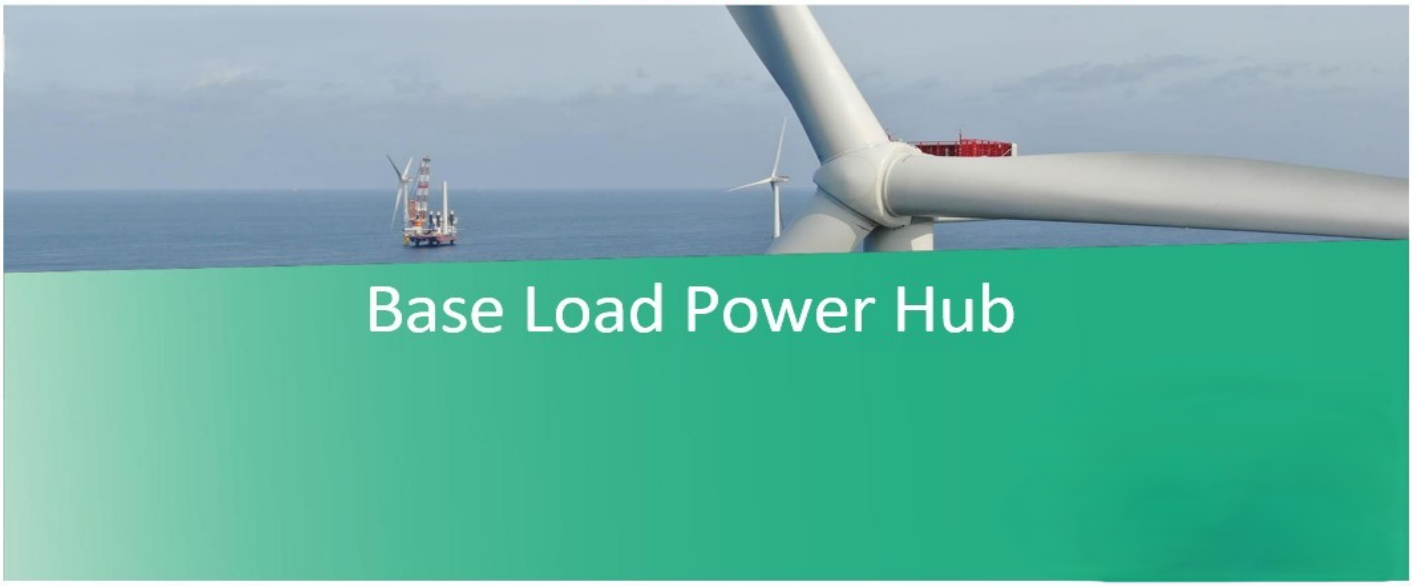
CROSSWIND

ROSETTI MARINO

PROVERLIS

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



COMMISSIONING DOSSIER (ONSHORE)

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

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

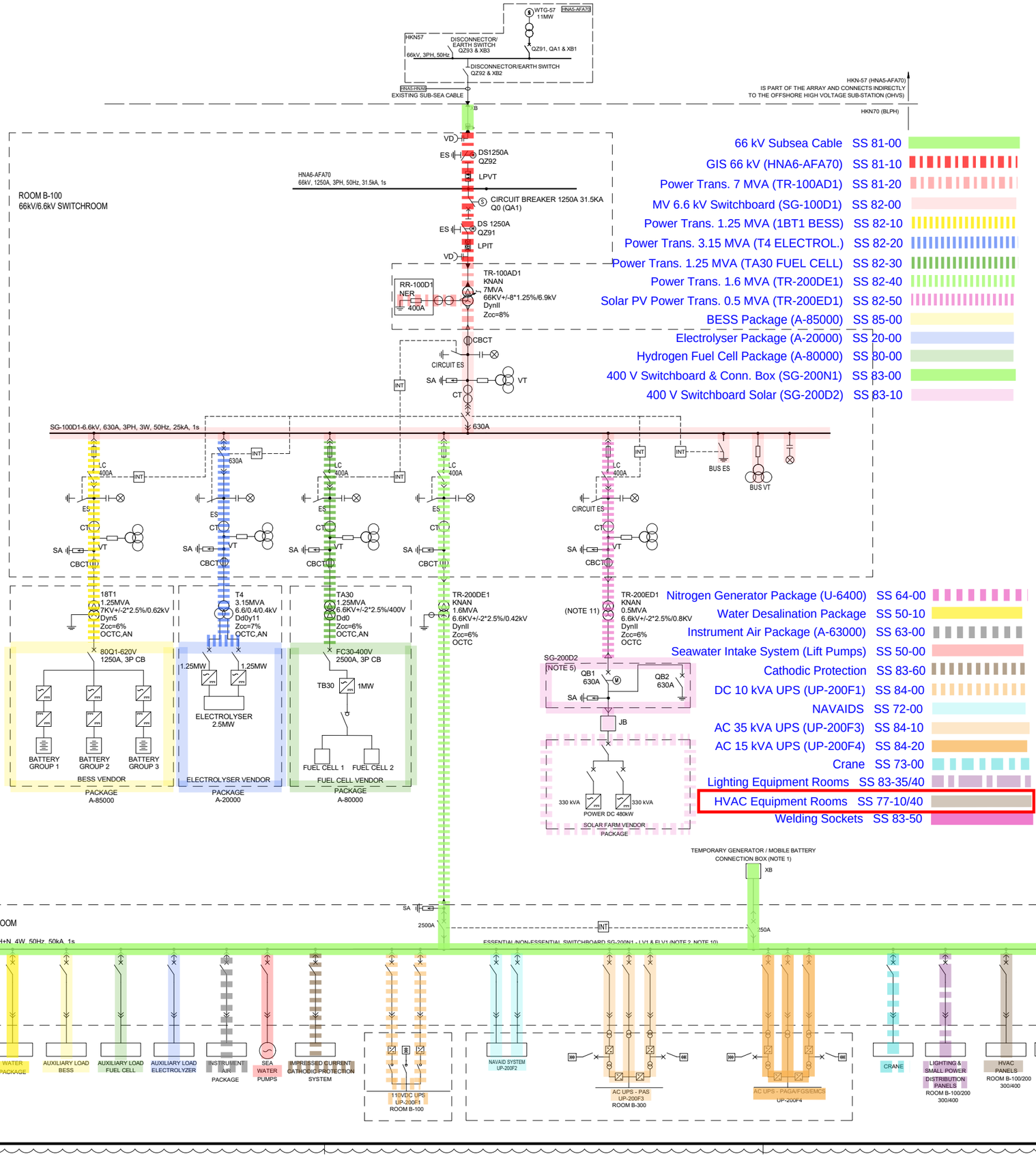
Sub System N°:	77-20	Tick as appropriate	ONSHORE	OK
Description:	HVAC LV Switchgear Room B-200		OFFSHORE	

1. *SUB-SYSTEM DEFINITION*	OK
1.1 Sub-System Description / Boundary Limit Drawings	
2. *READY FOR OPERATION CERTIFICATE*	OK
2.1 Achievement Of Ready for Operation Certificate (RFO)	
2.2 Exception Punch Lists (per discipline)	
2.3 “As-Commissioned” P&ID’s / SLD’s / D&ID’s / C&E’s	
3. *CONSOLIDATED PUNCH LISTS*	OK
3.1 Cleared and Residual Items (sorted by discipline)	
4. *FUNCTIONAL TESTS SHEETS*	OK
4.1 Electrical functional test sheets index	
4.2 Electrical “As-Commissioned” interconnection diagrams	
4.3 Instrumentation Functional Test Sheets Index	
4.4 Instrumentation “As-Commissioned” interconnection diagrams	
4.5 Telecommunication Functional Test Sheets Index	
4.6 Telecommunication “As-Commissioned” I.C.D. / TSLD’s	
5. *SITE / OPERATIONAL:*	NA
5.1 Operational Test Procedure	
5.2 Operational Test Certificates	
6. *PIPING AND VESSEL PREPARATION*	NA
6.1 Final Mechanical / Vessel Inspection Checks Index	
6.2 Leak Test / Drying / Inerting Test Sheets Index	
6.3 Chemical Loading & First Fill records Index	
6.4 Chemical Cleaning Reports and Records Index	
6.5 Lubrication Schedule	
7. *VENDORS*	OK
7.1 Vendor Package Summary Index	
7.2 SAT Procedure with associated punch list and reference (Front Page)	
7.3 Vendor Spares & Special Tools lists references	
7.4 Vendor Data / Operations / Maintenance Manuals References	
8. *LIST OF MODIFICATIONS*	NA
8.1 List of changes initiated during the WORKSITE Commissioning phase pertaining to the relevant Sub-System will be incorporated in this section with relevant references (with location and position of blinds/spades, isolation LO & LC valves, list of electrical isolation status, and remaining inhibits and overrides)	
9. *SUPPORTING DOCUMENTS*	NA
9.1 Other supporting documents (as applicable)	

	Contractor Commissioning Site Leader	Company Commissioning Site Leader
Name	Anthony Iveson	Martin Taylor
Date	2025-05-22	2025-05-22
Signature	PROVERLIS Digitaly signed by Anthony Iveson 2025-05-22T12:09:37.628Z	PROVERLIS Digitaly signed by Martin Taylor 2025-05-22T13:40:33.317Z

Section 1 SUB-SYSTEM DEFINITION

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 :

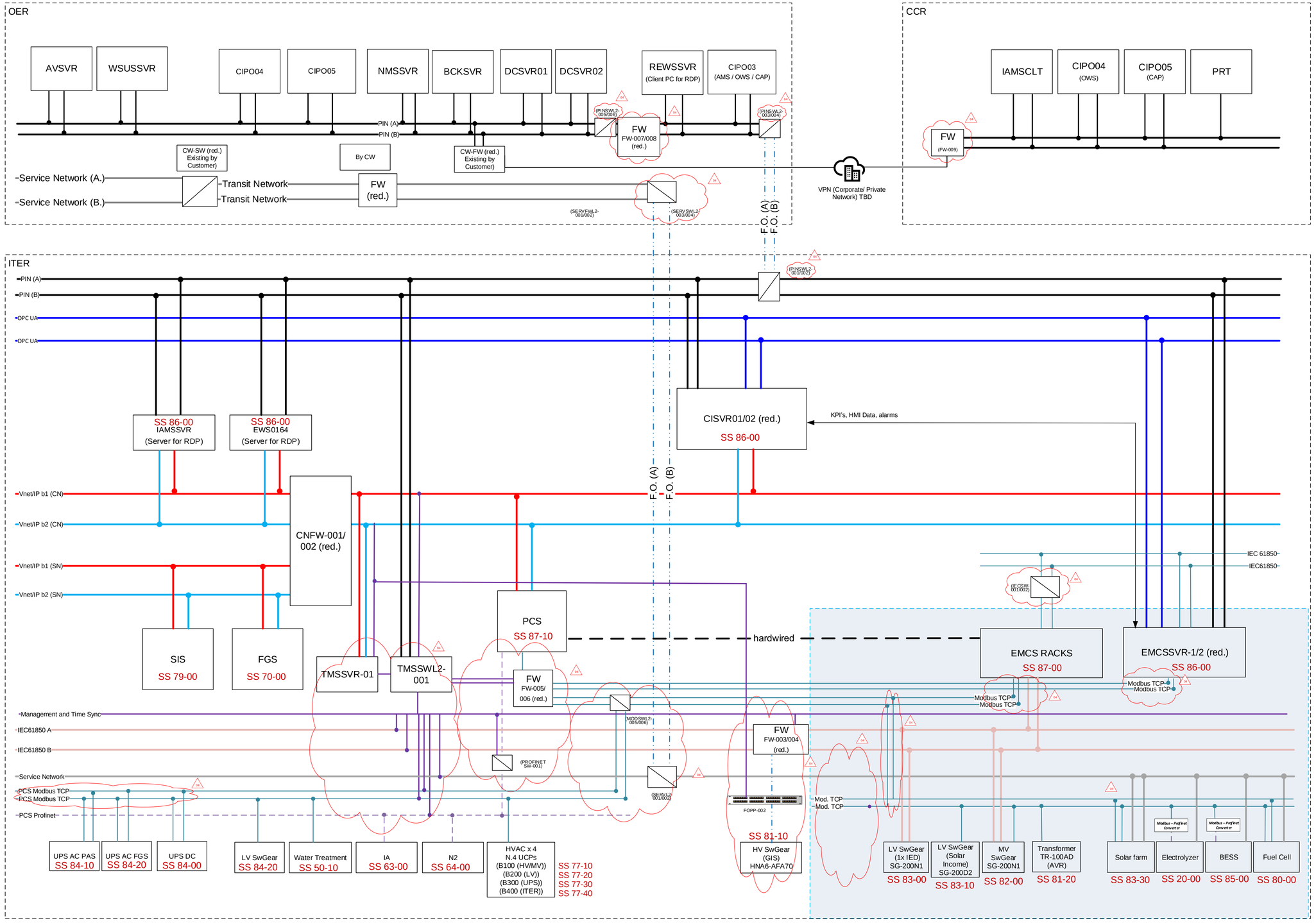
OVERALL/KEY SINGLE LINE DIAGRAM

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

CROSSWIND BLPH PROJECT - SYSTEM BLOCK DIAGRAM



AMS	: Alarm Management System	FCS	: Field Control Station
AV	: Anti-virus	FGS	: Fire & Gas System
BCK	: Backup Server	FO	: Fiber Optic
BESS	: Battery Energy Storage System	FOPP	: Fiber Optic Patch Panel (by others)
BLPH	: Base Load Power Hub	FTA	: Field Termination Assembly
CAP	: Critical Alarm Panel	HIST	: Historian
CCR	: Central Control Room	HKN	: Hollandse Kust Noord
CI	: Collaborative Infomation	IAMS	: Instrument Asset Management System
CN	: Control Network	ITER	: Instrument & Telecom Equipment Room
DC	: Domain Controller	LHVS	: Land High Voltage Station
DMZ	: De-militarized Zone	MCC	: Motor Control Center
ESB	: IO communication bus	MODB	: Modbus
EWS	: Engineering Work Station	MQTT	: Message Queuing Telemetry Transport
FC	: Field Communication (Vnet/IP)	NMS	: Network Management System
OER	: Onshore Equipment Room		
OHVS	: Offshore High Voltage Station		
OWS	: Operator Work Station		
PIN	: Plant Information Network		
PKG	: Package		
RDP	: Remote Desktop Protocol		
SCS	: Safety Control Station		
SIS	: Safety Instrumented System		
SN	: Safety Network		
SW	: Switch		
UCP	: Unit Control Panel (3rd party systems)		
VM	: Virtual Machine		
Vnet/IP	: Yokogawa's Control network		
WSUS	: Windows Security Update Services		

LEGEND:

- PIN (Plant Information Network)
- Vnet/IP BUS 1 PCS
- Vnet/IP BUS 2 PCS
- Vnet/IP BUS 1 SIS/FGS
- Vnet/IP BUS 2 SIS/FGS
- ESB bus connection
- IEC61850 connection
- OPC UA connection
- Service Network connection
- Modbus TCP connection
- Profinet (non redundant)
- Fiber Optic Patch Cords
- Fiber Optic connection (core by Crosswind)
- Fiber Optic backbone (by Crosswind)
- System Cable connection
- Management and Time sync.

Note 1 : Exact assignment of Servers per cabinet to be defined in cabinet General Arrangement Drawing.
Note 2 : For IP Addresses refer to 1724000594-IN-RE-00043 Cyber Security Settings
Note 3 : All Network Components will be installed in Network Cabinet.
Note 4 : Supply of Console Desk in CCR is in Customer Scope.
Note 5 : All Network Switches and Firewall is configured in VLAN.
Note 6 : Intermediate FO Connection between HNA5 and OER Intentionally not shown.

Zone-1	: PCS Control Zone	Zone-2	: Safety Control Zone
Zone-3	: PCS Zone	Zone-4	: Application Server Facility Zone
Zone-5	: Security Management Zone-1	Zone-6	: Security Management Zone-2
Zone-7	: Demilitirized Zone	Zone-8	: Croswind Zone
Zone-9	: Service Network Zone	Zone-10	: Application Server Facility Zone-OD
Zone-11	: Third Party System Zone		: Out of Scope

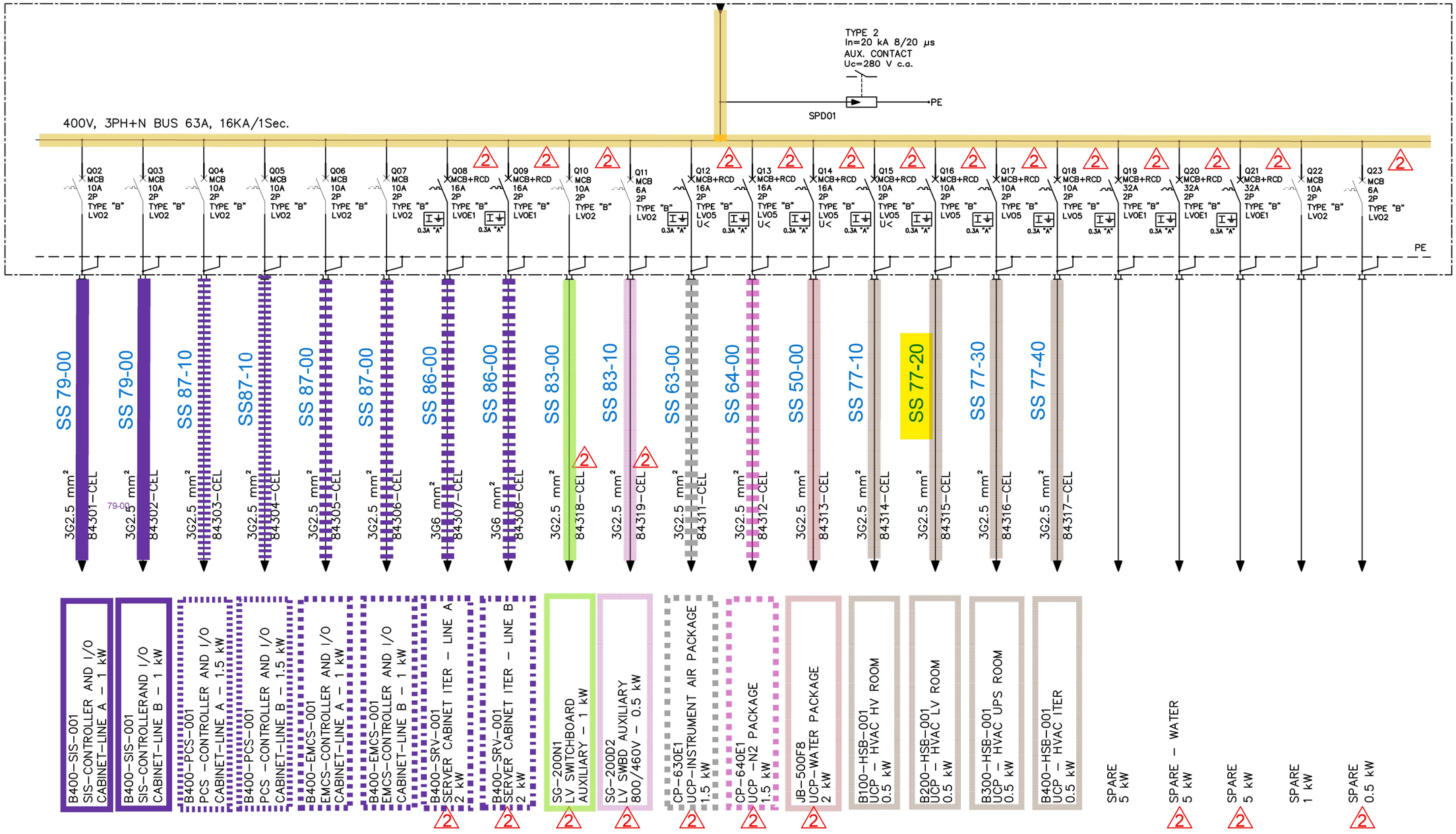
REV	DWG BY	CHK BY	APP BY	DATE
04	SKR	MP/AB	SC	12-Feb-25
03	SKR	MP/AB	SC	26-Aug-24
02	SKR	MP/AB	SC	28-Jun-24
01	SKR	MP/AB	SC	24-May-24
00	SKR	AB	SC	23-Apr-24

Doc No : 1724000594-IN-DD-00015
Doc Name : System Architecture

ROSETTI MARINO
HOLLANDSE KUST NOORD WIND PART Project
CROSSWIND
YOKOGAWA

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

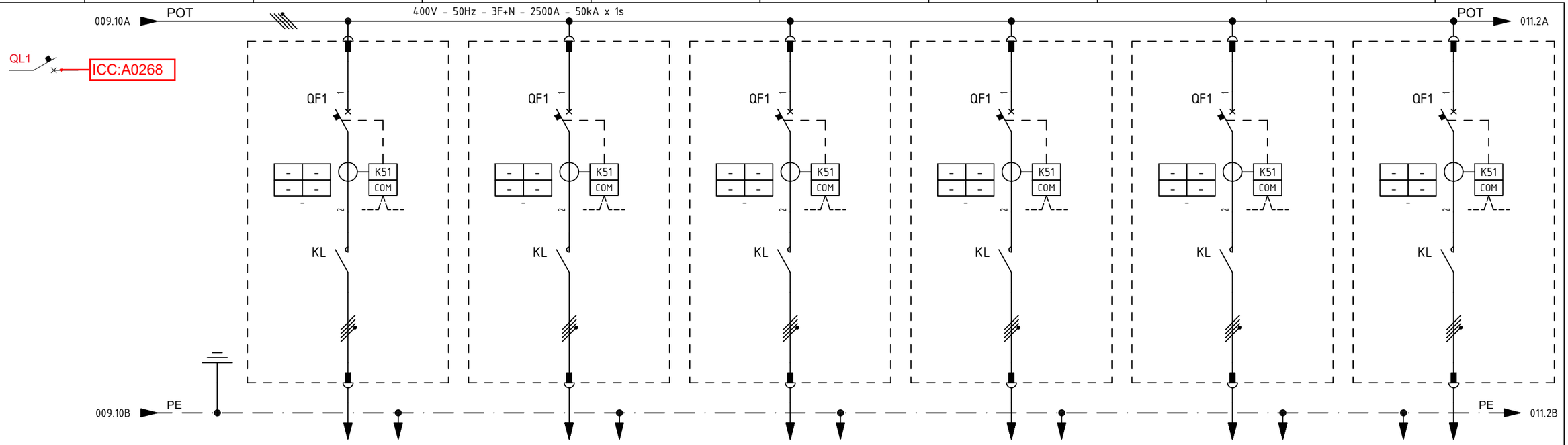
DRAWING NO. 123A90–DDL–EL–DG–20160

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 2 READY FOR OPERATION

Section 2.1 Achievement Of Ready for Operation Certificate (RFO)

ROSETTI MARINO

123A90 - HOLLANDSE KUST NOORD WIND PARK
BLPH Project

CROSSWIND

Ready For Operation (RFO) Certificate

COMPLETE	●	PARTIAL	

Revision:	2		Issued on:	2025-05-19	
System:	77	/	Heating & Ventilation		
SubSystem:	77-20	/	HVAC LV Switchgear Room B-200		

We hereby confirm that all Mechanical Completion (MC) and Pre-Commissioning/Commissioning (Pre-Comm./Comm.) activities for the above-mentioned System/Sub-System have been successfully completed in accordance with project specifications, relevant standards and contractual requirements. The System/Sub-System has been tested and verified to ensure readiness for operation. Issuance of this Certificate shall not release CONTRACTOR from any of his obligations, responsibilities or liabilities under the CONTRACT.

- **Mechanical Completion:** All required MC activities have been completed and approved
- **Pre-Commissioning & Commissioning:** All required Pre-Comm. and Comm. activities and OTPs have been completed and approved (Status Index attached)
- **Punch List:** All Punch items categorized as A and B have been cleared (PL report attached)
- **Documentation:** As-built documentation and Commissioning dossier has been completed, reviewed and approved

PUNCH LIST	PENDING POINTS
Note: All Category "A" and "B" Items must be cleared prior to issuance of the Ready For Operation (RFO) Certificate	B: 1

REMARKS:

	CONTRACTOR Commissioning Manager	COMPANY Commissioning Lead
Name	Anthony Iveson	Martin Taylor
Date	2025-05-19	2025-05-22
Signature	PROVERLIS Digitaly signed by Anthony Iveson 2025-05-19T09:39:55.799Z	PROVERLIS Digitaly signed by Martin Taylor 2025-05-22T09:25:38.853Z

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-20 & process: COMM

Electrical	77-20 HVAC LV Switchgear Room B-200						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
A5/+02-QF1	DRAWER HVAC PANELS LV ROOM - A5/+02-QF1	ONSHORE	C10002870	FP00	100	2024-10-14	RFO 2
		ONSHORE	C10002871	FTR-2	100	2024-09-20	RFO 2
		ONSHORE	C10002872	FTR-6	100	2024-10-03	RFO 2
		ONSHORE	C10003015	FTR-5	100	2025-04-29	RFO 2
B200-HSB-001	Distribution & HVAC Panel - LV Room	ONSHORE	C10002988	FP00	100	2024-10-28	RFO 2
UP-200F3-QF40	UCP - HVAC ROOM	ONSHORE	C10004577	FTR-2	100	2024-12-07	RFO 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-20 & process: COMM

Instrumental	77-20 HVAC LV Switchgear Room B-200

ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
77-XA-002	B-200 LV SWGR room HVAC fault	ONSHORE	C10003795	FJ01D	100	2025-03-11	RFO 2
77-XS-002	SHUT-DOWN B-200 LV SWGR room HVAC	ONSHORE	C10003799	FJ01D	100	2025-03-11	RFO 2
B200-HSB-001	Distribution & HVAC Panel - LV Room	ONSHORE	C10004880	FJ05	100	2025-05-16	RFO 2

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-20 HVAC LV Switchgear Room B-200

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000529	A	B200-HSB-001	Install Ethernet port locks on HVAC panels to prevent access by external devices without an authorized permit, as requested by the	Add ethernet port locks to allHVAC panel boards	installed	SLinari 2024-10-30	Vendor 2025-02-22	SLinari 2025-02-22	2025-02-22
C30000533	A	B200-HSB-001	The modbus I/O list have been updated during SAT, due to changes needed. During SAT activities several signals have not been checked.	Revise and issue on fusion live the HVAC I/O list documents for each HVAC panel. Before commissioning activities, all signals shall be	Spot check with Yokogawa and the communication work	SLinari 2024-10-30	Vendor 2025-02-22	SLinari 2025-02-22	2025-02-22
C30000023	B	B-200	Roof-top cables to be fixed with cable ties made by AISI 316L		ACTIVITY PERFORMED - SEE PICTURES	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	2024-12-05
C30000027	B	B-200	Earthing connection to be provided for all space heaters. To be done at RM yard		EARTHING INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000031	B	B-200	Earthing connection to be provided for all HVAC units. To be done at RM yard		EARTHING INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000035	B	B-200	Identification traffolyte tag to be provided for all E&I Items (lights, switches, space heaters,etc.). All traffolyte labels missing will be installed at RM		installed anche checked	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000039	B	B-200	HVAC cable tags to be provided on the panel top. Alex Sistemi will supply all loose cable tags. RM will install it		activity done - see picture	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	2024-12-05
C30000043	B	B-200	Cable's tag to be provided / fixed at all MCTs (IN/OUT). Alex Sistemi will supply all loose cable tags. RM will instali it		ACTIVITY DONE	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	2024-12-05
C30000051	B	B-200	HVAC fixed with screws M8. To be replaced with correct ones, as per drawing. Alex Sistemi will supply all final screws. RM will install it during		FIXED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29

Project CROSSWIND

PUNCH LIST REPORT

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

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000085	B	B-200	Earthing connection to be provided for all electrical conduits. Alex Sistemi will supply all material, RM will install it		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000089	B	B-200	Teflon to be provided between different materials for Hvac ducts unistrut and supports		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000093	B	B-200	External ducts (inside) welding to be cleaned before re-installation		ACTIVITY DONE - ALL DUCTS HAS BEEN INSTALLED	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	2024-12-05
C30000146	B	83024-CEL C10000549	Cable to be fixed with proper cable ties, after MCT installetion (point valid for internal and exsternal cable routing.	.		Gtangianu 2024-10-07	2025-01-30	APolo 2025-01-30	2025-01-30
C30000147	B	83024-CEL C10000549	Identification numbers on terminal strip are missing (L1/L2/N).	.		Gtangianu 2024-10-07	2025-02-04	APolo 2025-02-04	2025-02-04
C30000160	B	B200-HSB-001 C10000836	Black Thermoshrink is used on earthing connection inside the panel	To be replaced with Y/G		Gtangianu 2024-10-10	2024-12-03	Ecarotenuto 2024-12-03	2024-12-03
C30000161	B	B-200 C10002299	Missing copper grease on external earthing connection.	-		Gtangianu 2024-10-10	2024-12-14	Ecarotenuto 2024-12-14	2024-12-14
C30000162	B	B-200 C10002299	Black Thermoshrink is used on all earthing connection of HVAC System and cable trays. To be replaced with Y/G	-		Gtangianu 2024-10-10	2025-02-12	Pschintu 2025-02-12	2025-02-12
C30000521	B	B200-HSB-001	Heat shrinks for grounding inside HVAC panel installed of black color instead of yellow-green color as earthing cable itself	Heat shrink tubing to be replaced of yellow-green color type as earthing cable.	accepted	SLinari 2024-10-30	Vendor 2025-02-25	SLinari 2025-02-25	2025-02-25

Project CROSSWIND

PUNCH LIST REPORT

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

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000525	B	B200-HSB-001	Add an auxiliary IP address in addition to those already provided for each CPU, to allow communication and signals exchange between	Update software on all PLCs to enable switching to the standby CPU without losing the necessary communications	Implemented	SLinari 2024-10-30	Vendor 2025-02-20	SLinari 2025-02-20	2025-02-20
C30000537	B	B200-HSB-001	Verify for each HVAC panel a perfect correspondence between tag reported on P&IDs and HMIs. During SAT some TAGs were bot	Update and issue final P&IDs on fusion live and update PLC software to hace a perfect match between P&IDs and HMIs.	Implemented	SLinari 2024-10-30	Vendor 2025-02-25	SLinari 2025-02-25	2025-02-25
C30000917	B	84315-CEL C10000591	Missing cable tag , cabinet input B200-HSB-001.	.		APolo 2024-11-25	2025-02-21	APolo 2025-02-21	2025-02-21
C30000920	B	84315-CEL C10000591	Missing the cross-ferruling (Cores) . Cabinet side B200-HSB-001 . (see document 123A90-DDL-EL-DD-20092 sh.7-8)	.		APolo 2024-11-25	2025-02-15	AAndreani 2025-02-15	2025-02-15

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-20 HVAC LV Switchgear Room B-200

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000549	A	B200-HSB-001	Make temperature and differental pressure trends visible on all HMIs	Update PLC software to apply the request	Implemented by Vendor	SLinari 2024-10-30	Vendor 2025-02-20	SLinari 2025-02-20	2025-02-20
C30000015	B	B-200	Handles fixed on external doors are made of plastic material. Temporary key cylinder and handles to be replaced with the ones made of SS		DONE	SLinari 2024-08-02	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000019	B	B-200	Master key (common for all modules) to be provided		DONE	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000047	B	B-200	Some brass cable glands are overtightened and need to be untightened to avoid cold flow of cables. Will be performed a spot check at RM		CHECKED CEMBRE INSTALLATION MANUAL - ACCEPTED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000541	B	B-200	During SAT drainage pipes were not completely installed, incluede heat tracing and related connection to JB.	The work described has to be concluded. During commissioning heat tracing will be tested	Verified	SLinari 2024-10-30	Vendor 2025-02-20	SLinari 2025-02-20	2025-02-20
C30000545	B	B-200	None pressure relief damper HDR-77-201 work properly as per design conditions. They remain closed even thogh inside the shelters more then	Investigate the malfunction with the manufacturer and take corrctive actions to adjust or replace the pressure relief request.	The damper HDR-77-102 has been adjusted. Inside the shelter a constant pressure	SLinari 2024-10-30	GDelmissier 2025-05-09	GDelmissier 2025-05-09	2025-05-09
C30000553	B	B-200	Several doors present a not perfect closure on the three deadbolts, probably due to a misalignment.	Check the doors and fix the closure issue. This activity vould be done during commissioning activities.		SLinari 2024-10-30			
C30000557	B	B-200	Since the drainage pipe and heating cable datasheet have not yet been sent to RM, the suitability of the materials used cannot be verified.	Submit both the drainage pipe and heating cable datasheet (by inserting them HVAC COMPONENTS LIST AND DS - E&I	COMPONENTS LIST AND DS - E&I SHELTERS has been re issued and approved	SLinari 2024-10-30	Vendor 2025-04-04	SLinari 2025-04-04	2025-04-04
C30000561	B	B-200	Most of documntation is still in draft form. All documents must be finalized and approved by RM before commissioning activities. During	Review and issue al documentation by 15/11/2024 to allow for finalization by the end of november 2024, accounting fot the time	all documentation has been re issued and approved by vendor, in particulat	SLinari 2024-10-30	Vendor 2025-04-04	SLinari 2025-04-04	2025-04-04

Project CROSSWIND

PUNCH LIST REPORT

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

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004325	B	B-200	During execution of Cause & Effect OTP doc. n. 123A90-PML-COM-PRO-03054, it had been noted that on equipment packages provided with		Logic implemented and tested	GDelmissier 2025-04-15	GDelmissier 2025-05-15	GDelmissier 2025-05-15	2025-05-15

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-20 HVAC LV Switchgear Room B-200

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000898	A	C-77-XA-002/B400-SIS-001 C10000185	cable is not as specified in project cable schedule. (is a different gray color than what is shown in the project documentation).	.		APolo 2024-11-25	2024-12-05	Gtangianu 2024-12-05	2024-12-05
C30000163	B	B-200 C10002300	Instrument installation to be completed: 77-TP-201	-	POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE	Gtangianu 2024-10-10	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000164	B	B-200 C10002300	77-TP-201 INSTRUMENT IS NOT ACCESIBLE FOR MAINTENANCE.	-	POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE	Gtangianu 2024-10-10	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000616	B	B200-HSB-001/ B400-FGS-003 C10002036	The plastic fixing ties , on external routing cable , to be replaced with stainless steel.	.		APolo 2024-11-19	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30000617	B	B200-HSB-001/ B400-FGS-003 C10002036	Missing the tags plastic project on the cables , cabinet side B400-FGS-002 / Panel B200-HSB-001	.		APolo 2024-11-19	2025-02-21	JKrizanic 2025-02-21	2025-02-21
C30000618	B	B200-HSB-001/ B400-FGS-003 C10002036	Missing the cross-ferruling (Cores + Shields) . cabinet side B400-FGS-002 / Panel B200-HSB-001 . (see document	.		APolo 2024-11-19	2025-02-21	JKrizanic 2025-02-21	2025-02-21
C30000619	B	B200-HSB-001/ B400-FGS-003 C10002036	Double shield connected to one terminal on shield bar. this point is valid also for cabinet side B400-FGS-002 : cables	.		APolo 2024-11-19	2025-02-21	JKrizanic 2025-02-21	2025-02-21
C30000683	B	C-77-HY-006/77 -HS-006A C10000374	Identification tag wire missing inside C-77-HY-006 connection.	.		Gtangianu 2024-11-21	2024-12-17	Gtangianu 2024-12-17	2024-12-17
C30000690	B	C-77-HY-004/77 -HS-004A C10000368	Vendor HVAC Documentation (1724000049-HV-DA-00065_Rev.1) is not alligned with GA and P&I	.		Gtangianu 2024-11-21	2025-02-15	Ecarotenuto 2025-02-15	2025-02-15

Project CROSSWIND

PUNCH LIST REPORT

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

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000886	B	C-77-XS-002/B400-SIS-001 C10000181	Missing cables tag , cabinet side B200 HVAC / B400-SIS-001	.		APolo 2024-11-25	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30000887	B	C-77-XS-002/B400-SIS-001 C10000181	Missing the cross-ferruling (Cores) . Cabinet side B400-SIS-001 / B-200 HVAC . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-11-25	2025-04-11	Gtangianu 2025-04-11	2025-04-11
C30000888	B	C-77-XS-002/B400-SIS-001 C10000181	Double shield connected to one terminal on shield bar. this point is valid also for cabinet side B400-SIS-001	.		APolo 2024-11-25	2025-02-28	AAndreani 2025-02-28	2025-02-28
C30000901	B	C-77-XA-002/B400-SIS-001 C10000185	Missing cables tag , cabinet side B400-SIS-001 / B-200 HVAC	.		APolo 2024-11-25	2025-01-03	Gtangianu 2025-01-03	2025-01-03
C30000902	B	C-77-XA-002/B400-SIS-001 C10000185	Missing the cross-ferruling (Cores) . Cabinet side B400-SIS-001 / B-200 HVAC . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-11-25	2025-04-11	Gtangianu 2025-04-11	2025-04-11
C30000903	B	C-77-XA-002/B400-SIS-001 C10000185	Double shield connected to one terminal on shield bar. this point is valid also for cabinet side B400-SIS-001	.		APolo 2024-11-25	2025-02-28	AAndreani 2025-02-28	2025-02-28

Project CROSSWIND

PUNCH LIST REPORT

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

HVAC

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000055	B	B-200	All documentation listed in the SMIR, shall be re-issued in final revision and approved by RM and CW		can be close - refer to PL n. C30000561	SLinari 2024-08-02	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000059	B	B-200	The items to be installed at RM site are coalescent filters and fire dampers. To be completed at RM yard		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000069	B	B-200	TAG in front panels to be updated following last document revisions. All TAG traffolyte labels to be completely checked; several are missing. They		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000073	B	B-200	All balancing and setting activities to be done on site. !t was not possible during FAT due to HVAC system installation not completed. Ali		PERFORMED - SEE REPORTS	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000077	B	B-200	Drain pipes and heating cables are missing, since they must be necessary instalied on site to avoid damages. To be completed at RM yard		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000081	B	B-200	Duct insulation and cladding to be completed on site; it's needed to cover all duct junctions. Alex Sistemi will supply ali material, RM will install it		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

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

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

Section 2.2 Exception Punch Lists (per discipline)

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

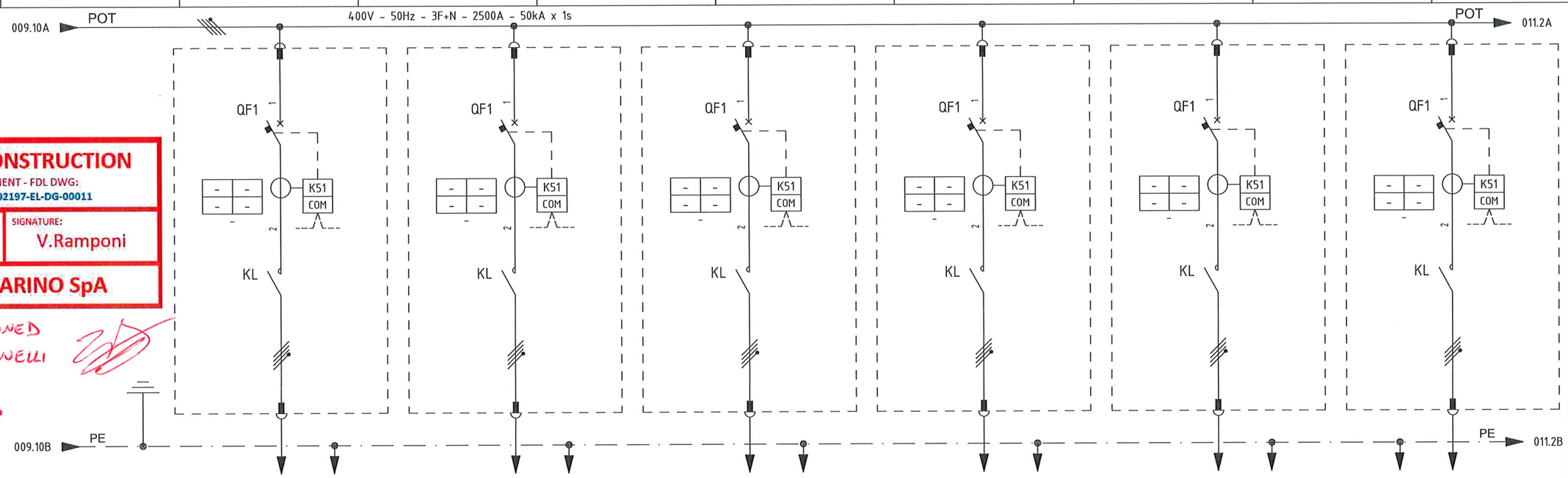
PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-20 HVAC LV Switchgear Room B-200

Mechanical									
CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000553	B	B-200	Several doors present a not perfect closure on the three deadbolts, probably due to a misalignment.	Check the doors and fix the closure issue. This activity vould be done during commissioning activities.		SLinari 2024-10-30			

Section 2.3 “As-Commissioned” P&ID's / SLD's / D&ID's / C&E's



VALID FOR CONSTRUCTION

VENDOR DOCUMENT - FDL DWG:
123A90-FDL-1723002197-EL-DG-00011

REV.:	DATE:	SIGNATURE:
4_A	18/12/24	V.Ramponi

ROSETTI MARINO SpA

AS-COMMISSIONED
DAVIDE ZUCCONELLI
20/03/2025
NO MARK UP

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	-	-	-	-	-	-
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	-

=						
+						
4	28/08/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)	
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)	
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION	

IMESA ELECTRICAL ENGINEERING

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

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"
SINGLE LINE DIAGRAM
Single Line Drawing

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00011

SHEET 010

REV. 04

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00011 Rev. 04

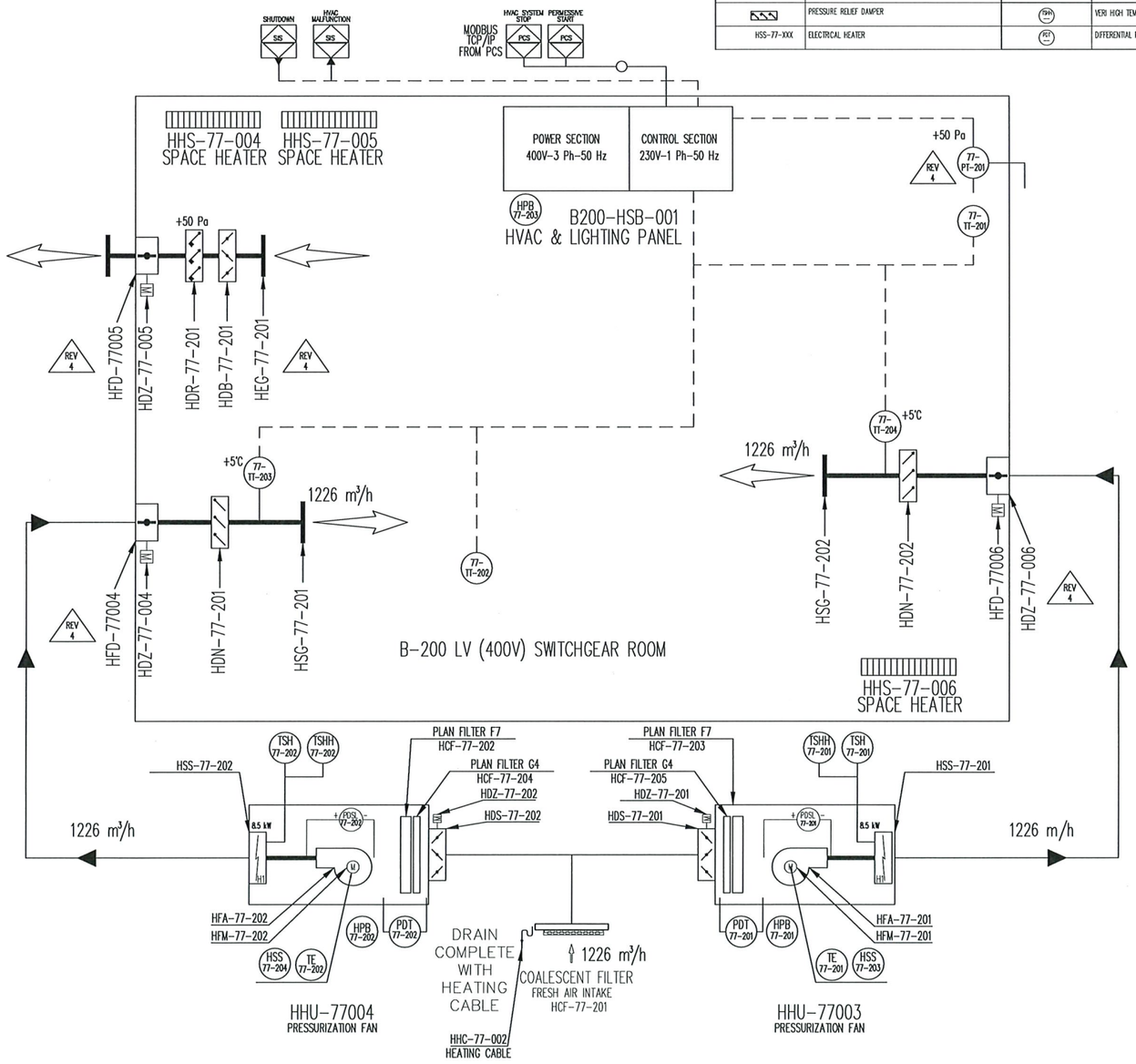
DRAWING NO. 1724000049-HV-PID-00040

REV. 4

ITEM	HVAC-PRESSURISING FAN
DESCRIPTION	HVAC UNIT
MAKER	FRIGOTERMICA srl
MODEL	4112-DMPD-300
SUPPLY AIR FLOW	1226 mc/h
COOLING COIL CAPACITY	N.A.
HEATING COIL CAPACITY	8.5 kW
TENSIONE	400 V - 50 Hz - 3 Ph+N
EXECUTION	SAFE AREA
REFRIGERANT	N.A.

LEGEND

	MOTORISED DAMPER WITH SPRING RETURN	F1	AIR FILTER "G4"		MOTORISED FIRE DAMPER WITH SPRING RETURN
	REGULATION DAMPER	F2	BAG FILTER "F8"		EVAPORATING COIL
	OVERPRESSURE DAMPER		CONDENSING COIL		
PDSH	DIFFERENTIAL PRESSURE SWITCH HIGH PRESSURE		CONDENSING FAN		
PDSL	DIFFERENTIAL PRESSURE SWITCH LOW PRESSURE		HEATING COIL		LIQUID RECEIVER
TT	TEMPERATURE TRASMITTER		SUPPLY FAN	MT	MOISTURE TRASMITTER
HPB	EMERGENCY PUSH BUTTON	①	GLOBE VALVE	PT	HIG PRESSURE TRASDUCER
OH	COMPRESSOR OIL HEATER	②	DRYER FILTER	TP	COMPRESSOR THERMIC PROTECTION
ST	SOLENOID VALVE	③	SIGHT GLASS	TSH	HIGH TEMPERATURE SECURITY THERMOSTATE
	REFRIGERANT COMPRESSOR	④	THERMOSTATIC VALVE	PSH	HIGH PRESSURE SWITCH
	PRESSURE RELIEF DAMPER	⑤	PRESSURE RELIEF VALVE	PSL	LOW PRESSURE SWITCH
HSS-77-XXX	ELECTRICAL HEATER	TSHH	VERY HIGH TEMPERATURE SECURITY THERMOSTATE	PC	CONDENSING PRESSURE SWITCH
		PDT	DIFFERENTIAL PRESSURE SWITCH FOR FILTER		SPACE HEATER
				TP	DIFFERENTIAL PRESSURE TRANSMITTER
				HHC-77-XXX	HEATING CABLE



OUTDOOR DESIGN CONDITIONS

Safe Area
Min. design DB Temp: -8.4°C with RH 100 %
Max. design DB Temp: +25°C with RH 90 %

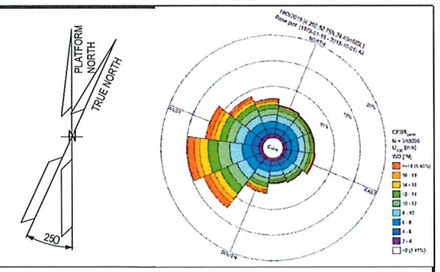
Module B200 LV Switchroom

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

NOTES:

- HVAC POWER CABINET will energize what above shown.
- HVAC CONTROL CABINET will control all what above shown.
- HVAC POWER CABINET will energize light and socket.
- Outside drainage system shall be provided of heatng coble 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

AS COMMISSIONED
12-05-2025
GIANDOMENICO DEL MASSIER



NOTES

LEGEND

HOLDS

ALEXSISTEMI srls

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
4	06/02/25	S.Z.	S.S.	M.G.	ISSUE FOR INFORMATION (IFI)
3	03/12/24	S.Z.	S.S.	M.G.	ISSUE FOR INFORMATION (IFI)
2	29/10/24	S.Z.	S.S.	M.G.	ISSUE FOR INFORMATION (IFI)
1	09/07/24	S.Z.	S.S.	M.G.	ISSUE FOR INFORMATION (IFI)
0	10/06/24	S.Z.	S.S.	M.G.	ISSUE FOR INFORMATION (IFI)

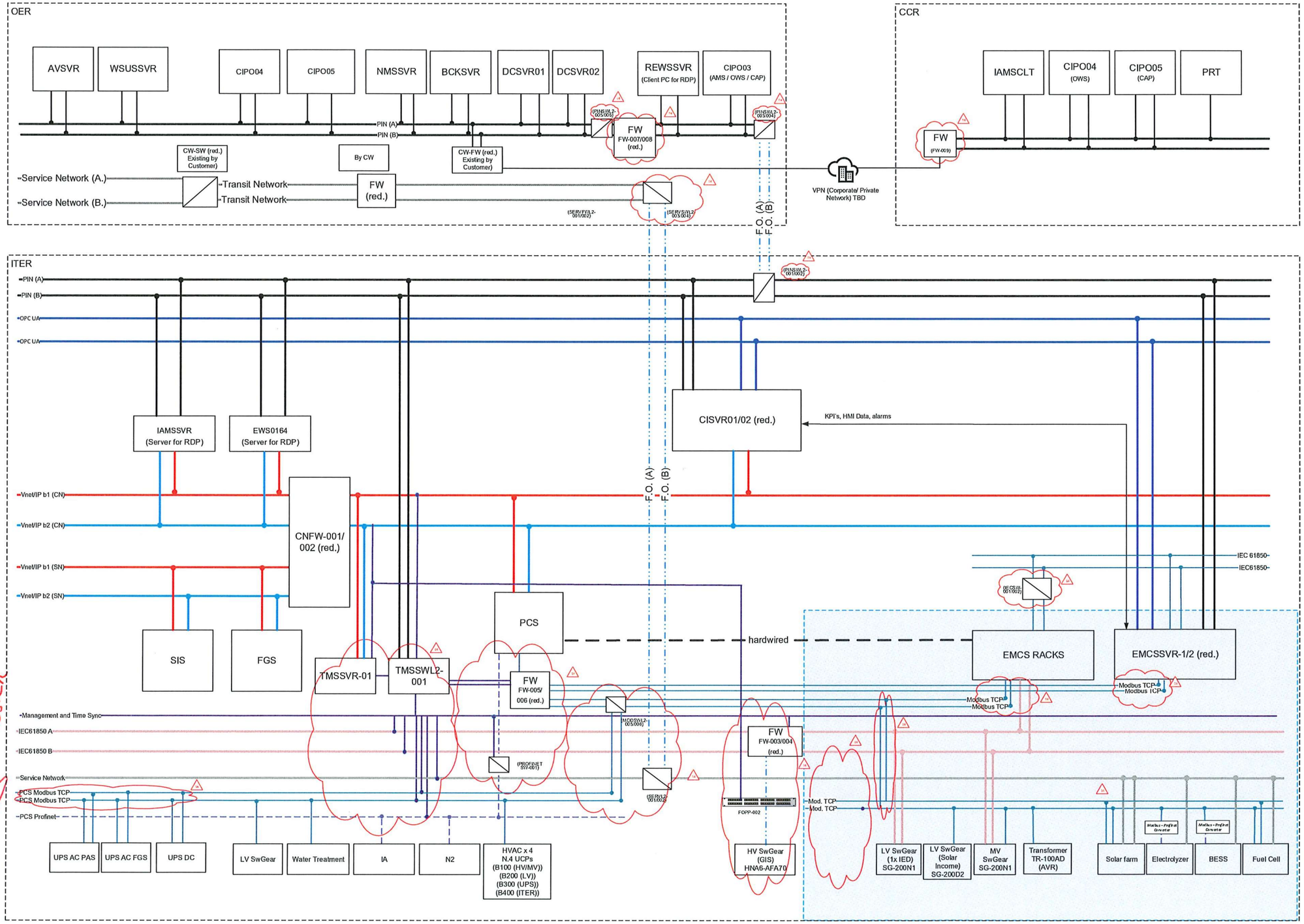
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCHROOM
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 27/01/25
A1 | DRAWING NO. 1724000049-HV-PID-00040 | SHEET 003 | REV. 4

File Name : 1724000049-HV-PID-00040

CROSSWIND BLPH PROJECT - SYSTEM BLOCK DIAGRAM



As Commissioning
08-05-2025
Gianluca De Nisco

AMS	: Alarm Management System	FCS	: Field Control Station
AV	: Anti-virus	FGS	: Fire & Gas System
BCK	: Backup Server	FO	: Fiber Optic
BESS	: Battery Energy Storage System	FOPP	: Fiber Optic Patch Panel (by others)
BLPH	: Base Load Power Hub	FTA	: Field Termination Assembly
CAP	: Critical Alarm Panel	HIST	: Historian
CCR	: Central Control Room	HKN	: Hollandse Kust Noord
CI	: Collaborative Information	IAMS	: Instrument Asset Management System
CN	: Control Network	ITER	: Instrument & Telecom Equipment Room
DC	: Domain Controller	LHVS	: Land High Voltage Station
DMZ	: De-militarized Zone	MCC	: Motor Control Center
ESB	: IO communication bus	MODB	: Modbus
EWS	: Engineering Work Station	MQTT	: Message Queuing Telemetry Transport
FC	: Field Communication (Vnet/IP)	NMS	: Network Management System
OER	: Onshore Equipment Room		
OHVS	: Offshore High Voltage Station		
OWS	: Operator Work Station		
PIN	: Plant Information Network		
PKG	: Package		
RDP	: Remote Desktop Protocol		
SCS	: Safety Control Station		
SIS	: Safety Instrumented System		
SN	: Safety Network		
SW	: Switch		
UCP	: Unit Control Panel (3rd party systems)		
VM	: Virtual Machine		
Vnet/IP	: Yokogawa's Control network		
WSUS	: Windows Security Update Services		

LEGEND:

- PIN (Plant Information Network)
- Vnet/IP BUS 1 PCS
- Vnet/IP BUS 2 PCS
- Vnet/IP BUS 1 SIS/FGS
- Vnet/IP BUS 2 SIS/FGS
- ESB bus connection
- IEC61850 connection
- OPC UA connection
- Service Network connection
- Modbus TCP connection
- Profinet (non redundant)
- Fiber Optic Patch Cords
- Fiber Optic connection (core by Crosswind)
- Fiber Optic backbone (by Crosswind)
- System Cable connection
- Management and Time sync.

Note 1 : Exact assignment of Servers per cabinet to be defined in cabinet General Arrangement Drawing.
Note 2 : For IP Addresses refer to 1724000594-IN-RE-00043 Cyber Security Settings
Note 3 : All Network Components will be installed in Network Cabinet.
Note 4 : Supply of Console Desk in CCR is in Customer Scope.
Note 5 : All Network Switches and Firewall is configured in VLAN.
Note 6 : Intermediate FO Connection between HNA5 and OER Intentionally not shown.

Zone-1 : PCS Control Zone
Zone-2 : Safety Control Zone
Zone-3 : PCS Zone
Zone-4 : Application Server Facility Zone
Zone-5 : Security Management Zone-1
Zone-6 : Security Management Zone-2
Zone-7 : Demilitirized Zone
Zone-8 : Croswind Zone
Zone-9 : Service Network Zone
Zone-10: Application Server Facility Zone-OD
Zone-11: Third Party System Zone
: Out of Scope

REV	DWG BY	CHK BY	APP BY	DATE
04	SKR	MP/AB	SC	12-Feb-25
03	SKR	MP/AB	SC	26-Aug-24
02	SKR	MP/AB	SC	28-Jun-24
01	SKR	MP/AB	SC	24-May-24
00	SKR	AB	SC	23-Apr-24

Doc No : 1724000594-IN-DD-00015
Doc Name : System Architecture

ROSETTI MARINO
HOLLANDSE KUST NOORD WIND PART Project
CROSSWIND
YOKOGAWA

This document is property of AEG Power Solutions and must not be displayed or duplicated to any third party without the consent of the company

CAE EPLAN Electric P8

AUXILIARY
From Lighting & Small Power DB BOP DP-200N1
(Cubicle 33-Q41)
103-240V/N/PE~50/60Hz

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

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

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

back-up fuse gS10A 3G2.5mm2

gG63A 4G35mm2

Not included in the AEG shipment

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

+MBC1
BY-200F3
Bypass transformer cabinet 40 kVA
1000007888.320
10009757

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

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

+UPS2
BC-200F3B
Protect 8.33 40-400-210-400
1000007888.310
10009755

-Q1 L=100/85A I=1,0kA Icu=50kA
-T40
-A1 REC
-A2 INV
-T1
-F1,-F2,-F3
-A3 SBS
-A4
-A18 Display
-A20 Parallel Adapter
INV CAN -X3 1 3 → 203/1.6
INV Sync -X5 1 4 → 205/1.6
203/1.6 → -X3 1 3 INV CAN
205/1.6 → -X5 1 4 INV Sync
-L11,-L12,-L13 Parallel preventive choke coil
-A12,-A13 Remote signaling
-A24.1 BLU PRO
-F91
-E2-X2 L-,L+,PE
-X15 2,3
-X130 1,2
-E3-X3 U,V,W,N,PE
-X2 1L+,1L-,PE
-X15 2,3
-X91 1M
-X5 1U,1V,1W,1N,PE
-X2 2L+,2L-,PE
-X15 4,5
-X91 2M
-X130 1,2,PE
-X2 3L+,3L-,PE
-X15 6,7
-X91 3M
-X2 4L+,4L-,PE
-X15 8,9
-X91 4M
-X130 3,4,PE
-Q71 NC
-Q72 NC
-Q29 INV operation / Manual bypass
-F25
DP-200F3
-QF31 B32A 300mA
-QF32 B32A 300mA
-QF33 B32A 300mA
-QF34 B16A 300mA 5pc
-QF38 B16A 300mA
-QF39 B10A 300mA 4pc
-QF42 B13A 300mA
-QF43 B13A 8pc
-QF50 B10A
-QF51 B6A
-QF52 B6A
-X31 U,N,PE
-X32 U,N,PE
-X33 U,N,PE
-X34 U,N,PE
-X38 V,N,PE
-X39 V,N,PE
-X42 W,N,PE
-X43 W,N,PE
-X50 U,N,PE
-X51 V,N,PE
-X52 V,N,PE

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

2(1x70 mm2)

+BFB1
CB-200F3A
Battery fuse box 200 A
-Q2 L=200A
DC 24V max. 300W

+BFB2
CB-200F3B
Battery fuse box 200 A
-Q2 L=200A
DC 24V max. 300W

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

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

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

*2 Connection cables are not included.

NO MARK UP
AS COMMISSIONED
DAVIDE TUCCONELLI
20/05/2025

VALID FOR CONSTRUCTION
VENDOR DOCUMENT - FDL DWG:
123A90-FDL-1724000372-EL-DG-00009

REV.:	DATE:	SIGNATURE:
3_B	02/04/25	G.Randi

ROSETTI MARINO SpA

21	1123333222253	18.09.2024	Dynamic	Date	14.05.2024	ROSETTI MARINO	AEG	System 40 kVA	
22	1123333222269	27.10.2024	Dynamic	Checked	Ch.Picco	Rotterdam Rot. World [NOR] Netherlands		Single-line diagram	
Size	Revision	Date	Name	Name				1000007888_010 en	A0

1000007888_010

Section 3 CONSOLIDATED PUNCH LISTS

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-20 HVAC LV Switchgear Room B-200

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000529	A	B200-HSB-001	Install Ethernet port locks on HVAC panels to prevent access by external devices without an authorized permit, as requested by the	Add ethernet port locks to allHVAC panel boards	installed	SLinari 2024-10-30	Vendor 2025-02-22	SLinari 2025-02-22	2025-02-22
C30000533	A	B200-HSB-001	The modbus I/O list have been updated during SAT, due to changes needed. During SAT activities several signals have not been checked.	Revise and issue on fusion live the HVAC I/O list documents for each HVAC panel. Before commissioning activities, all signals shall be	Spot check with Yokogawa and the communication work	SLinari 2024-10-30	Vendor 2025-02-22	SLinari 2025-02-22	2025-02-22
C30000023	B	B-200	Roof-top cables to be fixed with cable ties made by AISI 316L		ACTIVITY PERFORMED - SEE PICTURES	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	2024-12-05
C30000027	B	B-200	Earthing connection to be provided for all space heaters. To be done at RM yard		EARTHING INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000031	B	B-200	Earthing connection to be provided for all HVAC units. To be done at RM yard		EARTHING INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000035	B	B-200	Identification traffolyte tag to be provided for all E&I Items (lights, switches, space heaters,etc.). All traffolyte labels missing will be installed at RM		installed anche checked	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000039	B	B-200	HVAC cable tags to be provided on the panel top. Alex Sistemi will supply all loose cable tags. RM will install it		activity done - see picture	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	2024-12-05
C30000043	B	B-200	Cable's tag to be provided / fixed at all MCTs (IN/OUT). Alex Sistemi will supply all loose cable tags. RM will instali it		ACTIVITY DONE	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	2024-12-05
C30000051	B	B-200	HVAC fixed with screws M8. To be replaced with correct ones, as per drawing. Alex Sistemi will supply all final screws. RM will install it during		FIXED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29

Project CROSSWIND

PUNCH LIST REPORT

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

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000085	B	B-200	Earthing connection to be provided for all electrical conduits. Alex Sistemi will supply all material, RM will install it		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000089	B	B-200	Teflon to be provided between different materials for Hvac ducts unistrut and supports		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000093	B	B-200	External ducts (inside) welding to be cleaned before re-installation		ACTIVITY DONE - ALL DUCTS HAS BEEN INSTALLED	SLinari 2024-08-02	SLinari 2024-12-05	SLinari 2024-12-05	2024-12-05
C30000146	B	83024-CEL C10000549	Cable to be fixed with proper cable ties, after MCT installetion (point valid for internal and exsternal cable routing.	.		Gtangianu 2024-10-07	2025-01-30	APolo 2025-01-30	2025-01-30
C30000147	B	83024-CEL C10000549	Identification numbers on terminal strip are missing (L1/L2/N).	.		Gtangianu 2024-10-07	2025-02-04	APolo 2025-02-04	2025-02-04
C30000160	B	B200-HSB-001 C10000836	Black Thermoshrink is used on earthing connection inside the panel	To be replaced with Y/G		Gtangianu 2024-10-10	2024-12-03	Ecarotenuto 2024-12-03	2024-12-03
C30000161	B	B-200 C10002299	Missing copper grease on external earthing connection.	-		Gtangianu 2024-10-10	2024-12-14	Ecarotenuto 2024-12-14	2024-12-14
C30000162	B	B-200 C10002299	Black Thermoshrink is used on all earthing connection of HVAC System and cable trays. To be replaced with Y/G	-		Gtangianu 2024-10-10	2025-02-12	Pschintu 2025-02-12	2025-02-12
C30000521	B	B200-HSB-001	Heat shrinks for grounding inside HVAC panel installed of black color instead of yellow-green color as earthing cable itself	Heat shrink tubing to be replaced of yellow-green color type as earthing cable.	accepted	SLinari 2024-10-30	Vendor 2025-02-25	SLinari 2025-02-25	2025-02-25

Project CROSSWIND

PUNCH LIST REPORT

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

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000525	B	B200-HSB-001	Add an auxiliary IP address in addition to those already provided for each CPU, to allow communication and signals exchange between	Update software on all PLCs to enable switching to the standby CPU without losing the necessary communications	Implemented	SLinari 2024-10-30	Vendor 2025-02-20	SLinari 2025-02-20	2025-02-20
C30000537	B	B200-HSB-001	Verify for each HVAC panel a perfect correspondence between tag reported on P&IDs and HMIs. During SAT some TAGs were bot	Update and issue final P&IDs on fusion live and update PLC software to hace a perfect match between P&IDs and HMIs.	Implemented	SLinari 2024-10-30	Vendor 2025-02-25	SLinari 2025-02-25	2025-02-25
C30000917	B	84315-CEL C10000591	Missing cable tag , cabinet input B200-HSB-001.	.		APolo 2024-11-25	2025-02-21	APolo 2025-02-21	2025-02-21
C30000920	B	84315-CEL C10000591	Missing the cross-ferruling (Cores) . Cabinet side B200-HSB-001 . (see document 123A90-DDL-EL-DD-20092 sh.7-8)	.		APolo 2024-11-25	2025-02-15	AAndreani 2025-02-15	2025-02-15

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-20 HVAC LV Switchgear Room B-200

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000549	A	B200-HSB-001	Make temperature and differental pressure trends visible on all HMIs	Update PLC software to apply the request	Implemented by Vendor	SLinari 2024-10-30	Vendor 2025-02-20	SLinari 2025-02-20	2025-02-20
C30000015	B	B-200	Handles fixed on external doors are made of plastic material. Temporary key cylinder and handles to be replaced with the ones made of SS		DONE	SLinari 2024-08-02	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000019	B	B-200	Master key (common for all modules) to be provided		DONE	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000047	B	B-200	Some brass cable glands are overtightened and need to be untightened to avoid cold flow of cables. Will be performed a spot check at RM		CHECKED CEMBRE INSTALLATION MANUAL - ACCEPTED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000541	B	B-200	During SAT drainage pipes were not completely installed, incluede heat tracing and related connection to JB.	The work described has to be concluded. During commissioning heat tracing will be tested	Verified	SLinari 2024-10-30	Vendor 2025-02-20	SLinari 2025-02-20	2025-02-20
C30000545	B	B-200	None pressure relief damper HDR-77-201 work properly as per design conditions. They remain closed even thogh inside the shelters more then	Investigate the malfunction with the manufacturer and take corrctive actions to adjust or replace the pressure relief request.	The damper HDR-77-102 has been adjusted. Inside the shelter a constant pressure	SLinari 2024-10-30	GDelmissier 2025-05-09	GDelmissier 2025-05-09	2025-05-09
C30000553	B	B-200	Several doors present a not perfect closure on the three deadbolts, probably due to a misalignment.	Check the doors and fix the closure issue. This activity vould be done during commissioning activities.	Done	SLinari 2024-10-30	RDegliEsposti 2025-07-30	RDegliEsposti 2025-07-30	2025-07-30
C30000557	B	B-200	Since the drainage pipe and heating cable datasheet have not yet been sent to RM, the suitability of the materials used cannot be verified.	Submit both the drainage pipe and heating cable datasheet (by inserting them HVAC COMPONENTS LIST AND DS - E&I	COMPONENTS LIST AND DS - E&I SHELTERS has been re issued and approved	SLinari 2024-10-30	Vendor 2025-04-04	SLinari 2025-04-04	2025-04-04
C30000561	B	B-200	Most of documntation is still in draft form. All documents must be finalized and approved by RM before commissioning activities. During	Review and issue al documentation by 15/11/2024 to allow for finalization by the end of november 2024, accounting fot the time	all documentation has been re issued and approved by vendor, in particulat	SLinari 2024-10-30	Vendor 2025-04-04	SLinari 2025-04-04	2025-04-04

Project CROSSWIND

PUNCH LIST REPORT

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

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004325	B	B-200	During execution of Cause & Effect OTP doc. n. 123A90-PML-COM-PRO-03054, it had been noted that on equipment packages provided with		Logic implemented and tested	GDelmissier 2025-04-15	GDelmissier 2025-05-15	GDelmissier 2025-05-15	2025-05-15

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-20 HVAC LV Switchgear Room B-200

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000898	A	C-77-XA-002/B400-SIS-001 C10000185	cable is not as specified in project cable schedule. (is a different gray color than what is shown in the project documentation).	.		APolo 2024-11-25	2024-12-05	Gtangianu 2024-12-05	2024-12-05
C30000163	B	B-200 C10002300	Instrument installation to be completed: 77-TP-201	-	POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE	Gtangianu 2024-10-10	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000164	B	B-200 C10002300	77-TP-201 INSTRUMENT IS NOT ACCESIBLE FOR MAINTENANCE.	-	POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE	Gtangianu 2024-10-10	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000616	B	B200-HSB-001/ B400-FGS-003 C10002036	The plastic fixing ties , on external routing cable , to be replaced with stainless steel.	.		APolo 2024-11-19	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30000617	B	B200-HSB-001/ B400-FGS-003 C10002036	Missing the tags plastic project on the cables , cabinet side B400-FGS-002 / Panel B200-HSB-001	.		APolo 2024-11-19	2025-02-21	JKrizanic 2025-02-21	2025-02-21
C30000618	B	B200-HSB-001/ B400-FGS-003 C10002036	Missing the cross-ferruling (Cores + Shields) . cabinet side B400-FGS-002 / Panel B200-HSB-001 . (see document	.		APolo 2024-11-19	2025-02-21	JKrizanic 2025-02-21	2025-02-21
C30000619	B	B200-HSB-001/ B400-FGS-003 C10002036	Double shield connected to one terminal on shield bar. this point is valid also for cabinet side B400-FGS-002 : cables	.		APolo 2024-11-19	2025-02-21	JKrizanic 2025-02-21	2025-02-21
C30000683	B	C-77-HY-006/77 -HS-006A C10000374	Identification tag wire missing inside C-77-HY-006 connection.	.		Gtangianu 2024-11-21	2024-12-17	Gtangianu 2024-12-17	2024-12-17
C30000690	B	C-77-HY-004/77 -HS-004A C10000368	Vendor HVAC Documentation (1724000049-HV-DA-00065_Rev.1) is not alligned with GA and P&I	.		Gtangianu 2024-11-21	2025-02-15	Ecarotenuto 2025-02-15	2025-02-15

Project CROSSWIND

PUNCH LIST REPORT

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

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000886	B	C-77-XS-002/B400-SIS-001 C10000181	Missing cables tag , cabinet side B200 HVAC / B400-SIS-001	.		APolo 2024-11-25	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30000887	B	C-77-XS-002/B400-SIS-001 C10000181	Missing the cross-ferruling (Cores) . Cabinet side B400-SIS-001 / B-200 HVAC . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-11-25	2025-04-11	Gtangianu 2025-04-11	2025-04-11
C30000888	B	C-77-XS-002/B400-SIS-001 C10000181	Double shield connected to one terminal on shield bar. this point is valid also for cabinet side B400-SIS-001	.		APolo 2024-11-25	2025-02-28	AAndreani 2025-02-28	2025-02-28
C30000901	B	C-77-XA-002/B400-SIS-001 C10000185	Missing cables tag , cabinet side B400-SIS-001 / B-200 HVAC	.		APolo 2024-11-25	2025-01-03	Gtangianu 2025-01-03	2025-01-03
C30000902	B	C-77-XA-002/B400-SIS-001 C10000185	Missing the cross-ferruling (Cores) . Cabinet side B400-SIS-001 / B-200 HVAC . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-11-25	2025-04-11	Gtangianu 2025-04-11	2025-04-11
C30000903	B	C-77-XA-002/B400-SIS-001 C10000185	Double shield connected to one terminal on shield bar. this point is valid also for cabinet side B400-SIS-001	.		APolo 2024-11-25	2025-02-28	AAndreani 2025-02-28	2025-02-28

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 77 Heating & Ventilation

SUBSYSTEM 77-20 HVAC LV Switchgear Room B-200

HVAC

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000055	B	B-200	All documentation listed in the SMIR, shall be re-issued in final revision and approved by RM and CW		can be close - refer to PL n. C30000561	SLinari 2024-08-02	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000059	B	B-200	The items to be installed at RM site are coalescent filters and fire dampers. To be completed at RM yard		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000069	B	B-200	TAG in front panels to be updated following last document revisions. All TAG traffolyte labels to be completely checked; several are missing. They		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000073	B	B-200	All balancing and setting activities to be done on site. !t was not possible during FAT due to HVAC system installation not completed. Ali		PERFORMED - SEE REPORTS	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000077	B	B-200	Drain pipes and heating cables are missing, since they must be necessary instalied on site to avoid damages. To be completed at RM yard		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29
C30000081	B	B-200	Duct insulation and cladding to be completed on site; it's needed to cover all duct junctions. Alex Sistemi will supply ali material, RM will install it		INSTALLED	SLinari 2024-08-02	SLinari 2024-10-29	SLinari 2024-10-29	2024-10-29

Project CROSSWIND

PUNCH LIST REPORT

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

Telecom

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

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000617

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name: Alessio Polo

Date: 2024-11-19

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-19
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic

Date: 2025-02-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


CROSSWIND

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000618

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name: Alessio Polo
Date: 2024-11-19
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-19
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

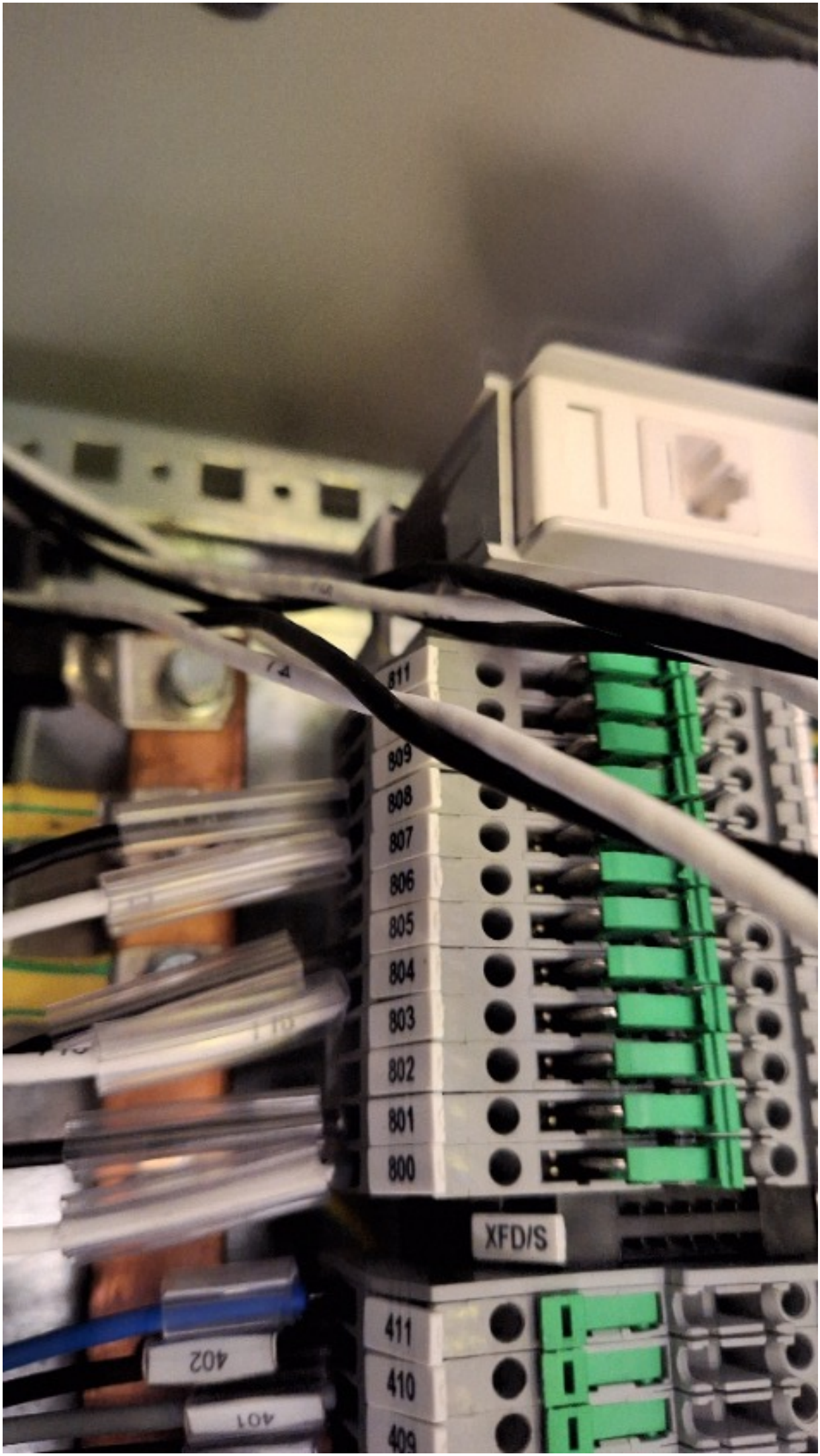
5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic
Date: 2025-02-21
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


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

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

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000619

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name: Alessio Polo
Date: 2024-11-19
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-19
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

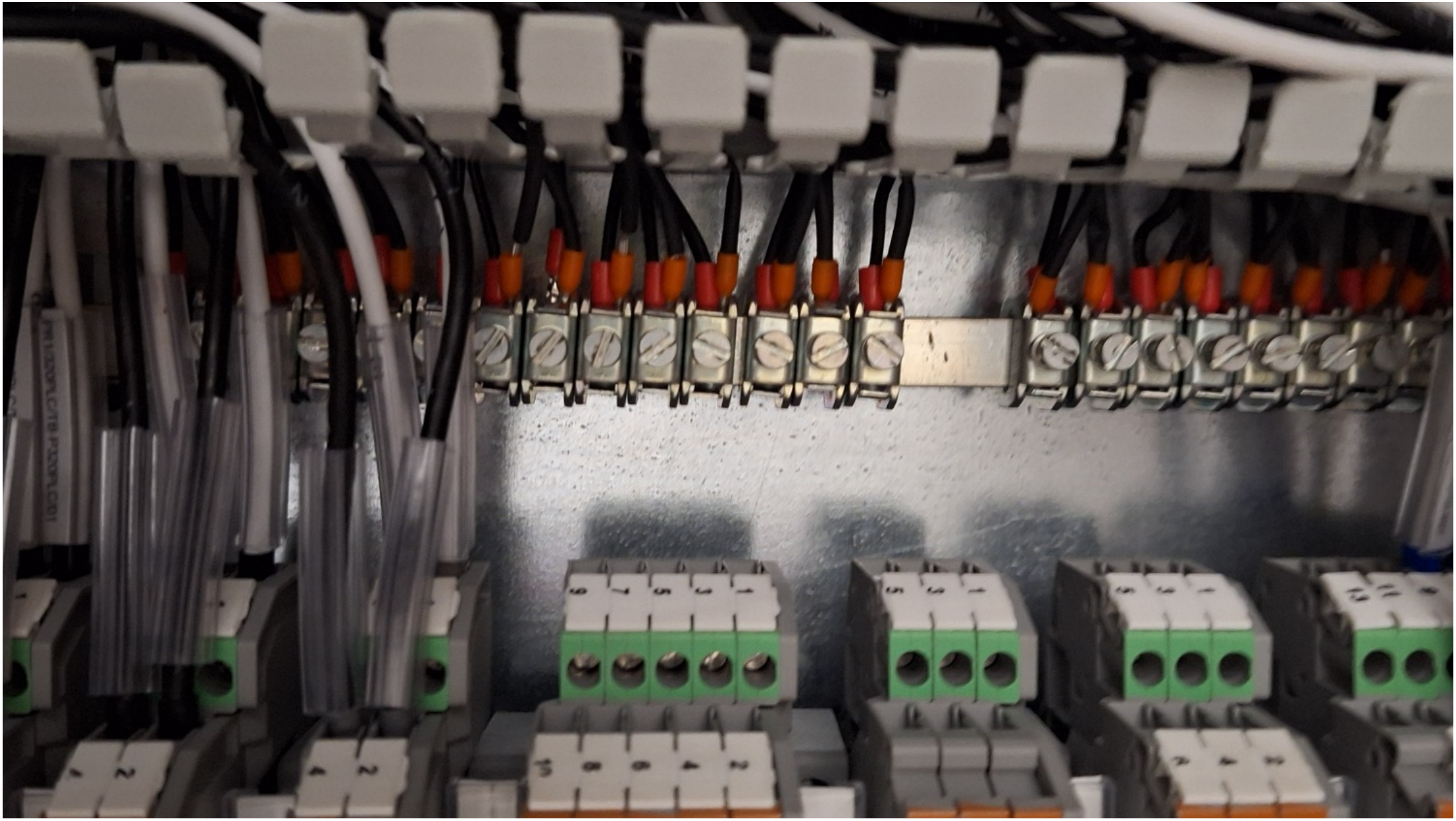
5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic
Date: 2025-02-21
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000683

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name: Giovanni Tangianu

Date: 2024-11-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2024-12-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000690

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name: Giovanni Tangianu
Date: 2024-11-21
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-21
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Documentation re-issued and aligned to installation

Name: Eleonora Carotenuto
Date: 2025-02-15
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000787

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name: Giovanni Tangianu

Date: 2024-11-22

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-22
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000886

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name: Alessio Polo
Date: 2024-11-25
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu
Date: 2025-02-26
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


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



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000887

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name: Alessio Polo
Date: 2024-11-25
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

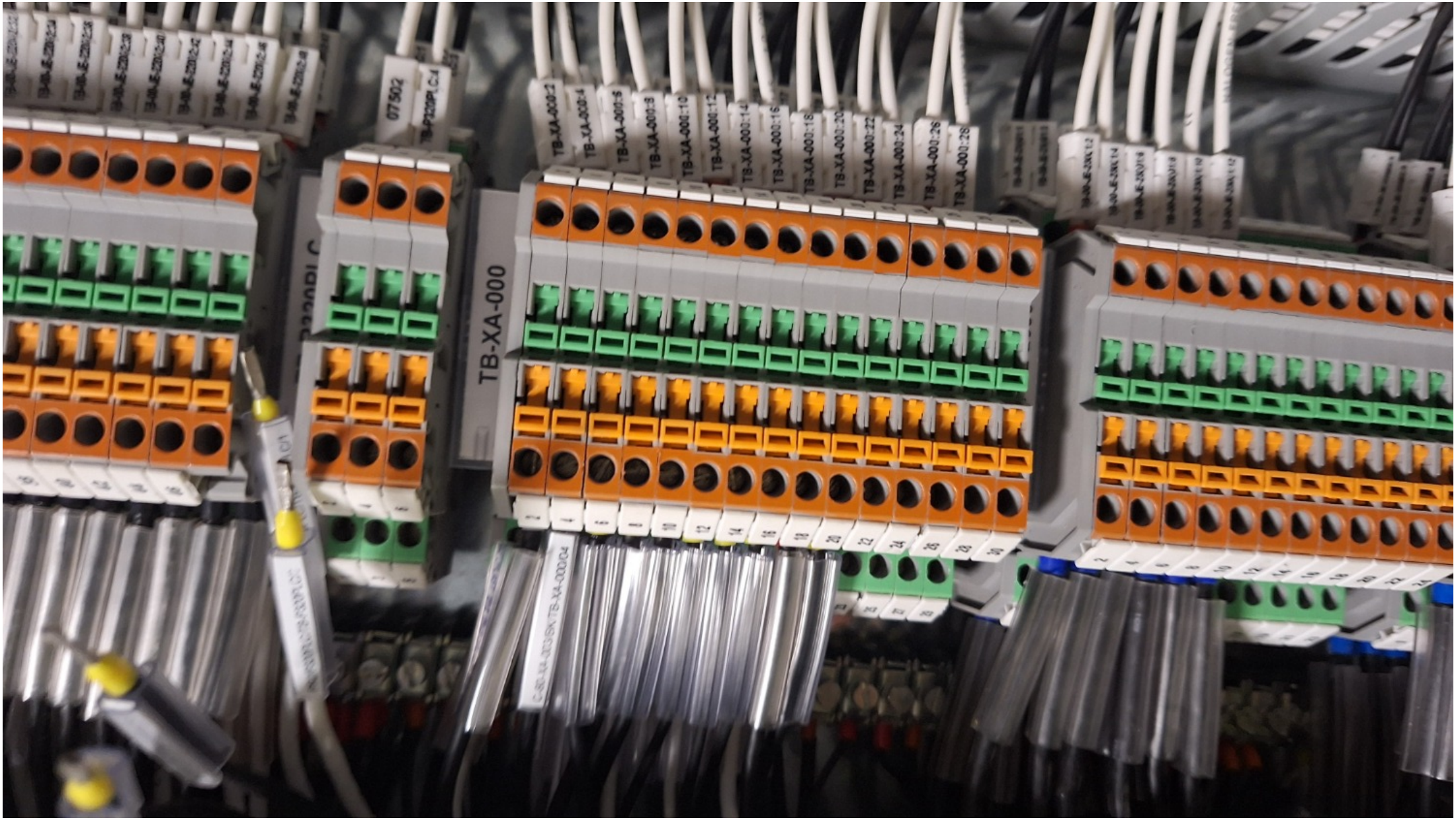
5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu
Date: 2025-04-11
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


TB-XA-000

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000888

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name: Alessio Polo

Date: 2024-11-25

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-28

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000898

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name: Alessio Polo
Date: 2024-11-25
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

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

Name: Giovanni Tangianu
Date: 2024-12-05
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


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

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000901

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name: Alessio Polo

Date: 2024-11-25

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Giovanni Tangianu

Date: 2025-01-03

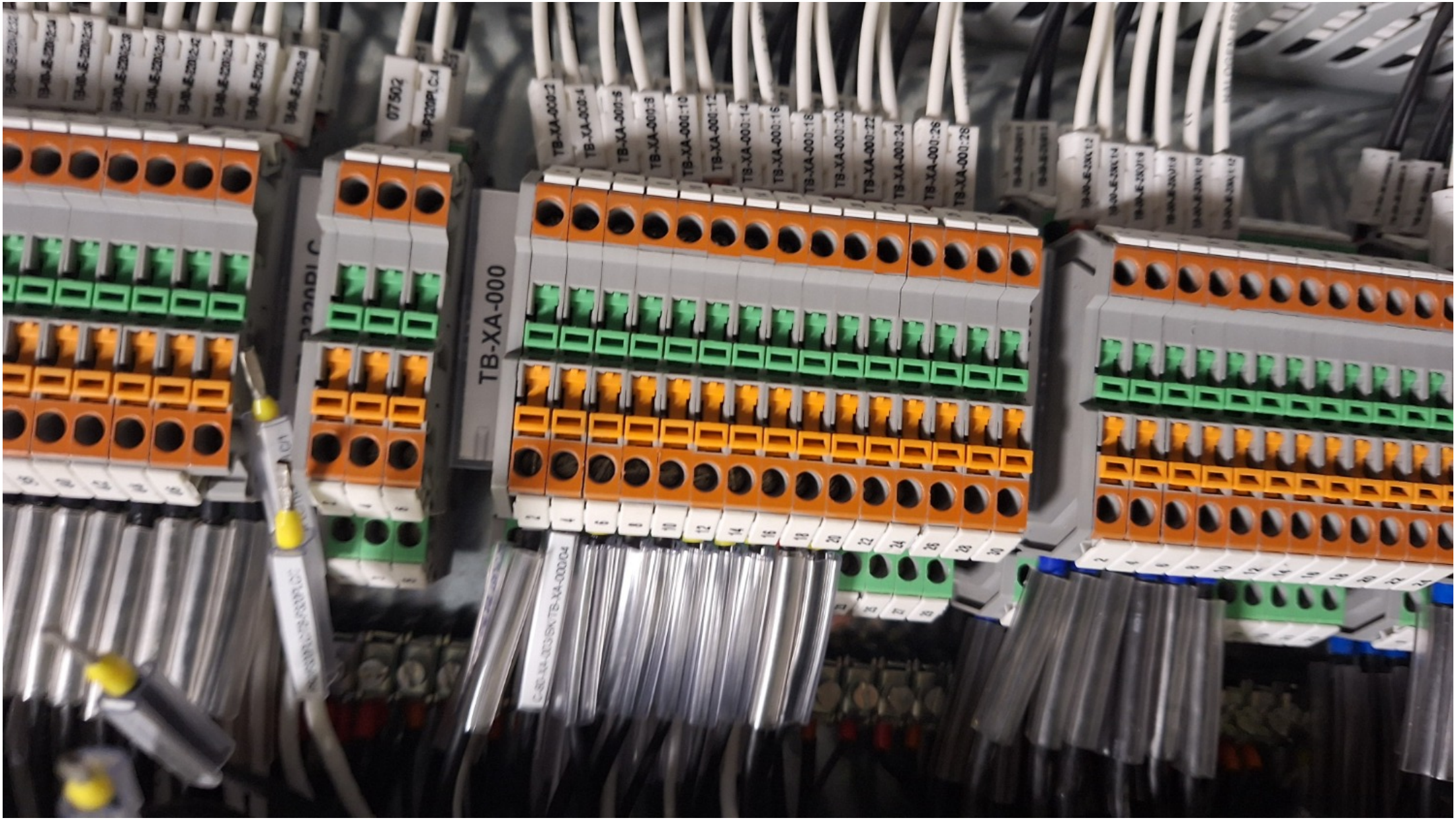
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


TB-XA-000





ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000902

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name: Alessio Polo
Date: 2024-11-25
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

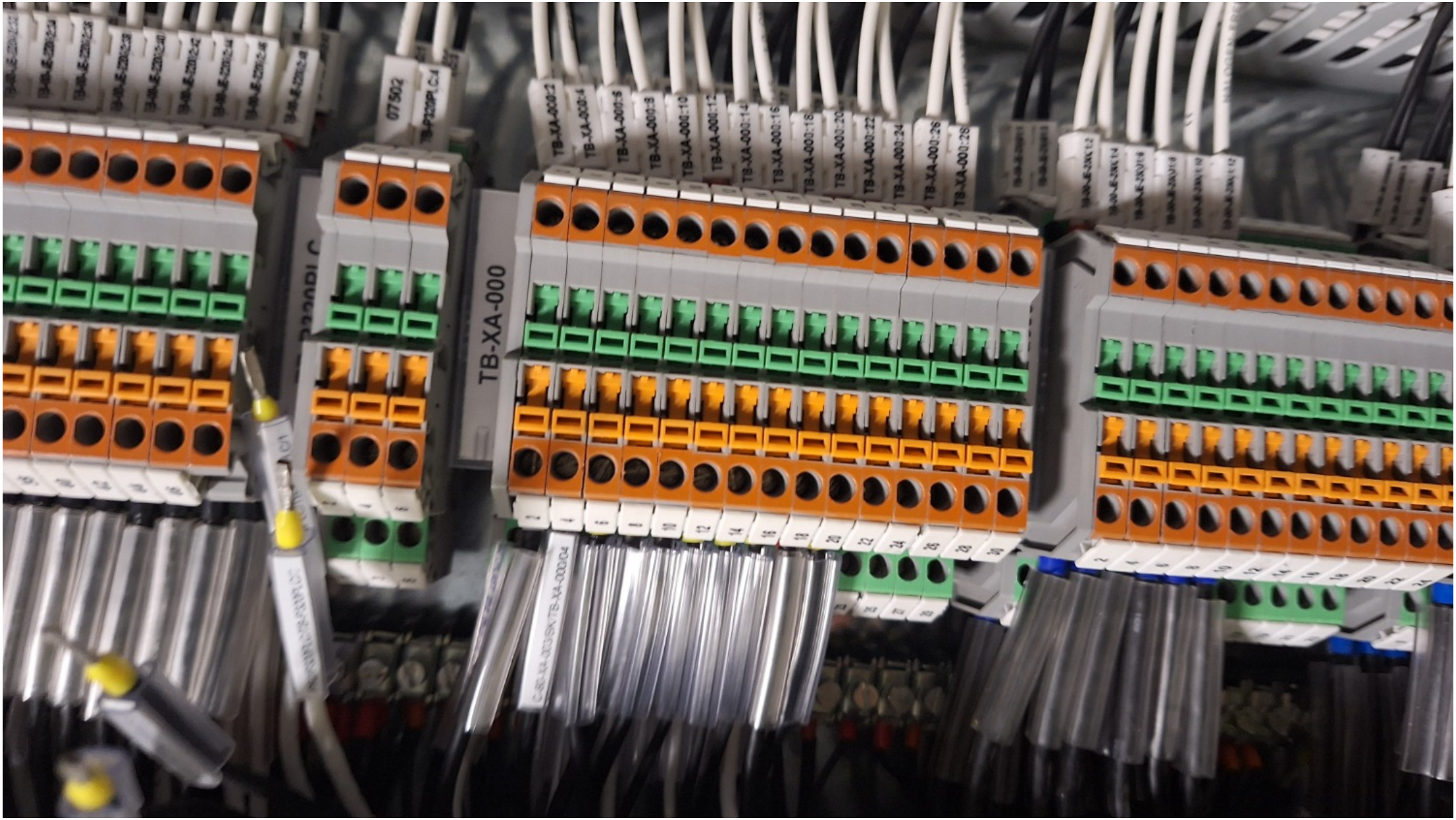
5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu
Date: 2025-04-11
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


TB-XA-000



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000903

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name: Alessio Polo

Date: 2024-11-25

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-28

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000917

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name: Alessio Polo
Date: 2024-11-25
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo
Date: 2025-02-21
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000920

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name: Alessio Polo
Date: 2024-11-25
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

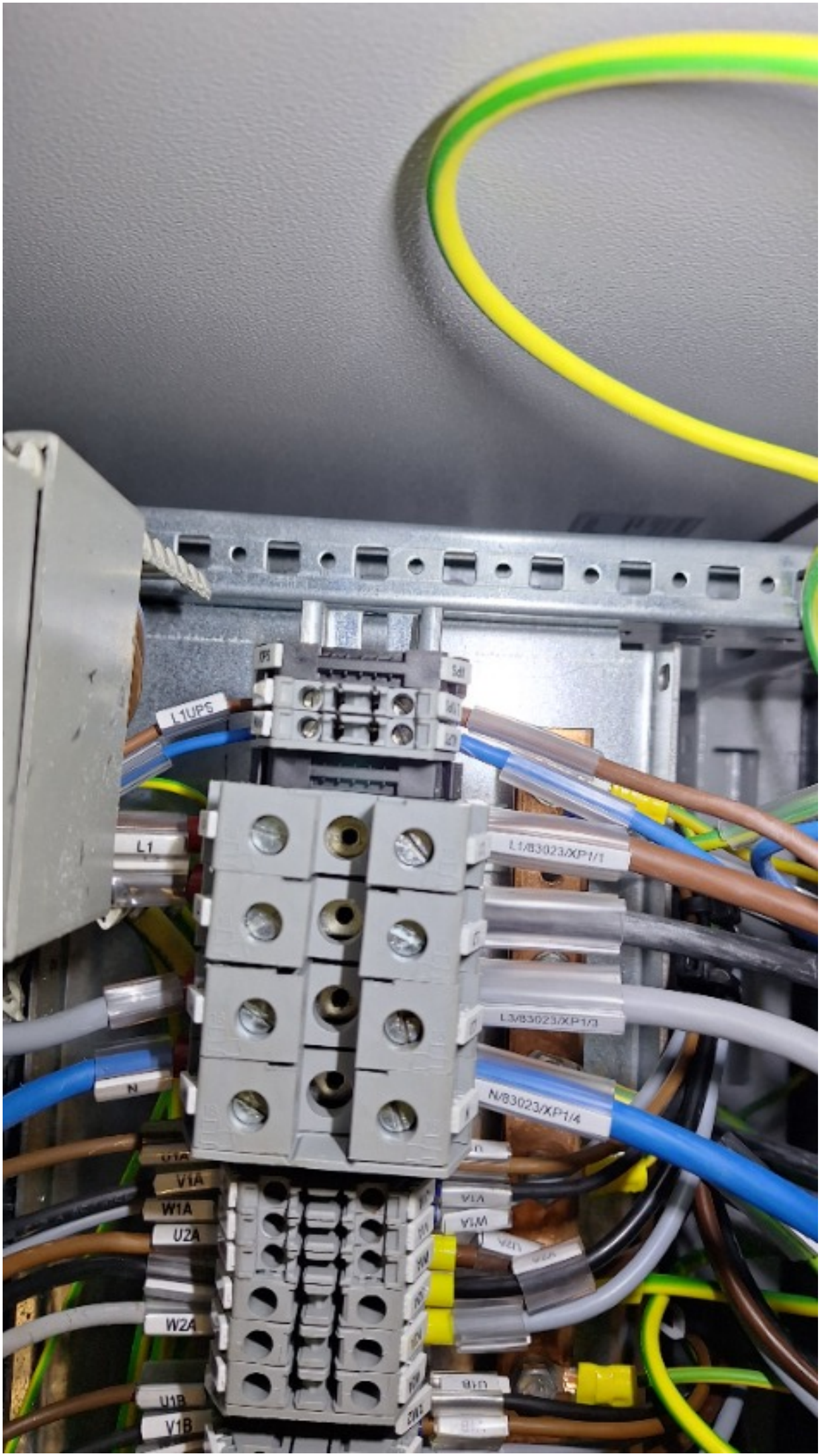
5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani
Date: 2025-02-15
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


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

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004325

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

During execution of Cause & Effect OTP doc. n. 123A90-PML-COM-PRO-03054, it had been noted that on equipment packages provided with a dedicated PLC controller, it was not possible to remotely reset the C&E trip command. Equipment package PLC internal logic to be updated and tested from Yokogawa workstation

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giandonato Delmissier
3.4 Activity code	COMM Commissioning	Date	2025-04-15
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

Logic implemented and tested

Name Giandonato Delmissier

Date 2025-05-15

Signature

5 - CLEARANCE CHECK

Done

Name Giandonato Delmissier

Date 2025-05-15

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000015

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

DONE

Name vendor alex sistemi

Date 2025-02-06

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-02-06

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


B-200
LV SWITCHROOM

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000019

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

Master key (common for all modules) to be provided

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

DONE

Name ALEX SISTEMI

Date 2024-10-29

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2024-10-29

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000023

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

ACTIVITY PERFORMED - SEE PICTURES

Name Stefano Linari

Date 2024-12-05

Signature

5 - CLEARANCE CHECK

ACTIVITY PERFORMED - SEE PICTURES

Name Stefano Linari

Date 2024-12-05

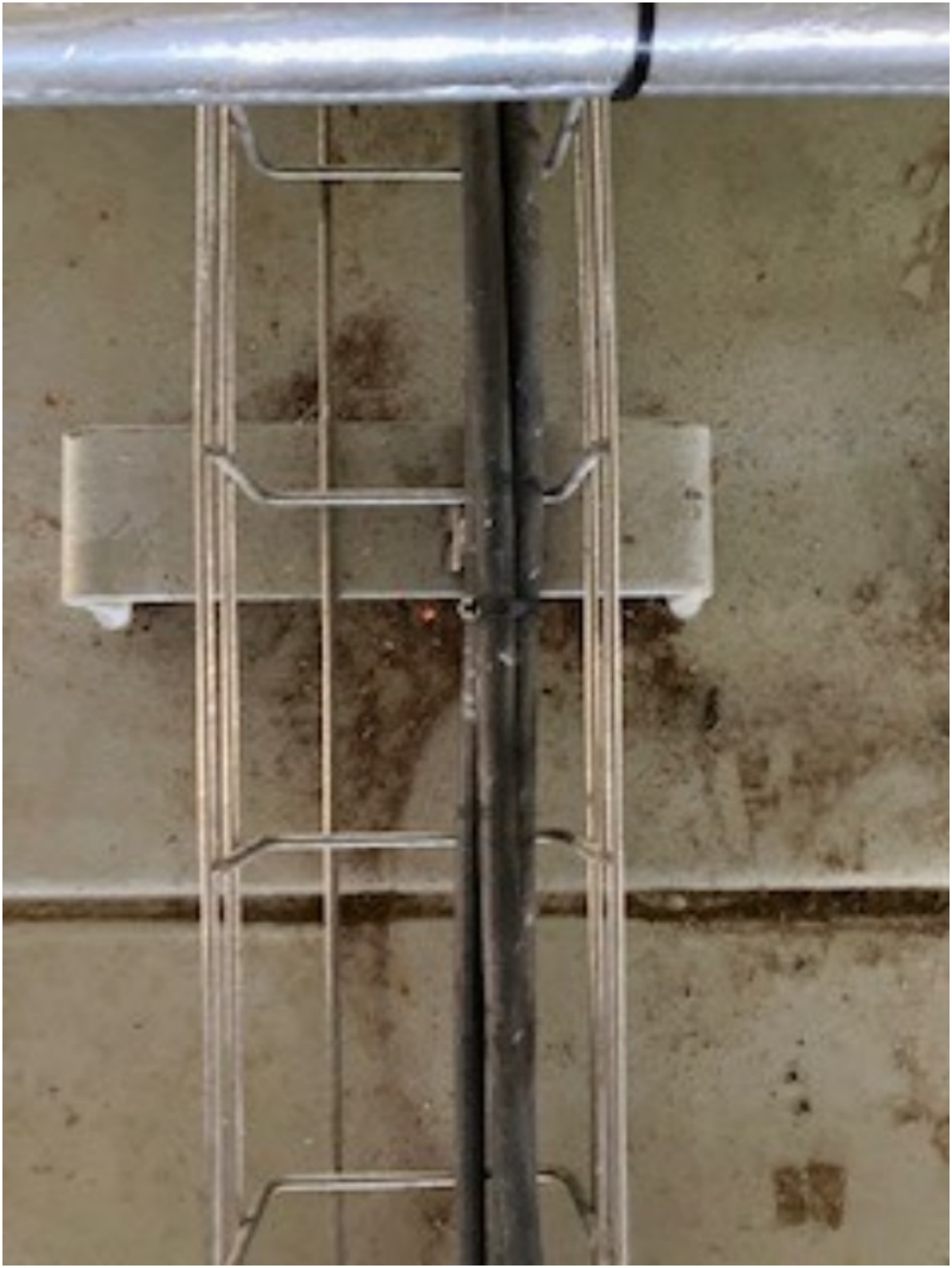
Signature

6- CLEARANCE APPROVAL

Name

Date

Signature





ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000027

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

EARTHING INSTALLED

Name ALEX SISTEMI

Date 2024-10-29

Signature

5 - CLEARANCE CHECK

EARTHING INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000031

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

EARTHING INSTALLED

Name ALEX SISTEMI

Date 2024-10-29

Signature

5 - CLEARANCE CHECK

EARTHING INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000035

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

installed anche checked

Name ALEX SISTEMI

Date 2024-10-29

Signature

5 - CLEARANCE CHECK

installed anche checked

Name Stefano Linari

Date 2024-10-29

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000039

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

activity done - see picture

Name Stefano Linari

Date 2024-12-05

Signature

5 - CLEARANCE CHECK

activity done - see picture

Name Stefano Linari

Date 2024-12-05

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


LIVE POWER
SOTTO TENSIONE
400 V

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000043

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

ACTIVITY DONE

Name Stefano Linari

Date 2024-12-05

Signature

5 - CLEARANCE CHECK

ACTIVITY DONE

Name Stefano Linari

Date 2024-12-05

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000047

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

CHECKED CEMBRE INSTALLATION MANUAL - ACCEPTED

Name ALEX SISTEMI

Date 2024-10-29

Signature

5 - CLEARANCE CHECK

CHECKED CEMBRE INSTALLATION MANUAL - ACCEPTED

Name Stefano Linari

Date 2024-10-29

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000051

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

FIXED

Name Stefano Linari

Date 2024-10-29

Signature

5 - CLEARANCE CHECK

FIXED

Name Stefano Linari

Date 2024-10-29

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000055

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

can be close - refer to PL n. C30000561

Name Stefano Linari

Date 2025-02-06

Signature

5 - CLEARANCE CHECK

can be close - refer to PL n. C30000561

Name Stefano Linari

Date 2025-02-06

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000059

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

INSTALLED

Name ALEX SISTEMI

Date 2024-10-29

Signature

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000069

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

INSTALLED

Name ALEX SISTEMI

Date 2024-10-29

Signature

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000073

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

PERFORMED - SEE REPORTS

Name ALEX SISTEMI

Date 2024-10-29

Signature

5 - CLEARANCE CHECK

PERFORMED - SEE REPORTS

Name Stefano Linari

Date 2024-10-29

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000077

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

INSTALLED

Name ALEX SISTEMI

Date 2024-10-29

Signature

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000081

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000085

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

INSTALLED

Name ALEX SISTEMI

Date 2024-10-29

Signature

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000089

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-10-29

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000093

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

ACTIVITY DONE - ALL DUCTS HAS BEEN INSTALLED

Name Stefano Linari

Date 2024-12-05

Signature

5 - CLEARANCE CHECK

ACTIVITY DONE - ALL DUCTS HAS BEEN INSTALLED

Name Stefano Linari

Date 2024-12-05

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000146

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name: Giovanni Tangianu

Date: 2024-10-07

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-10-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000147

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name: Giovanni Tangianu

Date: 2024-10-07

Signature:

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal	.Inside the panel B200-HSB-001 add identification numbers on terminal strip XPS		
3.2 Material required			
3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-10-07
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-02-04

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000160

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

Black Thermoshrink is used on earthing connection inside the panel

Name: Giovanni Tangianu

Date: 2024-10-10

Signature:

3 - DEFECT ASSESSMENT

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

3.2 Material required:

3.3 Priority: B PL B

3.4 Activity code: MC Mechanical Completion

3.5 Action by: VND Vendor

Name: Giovanni Tangianu

Date: 2024-10-10

Signature:

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Duplicate point. See PL n° C30000521

Name: Eleonora Carotenuto

Date: 2024-12-03

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000161

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

Missing copper grease on external earthing connection.

