2	LIVE	NonStatic	Last Step	0,00	-0,02	65,54	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	-0,03	156,45	0,00	0,00	0,00
X2	SLU WIND X	Combination		0,00	-0,02	126,96	0,00	0,00	0,00
X2	SLU WIND Y	Combination		0,00	-0,02	126,96	0,00	0,00	0,00
X2	SLE LIVE	Combination		0,00	-0,02	107,62	0,00	0,00	0,00
X2	SLE WIND X	Combination		0,00	0,00	42,08	0,00	0,00	0,00
X2	SLE WIND Y	Combination		0,00	0,00	42,08	0,00	0,00	0,00







MASTER COPY
INTERNAL TEST



NOTE

1) ALL DIMENSIONS ARE IM MM

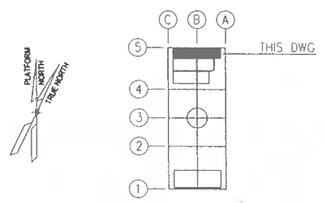
REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
B-400 STRUCTURAL CALCULATION - E&I SHELTERS	1724000049-ST-CA-00009

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-400 FOUNDATION DRAWING - E&I SHELTERS

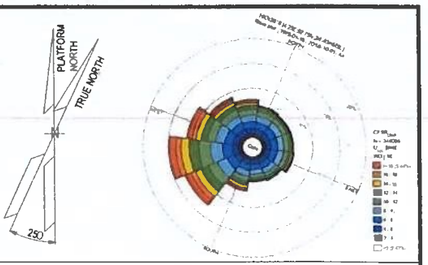
CONTRACT NO./TITLE CONTRACT NO: 1724000049			SCALE N.A
DRAWN M.G.	CHECKED M.R.	APPROVED O.A.	DATE 03/06/24
A1	DRAWING NO 1724000049-ST-DD-00013		SHEET 002/002 REV. 01

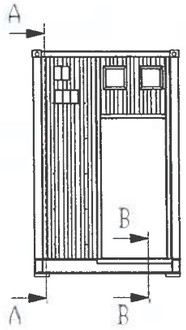
File Name : 1724000049-ST-DD-00013-REV.01

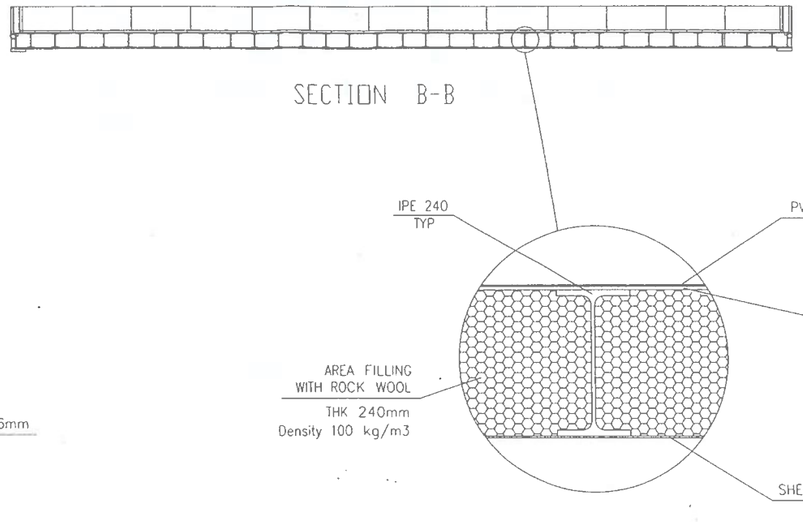
DRAWING NO. 1724000049-AR-DD-00021 REV. 02

