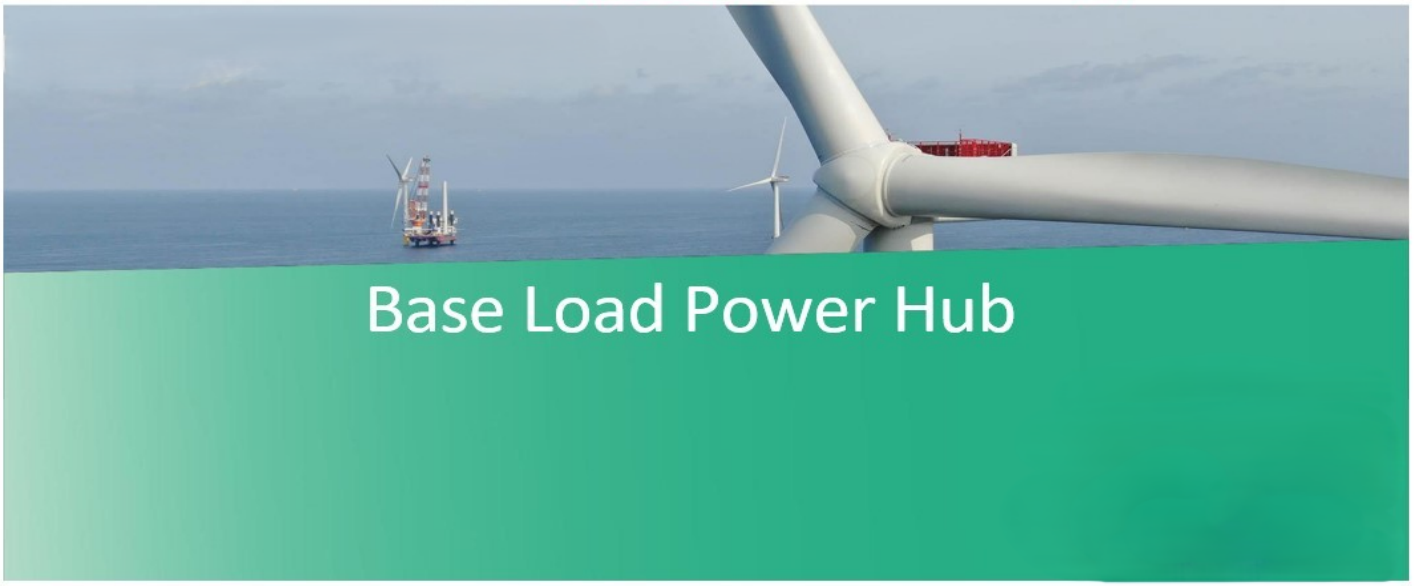
CROSSWIND

ROSETTI MARINO

PROVERLIS

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



COMMISSIONING DOSSIER (ONSHORE)

SYSTEM	63 Instrument Air
SUBSYSTEM	63-00 Instrument Air Package (A-63000)

CROSSWIND

123A90 - HOLLANDSE KUST NOORD WIND PARK
BLPH Project

COMMISSIONING DOSSIER INDEX

ROSETTI MARINO

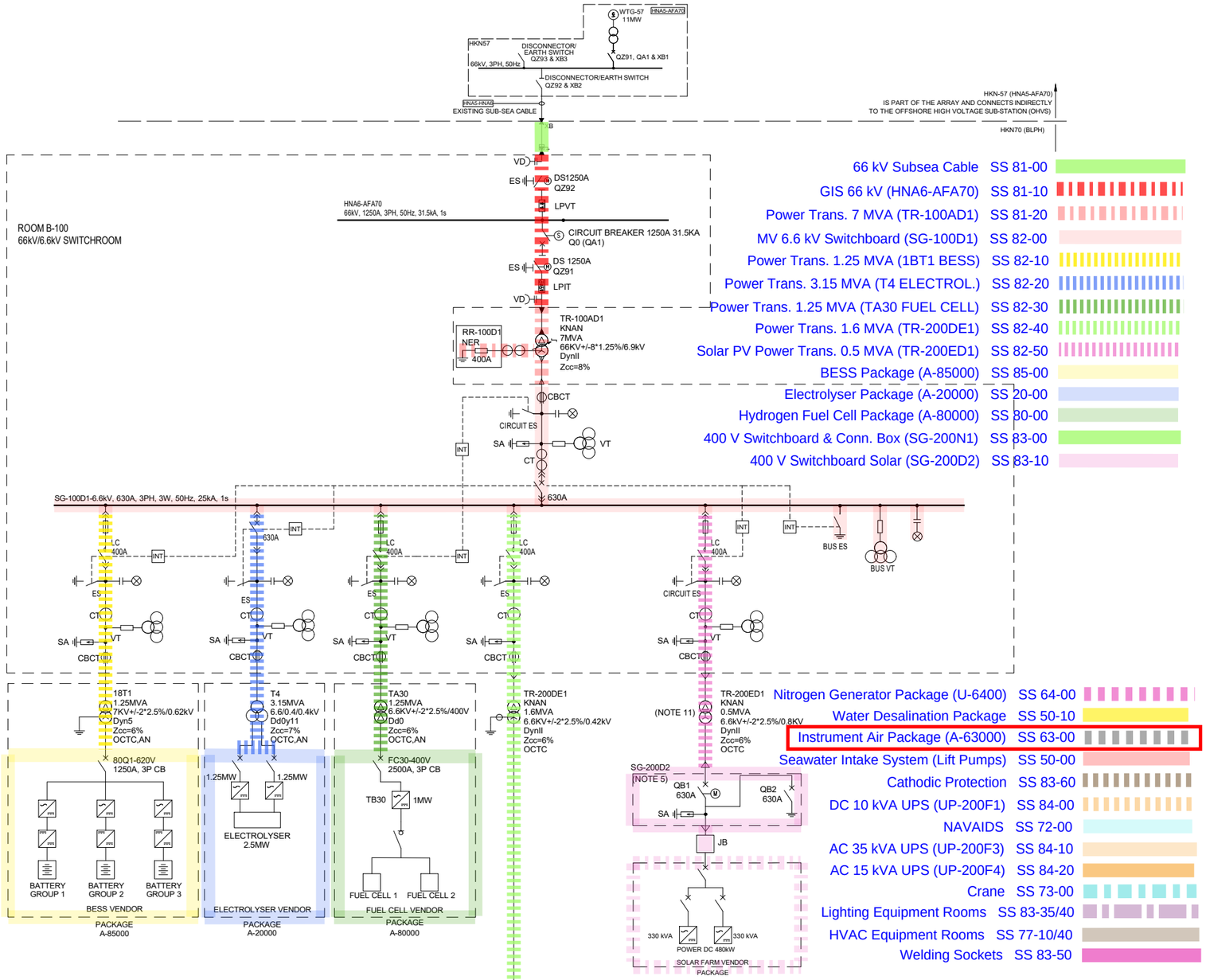
Sub System N°:	63-00	**Tick as appropriate**	ONSHORE	OK
Description:	Instrument Air Package (A-63000)		OFFSHORE	

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:*	OK
5.1 Operational Test Procedure	
5.2 Operational Test Certificates	
6. *PIPING AND VESSEL PREPARATION*	OK
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	
Date	2025-07-04	
Signature	PROVERLIS Digitaly signed by Anthony Iveson 2025-07-04T06:23:55.985Z	

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 :

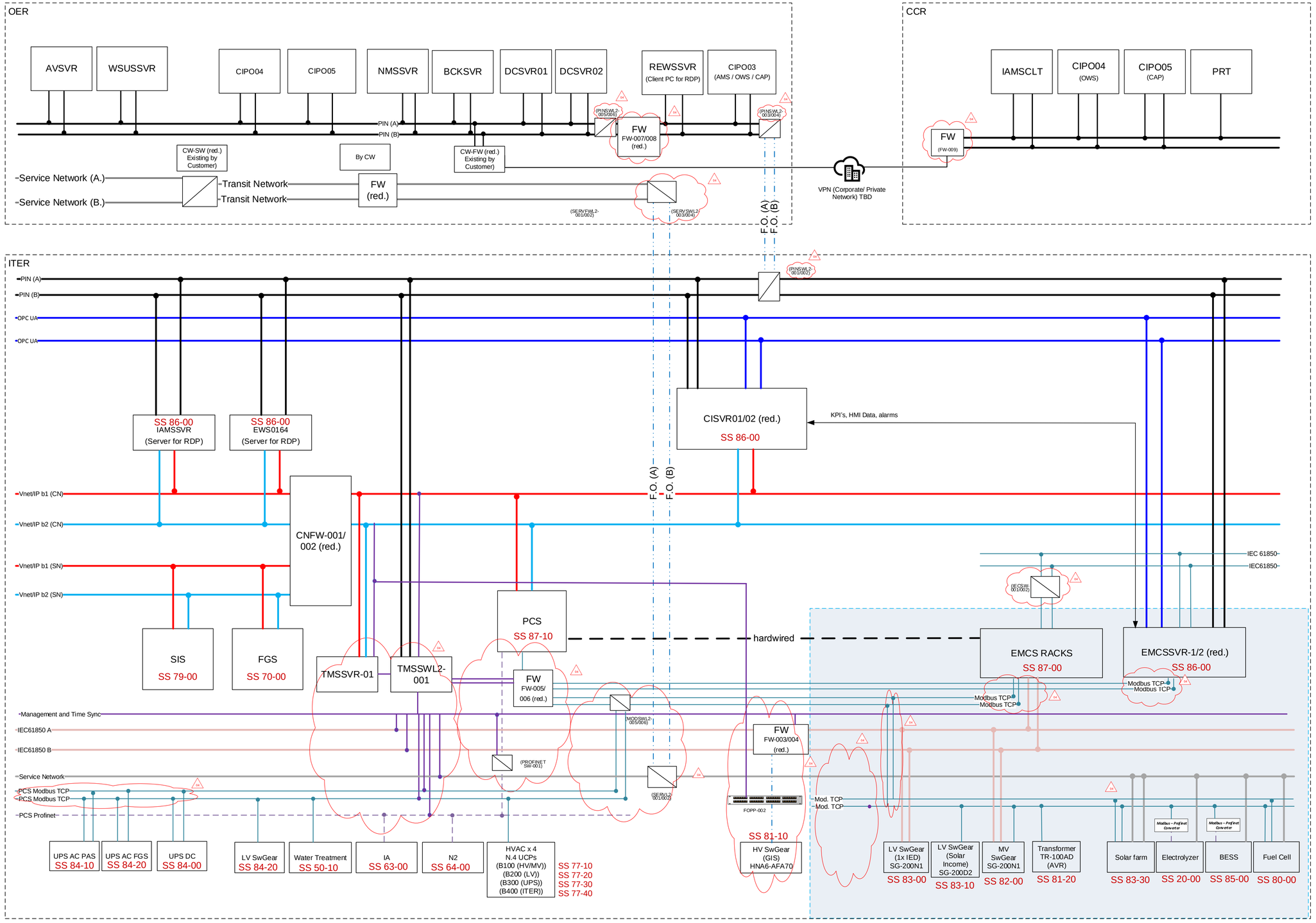
OVERALL/KEY SINGLE LINE DIAGRAM

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.

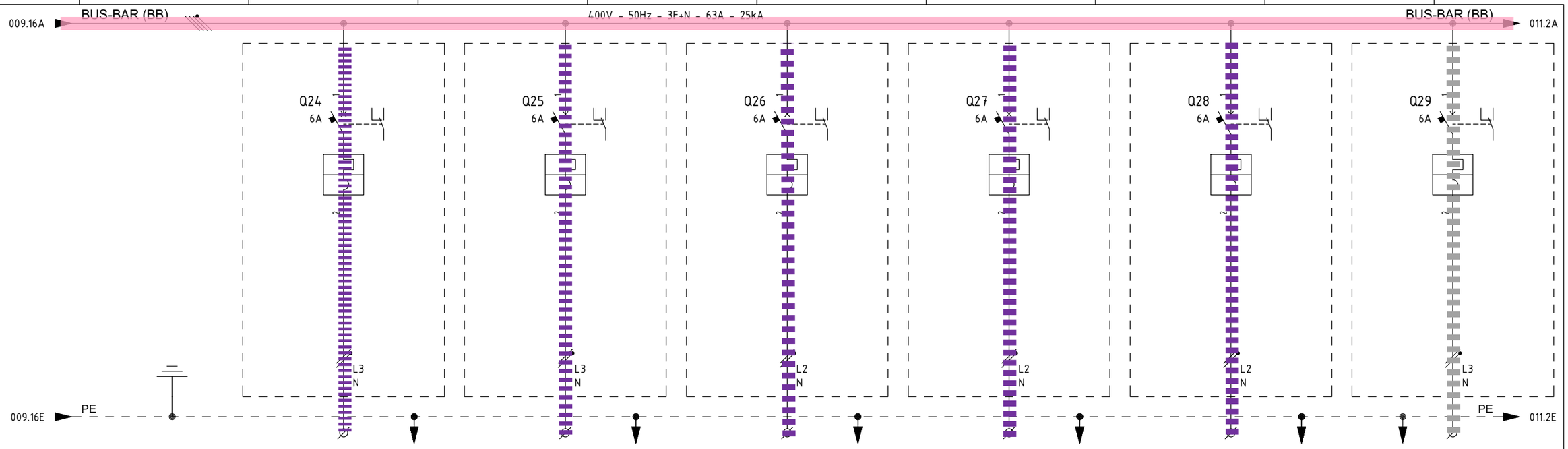
Note 1 : Exact assignment of Servers per cabinet to be defined in cabinet General Arrangement Drawing.
Note 2 : For IP Addresses refer to 1724000594-IN-RE-00043 Cyber Security Settings
Note 3 : All Network Components will be installed in Network Cabinet.
Note 4 : Supply of Console Desk in CCR is in Customer 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



ITEM			1	B400-PCS-001	B400-EMCS-001	B400-FGS-001	B400-NET-001	B400-SRV-001	CP-630E1
UTILITY			2	PCS-CONTROLLER AND I/O CABINET - AUXILIARY	EMCS-CONTROLLER AND I/O CABINET - AUXILIARY	FGS FIRE & GAS PANEL - AUXILIARY	SYSTEM SERVER / NETWORK CABINET - AUXILIARY	SERVER CABINET ITER - AUXILIARY	UCP - INSTRUMENT AIR PACKAGE -A-63000 - AUXILIARY
CUBICLE			3	+03	+03	+03	+03	+03	+03
RATED POWER | RATED CURRENT			4/5	0.5 KW | 2.72 A	0.5 KW | 2.72 A	0.8 KW | 4.35 A	0.5 KW | 2.72 A	0.5 KW | 2.72 A	0.5 KW | 2.72 A
TYPICAL FUNCTIONAL			6	-	-	-	-	-	-
CIRCUIT BREAKER (ABB)	TYPE		7	S302P-C6	S302P-C6	S302P-C6	S302P-C6	S302P-C6	S302P-C6
	VERSION		8	2P / MINIATURE	2P / MINIATURE	2P / MINIATURE	2P / MINIATURE	2P / MINIATURE	2P / MINIATURE
	TRIP UNITS		9	In=6A - Curve C	In=6A - Curve C	In=6A - Curve C	In=6A - Curve C	In=6A - Curve C	In=6A - Curve C
	Icu	KA	10	25kA	25kA	25kA	25kA	25kA	25kA
OVERLOAD	L	Range A	11	-	-	-	-	-	-
		Range t	12	-	-	-	-	-	-
SEL. SHORT-CIRCUIT	S	Range A	13	-	-	-	-	-	-
		Range t	14	-	-	-	-	-	-
INST. SHORT-CIRCUIT	I	Range A	15	-	-	-	-	-	-
		Range t	16	-	-	-	-	-	-
EARTH FAULT PROTECTION	G	Range A	17	-	-	-	-	-	-
		Range t	18	-	-	-	-	-	-
CONTACTOR (ABB)			19	-	-	-	-	-	-
THERMAL OVERLOAD RELAY (ABB)			20	-	-	-	-	-	-
SURGE ARRESTERS (DHENN)			21	-	-	-	-	-	-
TOROIDAL CURRENT TRANSFORMER (FRER)			22	-	-	-	-	-	-
FUSE HOLDER (ABB)			23	-	-	-	-	-	-
TWILIGHT SWITCH (ABB)			24	-	-	-	-	-	-
VOLTMETER (FRER)			25	-	-	-	-	-	-
CURRENT TRANSFORMER FOR MEASURE (FRER)	TYPE		26	-	-	-	-	-	-
	PERFORMANCE/CLASS		27	-	-	-	-	-	-
VOLTAGE TRANSFORMER FOR MEASURE (FRER)	TYPE		28	-	-	-	-	-	-
	PERFORMANCE/CLASS		29	-	-	-	-	-	-
POWER TERM. BLOCK (CABUR)		Type/mm²	30	SCREW / 4	SCREW / 4	SCREW / 4	SCREW / 4	SCREW / 4	SCREW / 4
POWER CONDUCTOR		mm²	31	3G2.5	3G2.5	3G2.5	3G2.5	3G2.5	3G2.5

SUBSYSTEM 87-10

SUBSYSTEM 87-00

SUBSYSTEM 70-00

SUBSYSTEM 86-00

SUBSYSTEM 86-00

SUBSYSTEM 63-00

=

+

DWG n° : 231298/SD/13

Item n° : PF1002888/101

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
3	05/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for construction (AFC)
2	24/04/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	15/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	08/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "DP-200N1"

SINGLE LINE DIAGRAM

Single Line Drawing

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

SCALE : NTS

A3

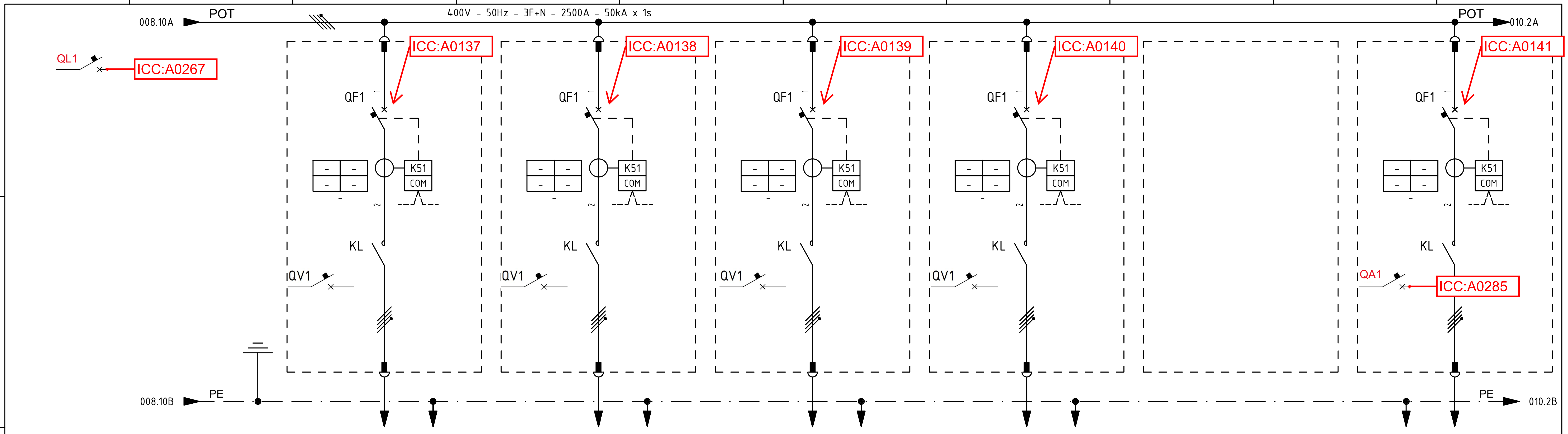
DRAWING NO. 1723002197-EL-DG-00013

SHEET 010

REV. 03

F.to UNI A3: 420mmx297mm

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



ITEM	1	A-80000	CP-850F03	SPARE	SPARE		K-63001-A
UTILITY	2	FUEL CELL AUXILIARY LOAD	BESS PCS CABINET	SPARE	SPARE		INSTRUMENTS AIR PACKAGE 01A
COLUMN/CUBICLE	3	A4 / +03	A4 / +04	A4 / +05	A4 / +06		A4 / +08
RATED POWER | RATED CURRENT	4/5	20 kW | 32.84 A	11,09 kW | 17.42 A	- kW | - A	20.0 kW | 32.1 A		68.75 kW | 111.24 A
TYPICAL FUNCTIONAL	6	LK1-63	LK1-40	LK1-40	LK1-40		LK2-160
CIRCUIT BREAKER (ABB) — TYPE	7	XT2S - 160	XT2S - 160	XT2S - 160	XT2S - 160		XT4S - 250
CIRCUIT BREAKER (ABB) — VERSION	8	4P - FIXED	4P - FIXED	4P - FIXED	4P - FIXED		4P - FIXED
CIRCUIT BREAKER (ABB) — TRIP UNITS	9	EKIP HI TOUCH LSIG (In = 63A)	EKIP HI TOUCH LSIG (In = 40A)	EKIP HI TOUCH LSIG (In = 40A)	EKIP HI TOUCH LSIG (In = 40A)		EKIP HI TOUCH LSIG (In = 160A)
CIRCUIT BREAKER (ABB) — Icu KA	10	50 kA	50 kA	50 kA	50 kA		50 kA
OVERLOAD L — Range A	11	(0.4 - 1) x In	(0.4 - 1) x In	(0.4 - 1) x In	(0.4 - 1) x In		(0.4 - 1) x In
OVERLOAD L — Range t	12	k/I^2	k/I^2	k/I^2	k/I^2		k/I^2
SEL. SHORT-CIRCUIT S — Range A	13	(0.6 - 10) x In	(0.6 - 10) x In	(0.6 - 10) x In	(0.6 - 10) x In		(0.6 - 10) x In
SEL. SHORT-CIRCUIT S — Range t	14	0.05 - 0,4 sec / k/I^2	0.05 - 0,4 sec / k/I^2	0.05 - 0,4 sec / k/I^2	0.05 - 0,4 sec / k/I^2		0.05 - 0.4 sec / k/I^2
INST. SHORT-CIRCUIT I — Range A	15	(1.5 - 15) x In	(1.5 - 15) x In	(1.5 - 15) x In	(1.5 - 15) x In		(1.5 - 15) x In
INST. SHORT-CIRCUIT I — Range t	16	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
EARTH FAULT PROTECTION G — 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
CONTACTOR (ABB)	19	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	AF40-40-00-13 (70A-AC1); 100-250VAC/DC		AF190-40-11-13 (275A-AC1); 100-250 VAC/DC
THERMAL OVERLOAD RELAY (ABB)	20	-	-	-	-		-
SURGE ARRESTER (DEHN)	21	-	-	-	-		-
TOROIDAL CURRENT TRANSFORMER (FRER)	22	-	-	-	-		-
FUSE HOLDER (ITALWEBER)	23						
INDIRECT PROTECTION (ABB)	24	SUBSISTEM 80.00	SUBSISTEM 85.00	SUBSISTEM 83.00	SUBSISTEM 83.00		SUBSISTEM 63.00
VOLTMETER	25						
CURRENT TRANSFORMER FOR MEASURE (FRER) — TYPE	26	-	-	-	-		-
CURRENT TRANSFORMER FOR MEASURE (FRER) — PERFORMANCE/CLASS	27	-	-	-	-		-
VOLTAGE TRANSFORMER FOR MEASURE (FRER) — TYPE	28	-	-	-	-		-
VOLTAGE TRANSFORMER FOR MEASURE (FRER) — PERFORMANCE/CLASS	29	-	-	-	-		-
LOCK-OUT RELAY (-)	30	-	-	-	-		-
POWER CONDUCTOR mmq	31	83012-CEL 5G16	83011-CEL 4 x 10	-	-		5G70

=						
+						
DWG n° : 231298/SD/11	3	08/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
Item n° : PF1002983/26	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

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

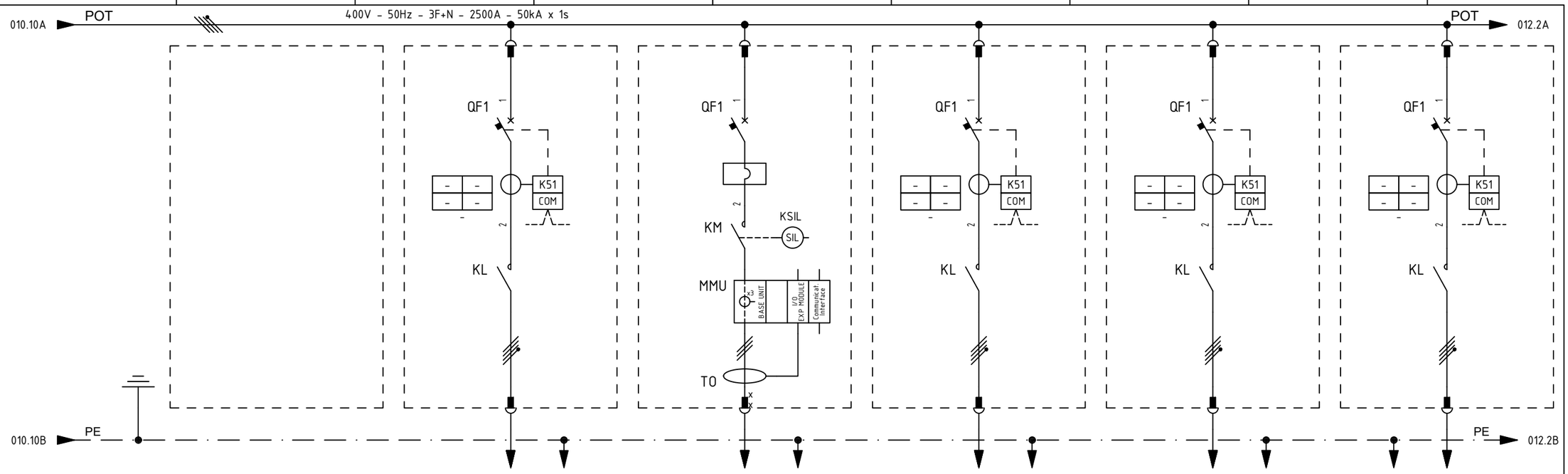
DRAWING NO. 1723002197-EL-DG-00011

SHEET 009

REV. 03

F.to UNI A3: 420mmx297mm

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



ITEM				K-63001-B		PM-50001 B		CP-850E1		CP-850E2		-	
UTILITY			2	INSTRUMENTS AIR PACKAGE 01B		SEA WATER PUMP B		BESS LV1 CABINET (+DISTR 1)		BESS LV2 CABINET (+DISTR 2)		SPARE	
COLUMN/CUBICLE			3	A5 / +08		A6 / +01		A6 / +02		A6 / +03		A6 / +04	
RATED POWER | RATED CURRENT			4/5	68.75 kW	111.24 A	6.1 kW	11.0 A	11.28 kW	18.09 A	11.28 kW	18.09 A	- kW	- A
TYPICAL FUNCTIONAL			6	LK2-160		M1-6		LK1-40		LK1-40		LK1-40	
CIRCUIT BREAKER (ABB)	TYPE		7	XT4S - 250		XT2S - 160		XT2S - 160		XT2S - 160		XT2S - 160	
	VERSION		8	4P - FIXED		3P - FIXED		4P - FIXED		4P - FIXED		4P - FIXED	
	TRIP UNITS		9	EKIP HI TOUCH LSIG (In = 160A)		MA (In = 20A)		EKIP HI TOUCH LSIG (In = 40A)		EKIP HI TOUCH LSIG (In = 40A)		EKIP HI TOUCH LSIG (In = 40A)	
	Icu	KA	10	50 kA		-		50 kA		50 kA		50 kA	
OVERLOAD	L	Range A	11	(0.4 - 1) x In		-		(0.4 - 1) x In		(0.4 - 1) x In		(0.4 - 1) x In	
		Range t	12	k/I^2		-		k/I^2		k/I^2		k/I^2	
SEL. SHORT-CIRCUIT	S	Range A	13	(0.6 - 10) x In		-		(0.6 - 10) x In		(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	
INST. SHORT-CIRCUIT	I	Range A	15	(1.5 - 15) x In		(6 - 14) x I		(1.5 - 15) x In		(1.5 - 15) x In		(1.5 - 15) x In	
		Range t	16	instantaneous		<= 0.02 sec		instantaneous		instantaneous		instantaneous	
EARTH FAULT PROTECTION	G	Range A	17	(0.1 - 1) x In		-		(0.1 - 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	
CONTACTOR (ABB)			19	AF190-40-11-13 (275A-AC1); 100-250 VAC/DC		AF38-30-00-13 (18.5 kW - AC3) - 100-250Vac/dc		AF40-40-00-13 (70A-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	-		UMC100.3 UC (0.24 - 63A)		-		-		-	
SURGE ARRESTER (DEHN)			21	-		-		-		-		-	
TOROIDAL CURRENT TRANSFORMER (FRER)			22	-		-		-		-		-	
FUSE HOLDER (ITALWEBER)			23	SUBSISTEM 63.00		SUBSISTEM 50.00		SUBSISTEM 85.00		SUBSISTEM 85.00		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	5G70		4G4		4 x (1 x 10)		4 x (1 x 10)		-	

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

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

SINGLE LINE DIAGRAM

Single Line Drawing

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00011

SHEET 011

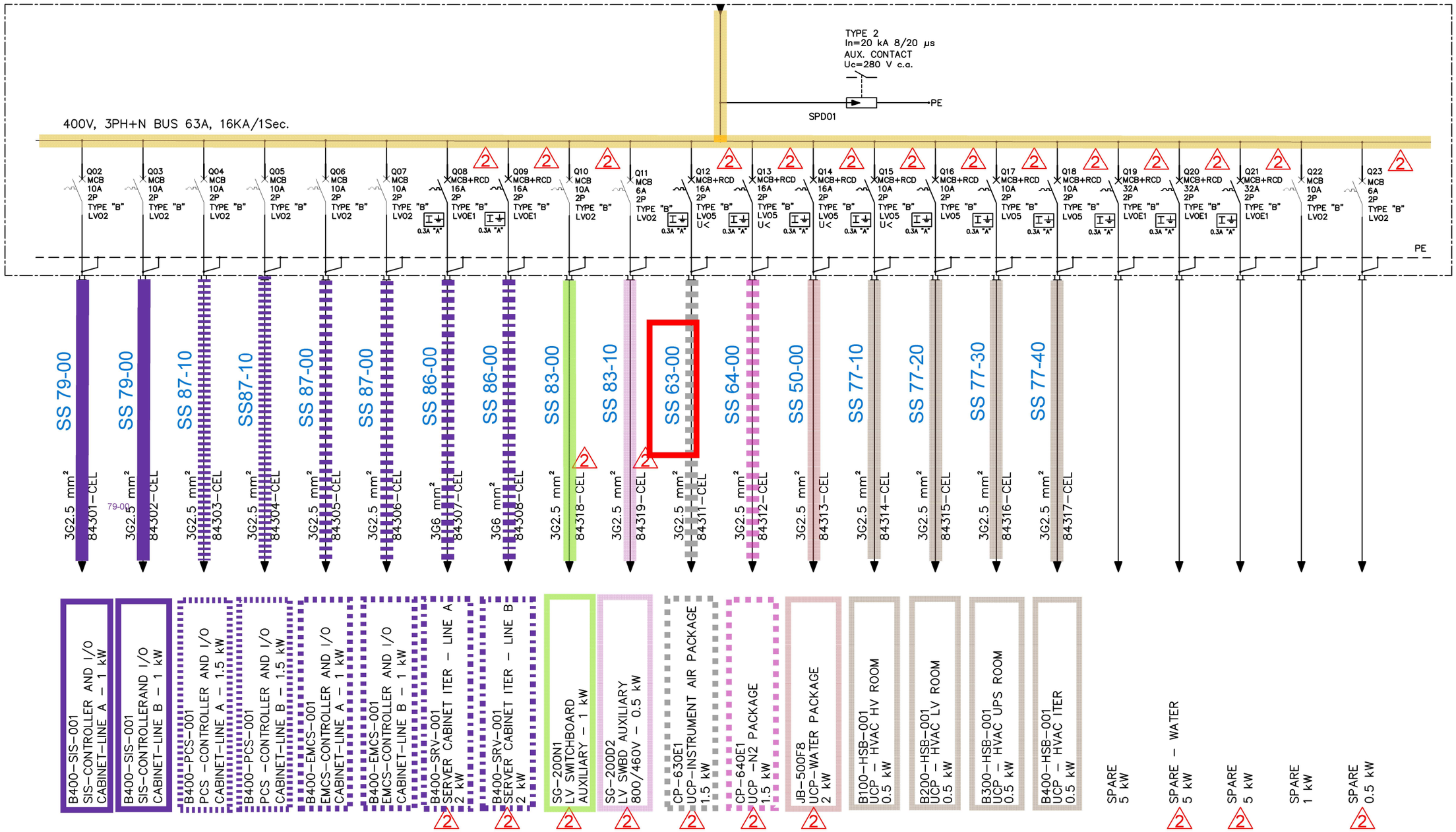
REV. 03

F.to UNI A3: 420mmx297mm

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

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

DRAWING NO. DRAWING_NO.

REV. REV

A-63000
INSTRUMENT AIR AND DRYER PACKAGE
CAPACITY : 313 Sm3/h (PRODUCTION)

A-64000
NITROGEN GENERATION SYSTEM
CAPACITY : 52.7 Sm3/h (PRODUCTION)

Waste Water Brine Discharge System SS 55-01
Instrument Air Distrubution Network SS 63-30
Instrument Air Package SS 63-00
Nitrogen Distribution Network SS 64-10
Nitrogen Generator Package SS 64-00

SUCTION 63 PI 001 | DISCHARGE 63 PI 002 | COMMON ALARM 63 XA 001 | MCC DEVICE COMMS FAIL 63 XI 001 | AVAILABLE STATUS 63 XI 002 | RUN/STOP STATUS 63 XI 003 | SHUTDOWN STATUS 63 XI 004 | SHUTDOWN ALARM 63 XA 002 | ESD I

FAULT PACKAGE 63 XA 003

ESD I — 63-XS-001 SHUT-DOWN

NOTE 14

A-63000
INSTRUMENT AIR AND DRYER PACKAGE
SEE VENDOR DIAGRAM
NOTE 2, 3, 4, 5, 6

V-63001
AIR RECEIVER

1-1/2"-IA-263-01SS-N

63 PI 004 LL | 63 PI 003 L | ESD

INSTR. PIPING

63 PT 003 | 63 PT 004

BLPH-MV-150 3/4" FLG x 1/2" NPTF | BLPH-MV-151 3/4" FLG x 1/2" NPTF

TP 041 | LO | BLPH-MV-149

1-1/2"-IA-108-01SS-N → 123A90-DDL-PR-PID-80041 TO INSTRUMENT AIR DISTRIBUTION HEADER

TP 039 | BLPH-MV-269 SB LO | 1"-WW-079-01CS-H → 123A90-DDL-PR-PID-80025 TO BRINE DISCHARGE CAISSON

BLPH-MV-270 LO 1.1/2" | 1-1/2"-IA-204-01SS-N

TO SAFE LOCATION | 2"-AV-224-01CS-N | TP 043 | TP 045

A-64000
NITROGEN SYSTEM
SEE VENDOR DIAGRAM

TP 042 | BLPH-MV-271 SB LO | 3/4" BLPH-MV-275 | 1"-N-158-01CS-N

1"-N-262-01CS-N

64 HS 031 | 64 PIC 031A H L | 64 PIC 031B H L | 64 PT 031A | 64 PT 031B | 64 PV 031A | 64 PV 031B | FL-DC TYP.6 1" | N-158 | N-100

NOTE 15 | 64 PI 002 L LL | 64 PT 002 | NOTE 1, 12 SET @ 10 barg | 102 | 64 PSV 001 | NOTE 10 TO ATM | 2"-AV-160-01CS-N

INSTR. PIPING | 3/4" FLG x 1/2" NPTF | BLPH-MV-386 | BLPH-MV-166 | BLPH-MV-167 3/4" FLG x 1/2" NPTF | 1"-N-100-01CS-N

1.5" x 1" | BLPH-MV-278 FB-LO 1.1/2" | 1-1/2"-N-197-01CS-N | 1.5" x 1"

1"-N-101-01CS-N → 123A90-DDL-PR-PID-80028 TO HYDROGEN VENT HEADER

1"-N-125-03HSS-N → 123A90-DDL-PR-PID-80017 TO HYDROGEN STORAGE VESSEL C

1"-N-124-03HSS-N → 123A90-DDL-PR-PID-80016 TO HYDROGEN STORAGE VESSEL B

1"-N-028-03HSS-N → 123A90-DDL-PR-PID-80015 TO HYDROGEN STORAGE VESSEL A

1"-N-257-03HSS-N

UPPER LEVEL | LOWER LEVEL

1"-N-126-03HSS-N → 123A90-DDL-PR-PID-80018 TO HYDROGEN STORAGE VESSEL D

1"-N-127-03HSS-N → 123A90-DDL-PR-PID-80019 TO HYDROGEN STORAGE VESSEL E

1"-N-128-03HSS-N → 123A90-DDL-PR-PID-80020 TO HYDROGEN STORAGE VESSEL F

64 SDV 001 | NOTE 13 | NC FC TYP.2

1"-N-151-01CS-N → 123A90-DDL-PR-PID-80011 TO ELECTROLYSER PACKAGE

01CS 03HSS

ESD I — 64-XS-001 SHUT-DOWN — ESD I — NOTE 14

64 XA 003 FAULT PACKAGE

V-64001
NITROGEN RECEIVER

NOTES

1. ONE UNINSTALLED SPARE PSV SHALL BE AVAILABLE.
2. COMPRESSORS AND DRIERS DESIGNED FOR 2 X 100% CONFIGURATION. INSTRUMENT AIR RECEIVER DESIGNED FOR 1 X 100%.
3. VENDOR TO PROVIDE NECESSARY CONTROLS, INSTRUMENTATIONS AND ISOLATIONS IN ORDER TO OPERATE THE PLANT IN SAFE MANNER.
4. COMPRESSORS WILL OPERATE ON THE BASIS OF ONE WORKING AND ONE ON STANDBY.
5. COMPRESSORS TO BE ROTARY SCREW TYPE OIL FREE.
6. AIR COMPRESSOR INLET TO BE LOCATED AWAY FROM ANY VENTS.
7. DELETED. 02
8. DELETED.
9. DELETED.
10. TO SAFE LOCATION, ROUTED AWAY FROM WALKWAYS.
11. DELETED. 02
12. 64PSV001 SIZED FOR UPSTREAM CV FAILURE.
13. 64SDV001 IS NORMALLY CLOSED. IF REQUIRED THE OPERATOR CAN REMOTELY OPEN THE VALVE TO ALLOW PURGING OPERATION. VALVE 64SDV001 IS ALSO CONNECTED TO THE PCS SYSTEM.
14. SERIAL COMMUNICATION WITH CONTROL SYSTEM.
15. THE ALARM 64-PAL-002 WILL CLOSE 64-SDV-001 THROUGH SAFETY SYSTEM.

02

HOLDS

1. DELETED.
2. DELETED. 02
3. DELETED.
4. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
INSTRUMENT AIR PACKAGE

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE	NTS
DRAWN	CHECKED	APPROVED		DATE	
A1	DRAWING NO. 123A90-DDL-PR-PID-80027			SHEET 001	REV. 02

File Name : FILE_NAME

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:	2025-05-16	

System:	63	/	Instrument Air
SubSystem:	63-00	/	Instrument Air Package (A-63000)

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	2025-05-16	2025-07-04
Signature	PROVERLIS Digitaly signed by Anthony Iveson 2025-05-16T08:59:06.175Z	PROVERLIS Digitaly signed by Martin Taylor 2025-07-04T06:01:09.538Z

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 63-00 & process: COMM

Electrical	63-00 Instrument Air Package (A-63000)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
A4/+08-QF1	DRAWER AIR PACKAGE 01A - A4/+08-QF1	ONSHORE	C10002854	FP00	100	2025-01-13	RFO 2
		ONSHORE	C10002855	FTR-2	100	2024-10-02	RFO 2
		ONSHORE	C10002856	FTR-6	100	2024-10-03	RFO 2
		ONSHORE	C10003012	FTR-5	100	2025-04-29	RFO 2
A5/+08-QF1	DRAWER AIR PACKAGE 01B - A5/+08-QF1	ONSHORE	C10002857	FP00	100	2025-01-13	RFO 2
		ONSHORE	C10002858	FTR-2	100	2024-10-02	RFO 2
		ONSHORE	C10002859	FTR-6	100	2024-10-03	RFO 2
		ONSHORE	C10003013	FTR-5	100	2025-04-29	RFO 2
DP-200N1-Q29	BREAKER AUX UCP AIR PACKAGE - DP-200N1-Q29	ONSHORE	C10002861	FTR-2	100	2024-10-28	RFO 2
UP-200F3-QF34	UCP - INSTRUMENT AIR PACKAGE	ONSHORE	C10004573	FTR-2	100	2024-12-07	RFO 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 63-00 & process: COMM

Instrumental	63-00 Instrument Air Package (A-63000)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
63-XA-003	A-63000 Instrument air PKG fault	ONSHORE	C10003761	FJ01D	100	2025-02-02	RFO 2
63-XS-001	SHUT-DOWN A-63000 Instrument air PKG	ONSHORE	C10003762	FJ01D	100	2025-02-02	RFO 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 63-00 & process: COMM

Piping	63-00 Instrument Air Package (A-63000)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
63-00	Service Test Instrument Air Package	ONSHORE	C10004906	4245	100	2025-03-28	RFO 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 63-00 & process: COMM

Miscellaneous	63-00 Instrument Air Package (A-63000)							
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
123A90-PML-COM-PRO-03043	OTP - Instrument Air Package	ONSHORE	C10004615	5300	100	2025-04-18	-
		OFFSHORE	C10004939	5300	0	-	-

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air

SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000490	A	A-63000	ALL SOLENOIDS HAVE BEEN DISMANTLED FROM THE PACKAGE. SEND TO THE SUB-VENDOR TO BE CHECK. ALL SOLENOID		installed	SLinari 2024-10-29	SLinari 2024-12-18	SLinari 2024-12-18	2024-12-18
C30000496	A	A-63000	CABLING INSIDE CONTROL PANEL NOT REFLECT THE SPECIFICATIONS AND DWG IN TERM OF COLOUR CODING. SEE NCR		NCR CLOSED -	SLinari 2024-10-29	SLinari 2024-12-18	SLinari 2024-12-18	2024-12-18
C30000482	B	A-63000	Check if the set point be set to 9,5 since on the air receiver (63-PT-004) we have a pressure of 8,8 barg		done - max 10 - min 8barg	SLinari 2024-10-29	SLinari 2025-01-24	SLinari 2025-01-24	2025-01-24
C30000483	B	A-63000	Package to be test with PLC set to REMOTE MODE		tested	SLinari 2024-10-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000484	B	A-63000	necessary to set the operating logic to ensure that with a DEW POINT measured > -40°C, the DRYER in operation is exchanged with the		DONE	SLinari 2024-10-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000485	B	A-63000	TO BE IMPLEMENT: THE PRESSURE SWITCHES IN BAD QUALITY MUST BLOCK AIR DRYER (to be verify at yard)		VERIFIED - CLOSED	SLinari 2024-10-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000486	B	A-63000	TO BE IMPLEMENT: THE INTERVENTION TIME OF THE LIMIT SWITCHES (to be verify at yard)		DONE	SLinari 2024-10-29	SLinari 2025-01-24	SLinari 2025-01-24	2025-01-24
C30000487	B	A-63000	TO BE IMPLEMENTED: VALVE POSITION DISCREPANCY (to be verify at yard)		DONE	SLinari 2024-10-29	SLinari 2025-01-24	SLinari 2025-01-24	2025-01-24
C30000488	B	A-63000	VERIFY AND SET THE EXCHANGE OF THE COMPRESSORS WITH THE DUTY/STAND-BY CYCLE TIME. To be verify and to be tested		OTP DONE POINT CLOSED	SLinari 2024-10-29	Vendor 2025-03-19	SLinari 2025-03-19	2025-03-19

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air

SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000489	B	A-63000	TO BE VERIFY AND TEST THE CHANGE OVER COMPRESSOR K-63001A TO K-63001B		DONE	SLinari 2024-10-29	SLinari 2025-01-24	SLinari 2025-01-24	2025-01-24
C30000491	B	A-63000	THE RESET COMMAND TO PACKAGE MUST BE MANAGED BY ESD (CURRENTLY IT'S ON LOCAL PANEL). To be verify with engineering.		AFTER CHECK- RESET COMMAND NOT NECESSARY (SEE EMAIL	SLinari 2024-10-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000492	B	A-63000	MAX PRESSURE ON VALVE ACTUATORS = 8 BAR IS NOT CONGRUENT WITH OPERATING PRESSURE = 9 BAR.		DONE	SLinari 2024-10-29	SLinari 2025-01-24	SLinari 2025-01-24	2025-01-24
C30000493	B	A-63000	DUE TO THE RUSH TO CONCLUDE ALL TESTS WITHIN ONE DAY, AN EXTENSIVE AND COMPREHENSIVE ON-SITE TEST WILL BE		DONE	SLinari 2024-10-29	SLinari 2025-01-27	SLinari 2025-01-27	2025-01-27
C30000494	B	A-63000	TO BE UPDATED DWG N. 1724000428-MAG-DG-00009 - CORRECT RAL 9002		Re issued	SLinari 2024-10-29	Vendor 2025-03-19	SLinari 2025-03-19	2025-03-19
C30000495	B	A-63000	ALL HARDWIRED AND PROFINET SIGNALS STILL TO BE TESTED		ACTIVITY DONE	SLinari 2024-10-29	SLinari 2025-01-27	SLinari 2025-01-27	2025-01-27
C30000497	B	A-63000	MISSING LEAKAGE TEST REPORTS. To be repeated on site up to rated package pressure		done	SLinari 2024-10-29	SLinari 2025-01-30	SLinari 2025-01-30	2025-01-30
C30000498	B	A-63000	CONTINUITY AND MEGGER TEST REPORTS ARE MISSING. TO BE PROVIDE		done	SLinari 2024-10-29	SLinari 2025-01-30	SLinari 2025-01-30	2025-01-30
C30002432	B	A-63000 C10002354	One of the 10 baseplates for the anchor down points has not been installed on the upper deck structure. See Drawing and 3d excerpt attached	.		KAlbonetti 2025-01-07	2025-01-10	KAlbonetti 2025-01-10	2025-01-10

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air
SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002651	B	V-63001 C10004527	Manhole has not been opened. Internal inspection not completed.	.		KAlbonetti 2025-01-10	2025-03-06	LNovaga 2025-03-06	2025-03-06
C30002654	B	V-63001 C10004527	Valve BLPH-MV-820 installed in place of BLPH-MV-741.	.		KAlbonetti 2025-01-10	2025-01-15	LNovaga 2025-01-15	2025-01-15
C30002655	B	V-63001 C10004527	Item PIT-059 installed in place of the 63-PIT-064.	.		KAlbonetti 2025-01-10	2025-01-15	LNovaga 2025-01-15	2025-01-15
C30002656	B	V-63001 C10004527	For items TI053 and TIT052 the fasteners are bolts L7+nuts 2H but the instruments are in stainless steel. Replace fasteners or add an	.		KAlbonetti 2025-01-10	2025-03-18	LNovaga 2025-03-18	2025-03-18
C30002657	B	V-63001 C10004527	Anchor down system is different from the one marked in the GA drawing 1724000428-MAC-DD-00006. Item 45 has been	.		KAlbonetti 2025-01-10	2025-03-06	LNovaga 2025-03-06	2025-03-06
C30002658	B	V-63001 C10004527	In the GA 1724000428-MAC-DD-00006 ther is no earthing lug marked. In the field there is only one earthing lug instead of two. position has been	.		KAlbonetti 2025-01-10	2025-02-03	LNovaga 2025-02-03	2025-02-03
C30002659	B	V-63001 C10004527	BLPH-MV-740 has rust on the stem.	.		KAlbonetti 2025-01-10	2025-03-06	LNovaga 2025-03-06	2025-03-06
C30002660	B	V-63001 C10004527	the lever of the MBLPH-MV-738 shall be rotated of 180° because it clashes with the vessel body.	.		KAlbonetti 2025-01-10	2025-01-10	KAlbonetti 2025-01-10	2025-01-10
C30002661	B	V-63001 C10004527	BLPH-MV-742 has the lock nuts bended.	.		KAlbonetti 2025-01-10	2025-01-15	LNovaga 2025-01-15	2025-01-15

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air

SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002848	B	V-63001 C10004527	Minor damages to the painting due transportation and installation, also there is rust in the nameplate of the vessel.	.		KAlbonetti 2025-01-14	2025-04-11	LNovaga 2025-04-11	2025-04-11
C30002850	B	A-63000 C10002354	Minor damages to the painting due transportation and installation.	.		KAlbonetti 2025-01-14	2025-04-11	LNovaga 2025-04-11	2025-04-11
C30002853	B	A-63000 C10002354	In the Air package GA nameplate detail the operative temperature range is marked as "-10°C/+90°C" but on the nameplate mounted on	.		KAlbonetti 2025-01-15	2025-02-14	KAlbonetti 2025-02-14	2025-02-14
C30002854	B	A-63000 C10002354	One supporting plate (the one added to close PL C300024) is 10 mm thinner compared to the other.	.		KAlbonetti 2025-01-15	2025-03-06	LNovaga 2025-03-06	2025-03-06
C30002855	B	A-63000 C10002354	There is still part of the wooden crate used for transport fixed on the skid. See attachment for the location.	.		KAlbonetti 2025-01-15	2025-03-05	LNovaga 2025-03-05	2025-03-05
C30004328	B	A-63000	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 63 Instrument Air
SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001283	A	84311-CEL C10000587	Missing the earth connection between the terminal block (PE) and the earthing bar (PE). see 123A90-DDL-EL-DG-20149 sh.40 (SIDE	.		APolo 2024-12-04	2024-12-06	Gtangianu 2024-12-06	2024-12-06
C30001287	A	83110-CEL C10000629	Missing the earth connection between the terminal block (PE) and the earthing bar (PE). see 123A90-DDL-EL-DG-20149 sh.53 . side A-63000.	.		APolo 2024-12-04	2024-12-06	Gtangianu 2024-12-06	2024-12-06
C30001281	B	84311-CEL C10000587	Missing cable tag SIDE DP-200F3 / Panel A-6300	.		APolo 2024-12-04	2025-02-04	APolo 2025-02-04	2025-02-04
C30001282	B	84311-CEL C10000587	Missing cores identification tag. Cabinet side DP-200F3 / A-63000 . (see document 123A90-DDL-EL-DD-20092 sh.7-8)	.		APolo 2024-12-04	2025-02-15	AAndreani 2025-02-15	2025-02-15
C30001288	B	83110-CEL C10000629	Missing cable tag . side A-63000 / DP-200N1	.		APolo 2024-12-04	2025-02-03	APolo 2025-02-03	2025-02-03
C30001289	B	83110-CEL C10000629	Missing cores identification tag. side DP-200N1 / A-63000 . (see document 123A90-DDL-EL-DD-20092 sh.7-8)	.		APolo 2024-12-04	2025-02-19	AAndreani 2025-02-19	2025-02-19
C30001297	B	83017-CEL-1 C10000537	Cover of terminal block doesn't work properly. See attached photo.	.		Gtangianu 2024-12-04	2025-02-06	APolo 2025-02-06	2025-02-06
C30001298	B	83017-CEL-2 C10000538	Cover of terminal block doesn't work properly. See attached photo.	.		Gtangianu 2024-12-04	2025-02-06	APolo 2025-02-06	2025-02-06
C30001299	B	83017-CEL-2 C10000538	Identification tag wires missing both side the83017-CEL-2 .	.		Gtangianu 2024-12-04	2025-02-19	AAndreani 2025-02-19	2025-02-19

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air
SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001300	B	83017-CEL-1 C10000537	Identification tag wires missing both side the 83017-CEL-1 .	.		Gtangianu 2024-12-04	2025-02-19	AAndreani 2025-02-19	2025-02-19
C30001301	B	83017-CEL-2 C10000538	Missing cable tags inside and outside both panels (83017-CEL-2).	.		Gtangianu 2024-12-04	2025-02-04	Gtangianu 2025-02-04	2025-02-04
C30001302	B	83017-CEL-1 C10000537	Missing cable tags inside and outside both panels (83017-CEL-1).	.		Gtangianu 2024-12-04	2025-02-04	Gtangianu 2025-02-04	2025-02-04
C30001303	B	83017-CEL-1 C10000537	Cover of terminal block on grounding cable is missing. See attached photo.	.		Gtangianu 2024-12-04	2025-02-28	Ecarotenuto 2025-02-28	2025-02-28
C30001304	B	83017-CEL-2 C10000538	Cover of terminal block on grounding cable is missing. See attached photo.	.		Gtangianu 2024-12-04	2025-02-28	Ecarotenuto 2025-02-28	2025-02-28
C30001317	B	A-63000 C10002352	Earthing System is not as indicated by the Electrical Typical Installation Details document . see 123A90-DDL-EL-DD-20090 sh.3	.		APolo 2024-12-04	2025-01-23	APolo 2025-01-23	2025-01-23
C30001318	B	A-63000 C10002352	The cables are not adequately preserved. inside Skid	.		APolo 2024-12-04	2025-01-22	Ecarotenuto 2025-01-22	2025-01-22
C30001379	B	84311-CEL C10000587	The cable gland are not closed in accordance with specification.	.		APolo 2024-12-05	2025-02-25	JKrizanic 2025-02-25	2025-02-25

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air
SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003339	A	63-00-TP-059 C10003666	Missing earthing connection on earthing plate	.		AMancini 2025-01-30	2025-02-08	Ecarotenuto 2025-02-08	2025-02-08
C30003340	A	63-00-TP-059 C10003666	Flange management activity to be done on joint J1 (Connection to A-63000/A). Broken joint done by Commissioning	.		AMancini 2025-01-30	2025-03-20	LNovaga 2025-03-20	2025-03-20
C30000992	B	63-00-TP-059 C10003665	General final touch-up to do.	-		MBruschi 2024-11-28	2025-02-06	KAlbonetti 2025-02-06	2025-02-06
C30000993	B	63-00-TP-059 C10003665	Unmounted spool-A with its erection materials.	-		MBruschi 2024-11-28	2025-01-17	LNovaga 2025-01-17	2025-01-17
C30001053	B	63-00-TP-025 C10003421	All U-BOLTS S-211 not installed (refer to: ISO 123A90-FDL-PP-DI-00127-01 and 123A90-FDL-PP-DI-00127-02)	-		MBruschi 2024-11-29	2025-02-17	KAlbonetti 2025-02-17	2025-02-17
C30001054	B	63-00-TP-025 C10003421	Support PS-02075 (F1) is only tack welded (refer to: ISO 123A90-FDL-PP-DI-00127-01)	-		MBruschi 2024-11-29	2025-02-17	KAlbonetti 2025-02-17	2025-02-17
C30001055	B	63-00-TP-025 C10003421	Spool C is out level of 1,5° (refer to: ISO 123A90-FDL-PP-DI-00127-02)	-		MBruschi 2024-11-29	2025-02-17	KAlbonetti 2025-02-17	2025-02-17
C30001056	B	63-00-TP-025 C10003421	Support PS-02027 (F2) is out of level 1,1° (refer to: ISO 123A90-FDL-PP-DI-00127-02)	-		MBruschi 2024-11-29	2025-02-17	KAlbonetti 2025-02-17	2025-02-17
C30003464	B	63-00-TP-025 C10003422	The support "PS-02027" (F2) is out of level about 1.1°. Isometric 123A90-FDL-PP-DI-00127-01.	.		MBruschi 2025-02-03	2025-03-06	LNovaga 2025-03-06	2025-03-06

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air

SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003552	B	63-00-TP-025 C10003423	General touch up do to, especially near the supports of the piping line.	.		KAlbonetti 2025-02-05	2025-04-17	LNovaga 2025-04-17	2025-04-17
C30003553	B	63-00-TP-025 C10003423	Color coding and fluid direction are missing.	.		KAlbonetti 2025-02-05	2025-03-21	LNovaga 2025-03-21	2025-03-21
C30004256	B	63-00-TP-059 C10003667	Color coding and fluid direction are missing.	.		LNovaga 2025-03-21			
C30004257	B	63-00-TP-059 C10003667	Missing the insulation pillow around the valve BLPH-MV-269 and joint 032-1J1.	.		LNovaga 2025-03-21	2025-04-04	LNovaga 2025-04-04	2025-04-04
C30004258	B	63-00-TP-059 C10003667	The drainage hole in the insulation is missing.	.		LNovaga 2025-03-21	2025-04-08	LNovaga 2025-04-08	2025-04-08

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air
SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Telecom

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000927	B	63-LP-001/B400 -NET-001 C10004349	The copper conductor of the cable armor must be individually connected to the earthing bar - B400-NET-001. See 123A90-DDL-EL-DD-20090.	.		APolo 2024-11-26	2025-02-04	APolo 2025-02-04	2025-02-04
C30000928	B	63-LP-001/B400 -NET-001 C10004349	Missing cable tag SS project, externally pannel A-630000.	.		APolo 2024-11-26	2025-01-02	Ecarotenuto 2025-01-02	2025-01-02
C30000929	B	63-LP-001/B400 -NET-001 C10004349	Missing cable tag , cabinet input A-630000.	.		APolo 2024-11-26	2025-02-04	APolo 2025-02-04	2025-02-04
C30000957	B	63-LP-001/B400 -NET-001 C10004349	The cable is not supported and fixed to the rack (outside panel)anel)	.		APolo 2024-11-27	2025-01-23	APolo 2025-01-23	2025-01-23
C30000961	B	63-LP-001/B400 -NET-001 C10004349	Missing cable tag , cabinet input U-63000.	.		APolo 2024-11-27	2025-02-04	APolo 2025-02-04	2025-02-04

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air

SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001270	B	C-63-XA-003/B400-SIS-001 C10001458	Missing cable tag SS .	.		APolo 2024-12-04	2025-02-04	APolo 2025-02-04	2025-02-04
C30001271	B	C-63-XA-003/B400-SIS-001 C10001458	Missing cores identification tag. Cabinet side A-63000. (see document 123A90-DDL-EL-DD-20092 sh.7-8)	.		APolo 2024-12-04	2025-02-08	Gtangianu 2025-02-08	2025-02-08
C30001275	B	C-63-XS-001/B400-SIS-001 C10001451	Missing cores identification tag. Cabinet side B400-SIS-001 / JB A-63000 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-12-04	2025-02-08	Gtangianu 2025-02-08	2025-02-08
C30001276	B	C-63-XS-001/B400-SIS-001 C10001451	Missing cable tag SS . side A-63000	.		APolo 2024-12-04	2025-02-04	APolo 2025-02-04	2025-02-04
C30001319	B	A-63000 C10002353	Earthing System is not as indicated by the Electrical Typical Installation Details document . see 123A90-DDL-EL-DD-20090 sh.3	.		APolo 2024-12-04	2025-01-23	APolo 2025-01-23	2025-01-23
C30001320	B	A-63000 C10002353	The tubing are not adequately preserved. inside Skid	.		APolo 2024-12-04	2025-01-22	Ecarotenuto 2025-01-22	2025-01-22

Section 2.2 Exception Punch Lists (per discipline)

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air

SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004256	B	63-00-TP-059 C10003667	Color coding and fluid direction are missing.	.		LNovaga 2025-03-21			

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

DRAWING NO. DRAWING_NO.