Name: Giovanni Tangianu

Date: 2024-10-10

Signature:

3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-10-10
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-14

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000162

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name: Giovanni Tangianu
Date: 2024-10-10
Signature:

3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-10-10
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu
Date: 2025-02-12
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000163

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

Instrument installation to be completed: 77-TP-201

Name: Giovanni Tangianu
Date: 2024-10-10
Signature:

3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-10-10
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE

Name: ALEX SISTEMI
Date: 2024-10-29
Signature:

5 - CLEARANCE CHECK

POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE

Name: Stefano Linari
Date: 2024-10-29
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000164

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name: Giovanni Tangianu
Date: 2024-10-10
Signature:

3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-10-10
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE

Name: ALEX SISTEMI
Date: 2024-10-29
Signature:

5 - CLEARANCE CHECK

POINT CLOSED - INSTRUMENT IS FREE FOR MAINTENANCE

Name: Stefano Linari
Date: 2024-10-29
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000521

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

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

4 - PERFORMED ACTION

accepted

Name Vendor Crosswind

Date 2025-02-25

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-02-25

Signature

6- CLEARANCE APPROVAL

Name

Date 2025-02-25

Signature

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000525

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

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

4 - PERFORMED ACTION

Implemented

Name Vendor Crosswind

Date 2025-02-20

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-02-20

Signature

6- CLEARANCE APPROVAL

Name

Date 2025-02-20

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000529

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

Add ethernet port locks to allHVAC panel boards

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

installed

Name Vendor Crosswind

Date 2025-02-22

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-02-22

Signature

6- CLEARANCE APPROVAL

Name

Date 2025-02-22

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000533

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

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

4 - PERFORMED ACTION

Spot check with Yokogawa and the communication work

Name Vendor Crosswind

Date 2025-02-22

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-02-22

Signature

6- CLEARANCE APPROVAL

Name

Date 2025-02-22

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000537

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

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

4 - PERFORMED ACTION

Implemented

Name Vendor Crosswind

Date 2025-02-25

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-02-25

Signature

6- CLEARANCE APPROVAL

Name

Date 2025-02-25

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000541

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

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

4 - PERFORMED ACTION

Verified

Name Vendor Crosswind

Date 2025-02-20

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-02-20

Signature

6- CLEARANCE APPROVAL

Name

Date 2025-02-20

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000545

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

None pressure relief damper HDR-77-201 work properly as per design conditions. They remain closed even thogh inside the shelters more then 50 Pa have been measured during SAT through the differential pressure transmitters (with fans running). SAT was conducted by manually positioning the dampers as they dhould appear when operating correctly (slightly open)

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal: Investigate the malfunction with the manufacturer and take corrctive actions to adjust or replace the pressure relief request.

3.2 Material required

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

4 - PERFORMED ACTION

The damper HDR-77-102 has been adjusted. Inside the shelter a constant pressure of 50 Pa.

Name: Giandonato Delmissier

Date: 2025-05-09

Signature

5 - CLEARANCE CHECK

done

Name: Giandonato Delmissier

Date: 2025-05-09

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000549

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

Make temperature and differental pressure trends visible on all HMIs

Name

Date

Signature

3 - DEFECT ASSESSMENT

Update PLC software to apply the request

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Implemented by Vendor

Name Vendor Crosswind

Date 2025-02-20

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-02-20

Signature

6- CLEARANCE APPROVAL

Name

Date 2025-02-20

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000553

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

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

4 - PERFORMED ACTION

Done

Name Raffaele Degli Esposti

Date 2025-07-30

Signature

5 - CLEARANCE CHECK

DONE

Name Raffaele Degli Esposti

Date 2025-07-30

Signature

6- CLEARANCE APPROVAL

Name

Date 2025-07-30

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000557

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal	Submit both the drainage pipe and heating cable datasheet (by inserting them HVAC COMPONENTS LIST AND DS - E&I SHELTERS and ELECTRICAL COMPONENTS LIST AND DS - E&I SHELTERS, for each shelter), clearly indicating the maximum temperature of the heating cable and the maximum temperature tolerance of the plastic drainage pipe, all system is not tested, will be tested during comm phase		
3.2 Material required			
3.3 Priority	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

COMPONENTS LIST AND DS - E&I SHELTERS has been re issued and approved with all informations of installed pvc and plastic ties

Name Vendor Crosswind

Date 2025-04-04

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-04-04

Signature

6- CLEARANCE APPROVAL

Name

Date 2025-04-04

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000561

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name

Date

Signature

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal	Review and issue al documentation by 15/11/2024 to allow for finalization by the end of november 2024, accounting fot the time required by RM to review these documents.		
3.2 Material required			
3.3 Priority	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

all documentation has been re issued and approved by vendor, in particulat interconnecting has been re issued on 14/03/2025

Name Vendor Crosswind

Date 2025-04-04

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-04-04

Signature

6- CLEARANCE APPROVAL

Name

Date 2025-04-04

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000616

PROVERLIS

1 -ELEMENT IDENTIFICATION

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

2 - OBSERVATION

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

Name: Alessio Polo
Date: 2024-11-19
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-19
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu
Date: 2025-02-26
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

Section 4 FUNCTIONAL TESTS SHEETS

Section 4.1 Electrical functional test sheets index

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-20 & process: COMM & discipline : E

Electrical	77-20 HVAC LV Switchgear Room B-200						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
A5/+02-QF1	DRAWER HVAC PANELS LV ROOM - A5/+02-QF1	ONSHORE	C10002870	FP00	100	2024-10-14	RFO 2
		ONSHORE	C10002871	FTR-2	100	2024-09-20	RFO 2
		ONSHORE	C10002872	FTR-6	100	2024-10-03	RFO 2
		ONSHORE	C10003015	FTR-5	100	2025-04-29	RFO 2
B200-HSB-001	Distribution & HVAC Panel - LV Room	ONSHORE	C10002988	FP00	100	2024-10-28	RFO 2
UP-200F3-QF40	UCP - HVAC ROOM	ONSHORE	C10004577	FTR-2	100	2024-12-07	RFO 2

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	A5/+02-QF1	: DRAWER HVAC PANELS LV ROOM - A5/+02-QF1			Dwg	1723002197-EL-DG-00011
	S/Sys	77-20	: HVAC LV Switchgear Room B-200			Module	
TASK	code	C10002870		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	PRE-COMM	Activity FTS	Discipline	Electrical	Form	FP00 Miscellaneous electrical Consumer

DATA

Switchboard	SG-200N1	Circuit ref:	SG-200N1-QF1
Breaker rating (A)	160A	Nominal current (A)	40A

FUNCTION TEST REQUIREMENT

1	Check pre-commissioning activities have been carried out					OK
2	Check equipment for cleaness					OK
3	Measure I/R value of equipment and feeder cable at 1000V (Min value: 10 Mohm)	>1000	MΩ			OK
4	Energise control of equipment feeder					OK
5	Full test feeder breaker operation in test position					OK
6	Check protection setting					OK
7	Test interface trips and signals (remote alarms & status). Check the relevant ITR presence in the system					OK
8	Test control and safety functions according to manufacturer's procedure.					OK
9	Energize					OK
10	Measure Voltage and Current values at feeder breaker	401V	V	0.1	A	OK
11	Attach test procedure, if any					NA

FUNCTION TEST REQUIREMENT	RESULT

Testing & measurement instruments used

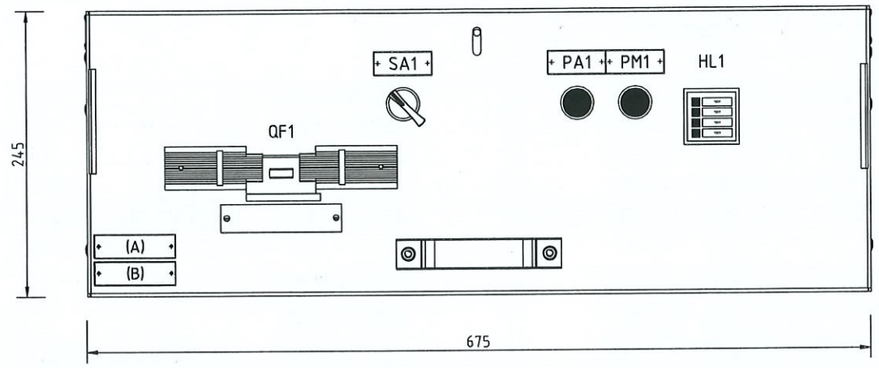
Type	Serial n°	Calibration certificate	Validity
FLUKE 376	A1711003	7710/24	10/07/2025
FLUKE 1663	5380144	7727/24	10/07/2025

Comments:

Page 1/1	Performed by	☐ WITNESS ☑ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM COMM	RM COMM	CPY NOT PRESENT
Name	Mattia Girotti	Kristian Castellani	Witness waived
Date	2024-10-14	2024-10-14	2024-10-14
Signature	PROVERLIS Digitaly signed by Mattia Girotti 2024-10-14T07:29:50.999Z	PROVERLIS Digitaly signed by Kristian Castellani 2024-10-14T08:28:39.659Z	PROVERLIS Digitaly signed by Witness waived 2024-10-14T08:33:42.860Z

DOOR FRONT LAY-OUT

TYPICAL : LINE FEEDER "LK1-n"

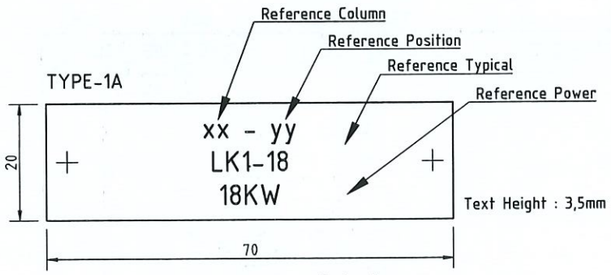


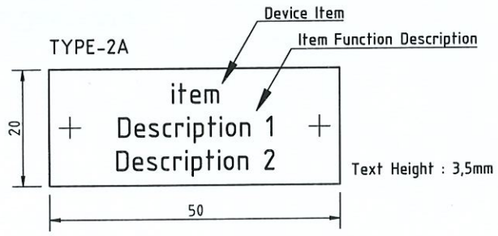
NOTE :

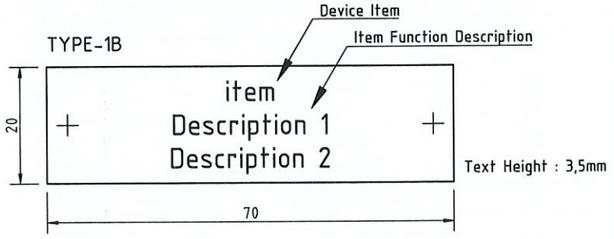
A) IDENTIFICATION name plate (type-1A) , with :
- Drawer position [Column / Position inside SWB]
- Typical name [reference applicability typical used]
- Power [reference applicability typical used]

B) USER name plate (type-1B), with :
- Item User [to see SLD diagrams]
- User Description [to see SLD diagrams]

DEVICES name plate			
ITEM	DESCRIPTION 1	DESCRIPTION 2	NOTE
QF1	Circuit Breaker		NO plate
SA1	LOC-REM	SELECTOR	Type-2A
PA1	STOP	~~MOTOR~~ OK	Type-2A
PM1	RUN	~~MOTOR~~ OK	Type-2A
HL1	Multiled	Signalling	NO plate







=	TYPICAL
+	LK-x
DWG n° :	231298/SD/31
Item n° :	PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS

Door Front Lay-Out - Typical "LK1-n" & "LK2-n"

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00031

SHEET 034

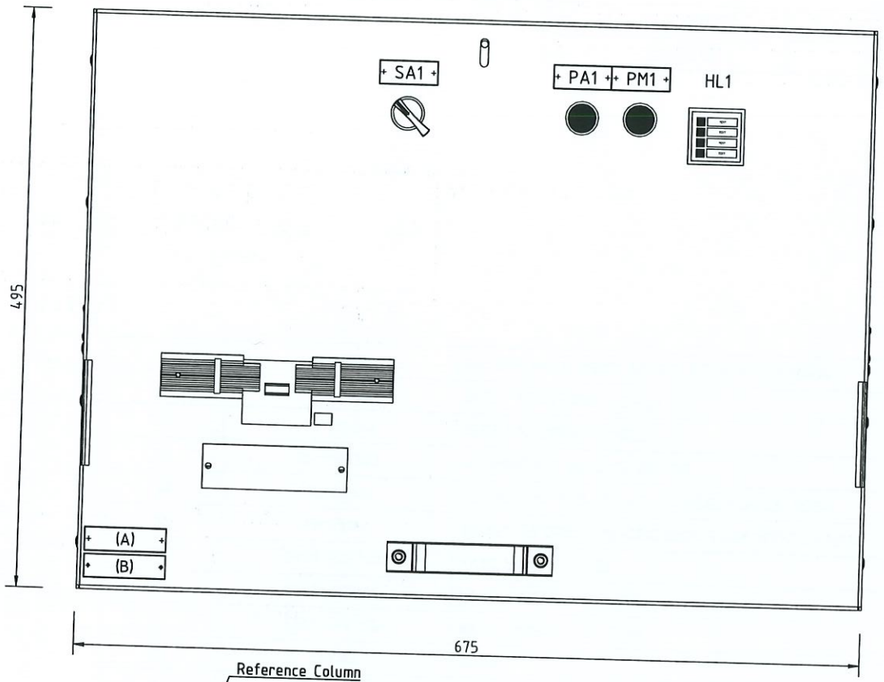
REV. 00

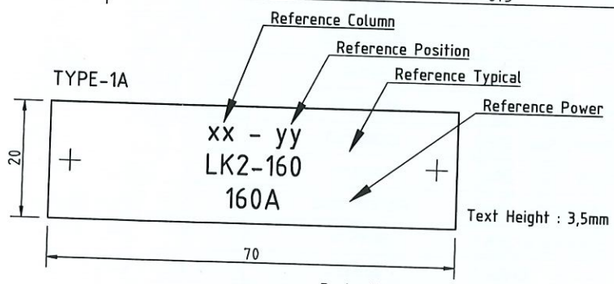
F.to UNI A3: 420mmx297mm

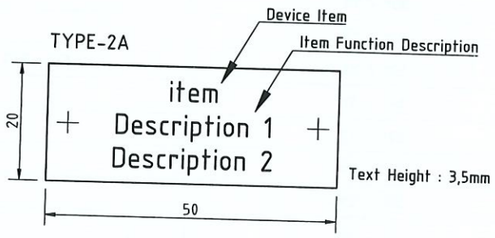
File Name : 1723002197-EL-DG-00031 Rev. 00

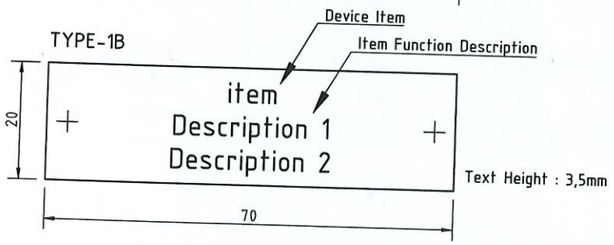
DOOR FRONT LAY-OUT

TYPICAL : LINE FEEDER "LK2-n"









NOTE :

A) IDENTIFICATION name plate (type-1A) , with :
- Drawer position [Column / Position inside SWB]
- Typical name [reference applicability typical used]
- Power [reference applicability typical used]

B) USER name plate (type-1B), with :
- Item User [to see SLD diagrams]
- User Description [to see SLD diagrams]

DEVICES name plate			
ITEM	DESCRIPTION 1	DESCRIPTION 2	NOTE
QF1	Circuit Breaker		NO plate
SA1	LOC-REM	SELECTOR	Type-2A
PA1	STOP	MOTOR ok	Type-2A
PM1	RUN	MOTOR ok	Type-2A
HL1	Multiled	Signalling	NO plate

= TYPICAL
+ LK-x
DWG n° : 231298/SD/31
Item n° : PF1002983/26

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"

LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS

Door Front Lay-Out - Typical "LK1-n" & "LK2-n"

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00031

SHEET 035

REV. 00

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 00

USERS LEGEND

TYPICAL : LINE FEEDER "LK1-n" "LK2-n"

TYPICAL APPLICABILITY					
ITEM	ITEM TAG	DESCRIPTION TAG	REFERENCE POSITION (written on name name plate "type-1A)	REFERENCE NOMINAL CURRENT C.B. TRIP UNIT (written on name name plate "type-1A)	REFERENCE TYPICAL (written on name name plate "type-1A)
1	DP-200N2	DB-LIGHTING & SMALL POWER INSIDE LV ROOM	A2 / +05	40A	LK1-40
2	JB-200E2	CRANE	A3 / +02	40A	LK1-40
3	DP-200N1	DB-LIGHTING & SMALL POWER BoP	A3 / +03	40A	LK1-40
4	SPARE	SPARE	A3 / +04	63A	LK1-63
5	SPARE	SPARE	A3 / +05	40A	LK1-40
6	A-50000	WATER PACKAGE	A3 / +08	160A	LK2-160
7	B100-HSB-001	HVAC PANELS HV ROOM	A4 / +02	40A	LK1-40
8	A-80000	FUELL CELL AUXIALIRY LOAD	A4 / +03	63A	LK1-63
9	CP-850F03	BESS PCS CABINET	A4 / +04	40A	LK1-40
10	DP-300N1	DB-LIGHTING & SMALL POWER INSIDE UPS ROOM	A4 / +05	40A	LK1-40
11	SPARE	SPARE	A4 / +06	40A	LK1-40
12	DP-630E01A	INSTRUMENTS AIR PACKAGE 01A	A4 / +08	160A	LK2-160
13	SPARE	SPARE	A5 / +01	40A	LK1-40
14	B200-HSB-001	HVAC PANELS - LV ROOM	A5 / +02	40A	LK1-40
15	B300-HSB-001	HVAC PANELS - UPS ROOM	A5 / +03	40A	LK1-40
16	B400-HSB-001	HVAC PANELS - ITER	A5 / +04	40A	LK1-40
17	CN-200N1	IMPRESSED CURR. CATHODIC PROTECTION (ICCP) SYSTEM	A5 / +05	40A	LK1-40
18	DP-400N1	DB-LIGHTING & SMALL POWER INSIEDE INSTR. ROOM	A5 / +06	40A	LK1-40
19	DP-630E01B	INSTRUMENTS AIR PACKAGE 01B	A5 / +08	160A	LK2-160
20	CP-850F01	BESS LV1 CABINAT (+DISTR 1)	A6 / +02	40A	LK1-40
21	CP-850F02	BESS LV2 CABINAT (+DISTR 2)	A6 / +03	40A	LK1-40
22	DP-100N1	DB-LIGHTING & SMALL POWER INSIDE HV/MV ROOM	A6 / +04	40A	LK1-40

= TYPICAL
+ LK-x

OWG n° : 231298/SD/31
Item n° : PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

TITLE : "SG-200N1"

LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS

Users Legend - Typical "LK1-n" & "LK2-n"

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

A3 | DRAWING NO. 1723002197-EL-DG-00031 | SHEET 036 | REV. 00

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 00

ITEMS ACRONYM

TYPICAL : LINE FEEDER "LK1-n" "LK2-n"

Composition of Typical :

LK-x = Common Parts
LK1-"nn" or LK2-"nn"= Specific Parts

Example for Composition of LK1-63:
- to take "LK-x" plus "LK1-63"

Example for Composition of LK2-160:
- to take "LK-x" plus "LK2-160"

	ACRONYM ITEMS (Comun parts)	ACRONYM ITEMS (Specific parts)				
	LK-x	LK1-40 (In=40A) (Current Trip Unit)	LK1-63 (In=63A) (Current Trip Unit)	LK2-160 (In=160A) (Current Trip Unit)		
ASSOCIATED TYPICAL	This Item include all devices that are comun for both "Specific Parts" Items	This Items include only devices that are detail for "Specific Parts" Items				
LK1-40	X	X				
LK1-63	X		X			
LK2-160	X			X		
-						

=	TYPICAL					
+	LK-x					
DWG n° : 231298/SD/31						
Item n° : PF1002983/26						
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)	
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION	

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

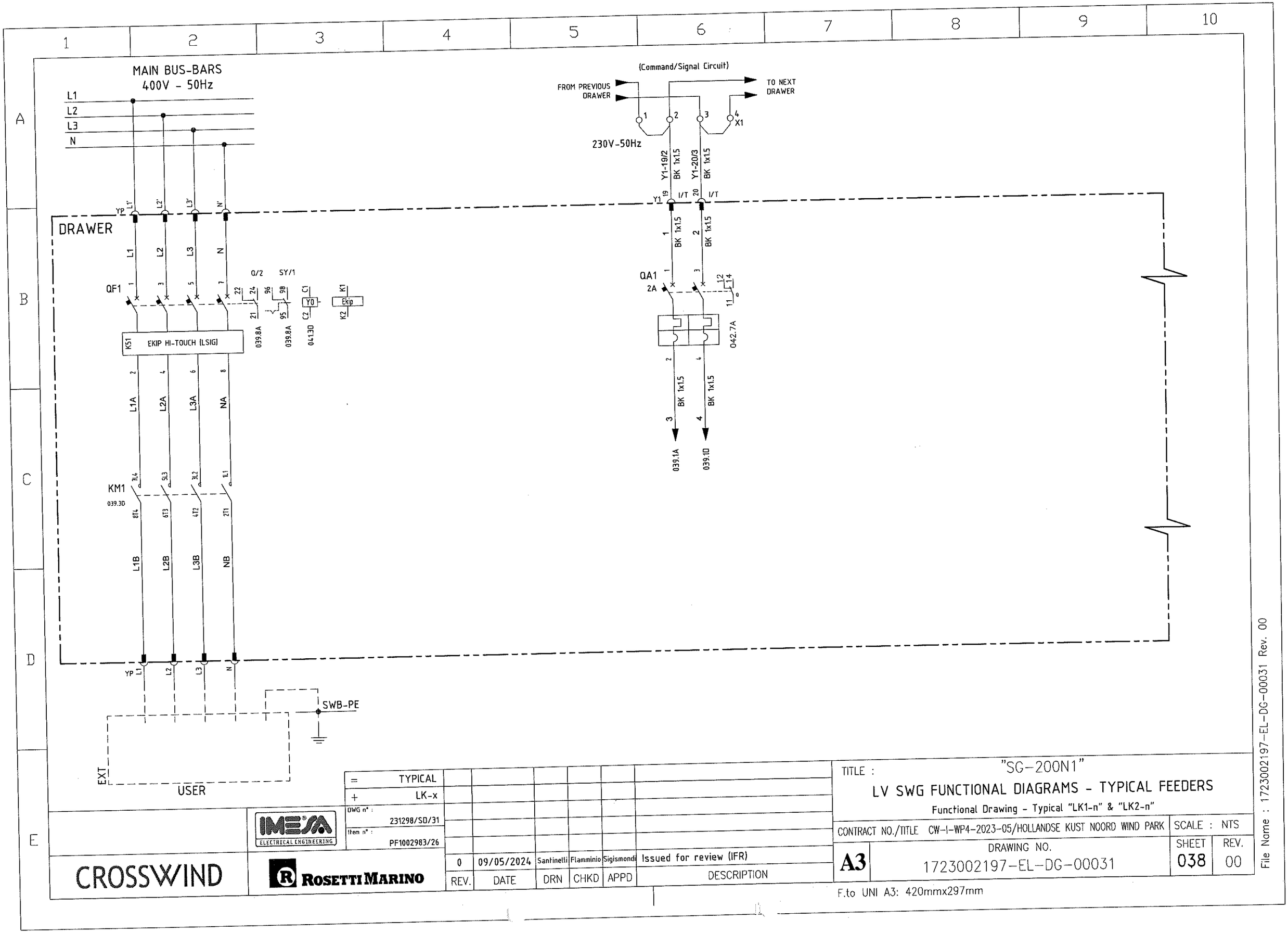
TITLE : "SG-200N1"
LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS
Items Acronym - Typical "LK1-n" & "LK2-n"

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

A3 | DRAWING NO. 1723002197-EL-DG-00031 | SHEET 037 | REV. 00

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 00



=	TYPICAL						
+	LK-x						
DWG n° : 231298/SD/31							
Item n° : PF1002983/26							
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)		
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION		

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS

Functional Drawing - Typical "LK1-n" & "LK2-n"

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00031

SHEET 038

REV. 00

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 00

APERTO IN INS.

038.6C 3 230V-50Hz

KA3 039.8D

KA6 042.9D

SA1 LOC REM CLOSE ON "LOC" 042.9A 039.7B 039.5B

SA1 039.3B CLOSE ON "REM"

PM1 GR

KM1 039.3D

PA1 RD

KA7 042.6D

KA6 042.5D

KA3 039.8D

SA1 039.3B CLOSE ON "REM"

KM1 039.3D

KA5 039.9D

QF1 038.1B Q

QF1 038.1B SY

Y1 22 T Y1 21 I/T

3 040.1B

7 BK 1x1.5

8 BK 1x1.5

9 BK 1x1.5

10 BK 1x1.5

11 BK 1x1.5

12 BK 1x1.5

5 BK 1x1.5

6 BK 1x1.5

13 BK 1x1.5

14 BK 1x1.5

15 BK 1x1.5

16 BK 1x1.5

17 BK 1x1.5

18 BK 1x1.5

19 BK 1x1.5

KM1 A1 A2 MAIN CONTACTOR

KA1 A1 A2 STATUS C.B/CONTACTOR

KA2 A1 A2 USER AVAILABLE

KA3 A1 A2 C.B. OPEN/CLOSED

KA4 A1 A2 C.B. TRIPPED

KA5 A1 A2 DRAWER ON TEST

038.6C 4

4 040.1D

038.1C 2T1 1L1
038.1C 4T2 3L2
038.1C 6T3 5L3
038.1C 8T4 7L4
039.6B 14 13
039.4B 24 23
039.5B 34 33
040.3B 44 43

042.4A 11 12 14 22 21 24 32 31 34 42 41 44

042.6A 11 12 14 22 21 24 32 31 34 42 41 44

039.6A 039.2A 040.3B 11 12 14 22 21 24 32 31 34 42 41 44

040.4B 042.6A 11 12 14 22 21 24 32 31 34 42 41 44

042.5A 039.7B 11 12 14 22 21 24 32 31 34 42 41 44

= TYPICAL
+ LK-x

DWG n° : 231298/SD/31
Item n° : PF1002983/26

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"

LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS

Functional Drawing - Typical "LK1-n" & "LK2-n"

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

SCALE : NTS

A3

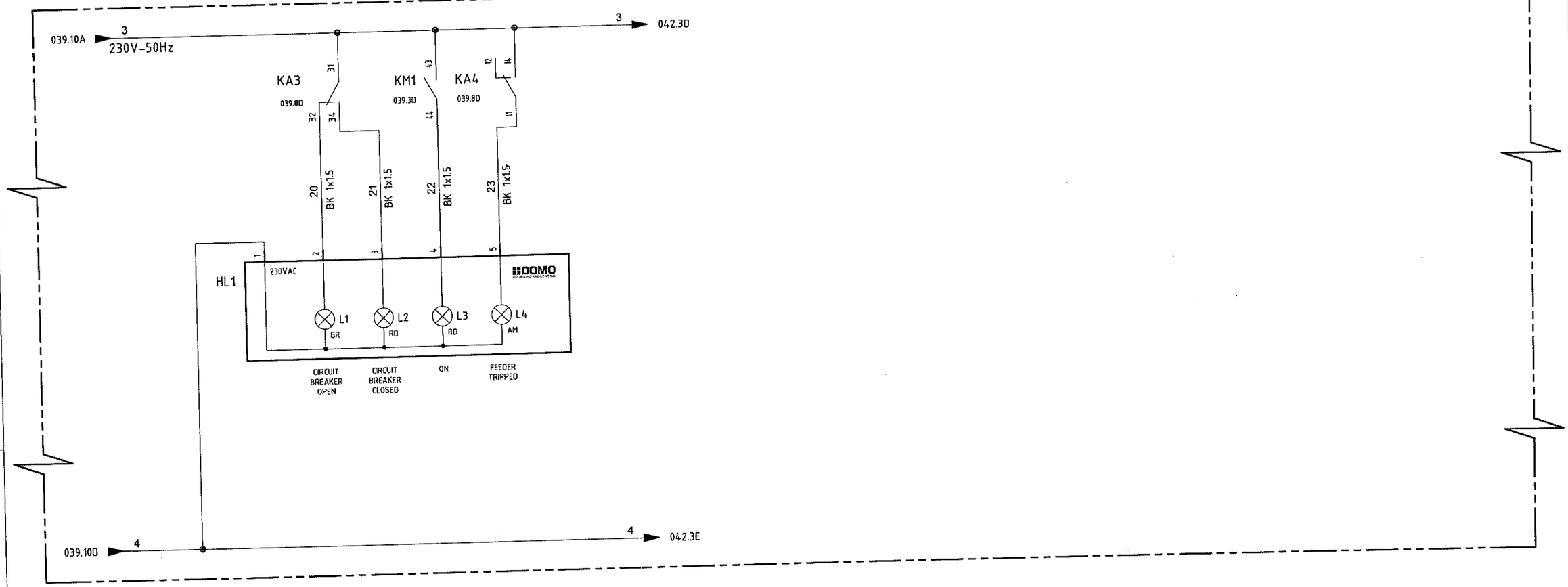
DRAWING NO. 1723002197-EL-DG-00031

SHEET 039

REV. 00

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 00



=	TYPICAL						
+	LK-x						
DWG n° :	231298/SD/31						
Item n° :	PF1002983/26						
		0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
		REV.	DATE	DRN	CHKD	APPD	DESCRIPTION

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS

Functional Drawing - Typical "LK1-n" & "LK2-n"

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

SCALE : NTS

A3

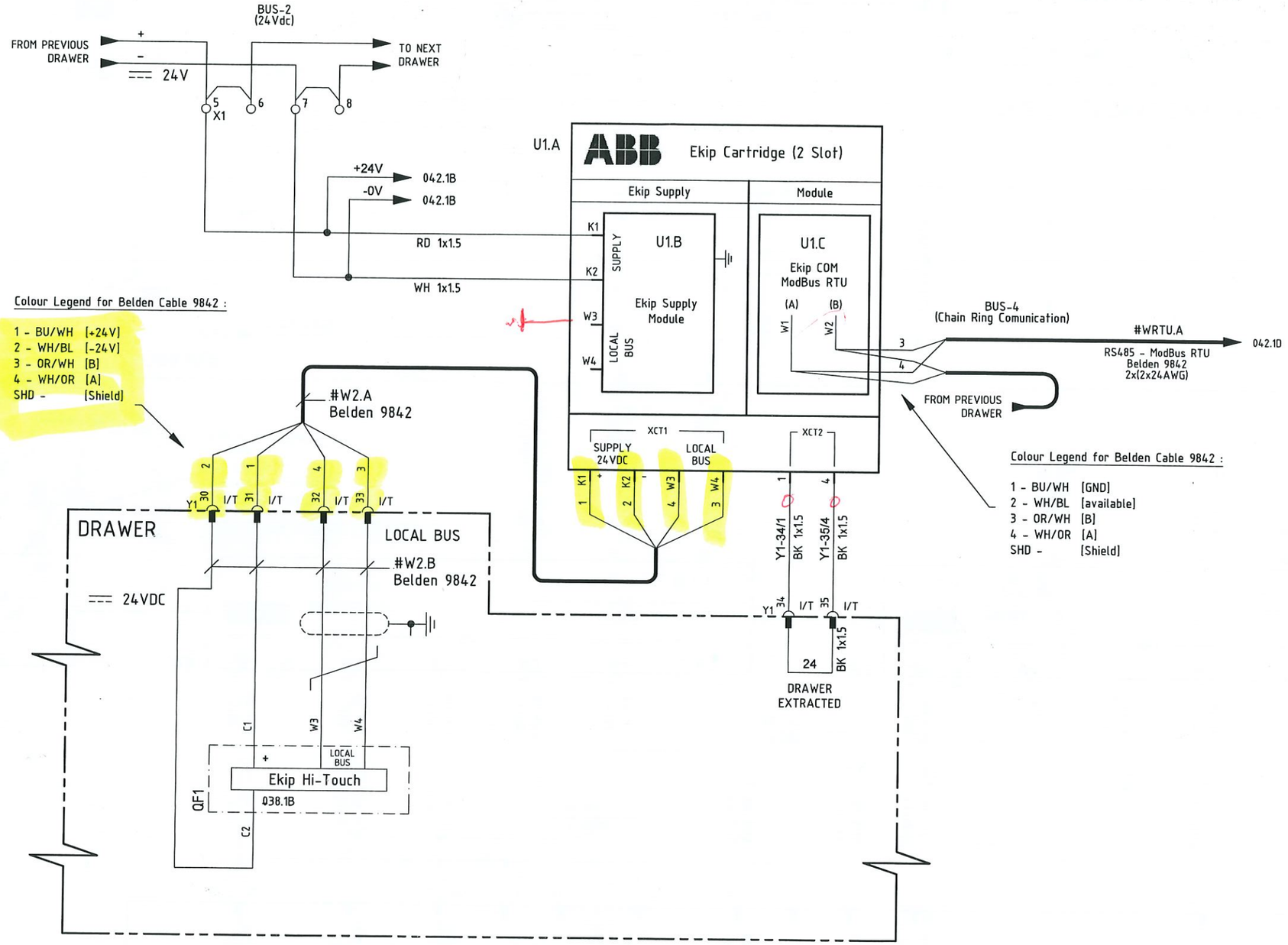
DRAWING NO. 1723002197-EL-DG-00031

SHEET 040

REV. 00

F.to UNI A3: 420mmx297mm

3 Name : 1723002197-EL-DG-00031 Rev. 00



=	TYPICAL						
+	LK-x						
DWG n° : 231298/SD/31							
Item n° : PF1002983/26							
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)		
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION		

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

TITLE : "SG-200N1"

LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS

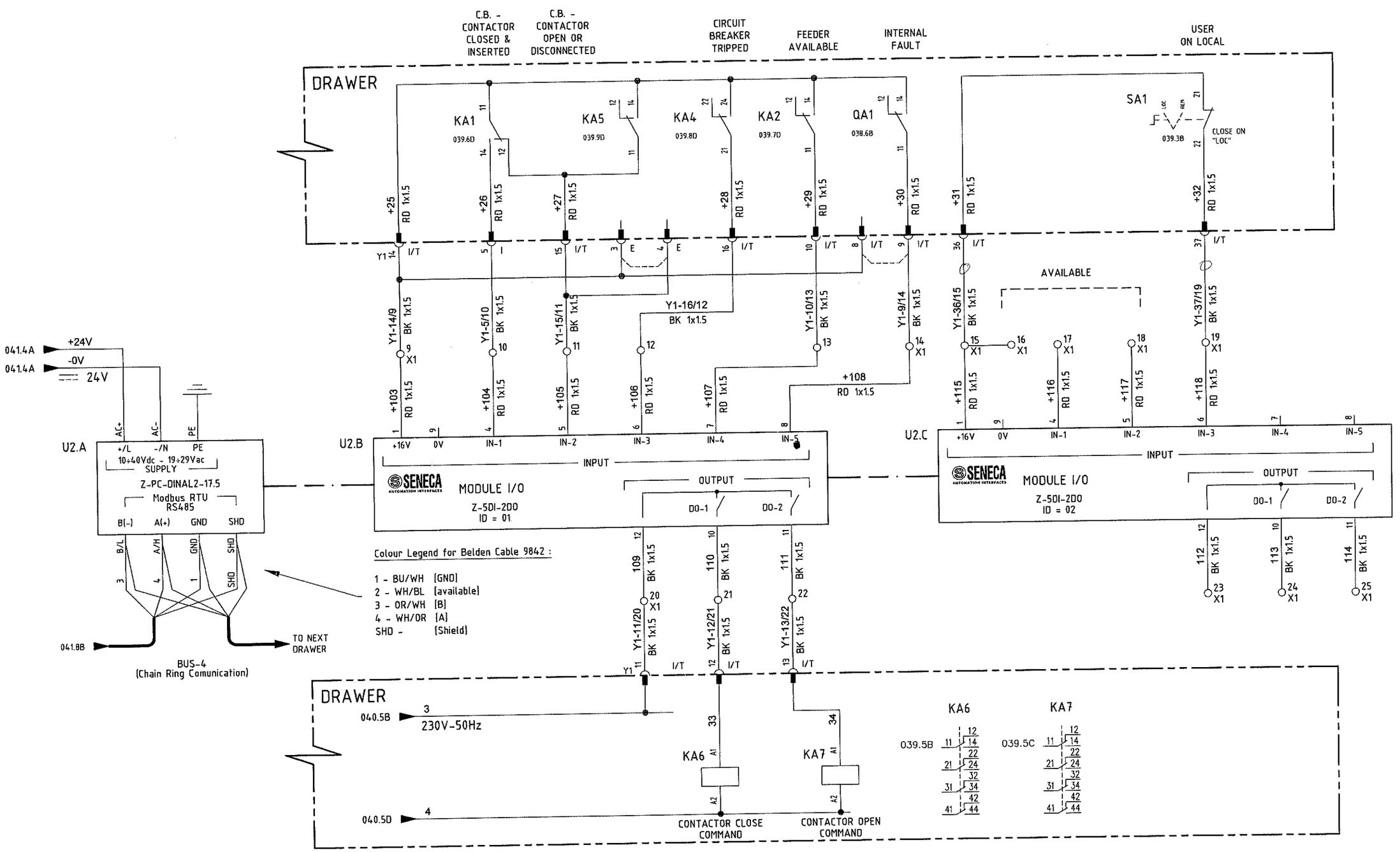
Functional Drawing - Typical "LK1-n" & "LK2-n"

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

A3 | DRAWING NO. 1723002197-EL-DG-00031 | SHEET 041 | REV. 00

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 00



=	TYPICAL						
+	LK-x						
OWG n° : 231298/SD/31							
item n° : PF1002983/26							
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)		
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION		

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS

Functional Drawing - Typical "LK1-n" & "LK2-n"

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00031

SHEET 042

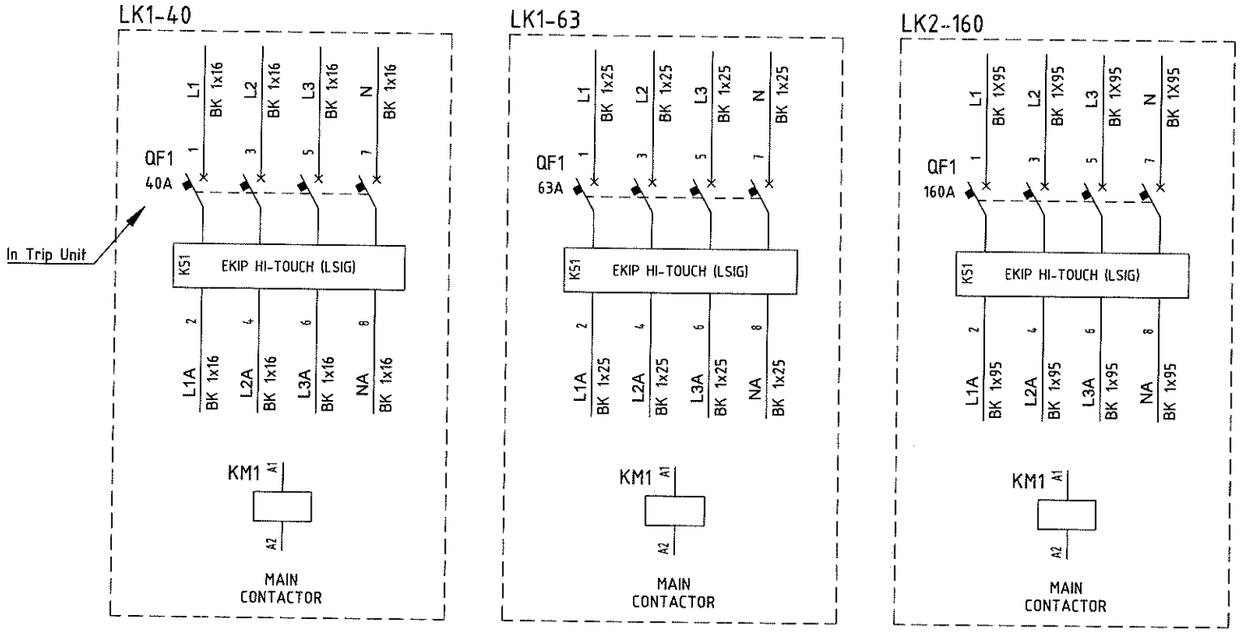
REV. 00

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 00

SPECIFIC PARTS

TYPICAL : LINE FEEDER "LK1-n" "LK2-n"



=	TYPICAL						
+	LK-x						
DWG n° :	231298/SD/31						
Item n° :	PF1002983/26						
		0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
		REV.	DATE	DRN	CHKD	APPD	DESCRIPTION

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS

Functional Drawing - Typical "LK1-n" & "LK2-n"

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00031

SHEET 043

REV. 00

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 00

AUXILIARY SOCKET

136450/001 (PF – 2 pcs) + 136458/004 (PM – 2 pcs)

N° PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
JUMP			•	•				•	•																																			
RACKED–OUT			X	X				X	X																																			
TEST								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RACKED–IN					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
PIN USED			042.5B	042.5B	042.4B			042.6B	042.7B	042.6B	042.5D	042.5D	042.6D	042.3B	042.4B	042.6B			038.6A	038.6A	039.9A	039.9A								041.3C	041.3C	041.4C	041.4C	041.6C	041.7C	042.7B	042.9B							

TYPICAL - LK-x - Y1

SX DX

- FIELD WHIT "X" - CONTACT CLOSE WHEN DRAWER IS IN RACKED-OUT POSITION
- FIELD WHIT "X" - CONTACT CLOSE WHEN DRAWER IS IN TEST POSITION
- FIELD WHIT "X" - CONTACT CLOSE WHEN DRAWER IS IN RACKED-IN POSITION
- CROS-REFERENCE USED PIN

x 19 CASSETTI

=	TYPICAL						
+	LK-x						
DWG n° :	231298/SD/31						
Item n° :	PF1002983/26						
		0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
		REV.	DATE	DRN	CHKD	APPD	DESCRIPTION

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG–200N1"

LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS

Functional Drawing - Typical "LK1-n" & "LK2-n"

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

A3 | DRAWING NO. 1723002197-EL-DG-00031 | SHEET 044 | REV. 00

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 00

TYPICAL - LK-x

X1

NumM	Fg.	Sez.	Tipo	Descrizione	Costruttore
			BT003	BT/3 End bracket	Cabur
1	038.5A	2.5	HD100GR__	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
2	038.6A	2.5	HD100GR__	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
3	038.6A	2.5	HD100GR__	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
4	038.6A	2.5	HD100GR__	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
5	041.3A	2.5	HD100GR__	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
6	041.3A	2.5	HD100GR__	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
7	041.4A	2.5	HD100GR__	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
8	041.4A	2.5	HD100GR__	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
			HD101GR	HMD/PT/GR End section - Grey	Cabur
9	042.3B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
10	042.4B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
11	042.4B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
12	042.5B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
13	042.6B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
14	042.7B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
15	042.7B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
16	042.7B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
17	042.8B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
18	042.8B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
19	042.9B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
20	042.5C	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
21	042.5C	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
22	042.6C	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
23	042.9C	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
24	042.9C	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
25	042.10C	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
			HD201GR	HMD.1/PT/GR End section - Grey	Cabur
			BT003	BT/3 End bracket	Cabur

=	TYPICAL
+	LK-x

IMESA ELECTRICAL ENGINEERING

DWG n° : 231298/SD/31

Item n° : PF1002983/26

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"

LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS

Functional Drawing - Typical "LK1-n" & "LK2-n"

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00031

SHEET 045

REV. 00

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 00

Nome/Item	Fg/Sh	Tipo/Type	Q.ta/Q.ty	Descrizione/Description	Costruttore/Manufacturer	Quadro (descrizione)
HL1	040	ML22/484L230STLTTR	1	MULTILED 48x48 - 4 LED - Vaux=230Vac/dc + LAMP TEST + TROP	DOMO	TYPICAL LK-x
KA1	039	ER 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LED	ABB	TYPICAL LK-x
		ER 609 8	1	CR-MH HOLDER FOR CR-M RELAY	ABB	TYPICAL LK-x
		ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	TYPICAL LK-x
KA2	039	ER 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LED	ABB	TYPICAL LK-x
		ER 609 8	1	CR-MH HOLDER FOR CR-M RELAY	ABB	TYPICAL LK-x
		ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	TYPICAL LK-x
KA3	039	ER 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LED	ABB	TYPICAL LK-x
		ER 609 8	1	CR-MH HOLDER FOR CR-M RELAY	ABB	TYPICAL LK-x
		ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	TYPICAL LK-x
KA4	039	ER 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LED	ABB	TYPICAL LK-x
		ER 609 8	1	CR-MH HOLDER FOR CR-M RELAY	ABB	TYPICAL LK-x
		ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	TYPICAL LK-x
KA5	039	ER 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LED	ABB	TYPICAL LK-x
		ER 609 8	1	CR-MH HOLDER FOR CR-M RELAY	ABB	TYPICAL LK-x
		ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	TYPICAL LK-x
KA6	042	ER 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LED	ABB	TYPICAL LK-x
		ER 609 8	1	CR-MH HOLDER FOR CR-M RELAY	ABB	TYPICAL LK-x
		ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	TYPICAL LK-x
KA7	042	ER 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LED	ABB	TYPICAL LK-x
		ER 609 8	1	CR-MH HOLDER FOR CR-M RELAY	ABB	TYPICAL LK-x
		ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	TYPICAL LK-x
PA1	039	KW 075 2	1	MP1-10R PUSH BUTTON RED WITH BLACK RING	ABB	TYPICAL LK-x
		EO 569 7	1	MCBH-00 FIXING SUPPORT 3 CONTACTS	ABB	TYPICAL LK-x
		EO 571 3	2	MCB-01 CONTACT NC FOR PUSHBUTTOM	ABB	TYPICAL LK-x
PM1	039	KW 076 0	1	MP1-10G PUSH BUTTON GREEN WITH BLACK RING	ABB	TYPICAL LK-x
		EO 569 7	1	MCBH-00 FIXING SUPPORT 3 CONTACTS	ABB	TYPICAL LK-x
		EO 570 5	2	MCB-10 CONTACT NO FOR PUSHBUTTONS	ABB	TYPICAL LK-x
QA1	038	S550239	1	S202M C 2 AUTOMATIC CIRCUIT BREAKER 10KA 2P	ABB	TYPICAL LK-x
		A563819	1	S2-CS/H6R AUXILIARY STATE CONTACT 1CO	ABB	TYPICAL LK-x
SA1	039	KW 329 3	1	M2SS2-10B HANDLE SELECTOR 2P 90° BLACK RING BLACK	ABB	TYPICAL LK-x
		EO 569 7	1	MCBH-00 FIXING SUPPORT 3 CONTACTS	ABB	TYPICAL LK-x
		EO 570 5	2	MCB-10 CONTACT NO FOR PUSHBUTTONS	ABB	TYPICAL LK-x
		EO 571 3	2	MCB-01 CONTACT NC FOR PUSHBUTTOM	ABB	TYPICAL LK-x
U1.2	041	1SDA074173R1	1	MODUL EKIP SUPPLY 24÷48VDC	ABB	TYPICAL LK-x
U1.3	041	1SDA105166R1	1	Module Ekip Com Modbus RS485 Tmax XT	ABB	TYPICAL LK-x
U1.A	041	1SDA105203R1	1	EKIP CARTRIDGE 2SLOT FOR XT2-XT4-XT5	ABB	TYPICAL LK-x
U2.A	042	Z-PC-DINAL2-17.5	1	DIN RAIL 2SLOT WITH HEAD FOR "Z-5DI-2DO"	SENECA	TYPICAL LK-x
U2.B	042	Z-5DI-2DO	1	I/O MODUL 5DI+2DO modbus RS485 Vaux=10÷40Vdc 19÷28Vac	SENECA	TYPICAL LK-x
U2.C	042	Z-5DI-2DO	1	I/O MODUL 5DI+2DO modbus RS485 Vaux=10÷40Vdc 19÷28Vac	SENECA	TYPICAL LK-x
X1		HD100GR_	8	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur	TYPICAL LK-x
		HD400GR_	17	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur	TYPICAL LK-x
		BT003	2	BT/3 End bracket	Cabur	TYPICAL LK-x
		HD101GR	1	HMD/PT/GR End section - Grey	Cabur	TYPICAL LK-x

=	TYPICAL
+	LK-x

DWG n° : 231298/SD/31

Item n° : PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS

Functional Drawing - Typical "LK1-n" & "LK2-n"

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00031

SHEET 046

REV. 00

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 00

Nome/Item	Fg/Sh	Tipo/Type	Q.ta/Q.ty	Descrizione/Description	Costruttore/Manufacturer	Quadro (descrizione)
X1		HD201GR	1	HMD.1/PT/GR End section - Grey	Cabur	TYPICAL LK-x

Nome/Item	Fg/Sh	Tipo/Type	Q.ta/Q.ty	Descrizione/Description	Costruttore/Manufacturer	Quadro (descrizione)
KM1	043	AF40400013	1	AF40-40-00-13 CONTACTOR 4P 40A 100-250VAC/DC	ABB	TYPICAL LK1-40
		CA440E	1	CA4-40E AUXILIARY FRONT CONTACT 4NO	ABB	TYPICAL LK1-40
QF1	043	1SDA068169R1	1	XT2S 160 BREAKING PART 4p F F	ABB	TYPICAL LK1-40
		1SDA100162R1	1	ELECTRONIC TRIP RELEASE Ekip Hi-Touch LSIG In=40A XT2 4p	ABB	TYPICAL LK1-40
		1SDA066431R1	1	AUX-C 1Q+1SY 250Vac/dc XT1..XT5 F/P	ABB	TYPICAL LK1-40

Nome/Item	Fg/Sh	Tipo/Type	Q.ta/Q.ty	Descrizione/Description	Costruttore/Manufacturer	Quadro (descrizione)
KM1	043	AF52400013	1	AF52-30-00-13 CONTACTOR 4P 53A(AC3) 100-250VAC/DC	ABB	TYPICAL LK1-63
		CA440E	1	CA4-40E AUXILIARY FRONT CONTACT 4NO	ABB	TYPICAL LK1-63
QF1	043	1SDA068169R1	1	XT2S 160 BREAKING PART 4p F F	ABB	TYPICAL LK1-63
		1SDA100163R1	1	ELECTRONIC TRIP RELEASE Ekip Hi-Touch LSIG In=63A XT2 4p	ABB	TYPICAL LK1-63
		1SDA066431R1	1	AUX-C 1Q+1SY 250Vac/dc XT1..XT5 F/P	ABB	TYPICAL LK1-63

Nome/Item	Fg/Sh	Tipo/Type	Q.ta/Q.ty	Descrizione/Description	Costruttore/Manufacturer	Quadro (descrizione)
KM1	043	AF190401113	1	AF190-40-11-13 CONT 4P 190A AC3 100-250VAC/DC	ABB	TYPICAL LK2-160
		CAL1911	1	CAL19-11 CONTATTO AUSILIARIO 1NA+1NC PER AF116÷AF370	ABB	TYPICAL LK2-160
		CAL1911B	2	CAL19-11B AUXILIARY CONTACT 1NA+1NC PER AF116÷AF370	ABB	TYPICAL LK2-160
QF1	043	1SDA068179R1	1	XT4S 250 BREAKING PART 4p F F	ABB	TYPICAL LK2-160
		1SDA100334R1	1	ELECTRONIC TRIP RELEASE Ekip Hi-Touch LSIG In=160A XT4 4p	ABB	TYPICAL LK2-160
		1SDA066431R1	1	AUX-C 1Q+1SY 250Vac/dc XT1..XT5 F/P	ABB	TYPICAL LK2-160

=	TYPICAL
+	LK-x

DWG n° : 231298/SD/31

Item n° : PF1002983/26

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"

LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS

Functional Drawing - Typical "LK1-n" & "LK2-n"

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00031

SHEET 047

REV. 00

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 00

ITEM	Tag	A5/+02-QF1	: DRAWER HVAC PANELS LV ROOM - A5/+02-QF1	Dwg	1723002197-EL-DG-00011		
	S/Sys	77-20	: HVAC LV Switchgear Room B-200	Module			
TASK	code	C10002871	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	PRE-COMM	Activity	FTS	Discipline	Electrical	Form	FTR-2	Protection Relay

FTR2 - Protection relay
Record sheet

RELAY DATA

Manufacturer:	ABB	Serial N°:	EF5001053690N000	Relay type:	EKIP HI TOUCH LSIG
Auxiliary supply:	24Vdc	Location:	B200	Cubicle:	A5/+02
Switchboard:	SG-200N1				

Current transformers

Tag	Number of	Ratio	Location

Voltage transformers

Tag	Number of	Ratio	Location

Test result (refer to manufacturer's procedure)

ANSI function	Setting	Injection	Trip value	Time delay	
				Setting	Trip value
L	40A	140A		3s	2243ms
S	200A	250A		0.1s	104ms
I	400A	450A		INSTANT	24ms
G	8A	# Note 1		0.1S	103ms

Testing & measurement instruments used

Type	Serial n°	Calibration certificate	Validity
EKIP T&P	E34013804410W050		

Comments: See attachments for full tests

#Note 1: 5A was injected into the neutral to trip the "G" protection while an equal amount of 5A was removed on the phase to create a potential difference

Page 1/1	Performed by	☐ WITNESS ☉ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM COMM	RM COMM	CPY NOT PRESENT
Name	Mattia Girotti	Kristian Castellani	Witness waived
Date	2024-09-17	2024-09-18	2024-09-20
Signature			

AS/102

AS COMMISSIONED: NATHA GIBBS

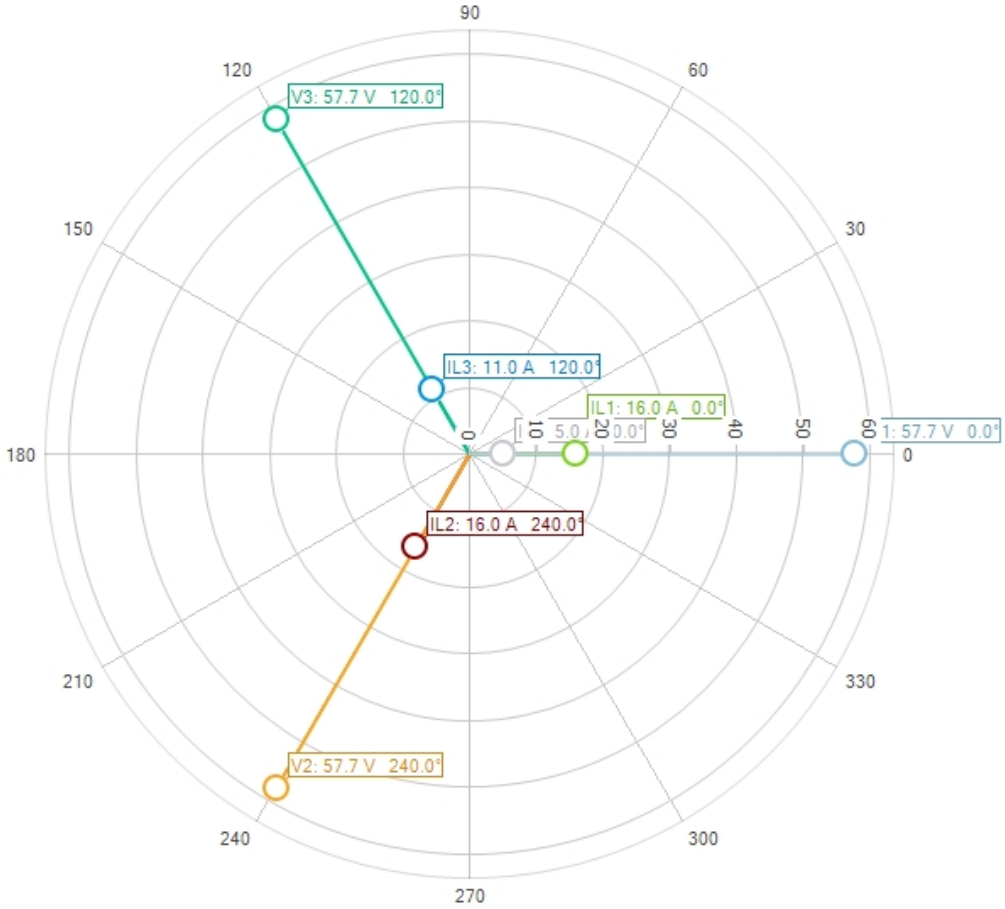
21/5/25

Page Name	Group Name	Variable Name	Variable Value	Variable Unit
Settings A				
	Overload Protection (L - ANSI 49)			
		PU nominal current In	40	
		Status	Enabled	
		Function	t=k/i^2	
		Prealarm I1	90	% I1
		Threshold I1	1.000	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)	5.00	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	10.00	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

AS/TO2 AS COMMISSIONED: NATWA GIBZW

21/5/25

		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	



Test

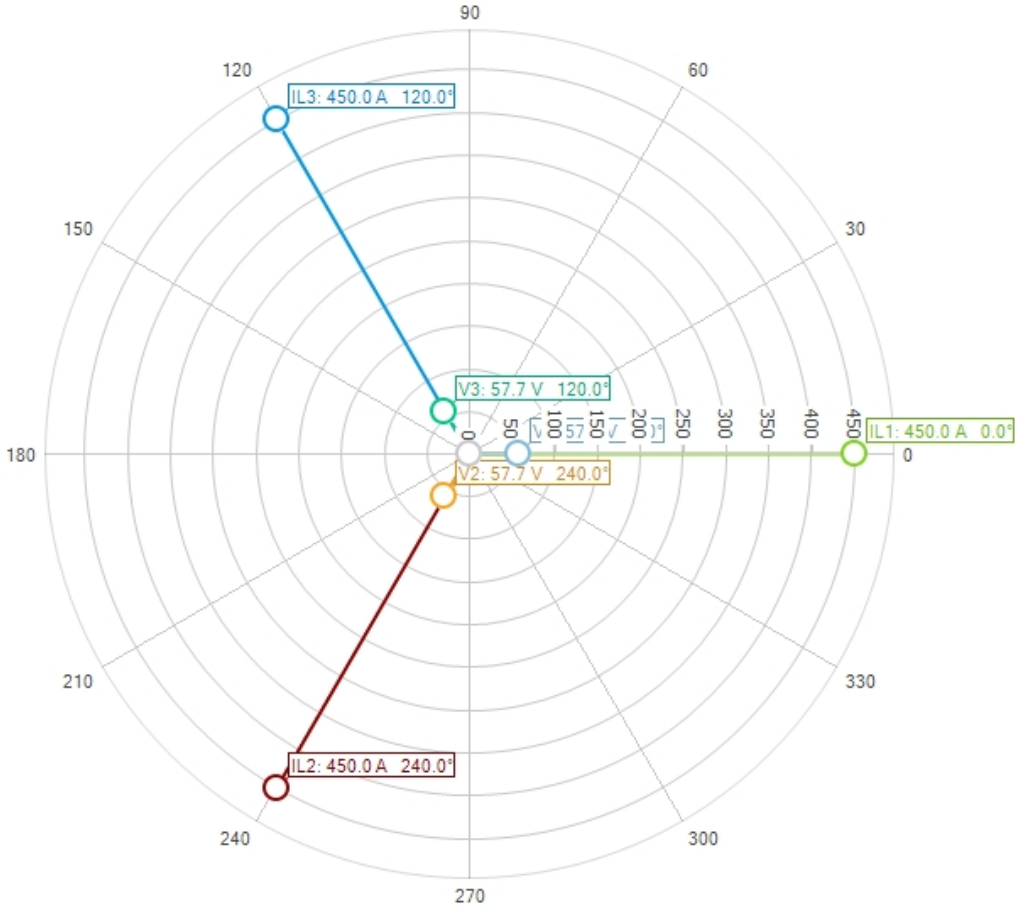
Name	Test 8
Session	Default session
Customer	
Location	
Operator	

Device

Tag name	A5/+02
Relay Serial Number	EF5001053690N000
Circuit Breaker Serial Number	CE61041916number
	XT2/4
Device settings	In = 40 A Un = 100 V fn = 50 Hz
Protection Settings	Protection = L Curve type = t=k/i^2 Threshold = 1.000 In Time = 3.00 s Protection = S Curve type = t=k Threshold = 5.00 In Time = 0.10 s Protection = I Threshold = 10.00 In Protection = G Curve type = t=k Threshold = 0.200 In Time = 0.10 s
Preconditions	All preconditions satisfied.

Test result

Test completed with trip. Protection G tripped in 103 ms.



Test

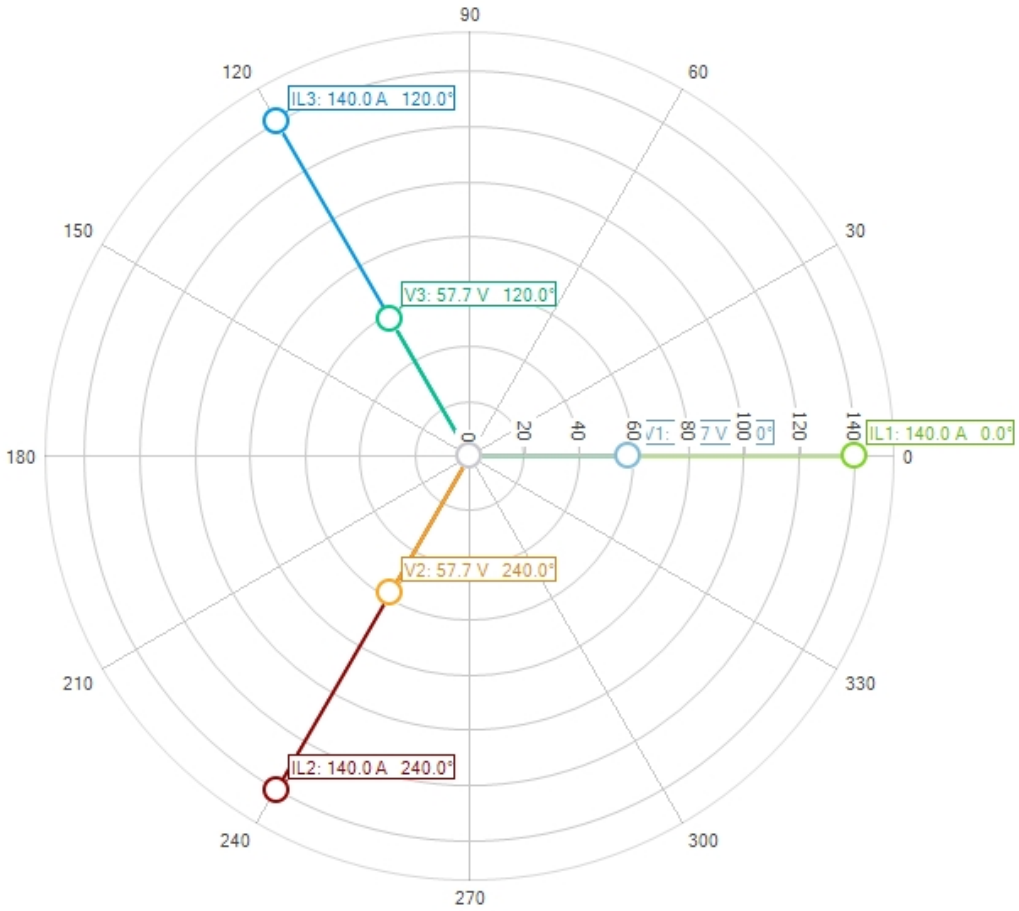
Name	Test 7
Session	Default session
Customer	
Location	
Operator	

Device

Tag name	A5/+02
Relay Serial Number	EF5001053690N000
Circuit Breaker Serial Number	CE61041916number
	XT2/4
Device settings	In = 40 A Un = 100 V fn = 50 Hz
Protection Settings	Protection = L Curve type = t=k/i^2 Threshold = 1.000 In Time = 3.00 s Protection = S Curve type = t=k Threshold = 5.00 In Time = 0.10 s Protection = I Threshold = 10.00 In Protection = G Curve type = t=k Threshold = 0.200 In Time = 0.10 s
Preconditions	All preconditions satisfied.

Test result

Test completed with trip. Protection I tripped in 24 ms.



Test

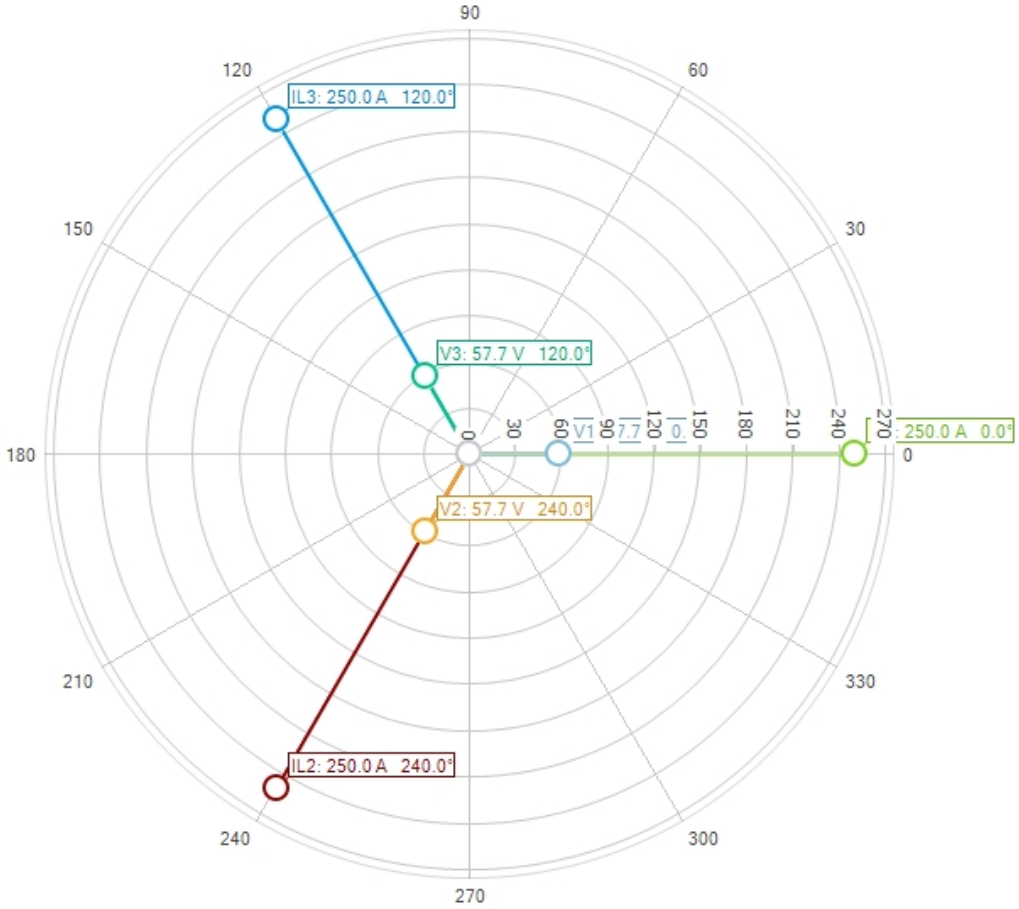
Name	Test 5
Session	Default session
Customer	
Location	
Operator	

Device

Tag name	A5/+02
Relay Serial Number	EF5001053690N000
Circuit Breaker Serial Number	CE61041916number
	XT2/4
Device settings	In = 40 A Un = 100 V fn = 50 Hz
Protection Settings	Protection = L Curve type = t=k/i^2 Threshold = 1.000 In Time = 3.00 s Protection = S Curve type = t=k Threshold = 5.00 In Time = 0.10 s Protection = I Threshold = 10.00 In Protection = G Curve type = t=k Threshold = 0.200 In Time = 0.10 s
Preconditions	All preconditions satisfied.

Test result

Test completed with trip. Protection L tripped in 2243 ms.



Test

Name	Test 6
Session	Default session
Customer	
Location	
Operator	

Device

Tag name	A5/+02
Relay Serial Number	EF5001053690N000
Circuit Breaker Serial Number	CE61041916number
	XT2/4
Device settings	In = 40 A Un = 100 V fn = 50 Hz
Protection Settings	Protection = L Curve type = t=k/i^2 Threshold = 1.000 In Time = 3.00 s Protection = S Curve type = t=k Threshold = 5.00 In Time = 0.10 s Protection = I Threshold = 10.00 In Protection = G Curve type = t=k Threshold = 0.200 In Time = 0.10 s
Preconditions	All preconditions satisfied.

Test result

Test completed with trip. Protection S tripped in 104 ms.

ITEM	Tag	A5/+02-QF1	: DRAWER HVAC PANELS LV ROOM - A5/+02-QF1			Dwg	1723002197-EL-DG-00011
	S/Sys	77-20	: HVAC LV Switchgear Room B-200			Module	
TASK	code	C10002872		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	PRE-COMM	Activity FTS	Discipline	Electrical	Form	FTR-6 Electrical IO

FTR 6 - Electrical I/O check record sheet

Equipment Tag:	B200-HSB-001 - HVAC LV SWITCHGEAR ROOM	Instrument Type / Serial N° :	FLUKE 175 / 17140769
Cubicle N°:	A5/+02	Calibration certificate date:	7715/24 - 10/07/2025

Link Type:	●	Hardwired	Communication	(strike through unapplicable type)
I/O Type:	●	Digital	Analogic	(strike through unapplicable type)

DIGITAL

Item	Signal description	Link Type (Hardwired/ Communication)	I/O Type (Digital/Analogic)	Point of Origin (From)	Point of Receival (to)	Text Labelling Display Satisfactory (Y/N)	Blinking/Static Display Satisfactory (Y/N)	Color Coding Satisfactory (Y/N)	Status Check			Time Stamping Satisfactory (Y/N)	Refresh Time (if >1s)	Appearing in all applicable display (Y/N)
									Event (Y/N)	Alarm (Y/N)	Fault (Y/N)			
1	C.B. - CLOSED & INSERTED	HW	DI	A5/+02 - KA1/11-14	A5/+02 - X1/9-10	NA	NA	NA	Y	NA	NA	NA	NA	NA
2	C.B. - OPEN OR DISCONNECTED	HW	DI	A5/+02 - KA1/11-12	A5/+02 - X1/9-11	NA	NA	NA	Y	NA	NA	NA	NA	NA
3	C.B. - TRIPPED	HW	DI	A5/+02 - KA4/21-24	A5/+02 - X1/9-12	NA	NA	NA	NA	NA	Y	NA	NA	NA
4	INTERNAL FAULT	HW	DI	A5/+02 - QA1/11-14	A5/+02 - X1/9-14	NA	NA	NA	NA	NA	Y	NA	NA	NA
5	FEEDER AVAILABLE	HW	DI	A5/+02 - KA2/11-14	A5/+02 - X1/9-13	NA	NA	NA	Y	NA	NA	NA	NA	NA
6	USER ON LOCAL	HW	DI	A5/+02 - SA1/21-22	A5/+02 - X1/9-15	NA	NA	NA	Y	NA	NA	NA	NA	NA
7	DRAWER ON TEST	HW	DI	A5/+02 - KA5/11-14	A5/+02 - X1/9-11	NA	NA	NA	Y	NA	NA	NA	NA	NA
8														

ANALOGIC

Item	Signal description	Link Type (Hardwired/ Communication)	I/O Type (Digital/Analogic)	Point of Origin (From)	Point of Receival (to)	Min value sent	Min value received	Max value sent	Max value received	Intermediate value sent	Intermediate value received	Out of scale test (OK, Not OK)	Refresh time (if >2s)	Appearing in all applicable display (Y/N)
1														
2														
3														

Comments: The test of the cubicle was carried out on a test bench.

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM COMM	rm comm	CPY NOT PRESENT
Name	Mattia Girotti	Kristian Castellani	Witness waived
Date	2024-10-02	2024-10-03	2024-10-03
Signature	PROVERLIS Digitaly signed by Mattia Girotti 2024-10-02T09:45:34.166Z	PROVERLIS Digitaly signed by Kristian Castellani 2024-10-03T07:12:44.158Z	PROVERLIS Digitaly signed by Witness waived 2024-10-03T14:28:48.589Z

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	B200-HSB-001	: Distribution & HVAC Panel - LV Room		Dwg	123A90-DDL-EL-DL-20105	
	S/Sys	77-20	: HVAC LV Switchgear Room B-200		Module	LD_B-200	
TASK	code	C10002988	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	PRE-COMM	Activity FTS	Discipline Electrical	Form	FP00	Miscellaneous electrical Consumer

DATA

Switchboard	B200-HSB-001	Circuit ref:	B200-HSB-001-QS1
Breaker rating (A)	160A	Nominal current (A)	40A

FUNCTION TEST REQUIREMENT

1	Check pre-commissioning activities have been carried out				OK
2	Check equipment for cleaness				OK
3	Measure I/R value of equipment and feeder cable at 1000V (Min value: 10 Mohm)	378	MΩ		OK
4	Energise control of equipment feeder				OK
5	Full test feeder breaker operation in test position				OK
6	Check protection setting				OK
7	Test interface trips and signals (remote alarms & status). Check the relevant ITR presence in the system				Note
8	Test control and safety functions according to manufacturer's procedure.				OK
9	Energize				OK
10	Measure Voltage and Current values at feeder breaker	399	V	15 A	OK
11	Attach test procedure, if any				NA

FUNCTION TEST REQUIREMENT	RESULT

Testing & measurement instruments used

Type	Serial n°	Calibration certificate	Validity
FLUKE 1663	5380144	7727/24	10/07/2025
FLUKE 376	A1711003	7710/24	10/07/2025

Comments: All the signal (from HVAC Panel to PCS) will be tested with Yokogawa.

Page 1/1	Performed by	☐ WITNESS ☑ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM COMM	RM COMM	CPY NOT PRESENT
Name	Mattia Girotti	Kristian Castellani	Witness waived
Date	2024-10-24	2024-10-28	2024-10-28
Signature	PROVERLIS Digitaly signed by Mattia Girotti 2024-10-24T13:21:32.463Z	PROVERLIS Digitaly signed by Kristian Castellani 2024-10-28T13:10:21.805Z	PROVERLIS Digitaly signed by Witness waived 2024-10-28T13:47:24.427Z

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	A5/+02-QF1	: DRAWER HVAC PANELS LV ROOM - A5/+02-QF1			Dwg	1723002197-EL-DG-00011
	S/Sys	77-20	: HVAC LV Switchgear Room B-200			Module	
TASK	code	C10003015		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	COMM	Activity FTS	Discipline	Electrical	Form	FTR-5 Remote Signalling

FTR5 - Remote signalling
Record sheet

DATA

Switchboard:	SG-200N1	Cubicle N°:	A5/+02

FUNCTION TEST

	Order/Inputs				Status/Output											
	Start order		Stop order		Run		Fault		Stop Signalisation		Available/Ready to start		TRIP		CB OPEN/CLOSED	
UCP																
ECS																
SSS																
PSS																
PCS	●	●	●	●	●	●	●	●			●	●	●	●	●	●
Control Station																
Control Panel																
HVAC Panel																
MCC	●	●	●	●	●	●							●	●	●	●

Column 1 (To check) to be filled during commissioning preparation stage - black if the check is asked
Column 2 (Checked) to be filled black if check is Ok

Comments: During the test, we tested all the Analog Input with success: Current "L1",Current "L2",Current "L3", Voltage "L1-L2", Voltage "L2-L3", Voltage "L1-L3", Frequency, Apparent Power, Real Power, Reactive Power and Power Factor.

	Performed by	☐ WITNESS ☒ REVIEW	☒ WITNESS ☐ REVIEW
Company	RM COMM	RM COMM	CW
Name	Mattia Girotti	Kristian Castellani	David Musgrove
Date	2025-04-29	2025-04-29	2025-04-29
Signature	PROVERLIS Digitaly signed by Mattia Girotti 2025-04-29T13:59:21.661Z	PROVERLIS Digitaly signed by Kristian Castellani 2025-04-29T14:07:37.327Z	PROVERLIS Digitaly signed by David Musgrove 2025-04-29T15:34:57.790Z

ITEM	Tag	UP-200F3-QF40	: UCP - HVAC ROOM		Dwg	1724000372-EL-DG-00009	
	S/Sys	77-20	: HVAC LV Switchgear Room B-200		Module		
TASK	code	C10004577	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	PRE-COMM	Activity FTS	Discipline Electrical	Form	FTR-2	Protection Relay

FTR2 - Protection relay
Record sheet

RELAY DATA

Manufacturer:	ABB	Serial N°:	NA	Relay type:	TYPE A
Auxiliary supply:	24Vdc	Location:	B300	Cubicle:	NA
Switchboard:	UP-200F3				

Current transformers

Tag	Number of	Ratio	Location

Voltage transformers

Tag	Number of	Ratio	Location

Test result (refer to manufacturer's procedure)

ANSI function	Setting	Injection	Trip value	Time delay	
				Setting	Trip value
64	300mA	300mA	240mA	FIXED	35.6ms

Testing & measurement instruments used

Type	Serial n°	Calibration certificate	Validity
FLUKE 1663	5380144	7727/24	10/07/2025

Comments:

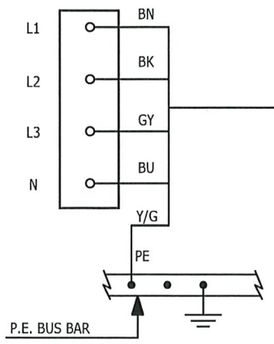
Page 1/1	Performed by	☐ WITNESS ☑ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM COMM	RM COMM	CPY NOT PRESENT
Name	Mattia Girotti	Kristian Castellani	Witness waived
Date	2024-12-04	2024-12-05	2024-12-07
Signature	PROVERLIS Digitaly signed by Mattia Girotti 2024-12-04T11:37:11.294Z	PROVERLIS Digitaly signed by Kristian Castellani 2024-12-05T09:35:44.435Z	PROVERLIS Digitaly signed by Witness waived 2024-12-07T10:37:38.593Z

Section 4.2 Electrical
“As-Commissioned” interconnection diagrams

FROM	TO

DESCRIPTION: LV SWITCHGEAR
TAG NUMBER: SG-200N1

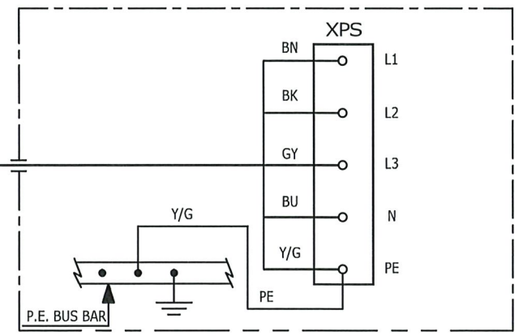
COLUMN/CUBIC.: A5/+02



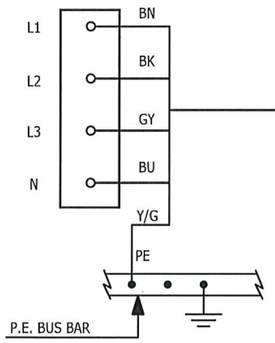
83024-CEL
5G16 mm²

NO MARK UP
MARCO MORETTO
21/3/25

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



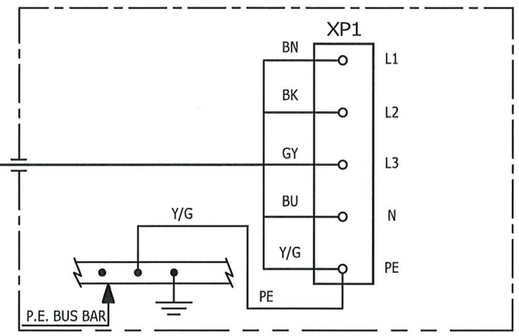
COLUMN/CUBIC.: A5/+03



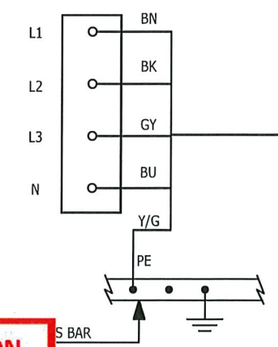
83025-CEL
5G16 mm²

NO MARK UP
MARCO MORETTO
21/3/25

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



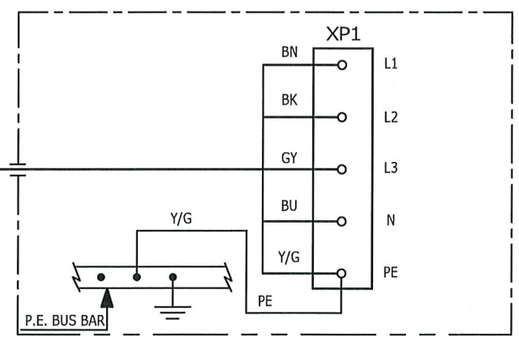
COLUMN/CUBIC.: A5/+04



83026-CEL
5G16 mm²

AS COMMISSIONED: MARCO GIGLI
21/3/25

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



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

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

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

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

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DG-20149	026	02

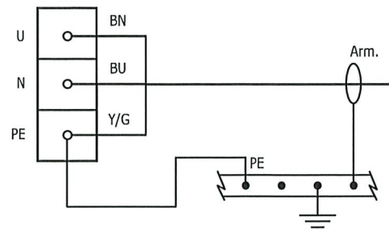
F.to UNI A3: 420mmx297mm

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

FROM	TO

DESCRIPTION: AC UPS - PAS DB
TAG NUMBER: ~~DP-200F3~~ UP-200 F3 BY PASS

-X35

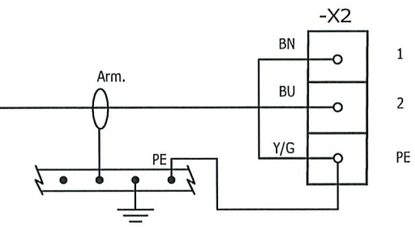


84312-CEL
3G2.5 mm²

MARCO MORETTO
19/3/25

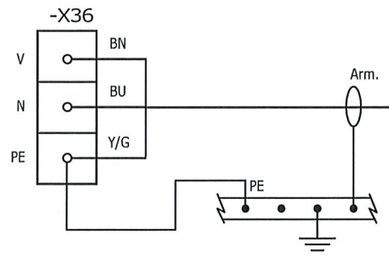
DESCRIPTION: UCP - N2 PACKAGE
TAG NUMBER: ~~CP-640E1~~ 64-LP001

SS 64-00



NO MARK UP MARCO MORETTO
21/3/25

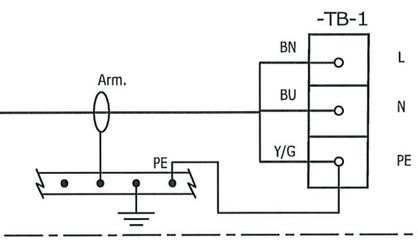
-X36



84313-CEL
3G2.5 mm²

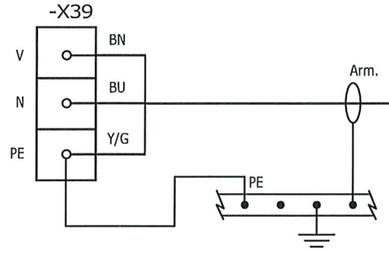
DESCRIPTION: UCP - WATER PACKAGE
TAG NUMBER: JB-500F8

SS ~~60-10~~ 50-10



NO MARK UP MARCO MORETTO
21/3/25

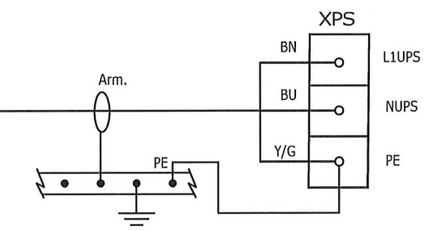
-X39



84314-CEL
3G2.5 mm²

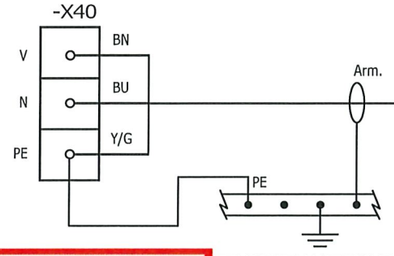
DESCRIPTION: UCP - HVAC HV ROOM
TAG NUMBER: B100-HSB-001

SS 77-10



NO MARK UP MARCO MORETTO
21/3/25

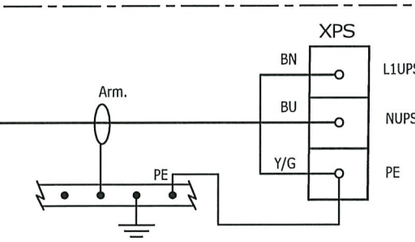
-X40



84315-CEL
3G2.5 mm²

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

SS 77-20



AS COMMISSIONED: MATTIA GIRTI
21/3/25

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

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

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

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

SCALE : 1:X

A3

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

SHEET 041

REV. 02

F.to UNI A3: 420mmx297mm

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

BASE LOAD POWER HUB (BLPH)

B-200

INTERCONNECTION WIRING DIAGRAM

B200-HSB-001

AS COMMISSIONED
ZUCCHELLI DAVIDE
16/04/2025
NO MARK UP

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
04	14/03/25	G.M.	A.O.	A.C.	ISSUE FOR INFORMATION (IFI)
03	14/11/24	G.M.	A.O.	A.C.	ISSUE FOR INFORMATION (IFI)
02	15/10/24	G.M.	A.O.	A.C.	ISSUE FOR INFORMATION (IFI)
01	04/09/24	G.M.	A.O.	A.C.	ISSUE FOR INFORMATION (IFI)
00	10/07/24	G.M.	A.O.	A.C.	ISSUE FOR INFORMATION (IFI)

CROSSWIND

ROSETTI MARINO

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

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

SCALE : NTS

A3

DRAWING NO. 1724000049-EL-DG-00023

SHEET 001

REV. 04

REV.	MOD.	DATE	SIGN	APPD	M.G.
04	ISSUED FOR INFORMATION (IFI)	19/12/24		DATE	15/04/24
03	ISSUED FOR INFORMATION (IFI)	13/11/24		DRN	F.M.
02	ISSUED FOR INFORMATION (IFI)	15/10/24		CHKD	S.S.

ALEXSISTEMI spa

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200
COVER

ROSETTI MARINO

1724000049-EL-DG-00023

FG. 1
F.S. 2

LISTA FOGLI \ INDEX

Foglio Sheet	Descrizione Description	Revisioni Revisions 1	2	3	4	5	6	7	8	9
1	COVER	X	X	X	X					
2	INDEX	X	X	X	X					
3	SIMBOL LIST	X	X	X	X					
4	INTERCONNECTION	X	X	X	X					
5	INTERCONNECTION	X	X	X	X					
6	INTERCONNECTION	X	X	X	X					
7	INTERCONNECTION	X	X	X	X					

Foglio Sheet	Descrizione Description	Revisioni Revisions 1	2	3	4	5	6	7	8	9

AS COMMISSIONED ZUCCHINELLI DAVIDE

16/09/2025 NO MARK JD

REV.	MOD.	DATE	SIGN
04	ISSUED FOR INFORMATION (IFI)	19/12/24	
03	ISSUED FOR INFORMATION (IFI)	13/11/24	
02	ISSUED FOR INFORMATION (IFI)	15/10/24	

DATE	05/07/24
DRN	F.M.
CHKD	S.S.
APPD	M.G.

ALEX SISTEMI spa

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200

INDEX

ROSETTI MARINO

1724000049-EL-DG-00023

FG. 2
F.S. 3

Symbol	Description	Symbol	Description	Symbol	Description
TR	VOLTAGE TRANSFORMER		SONIC INDICATOR	F.	FUSE
TA	CURRENT TRANSFORMER	*	INDICATOR INSTRUMENT		CONTACT N.O.
M ~	MOTOR IN C.A.		SELECTOR SWITCH		CONTACT N.C.
	GROUND : GENERAL SYMBOL	52.	SWITCH		COMMUTATION CONTACT
L..	SIGNAL LAMP	52.	AUTOMATIC CIRCUIT BREAKER	P	CONTACT ACTUATED BY A PRESSURE
L..	SIGNAL LAMP + HEATER	52. Id	DIFFERENTIAL AUTOMATIC BREAKER		CONTACT ACTUATED BY A FLOW
L..	SIGNAL LAMP + VOLTAGE TRANSF.	89.	DISCONNECTING SWITCH		CONTACT ACTUATED BY A LEVEL
	SIGNAL LAMP–PUSH BUTTON	89.	LOADED CIRCUIT BREAKER	θ	CONTACT ACTUATED BY A TEMPERATURE
E	CLOSING BUTTON	89.	FUSE DISCONNECTING SWITCH	2 3 4	TERMINAL STRIP
E	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		AS COMMISSIONED ZUCCHETTI DAVIDE 16/04/2025 MARTINI
79.	LIMIT SWITCH N.C.		ELECTROVALVE		

REV.	MOD.	DATE	SIGN		
04	ISSUB FOR INFORMATION (IFI)	19/12/24		DATE	05/07/24
03	ISSUB FOR INFORMATION (IFI)	13/11/24		DRN	F.M.
02	ISSUB FOR INFORMATION (IFI)	15/10/24		CHKD	S.S.
				APPD	M.G.

ALEXSISTEMI spa

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200

SIMBOL LIST

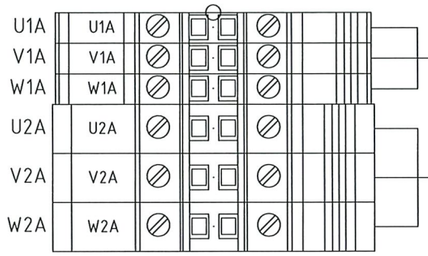
ROSETTI MARINO

1724000049-EL-DG-00023

FG. 3
F.S. 4

B200-HSB-01
PANEL SIDE

+QG - XM1
POWER PRESS FAN 1



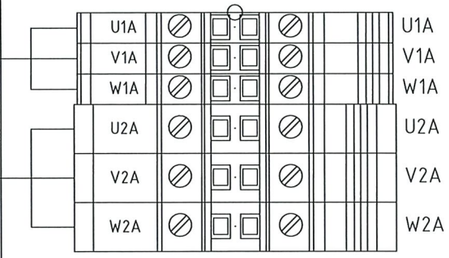
+QG - XPF1
AUX PRES FAN 1

77209-CBL-L1	4G2.5	XLPE/UNBL S2
77210-CBL-L1	4G6	XLPE/UNBL S2
77203-CBC-L1	2X1.5	XLPE/UNBL S2
77204-CBC-L1	2X1.5	XLPE/UNBL S2
77205-CBC-L1	2X1.5	XLPE/UNBL S2
77206-CBC-L1	2X1.5	XLPE/UNBL S2
77222-CBC-L1	2X1.5	XLPE/UNBL S2
77221-CBC-L1	2X1.5	XLPE7UNBL S2
77213-CBL-L2	3G1.5	XLPE/UNBL S2
77216-CBC-L2	4X1.5	XLPE/UNBL S2

AS COMMISSIONED
ZUCCOMELLI DAVIDE
16/04/2025
NO MARK UP

HHU-77003 UNIT
HJB-77003-A

+QG - XM1
POWER PRESS FAN 1



HHU-77003 UNIT
HJB-77003-B

+QG - XPF1
AUX PRES FAN 1

REV.	MOD.	DATE	SIGN
04	ISSUED FOR INFORMATION (IFI)	19/12/24	
03	ISSUED FOR INFORMATION (IFI)	13/11/24	
02	ISSUED FOR INFORMATION (IFI)	15/10/24	

DATE	15/04/24
DRN	F.M.
CHKD	S.S.
APPD	M.G.

ALEXSISTEMI spa

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200

INTERCONNECTION

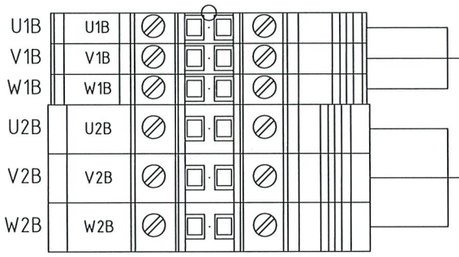
ROSETTI MARINO

1724000049-EL-DG-00023

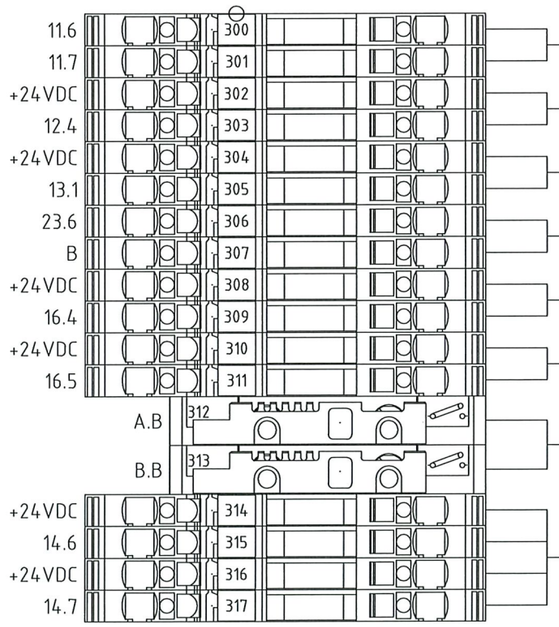
FG. 4
F.S. 5

B200-HSB-01
PANEL SIDE

+QG - XM2
POWER PRESS FAN 2



+QG - XPF2
AUX PRESS FAN 2

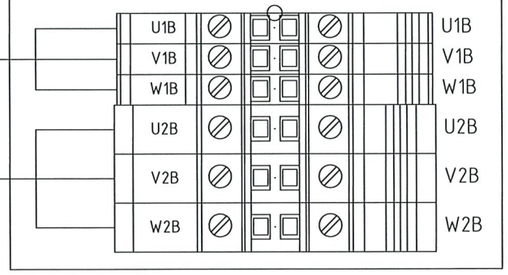


77211-CBL-L1	4G2.5	XLPE/UNEL S2
77212-CBL-L1	4G6	XLPE/UNEL S2
77207-CBC-L1	2X1.5	XLPE/UNEL S2
77208-CBC-L1	2x1.5	XLPE7UNEL S2
77209-CBC-L1	2X1.5	XLPE7UNEL S2
77210-CBC-L1	2X1.5	XLPE/UNEL S2
77224-CBC-L1	2X1.5	XLPE/UNEL S2
77223-CBC-L1	2X1.5	XLPE/UNEL S2
77214-CBL-L2	3G1.5	XLPE/UNEL S2
77217-CBC-L2	4X1.5	XLPE/UNEL S2

AS COMMISSIONED
ZUCCOMELLI DAVIDE
16/04/2025
NO MARK UP

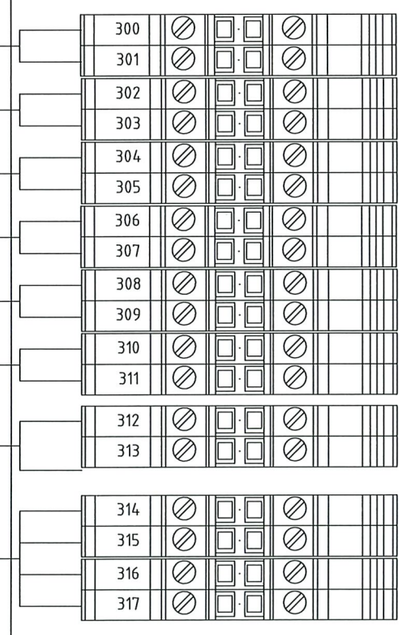
HHU-77004 UNIT
HJB-77004-A

+QG - XM2
POWER PRESS FAN 2



HHU-77004 UNIT
HJB-77004-B

+QG - XPF2
AUX PRESS FAN 2



REV.	MOD.	DATE	SIGN
04	ISSUED FOR INFORMATION (IFI)	19/12/24	
03	ISSUED FOR INFORMATION (IFI)	13/11/24	
02	ISSUED FOR INFORMATION (IFI)	15/10/24	

DATE	05/07/24
DRN	F.M.
CHKD	S.S.
APPD	M.G.