MODULE B-400

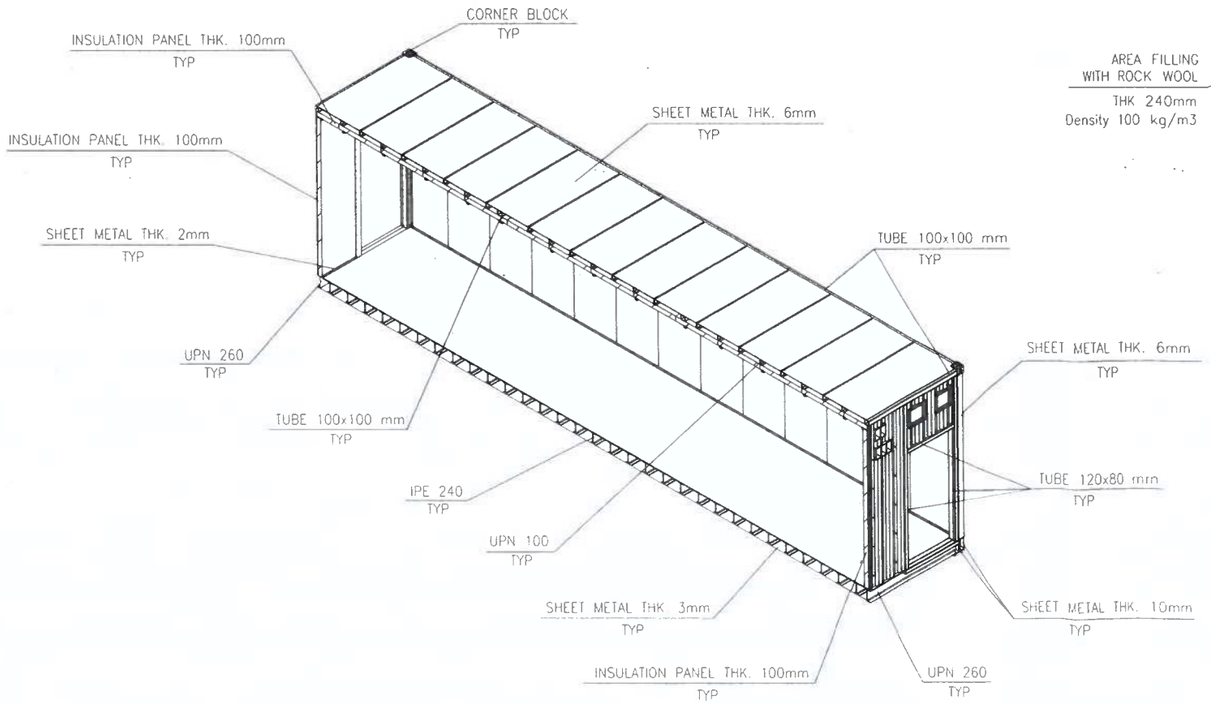
REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009
Weld Procedure Specifications (WPS), Weld Procedure Qualification Report (WPQR), Welding Map and Welders Qualifications	1724000049-WEL-RE-00003







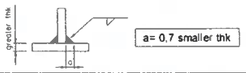
DETAIL "C"



MASTER COPY
INTERNAL TEST

NOTES

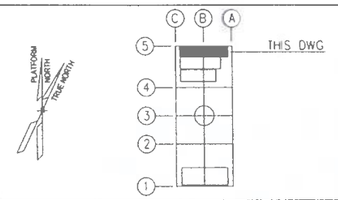
1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D.1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



LEGEND

HOLDS

KEY PLAN



ALEX

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	11/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
01	08/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	30/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND

ROSETTI MARINO

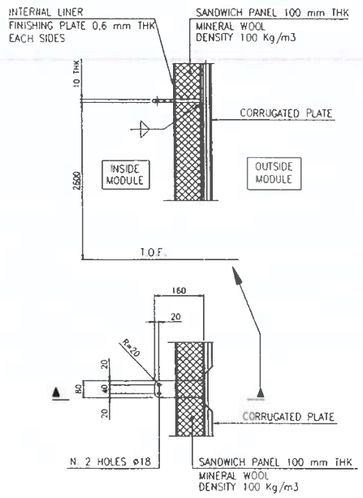
TITLE :