REV. REV

A-63000
INSTRUMENT AIR AND DRYER PACKAGE
CAPACITY : 313 Sm³/h (PRODUCTION)

A-64000
NITROGEN GENERATION SYSTEM
CAPACITY : 52.7 Sm³/h (PRODUCTION)

SUCTION 63 PI 001 · DISCHARGE 63 PI 002 · COMMON ALARM 63 XA 001 · MCC DEVICE COMMS FAIL 63 XI 001 · AVAILABLE STATUS 63 XI 002 · RUN/STOP STATUS 63 XI 003 · SHUTDOWN STATUS 63 XI 004 · SHUTDOWN ALARM 63 XA 002 · ESD I

A-63000
INSTRUMENT AIR AND DRYER PACKAGE
SEE VENDOR DRAWING 1724000428-PR-PID-00019
NOTE 2, 3, 4, 5, 6
03

ESD I → FAULT PACKAGE 63 XA 003
ESD I → 63-XS-001 SHUT-DOWN
NOTE 14

03 → **V-63001** AIR RECEIVER
SEE VENDOR DRAWING 1724000428-PR-PID-00019
63 TP 040 · 2" · 2"x1.1/2"

1-1/2"-IA-263-01SS-N

03 → 63 TP 041 · 2"x1.1/2" · LO · BLPH-MV-149

1-1/2"-IA-108-01SS-N → 123A90-DDL-PR-PID-80041 TO INSTRUMENT AIR DISTRIBUTION HEADER

63 PI 003 L · 63 PT 003 · 63 PT 004 · 63 PI 004 LL · ESD I

INSTR. PIPING
BLPH-MV-150 3/4" FLG x 1/2" NPTF
BLPH-MV-151 3/4" FLG x 1/2" NPTF

03 → 63 TP 039 · LO · BLPH-MV-269 · SB

1"-WW-079-01CS-H → 123A90-DDL-PR-PID-80025 TO BRINE DISCHARGE CAISSON

BLPH-MV-270 · LO · 1.1/2"

1-1/2"-IA-204-01SS-N → 123A90-DDL-PR-PID-80041 FROM INSTRUMENT AIR DISTRIBUTION HEADER 03

03 → CONC. RED. 1.1/2"x1" · 64 TP 037

ESD I → 2"-AV-224-01CS-N → TO SAFE LOCATION

03 → 64 TP 045

A-64000
NITROGEN SYSTEM
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

64 TP 042 · BLPH-MV-271 · SB · LO · 1"-N-158-01CS-N

03 → 64 TP 043 · 3/4"x1/2" · LO · BLPH-MV-275 NOTE 16

64 TP 044 · 1"-N-262-01CS-N

ESD I · 64-XS-001 SHUT-DOWN · ESD I · NOTE 14

64 XA 003 → FAULT PACKAGE

NOTE 15 · 64 PI 002 L LL

64 HS 031 · 64 PIC 031A H L · 64 PIC 0318 H L

64 PT 031A · 64 PT 0318 · 64 PT 002

NOTE 1, 12 SET @ 10 barg 1D2 · 64 PSV 001 · NOTE 10 TO ATM

2"-AV-160-01CS-N · 1.5" x 1" · BLPH-MV-278 FB-LO 1.1/2" · 1-1/2"-N-197-01CS-N · 1.5" x 1"

INSTR. PIPING
BLPH-MV-386 · 3/4" FLG x 1/2" NPTF · BLPH-MV-166 · 3/4" FLG x 1/2" NPTF · BLPH-MV-167 · 3/4" FLG x 1/2" NPTF

64 PV 031A · FL-DC TYP.6 1" · 64 PV 0318 · FL-DC TYP.6 1" · N-158 · N-100

1"-N-100-01CS-N

1"-N-257-03HSS-N

1"-N-101-01CS-N → 123A90-DDL-PR-PID-80028 TO HYDROGEN VENT HEADER
1"-N-125-03HSS-N → 123A90-DDL-PR-PID-80017 TO HYDROGEN STORAGE VESSEL C
1"-N-124-03HSS-N → 123A90-DDL-PR-PID-80016 TO HYDROGEN STORAGE VESSEL B
1"-N-028-03HSS-N → 123A90-DDL-PR-PID-80015 TO HYDROGEN STORAGE VESSEL A

UPPER LEVEL
LOWER LEVEL

1"-N-126-03HSS-N → 123A90-DDL-PR-PID-80018 TO HYDROGEN STORAGE VESSEL D
1"-N-127-03HSS-N → 123A90-DDL-PR-PID-80019 TO HYDROGEN STORAGE VESSEL E
1"-N-128-03HSS-N → 123A90-DDL-PR-PID-80020 TO HYDROGEN STORAGE VESSEL F
1"-N-151-01CS-N → 123A90-DDL-PR-PID-80011 TO ELECTROLYSER PACKAGE

64 SDY 001 · 64 SDV 001 · NOTE 13 · NC-FC TYP.2

01CS 03HSS

03 → **V-64001** NITROGEN RECEIVER
SEE VENDOR DRAWING 1724000437-PR-PID-00018
64 TP 046

AS COMMISSIONING
28.03.2025
GIANDOMENICO DE MASSIER

NOTES

1. ONE UNINSTALLED SPARE PSV SHALL BE AVAILABLE.
2. COMPRESSORS AND DRIERS DESIGNED FOR 2 X 100% CONFIGURATION. INSTRUMENT AIR RECEIVER DESIGNED FOR 1 X 100%.
3. VENDOR TO PROVIDE NECESSARY CONTROLS, INSTRUMENTATIONS AND ISOLATIONS IN ORDER TO OPERATE THE PLANT IN SAFE MANNER.
4. COMPRESSORS WILL OPERATE ON THE BASIS OF ONE WORKING AND ONE ON STANDBY.
5. COMPRESSORS TO BE ROTARY SCREW TYPE OIL FREE.
6. AIR COMPRESSOR INLET TO BE LOCATED AWAY FROM ANY VENTS.
7. DELETED.
8. DELETED.
9. DELETED.
10. TO SAFE LOCATION, ROUTED AWAY FROM WALKWAYS.
11. DELETED.
12. 64-PSV-001 SIZED FOR UPSTREAM 64-PV-031 CV FAILURE. 03
13. 64-SDV-001 IS NORMALLY CLOSED. IF REQUIRED THE OPERATOR CAN REMOTELY OPEN THE VALVE TO ALLOW PURGING OPERATION. VALVE 64-SDV-001 IS ALSO CONNECTED TO THE PCS SYSTEM.
14. SERIAL COMMUNICATION WITH CONTROL SYSTEM.
15. THE ALARM 64-PAL-002 WILL CLOSE 64-SDV-001 THROUGH SAFETY SYSTEM.
16. MANUAL VALVE BLPH-MV-275 TO BE CONNECTED WITH MANUAL VALVE BLPH-MV-466 (INSTALLED ON ELECTROLYSER PACKAGE EXIT LINE) BY MEAN ON A FLEXIBLE HOSE DURING COMMISSIONING PHASE FOR PURGING OPERATION. 03

HOLDS

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.

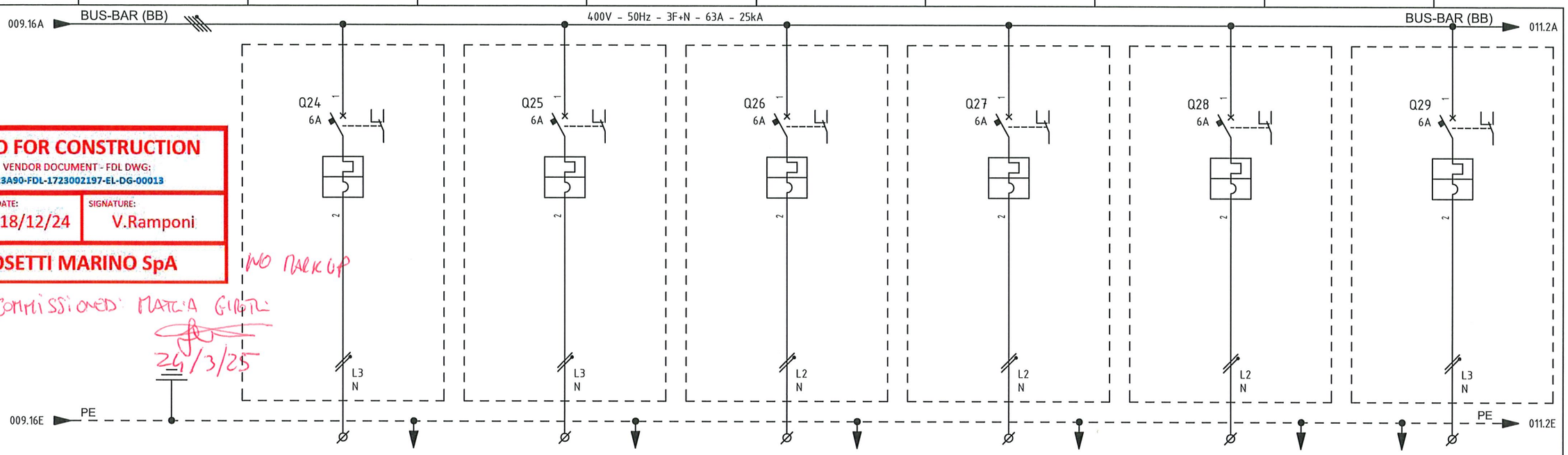
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	09/09/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND · ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
INSTRUMENT AIR PACKAGE

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE NTS
DRAWN	CHECKED	APPROVED	DATE
A1	DRAWING NO. 123A90-DDL-PR-PID-80027		SHEET 001 · REV. 03

File Name : FILE_NAME



VALID FOR CONSTRUCTION

VENDOR DOCUMENT - FDL DWG:
123A90-FDL-1723002197-EL-DG-00013

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

ROSETTI MARINO SpA

NO MARK UP

AS COMMISSIONED: MARCIA GIUSTI 26/3/25

ITEM			1	B400-PCS-001		B400-EMCS-001		B400-FGS-001		B400-NET-001		B400-SRV-001		CP-630E1	
UTILITY			2	PCS-CONTROLLER AND I/O CABINET - AUXILIARY		EMCS-CONTROLLER AND I/O CABINET - AUXILIARY		FGS FIRE & GAS PANEL - AUXILIARY		SYSTEM SERVER / NETWORK CABINET - AUXILIARY		SERVER CABINET ITER - AUXILIARY		UCP - INSTRUMENT AIR PACKAGE -A-63000 - AUXILIARY	
CUBICLE			3	+03		+03		+03		+03		+03		+03	
RATED POWER	RATED CURRENT		4/5	0.5 KW	2.72 A	0.5 KW	2.72 A	0.8 KW	4.35 A	0.5 KW	2.72 A	0.5 KW	2.72 A	0.5 KW	2.72 A
TYPICAL FUNCTIONAL			6	-		-		-		-		-		-	
CIRCUIT BREAKER (ABB)	TYPE		7	S302P-C6		S302P-C6		S302P-C6		S302P-C6		S302P-C6		S302P-C6	
	VERSION		8	2P / MINIATURE		2P / MINIATURE		2P / MINIATURE		2P / MINIATURE		2P / MINIATURE		2P / MINIATURE	
	TRIP UNITS		9	In=6A - Curve C		In=6A - Curve C		In=6A - Curve C		In=6A - Curve C		In=6A - Curve C		In=6A - Curve C	
	Icu	KA	10	25kA		25kA		25kA		25kA		25kA		25kA	
OVERLOAD	L	Range A	11	-		-		-		-		-		-	
		Range t	12	-		-		-		-		-		-	
SEL. SHORT-CIRCUIT	S	Range A	13	-		-		-		-		-		-	
		Range t	14	-		-		-		-		-		-	
INST. SHORT-CIRCUIT	I	Range A	15	-		-		-		-		-		-	
		Range t	16	-		-		-		-		-		-	
EARTH FAULT PROTECTION	G	Range A	17	-		-		-		-		-		-	
		Range t	18	-		-		-		-		-		-	
CONTACTOR (ABB)			19	-		-		-		-		-		-	
THERMAL OVERLOAD RELAY (ABB)			20	-		-		-		-		-		-	
SURGE ARRESTERS (DHENN)			21	-		-		-		-		-		-	
TOROIDAL CURRENT TRANSFORMER (FRER)			22	-		-		-		-		-		-	
FUSE HOLDER (ABB)			23	-		-		-		-		-		-	
TWILIGHT SWITCH (ABB)			24	-		-		-		-		-		-	
VOLTMETER (FRER)			25	-		-		-		-		-		-	
CURRENT TRANSFORMER FOR MEASURE (FRER)	TYPE		26	-		-		-		-		-		-	
	PERFORMANCE/CLASS		27	-		-		-		-		-		-	
VOLTAGE TRANSFORMER FOR MEASURE (FRER)	TYPE		28	-		-		-		-		-		-	
	PERFORMANCE/CLASS		29	-		-		-		-		-		-	
POWER TERM. BLOCK (CABUR)		Type/mm²	30	SCREW / 4		SCREW / 4		SCREW / 4		SCREW / 4		SCREW / 4		SCREW / 4	
POWER CONDUCTOR		mm²	31	3G2.5		3G2.5		3G2.5		3G2.5		3G2.5		3G2.5	

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=

+

DWG n° : 231298/SD/13

Item n° : PF1002888/101

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
4	18/09/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
3	05/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for construction (AFC)
2	24/04/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	15/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	08/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "DP-200N1"

SINGLE LINE DIAGRAM

Single Line Drawing

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

SCALE : NTS

A3

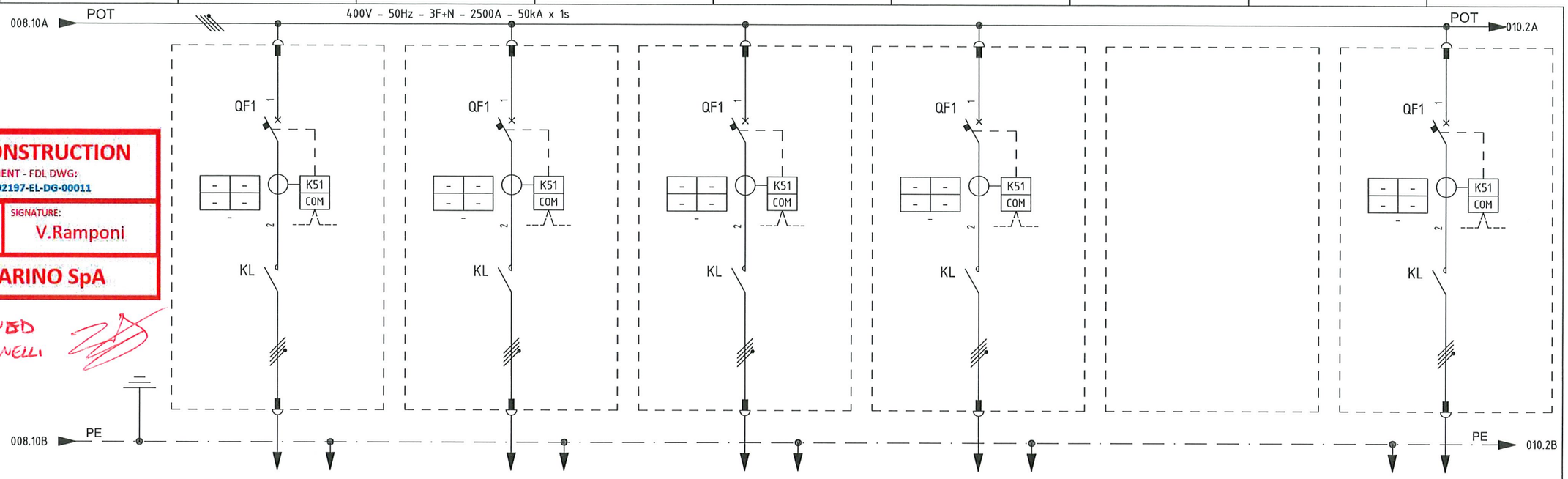
DRAWING NO. 1723002197-EL-DG-00013

SHEET 010

REV. 04

File Name : 1723002197-EL-DG-00013 Rev. 04

F.to UNI A3: 420mmx297mm



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	A-80000	CP-850F03	SPARE	SPARE		K-63001-A
UTILITY				2	FUEL CELL AUXILIARY LOAD	BESS PCS CABINET	SPARE	SPARE		INSTRUMENTS AIR PACKAGE 01A
COLUMN/CUBICLE				3	A4 / +03	A4 / +04	A4 / +05	A4 / +06		A4 / +08
RATED POWER | RATED CURRENT				4/5	20 kW | 32.84 A	11,09 kW | 17.42 A	- kW | - A	- kW | - A		68.75 kW | 111.24 A
TYPICAL FUNCTIONAL				6	LK1-63	LK1-40	LK1-40	LK1-40		LK2-160
CIRCUIT BREAKER (ABB)	TYPE			7	XT2S - 160	XT2S - 160	XT2S - 160	XT2S - 160		XT4S - 250
	VERSION			8	4P - FIXED	4P - FIXED	4P - FIXED	4P - FIXED		4P - FIXED
	TRIP UNITS			9	EKIP HI TOUCH LSIG (In = 63A)	EKIP HI TOUCH LSIG (In = 40A)	EKIP HI TOUCH LSIG (In = 40A)	EKIP HI TOUCH LSIG (In = 40A)		EKIP HI TOUCH LSIG (In = 160A)
	Icu	KA		10	50 kA	50 kA	50 kA	50 kA		50 kA
OVERLOAD	L	Range	A	11	(0.4 - 1) x In	(0.4 - 1) x In	(0.4 - 1) x In	(0.4 - 1) x In		(0.4 - 1) x In
		Range	t	12	k/I^2	k/I^2	k/I^2	k/I^2		k/I^2
SEL. SHORT-CIRCUIT	S	Range	A	13	(0.6 - 10) x In	(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
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
		Range	t	16	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
		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
CONTACTOR (ABB)				19	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	AF40-40-00-13 (70A-AC1); 100-250VAC/DC		AF190-40-11-13 (275A-AC1); 100-250 VAC/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	4 x 10	-	-		5G70

=
+

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

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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)

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 009

REV. 04

F.to UNI A3: 420mmx297mm

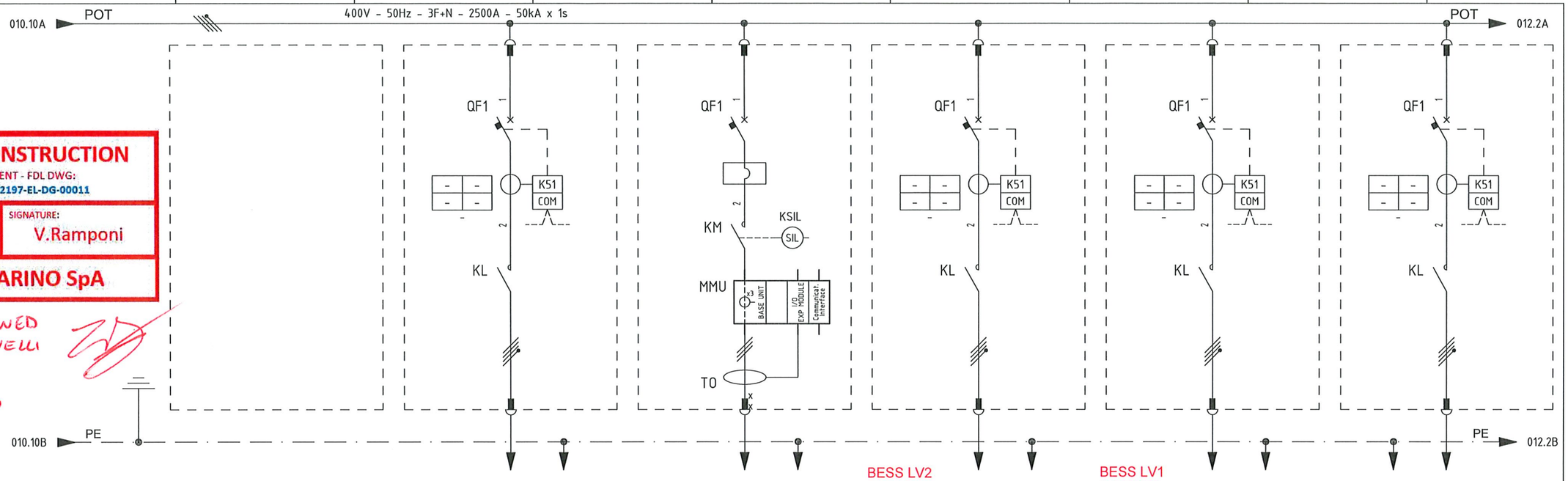
File Name : 1723002197-EL-DG-00011 Rev. 04

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		K-63001-B	PM-50001 B	BESS LV2 CABINET (+DISTR 2) ~~CP-850E1~~ CP-850E2 ~~BESS LV1 CABINET (+DISTR 1)~~	BESS LV1 CABINET (+DISTR 1) ~~CP-850E2~~ CP-850E1 ~~BESS LV2 CABINET (+DISTR 2)~~	-
UTILITY			2		INSTRUMENTS AIR PACKAGE 01B	SEA WATER PUMP B			SPARE
COLUMN/CUBICLE			3		A5 / +08	A6 / +01	A6 / +02	A6 / +03	A6 / +04
RATED POWER | RATED CURRENT			4/5		68.75 kW | 111.24 A	6.1 kW | 11.0 A	11.28 kW | 18.09 A	11.28 kW | 18.09 A	- kW | - A
TYPICAL FUNCTIONAL			6		LK2-160	M1-6	LK1-40	LK1-40	LK1-40
CIRCUIT BREAKER (ABB)	TYPE		7		XT4S - 250	XT2S - 160	XT2S - 160	XT2S - 160	XT2S - 160
	VERSION		8		4P - FIXED	3P - FIXED	4P - FIXED	4P - FIXED	4P - FIXED
	TRIP UNITS		9		EKIP HI TOUCH LSIG (In = 160A)	MA (In = 20A)	EKIP HI TOUCH LSIG (In = 40A)	EKIP HI TOUCH LSIG (In = 40A)	EKIP HI TOUCH LSIG (In = 40A)
	Icu	KA	10		50 kA	-	50 kA	50 kA	50 kA
OVERLOAD	L	Range A	11		(0.4 - 1) x In	-	(0.4 - 1) x In	(0.4 - 1) x In	(0.4 - 1) x In
		Range t	12		k/I^2	-	k/I^2	k/I^2	k/I^2
SEL. SHORT-CIRCUIT	S	Range A	13		(0.6 - 10) x In	-	(0.6 - 10) x In	(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
INST. SHORT-CIRCUIT	I	Range A	15		(1.5 - 15) x In	(6 - 14) x I	(1.5 - 15) x In	(1.5 - 15) x In	(1.5 - 15) x In
		Range t	16		instantaneous	<= 0.02 sec	instantaneous	instantaneous	instantaneous
EARTH FAULT PROTECTION	G	Range A	17		(0.1 - 1) x In	-	(0.1 - 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
CONTACTOR (ABB)			19		AF190-40-11-13 (275A-AC1); 100-250 VAC/DC	AF38-30-00-13 (18.5 kW - AC3) - 100-250Vac/dc	AF40-40-00-13 (70A-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		-	UMC100.3 UC (0.24 - 63A)	-	-	-
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		5G70	4G4	4 x (1 x 10)	4 x (1 x 10)	-

=
+

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

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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)

IMESA ELECTRICAL ENGINEERING
CROSSWIND
ROSETTI MARINO

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

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

A3
DRAWING NO. 1723002197-EL-DG-00011
SHEET 011
REV. 04

F.to UNI A3: 420mmx297mm

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

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

AUXILIARY
From Lighting & Small Power DB BOP DP 200N1
(Cubicle 33 Q41)
100-240V/N/PE~50/60Hz
back-up fuse gG10A 3G2.5mm2

LINE A
From LV Switchgear SG-200N1
(Cubicle A3/Q1)
Mains 400V;3/PE~50Hz
gG63A 4G35mm2

From LV Switchgear SG 200N1
(Cubicle A7/Q2)
Bypass mains 400V;3/PE~50Hz
gG63A 4G35mm2

LINE B
From LV Switchgear SG 200N1
(Cubicle A4/Q1)
Mains 400V;3/PE~50Hz
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
1000007883.020
10039757

-Q10 L=63/65A I=0,8kA Icu=50kA
-T8 400V/400V 40kVA
-X1 1U,1V,1W,PE
-X10 U,V,W,PE
-X13 U,N,PE
-X14 U,N
-A85
-H1

-Q28.1 NC
-Q28.2 NC

+UPS1
BC-200F3A
Protect 8.33 40-400-210-400
1000007883.010
10039756

+UPS2
BC-200F3B
Protect 8.33 40-400-210-400
1000007883.310
10039755

-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
-X3 INV CAN
-X5 INV Sync
-L11,-L12,-L13 Parallel preventive choke coil
-A12,-A13 Remote signaling
-A24.1 BLU PRO
-F91

-X1 2U,2V,2W,PE
-X4 1U,1V,1W,1N,PE
-X4 2U,2V,2W,2N,PE
-X1 4U,4V,4W,PE
-X1 3U,3V,3W,PE
-E1-X1 U,V,W,PE
-E4-X4 U,V,W,N,PE
-E2-X2 L-,L+,PE
-E3-X3 U,V,W,N,PE
-X15 2,3
-X130 1,2
-X5 1U,1V,1W,1N,PE
-X5 2U,2V,2W,2N,PE
-X2 3L+,3L-,PE
-X15 5,7
-X91 3M

-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 (8pc)
-QF43 B13A
-QF50 B10A
-QF51 B6A
-QF52 B6A
-X2 2L+,2L-,PE
-X15 4,5
-X91 2M
-X130 1,2,1PE
-X31 U,N,PE
-X32 U,N,PE
-X33 U,N,PE
-X34 U,N,PE
-X38 V,N,PE
-X39 V,N,PE
-X42 W,N,PE
-X43 W,N,PE
-X50 U,N,PE
-X51 V,N,PE
-X52 V,N,PE
-X2 4L+,4L-,PE
-X15 8,9
-X91 4M
-X130 3,4,2PE

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

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

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

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

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

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

AS-COMMISSIONED
DAVIDE ZUCCONELLI
NO MARK UP
21/03/2025

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

*2 Connection cables are not included.

1000007888_010

ROSETTI MARINO
Mohammed Bin Rashid Al Maktoum Port Farm
AEG
System 40 kVA
Single-line diagram
1000007888_310 en
A0

Section 3 CONSOLIDATED PUNCH LISTS

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air

SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000490	A	A-63000	ALL SOLENOIDS HAVE BEEN DISMANTLED FROM THE PACKAGE. SEND TO THE SUB-VENDOR TO BE CHECK. ALL SOLENOID		installed	SLinari 2024-10-29	SLinari 2024-12-18	SLinari 2024-12-18	2024-12-18
C30000496	A	A-63000	CABLING INSIDE CONTROL PANEL NOT REFLECT THE SPECIFICATIONS AND DWG IN TERM OF COLOUR CODING. SEE NCR		NCR CLOSED -	SLinari 2024-10-29	SLinari 2024-12-18	SLinari 2024-12-18	2024-12-18
C30000482	B	A-63000	Check if the set point be set to 9,5 since on the air receiver (63-PT-004) we have a pressure of 8,8 barg		done - max 10 - min 8barg	SLinari 2024-10-29	SLinari 2025-01-24	SLinari 2025-01-24	2025-01-24
C30000483	B	A-63000	Package to be test with PLC set to REMOTE MODE		tested	SLinari 2024-10-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000484	B	A-63000	necessary to set the operating logic to ensure that with a DEW POINT measured > -40°C, the DRYER in operation is exchanged with the		DONE	SLinari 2024-10-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000485	B	A-63000	TO BE IMPLEMENT: THE PRESSURE SWITCHES IN BAD QUALITY MUST BLOCK AIR DRYER (to be verify at yard)		VERIFIED - CLOSED	SLinari 2024-10-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000486	B	A-63000	TO BE IMPLEMENT: THE INTERVENTION TIME OF THE LIMIT SWITCHES (to be verify at yard)		DONE	SLinari 2024-10-29	SLinari 2025-01-24	SLinari 2025-01-24	2025-01-24
C30000487	B	A-63000	TO BE IMPLEMENTED: VALVE POSITION DISCREPANCY (to be verify at yard)		DONE	SLinari 2024-10-29	SLinari 2025-01-24	SLinari 2025-01-24	2025-01-24
C30000488	B	A-63000	VERIFY AND SET THE EXCHANGE OF THE COMPRESSORS WITH THE DUTY/STAND-BY CYCLE TIME. To be verify and to be tested		OTP DONE POINT CLOSED	SLinari 2024-10-29	Vendor 2025-03-19	SLinari 2025-03-19	2025-03-19

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air

SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000489	B	A-63000	TO BE VERIFY AND TEST THE CHANGE OVER COMPRESSOR K-63001A TO K-63001B		DONE	SLinari 2024-10-29	SLinari 2025-01-24	SLinari 2025-01-24	2025-01-24
C30000491	B	A-63000	THE RESET COMMAND TO PACKAGE MUST BE MANAGED BY ESD (CURRENTLY IT'S ON LOCAL PANEL). To be verify with engineering.		AFTER CHECK- RESET COMMAND NOT NECESSARY (SEE EMAIL	SLinari 2024-10-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000492	B	A-63000	MAX PRESSURE ON VALVE ACTUATORS = 8 BAR IS NOT CONGRUENT WITH OPERATING PRESSURE = 9 BAR.		DONE	SLinari 2024-10-29	SLinari 2025-01-24	SLinari 2025-01-24	2025-01-24
C30000493	B	A-63000	DUE TO THE RUSH TO CONCLUDE ALL TESTS WITHIN ONE DAY, AN EXTENSIVE AND COMPREHENSIVE ON-SITE TEST WILL BE		DONE	SLinari 2024-10-29	SLinari 2025-01-27	SLinari 2025-01-27	2025-01-27
C30000494	B	A-63000	TO BE UPDATED DWG N. 1724000428-MAG-DG-00009 - CORRECT RAL 9002		Re issued	SLinari 2024-10-29	Vendor 2025-03-19	SLinari 2025-03-19	2025-03-19
C30000495	B	A-63000	ALL HARDWIRED AND PROFINET SIGNALS STILL TO BE TESTED		ACTIVITY DONE	SLinari 2024-10-29	SLinari 2025-01-27	SLinari 2025-01-27	2025-01-27
C30000497	B	A-63000	MISSING LEAKAGE TEST REPORTS. To be repeated on site up to rated package pressure		done	SLinari 2024-10-29	SLinari 2025-01-30	SLinari 2025-01-30	2025-01-30
C30000498	B	A-63000	CONTINUITY AND MEGGER TEST REPORTS ARE MISSING. TO BE PROVIDE		done	SLinari 2024-10-29	SLinari 2025-01-30	SLinari 2025-01-30	2025-01-30
C30002432	B	A-63000 C10002354	One of the 10 baseplates for the anchor down points has not been installed on the upper deck structure. See Drawing and 3d excerpt attached	.		KAlbonetti 2025-01-07	2025-01-10	KAlbonetti 2025-01-10	2025-01-10

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air
SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002651	B	V-63001 C10004527	Manhole has not been opened. Internal inspection not completed.	.		KAlbonetti 2025-01-10	2025-03-06	LNovaga 2025-03-06	2025-03-06
C30002654	B	V-63001 C10004527	Valve BLPH-MV-820 installed in place of BLPH-MV-741.	.		KAlbonetti 2025-01-10	2025-01-15	LNovaga 2025-01-15	2025-01-15
C30002655	B	V-63001 C10004527	Item PIT-059 installed in place of the 63-PIT-064.	.		KAlbonetti 2025-01-10	2025-01-15	LNovaga 2025-01-15	2025-01-15
C30002656	B	V-63001 C10004527	For items TI053 and TIT052 the fasteners are bolts L7+nuts 2H but the instruments are in stainless steel. Replace fasteners or add an	.		KAlbonetti 2025-01-10	2025-03-18	LNovaga 2025-03-18	2025-03-18
C30002657	B	V-63001 C10004527	Anchor down system is different from the one marked in the GA drawing 1724000428-MAC-DD-00006. Item 45 has been	.		KAlbonetti 2025-01-10	2025-03-06	LNovaga 2025-03-06	2025-03-06
C30002658	B	V-63001 C10004527	In the GA 1724000428-MAC-DD-00006 ther is no earthing lug marked. In the field there is only one earthing lug instead of two. position has been	.		KAlbonetti 2025-01-10	2025-02-03	LNovaga 2025-02-03	2025-02-03
C30002659	B	V-63001 C10004527	BLPH-MV-740 has rust on the stem.	.		KAlbonetti 2025-01-10	2025-03-06	LNovaga 2025-03-06	2025-03-06
C30002660	B	V-63001 C10004527	the lever of the MBLPH-MV-738 shall be rotated of 180° because it clashes with the vessel body.	.		KAlbonetti 2025-01-10	2025-01-10	KAlbonetti 2025-01-10	2025-01-10
C30002661	B	V-63001 C10004527	BLPH-MV-742 has the lock nuts bended.	.		KAlbonetti 2025-01-10	2025-01-15	LNovaga 2025-01-15	2025-01-15

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air

SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002848	B	V-63001 C10004527	Minor damages to the painting due transportation and installation, also there is rust in the nameplate of the vessel.	.		KAlbonetti 2025-01-14	2025-04-11	LNovaga 2025-04-11	2025-04-11
C30002850	B	A-63000 C10002354	Minor damages to the painting due transportation and installation.	.		KAlbonetti 2025-01-14	2025-04-11	LNovaga 2025-04-11	2025-04-11
C30002853	B	A-63000 C10002354	In the Air package GA nameplate detail the operative temperature range is marked as "-10°C/+90°C" but on the nameplate mounted on	.		KAlbonetti 2025-01-15	2025-02-14	KAlbonetti 2025-02-14	2025-02-14
C30002854	B	A-63000 C10002354	One supporting plate (the one added to close PL C300024) is 10 mm thinner compared to the other.	.		KAlbonetti 2025-01-15	2025-03-06	LNovaga 2025-03-06	2025-03-06
C30002855	B	A-63000 C10002354	There is still part of the wooden crate used for transport fixed on the skid. See attachment for the location.	.		KAlbonetti 2025-01-15	2025-03-05	LNovaga 2025-03-05	2025-03-05
C30004328	B	A-63000	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 63 Instrument Air
SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001283	A	84311-CEL C10000587	Missing the earth connection between the terminal block (PE) and the earthing bar (PE). see 123A90-DDL-EL-DG-20149 sh.40 (SIDE	.		APolo 2024-12-04	2024-12-06	Gtangianu 2024-12-06	2024-12-06
C30001287	A	83110-CEL C10000629	Missing the earth connection between the terminal block (PE) and the earthing bar (PE). see 123A90-DDL-EL-DG-20149 sh.53 . side A-63000.	.		APolo 2024-12-04	2024-12-06	Gtangianu 2024-12-06	2024-12-06
C30001281	B	84311-CEL C10000587	Missing cable tag SIDE DP-200F3 / Panel A-6300	.		APolo 2024-12-04	2025-02-04	APolo 2025-02-04	2025-02-04
C30001282	B	84311-CEL C10000587	Missing cores identification tag. Cabinet side DP-200F3 / A-63000 . (see document 123A90-DDL-EL-DD-20092 sh.7-8)	.		APolo 2024-12-04	2025-02-15	AAndreani 2025-02-15	2025-02-15
C30001288	B	83110-CEL C10000629	Missing cable tag . side A-63000 / DP-200N1	.		APolo 2024-12-04	2025-02-03	APolo 2025-02-03	2025-02-03
C30001289	B	83110-CEL C10000629	Missing cores identification tag. side DP-200N1 / A-63000 . (see document 123A90-DDL-EL-DD-20092 sh.7-8)	.		APolo 2024-12-04	2025-02-19	AAndreani 2025-02-19	2025-02-19
C30001297	B	83017-CEL-1 C10000537	Cover of terminal block doesn't work properly. See attached photo.	.		Gtangianu 2024-12-04	2025-02-06	APolo 2025-02-06	2025-02-06
C30001298	B	83017-CEL-2 C10000538	Cover of terminal block doesn't work properly. See attached photo.	.		Gtangianu 2024-12-04	2025-02-06	APolo 2025-02-06	2025-02-06
C30001299	B	83017-CEL-2 C10000538	Identification tag wires missing both side the83017-CEL-2 .	.		Gtangianu 2024-12-04	2025-02-19	AAndreani 2025-02-19	2025-02-19

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air
SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001300	B	83017-CEL-1 C10000537	Identification tag wires missing both side the 83017-CEL-1 .	.		Gtangianu 2024-12-04	2025-02-19	AAndreani 2025-02-19	2025-02-19
C30001301	B	83017-CEL-2 C10000538	Missing cable tags inside and outside both panels (83017-CEL-2).	.		Gtangianu 2024-12-04	2025-02-04	Gtangianu 2025-02-04	2025-02-04
C30001302	B	83017-CEL-1 C10000537	Missing cable tags inside and outside both panels (83017-CEL-1).	.		Gtangianu 2024-12-04	2025-02-04	Gtangianu 2025-02-04	2025-02-04
C30001303	B	83017-CEL-1 C10000537	Cover of terminal block on grounding cable is missing. See attached photo.	.		Gtangianu 2024-12-04	2025-02-28	Ecarotenuto 2025-02-28	2025-02-28
C30001304	B	83017-CEL-2 C10000538	Cover of terminal block on grounding cable is missing. See attached photo.	.		Gtangianu 2024-12-04	2025-02-28	Ecarotenuto 2025-02-28	2025-02-28
C30001317	B	A-63000 C10002352	Earthing System is not as indicated by the Electrical Typical Installation Details document . see 123A90-DDL-EL-DD-20090 sh.3	.		APolo 2024-12-04	2025-01-23	APolo 2025-01-23	2025-01-23
C30001318	B	A-63000 C10002352	The cables are not adequately preserved. inside Skid	.		APolo 2024-12-04	2025-01-22	Ecarotenuto 2025-01-22	2025-01-22
C30001379	B	84311-CEL C10000587	The cable gland are not closed in accordance with specification.	.		APolo 2024-12-05	2025-02-25	JKrizanic 2025-02-25	2025-02-25

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air
SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003339	A	63-00-TP-059 C10003666	Missing earthing connection on earthing plate	.		AMancini 2025-01-30	2025-02-08	Ecarotenuto 2025-02-08	2025-02-08
C30003340	A	63-00-TP-059 C10003666	Flange management activity to be done on joint J1 (Connection to A-63000/A). Broken joint done by Commissioning	.		AMancini 2025-01-30	2025-03-20	LNovaga 2025-03-20	2025-03-20
C30000992	B	63-00-TP-059 C10003665	General final touch-up to do.	-		MBruschi 2024-11-28	2025-02-06	KAlbonetti 2025-02-06	2025-02-06
C30000993	B	63-00-TP-059 C10003665	Unmounted spool-A with its erection materials.	-		MBruschi 2024-11-28	2025-01-17	LNovaga 2025-01-17	2025-01-17
C30001053	B	63-00-TP-025 C10003421	All U-BOLTS S-211 not installed (refer to: ISO 123A90-FDL-PP-DI-00127-01 and 123A90-FDL-PP-DI-00127-02)	-		MBruschi 2024-11-29	2025-02-17	KAlbonetti 2025-02-17	2025-02-17
C30001054	B	63-00-TP-025 C10003421	Support PS-02075 (F1) is only tack welded (refer to: ISO 123A90-FDL-PP-DI-00127-01)	-		MBruschi 2024-11-29	2025-02-17	KAlbonetti 2025-02-17	2025-02-17
C30001055	B	63-00-TP-025 C10003421	Spool C is out level of 1,5° (refer to: ISO 123A90-FDL-PP-DI-00127-02)	-		MBruschi 2024-11-29	2025-02-17	KAlbonetti 2025-02-17	2025-02-17
C30001056	B	63-00-TP-025 C10003421	Support PS-02027 (F2) is out of level 1,1° (refer to: ISO 123A90-FDL-PP-DI-00127-02)	-		MBruschi 2024-11-29	2025-02-17	KAlbonetti 2025-02-17	2025-02-17
C30003464	B	63-00-TP-025 C10003422	The support "PS-02027" (F2) is out of level about 1.1°. Isometric 123A90-FDL-PP-DI-00127-01.	.		MBruschi 2025-02-03	2025-03-06	LNovaga 2025-03-06	2025-03-06

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air

SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003552	B	63-00-TP-025 C10003423	General touch up do to, especially near the supports of the piping line.	.		KAlbonetti 2025-02-05	2025-04-17	LNovaga 2025-04-17	2025-04-17
C30003553	B	63-00-TP-025 C10003423	Color coding and fluid direction are missing.	.		KAlbonetti 2025-02-05	2025-03-21	LNovaga 2025-03-21	2025-03-21
C30004256	B	63-00-TP-059 C10003667	Color coding and fluid direction are missing.	.	Colour code and fluid flow direction added.	LNovaga 2025-03-21	RDegliEsposti 2025-07-07	RDegliEsposti 2025-07-07	2025-07-07
C30004257	B	63-00-TP-059 C10003667	Missing the insulation pillow around the valve BLPH-MV-269 and joint 032-1J1.	.		LNovaga 2025-03-21	2025-04-04	LNovaga 2025-04-04	2025-04-04
C30004258	B	63-00-TP-059 C10003667	The drainage hole in the insulation is missing.	.		LNovaga 2025-03-21	2025-04-08	LNovaga 2025-04-08	2025-04-08

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air
SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Telecom

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000927	B	63-LP-001/B400-NET-001 C10004349	The copper conductor of the cable armor must be individually connected to the earthing bar - B400-NET-001. See 123A90-DDL-EL-DD-20090.	.		APolo 2024-11-26	2025-02-04	APolo 2025-02-04	2025-02-04
C30000928	B	63-LP-001/B400-NET-001 C10004349	Missing cable tag SS project, externally pannel A-630000.	.		APolo 2024-11-26	2025-01-02	Ecarotenuto 2025-01-02	2025-01-02
C30000929	B	63-LP-001/B400-NET-001 C10004349	Missing cable tag , cabinet input A-630000.	.		APolo 2024-11-26	2025-02-04	APolo 2025-02-04	2025-02-04
C30000957	B	63-LP-001/B400-NET-001 C10004349	The cable is not supported and fixed to the rack (outside panel)anel)	.		APolo 2024-11-27	2025-01-23	APolo 2025-01-23	2025-01-23
C30000961	B	63-LP-001/B400-NET-001 C10004349	Missing cable tag , cabinet input U-63000.	.		APolo 2024-11-27	2025-02-04	APolo 2025-02-04	2025-02-04

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air

SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001270	B	C-63-XA-003/B4 00-SIS-001 C10001458	Missing cable tag SS .	.		APolo 2024-12-04	2025-02-04	APolo 2025-02-04	2025-02-04
C30001271	B	C-63-XA-003/B4 00-SIS-001 C10001458	Missing cores identification tag. Cabinet side A-63000. (see document 123A90-DDL-EL-DD-20092 sh.7-8)	.		APolo 2024-12-04	2025-02-08	Gtangianu 2025-02-08	2025-02-08
C30001275	B	C-63-XS-001/B4 00-SIS-001 C10001451	Missing cores identification tag. Cabinet side B400-SIS-001 / JB A-63000 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-12-04	2025-02-08	Gtangianu 2025-02-08	2025-02-08
C30001276	B	C-63-XS-001/B4 00-SIS-001 C10001451	Missing cable tag SS . side A-63000	.		APolo 2024-12-04	2025-02-04	APolo 2025-02-04	2025-02-04
C30001319	B	A-63000 C10002353	Earthing System is not as indicated by the Electrical Typical Installation Details document . see 123A90-DDL-EL-DD-20090 sh.3	.		APolo 2024-12-04	2025-01-23	APolo 2025-01-23	2025-01-23
C30001320	B	A-63000 C10002353	The tubing are not adequately preserved. inside Skid	.		APolo 2024-12-04	2025-01-22	Ecarotenuto 2025-01-22	2025-01-22

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003464

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003422	1.4 Discipline	Piping
1.2 Item	63-00-TP-025	Test Pack 63-00-TP-025	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

The support "PS-02027" (F2) is out of level about 1.1°. Isometric 123A90-FDL-PP-DI-00127-01.

Name: Massimo Bruschi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Massimo Bruschi
3.4 Activity code	MC Mechanical Completion	Date	2025-02-03
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Accepted by Rosetti Marino.

Name: Lorenzo Novaga

Date: 2025-03-06

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003552

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003423	1.4 Discipline	Piping
1.2 Item	63-00-TP-025	Test Pack 63-00-TP-025	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

General touch up do to, especially near the supports of the piping line.

Name: Kangi Albonetti

Date: 2025-02-05

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-02-05
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date: 2025-04-17

Signature:

5 - CLEARANCE CHECK

Done

Name: Lorenzo Novaga

Date: 2025-04-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-04-17

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003553

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003423	1.4 Discipline	Piping
1.2 Item	63-00-TP-025	Test Pack 63-00-TP-025	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Color coding and fluid direction are missing.

Name: Kangi Albonetti

Date: 2025-02-05

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-02-05
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-03-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004256

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003667	1.4 Discipline	Piping
1.2 Item	63-00-TP-059	Test Pack 63-00-TP-059	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Color coding and fluid direction are missing.

Name: Lorenzo Novaga
Date: 2025-03-21
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-03-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Colour code and fluid flow direction added.

Name: Raffaele Degli Esposti
Date: 2025-07-07
Signature:

5 - CLEARANCE CHECK

VERIFIED - CLOSED

Name: Raffaele Degli Esposti
Date: 2025-07-07
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-07-08
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004257

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003667	1.4 Discipline	Piping
1.2 Item	63-00-TP-059	Test Pack 63-00-TP-059	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Missing the insulation pillow around the valve BLPH-MV-269 and joint 032-1J1.

Name: Lorenzo Novaga

Date: 2025-03-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-03-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Lorenzo Novaga

Date: 2025-04-04

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004258

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003667	1.4 Discipline	Piping
1.2 Item	63-00-TP-059	Test Pack 63-00-TP-059	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

The drainage hole in the insulation is missing.