ALEXSISTEMI spa

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200

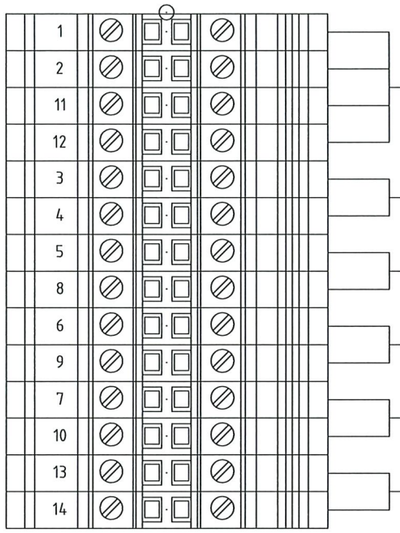
INTERCONNECTION

ROSETTI MARINO

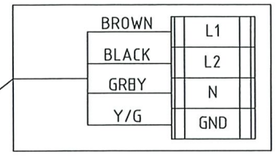
1724000049-EL-DG-00023

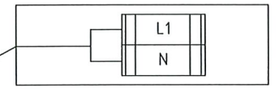
FG. 5
F.S. 6

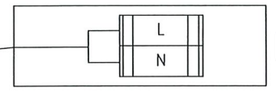
B200-HSB-01
PANEL SIDE
+QG - XAC
ACCESSORIES

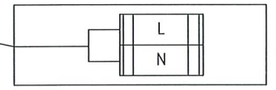


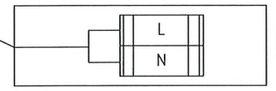
77201-CBL-L1	5G2.5	XLPE/UNBL S2	PECW-B200H-F1-L1-01
77205-CBL-L2	3G2.5	XLPE/UNBL S2	PESO-B200H-F2-L2-01
77206-CBL-L1	3G2.5	XLPE/UNBL S2	HHS-77-004
77207-CBL-L2	3G2.5	XLPE/UNBL S2	HHS-77-005
77208-CBL-L3	3G2.5	XLPE/UNBL S2	HHS-77-006
HEATING CABLE	3G2.5	XLPE/UNBL S2	HJB-7700XXX

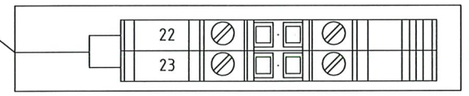






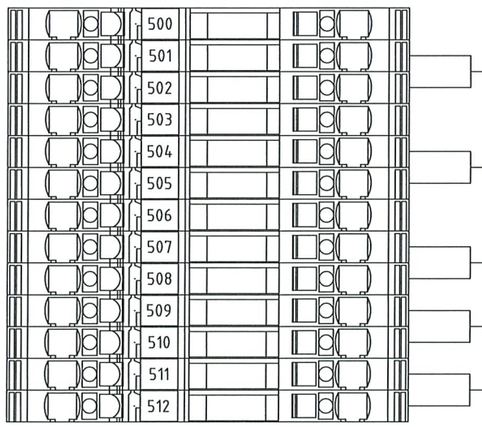




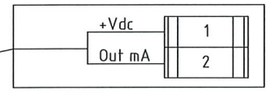


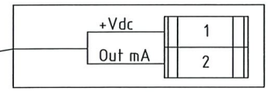
AS COMMISSIONED
ZUCCOMBIA DAVIDE
16/04/2025
NO MARK UP

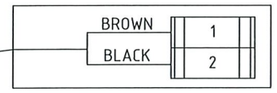
+QG - XT

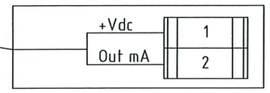


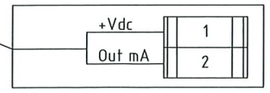
77225-CBC-L2	3X1.5+Sh	XLPE/UNBL S2	77-TT-201
77226-CBC-L2	3X1.5+Sh	XLPE/UNBL S2	77-TT-202
C-77-TP-201/B200-HSB-001	3X1.5+Sh	XLPE/UNBL S2	77-TP-201
77227-CBC-L2	3X1.5+Sh	XLPE/UNBL S2	77-TT-203
77228-CBC-L2	3X1.5+Sh	XLPE/UNBL S2	77-TT-204











REV.	MOD.	DATE	SIGN		
04	ISSUED FOR INFORMATION (IFI)	19/12/24		DATE	05/07/24
03	ISSUED FOR INFORMATION (IFI)	13/11/24		DRN	F.M.
02	ISSUED FOR INFORMATION (IFI)	15/10/24		CHKD	S.S.
				APPD	M.G.

ALEXSISTEMI spa

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200

INTERCONNECTION

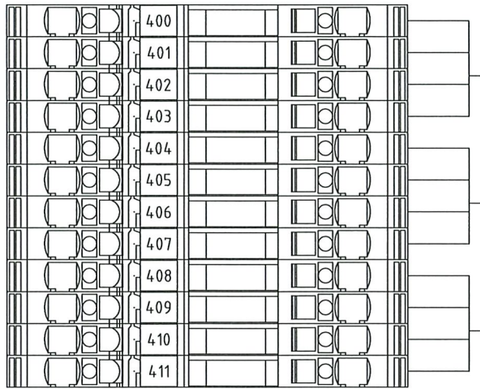
ROSETTI MARINO

1724000049-EL-DG-00023

FG. 6
F.S. 7

B200-HSB-01
PANEL SIDE

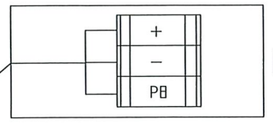
+QG - XFD
FIRE DAMPER



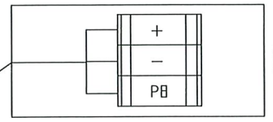
77218-CBC-L2 4X1.5 XLPE/UNEL S2

77219-CBC-L2 4X1.5 XLPE/UNEL S2

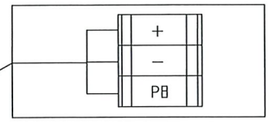
77220-CBC-L2 4X1.5 XLPE/UNEL S2



HFD-77004

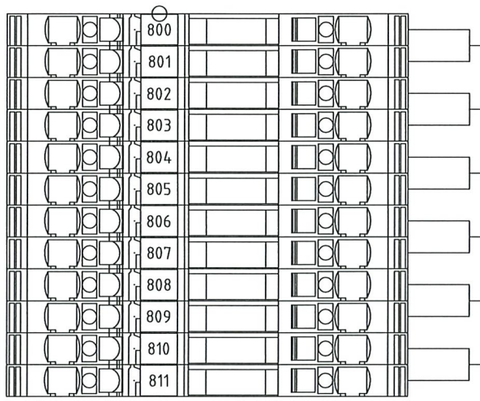


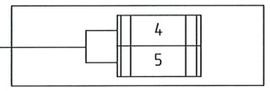
HFD-77005



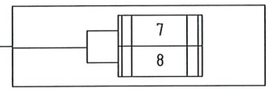
HFD-77006

+QG - XFD/S
FIRE DAMPER SIGNAL

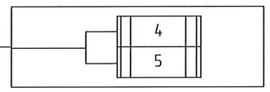




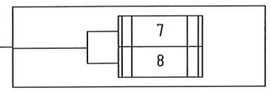
HFD-77001 CLOSED SIGNAL



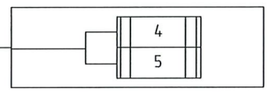
HFD-77001 OPEN SIGNAL



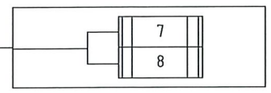
HFD-77002 CLOSED SIGNAL



HFD-77002 OPEN SIGNAL

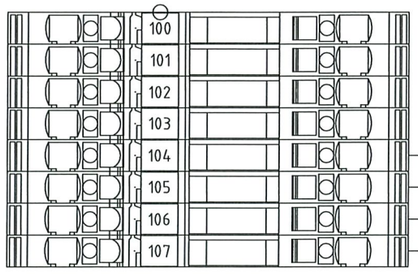


HFD-77003 CLOSED SIGNAL



HFD-77003 OPEN SIGNAL

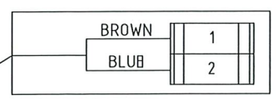
+QG - XC
Client



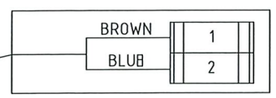
AS COMMISSIONED
ZUCCOMELLI DAVIDE
16/04/2025
NO MARK UP

77201-CBC-L1 2X1.5 XLPE/UNEL S2

77202-CBC-L1 2X1.5 XLPE/UNEL S2



CELS-B200H-F1-L1-01



CELS-B200H-F1-L1-02

REV.	MOD.	DATE	SIGN		
04	ISSUED FOR INFORMATION (IFI)	19/12/24		DATE	05/07/24
03	ISSUED FOR INFORMATION (IFI)	13/11/24		DRN	F.M.
02	ISSUED FOR INFORMATION (IFI)	15/10/24		CHKD	S.S.
				APPD	M.G.

ALEXSISTEMI spa

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200

INTERCONNECTION

ROSETTI MARINO

1724000049-EL-DG-00023

FG. 7
F.S. 8

B200-HSB-01
PANEL SIDE

+QG - XFD
FIRE DAMPER

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

77218-CBC-L2 4X1.5 XLPE/UNEL S2

77219-CBC-L2 4X1.5 XLPE/UNEL S2

77220-CBC-L2 4X1.5 XLPE/UNEL S2

+ – PE HFD-77004

+ – PE HFD-77005

+ – PE HFD-77006

+QG - XFD/S
FIRE DAMPER SIGNAL

800
801
802
803
804
805
806
807
808
809
810
811

4 5 HFD-77001 CLOSED SIGNAL

7 8 HFD-77001 OPEN SIGNAL

4 5 HFD-77002 CLOSED SIGNAL

7 8 HFD-77002 OPEN SIGNAL

4 5 HFD-77003 CLOSED SIGNAL

7 8 HFD-77003 OPEN SIGNAL

+QG - XC
Client

100
101
102
103
104
105
106
107

AS COMMISSIONED
ZUCCHINELLI DAVIDE
16/04/2025
NO MARK UP ZD

77201-CBC-L1 2X1.5 XLPE/UNEL S2

77202-CBC-L1 2X1.5 XLPE/UNEL S2

BROWN BLUE 1 2 CELS-B200H-F1-L1-01

BROWN BLUE 1 2 CELS-B200H-F1-L1-02

REV.	MOD.	DATE	SIGN
04	ISSUED FOR INFORMATION (IFI)	19/12/24	
03	ISSUED FOR INFORMATION (IFI)	13/11/24	
02	ISSUED FOR INFORMATION (IFI)	15/10/24	

DATE	05/07/24
DRN	F.M.
CHKD	S.S.
APPD	M.G.

ALEXSISTEMI spa

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200

INTERCONNECTION

ROSETTI MARINO

1724000049-EL-DG-00023

FG. 7
F.S. 8

Section 4.3 Instrumentation functional test sheets index

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 77-20 & discipline : I

Instrumental	77-20 HVAC LV Switchgear Room B-200

ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
77-XA-002	B-200 LV SWGR room HVAC fault	ONSHORE	C10003795	FJ01D	100	2025-03-11	RFO 2
77-XS-002	SHUT-DOWN B-200 LV SWGR room HVAC	ONSHORE	C10003799	FJ01D	100	2025-03-11	RFO 2
B200-HSB-001	Distribution & HVAC Panel - LV Room	ONSHORE	C10004880	FJ05	100	2025-05-16	RFO 2

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	77-XA-002	: B-200 LV SWGR room HVAC fault		Dwg	123A90-DDL-IN-LIS-40089	
	S/Sys	77-20	: HVAC LV Switchgear Room B-200		Module		
TASK	code	C10003795	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	COMM	Activity FTS	Discipline Instrumental	Form	FJ01D	Digital Loop

LOOP DATA

Loop TAG	77-XA-002			TSLD	123A90-FDL-IN-DG-40014 rev.1A		
IO Type	Input Yes	Output No		Energy by transmitter	No	Energy by system	Yes
Marshalling	B400-SIS-001	Terminal 08A/08B		Slot 01	Rack 03	Chanel 08	

LOOP TEST

1	Check earth isolation of the loop.					OK
2	Connect loop to terminal					OK
3	Energise Loop (close loop) and record status	Normal	Yes	Alarm/trip	No	OK
4	De-Energise Loop (open loop) and record status	Normal	No	Alarm/trip	Yes	OK
5	Record Fail Safe position	Open	NA	Closed	NA	NA

LOOP SERVICE

		Action	Alarm / Control			Display	
		Trip	GA	DCS	SOE	DCS	
6	Loop energized	No	Yes	Yes	Yes	OK	OK
7	Loop not energized	Yes	Yes	Yes	Yes	OK	OK
8	Checking of line monitoring	NA	NA	NA	NA	NA	NA
9	Checking of Maintenance Inhibition	NA	NA	NA	NA	NA	NA
10	Associated safety Level / bar						NA
11	Associated outputs						NA

LOOP DOCUMENTATION

12	Loop diagram is marked up and attached to this test sheet	OK
13	Cause and effect chart is highlighted accordingly	OK
14	Any defect is recorded for punch list issuance	NA

TESTING & MEASUREMENT INSTRUMENT USED

Type	Serial N.	Calibration Certificate	Validity
MULTIMETER FLUKE	AW1/018 17140769	7715/24	10/07/2025

Comments:

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM	RM COMM	CW Com
Name	Emerik Copkovic	Giandonato Delmissier	Jamie McAllister
Date	2025-02-28	2025-03-05	2025-03-11

PROVERLIS Digitaly signed by Emerik Copkovic 2025-02-28T19:06:15.678Z

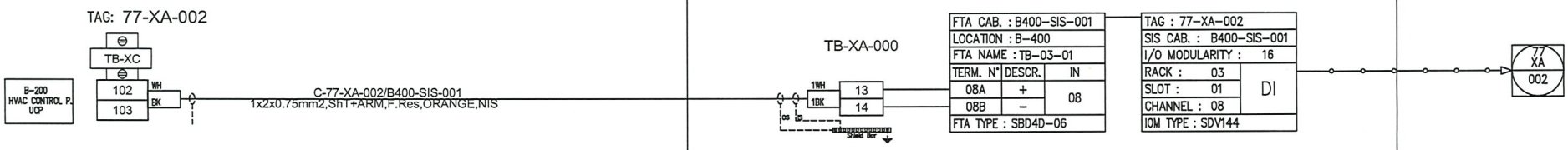
PROVERLIS Digitaly signed by Giandonato Delmissier 2025-03-05T09:38:18.195Z

PROVERLIS Digitaly signed by Jamie McAllister 2025-03-11T11:32:17.195Z

Signature			

DRAWING NO. 123A90-DDL-IN-DG-40014 | REV. 01

FIELD	ITER – B400	CENTRAL CONTROL ROOM
	SAFETY INSTRUMENTED SYSTEM	OPERATOR CONSOLE



NO RED MARK UP

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/12/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/10/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DG-40014
REV.: 1_A | DATE: 20/12/24 | SIGNATURE: C.Pilato
ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : INSTRUMENT LOOP DIAGRAM
77-XA-002
B-200 LV SWGR ROOM HVAC FAULT

CONTRACT NO./TITLE CONTRACT_NO.			SCALE 1:1
DRAWN: VBA	CHECKED: LCA	APPROVED: DLO	DATE 23/10/2024
A3	DRAWING NO. 123A90-DDL-IN-DG-40014	SHEET 135	REV. 01

File Name : 123A90-DDL-IN-DG-40014_REV.01

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	77-XS-002	: SHUT-DOWN B-200 LV SWGR room HVAC	Dwg	123A90-DDL-IN-LIS-40089		
	S/Sys	77-20	: HVAC LV Switchgear Room B-200	Module			
TASK	code	C10003799	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	COMM	Activity FTS	Discipline	Instrumental	Form FJ01D	Digital Loop

LOOP DATA

Loop TAG	77-XS-002			TSLD	123A90-FDL-IN-DG-40014 rev.1A		
IO Type	Input	No	Output Yes	Energy by transmitter	No	Energy by system	Yes
Marshalling	B400-SIS-001	Terminal	12A/12B	Slot	05	Rack 02	Chanel 012

LOOP TEST

1	Check earth isolation of the loop.					OK
2	Connect loop to terminal					OK
3	Energise Loop (close loop) and record status	Normal	Yes	Alarm/trip	No	OK
4	De-Energise Loop (open loop) and record status	Normal	No	Alarm/trip	Yes	OK
5	Record Fail Safe position	Open	Yes	Closed	No	OK

LOOP SERVICE

		Action	Alarm / Control			Display	
		Trip	GA	DCS	SOE	DCS	
6	Loop energized	No	Yes	Yes	Yes	OK	OK
7	Loop not energized	Yes	Yes	Yes	Yes	OK	OK
8	Checking of line monitoring	NA	NA	NA	NA	NA	NA
9	Checking of Maintenance Inhibition	NA	NA	NA	NA	NA	NA
10	Associated safety Level / bar						NA
11	Associated outputs						NA

LOOP DOCUMENTATION

12	Loop diagram is marked up and attached to this test sheet	OK
13	Cause and effect chart is highlighted accordingly	OK
14	Any defect is recorded for punch list issuance	NA

TESTING & MEASUREMENT INSTRUMENT USED

Type	Serial N.	Calibration Certificate	Validity
MULTIMETER FLUKE	AW1/018 17140769	7715/24	10/07/2025

Comments:

	Performed by	WITNESS ☐ REVIEW	WITNESS ☐ REVIEW
Company	RM	RM COMM	CW Com
Name	Emerik Copkovic	Giandonato Delmissier	Jamie McAllister
Date	2025-02-28	2025-03-05	2025-03-11

PROVERLIS Digitaly signed by Emerik Copkovic 2025-02-28T19:06:51.040Z

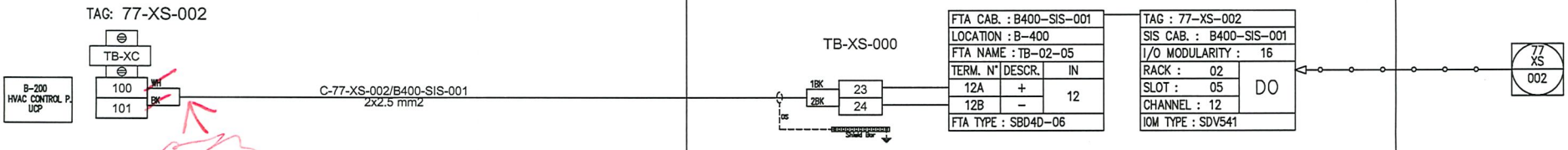
PROVERLIS Digitaly signed by Giandonato Delmissier 2025-03-05T09:39:07.696Z

PROVERLIS Digitaly signed by Jamie McAllister 2025-03-11T11:33:51.713Z

Signature			

DRAWING NO. 123A90-DDL-IN-DG-40014 REV. 00

FIELD	ITER – B400	CENTRAL CONTROL ROOM
	SAFETY INSTRUMENTED SYSTEM	OPERATOR CONSOLE



BK1
BK2

MARK UP
21/02/25

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	23/10/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DG-40014
REV.: 0_A | DATE: 23/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : INSRUMENT LOOP DIAGRAM
77-XS-002
SHUT-DOWN B-200 LV SWGR ROOM HVAC

CONTRACT NO./TITLE CONTRACT_NO.			SCALE 1:1
DRAWN: VBA	CHECKED: LCA	APPROVED: DLO	DATE 23/10/2024

	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40014	149	00

File Name : 123A90-DDL-IN-DG-40014_REV.00

ITEM	Tag	B200-HSB-001	: Distribution & HVAC Panel - LV Room		Dwg	123A90-DDL-EL-DL-20105	
	S/Sys	77-20	: HVAC LV Switchgear Room B-200		Module	LD_B-200	
TASK	code	C10004880		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	COMM	Activity FTS	Discipline	Instrumental	Form	FJ05 Serial Communication Test

SERIAL COMMUNICATION TEST

Reference document number: 1724000049-HV-LIS-00052 REV. 05

Associated subsystems: 77-20

Completion date: 15/05/2025

Comments/Remarks:

	Performed by	☐ WITNESS ☒ REVIEW	☒ WITNESS ☐ REVIEW
Company	ROSETTI MARINO		CW Com
Name	Fabio Sirigu	Anthony Iveson	Jamie McAllister
Date	2025-05-15	2025-05-16	2025-05-16
Signature	Digitaly signed by Fabio Sirigu 2025-05-15T14:01:08.760Z	Digitaly signed by Anthony Iveson 2025-05-16T12:09:04.641Z	Digitaly signed by Jamie McAllister 2025-05-16T13:43:03.992Z

Base Load Power Hub (BLPH)

B-200 HVAC I/O LIST - E&I SHELTERS

Document Number: 1724000049-HV-LIS-00052

Document Class: 3

15/05/25
COMMISSIONING

25.05.25
CW COMM

Rev.	Date	Description	Prepared	Reviewed	Approved
05	28/01/2025	Issue for Information (IFI)	M.G.	O.A.	C.A.
04	19/12/2024	Issue for Information (IFI)	M.G.	O.A.	C.A.
03	11/11/2024	Issue for Information (IFI)	M.G.	O.A.	C.A.
02	17/10/2024	Issue for Information (IFI)	M.G.	O.A.	C.A.
01	28/06/2024	Issue for Information (IFI)	F.M.	S.S.	M.G.
00	07/06/2024	Issue for Information (IFI)	F.M.	S.S.	M.G.

ALEXSISTEMI spa

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	B-200 HVAC IO LIST - E&I SHELTERS	Sh. 2 of 6 Date:28/01/2025 Rev. 5

Table of Contents

SH.	DESCRIPTION	REVISIONS							
		00	01	02	03	04			
1	Cover	X	X	X	X	X			
2	Table of Contents	X	X	X	X	X			
3	Revision / Change Log	X	X	X	X	X			
4	I/O List	X	X	X	X	X			
5	I/O List	X	X	X	X	X			
6	I/O List	X	X	X	X	X			

15/05/25 COMMISSIONING

15.05.25
CW Comm

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Revision / Change Log

Rev.	Description
00	ISSUE FOR INFORMATION (IFI)
01	ISSUE FOR INFORMATION (IFI)
02	ISSUE FOR INFORMATION (IFI)
03	ISSUE FOR INFORMATION (IFI)
04	ISSUE FOR INFORMATION (IFI)
05	ISSUE FOR INFORMATION (IFI)

HOLDS LIST

No.	Description
1.	
2.	
3.	
4.	

15/05/25
COMMISSIONING
Mario Di Maio

15.05.25
CW COM

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-WP4-2023-05	ROSETTI MARINO
Document Titel:	B-200 HVAC IO LIST - E&I SHELTERS	Sh. 4 of 6 Date: 28/01/2025 Rev: 5

15.05.25
CW COM

COMMISSIONING

Rev	Item	P&ID	PLC I / O	Service Description	Terminal Block I/O	SIGNAL TAG	Equipment	IO Type	Location		Logic State		Range		E.U.	Alarms				Ex	Red	Mon	Signal Type	Power	Note
									From	To	State 0	State 1	Min	Max		LL	L	H	HH						
Outside system signals																									
3	1	123A90-1724000049HV-PID-00040	I 2,4	SHUT DOWN	XC - 100 / 101	77-XS-002	B200-HSB-001	DI	FGS	HVAC UCP	ALARM	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		24 Vdc From SIS, Free voltage contact for HVAC system
3	2	123A90-1724000049HV-PID-00040	Q0,2	HVAC CRITICAL FAULT	XC - 102 / 103	77XA-002	B200-HSB-001	DO	FGS	HVAC UCP	ALARM	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		24 Vdc From HVAC & Lighting Panel, Free voltage contact for SIS system
3	3	123A90-1724000049HV-PID-00040	I 4,7	F&G DAMPER HDF-77004 CLOSE SIGNAL	XFD/S - 800 / 801	77-ZSL-004	HDF-77004	DO	HVAC UCP	F&G	NOT CLOSE	CLOSED	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		24 Vdc From HVAC & Lighting Panel, Free voltage contact for F&G system
3	4	123A90-1724000049HV-PID-00040	I 5,1	F&G DAMPER HDF-77005 CLOSE SIGNAL	XFD/S - 804 / 805	77-ZSL-005	HDF-77005	DO	HVAC UCP	F&G	NOT CLOSE	CLOSED	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		24 Vdc From HVAC & Lighting Panel, Free voltage contact for F&G system
3	5	123A90-1724000049HV-PID-00040	I 5,3	F&G DAMPER HDF-77006 CLOSE SIGNAL	XFD/S - 808 / 809	77-ZSL-006	HDF-77006	DO	HVAC UCP	F&G	NOT CLOSE	CLOSED	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		24 Vdc From HVAC & Lighting Panel, Free voltage contact for F&G system
HVAC system signals																									
4	6	123A90-1724000049HV-PID-00040	I 0,0	MOTORISED DAMPER CLOSED			HDZ-77-201	DI	HDZ-77-201	HVAC UCP	NOT CLOSED	CLOSED	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	7	123A90-1724000049HV-PID-00040	I 0,1	MOTORISED DAMPER OPEN			HDZ-77-201	DI	HDZ-77-201	HVAC UCP	NOT OPEN	OPEN	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		
4	8	123A90-1724000049HV-PID-00040	I 0,4	MAIN BRAKER TRIP SIGNAL			HVAC UCP	DI	HVAC UCP	HVAC UCP	ALARM	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		
4	9	123A90-1724000049HV-PID-00040	I 0,5	PRESSURIZING FAN UNIT HHU-77003 THERMIC PROTECTION			TE-77-201	DI	TE-77-201	HVAC UCP	RUNNING	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	10	123A90-1724000049HV-PID-00040	I 0,6	HHU-77003 ELECTRICAL HEATER HIGH/VERY HIGH THERMOSTATE TRIP			TSH-HH-77-201	DI	TSH-HH-77-201	HVAC UCP	ALARM	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	11	123A90-1724000049HV-PID-00040	I 0,7	PRESSURIZING FAN UNIT HHU-77003 TRIP			HFM-77-201	DI	HVAC UCP	HVAC UCP	ALARM	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	12	123A90-1724000049HV-PID-00040	I 1,0	PRESSURIZING FAN UNIT HHU-77003 VSD MALFUNCTION			HFM-77-201	DI	HVAC UCP	HVAC UCP	RUNNING	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	13	123A90-1724000049HV-PID-00040	I 1,1	PRESSURIZING FAN UNIT HHU-77004 THERMIC PROTECTION			TE-77-202	DI	TE-77-202	HVAC UCP	ALARM	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	14	123A90-1724000049HV-PID-00040	I 1,2	HHU-77004 ELECTRICAL HEATER HIGH/VERY HIGH THERMOSTATE TRIP			TSH/HH-77-202	DI	TSH/HH-77-202	HVAC UCP	ALARM	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	15	123A90-1724000049HV-PID-00040	I 1,3	PRESSURIZING FAN UNIT HHU-77004 TRIP			HFM-77-202	DI	HVAC UCP	HVAC UCP	ALARM	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	16	123A90-1724000049HV-PID-00040	I 1,4	PRESSURIZING FAN UNIT HHU-77004 VSD MALFUNCTION			HFM-77-202	DI	HVAC UCP	HVAC UCP	ALARM	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	17	123A90-1724000049HV-PID-00040	I1.5	ELECTRICAL HEATER HHU-77003 TRIP			HSS-77-201	DI	HVAC UCP	HVAC UCP	ALARM	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	18	123A90-1724000049HV-PID-00040	I 1,6	ELECTRICAL HEATER HHU-77004 TRIP			HSS-77-202	DI	HVAC UCP	HVAC UCP	RUNNING	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	19	123A90-1724000049HV-PID-00040	I 1,7	HHU-77003 ELECTRICAL HEATER MODULATION FAULT			HSS-77-201	DI	HVAC UCP	HVAC UCP	ALARM	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	20	123A90-1724000049HV-PID-00040	I 2,0	HHU-77004 ELECTRICAL HEATER MODULATION FAULT			HSS-77-202	DI	HVAC UCP	HVAC UCP	ALARM	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	21	123A90-1724000049HV-PID-00040	I 2,1	TRIP SIGNAL AUX			B200-HSB-001	DI	HVAC UCP	HVAC UCP	TRIP	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	22	123A90-1724000049HV-PID-00040	I 2,2	TRIP SIGNAL LIGHT POWER SUPPLY			B200-HSB-001	DI	HVAC UCP	HVAC UCP	ALARM	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	23	123A90-1724000049HV-PID-00040	I 2,3	TRIP SIGNAL MODULE SOCKET			B200-HSB-001	DI	HVAC UCP	HVAC UCP	ALARM	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	24	123A90-1724000049HV-PID-00040	I 2,5	MOTORISED DAMPER CLOSED			HDZ-77-202	DI	HDZ-77-202	HVAC UCP	NOT CLOSED	CLOSED	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	25	123A90-1724000049HV-PID-00040	I 2,6	MOTORISED DAMPER OPEN			HDZ-77-202	DI	HDZ-77-202	HVAC UCP	NOT OPEN	OPEN	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	26	123A90-1724000049HV-PID-00040	I 2,7	HHU-77003 AUTOMATIC SELECTOR			HHU-77003	DI	HVAC UCP	HVAC UCP	NOT AUTOMATIC	AUTOMATIC	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	27	123A90-1724000049HV-PID-00040	I 3,0	TRIP AUX SECTION HHU-77003			HHU-77003	DI	HVAC UCP	HVAC UCP	ALARM	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	28	123A90-1724000049HV-PID-00040	I 3,1	GENERAL PANEL AUX TRIP			B200-HSB-001	DI	HVAC UCP	HVAC UCP	ALARM	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	29	123A90-1724000049HV-PID-00040	I 3,2	HHU-77003 SECTION MAIN BRAKER TRIP			HHU-77003	DI	HVAC UCP	HVAC UCP	ALARM	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	30	123A90-1724000049HV-PID-00040	I 3,3	HHU-77004 SECTION MAIN BRAKER TRIP			HHU-77004	DI	HVAC UCP	HVAC UCP	ALARM	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	31	123A90-1724000049HV-PID-00040	I 3,4	SPACE HEATER TRIP			HHS-77004/5/6	DI	HVAC UCP	HVAC UCP	ALARM	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	32	123A90-1724000049HV-PID-00040	I 3,6	SPACE HEATER RUN			HHS-77004/5/6	DI	HVAC UCP	HVAC UCP	STOP	RUN	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	33	123A90-1724000049HV-PID-00040	I 4,0	HHU-77004 AUTOMATIC SELECTOR			HHU-77004	DI	HVAC UCP	HVAC UCP	NOT AUTOMATIC	AUTOMATIC	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	34	123A90-1724000049HV-PID-00040	I 4,1	HHU-77003 FAN LOW PRESSURE			PDSL-77-201	DI	PDSL-77-201	HVAC UCP	STOP	RUN	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	35	123A90-1724000049HV-PID-00040	I 4,2	HHU-77003 FILTER FLOW SWITCH HIGH PRESSURE			PDT-77-201	DI	PDT-77-201	HVAC UCP	NORMAL	DIRTY	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	36	123A90-1724000049HV-PID-00040	I 4,3	HHU-77004 FAN LOW PRESSURE			PDSL-77-202	DI	PDSL-77-202	HVAC UCP	STOP	RUN	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	37	123A90-1724000049HV-PID-00040	I 4,4	HHU-77004 FILTER FLOW SWITCH HIGH PRESSURE			PDT-77-202	DI	PDT-77-202	HVAC UCP	NORMAL	DIRTY	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	38	123A90-1724000049HV-PID-00040	I 4,5	HHU-77003 MANUAL MODE			HHU-77003	DI	HHU-77003	HVAC UCP	NOT MANUAL	MANUAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	39	123A90-1724000049HV-PID-00040	I 4,6	HHU-77004 MANUAL MODE			HHU-77004	DI	HHU-77004	HVAC UCP	NOT MANUAL	MANUAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	40	123A90-1724000049HV-PID-00040	I 4,7	HFD-77004 CLOSE FEEDBACK		77-ZSL-004	HFD-77004	DI	HFD-77004	HVAC UCP	NOT CLOSED	CLOSED	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	41	123A90-1724000049HV-PID-00040	I 5,0	HFD-77004 OPEN FEEDBACK		77-ZSH-004	HFD-77004	DI	HFD-77004	HVAC UCP	NOT OPEN	OPEN	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	42	123A90-1724000049HV-PID-00040	I 5,1	HFD-77005 CLOSE FEEDBACK		77-ZSL-005	HFD-77005	DI	HFD-77005	HVAC UCP	NOT CLOSED	CLOSED	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	43	123A90-1724000049HV-PID-00040	I 5,2	HFD-77005 OPEN FEEDBACK		77-ZSH-005	HFD-77005	DI	HFD-77005	HVAC UCP	NOT OPEN	OPEN	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	44	123A90-1724000049HV-PID-00040	I 5,3	HFD-77006 CLOSE FEEDBACK		77-ZSL-006	HFD-77006	DI	HFD-77006	HVAC UCP	NOT CLOSED	CLOSED	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	45	123A90-1724000049HV-PID-00040	I 5,4	HFD-77006 OPEN FEEDBACK		77-ZSH-006	HFD-77006	DI	HFD-77006	HVAC UCP	NOT OPEN	OPEN	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	46	123A90-1724000049HV-PID-00040	I 0,2	HEAING CABLE TRIP			HHC-77-002	DI	HVAC UCP	HVAC UCP	TRIP	NORMAL	-	-	-	-	-	-	-	-	-	-	VFC 24 Vdc		-
4	47	123A90-1724000049HV-PID-00040	Q 0,0	PRESSURIZING FAN UNIT HHU-77003 VSD START			HFM-77-201	DO	HVAC UCP	HVAC UCP	STOP	START	-	-	-	-	-	-	-	-	-	-	24 V DC		-
4	48	123A90-1724000049HV-PID-00040	Q 0,1	PRESSURIZING FAN UNIT HHU-77004 VSD START			HFM-77-202	DO	HVAC UCP	HVAC UCP	STOP	START	-	-	-	-	-	-	-	-	-	-	24 V DC		-
4	49	123A90-1724000049HV-PID-00040	Q 0,3	DAMPER OPEN COMMAND			HDZ-77-201	DO	HVAC UCP	HDZ-77001	CLOSE	OPEN	-	-	-	-	-	-	-	-	-	-	24 V DC		-
4	50	123A90-1724000049HV-PID-00040	Q 0,4	PRESSURIZING FAN UNIT HHU-77003 HEATER START			HSS-77-203	DO	HVAC UCP	HVAC UCP	STOP	START	-	-	-	-	-	-	-	-	-	-	24 V DC		-
4	51	123A90-1724000049HV-PID-00040	Q 0,5	PRESSURIZING FAN UNIT HHU-77004 HEATER START			HSS-77-204	DO	HVAC UCP	HVAC UCP	STOP	START	-	-	-	-	-	-	-	-	-	-	24 V DC		-

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-WP4-2023-05	ROSETTI MARINO
Document Titel:	B-200 HVAC IO LIST - E&I SHELTERS	Sh.5 of 6 Date: 28/01/2025 Rev: 5

JMC 15.05.25
CW Comm
COMMISSIONING

Rev	Item	P&ID	PLC I / O	Service Description	SIGNAL TAG	Equipment	IO Type	Location		Logic State		Range		E.U.	Alarms				Ex	Red	Mon	Signal Type	Power	Note
								From	To	State 0	State 1	Min	Max		LL	L	H	HH						
4	52	123A90-1724000049HV-PID-00040	Q 0,6	SPACE HEATER START		HHS-77004/5/6	DO	HVAC UCP	HVAC UCP	STOP	START	-	-	-	-	-	-	-	-	-	-	-	24 V DC	-
4	53	123A90-1724000049HV-PID-00040	Q 0,7	DAMPER OPEN COMMAND		HDZ-77-202	DO	HVAC UCP	HDZ-77002	CLOSE	OPEN	-	-	-	-	-	-	-	-	-	-	-	24 V DC	-
4	54	123A90-1724000049HV-PID-00040	AQ 0,0	PRESSURIZING FAN UNIT HHU-77003 VSD MODULATION		HFM-77-201	AO	HVAC UCP	HVAC UCP	-	-	4	20mA	-	-	-	-	-	-	-	-	4-20mA		-
4	55	123A90-1724000049HV-PID-00040	AQ 0,1	PRESSURIZING FAN UNIT HHU-77004 VSD MODULATION		HFM-77-202	AO	HVAC UCP	HVAC UCP	-	-	4	20mA	-	-	-	-	-	-	-	-	4-20mA		-
4	56	123A90-1724000049HV-PID-00040	AQ 0,2	HHU-77003 ELECTRICAL HEATER MODULATION		HSS-77-201	AO	HVAC UCP	HVAC UCP	-	-	4	20mA	-	-	-	-	-	-	-	-	4-20mA	-	-
4	57	123A90-1724000049HV-PID-00040	AQ 0,3	HHU-77004 ELECTRICAL HEATER MODULATION		HSS-77-202	AO	HVAC UCP	HVAC UCP	-	-	4	20mA	-	-	-	-	-	-	-	-	4-20mA	-	-
4	58	123A90-1724000049HV-PID-00040	AI 0,0	TEMPERATURE TRASMITTER 001		77-TT-201	AI	77-TT-201	HVAC UCP	-	-	-10	60	°C	-	-	-	-	-	-	-	4-20mA	-	-
4	59	123A90-1724000049HV-PID-00040	AI 0,1	TEMPERATURE TRASMITTER 002		77-TT-202	AI	77-TT-202	HVAC UCP	-	-	-10	60	°C	-	-	-	-	-	-	-	4-20mA	-	-
4	60	123A90-1724000049HV-PID-00040	AI 0,3	TEMPERATURE TRASMITTER 003		77-TT-203	AI	77-TT-203	HVAC UCP	-	-	-10	60	°C	-	-	-	-	-	-	-	4-20mA	-	-
4	61	123A90-1724000049HV-PID-00040	AI 1,0	TEMPERATURE TRASMITTER 004		77-TT-204	AI	77-TT-204	HVAC UCP	-	-	-10	60	°C	-	-	-	-	-	-	-	4-20mA	-	-
4	62	123A90-1724000049HV-PID-00040	AI 0,2	DIFFERENTIAL PRESSURE TRASMITTER PDIT-001		77-PT-201	AI	77-PT-201	HVAC UCP	-	-	0	500	Pa	-	-	-	-	-	-	-	4-20mA	-	-

HVAC ModBUs Signal

Rev	Item	P&ID	PLC I / O	Service Description	EQUIPMENT TAG	SIGNAL TAG	SIGNAL TYPE		SIGNAL TO PCS	MODBUS			STATUS		E.U.	RANGE				READ (R) WRITE (W)		Note
							PROTOCOL	TYPE		SLAVE ADDRESS	REGISTER	BIT NO.	HIGH - 1	LOW - 0		MIN		MAX				
4	67	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HFD-77004 NOT OPEN JMC ✓	HFD-77004	HFD-77004-ZSH	ModBus TCP/IP	BOOL	DIGITAL		40001	0	NOT OPEN	OK						R		
4	68	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HFD-77004 NOT CLOSE	HFD-77004	HFD-77004-ZSL	ModBus TCP/IP	BOOL	DIGITAL		40001	1	NOT CLOSE	OK						R		
4	69	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HFD-77005 NOT OPEN JMC ✓	HFD-77005	HFD-77-005-ZSH	ModBus TCP/IP	BOOL	DIGITAL		40001	2	NOT OPEN	OK						R		
4	70	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HFD-77005 NOT CLOSE	HFD-77005	HFD-77-005-ZSL	ModBus TCP/IP	BOOL	DIGITAL		40001	3	NOT CLOSE	OK						R		
4	71	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HFD-77006 NOT OPEN JMC ✓	HFD-77006	HFD-77-006-ZSH	ModBus TCP/IP	BOOL	DIGITAL		40001	4	NOT OPEN	OK						R		
4	72	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HFD-77006 NOT CLOSE	HFD-77006	HFD-77-006-ZSL	ModBus TCP/IP	BOOL	DIGITAL		40001	5	NOT CLOSE	OK						R		
4	73	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HDZ-77-201 NOT OPEN	HDZ-77-201	HDZ-77-201-ZSH	ModBus TCP/IP	BOOL	DIGITAL		40001	6	NOT OPEN	OK						R		
4	74	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HDZ-77-201 NOT CLOSE	HDZ-77-201	HDZ-77-201-ZSL	ModBus TCP/IP	BOOL	DIGITAL		40001	7	NOT CLOSE	OK						R		
4	75	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HDZ-77-202 NOT OPEN	HDZ-77-202	HDZ-77-202-ZSH	ModBus TCP/IP	BOOL	DIGITAL		40001	8	NOT OPEN	OK						R		
4	76	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HDZ-77-202 NOT CLOSE	HDZ-77-202	HDZ-77-202-ZSL	ModBus TCP/IP	BOOL	DIGITAL		40001	9	NOT CLOSE	OK						R		
4	77	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HFM-77-201 PTC Protection JMC ✓	HFM-77-201	HFM-77-201-PTCP	ModBus TCP/IP	BOOL	DIGITAL		40001	10	FAULT	OK						R		
4	78	123A90-1724000049HV-PID-00040	Modbus TCP/IP	TSH/HH-77-201 Electrical heater Protection thermostate JMC ✓	TSH/HH-77-201	TSH/HH-77-201-TSPH	ModBus TCP/IP	BOOL	DIGITAL		40001	11	FAULT	OK						R		
4	79	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HFM-77-201 TRIP SIGNAL JMC ✓	HFM-77-201	HFM-77-201-TRIP	ModBus TCP/IP	BOOL	DIGITAL		40001	12	FAULT	OK						R		
4	80	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HFM-77-201 VSD MALFUNCTION JMC ✓	HFM-77-201	HFM-77-201-VSDF	ModBus TCP/IP	BOOL	DIGITAL		40001	13	FAULT	OK						R		
4	81	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HSS-77-201 TRIP JMC ✓	HSS-77-201	HSS-77-201-TRP	ModBus TCP/IP	BOOL	DIGITAL		40001	14	FAULT	OK						R		
4	82	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HSS-77-201 MODULATION FAULT JMC ✓	HSS-77-201	HSS-77-201-MF	ModBus TCP/IP	BOOL	DIGITAL		40001	15	FAULT	OK						R		
4	83	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HHU-77003 AUX TRIP JMC ✓	HHU-77003	HHU-77003-ATRP	ModBus TCP/IP	BOOL	DIGITAL		40002	0	FAULT	OK						R		
4	84	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HHU-77003 MAIN BRAKER TRIP JMC ✓	HHU-77003	HHU-77003-MBTRP	ModBus TCP/IP	BOOL	DIGITAL		40002	1	FAULT	OK						R		
4	85	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HHU-77003 NO FLOW N/A	HHU-77003	HHU-77003-NF	ModBus TCP/IP	BOOL	DIGITAL		40002	2	FAULT	OK						R		
4	86	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HFM-77-202 Ptc Protection ALARM & GRAPHIC JMC ✓	HFM-77-202	HFM-77-202-PTCP	ModBus TCP/IP	BOOL	DIGITAL		40002	3	FAULT	OK						R		
4	87	123A90-1724000049HV-PID-00040	Modbus TCP/IP	TSH/HH-77-202 JMC ✓	TSH/HH-77-202	TSH/HH-77-202-TSPH	ModBus TCP/IP	BOOL	DIGITAL		40002	4	FAULT	OK						R		
4	88	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HFM-77-202 trip JMC ✓	HFM-77-202	HFM-77-202-TRP	ModBus TCP/IP	BOOL	DIGITAL		40002	5	FAULT	OK						R		
4	89	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HFM-77-202 VSD Malfunction JMC ✓	HFM-77-202	HFM-77-202-VSDF	ModBus TCP/IP	BOOL	DIGITAL		40002	6	FAULT	OK						R		
4	90	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HSS-77-202 trip JMC ✓	HSS-77-202	HSS-77-202-TRP	ModBus TCP/IP	BOOL	DIGITAL		40002	7	FAULT	OK						R		
4	91	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HSS-77-202 Modulation Fault JMC ✓	HSS-77-202	HSS-77-202-MF	ModBus TCP/IP	BOOL	DIGITAL		40002	8	FAULT	OK						R		
4	92	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HHU-77004 aux Trip JMC ✓	HHU-77004	HHU-77004-ATRP	ModBus TCP/IP	BOOL	DIGITAL		40002	9	FAULT	OK						R		
4	93	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HHU-77004 Main Braker Trip JMC ✓	HHU-77004	HHU-77004-MBTRP	ModBus TCP/IP	BOOL	DIGITAL		40002	10	FAULT	OK						R		
4	94	123A90-1724000049HV-PID-00040	Modbus TCP/IP	B200-HSB-001 Main Braker Trip JMC ✓	B200-HSB-001	B200-HSB-001-MBTRP	ModBus TCP/IP	BOOL	DIGITAL		40002	11	FAULT	OK						R		
4	95	123A90-1724000049HV-PID-00040	Modbus TCP/IP	B200-HSB-001 Module LIght Trip JMC ✓	B200-HSB-001	B200-HSB-001-MLTRP	ModBus TCP/IP	BOOL	DIGITAL		40002	12	FAULT	OK						R		
4	96	123A90-1724000049HV-PID-00040	Modbus TCP/IP	B200-HSB-001 Module Socket Trip JMC ✓	B200-HSB-001	B200-HSB-001-MSTRP	ModBus TCP/IP	BOOL	DIGITAL		40002	13	FAULT	OK						R		
4	97	123A90-1724000049HV-PID-00040	Modbus TCP/IP	B200-HSB-001 Aux Trip JMC ✓	B200-HSB-001	B200-HSB-001-ATRP	ModBus TCP/IP	BOOL	DIGITAL		40002	14	FAULT	OK						R		
4	98	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HHS-77-004/5/6 Space heater Trip JMC ✓	HHS-77-004/5/6	HHS-77-004/5/6-SHTRP	ModBus TCP/IP	BOOL	DIGITAL		40002	15	FAULT	OK						R		
4	99	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HHS-77-004/5/6 Fault JMC ✓	HSS-77-004/5/6	HHS-77-004/5/6-SHF	ModBus TCP/IP	BOOL	DIGITAL		40003	0	FAULT	OK						R		
4	100	123A90-1724000049HV-PID-00040	Modbus TCP/IP	77-TT-201 Fault JMC ✓	77-TT-201	77-TT-201-F	ModBus TCP/IP	BOOL	DIGITAL		40003	1	FAULT	OK						R		
4	101	123A90-1724000049HV-PID-00040	Modbus TCP/IP	77-TT-202 Fault JMC ✓	77-TT-202	77-TT-202-F	ModBus TCP/IP	BOOL	DIGITAL		40003	2	FAULT	OK						R		
4	102	123A90-1724000049HV-PID-00040	Modbus TCP/IP	77-TT-203 Fault JMC ✓	77-TT-203	77-TT-203-F	ModBus TCP/IP	BOOL	DIGITAL		40003	3	FAULT	OK						R		
4	103	123A90-1724000049HV-PID-00040	Modbus TCP/IP	77-TT-204 Fault JMC ✓	77-TT-201	77-TT-201-F	ModBus TCP/IP	BOOL	DIGITAL		40003	4	FAULT	OK						R		
4	104	123A90-1724000049HV-PID-00040	Modbus TCP/IP	77-PT-201 Fault JMC ✓	77-PT-201	77-PT-201-F	ModBus TCP/IP	BOOL	DIGITAL		40003	5	FAULT	OK						R		
4	105	123A90-1724000049HV-PID-00040	Modbus TCP/IP	MajorFault JMC ✓	B200-HSB-001	B200-HSB-001-MJF	ModBus TCP/IP	BOOL	DIGITAL		40003	6	FAULT	OK						R		

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-WP4-2023-05	ROSETTI MARINO
Document Titel:	B-200 HVAC IO LIST - E&I SHELTERS	Sh.6 of 6 Date: 28/01/2025 Rev: 5

15.05.25
CW Comm
COMMISSIONING

Rev	Item	P&ID	PLC I / O	Service Description	EQUIPMENT TAG	SIGNAL TAG	SIGNAL TYPE		SIGNAL TO PCS	MODBUS			STATUS		E.U.	RANGE				READ (R) WRITE (W)		Note
							PROTOCOL	TYPE		SLAVE ADDRESS	REGISTER	BIT NO.	HIGH - 1	LOW - 0		MIN		MAX				
4	106	123A90-1724000049HV-PID-00040	Modbus TCP/IP	Module Low Pressure	B200-HSB-001	B200-HSB-001-MLP	ModBus TCP/IP	BOOL	DIGITAL		40003	7	FAULT	OK						R		
4	107	123A90-1724000049HV-PID-00040	Modbus TCP/IP	ModBUS Fault	B200-HSB-001	B200-HSB-001-MODBUSF	ModBus TCP/IP	BOOL	DIGITAL		40003	8	FAULT	OK						R		
4	108	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HHU-77004 No Flow	HHU-77004	HHU-77004-NF	ModBus TCP/IP	BOOL	DIGITAL		40003	9	FAULT	OK						R		
4	109	123A90-1724000049HV-PID-00040	Modbus TCP/IP	SPARE			ModBus TCP/IP	BOOL	DIGITAL		40003	10										
4	110	123A90-1724000049HV-PID-00040	Modbus TCP/IP	SPARE			ModBus TCP/IP	BOOL	DIGITAL		40003	11										
4	111	123A90-1724000049HV-PID-00040	Modbus TCP/IP	SPARE			ModBus TCP/IP	BOOL	DIGITAL		40003	12										
4	112	123A90-1724000049HV-PID-00040	Modbus TCP/IP	SPARE			ModBus TCP/IP	BOOL	DIGITAL		40003	13										
4	113	123A90-1724000049HV-PID-00040	Modbus TCP/IP	ModBus Server Error	B200-HSB-001	B200-HSB-001-MSE	ModBus TCP/IP	BOOL	DIGITAL		40003	14	OK	FAULT						R		
4	114	123A90-1724000049HV-PID-00040	Modbus TCP/IP	SPARE			ModBus TCP/IP	BOOL	DIGITAL		40003	15								W		
4	115	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HHU-77003 Status	HHU-77003	HHU-77003-S	ModBus TCP/IP	INT	ANALOG		40004				NA					R		1=AVAILABLE 2=RUN 3=FAULT
4	116	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HHU-77004 Status	HHU-77004	HHU-77004-S	ModBus TCP/IP	INT	ANALOG		40005				NA					R		1=AVAILABLE 2=RUN 3=FAULT
4	117	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HHS-77005/6/7 Status	HHS-77005/6/7	HHS-77005/6/7-S	ModBus TCP/IP	INT	ANALOG		40006				NA					R		1=AVAILABLE 2=RUN 3=FAULT
4	118	123A90-1724000049HV-PID-00040	Modbus TCP/IP	B 200 Medium Internal Temperature	B200-HSB-001	B200-HSB-001-IT	ModBus TCP/IP	INT	ANALOG		40007				°C					R		DIVIDE THE NUMBER BY TEN TO GET THE CORRECT VALUE
4	119	123A90-1724000049HV-PID-00040	Modbus TCP/IP	B200 internal pressure	B200-HSB-001	B200-HSB-001-IP	ModBus TCP/IP	INT	ANALOG		40008				Pa					R		DIVIDE THE NUMBER BY TEN TO GET THE CORRECT VALUE
4	120	123A90-1724000049HV-PID-00040	Modbus TCP/IP	ModBus WatchDog	B200-HSB-001	B200-HSB-001-WD	ModBus TCP/IP	BOOL	DIGITAL		40009				NA					W		PULSATING HIGH/LOW SIGNAL WITH FREQUENCI UNDER 15S
4	121	123A90-1724000049HV-PID-00040	Modbus TCP/IP	System Start From PCS	B200-HSB-001	B200-HSB-001-SSTART	ModBus TCP/IP	BOOL	DIGITAL		40010		START	NONE	NA					W		SART SIGNAL FROM PCS
4	122	123A90-1724000049HV-PID-00040	Modbus TCP/IP	System Stop From PCS	B200-HSB-001	B200-HSB-001-SSTOP	ModBus TCP/IP	BOOL	DIGITAL		40011		STOP	NONE	NA					W		STOP SIGNAL FROM PCS
4	123	123A90-1724000049HV-PID-00040	Modbus TCP/IP	Resel Alarm From PCS	B200-HSB-001	B200-HSB-001-RA	ModBus TCP/IP	BOOL	DIGITAL		40012		RESET	NONE	NA					W		SIGNAL FOR RESET ALARM
4	124	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HHU-77003 Percentage of Capacity Utilisation	B200-HSB-001	B200-HSB-001-HFM1P	ModBus TCP/IP	INT	DIGITAL		40013		RESET	NONE	NA					W		
4	125	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HHU-77004 Percentage of Capacity Utilisation	B200-HSB-001	B200-HSB-001-HFM2P	ModBus TCP/IP	INT	DIGITAL		40014				NA					W		
5	126	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HHU-77003 SELECTOR STATUS	B200-HSB-001	B200-HSB-001-SS	ModBus TCP/IP	INT	ANALOG		40015				NA					R		1= AUTO 2= MANUAL 3=OFF
5	127	123A90-1724000049HV-PID-00040	Modbus TCP/IP	HHU-77004 SELECTOR STATUS	B200-HSB-001	B200-HSB-002-SS	ModBus TCP/IP	INT	ANALOG		40016				NA					R		1= AUTO 2= MANUAL 3=OFF

N/A
AVAI / RUN / FAULT JMC ✓
AVAI / RUN / FAULT JMC ✓
AVAI / RUN JMC ✓
JMC ✓
JMC ✓
JMC ✓
JMC ✓
JMC ✓
JMC ✓
JMC ✓
JMC ✓
JMC ✓
JMC ✓
JMC ✓
JMC ✓

Section 4.4 Instrumentation “As-Commissioned” interconnection diagrams

NOT APPLICABLE

Section 4.5 Telecommunication functional test sheets index

NOT APPLICABLE

Section 4.6 Telecommunication
“As-Commissioned” I.C.D. / TSLD's

NOT APPLICABLE

Section 5 SITE / OPERATIONAL

Section 5.1 Operational Test Procedure

Section 5.2 Operational Test Certificates

NOT APPLICABLE

Section 6 PIPING AND VESSEL PREPARATION

Section 6.1 Final Mechanical / Vessel Inspection Checks Index

NOT APPLICABLE

Section 6.2 Leak Test / Drying / Inerting Test Sheets Index

NOT APPLICABLE

Section 6.3 Chemical Loading & First Fill records Index

NOT APPLICABLE

Section 6.4 Chemical Cleaning Reports and Records Index

NOT APPLICABLE

Section 6.5 Lubrication Schedule

NOT APPLICABLE

Section 7 VENDOR

Section 7.1 Vendor Package Summary Index

NOT APPLICABLE

Section 7.2 SAT Procedure with associated punch list and reference (Front Page)

FAT PROCEDURE COMPLIANCE CHECKLIST

Project: HOLLANDSE KUST NOORD WIND PARK - BLPH

Document Reference: 1724000049-QC-PRO-00056 Rev. 04

Supplier: ALEX Sistemi – PO 1724000049

Subsystems covered:

- 77-10 HVAC HV/MV Switchgear Room B-100
- 77-20 HVAC LV Switchgear Room B-200
- 77-30 HVAC UPS Equipment Room B-300
- 77-40 HVAC I&T Equipment Room B-400

Note: This checklist summarises the execution and verification of FAT activities as described in the approved procedure (Ref. 1724000049-QC-PRO-00056 Rev. 04). The activities were carried out in October 23rd to 25th 2024.
Its purpose is to provide a formal, structured record confirming that the required test has been completed in accordance with the procedure, including acceptance criteria and relevant observations.
All activities and declarations included herein have been performed and compiled under the responsibility of Rosetti Marino.
An additional column has been added to indicate supporting documentation where available.
Where measurement values were not explicitly recorded in individual test reports, conformity has been stated based on witnessed execution and internal verification records.

Section	Test Description	Acceptance Criteria	Result	Reference	Notes
9.1	Dimensional Check and Visual Inspection of the shelter structure and components to verify compliance with GA drawings, correct installation, absence of transport damage, and conformity with project specifications (UNI EN ISO 13920 Class B).	All measured dimensions must comply with approved drawings and specified tolerances. Surfaces must be free of defects and properly treated.	Compliant	IR-ASI-0049-01 B-100 – Attach. 1 B-100 – Attach. 2 B-200 – Attach. 1 B-200 – Attach. 2 B-300 – Attach. 1 B-300 – Attach. 2 B-400 – Attach. 1 B-400 – Attach. 2 HVAC system GA	Verified during FAT carried out at ALEX fabrication premises on 24-25-26/07/2024 and confirmed in Oct 2024 site checks.
9.2	Visual and instrumental inspection of painting quality, including measurement of dry film thickness (DFT) to verify compliance with the approved painting specification.	DFT values must meet the minimum specified in the painting procedure using calibrated instruments.	Compliant	IR-ASI-0049-01 B-100 – Attach. 1 B-100 – Attach. 2 B-200 – Attach. 1 B-200 – Attach. 2 B-300 – Attach. 1 B-300 – Attach. 2 B-400 – Attach. 1 B-400 – Attach. 2	Verified during FAT carried out at ALEX fabrication premises on 24-25-26/07/2024. Measurements taken and confirmed compliant; values not recorded.
9.3	Verification of nameplate installation and content, ensuring correct labeling, location, and data	Nameplates must be correctly installed, readable, and match equipment tags and documentation.	Compliant	FAT Report 1 B-100 – Attach. 1 B-100 – Attach. 2 B-200 – Attach. 1 B-200 – Attach. 2	Visual inspection completed and confirmed.

Section	Test Description	Acceptance Criteria	Result	Reference	Notes
	conformity with approved documentation.			B-300 – Attach. 1 B-300 – Attach. 2 B-400 – Attach. 1 B-400 – Attach. 2	
9.4	Check of type, quantity, and installation position of components (internal and external) in accordance with the latest General Arrangement drawings and bill of materials.	Component positioning and quantity must match drawings. Any deviation must be approved.	Compliant	FAT Report 1 B-100 – Attach. 1 B-100 – Attach. 2 B-200 – Attach. 1 B-200 – Attach. 2 B-300 – Attach. 1 B-300 – Attach. 2 B-400 – Attach. 1 B-400 – Attach. 2	Verified during FAT and in field installation.
9.5	Functional testing of all lighting systems, including normal and emergency lights. Measurements of illumination levels and battery autonomy for emergency lights.	Lighting must operate as intended. Illumination and autonomy must meet design values.	Compliant	Activity witnessed and supervised by Rosetti. No dedicated report was issued	Tested in FAT. Emergency lighting confirmed operational.
9.6	Verification of grounding system integrity, including bonding resistance measurements and visual confirmation of connections.	Measured resistance must be < 200 mΩ. All metallic parts must be properly grounded.	Compliant	FAT Report 1 Grounding Test Report	Confirmed via measurements during FAT.
9.7	Review of material and component certificates, NDE reports, and traceability documents to ensure compliance with the ITP and project specifications.	All main materials and components must have valid certificates of conformity.	Compliant	No dedicated report was issued	Document review completed as per ITP. Activity performed by Rosetti Team, during the visit to Alex fabrication premises in July 2024 and completed during Site testing activities in October 2024
9.8	Full functional and performance test of the HVAC system, including pressure, temperature stability, redundancy, and I/O checks. Dummy loads are used to simulate heat input.	The system must maintain temperature within set points and ensure ≥ 50 Pa overpressure. I/O and alarms must operate per design.	Compliant	HVAC Report 1 HVAC Report 2	Executed in Oct 2024; values confirmed. No formal performance report issued.

Section	Test Description	Acceptance Criteria	Result	Reference	Notes
9.9	Fire & Gas system functional testing, including energisation, detector calibration, and full Cause & Effect simulation per project documentation.	All sequences must operate correctly, with the successful test of detectors and alarm response.	Compliant	Refer to B ITRs loaded in PROVERLIS	Simulated input tests were performed; they were confirmed by RM.

ADDITIONAL TEST (Not foreseen in the above-mentioned procedure)

During the commissioning phase, activities were carried out specifically to verify the interface between the HVAC units and the platform control system.
These tests focused on the validation of I/O signal exchange, interlocks, and control logic communication.
All activities were tracked and documented using the dedicated ITR forms managed through the PROVERLIS system.

Performed by	Verified by
Signature: Date: 16/05/2025 Name: Stefano Linari	Signature: Date: 16 Name: Raffaele Degli Esposti

IR-ASI-0049-01

ROSETTI MARINO	INSPECTION REPORT	Report No. IR-ASI-0049-01	SHEET 1 di 7
		Data *Date 24-25-26/07/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123 A90***	**COMMESSA FORNITORE** / *Job Vendor* ALEX SISTEMI
FORNITORE *Supplier: ALEX SISTEMI SPA*	**No. Ordine** *P.O. No. 1724000049 Rev.00*	**OGGETTO** *Object ELE/INST EQUIPMENT ROOM*	

DESCRIZIONE DEL MATERIALE / *Material Description*

POS. *Item*	QUANTITA' *Quantity*	DESCRIZIONE *Description*	Nr. TAG *TAG No.*	TIPO DI ISPEZIONE / *Kind of Inspection*	ESITO / *Result*
10	1	HV-MV (66kV 6.6kV) Switchroom B-100	B-100	Visual Check & FAT	**Satifactory with Punch List**
20	1	LV (400V) SWITCH ROOM B-200	B-200	Visual Check & FAT	**Satifactory with Punch List**
30	1	AC UPS EQUIPMENT ROOM B-300	B-300	Visual Check & FAT	**Satifactory with Punch List**
40	1	I&T EQUIPMENT ROOM B-400	B-400	Visual Check & FAT	**Satifactory with Punch List**

DOCUMENTI APPLICABILI / *Applicable Documents*

TITOLO DOCUMENTO / *Document Title*	NUMERO DOCUMENTO / *Document Number*	REVISIONE / *Revision*	STATO DOCUMENTO / *Document Status*
HV-MV (66kV 6.6kV) Switchroom B-100	1724000049-QC-PRO-00056	3	AFC-08/06/2024 approved
Inspection and Test Plan	1724000049-QC-ITP-00002	2	AFC-19/04/2024 approved
B-100 GENERAL ARRANGEMENT DRAWINGS	1724000049-AR-DA-00014	2	AFC-28/06/2024 approved
B-200 GENERAL ARRANGEMENT DRAWINGS	1724000049-AR-DA-00015	2	AFC-28/06/2024 approved
B-300 GENERAL ARRANGEMENT DRAWINGS	1724000049-AR-DA-00016	2	AFC-03/07/2024 approved
B-400 GENERAL ARRANGEMENT DRAWINGS	1724000049-AR-DA-00017	2	AFC-04/07/2024 approved

DISTRIBUZIONE A: / *Distribution to:*

☒**GESTIONE FORNITURE** / *Supply Management Department*	☒**CAPO COMMESSA** / *Project Manager*
☒**PRODUZIONE** / *Production*	☒**FORNITORE** / *Supplier*
☒**PPLM** / *Project Procurement & Logistic Manager*	☒**P.Q.M.**
☒**MAGAZZINO** / *Warehouse*	☒**P.E.M.**

ATTIVITA' ESEGUITE / *Activities Carried Out*

A - INTRODUZIONE / *Preliminary Introduction*

The present report refers to the inspection visit carried out on 24-25-26/07/2024 at Eudosia Sistemi Via Modigliani 8,Inveruno (MI).The following inspection activities were witnessed by Rosetti Marino and they have performed: Visual Check and Fat following the procedure for E&I Shelters B-100/B-200/B-300/B-400.
Attendees the test: Coicea Catalin(RM);Basile Martino(RM);Luca Caviglia(RM);Maurizio Gatti(RM); Salvatore Cordova(Alex Sistemi);Andrea Dicandia(Alex Sistemi);Oliviero Albizzati(Alex Sistemi) Pasquale Anacleto (Client Crosswind); Walter Gobbi (Client Crosswind).

B –SCOPO DELL'ISPEZIONE / *Scope of Inspection*

DESCRIZIONE DEI TEST PRESENZIATI / *Description of witnessed tests*	ESITO / *Result*
VISUAL INSPECTION AND CHECK DIMENSIONAL B-100; B-200; B-300; B-400	**Satifactory with Punch List**
FAT (Functional Acceptance Test) B-100 and B-200	**Satifactory with Punch List**

L' INCARICATO / *The person in charge*	IL RAPP. DEL CLIENTE / *Client's Representative*	IL FORNITORE / *Supplier*
ROSETTI MARINO *Supply Management Dept.* ROSETTI MARINO SpA Stefano Linari 31/07/24 Supply Management Dept.		

QUESTO DOCUMENTO NON SOLLEVA IL FORNITORE DALLA RESPONSABILITA' DI EVENTUALI DIFETTI E/O MALFUNZIONAMENTI RILEVATI DURANTE L'USO /
This document does not relieve the Supplier of the responsibility of any possible defects and/or misfunctioning arising during the utilisation.

Doc. Name: PAINTING CHECK		Report No.01 Mod 1.4.2
OUR JOB X176-24X	Date 24/07/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 24/07/2024

REFERENCE DRAWING:

REFERENCE DOCUMENT: 1724000049-MAT-PRO-00004

Inspection List	YES	NO	N.A.
1 Verification of paint and color code according to design specification			
Visual Check External Color walls, roof, base frame RAL 7035	✓		
Visual Check External Color doors RAL 7035	✓		
Layer thickness of external coating µm 320 total	✓		
Visual Check Internal Equipment Baseframe RAL 7035	✓		

Comments:

** Touch-up and cleaning are required before proceeding with packaging*

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	COICEA CATALIN ROSETTI MARINO	CROSSWIND		

Mod1.4.2

Doc. Name: CHECK AND FUNCTIONAL TEST		Report No.01
OUR JOB X176-24X	Date 24/07/2024	Page 1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION : ON SITE ☒ OFF SITE ☐

DATE OF TEST: 24/07/2024

REFERENCE DRAWING:

REFERENCE DOCUMENT: ECA-00-ELE-DEB- 0001 Rev.7 Electrical Design Criteria

Inspection List	YES	NO	N.A.
Functional Test of Doors :			
Opening/Closing doors, doors locking	✓		

Comments:

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	COICEA CATALIN ROSETTI MARINO (IV)	CROSSWIND		

Doc. Name: ELECTRICAL TESTS		Report No.01 Mod 1.4.6
OUR JOB X176-24X	Date 24/07/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 24/07/2024

REFERENCE DRAWING:

- 1724000049-AR-DA-00014 - B-100 GENERAL ARRANGMENT DRAWINGS - E&I SHELTERS
- 1724000049-HV-DA-00064 - MODULE B-100 – HVAC SYSTEM–G.A. AND DETAILS
- 1724000049-HV-DA-00026 - B-100 HVAC and LIGHTING PANEL WIRING DRAWINGS and GENERAL ARRANGEMENT (INCL INTERCONNECTING) - E&I SHELTERS

REFERENCE DOCUMENT:

- 1724000049-HV-PID-00039 - B-100 PID - E&I SHELTERS
- 1724000049-HV-LIS-00047 - B-100 HVAC COMPONENTS LIST AND DS - E&I SHELTERS
- 1724000049-HV-RE-00055 - HVAC SYST DESCRIPTION (MANAGEMENT LOGICS) - E&I SHELTERS
- 1724000049-QC-PRO-00056 (FAT Procedure)
- ECA-00-ELE-DEB-0001 Rev.7 Electrical Design Criteria

Inspection List	YES	NO	N.A.
Functional Test of Electrical System			
- Check of Lighting System, Control Panel, and socket/switch.			X
- Cable tag and wiring			X
- Cable tray and conduit installation			X
- Grounding System Installation			X
Functional Test of Grounding System			
- Check the functionality of Grounding System (less than 200 mΩ)			X

Comments:

The items listed above are marked as N.A. because FAT activities have not been conducted. The HVAC system supply and installation were not completed by the specified date, making it impossible to perform all the functional tests outlined in the table.

Mod1.4.6

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

At this stage, checking the lighting system was not possible, as this activity must be performed only after the lights are installed at the correct height.
However, the following preliminary checks have been completed:

- Main unit changeover by simulating a system fault.
- Switching on of space heaters.
- Maintaining overpressure through VSD control.
- Reading temperature and differential pressure values on the HMI.

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	Other
ALEXSISTEMI spa	ROSETTI MARINO	CROSSWIND W 29/07/24		

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 25/07/2024

REFERENCE DRAWING:

- 1724000049-AR-DA-00014 - B-100 GENERAL ARRANGMENT DRAWINGS - E&I SHELTERS
- 1724000049-HV-DA-00064 - MODULE B-100 – HVAC SYSTEM–G.A. AND DETAILS
- 1724000049-HV-DA-00026 - B-100 HVAC and LIGHTING PANEL WIRING DRAWINGS and GENERAL ARRANGEMENT (INCL INTERCONNECTING) - E&I SHELTERS

REFERENCE DOCUMENT:

- 1724000049-HV-PID-00039 - B-100 PID - E&I SHELTERS
- 1724000049-HV-CA-00035 - B-100 HVAC CALCULATION REPORT (Incl HVAC SYS CALC and HEAT DISSIPATION CALC) - E&I SHELTERS
- 1724000049-HV-LIS-00047 - B-100 HVAC COMPONENTS LIST AND DS - E&I SHELTERS
- 1724000049-HV-RE-00055 - HVAC SYST DESCRIPTION (MANAGEMENT LOGICS) - E&I SHELTERS
- 1724000049-QC-PRO-00056 (FAT Procedure)
- ECA-00-ELE-DEB-0001 Rev.7 Electrical Design Criteria

Inspection List	PASS	FAIL	N.A.	value
Functional & performance Test of A/C System (HVAC Test):				
• Visual and correct installation of HVAC fans.			X	
• Functional check of fans.	X			
• Check the functionality and performance of A/C System			X	

Doc. Name: CHECK AND FUNCTIONAL TEST OF HVAC SYSTEM		Report No.05 Mod 1.4.7
OUR JOB X176-24X	Date 25/07/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

Comments:

Some items listed above are marked as N.A. because FAT activities have not been conducted. The HVAC system supply and installation were not completed by the specified date, making it impossible to perform all the functional tests outlined in the table. However, the following preliminary checks have been completed:

- Main unit changeover by simulating a system fault.
- Switching on of space heaters.
- Maintaining overpressure through VSD control.
- Reading temperature and differential pressure values on the HMI.

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	ROSETTI MARINO	x CROSSWIND 29/07/24		

ROSETTI MARINO	INSPECTION REPORT	Report No. IR-ASI-0049-01	SHEET 2 di 7
		Data *Date 24-25-26/07/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123 A90***	**COMMESSA FORNITORE** / *Job Vendor* ALEX SISTEMI
FORNITORE *Supplier: ALEX SISTEMI SPA*	**No. Ordine** *P.O. No. 1724000049 Rev.00*	**OGGETTO** *Object ELE/INST EQUIPMENT ROOM*	

C –DETTAGLIO DEGLI STRUMENTI UTILIZZATI PER TEST E ISPEZIONE / *Details of Inspection and Test Instruments used*

NOME DELLO STRUMENTO *Equipment name*	PRODUTTORE *Manufacturer*	MODELLO *Model*	PROSSIMA TARATURA *Next calibration*

D –ALLEGATI / *Attachments (***CERTIFICATI E TEST REPORT** / *Certificates and Test Reports)*

NUMERO DOCUMENTO / *Document Number*	DESCRIZIONE / *Description*	TIPO / *Type*	NR. PAGINE / *No. Pages*
B100.attachment 1	Reports & drawings	report	10
B100.attachment 2	Reports & drawings	report	6
B100.attachment 3_Review	Reports & drawings_review	report	14
B200.attachment 1	Reports & drawings	report	10
B200.attachment 2	Reports & drawings	report	6
B200.attachment 3_Review	Reports & drawings_review	report	16
B300.attachment 1	Reports & drawings	report	9
B300.attachment 2	Reports & drawings	report	4
B300.attachment 3_Review	Reports & drawings_review	report	16
B400.attachment 1	Reports & drawings	report	10
B400.attachment 2	Reports & drawings	report	4
B300.attachment 3_Review	Reports & drawings_review	report	16

E – DETTAGLI ED ESITO DELL'ISPEZIONE / *Details and Results of Inspection*

F – CONCLUSIONI / *Conclusions*

FAT were witnessed by Rosetti Marino and CW as per ITP and relevant procedures and results are SATISFACTORY, as mentioned in the body of this report.
All remarks are indicated in the FAT reports
List of Punch list has been agreed between all parties.
The closure date will be define in the next few weeks between RM and ASI with a dedicated schedule.

G – PUNTI IRRISOLTI / *Outstanding points*

PLR-0049-ASI-001_20240731

H – STATO PACKING LIST / *Packing List Status*	☒ **EMESSO** / *Issued*	☐ **NON EMESSO** / *Not Issued*	26/07/2024 **ULTIMA DATA UTILE** / *Last Date*

PUNCH LIST REPORT: VEDI ALLEGATO N° / *Refer to Attachment n° NOT APPLICABLE*

L' INCARICATO / *The person in charge*	IL RAPP. DEL CLIENTE / *Client's Representative*	IL FORNITORE / *Supplier*
ROSETTI MARINO *Supply Management dept.* Stefano Linari *Quality Control Dept.* ROSETTI MARINO SpA 31/07/24		

QUESTO DOCUMENTO NON SOLLEVA IL FORNITORE DALLA RESPONSABILITA' DI EVENTUALI DIFETTI E/O MALFUNZIONAMENTI RILEVATI DURANTE L'USO /
This document does not relieve the Supplier of the responsibility of any possible defects and/or misfunctioning arising during the utilisation.

ROSETTI MARINO	INSPECTION REPORT	Report No. IR-ASI-0049-01	SHEET 3 di 7
		Data *Date 24-25-26/07/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123 A90***	**COMMESSA FORNITORE** / *Job Vendor* ALEX SISTEMI
FORNITORE *Supplier: ALEX SISTEMI SPA*	**No. Ordine** *P.O. No. 1724000049 Rev.00*	**OGGETTO** *Object ELE/INST EQUIPMENT ROOM*	

REPORT FOTOGRAFICO (SE PRESENTE) / *Digital Pictures (if any)*



B-400



B-300

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO *Supply Management dept.* 31/07/24 ROSETTI MARINO SpA Stefano Linari Quality Control Dept.		

QUESTO DOCUMENTO NON SOLLEVA IL FORNITORE DALLA RESPONSABILITA' DI EVENTUALI DIFETTI E/O MALFUNZIONAMENTI RILEVATI DURANTE L'USO /
This document does not relieve the Supplier of the responsibility of any possible defects and/or misfunctioning arising during the utilisation.

ROSETTI MARINO	INSPECTION REPORT	Report No. IR-ASI-0049-01	SHEET 4 di 7
		Data *Date 24-25-26/07/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123 A90***	**COMMESSA FORNITORE** / *Job Vendor* ALEX SISTEMI
FORNITORE *Supplier: ALEX SISTEMI SPA*	**No. Ordine** *P.O. No. 1724000049 Rev.00*	**OGGETTO** *Object ELE/INST EQUIPMENT ROOM*	



B-200



B-100



B100 ROOF TOP



B100 ROOF TOP

L' INCARICATO / *The person in charge*	IL RAPP. DEL CLIENTE / *Client's Representative*	IL FORNITORE / *Supplier*
31/07/24 ROSETTI MARINO SpA *Supply Management dept.* Stefano Linari Quality Control Dept.		

QUESTO DOCUMENTO NON SOLLEVA IL FORNITORE DALLA RESPONSABILITA' DI EVENTUALI DIFETTI E/O MALFUNZIONAMENTI RILEVATI DURANTE L'USO /
This document does not relieve the Supplier of the responsibility of any possible defects and/or misfunctioning arising during the utilisation.
MOD-PRO-16-Rev. 2016-00 Inspection Report

ROSETTI MARINO	INSPECTION REPORT	Report No. IR-ASI-0049-01	SHEET 5 di 7
		Data *Date 24-25-26/07/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123 A90***	**COMMESSA FORNITORE** / *Job Vendor* ALEX SISTEMI
FORNITORE *Supplier: ALEX SISTEMI SPA*	**No. Ordine** *P.O. No. 1724000049 Rev.00*	**OGGETTO** *Object ELE/INST EQUIPMENT ROOM*	





B200



B200 -ROOF TOP



L' INCARICATO / *The person in charge*	IL RAPP. DEL CLIENTE / *Client's Representative*	IL FORNITORE / *Supplier*
31/07/24 **ROSETTI MARINO** *Supply Management dept.* ROSETTI MARINO SpA Stefano Linari Supply Management Dept.		

QUESTO DOCUMENTO NON SOLLEVA IL FORNITORE DALLA RESPONSABILITA' DI EVENTUALI DIFETTI E/O MALFUNZIONAMENTI RILEVATI DURANTE L'USO /
This document does not relieve the Supplier of the responsibility of any possible defects and/or misfunctioning arising during the utilisation.

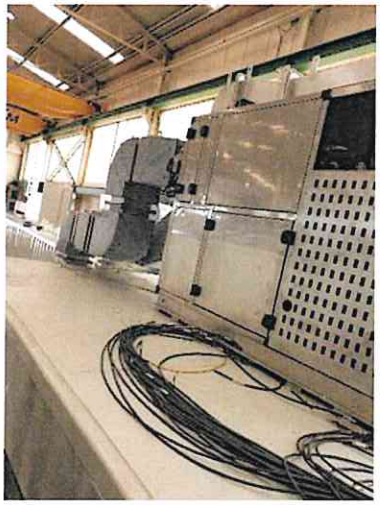
ROSETTI MARINO	INSPECTION REPORT	Report No. IR-ASI-0049-01	SHEET 6 di 7
		Data *Date 24-25-26/07/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123 A90***	**COMMESSA FORNITORE** / *Job Vendor* ALEX SISTEMI
FORNITORE *Supplier: ALEX SISTEMI SPA*	**No. Ordine** *P.O. No. 1724000049 Rev.00*	**OGGETTO** *Object ELE/INST EQUIPMENT ROOM*	



B300 Inside



B300 ROOF TOP



B300 ROOF TOP



L' INCARICATO / *The person in charge*	IL RAPP. DEL CLIENTE / *Client's Representative*	IL FORNITORE / *Supplier*
31/07/24 ROSETTI MARINO SpA Supply Management dept. Stefano Quality Control Dept.		

QUESTO DOCUMENTO NON SOLLEVA IL FORNITORE DALLA RESPONSABILITA' DI EVENTUALI DIFETTI E/O MALFUNZIONAMENTI RILEVATI DURANTE L'USO /
This document does not relieve the Supplier of the responsibility of any possible defects and/or misfunctioning arising during the utilisation.
MOD-PRO-16-Rev. 2016-00 Inspection Report

ROSETTI MARINO	INSPECTION REPORT	Report No. IR-ASI-0049-01	SHEET 7 di 7
		Data *Date 24-25-26/07/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123 A90***	**COMMESSA FORNITORE** / *Job Vendor* ALEX SISTEMI
FORNITORE *Supplier: ALEX SISTEMI SPA*	**No. Ordine** *P.O. No. 1724000049 Rev.00*	**OGGETTO** *Object ELE/INST EQUIPMENT ROOM*	



B400 INSIDE



B400 ROOF TOP



NON VALIDO PER IL RILASCIO DELLA FORNITURA / *It is not valid for the supply's release*

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO *Supply Management dept* ROSETTI MARINO SpA *Stefano Liman* Quality Control Dept. 31/07/24		

QUESTO DOCUMENTO NON SOLLEVA IL FORNITORE DALLA RESPONSABILITA' DI EVENTUALI DIFETTI E/O MALFUNZIONAMENTI RILEVATI DURANTE L'USO /
This document does not relieve the Supplier of the responsibility of any possible defects and/or misfunctioning arising during the utilisation.

ROSETTI MARINO	Base Load Power Hub (BLPH) Punch List Entry Form	CROSSWIND
Sub-system code:	Sub-system description:	Date: **31/07/2024**

Category "A" ➔ Items to be cleared before the issuance of the RFCC (Ready for Commissioning Certificate).
Category "B" ➔ Items to be cleared before the issuance of the RFOC (Ready For Operations Certificate).
Category "C" ➔ Items to be cleared before Sail Away.

Item N.	Check sheet ref.	Disc.	Tag Number	Raised By	Defect Description / Corrective Action	Attachments	Cat.	Action By	Duty Phase	Deadline date
1.	/	MECH	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	Handles fixed on external doors, are made by plastic material. Temporary key cylinder and handles to be replaced with ones made by SS material (AISI 316L) To be done at RM yard		B	Alex Sistemi		
2.	/	MECH	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	Master key (common for all modules) to be provided		B	Alex Sistemi		
3.	/	ELE	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	Roof-top cables to be fixed with cable ties made by AISI 316L		B	RM		
4.	/	ELE	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	Earthing connection to be provided for all space heaters To be done at RM yard		B	Alex Sistemi		
5.	/	ELE	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	Earthing connection to be provided for all HVAC units To be done at RM yard		B	Alex Sistemi		
6.	/	ELE	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	Identification trafolite tag to be provided for all E&I Items (lights, switch, space heaters, etc.) All trafolyte labels missing will be installed at RM yard		B	Alex Sistemi		
7.	/	ELE	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	HVAC cable tags to be provided on the panel top. Alex Sistemi will supply all loose cable tags. RM will install it		B	Alex Sistemi/ RM		

8.	/	ELE	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	Cable's tag to be provided / fixed at all MCTs (IN/OUT) Alex Sistemi will supply all loose cable tags. RM will install it		B	Alex Sistemi/ RM		
9.	/	MECH	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	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		B	Alex Sistemi		
10.	/	ELE	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	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		B	Alex Sistemi/ RM		
11.	/	HVAC	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	All documentation listed in the SMIR, shall be re issued in final revision and approved by RM and CW		B	Alex Sistemi		
12.	/	HVAC	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	The items to be installed at RM site are coalescent filters and fire dampers. To be completed at RM yard		B	Alex Sistemi		
13.	/	HVAC	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	HVAC Systems to be partially checked on sitefor B-100 and B-200 and completely for B-300and B-400. During FAT activities were tested few logics for B-100 and B-200 HVAC panels: unit changeover (due to fault), space heaters switch-on, overpressure maintaining through VSD control, temperature and differential pressure values reading on HMI). B-300 and B-400 HVAC unitsmust be completed yet. All notes/remarks are indicated in the FAT procedures and reports		B	Alex Sistemi		
14.	/	HVAC	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	B-300 and B-400 HVAC Unit wirings must be completed. To be completed at RM yard		B	Alex Sistemi		

15.	/	HVAC	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	TAG on front panels to be updated following last document revisions. In general, all TAG labels to be completely checked; several are missing. All trafolyte labels missing will be installed at RM yard		B	Alex Sistemi		
16	/	HVAC	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	All balancing and setting activities to be done on site. It was not possible during FAT due to HVAC system installation not completed. All notes/remarks are indicated in the FAT procedures and reports		B	Alex Sistemi		
17	/	HVAC	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	Drainpipes and heating cables are missing, since they must be necessary installed on site to avoid damages. To be completed at RM yard		B	Alex Sistemi		
18	/	HVAC	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	Duct insulation and cladding to be completed on site; it's needed to cover all duct junctions. Alex Sistemi will supply all material RM will install it during re installation of HVAC.		B	Alex Sistemi/ RM		
19	/	ELE	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	Earthing connection to be provided for all electrical conduits. Alex Sistemi will supply all material RM will install it		B	Alex Sistemi/ RM		
20	/	ELE	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	Teflon to be provided between different materials for Hvac ducts unistrut and supports		B	Alex Sistemi		
21	/	ELE	B-100 / B-200 B-300 / B-400	ROSETTI MARINO	External ducts (inside) welding to be cleaning before re installation		B	RM		

Raised by
Contractor / Subcontractor: _____

Checked by
Contractor QA/QC: _____
ROSETTI MARINO SpA
Stefano Linati
Quality Control Dept.
01-08-24
ALEXSISTEMI
31/07/2024

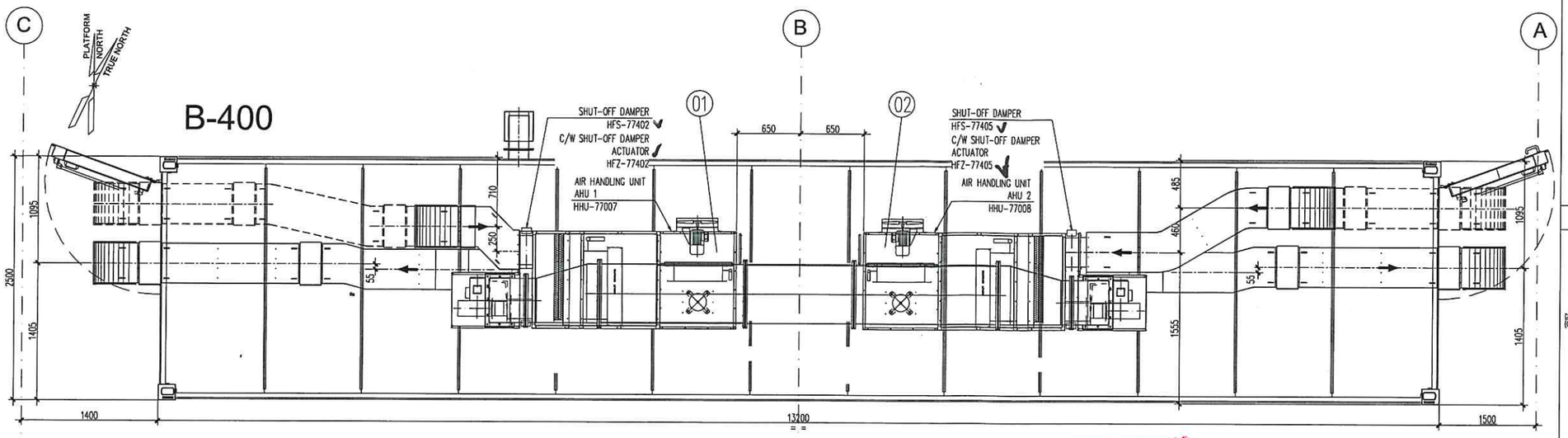
Accepted by
COMPANY: _____ x CROSSWIND
1/08/24

P1/1

HVAC SYSTEM GA

DRAWING NO. 1724000049-HV-DA-00067_1

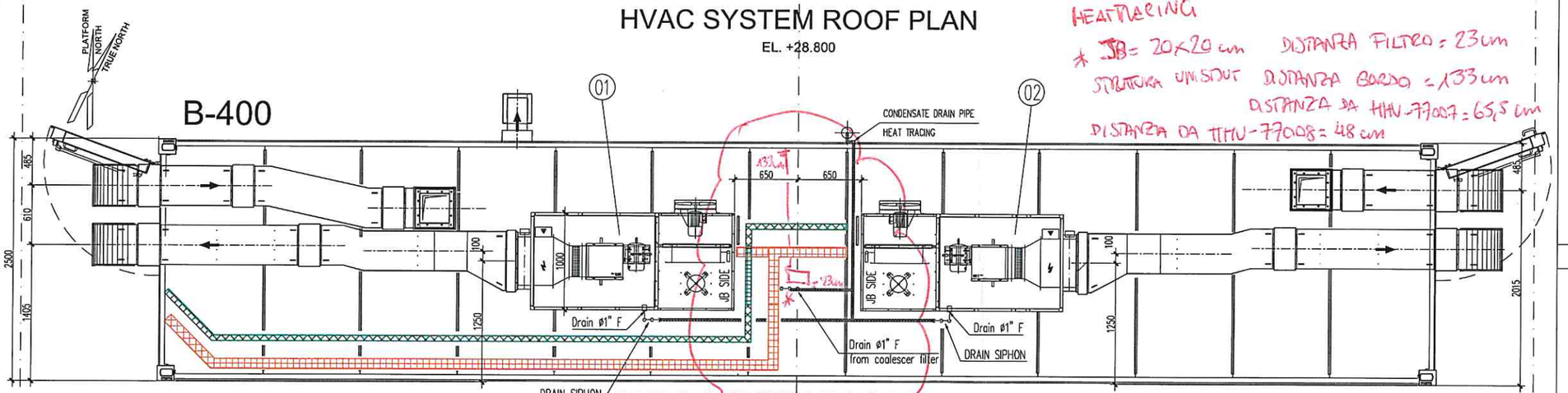
REV. 01



HVAC SYSTEM ROOF PLAN

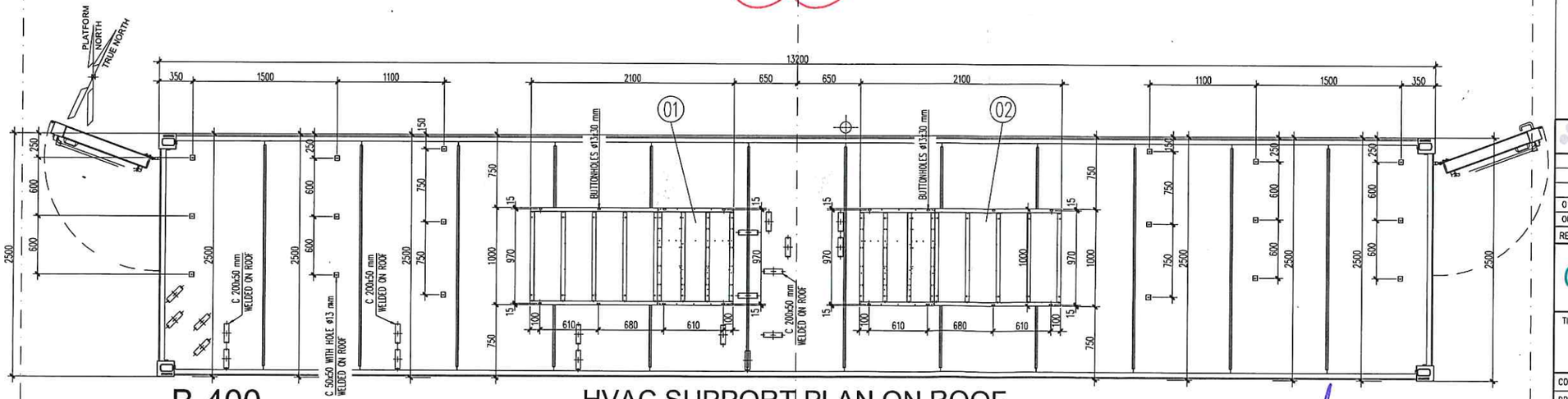
EL. +28.800

HEATTRACING
* JB= 20x20 cm DISTANZA FILTRO = 23cm
STRUTTURA UNISTRUT DISTANZA BORDO = 133cm
DISTANZA DA HHU-77007 = 65,5 cm
DISTANZA DA HHU-77008 = 48 cm



HVAC SYSTEM ROOF PLAN

EL. +28.000



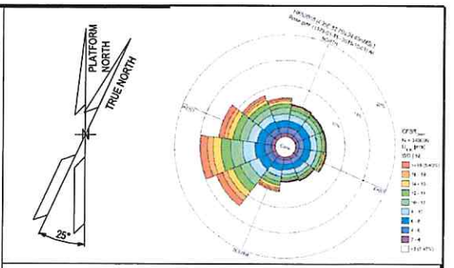
HVAC SUPPORT PLAN ON ROOF

EL. +27.300

B-400

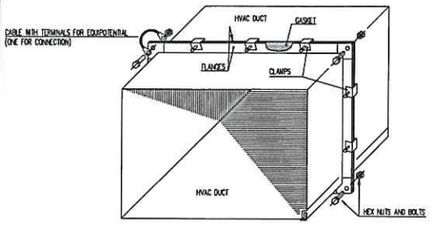
MASTER

ROSETTI MARINO SpA
Stefano Linari
Quality Control Dept. 23/10/24



NOTES

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



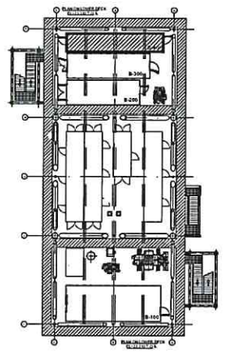
TYPICAL EQUIPOTENTIAL INSTALLING FOR FLANGE CONNECTION INDOOR AIR DUCT

Basket tray Power AISI 316L

Basket tray Instrument AISI 316L

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
01	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850
02	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850

KEY PLAN



ALEXSISTEMI

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	18/10/2024	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
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

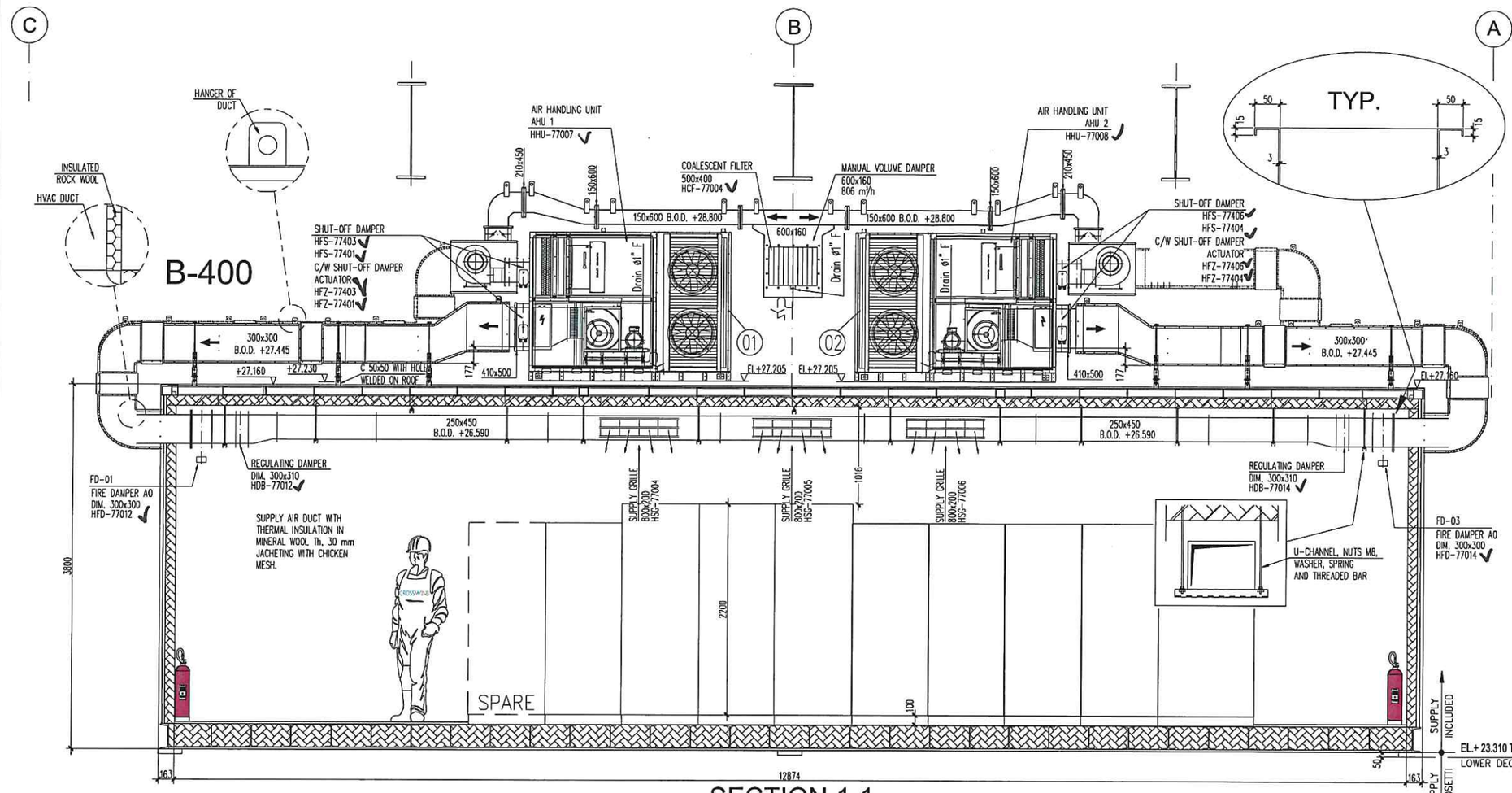
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 25
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 18/10/2024
A1	DRAWING NO. 1724000049-HV-DA-00067	SHEET 001	REV. 01

File Name : 1724000049-HV-DA-00067_1

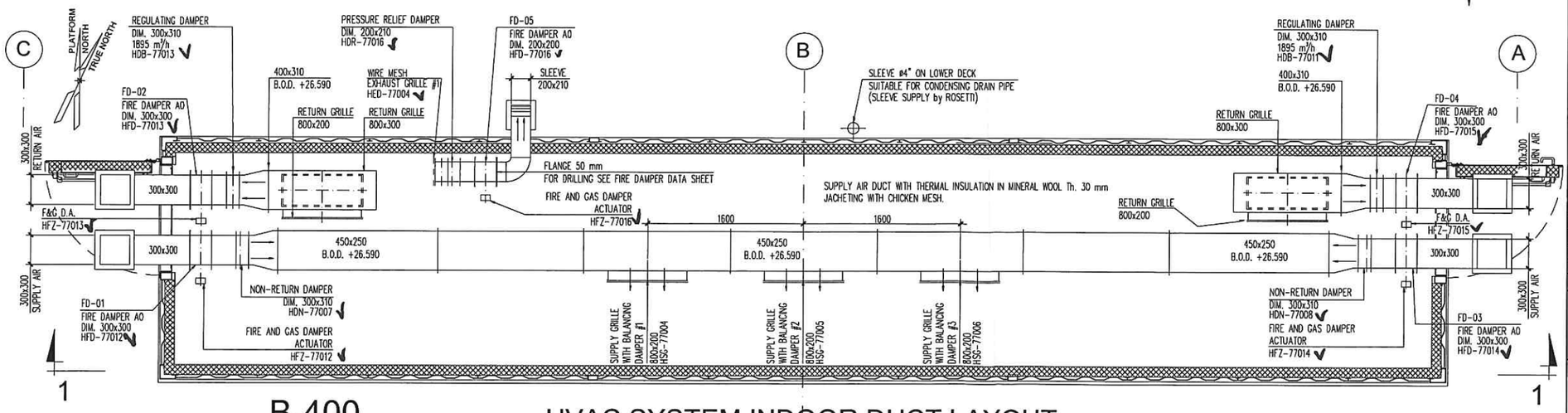
ALEX SISTEMI : Matteo Lorenzini

DRAWING NO. 1724000049-HV-DA-00067_1

REV. 01



SECTION 1-1



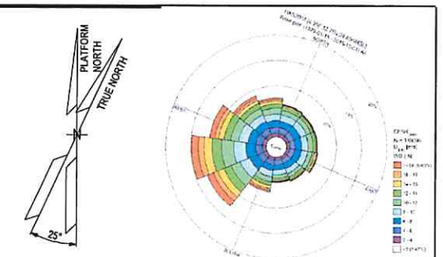
B-400

HVAC SYSTEM INDOOR DUCT LAYOUT

MASTER

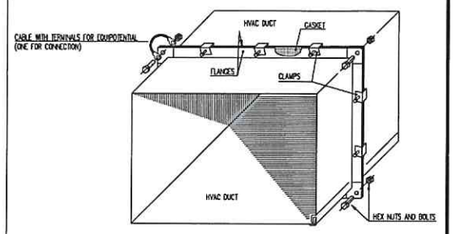
ROSETTI MARINO SpA
Stefano Linari
Quality Control Dept.
24/10/24

ALEX SISTEMI : Matteo Loredesi



NOTES

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



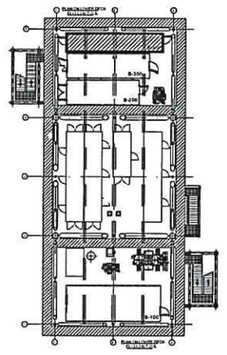
TYPICAL EQUIPOTENTIAL INSTALLING FOR FLANGE CONNECTION INDOOR AIR DUCT

Basket tray Power AISI 316L

Basket tray Instrument AISI 316L

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
01	HHU-77007	AIR HANDLING UNIT A	2100	1000	2158	850
02	HHU-77008	AIR HANDLING UNIT B	2100	1000	2158	850

KEY PLAN



ALEXSISTEMI

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	16/10/2024	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	13/06/2024	S.Z.	S.S.	M.G.	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

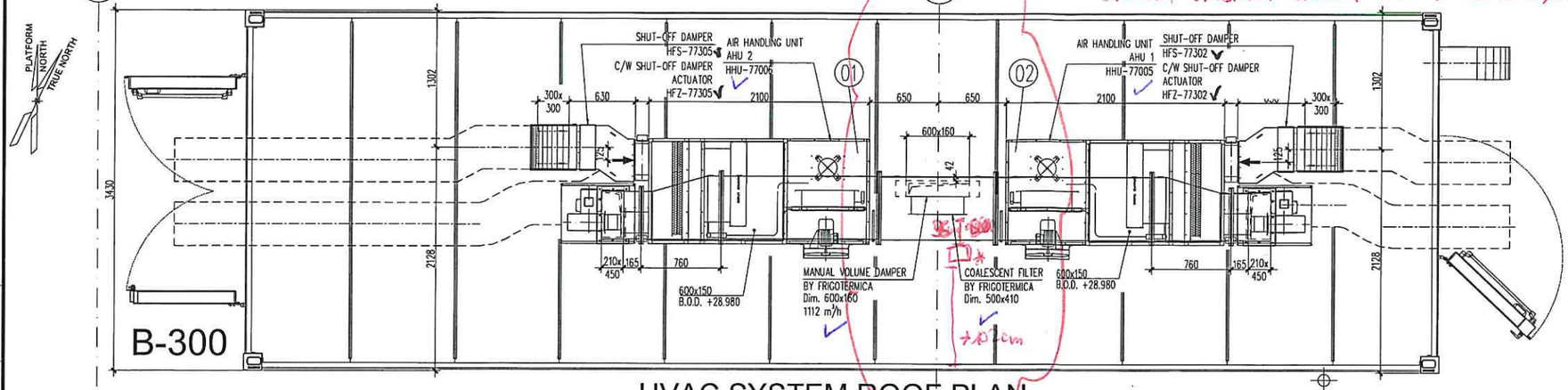
TITLE :
S.S.
MODULE B-400
HVAC SYSTEM – G.A. AND DETAILS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 25
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 16/10/2024
A1	DRAWING NO. 1724000049-HV-DA-00067	SHEET 002	REV. 01

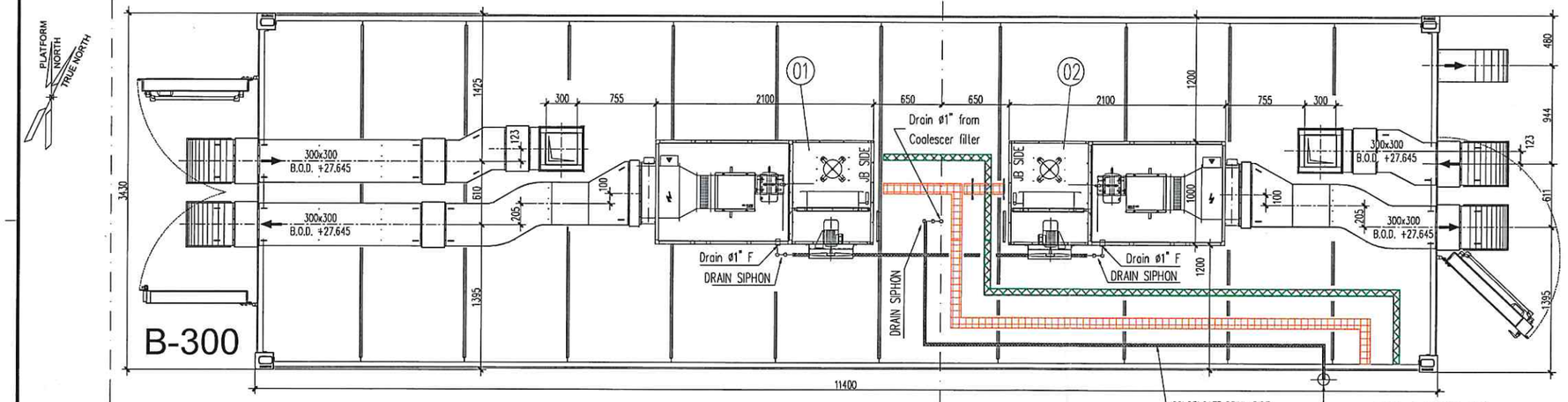
File Name : 1724000049-HV-DA-00067_1

DRAWING NO. 1724000049-HV-DA-00066_1 | REV. 01

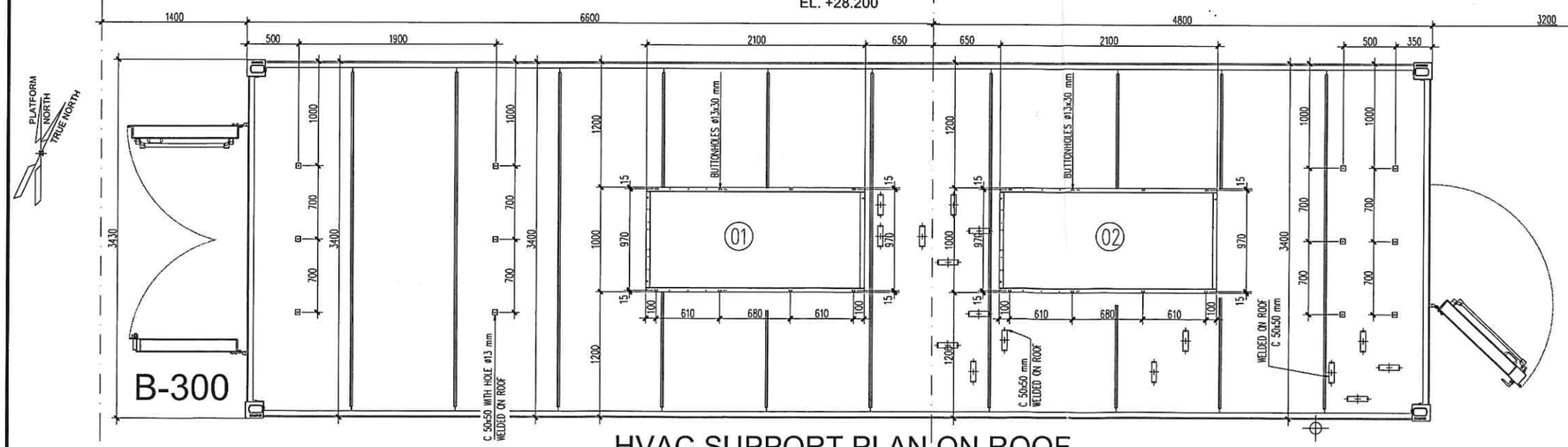
HEAT TRACING
SB: 20 x 20 cm DISTANZA FILTRO: 95 cm
STRUTTURA UNISTRUT DISTANZA BORDO MACCHINA: 102 cm



HVAC SYSTEM ROOF PLAN
EL. +28.980



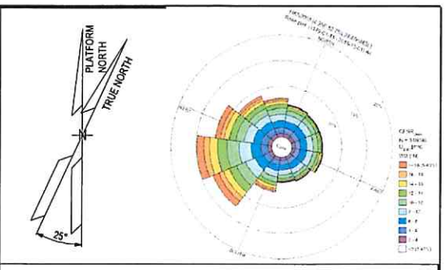
HVAC SYSTEM ROOF PLAN
EL. +28.200



HVAC SUPPORT PLAN ON ROOF
EL. +27.480

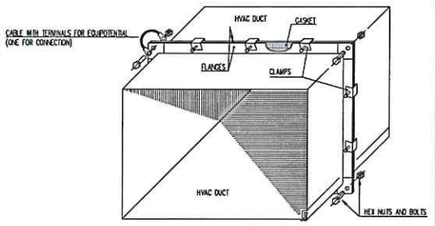
MASTER

ROSETTI MARINO SpA
Stefano Linari
Quality Control Dept.
23/10/24



NOTES

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



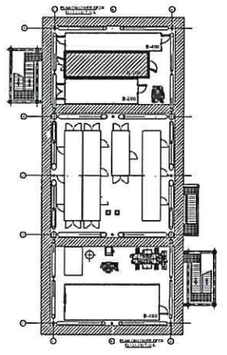
TYPICAL EQUIPOTENTIAL INSTALLING FOR FLANGE CONNECTION INDOOR AIR DUCT

Basket tray Power AISI 316L

Basket tray Instrument AISI 316L

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
01	HHU-77005	AIR HANDLING UNIT A	2100	1000	2158	850
02	HHU-77006	AIR HANDLING UNIT B	2100	1000	2158	850

KEY PLAN



ALEX SISTEMI

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	18/10/2024	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	13/06/2024	S.Z.	S.S.	M.G.	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE :
S.S.
MODULE B-300
HVAC SYSTEM – G.A. AND DETAILS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1 : 25
DRAWN M.G. | CHECKED O.A. | APPROVED C.A. | DATE 18/10/2024
A1 | DRAWING NO. 1724000049-HV-DA-00066 | SHEET 001 | REV. 01

File Name : 1724000049-HV-DA-00066_1

ALEX SISTEMI : Matteo Vecchiet

DRAWING NO. 1724000049-HV-DA-00066_1 | REV. 01

TYP.