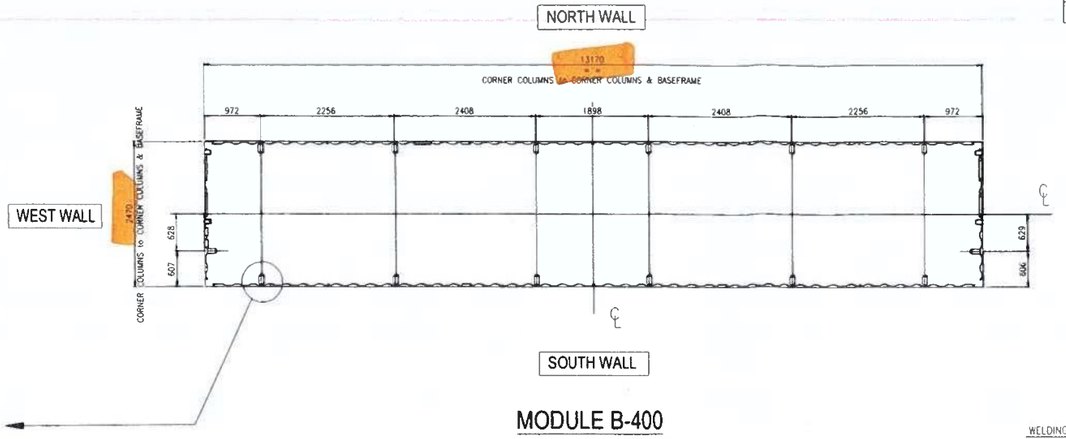
B-400 DETAILED DRAWINGS-E&I SHELTERS

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-00021	SHEET 001	REV. 02

File name: 1724000049-AR-DD-00021-REV.02

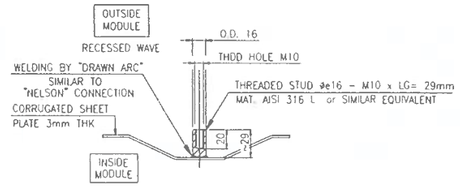
DRAWING NO. 1724000049-AR-DD-00021 REV. 02