Name: Lorenzo Novaga
Date: 2025-03-21
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-03-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date: 2025-04-08
Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga
Date: 2025-04-08
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-04-08
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004328

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-63000		Instrument Air Package
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

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

C30001288

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000629	1.4 Discipline	Electrical
1.2 Item	83110-CEL		Lighting & Small Power DB BoP / UCP - Instrument Air Package -A-63000 - Auxiliary
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

Missing cable tag . side A-63000 / DP-200N1

Name: Alessio Polo
Date: 2024-12-04
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	2024-12-04
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo
Date: 2025-02-03
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

C-63-PS-052
C-63-PS-064
C-63-ZSH-040
C-63-ZSL-040
C-63-XX-053


LIVE POWER
TTO TENSIONE
400 V

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001289

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000629	1.4 Discipline	Electrical
1.2 Item	83110-CEL		Lighting & Small Power DB BoP / UCP - Instrument Air Package -A-63000 - Auxiliary
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

Missing cores identification tag. side DP-200N1 / A-63000 . (see document 123A90-DDL-EL-DD-20092 sh.7-8)

Name: Alessio Polo
Date: 2024-12-04
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	2024-12-04
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani
Date: 2025-02-19
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

3
2
1
-XA
-X2
-X1


X1-93-N-83105-CEL
X1-94-L3-83106-CEL
X1-95-N-83106-CEL
X1-96-L2-83107-CEL
X1-97-N-83107-CEL
X1-98-L2-83108-CEL
X1-99-N-83108-CEL
X1-100-L2-83109-CEL
83113 CEL
122/X1/L/83119-CEL
123/X1/N/83119-CEL
124/X1/L/83120-CEL
125/X1/N/83120-CEL

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001297

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000537	1.4 Discipline	Electrical
1.2 Item	83017-CEL-1	LV Switchgear / Instrument Air Package	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Cover of terminal block doesn't work properly. See attached photo.

Name: Giovanni Tangianu
Date: 2024-12-04
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	2024-12-04
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo
Date: 2025-02-06
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

X0 - L2
X0 - L3
X0 - PE
X0 - L2

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001298

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000538	1.4 Discipline	Electrical
1.2 Item	83017-CEL-2	LV Switchgear / Instrument Air Package	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Cover of terminal block doesn't work properly. See attached photo.

Name: Giovanni Tangianu

Date: 2024-12-04

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	2024-12-04
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

VERIFIED - CLOSED

Name: Alessio Polo

Date: 2025-02-06

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

X0 - L2
X0 - L3
X0 - PE
X0 - L2

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001299

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000538	1.4 Discipline	Electrical
1.2 Item	83017-CEL-2	LV Switchgear / Instrument Air Package	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Identification tag wires missing both side the83017-CEL-2 .

Name: Giovanni Tangianu

Date: 2024-12-04

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	2024-12-04
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-19

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

X0 - L2
X0 - L3
X0 - PE
X0 - L2

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001300

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000537	1.4 Discipline	Electrical
1.2 Item	83017-CEL-1	LV Switchgear / Instrument Air Package	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Identification tag wires missing both side the 83017-CEL-1 .

Name: Giovanni Tangianu

Date: 2024-12-04

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	2024-12-04
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-19

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001301

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000538	1.4 Discipline	Electrical
1.2 Item	83017-CEL-2	LV Switchgear / Instrument Air Package	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Missing cable tags inside and outside both panels (83017-CEL-2).

Name: Giovanni Tangianu

Date: 2024-12-04

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	2024-12-04
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-04

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001302

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000537	1.4 Discipline	Electrical
1.2 Item	83017-CEL-1	LV Switchgear / Instrument Air Package	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Missing cable tags inside and outside both panels (83017-CEL-1).

Name: Giovanni Tangianu

Date: 2024-12-04

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	2024-12-04
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-04

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001303

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000537	1.4 Discipline	Electrical
1.2 Item	83017-CEL-1	LV Switchgear / Instrument Air Package	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Cover of terminal block on grounding cable is missing. See attached photo.

Name: Giovanni Tangianu
Date: 2024-12-04
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	2024-12-04
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Not required by Vendor

Name: Eleonora Carotenuto
Date: 2025-02-28
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

X0 - L2
X0 - L3
X0 - PE
X0 - L2

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001304

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000538	1.4 Discipline	Electrical
1.2 Item	83017-CEL-2	LV Switchgear / Instrument Air Package	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Cover of terminal block on grounding cable is missing. See attached photo.

Name: Giovanni Tangianu
Date: 2024-12-04
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	2024-12-04
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Not required by Vendor

Name: Eleonora Carotenuto
Date: 2025-02-28
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

X0 - L2
X0 - L3
X0 - PE
X0 - L2

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001317

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002352	1.4 Discipline	Electrical
1.2 Item	A-63000	Instrument Air Package	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Earthing System is not as indicated by the Electrical Typical Installation Details document . see 123A90-DDL-EL-DD-20090 sh.3

Name: Alessio Polo
Date: 2024-12-04
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	2024-12-04
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo
Date: 2025-01-23
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001318

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002352	1.4 Discipline	Electrical
1.2 Item	A-63000	Instrument Air Package	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

The cables are not adequately preserved. inside Skid

Name: Alessio Polo

Date: 2024-12-04

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	2024-12-04
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Eleonora Carotenuto

Date: 2025-01-22

Signature:

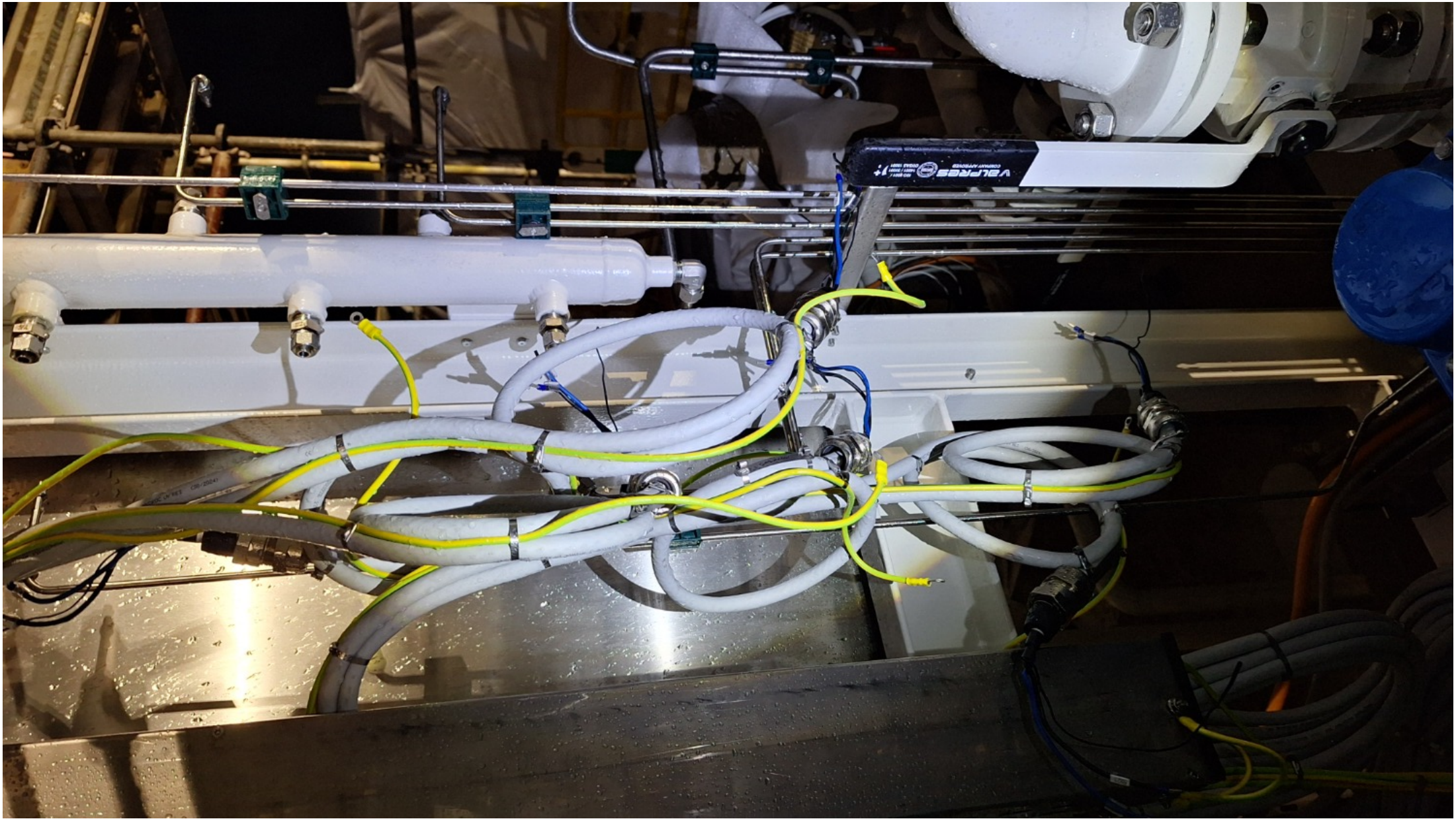
6- CLEARANCE APPROVAL

Name:

Date:

Signature:





ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001319

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002353	1.4 Discipline	Instrumental
1.2 Item	A-63000	Instrument Air Package	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Earthing System is not as indicated by the Electrical Typical Installation Details document . see 123A90-DDL-EL-DD-20090 sh.3

Name: Alessio Polo
Date: 2024-12-04
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	2024-12-04
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo
Date: 2025-01-23
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001320

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002353	1.4 Discipline	Instrumental
1.2 Item	A-63000	Instrument Air Package	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

The tubing are not adequately preserved. inside Skid

Name: Alessio Polo
Date: 2024-12-04
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	2024-12-04
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Eleonora Carotenuto
Date: 2025-01-22
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001379

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000587	1.4 Discipline	Electrical
1.2 Item	84311-CEL		AC UPS - PAS DB / UCP - Instrument Air Package A-63000
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

The cable gland are not closed in accordance with specification.

Name: Alessio Polo
Date: 2024-12-05
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	2024-12-05
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic
Date: 2025-02-25
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


84312-CEL
84311-CEL
8431 4-CEL
8431 8-CEL

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002432

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002354	1.4 Discipline	Mechanical
1.2 Item	A-63000	Instrument Air Package	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

One of the 10 baseplates for the anchor down points has not been installed on the upper deck structure. See Drawing and 3d excerpt attached for its position.

Name: Kangi Albonetti
Date: 2025-01-07
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

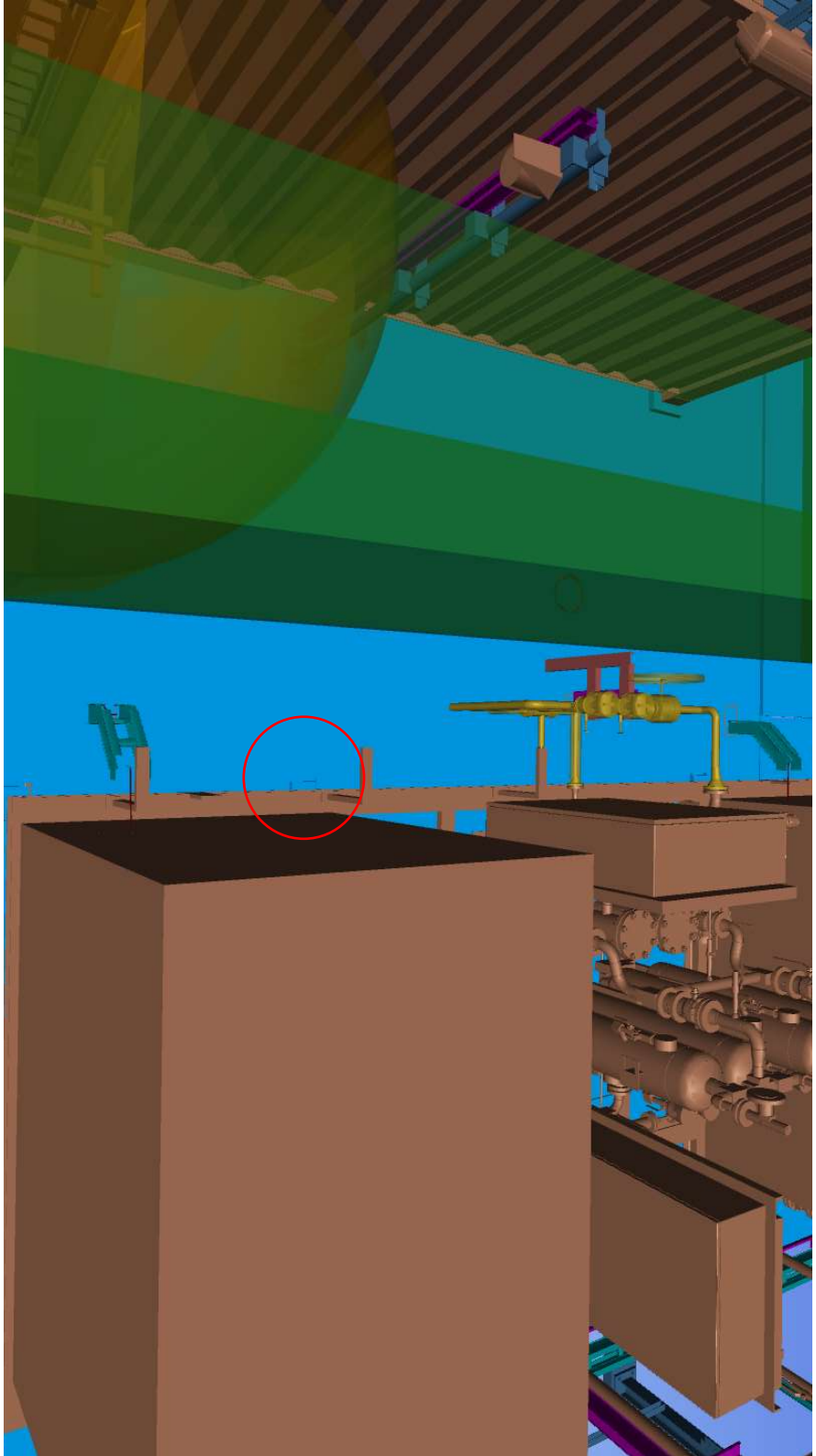
5 - CLEARANCE CHECK

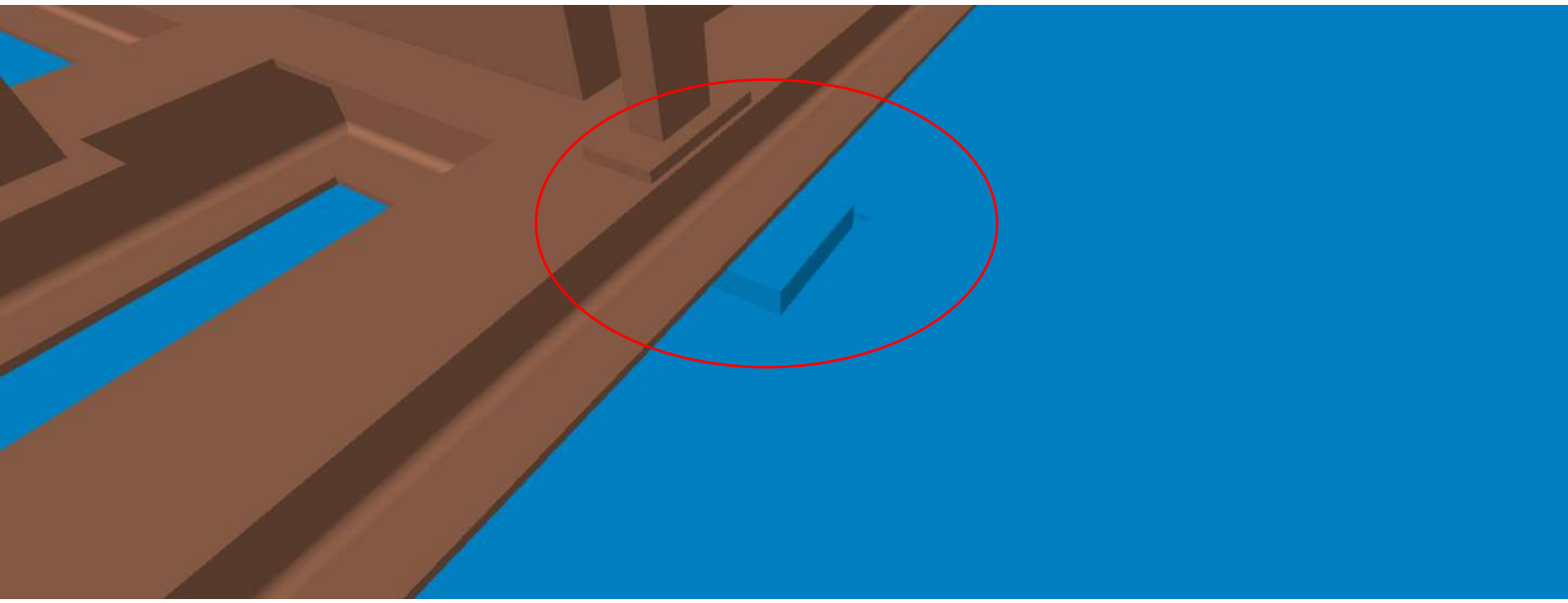
A plate has been drilled, added underneath and bolted to the skid (but not welded to the structure).

Name: Kangi Albonetti
Date: 2025-01-16
Signature:

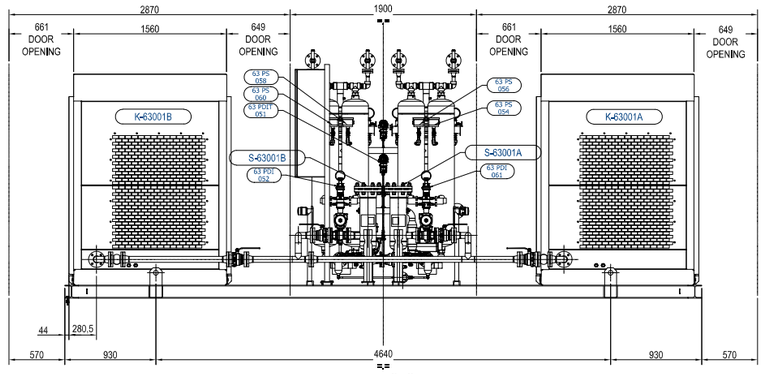
6- CLEARANCE APPROVAL

Name:
Date:
Signature:

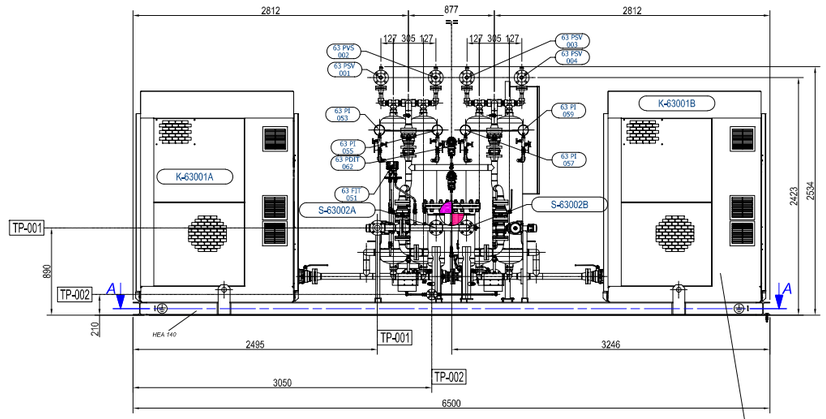




DRAWING NO. 1724000428-MAC-DA-00005 REV. 02



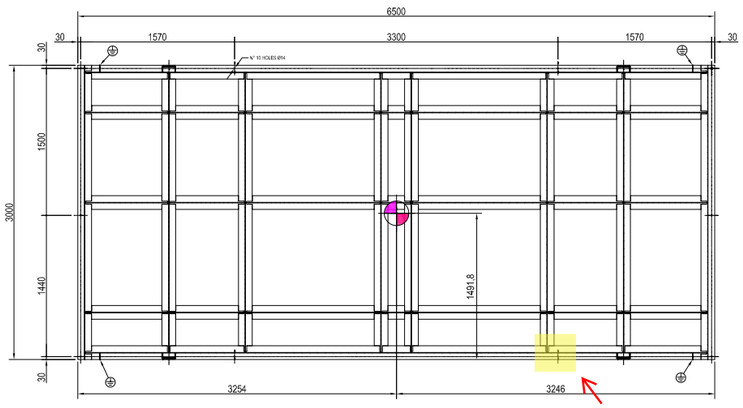
VIEW FROM "C"



VIEW FROM "A"

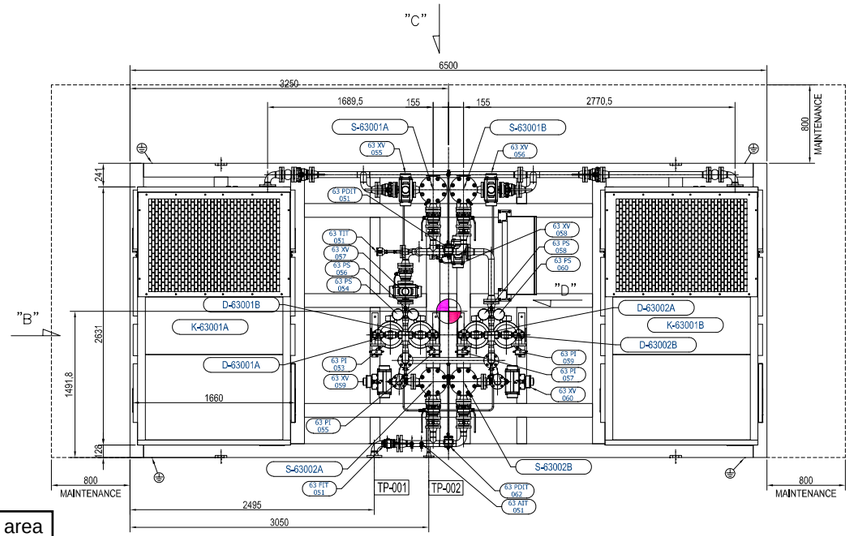
CABLE ENTRY SUITABLE FOR POWER CABLES 5G70sqmm

POWER SUPPLY 400V-3PH-50HZ COMPRESSOR POWER SUPPLY

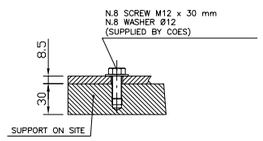


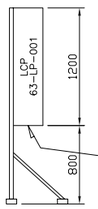
SECTION A-A (1 : 25)

missing plate underneath highlighted area



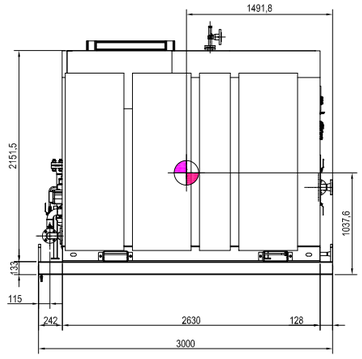
"A"





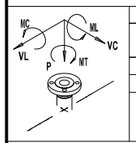
GLAND PLATE CABLE ENTRY SUITABLE
POWER SUPPLY 230V (UPS)
POWER SUPPLY 230V (Normal)
LOCAL CONTROL PANEL POWER SUPPLY

VIEW FROM "D"



VIEW FROM "B"

FOUNDATION LOADS TABLE			
	LIFTING	EMPTY	OPERATION
VERTICAL (kN)	10.8	10.8	10.8
SHEAR Y (kN)	0	0	0
SHEAR X (kN)	0	0	0
MOMENT Y (kNm)	0	0	0
MOMENT X (kNm)	0	0	0



MAX ALLOWABLE LOADS AT B,L, CONNECTIONS							
	FORCES [kN]			MOMENTS [kNm]		
	VL	P	VC	MC	MT	ML
A	1,8	1,5	1,8	0,3	0,4	0,2
B	2	2	2	0,8	0,8	0,8

TAG NUMBER OF EQUIPMENTS	
TAG	DESCRIPTION
K-63001A/B	OIL FREE SCREW COMPRESSOR 1&2
S-63001A/B	DRYER PRE-FILTER
D-63001A/B	DRYER UNIT 1
D-63002A/B	DRYER UNIT 2
S-63002A/B	DRYER AFTER-FILTER
V-63001	INSTRUMENT AIR RECEIVER

NAMEPLATE "COES"

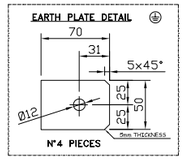
MANUFACTURER	COES SRL - STEZZANO (BG)		
SERVICE	INSTRUMENT AIR PACKAGE		
YEAR	2024	SERIAL NUMBER	*****
WEIGHT	11000 kg	ITEM	A-63000
PRESSURE	12 barg	TEMPERATURE	-10°C / 90°C

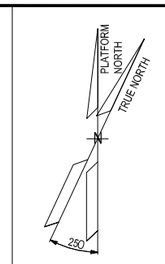
CE 0425 2014/68/UE - Cat.III

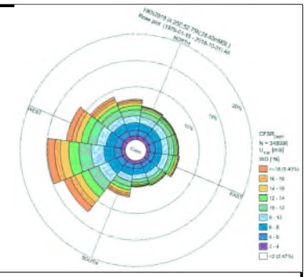
CONNECTIONS			
POS.	TYPE	SERVICE	MATERIAL
A	ø 1" ANSI 150# R.F.	DRAIN DISCHARGE	SS 316/316L
B	ø 2" ANSI 150# R.F.	INSTRUMENT AIR OUTLET	SS 316/316L

TOTAL WEIGHT : 11.000 kg

EARTH PLATE DETAIL







NOTES

1. SKID TOTAL WEIGHT: 5000 kg
2. FOR EQUIPMENT WEIGHT REFER TO EQUIPMENT DS, DOC. NO. 1724000428-MAC-DS-00011
3. FOR DESIGN PARAMETERS & CODES REFER TO EQUIPMENT DS, DOC. NO. 1724000428-MAC-DS-00011
4. FOR WELDING DETAILS REFER TO WELDING SPECIFICATION, DOC. NO. 1724000428-WEL-LIS-00021
5. FOR PAINTING DETAILS REFER TO PAINTING SPECIFICATION, DOC. NO. 1724000428-MAT-PRO-00022
6. NO LUBRICATION REQUIRED
7. FOR LOAD DETAILS REFER TO STRUCTURAL CALCULATION, DOC. NO. 1724000428-ST-RE-00010

LEGEND

HOLDS

N

coes

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	06/08/24	GT	MC	TM	ISSUE FOR REVIEW (IFR)
01	08/05/24	GT	MC	TM	ISSUE FOR REVIEW (IFR)
00	21/03/24	GT	MC	TM	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
PACKAGE GENERAL ARRANGEMENT
INSTRUMENT AIR PACKAGE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE N/A
DRAWN GT	CHECKED MC	APPROVED TM	DATE 06/08/24
A1	DRAWING NO. 1724000428-MAC-DA-00005	SHEET 001	REV. 02

File Name : 1724000428-MAC-DA-00005

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002651

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004527	1.4 Discipline	Mechanical
1.2 Item	V-63001	Air Receiver	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Manhole has not been opened. Internal inspection not completed.

Name: Kangi Albonetti
Date: 2025-01-10
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-10
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Accepted by Rosetti Marino.

Name: Lorenzo Novaga
Date: 2025-03-06
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002654

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004527	1.4 Discipline	Mechanical
1.2 Item	V-63001	Air Receiver	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Valve BLPH-MV-820 installed in place of BLPH-MV-741.

Name: Kangi Albonetti

Date: 2025-01-10

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-10
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-01-15

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002655

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004527	1.4 Discipline	Mechanical
1.2 Item	V-63001	Air Receiver	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Item PIT-059 installed in place of the 63-PIT-064.

Name: Kangi Albonetti

Date: 2025-01-10

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-10
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-01-15

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002656

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004527	1.4 Discipline	Mechanical
1.2 Item	V-63001	Air Receiver	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

For items TI053 and TIT052 the fasteners are bolts L7+nuts 2H but the instruments are in stainless steel. Replace fasteners or add an insulation kit.

Name: Kangi Albonetti
Date: 2025-01-10
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-10
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

5 - CLEARANCE CHECK

The installation is accepted by ENG dpt as it.

Name: Lorenzo Novaga
Date: 2025-03-18
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002657

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004527	1.4 Discipline	Mechanical
1.2 Item	V-63001	Air Receiver	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Anchor down system is different from the one marked in the GA drawing 1724000428-MAC-DD-00006. Item 45 has been substituted by M33x65 and there is no item 47 because the assembly is "blind bottom hole" type.

Name: Kangi Albonetti

Date: 2025-01-10

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-10
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Accepted by Rosetti Marino.

Name: Lorenzo Novaga

Date: 2025-03-06

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002658

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004527	1.4 Discipline	Mechanical
1.2 Item	V-63001	Air Receiver	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

In the GA 1724000428-MAC-DD-00006 ther is no earthing lug marked. In the field there is only one earthing lug instead of two. position has been marked in attached dwg.

Name: Kangi Albonetti

Date: 2025-01-10

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-10
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Activity done, see attached dwg.

Name: Lorenzo Novaga

Date: 2025-02-03

Signature:

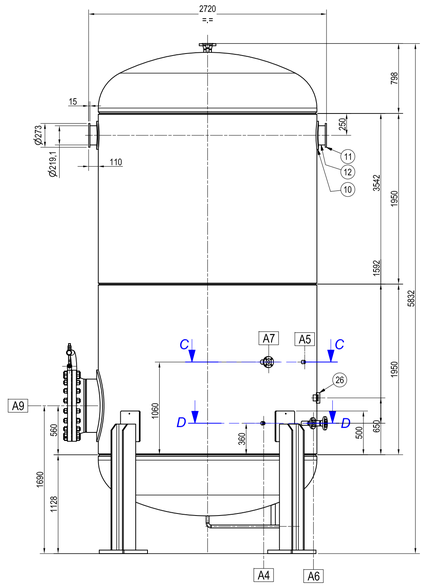
6- CLEARANCE APPROVAL

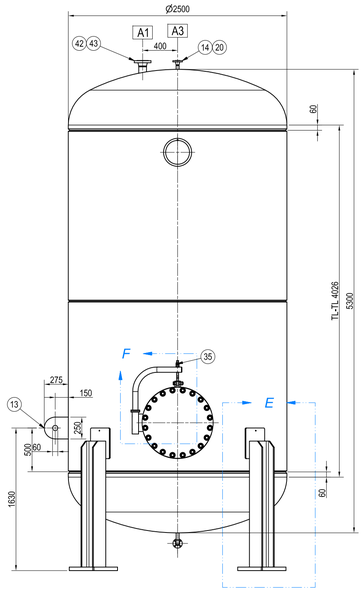
Name:

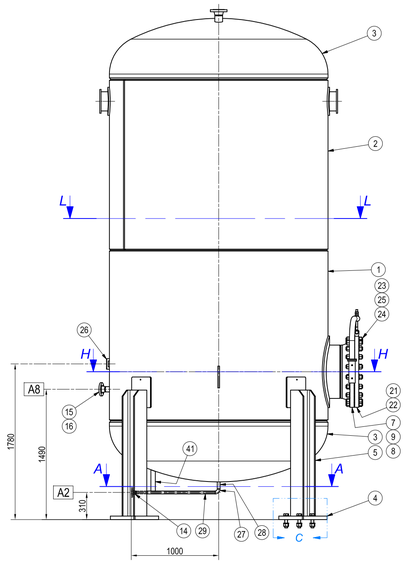
Date:

Signature:

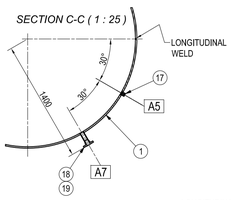
DRAWING NO. 1724000428-MAC-DD-00006 REV. 03

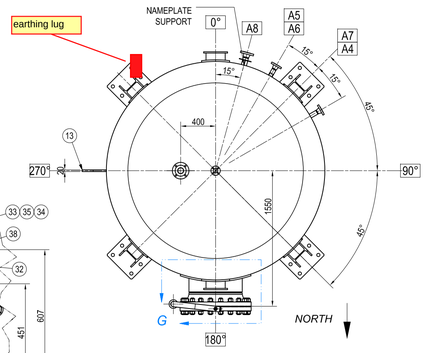




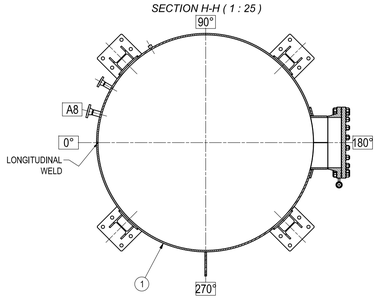


SECTION C-C (1 : 25)

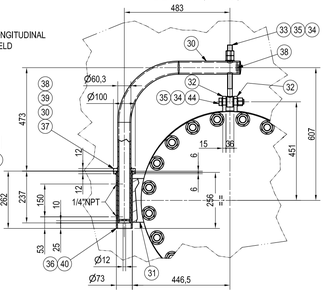




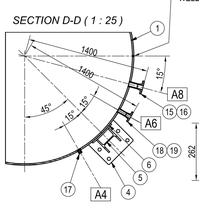
SECTION H-H (1 : 25)



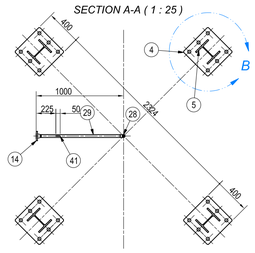
DETAIL F (1 : 10)



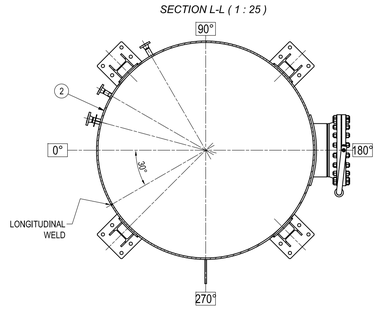
SECTION D-D (1 : 25)



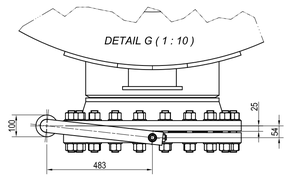
SECTION A-A (1 : 25)



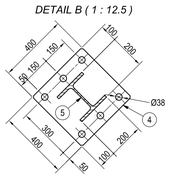
SECTION L-L (1 : 25)



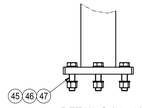
DETAIL G (1 : 10)



DETAIL B (1 : 12.5)



DETAIL C (1 : 10)



NAMEPLATE DETAIL

MANUFACTURER	COES SRL - STEZZANO (BG)
EQUIPMENT	AIR RECEIVER V-63001
SERIAL NUMBER	S240119 YEAR 2024
DESIGN CODE	ASME VIII Div. 1 Ed. 2021 / PED 2014/68/UE
CONFORMITY	Category IV
FLUID	AIR
DESIGN PRESSURE	12 barg
DESIGN TEMPERATURE	-29 / + 90°C
TEST PRESSURE	17.2 barg
CORROSION ALLOWANCE	1.5 mm
WEIGHT	7450 kg
VOLUME	23100 l

CE 0425

ELENCO PARTI / BILL OF MATERIAL

POS	QTY	DESCRIPTION	MATERIAL	WGT	TEST	COD. COES
1	1	SHELL ø2500 Thk. 18 L=1950 (Manhole 24" side)	SA 516 Gr.70	2096,5	B	L3714
2	1	SHELL ø2500 Thk. 18 L=1950	SA 516 Gr.70	2138,5	B	L3715
3	2	ELL. HEAD ø/2464 Thk. 18mm (Thk. 15.3mm min.)	SA 516 Gr.70	2053,1	B	L3728
4	4	PLATE 400x400 thk=40 - N° 6 holes Ø38	SA 516 Gr.70	192,7	C	L3998
5	5760,000 mm	PROFILE HEB 200 L=1440	S 355 J2	351,6	C	F7552
6	4	PAD 350x300 thk=15	SA 516 Gr.70	49,9	B	L3999
7	1	FLANGE W.N.24" Sch. 40 150# RF	SA 350 Gr. LF2 Cl.1	135,9	B	H5869
8	1	PAD thk=18 for Man Hole 24"	SA 516 Gr.70	32,2	B	L3729
9	1	SHELL ø/e610 Thk. 18 L=200	SA 516 Gr.70	45,6	B	L3730
10	2	PAD Øe=320 Øi=222 thk=18 for Trunnion	SA 516 Gr.70	11,8	B	L4000
11	2	DISK Ø273 thk=15	SA 516 Gr.70	13,8	C	D2222
12	200,000 mm	PIPE SMLSS 8 Sch.80	SA 333 Gr. 6	12,6	C	D9560
13	1	LIFTING LUG A=250 E=150 HOLE Ø60 THK=20	SA 516 Gr.70	9,3	B	L3717
14	2	FLANGE W.N.1" Sch. XXS 150# RF	SA 350 Gr. LF2 Cl.1	2,6	B	L3726
15	1	FLANGE W.N.2" Sch. 160 150# RF	SA 350 Gr. LF2 Cl.1	3,1	B	F7664
16	100,000 mm	PIPE SMLSS 2 Sch.160	SA 333 Gr. 6	1,1	B	C1399
17	2	COUPLING 1/2" NPT-F 6000#	SA 350 Gr. LF2 Cl.1	0,7	B	K1337
18	2	FLANGE W.N.1 1/2" Sch. 160 150# RF	SA 350 Gr. LF2 Cl.1	4,1	B	K1808
19	200,000 mm	PIPE SMLSS 1 1/2 Sch.160	SA 333 Gr. 6	1,4	B	H0405
20	65,000 mm	PIPE SMLSS 1 Sch.XXS	SA 333 Gr. 6	0,4	B	D9604
21	1	GKT SPIRAL WOUND 24" 150# Thk. 4.5mm	316L+GRAPHITE	4,7	C	C3128
22	1	FLANGE BLIND B16.5 24" 150# RF	SA 350 Gr. LF2 Cl.1	184,8	B	F1221
23	40	WASHER 1 1/4	C.S.	2,9	C	C6198
24	20	STUD-BOLT 1.1/4" UN x 190	SA 320 Gr.L7	23,7	B	L4002
25	40	NUT 1 1/4 UN	SA 194 Gr.7	13,2	B	J2834
26	1	SUPPORT NAMEPLATE 140x120 Thk.4mm	SA 516 Gr.70	0,5	B	E4247
27	1	ELBOW L.R. 90° 1" Sch. XXS	SA 420 WPL6	0,3	B	D9605
28	98,675 mm	PIPE SMLSS 1 Sch.XXS	SA 333 Gr. 6	0,5	B	D9604
29	902,528 mm	PIPE SMLSS 1 Sch.XXS	SA 333 Gr. 6	4,9	B	D9604
30	1	BENDING PIPE SMLSS 2" SCH. 40 L=1130 (DAVIT 24" 150#)	SA 333 Gr. 6	8,5	C	L4020
31	1	PLATE 200x52.5 thk=18 (DAVIT 24" 150#)	SA 516 Gr.70	1,3	B	L4001
32	2	PLATE 50x70 Thk. 15 mm FOR DAVIT 24"	SA 516 Gr.70	0,7	B	L4230
33	1	LIFTING EYE M22x260	SA 350 Gr. LF2 Cl.1	1	C	L4375
34	3	WASHER A 22	C 40	0,1	C	3393
35	3	NUT M22 UNI 5587	SA 194 Gr.7	0,3	C	L1368
36	1	ROD Øe=100 Øi=74 Thk=12	SA 516 Gr.70	0,3	C	L4016
37	1	ROD Øe=100 Øi=61 Thk=12	SA 516 Gr.70	0,5	C	L4376
38	1	DISK Øe=48 thk=6	SA 516 Gr.70	0,1	C	L4377
39	1	DISK Øe=48 Øi=12 thk=6	SA 516 Gr.70	0,1	C	L4378
40	256,000 mm	PIPE SMLSS 2 1/2 Sch.40 L=256	SA 333 Gr. 6	2,2	C	G6831
41	242,500 mm	PLATE 50x6 L=242,5	SA 516 Gr.70	0,6	B	L4380
42	90,000 mm	PIPE SMLSS 3 Sch.160	SA 333 Gr. 6	1,9	B	F8721
43	1	FLANGE W.N.3" Sch. 160 150# RF	SA 350 Gr. LF2 Cl.1	5,8	B	F7680
44	1	SCREW - M22 x 100 - UNI 5739	SA 320 Gr.L7	0,4	C	L0436
45	24	SCREW - M33 x 140 - UNI 5739	Cl. 8.8	1,9	C	L6140
46	48	WASHER A 33	C 40	5,8	C	F2511
47	24	NUT M33 UNI 5587	Cl. 8	0,4	C	L6139

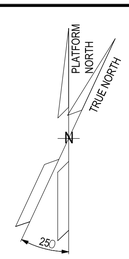
MATERIAL TEST SYMB. (according to EN 10204)

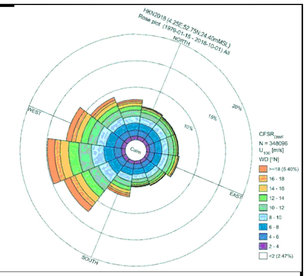
A	Tested material (3.2)
B	Material with certificate of manufacturer (3.1)
C	Material without certificate
D	Material with certificate of manufacturer (2.2)

POS	DESCRIPTION	PIPE CONN.
A1	PSV	WN 3" 150# RF SCH. 160
A2	DRAIN	WN 1" 150# RF SCH. XXS
A3	VENT	WN 1" 150# RF SCH. XXS
A4	PRESSURE GAUGE PG	COUPLING 1/2" NPTF 6000#
A5	PRESSURE TRANSMITTER PT	COUPLING 1/2" NPTF 6000#
A6	TEMPERATURE GAUGE TG	WN 1.1/2" 150# RF SCH. 160
A7	TEMPERATURE TRANSMITTER TT	WN 1.1/2" 150# RF SCH. 160
A8	IN/OUT	WN 2" 150# RF SCH. 160
A9	MAN HOLE	WN 24" 150# RF SCH. 40

DESIGN DATA

Code	Applicable codes and standards		ASME VIII Div.1 Ed. 2021 / PED 2014/68/EU		
	Third party		ICIM GROUP		
	STAMP		No		
	NATIONAL BOARD		No		
	CRN REGISTRATION		N.A.		
Pressure	Design pressure internal		12	barg	
	Working pressure		9	barg	
	Hydrotest pressure vertical		17,2	barg	
	Hydrotest pressure horizontal		N.A.	barg	
	Static head in design		0,6	barg	
	MAWP		14,14	barg	at temperature of 90 °C
Temperat.	Design temperature		90	°C	
	Working temperature		35	°C	
	M.D.M.T. @ MAWP		-29	°C	
	Test temperature min.		10	°C	
Miscellaneous	Corrosion allowance		1,5	mm	
	Out of roundness		1%		
	Insulation		-	mm	
	Capacity		23100,0	ℓ	
	Tollerance on thickness	Plates	0.25 (>4); 6% (<=4)	mm	
		Pipes	-12.5	%	
		Forgings	=0/1	mm	
Fluid	Nature		AIR		
	Physical state		GAS		Group 2
	Specific weight		1,29	kg/Nm³	
Weldings	Joint efficiency (E)		0.85		
	Rad. Cat/class		RT 3		
	Test Coupons		NO		
	Radiographic Examination		SPOT	note:	
Heat treatement and testing	Head assembly in 1 piece		N.A.		
	Heat treatment		NO	note:	
	Liquid penetrant Examination (PT)		YES	note:	
	Ultrasonic Examination (UT)		NO	note:	
	Impact test		NO	note:	Exempt Para. UCS-66 / YES PED 2014/68/EU Annex 1
	External Finishing		According to Coating Specification no. 1724000428-MAT-PRO-00022		
	Internal Finishing		According to Coating Specification no. 1724000428-MAT-PRO-00022		
Ext. Loads	Wind		YES	note:	Project Spec. 123A90-DDL-ST-SP-90017
	Seismic		YES	note:	Project Spec. 123A90-DDL-ST-SP-90017
Weight	Empty		7450,0	kg	
	Hydrotest condition		30550,0	kg	





NOTES

NOTE:

1. QUANTITIES IN MATERIAL LIST FOR No. 1 VESSEL.
2. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED.
3. ALL THICKNESSES SHOWN ARE MINIMUM AFTER FORMING.
4. TOLERANCE OF VESSELS: ACCORDING TO COES PROCEDURE CTP03684 Rev.2
5. FLANGES DRILLED HOLES SHALL STRADDLE MAIN CENTER AXIS OF VESSEL.
6. FLANGES FACE FINISHING: 125-250 AARH.
   FLANGES AND BLIND FLANGES <= 24" ACC TO ASME B16.5 (2020).
7. VENT HOLES ON REINF. PAD: 1/4" NPT/F EACH PAD OR SEGMENT
   PERFORM TEST AT 1 bar(g) WITH AIR AND SOAPY SOLUTION.
8. ALL NOZZLES WITHOUT INTERNAL PROJECTION, TO BE FLUSHED WITH INSIDE SURFACE OF THE VESSEL. THE INSIDE EDGE OF ALL NOZZLES TO BE ROUNDED.
9. FOR WELDING DETAILS REFER TO THE RELATED WELDING BOOK, DOCUMENT NO. 1724000428-WEL-LIS-00021.
10. BUTTWELDING FITTINGS ACCORDING TO ASME B16.9 (2018)
11. THREADED FITTINGS ACCORDING TO ASME B16.11 (2021)
12. QUANTITY 1: SEE ORIENTATION PLAN.

LEGEND

HOLDS

coes

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	02/01/25	STC	GT	TM	ISSUE FOR INFORMATION (IFI)
02	07/10/24	STC	GT	TM	ISSUE FOR INFORMATION (IFI)
01	05/07/24	STC	GT	TM	ISSUE FOR INFORMATION (IFI)
00	29/05/24	STC	GT	TM	ISSUE FOR INFORMATION (IFI)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
EQUIPMENT SECTIONAL DRAWING WITH BILL OF MATERIAL
INSTRUMENT AIR RECEIVER V-63000

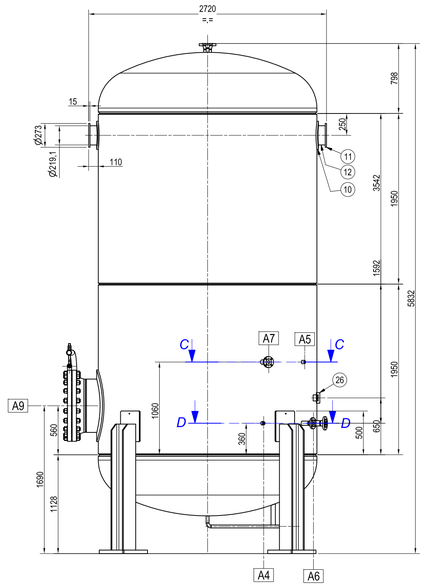
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:35

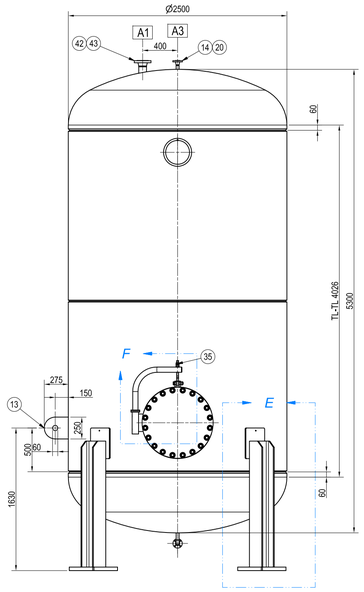
DRAWN STC | CHECKED GT | APPROVED TM | DATE 02/01/2025

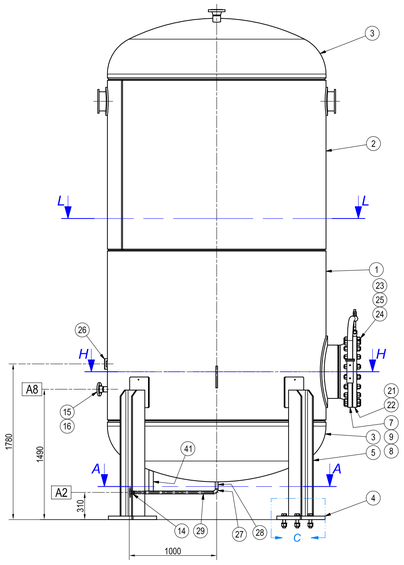
A1 | DRAWING NO. 1724000428-MAC-DD-00006 | SHEET 001 | REV. 03

File Name : 1724000428-MAC-DD-00006

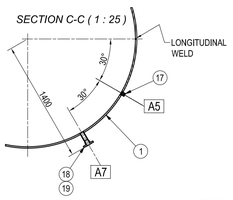
DRAWING NO. 1724000428-MAC-DD-00006 REV. 03







SECTION H-H (1 : 25)



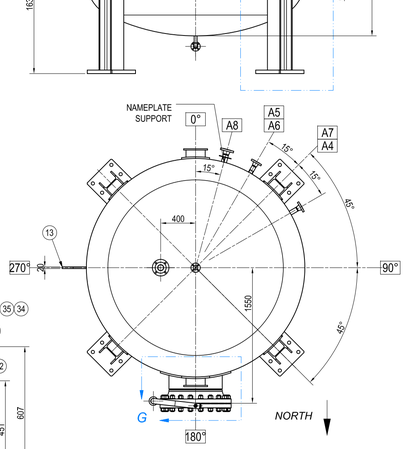
SECTION C-C (1 : 25)

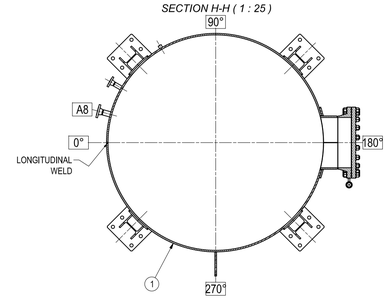
SECTION D-D (1 : 25)

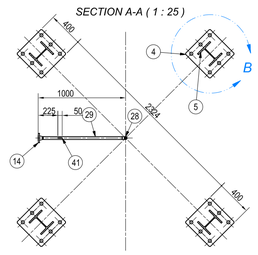
DETAIL F (1 : 10)

DETAIL G (1 : 10)

DETAIL B (1 : 12.5)

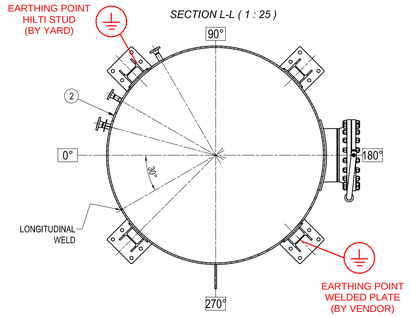




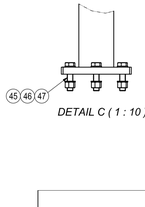


SECTION A-A (1 : 25)

EARTHING POINT HILTI STUD (BY YARD)



SECTION L-L (1 : 25)



DETAIL C (1 : 10)

NAMEPLATE DETAIL

MANUFACTURER	COES SRL - STEZZANO (BG)
EQUIPMENT	AIR RECEIVER V-63001
SERIAL NUMBER	S240119 YEAR 2024
DESIGN CODE	ASME VIII Div. 1 Ed. 2021 / PED 2014/68/UE
CONFORMITY	Category IV
FLUID	AIR
DESIGN PRESSURE	12 barg
DESIGN TEMPERATURE	-29 / + 90°C
TEST PRESSURE	17.2 barg
CORROSION ALLOWANCE	1.5 mm
WEIGHT	7450 kg
VOLUME	23100 l