B-300

AIR HANDLING UNIT AHU 2 HHU-77006

AIR HANDLING UNIT AHU 1 HHU-77005

COALESCENT FILTER 500x400 HCF-77003

MANUAL VOLUME DAMPER 600x160 1112 m³/h

SHUT-OFF DAMPER HFS-77306 HFS-77304 C/W SHUT-OFF DAMPER ACTUATOR HFZ-77306 HFZ-77304

SHUT-OFF DAMPER HFS-77303 HFS-77301 C/W SHUT-OFF DAMPER ACTUATOR HFZ-77303 HFZ-77301

HANGER OF DUCT

INSULATED ROCK WOOL HVAC DUCT

FD-01 FIRE DAMPER AO DIM. 300x300 HFD-77009

FD-03 FIRE DAMPER AO DIM. 300x300 HFD-77007

NON-RETURN DAMPER DIM. 300x310 HDN-77006

NON-RETURN DAMPER DIM. 300x310 HDN-77005

SUPPLY GRILLE 800x200 HSG-77007

SUPPLY GRILLE 800x200 HSG-77006

SUPPLY GRILLE 800x200 HSG-77005

SUPPLY AIR DUCT WITH THERMAL INSULATION IN MINERAL WOOL Th. 30 mm JACHETING WITH CHICKEN MESH.

U-CHANNEL, NUTS M8, WASHER, SPRING AND THREADED BAR

SUPPLY INCLUDED

SUPPLY by ROSETTI

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

11074 INTERNAL CLEARANCE

11400 OVERALL MODULE DIMENSIONS (OUTSIDE CORNER BLOCKS ON ROOF)

SECTION 1-1

B-300

PRESSURE RELIEF DAMPER DIM. 200x210 HDR-77011

WIRE MESH EXHAUST GRILLE #1 HED-77003

FD-05 FIRE DAMPER AO DIM. 200x210 HFD-77011

FLANGE 50 mm FOR DRILLING SEE FIRE DAMPER DATA SHEET

F&G D.A. HFZ-77011

FD-02 FIRE DAMPER AO DIM. 300x300 HFD-77010

FIRE AND GAS DAMPER ACTUATOR HFZ-77010

REGULATING DAMPER DIM. 300x310 1590 m³/h HDB-77010

RETURN GRILLE 800x200

RETURN GRILLE 800x300

SUPPLY AIR DUCT WITH THERMAL INSULATION IN MINERAL WOOL Th. 30 mm JACHETING WITH CHICKEN MESH.

RETURN GRILLE 800x200

RETURN GRILLE 800x300

REGULATING DAMPER DIM. 300x310 1590 m³/h HDB-77008

FD-04 FIRE DAMPER AO DIM. 300x300 HFD-77008

F&G D.A. HFZ-77008

NON-RETURN DAMPER DIM. 300x310 HDN-77006

FIRE AND GAS DAMPER ACTUATOR HFZ-77009

SUPPLY GRILLE WITH BALANCING DAMPER #3 800x200 HSG-77007

SUPPLY GRILLE WITH BALANCING DAMPER #2 800x200 HSG-77006

SUPPLY GRILLE WITH BALANCING DAMPER #1 800x200 HSG-77005

NON-RETURN DAMPER DIM. 300x310 HDN-77005

FIRE AND GAS DAMPER ACTUATOR HFZ-77007

FD-03 FIRE DAMPER AO DIM. 300x300 HFD-77007

(SLEEVE SUPPLY by ROSETTI) SUITABLE FOR CONDENSING DRAIN PIPE SLEEVE #4" ON LOWER DECK

HVAC SYSTEM INDOOR DUCT LAYOUT

PLATFORM NORTH TRUE NORTH 25°

NOTES

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

CABLE WITH TERMINALS FOR EQUIPOTENTIAL (ONE FOR CONNECTION) HVAC DUCT GASKET FLANGES CLAMPS HVAC DUCT HEX NUTS AND BOLTS

TYPICAL EQUIPOTENTIAL INSTALLING FOR FLANGE CONNECTION INDOOR AIR DUCT

Basket tray Power AISI 316L

Basket tray Instrument AISI 316L

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
01	HHU-77005	AIR HANDLING UNIT A	2100	1000	2158	850
02	HHU-77006	AIR HANDLING UNIT B	2100	1000	2158	850

KEY PLAN

ALEXSISTEMI

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	18/10/2024	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	13/06/2024	S.Z.	S.S.	M.G.	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE :
S.S.
MODULE B-300
HVAC SYSTEM – G.A. AND DETAILS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1 : 25
DRAWN M.G. | CHECKED O.A. | APPROVED C.A. | DATE 18/10/2024
A1 | DRAWING NO. 1724000049-HV-DA-00066 | SHEET 002 | REV. 01

File Name : 1724000049-HV-DA-00066_1

MASTER

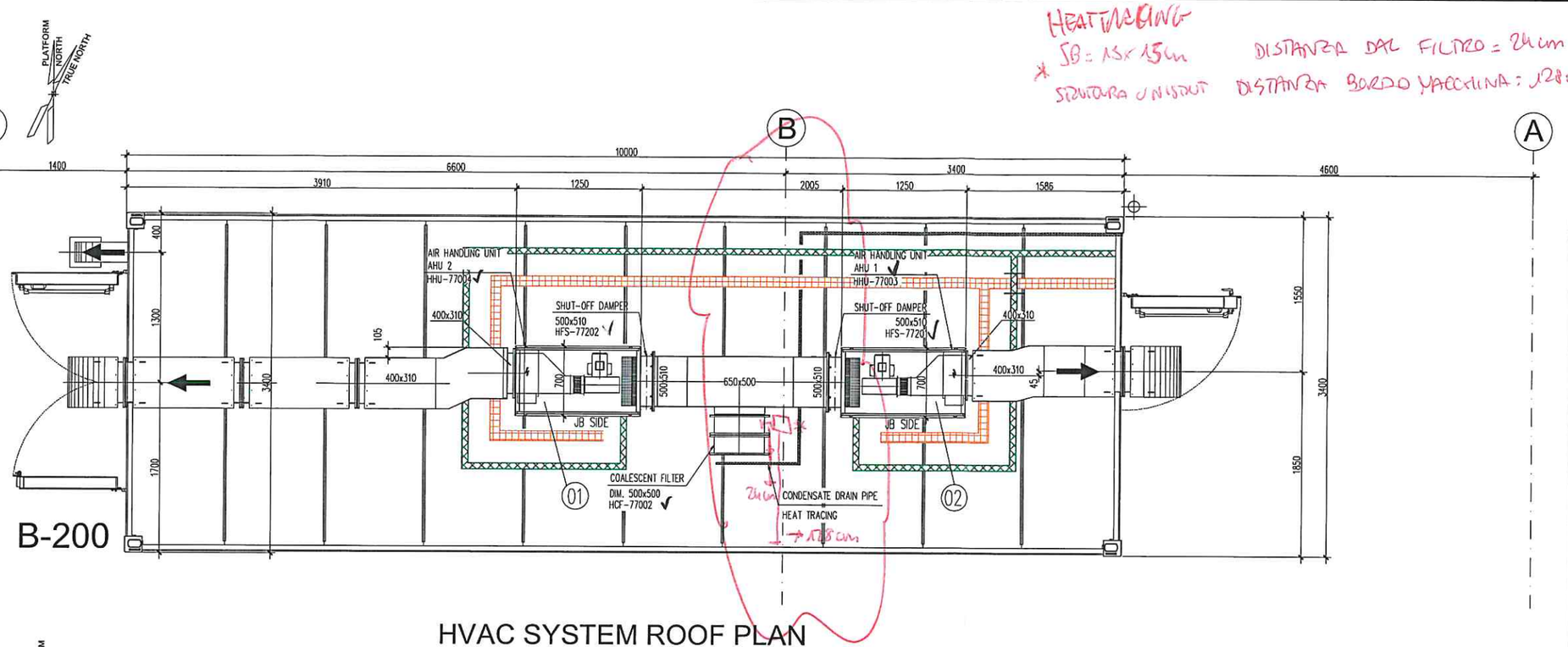
ROSETTI MARINO SpA
Stefano Linari 23/10/24
Quality Control Dept.

ALEX SISTEMI : Matteo Marchesi

DRAWING NO. 1724000049-HV-DA-00065_1

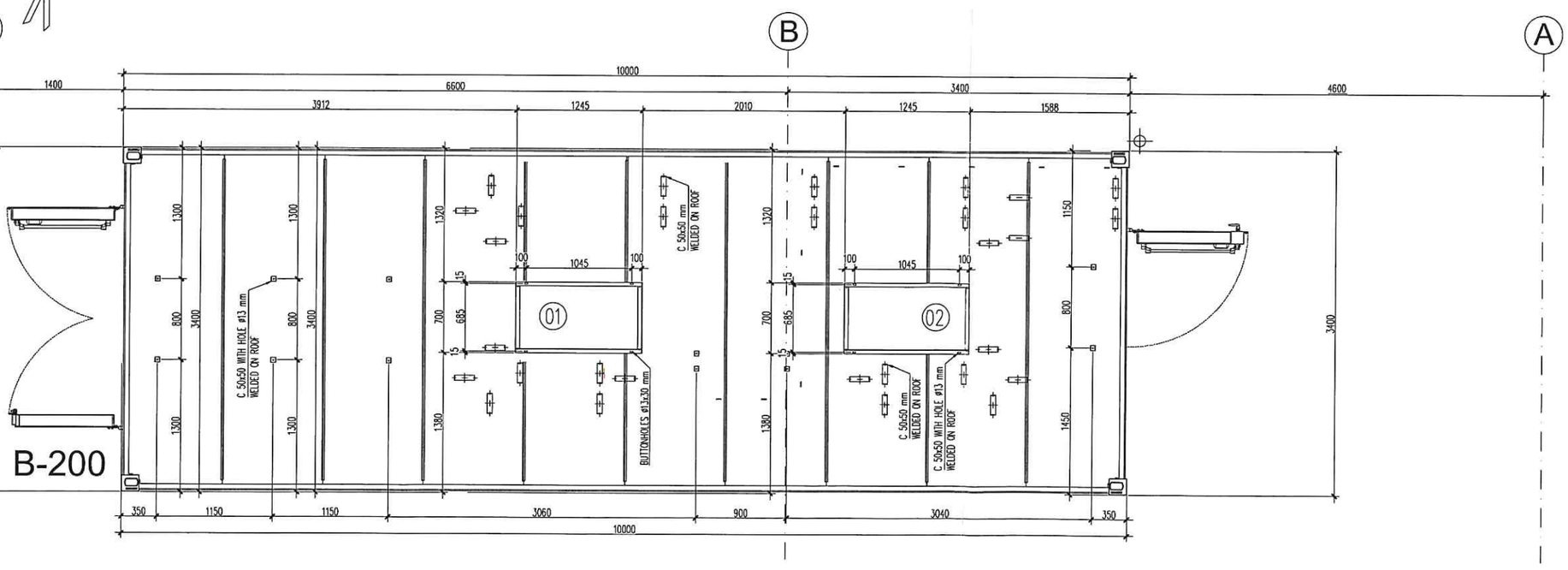
REV. 01

HEATTRACING
* JB = 15x 15cm DISTANZA DAL FILTRO = 24cm
STRUTTURA UNISTRUT DISTANZA BORDO YACHTLINA = 128cm



HVAC SYSTEM ROOF PLAN

EL. +28.800



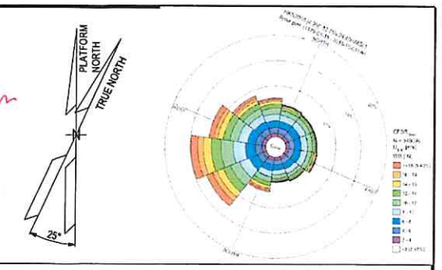
HVAC SUPPORT PLAN ON ROOF

EL. +28.050

MASTER

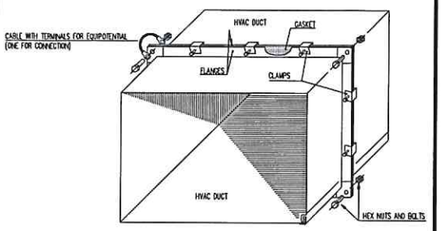
ROSETTI MARINO SpA
Stefano Linari 23/10/24
Quality Control Dept.

ALEX SISTEMI : Carlo Nardi



NOTES

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



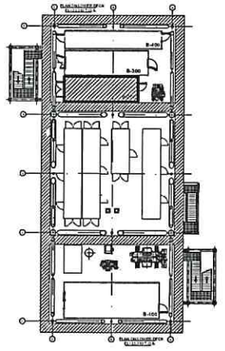
TYPICAL EQUIPOTENTIAL INSTALLING FOR FLANGE CONNECTION INDOOR AIR DUCT

Basket tray Power AISI 316L

Basket tray Instrument AISI 316L

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
01	HHU-77003	AIR HANDLING UNIT A	1250	850	900	140
02	HHU-77004	AIR HANDLING UNIT B	1250	850	900	140

KEY PLAN



ALEXSISTEMI

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	18/10/2024	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	13/06/2024	S.Z.	S.S.	M.G.	ISSUE FOR REVIEW (IFR)

CROSSWIND

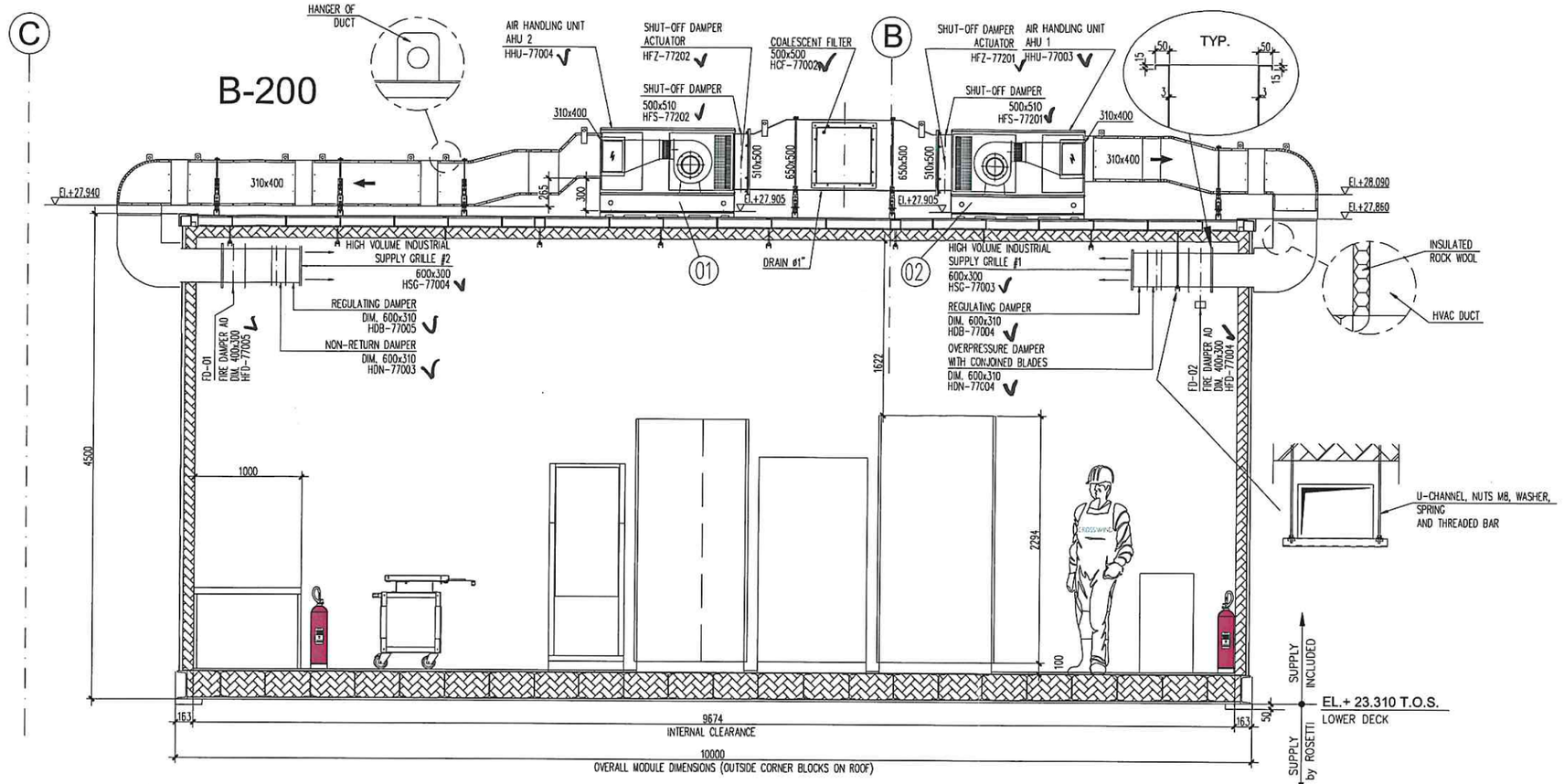
ROSETTI MARINO

TITLE :
S.S.
MODULE B-200
HVAC SYSTEM – G.A. AND DETAILS

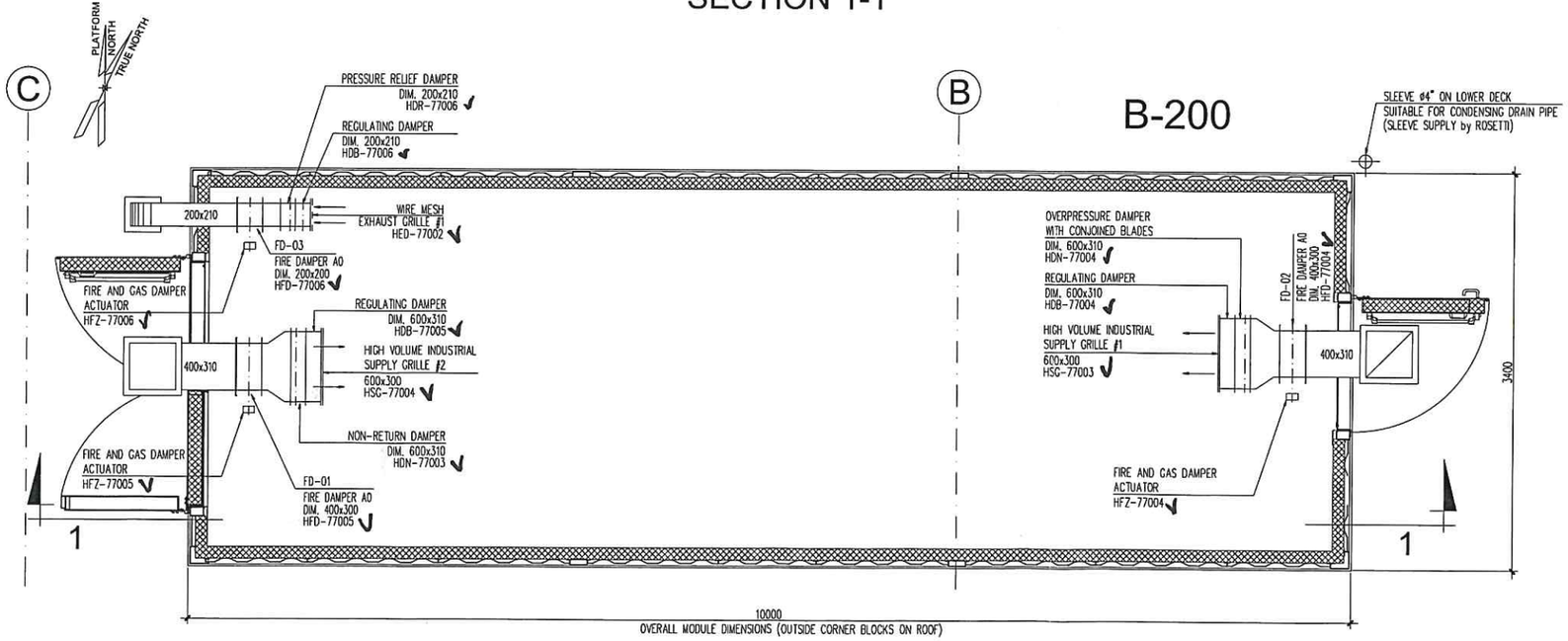
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 25
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 18/10/2024
A1	DRAWING NO. 1724000049-HV-DA-00065		SHEET 001 / REV. 01

File Name : 1724000049-HV-DA-00065_1

DRAWING NO. 1724000049-HV-DA-00065_1 | REV. 01



SECTION 1-1

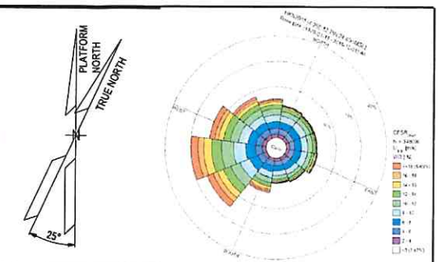


HVAC SYSTEM INDOOR DUCT LAYOUT

MASTER

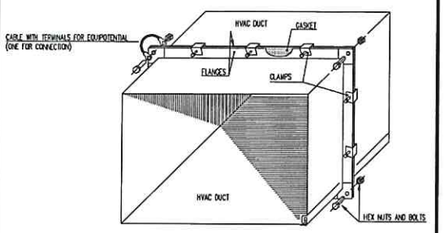
ROSETTI MARINO SpA
Stefano Linari 23/10/24
Quality Control Dept.

ALEX SISTEMI : Matteo Lazzari



NOTES

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



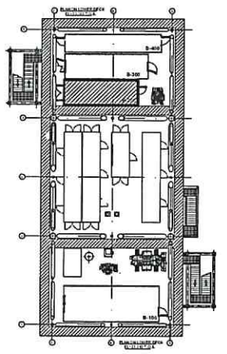
TYPICAL EQUIPOTENTIAL INSTALLING FOR FLANGE CONNECTION INDOOR AIR DUCT

Basket tray Power AISI 316L

Basket tray Instrument AISI 316L

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
01	HHU-77003	AIR HANDLING UNIT A	1250	850	900	140
02	HHU-77004	AIR HANDLING UNIT B	1250	850	900	140

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	18/10/2024	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	13/06/2024	S.Z.	S.S.	M.G.	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE :
S.S.
MODULE B-200
HVAC SYSTEM – G.A. AND DETAILS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 25
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 18/10/2024
A1	DRAWING NO. 1724000049-HV-DA-00065	SHEET 002	REV. 01

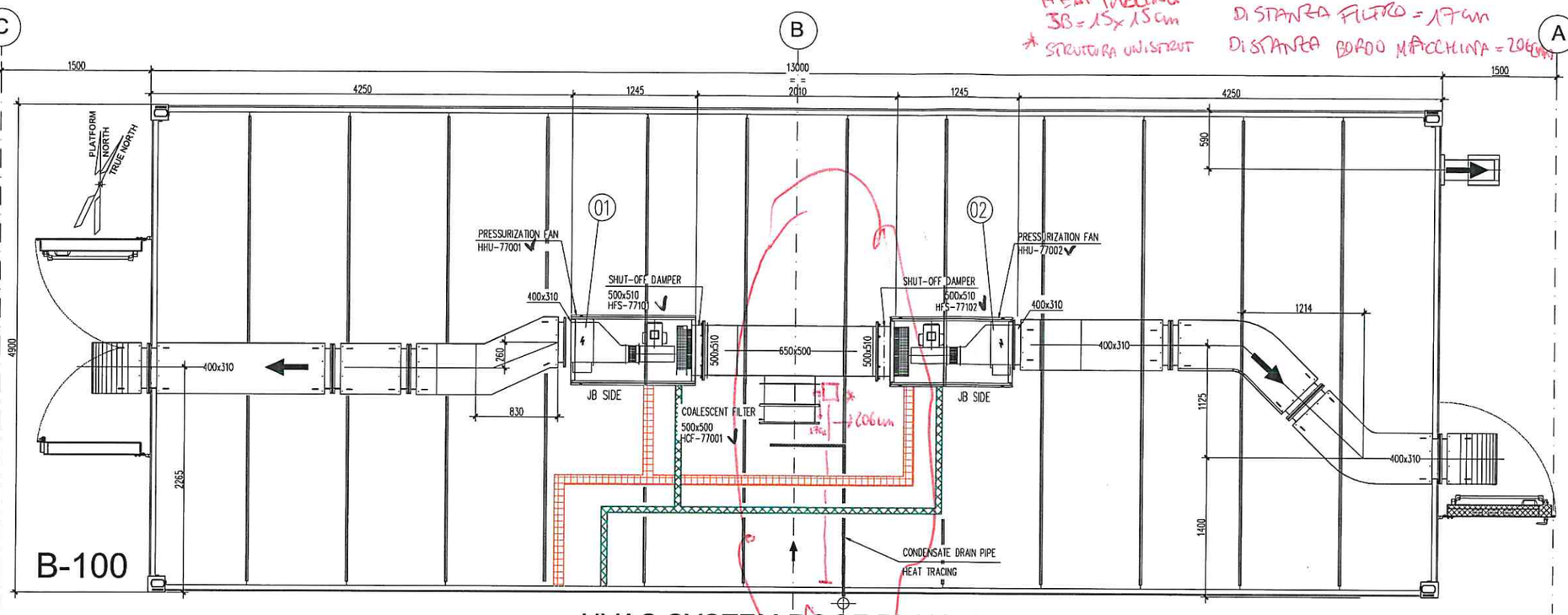
File Name : 1724000049-HV-DA-00065_1

DRAWING NO. 1724000049-HV-DA-00064_1

REV. 01

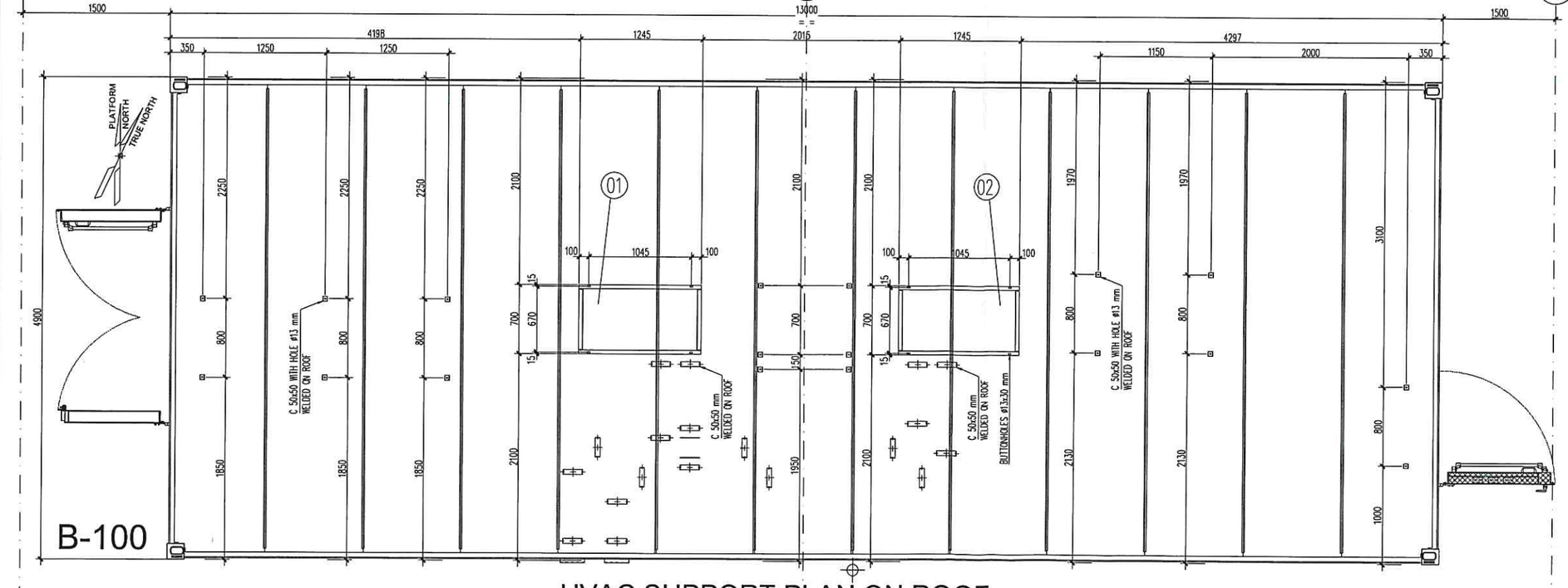
HEAT TRACING
3B = 15x15 cm
* STRUTTURA UNISTRUT

DISTANZA FILTRO = 17cm
DISTANZA BORDO MACCHINA = 206cm



HVAC SYSTEM ROOF PLAN

EL. +28.800



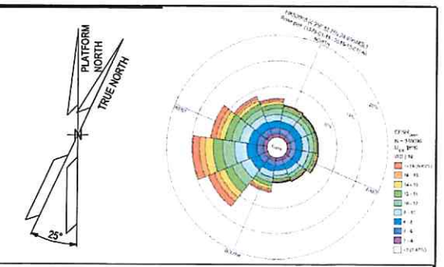
HVAC SUPPORT PLAN ON ROOF

EL. +28.050

MASTER

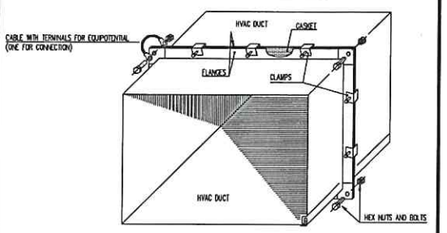
ROSETTI MARINO SpA
Stefano Linari 23/10/24
Quality Control Dept.

ALEX SISTEMI :



NOTES

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



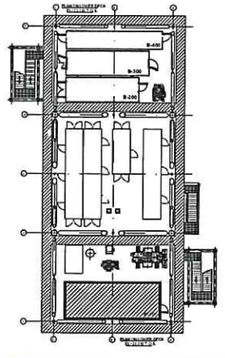
TYPICAL EQUIPOTENTIAL INSTALLING FOR FLANGE CONNECTION INDOOR AIR DUCT

Basket tray Power AISI 316L

Basket tray Instrument AISI 316L

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
01	HHU-77001	AIR HANDLING UNIT A	1250	850	900	140
02	HHU-77002	AIR HANDLING UNIT B	1250	850	900	140

KEY PLAN



ALEXSISTEMI

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	18/10/2024	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	13/06/2024	S.Z.	S.S.	M.G.	ISSUE FOR REVIEW (IFR)

CROSSWIND

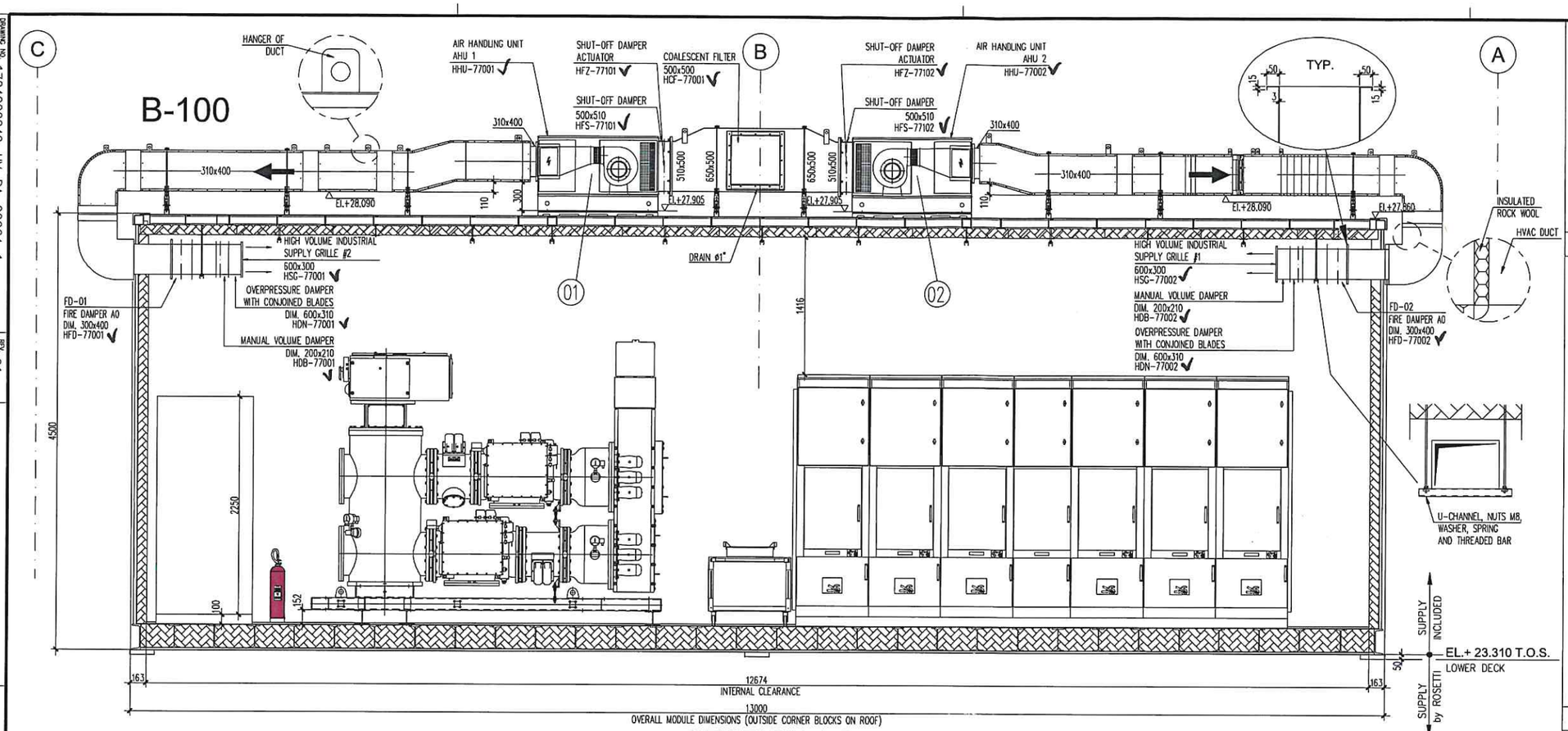
ROSETTI MARINO

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

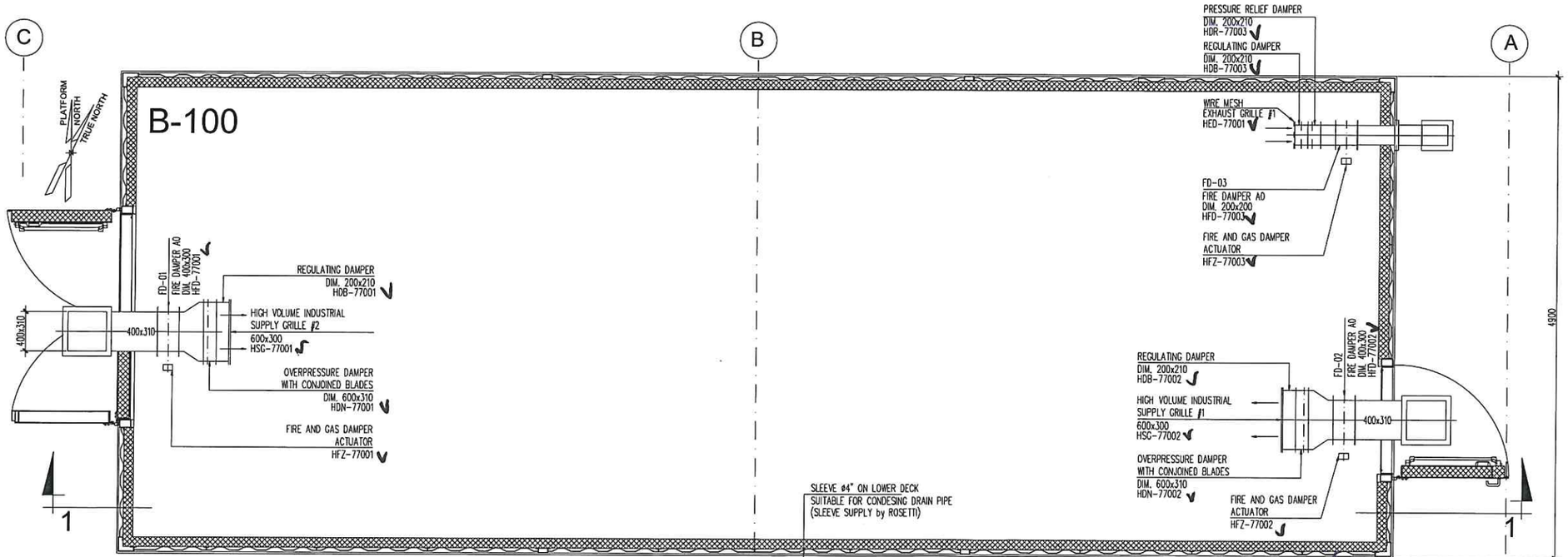
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 25
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 18/10/2024
A1	DRAWING NO. 1724000049-HV-DA-00064		SHEET 001 / REV. 01

File Name : 1724000049-HV-DA-00064_1

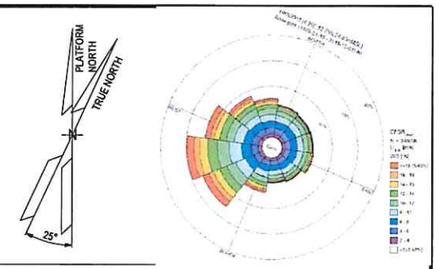
DRAWING NO. 1724000049-HV-DA-00064_1 REV. 01



SECTION 1-1

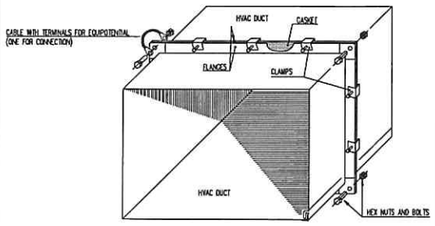


HVAC SYSTEM INDOOR DUCT LAYOUT



NOTES

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



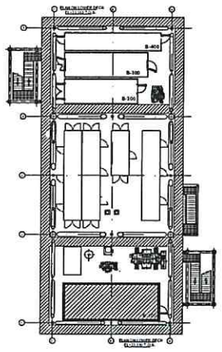
TYPICAL EQUIPOTENTIAL INSTALLING FOR FLANGE CONNECTION INDOOR AIR DUCT

Basket tray Power AISI 316L

Basket tray Instrument AISI 316L

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
01	HHU-77001	AIR HANDLING UNIT A	1250	850	900	140
02	HHU-77002	AIR HANDLING UNIT B	1250	850	900	140

KEY PLAN



ALEXSISTEMI

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	18/10/2024	M.G.	O.A.	C.A.	ISSUE FOR REVIEW (IFR)
00	13/06/2024	S.Z.	S.S.	M.G.	ISSUE FOR REVIEW (IFR)

CROSSWIND — ROSETTI MARINO

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

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 25
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 18/10/2024
A1	DRAWING NO. 1724000049-HV-DA-00064	SHEET 002	REV. 01

File Name : 1724000049-HV-DA-00064_1

MASTER

ROSETTI MARINO SpA
Stefano Linari
Quality Control Dept.
23/10/24

ALEX SISTEMI : Matteo Mocchi

B-100 – ATTACH. 1

ALEXSISTEMI spa

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV =ISO 9001=

Doc. Name: **Dimensional Check and Visual Inspection**		*Report No.01*
OUR JOB X176-24X	Date 24/07/2024	Page 1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION : ON SITE ☒ OFF SITE ☐

DATE OF TEST: 24/07/2024

REFERENCE DRAWING: 1724000049-AR-DA-00014 / 1724000049-ST-DD-00010 / 1724000049-AR-DD-00018

REFERENCE DOCUMENT: ISO 17637 / EEMUA 158

Inspection List	YES	NO	N.A.
Verificare tutte le quote di seguito indicate a disegno:			
NORTH VIEW	✓		
EAST VIEW	✓		
SOUT VIEW	✓		
WEST VIEW	✓		
TOP VIEW	✓		
SECTION A-A	✓		
SECTION B-B	✓		
SECTION C-C	✓		
SECTION D-D	✓		
SECTION E-E	✓		
BASEFRAME LOCATION	✓		

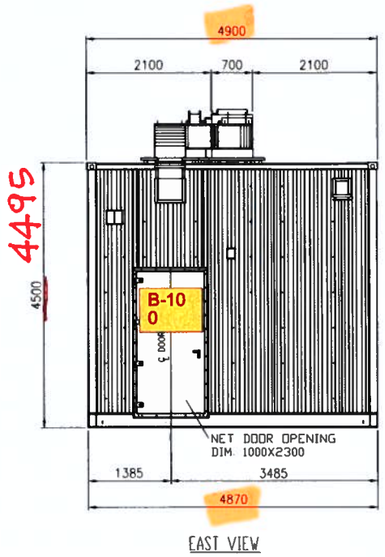
Comments:

DWG attached.

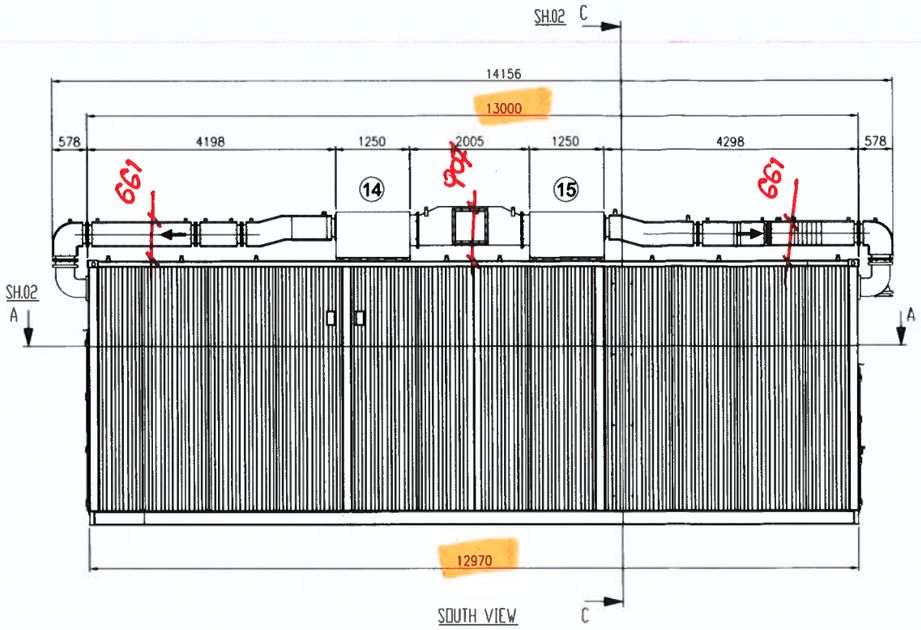
ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	COICEA CUTTALIN ROSETTI MARINO	x CROSSWIND		

Mod.P13.1

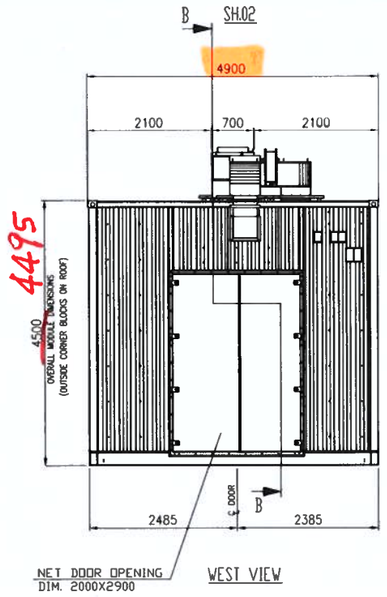
DRAWING NO. 1724000049-AR-DA-00014 REV. 02



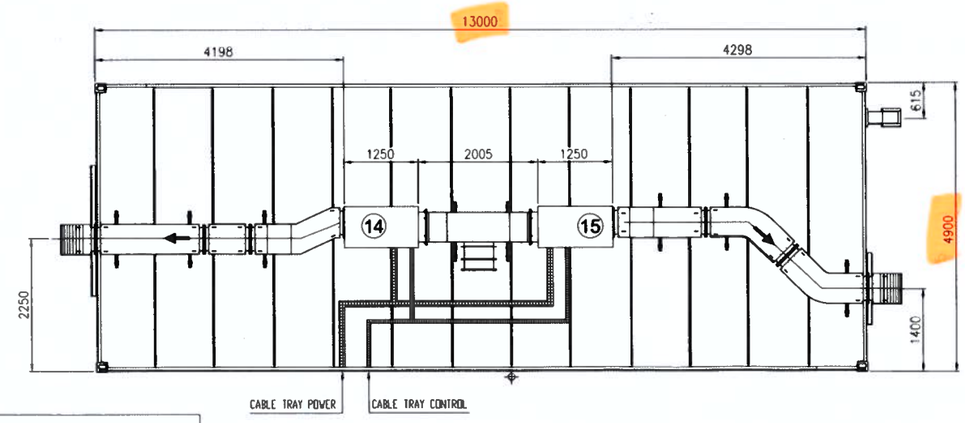
EAST VIEW



SOUTH VIEW



WEST VIEW



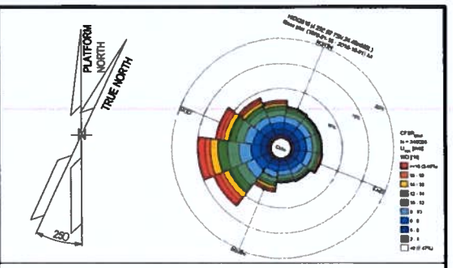
TOP VIEW

EQUIPMENT LIST

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

MASTER COPY
INTERNAL TEST

02



NOTE

1) ALL DIMENSIONS ARE IM MM.
~~2) INTERNAL LIGHTS DIMENSION AND QUANTITY TO BE DEFINE AFTER ADVANCE ENGINEERING~~
~~3) GROUDING SYSTEM WILL BE ADDED IN NEXT REVISION~~

remove Note 2 and 3 typical for all sh.

REFERENCE

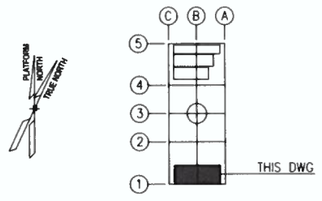
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00064
"B-100" DETAILED DRAWING	1724000049-AR-DD-00018
PAINTING PROCEDURE	1724000049-MAT-PRO-00004

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI s.r.l.

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

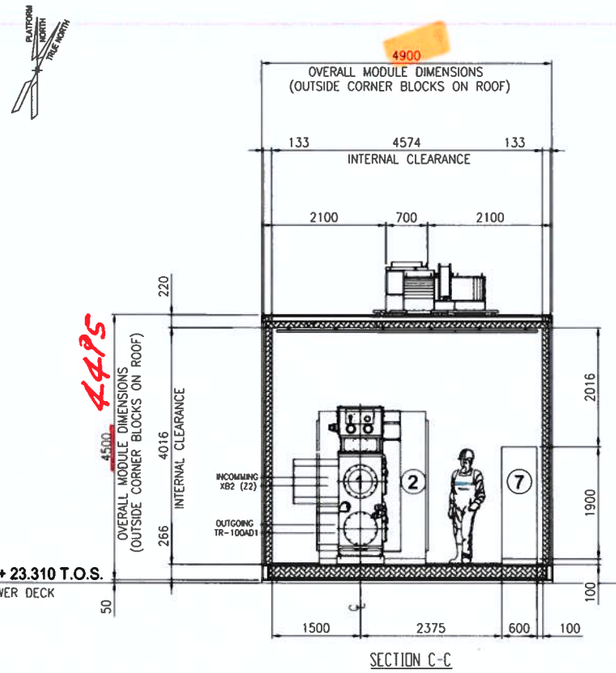
CROSSWIND — ROSETTI MARINO

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

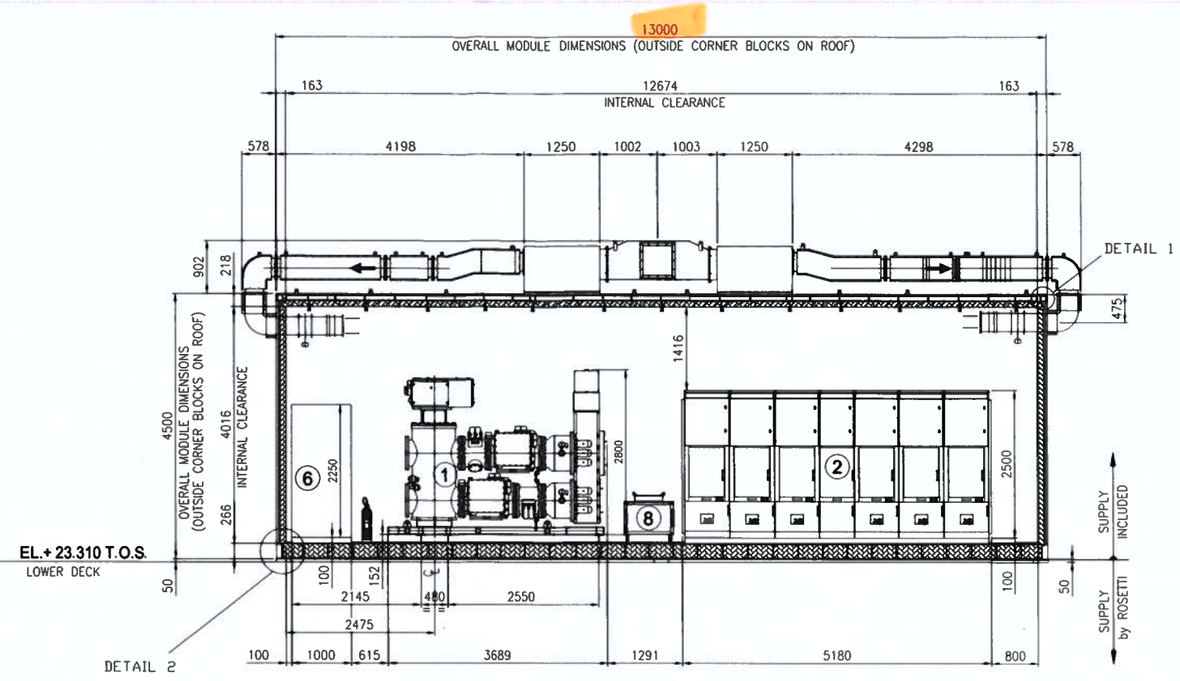
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 28/06/24
A1	DRAWING NO. 1724000049-AR-DA-00014	SHEET 001	REV. 02

File Name : 1724000049-AR-DA-00014-REV.02

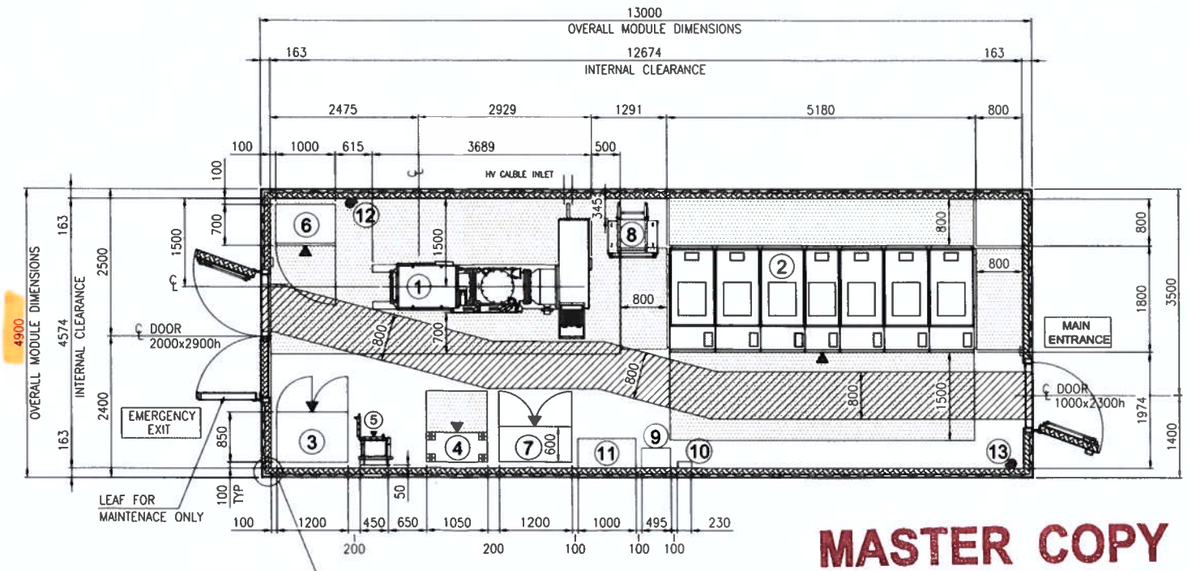
DRAWING NO 1724000049-AR-DA-00014 REV. 02



SECTION C-C



SECTION B-B



SECTION A-A

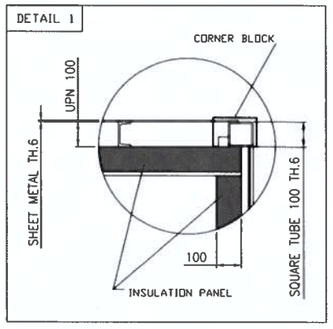
EQUIPMENT LAYOUT

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

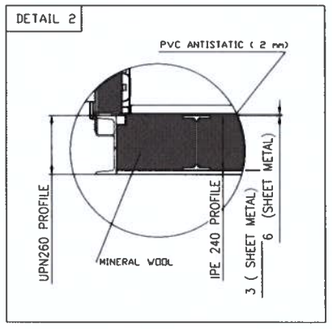
BOTTOM PLAN

02

DETAIL 1

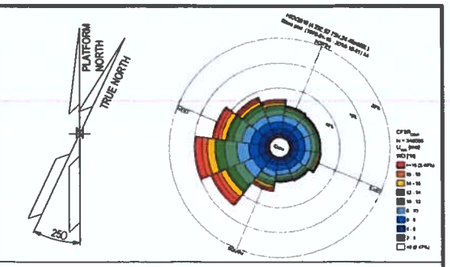


DETAIL 2



EQUIPMENT LIST

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



NOTES

1) ALL DIMENSIONS ARE IM MM.
2) INTERNAL LIGHTS DIMENSION AND QUANTITY TO BE DEFINE AFTER ADVANCE ENGINEERING
3) GROUDING SYSTEM WILL BE ADDED IN NEXT REVISION

REFERENCE

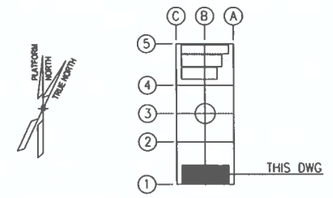
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00064
"B-100" DETAILED DRAWING	1724000049-AR-DD-00018
PAINTING PROCEDURE	1724000049-MAT-PRO-00004

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI

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

CROSSWIND

ROSETTI MARINO

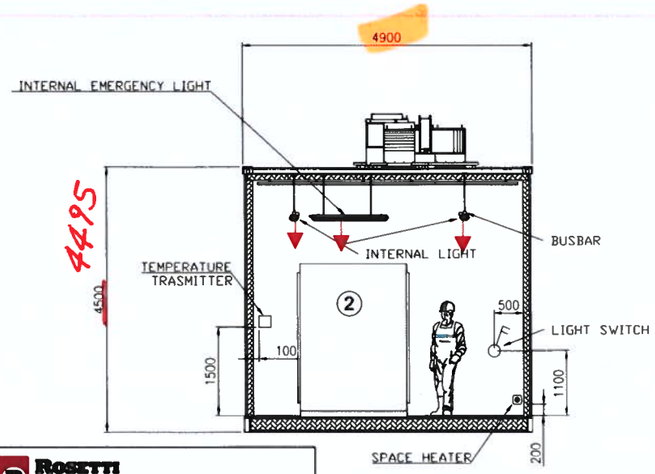
TITLE : BASE LOAD POWER HUB (BLPH)
B-100 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 28/06/24
A1	DRAWING NO. 1724000049-AR-DA-00014	SHEET 002	REV. 02

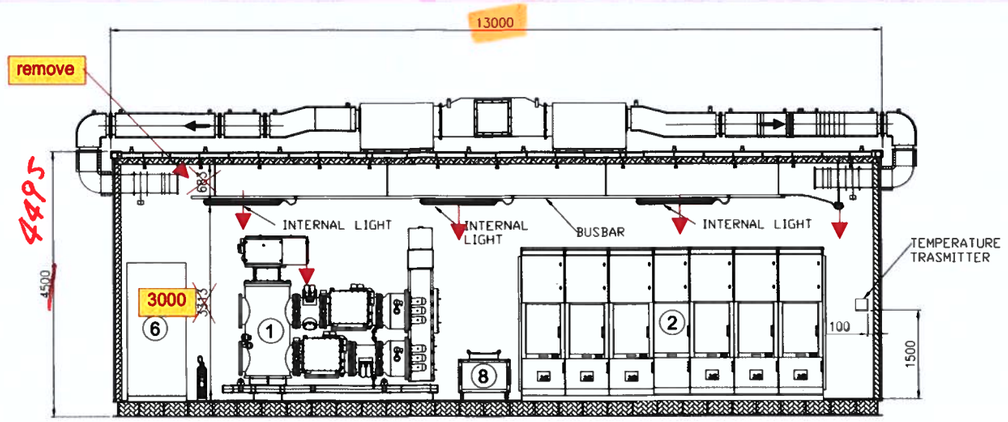
File Name : 1724000049-AR-DA-00014-REV.02

MASTER COPY
INTERNAL TEST

DRAWING NO. 1724000049-AR-DA-00014 REV. 02

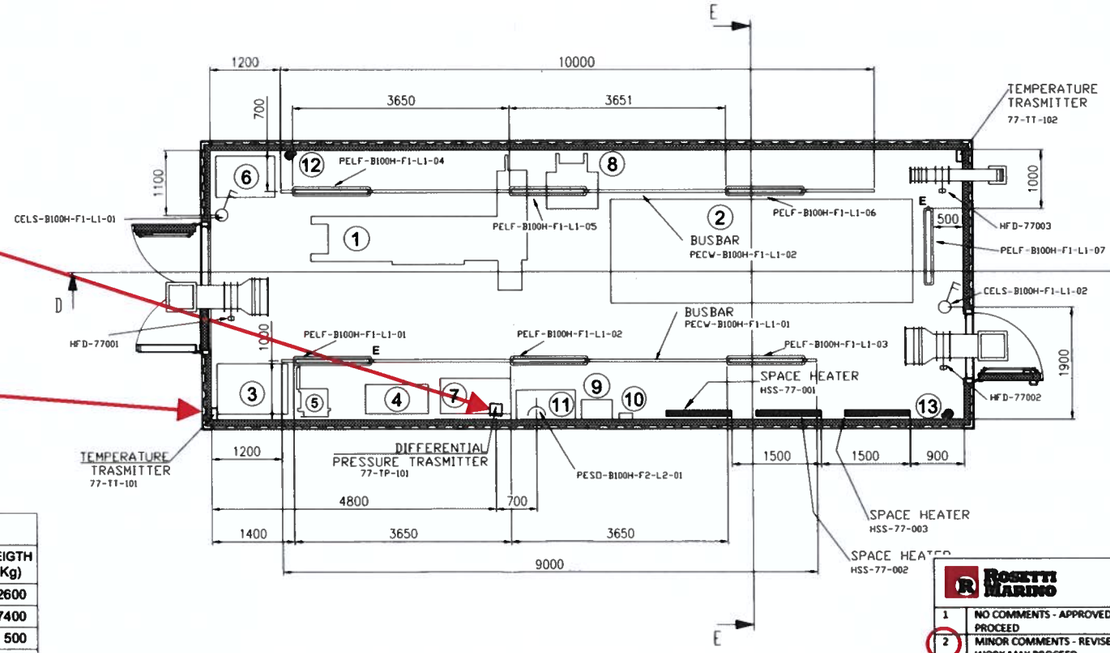


SECTION E-E



SECTION D-D

Verify that TAGs used on this document are the same used on all other documents



A better placing for differential pressure probe need to be evaluated, both for maintenance purposes and better differential pressure detection, preferably not behind other equipments.

A better placing for temperature probe need to be evaluated, both for maintenance purposes and better temperature detection, preferably not behind other equipments.

ROSETTI MARINO	
1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED

NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.

Sign	Date
R. Bossi	10/07/2024

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGTH (Kg)
1	HNA6-AFA70	66kV SWITCHGEAR (GIS)	3689	2025	2651	2600
2	SG-100D1	6.6kV SWITCHGEAR	5180	1800	2500	7400
3	UP-200F1	DC UPS PANEL	1200	850	2105	500
4	BA-200F1	DC UPS BATTERY RACK	1050	510	1272	522
5	CB-200F1	ISOLATOR FOR DC UPS	600	300	800	100
6	CP-100E1	66 kV SWITCHGEAR LOCAL CONTROL PANEL	1000	700	2100	2100
7	B100-HSB-001	DISTRIBUTION & HVAC PANEL - HV ~~MV~~ ROOM	1200	600	1900	400
8	-	SERVICE TROLLEY FOR 6.6kV SWITCHGEAR	943	862	874	70
9	-	TOOL BOX	495	335	920	20
10	-	ELECTRIC SAFETY KIT	230	110	280	20
11	-	TABLE	1000	500	750	50
12	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
14	~~HHU-77081A~~	AIR HANDLING UNIT A	1250	850	900	140
15	~~HHU-77081B~~	AIR HANDLING UNIT B	1250	850	900	140
16	HSS-77-001	SPACE HEATER 1	184	145	1100	5
17	HSS-77-002	SPACE HEATER 2	184	145	1100	5
18	HSS-77-003	SPACE HEATER 3	184	145	1100	5

Note for lighting system:
The position of the lamps indicated is to be considered the theoretical one, the final one will be confirmed in the As-Built issue.

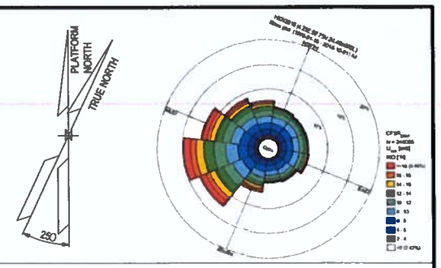
Revise TAG according to all documents (P&IDs, HVAC & Lighting Panel, HVAC GA & Details, etc.)

ROSETTI MARINO	
1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED

NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.

Sign	Date
R. Bossi	10/07/2024

MASTER COPY
INTERNAL TEST



NOTE

1) ALL DIMENSIONS ARE IM MM.
2) INTERNAL LIGHTS DIMENSION AND QUANTITY TO BE DEFINE AFTER ADVANCE ENGINEERING.
3) GROUDING SYSTEM WILL BE ADDED IN NEXT REVISION

REFERENCE

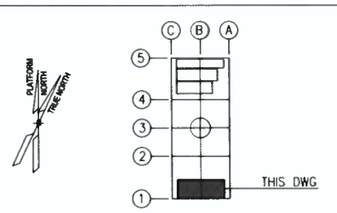
DOCUMENT TITLE	DOCUMENT NUMBER
"B-100" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00064
"B-100" DETAILED DRAWING	1724000049-AR-DD-00018
PAINTING PROCEDURE	1724000049-MAT-PRO-00004

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI

Next revision: 03 Accepted For Construction (AFC)

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

CROSSWIND — ROSETTI MARINO

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

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 28/06/24
A1	DRAWING NO. 1724000049-AR-DA-00014	SHEET 003	REV. 02

File Name : 1724000049-AR-DA-00014-REV.02

DRAWING NO. 1724000049-ST-DD-00010 REV. 01

13000

OVERALL MODULE DIMENSIONS (OUTSIDE CORNER BLOCKS ON ROOF)

250 | 6175 | 200 | 6175 | 250

250 | 250 | UNP260 | 250 | 250

UNP260 — UNP260

4423 — 4900 — OVERALL MODULE DIMENSIONS (OUTSIDE CORNER BLOCKS ON ROOF)

4970 | 4483 | 120 | 13.5

250 | 250 | UNP260 | 250 | 250

No. 2 HOLES Ø18
FOR M16 SCREW
AT EACH CORNER
(SCREW SUPPLY by ROSETTI)

250 | 200 | 250 | 250

HOLES | 40 | 12970 | 40

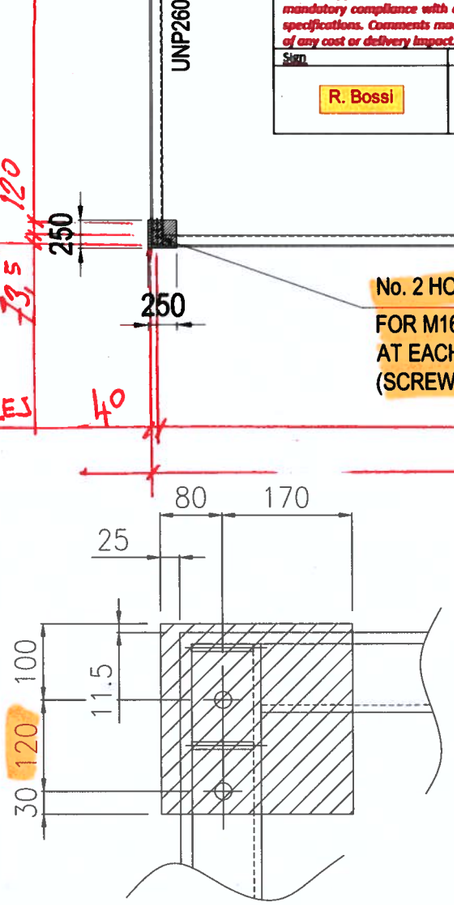
ROSETTI MARINO

1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED

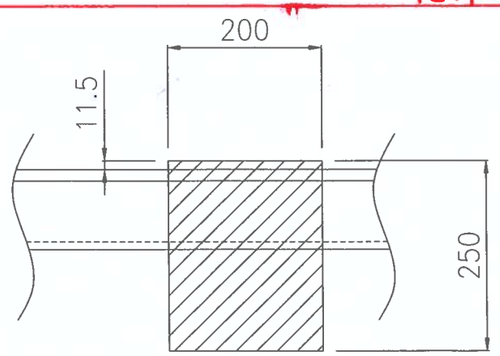
NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.

Sign	Date
R. Bossi	07/06/2024

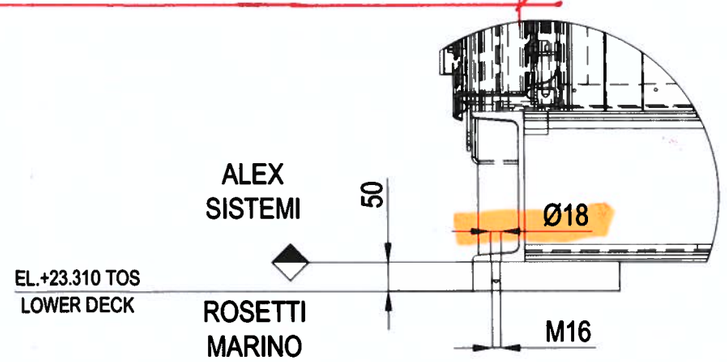
B-100



TYPICAL CORNER PLATE POSITION

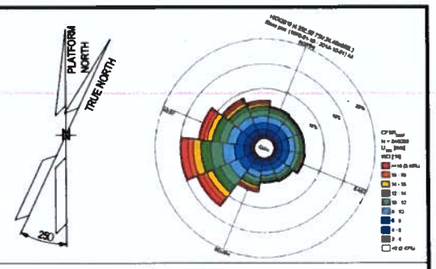


TYPICAL CENTRAL PLATE POSITION



TYPICAL FIXING DETAIL
SCALE 1 : 10

MASTER COPY
INTERNAL TEST



NOTE

1) ALL DIMENSIONS ARE IM MM.

REFERENCE

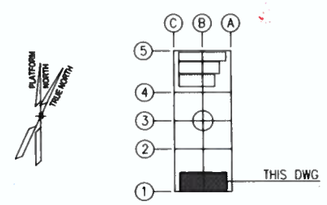
DOCUMENT TITLE	DOCUMENT NUMBER
B-100 STRUCTURAL CALCULATION - E&I SHELTERS	1724000049-ST-CA-00006

LEGEND

Plate 50 mm thk. welded on
Lower Deck - Supply by Rosetti

HOLDS

KEY PLAN



ALEXSISTEMI

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	03/06/24	M.G.	M.R.	O.A.	APPROVED FOR CONSTRUCTION (AFC)
00	16/04/24	M.G.	M.R.	O.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND — ROSETTI MARINO

TITLE : B-100 FOUNDATION DRAWING - E&I SHELTERS

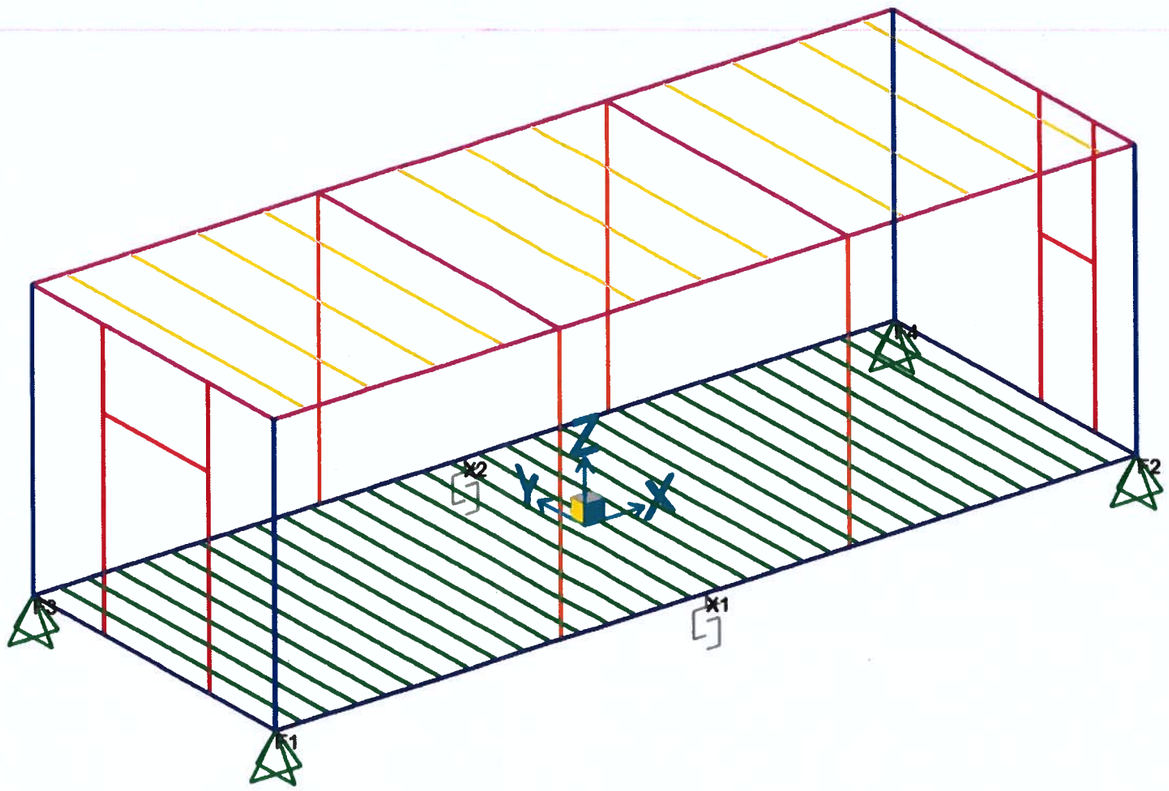
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE N.A.
DRAWN M.G.	CHECKED M.R.	APPROVED O.A.	DATE 03/06/24
A1	DRAWING NO. 1724000049-ST-DD-00010		SHEET 001/002 REV. 01

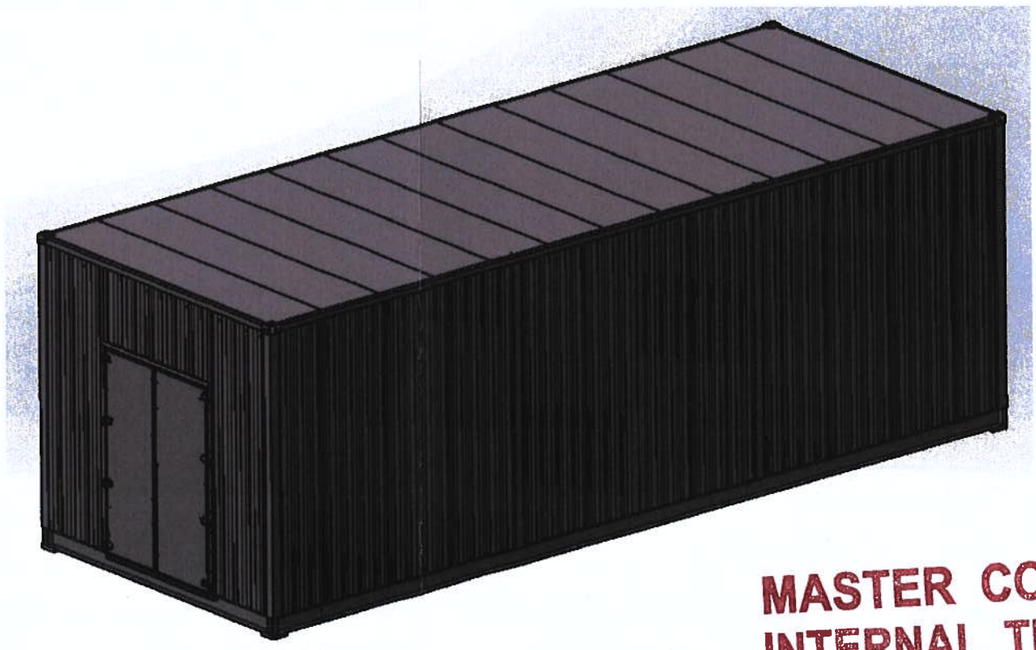
File Name : 1724000049-ST-DD-00010-REV01

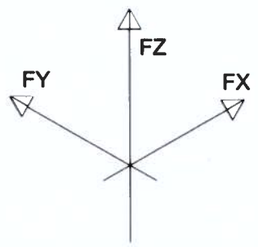
DRAWING NO. 1724000049-ST-DD-00010 REV. 01

TABLE: Joint Reactions

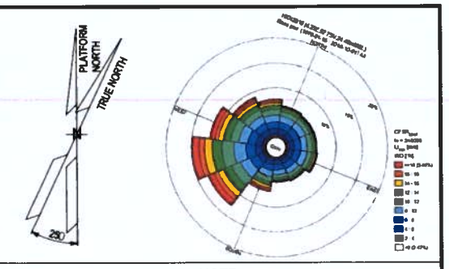
Joint	OutputCase	CaseType	StepType	Fx	Fy	Fz	Mx	My	Mz
Text	Text	Text	Text	KN	KN	KN	KN-m	KN-m	KN-m
F1	DEAD	NonStatic	Last Step	12,82	4,16	31,39	0,00	0,00	0,00
F1	SD	NonStatic	Last Step	16,38	5,33	21,73	0,00	0,00	0,00
F1	LIVE	NonStatic	Last Step	35,09	-0,18	78,19	0,00	0,00	0,00
F1	WIND X	NonStatic	Last Step	-19,31	1,03	-16,62	0,00	0,00	0,00
F1	WIND Y	NonStatic	Last Step	-16,35	-34,39	-38,28	0,00	0,00	0,00
F1	NOT X	NonStatic	Last Step	-0,10	-0,02	-0,03	0,00	0,00	0,00
F1	NOT Y	NonStatic	Last Step	-0,04	-0,10	-0,07	0,00	0,00	0,00
F1	SLU LIVE	Combination		93,68	12,99	190,55	0,00	0,00	0,00
F1	SLU WIND X	Combination		44,02	4,30	118,95	0,00	0,00	0,00
F1	SLU WIND Y	Combination		47,58	-38,21	92,96	0,00	0,00	0,00
F1	SLE LIVE	Combination		64,15	9,20	131,20	0,00	0,00	0,00
F1	SLE WIND X	Combination		4,84	0,09	24,91	0,00	0,00	0,00
F1	SLE WIND Y	Combination		6,92	-24,71	9,75	0,00	0,00	0,00
F2	DEAD	NonStatic	Last Step	-12,89	4,23	31,70	0,00	0,00	0,00
F2	SD	NonStatic	Last Step	-16,73	4,65	38,99	0,00	0,00	0,00
F2	LIVE	NonStatic	Last Step	-34,60	2,23	65,52	0,00	0,00	0,00
F2	WIND X	NonStatic	Last Step	-2,48	-2,84	-9,63	0,00	0,00	0,00
F2	WIND Y	NonStatic	Last Step	16,10	-35,47	-38,40	0,00	0,00	0,00
F2	NOT X	NonStatic	Last Step	-0,10	0,02	0,03	0,00	0,00	0,00
F2	NOT Y	NonStatic	Last Step	0,04	-0,10	-0,07	0,00	0,00	0,00
F2	SLU LIVE	Combination		-93,82	15,71	197,91	0,00	0,00	0,00
F2	SLU WIND X	Combination		-77,15	-0,20	142,47	0,00	0,00	0,00
F2	SLU WIND Y	Combination		-54,85	-39,35	107,95	0,00	0,00	0,00
F2	SLE LIVE	Combination		-64,28	11,02	136,16	0,00	0,00	0,00
F2	SLE WIND X	Combination		-27,33	-4,69	49,50	0,00	0,00	0,00
F2	SLE WIND Y	Combination		-14,32	-27,53	29,36	0,00	0,00	0,00
F3	DEAD	NonStatic	Last Step	12,94	-4,19	31,46	0,00	0,00	0,00
F3	SD	NonStatic	Last Step	16,46	-5,46	21,91	0,00	0,00	0,00
F3	LIVE	NonStatic	Last Step	34,14	0,36	76,92	0,00	0,00	0,00
F3	WIND X	NonStatic	Last Step	-19,52	-1,01	-16,62	0,00	0,00	0,00
F3	WIND Y	NonStatic	Last Step	2,37	-24,36	12,03	0,00	0,00	0,00
F3	NOT X	NonStatic	Last Step	-0,10	0,02	-0,03	0,00	0,00	0,00
F3	NOT Y	NonStatic	Last Step	0,04	-0,10	0,07	0,00	0,00	0,00
F3	SLU LIVE	Combination		92,65	-13,21	189,20	0,00	0,00	0,00
F3	SLU WIND X	Combination		48,71	-22,20	133,26	0,00	0,00	0,00
F3	SLU WIND Y	Combination		74,98	-50,22	167,64	0,00	0,00	0,00
F3	SLE LIVE	Combination		63,49	-9,37	130,33	0,00	0,00	0,00
F3	SLE WIND X	Combination		10,53	-18,05	40,41	0,00	0,00	0,00
F3	SLE WIND Y	Combination		25,85	-34,40	60,46	0,00	0,00	0,00
F4	DEAD	NonStatic	Last Step	-12,88	-4,20	30,83	0,00	0,00	0,00
F4	SD	NonStatic	Last Step	-16,11	-4,52	37,51	0,00	0,00	0,00
F4	LIVE	NonStatic	Last Step	-34,62	-2,41	65,64	0,00	0,00	0,00
F4	WIND X	NonStatic	Last Step	-2,36	2,82	-9,63	0,00	0,00	0,00
F4	WIND Y	NonStatic	Last Step	-2,12	-23,11	12,15	0,00	0,00	0,00
F4	NOT X	NonStatic	Last Step	-0,10	-0,02	0,03	0,00	0,00	0,00
F4	NOT Y	NonStatic	Last Step	-0,04	-0,10	0,07	0,00	0,00	0,00
F4	SLU LIVE	Combination		-93,03	-16,01	194,92	0,00	0,00	0,00
F4	SLU WIND X	Combination		-81,63	-17,62	154,59	0,00	0,00	0,00
F4	SLU WIND Y	Combination		-81,34	-48,74	180,72	0,00	0,00	0,00
F4	SLE LIVE	Combination		-63,76	-11,25	134,07	0,00	0,00	0,00
F4	SLE WIND X	Combination		-32,13	-12,95	62,45	0,00	0,00	0,00
F4	SLE WIND Y	Combination		-31,96	-31,10	77,70	0,00	0,00	0,00
X1	DEAD	NonStatic	Last Step	0,00	0,01	37,72	0,00	0,00	0,00
X1	SD	NonStatic	Last Step	0,00	0,01	44,32	0,00	0,00	0,00
X1	LIVE	NonStatic	Last Step	0,00	0,08	103,90	0,01	0,00	0,00
X1	WIND X	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X1	WIND Y	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X1	NOT X	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X1	NOT Y	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X1	SLU LIVE	Combination		0,00	0,14	271,37	0,01	0,00	0,00
X1	SLU WIND X	Combination		0,00	0,11	224,62	0,01	0,00	0,00
X1	SLU WIND Y	Combination		0,00	0,11	224,62	0,01	0,00	0,00
X1	SLE LIVE	Combination		0,00	0,10	185,94	0,01	0,00	0,00
X1	SLE WIND X	Combination		0,00	0,02	82,05	0,00	0,00	0,00
X1	SLE WIND Y	Combination		0,00	0,02	82,05	0,00	0,00	0,00
X2	DEAD	NonStatic	Last Step	0,00	-0,01	37,74	0,00	0,00	0,00
X2	SD	NonStatic	Last Step	0,00	-0,01	43,58	0,00	0,00	0,00
X2	LIVE	NonStatic	Last Step	0,00	-0,08	102,92	-0,01	0,00	0,00
X2	WIND X	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X2	WIND Y	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X2	NOT X	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X2	NOT Y	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X2	SLU LIVE	Combination		0,00	-0,14	268,80	-0,01	0,00	0,00
X2	SLU WIND X	Combination		0,00	-0,10	222,49	-0,01	0,00	0,00
X2	SLU WIND Y	Combination		0,00	-0,10	222,49	-0,01	0,00	0,00
X2	SLE LIVE	Combination		0,00	-0,09	184,23	-0,01	0,00	0,00
X2	SLE WIND X	Combination		0,00	-0,02	81,32	0,00	0,00	0,00
X2	SLE WIND Y	Combination		0,00	-0,02	81,32	0,00	0,00	0,00







MASTER COPY
INTERNAL TEST



NOTE

1) ALL DIMENSIONS ARE IM MM.

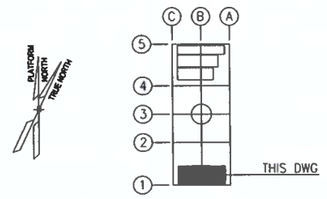
REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
B-100 STRUCTURAL CALCULATION - E&I SHELTERS	1724000049-ST-CA-00006

LEGEND

HOLDS

KEY PLAN



ALEXSISTEMI spa

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	03/06/24	M.G.	M.R.	O.A.	APPROVED FOR CONSTRUCTION (AFC)
00	16/04/24	M.G.	M.R.	O.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND

ROSETTI MARINO

TITLE : B-100 FOUNDATION DRAWING - E&I SHELTERS

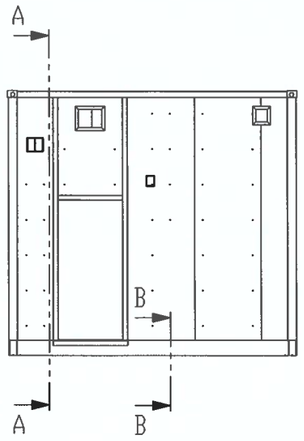
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE N.A.
DRAWN M.G.	CHECKED M.R.	APPROVED O.A.	DATE 03/06/24
A1	DRAWING NO. 1724000049-ST-DD-00010	SHEET 002/002	REV. 01

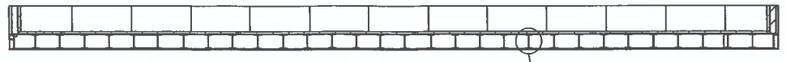
File Name : 1724000049-ST-DD-00010-REV.01

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

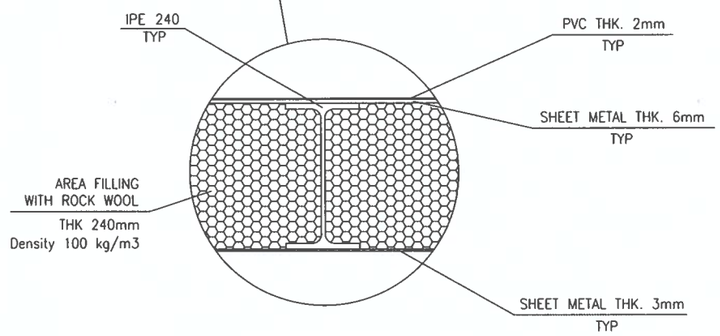
MODULE B-100

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

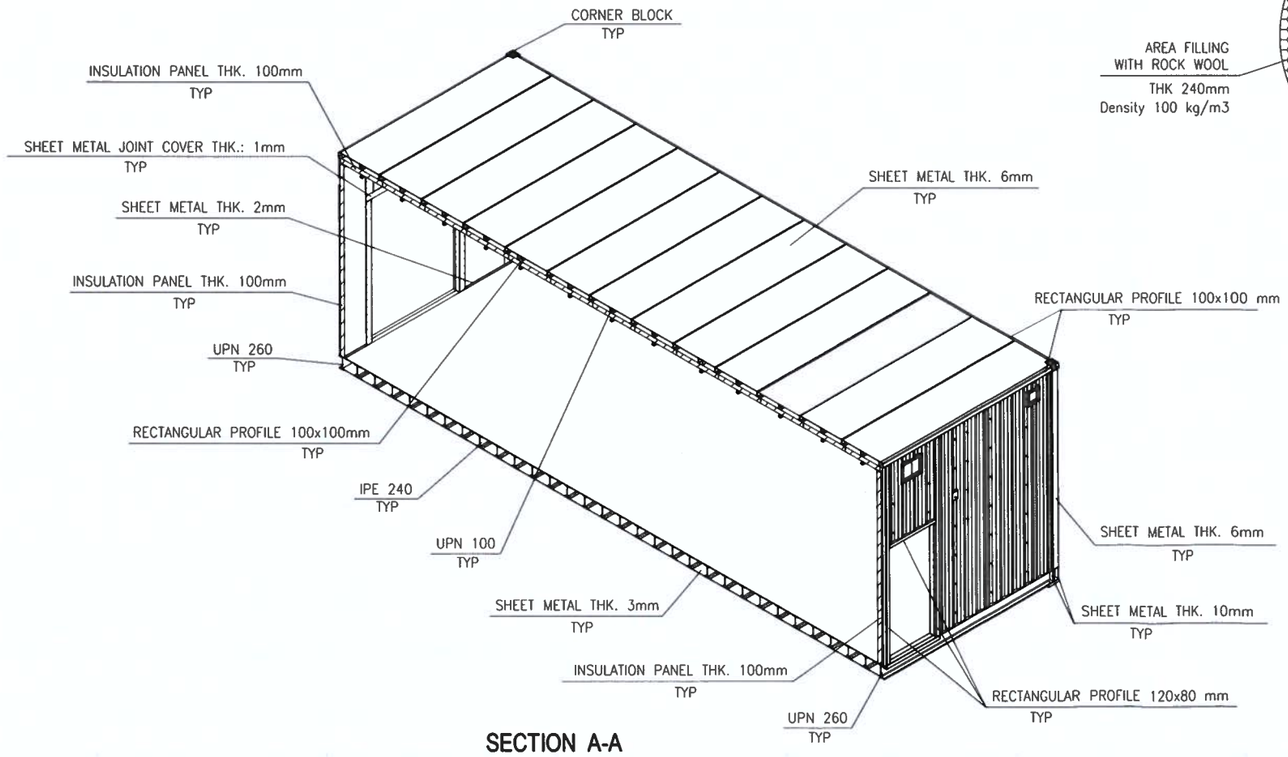




SECTION B-B

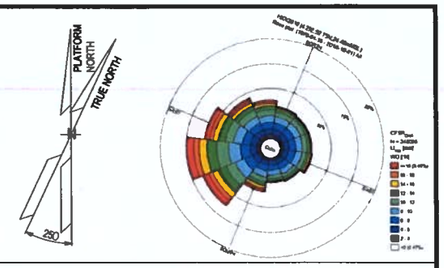


DETAIL "C"



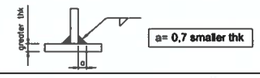
SECTION A-A

MASTER COPY
INTERNAL TEST



NOTES

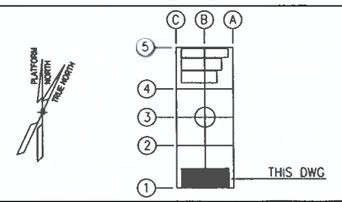
1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D.1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



LEGEND

HOLDS

KEY PLAN



ALEXSISTEMI spa

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

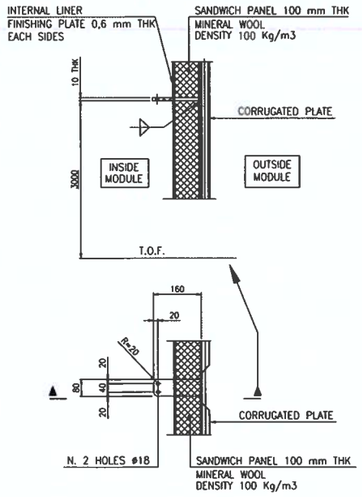
CROSSWIND | ROSETTI MARINO

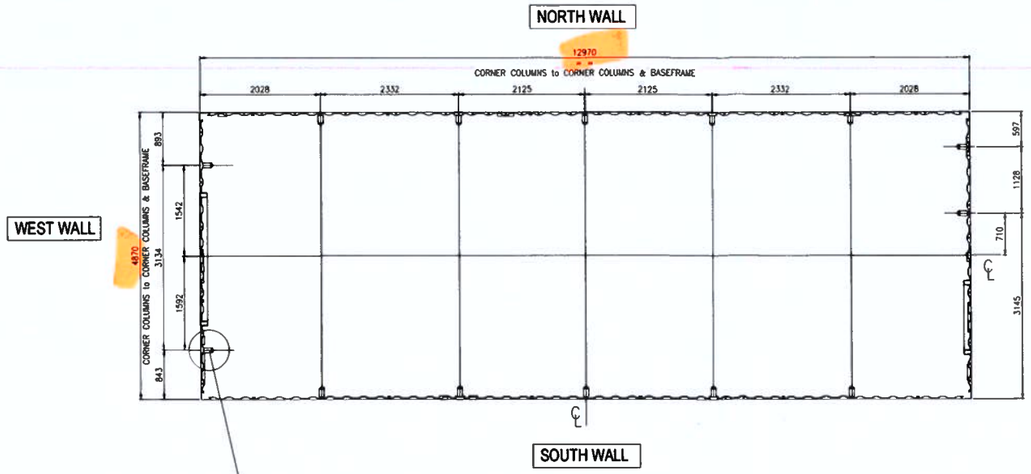
TITLE :
B-100 DETAILED DRAWINGS-E&I SHELTERS

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

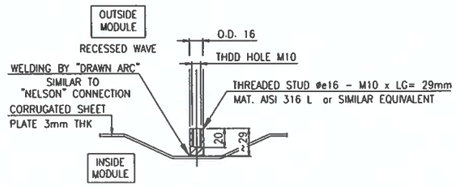
File Name : 1724000049-AR-DD-00018-REV.02

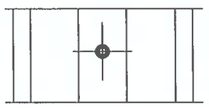
DRAWING NO 1724000049-AR-DD-00018 REV. 02



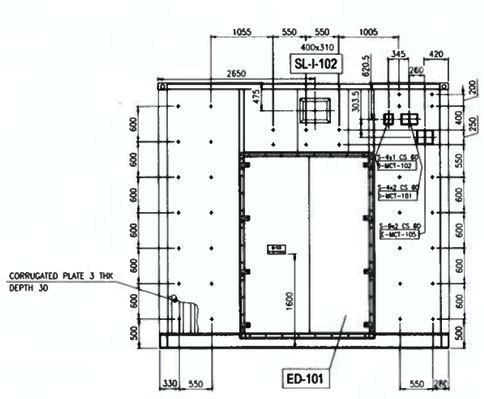


MODULE B-100
INTERNAL SEA FASTENING PLATES PLAN

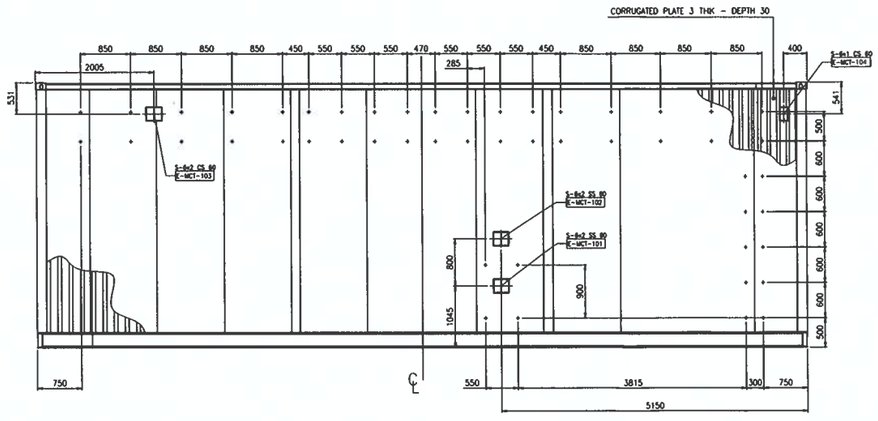




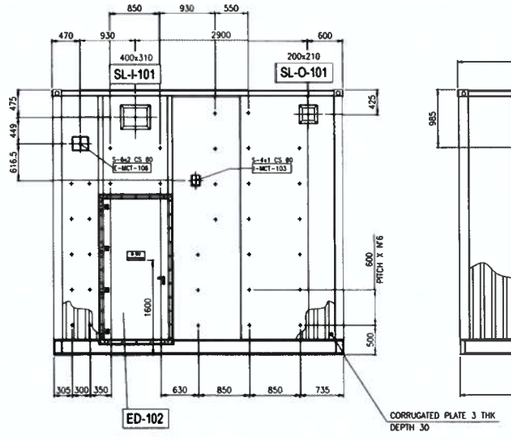
THREADED STUD INSTALLATION



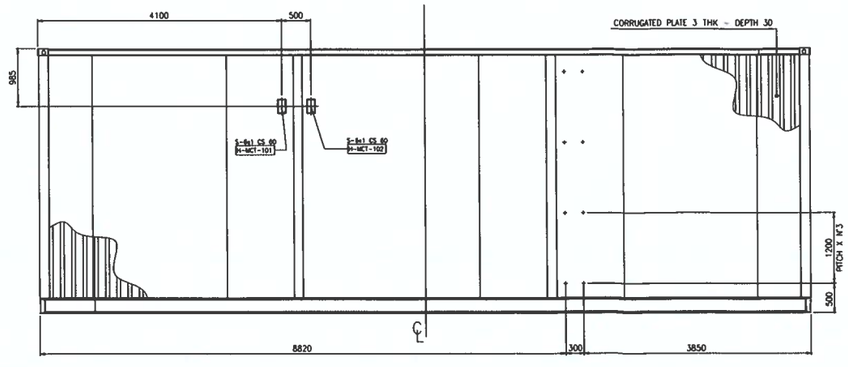
VIEW OF WEST WALL



VIEW OF NORTH WALL



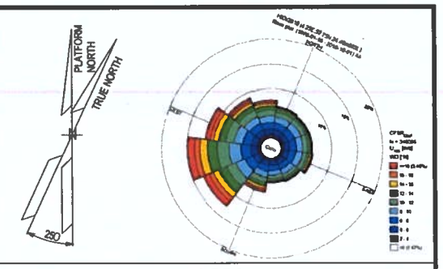
VIEW OF EAST WALL



VIEW OF SOUTH WALL

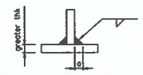
MASTER COPY
INTERNAL TEST

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



NOTES

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



a= 0,7 smaller thk

LEGEND

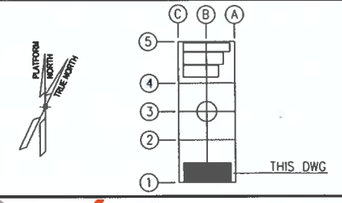
THREADED STUD ø16 - M10 x LG= 29mm
T.O.F. TOP OF FLOOR

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

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

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

KEY PLAN



MCT LIST

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

ALEXSISTEMI

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

CROSSWIND — ROSETTI MARINO

TITLE :
B-100 DETAILED DRAWINGS-E&I SHELTERS

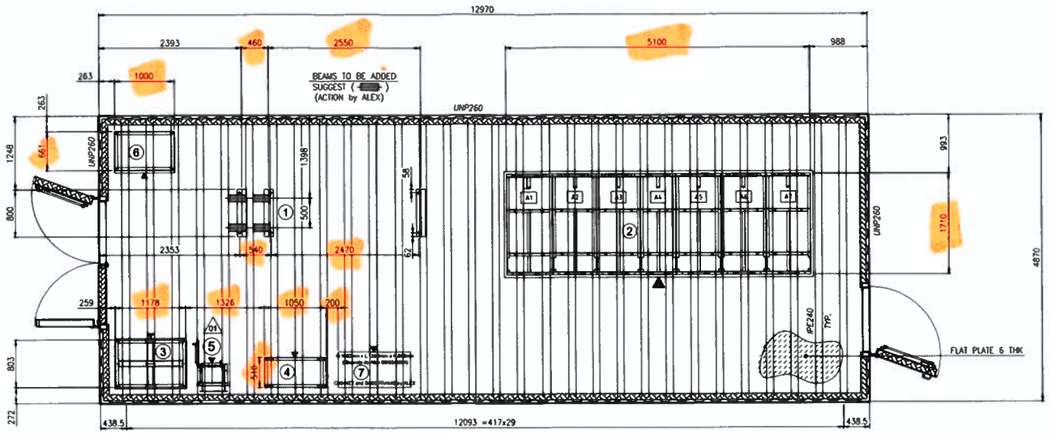
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00018	SHEET 002	REV. 02

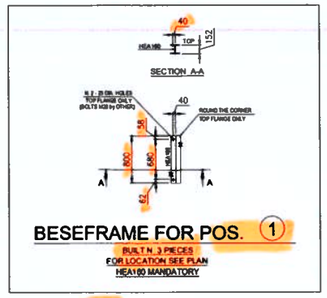
File Name : 1724000049-AR-DD-00018-REV.02

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

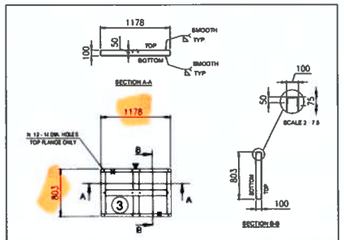
B-100
I&T EQUIPMENT ROOM
BASEFRAME LOCATION PLAN

MASTER COPY
INTERNAL TEST

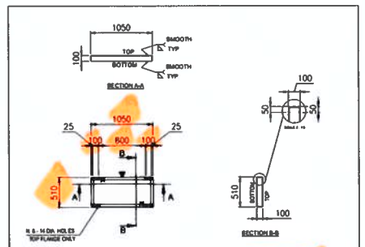




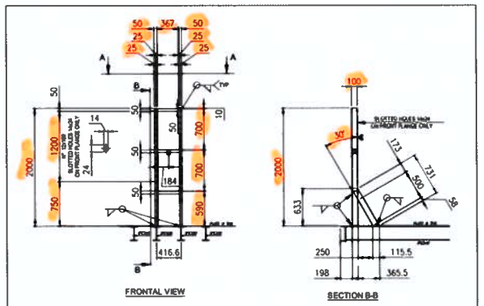
BESEFRAME FOR POS. 1
BUILT N. 3 PIECES
FOR LOCATION SEE PLAN
HEA180 MANDATORY



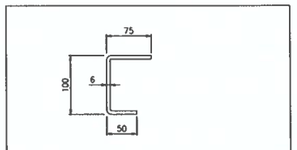
BESEFRAME FOR POS. 3
BUILT N. 1 PIECE



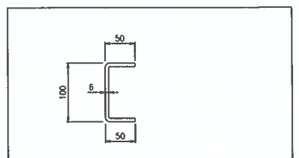
BESEFRAME FOR POS. 4
BUILT N. 1 PIECE EACH



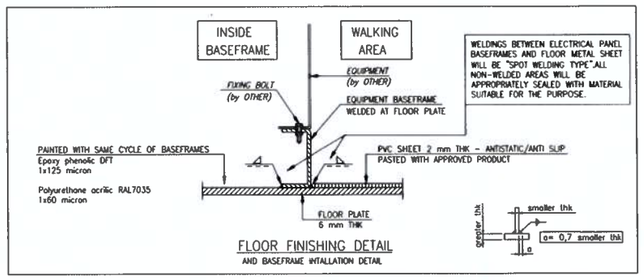
BESEFRAME FOR POS. 5
BUILT N. 1 PIECE EACH



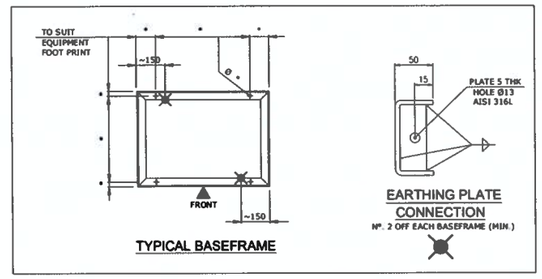
C 100x80x50 THK 6mm.
FROM BENT PLATE THK 6mm.
MAT. CARBON STEEL



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

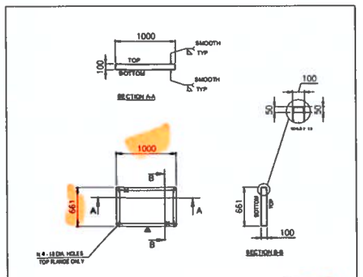


FLOOR FINISHING DETAIL
AND BASEFRAME INTALLATION DETAIL

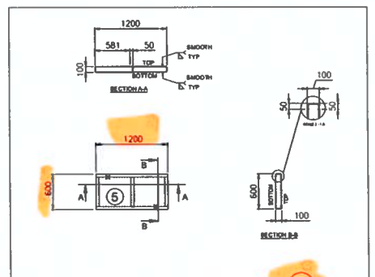


TYPICAL BASEFRAME

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



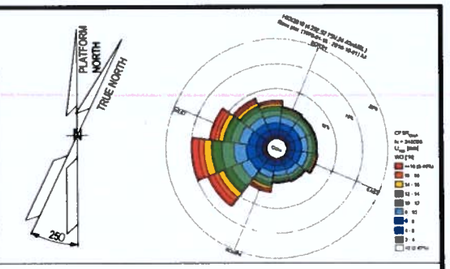
BESEFRAME FOR POS. 6
BUILT N. 1 PIECE



BESEFRAME FOR POS. 7
BUILT N. 1 PIECE

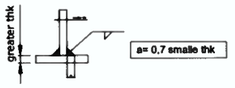
EQUIPMENT LIST

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



NOTES

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



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

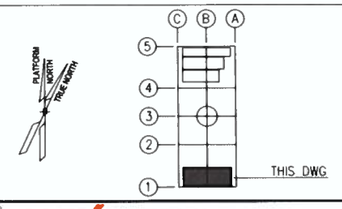


6. SURFACE TREATMENT ACCORDING DOCUMENT N. 1724000049-MAT-PRO-00004 - PAINTING PROCEDURE FINAL COLOUR LIGHT GREY RAL 7035.