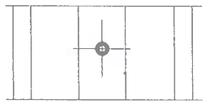




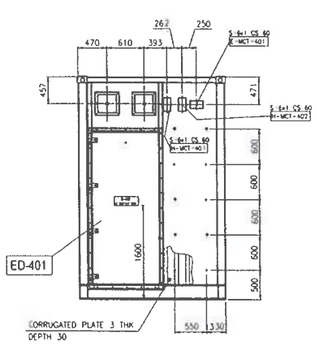
MODULE B-400

INTERNAL SEA FASTENING PLATES PLAN

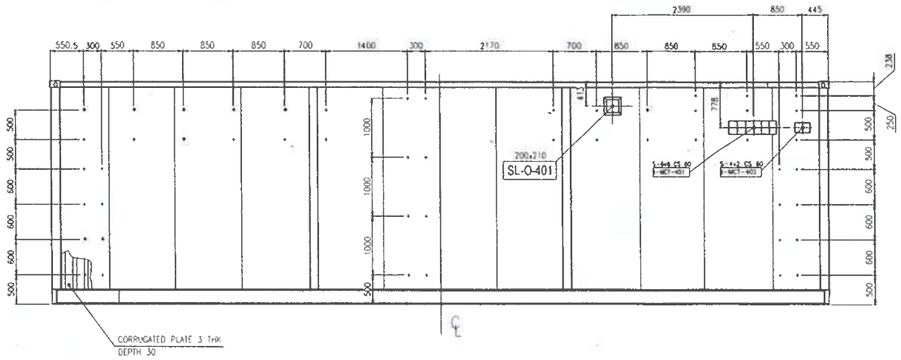




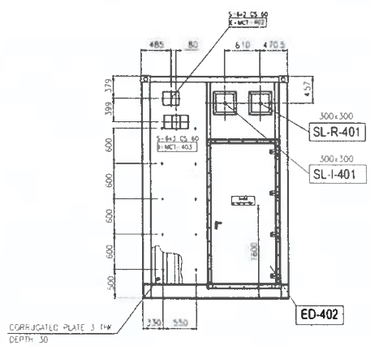
THREADED STUD INSTALLATION



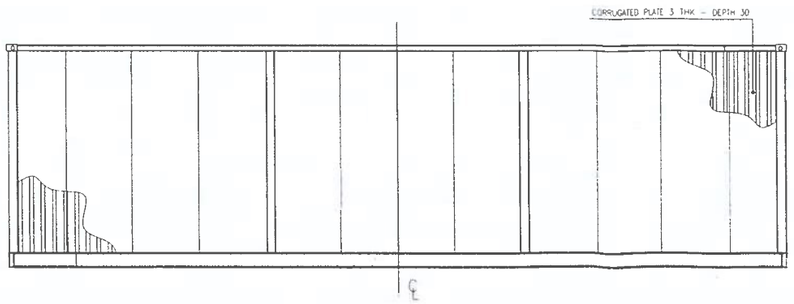
VIEW OF WEST WALL



VIEW OF NORTH WALL



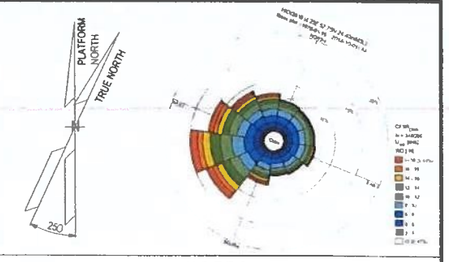
VIEW OF EAST WALL



VIEW OF SOUTH WALL

MASTER COPY
INTERNAL TEST

REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00017
"B-400" HVAC GENERAL ARRANGEMENT	1724000049-HV-DA-00067



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

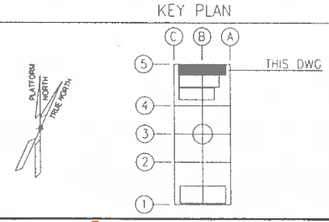
T.O.F. TOP OF FLOOR

MCT LEGEND: E-MCT-401
- MCT TYPE & SIZE / BRAND ROXTEC: S 6x2 C.S. 60
- MATERIAL: C.S.= PRIMED MILD STEEL; S.S.= AISI 316 L
- 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: 300x300 SL-I-401
- INTERNAL SIZE OF DUCT L x H (mm)
- SERVICE: I= AIR IN; R= RECYRCLE; O= OVERPRESSURE
- PROGRESSIVE NUMBER FROM 01
- MODULE LOCATION: 1= B-100, 2= B-200, 3= B-300, 4= B-400

DOOR LEGEND: ED-401
- 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-401	238	140.5	60	6x1	
	E-MCT-402	271	238	60	6x2	
INSTRUMENTAL	I-MCT-401	793	238	60	6x6	
	I-MCT-402	271	179.5	60	4x2	
	I-MCT-403	411.5	238	60	6x3	
HVAC	H-MCT-401	140.5	238	60	6x1	
	H-MCT-402	140.5	238	60	6x1	

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	30/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

ALEX

CROSSWIND

ROSETTI MARINO

TITLE :

B-400 DETAILED DRAWINGS-E&I SHELTERS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049 | SCALE 1:50

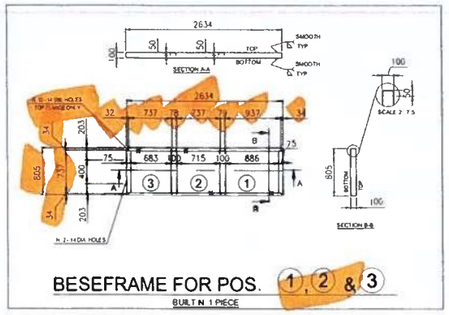
DRAWN M.G. | CHECKED O.A. | APPROVED C.A. | DATE 11/07/24

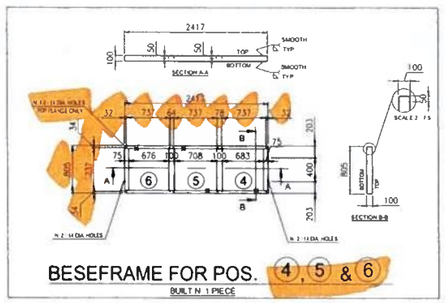
A1 | DRAWING NO. 1724000049 AR DD 00021 | SHEET 002 | REV 02