CE 0425

VALID FOR CONSTRUCTION

VENDOR DOCUMENT - FDL DWG:
123A90-FDL-1724000428-MAC-DD-00006

REV.:	DATE:	SIGNATURE:
3_A	31/01/25	G.Randi

ROSETTI MARINO SpA

ELENCO PARTI / BILL OF MATERIAL

POS	QTY	DESCRIPTION	MATERIAL	WGT	TEST	COD. COES
1	1	SHELL ø2500 Thk. 18 L=1950 (Manhole 24" side)	SA 516 Gr.70	2096,5	B	L3714
2	1	SHELL ø2500 Thk. 18 L=1950	SA 516 Gr.70	2138,5	B	L3715
3	2	ELL. HEAD ø/2464 Thk. 18mm (Thk. 15.3mm min.)	SA 516 Gr.70	2053,1	B	L3728
4	4	PLATE 400x400 thk=40 - N° 6 holes Ø38	SA 516 Gr.70	192,7	C	L3998
5	5760,000 mm	PROFILE HEB 200 L=1440	S 355 J2	351,6	C	F7552
6	4	PAD 350x300 thk=15	SA 516 Gr.70	49,9	B	L3999
7	1	FLANGE W.N.24" Sch. 40 150# RF	SA 350 Gr. LF2 Cl.1	135,9	B	H5869
8	1	PAD thk=18 for Man Hole 24"	SA 516 Gr.70	32,2	B	L3729
9	1	SHELL øe610 Thk. 18 L=200	SA 516 Gr.70	45,6	B	L3730
10	2	PAD Øe=320 Øi=222 thk=18 for Trunnion	SA 516 Gr.70	11,8	B	L4000
11	2	DISK Ø273 thk=15	SA 516 Gr.70	13,8	C	D2222
12	200,000 mm	PIPE SMLSS 8 Sch.80	SA 333 Gr. 6	12,6	C	D9560
13	1	LIFTING LUG A=250 E=150 HOLE Ø60 THK=20	SA 516 Gr.70	9,3	B	L3717
14	2	FLANGE W.N.1" Sch. XXS 150# RF	SA 350 Gr. LF2 Cl.1	2,6	B	L3726
15	1	FLANGE W.N.2" Sch. 160 150# RF	SA 350 Gr. LF2 Cl.1	3,1	B	F7664
16	100,000 mm	PIPE SMLSS 2 Sch.160	SA 333 Gr. 6	1,1	B	C1399
17	2	COUPLING 1/2" NPT-F 6000#	SA 350 Gr. LF2 Cl.1	0,7	B	K1337
18	2	FLANGE W.N.1 1/2" Sch. 160 150# RF	SA 350 Gr. LF2 Cl.1	4,1	B	K1808
19	200,000 mm	PIPE SMLSS 1 1/2 Sch.160	SA 333 Gr. 6	1,4	B	H0405
20	65,000 mm	PIPE SMLSS 1 Sch.XXS	SA 333 Gr. 6	0,4	B	D9604
21	1	GKT SPIRAL WOUND 24" 150# Thk. 4.5mm	316L+GRAPHITE	4,7	C	C3128
22	1	FLANGE BLIND B16.5 24" 150# RF	SA 350 Gr. LF2 Cl.1	184,8	B	F1221
23	40	WASHER 1 1/4	C.S.	2,9	C	C6198
24	20	STUD-BOLT 1.1/4" UN x 190	SA 320 Gr.L7	23,7	B	L4002
25	40	NUT 1 1/4 UN	SA 194 Gr.7	13,2	B	J2834
26	1	SUPPORT NAMEPLATE 140x120 Thk.4mm	SA 516 Gr.70	0,5	B	E4247
27	1	ELBOW L.R. 90° 1" Sch. XXS	SA 420 WPL6	0,3	B	D9605
28	98,675 mm	PIPE SMLSS 1 Sch.XXS	SA 333 Gr. 6	0,5	B	D9604
29	902,528 mm	PIPE SMLSS 1 Sch.XXS	SA 333 Gr. 6	4,9	B	D9604
30	1	BENDING PIPE SMLSS 2" SCH. 40 L=1130 (DAVIT 24" 150#)	SA 333 Gr. 6	8,5	C	L4020
31	1	PLATE 200x52.5 thk=18 (DAVIT 24" 150#)	SA 516 Gr.70	1,3	B	L4001
32	2	PLATE 50x70 Thk. 15 mm FOR DAVIT 24"	SA 516 Gr.70	0,7	B	L4230
33	1	LIFTING EYE M22x260	SA 350 Gr. LF2 Cl.1	1	C	L4375
34	3	WASHER A 22	C 40	0,1	C	3393
35	3	NUT M22 UNI 5587	SA 194 Gr.7	0,3	C	L1368
36	1	ROD Øe=100 Øi=74 Thk=12	SA 516 Gr.70	0,3	C	L4016
37	1	ROD Øe=100 Øi=61 Thk=12	SA 516 Gr.70	0,5	C	L4376
38	1	DISK Øe=48 thk=6	SA 516 Gr.70	0,1	C	L4377
39	1	DISK Øe=48 Øi=12 thk=6	SA 516 Gr.70	0,1	C	L4378
40	256,000 mm	PIPE SMLSS 2 1/2 Sch.40 L=256	SA 333 Gr. 6	2,2	C	G6831
41	242,500 mm	PLATE 50x6 L=242,5	SA 516 Gr.70	0,6	B	L4380
42	90,000 mm	PIPE SMLSS 3 Sch.160	SA 333 Gr. 6	1,9	B	F8721
43	1	FLANGE W.N.3" Sch. 160 150# RF	SA 350 Gr. LF2 Cl.1	5,8	B	F7680
44	1	SCREW - M22 x 100 - UNI 5739	SA 320 Gr.L7	0,4	C	L0436
45	24	SCREW - M33 x 140 - UNI 5739	Cl. 8.8	1,9	C	L6140
46	48	WASHER A 33	C 40	5,8	C	F2511
47	24	NUT M33 UNI 5587	Cl. 8	0,4	C	L6139

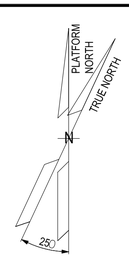
MATERIAL TEST SYMB. (according to EN 10204)

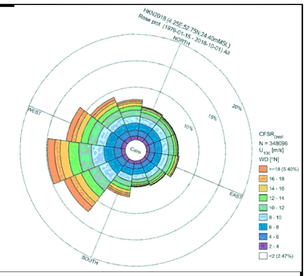
A	Tested material (3.2)
B	Material with certificate of manufacturer (3.1)
C	Material without certificate
D	Material with certificate of manufacturer (2.2)

POS	DESCRIPTION	PIPE CONN.
A1	PSV	WN 3" 150# RF SCH. 160
A2	DRAIN	WN 1" 150# RF SCH. XXS
A3	VENT	WN 1" 150# RF SCH. XXS
A4	PRESSURE GAUGE PG	COUPLING 1/2" NPTF 6000#
A5	PRESSURE TRANSMITTER PT	COUPLING 1/2" NPTF 6000#
A6	TEMPERATURE GAUGE TG	WN 1.1/2" 150# RF SCH. 160
A7	TEMPERATURE TRANSMITTER TT	WN 1.1/2" 150# RF SCH. 160
A8	IN/OUT	WN 2" 150# RF SCH. 160
A9	MAN HOLE	WN 24" 150# RF SCH. 40

DESIGN DATA

Code	Applicable codes and standards		ASME VIII Div.1 Ed. 2021 / PED 2014/68/EU		
	Third party		ICIM GROUP		
	STAMP		No		
	NATIONAL BOARD		No		
	CRN REGISTRATION		N.A.		
Pressure	Design pressure internal		12	barg	
	Working pressure		9	barg	
	Hydrotest pressure vertical		17,2	barg	
	Hydrotest pressure horizontal		N.A.	barg	
	Static head in design		0,6	barg	
	MAWP		14,14	barg	at temperature of 90 °C
Temperat.	Design temperature		90	°C	
	Working temperature		35	°C	
	M.D.M.T. @ MAWP		-29	°C	
	Test temperature min.		10	°C	
Miscellaneous	Corrosion allowance		1,5	mm	
	Out of roundness		1%		
	Insulation		-	mm	
	Capacity		23100,0	ℓ	
	Tollerance on thickness	Plates	0.25 (>4); 6% (<=4)	mm	
		Pipes	-12.5	%	
		Forgings	=0/1	mm	
Fluid	Nature		AIR		
	Physical state		GAS		Group 2
	Specific weight		1,29	kg/Nm³	
Weldings	Joint efficiency (E)		0.85		
	Rad. Cat/class		RT 3		
	Test Coupons		NO		
	Radiographic Examination		SPOT	note:	
Heat treatement and testing	Head assembly in 1 piece		N.A.		
	Heat treatment		NO	note:	
	Liquid penetrant Examination (PT)		YES	note:	
	Ultrasonic Examination (UT)		NO	note:	
	Impact test		NO	note:	Exempt Para. UCS-66 / YES PED 2014/68/EU Annex 1
	External Finishing		According to Coating Specification no. 1724000428-MAT-PRO-00022		
	Internal Finishing		According to Coating Specification no. 1724000428-MAT-PRO-00022		
Ext. Loads	Wind		YES	note:	Project Spec. 123A90-DDL-ST-SP-90017
	Seismic		YES	note:	Project Spec. 123A90-DDL-ST-SP-90017
Weight	Empty		7450,0	kg	
	Hydrotest condition		30550,0	kg	





NOTES

NOTE:
1. QUANTITIES IN MATERIAL LIST FOR No. 1 VESSEL.
2. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED.
3. ALL THICKNESSES SHOWN ARE MINIMUM AFTER FORMING.
4. TOLERANCE OF VESSELS: ACCORDING TO COES PROCEDURE CTP03684 Rev.2
5. FLANGES DRILLED HOLES SHALL STRADDLE MAIN CENTER AXIS OF VESSEL.
6. FLANGES FACE FINISHING: 125-250 AARH.
   FLANGES AND BLIND FLANGES <= 24" ACC TO ASME B16.5 (2020).
7. VENT HOLES ON REINF. PAD: 1/4" NPT/F EACH PAD OR SEGMENT
   PERFORM TEST AT 1 bar(g) WITH AIR AND SOAPY SOLUTION.
8. ALL NOZZLES WITHOUT INTERNAL PROJECTION, TO BE FLUSHED WITH INSIDE SURFACE OF THE VESSEL. THE INSIDE EDGE OF ALL NOZZLES TO BE ROUNDED.
9. FOR WELDING DETAILS REFER TO THE RELATED WELDING BOOK, DOCUMENT NO. 1724000428-WEL-LIS-00021.
10. BUTTWELDING FITTINGS ACCORDING TO ASME B16.9 (2018)
11. THREADED FITTINGS ACCORDING TO ASME B16.11 (2021)
12. QUANTITY 1: SEE ORIENTATION PLAN.

LEGEND

HOLDS

coes

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	02/01/25	STC	GT	TM	ISSUE FOR INFORMATION (IFI)
02	07/10/24	STC	GT	TM	ISSUE FOR INFORMATION (IFI)
01	05/07/24	STC	GT	TM	ISSUE FOR INFORMATION (IFI)
00	29/05/24	STC	GT	TM	ISSUE FOR INFORMATION (IFI)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
EQUIPMENT SECTIONAL DRAWING WITH BILL OF MATERIAL
INSTRUMENT AIR RECEIVER V-63000

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:35	
DRAWN STC	CHECKED GT	APPROVED TM	DATE 02/01/2025
A1	DRAWING NO. 1724000428-MAC-DD-00006	SHEET 001	REV. 03

File Name : 1724000428-MAC-DD-00006

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002659

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004527	1.4 Discipline	Mechanical
1.2 Item	V-63001	Air Receiver	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

BLPH-MV-740 has rust on the stem.

Name: Kangi Albonetti

Date: 2025-01-10

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-10
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Stem has been cleaned and painted, see attached photo.

Name: Lorenzo Novaga

Date: 2025-03-06

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


BLPH-MV-740
MANUAL VALVE


BLPH-MV-740
MANUAL VALVE


BLPH-MV-740
MANUAL VALVE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002660

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004527	1.4 Discipline	Mechanical
1.2 Item	V-63001	Air Receiver	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

the lever of the MBLPH-MV-738 shall be rotated of 180° because it clashes with the vessel body.

Name: Kangi Albonetti

Date: 2025-01-10

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-10
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

The lever has been dismantled and reinstalled rotated correctly by the commissioning team.

Name: Kangi Albonetti

Date: 2025-01-10

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


BLPH-MV-738
MANUAL VALVE


MANUAL VALVE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002661

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004527	1.4 Discipline	Mechanical
1.2 Item	V-63001	Air Receiver	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

BLPH-MV-742 has the lock nuts bended.

Name: Kangi Albonetti

Date: 2025-01-10

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-10
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Lorenzo Novaga

Date: 2025-01-15

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


BLPH-MV-742
MANUAL VALVE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002848

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004527	1.4 Discipline	Mechanical
1.2 Item	V-63001	Air Receiver	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Minor damages to the painting due transportation and installation, also there is rust in the nameplate of the vessel.

Name: Kangi Albonetti

Date: 2025-01-14

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date: 2025-04-11

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-04-11

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-04-11

Signature:




MANUFACTURER
COES SRL - STEZZANO (BG)
EQUIPMENT
AIR RECEIVER V-63001
SERIAL NUMBER
S240119
YEAR
2024
DESIGN CODE
ASME VIII Div. 1 Ed. 2021 / PED 2014/68/EU
CONFORMITY
Category IV
FLUID
AIR
DESIGN PRESSURE
12 barg
DESIGN TEMPERATURE
-29 / +90°C
TEST PRESSURE
17,2 barg
CORROSION ALLOWANCE
1.5 mm
WEIGHT
7450 kg
VOLUME
23100 l
CE
0425

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002850

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002354	1.4 Discipline	Mechanical
1.2 Item	A-63000	Instrument Air Package	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Minor damages to the painting due transportation and installation.

Name: Kangi Albonetti

Date: 2025-01-14

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-04-11

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002853

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002354	1.4 Discipline	Mechanical
1.2 Item	A-63000	Instrument Air Package	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

In the Air package GA' nameplate detail the operative temperature range is marked as "-10°C/+90°C" but on the nameplate mounted on the skid the range indicated is "-29°C/+80°C"

Name: Kangi Albonetti
Date: 2025-01-15
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Nameplate drawing has been upodated to "-29°C/+90°C" and Nameplate has been swapped for new one with marked "-29°C/+90°c"

Name: Kangi Albonetti
Date: 2025-02-14
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002854

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002354	1.4 Discipline	Mechanical
1.2 Item	A-63000	Instrument Air Package	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

One supporting plate (the one added to close PL C300024) is 10 mm thinner compared to the other.

Name: Kangi Albonetti

Date: 2025-01-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Accepted by Rosetti Marino.

Name: Lorenzo Novaga

Date: 2025-03-06

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002855

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002354	1.4 Discipline	Mechanical
1.2 Item	A-63000	Instrument Air Package	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

There is still part of the wooden crate used for transport fixed on the skid. See attachment for the location.

Name: Kangi Albonetti

Date: 2025-01-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-03-05

Signature:

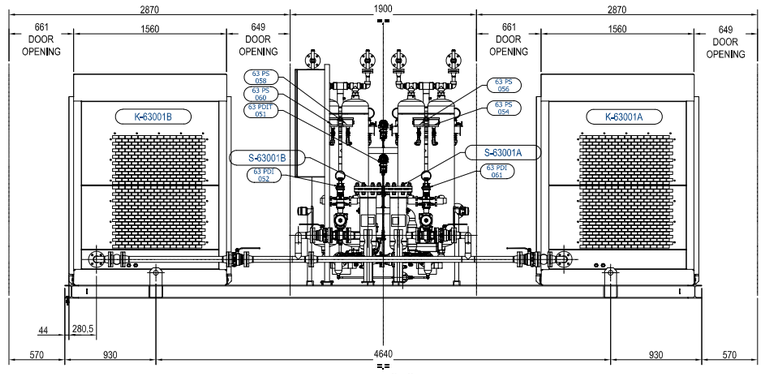
6- CLEARANCE APPROVAL

Name:

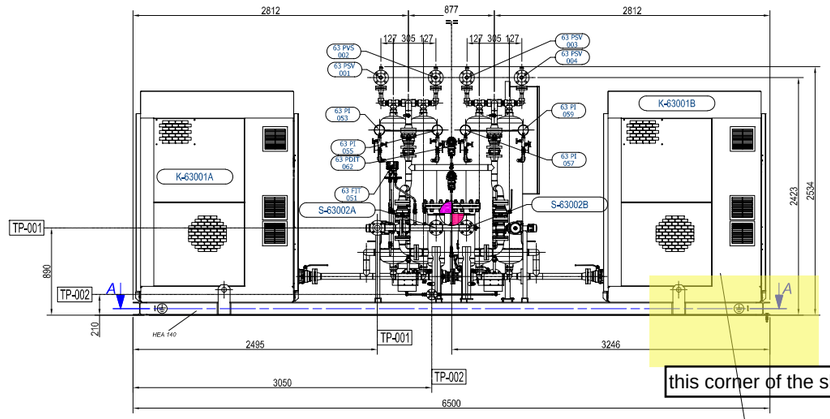
Date:

Signature:

DRAWING NO. 1724000428-MAC-DA-00005 REV. 02



VIEW FROM "C"

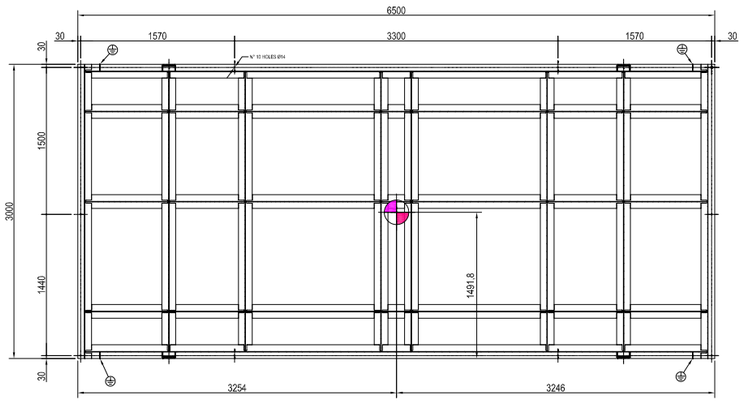


VIEW FROM "A"

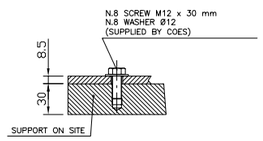
this corner of the skid is still covered in wood

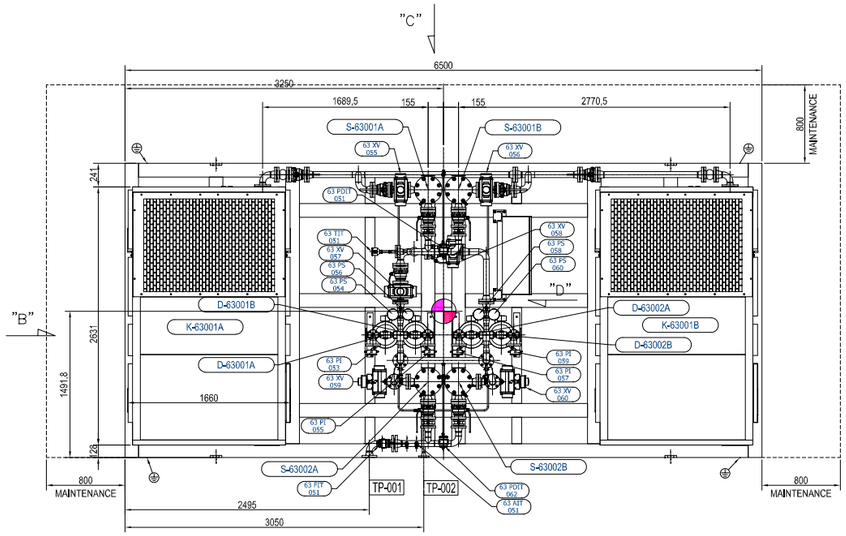
CABLE ENTRY SUITABLE FOR POWER CABLES 5G70sqmm

POWER SUPPLY 400V-3PH-50HZ COMPRESSOR POWER SUPPLY



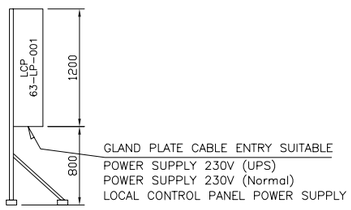
SECTION A-A (1 : 25)





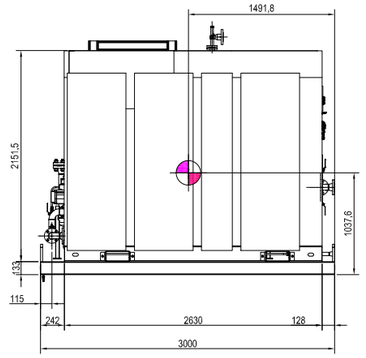
"B"

"A"

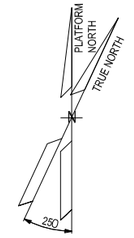


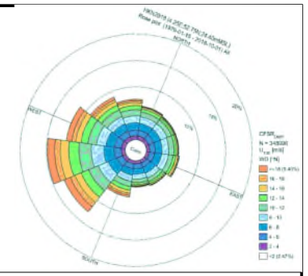
GLAND PLATE CABLE ENTRY SUITABLE
POWER SUPPLY 230V (UPS)
POWER SUPPLY 230V (Normal)
LOCAL CONTROL PANEL POWER SUPPLY

VIEW FROM "D"



VIEW FROM "B"





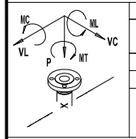
NOTES

1. SKID TOTAL WEIGHT: 5000 kg
2. FOR EQUIPMENT WEIGHT REFER TO EQUIPMENT DS, DOC. NO. 1724000428-MAC-DS-00011
3. FOR DESIGN PARAMETERS & CODES REFER TO EQUIPMENT DS, DOC. NO. 1724000428-MAC-DS-00011
4. FOR WELDING DETAILS REFER TO WELDING SPECIFICATION, DOC. NO. 1724000428-WEL-LIS-00021
5. FOR PAINTING DETAILS REFER TO PAINTING SPECIFICATION, DOC. NO. 1724000428-MAT-PRO-00022
6. NO LUBRICATION REQUIRED
7. FOR LOAD DETAILS REFER TO STRUCTURAL CALCULATION, DOC. NO. 1724000428-ST-RE-00010

LEGEND

HOLDS

FOUNDATION LOADS TABLE			
	LIFTING	EMPTY	OPERATION
VERTICAL (kN)	10.8	10.8	10.8
SHEAR Y (kN)	0	0	0
SHEAR X (kN)	0	0	0
MOMENT Y (kNm)	0	0	0
MOMENT X (kNm)	0	0	0



MAX ALLOWABLE LOADS AT B,L, CONNECTIONS							
	FORCES [kN]			MOMENTS [kNm]		
	VL	P	VC	MC	MT	ML
A	1,8	1,5	1,8	0,3	0,4	0,2
B	2	2	2	0,8	0,8	0,8

TAG NUMBER OF EQUIPMENTS	
TAG	DESCRIPTION
K-63001A/B	OIL FREE SCREW COMPRESSOR 1&2
S-63001A/B	DRYER PRE-FILTER
D-63001A/B	DRYER UNIT 1
D-63002A/B	DRYER UNIT 2
S-63002A/B	DRYER AFTER-FILTER
V-63001	INSTRUMENT AIR RECEIVER

NAMEPLATE "COES"

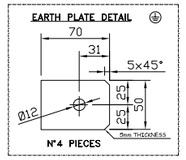
MANUFACTURER	COES SRL - STEZZANO (BG)		
SERVICE	INSTRUMENT AIR PACKAGE		
YEAR	2024	SERIAL NUMBER	*****
WEIGHT	11000 kg	ITEM	A-63000
PRESSURE	12 barg	TEMPERATURE	-10°C / 90°C

CE 0425 2014/68/UE - Cat.III

CONNECTIONS			
POS.	TYPE	SERVICE	MATERIAL
A	ø 1" ANSI 150# R.F.	DRAIN DISCHARGE	SS 316/316L
B	ø 2" ANSI 150# R.F.	INSTRUMENT AIR OUTLET	SS 316/316L

TOTAL WEIGHT : 11.000 kg

EARTH PLATE DETAIL



N°4 PIECES

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	06/08/24	GT	MC	TM	ISSUE FOR REVIEW (IFR)
01	08/05/24	GT	MC	TM	ISSUE FOR REVIEW (IFR)
00	21/03/24	GT	MC	TM	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
PACKAGE GENERAL ARRANGEMENT
INSTRUMENT AIR PACKAGE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE N/A
DRAWN GT	CHECKED MC	APPROVED TM	DATE 06/08/24
A1	DRAWING NO. 1724000428-MAC-DA-00005	SHEET 001	REV. 02

File Name : 1724000428-MAC-DA-00005

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003339

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003666	1.4 Discipline	Piping
1.2 Item	63-00-TP-059	Test Pack 63-00-TP-059	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Missing earthing connection on earthing plate

Name: Andrea Mancini

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Andrea Mancini
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Eleonora Carotenuto

Date: 2025-02-08

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003340

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003666	1.4 Discipline	Piping
1.2 Item	63-00-TP-059	Test Pack 63-00-TP-059	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Flange management activity to be done on joint J1 (Connection to A-63000/A). Broken joint done by Commissioning

Name: Andrea Mancini

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Andrea Mancini
3.4 Activity code	COMM Commissioning	Date	2025-01-30
3.5 Action by	PRE-COMM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date: 2025-03-20

Signature:

5 - CLEARANCE CHECK

Flange management activity done.

Name: Lorenzo Novaga

Date: 2025-03-20

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-03-20

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000486

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-63000		Instrument Air Package
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

TO BE IMPLEMENT: THE INTERVENTION TIME OF THE LIMIT SWITCHES (to be verify at 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	2024-10-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

DONE

Name VENDOR COES

Date 2025-01-24

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-01-24

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000487

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-63000		Instrument Air Package
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

TO BE IMPLEMENTED: VALVE POSITION DISCREPANCY (to be verify at 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	2024-10-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

DONE

Name VENDOR COES

Date 2025-01-24

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-01-24

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000488

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-63000		Instrument Air Package
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

VERIFY AND SET THE EXCHANGE OF THE COMPRESSORS WITH THE DUTY/STAND-BY CYCLE TIME. To be verify and to be tested

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	2024-10-29
3.5 Action by	RM Rosetti Marino Quality	Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

OTP DONE POINT CLOSED

Name Vendor Crosswind

Date 2025-03-19

Signature

5 - CLEARANCE CHECK

VERIFIED - CLOSED

Name Stefano Linari

Date 2025-03-19

Signature

6- CLEARANCE APPROVAL

Name

Date 2025-03-19

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000489

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-63000		Instrument Air Package
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

TO BE VERIFY AND TEST THE CHANGE OVER COMPRESSOR K-63001A TO K-63001B

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	2024-10-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

DONE

Name VENDOR COES

Date 2025-01-24

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-01-24

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000490

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-63000		Instrument Air Package
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

ALL SOLENOIDS HAVE BEEN DISMANTLED FROM THE PACKAGE. SEND TO THE SUB-VENDOR TO BE CHECK. ALL SOLENOID WILL BE RE INSTALLED

Name

Date

Signature

3 - DEFECT ASSESSMENT

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	2024-10-29
3.5 Action by	VND Vendor	Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

installed

Name vendor coes

Date 2024-12-18

Signature

5 - CLEARANCE CHECK

installed

Name Stefano Linari

Date 2024-12-18

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature







ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000491

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-63000		Instrument Air Package
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

THE RESET COMMAND TO PACKAGE MUST BE MANAGED BY ESD (CURRENTLY IT'S ON LOCAL PANEL). To be verify with engineering.

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	2024-10-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

AFTER CHECK- RESET COMMAND NOT NECESSARY (SEE EMAIL ATTACHED)

Name SIRIGU FABIO

Date 2025-02-06

Signature

5 - CLEARANCE CHECK

AFTER CHECK- RESET COMMAND NOT NECESSARY (SEE EMAIL ATTACHED

Name Stefano Linari

Date 2025-02-06

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

Linari Stefano (Rosetti)

Da: Sirigu Fabio (ERM)
Inviato: mercoledì 5 febbraio 2025 14:21
A: Calabrese Loredana (Rosetti); Casagrande Davide (ERM); Lo Sterzo Davide (Rosetti); Linari Stefano (Rosetti)
Cc: Iveson Anthony (ERM); Giunchi Claudia (Rosetti); Mura Fabrizio (Rosetti); Cavallo Giuseppe (ERM)
Oggetto: I: 123A90 CW // IO list IA & N2

Ciao,
COES conferma che il package fa trip per:

- pressione pulsante a fronte quadro
- shutdown da SIS

Direi quindi che il reset non è necessario e possiamo rimuovere la relativa punch.
Cordialità

Fabio SIRIGU
Commissioning Lead Automation
CROSSWIND BLPH PROJECT

Da: Luigi Testa <testa@coessrl.com>
Inviato: mercoledì 5 febbraio 2025 12:45
A: Sirigu Fabio (ERM) <Fabio.Sirigu@rosetti.it>
Oggetto: R: 123A90 CW // IO list IA & N2

Buongiorno Sig. Sirigu,

Ho ricevuto conferma che non è stata fatta alcune modifica rispetto a quanto sotto.

Cordiali saluti,
Luigi Testa

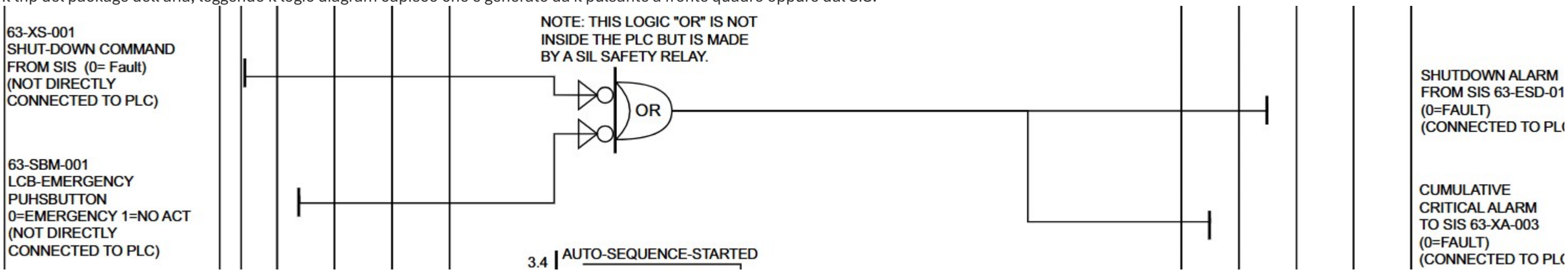
Coes Srl
Via Pontida, 265 - 24040 Stezzano, Italy

Office +39 035 2050511
Mobile +39 346 9690537
Fax +39 035 2050532
testa@coessrl.com
Antispam Service has detected a possible fraud attempt from "www.coessrl.comm" claiming to be www.coessrl.com

This e-mail message (including attachments, if any) is for the sole use of the intended recipient(s) and may contain information that is private, confidential, or exempt from disclosure. Any unauthorized review, use, copying, printing, disclosure, retention, or distribution is strictly prohibited. If you are not the intended recipient, please contact the sender by reply to this e-mail, and delete all copies without disclosing this message to others.
Please consider the environment before printing this email

Da: Sirigu Fabio (ERM) <Fabio.Sirigu@rosetti.it>
Inviato: martedì 4 febbraio 2025 17:47
A: Luigi Testa <testa@coessrl.com>
Oggetto: R: 123A90 CW // IO list IA & N2

Buongiorno Sig. Testa,
avrei necessità di una conferma.
Il trip del package dell'aria, leggendo il logic diagram capisco che è generato da il pulsante a fronte quadro oppure dal SIS:



ed è confermato anche dalla vostra narrativa:

3.2.4 SHUTDOWN

The system shutdown can be activated locally by pressing the mushroom button on the LCP (63-LP-001) or by command from SIS.

In case of shutdown, the compressors are stopped and the valves are brought to "fail position" by deactivating the command to the solenoid valves.

To reset the shutdown, you must act on the LCP (63-LP-001) by pressing the "SAFETY RELAY RESET" button (63-HS-003).

Non trovo altre cause di trip interne al package.
Me lo conferma?
Cordialità

Fabio SIRIGU
Commissioning Lead Automation
CROSSWIND BLPH PROJECT

Da: Luigi Testa <testa@coessrl.com>
Inviato: venerdì 31 gennaio 2025 11:24
A: Sirigu Fabio (ERM) <Fabio.Sirigu@rosetti.it>
Cc: Delmissier Giandonato (ERM) <Giandonato.Delmissier@rosetti.it>; Casagrande Davide (ERM) <Davide.Casagrande@rosetti.it>; Giunchi Claudia (Rosetti) <Claudia.Giunchi@rosetti.it>; Basile Martino (ERM) <Martino.Basile@rosetti.it>
Oggetto: R: 123A90 CW // IO list IA & N2

Buongiorno Sig. Sirigu,

I due segnali sono mantenuti.

Cordiali saluti,
Luigi Testa

Coes Srl
Via Pontida, 265 - 24040 Stezzano, Italy

Office +39 035 2050511
Mobile +39 346 9690537
Fax +39 035 2050532
testa@coessrl.com
Antispam Service has detected a possible fraud attempt from "www.coessrl.comm" claiming to be www.coessrl.com

This e-mail message (including attachments, if any) is for the sole use of the intended recipient(s) and may contain information that is private, confidential, or exempt from disclosure. Any unauthorized review, use, copying, printing, disclosure, retention, or distribution is strictly prohibited. If you are not the intended recipient, please contact the sender by reply to this e-mail, and delete all copies without disclosing this message to others.
Please consider the environment before printing this email

Da: Sirigu Fabio (ERM) <Fabio.Sirigu@rosetti.it>
Inviato: mercoledì 29 gennaio 2025 16:12
A: Luigi Testa <testa@coessrl.com>
Cc: Delmissier Giandonato (ERM) <Giandonato.Delmissier@rosetti.it>; Casagrande Davide (ERM) <Davide.Casagrande@rosetti.it>; Giunchi Claudia (Rosetti) <Claudia.Giunchi@rosetti.it>; Basile Martino (ERM) <Martino.Basile@rosetti.it>
Oggetto: R: 123A90 CW // IO list IA & N2

Buon pomeriggio,
un chiarimento riguardo i seguenti segnali:

- 63-CMPR-START-001 COMPRESSOR 1 REMOTE START/STOP
- 63-CMPR-START-002 COMPRESSOR 2 REMOTE START/STOP

sono mantenuti o impulsivi?
Grazie

Fabio SIRIGU
Commissioning Lead Automation
CROSSWIND BLPH PROJECT

Da: Luigi Testa <testa@coessrl.com>
Inviato: venerdì 24 gennaio 2025 11:45
A: Sirigu Fabio (ERM) <Fabio.Sirigu@rosetti.it>
Cc: Delmissier Giandonato (ERM) <Giandonato.Delmissier@rosetti.it>; Casagrande Davide (ERM) <Davide.Casagrande@rosetti.it>; Giunchi Claudia (Rosetti) <Claudia.Giunchi@rosetti.it>; Basile Martino (ERM) <Martino.Basile@rosetti.it>
Oggetto: 123A90 CW // IO list IA & N2

Buongiorno Sig. Sirigu,

Invio in allegato le IO list in ultima versione.

Carico anche a sistema i due documenti.

Cordiali saluti,
Luigi Testa

Coes Srl
Via Pontida, 265 - 24040 Stezzano, Italy

Office +39 035 2050511

Mobile +39 346 9690537
Fax +39 035 2050532
testa@coessrl.com
Antispam Service has detected a possible fraud attempt from "www.coessrl.comm" claiming to be www.coessrl.com

This e-mail message (including attachments, if any) is for the sole use of the intended recipient(s) and may contain information that is private, confidential, or exempt from disclosure. Any unauthorized review, use, copying, printing, disclosure, retention, or distribution is strictly prohibited. If you are not the intended recipient, please contact the sender by reply to this e-mail, and delete all copies without disclosing this message to others.
Please consider the environment before printing this email

CONFIDENTIALITY NOTICE - This e-mail and any attachment are confidential and may be privileged or otherwise protected from disclosure. It is solely intended for the person(s) named above. If you are not the intended recipient, any reading, use,disclosure, copying or distribution of all or parts of this e-mail or associated attachments is strictly prohibited. If you are not an intended recipient, please notify the sender immediately by replying to this message or by telephone and delete this e-mail and any attachments permanently from your system.

Save a tree! Don't print this e-mail unless you really need to.
CONFIDENTIALITY NOTICE - This e-mail and any attachment are confidential and may be privileged or otherwise protected from disclosure. It is solely intended for the person(s) named above. If you are not the intended recipient, any reading, use,disclosure, copying or distribution of all or parts of this e-mail or associated attachments is strictly prohibited. If you are not an intended recipient, please notify the sender immediately by replying to this message or by telephone and delete this e-mail and any attachments permanently from your system.

Save a tree! Don't print this e-mail unless you really need to.

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000492

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-63000		Instrument Air Package
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

MAX PRESSURE ON VALVE ACTUATORS = 8 BAR IS NOT CONGRUENT WITH OPERATING PRESSURE = 9 BAR.

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	2024-10-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

DONE

Name VENDOR COES

Date 2025-01-24

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-01-24

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000493

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-63000		Instrument Air Package
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

DUE TO THE RUSH TO CONCLUDE ALL TESTS WITHIN ONE DAY, AN EXTENSIVE AND COMPREHENSIVE ON-SITE TEST WILL BE MANDATORY BEFORE PERFORMING THE FUNCTIONAL AND PERFORMANCE TESTS OF THE PACKAGE. ALL PERFORMANCE MUST BE TESTED AND ACCEPTED AT THE CONSTRUCTION SITE.

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	2024-10-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

DONE

Name VENDOR COES

Date 2025-01-27

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-01-27

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000494

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-63000		Instrument Air Package
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

TO BE UPDATED DWG N. 1724000428-MAG-DG-00009 - CORRECT RAL 9002

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	2024-10-29
3.5 Action by	VND Vendor	Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

Re issued

Name	Vendor Crosswind
Date	2025-03-19
Signature	

5 - CLEARANCE CHECK

VERIFIED - CLOSED

Name	Stefano Linari
Date	2025-03-19
Signature	

6- CLEARANCE APPROVAL

Name	
Date	2025-03-19
Signature	

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000495

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-63000		Instrument Air Package
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

ALL HARDWIRED AND PROFINET SIGNALS STILL TO BE TESTED

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	2024-10-29
3.5 Action by	VND Vendor	Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

ACTIVITY DONE

Name VENDOR COES

Date 2025-01-27

Signature

5 - CLEARANCE CHECK

ACTIVITY DONE

Name Stefano Linari

Date 2025-01-27

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000496

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-63000		Instrument Air Package
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

CABLING INSIDE CONTROL PANEL NOT REFLECT THE SPECIFICATIONS AND DWG IN TERM OF COLOUR CODING.
SEE NCR 2024-Q-123A90-0009

Name

Date

Signature

3 - DEFECT ASSESSMENT

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	2024-10-29
3.5 Action by	VND Vendor	Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

NCR CLOSED -

Name vendor coes

Date 2024-12-18

Signature

5 - CLEARANCE CHECK

NCR CLOSED -

Name Stefano Linari

Date 2024-12-18

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000497

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-63000		Instrument Air Package
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

MISSING LEAKAGE TEST REPORTS. To be repeated on site up to rated package pressure

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	2024-10-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

done

Name VENDOR COES

Date 2025-01-30

Signature

5 - CLEARANCE CHECK

done

Name Stefano Linari

Date 2025-01-30

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

COES Srl
24040 STEZZANO - ITALY - Via Pontida, 265
tel +39 035 2050 511
e.mail: coes@coessrl.com

Sedi operative
24040 STEZZANO – Via Pontida, 265
24040 COMUN NUOVO – Via Europa, 9

LEAKAGE TEST CERTIFICATE

CUSTOMER:	ROSETTI MARINO
PURCHASE ORDER:	1724000428
PROJECT:	HOLLANDSE KUST NOORD WIND PARK Project
SCOPE OF SUPPLY:	INSTRUMENT AIR PACKAGE
ITEM:	A-63000
INSPECTION AND TEST PLAN:	1724000428-QC-ITP-00002
FAT PROCEDURE:	1724000428-QC-PRO-00024
COES JOB:	166/24

ACTIVITY	RESULT
PNEUMATIC LEAKAGE CHECK @ 7 barg	**CONFORM**

Notes:
Test performed at RM Piomboni Yard

COES SRL

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000498

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-63000		Instrument Air Package
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

CONTINUITY AND MEGGER TEST REPORTS ARE MISSING.
TO BE PROVIDE

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	2024-10-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

done

Name VENDOR COES

Date 2025-01-30

Signature

5 - CLEARANCE CHECK

done

Name Stefano Linari

Date 2025-01-30

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

COES Srl
24040 STEZZANO - ITALY - Via Pontida, 265
tel +39 035 2050 511
e.mail: coes@coessrl.com

Sedi operative
24040 STEZZANO – Via Pontida, 265
24040 COMUN NUOVO – Via Europa, 9

CONTINUITY AND INSULATION RESISTANCE TEST CERTIFICATE

CUSTOMER:	ROSETTI MARINO
PURCHASE ORDER:	1724000428
PROJECT:	HOLLANDSE KUST NOORD WIND PARK Project
SCOPE OF SUPPLY:	INSTRUMENT AIR PACKAGE
ITEM:	A-63000
INSPECTION AND TEST PLAN:	1724000428-QC-ITP-00002
FAT PROCEDURE:	1724000428-QC-PRO-00024
COES JOB:	166/24

ACTIVITY	**RESULT**
CHECK THE CONTINUITY OF THE PROTECTIVE BONDING CIRCUIT	**CONFORM**

Test parameters:

Open circuit voltage: 24Vac/dc
Test current: 10A
Test time: 5 s
Localization of the PE terminal: Earth bar

ACTIVITY	**RESULT**
INSULATION RESISTANCE TEST	**CONFORM**

Test parameters:

Test voltage: 500V
Localization of the PE terminal: Earth bar

(When performing the strength tests of insulation, the insulation resistance measured at 500V DC between conductors of the power circuit and the protective bonding circuit shall not be less than 1MΩ.)



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000927

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004349	1.4 Discipline	Telecom
1.2 Item	63-LP-001/B400-NET-001	COMMUNICATION / NETWORK CABINET	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

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

Name: Alessio Polo
Date: 2024-11-26
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	2024-11-26
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

5 - CLEARANCE CHECK

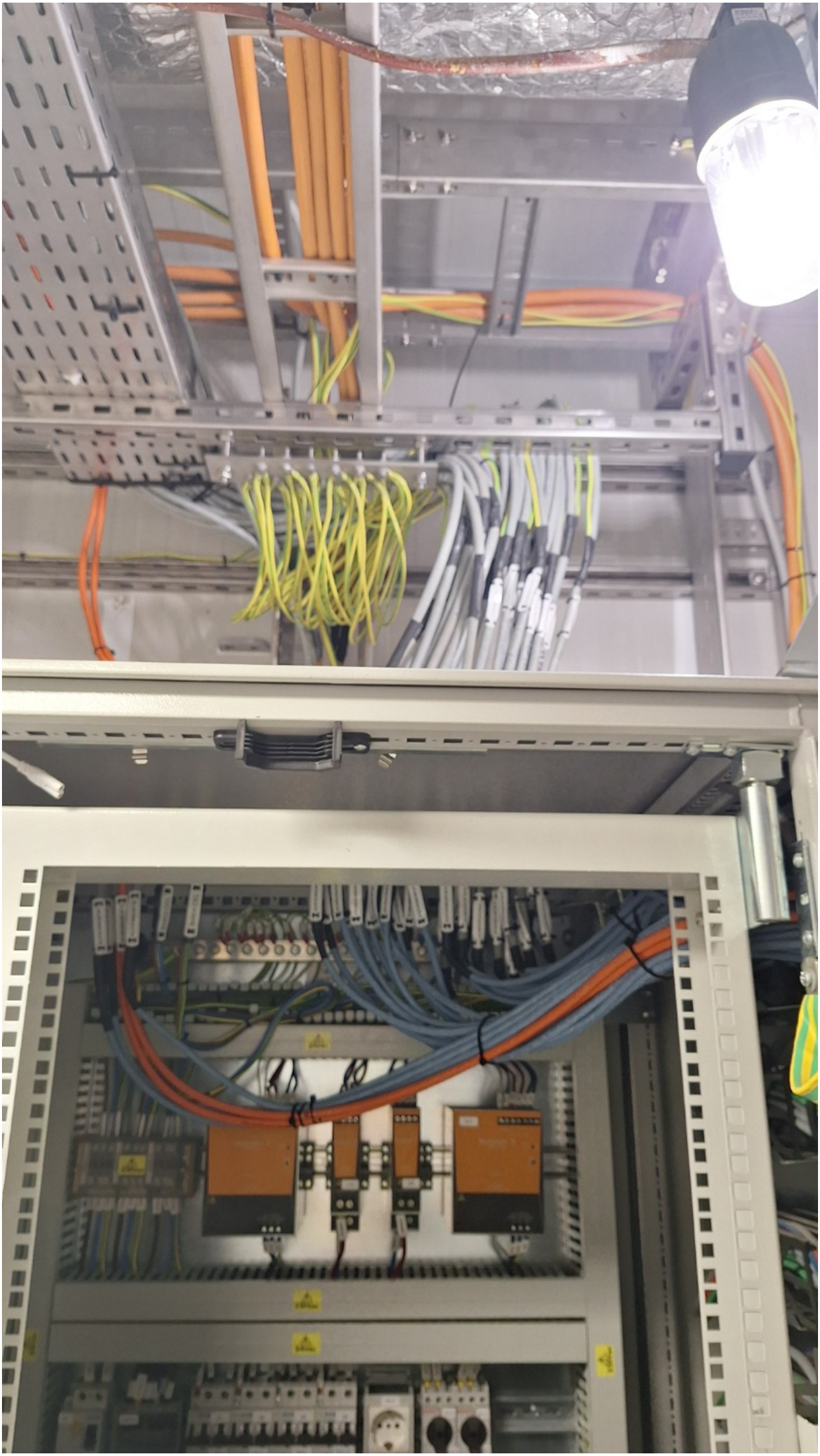
DONE

Name: Alessio Polo
Date: 2025-02-04
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:





ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000928

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004349	1.4 Discipline	Telecom
1.2 Item	63-LP-001/B400-NET-001	COMMUNICATION / NETWORK CABINET	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Missing cable tag SS project, externally pannel A-630000.

Name: Alessio Polo
Date: 2024-11-26
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	2024-11-26
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Eleonora Carotenuto
Date: 2025-01-02
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

C-63-CMPR-START-001
C-63-XV-051
C-63-ZSH-057
C-63-PDIT-052
63-LP-001/B400-MET-001

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000929

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004349	1.4 Discipline	Telecom
1.2 Item	63-LP-001/B400-NET-001	COMMUNICATION / NETWORK CABINET	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Missing cable tag , cabinet input A-630000.

Name: Alessio Polo

Date: 2024-11-26

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	2024-11-26
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-02-04

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


4xI 2-/4-wire
DIAG
SCH

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000957

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004349	1.4 Discipline	Telecom
1.2 Item	63-LP-001/B400-NET-001	COMMUNICATION / NETWORK CABINET	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

The cable is not supported and fixed to the rack (outside panel)anel)

Name: Alessio Polo

Date: 2024-11-27

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	2024-11-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-01-23

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000961

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004349	1.4 Discipline	Telecom
1.2 Item	63-LP-001/B400-NET-001	COMMUNICATION / NETWORK CABINET	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Missing cable tag , cabinet input U-64000

Name: Alessio Polo
Date: 2024-11-27
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	2024-11-27
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

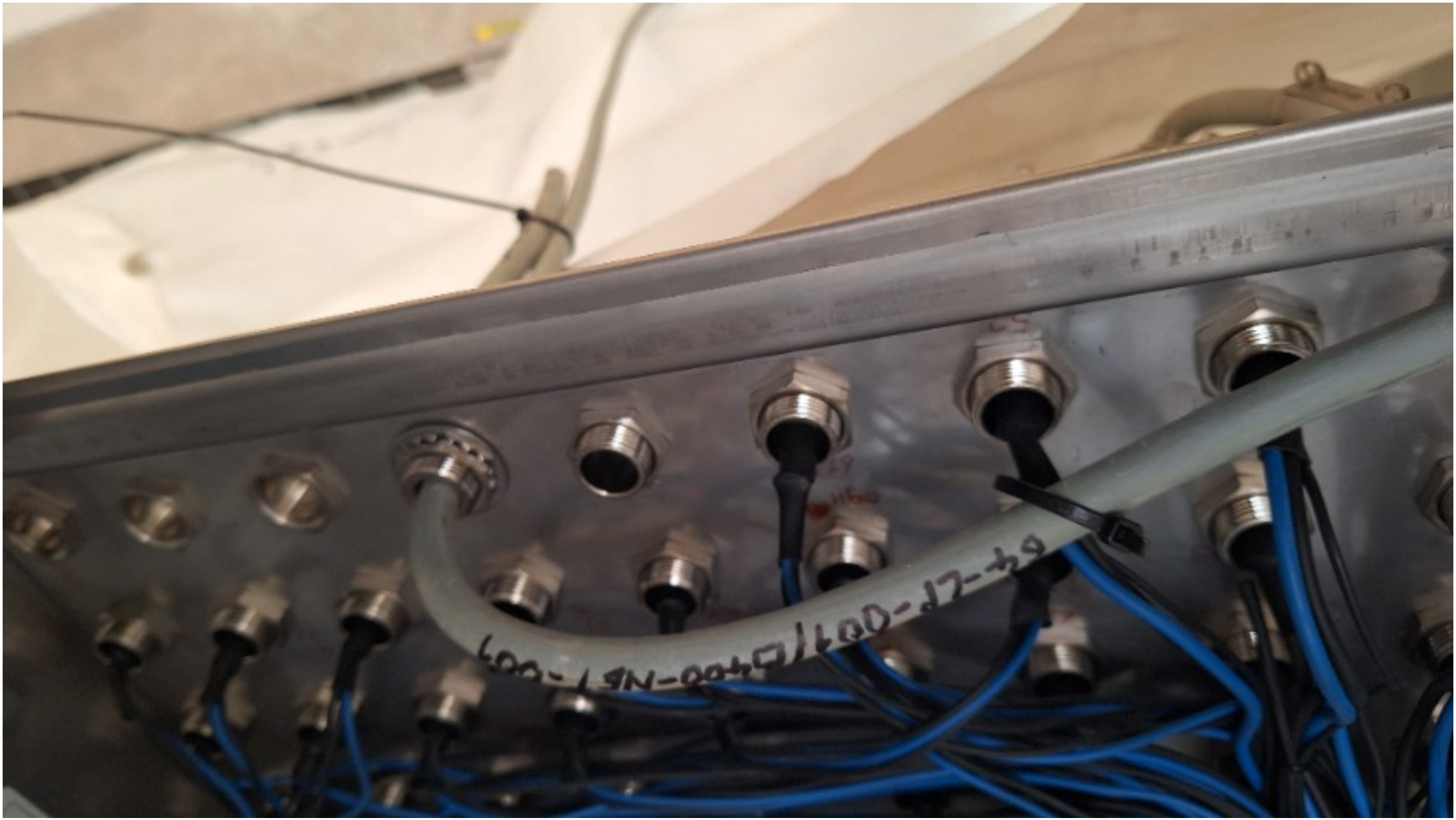
5 - CLEARANCE CHECK

DONE

Name: Alessio Polo
Date: 2025-02-04
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:




SCH

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000992

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003665	1.4 Discipline	Piping
1.2 Item	63-00-TP-059	Test Pack 63-00-TP-059	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

General final touch-up to do.

Name: Massimo Bruschi
Date: 2024-11-28
Signature:

3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Massimo Bruschi
3.4 Activity code	MC Mechanical Completion	Date	2024-11-28
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Activity done.

Name: Kangi Albonetti
Date: 2025-02-06
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000993

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003665	1.4 Discipline	Piping
1.2 Item	63-00-TP-059	Test Pack 63-00-TP-059	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Unmounted spool-A with its erection materials.

Name: Massimo Bruschi

Date: 2024-11-28

Signature:

3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Massimo Bruschi
3.4 Activity code	MC Mechanical Completion	Date	2024-11-28
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Flange management activities done for this test pack.

Name: Lorenzo Novaga

Date: 2025-01-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001053

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003421	1.4 Discipline	Piping
1.2 Item	63-00-TP-025	Test Pack 63-00-TP-025	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

All U-BOLTS S-211 not installed (refer to: ISO 123A90-FDL-PP-DI-00127-01 and 123A90-FDL-PP-DI-00127-02)

Name: Massimo Bruschi
Date: 2024-11-29
Signature:

3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Massimo Bruschi
3.4 Activity code	MC Mechanical Completion	Date	2024-11-29
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Kangi Albonetti
Date: 2025-02-17
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001054

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003421	1.4 Discipline	Piping
1.2 Item	63-00-TP-025	Test Pack 63-00-TP-025	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Support PS-02075 (F1) is only tack welded (refer to: ISO 123A90-FDL-PP-DI-00127-01)

Name: Massimo Bruschi

Date: 2024-11-29

Signature:

3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Massimo Bruschi
3.4 Activity code	MC Mechanical Completion	Date	2024-11-29
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Kangi Albonetti

Date: 2025-02-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001055

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003421	1.4 Discipline	Piping
1.2 Item	63-00-TP-025	Test Pack 63-00-TP-025	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Spool C is out level of 1,5° (refer to: ISO 123A90-FDL-PP-DI-00127-02)

Name: Massimo Bruschi

Date: 2024-11-29

Signature:

3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Massimo Bruschi
3.4 Activity code	MC Mechanical Completion	Date	2024-11-29
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Kangi Albonetti

Date: 2025-02-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001056

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003421	1.4 Discipline	Piping
1.2 Item	63-00-TP-025	Test Pack 63-00-TP-025	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Support PS-02027 (F2) is out of level 1,1° (refer to: ISO 123A90-FDL-PP-DI-00127-02)

Name: Massimo Bruschi

Date: 2024-11-29

Signature:

3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Massimo Bruschi
3.4 Activity code	MC Mechanical Completion	Date	2024-11-29
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

See PL 30003464.

Name: Kangi Albonetti

Date: 2025-02-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001270

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001458	1.4 Discipline	Instrumental
1.2 Item	C-63-XA-003/B400-SIS-001	UCP FAULT ALARM / MARSHALLING PCS	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Missing cable tag SS .