LEGEND

ASI = ALEX SISTEMI

KEY PLAN



ALEXSISTEMI s.p.a.

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

CROSSWIND

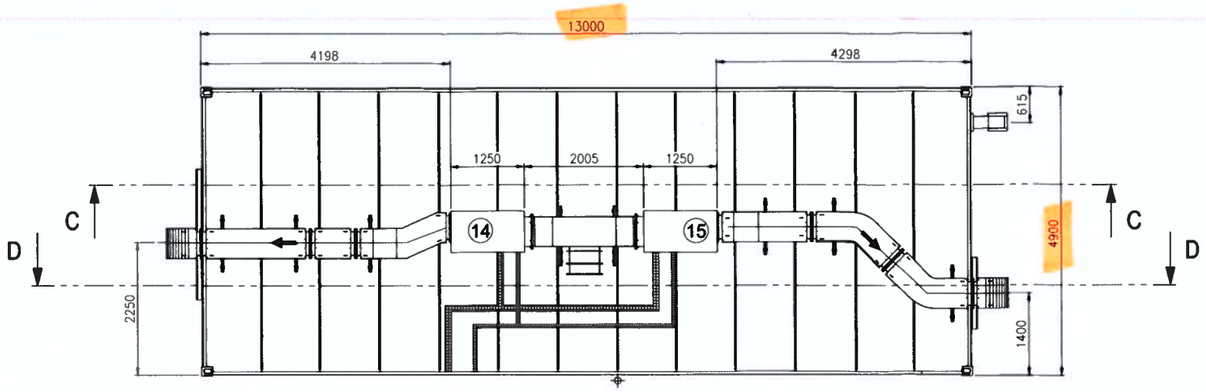
ROSETTI MARINO

TITLE :
B-100 DETAILED DRAWINGS-E&I SHELTERS

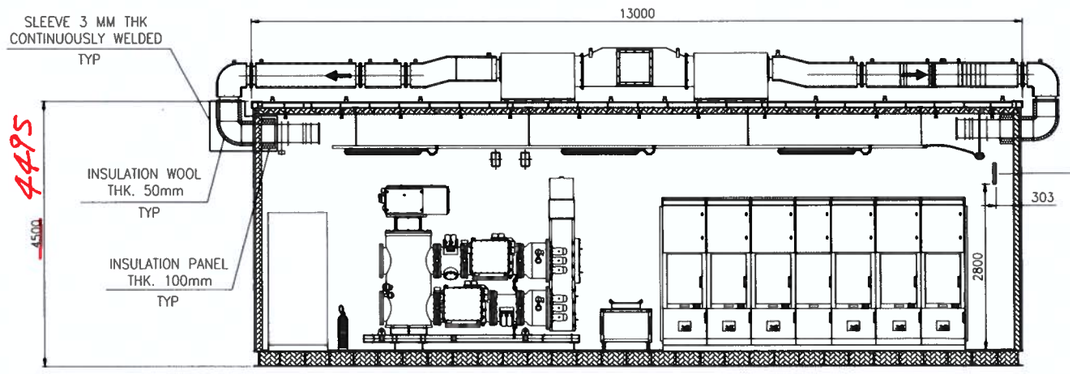
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00018	SHEET 003	REV. 02

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

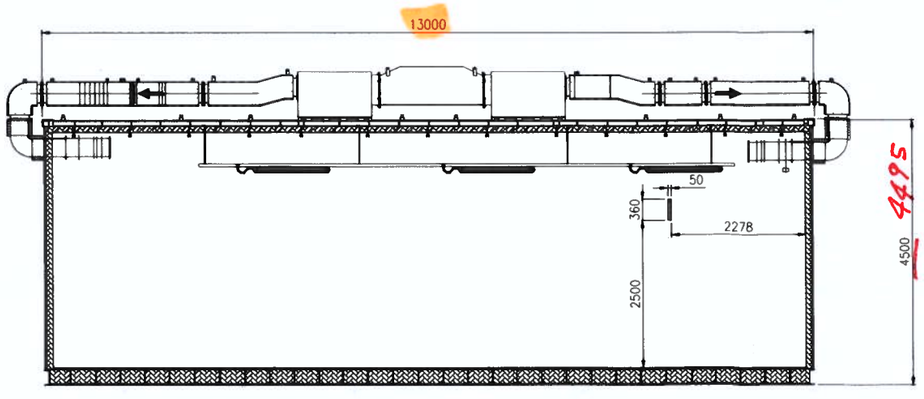
DRAWING NO. 1724000049-AR-DD-00018 | REV. 02



TOP VIEW



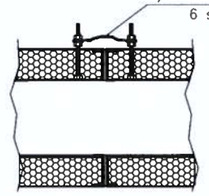
SECTION C-C



SECTION D-D

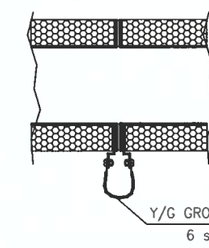
DET. 1

EXTERNAL DUCT



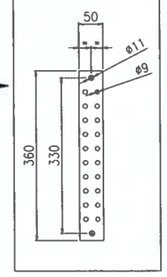
DET. 2

INTERNAL DUCT



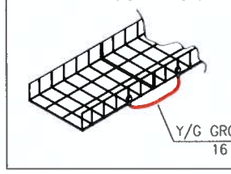
DET. 3

TYPICAL DETAIL
Ground bar



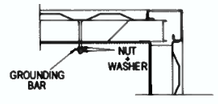
DET. 4

TYPICAL DETAIL
Cable tray grounding system



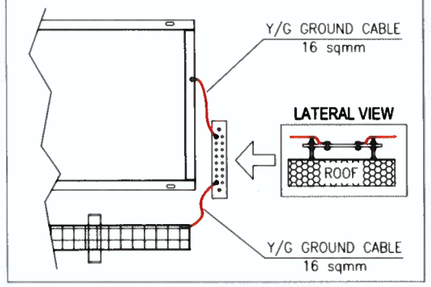
DET. 5

TYPICAL INSTALLATION BTH PE



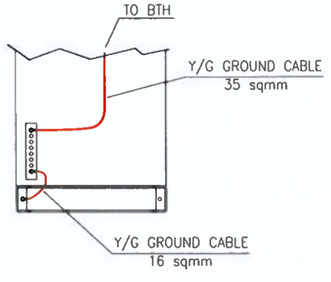
DET. 6

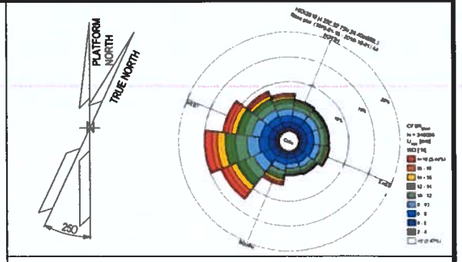
TYPICAL ROOF GROUNDING CONNECTION



DET. 7

TYPICAL CABINET GROUNDING CONNECTION



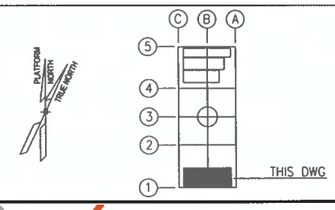


NOTES

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.

LEGEND

KEY PLAN



ALEXSISTEMI S.r.l.

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

CROSSWIND | ROSETTI MARINO

TITLE :
B-100 DETAILED DRAWINGS-E&I SHELTERS

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

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

B-100 – ATTACH. 2

Doc. Name: PAINTING CHECK		Report No.01 Mod 1.4.2
OUR JOB X176-24X	Date 24/07/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 24/07/2024

REFERENCE DRAWING:

REFERENCE DOCUMENT: 1724000049-MAT-PRO-00004

Inspection List	YES	NO	N.A.
1 Verification of paint and color code according to design specification			
Visual Check External Color walls, roof, base frame RAL 7035	✓		
Visual Check External Color doors RAL 7035	✓		
Layer thickness of external coating µm 320 total	✓		
Visual Check Internal Equipment Baseframe RAL 7035	✓		

Comments:

** Touch-up and cleaning are required before proceeding with packaging*

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	COICEA CATALIN ROSETTI MARINO	CROSSWIND		

Mod1.4.2

Doc. Name: CHECK AND FUNCTIONAL TEST		Report No.01
OUR JOB X176-24X	Date 24/07/2024	Page 1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION : ON SITE ☒ OFF SITE ☐

DATE OF TEST: 24/07/2024

REFERENCE DRAWING:

REFERENCE DOCUMENT: ECA-00-ELE-DEB- 0001 Rev.7 Electrical Design Criteria

Inspection List	YES	NO	N.A.
Functional Test of Doors :			
Opening/Closing doors, doors locking	✓		

Comments:

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	COICEA CATALIN ROSETTI MARINO (IV)	CROSSWIND		

Doc. Name: ELECTRICAL TESTS		Report No.01 Mod 1.4.6
OUR JOB X176-24X	Date 24/07/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 24/07/2024

REFERENCE DRAWING:

- 1724000049-AR-DA-00014 - B-100 GENERAL ARRANGMENT DRAWINGS - E&I SHELTERS
- 1724000049-HV-DA-00064 - MODULE B-100 – HVAC SYSTEM–G.A. AND DETAILS
- 1724000049-HV-DA-00026 - B-100 HVAC and LIGHTING PANEL WIRING DRAWINGS and GENERAL ARRANGEMENT (INCL INTERCONNECTING) - E&I SHELTERS

REFERENCE DOCUMENT:

- 1724000049-HV-PID-00039 - B-100 PID - E&I SHELTERS
- 1724000049-HV-LIS-00047 - B-100 HVAC COMPONENTS LIST AND DS - E&I SHELTERS
- 1724000049-HV-RE-00055 - HVAC SYST DESCRIPTION (MANAGEMENT LOGICS) - E&I SHELTERS
- 1724000049-QC-PRO-00056 (FAT Procedure)
- ECA-00-ELE-DEB-0001 Rev.7 Electrical Design Criteria

Inspection List	YES	NO	N.A.
Functional Test of Electrical System			
- Check of Lighting System, Control Panel, and socket/switch.			X
- Cable tag and wiring			X
- Cable tray and conduit installation			X
- Grounding System Installation			X
Functional Test of Grounding System			
- Check the functionality of Grounding System (less than 200 mΩ)			X

Comments:

The items listed above are marked as N.A. because FAT activities have not been conducted. The HVAC system supply and installation were not completed by the specified date, making it impossible to perform all the functional tests outlined in the table.

Mod1.4.6

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

At this stage, checking the lighting system was not possible, as this activity must be performed only after the lights are installed at the correct height.
However, the following preliminary checks have been completed:

- Main unit changeover by simulating a system fault.
- Switching on of space heaters.
- Maintaining overpressure through VSD control.
- Reading temperature and differential pressure values on the HMI.

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	Other
ALEXSISTEMI spa	ROSETTI MARINO	CROSSWIND W 29/07/24		

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 25/07/2024

REFERENCE DRAWING:

- 1724000049-AR-DA-00014 - B-100 GENERAL ARRANGMENT DRAWINGS - E&I SHELTERS
- 1724000049-HV-DA-00064 - MODULE B-100 – HVAC SYSTEM–G.A. AND DETAILS
- 1724000049-HV-DA-00026 - B-100 HVAC and LIGHTING PANEL WIRING DRAWINGS and GENERAL ARRANGEMENT (INCL INTERCONNECTING) - E&I SHELTERS

REFERENCE DOCUMENT:

- 1724000049-HV-PID-00039 - B-100 PID - E&I SHELTERS
- 1724000049-HV-CA-00035 - B-100 HVAC CALCULATION REPORT (Incl HVAC SYS CALC and HEAT DISSIPATION CALC) - E&I SHELTERS
- 1724000049-HV-LIS-00047 - B-100 HVAC COMPONENTS LIST AND DS - E&I SHELTERS
- 1724000049-HV-RE-00055 - HVAC SYST DESCRIPTION (MANAGEMENT LOGICS) - E&I SHELTERS
- 1724000049-QC-PRO-00056 (FAT Procedure)
- ECA-00-ELE-DEB-0001 Rev.7 Electrical Design Criteria

Inspection List	PASS	FAIL	N.A.	value
Functional & performance Test of A/C System (HVAC Test):				
• Visual and correct installation of HVAC fans.			X	
• Functional check of fans.	X			
• Check the functionality and performance of A/C System			X	

Doc. Name: CHECK AND FUNCTIONAL TEST OF HVAC SYSTEM		Report No.05 Mod 1.4.7
OUR JOB X176-24X	Date 25/07/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

Comments:

Some items listed above are marked as N.A. because FAT activities have not been conducted. The HVAC system supply and installation were not completed by the specified date, making it impossible to perform all the functional tests outlined in the table. However, the following preliminary checks have been completed:

- Main unit changeover by simulating a system fault.
- Switching on of space heaters.
- Maintaining overpressure through VSD control.
- Reading temperature and differential pressure values on the HMI.

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	ROSETTI MARINO	x CROSSWIND 29/07/24		

B-200 – ATTACH. 1

ALEXSISTEMI spa

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV = ISO 9001 =

Doc. Name: **Dimensional Check and Visual Inspection**		Report No.02
OUR JOB X176-24X	Date 24/07/2024	Page 1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** LV (400V) SWITCH ROOM B-200
S/N: B200	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION : ON SITE ☒ OFF SITE ☐

DATE OF TEST: 24/07/2024

REFERENCE DRAWING: 1724000049-AR-DA-00015 / 1724000049-ST-DD-00011 / 1724000049-AR-DD-00019

REFERENCE DOCUMENT: ISO 17637 / EEMUA 158

Inspection List	YES	NO	N.A.
Verificare tutte le quote di seguito indicate a disegno:			
NORTH VIEW	✓		
EAST VIEW	✓		
SOUT VIEW	✓		
WEST VIEW	✓		
TOP VIEW	✓		
SECTION A-A	✓		
SECTION B-B	✓		
SECTION C-C	✓		
SECTION D-D	✓		
SECTION E-E	✓		
BASEFRAME LOCATION	✓		

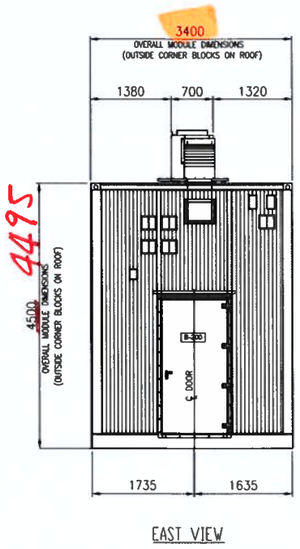
Comments:

DWG attached.

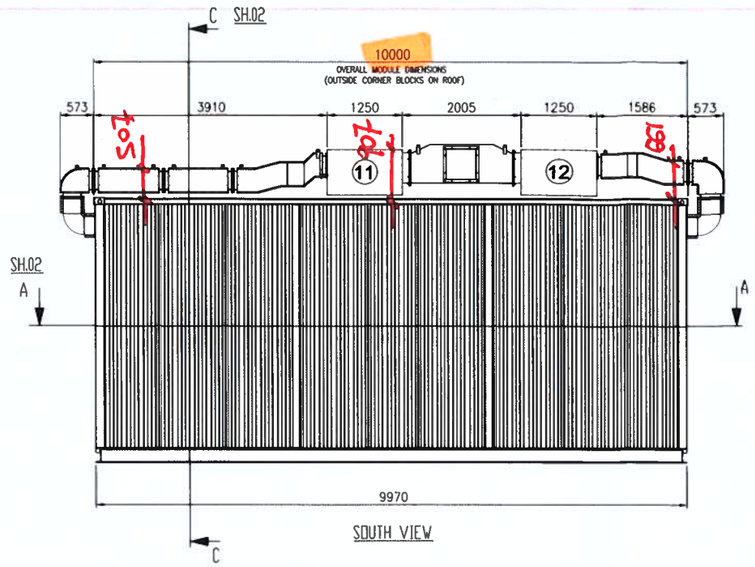
ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	COICEA CATALIN ROSETTI MARINO (XV)	CROSSWIND W		

Mod.P13.1

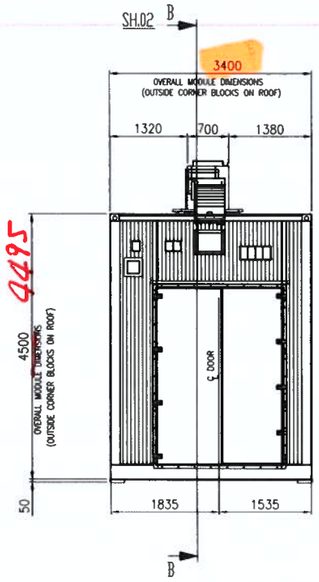
DRAWING NO: 1724000049-AR-DA-00015 REV. 02



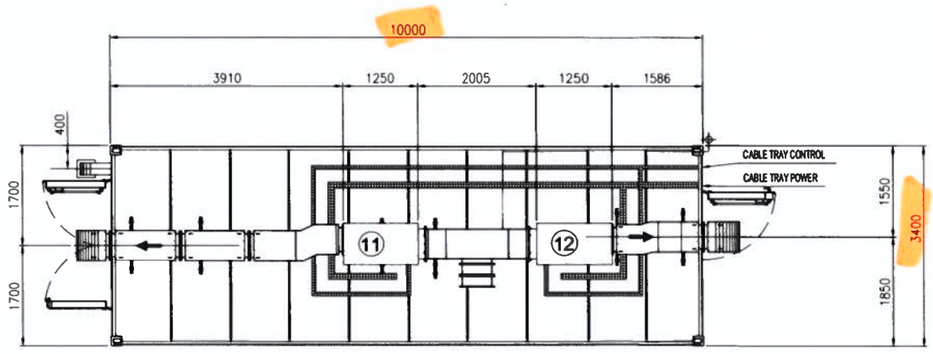
EAST VIEW



SOUTH VIEW



WEST VIEW



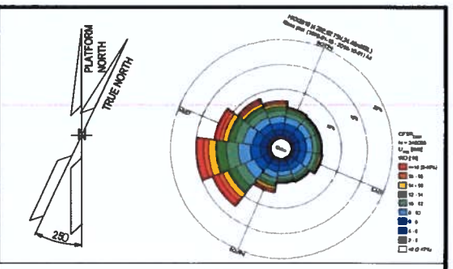
TOP VIEW

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	4900
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	600
3		*DELETED*				
4	CN-200N1	ICCP PANEL	700	580	1830	250
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	400
6	-	TOOL BOX	495	335	200	20
7	-	TABLE	1000	500	750	50
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	1000
9	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
10	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
11	HHU-77003	AIR HANDLING UNIT A	1250	850	900	140
12	HHU-77004	AIR HANDLING UNIT B	1250	850	900	140
13	HSS-77-001	SPACE HEATER 1	184	145	1100	5
14	HSS-77-002	SPACE HEATER 2	184	145	1100	5
15	HSS-77-003	SPACE HEATER 3	184	145	1100	5

MASTER COPY
INTERNAL TEST

02



NOTE

1) ALL DIMENSIONS ARE IM MM.
2) ~~INTERNAL LIGHTS DIMENSION AND QUANTITY TO BE DEFINE AFTER ADVANCE ENGINEERING~~
3) ~~GROUDING SYSTEM WILL BE ADDED IN NEXT REVISION~~

remove Note 2 and 3 typical for all sh.

REFERENCE

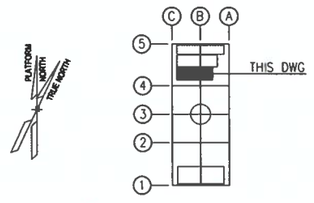
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00065
"B-200" DETAILED DRAWING	1724000049-AR-DD-00019
PAINTING PROCEDURE	1724000049-MAT-PRO-00005

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI spa

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

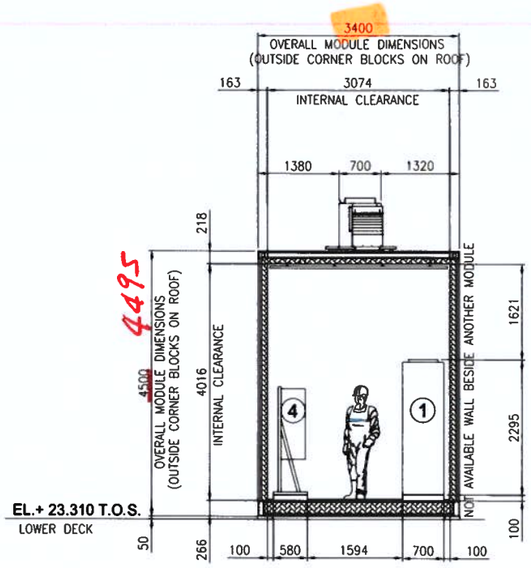
CROSSWIND | ROSETTI MARINO

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

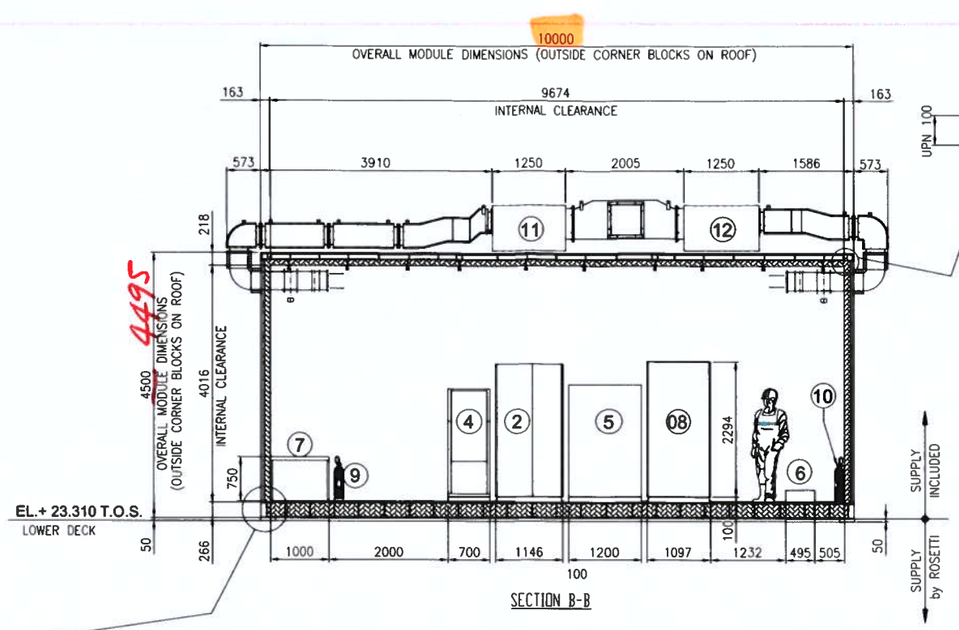
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 28/06/24
A1	DRAWING NO. 1724000049-AR-DA-00015	SHEET 001	REV. 02

File Name : 1724000049-AR-DA-00015-REV.02

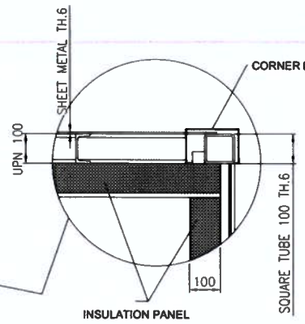
DRAWING NO. 1724000049-AR-DA-00015 REV. 02

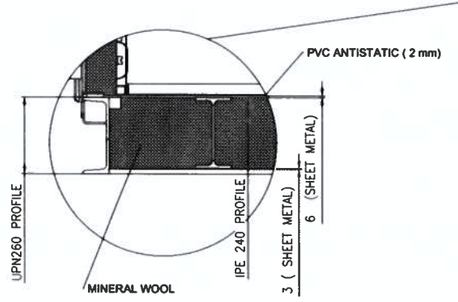


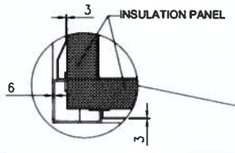
SECTION C-C

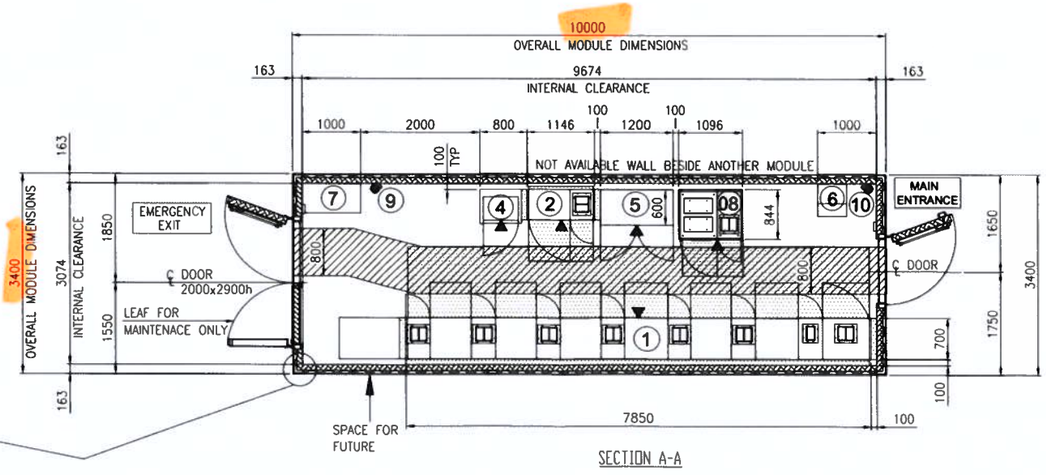


SECTION B-B









SECTION A-A

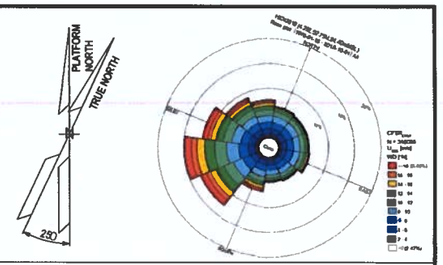
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	4900
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	600
3		*DELETED*				
4	CN-200N1	ICCP PANEL	700	580	1830	250
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	400
6	-	TOOL BOX	495	335	200	20
7	-	TABLE	1000	500	750	50
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	1000
9	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
10	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
11	HHU-77003	AIR HANDLING UNIT A	1250	850	900	140
12	HHU-77004	AIR HANDLING UNIT B	1250	850	900	140
13	HSS-77-001	SPACE HEATER 1	184	145	1100	5
14	HSS-77-002	SPACE HEATER 2	184	145	1100	5
15	HSS-77-003	SPACE HEATER 3	184	145	1100	5

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

MASTER COPY
INTERNAL TEST

02



NOTE

1) ALL DIMENSIONS ARE IM MM.
2) INTERNAL LIGHTS DIMENSION AND QUANTITY TO BE DEFINE AFTER ADVANCE ENGINEERING
3) GROUDING SYSTEM WILL BE ADDED IN NEXT REVISION

REFERENCE

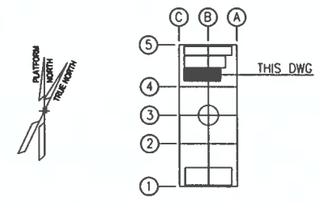
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00065
"B-200" DETAILED DRAWING	1724000049-AR-DD-00019
PAINTING PROCEDURE	1724000049-MAT-PRO-00005

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI

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

CROSSWIND

ROSETTI MARINO

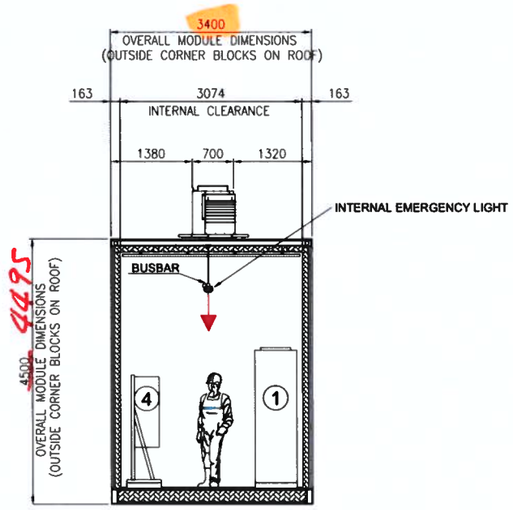
TITLE : BASE LOAD POWER HUB (BLPH)
B-200 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 14/05/24
A1	DRAWING NO. 1724000049-AR-DA-00015	SHEET 002	REV. 02

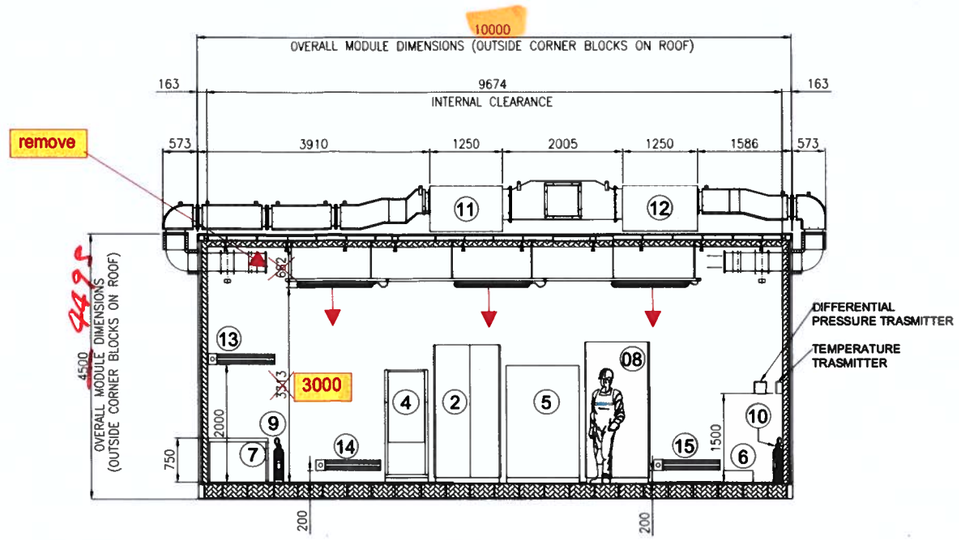
File Name : 1724000049-AR-DA-00015-REV.02

DRAWING NO. 1724000049-AR-DA-00015

REV. 02



SECTION E-E



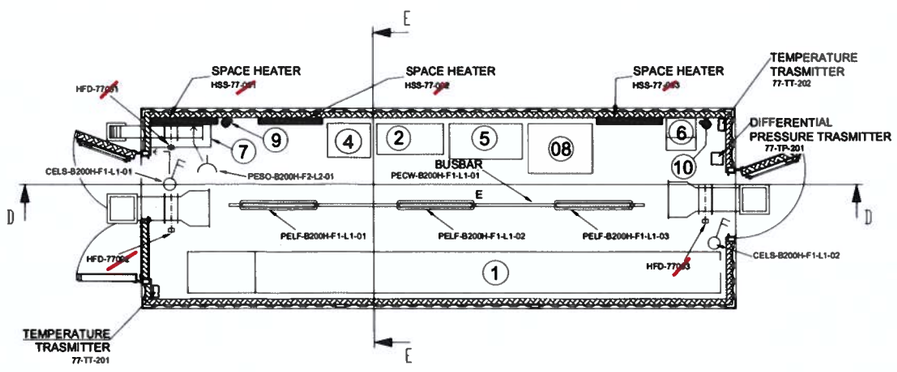
SECTION D-D

Verify that TAGs used on this document are the same used on all other documents, without doubles TAG

ROSETTI MARINO	
1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED

NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.

Sign	Date
R. Bossi	10/07/2024



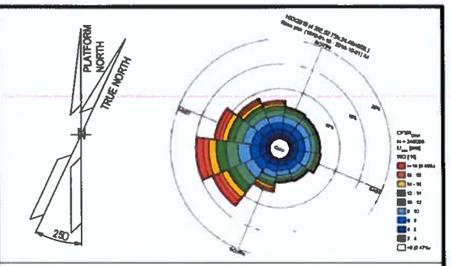
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	4900
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	600
3		*DELETED*				
4	CN-200N1	ICCP PANEL	700	580	1830	250
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	400
6	-	TOOL BOX	495	335	200	20
7	-	TABLE	1000	500	750	50
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	1000
9	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
10	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20
11	HHU-77003	AIR HANDLING UNIT A	1250	850	900	140
12	HHU-77004	AIR HANDLING UNIT B	1250	850	900	140
13	HSS-77-~~001~~	SPACE HEATER 1	184	145	1100	5
14	HSS-77-~~002~~	SPACE HEATER 2	184	145	1100	5
15	HSS-77-~~003~~	SPACE HEATER 3	184	145	1100	5

Note for lighting system:
The position of the lamps indicated is to be considered the theoretical one, the final one will be confirmed in the As-Built issue.

Revise TAG according to all documents (P&IDs, HVAC & Lighting Panel, HVAC GA & Details, etc.)

02



NOTE

1) ALL DIMENSIONS ARE IM MM.
2) INTERNAL LIGHTS DIMENSION AND QUANTITY TO BE DEFINE AFTER ADVANCE ENGINEERING
3) GROUDING SYSTEM WILL BE ADDED IN NEXT REVISION

REFERENCE

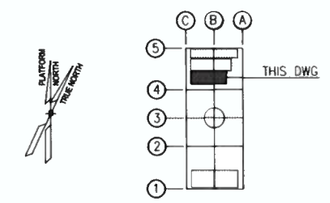
DOCUMENT TITLE	DOCUMENT NUMBER
"B-200" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00065
"B-200" DETAILED DRAWING	1724000049-AR-DD-00019
PAINTING PROCEDURE	1724000049-MAT-PRO-00005

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI s.r.l.

Next revision: 03 Accepted For Construction (AFC)

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

CROSSWIND | ROSETTI MARINO

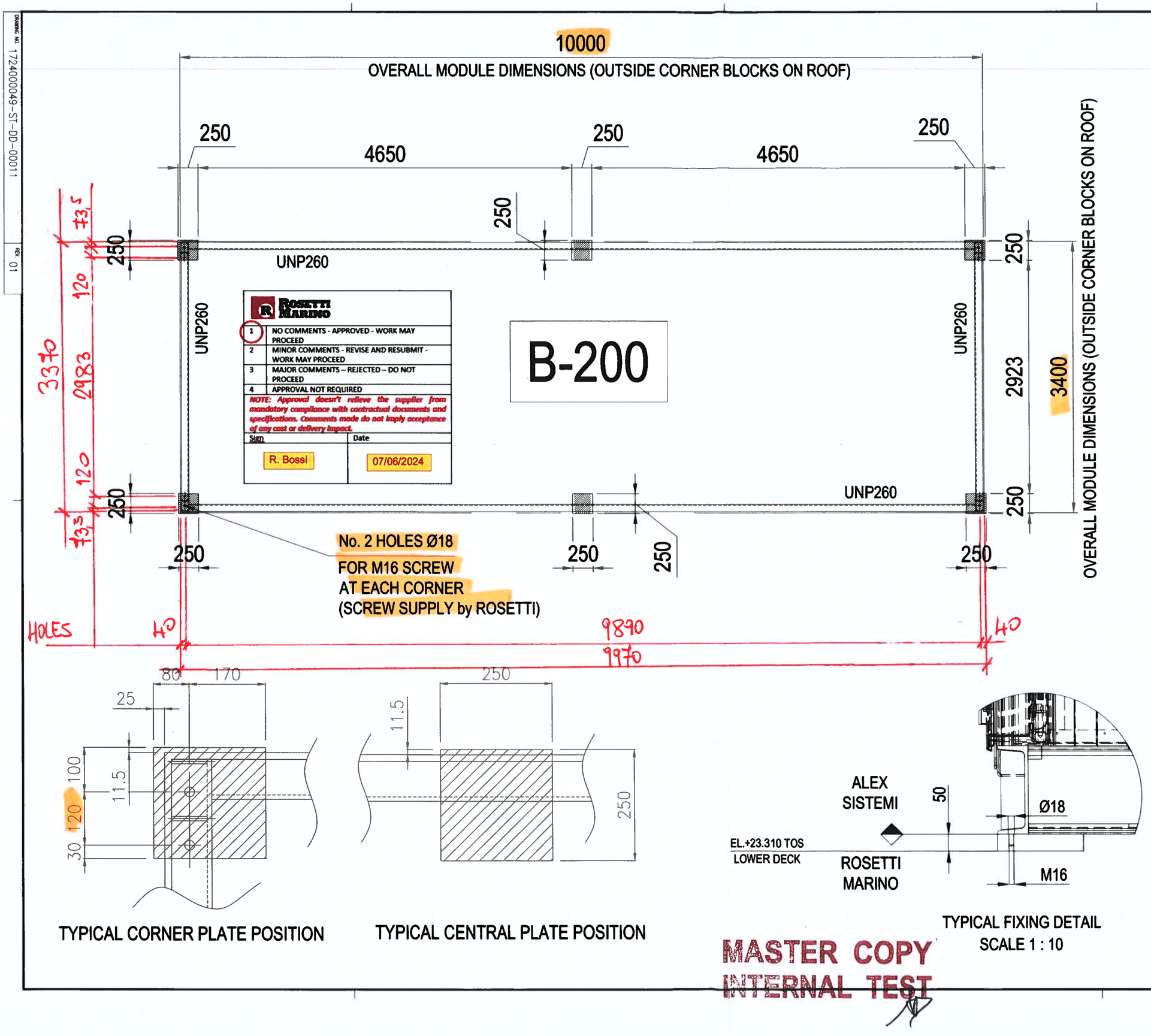
TITLE : BASE LOAD POWER HUB (BLPH)
B-200 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 28/06/24
A1	DRAWING NO. 1724000049-AR-DA-00015	SHEET 003	REV. 02

File Name : 1724000049-AR-DA-00015-REV.02

MASTER COPY
INTERNAL TEST

DRAWING NO. 1724000049-ST-DD-00011 REV. 01



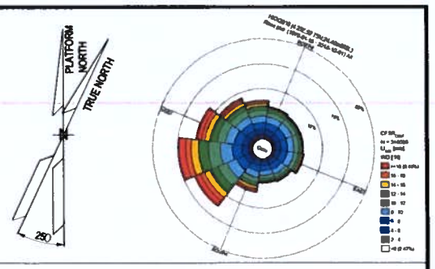
ROSETTI MARINO

1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED

NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.

Sign	Date
R. Bossi	07/06/2024

B-200



NOTE

1) ALL DIMENSIONS ARE IM MM.

REFERENCE

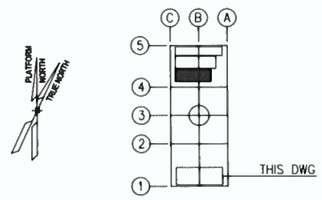
DOCUMENT TITLE	DOCUMENT NUMBER
B-200 STRUCTURAL CALCULATION - E&I SHELTERS	1724000049-ST-CA-00007

LEGEND

Plate 50 mm thk. welded on
Lower Deck - Supply by Rosetti

HOLDS

KEY PLAN



ALEXSISTEMI s.p.a.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	03/06/24	M.G.	M.R.	O.A.	APPROVED FOR CONSTRUCTION (AFC)
00	16/04/24	M.G.	M.R.	O.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND | ROSETTI MARINO

TITLE : B-200 FOUNDATION DRAWING - E&I SHELTERS

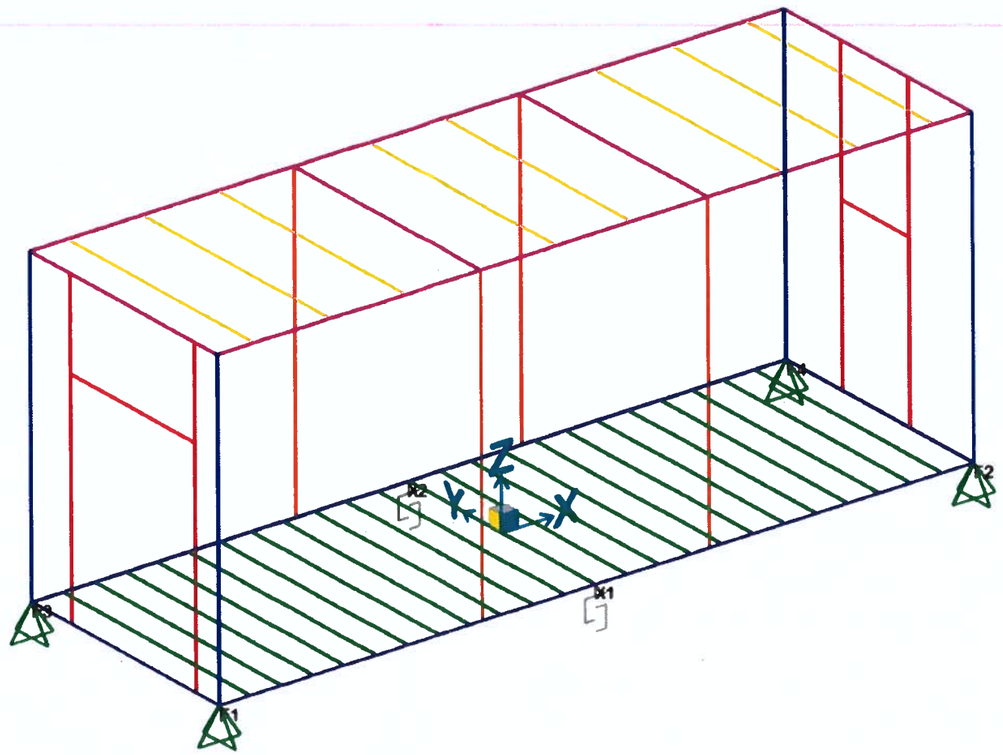
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE N.A.
DRAWN M.G.	CHECKED M.R.	APPROVED O.A.	DATE 03/06/24
A1	DRAWING NO. 1724000049-ST-DD-00011	SHEET 001/002	REV. 01

File Name : 1724000049-ST-DD-00011-REV.01

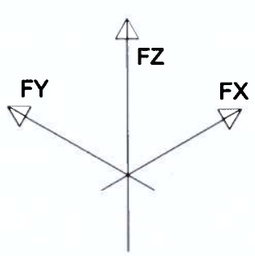
MASTER COPY
INTERNAL TEST

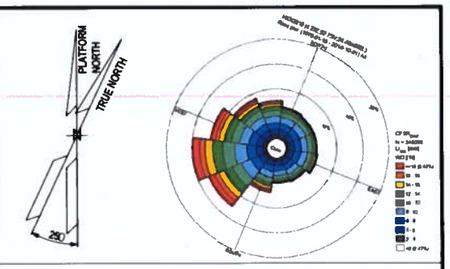
DRAWING NO 1724000049-ST-DD-00011 REV. 01

TABLE: Joint Reactions									
Joint	OutputCase	CaseType	StepType	Fx	Fy	Fz	Mx	My	Mz
Text	Text	Text	Text	KN	KN	KN	KN-m	KN-m	KN-m
F1	DEAD	NonStatic	Last Step	7,06	3,99	20,50	0,00	0,00	0,00
F1	SD	NonStatic	Last Step	13,01	4,55	19,04	0,00	0,00	0,00
F1	LIVE	NonStatic	Last Step	14,07	5,34	39,40	0,00	0,00	0,00
F1	WIND X	NonStatic	Last Step	-11,37	2,10	-9,99	0,00	0,00	0,00
F1	WIND Y	NonStatic	Last Step	-11,97	-27,03	-35,97	0,00	0,00	0,00
F1	NOT X	NonStatic	Last Step	-0,06	-0,01	-0,02	0,00	0,00	0,00
F1	NOT Y	NonStatic	Last Step	-0,03	-0,06	-0,07	0,00	0,00	0,00
F1	SLU LIVE	Combination		49,68	19,93	114,19	0,00	0,00	0,00
F1	SLU WIND X	Combination		22,69	12,58	70,68	0,00	0,00	0,00
F1	SLU WIND Y	Combination		21,98	-22,38	39,50	0,00	0,00	0,00
F1	SLE LIVE	Combination		34,05	13,81	78,85	0,00	0,00	0,00
F1	SLE WIND X	Combination		5,01	2,47	18,67	0,00	0,00	0,00
F1	SLE WIND Y	Combination		4,60	-17,93	0,48	0,00	0,00	0,00
F2	DEAD	NonStatic	Last Step	-7,04	3,97	20,19	0,00	0,00	0,00
F2	SD	NonStatic	Last Step	-13,96	6,14	38,62	0,00	0,00	0,00
F2	LIVE	NonStatic	Last Step	-13,28	3,92	24,14	0,00	0,00	0,00
F2	WIND X	NonStatic	Last Step	-3,45	-2,84	-3,91	0,00	0,00	0,00
F2	WIND Y	NonStatic	Last Step	11,75	-27,17	-35,34	0,00	0,00	0,00
F2	NOT X	NonStatic	Last Step	-0,06	0,01	0,02	0,00	0,00	0,00
F2	NOT Y	NonStatic	Last Step	0,03	-0,06	-0,07	0,00	0,00	0,00
F2	SLU LIVE	Combination		-50,06	20,16	120,32	0,00	0,00	0,00
F2	SLU WIND X	Combination		-45,73	6,00	93,00	0,00	0,00	0,00
F2	SLU WIND Y	Combination		-27,49	-23,20	55,28	0,00	0,00	0,00
F2	SLE LIVE	Combination		-34,31	13,96	82,90	0,00	0,00	0,00
F2	SLE WIND X	Combination		-20,96	-0,94	44,26	0,00	0,00	0,00
F2	SLE WIND Y	Combination		-10,32	-17,97	22,25	0,00	0,00	0,00
F3	DEAD	NonStatic	Last Step	7,04	-3,98	20,19	0,00	0,00	0,00
F3	SD	NonStatic	Last Step	12,77	-4,86	18,96	0,00	0,00	0,00
F3	LIVE	NonStatic	Last Step	14,04	-5,08	38,74	0,00	0,00	0,00
F3	WIND X	NonStatic	Last Step	-11,51	-2,08	-10,05	0,00	0,00	0,00
F3	WIND Y	NonStatic	Last Step	5,77	-18,59	22,08	0,00	0,00	0,00
F3	NOT X	NonStatic	Last Step	-0,06	0,01	-0,02	0,00	0,00	0,00
F3	NOT Y	NonStatic	Last Step	0,03	-0,06	0,07	0,00	0,00	0,00
F3	SLU LIVE	Combination		49,32	-20,17	112,85	0,00	0,00	0,00
F3	SLU WIND X	Combination		27,47	-26,58	86,97	0,00	0,00	0,00
F3	SLU WIND Y	Combination		48,20	-46,39	125,52	0,00	0,00	0,00
F3	SLE LIVE	Combination		33,81	-13,98	77,93	0,00	0,00	0,00
F3	SLE WIND X	Combination		9,99	-16,56	35,77	0,00	0,00	0,00
F3	SLE WIND Y	Combination		22,09	-28,12	58,25	0,00	0,00	0,00
F4	DEAD	NonStatic	Last Step	-7,06	-3,98	20,32	0,00	0,00	0,00
F4	SD	NonStatic	Last Step	-11,82	-5,83	29,87	0,00	0,00	0,00
F4	LIVE	NonStatic	Last Step	-14,83	-4,17	30,77	0,00	0,00	0,00
F4	WIND X	NonStatic	Last Step	-3,46	2,81	-3,85	0,00	0,00	0,00
F4	WIND Y	NonStatic	Last Step	-5,55	-18,31	21,44	0,00	0,00	0,00
F4	NOT X	NonStatic	Last Step	-0,06	-0,01	0,02	0,00	0,00	0,00
F4	NOT Y	NonStatic	Last Step	-0,03	-0,06	0,06	0,00	0,00	0,00
F4	SLU LIVE	Combination		-49,27	-20,26	117,50	0,00	0,00	0,00
F4	SLU WIND X	Combination		-49,44	-19,65	104,31	0,00	0,00	0,00
F4	SLU WIND Y	Combination		-51,96	-45,00	134,66	0,00	0,00	0,00
F4	SLE LIVE	Combination		-33,80	-14,04	81,05	0,00	0,00	0,00
F4	SLE WIND X	Combination		-24,09	-12,55	52,86	0,00	0,00	0,00
F4	SLE WIND Y	Combination		-25,56	-27,34	70,57	0,00	0,00	0,00
X1	DEAD	NonStatic	Last Step	0,00	0,00	22,31	0,00	0,00	0,00
X1	SD	NonStatic	Last Step	0,00	0,01	48,86	0,00	0,00	0,00
X1	LIVE	NonStatic	Last Step	0,00	0,01	37,09	0,00	0,00	0,00
X1	WIND X	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X1	WIND Y	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X1	NOT X	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X1	NOT Y	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X1	SLU LIVE	Combination		0,00	0,02	157,92	0,00	0,00	0,00
X1	SLU WIND X	Combination		0,00	0,02	141,23	0,00	0,00	0,00
X1	SLU WIND Y	Combination		0,00	0,02	141,23	0,00	0,00	0,00
X1	SLE LIVE	Combination		0,00	0,01	108,26	0,00	0,00	0,00
X1	SLE WIND X	Combination		0,00	0,01	71,17	0,00	0,00	0,00
X1	SLE WIND Y	Combination		0,00	0,01	71,17	0,00	0,00	0,00
X2	DEAD	NonStatic	Last Step	0,00	0,00	22,38	0,00	0,00	0,00
X2	SD	NonStatic	Last Step	0,00	-0,01	43,73	0,00	0,00	0,00
X2	LIVE	NonStatic	Last Step	0,00	-0,01	40,88	0,00	0,00	0,00
X2	WIND X	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X2	WIND Y	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X2	NOT X	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X2	NOT Y	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X2	SLU LIVE	Combination		0,00	-0,02	156,02	0,00	0,00	0,00
X2	SLU WIND X	Combination		0,00	-0,02	137,62	0,00	0,00	0,00
X2	SLU WIND Y	Combination		0,00	-0,02	137,62	0,00	0,00	0,00
X2	SLE LIVE	Combination		0,00	-0,01	107,00	0,00	0,00	0,00
X2	SLE WIND X	Combination		0,00	-0,01	66,11	0,00	0,00	0,00
X2	SLE WIND Y	Combination		0,00	-0,01	66,11	0,00	0,00	0,00









NOTE

1) ALL DIMENSIONS ARE IM MM.

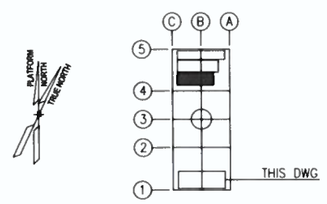
REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
B-200 STRUCTURAL CALCULATION - E&I SHELTERS	1724000049-ST-CA-00007

LEGEND

HOLDS

KEY PLAN



ALEXSISTEMI S.p.A.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	03/06/24	M.G.	M.R.	O.A.	APPROVED FOR CONSTRUCTION (AFC)
00	16/04/24	M.G.	M.R.	O.A.	ISSUE FOR CLIENT REVIEW (ICR)

CROSSWIND — ROSETTI MARINO

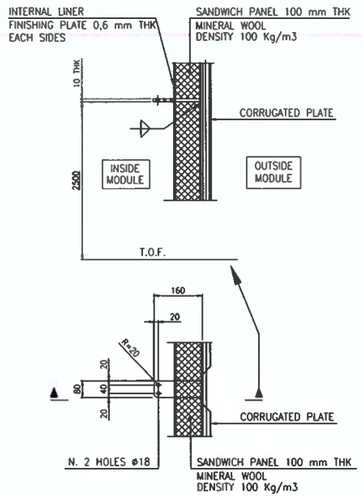
TITLE : B-200 FOUNDATION DRAWING - E&I SHELTERS

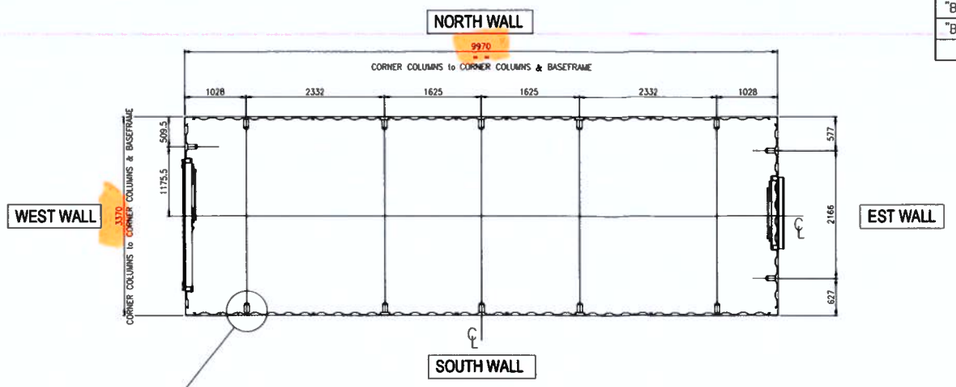
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE N.A.
DRAWN M.G.	CHECKED M.R.	APPROVED O.A.	DATE 03/06/24
A1	DRAWING NO. 1724000049-ST-DD-00011	SHEET 002/002	REV. 01

File Name : 1724000049-ST-DD-00011-REV.01

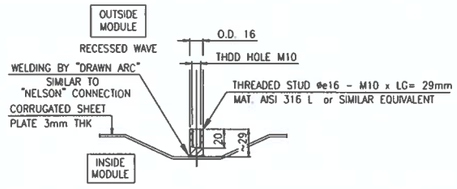
MASTER COPY
INTERNAL TEST

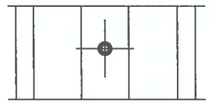
DRAWING NO. 1724000049-AR-DD-00019 REV. 02



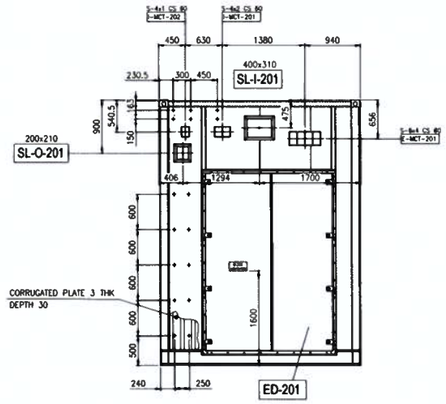


MODULE B-200
INTERNAL SEA FASTENING PLATES PLAN

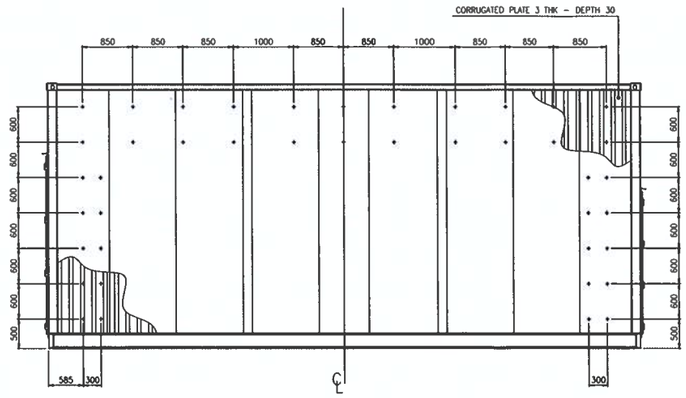




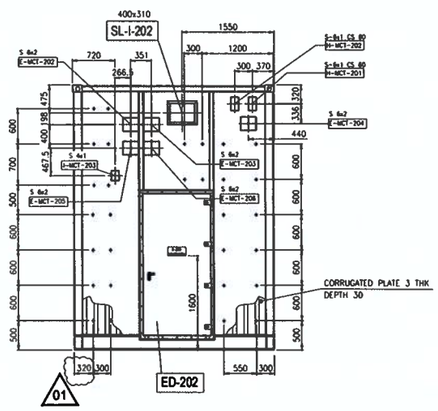
THREADED STUD INSTALLATION



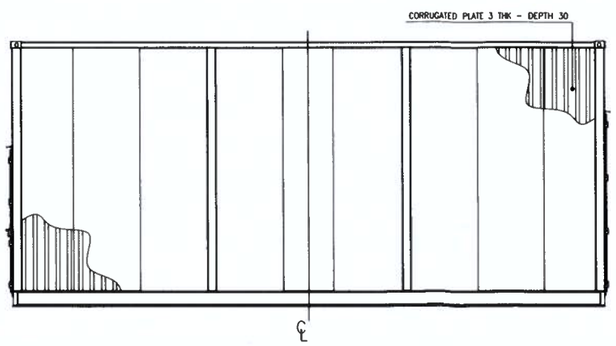
VIEW OF WEST WALL



VIEW OF NORTH WALL



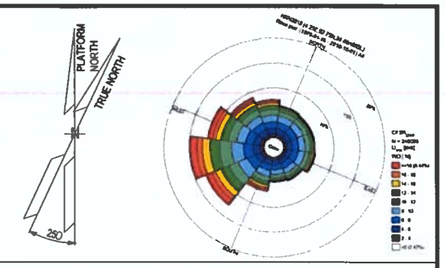
VIEW OF EAST WALL



VIEW OF SOUTH WALL

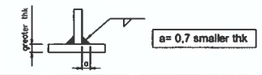
MASTER COPY
INTERNAL TEST

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



NOTES

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



LEGEND

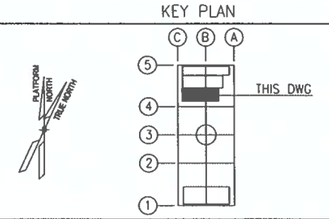
THREADED STUD ø16 - M10 x LG= 29mm
T.O.F. TOP OF FLOOR

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

DOOR LEGEND:
ED-201
EXTERNAL DOOR
PROGRESSIVE NUMBER FROM 01
MODULE LOCATION: 1= B-100, 2= B-200, 3= B-300, 4= B-400

KEY PLAN



MCT LIST

SERVICE	TAG No.	MCT DIMENSIONS and INSTALLATION SENSE L (mm) HORIZONTAL	H (mm) VERTICAL	W (mm) DEPTH	MCT SIZE TYPE "S" FRAME Primed Mild Steel BRAND: ROXTEC	MCT SIZE TYPE "S" FRAME AISI 316 L BRAND: ROXTEC
ELECTRICAL	E-MCT-201	532	238	60	6x4	
	E-MCT-202	271	238	60		6x2
	E-MCT-203	271	238	60		6x2
	E-MCT-204	271	238	60	6x2	
	E-MCT-205	271	238	60		6x2
	E-MCT-206	271	238	60		6x2
INSTRUMENTAL	I-MCT-201	271	179.5	60	4x2	
	I-MCT-202	140.5	179.5	60	4x1	
	I-MCT-203	140.5	179.5	60	4x1	
HVAC	H-MCT-201	140.5	238	60	6x1	
	H-MCT-202	140.5	238	60	6x1	

ALEXSISTEMI

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

CROSSWIND — ROSETTI MARINO

TITLE :
B-200 DETAILED DRAWINGS-E&I SHELTERS

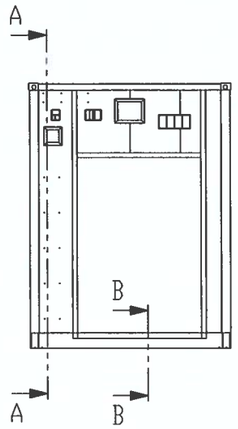
CONTRACT NO./TITLE CONTRACT_NO. 1724000049 — SCALE 1:50
DRAWN M.G. — CHECKED O.A. — APPROVED C.A. — DATE 11/07/24
A1 — DRAWING NO. 1724000049-AR-DD-00019 — SHEET 002 — REV. 02

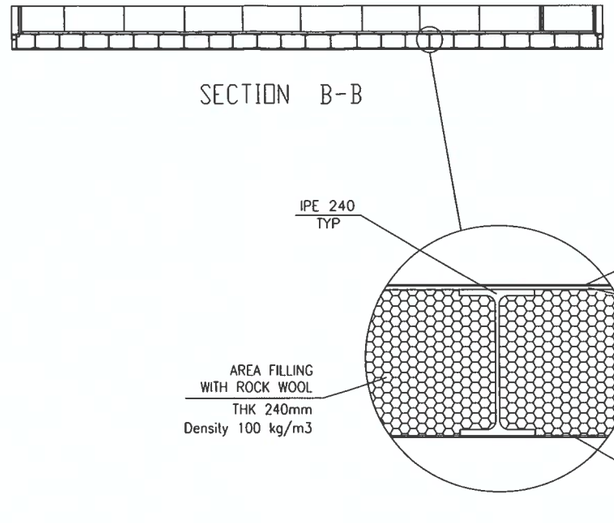
File Name : 1724000049-AR-DD-00019-REV.02

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

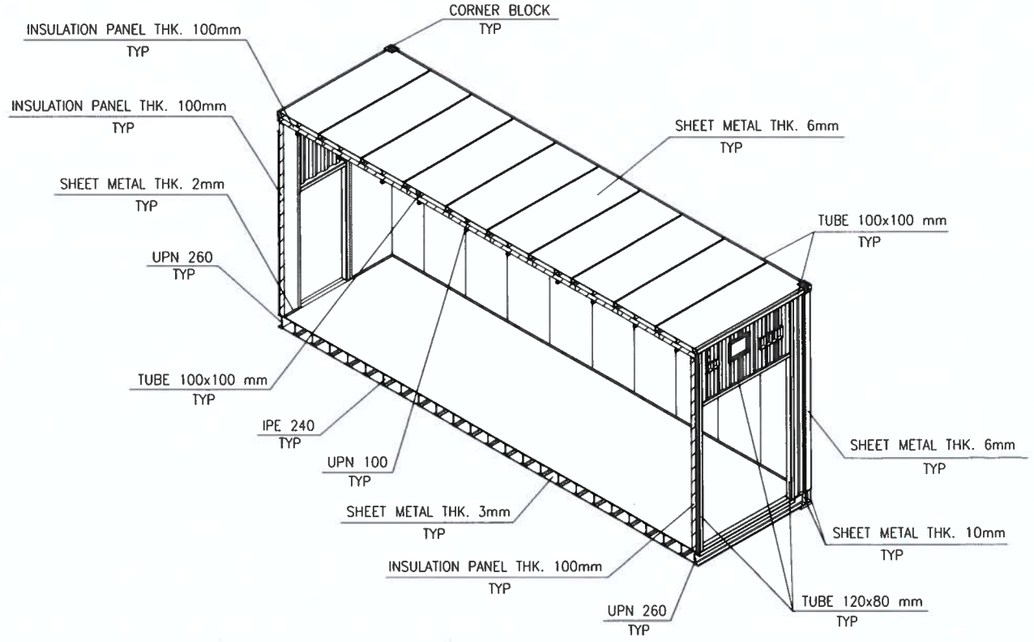
MODULE B-200

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



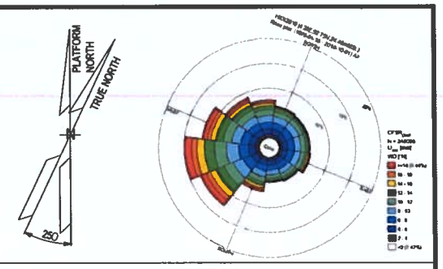


DETAIL "C"



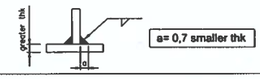
SECTION A-A

MASTER COPY
INTERNAL TEST



NOTES

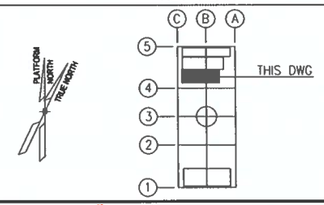
1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D.1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



LEGEND

HOLDS

KEY PLAN



ALEXSISTEMI

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

CROSSWIND | ROSETTI MARINO

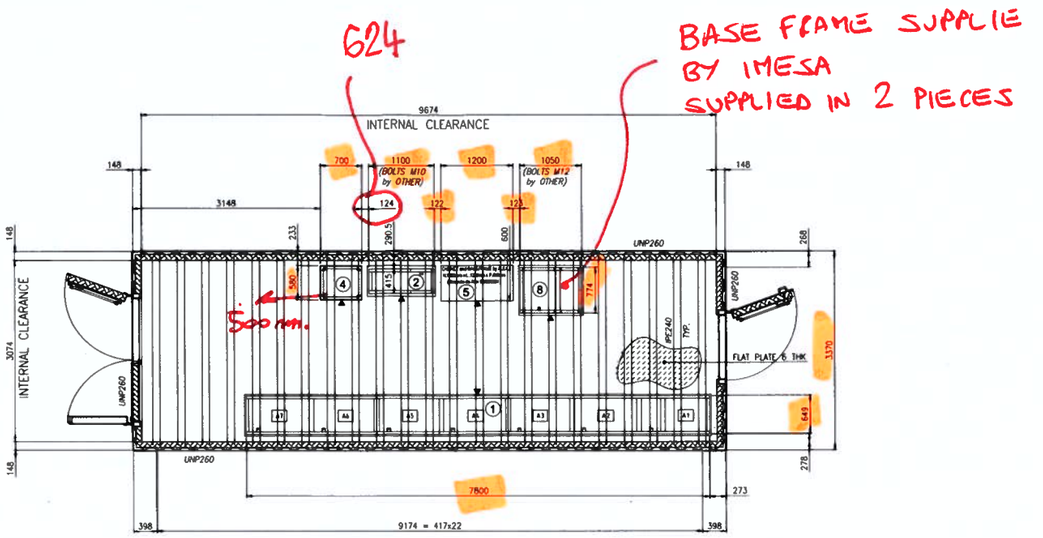
TITLE :
B-200 DETAILED DRAWINGS-E&I SHELTERS

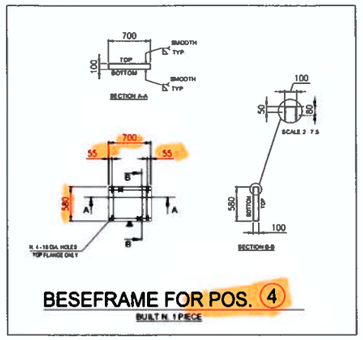
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00019	SHEET 001	REV. 02

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

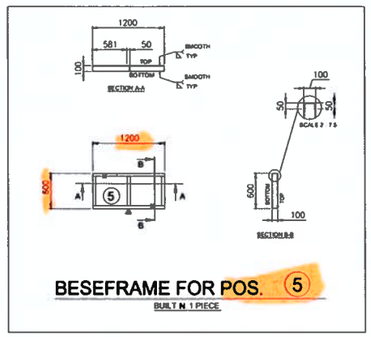
DRAWING NO. 1724000049-AR-DD-00019 REV. 02

B-200
I&T EQUIPMENT ROOM
BASEFRAME LOCATION PLAN

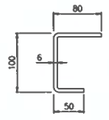




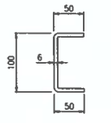
BESEFRAME FOR POS. 4
BUILT N. 1 PIECE



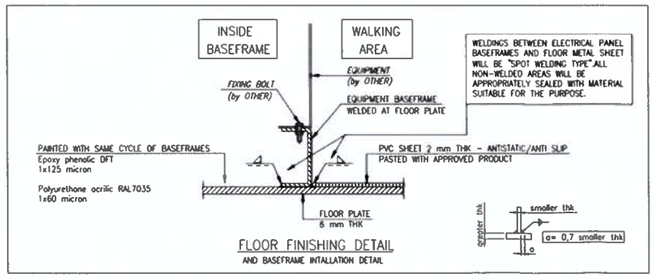
BESEFRAME FOR POS. 5
BUILT N. 1 PIECE



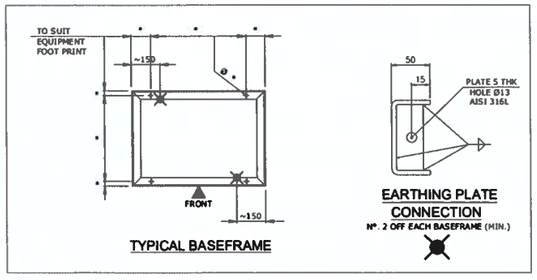
C 100x80x50 THK 6mm.
FROM BENT PLATE THK 6mm.
MAT. CARBON STEEL



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

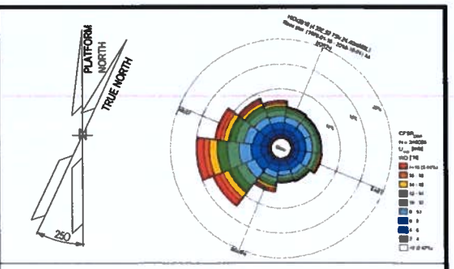


FLOOR FINISHING DETAIL
AND BASEFRAME INTALLATION DETAIL



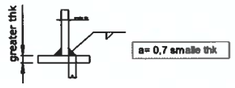
TYPICAL BASEFRAME

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



NOTES

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



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



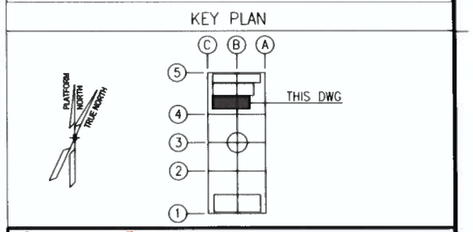
6. SURFACE TREATMENT ACCORDING DOCUMENT N. 1724000049-MAT-PRO-00004 - PAINTING PROCEDURE FINAL COLOUR LIGHT GREY RAL 7035.

LEGEND

ASI = ALEX SISTEMI

EQUIPMENT LIST

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



ALEXSISTEMI S.r.l.

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

CROSSWIND

ROSETTI MARINO

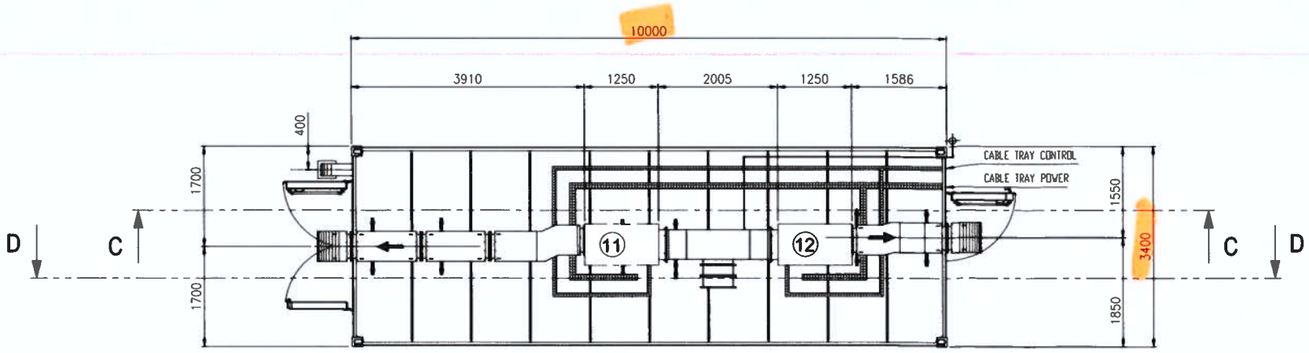
TITLE :
B-200 DETAILED DRAWINGS-E&I SHELTERS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00019		SHEET 003 / REV. 02

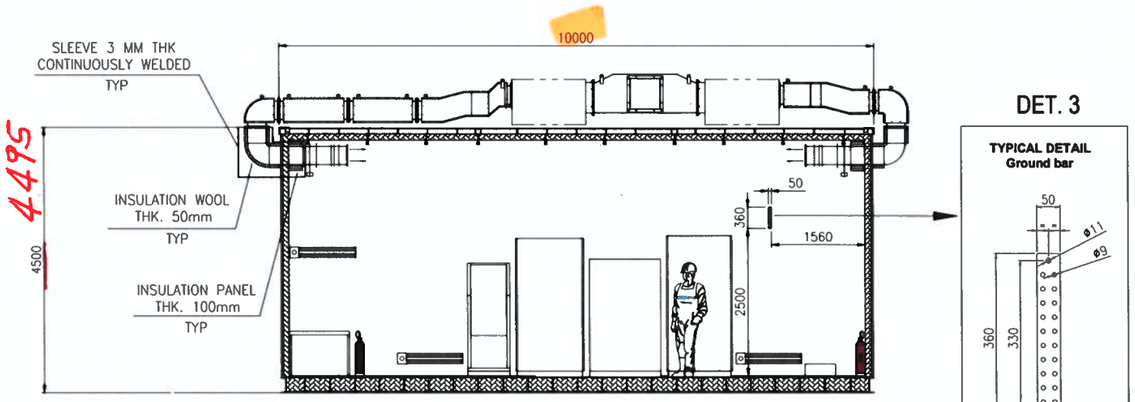
File Name : 1724000049-AR-DD-00019-REV.02

MASTER COPY
INTERNAL TEST

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



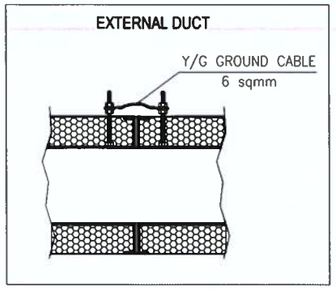
TOP VIEW



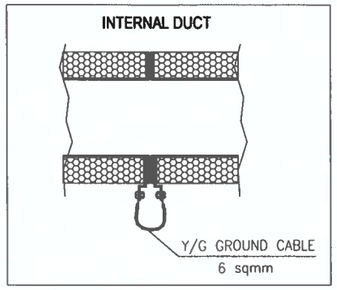
SECTION C-C

DET. 3

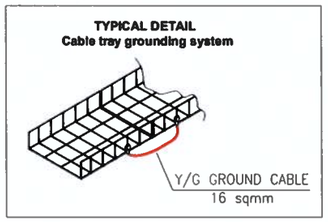
DET. 1



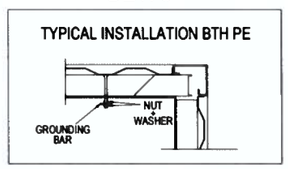
DET. 2



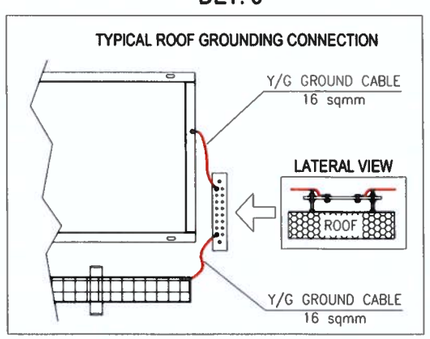
DET. 4



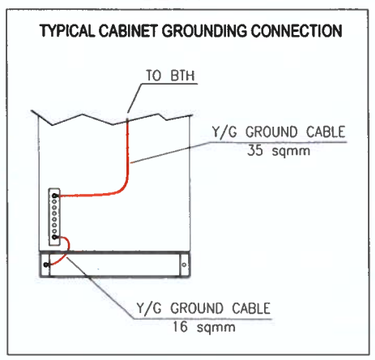
DET. 5

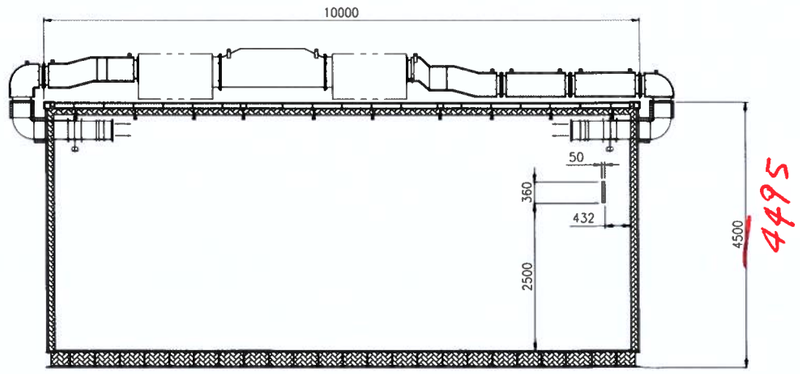


DET. 6

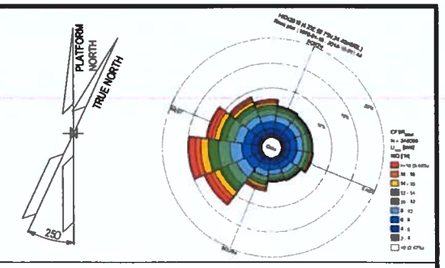


DET. 7





SECTION D-D

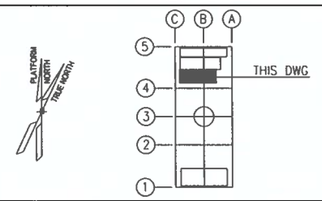


NOTES

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.

LEGEND

KEY PLAN



ALEXSISTEMI

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

CROSSWIND | ROSETTI MARINO

TITLE :
B-200 DETAILED DRAWINGS-E&I SHELTERS

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

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

B-200 – ATTACH. 2

Doc. Name: CHECK AND FUNCTIONAL TEST		Report No.02
OUR JOB X176-24X	Date 24/07/2024	Page 1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** LV (400V) SWITCH ROOM B-200
S/N: B200	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION : ON SITE ☒ OFF SITE ☐

DATE OF TEST: 24/07/2024

REFERENCE DRAWING:

REFERENCE DOCUMENT: ECA-00-ELE-DEB- 0001 Rev.7 Electrical Design Criteria

Inspection List	YES	NO	N.A.
Functional Test of Doors :			
Opening/Closing doors, doors locking	✓		

Comments:

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	COICEA CATALIN LD ROSETTI MARINO (X)			

Doc. Name: PAINTING CHECK		Report No.02 Mod 1.4.2
OUR JOB X176-24X	Date 24/07/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** LV (400V) SWITCH ROOM B-200
S/N: B200	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 24/07/2024

REFERENCE DRAWING:

REFERENCE DOCUMENT: 1724000049-MAT-PRO-00004

Inspection List	YES	NO	N.A.
1 Verification of paint and color code according to design specification			
Visual Check External Color walls, roof, base frame RAL 7035	✓		
Visual Check External Color doors RAL 7035	✓		
Layer thickness of external coating µm 320 total	✓		
Visual Check Internal Equipment Baseframe RAL 7035	✓		

Comments:

** Touch-up and cleaning are required before proceeding with packaging*

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	COICEA CATALIN ROSETTI MARINO (X)	CROSSWIND		

Mod1.4.2

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** LV (400 V) SWITCH ROOM B-200
S/N: B200	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 24/07/2024

REFERENCE DRAWING:

- 1724000049-AR-DA-00015 - B-200 GENERAL ARRANGMENT DRAWINGS - E&I SHELTERS
- 1724000049-HV-DA-00065 - MODULE B-200 – HVAC SYSTEM–G.A. AND DETAILS
- 1724000049-HV-DA-00027 - B-200 HVAC and LIGHTING PANEL WIRING DRAWINGS and GENERAL ARRANGEMENT (INCL INTERCONNECTING) - E&I SHELTERS

REFERENCE DOCUMENT:

- 1724000049-HV-PID-00040 - B-200 PID - E&I SHELTERS
- 1724000049-HV-LIS-00048 - B-200 HVAC COMPONENTS LIST AND DS - E&I SHELTERS
- 1724000049-HV-RE-00055 - HVAC SYST DESCRIPTION (MANAGEMENT LOGICS) - E&I SHELTERS
- 1724000049-QC-PRO-00056 (FAT Procedure)
- ECA-00-ELE-DEB-0001 Rev.7 Electrical Design Criteria

Inspection List	YES	NO	N.A.
Functional Test of Electrical System			
- Check of Lighting System, Control Panel, and socket/switch.			X
- Cable tag and wiring			X
- Cable tray and conduit installation			X
- Grounding System Installation			X
Functional Test of Grounding System			
- Check the functionality of Grounding System (less than 200 mΩ)			X

Comments:

The items listed above are marked as N.A. because FAT activities have not been conducted. The HVAC system supply and installation were not completed by the specified date, making it impossible to perform all the functional tests outlined in the table.

Mod1.4.6

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** LV (400 V) SWITCH ROOM B-200
S/N: B200	**FAT procedure:** 1724000049-QC-PRO-00056

At this stage, checking the lighting system was not possible, as this activity must be performed only after the lights are installed at the correct height.
However, the following preliminary checks have been completed:

- Main unit changeover by simulating a system fault.
- Switching on of space heaters.
- Maintaining overpressure through VSD control.
- Reading temperature and differential pressure values on the HMI.

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	Other
ALEXSISTEMI spa	ROSETTI MARINO	CROSSWIND 29/07/24		

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** LV (400 V) SWITCH ROOM B-200
S/N: B200	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 25/07/2024

REFERENCE DRAWING:

- 1724000049-AR-DA-00015 - B-200 GENERAL ARRANGMENT DRAWINGS - E&I SHELTERS
- 1724000049-HV-DA-00065 - MODULE B-200 – HVAC SYSTEM–G.A. AND DETAILS
- 1724000049-HV-DA-00027 - B-200 HVAC and LIGHTING PANEL WIRING DRAWINGS and GENERAL ARRANGEMENT (INCL INTERCONNECTING) - E&I SHELTERS

REFERENCE DOCUMENT:

- 1724000049-HV-PID-00040 - B-200 PID - E&I SHELTERS
- 1724000049-HV-CA-00036 - B-200 HVAC CALCULATION REPORT (Incl HVAC SYS CALC and HEAT DISSIPATION CALC) - E&I SHELTERS
- 1724000049-HV-LIS-00048 - B-200 HVAC COMPONENTS LIST AND DS - E&I SHELTERS
- 1724000049-HV-RE-00055 - HVAC SYST DESCRIPTION (MANAGEMENT LOGICS) - E&I SHELTERS
- 1724000049-QC-PRO-00056 (FAT Procedure)
- ECA-00-ELE-DEB-0001 Rev.7 Electrical Design Criteria

Inspection List	PASS	FAIL	N.A.	value
Functional & performance Test of A/C System (HVAC Test):				
• Visual and correct installation of HVAC fans.			X	
• Functional check of fans.	X			
• Check the functionality and performance of A/C System			X	

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** LV (400 V) SWITCH ROOM B-200
S/N: B200	**FAT procedure:** 1724000049-QC-PRO-00056

Comments:

Some items listed above are marked as N.A. because FAT activities have not been conducted. The HVAC system supply and installation were not completed by the specified date, making it impossible to perform all the functional tests outlined in the table. However, the following preliminary checks have been completed:

- Main unit changeover by simulating a system fault.
- Switching on of space heaters.
- Maintaining overpressure through VSD control.
- Reading temperature and differential pressure values on the HMI.

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	ROSETTI MARINO	CROSSWIND 29/07/24		

B-300 – ATTACH. 1

ALEXSISTEMI spa

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV = ISO 9001 =

Doc. Name:
Dimensional Check and Visual Inspection *Report No.03*

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:** AC UPS EQUIPMENT ROOM B-300
S/N: B300	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION : ON SITE ☒ OFF SITE ☐

DATE OF TEST: 26/07/2024

REFERENCE DRAWING: 1724000049-AR-DA-00016 / 1724000049-ST-DD-00012 / 1724000049-AR-DD-00020

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:

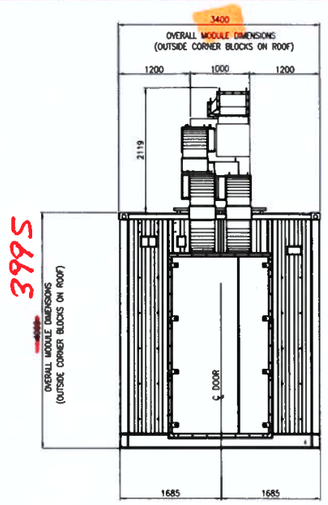
DWG attached.

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	COICEA CATALIN ROSETTI MARINO (X)	x CROSSWIND W		

Mod.P13.1

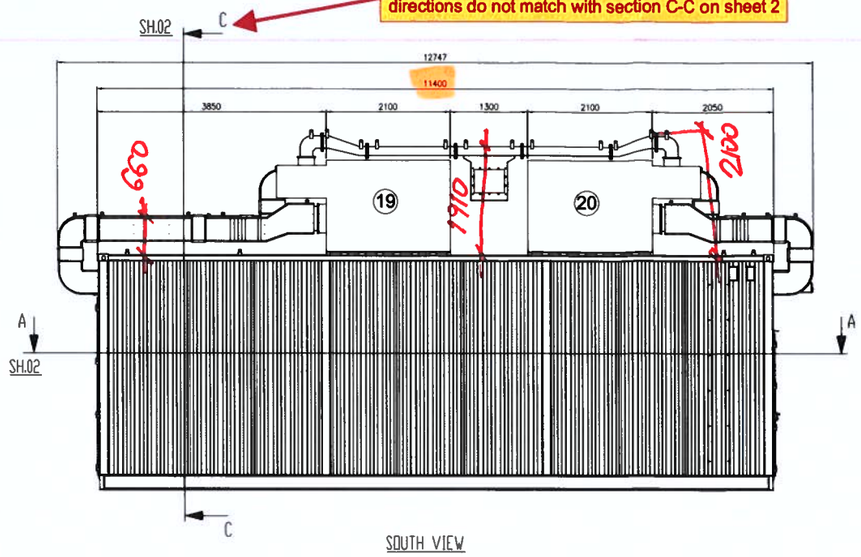
DRAWING NO. 1724000049-AR-DA-00016 REV. 02

Check and revise section C-C. Position and arrow directions do not match with section C-C on sheet 2

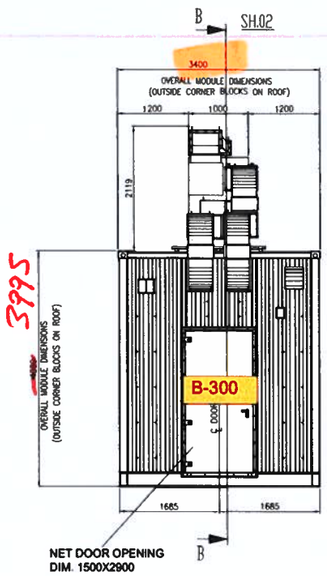


~~EAST VIEW~~

WEST VIEW

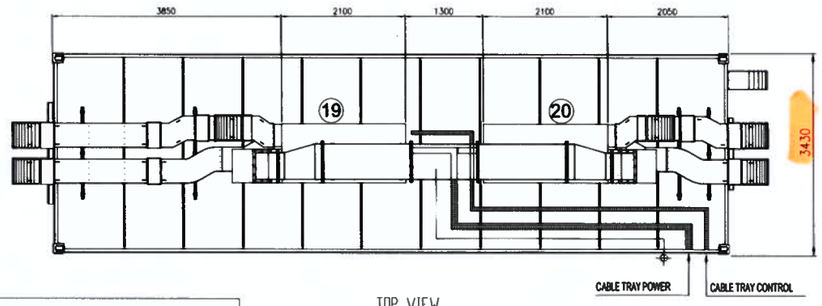


SOUTH VIEW



~~WEST VIEW~~

EAST VIEW



TOP VIEW

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)
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	1890	725	1761	3429
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	600	300	800	100
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	600	300	800	100
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	600	300	800	100
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	600	300	800	100
11	NC-200F2	NAVAID PANEL	1000	800	2600	535
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70
14	B300-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	500
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	607	607	2157	500
19	HHU-77005	AIR HANDLING UNIT A	2100	1000	2158	850
20	HHU-77006	AIR HANDLING UNIT B	2100	1000	2158	850
21	HSS-77-001	SPACE HEATER 1	184	145	1100	5
22	HSS-77-002	SPACE HEATER 2	184	145	1100	5
23	HSS-77-003	SPACE HEATER 3	184	145	1100	5

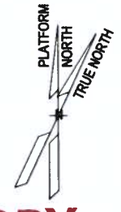
GENERAL REMARK:
Check line position and arrow directions for all sections (eg. sections B-B and D-D show same details)

ROSETTI MARINO

1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED

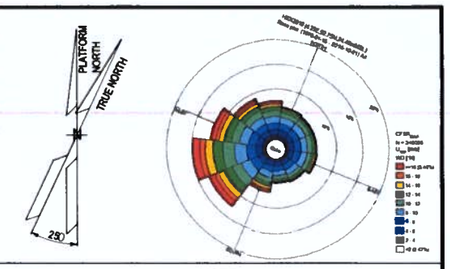
NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.

Sign	Date
R. Bossi	10/07/2024



MASTER COPY
INTERNAL TEST

02



NOTE

1) ALL DIMENSIONS ARE IM MM.

REFERENCE

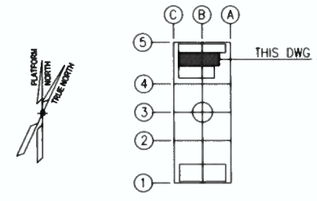
DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00066
"B-300" DETAILED DRAWING	1724000049-AR-DD-00020
PAINTING PROCEDURE	1724000049-MAT-PRO-00006

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI spa

Next revision: 03 Accepted For Construction (AFC)

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	03/07/24	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)

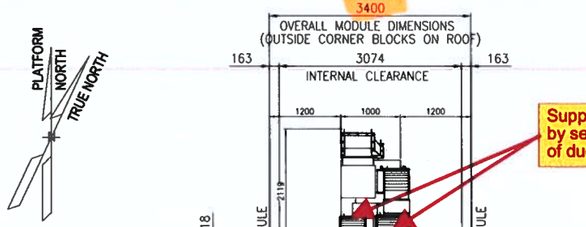
CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
B-300 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 03/07/24
A1	DRAWING NO. 1724000049-AR-DA-00016	SHEET 001	REV. 02

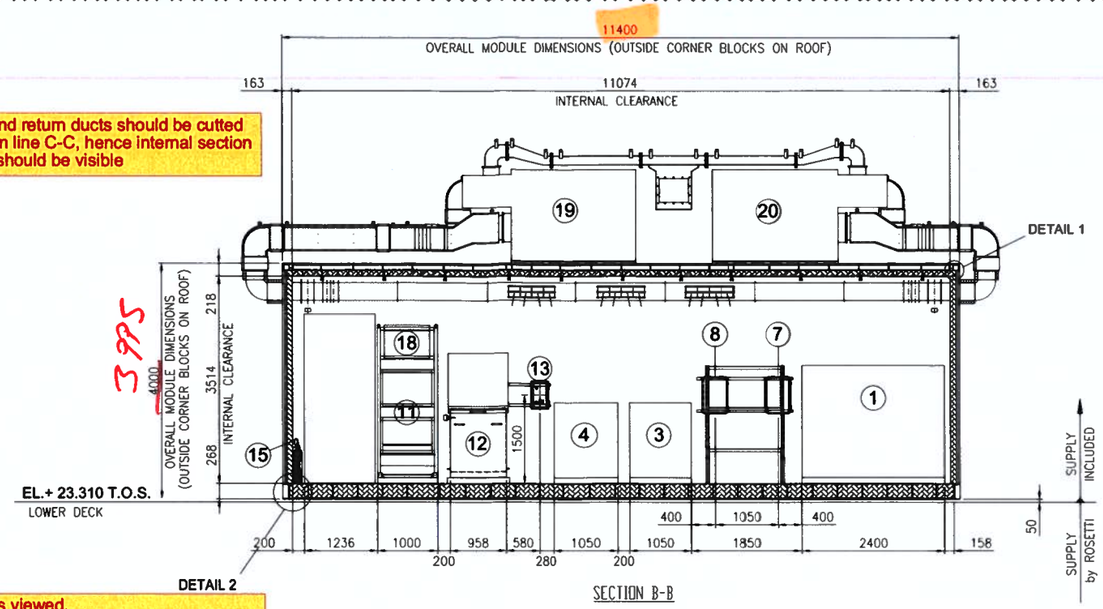
File Name : 1724000049-AR-DA-00016-REV.02

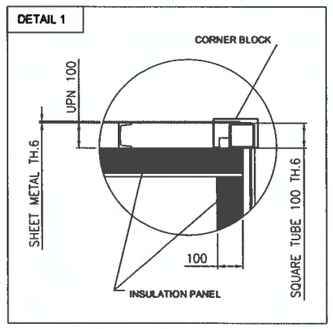
DRAWING NO. 1724000049-AR-DA-00016 REV. 02

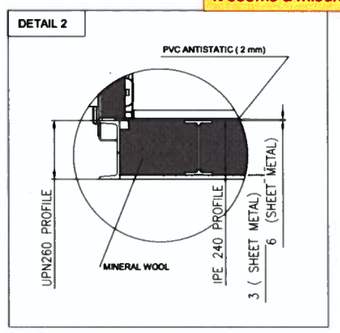


Supply and return ducts should be cutted by section line C-C, hence internal section of ducts should be visible

Revise Items viewed.
It seems a misdraw coming from section E-E

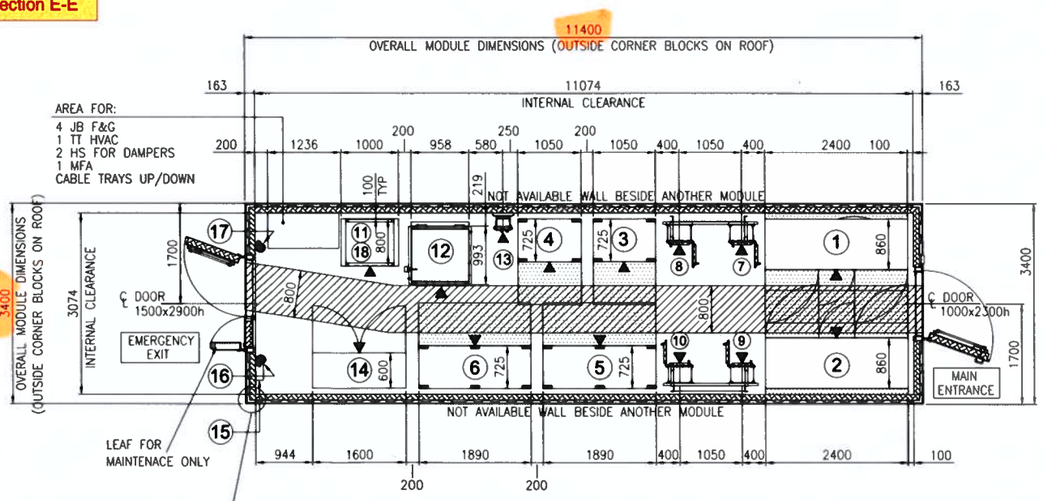


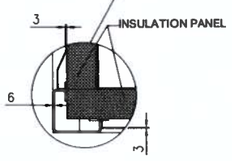




EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)
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	1890	725	1761	3429
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	600	300	800	100
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	600	300	800	100
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	600	300	800	100
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	600	300	800	100
11	NC-200F2	NAVAID PANEL	1000	800	2600	535
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70
14	B300-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	500
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	607	607	2157	500
19	HHU-77005	AIR HANDLING UNIT A	2100	1000	2158	850
20	HHU-77006	AIR HANDLING UNIT B	2100	1000	2158	850
21	HSS-77-001	SPACE HEATER 1	184	145	1100	5
22	HSS-77-002	SPACE HEATER 2	184	145	1100	5
23	HSS-77-003	SPACE HEATER 3	184	145	1100	5

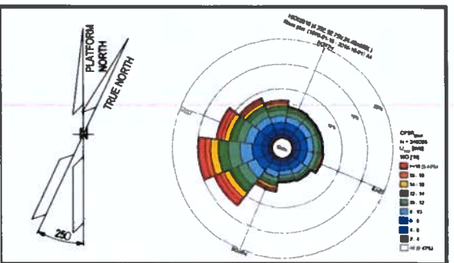




EQUIPMENT LAYOUT
"B-300" AC UPS FITTED WITH UPS SYSTEM EQUIPMENT ROOM
BOTTOM PLAN

MASTER COPY
INTERNAL TEST

02



NOTE

1) ALL DIMENSIONS ARE IM MM.