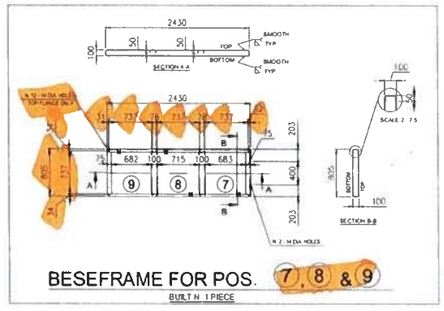
File Name 1724000049-AR-DD-00021-REV.02

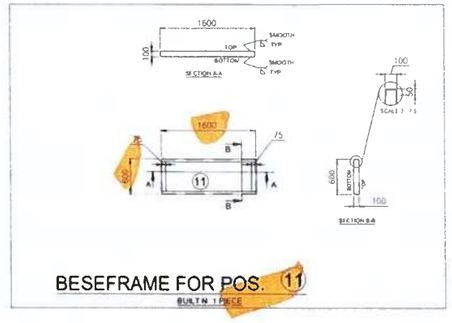
DRAWING NO. 1724000049-AR-DD-00021 REV. 02

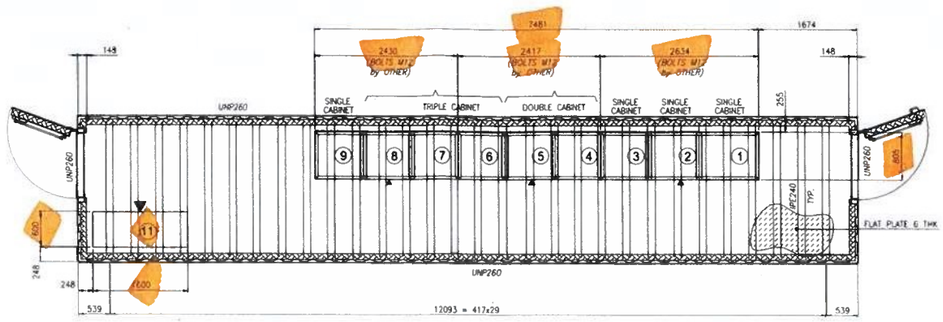
B-400
I&T EQUIPMENT ROOM
BASEFRAME LOCATION PLAN

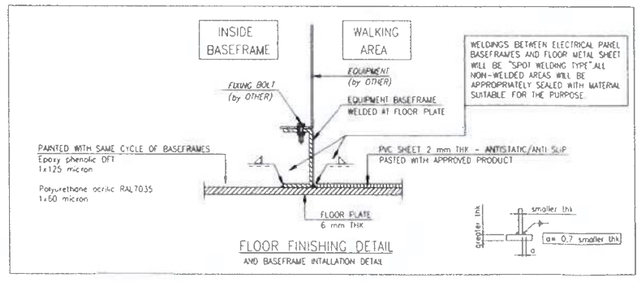


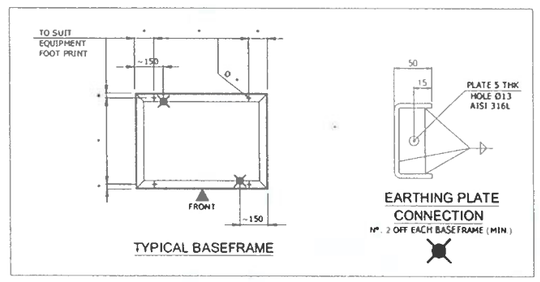


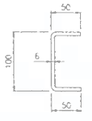








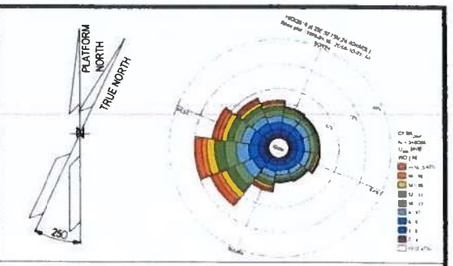




EQUIPMENT LIST

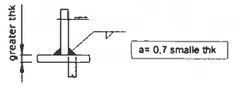
REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	SCOPE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	ASI
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	ASI
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	ASI
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	ASI
5	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	250	ASI
6	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	250	ASI
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	250	ASI
8	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	250	ASI
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	250	ASI
10	-	SPARE					
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	1150	ASI