Name: Alessio Polo

Date: 2024-12-04

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	2024-12-04
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

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

C30001271

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001458	1.4 Discipline	Instrumental
1.2 Item	C-63-XA-003/B400-SIS-001	UCP FAULT ALARM / MARSHALLING PCS	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Missing cores identification tag. Cabinet side A-63000. (see document 123A90-DDL-EL-DD-20092 sh.7-8)

Name: Alessio Polo
Date: 2024-12-04
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	2024-12-04
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

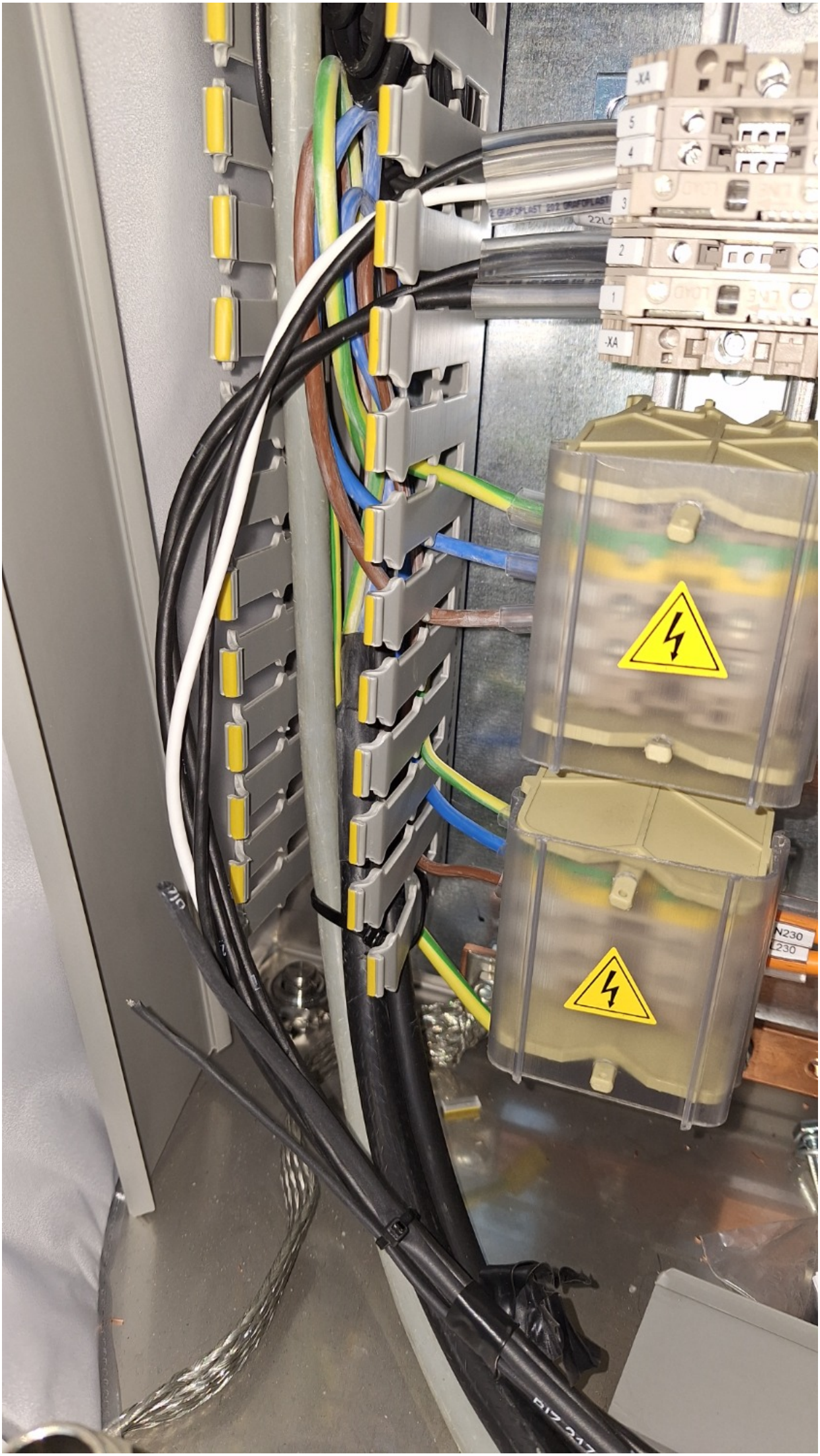
5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu
Date: 2025-02-08
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


XA
5
4
3
2
1
-XA
N230
230

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001275

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001451	1.4 Discipline	Instrumental
1.2 Item	C-63-XS-001/B400-SIS-001	TRIP SIGNAL TO UCP / MARSHALLING PCS	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Missing cores identification tag. Cabinet side B400-SIS-001 / JB A-63000 . (see document 123A90-DDL-IN-DG-40016 sh.3)

Name: Alessio Polo

Date: 2024-12-04

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	2024-12-04
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-08

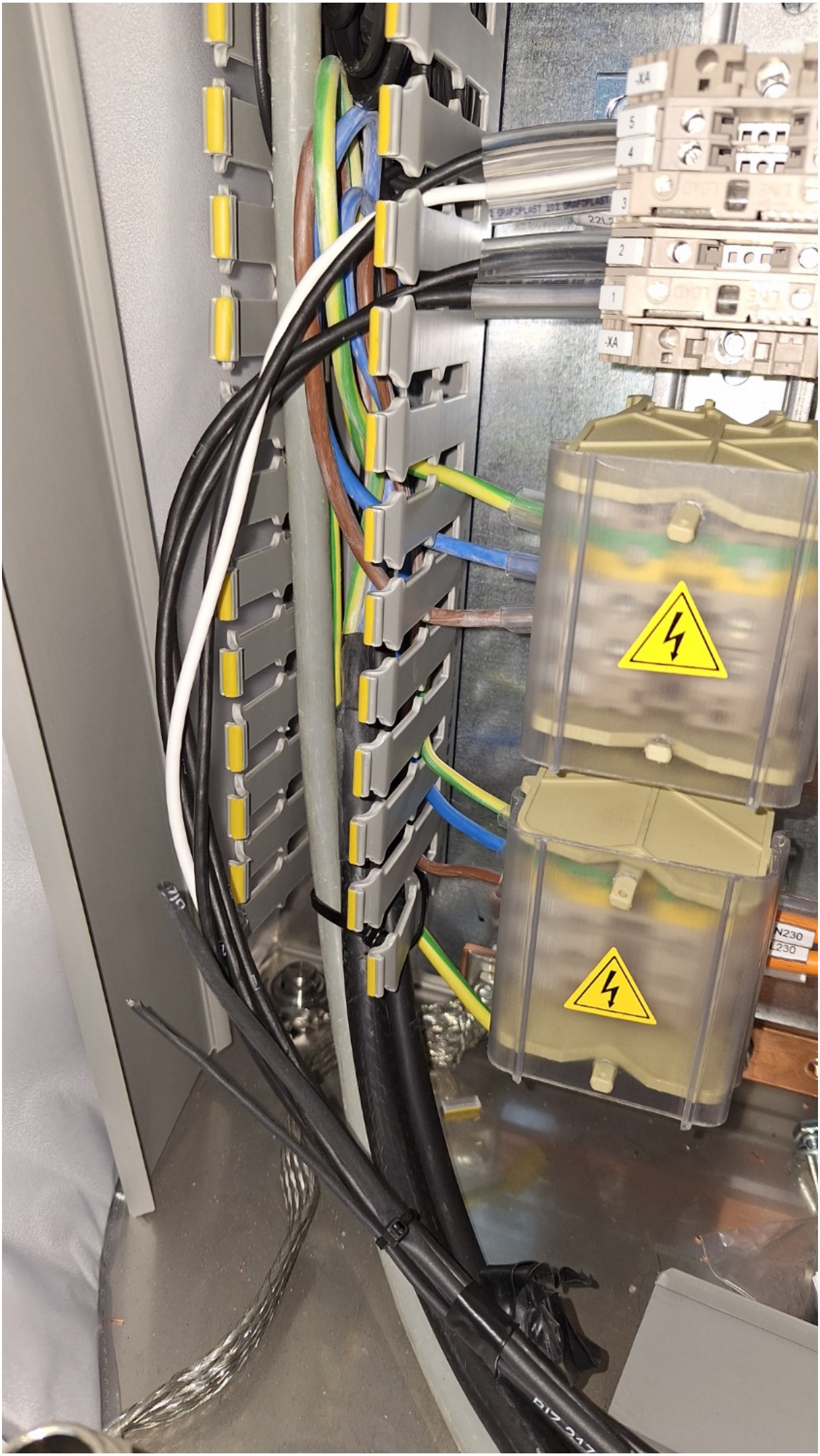
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


XA
5
4
3
2
1
-XA
N230
230

4
6
8
10
12
14
16
18
20
26
28
30
32
34
CB-200F4B/2ТВ-XS-000/12
CB-200F4B/2ТВ-XS-000/14

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001276

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001451	1.4 Discipline	Instrumental
1.2 Item	C-63-XS-001/B400-SIS-001	TRIP SIGNAL TO UCP / MARSHALLING PCS	
1.3 Subsystem	63-00	Instrument Air Package (A-63000)	

2 - OBSERVATION

Missing cable tag SS . side A-63000

Name: Alessio Polo

Date: 2024-12-04

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	2024-12-04
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

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

C30001281

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000587	1.4 Discipline	Electrical
1.2 Item	84311-CEL		AC UPS - PAS DB / UCP - Instrument Air Package A-63000
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

Missing cable tag SIDE DP-200F3 / Panel A-6300

Name: Alessio Polo
Date: 2024-12-04
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	2024-12-04
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo
Date: 2025-02-04
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

C-63-PS-052
C-63-PS-064
C-63-ZSH-040
C-63-ZSL-040
C-63-XX-053


84312-CEL
84311-CEL
8431 4-CEL
8431 8-CEL

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001282

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000587	1.4 Discipline	Electrical
1.2 Item	84311-CEL		AC UPS - PAS DB / UCP - Instrument Air Package A-63000
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

Missing cores identification tag. Cabinet side DP-200F3 / A-63000 . (see document 123A90-DDL-EL-DD-20092 sh.7-8)

Name: Alessio Polo
Date: 2024-12-04
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	2024-12-04
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

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

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


X48 N
X47 N
X46 N
X45 N
X44 N
X43 N
X42 N
X41 N
X40 N
X39 N
X38 N
X37 N
X36 N
X35 N
X34 N
X31 PE
N/X48/N/84306-CEL
N/X46/N/84304-CEL
N/X45/N/84303-CEL
N/X44/N/84302-CEL
N/X43/N/84301-CEL
N/X42/N/84317-CEL
N/X41/N/84316-CEL
N/X40/N/84315-CEL
N/X39/N/84314-CEL
N/X38/N/84308-CEL
N/X37/N/8430?-CEL

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001283

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000587	1.4 Discipline	Electrical
1.2 Item	84311-CEL		AC UPS - PAS DB / UCP - Instrument Air Package A-63000
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

Missing the earth connection between the terminal block (PE) and the earthing bar (PE). see 123A90-DDL-EL-DG-20149 sh.40 (SIDE A-63000)

Name: Alessio Polo
Date: 2024-12-04
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	2024-12-04
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

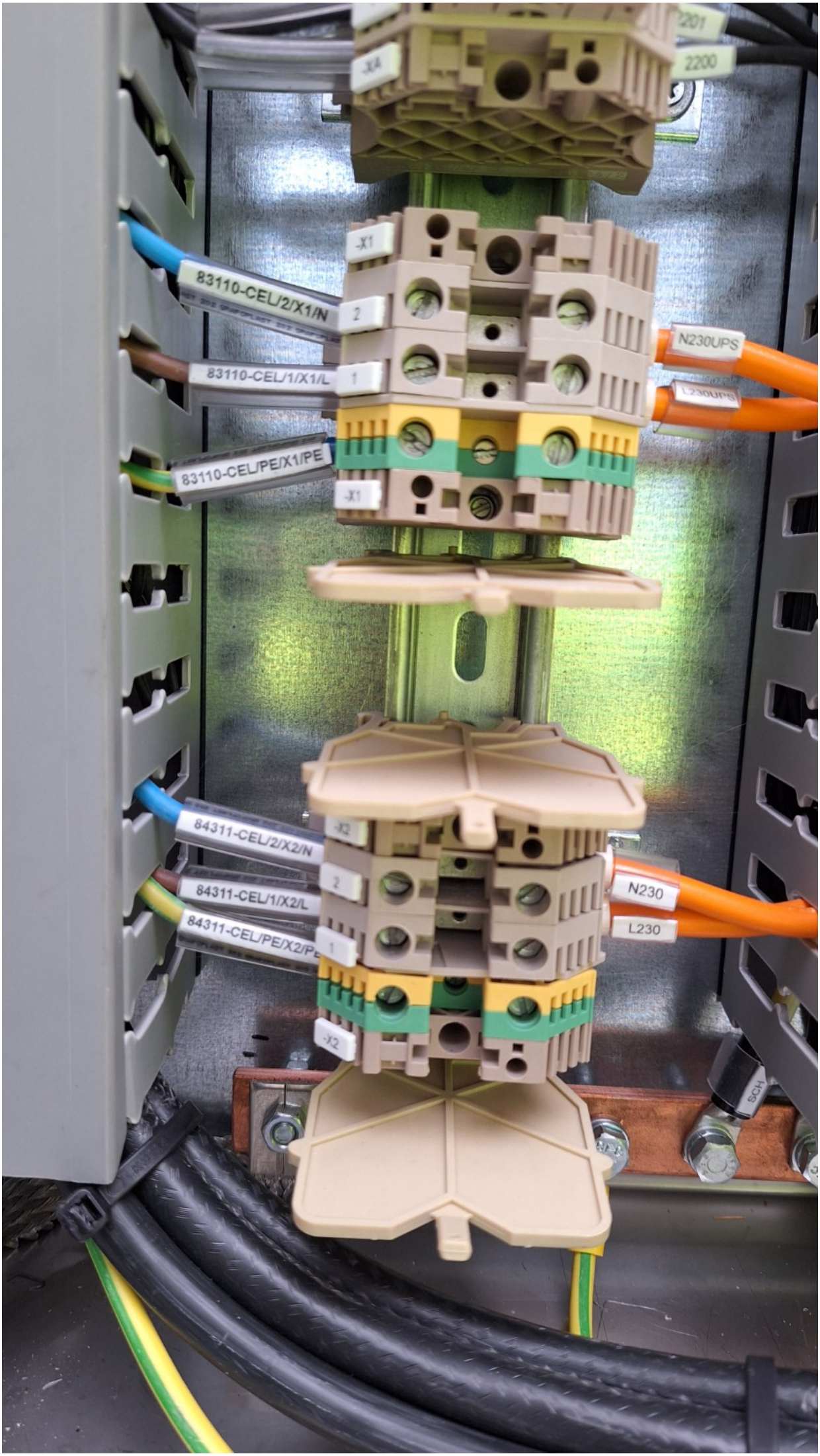
5 - CLEARANCE CHECK

The terminal earthing connection is grounded in the panel.

Name: Giovanni Tangianu
Date: 2024-12-06
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


2201
-XA
2200
-X1
83110-CEL/2/X1/N
2
N230UPS
83110-CEL/1/X1/L
1
L230UPS
83110-CEL/PE/X1/PE
-X1
84311-CEL/2/X2/N
-X2
2
N230
84311-CEL/1/X2/L
L230
1
-X2
SCH

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001287

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000629	1.4 Discipline	Electrical
1.2 Item	83110-CEL		Lighting & Small Power DB BoP / UCP - Instrument Air Package -A-63000 - Auxiliary
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

Missing the earth connection between the terminal block (PE) and the earthing bar (PE). see 123A90-DDL-EL-DG-20149 sh.53 . side A-63000.

Name: Alessio Polo
Date: 2024-12-04
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	2024-12-04
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name:
Date:
Signature:

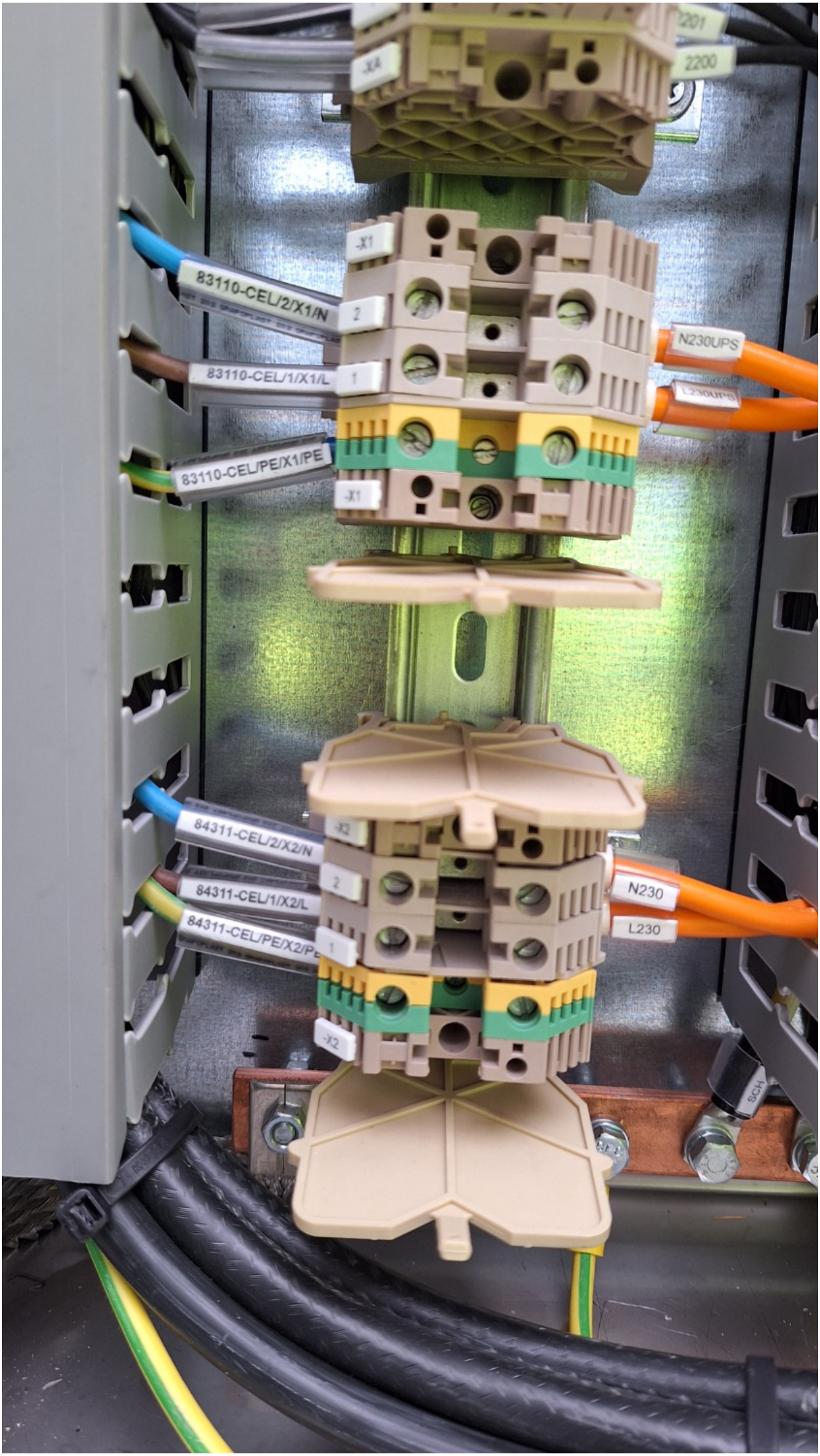
5 - CLEARANCE CHECK

The terminal earthing connection is grounded in the panel.

Name: Giovanni Tangianu
Date: 2024-12-06
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


2201
-XA
2200
-X1
83110-CEL/2/X1/N
2
N230UPS
83110-CEL/1/X1/L
1
L230UPS
83110-CEL/PE/X1/PE
-X1
84311-CEL/2/X2/N
-X2
2
N230
84311-CEL/1/X2/L
L230
1
-X2
SCH

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000482

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-63000		Instrument Air Package
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

Check if the set point be set to 9,5 since on the air receiver (63-PT-004) we have a pressure of 8,8 barg

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	2024-10-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

done - max 10 - min 8barg

Name VENDOR COES

Date 2025-01-24

Signature

5 - CLEARANCE CHECK

done - max 10 - min 8barg

Name Stefano Linari

Date 2025-01-24

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000483

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-63000		Instrument Air Package
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

Package to be test with PLC set to REMOTE MODE

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	2024-10-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

tested

Name VENDOR COES

Date 2025-02-06

Signature

5 - CLEARANCE CHECK

tested

Name Stefano Linari

Date 2025-02-06

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000484

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-63000		Instrument Air Package
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

necessary to set the operating logic to ensure that with a DEW POINT measured > -40°C, the DRYER in operation is exchanged with the DRYER in pause

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	2024-10-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

DONE

Name VENDOR COES

Date 2025-02-06

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-02-06

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000485

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-63000		Instrument Air Package
1.3 Subsystem	63-00		Instrument Air Package (A-63000)

2 - OBSERVATION

TO BE IMPLEMENT: THE PRESSURE SWITCHES IN BAD QUALITY MUST BLOCK AIR DRYER (to be verify at 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	2024-10-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

VERIFIED - CLOSED

Name	VENDOR COES
Date	2025-02-06
Signature	

5 - CLEARANCE CHECK

VERIFIED - CLOSED

Name	Stefano Linari
Date	2025-02-06
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: 63-00 & process: COMM & discipline : E

Electrical	63-00 Instrument Air Package (A-63000)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
A4/+08-QF1	DRAWER AIR PACKAGE 01A - A4/+08-QF1	ONSHORE	C10002854	FP00	100	2025-01-13	RFO 2
		ONSHORE	C10002855	FTR-2	100	2024-10-02	RFO 2
		ONSHORE	C10002856	FTR-6	100	2024-10-03	RFO 2
		ONSHORE	C10003012	FTR-5	100	2025-04-29	RFO 2
A5/+08-QF1	DRAWER AIR PACKAGE 01B - A5/+08-QF1	ONSHORE	C10002857	FP00	100	2025-01-13	RFO 2
		ONSHORE	C10002858	FTR-2	100	2024-10-02	RFO 2
		ONSHORE	C10002859	FTR-6	100	2024-10-03	RFO 2
		ONSHORE	C10003013	FTR-5	100	2025-04-29	RFO 2
DP-200N1-Q29	BREAKER AUX UCP AIR PACKAGE - DP-200N1-Q29	ONSHORE	C10002861	FTR-2	100	2024-10-28	RFO 2
UP-200F3-QF34	UCP - INSTRUMENT AIR PACKAGE	ONSHORE	C10004573	FTR-2	100	2024-12-07	RFO 2

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	A4/+08-QF1	: DRAWER AIR PACKAGE 01A - A4/+08-QF1			Dwg	1723002197-EL-DG-00011
	S/Sys	63-00	: Instrument Air Package (A-63000)			Module	
TASK	code	C10002854		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-A4/+08
Breaker rating (A)	160A	Nominal current (A)	111.24A

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				NA
8	Test control and safety functions according to manufacturer's procedure.				OK
9	Energize				OK
10	Measure Voltage and Current values at feeder breaker	398	V	0.2 A	OK
11	Attach test procedure, if any				NA

FUNCTION TEST REQUIREMENT	RESULT

Testing & measurement instruments used

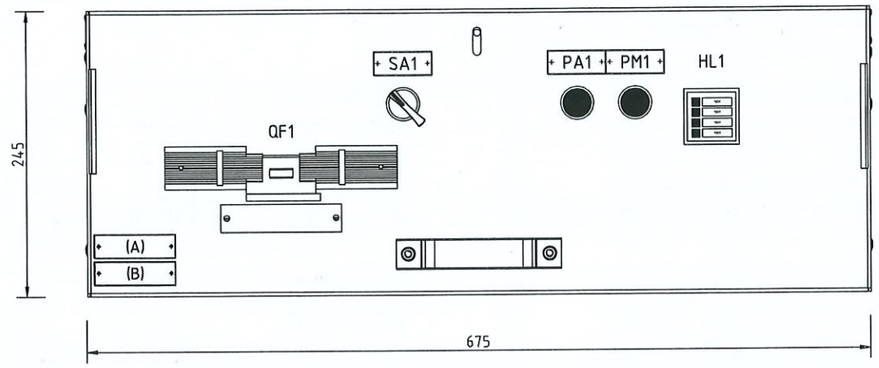
Type	Serial n°	Calibration certificate	Validity
FLUKE 1663	5380144	7727/24	10/07/2025
FLUKE 376	A1711003	7710/24	10/07/2025

Comments:

Page 1/1	Performed by	☐ WITNESS ☑ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM COMM	RM COMM	CPY NOT PRESENT
Name	Davide Zucconelli	Kristian Castellani	Witness waived
Date	2024-12-24	2025-01-13	2025-01-13
Signature	Digitaly signed by Davide Zucconelli 2024-12-24T07:58:29.393Z	Digitaly signed by Kristian Castellani 2025-01-13T09:55:01.772Z	Digitaly signed by Witness waived 2025-01-13T10:42:07.386Z

DOOR FRONT LAY-OUT

TYPICAL : LINE FEEDER "LK1-n"

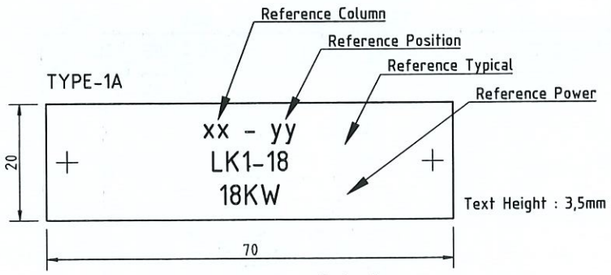


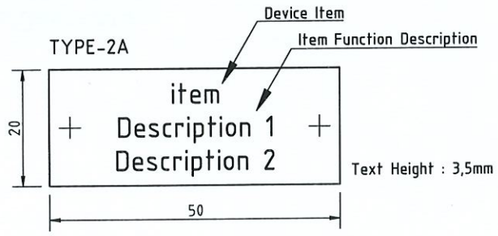
NOTE :

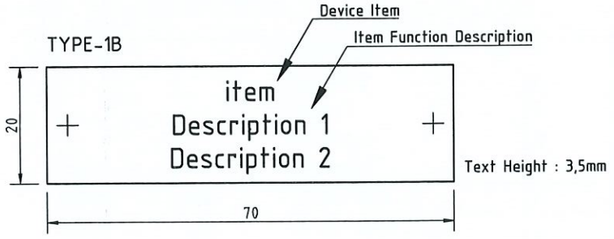
A) IDENTIFICATION name plate (type-1A) , with :
- Drawer position [Column / Position inside SWB]
- Typical name [reference applicability typical used]
- Power [reference applicability typical used]

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

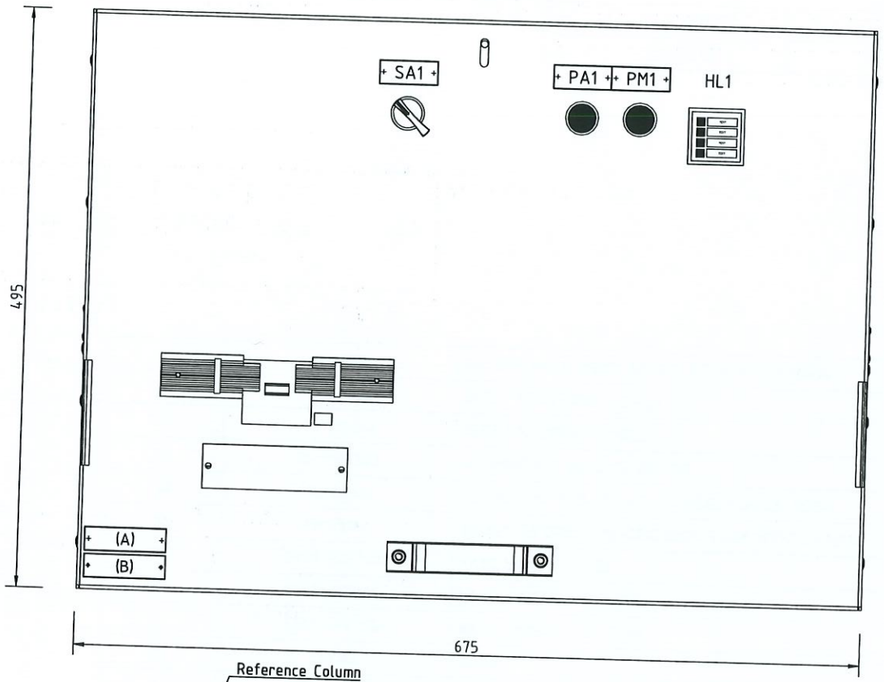
REV. 00

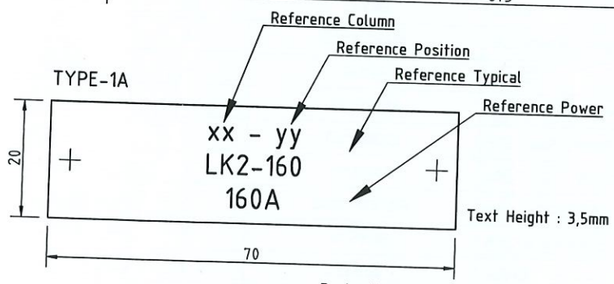
F.to UNI A3: 420mmx297mm

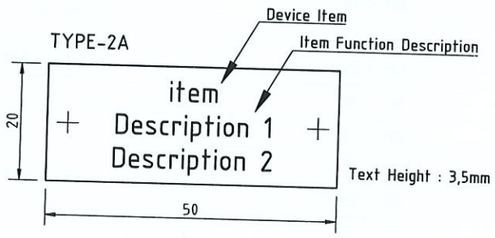
File Name : 1723002197-EL-DG-00031 Rev. 00

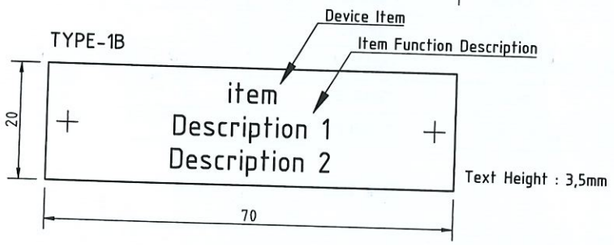
DOOR FRONT LAY-OUT

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

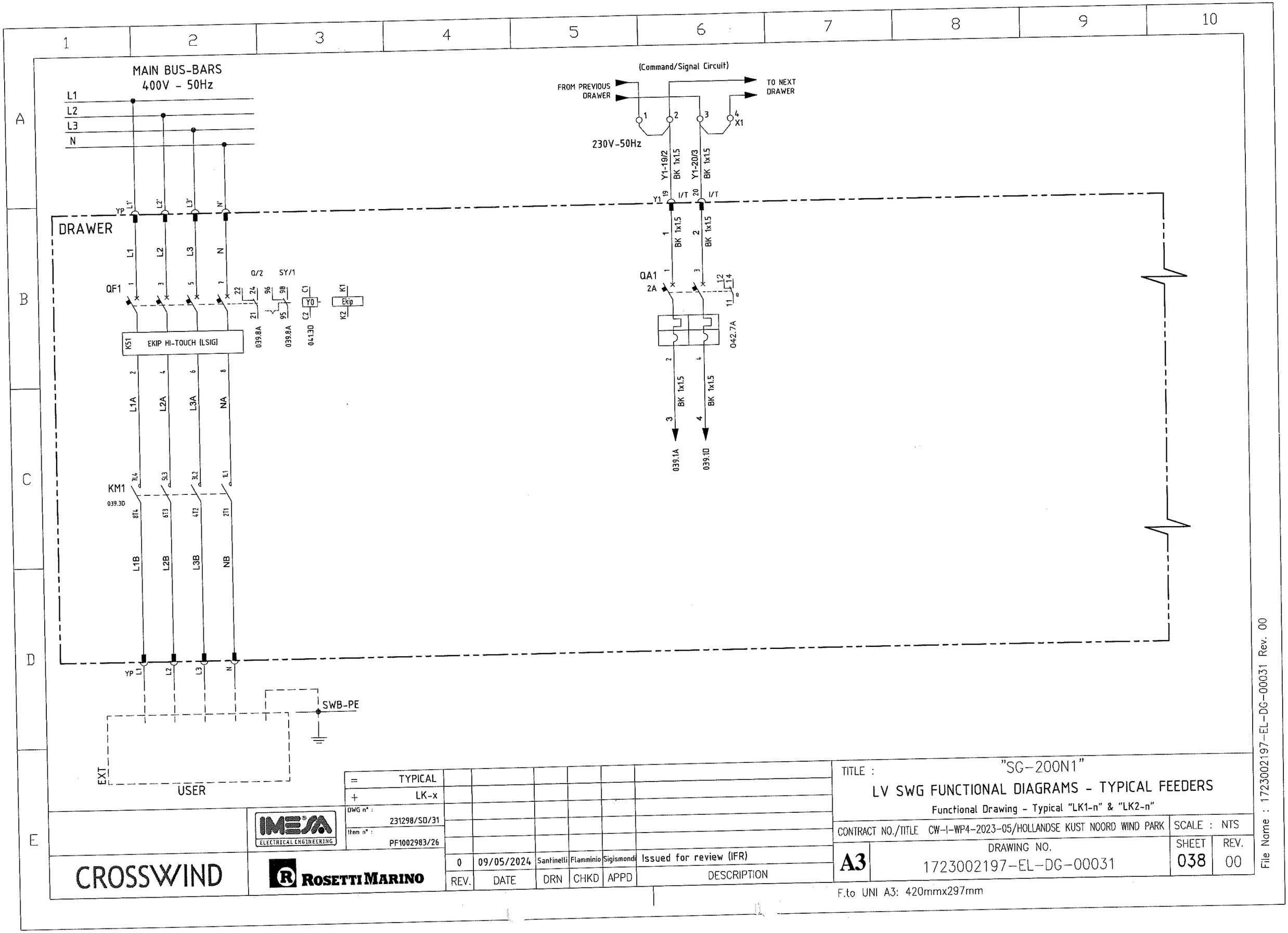
TITLE : "SG-200N1"
LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS
Items Acronym - Typical "LK1-n" & "LK2-n"

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

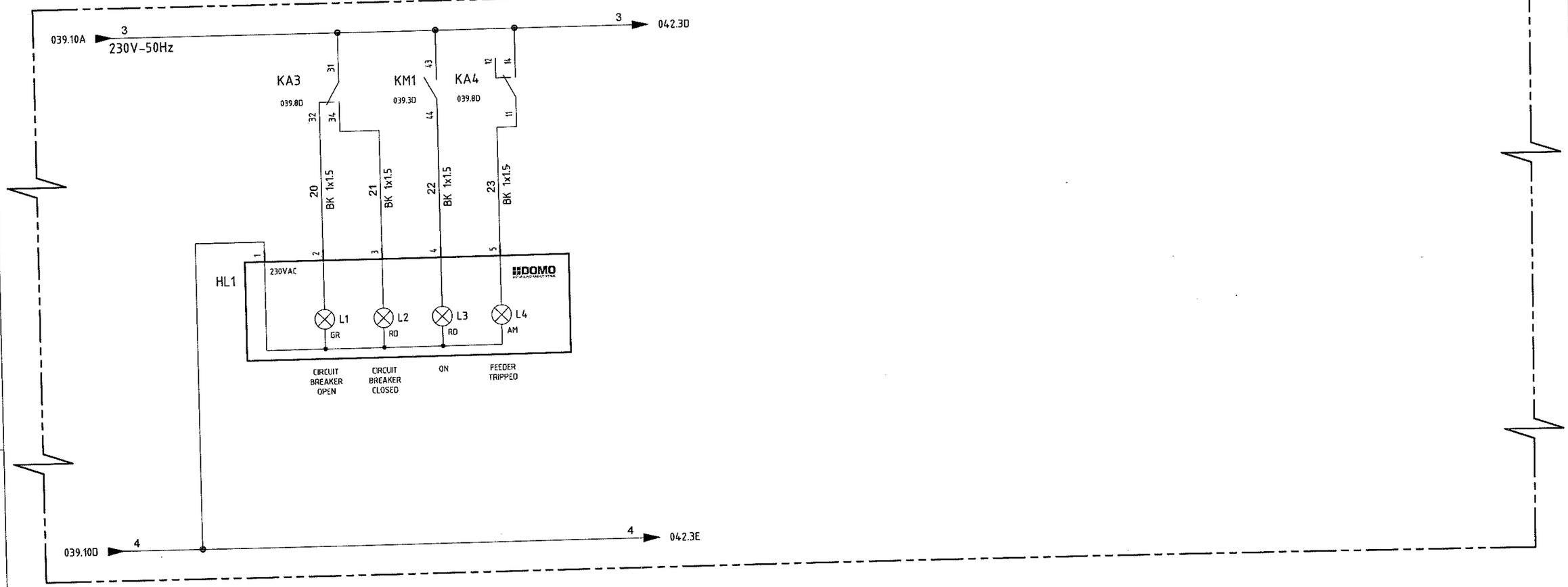
DRAWING NO. 1723002197-EL-DG-00031

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

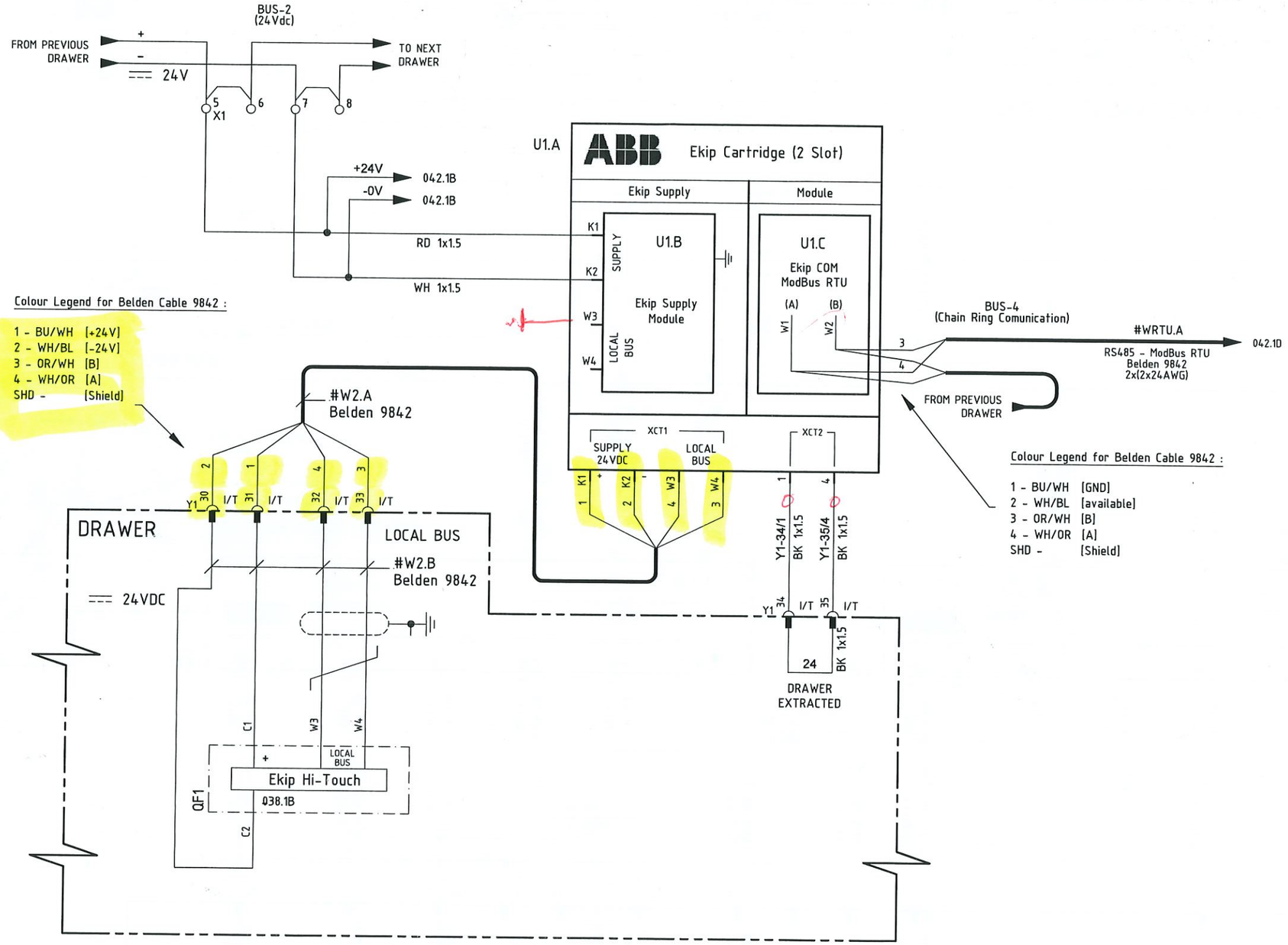
DRAWING NO. 1723002197-EL-DG-00031

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

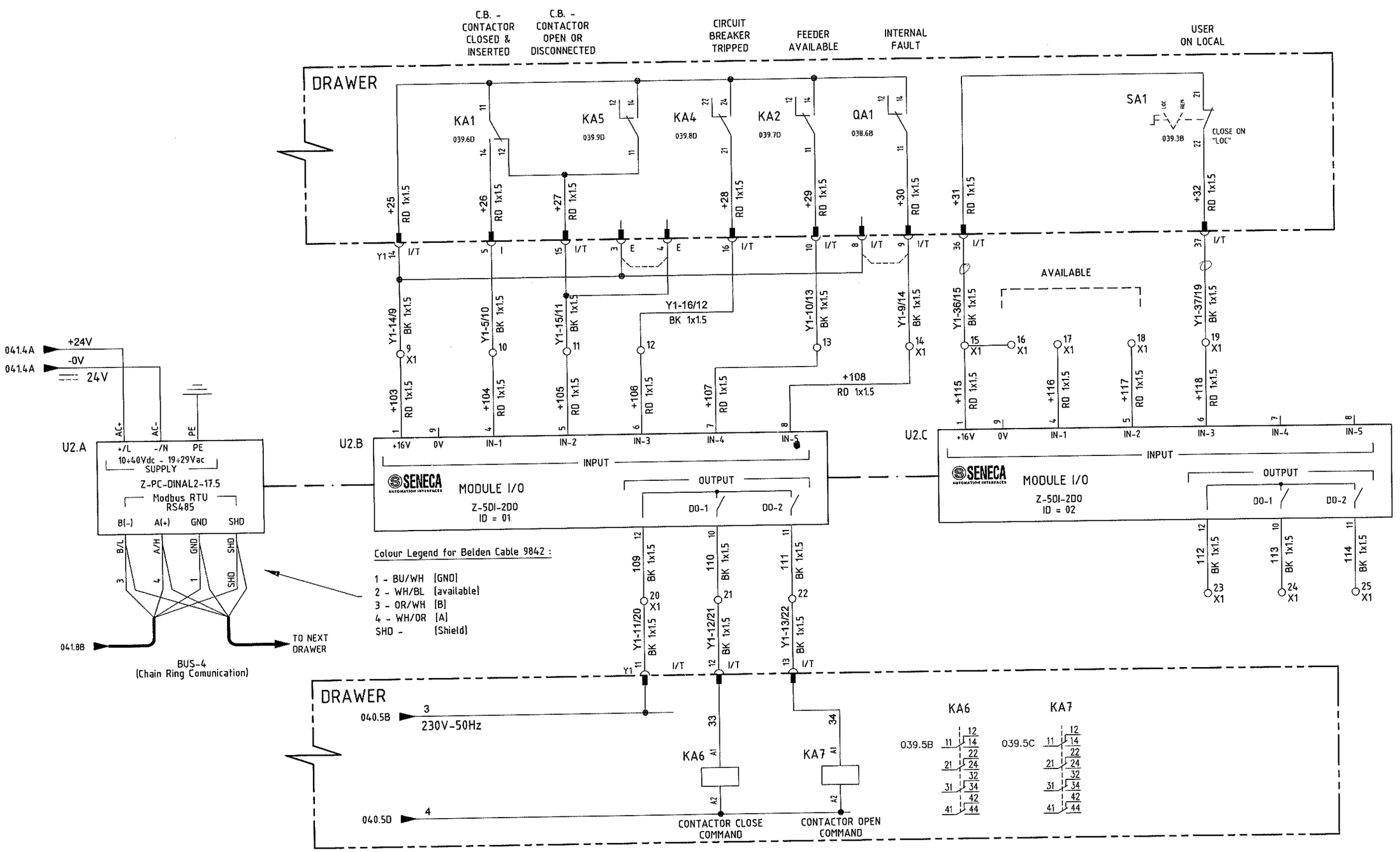
Functional Drawing - Typical "LK1-n" & "LK2-n"

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

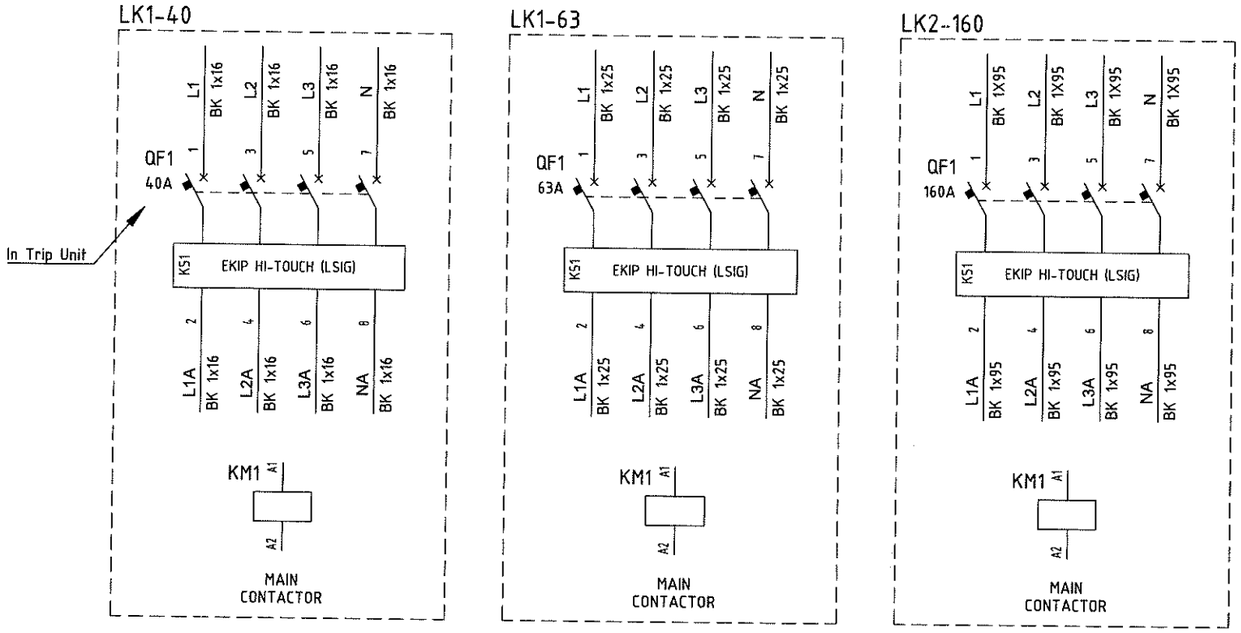
REV. 00

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

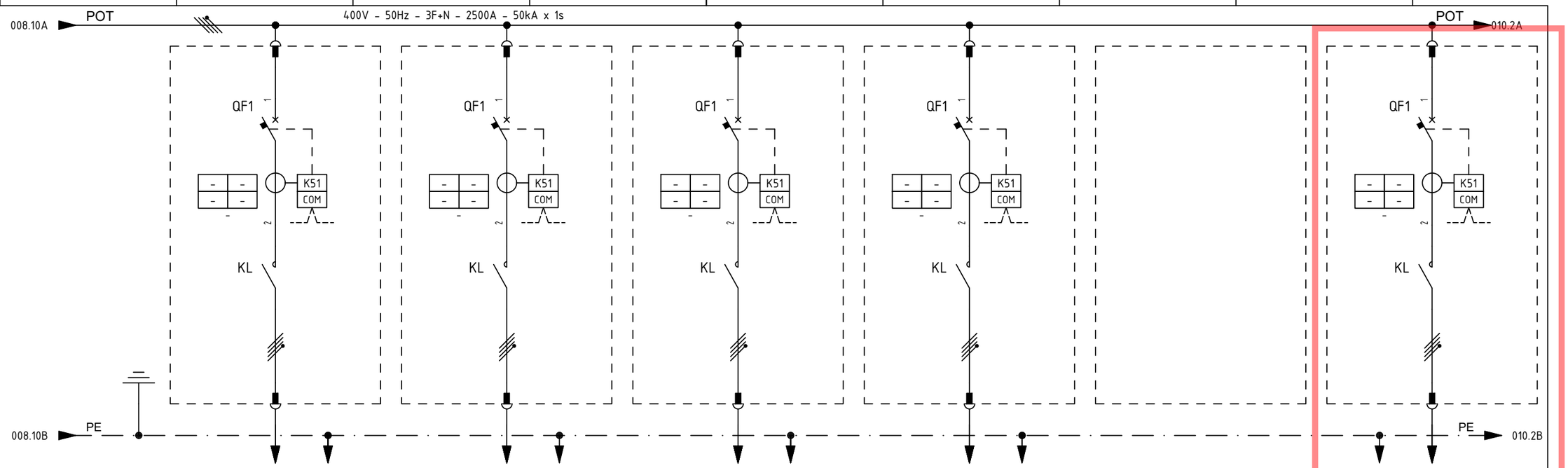
DRAWING NO. 1723002197-EL-DG-00031

SHEET 047

REV. 00

F.to UNI A3: 420mmx297mm

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



ITEM			1	A-80000	CP-850F03	SPARE	SPARE		K-63001-A
UTILITY			2	FUEL CELL AUXILIARY LOAD	BESS PCS CABINET	SPARE	SPARE		INSTRUMENTS AIR PACKAGE 01A
COLUMN/CUBICLE			3	A4 / +03	A4 / +04	A4 / +05	A4 / +06		A4 / +08
RATED POWER | RATED CURRENT			4/5	20 kW | 32.84 A	11,09 kW | 17.42 A	- kW | - A	20.0 kW | 32.1 A		68.75 kW | 111.24 A
TYPICAL FUNCTIONAL			6	LK1-63	LK1-40	LK1-40	LK1-40		LK2-160
CIRCUIT BREAKER (ABB)	TYPE		7	XT2S - 160	XT2S - 160	XT2S - 160	XT2S - 160		XT4S - 250
	VERSION		8	4P - FIXED	4P - FIXED	4P - FIXED	4P - FIXED		4P - FIXED
	TRIP UNITS		9	EKIP HI TOUCH LSIG (In = 63A)	EKIP HI TOUCH LSIG (In = 40A)	EKIP HI TOUCH LSIG (In = 40A)	EKIP HI TOUCH LSIG (In = 40A)		EKIP HI TOUCH LSIG (In = 160A)
	Icu	KA	10	50 kA	50 kA	50 kA	50 kA		50 kA
OVERLOAD	L	Range A	11	(0.4 - 1) x In	(0.4 - 1) x In	(0.4 - 1) x In	(0.4 - 1) x In		(0.4 - 1) x In
		Range t	12	k/I^2	k/I^2	k/I^2	k/I^2		k/I^2
SEL. SHORT-CIRCUIT	S	Range A	13	(0.6 - 10) x In	(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
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
		Range t	16	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
		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
CONTACTOR (ABB)			19	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	AF40-40-00-13 (70A-AC1); 100-250VAC/DC		AF190-40-11-13 (275A-AC1); 100-250 VAC/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	4 x 10	-	-		5G70

=

+

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

IMESA ELECTRICAL ENGINEERING

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 009

REV. 03

F.to UNI A3: 420mmx297mm

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

ITEM	Tag	A4/+08-QF1	: DRAWER AIR PACKAGE 01A - A4/+08-QF1	Dwg	1723002197-EL-DG-00011		
	S/Sys	63-00	: Instrument Air Package (A-63000)	Module			
TASK	code	C10002855	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°:	EGA000254350N000	Relay type:	EKIP HI TOUCH LSIG
Auxiliary supply:	24Vdc	Location:	B200	Cubicle:	A4/+08
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	115.2A	189A		3s	1586ms
S	560A	315A		0.1s	315ms
I	1120A	945A		INSTANT	27ms
G	32A			0.1s	

Testing & measurement instruments used

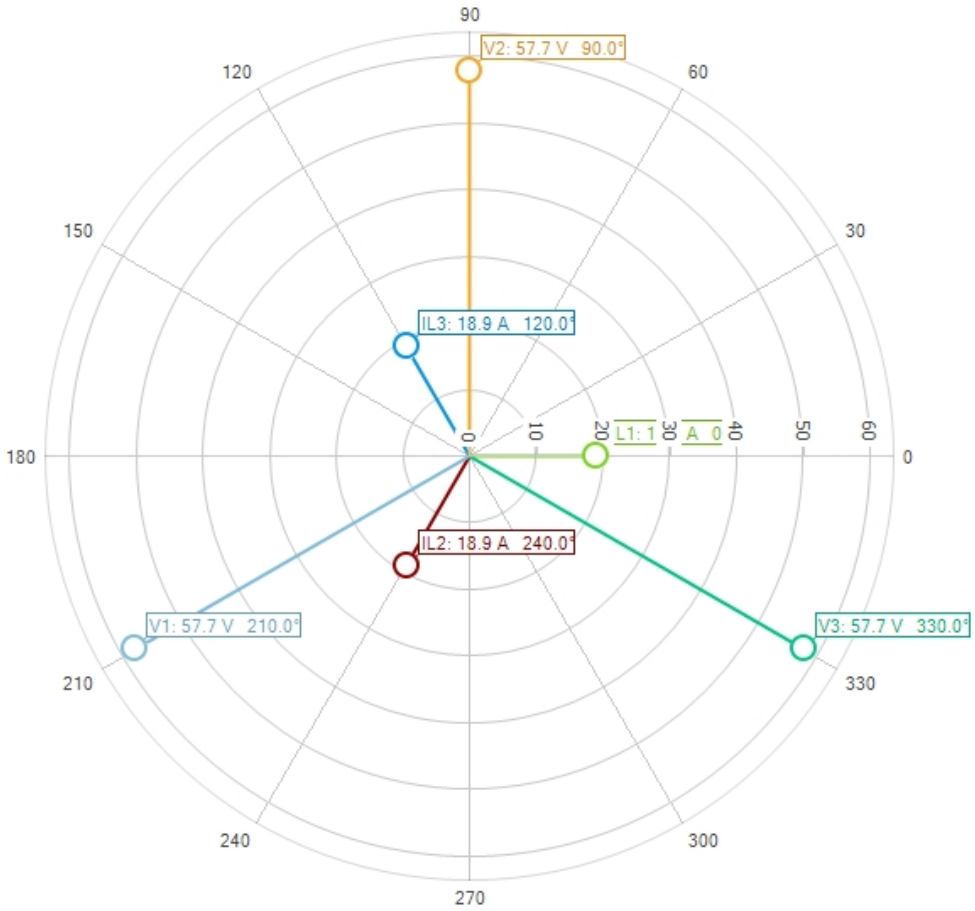
Type	Serial n°	Calibration certificate	Validity
ABB EKIP T&P	E34013804410W050		

Comments: See the attachments for full tests.