REFERENCE

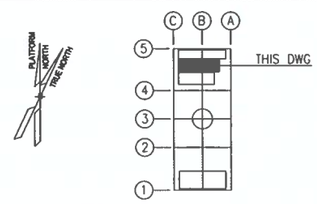
DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00066
"B-300" DETAILED DRAWING	1724000049-AR-DD-00020
PAINTING PROCEDURE	1724000049-MAT-PRO-00006

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI srl

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	03/07/24	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)

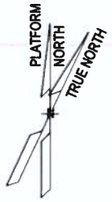
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
B-300 GENERAL ARRANGEMENT DRAWINGS

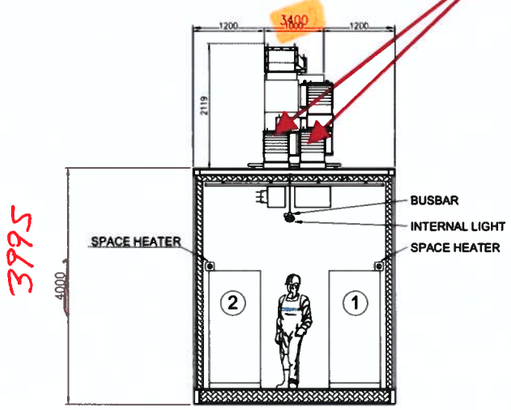
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 03/07/24
A1	DRAWING NO. 1724000049-AR-DA-00016	SHEET 002	REV. 02

File Name : 1724000049-AR-DA-00016-REV.02

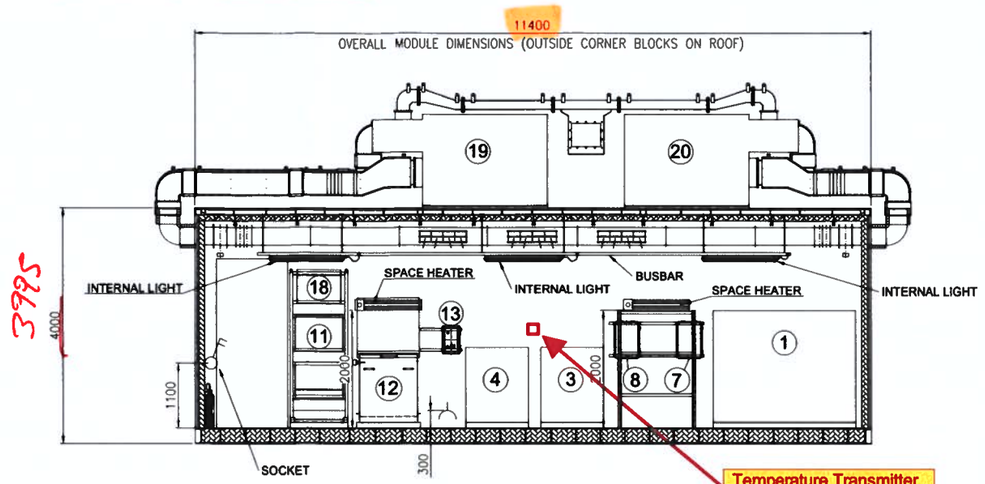
DRAWING NO. 1724000049-AR-DA-00016 REV. 02



Supply and return ducts should be cutted by section line E-E, hence internal section of ducts should be visible

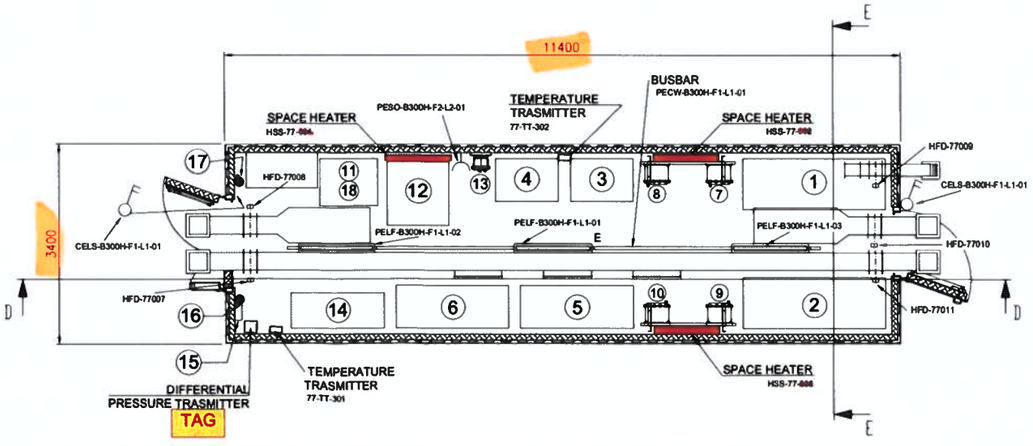


SECTION E-E



SECTION D-D

Temperature Transmitter TAG



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.

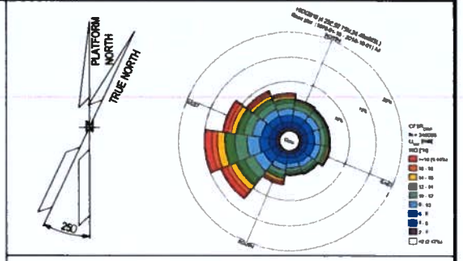
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)
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	1890	725	1761	3429
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	600	300	800	100
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	600	300	800	100
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	600	300	800	100
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	600	300	800	100
11	NC-200F2	NAVAID PANEL	1000	800	2600	535
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70
14	B300-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	500
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	607	607	2157	500
19	HHU-77005	AIR HANDLING UNIT A	2100	1000	2158	850
20	HHU-77006	AIR HANDLING UNIT B	2100	1000	2158	850
21	~~HSS-77-001~~	SPACE HEATER 1	184	145	1100	5
22	~~HSS-77-002~~	SPACE HEATER 2	184	145	1100	5
23	~~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.)

02

MASTER COPY
INTERNAL TEST



NOTE

1) ALL DIMENSIONS ARE IM MM.

REFERENCE

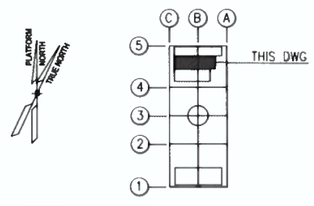
DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00066
"B-300" DETAILED DRAWING	1724000049-AR-DD-00020
PAINTING PROCEDURE	1724000049-MAT-PRO-00006

LEGEND

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

HOLDS

KEY PLAN



ALEXSISTEMI S.r.l.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	03/07/24	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-300 GENERAL ARRANGEMENT DRAWINGS

CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED SKV	APPROVED C.A.	DATE 03/07/24
A1	DRAWING NO. 1724000049-AR-DA-00016		SHEET 003 / REV. 02

File Name : 1724000049-AR-DA-00016-REV.02

DRAWING NO. 1724000049-ST-DD-00012 REV. 01

11400

OVERALL MODULE DIMENSIONS (OUTSIDE CORNER BLOCKS ON ROOF)

250 5350 250 5350 250

250

UNP260

UNP260

UNP260

UNP260

ROSETTI MARINO

1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED

NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.

Sign	Date
R. Bossi	07/06/2024

B-300

73.5 120 2983 120 73.5 = 3370

250 2923 250 = 3400

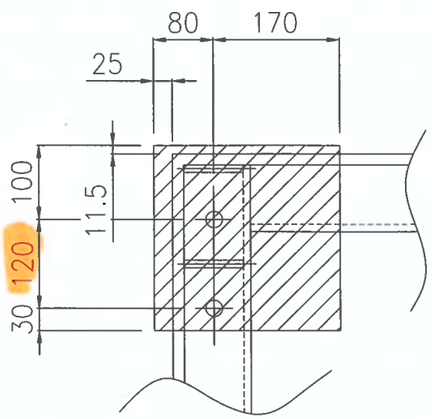
OVERALL MODULE DIMENSIONS (OUTSIDE CORNER BLOCKS ON ROOF)

250 250 250 250

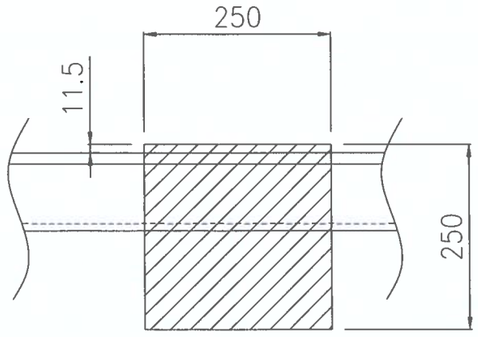
No. 2 HOLES Ø18
FOR M16 SCREW
AT EACH CORNER
(SCREW SUPPLY by ROSETTI)

HOLES 40 11290 40

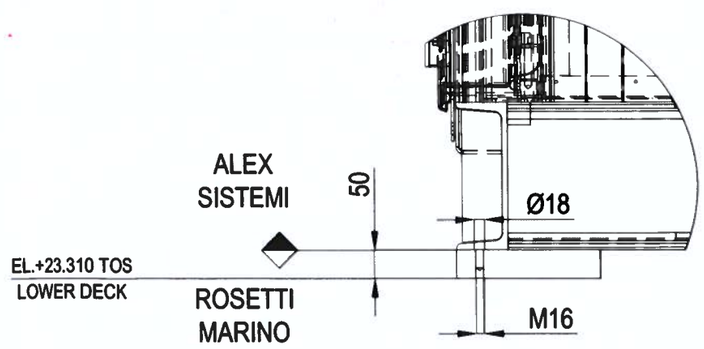
11370



TYPICAL CORNER PLATE POSITION

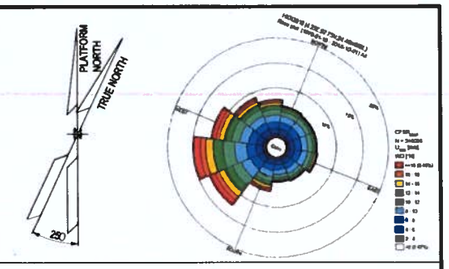


TYPICAL CENTRAL PLATE POSITION



TYPICAL FIXING DETAIL
SCALE 1 : 10

MASTER COPY
INTERNAL TEST



NOTE

1) ALL DIMENSIONS ARE IM MM.

REFERENCE

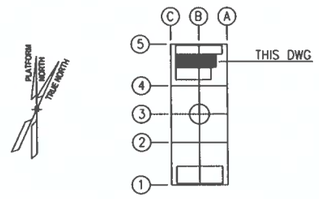
DOCUMENT TITLE	DOCUMENT NUMBER
B-300 STRUCTURAL CALCULATION - E&I SHELTERS	1724000049-ST-CA-00008

LEGEND

Plate 50 mm thk. welded on
Lower Deck - Supply by Rosetti

HOLDS

KEY PLAN



ALEXSISTEMI spa

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-300 FOUNDATION DRAWING - E&I SHELTERS

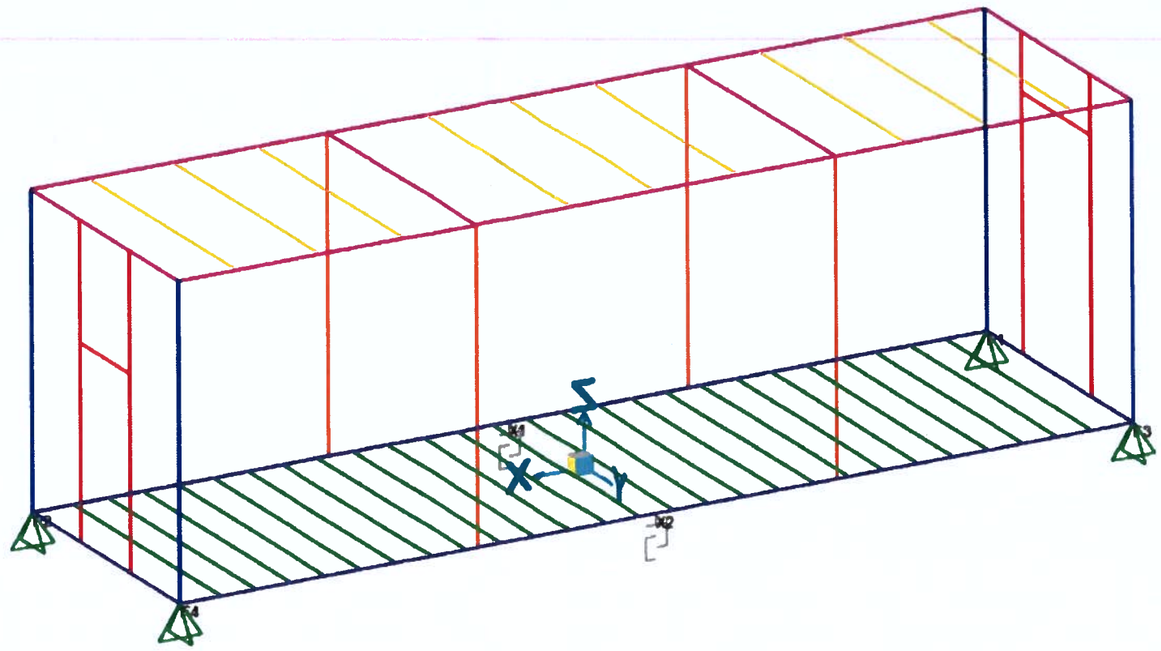
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE N.A.
DRAWN M.G.	CHECKED M.R.	APPROVED O.A.	DATE 03/06/24
A1	DRAWING NO. 1724000049-ST-DD-00012	SHEET 001/002	REV. 01

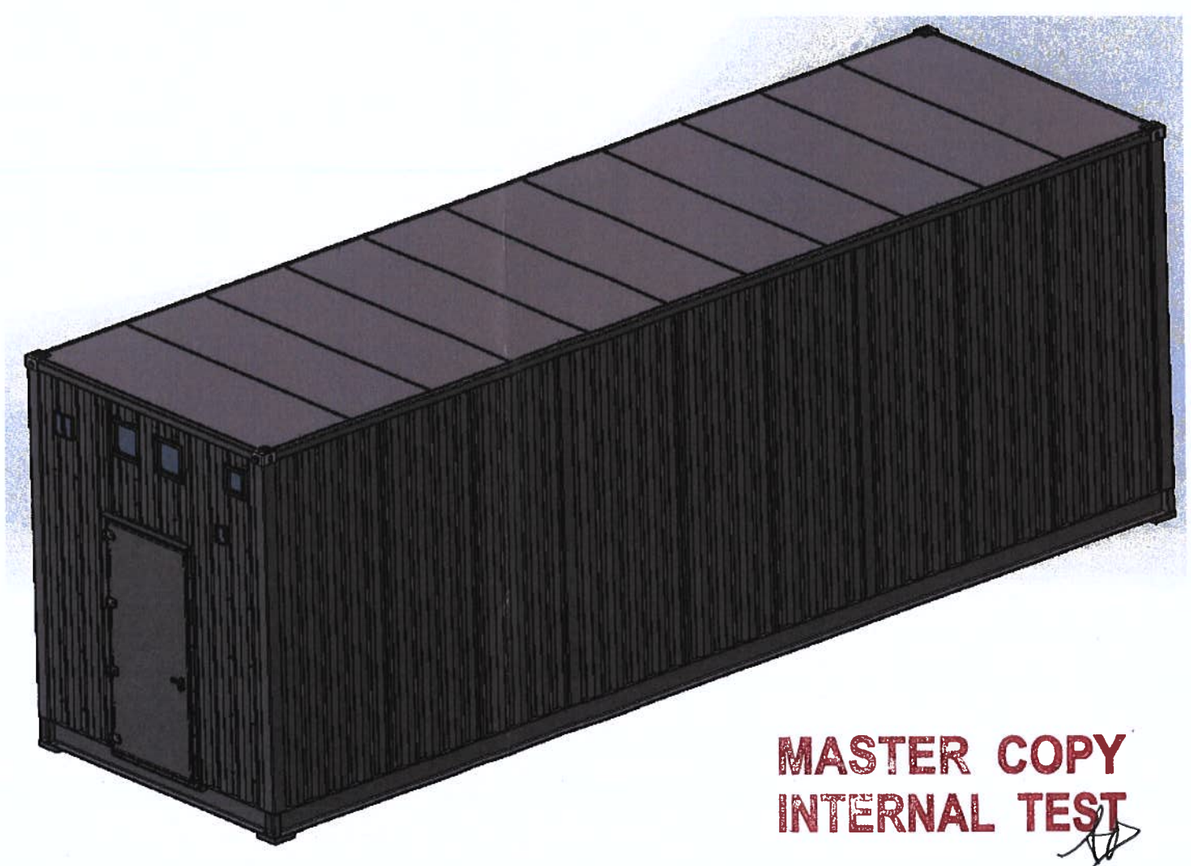
File Name : 1724000049-ST-DD-00012-REV.01

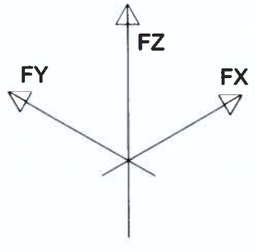
DRAWING NO. 1724000049-ST-DD-00012 REV. 01

TABLE: Joint Reactions

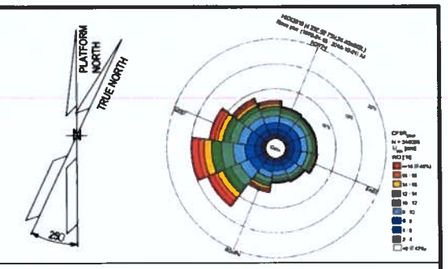
Joint	OutputCase	CaseType	StepType	Fx	Fy	Fz	Mx	My	Mz
Text	Text	Text	Text	KN	KN	KN	KN-m	KN-m	KN-m
F1	DEAD	NonStatic	Last Step	8,15	3,98	20,56	0,00	0,00	0,00
F1	SD	NonStatic	Last Step	17,79	5,10	26,86	0,00	0,00	0,00
F1	LIVE	NonStatic	Last Step	18,94	6,80	43,72	0,00	0,00	0,00
F1	WIND X	NonStatic	Last Step	-11,64	0,34	-9,78	0,00	0,00	0,00
F1	WIND Y	NonStatic	Last Step	-12,43	-25,98	-33,62	0,00	0,00	0,00
F1	NOT X	NonStatic	Last Step	-0,07	-0,01	-0,02	0,00	0,00	0,00
F1	NOT Y	NonStatic	Last Step	-0,04	-0,07	-0,06	0,00	0,00	0,00
F1	SLU LIVE	Combination		65,55	22,92	132,49	0,00	0,00	0,00
F1	SLU WIND X	Combination		35,85	12,57	88,06	0,00	0,00	0,00
F1	SLU WIND Y	Combination		34,89	-19,01	59,46	0,00	0,00	0,00
F1	SLE LIVE	Combination		44,78	15,80	91,06	0,00	0,00	0,00
F1	SLE WIND X	Combination		10,47	1,55	27,47	0,00	0,00	0,00
F1	SLE WIND Y	Combination		9,91	-16,88	10,79	0,00	0,00	0,00
F2	DEAD	NonStatic	Last Step	-8,15	3,95	20,50	0,00	0,00	0,00
F2	SD	NonStatic	Last Step	-15,55	4,85	31,79	0,00	0,00	0,00
F2	LIVE	NonStatic	Last Step	-19,68	6,13	33,86	0,00	0,00	0,00
F2	WIND X	NonStatic	Last Step	-1,08	-2,06	-5,72	0,00	0,00	0,00
F2	WIND Y	NonStatic	Last Step	12,41	-26,02	-33,53	0,00	0,00	0,00
F2	NOT X	NonStatic	Last Step	-0,07	0,01	0,02	0,00	0,00	0,00
F2	NOT Y	NonStatic	Last Step	0,04	-0,07	-0,06	0,00	0,00	0,00
F2	SLU LIVE	Combination		-63,48	21,52	125,06	0,00	0,00	0,00
F2	SLU WIND X	Combination		-52,52	7,87	91,19	0,00	0,00	0,00
F2	SLU WIND Y	Combination		-36,33	-20,88	57,82	0,00	0,00	0,00
F2	SLE LIVE	Combination		-43,41	14,87	86,10	0,00	0,00	0,00
F2	SLE WIND X	Combination		-21,09	-1,13	36,46	0,00	0,00	0,00
F2	SLE WIND Y	Combination		-11,65	-17,90	17,00	0,00	0,00	0,00
F3	DEAD	NonStatic	Last Step	8,15	-3,98	20,51	0,00	0,00	0,00
F3	SD	NonStatic	Last Step	11,42	-4,47	17,26	0,00	0,00	0,00
F3	LIVE	NonStatic	Last Step	20,70	-7,01	46,69	0,00	0,00	0,00
F3	WIND X	NonStatic	Last Step	-11,74	-0,31	-9,79	0,00	0,00	0,00
F3	WIND Y	NonStatic	Last Step	4,72	-19,65	18,12	0,00	0,00	0,00
F3	NOT X	NonStatic	Last Step	-0,07	0,01	-0,02	0,00	0,00	0,00
F3	NOT Y	NonStatic	Last Step	0,04	-0,07	0,06	0,00	0,00	0,00
F3	SLU LIVE	Combination		58,73	-22,47	122,63	0,00	0,00	0,00
F3	SLU WIND X	Combination		33,23	-25,68	92,38	0,00	0,00	0,00
F3	SLU WIND Y	Combination		52,98	-48,88	125,86	0,00	0,00	0,00
F3	SLE LIVE	Combination		40,24	-15,52	84,50	0,00	0,00	0,00
F3	SLE WIND X	Combination		9,22	-14,72	33,46	0,00	0,00	0,00
F3	SLE WIND Y	Combination		20,74	-28,25	52,99	0,00	0,00	0,00
F4	DEAD	NonStatic	Last Step	-8,15	-3,95	20,50	0,00	0,00	0,00
F4	SD	NonStatic	Last Step	-13,65	-5,48	33,05	0,00	0,00	0,00
F4	LIVE	NonStatic	Last Step	-19,97	-5,92	33,74	0,00	0,00	0,00
F4	WIND X	NonStatic	Last Step	-1,16	2,03	-5,71	0,00	0,00	0,00
F4	WIND Y	NonStatic	Last Step	-4,70	-19,60	18,02	0,00	0,00	0,00
F4	NOT X	NonStatic	Last Step	-0,07	-0,01	0,02	0,00	0,00	0,00
F4	NOT Y	NonStatic	Last Step	-0,04	-0,07	0,06	0,00	0,00	0,00
F4	SLU LIVE	Combination		-61,15	-22,33	126,93	0,00	0,00	0,00
F4	SLU WIND X	Combination		-55,32	-22,49	108,58	0,00	0,00	0,00
F4	SLU WIND Y	Combination		-59,56	-48,45	137,06	0,00	0,00	0,00
F4	SLE LIVE	Combination		-41,87	-15,42	87,36	0,00	0,00	0,00
F4	SLE WIND X	Combination		-24,48	-13,35	53,32	0,00	0,00	0,00
F4	SLE WIND Y	Combination		-26,95	-28,49	69,93	0,00	0,00	0,00
X1	DEAD	NonStatic	Last Step	0,00	0,00	24,94	0,00	0,00	0,00
X1	SD	NonStatic	Last Step	0,00	0,02	65,88	0,00	0,00	0,00
X1	LIVE	NonStatic	Last Step	0,00	0,01	52,89	0,00	0,00	0,00
X1	WIND X	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X1	WIND Y	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X1	NOT X	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X1	NOT Y	NonStatic	Last Step	0,00	0,00	0,00	0,00	0,00	0,00
X1	SLU LIVE	Combination		0,00	0,05	210,58	0,00	0,00	0,00
X1	SLU WIND X	Combination		0,00	0,04	186,78	0,00	0,00	0,00
X1	SLU WIND Y	Combination		0,00	0,04	186,78	0,00	0,00	0,00
X1	SLE LIVE	Combination		0,00	0,03	143,71	0,00	0,00	0,00
X1	SLE WIND X	Combination		0,00	0,02	90,82	0,00	0,00	0,00
X1	SLE WIND Y	Combination		0,00	0,02	90,82	0,00	0,00	0,00
X2	DEAD	NonStatic	Last Step	0,00	0,00	24,95	0,00	0,00	0,00
X2	SD	NonStatic	Last Step	0,00	-0,01	43,97	0,00	0,00	0,00
X2	LIVE	NonStatic	Last Step	0,00	-0,01	55,99	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	-0,04	182,36	0,00	0,00	0,00
X2	SLU WIND X	Combination		0,00	-0,03	157,17	0,00	0,00	0,00
X2	SLU WIND Y	Combination		0,00	-0,03	157,17	0,00	0,00	0,00
X2	SLE LIVE	Combination		0,00	-0,03	124,90	0,00	0,00	0,00
X2	SLE WIND X	Combination		0,00	-0,01	68,91	0,00	0,00	0,00
X2	SLE WIND Y	Combination		0,00	-0,01	68,91	0,00	0,00	0,00







MASTER COPY
INTERNAL TEST



NOTE

1) ALL DIMENSIONS ARE IM MM.

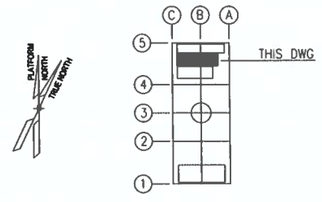
REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
B-300 STRUCTURAL CALCULATION - E&I SHELTERS	1724000049-ST-CA-00008

LEGEND

HOLDS

KEY PLAN



ALEXSISTEMI

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-300 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-00012		SHEET 002/002 REV. 01

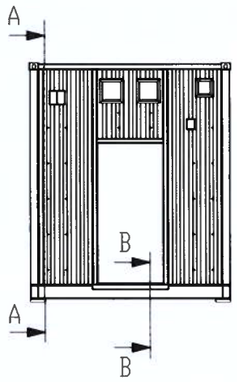
File Name : 1724000049-ST-DD-00012-REV.01

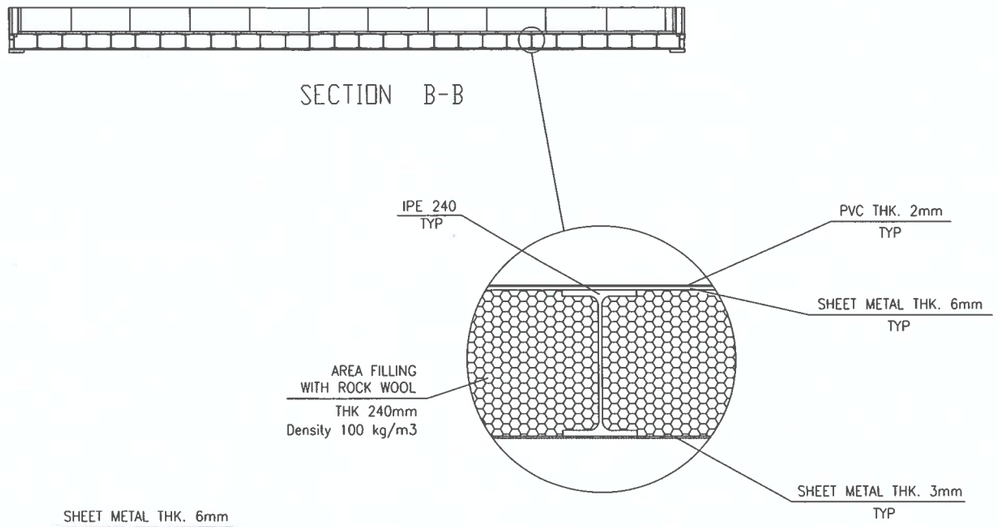
DRAWING NO. 1724000049-AR-DD-00020

REV. 02

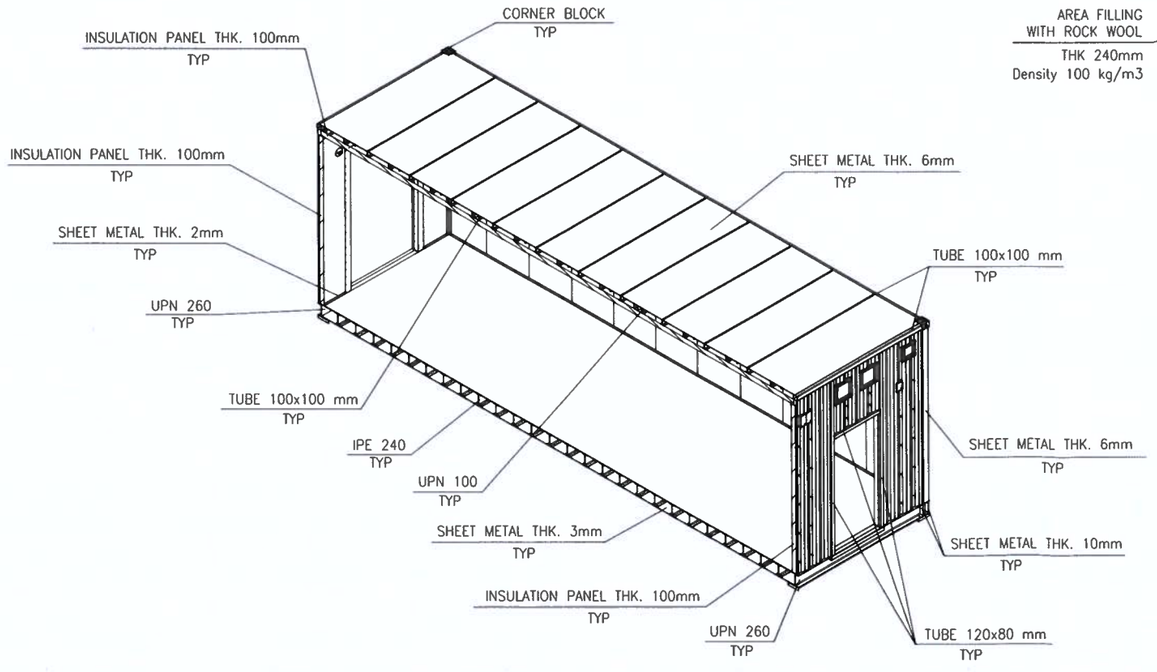
MODULE B-300

REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" STRUCTURAL CALCULATION	1724000049-ST-CA-00008
Weld Procedure Specifications (WPS), Weld Procedure Qualification Report (WPQR), Welding Map and Welders Qualifications	1724000049-WEL-RE-00003

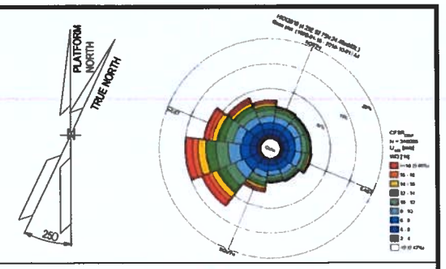




DETAIL "C"

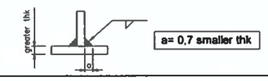


MASTER COPY
INTERNAL TEST



NOTES

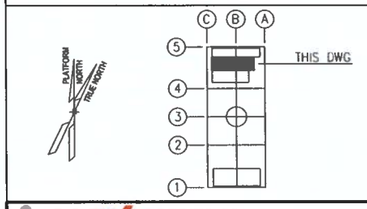
1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WELDINGS SYMBOLS ARE IN ACCORDANCE WITH A.W.S. CODE D.1.1
3. UNLESS OTHERWISE INDICATED FILLET WELDS SHALL HAVE FOLLOWING DIM.:



LEGEND

HOLDS

KEY PLAN



ALEXSISTEMI

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-300 DETAILED DRAWINGS-E&I SHELTERS

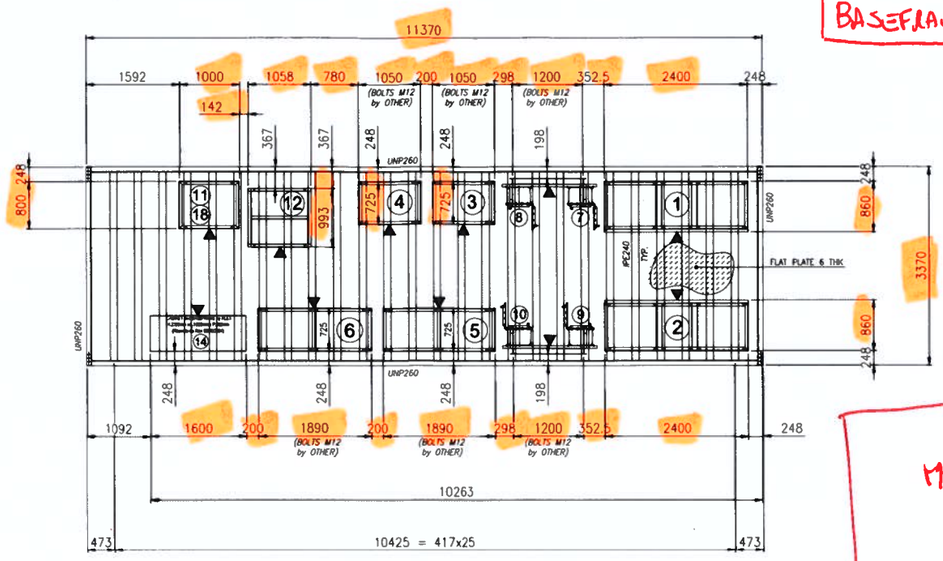
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00020	SHEET 001	REV. 02

File Name : 1724000049-AR-DD-00020-REV.02

DRAWING NO. 1724000049-AR-DD-00020

REV. 02

B-300
I&T EQUIPMENT ROOM
BASEFRAME LOCATION PLAN

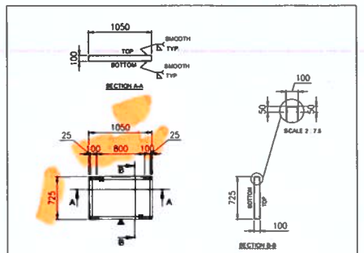


MISSING

BASEFRAME (12)

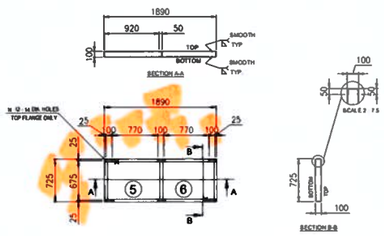
MISSING

BASEFRAME (11) (18)



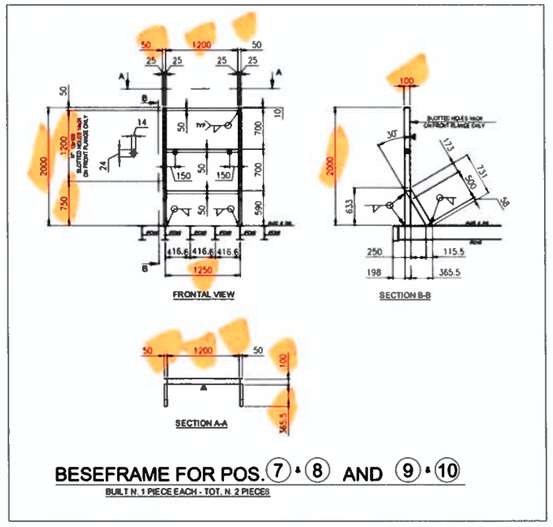
BESEFRAME FOR POS. 3 & 4

BUILT N. 1 PIECE EACH - TOT. N. 2 PIECES



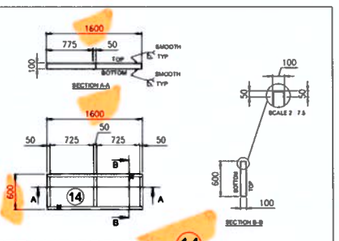
BESEFRAME FOR POS. 5 & 6

BUILT N. 1 PIECE EACH - TOT. N. 2 PIECES



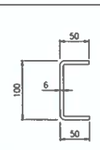
BESEFRAME FOR POS. 7 & 8 AND 9 & 10

BUILT N. 1 PIECE EACH - TOT. N. 2 PIECES

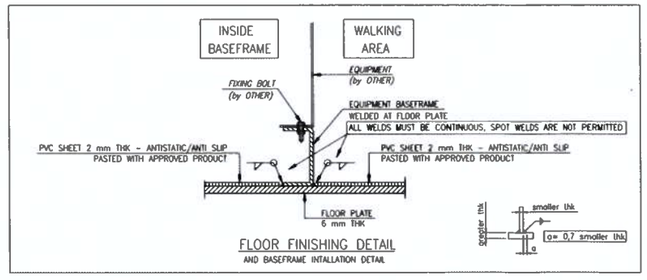


BESEFRAME FOR POS. 14

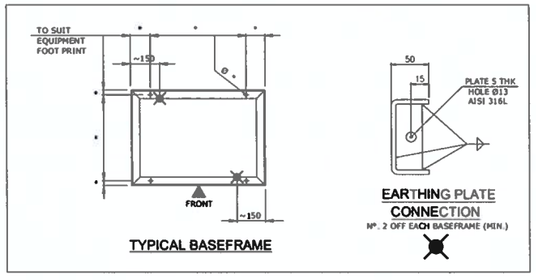
BUILT N. 1 PIECE



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



FLOOR FINISHING DETAIL
AND BASEFRAME INTALLATION DETAIL

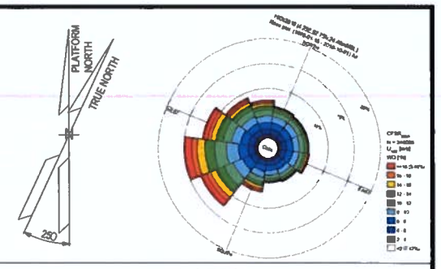


TYPICAL BASEFRAME

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

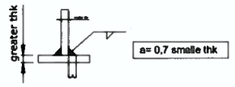
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	SCOPE
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	ASI
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	ASI
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	ASI
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	ASI
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	ASI
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	ASI
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	600	300	800	100	ASI
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	600	300	800	100	ASI
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	600	300	800	100	ASI
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	600	300	800	100	ASI
11	NC-200F2	NAVAID PANEL	1180	810	675	500	ASI
12	BA-200F2	BATTERY BOX NAVAID	1000	500	1135	325	ASI
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	ASI
18	BC-200F2	BATTERY CHARGER NAVAID	607	607	2157	500	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".



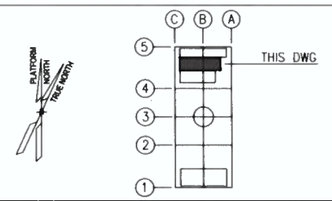
6. SURFACE TREATMENT ACCORDING DOCUMENT N. 1724000049-MAT-PRO-00004 - PAINTING PROCEDURE FINAL COLOUR LIGHT GREY RAL 7035.

LEGEND

ASI = ALEX SISTEMI

HOLDS

KEY PLAN



ALEXSISTEMI

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-300 DETAILED DRAWINGS-E&I SHELTERS

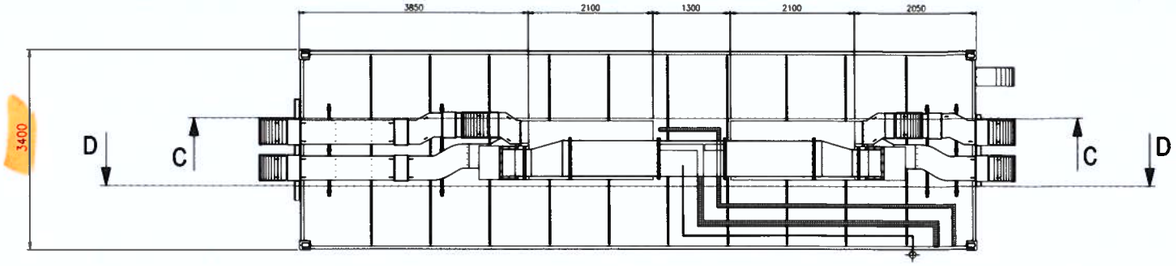
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE 1:50
DRAWN M.G.	CHECKED O.A.	APPROVED C.A.	DATE 11/07/24
A1	DRAWING NO. 1724000049-AR-DD-00020	SHEET 003	REV. 02

File Name : 1724000049-AR-DD-00020-REV.02

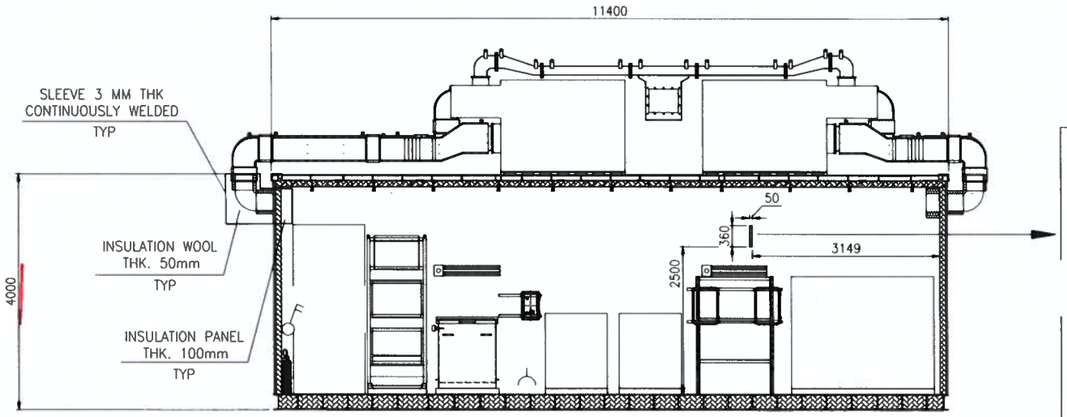
MASTER COPY
INTERNAL TEST

DRAWING NO. 1724000049-AR-DD-00020

REV. 02

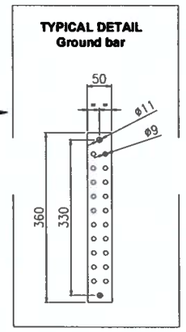


TOP VIEW

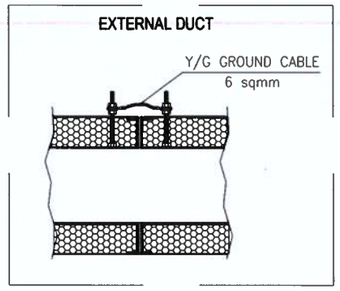


SECTION C-C

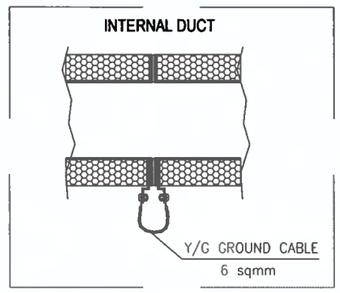
DET. 3



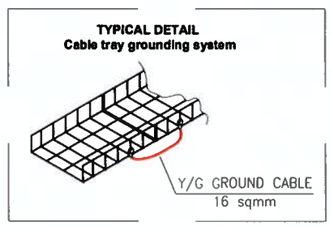
DET. 1



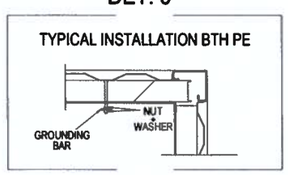
DET. 2



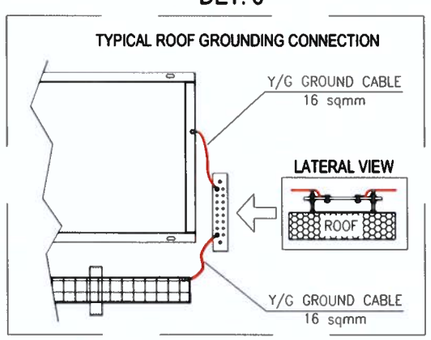
DET. 4



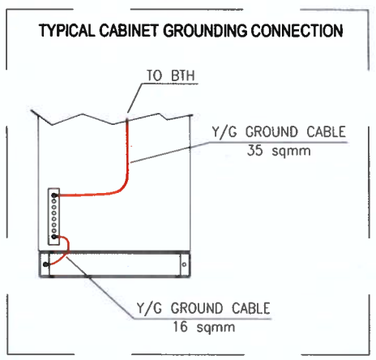
DET. 5

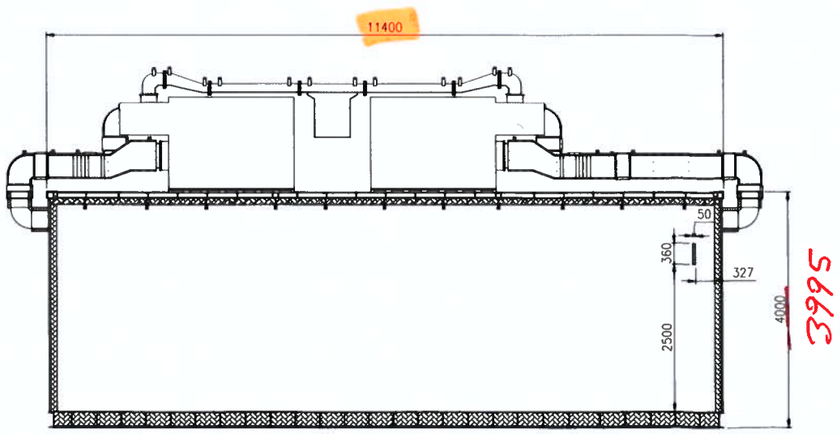


DET. 6



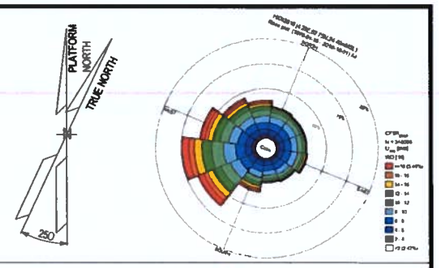
DET. 7





SECTION D-D

MASTER COPY
INTERNAL TEST



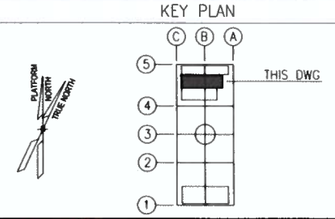
NOTES

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.

LEGEND

HOLDS

KEY PLAN



ALEXSISTEMI

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-300 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-00020	SHEET 005	REV. 02

File Name : 1724000049-AR-DD-00020-REV.02

B-300 – ATTACH. 2

Doc. Name: PAINTING CHECK		Report No.03 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:** AC UPS EQUIPMENT ROOM B-300
S/N: B300	**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		

Mod1.4.2

Doc. Name: CHECK AND FUNCTIONAL TEST		Report No.03
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:** AC UPS EQUIPMENT ROOM B-300
S/N: B300	**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	COICEA CATALIN AD ROSETTI MARINO (XV)	CROSSWIND		

Mod.1.4.9

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** AC UPS EQUIPMENT ROOM B-300
S/N: B300	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 26/07/2024

REFERENCE DRAWING:

- 1724000049-AR-DA-00016 - B-300 GENERAL ARRANGMENT DRAWINGS - E&I SHELTERS
- 1724000049-HV-DA-00066 - MODULE B-300 – HVAC SYSTEM–G.A. AND DETAILS
- 1724000049-HV-DA-00028 - B-300 HVAC and LIGHTING PANEL WIRING DRAWINGS and GENERAL ARRANGEMENT (INCL INTERCONNECTING) - E&I SHELTERS

REFERENCE DOCUMENT:

- 1724000049-HV-PID-00041 - B-300 PID - E&I SHELTERS
- 1724000049-HV-LIS-00049 - B-300 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.

Mod1.4.6

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** AC UPS EQUIPMENT ROOM B-300
S/N: B300	**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		

B-400 – ATTACH. 1

ALEXSISTEMI spa

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV = ISO 9001 =

Doc. Name: **Dimensional Check and Visual Inspection**		*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: 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	✓		

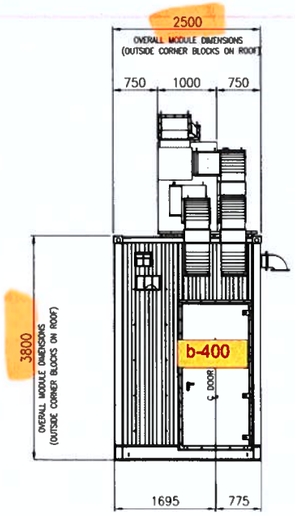
Comments:

DWG attached.

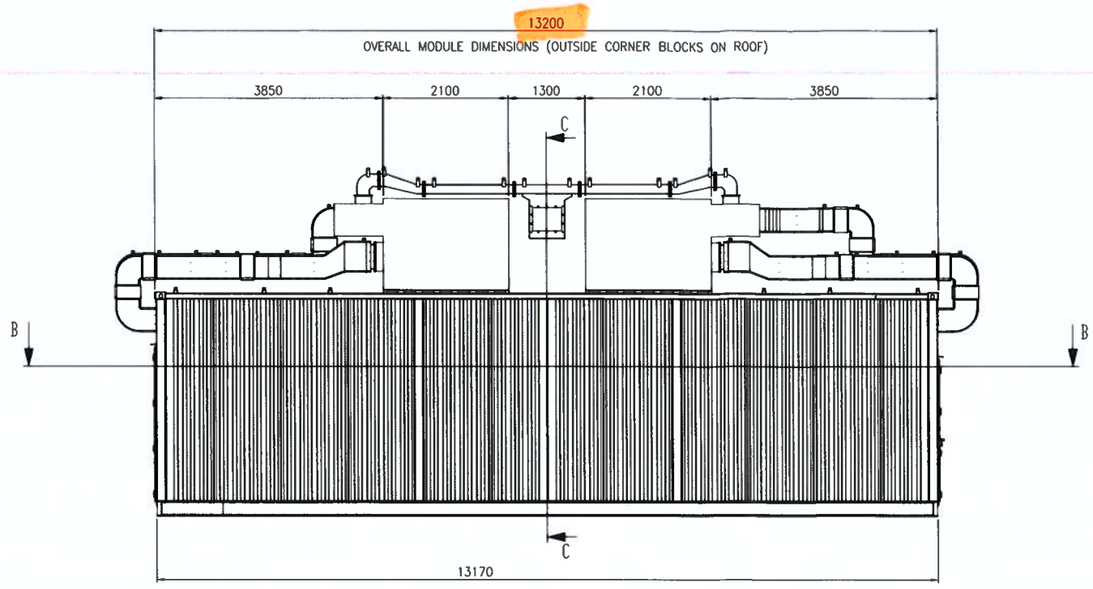
ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
ALEXSISTEMI spa	COICEA CATALIN ROSETTI MARINO	CROSSWIND		

Mod.P13.1

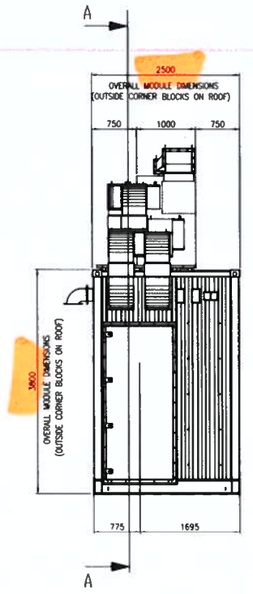
DRAWING NO. 1724000049-AR-DA-00017 REV 02



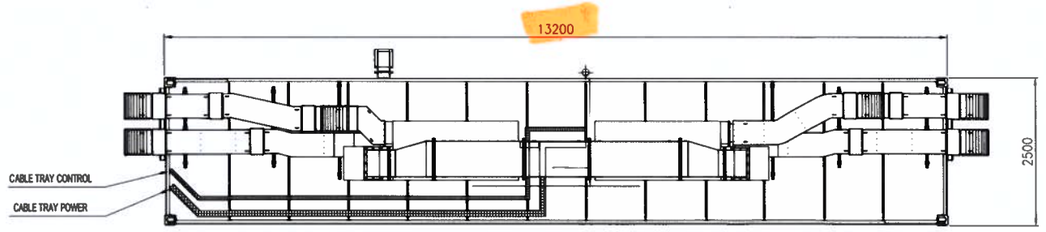
EAST VIEW



SOUTH VIEW



WEST VIEW



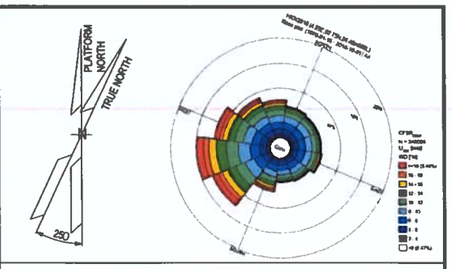
TOP VIEW

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

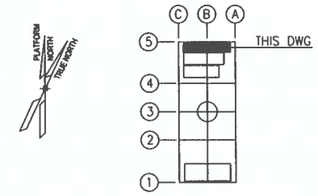
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007

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



ALEXSISTEMI spa

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

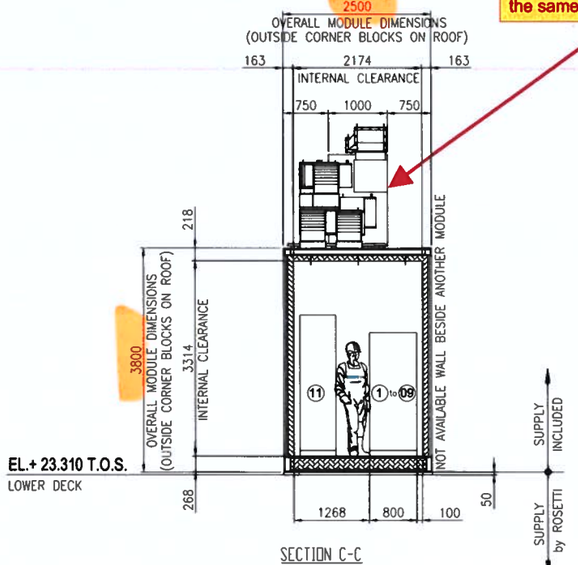
TITLE : BASE LOAD POWER HUB (BLPH)
B-400 GENERAL ARRANGEMENT DRAWINGS

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

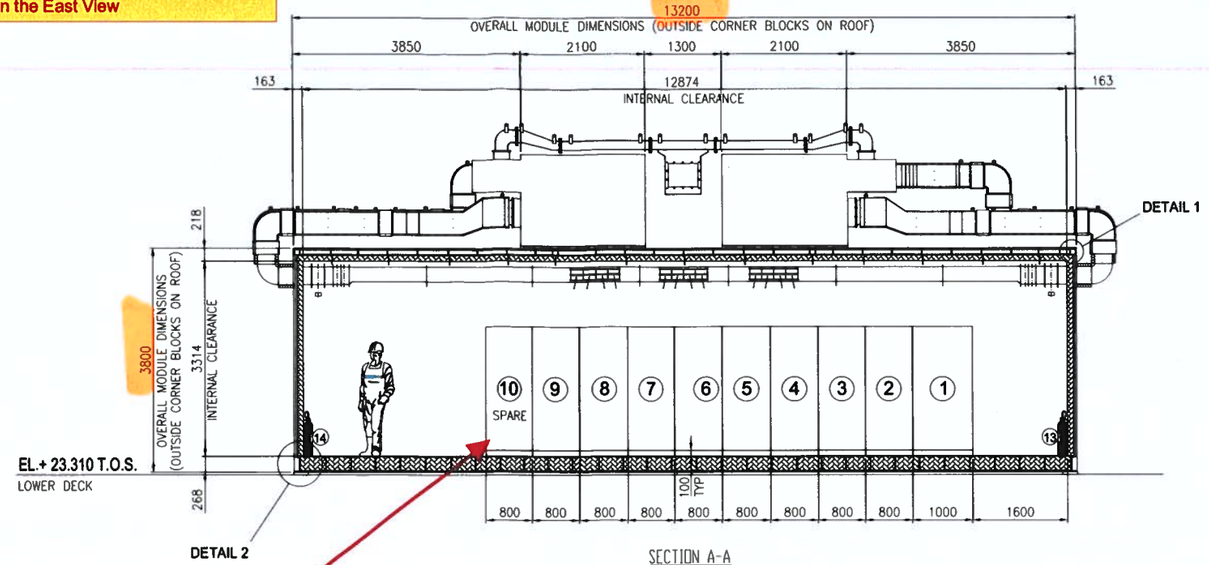
File Name : 1724000049-AR-DA-00017-REV.02

DRAWING NO. 1724000049-AR-DA-00017 REV. 02

Check HVAC units and ducts positions. It should be the same shown in the East View



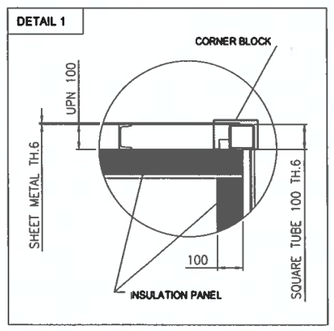
SECTION C-C

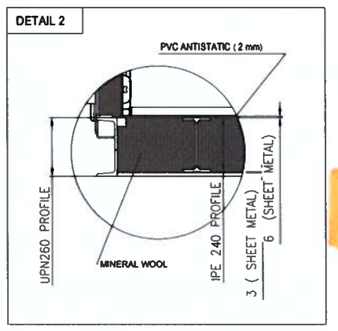


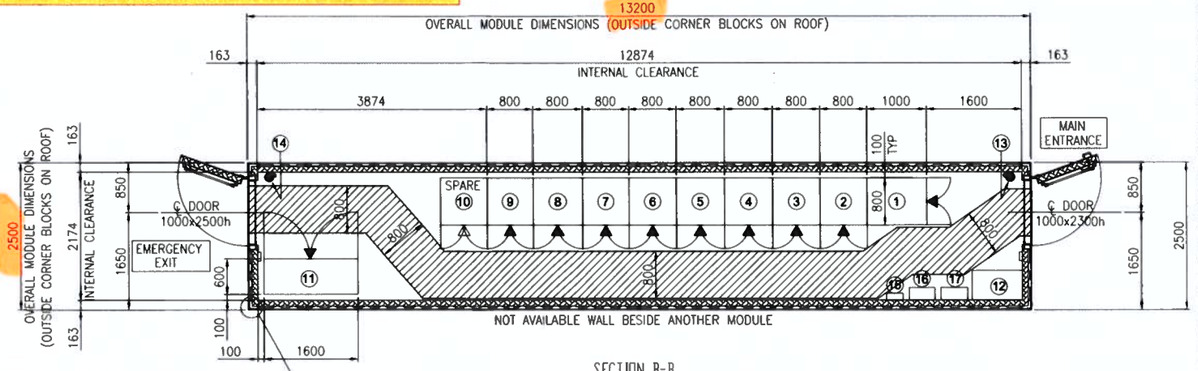
DETAIL 2

SECTION A-A

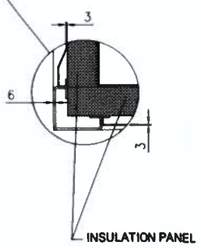
Check numbering and position of items.
This section view is similar to section D-D, although section A-A should be oriented to South







SECTION B-B



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

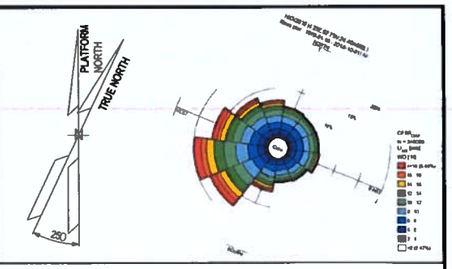
EQUIPMENT LIST

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.)

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: R. Bossi	Date: 10/07/2024

MASTER COPY
INTERNAL TEST



NOTE

1) ALL DIMENSIONS ARE IM MM.

REFERENCE

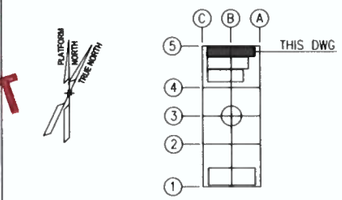
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007

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



ALEXSISTEMI

Next revision: 03 Accepted For Construction (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

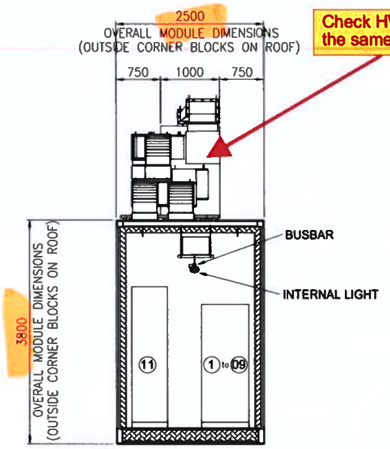
TITLE : BASE LOAD POWER HUB (BLPH)
B-400 GENERAL ARRANGEMENT DRAWINGS

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

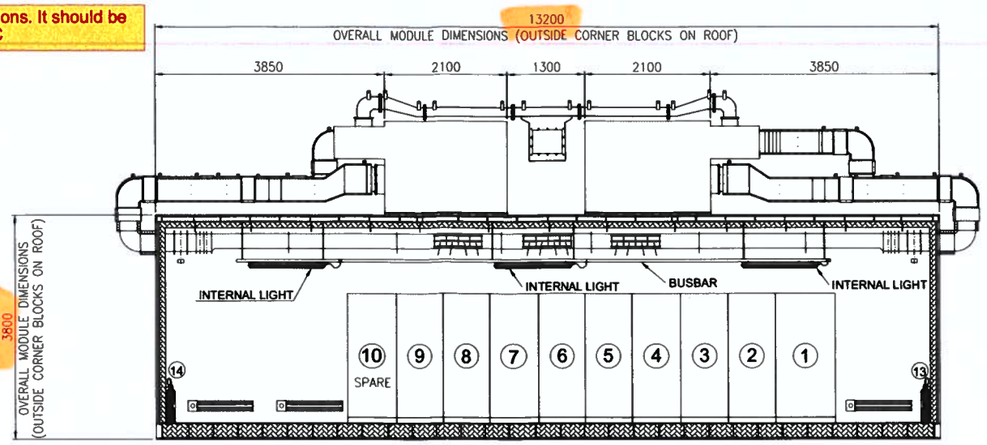
02

DRAWING NO. 1724000049-AR-DA-00017 REV 02

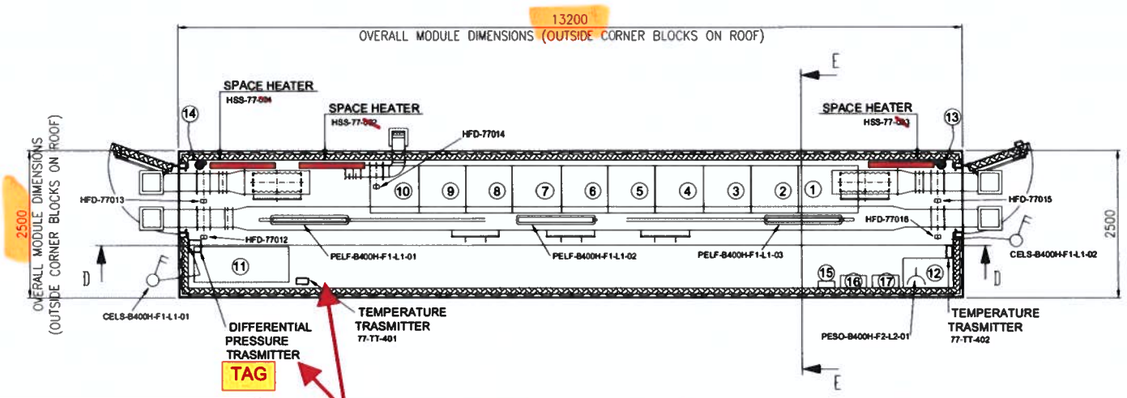


SECTION E-E

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

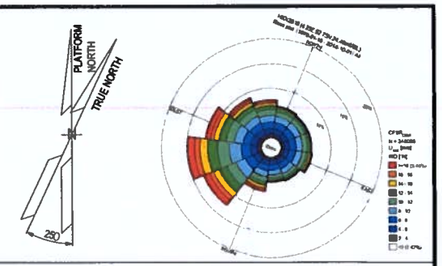
EQUIPMENT LIST

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	

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.

MASTER COPY
INTERNAL TEST

02



NOTE

1) ALL DIMENSIONS ARE IM MM.

REFERENCE

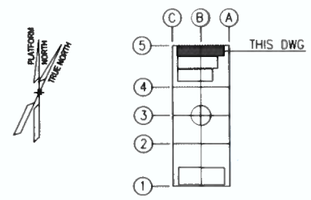
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" HVAC SYSTEM G.A. & DETAILS	1724000049-HV-DA-00067
"B-400" DETAILED DRAWING	1724000049-AR-DD-00021
PAINTING PROCEDURE	1724000049-MAT-PRO-00007

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



ALEXSISTEMI

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

UNP260

B-400

UNP260

UNP260

UNP260

250 | 2023 | 250 = 2500

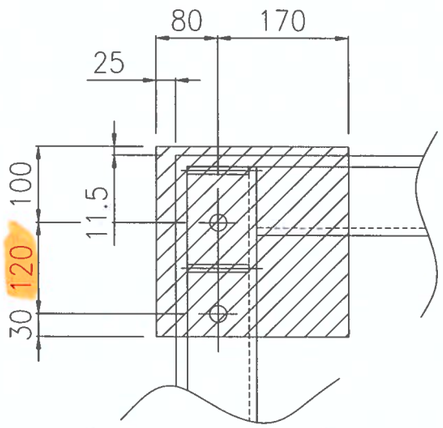
OVERALL MODULE DIMENSIONS (OUTSIDE CORNER BLOCKS ON ROOF)

2470

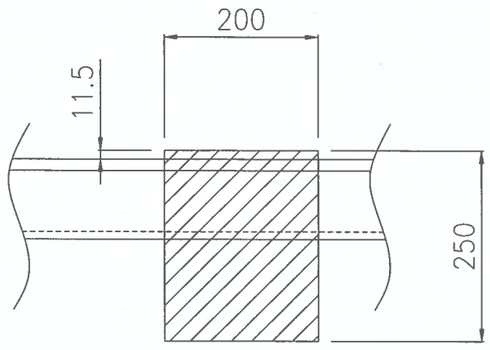
735 | 129 | 250 | 2983 | 120 | 250 | 735

250 | 200 | 250 | 250

No. 2 HOLES Ø18
FOR M16 SCREW
AT EACH CORNER
(SCREW SUPPLY by ROSETTI)



TYPICAL CORNER PLATE POSITION



TYPICAL CENTRAL PLATE POSITION

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

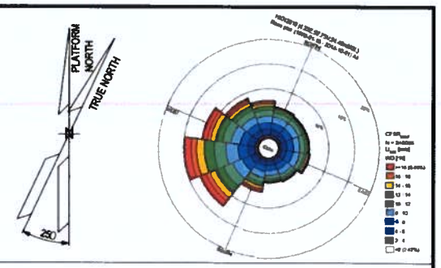
NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.

Sign	Date
R. Bossi	07/06/2024



TYPICAL FIXING DETAIL
SCALE 1 : 10

MASTER COPY
INTERNAL TEST



NOTE

1) ALL DIMENSIONS ARE IM MM.

REFERENCE

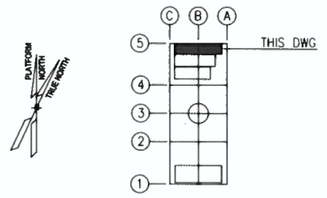
DOCUMENT TITLE	DOCUMENT NUMBER
B-400 STRUCTURAL CALCULATION - E&I SHELTERS	1724000049-ST-CA-00009

LEGEND

Plate 50 mm thk. welded on
Lower Deck - Supply by Rosetti

HOLDS

KEY PLAN



ALEXSISTEMI spa

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

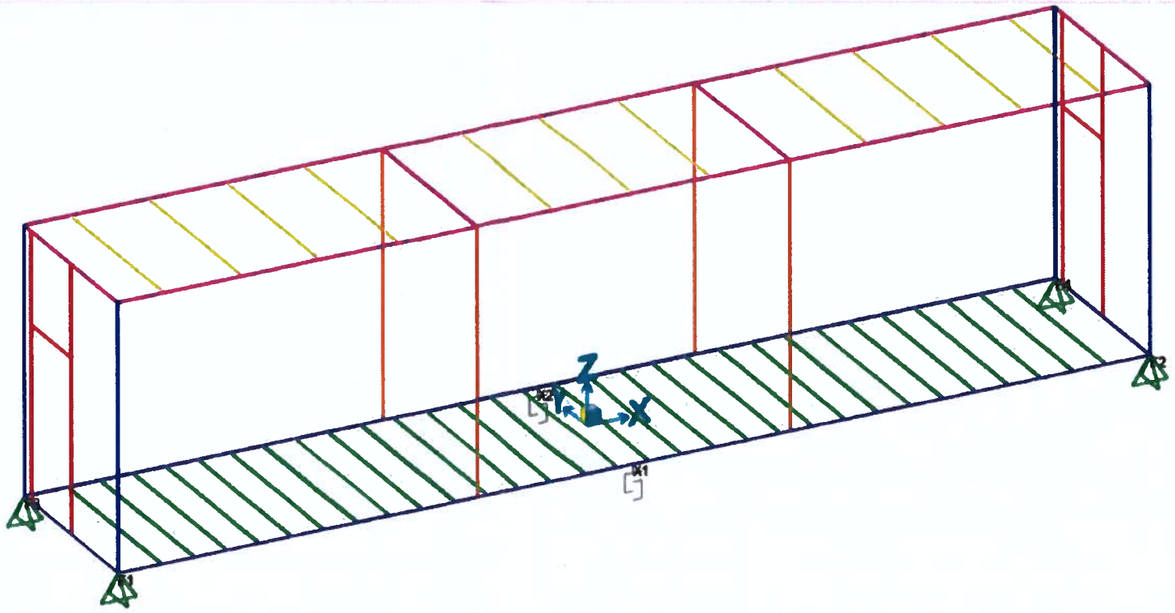
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE N.A.
DRAWN M.G.	CHECKED M.R.	APPROVED O.A.	DATE 03/06/24
A1	DRAWING NO. 1724000049-ST-DD-00013	SHEET 001/002	REV. 01

File Name : 1724000049-ST-DD-00013-REV01

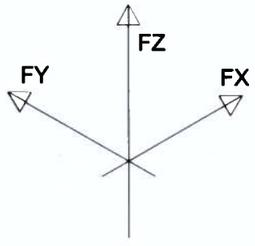
DRAWING NO. 1724000049-ST-DD-00013 REV. 01

TABLE: Joint Reactions

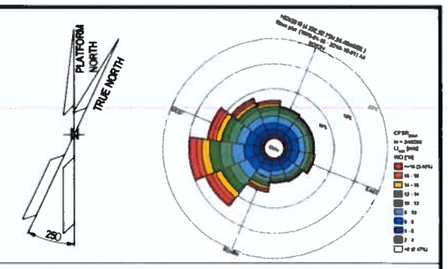
Joint	OutputCase	CaseType	StepType	Fx	Fy	Fz	Mx	My	Mz
Text	Text	Text	Text	KN	KN	KN	KN-m	KN-m	KN-m
F3	DEAD	NonStatic	Last Step	7,70	-3,33	18,50	0,00	0,00	0,00
F3	SD	NonStatic	Last Step	6,05	-2,10	13,16	0,00	0,00	0,00
F3	LIVE	NonStatic	Last Step	19,91	-7,03	38,05	0,00	0,00	0,00
F3	WIND X	NonStatic	Last 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.

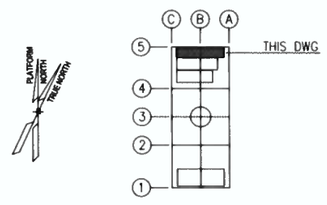
REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
B-400 STRUCTURAL CALCULATION - E&I SHELTERS	1724000049-ST-CA-00009

LEGEND

HOLDS

KEY PLAN



ALEXSISTEMI s.p.a.

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

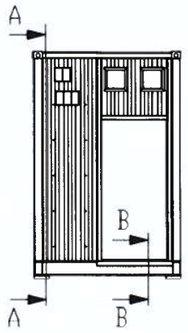
CONTRACT NO./TITLE CONTRACT_NO. 1724000049			SCALE N.A.
DRAWN M.G.	CHECKED M.R.	APPROVED O.A.	DATE 03/06/24
A1	DRAWING NO. 1724000049-ST-DD-00013	SHEET 002/002	REV. 01

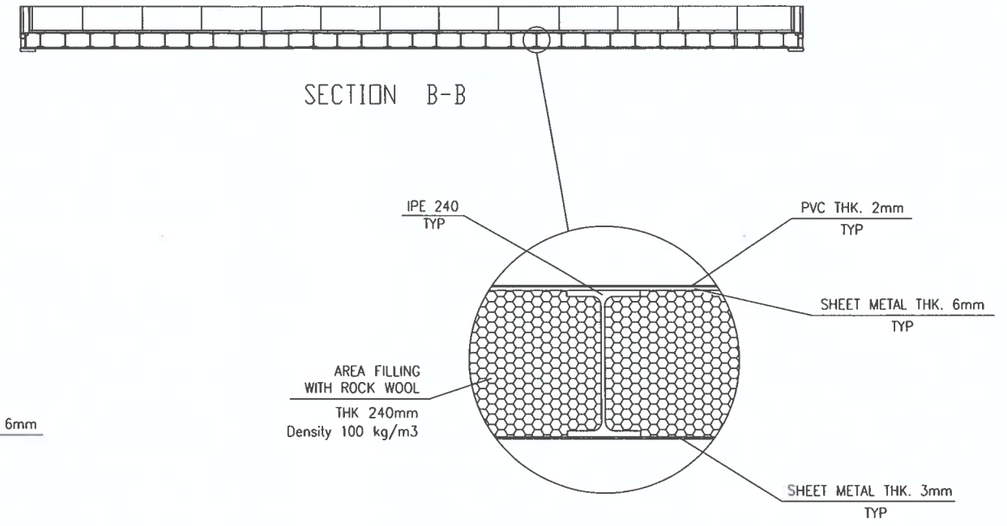
File Name : 1724000049-ST-DD-00013-REV01

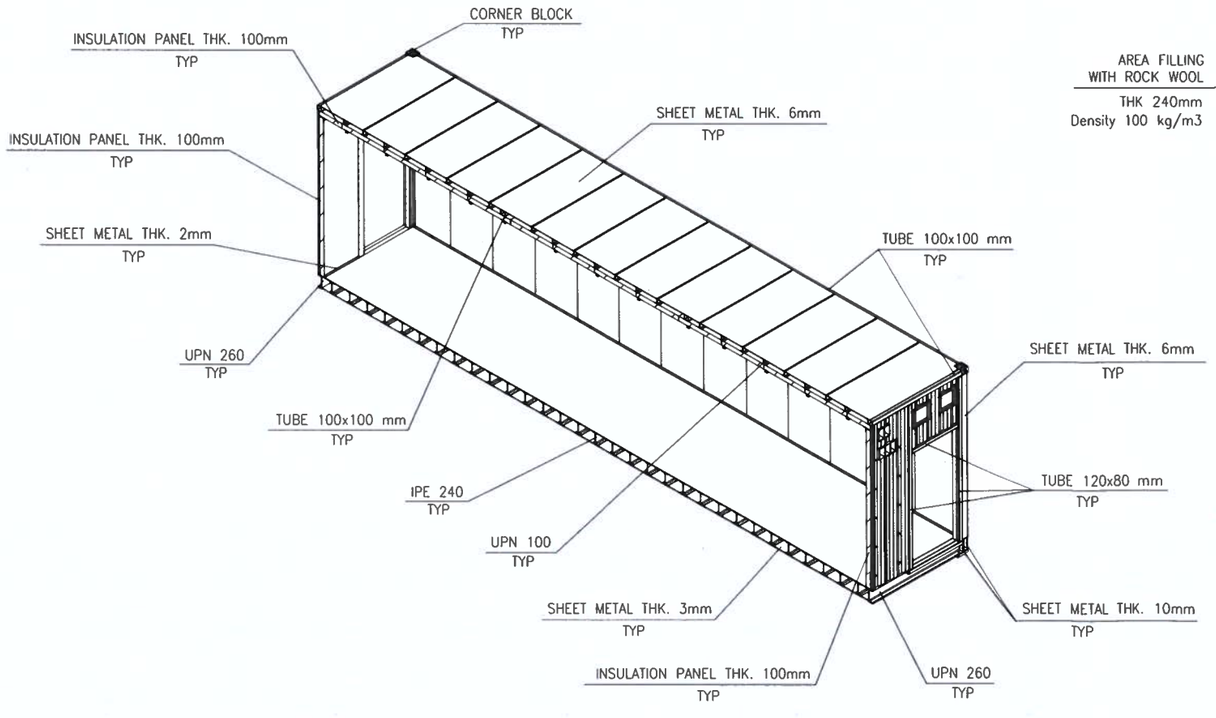
DRAWING NO. 1724000049-AR-DD-00021 REV. 02

MODULE B-400

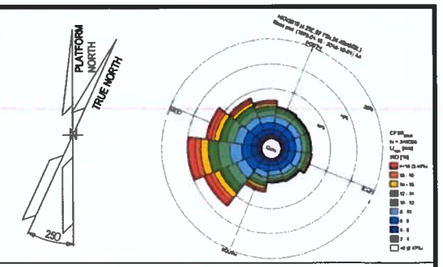
REFERENCE	
DOCUMENT TITLE	DOCUMENT NUMBER
"B-400" STRUCTURAL CALCULATION	1724000049-ST-CA-00009
Weld Procedure Specifications (WPS), Weld Procedure Qualification Report (WPQR), Welding Map and Welders Qualifications	1724000049-WEL-RE-00003





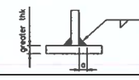


MASTER COPY
INTERNAL TEST



NOTES

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

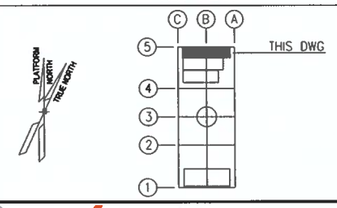


a= 0,7 smaller thk

LEGEND

HOLDS

KEY PLAN



ALEXSISTEMI

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

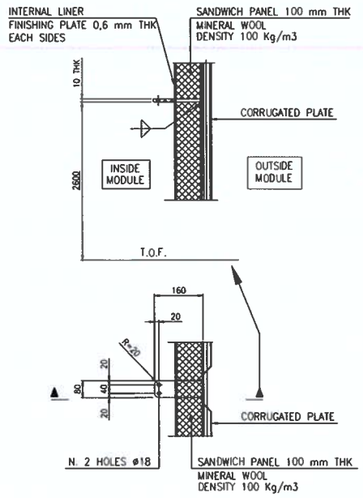
TITLE :

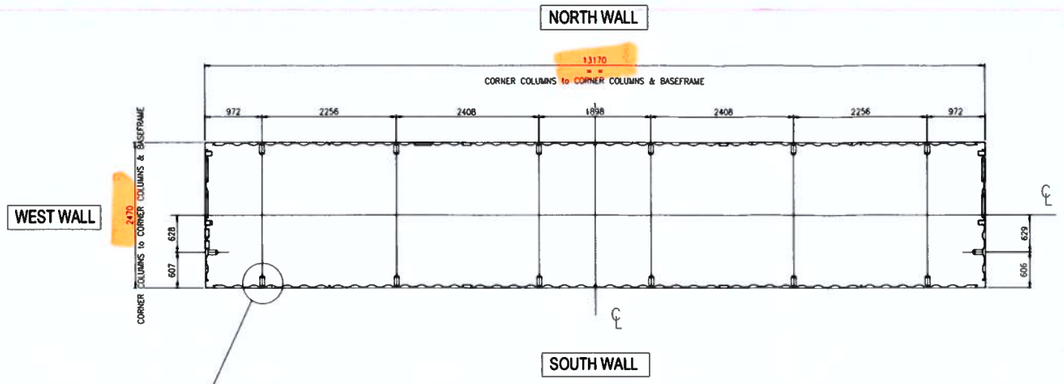
B-400 DETAILED DRAWINGS-E&I SHELTERS

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

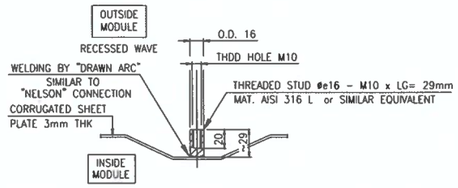
File Name : 1724000049-AR-DD-00021-REV.02

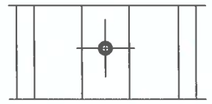
DRAWING NO. 1724000049-AR-DD-00021 | REV. 02



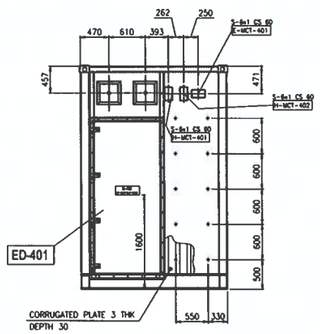


MODULE B-400
INTERNAL SEA FASTENING PLATES
PLAN

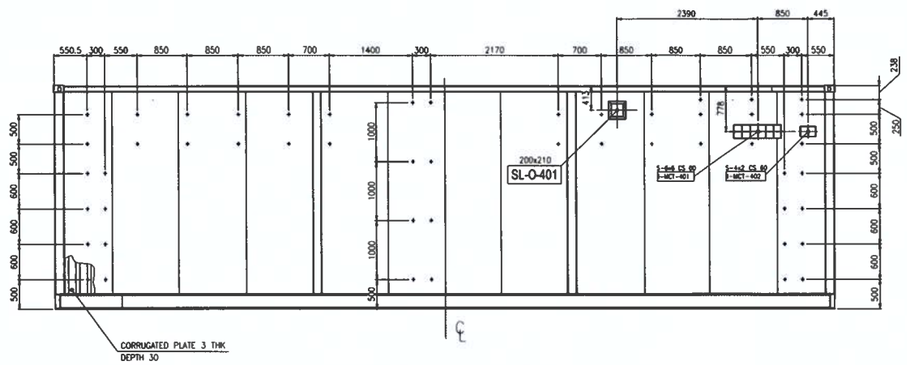




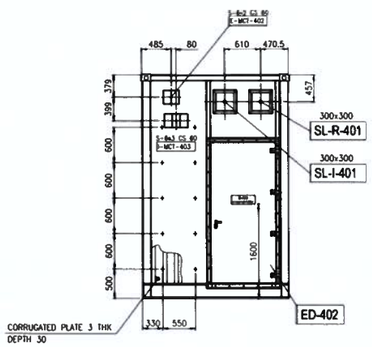
THREADED STUD INSTALLATION



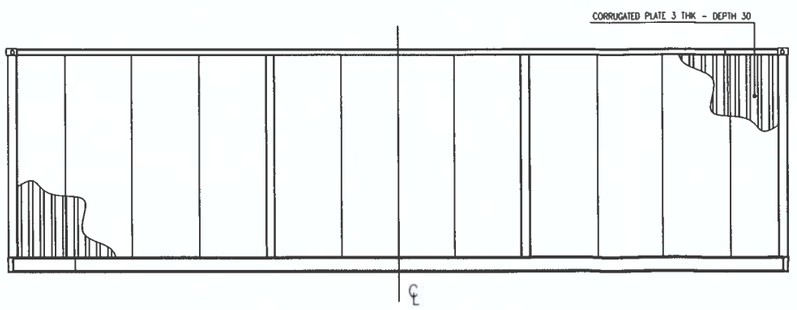
VIEW OF WEST WALL



VIEW OF NORTH WALL



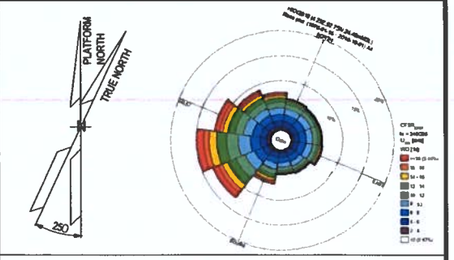
VIEW OF EAST WALL



VIEW OF SOUTH WALL

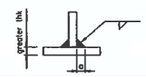
MASTER COPY
INTERNAL TEST

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

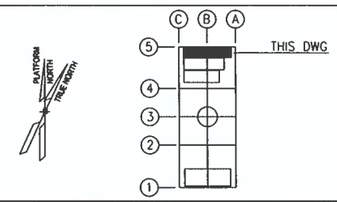
THREADED STUD ø16 - M10 x LG= 29mm
T.O.F. — TOP OF FLOOR

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 3= B-300 2= B-200 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 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	

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)

ALEXSISTEMI

CROSSWIND | ROSETTI MARINO

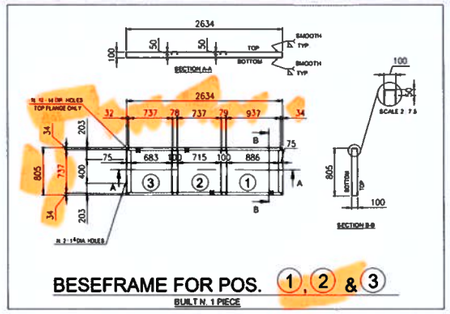
TITLE :
B-400 DETAILED DRAWINGS-E&I SHELTERS

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

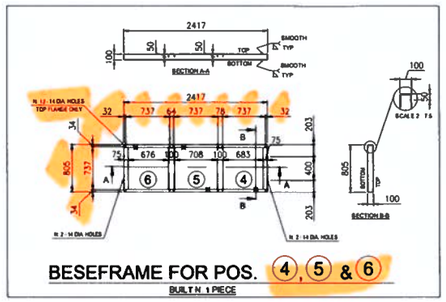
DRAWING NO. 1724000049-AR-DD-00021 REV. 02

B-400
I&T EQUIPMENT ROOM
BASEFRAME LOCATION PLAN



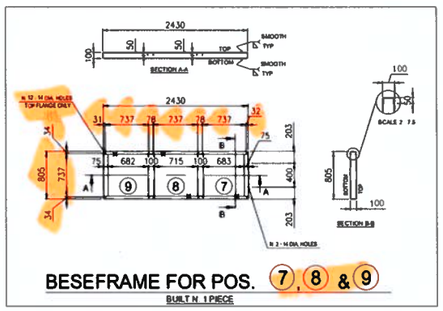
BESEFRAME FOR POS. 1, 2 & 3

BUILT N. 1 PIECE



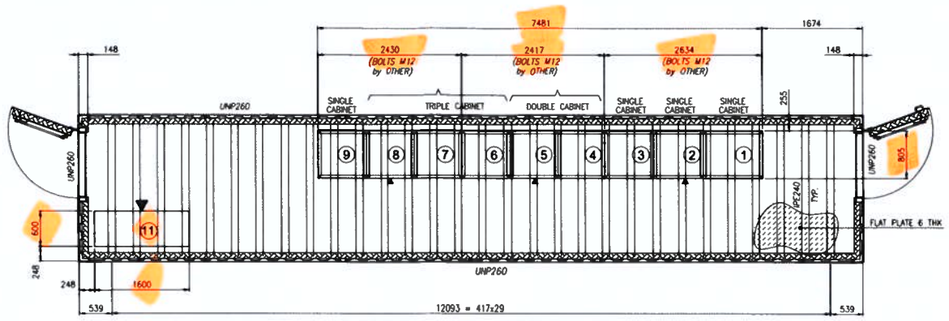
BESEFRAME FOR POS. 4, 5 & 6

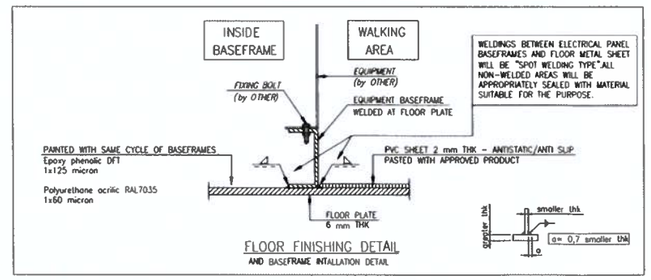
BUILT N. 1 PIECE



BESEFRAME FOR POS. 7, 8 & 9

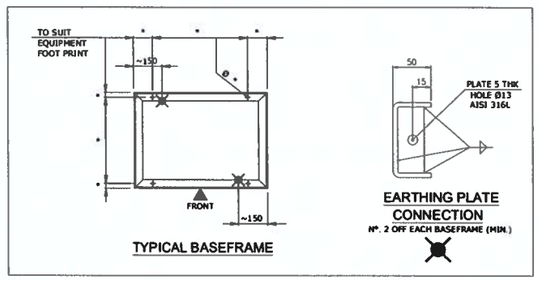
BUILT N. 1 PIECE





FLOOR FINISHING DETAIL

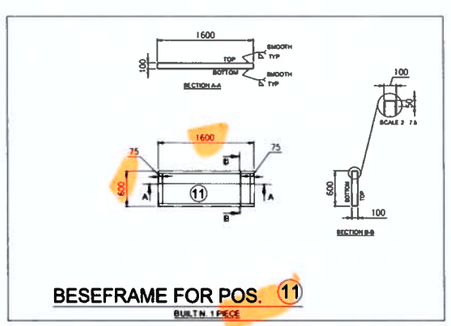
AND BASEFRAME INTALLATION DETAIL



TYPICAL BASEFRAME

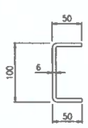
EARTHING PLATE CONNECTION

Nº. 2 OFF EACH BASEFRAME (MIN.)



BESEFRAME FOR POS. 11

BUILT N. 1 PIECE

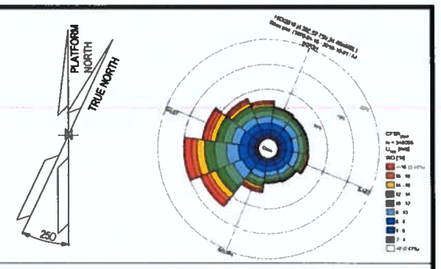


C 100x50x50 THK 6mm.
FROM BENT PLATE THK 6mm.
MAT. CARBON STEEL

EQUIPMENT LIST

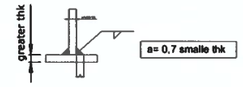
REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	SCOPE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	250	ASI
2	B400-NET-001	NETWORK CABINET	800	800	2100	250	ASI
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	250	ASI
4	B400-PCS-001	PCS SYSTEM CABINET	800	800	2100	250	ASI
5	B400-PCS-002	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

MASTER COPY
INTERNAL TEST

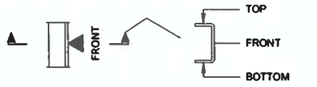


NOTES

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".



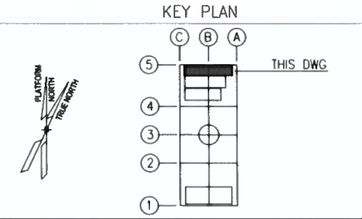
6. SURFACE TREATMENT ACCORDING DOCUMENT N. 1724000049-MAT-PRO-00004 - PAINTING PROCEDURE FINAL COLOUR LIGHT GREY RAL 7035.

LEGEND

ASI = ALEX SISTEMI

HOLDS

KEY PLAN



ALEXSISTEMI S.r.l.

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

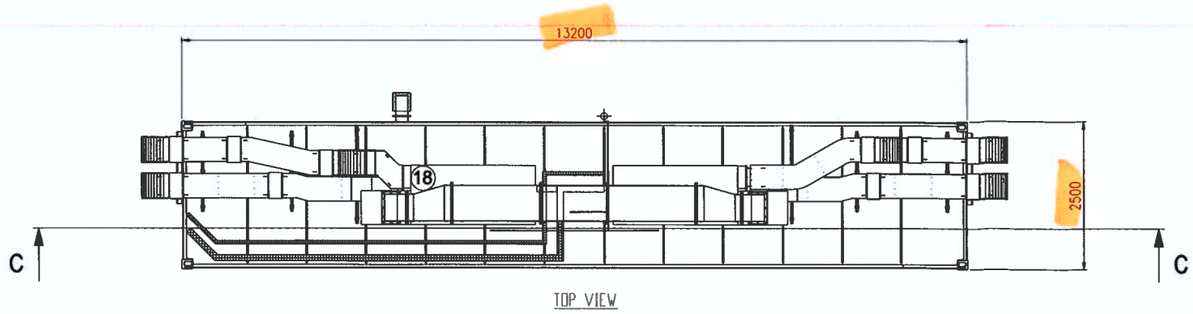
TITLE :

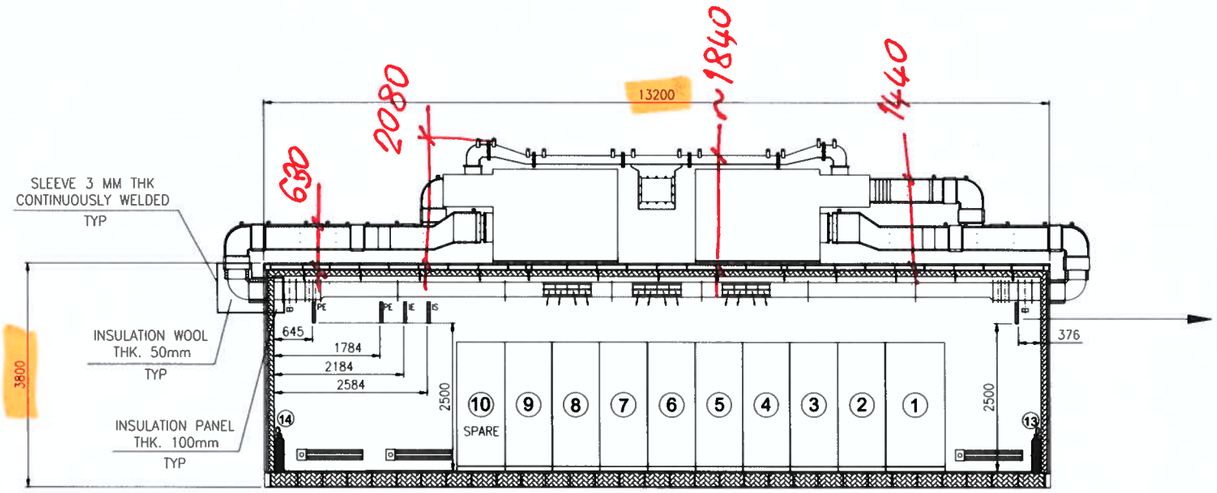
B-400 DETAILED DRAWINGS-E&I SHELTERS

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

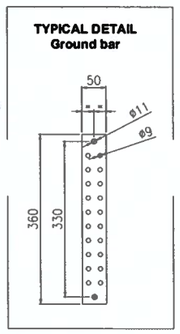
File Name : 1724000049-AR-DD-00021-REV.02

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

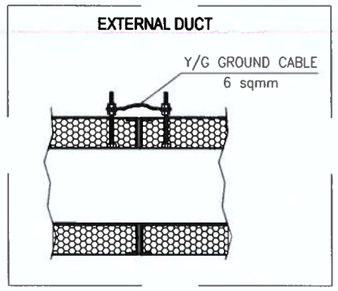




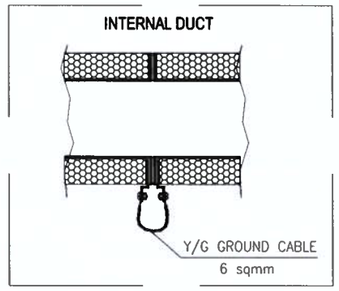
DET. 3



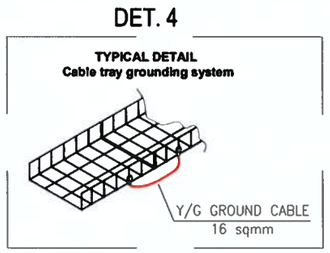
DET. 1



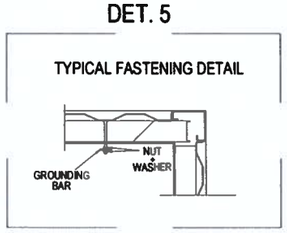
DET. 2



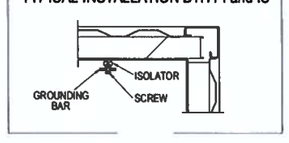
DET. 4



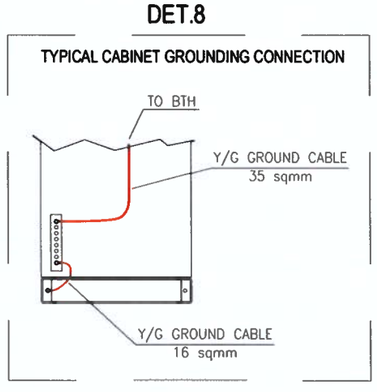
DET. 5



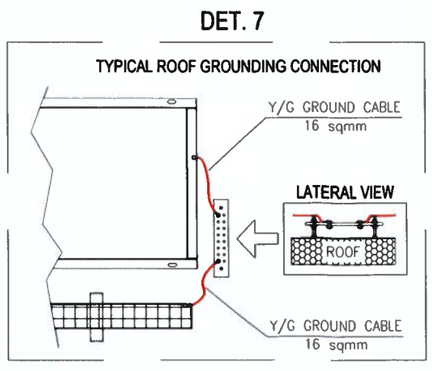
DET. 6

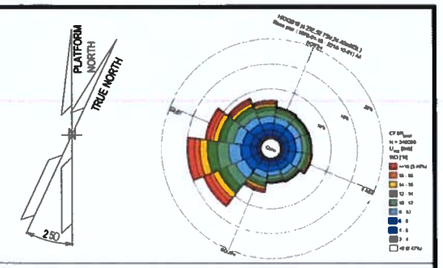


DET.8



DET. 7





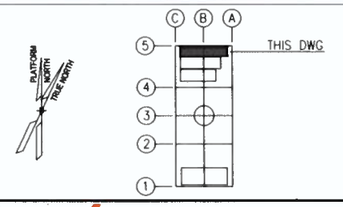
NOTES

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.

LEGEND

HOLDS

KEY PLAN



ALEXSISTEMI s.p.a.

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

B-400 – ATTACH. 2

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 (1X/)	CROSSWIND		

Mod1.4.2

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	COICEA CATALIN ROSETTI MARINO (IX)	CROSSWIND		

Mod.1.4.9

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.