MASTER COPY
INTERNAL TEST

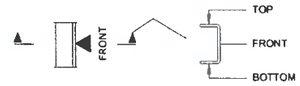


NOTES

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.



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".



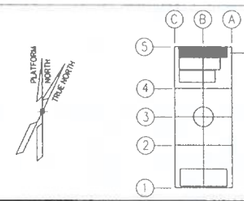
6. SURFACE TREATMENT ACCORDING DOCUMENT N. 1724000049-MAT-PRO-00004 - PAINTING PROCEDURE FINAL COLOUR LIGHT GREY RAL 7035.

LEGEND

ASI = ALEX SISTEMI

HOLDS

KEY PLAN



ALEX

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	11/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
01	08/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	30/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND

ROSETTI MARINO

TITLE :

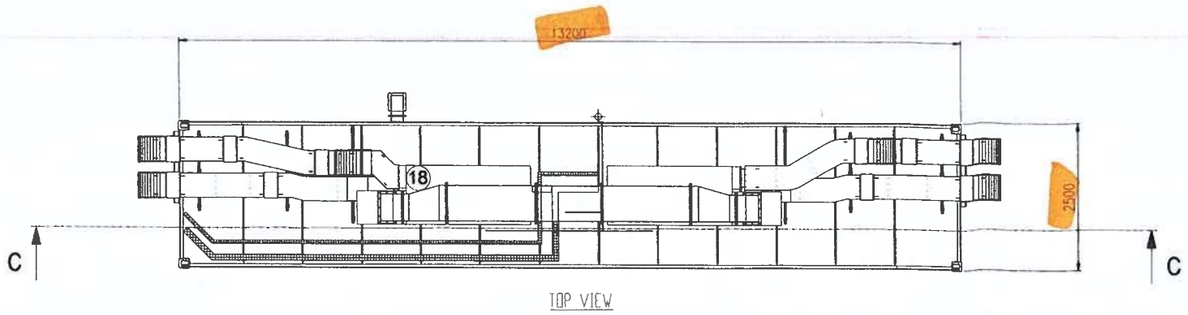
B-400 DETAILED DRAWINGS-E&I SHELTERS

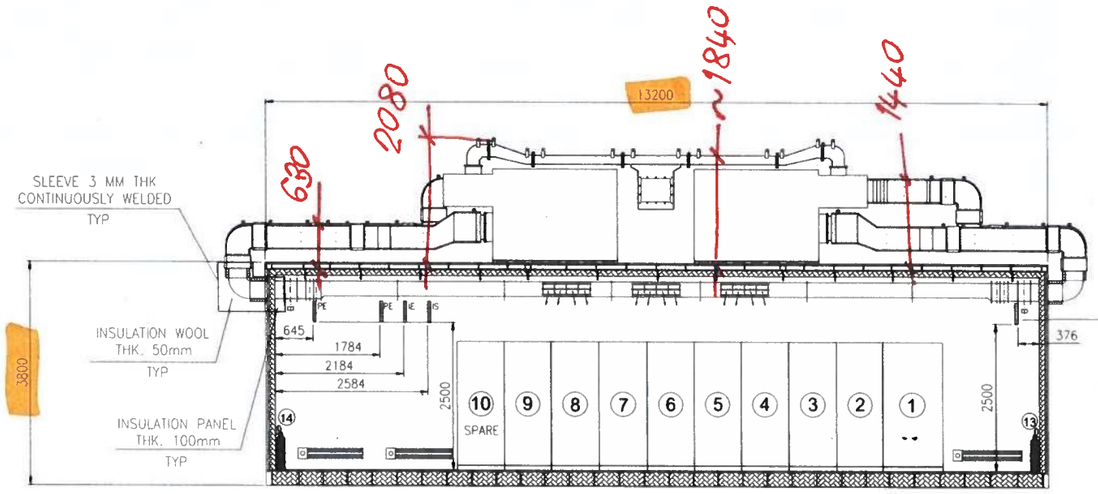
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00021		SHEET 003 / REV 02