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	2024-10-02	2024-10-02
Signature	PROVERLIS Digitaly signed by Mattia Girotti 2024-10-02T06:28:41.743Z	PROVERLIS Digitaly signed by Kristian Castellani 2024-10-02T08:50:22.778Z	PROVERLIS Digitaly signed by Witness waived 2024-10-02T09:20:17.265Z

Page Name	Group Name	Variable Name	Variable Value	Variable Unit
Settings A				
	Overload Protection (L - ANSI 49)			
		PU nominal current In	160	
		Status	Enabled	
		Function	t=k/i^2	
		Prealarm I1	90	% I1
		Threshold I1	0.720	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)	3.50	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	7.00	In
		Startup enable	Disabled	
		Startup time	0.10	s
		Startup threshold	1.50	In
		Set Startup th. on ProgStatusD	--------	
		BlockOnStartUp	--------	
		BlockOnOutOfFrequency	--------	
		BlockOnProgStatusA	--------	
		BlockOnProgStatusB	--------	
		BlockOnProgStatusC	--------	
		BlockOnProgStatusD	--------	
		Zone Selectivity status	Disabled	
		Zone Selectivity Type	Logic and Hardware	
	Second I			
		Prot Second I	---	
		Status	Disabled	
		Threshold I31	1.50	In
		Zone Selectivity status	Disabled	
		Zone Selectivity Type	Logic and Hardware	
		Second I Mode	Function Dependent	
		Function	Disabled	
		Delay On	0.00	s
		Delay Off	15.00	s
	Earth fault protection (G - ANSI 50N TD/68/51N)			
		Status	Enabled	
		Trip enable	Enabled	
		BlockOnStartUp	--------	
		BlockOnOutOfFrequency	--------	
		BlockOnProgStatusA	--------	
		BlockOnProgStatusB	--------	
		BlockOnProgStatusC	--------	
		BlockOnProgStatusD	--------	
		Function	t=k	
		Prealarm I4	90	% I4
		Threshold I4 (t=k)	0.200	In
		Time t4 (t=k) IEC - UL489	0.10	s

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



Test

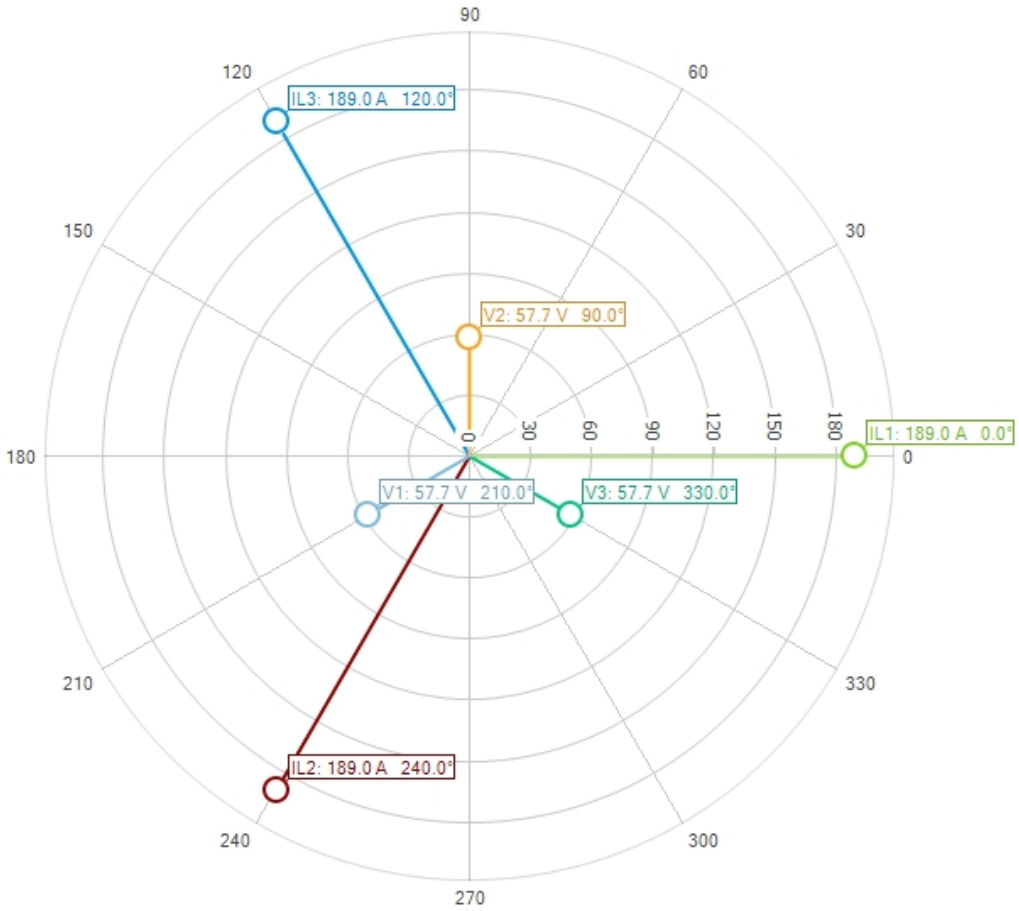
Name	Automatic test 1
Session	Default session
Customer	
Location	
Operator	

Device

Tag name	A5/+08
Relay Serial Number	EGA000154350N000
Circuit Breaker Serial Number	CE71079782number
	XT2/4
Device settings	In = 160 A Un = 100 V fn = 50 Hz
Protection Settings	Protection = L Curve type = t=k/i^2 Threshold = 0.720 In Time = 3.00 s Protection = S Curve type = t=k Threshold = 3.50 In Time = 0.10 s Protection = I Threshold = 7.00 In Protection = G Curve type = t=k Threshold = 0.200 In Time = 0.10 s
Preconditions	All preconditions satisfied.

Test result

⚠ Test completed without any trip in 3000 ms.



Test

Name	Automatic test 2
Session	Default session
Customer	
Location	
Operator	

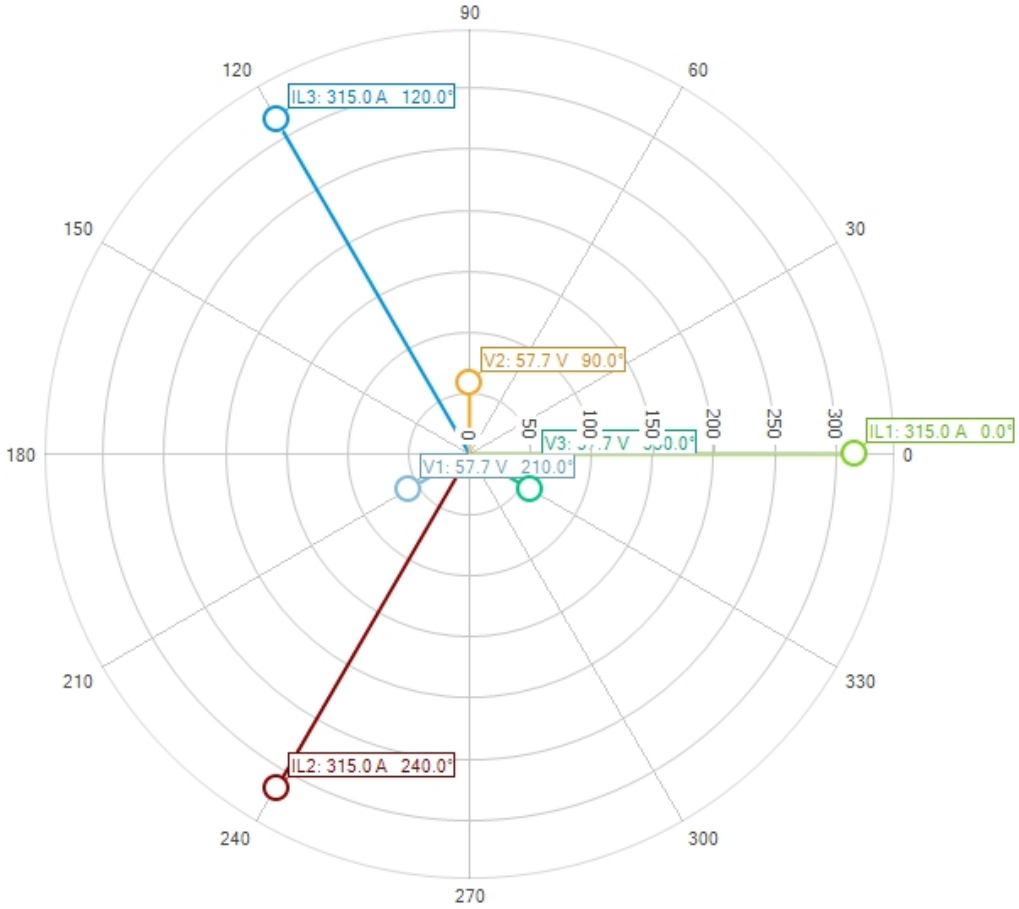
Device

Tag name	A5/+08
Relay Serial Number	EGA000154350N000
Circuit Breaker Serial Number	CE71079782number
	XT2/4
Device settings	In = 160 A Un = 100 V fn = 50 Hz
Protection Settings	Protection = L Curve type = t=k/i^2 Threshold = 0.720 In Time = 3.00 s Protection = S Curve type = t=k Threshold = 3.50 In Time = 0.10 s Protection = I Threshold = 7.00 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 but out of time. Protection L tripped in 1585 ms.
Trip time must be between 0 ms and 1000 ms

Trip time must be between 0 ms and 1000 ms.



Test

Name	Automatic test 3
Session	Default session
Customer	
Location	
Operator	

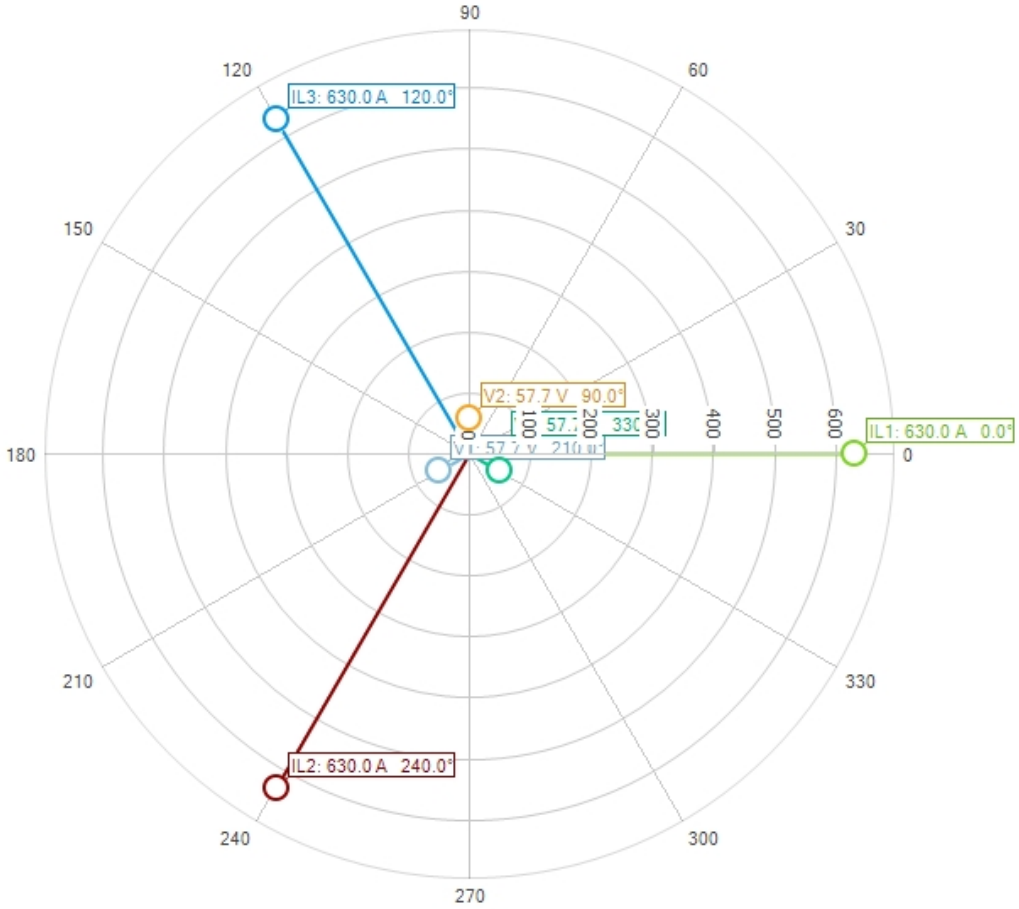
Device

Tag name	A5/+08
Relay Serial Number	EGA000154350N000
Circuit Breaker Serial Number	CE71079782number
	XT2/4
Device settings	In = 160 A Un = 100 V fn = 50 Hz
Protection Settings	Protection = L Curve type = t=k/i^2 Threshold = 0.720 In Time = 3.00 s Protection = S Curve type = t=k Threshold = 3.50 In Time = 0.10 s Protection = I Threshold = 7.00 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 102 ms.
Trip time must be between 0 ms and 1000 ms

Trip time must be between 0 ms and 1000 ms.



Test

Name	Automatic test 4
Session	Default session
Customer	
Location	
Operator	

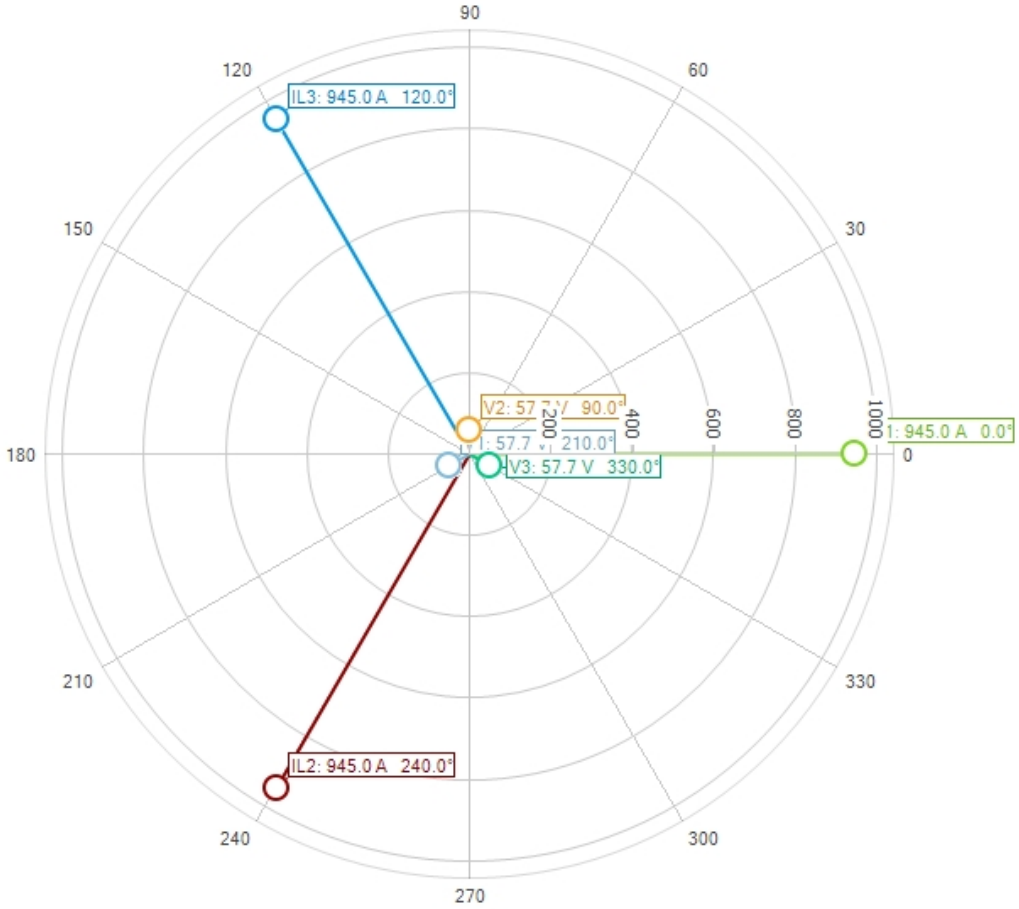
Device

Tag name	A5/+08
Relay Serial Number	EGA000154350N000
Circuit Breaker Serial Number	CE71079782number
	XT2/4
Device settings	In = 160 A Un = 100 V fn = 50 Hz
Protection Settings	Protection = L Curve type = t=k/i^2 Threshold = 0.720 In Time = 3.00 s Protection = S Curve type = t=k Threshold = 3.50 In Time = 0.10 s Protection = I Threshold = 7.00 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 22 ms.
Trip time must be between 0 ms and 1000 ms

Trip time must be between 0 ms and 1000 ms.



Test

Name	Automatic test 5
Session	Default session
Customer	
Location	
Operator	

Device

Tag name	A5/+08
Relay Serial Number	EGA000154350N000
Circuit Breaker Serial Number	CE71079782number
	XT2/4
Device settings	In = 160 A Un = 100 V fn = 50 Hz
Protection Settings	Protection = L Curve type = t=k/i^2 Threshold = 0.720 In Time = 3.00 s Protection = S Curve type = t=k Threshold = 3.50 In Time = 0.10 s Protection = I Threshold = 7.00 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 27 ms.
Trip time must be between 0 ms and 1000 ms

Trip time must be between 0 ms and 1000 ms.

ITEM	Tag	A4/+08-QF1	: DRAWER AIR PACKAGE 01A - A4/+08-QF1			Dwg	1723002197-EL-DG-00011
	S/Sys	63-00	: Instrument Air Package (A-63000)			Module	
TASK	code	C10002856		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:	K-63001-A INSTRUMENTS AIR PACKAGE 01A	Instrument Type / Serial N° :	FLUKE 175 / 17140769
Cubicle N°:	A4/+08	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								
									Status Check					
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)	Event (Y/N)	Alarm (Y/N)	Fault (Y/N)	Time Stamping Satisfactory (Y/N)	Refresh Time (if >1s)	Appearing in all applicable display (Y/N)
1	C.B. - CLOSED & INSERTED	HW	DI	A4/+08 - KA1/11-14	A4/+08 - X1/9-10	NA	NA	NA	Y	NA	NA	NA	NA	NA
2	C.B. - OPEN OR DISCONNECTED	HW	DI	A4/+08 - KA1/11-12	A4/+08 - X1/9-11	NA	NA	NA	Y	NA	NA	NA	NA	NA
3	C.B. - TRIPPED	HW	DI	A4/+08 - KA4/21-24	A4/+08 - X1/9-12	NA	NA	NA	NA	NA	Y	NA	NA	NA
4	INTERNAL FAULT	HW	DI	A4/+08 - QA1/11-14	A4/+08 - X1/9-14	NA	NA	NA	NA	NA	Y	NA	NA	NA
5	FEEDER AVAILABLE	HW	DI	A4/+08 - KA2/11-14	A4/+08 - X1/9-13	NA	NA	NA	Y	NA	NA	NA	NA	NA
6	USER ON LOCAL	HW	DI	A4/+08 - SA1/21-22	A4/+08 - X1/15-19	NA	NA	NA	Y	NA	NA	NA	NA	NA
7	DRAWER ON TEST	HW	DI	A4/+08 - KA5/11-14	A4/+08 - 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 2024-10-02T12:55:52.075Z	PROVERLIS Digitaly signed by Kristian Castellani 2024-10-03T07:11:43.028Z	PROVERLIS Digitaly signed by Witness waived 2024-10-03T14:27:42.466Z

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	A5/+08-QF1	: DRAWER AIR PACKAGE 01B - A5/+08-QF1			Dwg	1723002197-EL-DG-00011
	S/Sys	63-00	: Instrument Air Package (A-63000)			Module	
TASK	code	C10002857		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-A5/+08
Breaker rating (A)	160A	Nominal current (A)	111.24A

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				NA
8	Test control and safety functions according to manufacturer's procedure.				OK
9	Energize				OK
10	Measure Voltage and Current values at feeder breaker	397	V	0.1 A	OK
11	Attach test procedure, if any				NA

FUNCTION TEST REQUIREMENT	RESULT

Testing & measurement instruments used

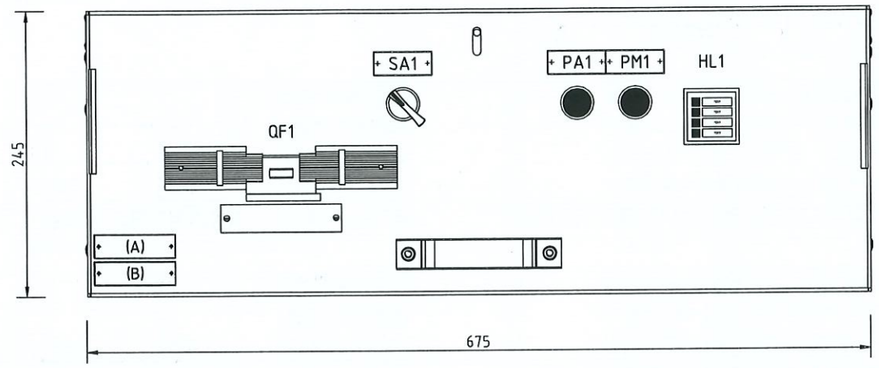
Type	Serial n°	Calibration certificate	Validity
FLUKE 1663	5380144	7727/24	10/07/2025
FLUKE 376	A1711003	7710/24	10/07/2025

Comments:

Page 1/1	Performed by	☐ WITNESS ☑ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM COMM	RM COMM	CPY NOT PRESENT
Name	Davide Zucconelli	Kristian Castellani	Witness waived
Date	2024-12-24	2025-01-13	2025-01-13
Signature	PROVERLIS Digitaly signed by Davide Zucconelli 2024-12-24T07:59:12.090Z	PROVERLIS Digitaly signed by Kristian Castellani 2025-01-13T09:56:02.323Z	PROVERLIS Digitaly signed by Witness waived 2025-01-13T10:42:35.660Z

DOOR FRONT LAY-OUT

TYPICAL : LINE FEEDER "LK1-n"

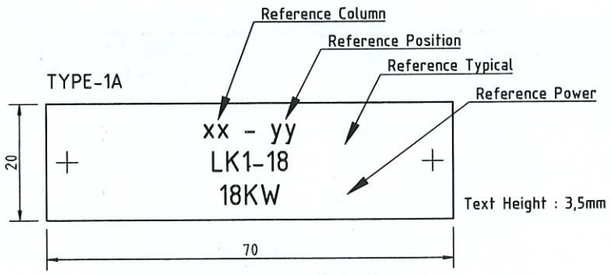


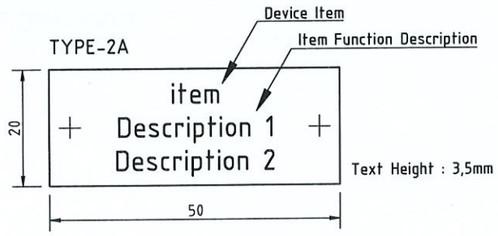
NOTE :

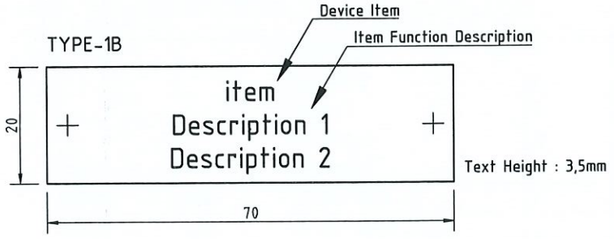
A) IDENTIFICATION name plate (type-1A) , with :
- Drawer position [Column / Position inside SWB]
- Typical name [reference applicability typical used]
- Power [reference applicability typical used]

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

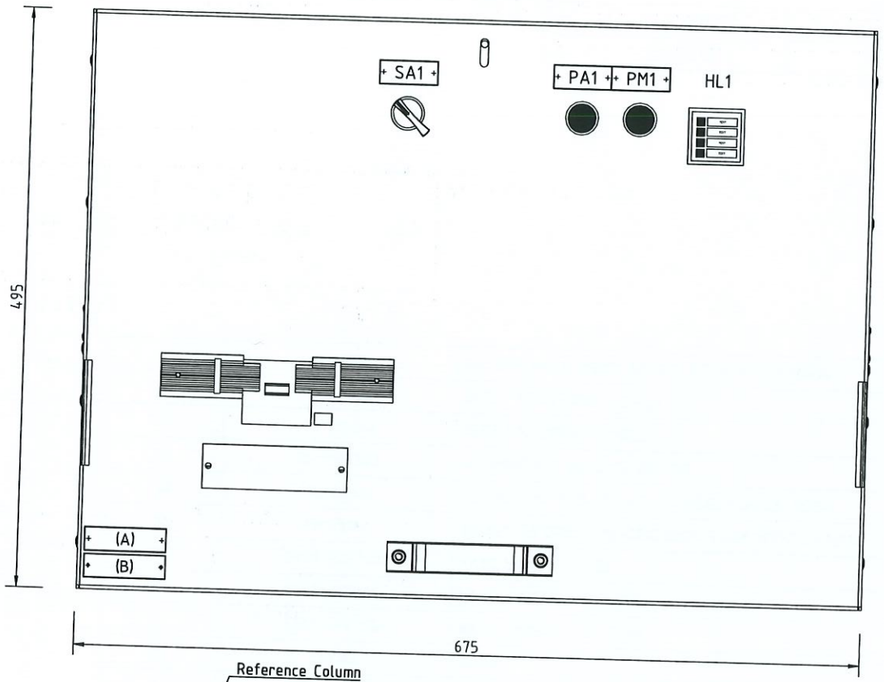
REV. 00

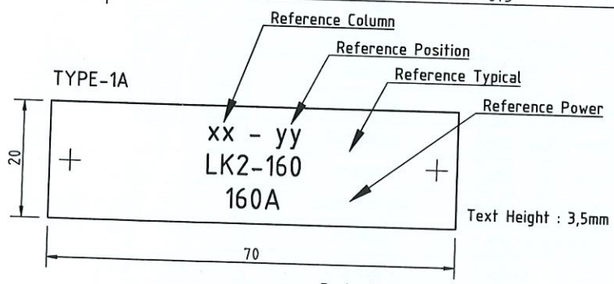
F.to UNI A3: 420mmx297mm

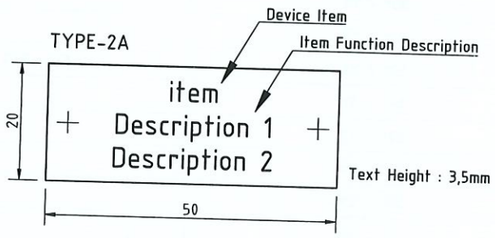
File Name : 1723002197-EL-DG-00031 Rev. 00

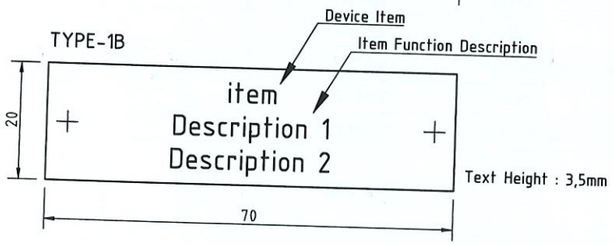
DOOR FRONT LAY-OUT

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

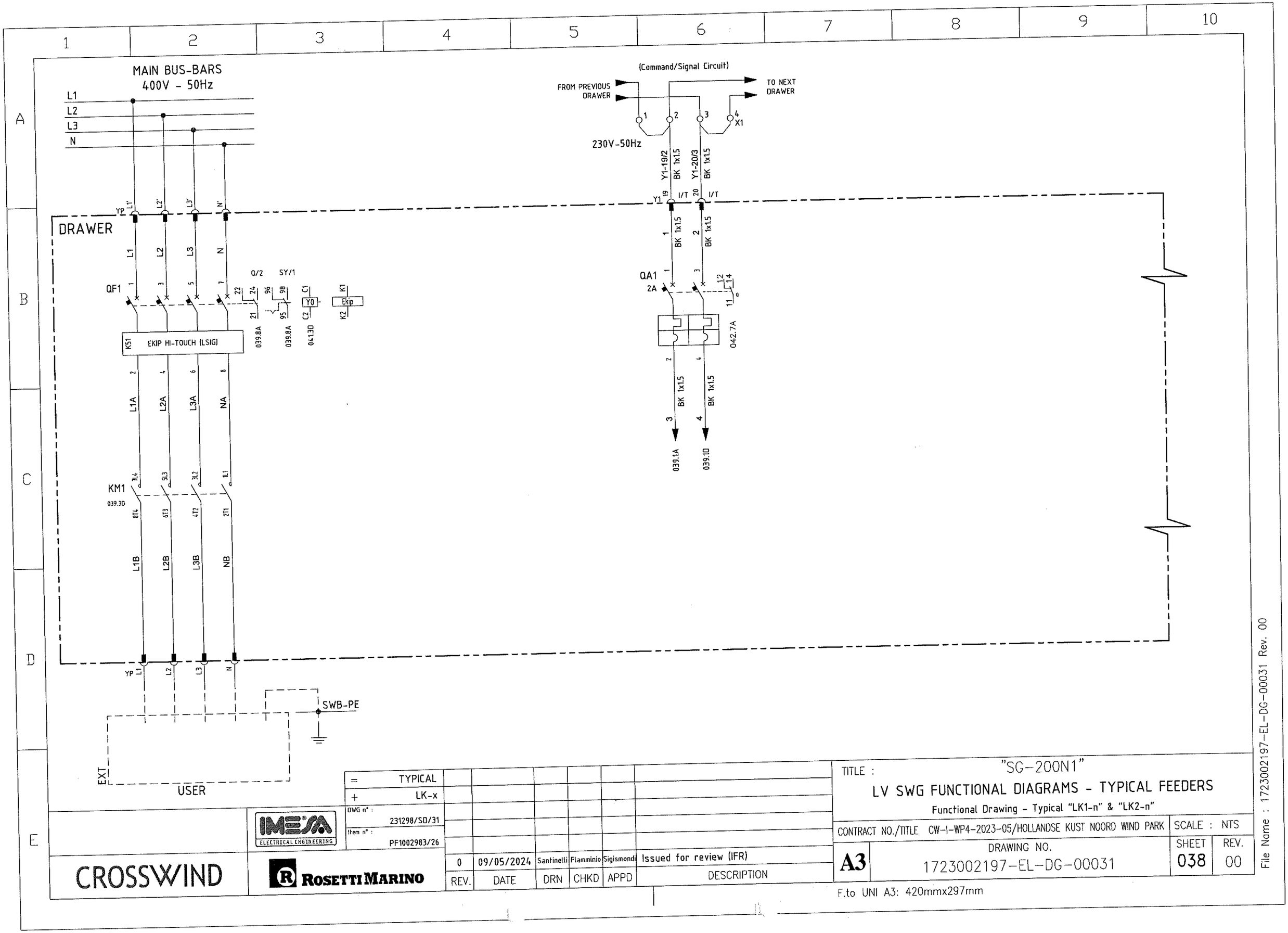
TITLE : "SG-200N1"
LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS
Items Acronym - Typical "LK1-n" & "LK2-n"

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

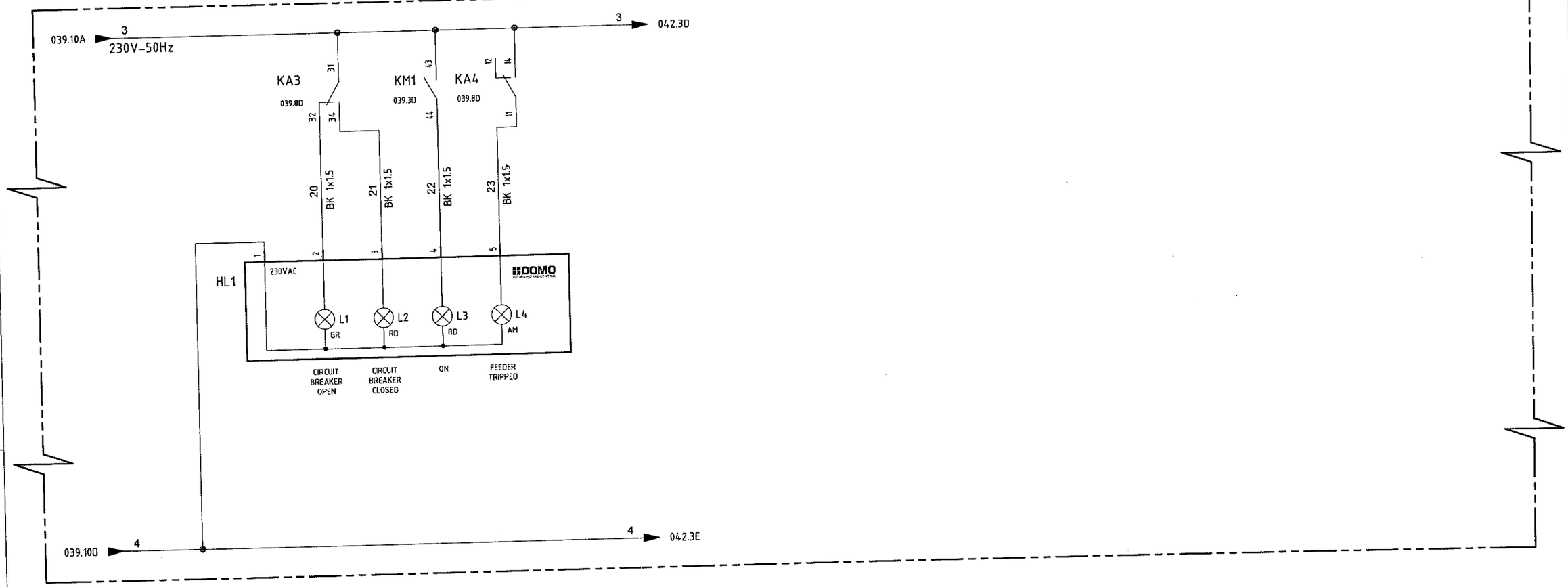
DRAWING NO. 1723002197-EL-DG-00031

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

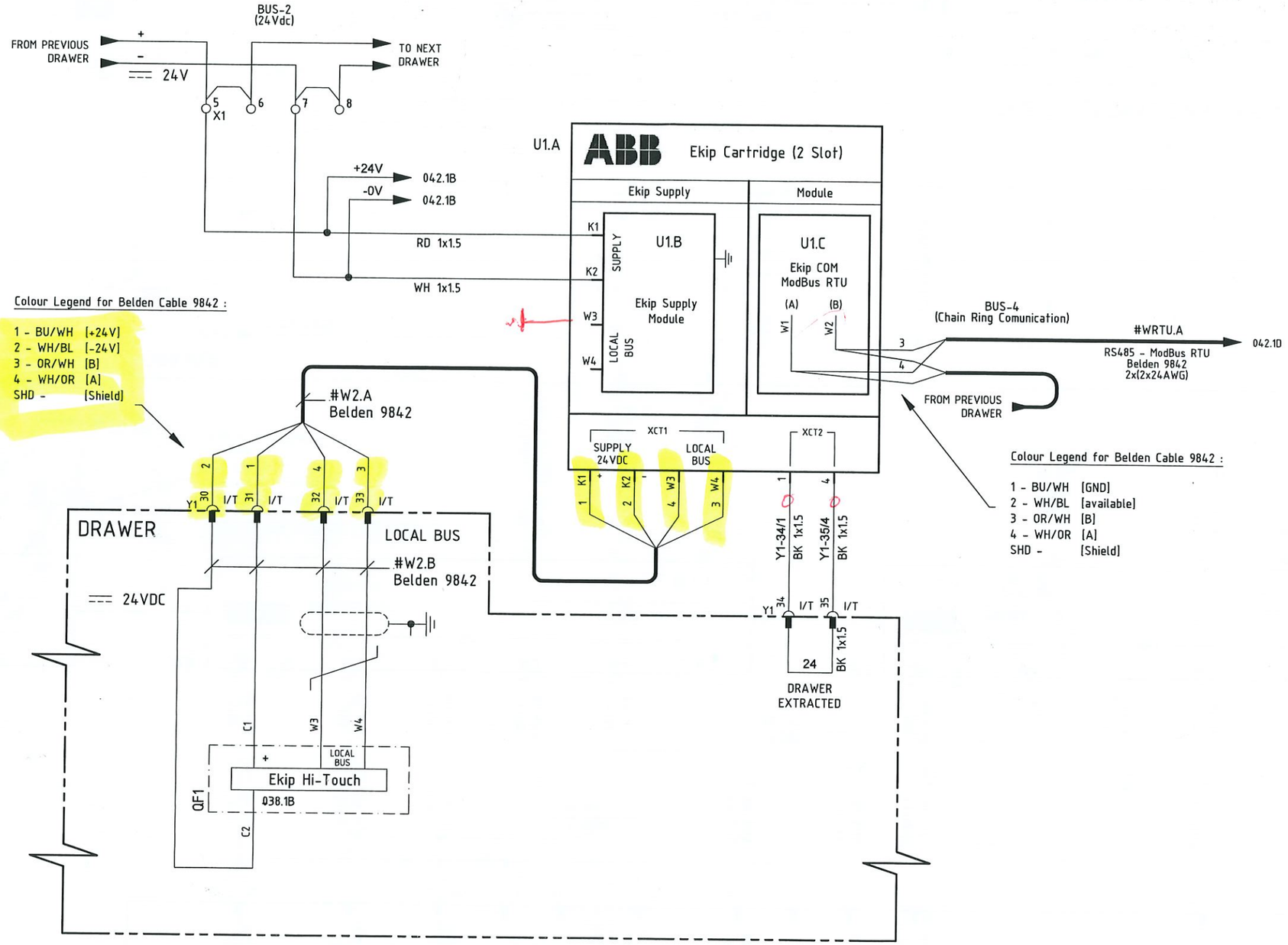
DRAWING NO. 1723002197-EL-DG-00031

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

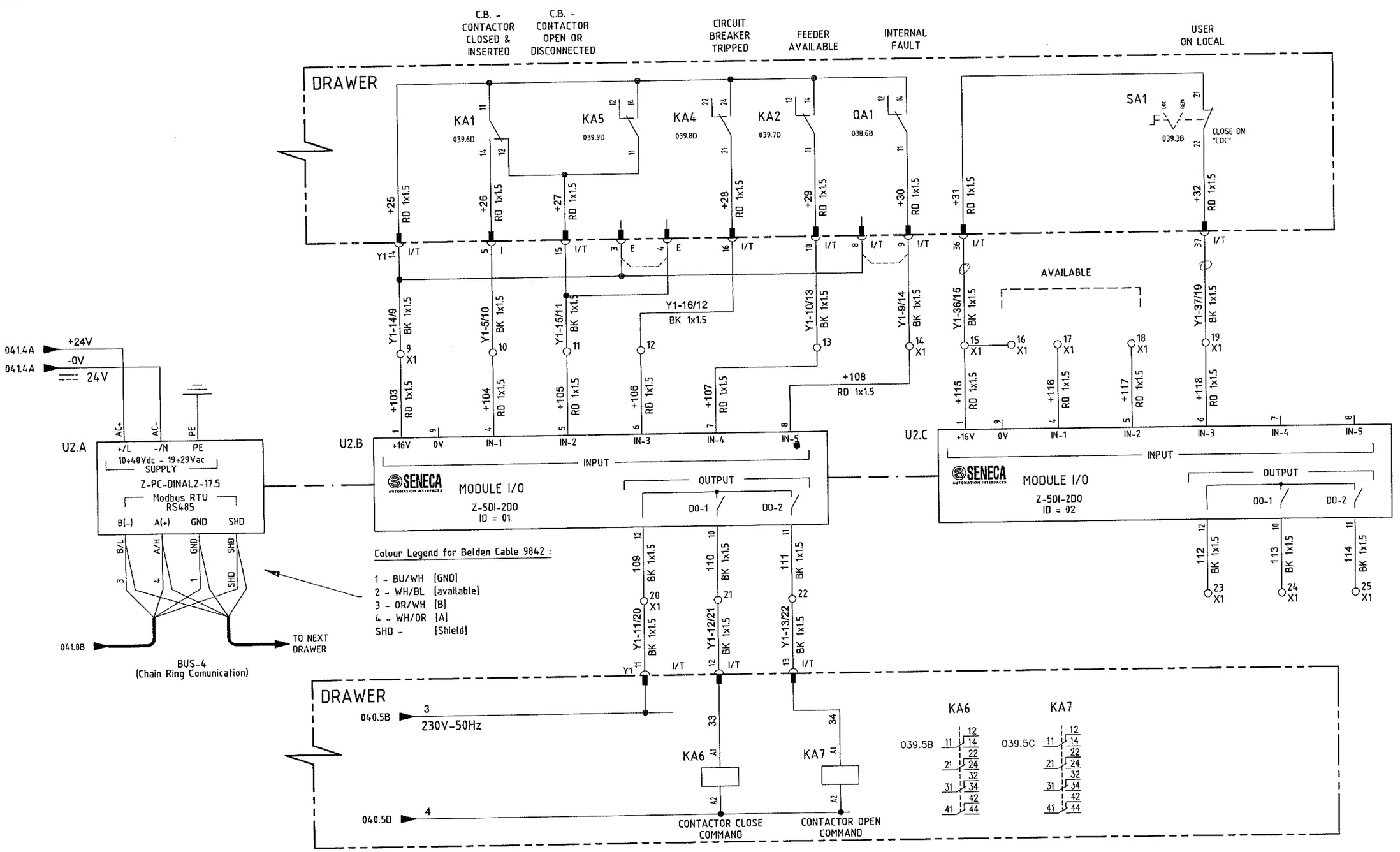
Functional Drawing - Typical "LK1-n" & "LK2-n"

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

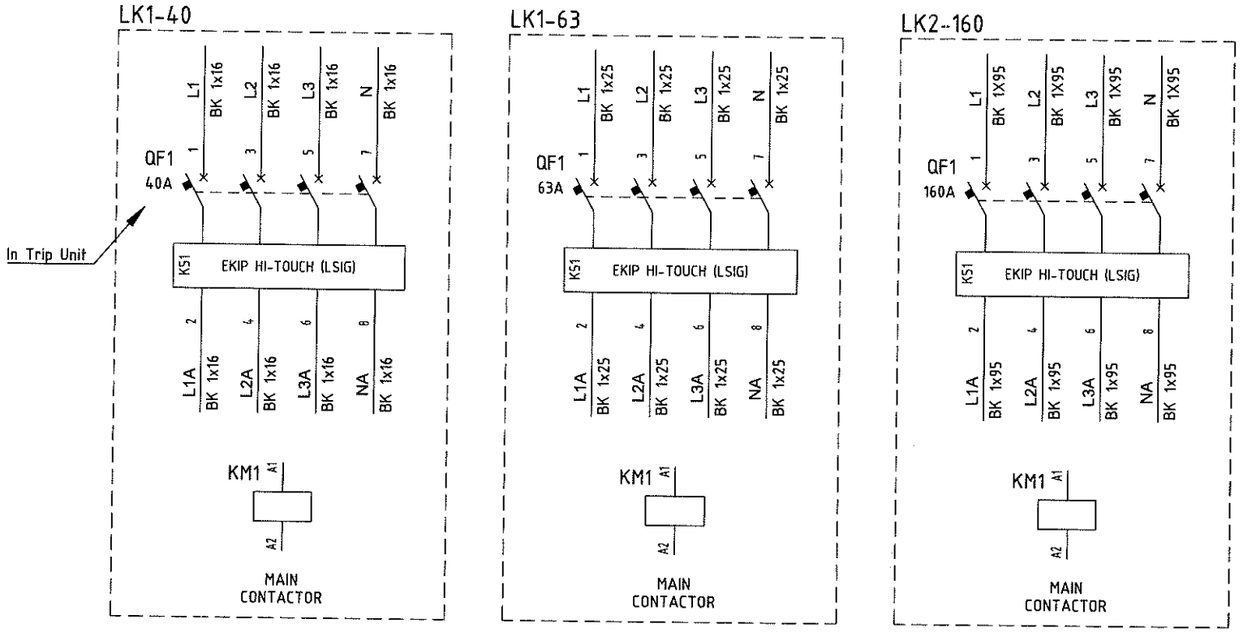
REV. 00

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

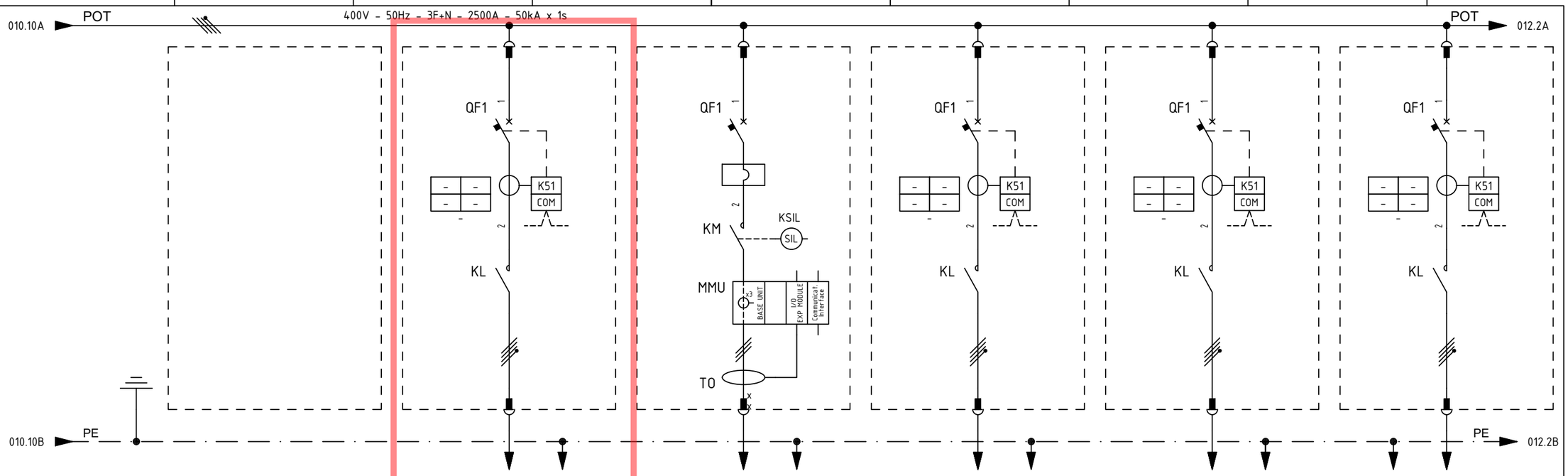
DRAWING NO. 1723002197-EL-DG-00031

SHEET 047

REV. 00

F.to UNI A3: 420mmx297mm

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



ITEM			1		K-63001-B		PM-50001 B		CP-850E1		CP-850E2		-	
UTILITY			2		INSTRUMENTS AIR PACKAGE 01B		SEA WATER PUMP B		BESS LV1 CABINET (+DISTR 1)		BESS LV2 CABINET (+DISTR 2)		SPARE	
COLUMN/CUBICLE			3		A5 / +08		A6 / +01		A6 / +02		A6 / +03		A6 / +04	
RATED POWER | RATED CURRENT			4/5		68.75 kW	111.24 A	6.1 kW	11.0 A	11.28 kW	18.09 A	11.28 kW	18.09 A	- kW	- A
TYPICAL FUNCTIONAL			6		LK2-160		M1-6		LK1-40		LK1-40		LK1-40	
CIRCUIT BREAKER (ABB)	TYPE		7		XT4S - 250		XT2S - 160		XT2S - 160		XT2S - 160		XT2S - 160	
	VERSION		8		4P - FIXED		3P - FIXED		4P - FIXED		4P - FIXED		4P - FIXED	
	TRIP UNITS		9		EKIP HI TOUCH LSIG (In = 160A)		MA (In = 20A)		EKIP HI TOUCH LSIG (In = 40A)		EKIP HI TOUCH LSIG (In = 40A)		EKIP HI TOUCH LSIG (In = 40A)	
	Icu	KA	10		50 kA		-		50 kA		50 kA		50 kA	
OVERLOAD	L	Range A	11		(0.4 - 1) x In		-		(0.4 - 1) x In		(0.4 - 1) x In		(0.4 - 1) x In	
		Range t	12		k/I^2		-		k/I^2		k/I^2		k/I^2	
SEL. SHORT-CIRCUIT	S	Range A	13		(0.6 - 10) x In		-		(0.6 - 10) x In		(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	
INST. SHORT-CIRCUIT	I	Range A	15		(1.5 - 15) x In		(6 - 14) x I		(1.5 - 15) x In		(1.5 - 15) x In		(1.5 - 15) x In	
		Range t	16		instantaneous		<= 0.02 sec		instantaneous		instantaneous		instantaneous	
EARTH FAULT PROTECTION	G	Range A	17		(0.1 - 1) x In		-		(0.1 - 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	
CONTACTOR (ABB)			19		AF190-40-11-13 (275A-AC1); 100-250 VAC/DC		AF38-30-00-13 (18.5 kW - AC3) - 100-250Vac/dc		AF40-40-00-13 (70A-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		-		UMC100.3 UC (0.24 - 63A)		-		-		-	
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		5G70		4G4		4 x (1 x 10)		4 x (1 x 10)		-	

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

IMESA ELECTRICAL ENGINEERING

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 011

REV. 03

F.to UNI A3: 420mmx297mm

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

ITEM	Tag	A5/+08-QF1	: DRAWER AIR PACKAGE 01B - A5/+08-QF1	Dwg	1723002197-EL-DG-00011		
	S/Sys	63-00	: Instrument Air Package (A-63000)	Module			
TASK	code	C10002858	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°:	EGA000154350N000	Relay type:	EKIP HI TOUCH LSIG
Auxiliary supply:	24Vdc	Location:	B200	Cubicle:	A5/+08
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	115.2A	189A		3s	1585ms
S	560A	315A		0.1s	102ms
I	1120A	630A		INSTANT	22ms
G	32A			0.1s	

Testing & measurement instruments used

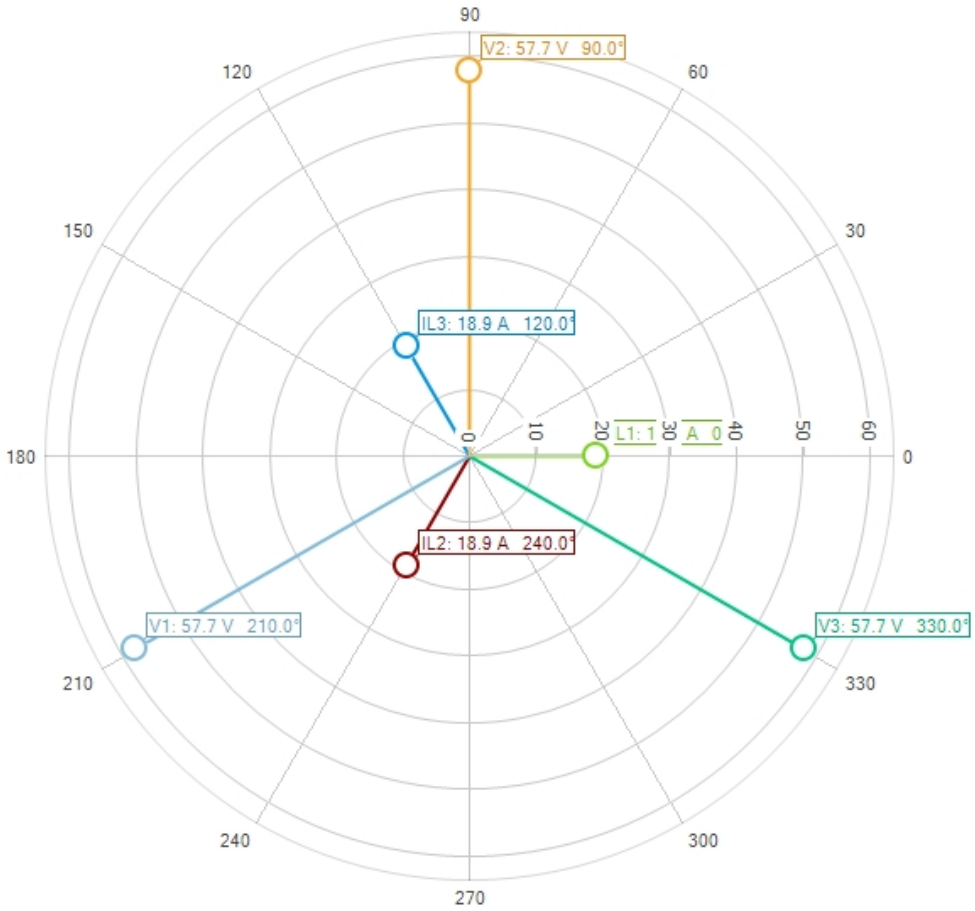
Type	Serial n°	Calibration certificate	Validity
ABB EKIP T&P	E34013804410W050		

Comments: See the attchments for full tests

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	2024-10-01	2024-10-02	2024-10-02
Signature	PROVERLIS Digitaly signed by Mattia Girotti 2024-10-01T14:36:26.955Z	PROVERLIS Digitaly signed by Kristian Castellani 2024-10-02T08:50:59.177Z	PROVERLIS Digitaly signed by Witness waived 2024-10-02T09:20:37.633Z

Page Name	Group Name	Variable Name	Variable Value	Variable Unit
Settings A				
	Overload Protection (L - ANSI 49)			
		PU nominal current In	160	
		Status	Enabled	
		Function	t=k/i^2	
		Prealarm I1	90	% I1
		Threshold I1	0.720	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)	3.50	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	7.00	In
		Startup enable	Disabled	
		Startup time	0.10	s
		Startup threshold	1.50	In
		Set Startup th. on ProgStatusD	--------	
		BlockOnStartUp	--------	
		BlockOnOutOfFrequency	--------	
		BlockOnProgStatusA	--------	
		BlockOnProgStatusB	--------	
		BlockOnProgStatusC	--------	
		BlockOnProgStatusD	--------	
		Zone Selectivity status	Disabled	
		Zone Selectivity Type	Logic and Hardware	
	Second I			
		Prot Second I	---	
		Status	Disabled	
		Threshold I31	1.50	In
		Zone Selectivity status	Disabled	
		Zone Selectivity Type	Logic and Hardware	
		Second I Mode	Function Dependent	
		Function	Disabled	
		Delay On	0.00	s
		Delay Off	15.00	s
	Earth fault protection (G - ANSI 50N TD/68/51N)			
		Status	Enabled	
		Trip enable	Enabled	
		BlockOnStartUp	--------	
		BlockOnOutOfFrequency	--------	
		BlockOnProgStatusA	--------	
		BlockOnProgStatusB	--------	
		BlockOnProgStatusC	--------	
		BlockOnProgStatusD	--------	
		Function	t=k	
		Prealarm I4	90	% I4
		Threshold I4 (t=k)	0.200	In
		Time t4 (t=k) IEC - UL489	0.10	s

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



Test

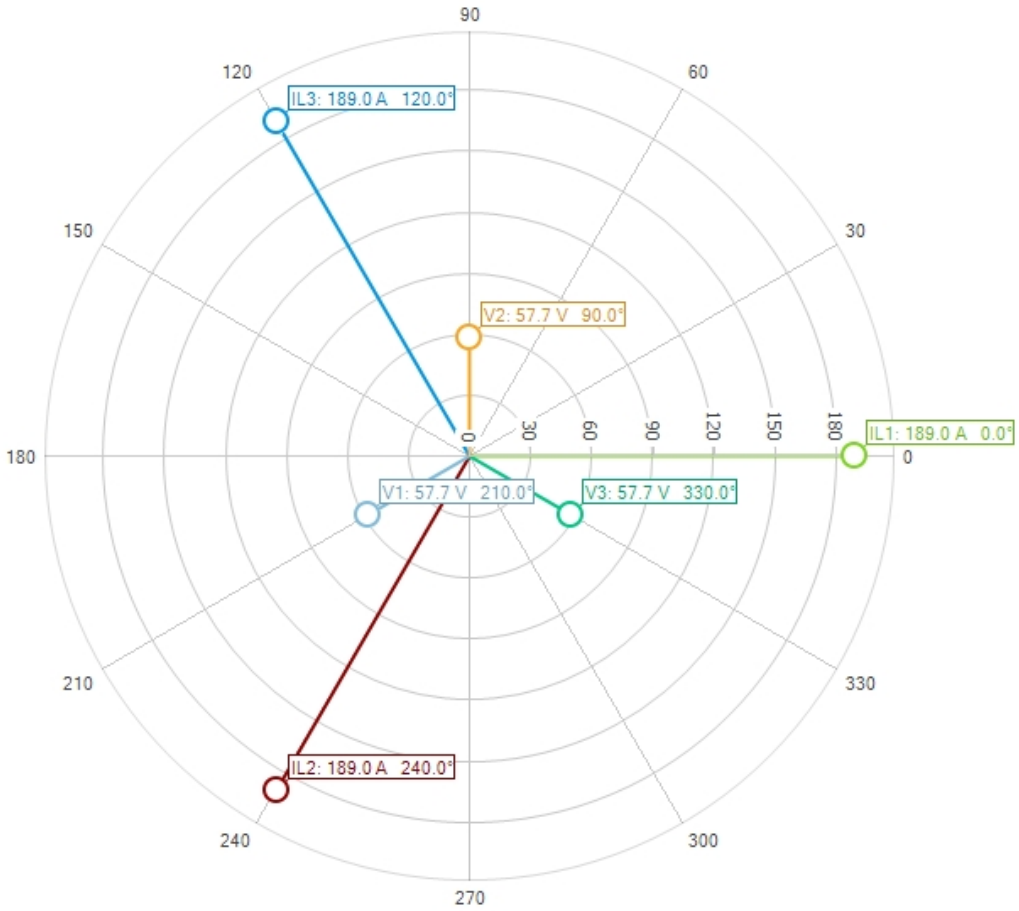
Name	Automatic test 1
Session	Default session
Customer	
Location	
Operator	

Device

Tag name	A5/+08
Relay Serial Number	EGA000154350N000
Circuit Breaker Serial Number	CE71079782number
	XT2/4
Device settings	In = 160 A Un = 100 V fn = 50 Hz
Protection Settings	Protection = L Curve type = t=k/i^2 Threshold = 0.720 In Time = 3.00 s Protection = S Curve type = t=k Threshold = 3.50 In Time = 0.10 s Protection = I Threshold = 7.00 In Protection = G Curve type = t=k Threshold = 0.200 In Time = 0.10 s
Preconditions	All preconditions satisfied.