Mod1.4.6

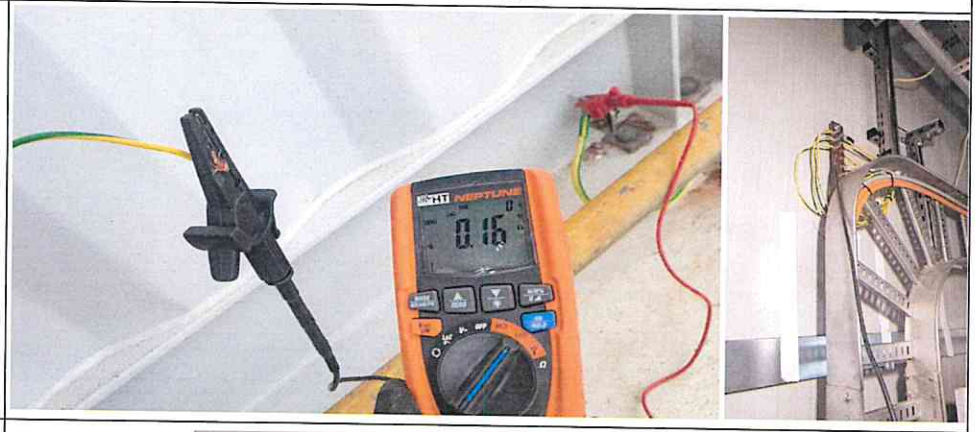
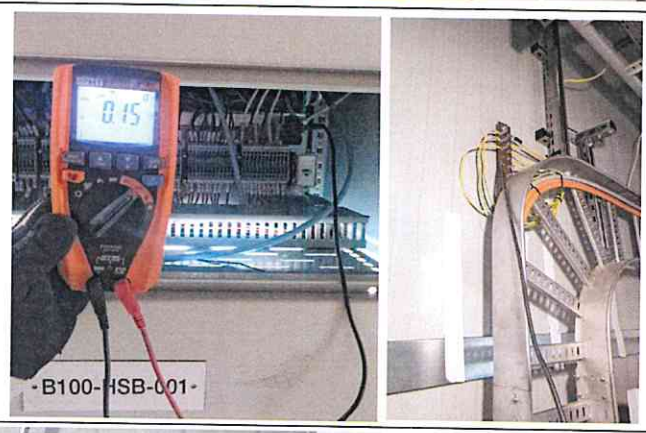
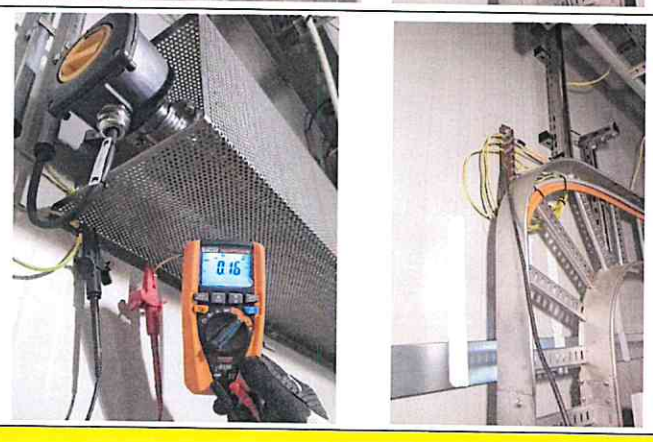
Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** I&T EQUIPMENT ROOM B-400
S/N: B400	**FAT procedure:** 1724000049-QC-PRO-00056

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		

GROUNDING REPORT

GROUNDING SYSTEM CHECK REPORT (B-100)

Measurement point	Value	Photos
From the external ground cable to the internal BTM	160mΩ	
From panel to BTM	150mΩ	
From the pressure differential instrument to BTM	180mΩ	
From conduit to BTM	150mΩ	
From space heater to BTM	160mΩ	
AVERAGE	**160mΩ**	

All measures were taken in Ω

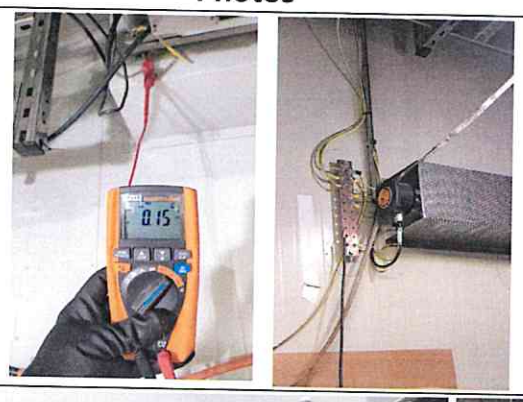
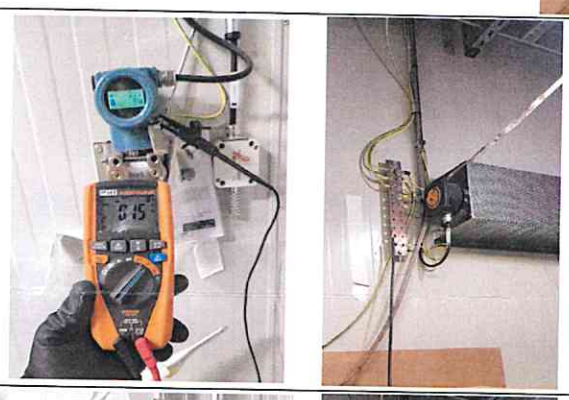
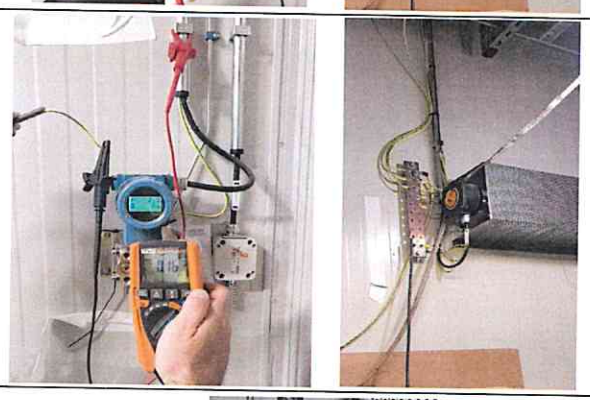
Approval RM

ROSETTI MARINO SpA
Stefano Linari
Quality Control Dept.
23/10/24

24/10/2024

ALEX SISTEMI:

GROUNDING SYSTEM CHECK REPORT (B-200)

Measurement point	Value	Photos
From HVAC to BTM	150mΩ	
From panel to BTM	150mΩ	
From the pressure differential instrument to BTM	150mΩ	
From conduit to BTM	160mΩ	
From space heater to BTM	150mΩ	
AVERAGE	**152mΩ**	

All measures were taken in Ω

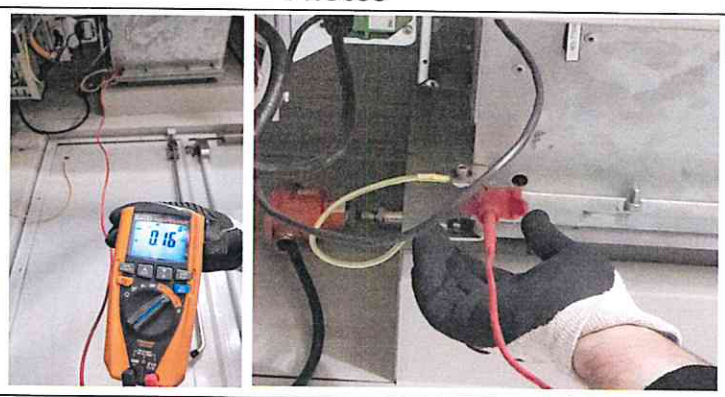
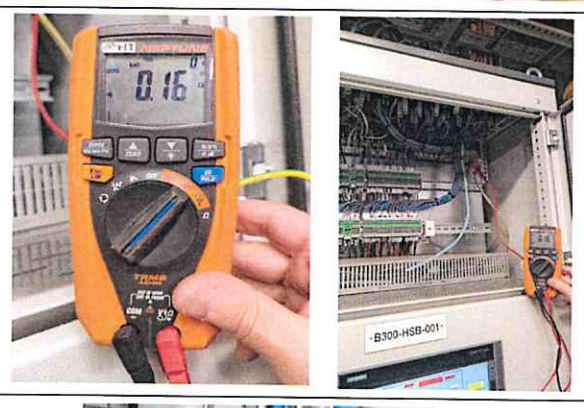
Approval RM

ROSETTI MARINO SpA
Stefano Linari
Quality Control Dept.
23/10/24

24/10/2024

ALEX SISTEMI : Matteo Marchi

GROUNDING SYSTEM CHECK REPORT (B-300)

Measurement point	Value	Photos
From HVAC to BTM	160mΩ	
From panel to BTM	160mΩ	
From the pressure differential instrument to BTM	180mΩ	
From conduit to BTM	160mΩ	
From space heater to BTM	160mΩ	
AVERAGE	**164mΩ**	

All measures were taken in Ω

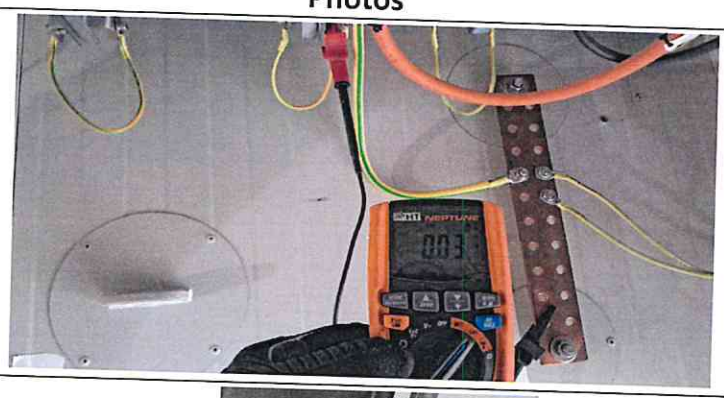
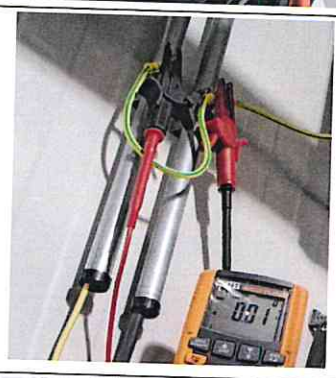
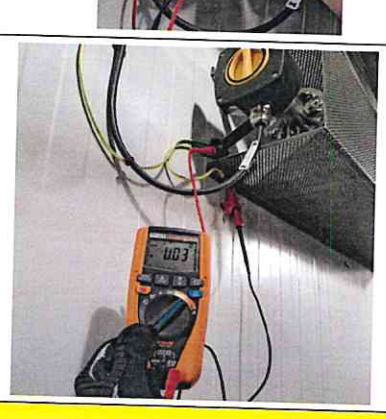
Approval RM

ROSETTI MARINO SpA
Stefano Linari
Quality Control Dept.
23/10/24

24/10/2024

ALEX SISTEMI: Matteo Lorenzi

GROUNDING SYSTEM CHECK REPORT (B-400)

Measurement point	Value	Photos
From HVAC to BTM	30mΩ	
From conduit to BTM	10mΩ	
From conduit to BTM	30mΩ	
From conduit to BTM	30mΩ	
From space heater to BTM	30mΩ	
AVERAGE	**26mΩ**	

All measures were taken in Ω

Approval RM

ROSETTI MARINO SpA
Stefano Linari
Quality Control Dept.
23/10/24

24/10/2024

ALEX SISTEMI :

HVAC REP.1

HHV 77003

testo 440 dP

V 1.0.6 — 83164119

Applicazione: Portata
11/02/2019 16:53:40
Tipo di misura: Media per punti
Punti di misura: 9

Portata 1250,9 m³/h

Num. Serie Sonda: 20795382

Num.	m³/h	m/s	°C
1	304,0	0,65	22,3
2	224,5	0,48	22,1
3	-149,7	-0,32	22,0
4	425,6	0,91	21,4
5	-149,7	-0,32	21,3
6	654,8	1,40	21,2
7	3484,5	7,45	20,2
8	3283,3	7,02	19,6
9	3180,4	6,80	19,4

Geometria: Area
Area: 129920 mm²
Fattore di Correzione: 100%
Pressione atmosferica:
1013,00 hPa

HHV-77001

testo 440 dP

V 1.0.6 — 83164119

Applicazione: Portata
12/02/2019 17:16:05
Tipo di misura: Media per punti
Punti di misura: 9

Portata 1907,7 m³/h

Num. Serie Sonda: 20795382

Num.	m³/h	m/s	°C
1	3942,8	8,43	22,5
2	3797,8	8,12	22,7
3	3942,8	8,43	22,7
4	1552,8	3,32	22,6
5	1379,8	2,95	22,5
6	1861,5	3,98	22,5
7	608,0	1,30	22,5
8	257,2	0,55	22,5
9	-173,1	-0,37	22,5

Geometria: Area
Area: 129920 mm²
Fattore di Correzione: 100%
Pressione atmosferica:
1013,00 hPa

HHV 77004

testo 440 dP

V 1.0.6 — 83164119

Applicazione: Portata
11/02/2019 17:13:48
Tipo di misura: Media per punti
Punti di misura: 9

Portata 1589,2 m³/h

Num. Serie Sonda: 20795382

Num.	m³/h	m/s	°C
1	3222,5	6,89	28,3
2	3222,5	6,89	28,4
3	3250,6	6,95	28,5
4	3138,3	6,71	29,7
5	827,9	1,77	30,0
6	257,2	0,55	29,9
7	102,9	0,22	29,8
8	154,3	0,33	29,7
9	126,3	0,27	29,7

Geometria: Area
Area: 129920 mm²
Fattore di Correzione: 100%
Pressione atmosferica:
1013,00 hPa

HHV 77002

testo 440 dP

V 1.0.6 — 83164119

Applicazione: Portata
12/02/2019 17:26:41
Tipo di misura: Media per punti
Punti di misura: 9

Portata 1760,2 m³/h

Num. Serie Sonda: 20795382

Num.	m³/h	m/s	°C
1	374,2	0,80	23,7
2	261,9	0,56	23,3
3	-121,6	-0,26	23,3
4	1459,3	3,12	25,5
5	940,1	2,01	25,5
6	884,0	1,89	25,9
7	3961,5	8,47	26,3
8	3938,1	8,42	26,4
9	4143,9	8,86	26,4

Geometria: Area
Area: 129920 mm²
Fattore di Correzione: 100%
Pressione atmosferica:
1013,00 hPa

ROSETTI MARINO SPA
Stefano Linari
Quality Control Dept.

ATEX SISTEMI: Matteo Lazzeri

HVAC REP.2

MAU 77008

testo 440 dP

V 1.0.6 — 83164119

Applicazione: Portata
12/02/2019 11:39:38
Tipo di misura: Media per punti
Punti di misura: 9

Portata 875,5 m³/h

Num.	Serie Sonda: m³/h	m/s	20795382 °C
1	697,0	1,21	19,6
2	944,6	1,64	19,2
3	1157,8	2,01	19,2
4	817,9	1,42	19,1
5	800,6	1,39	18,9
6	956,2	1,66	18,6
7	783,4	1,36	18,4
8	944,6	1,64	18,3
9	777,6	1,35	18,3

Geometria: Area
Area: 160000 mm²
Fattore di Correzione: 100%
Pressione atmosferica:
1013,00 hPa

MAU - 77007

testo 440 dP

V 1.0.6 — 83164119

Applicazione: Portata
12/02/2019 11:28:29
Tipo di misura: Media per punti
Punti di misura: 9

Portata 1554,3 m³/h

Num.	Serie Sonda: m³/h	m/s	20795382 °C
1	1163,6	1,85	22,5
2	1320,9	2,10	22,8
3	1320,9	2,10	22,8
4	1302,0	2,07	22,8
5	1786,3	2,84	23,0
6	1754,9	2,79	23,3
7	1654,2	2,63	23,6
8	1912,1	3,04	23,9
9	1773,8	2,82	24,3

Geometria: Area
Area: 174720 mm²
Fattore di Correzione: 100%
Pressione atmosferica:
1013,00 hPa

MAU - 77006

testo 440 dP

V 1.0.6 — 83164119

Applicazione: Portata
11/02/2019 12:01:46
Tipo di misura: Media per punti
Punti di misura: 8

Portata 1600,8 m³/h

Num.	Serie Sonda: m³/h	m/s	20795382 °C
1	1679,4	2,67	29,6
2	1786,3	2,84	29,9
3	1717,1	2,73	29,8
4	1541,0	2,45	29,9
5	1471,8	2,34	29,9
6	1484,4	2,36	29,7
7	1515,9	2,41	29,6
8	1610,2	2,56	29,8

Geometria: Area
Area: 174720 mm²
Fattore di Correzione: 100%
Pressione atmosferica:
1013,00 hPa

MAU-77005

testo 440 dP

V 1.0.6 — 83164119

Applicazione: Portata
11/02/2019 12:34:49
Tipo di misura: Media per punti
Punti di misura: 8

Portata 571,7 m³/h

Num.	Serie Sonda: m³/h	m/s	20795382 °C
1	593,3	1,03	21,7
2	633,6	1,10	21,6
3	541,4	0,94	21,5
4	524,2	0,91	21,4
5	558,7	0,97	21,2
6	576,0	1,00	21,2
7	581,8	1,01	21,1
8	564,5	0,98	21,0

Geometria: Area
Area: 160000 mm²
Fattore di Correzione: 100%
Pressione atmosferica:
1013,00 hPa

testo 440 dP

V 1.0.6 — 83164119

Applicazione: Portata
12/02/2019 11:55:22
Tipo di misura: Media per punti
Punti di misura: 6

Portata 1088,4 m³/h

Num.	Serie Sonda: m³/h	m/s	20795382 °C
1	1200,9	2,97	30,7
2	1192,8	2,95	30,9
3	946,2	2,34	30,5
4	1055,4	2,61	30,3
5	1067,5	2,64	30,2
6	1067,5	2,64	30,2

Geometria: Area
Area: 112320 mm²
Fattore di Correzione: 100%
Pressione atmosferica:
1013,00 hPa

testo 440 dP

V 1.0.6 — 83164119

Applicazione: Portata
12/02/2019 11:30:38
Tipo di misura: Media per punti
Punti di misura: 6

Portata 1265,0 m³/h

Num.	Serie Sonda: m³/h	m/s	20795382 °C
1	974,5	2,41	25,1
2	1087,7	2,69	25,5
3	1326,3	3,28	25,9
4	1293,9	3,20	25,8
5	1451,6	3,59	25,8
6	1455,7	3,60	25,8

Geometria: Area
Area: 112320 mm²
Fattore di Correzione: 100%
Pressione atmosferica:
1013,00 hPa

testo 440 dP

V 1.0.6 — 83164119

Applicazione: Portata
11/02/2019 12:04:12
Tipo di misura: Media per punti
Punti di misura: 6

Portata 1026,4 m³/h

Num.	Serie Sonda: m³/h	m/s	20795382 °C
1	1023,0	2,53	30,1
2	1200,9	2,97	30,1
3	1055,4	2,61	30,3
4	962,4	2,38	30,4
5	958,3	2,37	30,7
6	958,3	2,37	30,8

Geometria: Area
Area: 112320 mm²
Fattore di Correzione: 100%
Pressione atmosferica:
1013,00 hPa

testo 440 dP

V 1.0.6 — 83164119

Applicazione: Portata
11/02/2019 12:41:48
Tipo di misura: Media per punti
Punti di misura: 8

Portata 1501,7 m³/h

Num.	Serie Sonda: m³/h	m/s	20795382 °C
1	1421,5	2,26	24,9
2	1547,3	2,46	25,3
3	1320,9	2,10	25,7
4	1534,7	2,44	26,1
5	1559,9	2,48	26,2
6	1503,3	2,39	26,3
7	1585,1	2,52	26,4
8	1541,0	2,45	26,3

Geometria: Area
Area: 174720 mm²
Fattore di Correzione: 100%
Pressione atmosferica:
1013,00 hPa

testo 440 dP

V 1.0.6 — 83164119

Applicazione: Portata
12/02/2019 11:53:45
Tipo di misura: Media per punti
Punti di misura: 9

Portata 1696,9 m³/h

Num.	Serie Sonda: m³/h	m/s	20795382 °C
1	1773,8	2,82	26,5
2	1729,7	2,75	26,6
3	1629,1	2,59	27,2
4	1641,7	2,61	28,1
5	1868,1	2,97	28,3
6	1635,4	2,60	28,7
7	1748,6	2,78	28,8
8	1616,5	2,57	28,9
9	1629,1	2,59	29,0

Geometria: Area
Area: 174720 mm²
Fattore di Correzione: 100%
Pressione atmosferica:
1013,00 hPa

testo 440 dP

V 1.0.6 — 83164119

Applicazione: Portata
12/02/2019 11:39:38
Tipo di misura: Media per punti
Punti di misura: 9

Portata 875,5 m³/h

Num.	Serie Sonda: m³/h	m/s	20795382 °C
1	697,0	1,21	19,6
2	944,6	1,64	19,2
3	1157,8	2,01	19,2
4	817,9	1,42	19,1
5	800,6	1,39	18,9
6	956,2	1,66	18,6
7	783,4	1,36	18,4
8	944,6	1,64	18,3
9	777,6	1,35	18,3

Geometria: Area
Area: 160000 mm²
Fattore di Correzione: 100%
Pressione atmosferica:
1013,00 hPa

testo 440 dP

V 1.0.6 — 83164119

Applicazione: Portata
11/02/2019 12:14:34
Tipo di misura: Media per punti
Punti di misura: 9

Portata 447,4 m³/h

Num.	Serie Sonda: m³/h	m/s	20795382 °C
1	409,0	0,71	23,2
2	455,0	0,79	22,9
3	403,2	0,70	22,7
4	391,7	0,68	22,3
5	472,3	0,82	22,1
6	512,6	0,89	21,9
7	489,6	0,85	21,5
8	460,8	0,80	21,3
9	432,0	0,75	21,2

Geometria: Area
Area: 160000 mm²
Fattore di Correzione: 100%
Pressione atmosferica:
1013,00 hPa

testo 440 dP

V 1.0.6 — 83164119

Applicazione: Portata
11/02/2019 12:44:09
Tipo di misura: Media per punti
Punti di misura: 8

Portata 1133,7 m³/h

Num.	Serie Sonda: m³/h	m/s	20795382 °C
1	1120,1	2,77	26,6
2	1079,6	2,67	26,7
3	1079,6	2,67	26,9
4	1091,8	2,70	27,0
5	1136,2	2,81	27,0
6	1180,7	2,92	27,4
7	1184,8	2,93	27,5
8	1196,9	2,96	27,7

Geometria: Area
Area: 112320 mm²
Fattore di Correzione: 100%
Pressione atmosferica:
1013,00 hPa

ROSETTI MARINO SpA
Stefano Linari
Quality Control Dept.
23/10/24

AGEX SISTEMI: Matteo Forchesi

FAT REPORT 1

Doc. Name: CHECK AND FUNCTIONAL TEST OF HVAC SYSTEM		Report No.01 Mod 1.4.7
OUR JOB X176-24X	Date 24/10/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 24/10/2024

REFERENCE DRAWING:

- 1724000049-AR-DA-00014 - B-100 GENERAL ARRANGMENT DRAWINGS - E&I SHELTERS
- 1724000049-HV-DA-00064 - MODULE B-100 – HVAC SYSTEM–G.A. AND DETAILS
- 1724000049-HV-DA-00026 - B-100 HVAC and LIGHTING PANEL WIRING DRAWINGS and GENERAL ARRANGEMENT (INCL INTERCONNECTING) - E&I SHELTERS

REFERENCE DOCUMENT:

- 1724000049-HV-PID-00039 - B-100 PID - E&I SHELTERS
- 1724000049-HV-CA-00035 - B-100 HVAC CALCULATION REPORT (Incl HVAC SYS CALC and HEAT DISSIPATION CALC) - E&I SHELTERS
- 1724000049-HV-LIS-00047 - B-100 HVAC COMPONENTS LIST AND DS - E&I SHELTERS
- 1724000049-HV-RE-00055 - HVAC SYST DESCRIPTION (MANAGEMENT LOGICS) - E&I SHELTERS
- 1724000049-QC-PRO-00056 (FAT Procedure)
- ECA-00-ELE-DEB-0001 Rev.7 Electrical Design Criteria

Inspection List	PASS	FAIL	N.A.	value
Functional & performance Test of A/C System (HVAC Test):				
• Visual and correct installation of HVAC fans.	x			
• Functional check of fans.	x			
• Check the functionality and performance of A/C System	x			

Doc. Name: CHECK AND FUNCTIONAL TEST OF HVAC SYSTEM		Report No.01 Mod 1.4.7
OUR JOB X176-24X	Date 24/10/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** HV (66KV 6.6KV) SWITCH ROOM B-100
S/N: B100	**FAT procedure:** 1724000049-QC-PRO-00056

Comments:

SAT activities were carried out at the Rosetti Marino yard, after the main HVAC system installation was completed. Following this, all functional tests listed in the above table were conducted, although most of the documentation was in draft form, as it has not yet been officially issued.

Some activities and related tests are still required to finalize SAT and to make the HVAC system supply and installation fully compliant. These remaining tasks will be outlined and sent to Alex Sistemi, along with corrective actions to address them.

The key items that remain outstanding are:

- Completion of detailed engineering documentation
- Completion of the drainage system and heating cable installations
- Completion of the emergency lighting installation (during SAT the lights didn't turn on)

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
MATTEO MARCHESI Matteo Marchesi 23/10/24	CAVIGLIA LUCA ROSETTI MARINO Luca Caviglia 23/10/24			

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** LV (400 V) SWITCH ROOM B-200
S/N: B200	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 23/10/2024

REFERENCE DRAWING:

- 1724000049-AR-DA-00015 - B-200 GENERAL ARRANGMENT DRAWINGS - E&I SHELTERS
- 1724000049-HV-DA-00065 - MODULE B-200 – HVAC SYSTEM–G.A. AND DETAILS
- 1724000049-HV-DA-00027 - B-200 HVAC and LIGHTING PANEL WIRING DRAWINGS and GENERAL ARRANGEMENT (INCL INTERCONNECTING) - E&I SHELTERS

REFERENCE DOCUMENT:

- 1724000049-HV-PID-00040 - B-200 PID - E&I SHELTERS
- 1724000049-HV-CA-00036 - B-200 HVAC CALCULATION REPORT (Incl HVAC SYS CALC and HEAT DISSIPATION CALC) - E&I SHELTERS
- 1724000049-HV-LIS-00048 - B-200 HVAC COMPONENTS LIST AND DS - E&I SHELTERS
- 1724000049-HV-RE-00055 - HVAC SYST DESCRIPTION (MANAGEMENT LOGICS) - E&I SHELTERS
- 1724000049-QC-PRO-00056 (FAT Procedure)
- ECA-00-ELE-DEB-0001 Rev.7 Electrical Design Criteria

Inspection List	PASS	FAIL	N.A.	value
Functional & performance Test of A/C System (HVAC Test):				
• Visual and correct installation of HVAC fans.	x			
• Functional check of fans.	x			
• Check the functionality and performance of A/C System	x			

Doc. Name: CHECK AND FUNCTIONAL TEST OF HVAC SYSTEM		Report No.01 Mod 1.4.7
OUR JOB X176-24X	Date 23/10/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** LV (400 V) SWITCH ROOM B-200
S/N: B200	**FAT procedure:** 1724000049-QC-PRO-00056

Comments:

SAT activities were carried out at the Rosetti Marino yard, after the main HVAC system installation was completed. Following this, all functional tests listed in the above table were conducted, although most of the documentation was in draft form, as it has not yet been officially issued.

Some activities and related tests are still required to finalize SAT and to make the HVAC system supply and installation fully compliant. These remaining tasks will be outlined and sent to Alex Sistemi, along with corrective actions to address them.

The key items that remain outstanding are:

- Completion of detailed engineering documentation
- Completion of the drainage system and heating cable installations
- Completion of the emergency lighting installation (during SAT the lights didn't turn on)

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
MATTEO MARENZI 23/10/24	CAVIGLIA LUCA ROSETTI MARINO 23/10/24			

Doc. Name: CHECK AND FUNCTIONAL TEST OF HVAC SYSTEM		Report No.01 Mod 1.4.7
OUR JOB X176-24X	Date 23/10/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** AC UPS EQUIPMENT ROOM B-300
S/N: B300	**FAT procedure:** 1724000049-QC-PRO-00056

LOCATION: ON SITE ☒ OFF SITE ☐

DATE OF TEST: 23/10/2024

REFERENCE DRAWING:

- 1724000049-AR-DA-00016 - B-300 GENERAL ARRANGMENT DRAWINGS - E&I SHELTERS
- 1724000049-HV-DA-00066 - MODULE B-300 – HVAC SYSTEM–G.A. AND DETAILS
- 1724000049-HV-DA-00028 - B-300 HVAC and LIGHTING PANEL WIRING DRAWINGS and GENERAL ARRANGEMENT (INCL INTERCONNECTING) - E&I SHELTERS

REFERENCE DOCUMENT:

- 1724000049-HV-PID-00041 - B-300 PID - E&I SHELTERS
- 1724000049-HV-CA-00037 - B-300 HVAC CALCULATION REPORT (Incl HVAC SYS CALC and HEAT DISSIPATION CALC) - E&I SHELTERS
- 1724000049-HV-LIS-00049 - B-300 HVAC COMPONENTS LIST AND DS - E&I SHELTERS
- 1724000049-HV-RE-00055 - HVAC SYST DESCRIPTION (MANAGEMENT LOGICS) - E&I SHELTERS
- 1724000049-QC-PRO-00056 (FAT Procedure)
- ECA-00-ELE-DEB-0001 Rev.7 Electrical Design Criteria

Inspection List	PASS	FAIL	N.A.	value
Functional & performance Test of A/C System (HVAC Test):				
• Visual and correct installation of HVAC fans.	x			
• Functional check of fans.	x			
• Check the functionality and performance of A/C System	x			

Doc. Name: CHECK AND FUNCTIONAL TEST OF HVAC SYSTEM		Report No.01 Mod 1.4.7
OUR JOB X176-24X	Date 23/10/2024	Page 1/1

Customer: Rosetti Marino	**Project:** BASE LOAD POWER HUB (BLPH)
C/N: CW-I-WPA-2023-05	**Description:** AC UPS EQUIPMENT ROOM B-300
S/N: B300	**FAT procedure:** 1724000049-QC-PRO-00056

Comments:

SAT activities were carried out at the Rosetti Marino yard, after the main HVAC system installation was completed. Following this, all functional tests listed in the above table were conducted, although most of the documentation was in draft form, as it has not yet been officially issued.

Some activities and related tests are still required to finalize SAT and to make the HVAC system supply and installation fully compliant. These remaining tasks will be outlined and sent to Alex Sistemi, along with corrective actions to address them.

The key items that remain outstanding are:

- Completion of detailed engineering documentation
- Completion of the drainage system and heating cable installations

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
MATTEO MARCHESI 23/10/24	CAVIGLIA LUCA ROSETTI MARINO 23/10/24			

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:

SAT activities were carried out at the Rosetti Marino yard, after the main HVAC system installation was completed. Following this, all functional tests listed in the above table were conducted, although most of the documentation was in draft form, as it has not yet been officially issued.

Some activities and related tests are still required to finalize SAT and to make the HVAC system supply and installation fully compliant. These remaining tasks will be outlined and sent to Alex Sistemi, along with corrective actions to address them.

The key items that remain outstanding are:

- Completion of detailed engineering documentation
- Completion of the drainage system and heating cable installations
- Completion of the emergency lighting installation (during SAT the lights didn't turn on)

ALEX SISTEMI *Quality Assurance*	Customer	Final Customer	3rd Part	other
MATTEO MARCHESI Matteo Marchesi 23/10/24	CAVIGLIA LUCA ROSETTI MARINO Luca Caviglia 23/10/24			

Doc. Name: CHECK AND FUNCTIONAL TEST OF HVAC SYSTEM		Report No.01 Mod 1.4.7
OUR JOB X176-24X	Date 25/10/2024	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: 24/10/2024

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			

Section 7.3 Vendor Spares & Special Tools lists references

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sheet 3 of 4 Date : 26/02/2025 Rev: 0
Document Title:	**HVAC System** **Commissioning and Start-Up and 2 Year Spares List**	**Commissioning**

Pos	Codice/Code	Descrizione/Description	Rif./Ref.	Qtà/Qty	Costo unit./Unit price	Costo tot./Tot. price
	B100					
1	592x592x48	Air filter G4		2	€ 84.36	€ 168.72
2	592x592x48	Air filter F7		2	€ 252.08	€ 504.16
	B200					
3	592x592x48	Air filter G4		2	€ 84.36	€ 168.72
4	592x592x48	Air filter F7		2	€ 252.08	€ 504.16
	B300					
5	592x592x48	Air filter G4		2	€ 84.36	€ 168.72
6	288x593x48	Air filter G4		2	€ 84.36	€ 168.72
7	592x592x48	Air filter F7		2	€ 252.08	€ 504.16
8	288x593x48	Air filter F7		2	€ 199.53	€ 399.06
9	A47	Fan belt		2	€ 84.36	€ 168.72
	B400					
10	592x592x48	Air filter G4		2	€ 84.36	€ 168.72
11	288x593x48	Air filter G4		2	€ 84.36	€ 168.72
12	592x592x48	Air filter F7		2	€ 252.08	€ 504.16
13	288x593x48	Air filter F7		2	€ 199.53	€ 399.06
14	A47	Fan belt		2	€ 84.36	€ 168.72
					TOTAL PAGE €	***€ 2.586.42***

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as “NOT CONTROLLED” copy

CROSSWIND

HOLLANDSE KUST NOORD WIND PARK Project
Contract No. CW-I-WP4-2023-05

ROSETTI MARINO

Sheet 4 of 4
Date : 26/02/2025
Rev: 0

Document Title:

HVAC System
Commissioning and Start-Up and 2 Year Spares List

2 Year Spare Parts

Pos	Codice/Code	Descrizione/Description	Rif./Ref.	Qtà/Qty	Costo unit./Unit price	Costo tot./Tot. price
	B100					
1	592x592x48	Air filter G4		16	€ 84.36	€ 1.349.76
2	592x592x48	Air filter F7		16	€ 252.08	€ 4.033.28
3	DA03S220S	Damper actuator		1	€ 790.41	€ 790.41
4	PS 600	Pressure switch		2	€ 217.29	€ 434.58
5	RM280	Fan with motor		1	€ 2.156.96	€ 2.156.96
6	55340240040	Relay 24v DC		5	€ 84.36	€ 421.80
7	6SL3210-5BE22-2CV0	2,2 Kw Inverter		1	€ 1.540.96	€ 1.540.96
8	GRP-H-25-48-D-1-0000	Static power slave unit		1	€ 629.96	€ 629.96
9	GRM-H-25-48-AN-OL-00000	Static power master unit		1	€ 1.002.13	€ 1.002.13
10	6ES7155-6BH01-0BA0	Digital imput module		1	€ 447.55	€ 447.55
11	6ES7132-6BH01-0BA0	Digital output module		1	€ 494.07	€ 494.07
12	6ES7134-6HD01-0BA1	Analog input module		1	€ 804.76	€ 804.76
13	6ES7513-1RM03-0BA0	CPU 1513-R		1	€ 6.273.83	€ 6.273.83
14	5SY7410-7	Circuit braker 400v 15kA 10A		1	€ 319.34	€ 319.34
15	3RV2011-1EA10	Circuit braker for motor protection 2,8 / 4 A		1	€ 199.53	€ 199.53
	B200					
16	592x592x48	Air filter G4		16	€ 84.36	€ 1.349.76
17	592x592x48	Air filter F7		16	€ 252.08	€ 4.033.28
18	DA03S220S	Damper actuator		1	€ 790.41	€ 790.41
19	PS 600	Pressure switch		2	€ 217.29	€ 434.58
20	RM280	Fan with motor		1	€ 2.156.96	€ 2.156.96
21	55340240040	Relay 24v DC		5	€ 84.36	€ 421.80
22	6SL3210-5BE22-2CV0	2,2 Kw Inverter		1	€ 1.540.96	€ 1.540.96
23	GRP-H-25-48-D-1-0000	Static power slave unit		1	€ 629.96	€ 629.96
24	GRM-H-25-48-AN-OL-00000	Static power master unit		1	€ 1.002.13	€ 1.002.13
25	6ES7155-6BH01-0BA0	Digital imput module		1	€ 447.55	€ 447.55
26	6ES7132-6BH01-0BA0	Digital output module		1	€ 494.07	€ 494.07
27	6ES7134-6HD01-0BA1	Analog input module		1	€ 804.76	€ 804.76
28	6ES7513-1RM03-0BA0	CPU 1513-R		1	€ 6.273.83	€ 6.273.83
29	5SY7410-7	Circuit braker 400v 15kA 10A		1	€ 319.34	€ 319.34
30	3RV2011-1EA10	Circuit braker for motor protection 2,8 / 4 A		1	€ 199.53	€ 199.53
	B300					
31	592x592x48	Air filter G4		16	€ 84.36	€ 1.349.76
32	288x593x48	Air filter G4		16	€ 84.36	€ 1.349.76
33	592x592x48	Air filter F7		16	€ 252.08	€ 4.033.28
34	288x593x48	Air filter F7		16	€ 199.53	€ 3.192.48
35	DA03S220S	Damper actuator		2	€ 790.41	€ 1.580.82
36	PS 600	Pressure switch		4	€ 217.29	€ 869.16
37	55340240040	Relay 24v DC		5	€ 84.36	€ 421.80
38	5.53482E+11	Relay 230V AC		10	€ 84.36	€ 843.60
39	DTMSMM1	Temporrized relay		4	€ 163.08	€ 652.32
40	6SL3210-5BE15-5CV0	0,55kW Inverter		1	€ 1.112.48	€ 1.112.48
41	6SL3210-5BE21-1CV0	1,1kW Inverter		1	€ 1.275.33	€ 1.275.33
42	GRP-H-25-48-D-1-0000	Static power slave unit		1	€ 629.96	€ 629.96
43	GRM-H-25-48-AN-OL-00000	Static power master unit		1	€ 1.002.13	€ 1.002.13
44	6ES7155-6BH01-0BA0	Digital imput module		1	€ 447.55	€ 447.55
45	6ES7132-6BH01-0BA0	Digital output module		1	€ 494.07	€ 494.07
46	6ES7134-6HD01-0BA1	Analog input module		1	€ 804.76	€ 804.76
47	6ES7513-1RM03-0BA0	CPU 1513-R		1	€ 6.273.83	€ 6.273.83
48	5SY7410-7	Circuit braker 400v 15kA 10A		1	€ 319.34	€ 319.34
49	3RV2011-1AA10	Circuit braker for motor protection 1,1 / 1,6 A		1	€ 199.53	€ 199.53
50	3RV2011-1GA10	Circuit braker for motor protection 4,5 / 6,3 A		1	€ 199.53	€ 199.53
51	3RV2011-1JA10	Circuit braker for motor protection 7 / 10 A		1	€ 234.80	€ 234.80
52	3RT2015-1AP01	Power contactor 230V		1	€ 144.29	€ 144.29
53	A47	Fan belt		8	€ 84.36	€ 674.88
54	C-SBN453H8G	Compressor		1	€ 1.775.04	€ 1.775.04
55	T3A 100LB4	Supply fan motor		1	€ 1.194.28	€ 1.194.28
56	SR454T	Condenser fan		1	€ 2.727.31	€ 2.727.31
	B400					
57	592x592x48	Air filter G4		16	€ 84.36	€ 1.349.76
58	288x593x48	Air filter G4		16	€ 84.36	€ 1.349.76
59	592x592x48	Air filter F7		16	€ 252.08	€ 4.033.28
60	288x593x48	Air filter F7		16	€ 199.53	€ 3.192.48
61	DA03S220S	Damper actuator		2	€ 790.41	€ 1.580.82
62	PS 600	Pressure switch		4	€ 217.29	€ 869.16
63	55340240040	Relay 24v DC		5	€ 84.36	€ 421.80
64	5.53482E+11	Relay 230V AC		10	€ 84.36	€ 843.60
65	DTMSMM1	Temporrized relay		4	€ 163.08	€ 652.32
66	6SL3210-5BE15-5CV0	0,55kW Inverter		1	€ 1.112.48	€ 1.112.48
67	6SL3210-5BE21-1CV0	1,1kW Inverter		1	€ 1.275.33	€ 1.275.33
68	GRP-H-25-48-D-1-0000	Static power slave unit		1	€ 629.96	€ 629.96
69	GRM-H-25-48-AN-OL-00000	Static power master unit		1	€ 1.002.13	€ 1.002.13
70	6ES7155-6BH01-0BA0	Digital imput module		1	€ 447.55	€ 447.55
71	6ES7132-6BH01-0BA0	Digital output module		1	€ 494.07	€ 494.07
72	6ES7134-6HD01-0BA1	Analog input module		1	€ 804.76	€ 804.76
73	6ES7513-1RM03-0BA0	CPU 1513-R		1	€ 6.273.83	€ 6.273.83
74	5SY7410-7	Circuit braker 400v 15kA 10A		1	€ 319.34	€ 319.34
75	3RV2011-1AA10	Circuit braker for motor protection 1,1 / 1,6 A		1	€ 199.53	€ 199.53
76	3RV2011-1GA10	Circuit braker for motor protection 4,5 / 6,3 A		1	€ 199.53	€ 199.53
77	3RV2011-1BA10	Circuit braker for motor protection 14 / 20 A		1	€ 199.53	€ 199.53
78	3RT2015-1AP01	Power contactor 230V		1	€ 144.29	€ 144.29
79	A47	Fan belt		8	€ 84.36	€ 674.88
80	C-SBN753H8H	Compressor		1	€ 2.727.31	€ 2.727.31
81	T3A 100LB4	Supply fan motor		1	€ 1.194.28	€ 1.194.28
82	SR454T	Condenser fan		1	€ 2.727.31	€ 2.727.31
					TOTAL PAGE €	***€ 110.319.02***

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Section 7.4 Vendor Data / Operations / Maintenance Manuals References

CAE EPLAN Electric P8

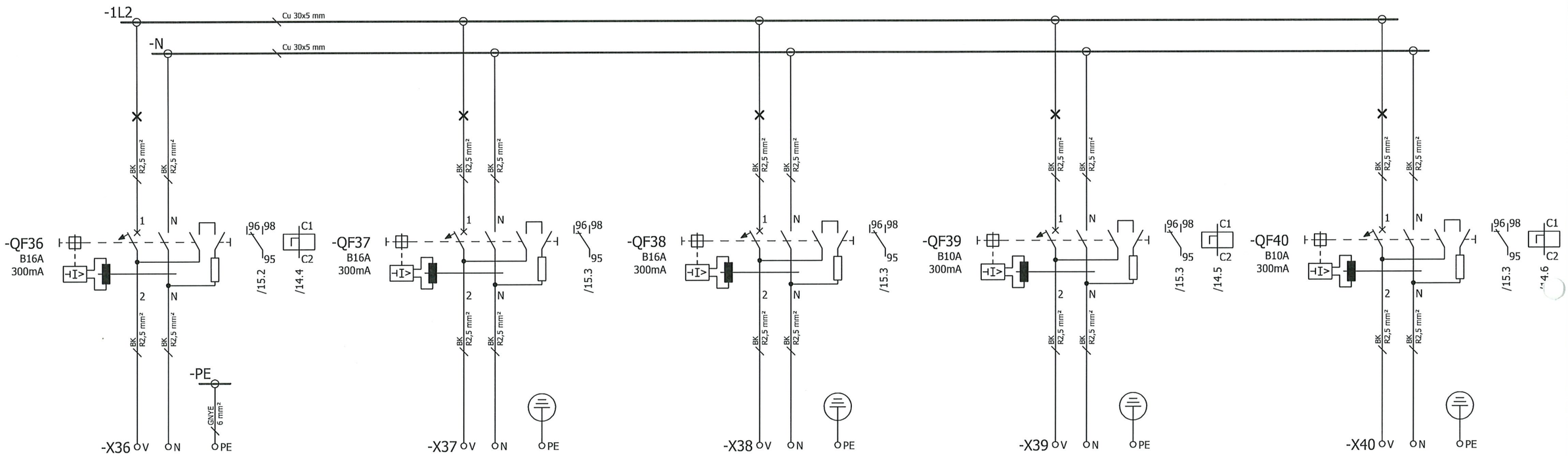
This document is property of AEG Power Solutions and must not be displayed or duplicated to any third party without the consent of the company

VALID FOR CONSTRUCTION
VENDOR DOCUMENT - FDL DWG:
123A90-FDL-1724000372-EL-DG-00009

REV.:	DATE:	SIGNATURE:
3_A	15/11/24	G.Randi

ROSETTI MARINO SpA

NO MARK UP
AS COMMISSIONED: NATALIA GIROTI
24/3/25



Load
230V/N/PE~50Hz

JB-500-F8
UCP WATER PACKAGE
2KW

Load
230V/N/PE~50Hz

B400-SRV-001
SERVER CABINET ITER - LINE A

Load
230V/N/PE~50Hz

B400-SRV-001
SERVER CABINET ITER - LINE B

Load
230V/N/PE~50Hz

B100-HSB-001
UCP-HVAC HV ROOM
0.5KW

Load
230V/N/PE~50Hz

B200-HSB-001
UCP-HVAC LV ROOM
0.5KW

1000007888_010

				Date	23.05.2024
01	500000002053	13.08.2024	Beckschäfer	Editor	Beckschäfer
02	500000002089	27.08.2024	Beckschäfer	Checked	Ch.Peck
Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Load
Bypass transformer cabinet
with manual bypass 40 kVA
Circuit diagram

1000007888.020
10009757

1000007888_010 en

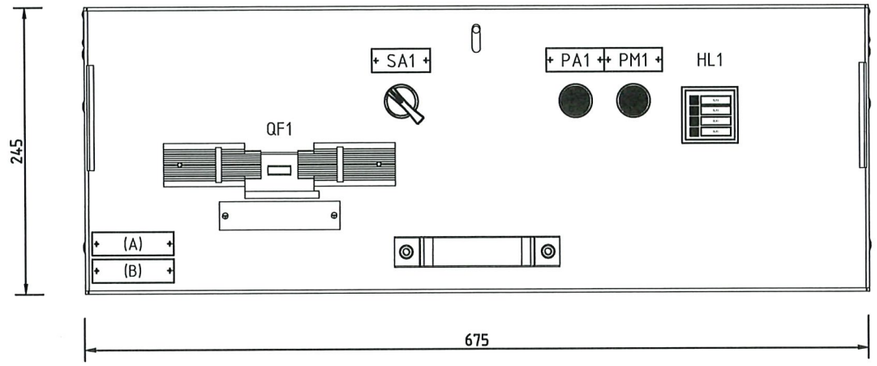
=
+ MBC1
& EFS

A3

sheet 8
sheets 17

DOOR FRONT LAY-OUT

TYPICAL : LINE FEEDER "LK1-n"

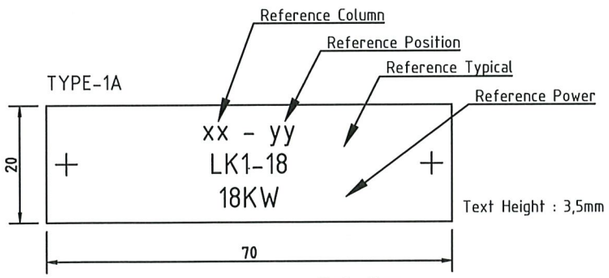


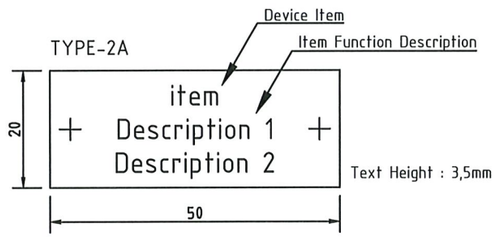
NOTE :

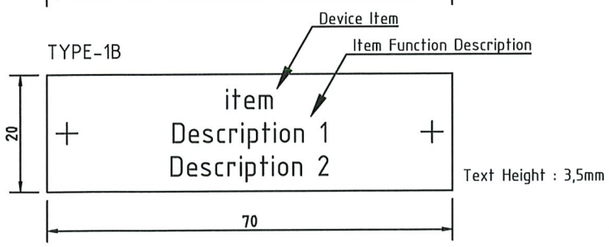
A) IDENTIFICATION name plate (type-1A) , with :
- Drawer position [Column / Position inside SWB]
- Typical name [reference applicability typical used]
- Power [reference applicability typical used]

B) USER name plate (type-1B), with :
- Item User [to see SLD diagrams]
- User Description [to see SLD diagrams]

DEVICES name plate			
ITEM	DESCRIPTION 1	DESCRIPTION 2	NOTE
QF1	Circuit Breaker		NO plate
SA1	LOC-REM	SELECTOR	Type-2A
PA1	STOP	MOTOR	Type-2A
PM1	RUN	MOTOR	Type-2A
HL1	Multiled	Signalling	NO plate







AS COMMISSIONED : MARINA GIORGI
26/3/25
NO MARK UP

VALID FOR CONSTRUCTION
VENDOR DOCUMENT - FDL DWG:
123A90-FDL-1724002197-EL-DG-00031

REV.:	DATE:	SIGNATURE:
2_A	18/03/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= TYPICAL
+ LK-x
DWG n° : 231298/SD/31
Item n° : PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	18/09/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
1	10/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"
LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS
Door Front Lay-Out - Typical "LK1-n" & "LK2-n"

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

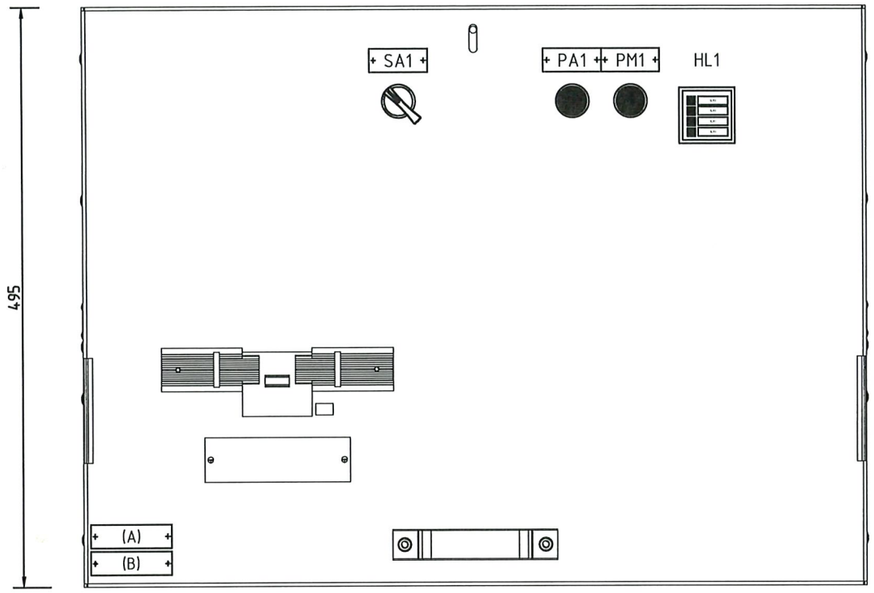
A3 | DRAWING NO. 1723002197-EL-DG-00031 | SHEET 034 | REV. 02

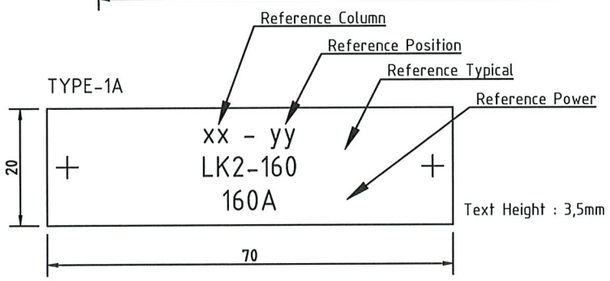
F.to UNI A3: 420mmx297mm

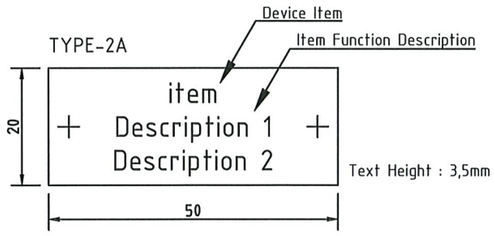
File Name : 1723002197-EL-DG-00031 Rev. 02

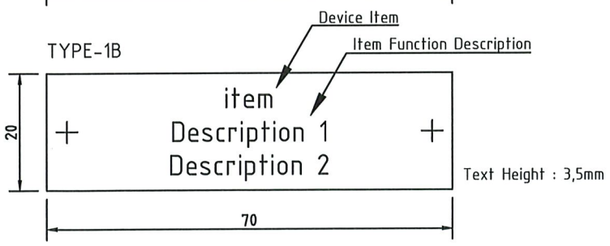
DOOR FRONT LAY-OUT

TYPICAL : LINE FEEDER "LK2-n"









NOTE :

A) IDENTIFICATION name plate (type-1A) , with :
- Drawer position [Column / Position inside SWB]
- Typical name [reference applicability typical used]
- Power [reference applicability typical used]

B) USER name plate (type-1B), with :
- Item User [to see SLD diagrams]
- User Description [to see SLD diagrams]

DEVICES name plate

ITEM	DESCRIPTION 1	DESCRIPTION 2	NOTE
QF1	Circuit Breaker		NO plate
SA1	LOC-REM	SELECTOR	Type-2A
PA1	STOP	MOTOR	Type-2A
PM1	RUN	MOTOR	Type-2A
HL1	Multiled	Signalling	NO plate

AS COMMISSIONED : MARIA GIROZ
24/3/25
NO MARK UP

VALID FOR CONSTRUCTION
VENDOR DOCUMENT - FDL DWG:
123A90-FDL-1724002197-EL-DG-00031
REV.: 2_A | DATE: 18/03/25 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= TYPICAL
+ LK-x
DWG n° : 231298/SD/31
Item n° : PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	18/09/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
1	10/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"
LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS
Door Front Lay-Out - Typical "LK1-n" & "LK2-n"

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

A3 | DRAWING NO. 1723002197-EL-DG-00031 | SHEET 035 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 02

USERS LEGEND

TYPICAL : LINE FEEDER "LK1-n" "LK2-n"

TYPICAL APPLICABILITY					
ITEM	ITEM TAG	DESCRIPTION TAG	REFERENCE POSITION (written on name name plate "type-1A)	REFERENCE NOMINAL CURRENT C.B. TRIP UNIT (written on name name plate "type-1A)	REFERENCE TYPICAL (written on name name plate "type-1A)
1	SPARE	SPARE	A2 / +05	40A	LK1-40
2	SPARE	SPARE	A3 / +02	40A	LK1-40
3	DP-200N1	DB-LIGHTING & SMALL POWER BoP	A3 / +03	100A	LK1-100
4	JB-200E3	CRANE	A3 / +04	63A	LK1-63
5	SPARE	SPARE	A3 / +05	40A	LK1-40
6	JB-500E8	WATER PACKAGE	A3 / +08	160A	LK2-160
7	B100-HSB-001	HVAC PANELS HV ROOM	A4 / +02	40A	LK1-40
8	A-80000	FUELL CELL AUXIALIRY LOAD	A4 / +03	63A	LK1-63
9	CP-850F03	BESS PCS CABINET	A4 / +04	40A	LK1-40
10	SPARE	SPARE	A4 / +05	40A	LK1-40
11	SPARE	SPARE	A4 / +06	40A	LK1-40
12	K-63001-A	INSTRUMENTS AIR PACKAGE 01A	A4 / +08	160A	LK2-160
13	SPARE	SPARE	A5 / +01	40A	LK1-40
14	B200-HSB-001	HVAC PANELS - LV ROOM	A5 / +02	40A	LK1-40
15	B300-HSB-001	HVAC PANELS - UPS ROOM	A5 / +03	63A	LK1-63
16	B400-HSB-001	HVAC PANELS - ITER	A5 / +04	63A	LK1-63
17	CN-200N1	IMPRESSED CURR. CATHODIC PROTECTION (ICCP) SYSTEM	A5 / +05	40A	LK1-40
18	SPARE	SPARE	A5 / +06	40A	LK1-40
19	K-63001-B	INSTRUMENTS AIR PACKAGE 01B	A5 / +08	160A	LK2-160
20	CP-850E1	BESS LV1 CABINAT (+DISTR 1)	A6 / +02	40A	LK1-40
21	CP-850E2	BESS LV2 CABINAT (+DISTR 2)	A6 / +03	40A	LK1-40
22	SPARE	SPARE	A6 / +04	40A	LK1-40

AS COMMISSIONED: NATALIA GIROLI
24/3/25
NO MARK UP

VALID FOR CONSTRUCTION
VENDOR DOCUMENT - FDL DWG:
123A90-FDL-1724002197-EL-DG-00031
REV.: 2_A | DATE: 18/03/25 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= TYPICAL
+ LK-x
DWG n° : 231298/SD/31
Item n° : PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	18/09/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
1	10/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"
LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS
Users Legend - Typical "LK1-n" & "LK2-n"

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

A3 | DRAWING NO. 1723002197-EL-DG-00031 | SHEET 036 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 02

ITEMS ACRONYM

TYPICAL : LINE FEEDER "LK1-n" "LK2-n"

Composition of Typical :

LK-x = Common Parts
LK1-"nn" or LK2-"nn"= Specific Parts

Example for Composition of LK1-63:
- to take "LK-x" plus "LK1-63"

Example for Composition of LK2-160:
- to take "LK-x" plus "LK2-160"

	ACRONYM ITEMS [Comun parts]	ACRONYM ITEMS [Specific parts]					
	LK-x	LK1-40 [In=40A] [Current Trip Unit]	LK1-63 [In=63A] [Current Trip Unit]	LK1-100 [In=100A] [Current Trip Unit]	LK2-160 [In=160A] [Current Trip Unit]		
ASSOCIATED TYPICAL	This Item include all devices that are comun for both "Specific Parts" Items	This Items include only devices that are detail for "Specific Parts" Items					
LK1-40	X	X					
LK1-63	X		X				
LK1-100	X			X			
LK2-160	X				X		
-							

AS COMMISSIONED: NATALIA GIRGIN
24/3/25
NO MARK UP

VALID FOR CONSTRUCTION
VENDOR DOCUMENT - FDL DWG:
123A90-FDL-1724002197-EL-DG-00031
REV.: 2_A | DATE: 18/03/25 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= TYPICAL
+ LK-x
DWG n° : 231298/SD/31
Item n° : PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	18/09/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
1	10/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

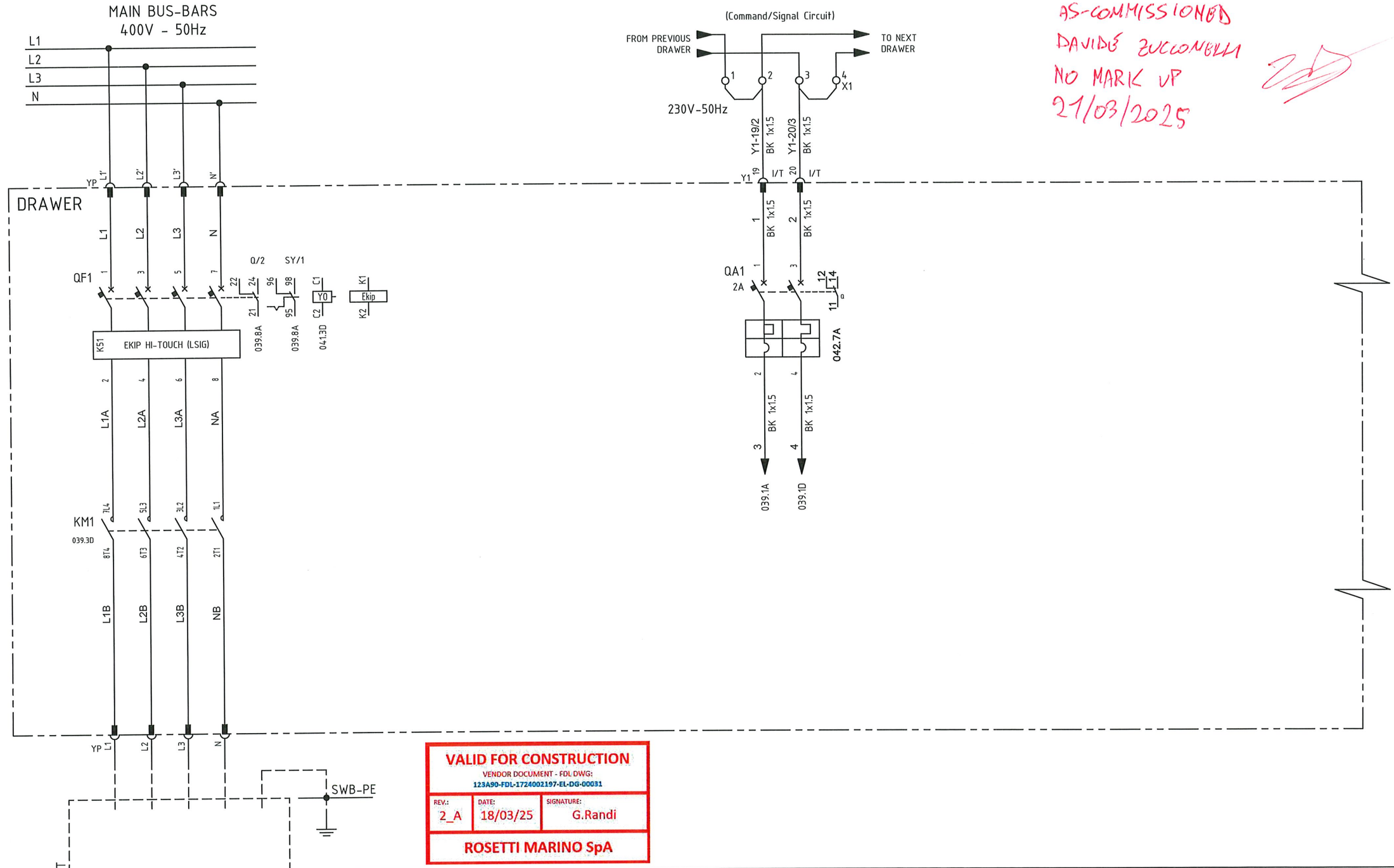
TITLE : "SG-200N1"
LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS
Items Acronym - Typical "LK1-n" & "LK2-n"

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

A3 | DRAWING NO. 1723002197-EL-DG-00031 | SHEET 037 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 02



AS-COMMISSIONED
DAVIDE ZUCCONELLI
NO MARK UP
21/03/2025

VALID FOR CONSTRUCTION
VENDOR DOCUMENT - FDL DWG:
123A90-FDL-1724002197-EL-DG-00031

REV.:	DATE:	SIGNATURE:
2_A	18/03/25	G.Randi

ROSETTI MARINO SpA

=	TYPICAL
+	LK-x

DWG n° : 231298/SD/31
Item n° : PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	18/09/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
1	10/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"
LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS
Functional Drawing - Typical "LK1-n" & "LK2-n"

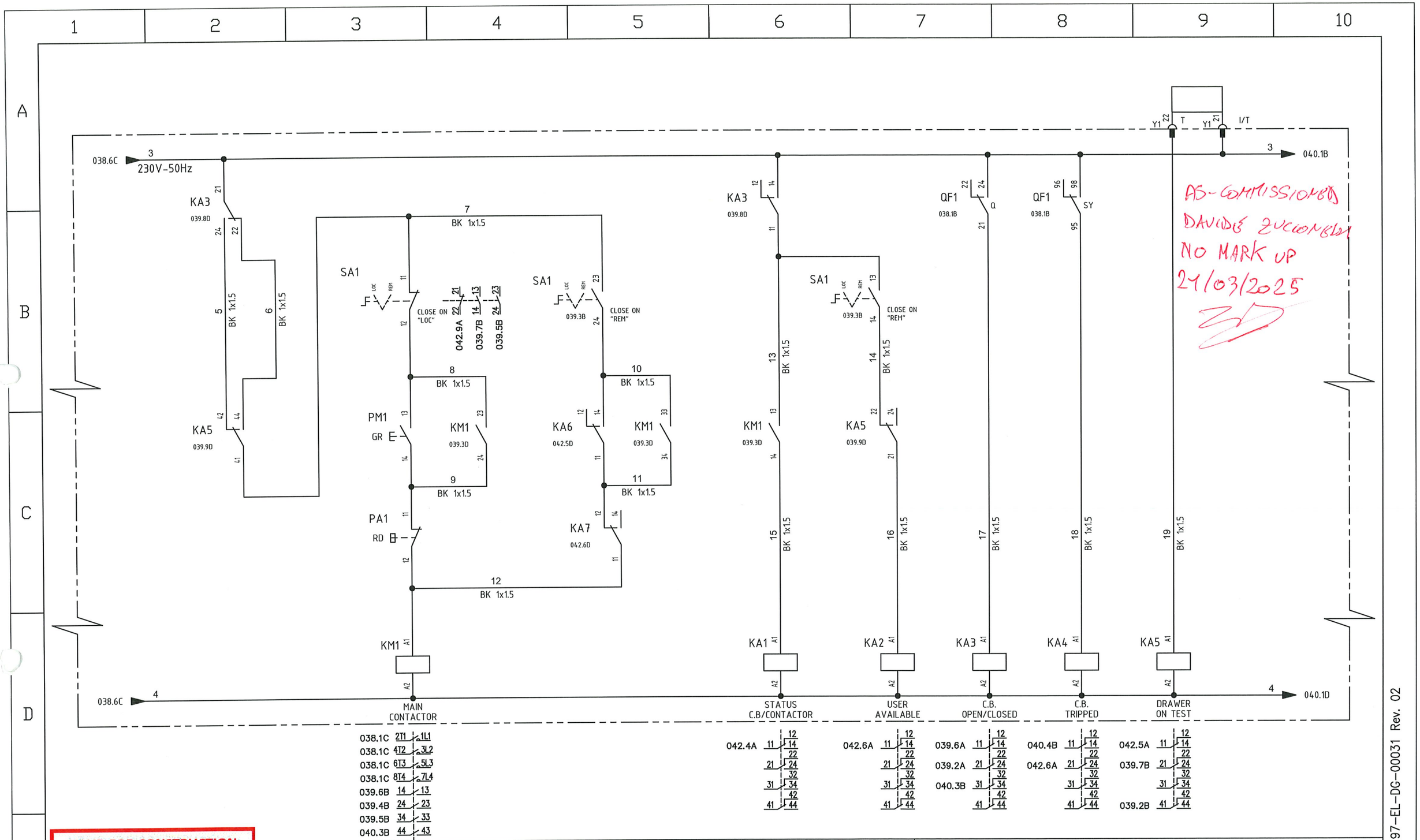
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00031 | SHEET 038 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 02

CROSSWIND
IMESA ELECTRICAL ENGINEERING
ROSETTI MARINO



VALID FOR CONSTRUCTION
VENDOR DOCUMENT - FDL DWG:
123A90-FDL-1724002197-EL-DG-00031

REV.:	DATE:	SIGNATURE:
2_A	18/03/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=	TYPICAL
+	LK-x
DWG n° :	231298/SD/31
Item n° :	PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	18/09/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
1	10/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"

LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS

Functional Drawing - Typical "LK1-n" & "LK2-n"

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00031

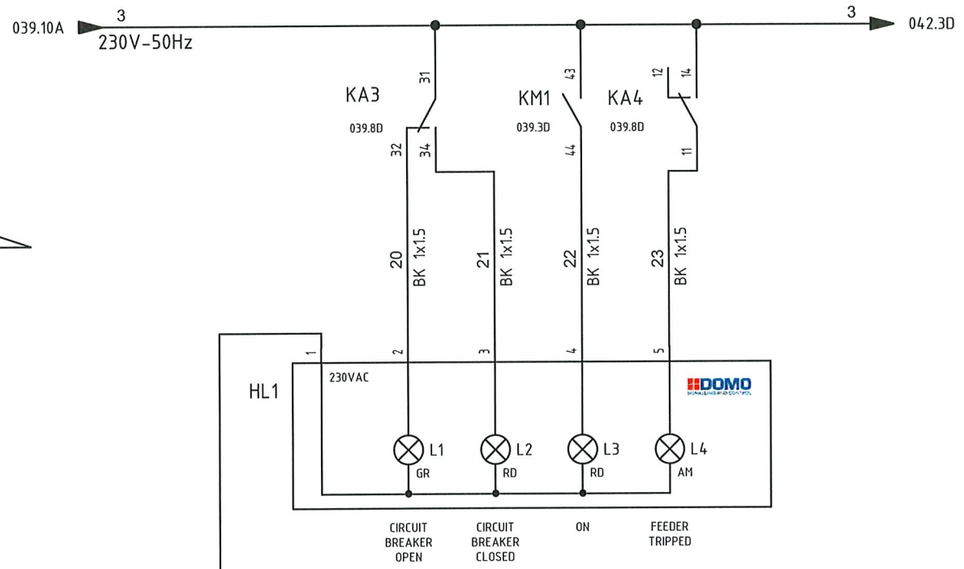
SHEET 039

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 02

AS-COMMISSIONED
DAVIDE ZUCCONELLI
NO MARK UP
27/03/2025



VALID FOR CONSTRUCTION
VENDOR DOCUMENT - FDL DWG:
123A90-FDL-1724002197-EL-DG-00031

REV.:	DATE:	SIGNATURE:
2_A	18/03/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= TYPICAL
+ LK-x
DWG n° : 231298/SD/31
Item n° : PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	18/09/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
1	10/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"
LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS
Functional Drawing - Typical "LK1-n" & "LK2-n"

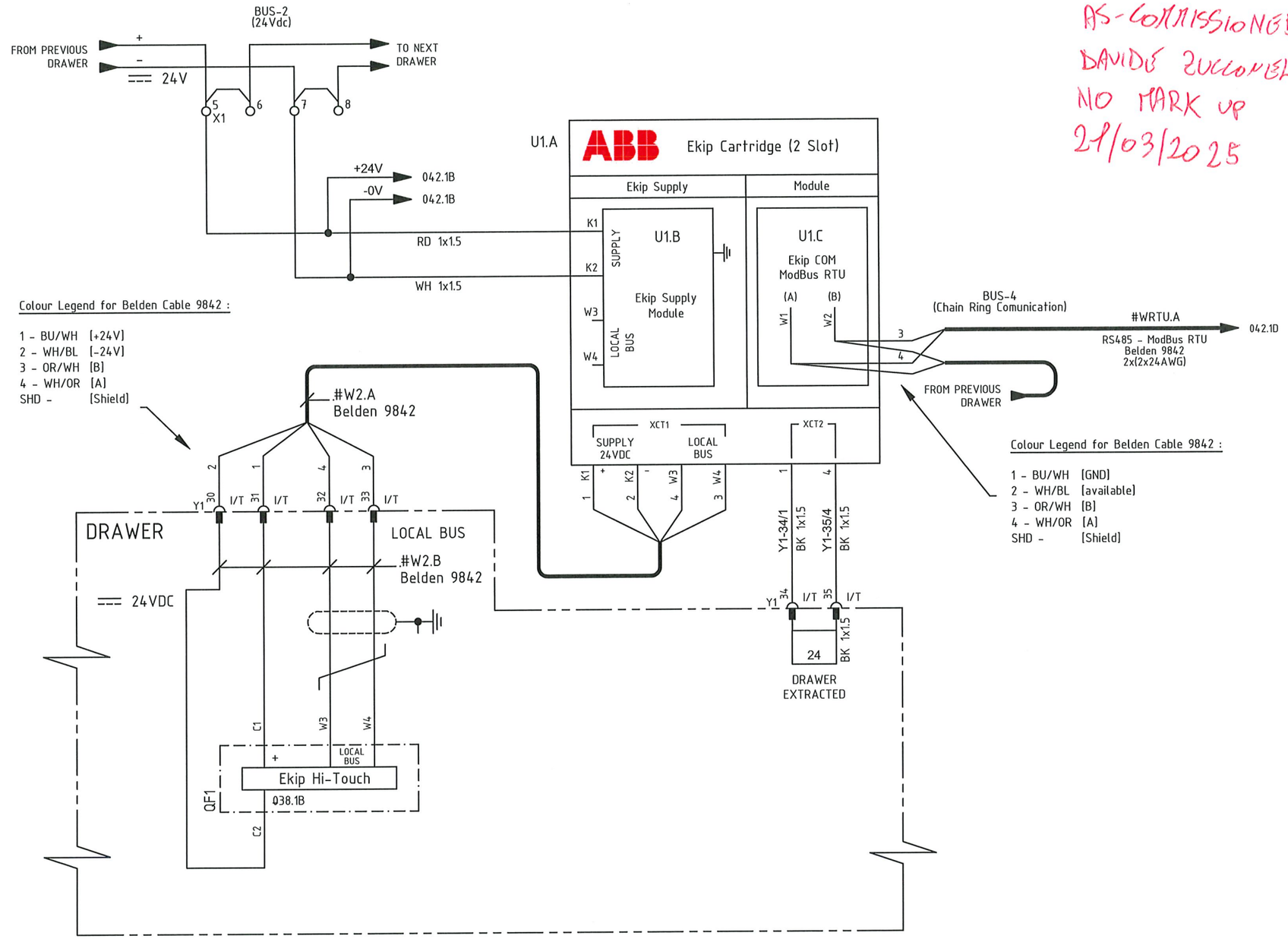
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00031 | SHEET 040 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 02

AS-COMMISSIONED
DAVIDE ZUCCONELLI
NO MARK UP
21/03/2025



VALID FOR CONSTRUCTION
VENDOR DOCUMENT - FDL DWG:
123A90-FDL-1724002197-EL-DG-00031

REV.:	DATE:	SIGNATURE:
2_A	18/03/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=	TYPICAL
+	LK-x
DWG n° :	231298/SD/31
Item n° :	PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	18/09/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
1	10/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"

LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS

Functional Drawing - Typical "LK1-n" & "LK2-n"

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00031

SHEET 041

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 02

AS-COMMISSIONED
DAVIDE ZUCCOMELLI
NO MARK UP
21/03/2025

DRAWER

C.B. - CONTACTOR CLOSED & INSERTED
C.B. - CONTACTOR OPEN OR DISCONNECTED
CIRCUIT BREAKER TRIPPED
FEEDER AVAILABLE
INTERNAL FAULT
USER ON LOCAL

KA1 039.6D
KA5 039.9D
KA4 039.8D
KA2 039.7D
QA1 038.6B
SA1 039.3B
CLOSE ON "LOC"

+25 RD 1x1.5 · +26 RD 1x1.5 · +27 RD 1x1.5 · +28 RD 1x1.5 · +29 RD 1x1.5 · +30 RD 1x1.5 · +31 RD 1x1.5 · +32 RD 1x1.5

Y1 14 I/T · 5 I · 15 I/T · 3 E · 4 E · 16 I/T · 10 I/T · 8 I/T · 9 I/T · 36 I/T · 37 I/T

Y1-14/9 BK 1x1.5 · Y1-5/10 BK 1x1.5 · Y1-15/11 BK 1x1.5 · Y1-16/12 BK 1x1.5 · Y1-10/13 BK 1x1.5 · Y1-9/14 BK 1x1.5 · Y1-36/15 BK 1x1.5 · Y1-37/19 BK 1x1.5

AVAILABLE

+103 RD 1x1.5 · +104 RD 1x1.5 · +105 RD 1x1.5 · +106 RD 1x1.5 · +107 RD 1x1.5 · +108 RD 1x1.5 · +115 RD 1x1.5 · +116 RD 1x1.5 · +117 RD 1x1.5 · +118 RD 1x1.5

041.4A +24V
041.4A -0V
=== 24V

U2.A
AC+ AC- PE
+/L -/N PE
10÷40Vdc - 19÷29Vac SUPPLY
Z-PC-DINAL2-17.5
Modbus RTU RS485
B(-) A(+) GND SHD
B/L A/H GND SHD
3 4 1 SHD
041.9B
TO NEXT DRAWER
BUS-4
(Chain Ring Comunication)

U2.B
+16V 0V IN-1 IN-2 IN-3 IN-4 IN-5
INPUT
SENECA AUTOMATION INTERFACES
MODULE I/O
Z-5DI-2DO
ID = 01
OUTPUT
DO-1 DO-2

U2.C
+16V 0V IN-1 IN-2 IN-3 IN-4 IN-5
INPUT
SENECA AUTOMATION INTERFACES
MODULE I/O
Z-5DI-2DO
ID = 02
OUTPUT
DO-1 DO-2

Colour Legend for Belden Cable 9842 :

1 - BU/WH [GND]
2 - WH/BL [available]
3 - OR/WH [B]
4 - WH/OR [A]
SHD - [Shield]

109 BK 1x1.5 · 110 BK 1x1.5 · 111 BK 1x1.5 · 112 BK 1x1.5 · 113 BK 1x1.5 · 114 BK 1x1.5
Y1-11/20 BK 1x1.5 · Y1-12/21 BK 1x1.5 · Y1-13/22 BK 1x1.5

Y1 11 I/T · 12 I/T · 13 I/T

DRAWER
040.5B 3 230V-50Hz
040.5D 4

KA6 · KA7
CONTACTOR CLOSE COMMAND
CONTACTOR OPEN COMMAND

KA6 039.5B 11 12 14 22 21 24 32 31 34 42 41 44
KA7 039.5C 11 12 14 22 21 24 32 31 34 42 41 44

VALID FOR CONSTRUCTION
VENDOR DOCUMENT - FDL DWG:
123A90-FDL-1724002197-EL-DG-00031
REV.: 2_A | DATE: 18/03/25 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= TYPICAL
+ LK-x
DWG n° : 231298/SD/31
Item n° : PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	18/09/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
1	10/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"
LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS
Functional Drawing - Typical "LK1-n" & "LK2-n"

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

A3 | DRAWING NO. 1723002197-EL-DG-00031 | SHEET 042 | REV. 02

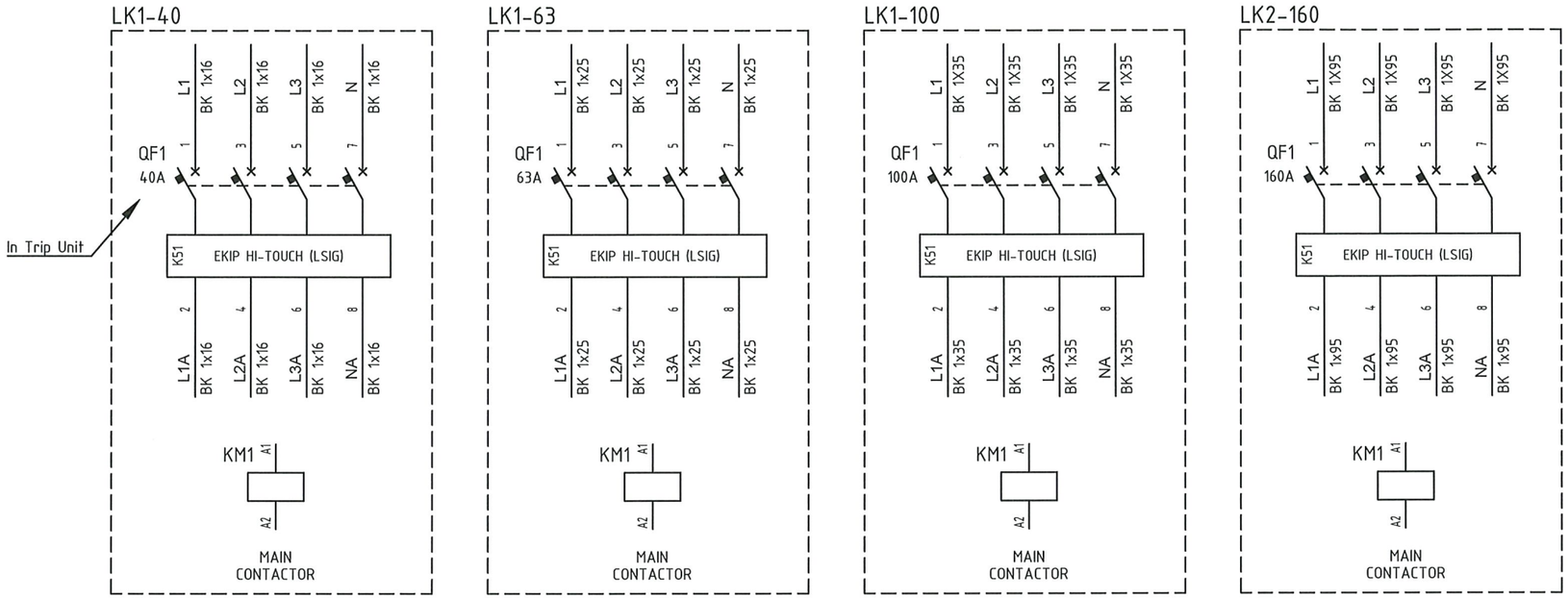
F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 02

SPECIFIC PARTS

TYPICAL : LINE FEEDER "LK1-n" "LK2-n"

AS-COMMISSIONED
DAVIDE ZUCCONELLI
NO MARK UP
21/03/2025



VALID FOR CONSTRUCTION
VENDOR DOCUMENT - FDL DWG:
123A90-FDL-1724002197-EL-DG-00031
REV.: 2_A | DATE: 18/03/25 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= TYPICAL
+ LK-x
DWG n° : 231298/SD/31
Item n° : PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	18/09/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
1	10/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"
LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS
Functional Drawing - Typical "LK1-n" & "LK2-n"

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

A3 | DRAWING NO. 1723002197-EL-DG-00031 | SHEET 043 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 02

AUXILIARY SOCKET

136450/001 (PF – 2 pcs) + 136458/004 (PM – 2 pcs)

N° PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
JUMP			●	●				●	●																																			
RACKED-OUT			✕	✕				✕	✕																																			
TEST								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RACKED-IN					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
PIN USED			042.5B	042.5B	042.4B			042.6B	042.7B	042.6B	042.5D	042.5D	042.6D	042.3B	042.4B	042.6B			038.6A	038.6A	039.9A	039.9A								041.3C	041.3C	041.4C	041.4C	041.6C	041.7C	042.7B	042.9B							

1	FIELD WHIT "X" - CONTACT CLOSE WHEN DRAWER IS IN RACKED-OUT POSITION
2	FIELD WHIT "X" - CONTACT CLOSE WHEN DRAWER IS IN TEST POSITION
3	FIELD WHIT "X" - CONTACT CLOSE WHEN DRAWER IS IN RACKED-IN POSITION
4	CROS-REFERENCE USED PIN

TYPICAL - LK-x - Y1

AS COMMISSIONED
DAVIDE ZUCCONELLI
NO MARK UP
21/03/2025

VALID FOR CONSTRUCTION
VENDOR DOCUMENT - FDL DWG:
123A90-FDL-1724002197-EL-DG-00031
REV.: 2_A | DATE: 18/03/25 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= TYPICAL
+ LK-x
DWG n° : 231298/SD/31
Item n° : PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	18/09/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
1	10/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"
LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS
Functional Drawing - Typical "LK1-n" & "LK2-n"

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

A3 | DRAWING NO. 1723002197-EL-DG-00031 | SHEET 044 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 02

TYPICAL - LK-x
X1

NumM	Fg.	Sez.	Tipo	Descrizione	Costruttore
			BT003	BT/3 End bracket	Cabur
1	038.5A	2.5	HD100GR__	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
2	038.6A	2.5	HD100GR__	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
3	038.6A	2.5	HD100GR__	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
4	038.6A	2.5	HD100GR__	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
5	041.3A	2.5	HD100GR__	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
6	041.3A	2.5	HD100GR__	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
7	041.4A	2.5	HD100GR__	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
8	041.4A	2.5	HD100GR__	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
			HD101GR	HMD/PT/GR End section - Grey	Cabur
9	042.3B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
10	042.4B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
11	042.4B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
12	042.5B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
13	042.6B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
14	042.7B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
15	042.7B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
16	042.7B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
17	042.8B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
18	042.8B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
19	042.9B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
20	042.5C	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
21	042.5C	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
22	042.6C	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
23	042.9C	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
24	042.9C	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
25	042.10C	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
			HD201GR	HMD.1/PT/GR End section - Grey	Cabur
			BT003	BT/3 End bracket	Cabur

AS-COMMISSIONED
DAVIDE ZUCCHINELLI
NO MARK UP
21/03/2025

VALID FOR CONSTRUCTION
VENDOR DOCUMENT - FDL DWG:
123A90-FDL-1724002197-EL-DG-00031
REV.: 2_A | DATE: 18/03/25 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= TYPICAL
+ LK-x
DWG n° : 231298/SD/31
Item n° : PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	18/09/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
1	10/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"
LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS
Functional Drawing - Typical "LK1-n" & "LK2-n"

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

A3 | DRAWING NO. 1723002197-EL-DG-00031 | SHEET 045 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 02

Nome/Item	Fg/Sh	Tipo/Type	Q.ta/Q.ty	Descrizione/Description	Costruttore/Manufacturer	Quadro (descrizione)
HL1	040	ML22/484L230STLTTR	1	MULTILED 48x48 - 4 LED - Vaux=230Vac/dc + LAMP TEST + TROP	DOMO	TYPICAL LK-x
KA1	039	ER 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LED	ABB	TYPICAL LK-x
		ER 609 8	1	CR-MH HOLDER FOR CR-M RELAY	ABB	TYPICAL LK-x
		ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	TYPICAL LK-x
KA2	039	ER 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LED	ABB	TYPICAL LK-x
		ER 609 8	1	CR-MH HOLDER FOR CR-M RELAY	ABB	TYPICAL LK-x
		ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	TYPICAL LK-x
KA3	039	ER 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LED	ABB	TYPICAL LK-x
		ER 609 8	1	CR-MH HOLDER FOR CR-M RELAY	ABB	TYPICAL LK-x
		ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	TYPICAL LK-x
KA4	039	ER 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LED	ABB	TYPICAL LK-x
		ER 609 8	1	CR-MH HOLDER FOR CR-M RELAY	ABB	TYPICAL LK-x
		ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	TYPICAL LK-x
KA5	039	ER 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LED	ABB	TYPICAL LK-x
		ER 609 8	1	CR-MH HOLDER FOR CR-M RELAY	ABB	TYPICAL LK-x
		ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	TYPICAL LK-x
KA6	042	ER 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LED	ABB	TYPICAL LK-x
		ER 609 8	1	CR-MH HOLDER FOR CR-M RELAY	ABB	TYPICAL LK-x
		ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	TYPICAL LK-x
KA7	042	ER 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LED	ABB	TYPICAL LK-x
		ER 609 8	1	CR-MH HOLDER FOR CR-M RELAY	ABB	TYPICAL LK-x
		ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	TYPICAL LK-x
PA1	039	KW 075 2	1	MP1-10R PUSH BUTTON RED WITH BLACK RING	ABB	TYPICAL LK-x
		EO 569 7	1	MCBH-00 FIXING SUPPORT 3 CONTACTS	ABB	TYPICAL LK-x
		EO 571 3	2	MCB-01 CONTACT NC FOR PUSHBUTTOM	ABB	TYPICAL LK-x
PM1	039	KW 076 0	1	MP1-10G PUSH BUTTON GREEN WITH BLACK RING	ABB	TYPICAL LK-x
		EO 569 7	1	MCBH-00 FIXING SUPPORT 3 CONTACTS	ABB	TYPICAL LK-x
		EO 570 5	2	MCB-10 CONTACT NO FOR PUSHBUTTONS	ABB	TYPICAL LK-x
QA1	038	S550239	1	S202M C 2 AUTOMATIC CIRCUIT BREAKER 10KA 2P	ABB	TYPICAL LK-x
		A563819	1	S2-CS/H6R AUXILIARY STATE CONTACT 1CO	ABB	TYPICAL LK-x
SA1	039	KW 329 3	1	M2SS2-10B HANDLE SELECTOR 2P 90° BLACK RING BLACK	ABB	TYPICAL LK-x
		EO 569 7	1	MCBH-00 FIXING SUPPORT 3 CONTACTS	ABB	TYPICAL LK-x
		EO 570 5	2	MCB-10 CONTACT NO FOR PUSHBUTTONS	ABB	TYPICAL LK-x
		EO 571 3	2	MCB-01 CONTACT NC FOR PUSHBUTTOM	ABB	TYPICAL LK-x
U1.2	041	1SDA074173R1	1	MODUL EKIP SUPPLY 24÷48VDC	ABB	TYPICAL LK-x
U1.3	041	1SDA105166R1	1	Module Ekip Com Modbus RS485 Tmax XT	ABB	TYPICAL LK-x
U1.A	041	1SDA105203R1	1	EKIP CARTRIDGE 2SLOT FOR XT2-XT4-XT5	ABB	TYPICAL LK-x
U2.A	042	Z-PC-DINAL2-17.5	1	DIN RAIL 2SLOT WITH HEAD FOR "Z-5DI-2DO"	SENECA	TYPICAL LK-x
U2.B	042	Z-5DI-2DO	1	I/O MODUL 5DI+2DO modbus RS485 Vaux=10÷40Vdc 19÷28Vac	SENECA	TYPICAL LK-x
U2.C	042	Z-5DI-2DO	1	I/O MODUL 5DI+2DO modbus RS485 Vaux=10÷40Vdc 19÷28Vac	SENECA	TYPICAL LK-x
X1		HD100GR_	8	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur	TYPICAL LK-x
		HD400GR_	17	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur	TYPICAL LK-x
		BT003	2	BT/3 End bracket	Cabur	TYPICAL LK-x
		HD101GR	1	HMD/PT/GR End section - Grey	Cabur	TYPICAL LK-x

VALID FOR CONSTRUCTION
VENDOR DOCUMENT - FDL DWG:
123A90-FDL-1724002197-EL-DG-00031
REV.: 2_A | DATE: 18/03/25 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= TYPICAL
+ LK-x
DWG n° : 231298/SD/31
Item n° : PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	18/09/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
1	10/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"
LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS
Functional Drawing - Typical "LK1-n" & "LK2-n"

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

A3 | DRAWING NO. 1723002197-EL-DG-00031 | SHEET 046 | REV. 02

File Name : 1723002197-EL-DG-00031 Rev. 02

AS-COMMISSIONED DAVIDE ZUCCONELLI NO MARK UP 21/03/2025

Foto UNI A3: 420mmx297mm

Nome/Item	Fg/Sh	Tipo/Type	Q.ta/Q.ty	Descrizione/Description	Costruttore/Manufacturer	Quadro (descrizione)
X1		HD201GR	1	HMD.1/PT/GR End section - Grey	Cabur	TYPICAL LK-x

AS-COMMISSIONED
DAVIDE ZUCCOMELLI

NO MARK UP
21/03/2025

Nome/Item	Fg/Sh	Tipo/Type	Q.ta/Q.ty	Descrizione/Description	Costruttore/Manufacturer	Quadro (descrizione)
KM1	043	AF40400013	1	AF40-40-00-13 CONTACTOR 4P 40A 100-250VAC/DC	ABB	TYPICAL LK1-40
		CA440E	1	CA4-40E AUXILIARY FRONT CONTACT 4NO	ABB	TYPICAL LK1-40
QF1	043	1SDA068169R1	1	XT2S 160 BREAKING PART 4p F F	ABB	TYPICAL LK1-40
		1SDA100162R1	1	ELECTRONIC TRIP RELEASE Ekip Hi-Touch LSIG In=40A XT2 4p	ABB	TYPICAL LK1-40
		1SDA066431R1	1	AUX-C 1Q+1SY 250Vac/dc XT1..XT5 F/P	ABB	TYPICAL LK1-40

Nome/Item	Fg/Sh	Tipo/Type	Q.ta/Q.ty	Descrizione/Description	Costruttore/Manufacturer	Quadro (descrizione)
KM1	043	AF52400013	1	AF52-30-00-13 CONTACTOR 4P 53A(AC3) 100-250VAC/DC	ABB	TYPICAL LK1-63
		CA440E	1	CA4-40E AUXILIARY FRONT CONTACT 4NO	ABB	TYPICAL LK1-63
QF1	043	1SDA068169R1	1	XT2S 160 BREAKING PART 4p F F	ABB	TYPICAL LK1-63
		1SDA100163R1	1	ELECTRONIC TRIP RELEASE Ekip Hi-Touch LSIG In=63A XT2 4p	ABB	TYPICAL LK1-63
		1SDA066431R1	1	AUX-C 1Q+1SY 250Vac/dc XT1..XT5 F/P	ABB	TYPICAL LK1-63

Nome/Item	Fg/Sh	Tipo/Type	Q.ta/Q.ty	Descrizione/Description	Costruttore/Manufacturer	Quadro (descrizione)
KM1	043	AF80400013	1	AF80-30-00-13 CONTACTOR 4P 80A(AC3) 100-250VAC/DC	ABB	TYPICAL LK1-100
		CA440E	1	CA4-40E AUXILIARY FRONT CONTACT 4NO	ABB	TYPICAL LK1-100
QF1	043	1SDA068169R1	1	XT2S 160 BREAKING PART 4p F F	ABB	TYPICAL LK1-100
		1SDA100164R1	1	ELECTRONIC TRIP RELEASE Ekip Hi-Touch LSIG In=100A XT2 4p	ABB	TYPICAL LK1-100
		1SDA066431R1	1	AUX-C 1Q+1SY 250Vac/dc XT1..XT5 F/P	ABB	TYPICAL LK1-100

Nome/Item	Fg/Sh	Tipo/Type	Q.ta/Q.ty	Descrizione/Description	Costruttore/Manufacturer	Quadro (descrizione)
KM1	043	AF190401113	1	AF190-40-11-13 CONT 4P 190A AC3 100-250VAC/DC	ABB	TYPICAL LK2-160
		CAL1911	1	CAL19-11 CONTATTO AUSILIARIO 1NA+1NC PER AF116÷AF370	ABB	TYPICAL LK2-160
		CAL1911B	2	CAL19-11B AUXILIARY CONTACT 1NA+1NC PER AF116÷AF370	ABB	TYPICAL LK2-160
QF1	043	1SDA068179R1	1	XT4S 250 BREAKING PART 4p F F	ABB	TYPICAL LK2-160
		1SDA100334R1	1	ELECTRONIC TRIP RELEASE Ekip Hi-Touch LSIG In=160A XT4 4p	ABB	TYPICAL LK2-160
		1SDA066431R1	1	AUX-C 1Q+1SY 250Vac/dc XT1..XT5 F/P	ABB	TYPICAL LK2-160

VALID FOR CONSTRUCTION
VENDOR DOCUMENT - FDL DWG:
123A90-FDL-1724002197-EL-DG-00031
REV.: 2_A | DATE: 18/03/25 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= TYPICAL
+ LK-x
DWG n° : 231298/SD/31
Item n° : PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	18/09/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
1	10/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	09/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"
LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS
Functional Drawing - Typical "LK1-n" & "LK2-n"

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

A3 | DRAWING NO. 1723002197-EL-DG-00031 | SHEET 047 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 02

BASE LOAD POWER HUB (BLPH)

B-200 HVAC and LIGHTING PANEL WIRING DRAWING and GENERAL ARRANGEMENT (INC INTERCONNECTING) - E&I SHELTERS

B200-HSB-001

NO MARK UP
AS COMMISSIONED: MATIAS GIRON.
16/4/25

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	24/01/25				ACCEPT FOR CONSTRUCTION (AFC)
04	10/12/24				ACCEPT FOR CONSTRUCTION (AFC)
03	06/07/24				ISSUE FOR REVIEW (IFR)
02	13/06/24				ISSUE FOR REVIEW (IFR)
01	15/04/24				ISSUE FOR REVIEW (IFR)
00	15/04/24				ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

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. 1724000049-HV-DA-0027

SHEET 001

REV. 05

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
COVER

ROSETTI MARINO ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 1

F.S. 2

NO MARK UP AS COMMISSIONED: MARIA GIROTTI 16/4/25

LISTA FOGLI \ INDEX

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

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

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM

INDEX

ROSETTI MARINO | ALEXSISTEMI s.p.

1724000049-HV-DA-00027

FG. 2
F.S. 3

NO MARK UP AS COMMISSIONED: MATTIA GIRSTMI 16/4/25

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
E	CLOSING BUTTON	89.	FUSE DISCONNECTING SWITCH	2 3 4	TERMINAL STRIP
E	OPENING BUTTON	6. d	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
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
SIMBOL LIST

ROSETTI MARINO | ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

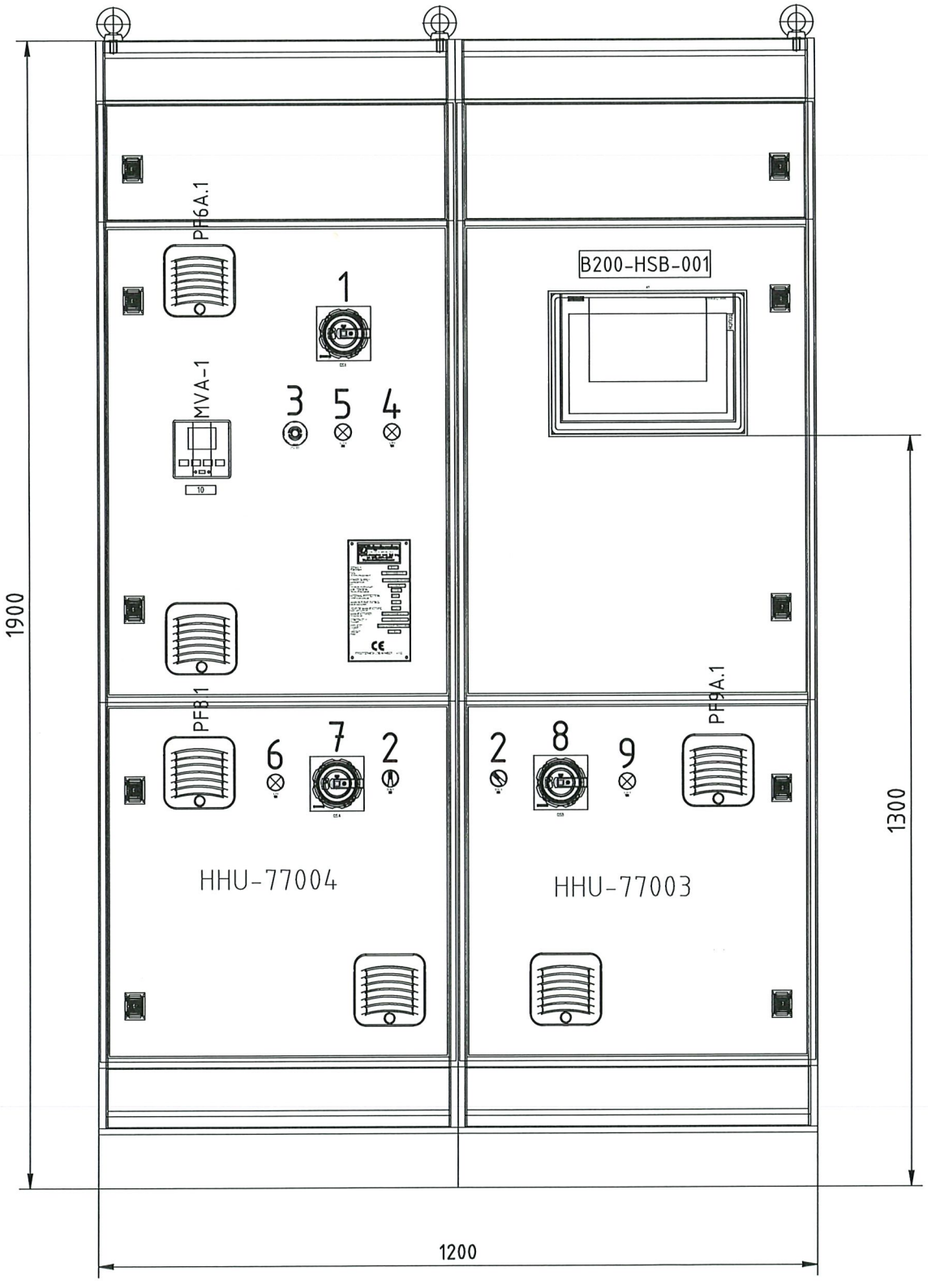
FG. 3
F.S. 4

NO MARK UP

AS COMMISSIONED: MATTIA GINOTTI

16/4/25

EXTERNAL VIEW



LABEL	
1	MAIN SWITCH
2	AUTO-0-MANUAL
3	HPB-003
4	24VDC VOLTAGEPRESENCE
5	230V VOLTAGE PRESENCE
6	230V VOLTAGE PRESENCE
7	HHU-77004 MAIN SWITH
8	HHU-77003 MAIN SWITH
9	230V VOLTAGE PRESENCE
10	MULTIMETER

CABINET QUOTE:
LENGHT 1200 mm
HEIGHT 1900 mm
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.:*	1627
TAG: *Codice identificativo:*	B200-HSB-001
POWER SUPPLY: *Alimenatzione:*	400 Vac 50Hz 3Ph+N
Icc: *Coorente cortocircuito:*	25 kA/1s
AUX. TENSION: *Tensione ausiliaria:*	24 Vdc
INTERNAL PROTECTION: *Protezione interna:*	IP54
MAIN BUS BAR RATING: *Barra principale:*	40 A
YEAR OF MANUFACTURE: *Anno produzione:*	2024
MANUFACTURER: *Costruzione:*	FRIGOTERMICA s.r.l.
CONTRACT n.: *Contratto:*	51/240554
PROJECT: *Progetto:*	BASE LOAD POWER HUB
WEIGHT: *Peso:*	700 Kg

CE

FRIGOTERMICA JOB NUMBER: 4112

SCALA 1:10

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

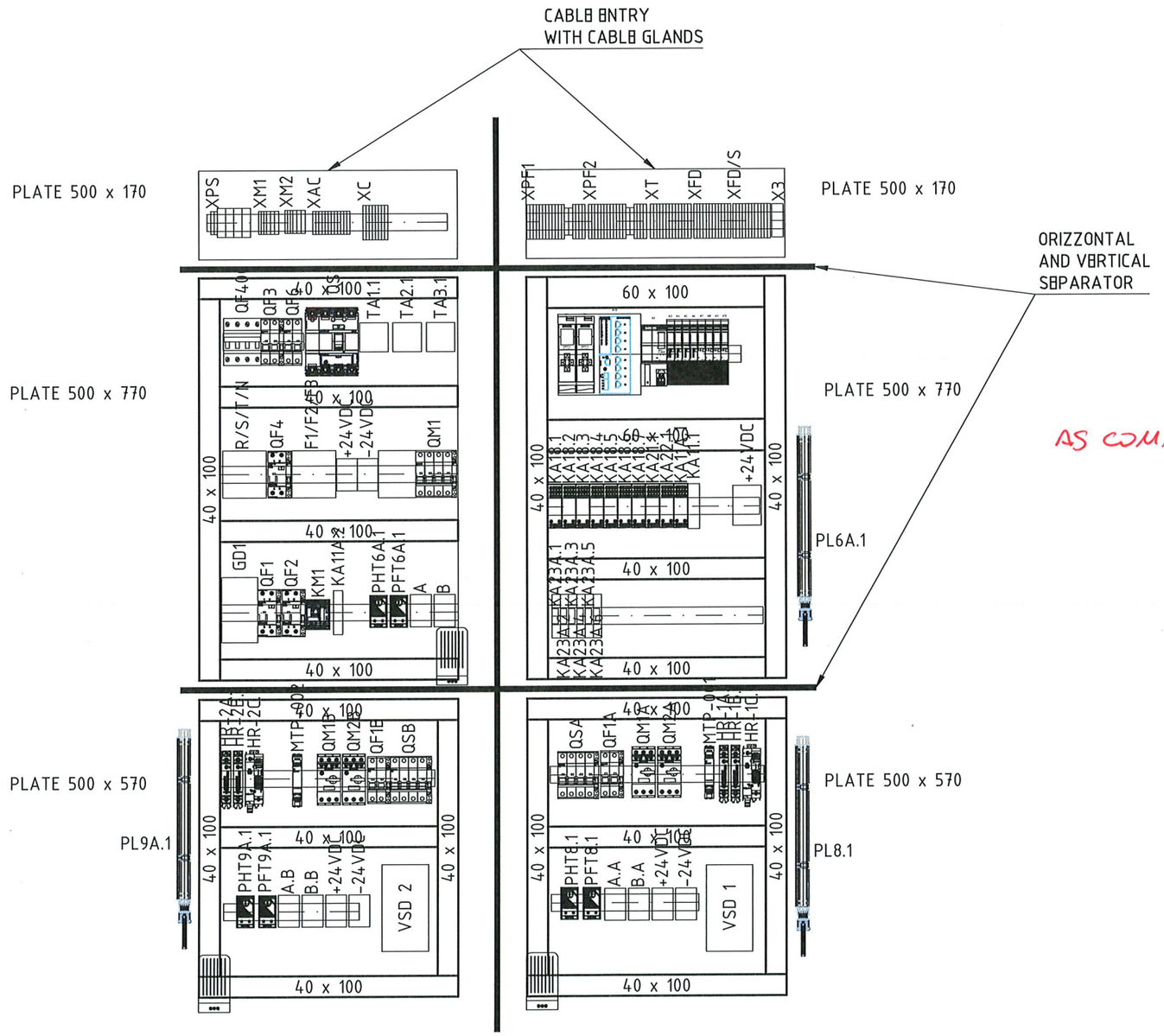
BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
EXTERNAL VIEW

ROSETTI MARINO | ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 4
F.S. 5

INTERNAL VIEW



NO MARK UP
AS COMMISSIONED: MATTIA GIROTTI
16/4/25

SCALA 1:10

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

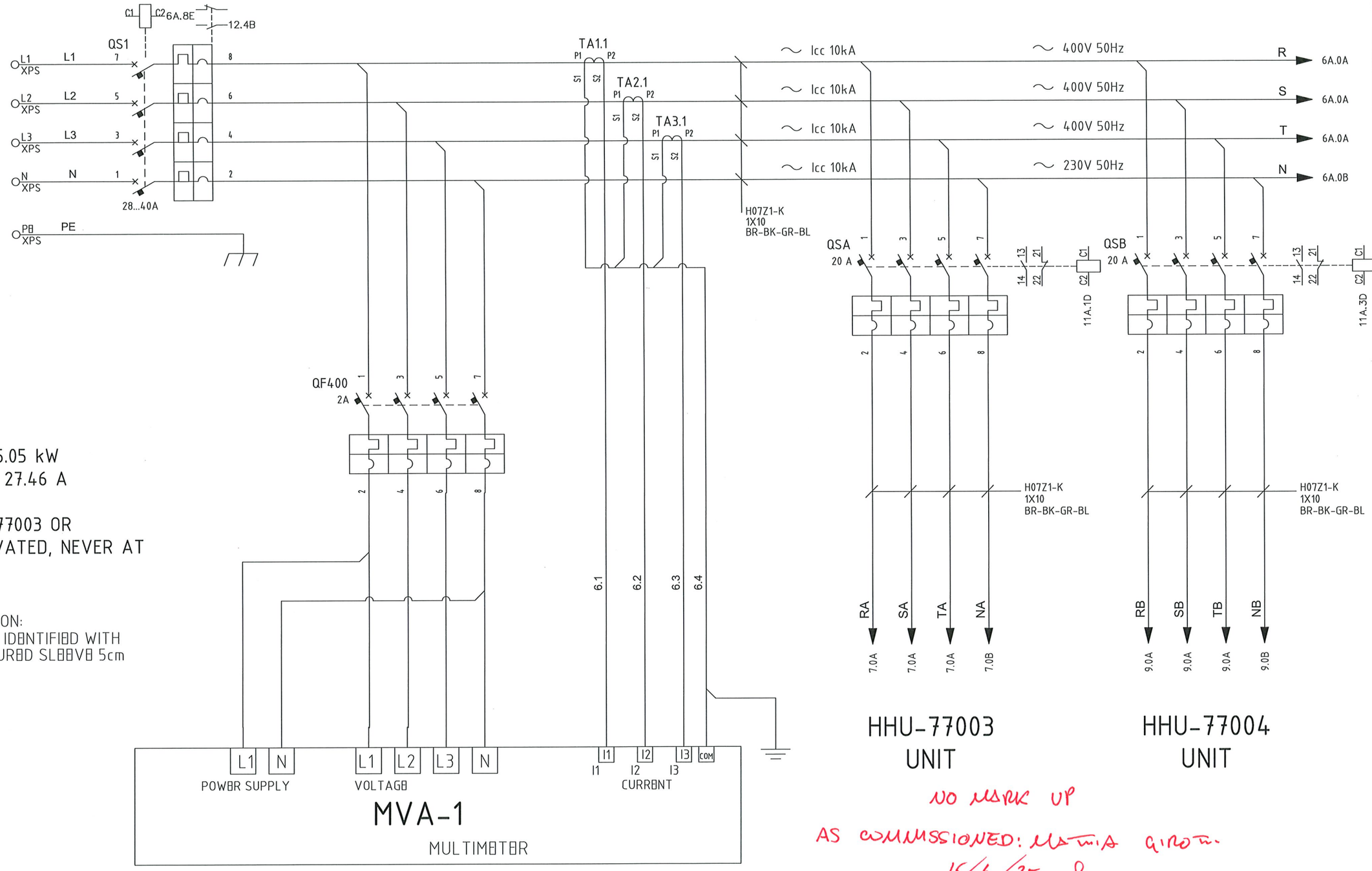
BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
INTERNAL VIEW

ROSETTI MARINO | ALEXSISTEMI spa

1724000049-HV-DA-00027

FG. 5
F.S. 6

POWER SUPPLY
FROM
LV SWITCHGEAR
3PH + N + PE
400V 50Hz
TAG SG-200N1
5G25



HHU-77003
UNIT

HHU-77004
UNIT

RATED POWER: 15.05 kW
RATED CURRENT: 27.46 A

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

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

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

230V 1P + N
- ⟶ BROWN
- ⟶ BLU

24Vdc
- ⟶ RED
- ⟶ BLACK

NO MARK UP
AS COMMISSIONED: MATTIA GIROTTI
15/4/25

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

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

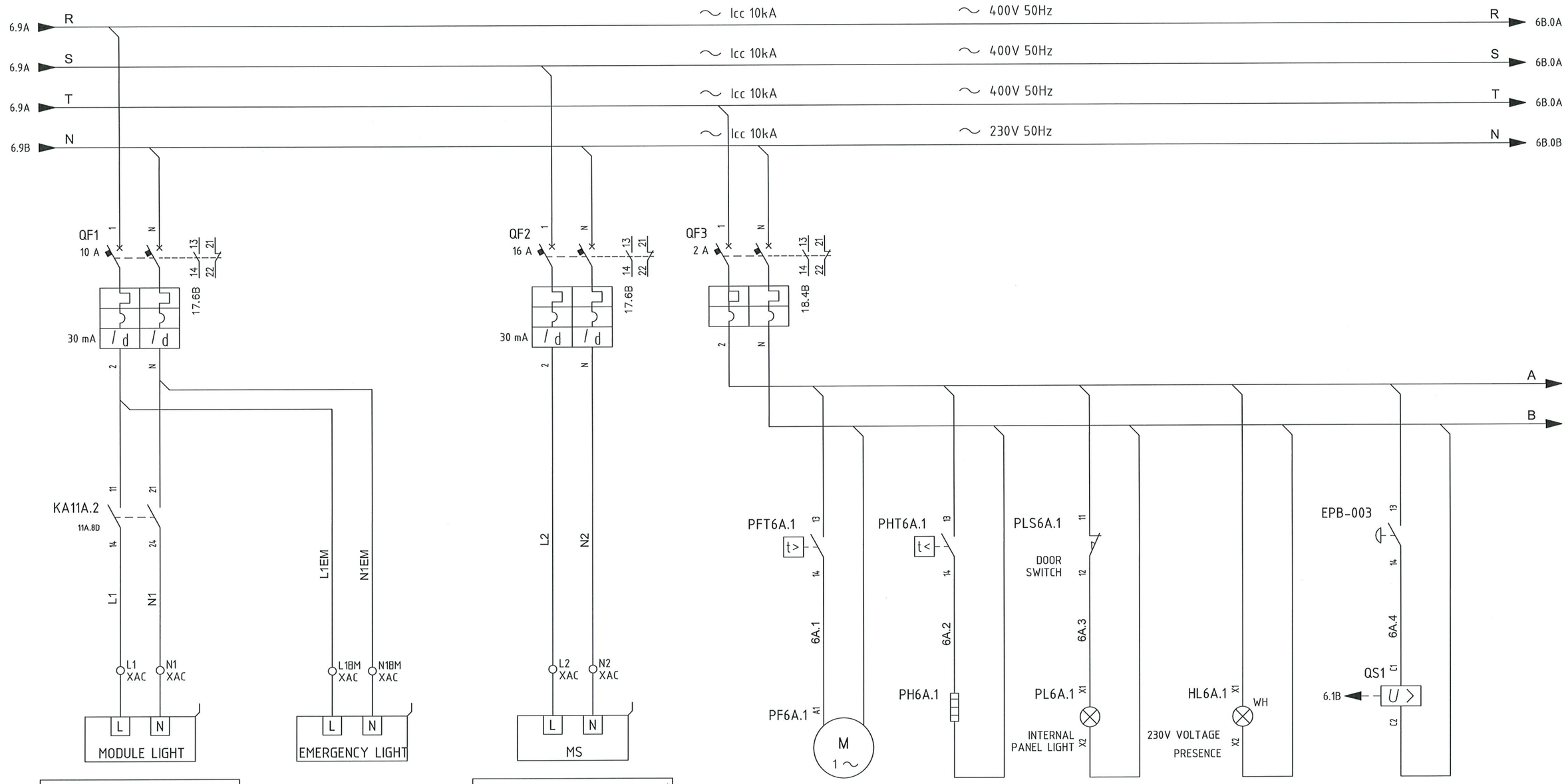
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
POWER SECTION

ROSETTI MARINO | ALEXSISTEMI

1724000049-HV-DA-00027

FG. 6
F.S. 6A



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

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

NO MARK UP

AS COMMISSIONED: MOT-A GIROT.