File Name: 1724000049-AR-DD-00021-REV.02

DRAWING NO. 1724000049-AR-DD-00021

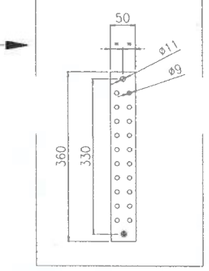
REV. 02





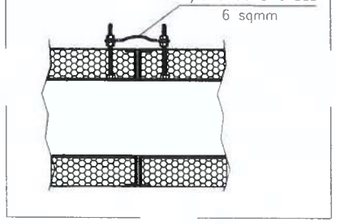
DET. 3

TYPICAL DETAIL
Ground bar



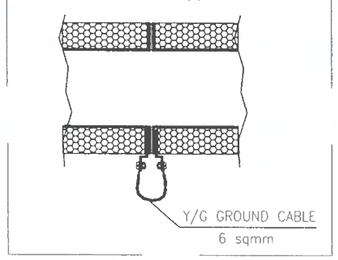
DET. 1

EXTERNAL DUCT



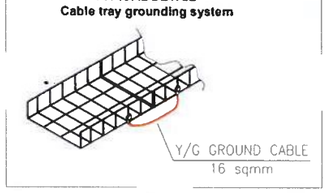
DET. 2

INTERNAL DUCT



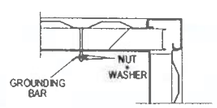
DET. 4

TYPICAL DETAIL
Cable tray grounding system



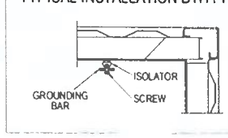
DET. 5

TYPICAL FASTENING DETAIL



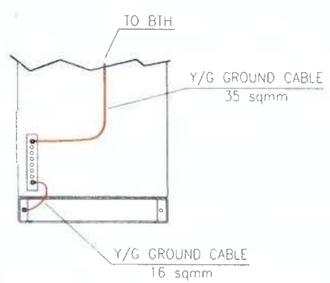
DET. 6

TYPICAL INSTALLATION BTH PI and IS



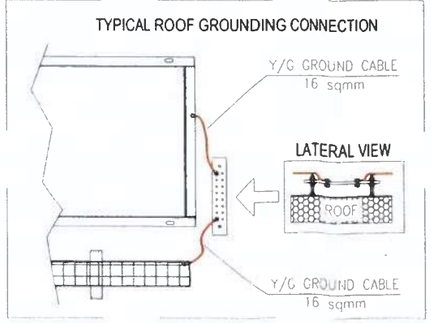
DET.8

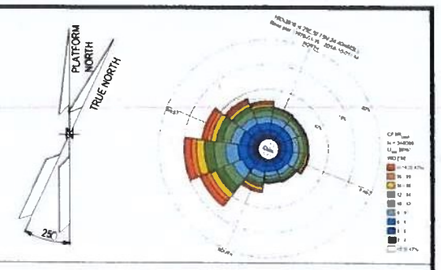
TYPICAL CABINET GROUNDING CONNECTION



DET. 7

TYPICAL ROOF GROUNDING CONNECTION





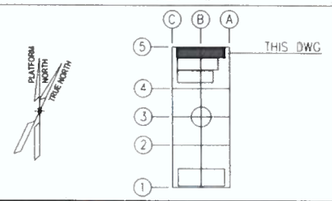
NOTES

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.