Test result

⚠ Test completed without any trip in 3000 ms.



Test

Name	Automatic test 2
Session	Default session
Customer	
Location	
Operator	

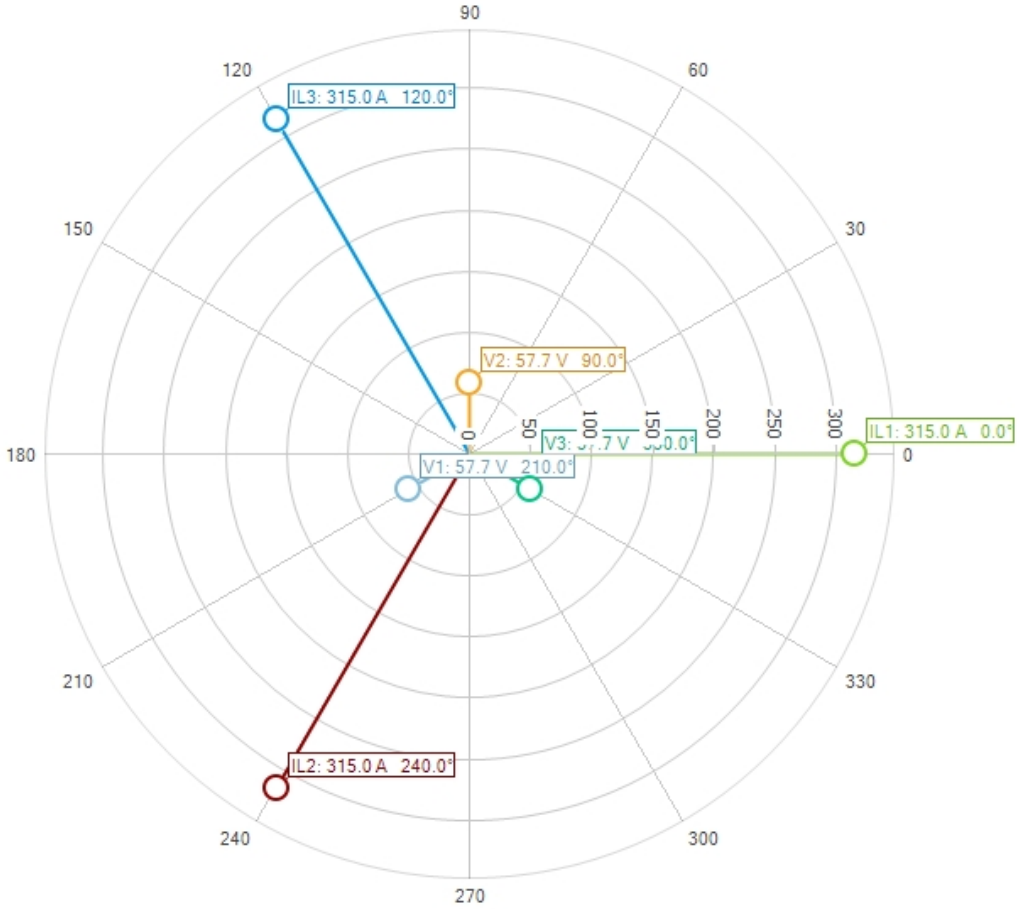
Device

Tag name	A5/+08
Relay Serial Number	EGA000154350N000
Circuit Breaker Serial Number	CE71079782number
	XT2/4
Device settings	In = 160 A Un = 100 V fn = 50 Hz
Protection Settings	Protection = L Curve type = t=k/i^2 Threshold = 0.720 In Time = 3.00 s Protection = S Curve type = t=k Threshold = 3.50 In Time = 0.10 s Protection = I Threshold = 7.00 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 but out of time. Protection L tripped in 1585 ms.
Trip time must be between 0 ms and 1000 ms

Trip time must be between 0 ms and 1000 ms.



Test

Name	Automatic test 3
Session	Default session
Customer	
Location	
Operator	

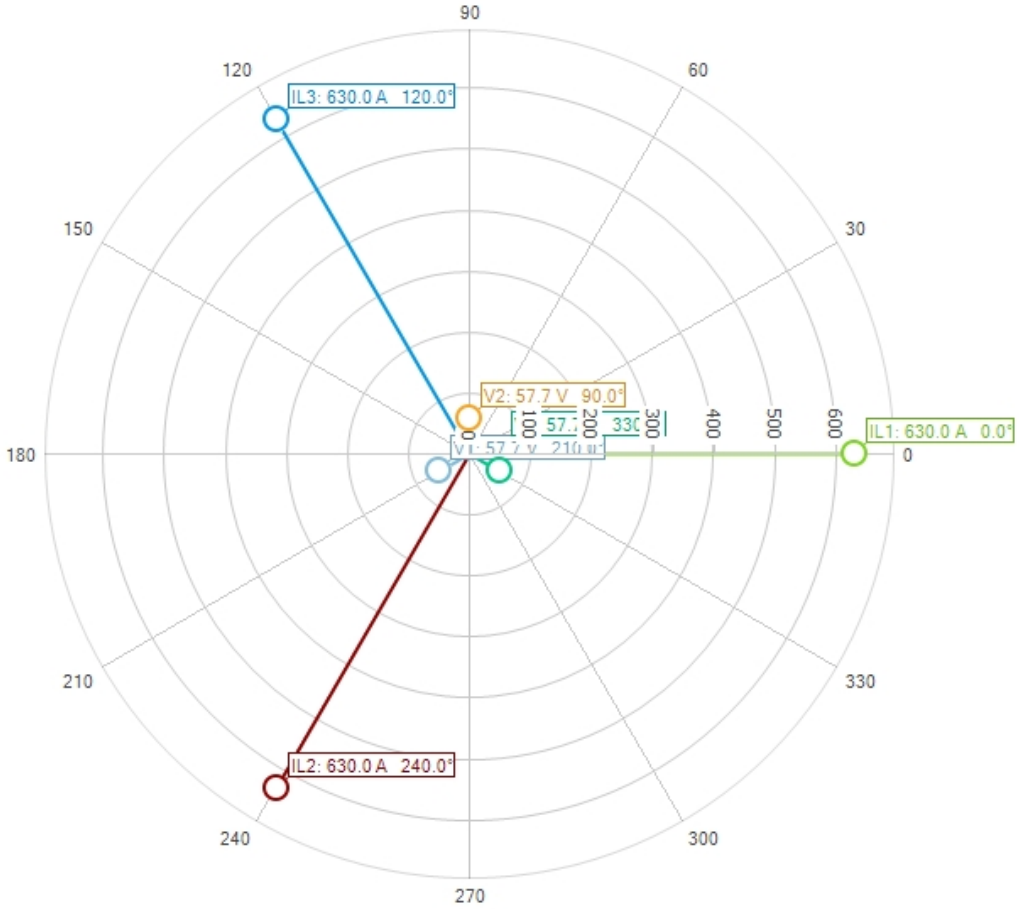
Device

Tag name	A5/+08
Relay Serial Number	EGA000154350N000
Circuit Breaker Serial Number	CE71079782number
	XT2/4
Device settings	In = 160 A Un = 100 V fn = 50 Hz
Protection Settings	Protection = L Curve type = t=k/i^2 Threshold = 0.720 In Time = 3.00 s Protection = S Curve type = t=k Threshold = 3.50 In Time = 0.10 s Protection = I Threshold = 7.00 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 102 ms.
Trip time must be between 0 ms and 1000 ms

Trip time must be between 0 ms and 1000 ms.



Test

Name	Automatic test 4
Session	Default session
Customer	
Location	
Operator	

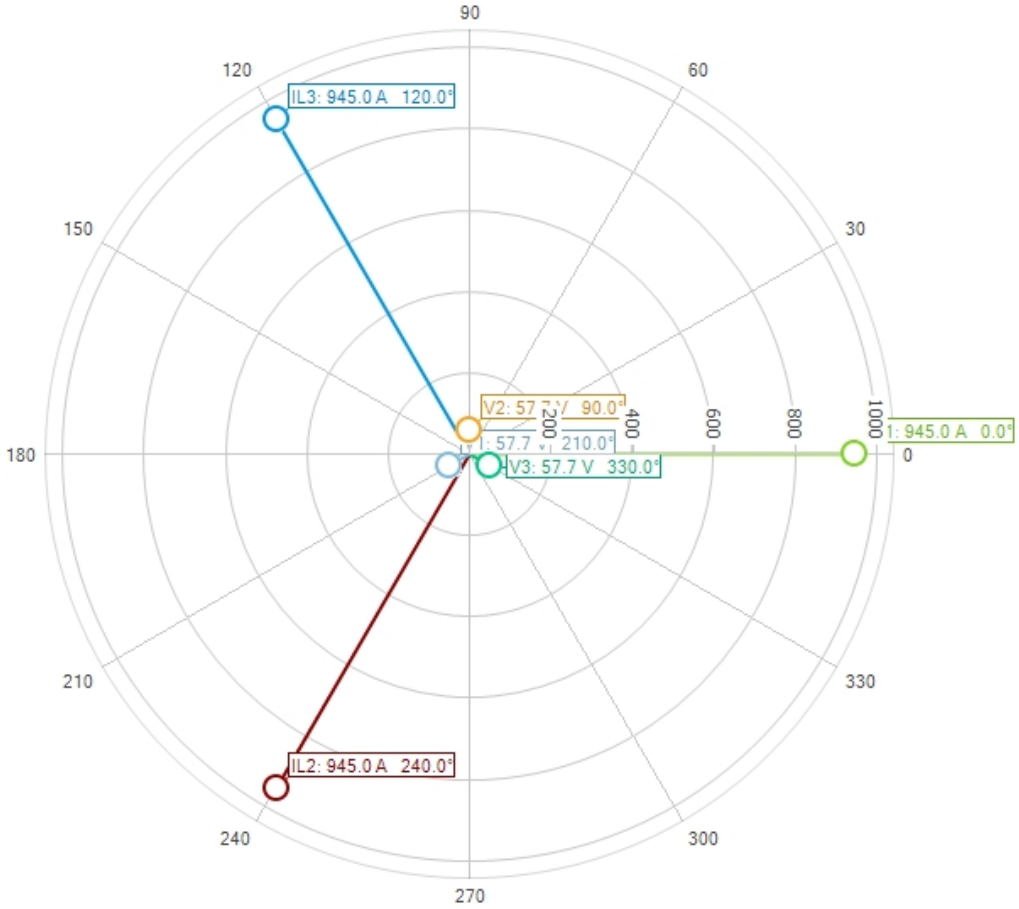
Device

Tag name	A5/+08
Relay Serial Number	EGA000154350N000
Circuit Breaker Serial Number	CE71079782number
	XT2/4
Device settings	In = 160 A Un = 100 V fn = 50 Hz
Protection Settings	Protection = L Curve type = t=k/i^2 Threshold = 0.720 In Time = 3.00 s Protection = S Curve type = t=k Threshold = 3.50 In Time = 0.10 s Protection = I Threshold = 7.00 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 22 ms.
Trip time must be between 0 ms and 1000 ms

Trip time must be between 0 ms and 1000 ms.



Test

Name	Automatic test 5
Session	Default session
Customer	
Location	
Operator	

Device

Tag name	A5/+08
Relay Serial Number	EGA000154350N000
Circuit Breaker Serial Number	CE71079782number
	XT2/4
Device settings	In = 160 A Un = 100 V fn = 50 Hz
Protection Settings	Protection = L Curve type = t=k/i^2 Threshold = 0.720 In Time = 3.00 s Protection = S Curve type = t=k Threshold = 3.50 In Time = 0.10 s Protection = I Threshold = 7.00 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 27 ms.
Trip time must be between 0 ms and 1000 ms

Trip time must be between 0 ms and 1000 ms.

ITEM	Tag	A5/+08-QF1	: DRAWER AIR PACKAGE 01B - A5/+08-QF1			Dwg	1723002197-EL-DG-00011
	S/Sys	63-00	: Instrument Air Package (A-63000)			Module	
TASK	code	C10002859		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:	K-63001-B INSTRUMENTS AIR PACKAGE 01B	Instrument Type / Serial N° :	FLUKE 175 / 17140769
Cubicle N°:	A5/+08	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								
									Status Check					
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)	Event (Y/N)	Alarm (Y/N)	Fault (Y/N)	Time Stamping Satisfactory (Y/N)	Refresh Time (if >1s)	Appearing in all applicable display (Y/N)
1	C.B. - CLOSED & INSERTED	HW	DI	A5/+08 - KA1/11-14	A5/+08 - X1/9-10	NA	NA	NA	Y	NA	NA	NA	NA	NA
2	C.B. - OPEN OR DISCONNECTED	HW	DI	A5/+08 - KA1/11-12	A5/+08 - X1/9-11	NA	NA	NA	Y	NA	NA	NA	NA	NA
3	C.B. - TRIPPED	HW	DI	A5/+08 - KA4/21-24	A5/+08 - X1/9-12	NA	NA	NA	NA	NA	Y	NA	NA	NA
4	INTERNAL FAULT	HW	DI	A5/+08 - QA1/11-14	A5/+08 - X1/9-14	NA	NA	NA	NA	NA	Y	NA	NA	NA
5	FEEDER AVAILABLE	HW	DI	A5/+08 - KA2/11-14	A5/+08 - X1/9-13	NA	NA	NA	Y	NA	NA	NA	NA	NA
6	USER ON LOCAL	HW	DI	A5/+08 - SA1/21-22	A5/+08 - X1/15-19	NA	NA	NA	Y	NA	NA	NA	NA	NA
7	DRAWER ON TEST	HW	DI	A5/+08 - KA5/11-14	A5/+08 - 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 2024-10-02T11:16:40.545Z	PROVERLIS Digitaly signed by Kristian Castellani 2024-10-03T07:12:12.755Z	PROVERLIS Digitaly signed by Witness waived 2024-10-03T14:28:00.818Z

ITEM	Tag	DP-200N1-Q29	: BREAKER AUX UCP AIR PACKAGE - DP-200N1-Q29	Dwg	1723002197-EL-DG-00013		
	S/Sys	63-00	: Instrument Air Package (A-63000)	Module			
TASK	code	C10002861	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:	NA
Auxiliary supply:	NA	Location:	B200	Cubicle:	+03
Switchboard:	DP-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
I	6A	NA	NA	FIXED	NA

Testing & measurement instruments used

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

Comments:

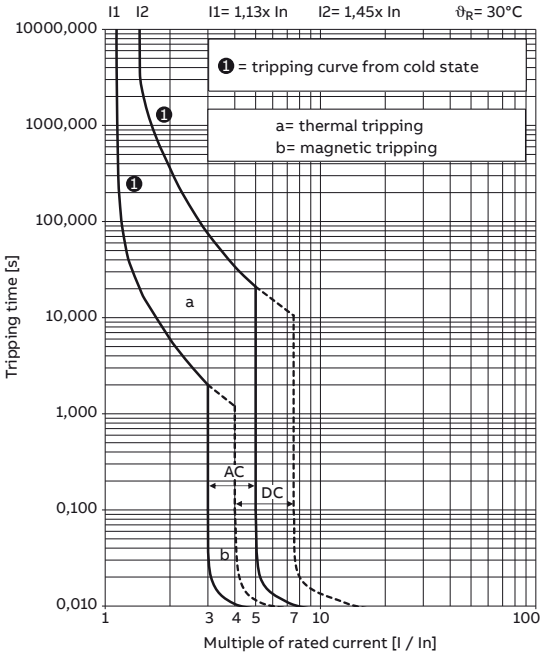
Page 1/1	Performed by	☐ WITNESS ☑ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM CMM	RM COMM	CPY NOT PRESENT
Name	Davide Zucconelli	Kristian Castellani	Witness waived
Date	2024-10-28	2024-10-28	2024-10-28
Signature	PROVERLIS Digitaly signed by Davide Zucconelli 2024-10-28T11:45:34.472Z	PROVERLIS Digitaly signed by Kristian Castellani 2024-10-28T12:58:58.620Z	PROVERLIS Digitaly signed by Witness waived 2024-10-28T13:31:12.962Z

Miniature Circuit breakers S300P

Tripping characteristics

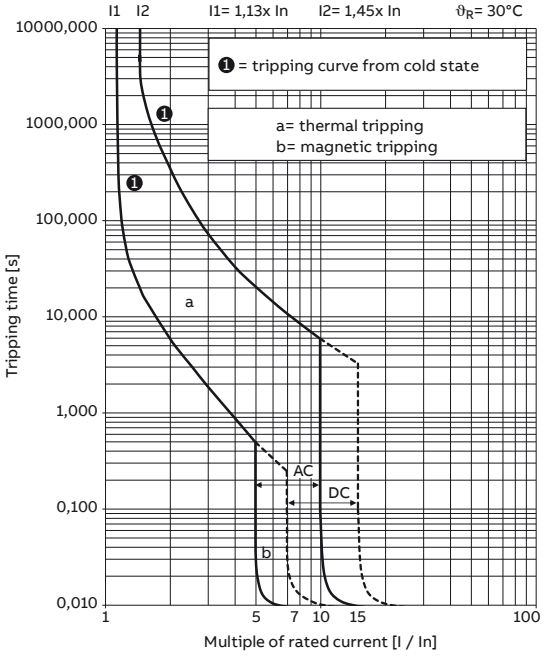
MCB Type S300P - B (3 ... 5 x I_n AC)

Tripping Characteristic IEC/EN 60898-1



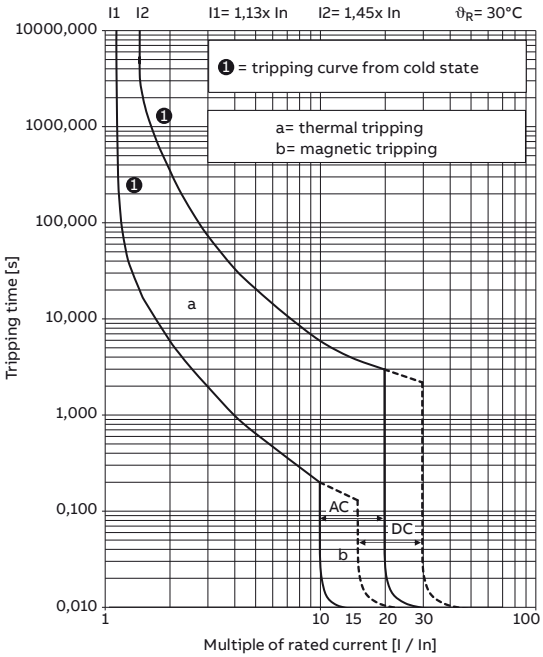
MCB Type S300P - C (5 ... 10 x I_n AC)

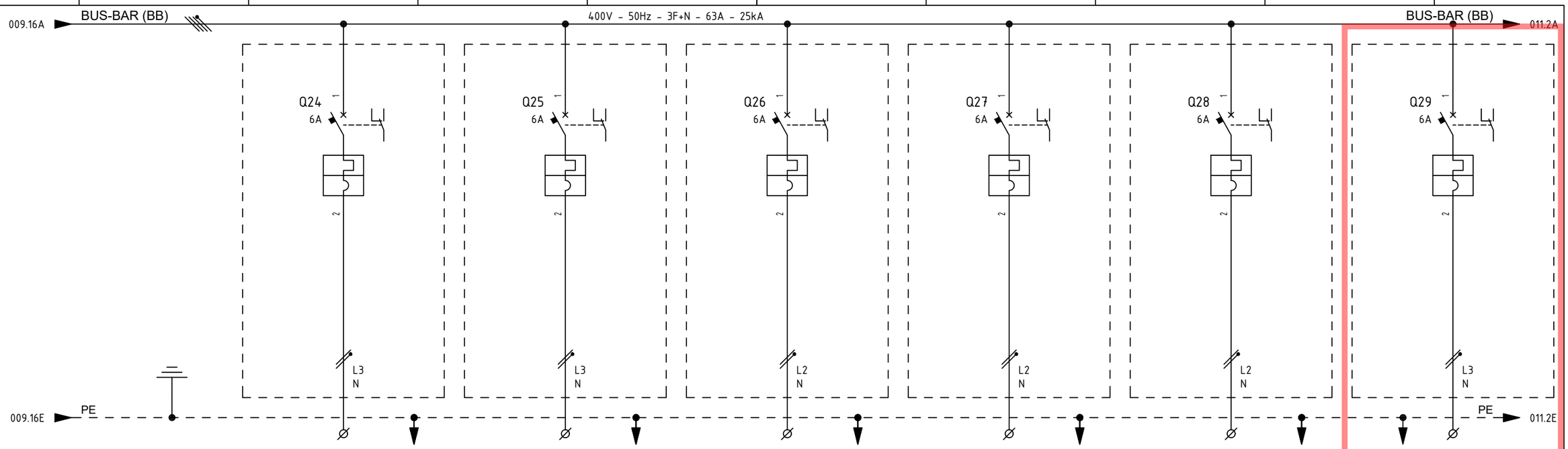
Tripping Characteristic IEC/EN 60898-1



MCB Type S300P - D (10 ... 20 x I_n AC)

Tripping Characteristic IEC/EN 60898-1





ITEM				1	B400-PCS-001	B400-EMCS-001	B400-FGS-001	B400-NET-001	B400-SRV-001	CP-630E1
UTILITY				2	PCS-CONTROLLER AND I/O CABINET - AUXILIARY	EMCS-CONTROLLER AND I/O CABINET - AUXILIARY	FGS FIRE & GAS PANEL - AUXILIARY	SYSTEM SERVER / NETWORK CABINET - AUXILIARY	SERVER CABINET ITER - AUXILIARY	UCP - INSTRUMENT AIR PACKAGE -A-63000 - AUXILIARY
CUBICLE				3	+03	+03	+03	+03	+03	+03
RATED POWER | RATED CURRENT				4/5	0.5 KW / 2.72 A	0.5 KW / 2.72 A	0.8 KW / 4.35 A	0.5 KW / 2.72 A	0.5 KW / 2.72 A	0.5 KW / 2.72 A
TYPICAL FUNCTIONAL				6	-	-	-	-	-	-
CIRCUIT BREAKER (ABB)	TYPE			7	S302P-C6	S302P-C6	S302P-C6	S302P-C6	S302P-C6	S302P-C6
	VERSION			8	2P / MINIATURE	2P / MINIATURE	2P / MINIATURE	2P / MINIATURE	2P / MINIATURE	2P / MINIATURE
	TRIP UNITS			9	In=6A - Curve C	In=6A - Curve C	In=6A - Curve C	In=6A - Curve C	In=6A - Curve C	In=6A - Curve C
	Icu		KA	10	25kA	25kA	25kA	25kA	25kA	25kA
OVERLOAD	L	Range	A	11	-	-	-	-	-	-
		Range	t	12	-	-	-	-	-	-
SEL. SHORT-CIRCUIT	S	Range	A	13	-	-	-	-	-	-
		Range	t	14	-	-	-	-	-	-
INST. SHORT-CIRCUIT	I	Range	A	15	-	-	-	-	-	-
		Range	t	16	-	-	-	-	-	-
EARTH FAULT PROTECTION	G	Range	A	17	-	-	-	-	-	-
		Range	t	18	-	-	-	-	-	-
CONTACTOR (ABB)				19	-	-	-	-	-	-
THERMAL OVERLOAD RELAY (ABB)				20	-	-	-	-	-	-
SURGE ARRESTERS (DHENN)				21	-	-	-	-	-	-
TOROIDAL CURRENT TRANSFORMER (FRER)				22	-	-	-	-	-	-
FUSE HOLDER (ABB)				23	-	-	-	-	-	-
TWILIGHT SWITCH (ABB)				24	-	-	-	-	-	-
VOLTMETER (FRER)				25	-	-	-	-	-	-
CURRENT TRANSFORMER FOR MEASURE (FRER)	TYPE			26	-	-	-	-	-	-
	PERFORMANCE/CLASS			27	-	-	-	-	-	-
VOLTAGE TRANSFORMER FOR MEASURE (FRER)	TYPE			28	-	-	-	-	-	-
	PERFORMANCE/CLASS			29	-	-	-	-	-	-
POWER TERM. BLOCK (CABUR)			$Type/mm^2$	30	SCREW / 4	SCREW / 4	SCREW / 4	SCREW / 4	SCREW / 4	SCREW / 4
POWER CONDUCTOR			mm^2	31	3G2.5	3G2.5	3G2.5	3G2.5	3G2.5	3G2.5

=

+

DWG n° : 231298/SD/13

Item n° : PF1002888/101

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
4	18/09/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
3	05/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for construction (AFC)
2	24/04/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	15/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	08/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "DP-200N1"

SINGLE LINE DIAGRAM

Single Line Drawing

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

SCALE : NTS

A3

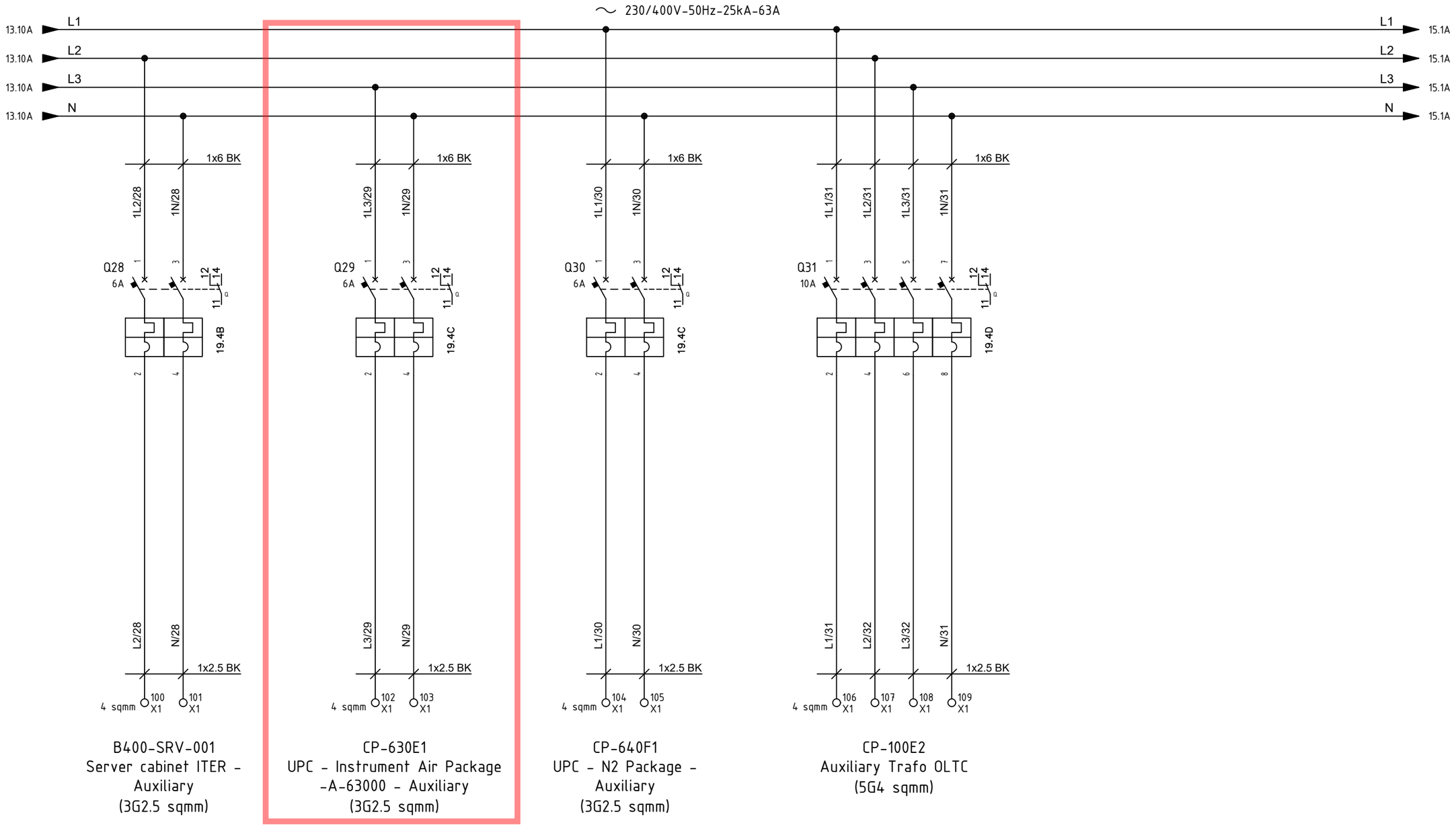
DRAWING NO. 1723002197-EL-DG-00013

SHEET 010

REV. 04

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00013 Rev. 04



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
2	19/08/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
1	05/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for construction (AFC)
0	29/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n° : 231298/SD/33

Item n° : PF1002888/101

TITLE : "DP-200N1"

LV SWBD FUNCTIONAL DIAGRAMS

Functional Drawing

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00033

SHEET 1.4

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00033 Rev. 02

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	A4/+08-QF1	: DRAWER AIR PACKAGE 01A - A4/+08-QF1			Dwg	1723002197-EL-DG-00011
	S/Sys	63-00	: Instrument Air Package (A-63000)			Module	
TASK	code	C10003012		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°:	A4/+08

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 2025-04-29T07:57:28.001Z	PROVERLIS Digitaly signed by Kristian Castellani 2025-04-29T14:05:38.294Z	PROVERLIS Digitaly signed by David Musgrove 2025-04-29T14:29:47.857Z

ITEM	Tag	A5/+08-QF1	: DRAWER AIR PACKAGE 01B - A5/+08-QF1			Dwg	1723002197-EL-DG-00011
	S/Sys	63-00	: Instrument Air Package (A-63000)			Module	
TASK	code	C10003013		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/+08

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 2025-04-29T13:56:25.988Z	PROVERLIS Digitaly signed by Kristian Castellani 2025-04-29T14:06:28.201Z	PROVERLIS Digitaly signed by David Musgrove 2025-04-29T14:38:58.010Z

ITEM	Tag	UP-200F3-QF34	: UCP - INSTRUMENT AIR PACKAGE		Dwg	1724000372-EL-DG-00009	
	S/Sys	63-00	: Instrument Air Package (A-63000)		Module		
TASK	code	C10004573	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:	A TYPE
Auxiliary supply:	24V	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	210mA	FIXED	37.7ms

Testing & measurement instruments used

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

Comments:

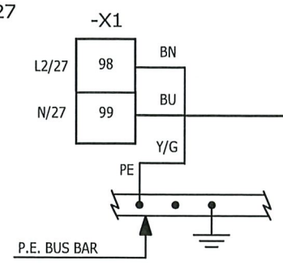
Page 1/1	Performed by	☐ WITNESS ☑ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM COMM	RM COMM	CPY NOT PRESENT
Name	Davide Zucconelli	Kristian Castellani	Witness waived
Date	2024-12-04	2024-12-05	2024-12-07
Signature	PROVERLIS Digitaly signed by Davide Zucconelli 2024-12-04T12:51:13.080Z	PROVERLIS Digitaly signed by Kristian Castellani 2024-12-05T09:33:03.291Z	PROVERLIS Digitaly signed by Witness waived 2024-12-07T10:36:35.028Z

Section 4.2 Electrical
“As-Commissioned” interconnection diagrams

FROM	TO

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

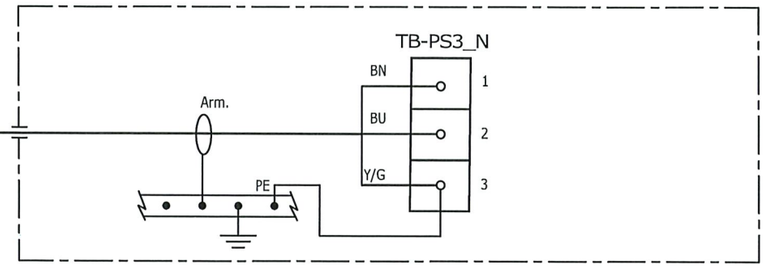
CUBICLE/CB: +03/Q27



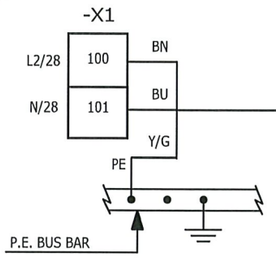
83108-CEL
3G2.5 mm²

NO MARK UP
MARCO MORETTO
20/3/25

DESCRIPTION: SYSTEM SERVER / NETWORK CABINET - AUXILIARY
TAG NUMBER: B400-NET-001



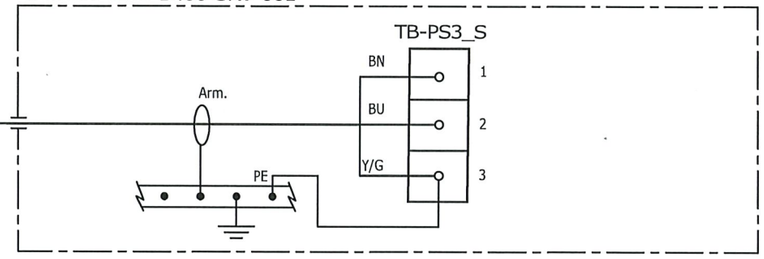
CUBICLE/CB: +03/Q28



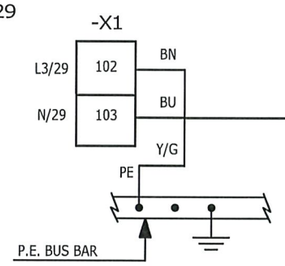
83109-CEL
3G2.5 mm²

NO MARK UP
MARCO MORETTO
20/3/25

DESCRIPTION: SERVER CABINER ITER - AUXILIARY
TAG NUMBER: B400-SRV-001



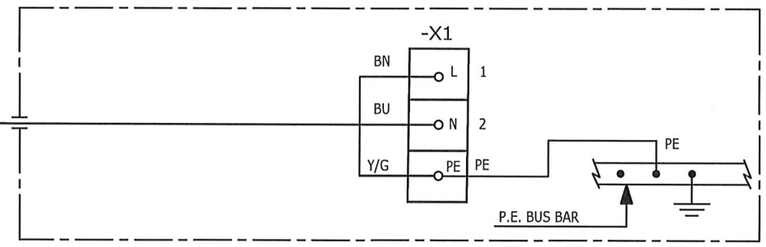
CUBICLE/CB: +03/Q29



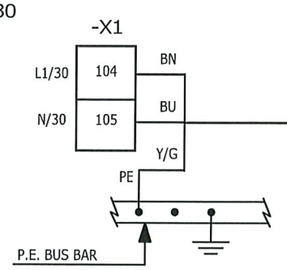
83110-CEL
3G2.5 mm²

NO MARK UP
MARCO MORETTO
20/3/25

DESCRIPTION: UCP - INSTRUMENT AIR PACKAGE -A-63000 - AUXILIARY
TAG NUMBER: CP-630E1



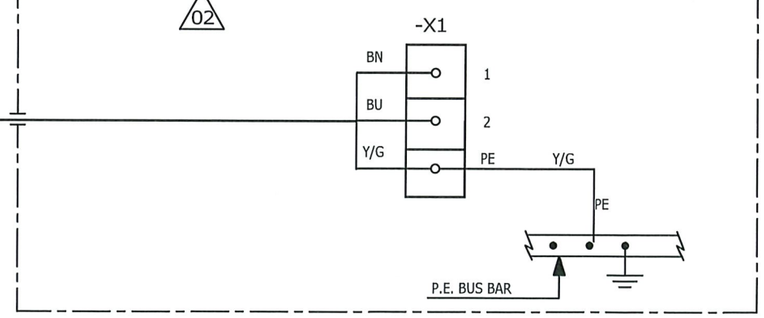
CUBICLE/CB: +03/Q30



83111-CEL
3G2.5 mm²

MARCO MORETTO
19/3/25

DESCRIPTION: UCP - N2 PACKAGE - AUXILIARY
TAG NUMBER: CP-640E1 64-LP001
02



AS COMMISSIONED: MATTIA GIBERTI

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
LIGHTING & SMALL POWER DB BOP

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

SCALE : 1:X

A3

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

SHEET 053

REV. 02

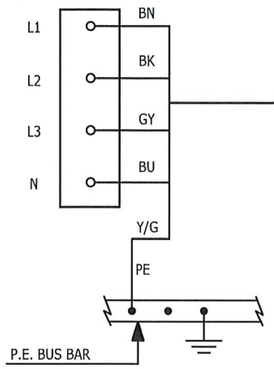
F.to UNI A3: 420mmx297mm

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

FROM	TO

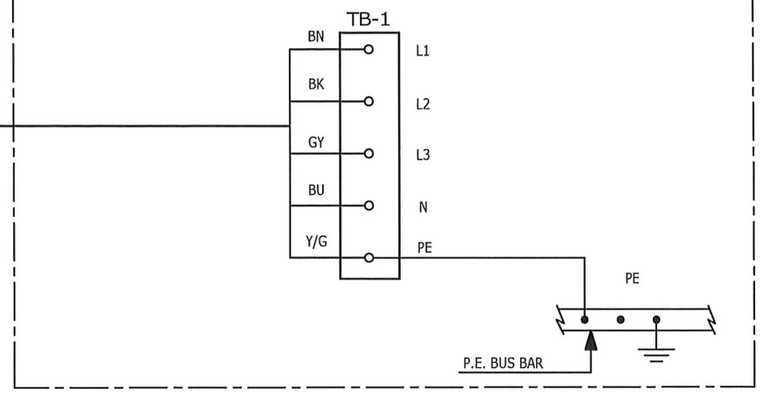
DESCRIPTION: LV SWITCHGEAR
TAG NUMBER: SG-200N1

COLUMN/CUBIC.:A3/+08

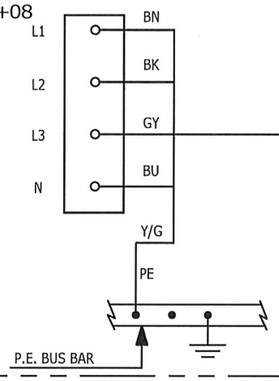


83016-CEL
5G70 mm²

DESCRIPTION: WATER PACKAGE
TAG NUMBER: JB-500E8



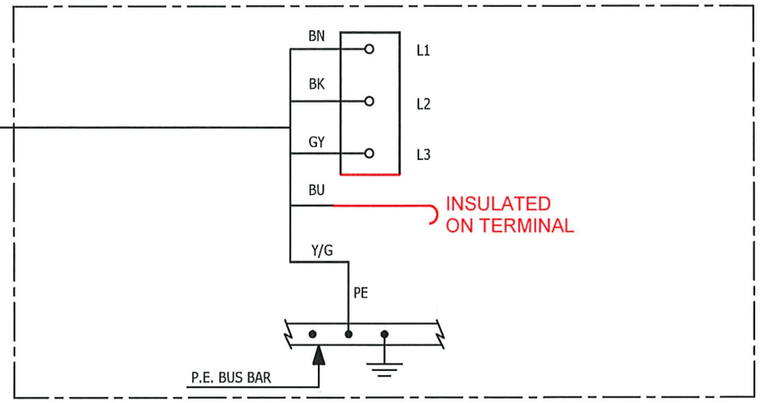
COLUMN/CUBIC.:A4/+08



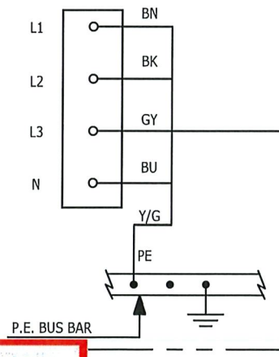
83017-CEL-1
5G70 mm²

NO MARK UP
MARCO MORETTO
20/3/25

DESCRIPTION: INSTRUMENT AIR PACKAGE
TAG NUMBER: K-63001-A



COLUMN/CUBIC.:A5/+08

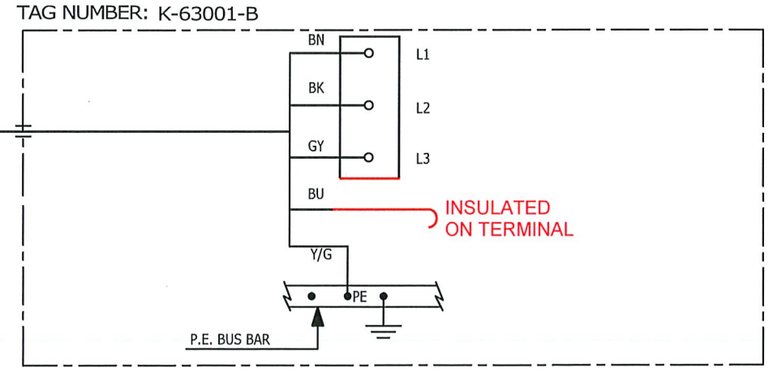


83017-CEL-2
5G70 mm²

NO MARK UP
MARCO MORETTO
20/3/25

AS COMMISSIONED: MATTIA GIRELLI

DESCRIPTION: INSTRUMENT AIR PACKAGE
TAG NUMBER: K-63001-B



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

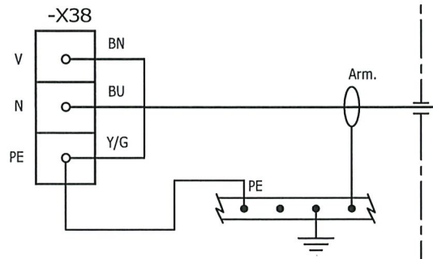
A3 | DRAWING NO. 123A90-DDL-EL-DG-20149 | SHEET 023 | REV. 02

F.to UNI A3: 420mmx297mm

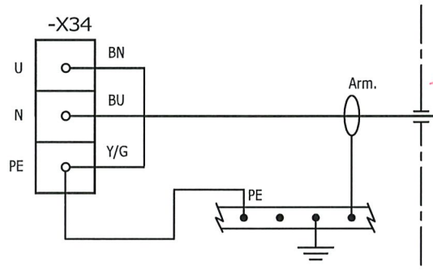
File Name : 123A90-DDL-EL-DG-20149 Rev. 02

FROM	TO

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



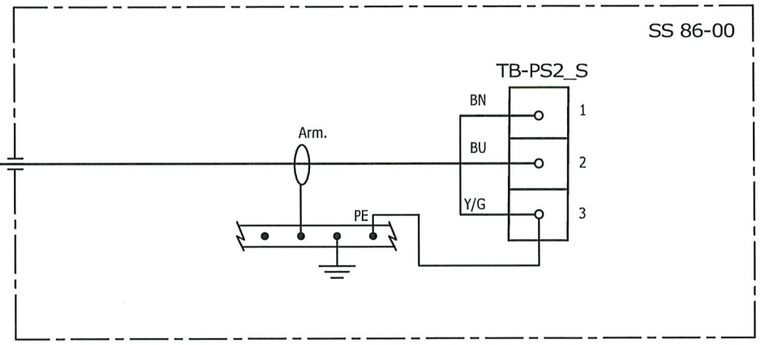
84308-CEL
3G6 mm²



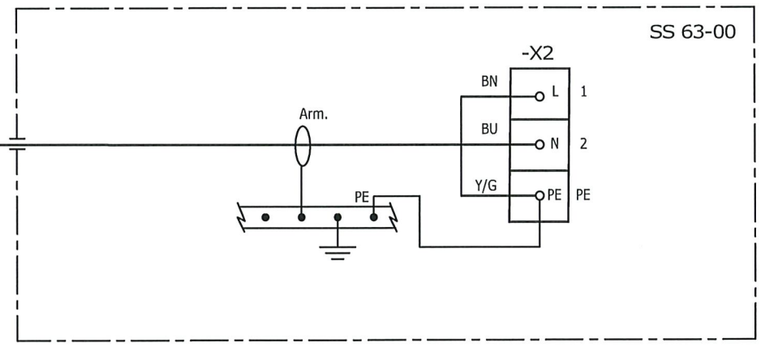
MARCO MORETTO
20/3/25

84311-CEL
3G2.5 mm²

DESCRIPTION: SERVER CABINET ITER - LINE B
TAG NUMBER: B400-SRV-001



DESCRIPTION: UCP - INSTRUMENT AIR PACKAGE A-63000
TAG NUMBER: CP-630E1



AS COMMISSIONED: MATTIA GIRTLI

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.	SHEET	REV.
	123A90–DDL–EL–DG–20149	040	02

F.to UNI A3: 420mmx297mm

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

Section 4.3 Instrumentation functional test sheets index

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 63-00 & discipline : I

Instrumental	63-00 Instrument Air Package (A-63000)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
63-XA-003	A-63000 Instrument air PKG fault	ONSHORE	C10003761	FJ01D	100	2025-02-02	RFO 2
63-XS-001	SHUT-DOWN A-63000 Instrument air PKG	ONSHORE	C10003762	FJ01D	100	2025-02-02	RFO 2

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	63-XA-003	: A-63000 Instrument air PKG fault	Dwg	123A90-DDL-IN-LIS-40089		
	S/Sys	63-00	: Instrument Air Package (A-63000)	Module			
TASK	code	C10003761	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	COMM	Activity FTS	Discipline	Instrumental	Form FJ01D	Digital Loop

LOOP DATA

Loop TAG	63-XA-003				TSLD	123A90-FDL-IN-DG-40014 rev. 1_A			
IO Type	Input	Yes	Output	No	Energy by transmitter	No	Energy by system	Yes	
Marshalling	B400-SIS-001	Terminal	05A/05B		Slot	01	Rack	03	Chanel 05

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		OK	OK
7	Loop not energized	Yes		Yes		OK	OK
8	Checking of line monitoring	No		No		OK	OK
9	Checking of Maintenance Inhibition	NA	NA	NA	NA	OK	NA
10	Associated safety Level / bar						
11	Associated outputs						

LOOP DOCUMENTATION

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

TESTING & MEASUREMENT INSTRUMENT USED

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

Comments:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM COMM	RM COMM	CW OPS
Name	Marco Di Maria	Giandonato Delmissier	Jamie McAllister
Date	2025-02-01	2025-02-01	2025-02-02