16/4/25

REV.	MODIFICA	DATA	FIRMA	APPR.
05	ACCEPT FOR CONSTRUCTION	24/01/25		DATA 15/04/2024
04	ACCEPT FOR CONSTRUCTION	10/10/24		DISEGN. F.M.
03	ISSUED FOR APPROVAL	06/07/24		VISTO S.S.

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

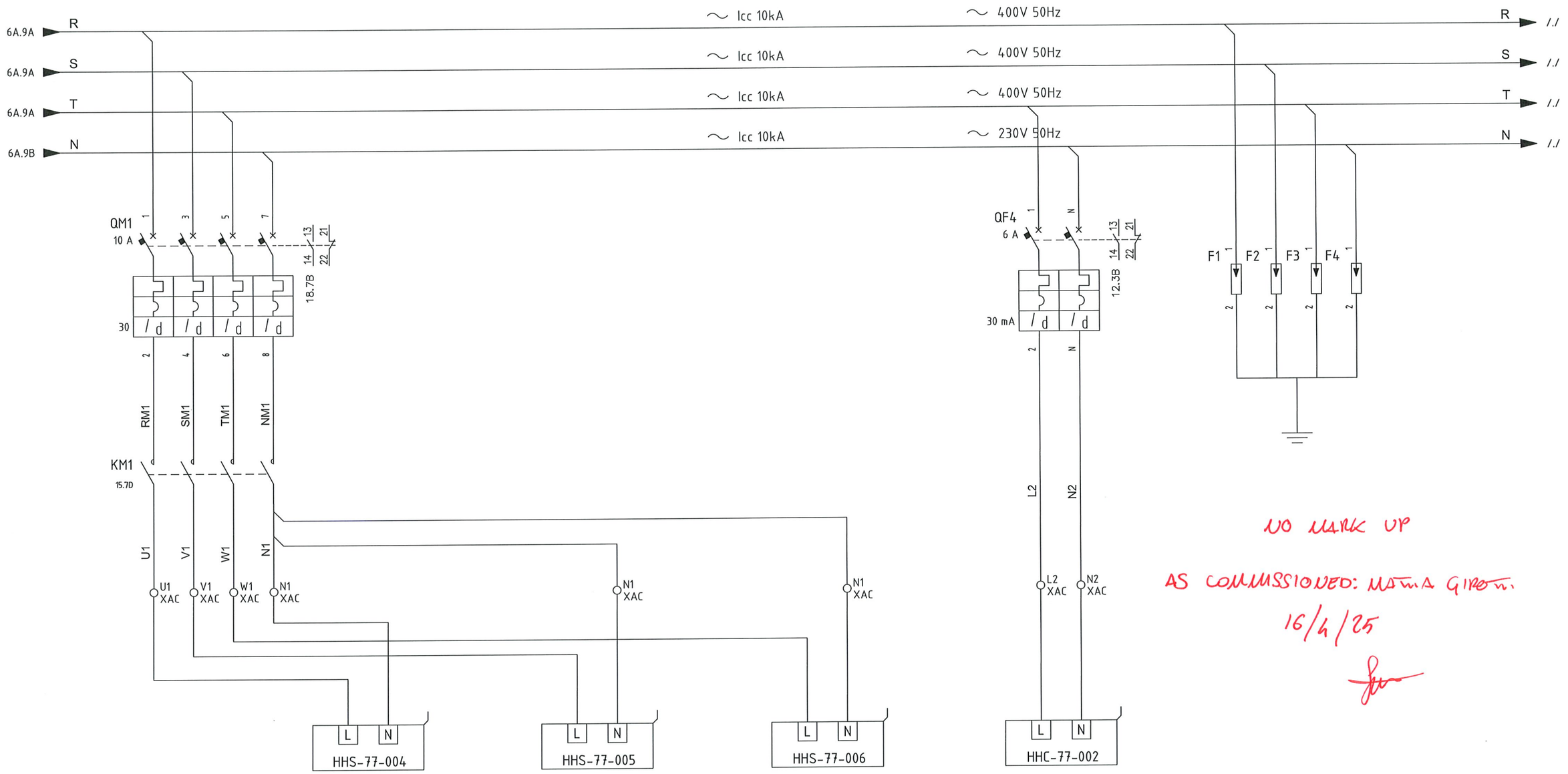
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
POWER SECTION

ROSETTI MARINO | ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 6A
F.S. 6B



NO MARK UP

AS COMMISSIONED: MOTMA GIROTT.

16/4/25

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

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

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

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

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

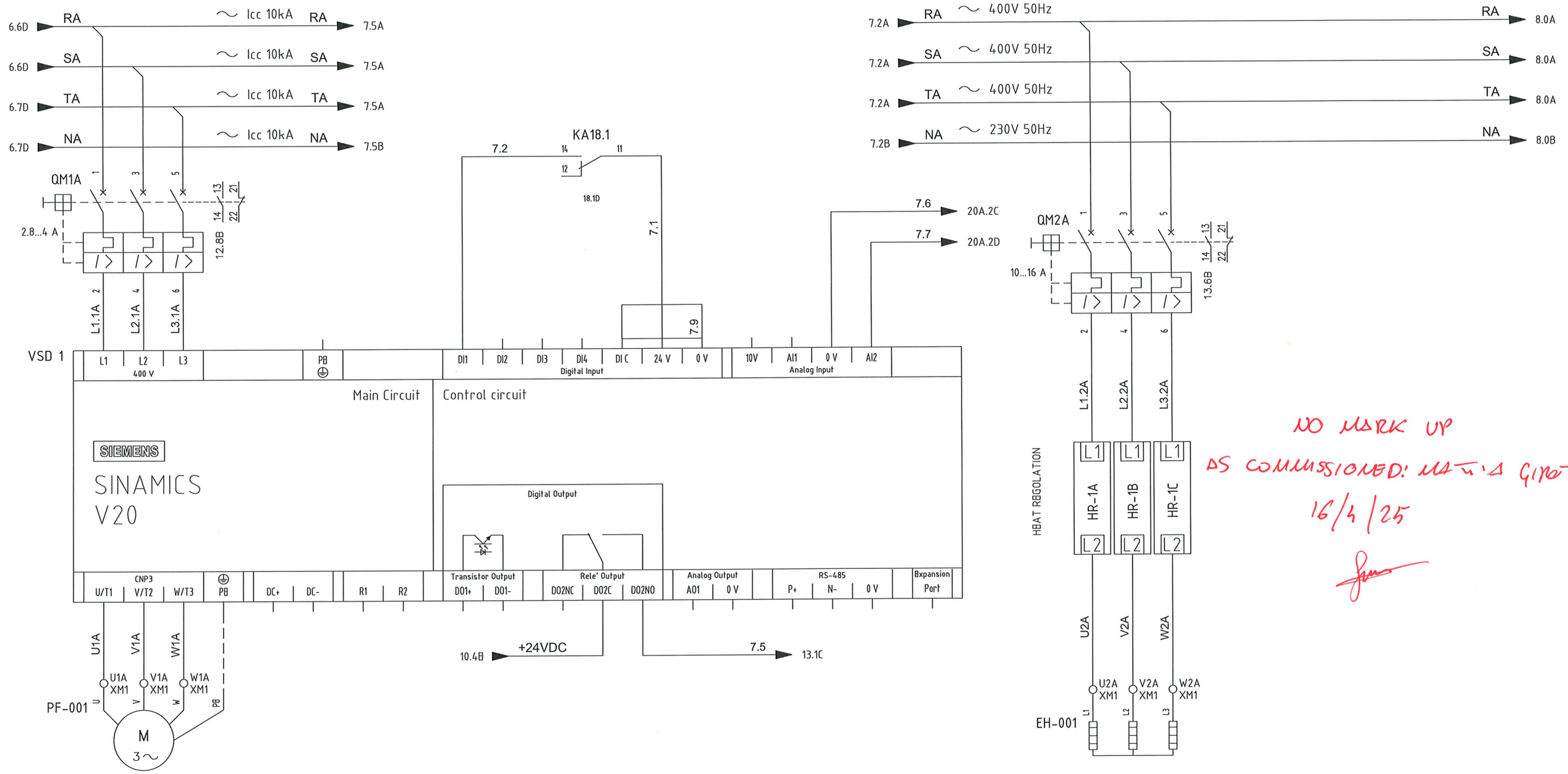
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
POWER SECTION

ROSETTI MARINO | ALEXSISTEMI s.p.s.

1724000049-HV-DA-00027

FG. 6B
F.S. 7



NO MARK UP
AS COMMISSIONED: MATTIA GIROTTI
16/4/25

HFM-77-201	
PRESSURIZING FAN 1	
RATED	ABSORBED
1.1 kW	1 kW
2.3 A	2 A

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

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
POWER SECTION

ROSETTI MARINO | ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 7
F.S. 8

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

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

7.9A TA ~ Icc 10kA ~ 400V 50Hz TA 21.4F

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

NO MARK UP
AS COMMISSIONED: MATIA GIROTI
16/4/25

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

A.A

B.A

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

PHT8.1 13 t< 14 8.2 PH8.1

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

HL8.1 X1 WH 230V VOLTAGE PRESENCE X2

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

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

PF-001
MOTOR HEATER

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

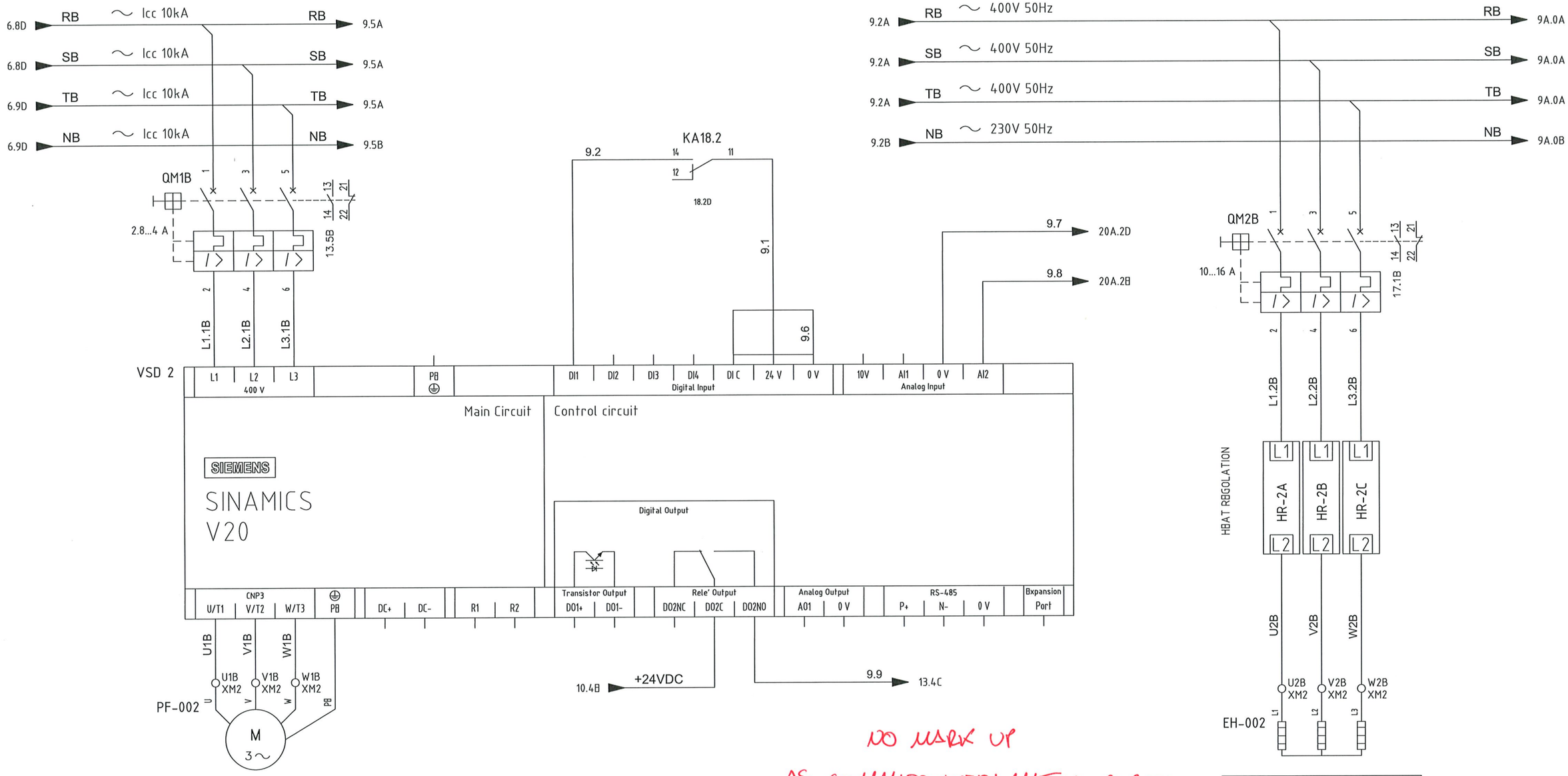
BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM

POWER SECTION

ROSETTI MARINO ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 8
F.S. 9



HFM-77-202	
PRESSURIZING FAN 2	
RATED	ABSORBED
1.1 kW	1 kW
2.3 A	2 A

NO MARK UP
AS COMMISSIONED! MATRIA GIROTTI
16/4/25

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

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
POWER SECTION

ROSETTI MARINO | ALEXSISTEMI s.p.s.

1724000049-HV-DA-00027

FG. 9
F.S. 9A

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

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

9.9A TB ~ Icc 10kA ~ 400V 50Hz TB 22.4F

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

NO MARK UP

AS COMMISSIONED: M&M A GIROTTI

16/4/25

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

A.B

B.B

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

PHT9A.1 13 t< 14 8.2 PH9.1

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

HL9A.1 X1 WH X2 230V VOLTAGE PRESENCE

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

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

PF-002
MOTOR HEATER

REV.	MODIFICA	DATA	FIRMA		
05	ACCEPT FOR CONSTRUCTION	24/01/25		DATA	15/04/2024
04	ACCEPT FOR CONSTRUCTION	10/10/24		DISEGN.	F.M.
03	ISSUED FOR APPROVAL	06/07/24		VISTO	S.S.
				APPR.	M.G.

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

CLIENT: CROSSWIND

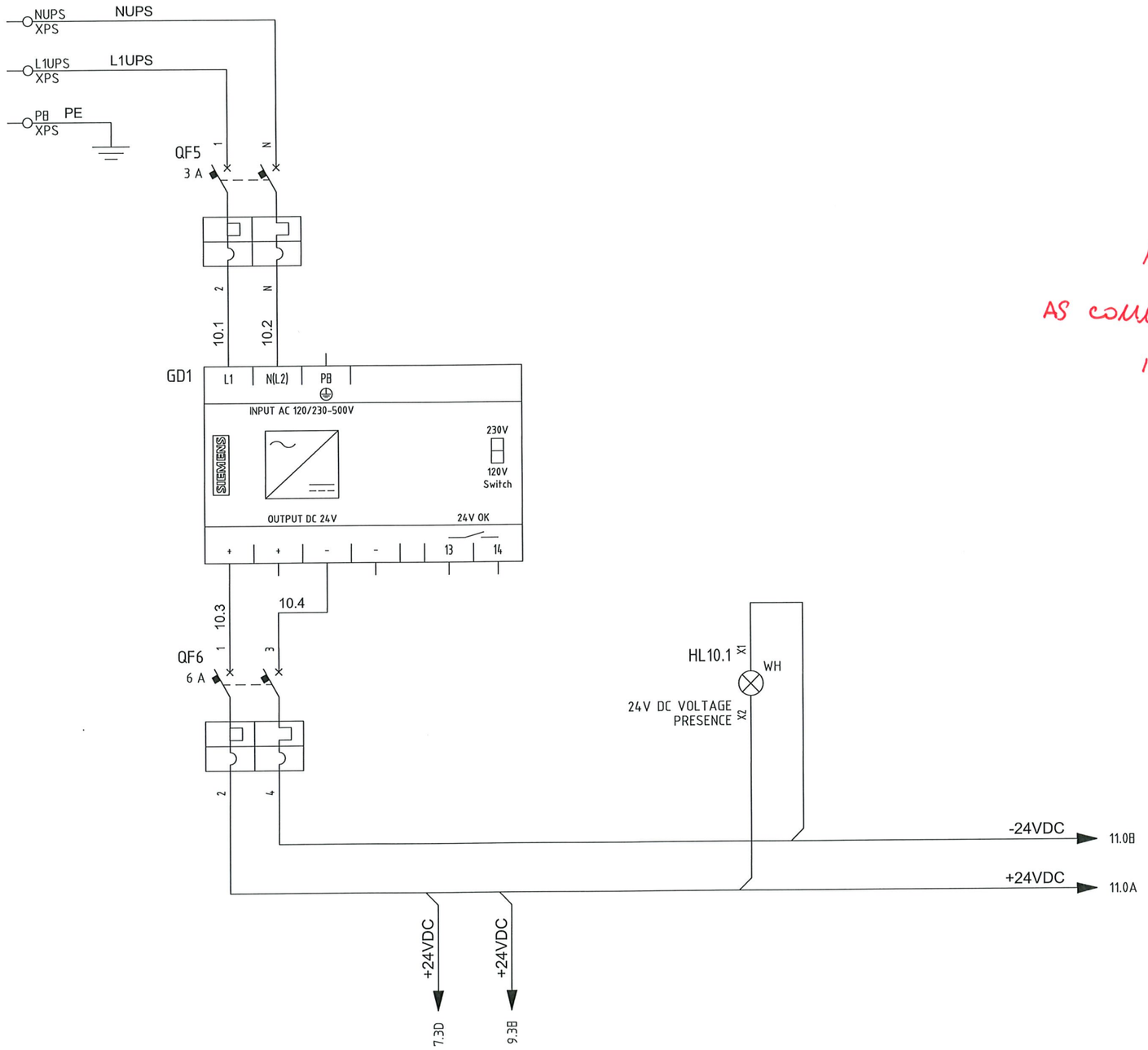
BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
POWER SECTION

ROSETTI MARINO ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 9A
F.S. 10

UPS POWER SUPPLY
FROM AC UPS-PAS DB
1PH + N + PE 230V
50Hz
TAG DP-200F3
3G4



RATED POWER: 0.7 kW
RATED CURRENT: 3 A

ABSORBED POWER: 0.5 kW
ABSORBED CURRENT: 2 A

NO MARK UP
AS COMMISSIONED: MATTIA GIROTTI
16/4/25

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
AUX SECTION

ROSETTI MARINO | ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 10
F.S. 11

SHUT DOWN
FROM
CUSTOMER SIS

PF-001
PRESSURIZING FAN
THERMIC PROTECTION
PTC-001

PF-002
PRESSURIZING FAN
THERMIC PROTECTION
PTC-002

10.7B +24VDC

+24VDC 11A.0A

24V DC
FROM SIS
B400-SIS-0901
1= OK
0= SHUT
DOWN

100 XC

101 XC

KA11.1 A1 A2

14.4B

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

MTP-001

MOTOR THERMIC PROTECTION

SIEMENS

TRIPPED

A1/11 T1 T2 A2 12 14 NC NO

11.3 11.4

200 XPF1 201 XPF1

11.5 12.5B

MTP-002

MOTOR THERMIC PROTECTION

SIEMENS

TRIPPED

A1/11 T1 T2 A2 12 14 NC NO

11.6 11.7

300 XPF2 301 XPF2

11.8 13.2C

10.7B -24VDC

-24VDC 11A.0B

NO MARK UP
AS COMMISSIONED: MAN.A GIROM.
16/4/25

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
AUX SECTION

ROSETTI MARINO | ALEXSISTEMI

1724000049-HV-DA-00027

FG. 11
F.S. 11A

HPB-77-201
EMERGENCY POWER
BUTTON
HHU-77003

HPB-77-202
EMERGENCY POWER
BUTTON
HHU-77004

LIGHT COMMAND

11.9A +24VDC

+24VDC 12.0A

202 XPF1

302 XPF2

104 XC

106 XC

A

A

HPB-77-201

HPB-77-202

11

12

LIGHT
PUSH BUTTON

203 XPF1

303 XPF2

105 XC

107 XC

KA11A.1
11A.5D

11

14

12

11A.5

11A.3

11A.4

QSA C1 C2

6.6B

QSB C1 C2

6.8B

KA11A.1 A1 A2

KA11A.2 A1 A2

B

B

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

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

11.9B -24VDC

-24VDC 12.0A

NO MARK UP
AS COMMISSIONED: MISURA GIROTT.
16/4/25

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

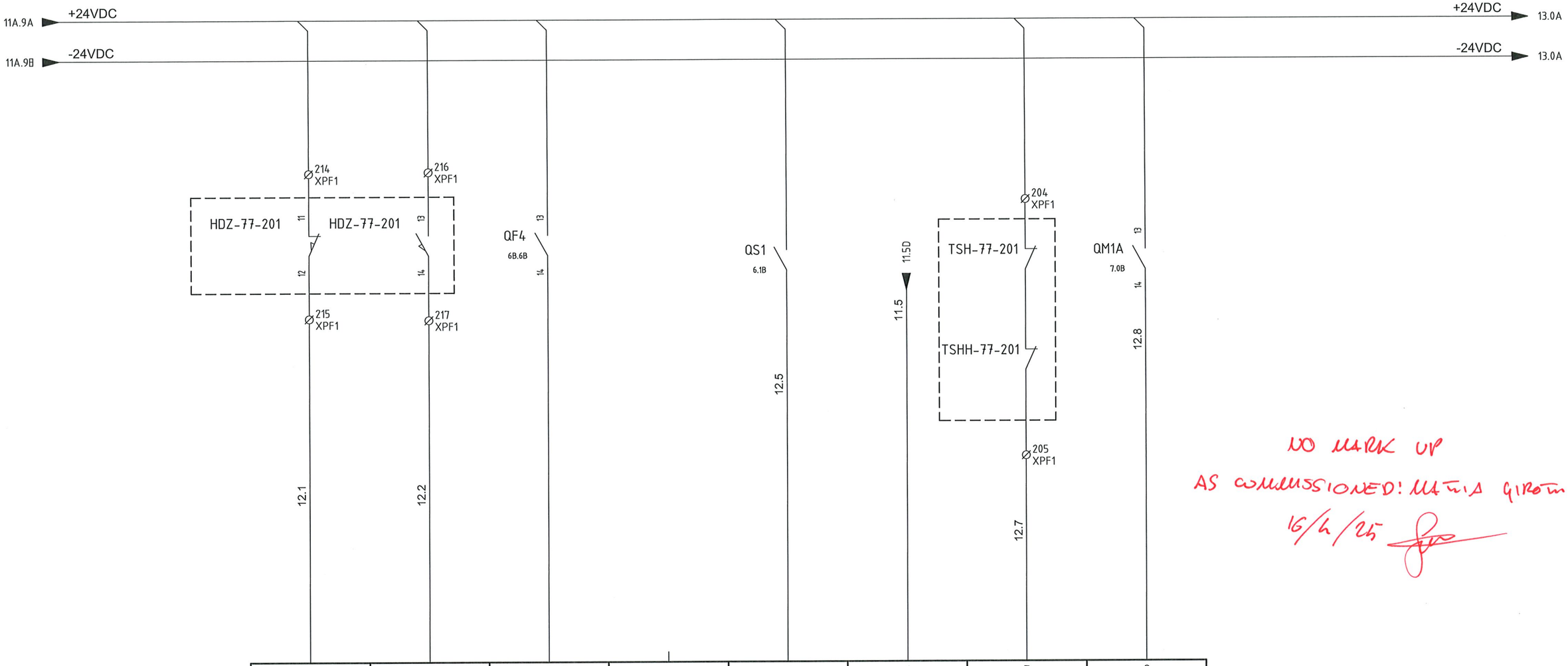
BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM

AUX SECTION

ROSETTI MARINO | ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 11A
F.S. 12



NO MARK UP
AS COMMISSIONED: MATIA GIROTTI
16/4/25

1	2	3	4	5	6	7	8
10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7
CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4	CPU: QUADRO GENERALE MOD. : 4
Name: A3 Sheet:	Name: A3 Sheet:	Name: A3 Sheet:	Name: A3 Sheet:	Name: A3 Sheet:	Name: A3 Sheet:	Name: A3 Sheet:	Name: A3 Sheet:
HDZ-77-201 CLOSE FEEDBACK 0=NOT CLOSE 1=CLOSE	HDZ-77-201 OPEN FEEDBACK 0=NOT OPEN 1=OPEN	HHC-77-0002 HEATING CABLE TRIP	SPARE	MAIN BRAKER TRIP SIGNAL 0=TRIP 1=NORMAL	ET-77-201 MOTOR. TERM.PROT 0=MALFUNC. 1=NORMAL	TSH/HH-77-201 EL.HEATER THERM. 0=MALFUNC. 1=NORMAL	HFM-77-201 TRIP SIGNAL 0=TRIP 1=NORMAL

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

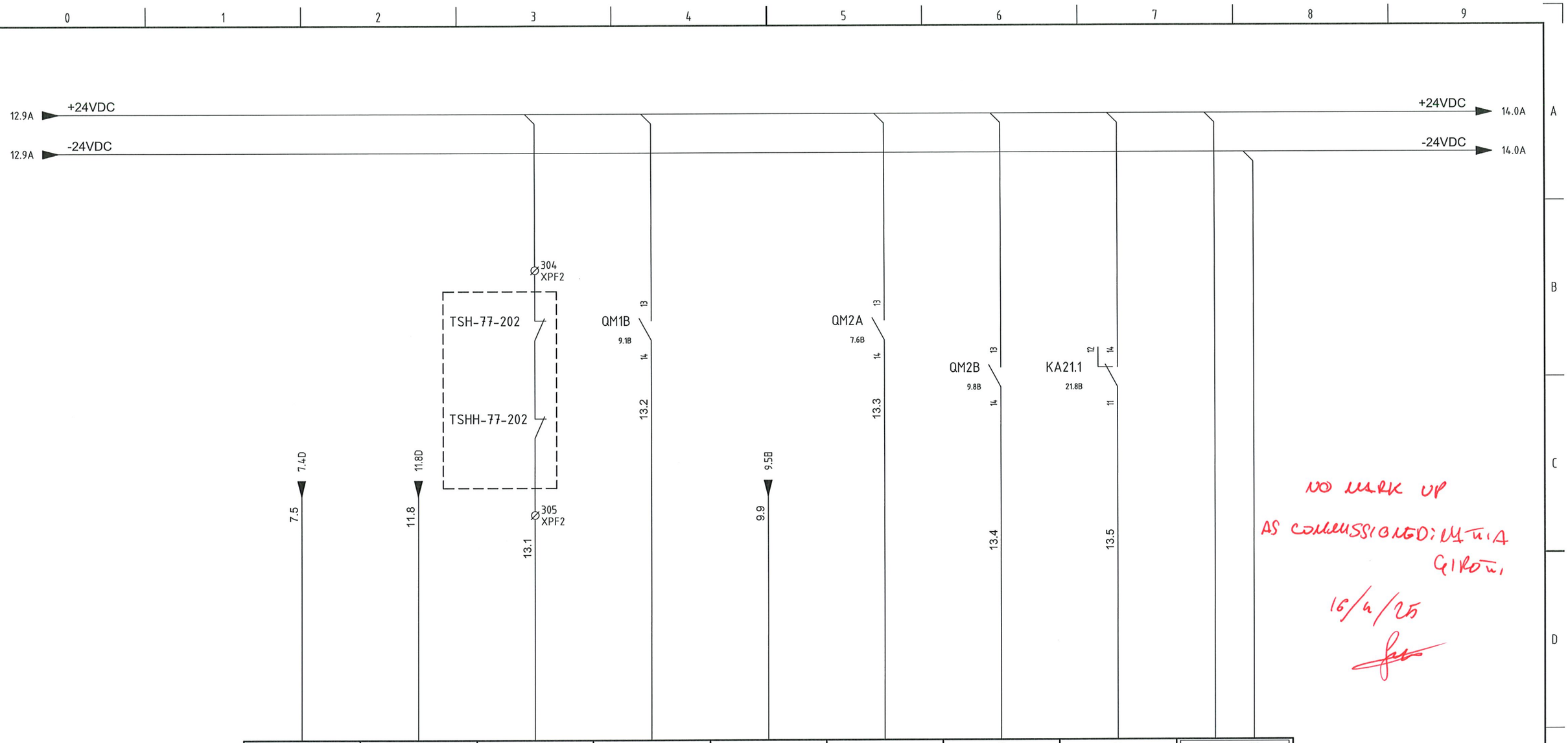
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
AUX SECTION

ROSETTI MARINO | ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 12
F.S. 13



NO MARK UP
AS COMMISSIONED: M.T.A
GIROTTI
16/4/25

9	10	11	12	13	14	15	16	L+ M
I1.0	I1.1	I1.2	I1.3	I1.4	I1.5	I1.6	I1.7	
CPU: QUADRO GENERALE MOD.: 4	CPU: QUADRO GENERALE MOD.: 4	CPU: QUADRO GENERALE MOD.: 4	CPU: QUADRO GENERALE MOD.: 4	CPU: QUADRO GENERALE MOD.: 4	CPU: QUADRO GENERALE MOD.: 4	CPU: QUADRO GENERALE MOD.: 4	CPU: QUADRO GENERALE MOD.: 4	CPU: QUADRO GENERALE MOD.: 4
Name: A3 / Sheet:	Name: A3 / Sheet:	Name: A3 / Sheet:	Name: A3 / Sheet:	Name: A3 / Sheet:	Name: A3 / Sheet:	Name: A3 / Sheet:	Name: A3 / Sheet:	Name: A3 / Sheet:
VSD-1 MALFUN. SIGNAL 0=MALFUNC. 1=NORMAL	ET-77-202 MOTOR. TERM.PROT 0=MALFUNC. 1=NORMAL	TSH/HH-77-202 EL.HEATER THERM. 0=MALFUNC. 1=NORMAL	HFM-77-202 TRIP SIGNAL 0=MALFUNC. 1=NORMAL	VSD-2 MALFUN. SIGNAL 0=MALFUNC. 1=NORMAL	HSS-77-201 TRIP SIGNAL 0=MALFUNC. 1=NORMAL	HSS-77-202 TRIP SIGNAL 0=MALFUNC. 1=NORMAL	HSS-77-201 MODULATION FAULT 0=MALFUNC. 1=NORMAL	

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
AUX SECTION

ROSETTI MARINO | ALEXSISTEMI s.p.s.

1724000049-HV-DA-00027

FG. 13
F.S. 14

13.9A +24VDC

13.9A -24VDC

+24VDC 15.0A

-24VDC 15.0A

KA22.1 (12, 14 / 11) — 22.8B

QF1B (13 / 14) — 9A.0B

QF1 (13 / 14) — 6A.1B

QF2 (13 / 14) — 6A.2B

KA11.1 (22, 24 / 21) — 11.2C

HDZ-77-202 (11 / 12) — 314 XPF2

HDZ-77-202 (13 / 14) — 316 XPF2

315 XPF2

317 XPF2

SA14.1 RD (13 / 14) — 16.5B (14-13 / 14-13)

1=AUTOMATIC
0= STOP
2= MANUAL

NO MARK UP

AS COMMISSIONED: MATTIA GIROTTO
16/4/25

14.1 | 14.2 | 14.3 | 14.4 | 14.5 | 14.6 | 14.7 | 14.8

1	2	3	4	5	6	7	8
12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7
CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5	CPU: QUADRO GENERALE MOD. : 5
Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:
HSS-77-202 MODULATION FAULT 0=MALFUNC. 1=NORMAL	HHU-77004 TRIP AUX SECTION	TRIP SIGNAL MODULE LIGHT	TRIP SIGNAL MODULE SOCKET	HVAC SHUT DOWN FROM SIS 0=SHUTDOWN 1=NORMAL	HDZ-77-202 CLOSE FEEDBACK 0=NOT CLOSE 1=CLOSE	HDZ-77-202 OPEN FEEDBACK 0=NOT OPEN 1=OPEN	HHU-77003 AUTO MODE 0=NOT AUTO 1= AUTOMATIC

REV.	MODIFICA	DATA	FIRMA	APPR.	
05	ACCEPT FOR CONSTRUCTION	24/01/25		DATA	15/04/2024
04	ACCEPT FOR CONSTRUCTION	10/10/24		DISEGN.	F.M.
03	ISSUED FOR APPROVAL	06/07/24		VISTO	S.S.
				APPR.	M.G.

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
AUX SECTION

ROSETTI MARINO | ALEXSISTEMI

1724000049-HV-DA-00027

F.G. 14
F.S. 15

14.9A +24VDC

14.9A -24VDC

+24VDC 16.0A

-24VDC 16.0A

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

NO MARK UP
AS COMMISSIONED!
MATTIA GIROTTI.
16/4/25

9	10	11	12	13	14	15	16	L+ M
I3.0	I3.1	I3.2	I3.3	I3.4	I3.5	I3.6	I3.7	
CPU: QUADRO GENERALE MOD.: 5	CPU: QUADRO GENERALE MOD.: 5	CPU: QUADRO GENERALE MOD.: 5	CPU: QUADRO GENERALE MOD.: 5	CPU: QUADRO GENERALE MOD.: 5	CPU: QUADRO GENERALE MOD.: 5	CPU: QUADRO GENERALE MOD.: 5	CPU: QUADRO GENERALE MOD.: 5	CPU: QUADRO GENERALE MOD.: 5
Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:	Name: A4 Sheet:
HHU-77003 TRIP AUX SECTION	GENERAL PANEL AUX TRIP	HHU-77003 MAIN BRAKER TRIP	HHU-77004 MAIN BRAKER TRIP	HSS-77004/5/6 SPACE HEATER TRIP	SPARE	HSS-77004/5/6 SPACE HEATER RUN	SPARE	

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
AUX SECTION

ROSETTI MARINO | ALEXSISTEMI spa

1724000049-HV-DA-00027

FG. 15
F.S. 16

15.9A +24VDC → +24VDC 17.0A

15.9A -24VDC → -24VDC 17.0A

1=AUTOMATIC
0= STOP
2= MANUAL

SA16.1 — RD — 13 — 14 — 23 — 24 — 33 — 34 — 16.6B

208 XPF1 — 13 — PDSL-77-201 (p>) — 14 — 209 XPF1

PDT-77-201 (p>)

210 XPF1 — 13 — 14 — 211 XPF1

PDSL-77-202 (p>)

308 XPF2 — 13 — 14 — 309 XPF2

PDT-77-202 (p>)

310 XPF2 — 13 — 14 — 311 XPF2

SA14.1 — 13 — 14 — 14.7B

SA16.1 — 23 — 24 — 16.1B

KA23A.1 — 11 — 14 — 12 — 23A.1B

NO MARK UP
AS COMMISSIONED: MATTIA GIRETTI
17/4/25

9	10	11	12	13	14	15	16
14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7
CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6
Name: A5 Sheet:	Name: A5 Sheet:	Name: A5 Sheet:	Name: A5 Sheet:	Name: A5 Sheet:	Name: A5 Sheet:	Name: A5 Sheet:	Name: A5 Sheet:
HHU-77004 AUTO MODE 0=NOT AUTO 1= AUTOMATIC	PDSL-77-201 FAN FLOW SWITCH 0=NO FLOW 1=FLOW	PDT-77-201 FILTER DIFF SWITCH 0=NORMAL 1=CLOGGED	PDSL-77-202 FAN FLOW SWITCH 0=NO FLOW 1=FLOW	PDT-77-202 FILTER DIFF SWITCH 0=NORMAL 1=CLOGGED	HHU-77003 MANUAL MODE 0=NOT MANUAL 1=MANUAL	HHU-77004 MANUAL MODE 0=NOT MANUAL 1=MANUAL	HFD-77004 CLOSE CONTACT 0=NOT CLOSE 1=CLOSE

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
AUX SECTION

ROSETTI MARINO — ALEXSISTEMI

1724000049-HV-DA-00027

FG. 16
F.S. 17

16.9A +24VDC

16.9A -24VDC

+24VDC 18.0C

-24VDC 18.0D

	KA23A.2	KA23A.3	KA23A.4	KA23A.5	KA23A.6
	11	11	11	11	11
	23A.2B	23A.3B	23A.4B	23A.6B	23A.7B
	14 12	14 12	14 12	14 12	14 12

NO MARK UP
AS COMMISSIONED: MTMS
GMOTM.
17/1/25

9	10	11	12	13	14	15	16	L+ M
15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	
CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6	CPU: QUADRO GENERALE MOD. : 6
Name: A5 / Sheet:	Name: A5 / Sheet:	Name: A5 / Sheet:	Name: A5 / Sheet:	Name: A5 / Sheet:	Name: A5 / Sheet:	Name: A5 / Sheet:	Name: A5 / Sheet:	Name: A5 / Sheet:
HFD-77004 OPEN CONTACT 0=NOT OPEN 1=OPEN	HFD-77005 CLOSE CONTACT 0=NOT CLOSE 1=CLOSE	HFD-77005 OPEN CONTACT 0=NOT OPEN 1=OPEN	HFD-77006 CLOSE CONTACT 0=NOT CLOSE 1=CLOSE	HFD-77006 OPEN CONTACT 0=NOT OPEN 1=OPEN	SPARE	SPARE	SPARE	

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
AUX SECTION

ROSETTI MARINO | ALEXSISTEMI spa

1724000049-HV-DA-00027

FG. 17
F.S. 18

VSD 1 START COMMAND vsd 1 start command		VSD 2 START COMMAND vsd 2 start command		HVAC MALFUNCTION SIGNAL TO SIS 0=MALFUNC. 1=NORMAL		HDZ-77-201 OPEN COMMAND 0=OFF 1=OPEN		HSS-77-203 MOTOR HEATER		HSS-77-204 MOTOR HEATER		HSS-77004/5/6 SPACE HEATER START		HDZ-77-202 OPEN COMMAND 0=OFF 1=OPEN	
Name: A6	Sheet:	Name: A6	Sheet:	Name: A6	Sheet:	Name: A6	Sheet:	Name: A6	Sheet:	Name: A6	Sheet:	Name: A6	Sheet:	Name: A6	Sheet:
CPU: QUADRO GENERALE MOD.: 7		CPU: QUADRO GENERALE MOD.: 7		CPU: QUADRO GENERALE MOD.: 7		CPU: QUADRO GENERALE MOD.: 7		CPU: QUADRO GENERALE MOD.: 7		CPU: QUADRO GENERALE MOD.: 7		CPU: QUADRO GENERALE MOD.: 7		CPU: QUADRO GENERALE MOD.: 7	
Q0.0		Q0.1		Q0.2		Q0.3		Q0.4		Q0.5		Q0.6		Q0.7	
1		2		3		4		5		6		7		8	

18.1 18.2 18.3 18.5 18.6 18.7

17.9A +24VDC → 19.0D +24VDC

17.9A -24VDC → 19.0D -24VDC

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

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

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

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

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

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

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

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

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

NO MARK UP
AS COMMISSIONED: MATTIA GIROTTI
17/4/25

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
AUX SECTION

ROSETTI MARINO | ALEXSISTEMI spa

1724000049-HV-DA-00027

FG. 18
F.S. 19

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

18.9C +24VDC → +24VDC 20.0A

18.9D -24VDC → -24VDC 20.0A

NO MARK UP
AS COMMISSIONED: M.T.A. 9/2024
17/4/25

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
AUX SECTION

ROSETTI MARINO | ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 19
F.S. 20

19.9D +24VDC

19.9D -24VDC

+24VDC 20A.0A

-24VDC 20A.0A

TEMPERATURE TRANSM. 4-20ma 77-TT-201

TEMPERATURE TRANSM. 4-20mA 77-TT-202

DIFFER. PRESSURE TRANSM. 4-20mA 77-PT-201

TEMPERATURE TRASM. 4-20mA 77-TT-203

500 XT 501 XT 502 XT

503 XT 504 XT 505 XT

506 XT 507 XT 508 XT

509 XT 510 XT

20.1 20.2 20.3

NO MARK UP

AS COMMISSIONED: MATTIA GIROTTO

17/4/25

1 5 9 13	2 6 10 14	3 7 11 15	4 8 12 16	L+ M
AI0.0	AI0.1	AI0.2	AI0.3	
CPU: QUADRO GENERALE MOD.: 8	CPU: QUADRO GENERALE MOD.: 8	CPU: QUADRO GENERALE MOD.: 8	CPU: QUADRO GENERALE MOD.: 8	CPU: QUADRO GENERALE MOD.: 8
Name: A7 / Sheet:	Name: A7 / Sheet:	Name: A7 / Sheet:	Name: A7 / Sheet:	Name: A7 / Sheet:
77-TT-201 TEMPERATURE TRASMITTER	77-TT-202 TEMPERATURE TRASMITTER	77-PT-201 DIFFERENTIAL PRESSURE TRASMITTER SIGNAL	77-TT-203 TEMPERATURE TRASMITTER	

REV.		DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
AUX SECTION

ROSETTI MARINO ALEXSISTEMI

1724000049-HV-DA-00027

FG. 20
F.S. 20A

20.9A +24VDC → +24VDC 20B.0A

20.9A -24VDC → -24VDC 20B.0A

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

7.5B 7.6

7.5B 7.7

9.6B 9.7

9.6B 9.8

20A.1 → 21.7B

20A.2 → 21.7B

20A.3 → 22.7C

20A.4 → 22.7C

NO MARK UP
AS COMMISSIONED: MATTIA GIROTTI
17/4/25

REV.	MODIFICA	DATA	FIRMA		
05	ACCEPT FOR CONSTRUCTION	24/01/25		DATA	15/04/2024
04	ACCEPT FOR CONSTRUCTION	10/10/24		DESIGN.	F.M.
03	ISSUED FOR APPROVAL	06/07/24		VISTO	S.S.
				APPR.	M.G.

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
AUX SECTION

ROSETTI MARINO | ALEXSISTEMI

1724000049-HV-DA-00027

FG. 20A
F.S. 20B

20A.9A +24VDC

20A.9A -24VDC

+24VDC 20C.0A

-24VDC 20C.0A

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

NO MARK UP

AS COMMISSIONED: MATIA GIROTTI

17/4/25

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM

AUX SECTION

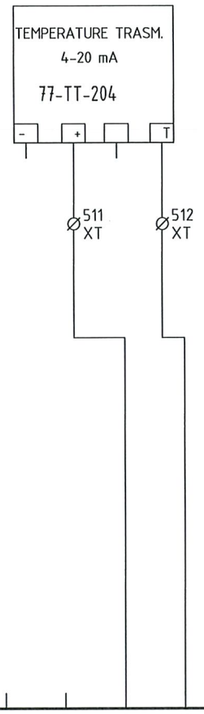
ROSETTI MARINO | ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 20B
F.S. 20C

20B.9A +24VDC → +24VDC 20D.0B

20B.9A -24VDC → -24VDC 20D.0F



NO MARK UP
AS COMMISSIONED: MATT. A GIRETTI
17/4/25

1 5 9 13	2 6 10 14	3 7 11 15	4 8 12 16	L+ M
AI1.0	AI1.1	AI1.2	AI1.3	
CPU: QUADRO GENERALE MOD. : 12	CPU: QUADRO GENERALE MOD. : 12	CPU: QUADRO GENERALE MOD. : 12	CPU: QUADRO GENERALE MOD. : 12	CPU: QUADRO GENERALE MOD. : 12
Name: A10 / Sheet:	Name: A10 / Sheet:	Name: A10 / Sheet:	Name: A10 / Sheet:	Name: A10 / Sheet:
77-TT-204 TEMPERATURE TRANSMITTER	SPARE	SPARE	SPARE	

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

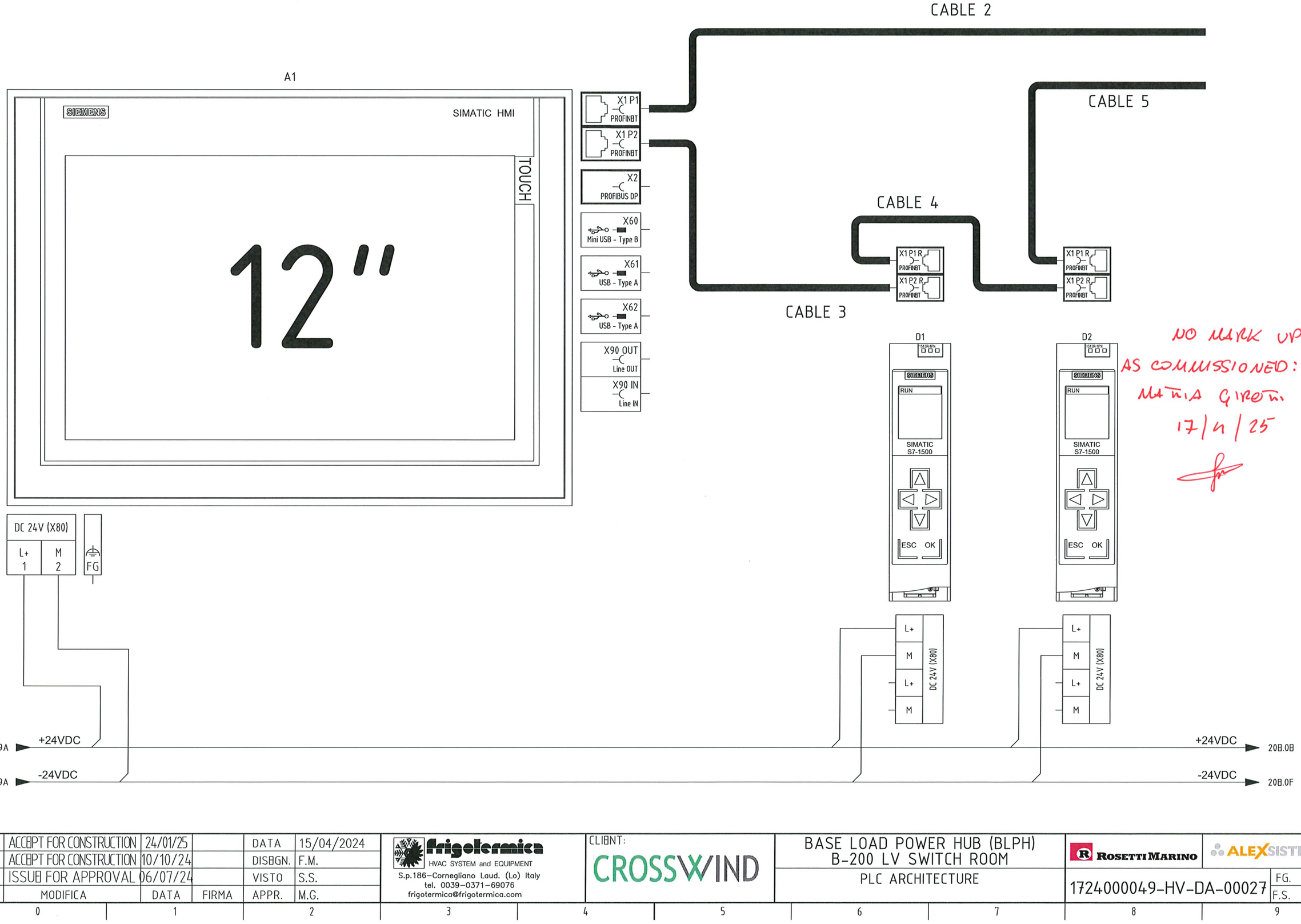
CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
AUX SECTION

ROSETTI MARINO | ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 20C
F.S. 20D



NO MARK UP
AS COMMISSIONED:
MATTIA GIROTTI
17/4/25

REV.	MODIFICA	DATA	FIRMA		
05	ACCEPT FOR CONSTRUCTION	24/01/25		DATA	15/04/2024
04	ACCEPT FOR CONSTRUCTION	10/10/24		DISEGN.	F.M.
03	ISSUED FOR APPROVAL	06/07/24		VISTO	S.S.
				APPR.	M.G.

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

CLIENT:
CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM

PLC ARCHITECTURE

ROSETTI MARINO | ALEXSISTEMI

1724000049-HV-DA-00027

FG. 20D
F.S. 20E

CABLE 2

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

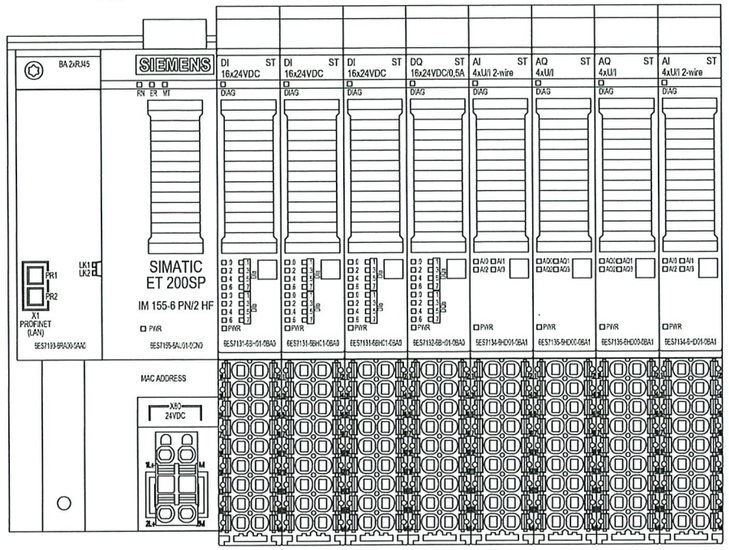
1	TD	PROFINET IO - Port 2 RJ45
2	TD_N	
3	RD	
4	GND	
5	GND	
6	RD_N	
7	GND	
8	GND	

CABLE 1

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

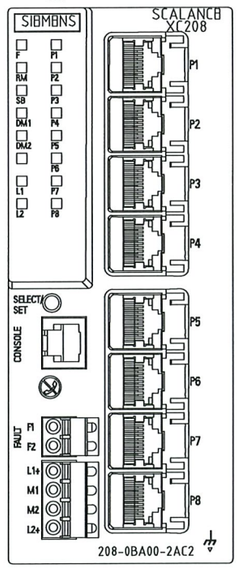
CABLE 5

A2 A3 A4 A5 A6 A7 A8 A9 A10



NO MARK UP
AS COMMISSIONED: MARIA GIROTTI
17/4/25

A11



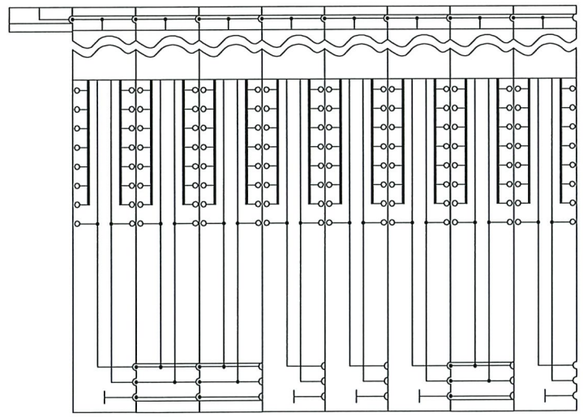
P1	LAN	
P2	LAN	
P3	LAN	
P4	LAN	
P5	LAN	
P6	LAN	
P7	LAN	
P8	LAN	

1	F1	
2	F2	

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

MODBUS TCP/IP TO CLIENT

RJ45 CONNECTION IN TERMINAL STRIP



20D.9B +24VDC → +24VDC 21.0A

20D.9F -24VDC → -24VDC 21.0A

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM

PLC ARCHITECTURE

ROSETTI MARINO | ALEXSISTEMI

1724000049-HV-DA-00027

FG. 20E
F.S. 21

BH-001
MODULATION

20B.9B +24VDC → +24VDC 22.0A

20B.9F -24VDC → -24VDC 22.0A

21.1

21.2

20A.5B

20A.5B

20A.1

20A.2

KA21.1 A1 / A2

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

HR-1A.

1/L1

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

GRP 3

2/T1

HR-1B.

1/L1

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

GRP 3

2/T1

HR-1C.

1/L1

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

GRM 1

2/T1

3/L2

FU21.1 1 / 2

8.9A RA

NO MARK UP
AS COMMISSIONED. MA.T.A
GIROTH.
17/4/25

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM

ELECTRICAL HEATER MODULATION

ROSETTI MARINO | ALEXSISTEMI

1724000049-HV-DA-00027

FG. 21
F.S. 22

BH-002
MODULATION

21.9A +24VDC

21.9A -24VDC

+24VDC /./

-24VDC /./

22.1

22.2

1/L1

HR-2A.

GRP 3

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

2/T1

1/L1

HR-2B.

GRP 3

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

2/T1

1/L1

HR-2C.

GRM 1

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

2/T1

3/L2

20A.6B

20A.7B

20A.3

20A.4

KA22.1 A1 A2

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

FU22.1 1 2

9A.9A RB

NO MARK UP
AS COMMISSIONED: MATTIA GIROTTO
17/4/25

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM

ELECTRICAL HEATER MODULATION

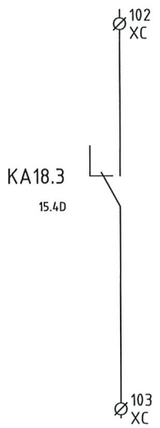
ROSETTI MARINO | ALEXSISTEMI

1724000049-HV-DA-00027

FG. 22
F.S. 23

AVAILABLE FREE VOLTAGE SIGNAL GENERAL FAULT TO SIS

HVAC MALFUNCTION SIGNAL



CLOSE= NORMAL
OPEN= MALFUNCTION

SIGNAL TO SIS
B400-SIS-0901

NO MARK UP
AS COMMISSIONED: MATTIA GIROTTI
17/4/25

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
AVAILABLE SIGNAL

ROSETTI MARINO | ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 23
F.S. 23A

HFD-77004
CLOSED FEEDBACK

HFD-77005
CLOSED FEEDBACK

HFD-77006
CLOSED FEEDBACK

HFD-77004
OPEN FEEDBACK

HFD-77005
OPEN FEEDBACK

HFD-77006
OPEN FEEDBACK

+24VDC

+24VDC

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

HFD-77004 (11, 12)
HFD-77004 (13, 14)
HFD-77005 (11, 12)
HFD-77005 (13, 14)
HFD-77006 (11, 12)
HFD-77006 (13, 14)

403 XFD
405 XFD
409 XFD
411 XFD
415 XFD
417 XFD

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

-24VDC

-24VDC

16.7B 11 12 14 22
23B.1C 21 24

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

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

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

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

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

NO MARK UP
AS COMMISSIONED: MATTIA GIBETTI
17/4/25

REV.	MODIFICA	DATA	FIRMA		
05	ACCEPT FOR CONSTRUCTION	24/01/25		DATA	15/04/2024
04	ACCEPT FOR CONSTRUCTION	10/10/24		DISEGN.	F.M.
03	ISSUED FOR APPROVAL	06/07/24		VISTO	S.S.
				APPR.	M.G.

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

CLIENT: CROSSWIND

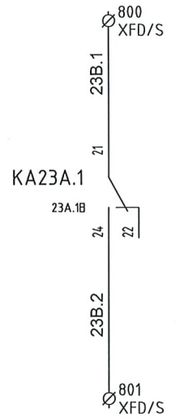
BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
AVAILABLE SIGNAL

ROSETTI MARINO | ALEXSISTEMI

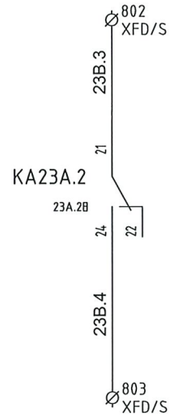
1724000049-HV-DA-00027

FG. 23A
F.S. 23B

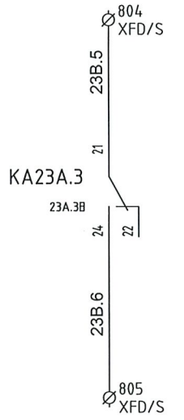
HFD-77004
CLOSED SIGNAL
TO F&G



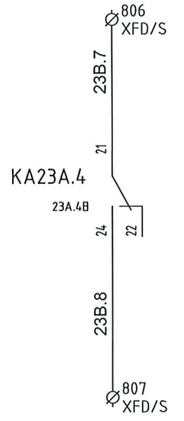
HFD-77004
OPEN SIGNAL
TO F&G



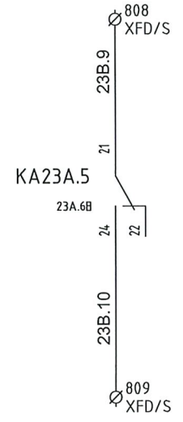
HFD-77005
CLOSED SIGNAL
TO F&G



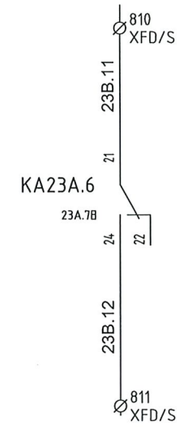
HFD-77005
OPEN SIGNAL
TO F&G



HFD-77006
CLOSED SIGNAL
TO F&G



HFD-77006
OPEN SIGNAL
TO F&G



NO MARK UP
AS COMMISSIONED: MATIA GIROTTI
17/4/25

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT:
CROSSWIND

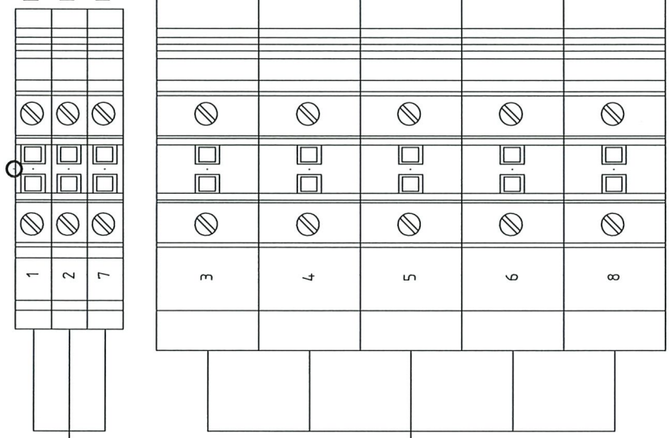
BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
AVAILABLE SIGNAL

ROSETTI MARINO | ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 23B
F.S. 24

+QG - XPS
POWER SUPPLY



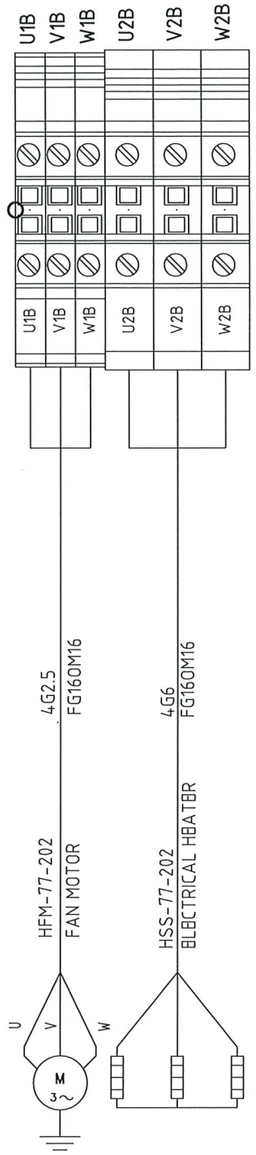
230V 1F + N + PE
50Hz
FROM
AC UPS-PAS DB
3G4
DP-200F3

400V 3F +N + PE
50Hz
FROM LV
SWITCHGEAR
5G25
SG-200N1

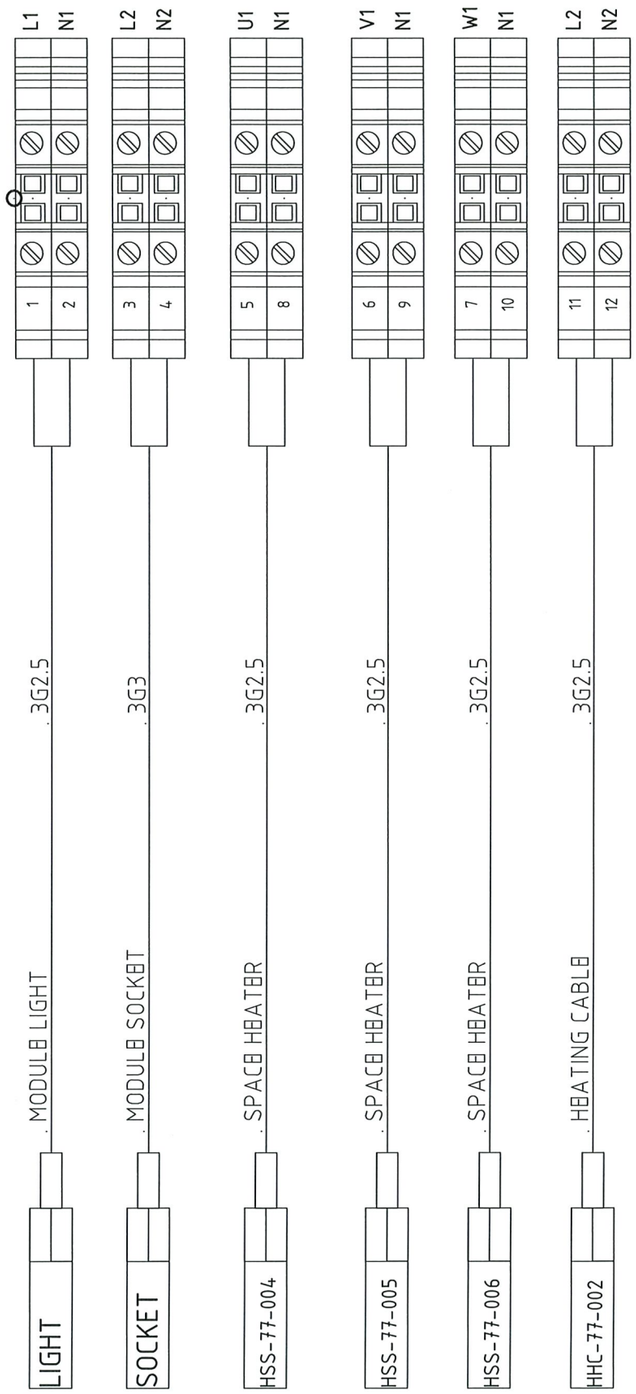
+QG - XM1
POWER PRESS FAN 1



+QG - XM2
POWER PRESS FAN 2



+QG - XAC
ACCESSORIES



NO MARK UP
AS COMMISSIONED: MAT. A GIROTTI
17/4/25

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
TERMINAL STRIP

ROSETTI MARINO | ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 24
F.S. 25

NO MARK UP AS COMMISSIONED: MATTIA GIROTTI 17/4/25

+QG - XC
Client

+QG - XPF1
AUX PRBS FAN 1

+QG - XPF2
AUX PRBS FAN 2

+QG - XT

SHUTDOWN FROM SIS

LIGHT BUTTON

HVAC MALF. SIGNAL TO SIS

LIGHT BUTTON

TE-77-201 PTC MOTOR PROTECTION
HPB-77-201 EMERGENCY STOP BUTTON
TSH/HH-77-201 ELECTRICAL HEATER THERMOSTATIC PROTECTION
HSS-77-203 MOTOR FAN ELECTRICAL HEATER
PDSL-77-201 FAN FLOW SWITCH
PDT-77-201 FILTER FLOW SWITCH
HDZ-77-201 POWER SUPPLY / SIGNAL FEEDBACK

TE-77-202 PTC MOTOR PROTECTION
HPB-77-202 EMERGENCY STOP BUTTON
TSH/HH-77-202 ELECTRICAL HEATER THERMOSTATIC PROTECTION
HSS-77-204 MOTOR FAN ELECTRICAL HEATER
PDSL-77-202 FAN FLOW SWITCH
PDT-77-202 FILTER FLOW SWITCH
HDZ-77-202 POWER SUPPLY / SIGNAL FEEDBACK

77-TT-201 TEMPERATURE TRANSMITTER BY CLIENT
77-TT-202 TEMPERATURE TRANSMITTER BY CLIENT
77-PT-201 DIFFERENTIAL PRESSURE TRANSM BY CLIENT
77-TT-203 DUCT TEMPERATURE TRASMITTER
77-TT-204 DUCT TEMPERATURE TRASMITTER

RBV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
TERMINAL STRIP

ROSETTI MARINO
ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 25
F.S. 25A

+QG - XFD
FIRE DAMPER

+24 VDC 16.6 | +24 VDC 17.8 | +24 VDC 17.10 | +24 VDC 17.12 | +24 VDC 17.14 | +24 VDC 17.16

402 403 404 405 | 408 409 410 411 | 414 415 416 417

4X1.5 SIGNAL FEEDBACK

HFD-77004 | HFD-77005 | HFD-77006

1 2 | S1 S2 S3 S4 S5 S6

240V | ZSC <5° | ZSO >85°

+QG - XFD/S
FIRE DAMPER SIGNALS

23B.1 23B.2 23B.3 23B.4 23B.5 23B.6 23B.7 23B.8 23B.9 23B.10 23B.11 23B.12

800 801 802 803 804 805 806 807 808 809 810 811

HFD-77004 CLOSED SIGNAL
HFD-77005 CLOSED SIGNAL
HFD-77006 CLOSED SIGNAL

HFD-77004 OPEN SIGNAL
HFD-77005 OPEN SIGNAL
HFD-77006 OPEN SIGNAL

X3
RJ45

RJ45 CLIENT CONNECTION

MODBUS TCP/IP CONNECTION FROM B400-NET-001

NO MARK UP
AS COMMISSIONED: M.A. n. 4
G. Mo n.
17/4/25

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM
TERMINAL STRIP

ROSETTI MARINO | ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 25A
F.S. 26

NO MARK UP AS COMMISSIONED: MARIA GIRO - 17/4/25

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
				Hq	4	2
	R5CPFE6100	Compensation panel for modular cabinet height 100 width 600	dkc	Hq	4	2
	R5CPME6200	Solid modular door for cabinet width 600, door height 200	dkc	Hq	4	2
	RZPCE6200	modular wiring panel L.600 H.200	dkc			2
	R5CPME6600	Solid modular cabinet door 600 width, 600 door height	dkc	Hq	4	2
	RZPCE6600	Modular wiring panel L.600 H.600	dkc			2
	R5CPME6800	Solid modular cabinet door width 600, door height 800	dkc	Hq	4	2
	RZPCE6800	Modular wiring panel L.600 H.800	dkc			2
	R5CQE1866R	Cabinet comp. 1800x600x600 back	dkc	Hq	4	2
	R5LE1862	SIDE DOOR FOR CQE PANEL DEPTH 600 HEIGHT 1800	dkc			2
	R1ZCOR1	Modular plinth corner H100 4pcs	dkc			2
	R1ZPRO601	Front/side flange H100 length 600	dkc			3
	R5TOE60	Rebate crossbar for modular doors, width 600	dkc			5
	RZMVE18	Vertical support height 1800	dkc			2
	RZA33	Lifting Ring	dkc			3
	RZKE65	CQE cabinet union kit	dkc			2
	rzkre65	Flat Cooling Kit for CQE Cabinets	dkc			2
	rzksre65	L-shaped union reinforcement kit for CQE cabinets	dkc			2
	RZSOE545	HORIZONTAL SUPPORT TOTAL CABINET DEPTH 600	dkc			5
	RZDOE6545	HORIZONTAL PARTITION TOTAL CABINET WIDTH 600 DEPTH 600	dkc			5
	RZDVE1860	Vertical partition for CQE 1800x600	dkc			2
32 x 15	534-2	DIN rail EN60715 32x15x1.5 closed	Arnocanali	Hq	5	4.01
32 x 15	PD32Z	Sendzimir rail 32x15x9 closed	Canloplast	Hq	5	0.41
40 x 100	E35	can.cabl.40x100 sg	Canloplast	Hq	5	9.79
60 x 100	E184	Can.Cabl.60x100 SG S/4	Canloplast	Hq	5	0.84
77-TT-203				Hq		1
77-TT-204				Hq		1
A1	6AV2124-0MC01-0AX0	SIMATIC HMI TP1200 Comfort. Touch control, 12" widescreen display	siemens	Hq	20d	1
A2	6ES7155-6AU01-0CN0	IM 155-6 PN HF/2 V4.2 Interface Module	siemens	Hq	20th	1
	6ES7193-6AR00-0AA0	BA 2×RJ45 (PROFINET busadapter with standard Ethernet socket for IM-PN)	siemens			1
A3	6ES7131-6BH01-0BA0	Digital Input Module: 16x24VDC ST	siemens	Hq	20th	1
	6ES7193-6BP00-0DA0	Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)	siemens			1
A4	6ES7131-6BH01-0BA0	Digital Input Module: 16x24VDC ST	siemens	Hq	20th	1
	6ES7193-6BP00-0BA0	Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)	siemens			1
A5	6ES7131-6BH01-0BA0	Digital Input Module: 16x24VDC ST	siemens	Hq	20th	1
	6ES7193-6BP00-0BA0	Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)	siemens			1
A6	6ES7132-6BH01-0BA0	Digital Output Module: DQ 16x24VDC/0.5A ST	siemens	Hq	20th	1
	6ES7193-6BP00-0DA0	Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)	siemens			1
A7	6ES7134-6HD01-0BA1	Analog Input Module: AI 4XU/I 2-Wire ST	siemens	Hq	20th	1
	6ES7193-6BP00-0DA0	Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)	siemens			1
A8	6ES7135-6HD00-0BA1	Analog Output Module: AQ 4XU/I ST	siemens	Hq	20th	1
	6ES7193-6BP00-0DA0	Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)	siemens			1
A9	6ES7135-6HD00-0BA1	Analog Output Module: AQ 4XU/I ST	siemens	Hq	20th	1
	6ES7193-6BP00-0BA0	Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)	siemens			1
A10	6ES7134-6HD01-0BA1	Analog Input Module: AI 4XU/I 2-Wire ST	siemens	Hq	20th	1

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
05	ACCEPT FOR CONSTRUCTION	24/01/25		DATA	15/04/2024
04	ACCEPT FOR CONSTRUCTION	10/10/24		DISEGN.	F.M.
03	ISSUED FOR APPROVAL	06/07/24		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-200 LV SWITCH ROOM

MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO | ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 26
F.S. 27

NO MARK UP AS COMMISSIONED: MARIA GIROTTI 17/4/25

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
A10	6ES7193-6BP00-0DA0	Type A0 BU, 16 push-in, 2 power terminals. Separate (digital/analogue, max. 24VDC/10A)	siemens	Hq	20th	1
A11	6GK5208-0BA00-2AC2	XC208 Managed Switch with 8 RJ45 100Mbit/s Ports	siemens	Hq	20th	1
D1	6ES7513-1RM03-0AB0	CPU 1513R-1PN	siemens	Hq	20d	1
	6ES7954-8LF02-0AA0	Memory card, 24 MB	siemens			1
	6ES7590-1AB60-0AA0	Profile rail S7-1500, 160 mm	siemens			1
D2	6ES7513-1RM03-0AB0	CPU 1513R-1PN	siemens	Hq	20d	1
	6ES7954-8LF02-0AA0	Memory card, 24 MB	siemens			1
	6ES7590-1AB60-0AA0	Profile rail S7-1500, 160 mm	siemens			1
BPB-003	3su1900-0dy30-0aa0	Protective collar for merge button, plastic, yellow, 22mm hole	siemens	Hq	6th	1
	3SU1001-1HB20-0AA0	Emergency stop mushroom pushbutton, illuminatable, twist release, 40 mm diameter, 2 positions	siemens			1
	3su1500-0aa10-0aa0	Support without module. plastic	siemens			1
F1		docker		Hq	6b	1
F2		docker		Hq	6b	1
F3		docker		Hq	6b	1
F4		docker		Hq	6b	1
FU21.1		Single-pole fuse		Hq	21	1
FU22.1		Single-pole fuse		Hq	22	1
GD1	6EP1333-3BA10	Sitop PSU200M single-phase and two-phase, DC 24V/5A. Stabilized power supply Input: 120-230/230-500V AC, Output: DC 24V/5A	siemens	Hq	10	1
HDZ-77-201		Single-phase alternating current motor		Hq	8	1
HDZ-77-201		NC Limit Switch		Hq	12	1
HDZ-77-201		Limit Switch: No		Hq	12	1
HDZ-77-202		Single-phase alternating current motor		Hq	9a	1
HDZ-77-202		NC Limit Switch		Hq	14	1
HDZ-77-202		Limit Switch: No		Hq	14	1
HFD-77004		NC Limit Switch		Hq	23rd	1
HFD-77004		Limit Switch: No		Hq	23rd	1
HFD-77004				Hq	25th	1
HFD-77005		NC Limit Switch		Hq	23rd	1
HFD-77005		Limit Switch: No		Hq	23rd	1
HFD-77005				Hq	25th	1
HFD-77006		NC Limit Switch		Hq	23rd	1
HFD-77006		Limit Switch: No		Hq	23rd	1
HFD-77006				Hq	25th	1
HHC-77-002				Hq		1
HL6A.1	3SU1001-6AA60-0AA0	Indicator light with smooth lens, white	siemens	Hq	6th	1
	3SU1401-1BH60-1AA0	White LED module for mounting on front plate, 24 ... 240 V AC/DC. Screw terminals	siemens			1
	3su1500-0aa10-0aa0	Support without module. plastic	siemens			1
HL8.1	3SU1001-6AA60-0AA0	Indicator light with smooth lens, white	siemens	Hq	8	1
	3SU1401-1BH60-1AA0	White LED module for mounting on front plate, 24 ... 240 V AC/DC. Screw terminals	siemens			1
	3su1500-0aa10-0aa0	Support without module. plastic	siemens			1
HL9A.1	3SU1001-6AA60-0AA0	Indicator light with smooth lens, white	siemens	Hq	9a	1
	3SU1401-1BH60-1AA0	White LED module for mounting on front plate, 24 ... 240 V AC/DC. Screw terminals	siemens			1
	3su1500-0aa10-0aa0	Support without module. plastic	siemens			1
HL10.1	3SU1001-6AA60-0AA0	Indicator light with smooth lens, white	siemens	Hq	10	1

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM

MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO | ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 27
F.S. 28

NO MARK UP AS COMMISSIONED: MARIA GIRON. 17/4/25

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
HL10.1	3SU1401-1BH60-1AA0	White LED module for mounting on front plate, 24 ... 240 V AC/DC. Screw terminals	siemens	Hq	10	1
	3su1500-0aa10-0aa0	Support without module. plastic	siemens			1
HR-1A				Hq	7	1
HR-1A.	GRP-H-25-48-D-1-0000	Static power slave unit for load control, logic/analog control. Maximum current 25A.	Gefran	Hq	21	1
HR-1B				Hq	7	1
HR-1B.	GRP-H-25-48-D-1-0000	Static power slave unit for load control, logic/analog control. Maximum current 25A.	Gefran	Hq	21	1
HR-1C				Hq	7	1
HR-1C.	GRM-H-25-48-AN-OL-00000	Static power master unit for load control, logic/analog control. Maximum current 25A.	Gefran	Hq	21	1
HR-2A				Hq	9	1
HR-2A.	GRP-H-25-48-D-1-0000	Static power slave unit for load control, logic/analog control. Maximum current 25A.	Gefran	Hq	22	1
HR-2B				Hq	9	1
HR-2B.	GRP-H-25-48-D-1-0000	Static power slave unit for load control, logic/analog control. Maximum current 25A.	Gefran	Hq	22	1
HR-2C				Hq	9	1
HR-2C.	GRM-H-25-48-AN-OL-00000	Static power master unit for load control, logic/analog control. Maximum current 25A.	Gefran	Hq	22	1
HSS-77-004				Hq		1
HSS-77-005				Hq		1
HSS-77-006				Hq		1
KA11.1	553490240040	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	11	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
KA11A.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	11th	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
KA11A.2	202290244000	Modular Pulse Relay No. of contacts: 2 Contact configuration: No Contact material: AGSNo2 Mounting: DIN rail Function: Mechanical Sizing current: 16 A. Width in subdivision units: 1 Type of supply voltage	Finder	Hq	11th	1
KA18.1	553490240040	industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in connection Power supply: DC volts DC: 24 V. Non-polarized monostable Protection category: RT I. Option	Finder	Hq	18	1
	9404spa	Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20 Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC	Finder			1
	094913	Latching and unhooking jumper	Finder			1
KA18.2	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	18	1
	9404spa	Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20 Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC	Finder			1
	094913	Latching and unhooking jumper	Finder			1

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM

MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO | ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 28
F.S. 29

NO MARK UP AS COMMISSIONED: MARIA GIROTTO 17/4/25

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
KA18.3	553490240040	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in connection Power supply: DC volts DC: 24 V. Non-polarized monostable Protection category: RT I. Option*	*Finder*	*Hq*	18	1
	9404spa	*Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20 Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC*	*Finder*			1
	094913	*Latching and unhooking jumper*	*Finder*			1
KA18.4	*9404spa*	*Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20 Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC*	*Finder*	*Hq*	18	1
	553490240040	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in connection Power supply: DC volts DC: 24 V. Non-polarized monostable Protection category: RT I. Option*	*Finder*			1
	094913	*Latching and unhooking jumper*	*Finder*			1
KA18.5	553490240040	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in connection Power supply: DC volts DC: 24 V. Non-polarized monostable Protection category: RT I. Option*	*Finder*	*Hq*	18	1
	9404spa	*Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20 Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC*	*Finder*			1
	094913	*Latching and unhooking jumper*	*Finder*			1
KA18.6	553490240040	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in connection Power supply: DC volts DC: 24 V. Non-polarized monostable Protection category: RT I. Option*	*Finder*	*Hq*	18	1
	9404spa	*Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20 Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC*	*Finder*			1
	094913	*Latching and unhooking jumper*	*Finder*			1
KA18.7	*9404spa*	*Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20 Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC*	*Finder*	*Hq*	18	1
	553490240040	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in connection Power supply: DC volts DC: 24 V. Non-polarized monostable Protection category: RT I. Option*	*Finder*			1
	094913	*Latching and unhooking jumper*	*Finder*			1
KA21.1	553490240040	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in connection Power supply: DC volts DC: 24 V. Non-polarized monostable Protection category: RT I. Option*	*Finder*	*Hq*	21	1
	9404spa	*Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20 Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC*	*Finder*			1
	094913	*Latching and unhooking jumper*	*Finder*			1
KA22.1	553490240040	*industrial relay. (A): 7 No. of contacts: 4 Contact configuration: CO Contact material: AGNI Electrical connection: Push-in connection Power supply: DC volts DC: 24 V. Non-polarized monostable Protection category: RT I. Option*	*Finder*	*Hq*	22	1
	9404spa	*Socket with socket clamps Mounting: Blind bar 35 mm (H): 10 Degree of protection: IP 20 Accessories: metal or plastic jumper, 6-pole comb, timer modules, signaling modules and EMC*	*Finder*			1
	094913	*Latching and unhooking jumper*	*Finder*			1
KA23A.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*	*23rd*	1

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM

MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO | ALEXSISTEMI s.p.

1724000049-HV-DA-00027

FG. 29
F.S. 30

NO MARK UP AS COMMISSIONED: MEMA GIROTTI 17/4/25

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
KA23A.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*	*Hq*	*23rd*	1
KA23A.2	465290240040	*minirelay. (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*	*23rd*	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
KA23A.3	465290240040	*minirelay. (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*	*23rd*	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
KA23A.4	465290240040	*minirelay. (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*	*23rd*	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
KA23A.5	465290240040	*minirelay. (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*	*23rd*	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
KA23A.6	465290240040	*minirelay. (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*	*23rd*	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
KM1	*3RT2316-1BB40*	*contactor, 4 NO, AC-1: 18 to 24 V DC, 4-pole, 4 NO, size S00, screw terminals*	*siemens*	*Hq*	18	1
	3RH29111HA22	*Bloc.Aus.2L 2R 1L,1L,S00/S0,*	*siemens*			1
LIGHT				*Hq*		1
MTP-001	*3RN2000-1AW30*	*Motor protection relay for PTC thermistor supervision 24/240 V AC/DC 1 changeover contact*	*siemens*	*Hq*	11	1
MTP-002	*3RN2000-1AW30*	*Motor protection relay for PTC thermistor supervision 24/240 V AC/DC 1 changeover contact*	*siemens*	*Hq*	11	1
MVA-1	*DMG600*	*multimeter with icon-based LCD*	*Lovato*	*Hq*	6	1
PDSL-77-201		*Pressure-controlled (pressure switch) No*		*Hq*	16	1
PDSL-77-201				*Hq*		1
PDSL-77-202		*Pressure-controlled (pressure switch) No*		*Hq*	16	1
PDSL-77-202				*Hq*		1
PDT-77-201		*Pressure-controlled (pressure switch) No*		*Hq*	16	1
PDT-77-201				*Hq*		1
PDT-77-202		*Pressure-controlled (pressure switch) No*		*Hq*	16	1
PDT-77-202				*Hq*		1
PF6A.1	*GSF10*	*air intake filter 100x100*	*Cosmotec*	*Hq*	*6th*	1
	GSV1000220	*Panel Fan 100x100 230V 24m³/h*	*Cosmotec*			1
PF8.1	*GSV1000220*	*Panel Fan 100x100 230V 24m³/h*	*Cosmotec*	*Hq*	8	1
	GSF10	*air intake filter 100x100*	*Cosmotec*			1

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM

MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO | ALEXSISTEMI s.p.s.

1724000049-HV-DA-00027

FG. 30
F.S. 31

NO MARK UP AS COMMISSIONED: MATTIA GIROTTI 17/4/25

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
PF9A.1	GSV1000220	Panel Fan 100x100 230V 24m³/h	Cosmotec	Hq	9a	1
	GSF10	air intake filter 100x100	Cosmotec			1
PFT6A.1	007026.00001	Thermostate Panel Fan	Fandis	Hq	6th	1
PFT8.1	007026.00001	Thermostate Panel Fan	Fandis	Hq	8	1
PFT9A.1	007026.00001	Thermostate Panel Fan	Fandis	Hq	9a	1
PH6A.1	050ra50	Anticondensing Heater 230V 50W	New Elfin	Hq	6th	1
PH8.1	050ra50	Anticondensing Heater 230V 50W	New Elfin	Hq	8	1
PH9.1	050ra50	Anticondensing Heater 230V 50W	New Elfin	Hq	9a	1
PHT6A.1	007038.00001	Antcondensing Thermostat 230V	Fandis	Hq	6th	1
PHT8.1	007038.00001	Antcondensing Thermostat 230V	Fandis	Hq	8	1
PHT9A.1	007038.00001	Antcondensing Thermostat 230V	Fandis	Hq	9a	1
PL6A.1	050PEL3C	230V lamp	New Elfin	Hq	6th	1
	050kfm	Magnet kit	New Elfin			1
PL8.1	050PEL3C	230V lamp	New Elfin	Hq	8	1
	050kfm	Magnet kit	New Elfin			1
PL9A.1	050PEL3C	230V lamp	New Elfin	Hq	9a	1
	050kfm	Magnet kit	New Elfin			1
PLS6A.1	RAMC05	Micro Door Opening Switch 1 No & 1NC	dkc	Hq	6th	1
PLS8.1	RAMC05	Micro Door Opening Switch 1 No & 1NC	dkc	Hq	8	1
PLS9A.1	RAMC05	Micro Door Opening Switch 1 No & 1NC	dkc	Hq	9a	1
QF1	5SU1354-1KK10	Residual current circuit breaker, 10 kA, 1P N, AC type, 30 mA, C, IN: 10 A, UN AC: 230 V	siemens	Hq	6th	1
	5ST3010	Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker	siemens			1
QF1A	5SY4502-7	Circuit breaker 230 V 10KA, 1P N, C, 2A, D=70 mm	siemens	Hq	8	1
	5ST3010	Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker	siemens			1
QF1B	5SY4502-7	Circuit breaker 230 V 10KA, 1P N, C, 2A, D=70 mm	siemens	Hq	9a	1
	5ST3010	Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker	siemens			1
QF2	5SU1354-1KK16	RCD, 10 kA, 1P N, AC type, 30 mA, C, IN: 16 A, UN AC: 230 V	siemens	Hq	6th	1
	5ST3010	Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker	siemens			1
QF3	5SY7502-7	Circuit breaker 230 V 15KA, 1P N, C, 2 A, D=70 mm	siemens	Hq	6th	1
	5ST3010	Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker	siemens			1
QF4	5su1354-1kk06	RCD, 10 kA, 1P N, AC Type, 30 mA, C, In: 6 A, One AC: 230 V	siemens	Hq	6b	1
	5ST3010	Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker	siemens			1
QF5	5SY7503-7	Circuit breaker 230 V 15Ka, 1P N, C, 3 A, D=70 mm	siemens	Hq	10	1
QF6	5SY5206-7	Universal current circuit breaker 440 V DC - 400 V AC 10Ka, 2P, C, 6 A	siemens	Hq	10	1
QF400	5SY74027	Int. MT 4P C2 ICN 15KA, ICU 50KA	siemens	Hq	6	1
QM1	5SY7410-7	Circuit breaker 400 V 15kA, 4P, C, 10 A, D=70 mm	siemens	Hq	6b	1
	5SM23420	Block diff. 4P 40A 30mA Type AC x 5sy	siemens			1
	5ST3010	Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker	siemens			1
QM1A	3RV2011-1EA10	Circuit breaker size S00 for motor protection, class 10, trip A 2.8...4 A, trip N 52 A, screw terminal	siemens	Hq	7	1
	3RV2901-1E	Cross Auxiliary Contact Block 1No 1NC Screw Terminals for 3RV2 Circuit Breakers	siemens			1
QM1B	3RV2011-1EA10	Circuit breaker size S00 for motor protection, class 10, trip A 2.8...4 A, trip N 52 A, screw terminal	siemens	Hq	9	1
	3RV2901-1E	Cross Auxiliary Contact Block 1No 1NC Screw Terminals for 3RV2 Circuit Breakers	siemens			1

REV.	MODIFICA	DATA	FIRMA	APPR.	M.G.
05	ACCEPT FOR CONSTRUCTION	24/01/25		DATA	15/04/2024
04	ACCEPT FOR CONSTRUCTION	10/10/24		DISEGN.	F.M.
03	ISSUED FOR APPROVAL	06/07/24		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-200 LV SWITCH ROOM

MATERIAL LIST
LISTA METERIALI

ROSETTI MARINO | ALEXSISTEMI s.p.s.

1724000049-HV-DA-00027

FG. 31
F.S. 32

NO MARK UP AS COMMISSIONED: MATTIA GIROTTI 17/4/25

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
QM2A	3RV2011-4AA10	Circuit breaker size S00 for motor protection, class 10, trip A 10...16 A, trip N 208 A, screw terminal	siemens	Hq	7	1
	3RV2901-1E	Cross Auxiliary Contact Block 1No 1NC Screw Terminals for 3RV2 Circuit Breakers	siemens			1
QM2B	3RV2011-4AA10	Circuit breaker size S00 for motor protection, class 10, trip A 10...16 A, trip N 208 A, screw terminal	siemens	Hq	9	1
	3RV2901-1E	Cross Auxiliary Contact Block 1No 1NC Screw Terminals for 3RV2 Circuit Breakers	siemens			1
QS1	3VA1140-3GE42-0AA0	3VA1 switch IEC chassis 160 switching capacity class n ICU=25 KA 415 V 4-pole, TM220 system protection, ATFM, IN=40 A Overload protection IR=28 A... 40 A Short-Circuit Protection II=10 x in N-Conductor Protection 100% LUG terminal	siemens	Hq	6	1
	3VA9988-0BL30	bobsleigh. Launch SIN 24VAC 50/60 Hz/12-30 VDC	siemens			1
	3VA9988-0AA11	Cont. HP-type status	siemens			1
	3VA9157-0FK21	com. rinv. Door Lock x 3VA10/1 STD	siemens			1
	3VA9111-0WD40	Cover x 3VA10/1 4P 1pcs.	siemens			2
QSA	5SY4420-7	Circuit breaker 400 V 10Ka, 4P, C, 20A, D=70 mm	siemens	Hq	6	1
	5ST3010	Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker	siemens			1
	5st3060	Rotary control padlockable door lock IP65 black	siemens			1
	5st3031	24-48 V DC opening trip, for 5SL4, 5SY, 5SP, RCBO 5SU1, FI 5SV circuit breaker	siemens			1
QSB	5SY4420-7	Circuit breaker 400 V 10Ka, 4P, C, 20A, D=70 mm	siemens	Hq	6	1
	5ST3010	Auxiliary contact block, 1 NO 1 NC for 5SL, 5SY, 5SP circuit breaker	siemens			1
	5st3060	Rotary control padlockable door lock IP65 black	siemens			1
	5st3031	24-48 V DC opening trip, for 5SL4, 5SY, 5SP, RCBO 5SU1, FI 5SV circuit breaker	siemens			1
SA14.1	3su1002-2bl10-0aa0	Black selector 3 positions (I or II), illuminable. permanent, 2 x 45°	siemens	Hq	14	1
	3su1500-0aa10-0aa0	Support without module. plastic	siemens			1
	3SU1400-1AA10-1BA0	Module of contacts for fixing on the front plate. 1 NO, screw terminals	siemens			2
SA16.1	3su1002-2bl10-0aa0	Black selector 3 positions (I or II), illuminable. permanent, 2 x 45°	siemens	Hq	16	1
	3su1500-0aa10-0aa0	Support without module. plastic	siemens			1
	3SU1400-1AA10-1BA0	Module of contacts for fixing on the front plate. 1 NO, screw terminals	siemens			2
SOCKET				Hq		1
TA1.1	TAC022150X05	Amperometric transformer hole 22, transformation ratio 150/5 A	Frer	Hq	6	1
TA2.1	TAC022150X05	Amperometric transformer hole 22, transformation ratio 150/5 A	Frer	Hq	6	1
TA3.1	TAC022150X05	Amperometric transformer hole 22, transformation ratio 150/5 A	Frer	Hq	6	1
VSD 1	6SL3210-5BE22-2CV0	SinamiCs V20 3AC380-480V 2.2KW with C3 Filter	siemens	Hq	7	1
VSD 2	6SL3210-5BE22-2CV0	SinamiCs V20 3AC380-480V 2.2KW with C3 Filter	siemens	Hq	9	1
X3		RJ45 port per panel		Hq	25th	1
XAC	CBC04GR	CBC.4/GR Feed-through clamp	Cabur	Hq		12
	CBC02GR	CBC.2/GR Thru-Clamp	Cabur			2
XC	CBS02GR	Sectionable clamp 2.5 mm2	Cabur	Hq		8
XFD	CBS02GR	Sectionable clamp 2.5 mm2	Cabur	Hq		12
XFD/S	CBS02GR	Sectionable clamp 2.5 mm2	Cabur	Hq		12
XM1	CBC02GR	CBC.2/GR Thru-Clamp	Cabur	Hq		3
	CBC06GR	CBC.6/GR Thru-Clamp	Cabur			3
XM2	CBC02GR	CBC.2/GR Thru-Clamp	Cabur	Hq		3
	CBC06GR	CBC.6/GR Thru-Clamp	Cabur			3
XPF1	CBS02GR	Sectionable clamp 2.5 mm2	Cabur	Hq		16
	SF900GR	SFR.4/GR Sectionable clamp	Cabur			2

REV.	MODIFICA	DATA	FIRMA	APPR.
05	ACCEPT FOR CONSTRUCTION	24/01/25		
04	ACCEPT FOR CONSTRUCTION	10/10/24		
03	ISSUED FOR APPROVAL	06/07/24		

DATA 15/04/2024
DESIGN. F.M.
VISTO S.S.
M.G.

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM

Distinta Materiali
Bill of Materials

ROSETTI MARINO | ALEXSISTEMI s.p.

1724000049-HV-DA-00027

FG. 32
F.S. 33

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Manufacturer	Quadro/Board	Fg/Sh	Q.ta/Q.ty
XPF2	*CBS02GR*	*Sectionable clamp 2.5 mm2*	*Cabur*	*Hq*		16
	SF900GR	*SFR.4/GR Sectionable clamp*	*Cabur*			2
XPS	*CBC04GR*	*CBC.4/GR Feed-through clamp*	*Cabur*	*Hq*		3
	CBC35gr	*CBC.35/GR Feed-through clamp*	*Cabur*			5
XT	*CBS02GR*	*Sectionable clamp 2.5 mm2*	*Cabur*	*Hq*		13

NO MARK UP
AS COMMISSIONED: MARIA GIROTTI
17/4/25

REV.	MODIFICA	DATA	FIRMA
05	ACCEPT FOR CONSTRUCTION	24/01/25	
04	ACCEPT FOR CONSTRUCTION	10/10/24	
03	ISSUED FOR APPROVAL	06/07/24	

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

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

CLIENT: CROSSWIND

BASE LOAD POWER HUB (BLPH)
B-200 LV SWITCH ROOM

Distinta Materiali
Bill of Materials

ROSETTI MARINO | ALEXSISTEMI s.p.a.

1724000049-HV-DA-00027

FG. 33
F.S. 71_GS_LI

Section 8 LIST OF MODIFICATIONS

NOT APPLICABLE

Section 8.1 List of changes

NOT APPLICABLE

Section 9 SUPPORTING DOCUMENTS

NOT APPLICABLE