LEGEND

HOLDS

KEY PLAN



ALEX

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	11/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
01	08/07/24	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	30/05/24	M.G.	O.A.	C.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND

ROSETTI MARINO

TITLE :

B-400 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-00021	SHEET 004	REV. 02

File Name : 1724000049-AR-DD-00021-REV.02

MASTER COPY
INTERNAL TEST

ALEXSISTEMI spa

Doc. Name: PAINTING CHECK		Report No.08 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:** I&T EQUIPMENT ROOM B-400
S/N: B400	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 23/07/2024

REFERENCE DRAWING:

REFERENCE DOCUMENT: 1724000049-MAT-PRO-00004

Inspection List	YES	NO	N.A.
1 Verification of paint and color code according to design specification			
Visual Check External Color walls, roof, base frame RAL 7035	X		
Visual Check External Color doors RAL 7035	X		
Layer thickness of external coating µm 320 total	X		
Visual Check Internal Equipment Baseframe	X		

Comments:

** Touch-up and cleaning are required before proceeding with packaging*

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	COICEA CATALIN ROSETTI MARINO			

R

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV = ISO 9001 =

Doc. Name: CHECK AND FUNCTIONAL TEST		Report No.08
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:** I&T EQUIPMENT ROOM B-400
S/N: B400	**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 AD ROSETTI MARINO (R)			

ALEXSISTEMI spa

Doc. Name: ELECTRICAL TESTS		Report No.08 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:** I&T EQUIPMENT ROOM B-400
S/N: B400	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 23/07/2024

REFERENCE DRAWING:

- 1724000049-AR-DA-00017 - B-400 GENERAL ARRANGMENT DRAWINGS - E&I SHELTERS
- 1724000049-HV-DA-00067 - MODULE B-400 – HVAC SYSTEM–G.A. AND DETAILS
- 1724000049-HV-DA-00029 - B-400 HVAC and LIGHTING PANEL WIRING DRAWINGS and GENERAL ARRANGEMENT (INCL INTERCONNECTING) - E&I SHELTERS

REFERENCE DOCUMENT:

- 1724000049-HV-PID-00042 - B-400 PID - E&I SHELTERS
- 1724000049-HV-LIS-00050 - B-400 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.08 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:** I&T EQUIPMENT ROOM B-400
S/N: B400	**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.04 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:** I&T EQUIPMENT ROOM B-400
S/N: B400	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 23/07/2024

REFERENCE DRAWING:

- 1724000049-AR-DA-00017 - B-400 GENERAL ARRANGMENT DRAWINGS - E&I SHELTERS
- 1724000049-HV-DA-00067 - MODULE B-400 – HVAC SYSTEM–G.A. AND DETAILS
- 1724000049-HV-DA-00029 - B-400 HVAC and LIGHTING PANEL WIRING DRAWINGS and GENERAL ARRANGEMENT (INCL INTERCONNECTING) - E&I SHELTERS

REFERENCE DOCUMENT:

- 1724000049-HV-PID-00042 - B-400 PID - E&I SHELTERS
- 1724000049-HV-CA-00038 - B-400 HVAC CALCULATION REPORT (Incl HVAC SYS CALC and HEAT DISSIPATION CALC) - E&I SHELTERS
- 1724000049-HV-LIS-00050 - B-400 HVAC COMPONENTS LIST AND DS - E&I SHELTERS
- 1724000049-HV-RE-00055 - HVAC SYST DESCRIPTION (MANAGEMENT LOGICS) - E&I SHELTERS
- 1724000049-QC-PRO-00056 (FAT Procedure)
- ECA-00-ELE-DEB-0001 Rev.7 Electrical Design Criteria

Inspection List	PASS	FAIL	N.A.	value
Functional & performance Test of A/C System (HVAC Test):				
• Visual and correct installation of HVAC fans.			x	
• Functional check of fans.			x	
• Check the functionality and performance of A/C System			x	

ALEXSISTEMI spa

Doc. Name: CHECK AND FUNCTIONAL TEST OF HVAC SYSTEM		Report No.04 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:** I&T EQUIPMENT ROOM B-400
S/N: B400	**FAT procedure:** 1724000049-QC-PRO-00056

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.

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa				

Section 13 MECHANICAL COMPLETION CHANGES / MARK-UPS

NOT APPLICABLE