PROVERLIS Digitaly signed by Marco Di Maria 2025-02-01T07:04:36.036Z

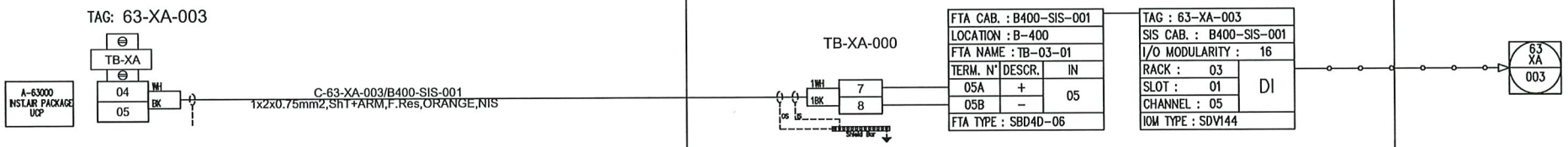
PROVERLIS Digitaly signed by Giandonato Delmissier 2025-02-01T07:52:44.527Z

PROVERLIS Digitaly signed by Jamie McAllister 2025-02-02T06:29:55.086Z

Signature			

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

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



NO MARK UP
23/01/25

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
63-XA-003
A-63000 INSTRUMENT AIR PKG 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 131	REV. 01

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

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	63-XS-001	: SHUT-DOWN A-63000 Instrument air PKG	Dwg	123A90-DDL-IN-LIS-40089		
	S/Sys	63-00	: Instrument Air Package (A-63000)	Module			
TASK	code	C10003762	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	COMM	Activity FTS	Discipline	Instrumental	Form FJ01D	Digital Loop

LOOP DATA

Loop TAG	63-XS-001				TSLD	123A90-FDL-IN-DG-40014 rev. 1_A			
IO Type	Input	No	Output	Yes	Energy by transmitter	No	Energy by system	Yes	
Marshalling	B400-SIS-001	Terminal	08A/08B		Slot	05	Rack 02	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		OK	OK
7	Loop not energized	Yes		Yes		OK	OK
8	Checking of line monitoring	No		No		OK	OK
9	Checking of Maintenance Inhibition	NA	NA	NA	NA	NA	NA
10	Associated safety Level / bar						
11	Associated outputs						

LOOP DOCUMENTATION

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

TESTING & MEASUREMENT INSTRUMENT USED

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

Comments:

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM COMM	RM COMM	CW OPS
Name	Marco Di Maria	Giandonato Delmissier	Jamie McAllister
Date	2025-02-01	2025-02-01	2025-02-02

PROVERLIS Digitaly signed by Marco Di Maria 2025-02-01T07:04:50.345Z

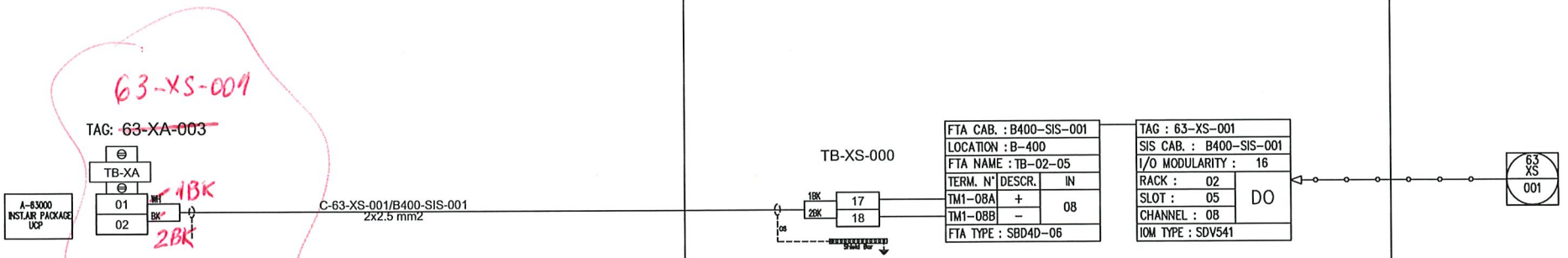
PROVERLIS Digitaly signed by Giandonato Delmissier 2025-02-01T07:53:40.676Z

PROVERLIS Digitaly signed by Jamie McAllister 2025-02-02T06:31:37.886Z

Signature			

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

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



L Grifoni
23/09/25

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
63-XS-001
SHUT-DOWN A-63000 INSTRUMENT AIR PKG

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 146 | REV. 01

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

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

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 63-00 & process: COMM

Miscellaneous	63-00 Instrument Air Package (A-63000)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
123A90-PML-COM-PRO-03043	OTP - Instrument Air Package	ONSHORE	C10004615	5300	100	2025-04-18	-
		OFFSHORE	C10004939	5300	0	-	-

ITEM	Tag	123A90-PML-COM-PRO-03043 : OTP - Instrument Air Package				Dwg	123A90-PML-COM-PRO-03043
	S/Sys	63-00 : Instrument Air Package (A-63000)				Module	
TASK	code	C10004615		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	COMM	Activity OTS	Discipline	Miscellaneous Form 5300		Operational Test Procedure

OTP - OPERATIONAL TEST PROCEDURE

Attached procedure number: 123A90-PML-COM-PRO-03043

Associated subsystems: 63-00

Completion date: 31-01.2025

Comments/Remarks:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
	COMMISSIONING DISCIPLINE LEAD	RM COMMISSIONING MANAGER	CPY COMMISSIONING MANAGER
Name	Giandonato Delmissier	Anthony Iveson	Jamie McAllister
Date	2025-04-14	2025-04-14	2025-04-18
Signature	PROVERLIS Digitaly signed by Giandonato Delmissier 2025-04-14T14:38:24.863Z	PROVERLIS Digitaly signed by Anthony Iveson 2025-04-14T12:55:05.586Z	PROVERLIS Digitaly signed by Jamie McAllister 2025-04-18T09:56:08.399Z

Base Load Power Hub (BLPH)

OTP – Instrument Air Package

Document Number: 123A90-PML-COM-PRO-03043

Document Class: 2

01	19/11/2024	Accepted for Construction (AFC)	G.DEL MISSIER	A. IVESON	M.BRUNELLI
00	01/10/2024	Issue for Review (IFR)	G.DEL MISSIER	A. IVESON	M.BRUNELLI
Rev.	Date	Description	Prepared	Reviewed	Approved

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 Review (IFR)
01	Accepted for Construction (AFC)

HOLDS LIST

No.	Description
1	
2	
3	
4	

Table of Contents

1. INTRODUCTION 7
   1.1 Project Overview 7
   1.2 Project Location 7
   1.3 Project Concept 8
2. DOCUMENT SCOPE 10
3. OTP SUMMARY 11
   3.1 Test Objective 11
   3.2 System Boundary Limits 11
   3.3 Test and System Description 11
   3.4 Safety Devices 12
   3.5 HSE Management 12
   3.6 Acceptance Criteria 13
4. DOCUMENTS REFERENCES AND ABBREVIATIONS 14
   4.1 Reference Documents 14
      4.1.1 Company Documents and Standards 14
      4.1.2 Project Documents 14
      4.1.3 Vendor Documents 16
   4.2 Acronyms and Abbreviations 17
5. OTP TEST REQUIREMENTS – ONSHORE WORKSITE 19
   5.1 Planning and Manpower 19
      5.1.1 Planned Tasks with Estimated Manpower 19
      5.1.2 Test Duration Estimate 20
      5.1.3 Vendor Assistance 20
      5.1.4 Items Postponed to C&E OTP 20
      5.1.5 Summary of Items HARDWIRED to be Tested 20
      5.1.6 Summary of Items HARDWIRED and PROFINET to be Tested 21
   5.2 OTP TEST REQUIREMENTS – ONSHORE WORKSITE 21
      5.2.1 Pre-Commissioning Achievement 21
      5.2.2 Commissioning Achievement 21
      5.2.3 Status of Required Associated Subsystems 21
      5.2.4 Special Tools & Test Equipment 21
      5.2.5 Consumable List 22

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

5.2.6 Commissioning Spare Parts 22
5.2.7 Temporary Facilities 22
5.3 OTP DESCRIPTION – ONSHORE WORKSITE 22
5.3.1 OTP Test Preparation 22
5.3.2 Electrical Preparation 23
5.3.3 Mechanical Preparation 23
5.3.4 Instrument Preparation 24
5.3.5 Piping Preparation 24
5.3.6 Additional Discipline Preparation 24
5.4 OTP TEST STEPS - ONSHORE WORKSITE (PHASE 1 & PHASE 2) 24
5.4.1 Test Preparation 24
5.4.2 Test Step PHASE 1: Preparation and Package Operations Tests 25
5.4.3 Test Preparation PHASE 2: Validation of Communication and I/O 29
5.4.4 OTP Worksite Tests Notes and Remark 30
5.4.5 OTP Worksite Tests Certifying Authority Table of Attendances 31
5.4.6 OTP Worksite Test Final Signatures and Company Acceptance 31
5.5 POST TEST CONDITION 31
5.6 REINSTATEMENT AND PRESERVATION TASKS 31
6. OTP AT OFFSHORE SITE 32
6.1 PLANNING AND MANPOWER 32
6.1.1 Offshore Site Test Overview 32
6.1.2 Planned Tasks with Estimated Manpower 32
6.1.3 Test Duration Estimate 32
6.1.4 Vendor Assistance 32
6.1.5 Items Postponed to C&E OTP 32
6.1.6 HOLDS 32
6.2 OTP TEST REQUIREMENT – OFFSHORE SITE 32
6.2.1 Pre-Commissioning Achievement 32
6.2.2 Commissioning Achievement 32
6.2.3 Status of Required Associated Subsystem 33
6.2.4 Special Tools & Test Equipment 33
6.2.5 Consumable List 33
6.2.6 Commissioning Spare Parts 33
6.2.7 Temporary Facilities 33
6.3 OTP DESCRIPTION – OFFSHORE SITE 34
6.3.1 OTP Test Preparation 34

6.3.2 Electrical Preparation 34
6.3.3 Mechanical Preparation 34
6.3.4 Instrument Preparation 34
6.3.5 Piping Preparation 34
6.3.6 Additional Discipline Preparation 35
6.4 OTP TEST STEPS - OFFSHORE SITE 35
6.4.1 Test Preparation 35
6.4.2 Test Steps 35
6.4.3 OTP Site Tests Notes and Remarks 37
6.4.4 OTP Site Tests Certifying Authority Table of Attendances 38
6.4.5 OTP Site Tests Final Signatures and Company Acceptance 38
6.5 POST TEST CONDITIONS 38
6.6 REINSTATEMENT AND PRESERVATION TASKS 38
7. APPENDICES 39
7.1 Vendor SAT Procedure (where applicable) 40
7.2 Proverlis Summary System Reports 41
7.3 Equipment Related Technical Queries (where applicable) 42
7.4 As Built Documentation (where applicable) 43
7.5 Management of Change – Summery Table of Tasks and Details of Affected Related Documentation (where applicable) 44
7.6 Profinet Signal Table 45

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

List of Figures

Figure 1 - HOLLANDSE KUST NOORD WIND PARK Location Map 7

Figure 2 - Wind Park Details 8

Figure 3 – BLPH Concept 9

Figure 4 – System Boundary Limits 11

List of Tables

Table 1: Company Documents and Standards 14

Table 2: Project Documents 16

Table 3: Vendor Documents 17

Table 4: Acronyms and Abbreviation 19

Table 5: *Items HARDWIRING to be Tested* 20

Table 6 *Items HARDWIRING and PROFINET to be Tested* 21

List of Attachments

Attachment 1 – N/A

1. INTRODUCTION

1.1 Project Overview

Crosswind, a Shell and Eneco joint venture, was awarded the tender to develop the offshore Hollandse Kust Noord (HKN) wind farm, located 18.5km off the coast of Netherlands near the town of Egmond aan Zee. The consortium plans to have HKN operational in 2023 with an installed capacity of 759MW generating at least 3.3TWh per year. This is sufficient renewable power to supply more than 1 million Dutch households with green electricity.

Offshore wind farms produce intermittent electricity and balancing these dips and peaks and integrating this electricity into the national energy system requires new technologies. For this reason, the offshore wind farm will include several new technologies that could be implemented at full-scale in the future. The new technologies being explored include a floating solar park, a short-duration battery storage as well as long-term storage via green hydrogen produced by water electrolysis and subsequently consumed in a fuel cell. The combination of these individual measures, herein referred to as the Base Load Power Hub (BLPH) will ensure a continuous power supply regardless of the wind situation.

1.2 Project Location

The Hollandse Kust Noord (HKN) wind farm is located 18.5km off the coast of the Netherlands near the town of Egmond aan Zee.



Figure 1 - HOLLANDSE KUST NOORD WIND PARK Location Map



***Figure 2** - Wind Park Details*

The wind farm will consist of No. 69 x 11.5MW wind turbine generators each to be installed on a dedicated monopile structure. A 70th monopile is located on coordinates E 590719.1, N 5841602.3 and is reserved for installing the platform accommodating the BLPH. The monopile structure was designed and installed by Van Oord Offshore Wind (VooW) and therefore not part of the BLPH scope.

1.3 Project Concept

All components included in the BLPH will be integrated onshore on a topsides and installed in an offshore location within the boundaries of the HKN wind farm. At its simplest, the BLPH will store energy during periods of high electricity generation from renewable sources (a wind turbine generator and the floating solar PV farm) and release it during periods of low generation. In practice. It is expected that the energy stored will supplement generation from renewable sources to ensure that at least 1.0MW of power is exported to the electrical grid regardless of wind/solar availability.

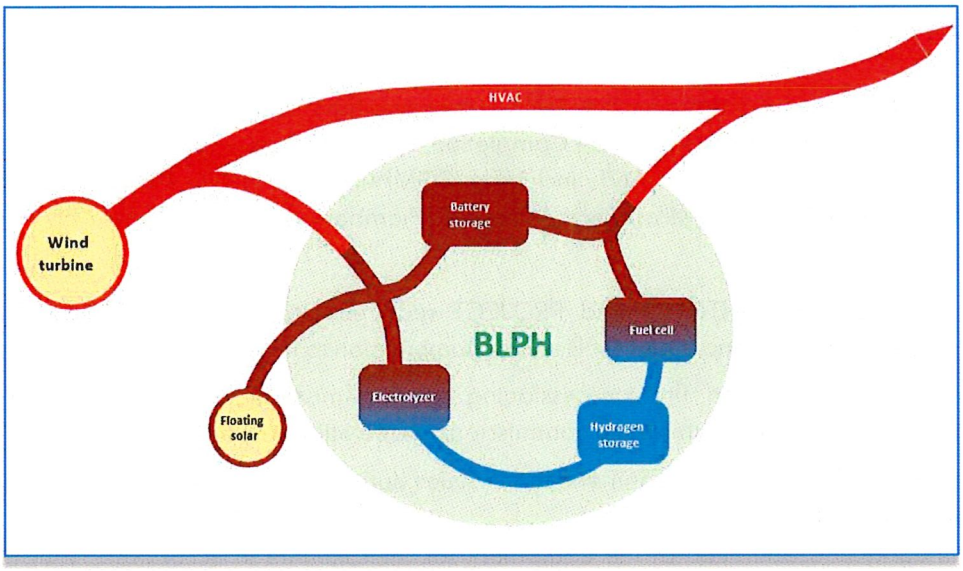


Figure 3 – BLPH Concept

Electricity in the BLPH will be stored in the form of electrons in a battery energy storage system (BESS) as well as converted into green hydrogen via water electrolysis. When the power output from the connecting wind turbine drops to below 1 MWe, the BLPH will return its stored energy to supplement the remaining power output. This will be by discharging the BESS, while stored hydrogen will be converted back into electricity using a fuel cell to extend the discharge duration.

The purpose of the BLPH is to function as a testbed for the integration of energy storage technologies with renewable generation. It is expected that equipment installed on the BLPH will operate as Normally Unmanned Installation for at least two (2) years with no or minimal maintenance and it will have its own independent control room with the ability to communicate with Crosswind's control room.

2. DOCUMENT SCOPE

The purpose of this document is to describe the methodology and the planned actions to be implemented for the preparation and execution of Mechanical Completion, Pre-commissioning, Commissioning & Start-Up activities to be performed on the PLANT, including COMPANY PROVIDED ITEMS, at the onshore premises of CONTRACTOR located in Milan (Italy) offices and Piomboni yard - Marina di Ravenna (Italy).

CONTRACTOR, pursuant to CONTRACT and PROJECT requirements, shall implement an exacting methodology, complete with a distinct set of tools and documentation to meet the following key objectives:

Perform the Mechanical Completion, Pre-commissioning and Commissioning on the WORKSITE to the maximum extent possible so as to minimise the commissioning operations on SITE;

- Ensure safety for the people, environment and facilities during the execution of the Commissioning activities at WORKSITE,
- Ensure integrity and operation of the equipment for their lifetime in accordance with PROJECT design and specifications,
- Plan a smooth and flawless execution of the Commissioning activities avoiding unforeseen downtimes and delays.

Achievement of the above objectives shall be obtained by:

- Defining and prioritizing a predetermined sequence of the Mechanical Completion checks, Pre-commissioning and Commissioning tests and tasks,
- Checking, testing systematically and exhaustively all the components of PLANT in compliance with PROJECT approved procedures and CONTRACT terms, managed by a dedicated team of inspectors, technicians and field engineers who will perform the Mechanical Completion, Pre-commissioning, Commissioning and Start-Up tasks and subsequently record the results via discipline specific check, inspection and test sheets (ITR's) & where applicable via discrete Operational Test Procedures (OTP's).
- Ensuring full traceability of the performed checks and tests, through implementation of a dedicated Project Completions Management System (CMS) containing individual references to all tagged items.

3. OTP SUMMARY

3.1 Test Objective

The operating test of the Instrument Air Package system is executed to ensure that the system is started up in a safe and controlled manner and to verify the correct operation according to the project requirements.

The scope of this document is to explain the principal procedure for inspection and test the Instrument Air Package.

3.2 System Boundary Limits

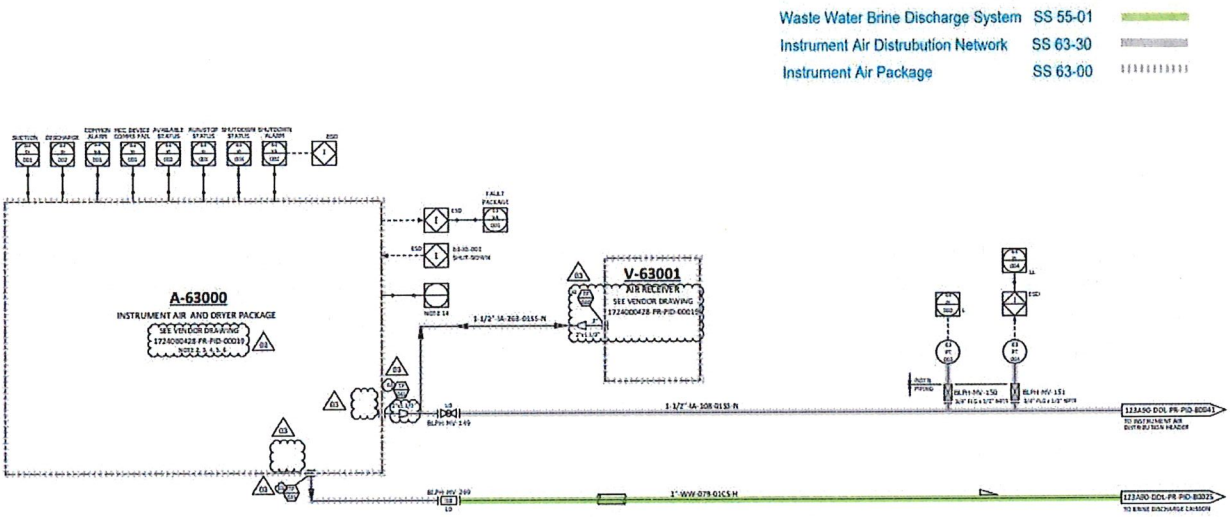


Figure 4 – System Boundary Limits

3.3 Test and System Description

This document is specifically related to the following system:

- 63-00: Instrument Air Package

All equipment must be properly installed in according with vendor document 1724000428-PR-PID-0019.
The limits of the system are defined in document 1724000428-PR-PID-0019.

These parts of the system shall be tested on worksite and on site.

The Instrument Air Package data are the following:
GENERAL CHARACTERISTICS CLIMATIC CONDITION:

Main components of the Package:

- K-63001A/B Oil Free Screw Compressor 1&2
  - 400V – 50 Hz
  - Max operating Pressure10barg.
  - Discharge Pressure 9.5barg
  - Discharge temperature 35°C
- S-63001A/B Dryer Pre-Filter
- D-63001A/B Dryer Unit 1
- D-63002A/B Dryer Unit 2
- S-63002A/B Dryer After-Filter
- V-63001 Air Receiver
- 63-LP-001 Local Control Panel

3.4 Safety Devices

- Appropriate Personnel Protective Equipment (PPE) and safety equipment e.g., safety shoes, hand gloves, helmet, earplugs etc. are available and must be used in line with the site requirements.
- Warning safety signs are to be posted with restricted access to essential personnel only.
- Adequate firefighting equipment.

3.5 HSE Management

All necessary safety precautions must be taken to avoid any risk for personnel injury.

- All personnel involved in this operational test shall be competent for the tasks they will be required to undertake
- Place safety / warning signs and segregate the entire area with barrier tapes (safety barriers) of a colour distinguished (blue and white) from those used for construction activities
- Restrict access into area only to authorized personnel
- Conduct "Toolbox Talk" with all personnel prior to starting test work
- Appropriate Personnel Protective Equipment (PPE) and safety equipment e.g. safety shoes, safety glasses, hand gloves, helmet, earplugs etc. are available and must be used in line with the site requirements
- All activities carried out on the project shall be performed in accordance with the "Permit to Work" system Doc. PRO-HSE-23
- Electrical and mechanical isolations are to be assured as per Doc. PRO-HSE-08 and "Commissioning and start-up operation" procedure.
- Observe and enforce all international codes and regulations to safeguard personnel, plant and environment.
- Ensure that the working area is clean, tidy, well illuminated and that access and escape routes are free from obstructions.

Before starting work on any of the activities in this OTP it is the responsibility of the persons performing the work to:

- Familiarize themselves with the plant/equipment to be worked on
- Ensure they are aware of all other work activities that are taking place, or due to take place
- If necessary, re-plan any situation/activity
- Ensure proper communications between parties involved in the execution of the OTP
- Read the relevant Vendor documentation for the equipment covered by this OTP and observe any special requirements and limitations recommended or imposed by Vendor
- Verify that all personnel involved in the implementation of this procedure are familiar with its content as well as the associated safety requirements (Toolbox Talk)

3.6 Acceptance Criteria

Before Power ON:
Visual inspection and verification are a crucial step to identify any obvious issues with the installation, such as loose connections, missing components, or damage to the equipment.
Crosschecking the installation with engineering documentation ensures that the installation is done correctly and according to the manufacturer's guidelines. These steps can help identify any missing or incorrect components and connections.

After Power ON:
Energising the units is an essential step in verifying the correct operation of the equipment. Observing that all wiring has been done correctly and in the event of an alarm will help us detect possible errors or malfunctions.

Phase 1: Preparation and Package Operations Tests

- The instrument air package consists of two distinct parts, Air Dryers & Air Compressors.
- The Air Dryer Local Control Panel 63-LP-001 will receive a 1st power supply from AC 35kVA UPS (UP-200F3) 230V MCB Q41, Subsystem SS 84-10.
- The Air Dryer Local Control Panel 63-LP-001 will receive a 2nd power supply from Distribution Board DP-200N1 230V MCB Q29, Subsystem SS 83-20.
- The Air Compressor Units K-63001A/B will receive power supplies from LV 400V Switchboard SG-200N1, drawers A4/+08 and A5/+08.

Phase 1 will validate the following:

- Verify the CPU & additional components are energized and the instrumentation on the Air Dryers are in service.
- Loop check and C&E the Air Dryers are completed.
- Verify the Air Compressor Units K-63001A/B are powered on and there are no alarms present.
- Verify the Air Compressor Units K-63001A/B functional tests are completed.

Phase 2: Validation of Communication and I/O

- Profinet communication to Network Cabinet B-400-NET-001/Server Cabinet B400-SRV-001 and PCS System Cabinet B400-PCS-001.
- Hardwired connections to SIS System.

Phase 2 will validate the following:

- Verify the Profinet Communication from PCS to Local Control Panel 63-LP-001 is operational.
- Verify loop check from SIS to Local Control Panel 63-LP-001 with C&E test.

Performing the steps in this OTP as per engineering documents is crucial to ensure that the equipment is operating correctly and that it meets the desired design specifications. Observing the results will help identify any issues that may arise during the operation.
Overall, following these steps shall provide a comprehensive and effective way to verify the equipment installation and functionality.

4. DOCUMENTS REFERENCES AND ABBREVIATIONS

4.1 Reference Documents

4.1.1 Company Documents and Standards

Document ID	Document Title
[1] K559-2254-CG-PHI-001	Commissioning Philosophy
[2] K559-2254-EL-ELL-002	BLPH Electrical Load List (CCS MODE 2(A) 'HOT STANDBY')
[3] K559-2254-EL-ELL-003	BLPH Electrical Load List (CCS MODE 3(C) 'DISCHARGING')
[4] K559-2254-EL-ELL-004	BLPH Electrical Load List (CCS MODE 4(A) 'COLD STANDBY')
[5] K559-2254-EL-ELL-005	BLPH Electrical Load List (CCS MODE 4A(D) 'EMERGENCY MODE (Island))
[6] K559-2254-EL-ELL-006	BLPH Electrical Load List (CCS MODE 5(D) 'POWER OUT (Blackout))
[7] K559-2254-PR-PHI-001	Main process control philosophy

Table 1: Company Documents and Standards

These documents were produced in FEED and made available to RM for info. They have subsequently been superseded by Detailed Design, similar or same deliverables.

4.1.2 Project Documents

Document ID	Document Title
[1] 123A90-PML-PM-LIS-01001	Master Document Register
[2] 123A90-PML-COM-PL-03002	Mechanical Completion & Commissioning Execution Plan
[3] 123A90-PML-COM-LIS-03011	System/Sub-Systems List
[4] 123A90-PML-COM-LIS-03012	System/Sub-System Boundary Limit Diagrams
[5] 123A90-PML-COM-PRO-03007	Commissioning Strategy
[6] 123A90-PML-COM-PRO-03038	Leak Test Procedure

Document ID	Document Title
[7] 123A90-PML-COM-SP-03032	Pre-Commissioning Functional Test Sheet Template Collection (ITR-B)
[8] 123A90-PML-COM-SP-03014	Commissioning TDS - Temporary Equipment & Facilities
[9] 123A90-PML-COM-PRO-03019	OTP – Onshore Performance & Integrated Test Procedure
[10] 123A90-PML-COM-LIS-03034	Inhibit-Override Register
[11] 123A90-PML-COM-LIS-03035	PSV Calibration Register
[12] 123A90-PML-COM-PRO-03036	OTP - Black Start Procedure
[13] 123A90-PML-COM-LIS-03024	Commissioning Spare Parts and Consumables List
[14] 123A90-PML-COM-PRO-03022	Initial offshore START-UP procedures
[15] 123A90-PML-COM-RE-03001	Commissioning Final Dossier (ITR-B)
[16] 123A90-PML-QHSE-PRO-00116	Flushing and Cleaning Procedures
[17] 123A90-PML-QHSE-SP-00118	Mechanical Completion Check Sheet Template Collection (ITR-A)
[18] 123A90-PML-QHSE-RE-00115	Mechanical Completion Final Dossier (ITR-A)
[19] 123A90-PML-QHSE-PRO-00117	Punch list Management Procedure
[20] 123A90- 123A90-PML-COM-PRO-03041	OTP - Hydrogen Storage & Venting Systems
[21] 123A90- 123A90-PML-COM-PRO-03042	OTP - Sea Water Intake & Fresh Water Treatment Systems
[22] 123A90- 123A90-PML-COM-PRO-03043	OTP - Instrument Air System
[23] 123A90- 123A90-PML-COM-PRO-03055	OTP - Nitrogen Generation System
[24] 123A90- 123A90-PML-COM-PRO-03045	OTP - HV Switchgear & 66 kV Transformer Systems
[25] 123A90- 123A90-PML-COM-PRO-03046	OTP - MV Switchgear & 6.6 kV Transformer Systems
[26] 123A90- 123A90-PML-COM-PRO-03047	OTP - LV Switch Boards & LV Distribution Board Systems
[27] 123A90- 123A90-PML-COM-PRO-03048	OTP - Lighting & Small Power Systems
[28] 123A90- 123A90-PML-COM-PRO-03049	OTP - Electrical Heat Tracing Systems
[29] 123A90- 123A90-PML-COM-PRO-03050	OTP - DC UPS System 10KVA UP-200F1
[30] 123A90- 123A90-PML-COM-PRO-03051	OTP - Data Network Systems
[31] 123A90- 123A90-PML-COM-PRO-03053	OTP - Navaid System
[32] 123A90- 123A90-PML-COM-PRO-03054	OTP - F&G and ESD C&E Logics

Document ID	Document Title
[33] 123A90-PML-COM-SP-03057	Worksite WEF (Work Execution Flow Scheme)
[34] 123A90-PML-COM-SP-03058	Site WEF (Work Execution Flow Scheme)
[35] 123A90-PML-QHSE-PL-00001	Project HSE Plan
[36] 123A90-PML-QHSE-PRO-00120	Proverlis Management Procedure
[37] 123A90-PML-COM-PRO-03056	OTP – Document Template
[38] 123A90-PML-COM-PRO-03059	OTP - AC UPS System 35kVA UP-200F3
[39] 123A90-PML-COM-PRO-03060	OTP - AC UPS System 15kVA UP-200F4
[40] 123A90-PML-COM-PRO-03061	OTP – Electrolyser (CPI)
[41] 123A90-PML-COM-PRO-03062	OTP – Fuel Cell (CPI)
[42] 123A90-PML-COM-PRO-03063	OTP – BESS (CPI)

Table 2: Project Documents

4.1.3 Vendor Documents

Document ID	Document Title
[1] 1724000428-MD-LIS-00001	SMIR - SUPPLIER MASTER INFORMATION REGISTER
[2] 1724000428-QC-ITP-00002	INSPECTION TEST PLAN (ITP)
[3] 1724000428-MAC-SP-00003	SYSTEM/PACKAGE FUNCTIONAL DESCRIPTION
[4] 1724000428-MAC-CE-00004	PACKAGE CAUSE EFFECT MATRIX /LOGIC DIAGRAMS
[5] 1724000428-MAC-DA-00005	EQUIPMENT SECTIONAL DRAWING WITH BILL OF MATERIAL
[6] 1724000428-MAC-DD-00006	EQUIPMENT SECTIONAL DRAWING WITH BILL OF MATERIAL
[7] 1724000428-MAC-DD-00007	PACKAGE 3D MODEL DRAWING AND ELECTRONIC FILE
[8] 1724000428-MAC-DD-00008	PACKAGE PIPING SCHEMATICS AND BILL OF MATERIALS
[9] 1724000428-MAC-DG-00009	PACKAGE WIRING DIAGRAM INCLUDING LAYOUT OF PACKAGE CONTROL PANEL
[10] 1724000428-ST-RE-00010	PACKAGE STRUCTURAL CALCULATION REPORT INCLUDING FIXING POINTS and LIFTING POINTS
[11] 1724000428-MAC-DS-00011	EQUIPMENT DATA SHEETS INCLUDING MOTORS, AIR COMPRESSOR, DRYERS, ETC.
[12] 1724000428-MAC-DS-00012	PACKAGE EQUIPMENT NOISE DATA SHEETS INCLUDING AIR COMPRESSOR, DRYERS, ETC.
[13] 1724000428-MAC-DS-00013	INSTRUMENT DATA SHEETS
[14] 1724000428-MAC-DS-00014	AIR COMPRESSOR PERFORMANCE CHART
[15] 1724000428-EL-LIS-00015	ELECTRICAL LOAD LIST

Document ID	Document Title
[16] 1724000428-IN-LIS-00016	I/O LIST
[17] 1724000428-IN-LIS-00017	INSTRUMENT LIST WITH SET POINTS/CONTROL/ALARM/SHUTDOWN
[18] 1724000428-EL-LIS-00018	CABLES LIST
[19] 1724000428-PR-PID-00019	PACKAGE P&ID
[20] 1724000428-NDT-PRO-00020	NDT PROCEDURES INCLUDING PERSONNEL QUALIFICATIONS
[21] 1724000428-WEL-LIS-00021	WELDING BOOK (WPS, PQR, WELDERS QUALIFICATIONS, WELDING MAPS, ETC.)
[22] 1724000428-MAT-PRO-00022	PAINTING PROCEDURE
[23] 1724000428-QC-PRO-00023	HYDROSTATIC AND OR PNEUMATIC TEST PROCEDURE
[24] 1724000428-QC-PRO-00024	FAT (FACTORY ACCEPTANCE TEST) PROCEDURE
[25] 1724000428-QC-DB-00025	MANUFACTURERS RECORD BOOK (FINAL DOSSIER)
[26] 1724000428-QC-LIS-00026	MANUFACTURERS RECORD BOOK (FINAL DOSSIER) - INDEX
[27]1724000428-MAC-LIS-00027	ATEX REGISTER
[28]1724000428-MAC-LIS-00028	ATEX DOCUMENTATION
[29] 1724000428-COM-LIS-00029	SPARE PARTS LIST (2 YEARS AND COMMISSIONING & START-UP
[30]1724000428-MAC-MAN-00030	INSTALLATION, OPERATING AND MAINTENANCE MANUAL (INCLUDING SITE ERECTION INSTRUCTIONS AND PROCEDURES)

Table 3: Vendor Documents

4.2 Acronyms and Abbreviations

Acronyms and Abbreviations	Description
AOC	Achievement of Commissioning
BLPH	Base Load Power Hub
BESS	Battery Energy Storage System
C&E	Cause & Effects
CCR	Centra Control Room
CCS	Central Control System
CCTV	Closed Circuit Television
CMS	Completions Management System
CPI	Company Provided Item
CSU	Commissioning & Start-Up
E&I	Electrical & Instrumentation
EMCS	Electrical Monitoring & Control System

Acronyms and Abbreviations	Description
ESD	Emergency Shut Down
F&G	Fire & Gas
FAT	Factory Acceptance Test
FT	Functional Test
GALT	Gross Air Leak Test
HAZID	Hazard Identification Studies
HAZOP	Hazard and Operability Studies
HKN	Hollandse Kust Noord
HSE	Health, Safety, & Environment
HSSE	Health, Safety, Security & Environment
HV	High Voltage
HVAC	Heating, Ventilation and Air Conditioning
ICSS	Integrated Control and Safety System
ITR	Inspection & Test Record
LC	Locked Closed
LO	Locked Open
LOTO	Lock-Out / Tag-Out
LV	Low Voltage
OCC	Onshore Commissioning Complete
OEM	Original Equipment Manufacturer
OICT	Onshore Utility Commissioning Complete
OMAR	Operating Modes Assurance Review
OR	Operations Readiness
ORR	Operations Readiness Review
OTP	Operational Test Procedure (Commissioning)
PACO	Process Automation, Control and Optimisation
PCS	Process Control System
PC&C	Pre-Commissioning & Commissioning
PID (P&ID)	Piping and Instrumentation Diagram
PSV	Pressure Safety Valve
PSSR	Pre Start-up Safety Review
PTW	Permit to Work
PV	PothoVoltaic
PVP	Piping and Vessels Preparation

Acronyms and Abbreviations	Description
RFC	Ready for Commissioning
RFO	Ready for Operation
RFSA	Ready For Sail Away
RFSU	Ready For Start-Up
SAT	Site Acceptance test
SECE	Safety Environmental Critical Element
SIF	Safety Instrumentation Function
SIL	Safety Integrity Level
SIMOPS	Simultaneous Operations & Maintenance
SIS	Safety Instrumented System
SLD	Single Line Diagram
SMIR	Supplier Master Information Register
SoF	Statement of Fitness
TIV	Technical Integrity verification
UPS	Uninterruptible Power Supply
VHF	Very High Frequency
VooW	Van Oord Offshore Wind
VSAT	Very Small Aperture Terminal
VSAT	Very Small Aperture Terminal
WEF	Work Execution Flow Scheme

Table 4: Acronyms and Abbreviation

5. OTP TEST REQUIREMENTS – ONSHORE WORKSITE

This chapter refers to the activities on the Contractor worksite (construction yard).

5.1 Planning and Manpower

5.1.1 Planned Tasks with Estimated Manpower

Estimated manpower for the entire duration of the Test:

- 1 E&I commissioning superintendent from Contractor.
- 1 E&I commissioning supervisor from Contractor.
- 1 E&I commissioning technicians from Contractor.
- 1 Vendor technician.
- 1 Operator workstation field engineer (phase 2).

5.1.2 Test Duration Estimate

The test duration is forecast as follows:

- 2 days approx. PHASE 1.
- 1 day PHASE 2.

If necessary, the estimated time can be extended in order to complete all required pre-commissioning and commissioning activities.

5.1.3 Vendor Assistance

Vendor COES SRL will provide a qualified specialist to assist with all aspects of commissioning of the Instrument Air Package.

5.1.4 Items Postponed to C&E OTP

- Not Applicable

5.1.5 Summary of Items HARDWIRED to be Tested

Signal tag:	**Signal description:**
63-AIT-051	Outlet dew point
63-FIT-051	Outlet flowrate
63-XY-051 63-XY-052 63-XY-053 63-XY-054	Pneumatic on-off valves actuation
63-XV-051 63-XV-052 63-XV-053 63-XV-054	Dryer towers change-over
63-XV-055 63-XV-056	Pre-filters change-over
63-XV-059 63-XV-060	Post-filters change-over
63-PIT-064	Instrument Air Receiver pressure
63-PDIT-051	Pre-filter pressure drop
63-PDIT-062	Post-filter pressure drop
63-TIT-051	Air dryer inlet temperature
63-TIT-052	Instrument Air Receiver temperature
63-PS-054 63-PS-056 63-PS-058 63-PS-060	Air dryer towers pressure

Table 5: *Items HARDWIRING to be Tested*

5.1.6 Summary of Items HARDWIRED and PROFINET to be Tested

Signal tag:	Signal description:
63-XA-003	A-63000 Instrument air PKG fault
63-XS-001	SHUT-DOWN A-63000 Instrument air PKG
PROFINET	Refer to parameter list Appendix 7.6

Table 6 *Items HARDWIRING and PROFINET to be Tested*

5.2 OTP TEST REQUIREMENTS – ONSHORE WORKSITE

5.2.1 Pre-Commissioning Achievement

Prior the commissioning operation starts, the relevant pre-commissioning ITRs should be fully signed.

5.2.2 Commissioning Achievement

The commissioning achievement will be the successful operation, functionality of Instrument Air Package, installed and put in operation during the WORKSITE phase:

- 63-00: Instrument Air Package

5.2.3 Status of Required Associated Subsystems

PHASE 1: Preparation and Package Operations Tests
Subsystems required RFC for Commissioning of Instrument Air Package:

- SS 83-00 LV 400V Switchboard SG-200N1
- SS 83-20 Distribution Board DP-200N1 230V
- SS 84-10 AC 35kVA UPS (UP-200F3) 230V
- SS 88-00 Earthing System
- SS 55-01 Wastewater Brine Discharge System

PHASE 2: Validation of Communication and I/O
Subsystems required RFC for Commissioning of Instrument Air Package:

- SS 83-00 LV 400V Switchboard SG-200N1
- SS 84-10 AC 35kVA UPS (UP-200F3) 230V
- SS 83-20 Distribution Board DP-200N1 230V
- SS 88-00 Earthing System
- SS 55-01 Wastewater Brine Discharge System
- SS 86-00 Server Cabinet
- SS 86-00 Network Cabinet
- SS 79-00 SIS (ESD)
- SS 87-10 PCS System Cabinet

5.2.4 Special Tools & Test Equipment

The following special tools and Test Equipment are required:

- Continuity tester (Multimeter)
- Toolbox

- Hart Communicator
- Portable radios (2 pcs + 1 per Technical Room)
- Dew point measuring instrument (vendor supply)

TESTING & MEASUREMENT INSTRUMENT USED			
Type	Serial N.	Calibration certificate	Validity
FLUKE 175	AW1/018 (17140769)	7715/24	10/07/2025

5.2.5 Consumable List

- Not applicable

5.2.6 Commissioning Spare Parts

- See reference doc. N. 1724000428-COM-LIS-00029

5.2.7 Temporary Facilities

- Not applicable

5.3 OTP DESCRIPTION – ONSHORE WORKSITE

5.3.1 OTP Test Preparation

Step	Description	Result	Verified by	Date
1.	System Ready for Commissioning Certificate (RFC) is issued and approved.	OK		31/01/2025
2.	No Mechanical Completion or Pre-commissioning punch list 'A' items are outstanding against the system to be commissioned.	OK		31/01/2025
3.	Factory Acceptance Test Procedure has been carried out successfully (refer to Doc. 1724000428-QC-PRO-00024)	OK		31/01/2025
4.	All personnel involved in the implementation of this procedure are familiar with its content as well as with associated safety requirements (Toolbox Talk to be conducted before initiation of activities).	OK		31/01/2025
5.	A final walkdown of the system has been completed, to ensure that the system and the area are ready for commissioning.	OK		31/01/2025

6.	Check that areas are free for work and escape routes are clear of any obstructions.	OK		31/01/2025
7.	All safety barriers and warning signs have been installed.	OK		31/01/2025
8.	Ensure that proper communications have been established between parties involved in the implementation of the procedure.	OK		31/01/2025
9.	Verify availability of test equipment as per section 5.2.4.	OK		31/01/2025
10.	System(s) (de)isolations as per LOTO procedure defined within HSSE Permits to Work and Commissioning procedures duly prepared and approved	OK		31/01/2025
11.	All yard personnel have been duly notified by dedicated LUN (Livening Up Notification) that the system(s) is ready for commissioning.	OK		31/01/2025

5.3.2 Electrical Preparation

Step	Description	Result	Verified by	Date
1.	Check related punch list 'B' items and confirm acceptability for start of commissioning activities.	OK		31/01/2025
2.	Verify that all relevant associated systems / subsystems are completed.	OK		31/01/2025
3.	Verify and confirm the completion of the final connections between the LV 400V Switchboard 04/+08 & 05/+08 and the two Air Compressors units K-63001A/B.	OK		31/01/2025
4.	Verify and confirm the correct circuit breaker protection settings according to latest protection study revision.	OK		31/01/2025
5.	Verify and confirm the completion of the final connections between the UPS (UP-200F3) MCB QF34 and the 63-LP-001 Local Control Panel.	OK		31/01/2025
6.	Verify and confirm the completion of the final connections between the Distribution Board DP-200N1MCB Q29 and the 63-LP-001 Local Control Panel.	OK		31/01/2025

5.3.3 Mechanical Preparation

Step	Description	Result	Verified by	Date
1.	Check the correct flow direction of the package valves	OK		31/01/2025

2.	Install flexible hose if necessary for Temporary drainage.	OK		31/01/2025

5.3.4 Instrument Preparation

Step	Description	Result	Verified by	Date
1.	Check related punch list 'B' items and confirm acceptability for start of commissioning activities.	OK		31/01/2025
2.	Verify that all relevant associated systems / subsystems are ready.	OK		31/01/2025
3.	Check Inhibit and Override register has been prepared and validated.	OK		31/01/2025
4.	Verify that relevant equipment/ components are available and in operation for start of commissioning activities.	OK		31/01/2025
5.	Verify availability of test equipment as per section 5.2.4.	OK		31/01/2025

5.3.5 Piping Preparation

Step	Description	Result	Verified by	Date
1.	Verify the completion of piping in conformity with system battery limit.	OK		31/01/2025

5.3.6 Additional Discipline Preparation

- Not applicable

5.4 OTP TEST STEPS - ONSHORE WORKSITE (PHASE 1 & PHASE 2)

In the following steps the functionality of the Instrument Air Package shall be tested:

- SS 63-00: Instrument Air Package

5.4.1 Test Preparation

Need to Verify:

- SS 83-00 LV 400V Switchboard SG-200N1
- SS 84-10 AC 35kVA UPS (UP-200F3) 230V
- SS 83-20 Distribution Board DP-200N1 230V
- SS 88-00 Earthing System
- SS 55-01 Wastewater Brine Discharge System
- SS 86-00 Server Cabinet
- SS 86-00 Network Cabinet
- SS 79-00 SIS (ESD)

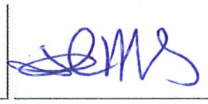
- SS 87-10 PCS System Cabinet

All systems and subsystems involved in this procedure must be ready for commissioning and available.

5.4.2 Test Step PHASE 1: Preparation and Package Operations Tests

Step	Description	Result	Verified by	Date
Energization of Instrument Air Package				
PHASE1: Preparation and Package Operations Tests				
Verify related ITR-B for System 63-00 is completed.				
1	Check and confirm that the MCB QF34 from UPS (UP-200F3) and Distribution Board DP-200N1 MCB Q29 230V are ready for power on.	OK		31/01/2025
2	Check according to reference vendor document 1724000428-MAC-DG-00009 sheets 20 and 21 the following protection devices are open. 20QF1/20FU2 and 21QF1/21FU3.	OK		31/01/2025
3	Confirmed the above we can proceed with energization of the Air Dryer Local Control Panel 63-LP-001.	OK		31/01/2025
4	Close the MCB QF34 from UPS(UP-200F3) and with reference to vendor doc. 1724000428-MAC-DG-00009 sheet 21 verify that power supply 230V is present on the terminal strip X2:1-2 Voltage: 230 V	OK		31/01/2025
5	Close the MCB Q29 from Distribution Board DP-200N1and with reference vendor doc. 1724000428-MAC-DG-00009 sheet 20 verify that power supply 230V is present on the terminal strip X1:1-2 Voltage: 230 V	OK		31/01/2025
6	Confirmed the steps 4 and 5 let's proceed with energization of the CPU1, CPU2, I/O RACK, SCALANCE and PN/PN COUPLER with reference vendor doc. 1724000428-MAC-DG-00009 sheets 44 and 45.	OK		31/01/2025
7	Check that there are no alarms present and that all instrumentation on the Air Dryer are powered.	OK		31/01/2025

Step	Description	Result	Verified by	Date
8	With reference Vendor Doc 1724000428-MAC-DG-00009 sheet 20 verify the correct functionality: internal light, anticondensation resistor and service socket.	ok		31/01/2025
9	Verify loop check and alarm setting with reference vendor doc. 172400428-IN-LIS-00016 sheet 4.	ok		31/01/2025
10	Check and confirm that the A4/+08 and A5/+08 drawers on the LV 400V switchboard SG-200N1 are ready for power on.	ok		31/01/2025
11	Check and confirm that the Main Switch's inside the Air Compressors K-63001A/B are open, see reference document 1724000428.MAC-MAN-00030	ok		31/01/2025
12	Confirmed the above we can proceed with energization of the Air Compressors K-63001A/B	ok		31/01/2025
13	Close and energize drawers A4/+08 and A5/+08 from LV 400V switchboard SG-200N1 and with reference vendor doc. 1724000428.MAC-MAN-00030 verify in the Air Compressors K-63001A/B that the control voltage, line voltage and phase rotation are all correct for starting.	ok		31/01/2025
14	Before starting the compressors, ensure that no persons are in a hazardous position.	ok		31/01/2025
15	With reference to the first Air Compressor K-63001A, when the display shows READY TO START, press the dedicated START button. The compressor will start in an unloaded state then automatically load depending on demand.	ok		31/01/2025
16	Pressing the dedicated button UNLOAD STOP will activate the unload stop sequence. If the compressor is running loaded, it will first unload and then stop. If the compressor is running unloaded, it will stop immediately.	ok		31/01/2025
17	Pressing the dedicated button UNLOAD will cause the compressor to unload and remain running and unloaded. The display will indicate that the machine is RUNNING UNLOADED with MODE UNLOAD.	ok		31/01/2025

Step	Description	Result	Verified by	Date
18	Pressing the dedicated button LOAD will cause the compressor to load if the compressor is running and if the DISCHARGE PRESSURE is less than the ONLINE PRESSURE. This also returns the machine to the operating mode that is specified by the MODE OF OPERATION set point. The other buttons provide access to various operator-selectable functions and machine operating conditions. The purpose of each of these buttons is defined by the display screen and the particular function being performed at that time.	OK		31/01/2025
19	With reference to the second Air Compressor K-63001B, repeat the test steps from n. 15 to n. 18.	OK		31/01/2025
20	The sequence local mode Air Dryer is from Local Control Panel 63-LP-001. Before starting the sequence verify in the front LCP: • Lamp 230V SERVICE 63-XL–001 is on • Lamp 230V UPS 63-XL-002 is on • Lamp 24V 63-XL-004 is on • Lamp ALARM 63-XA-001 is off	OK		31/01/2025
21	Turns the selector 63-HS-004 in local mode and start pushbutton 63-HS-001. Verify in the front LCP the running status lamp 63-XL-003 is on, (the sequence is starting). Verify the start sequence in local mode with vendor document 172400428-MAC-CE-0004.	OK		31/01/2025
22	The PLC inside the LCP 63-LP-001 will manage the sequence Air Dryer and interface with Compressors K-63001A and K-63001B.	OK		31/01/2025
23	The dryer consists of two pressure towers. Both towers are filled with desiccant. A tower removes moisture from compressed air. The moist air passes directly through a desiccant tower that absorbs moisture. When the tower is saturated with moisture, the valves switch and conduct air to the other spare tower. During absorption on the second tower, the first tower will respawn. This is a cyclical process. The tower containing the saturated desiccant is depressurized and the accumulated water is expelled.	OK		31/01/2025

Step	Description	Result	Verified by	Date
24	During the testing verify the: Dew point analyzer 63-AIT-051 • -57.92 DP°C Fow downstream dryer 63-FIT-051 • 350 Sm³/h Air dryer intel temperature 63-TIT-051 • 8.9 °C. Air receiver pressure 63-PIT-064 • 8.8 barg. Differential pressure Pre-filter 63-PDIT-051 • 0.05 barg. Differential pressure After filter 63-PDIT-062 • 0.06 barg. For the set point alarms are in the document vendor 1724000428-IN-LIS-00017 sheet 2 and 3	Ok		31/01/2025
25	Test Acceptance criteria: • Outlet air dew point -40°C • Outlet air flow 350 Sm³/h • Outlet air pressure 9 barg • Outlet air temperature 35°C	Ok		31/01/2025
26	After Validation of the process parameters detailed above proceed to the stop sequence, press the stop pushbutton 63-HS-002.	ok		31/01/2025
27	The shutdown Air Dryer is given by the: • Emergency push button 63-SBM-001 Cumulative critical alarm 63-XS-003.	Ok		31/01/2025

5.4.3 Test Preparation PHASE 2: Validation of Communication and I/O

Step	Description	Result	Verified by	Date
PROFINET Communication Instrument Air Package				
PHASE 2: Validation of Communication and I/O				
1.	Check and confirm all panels are involved as per section 5.4.1 are available.	Ok		31/01/2025
2.	Verify the interface Profinet Communication from PCS System to Control Local Control Panel 63-LP-001 is available and has no communication problem.	Ok		31/01/2025
3.	Verify the Profinet Signal and alarm setting from 63-LP-001 to HMI/workstation in CCR with vendor document 1724000428-MD-LIS-00016.	Ok		31/01/2025
4.	Verify the hardwiring signal from 63-LP-001 to SIS in HMI/workstation in CCR: • 63-XA-003: Instrument Air PKG fault. • 63-XS-001: SHUT-DOWN Instrument Air PKG.	Ok		31/01/2025
5.	During the step 3 to 4 verify and confirm the correct animation in the graphic page in the HMI/workstation.	Ok		31/01/2025
6.	Confirmed the steps 1 to 5 let's proceed with start the Instrument Air PKG in remote mode from workstation located in temporary yard CCR. Verify the start sequence with vendor document 172400428-MAC-CE-0004.	Ok		31/01/2025
7.	Confirmed step 6 proceed to send STOP command to the Instrument Air PKG in remote mode from workstation located in temporary yard CCR.	Ok		31/01/2025
8.	Start once again the Instrument Air PKG in remote mode from workstation located in temporary yard CCR and validate the trip signal from send from SIS (63-XA-001). Confirm Instrument Air Package stopped, then reset tip signal and confirm Package ready to start.	Ok		31/01/2025
9.	Steps 6 to 8 must be repeated for the Air Compressors K-63001A and K-63001B.	Ok		31/01/2025

5.4.4 OTP Worksite Tests Notes and Remark

5.4.5 OTP Worksite Tests Certifying Authority Table of Attendances

Name and Surname	Certifying Authority	Position	Signature

5.4.6 OTP Worksite Test Final Signatures and Company Acceptance

Name and Surname	Company Representative	Position	Signature
JAMIE M'ALLISTER	CROSS WIND	OPS COM ENG	
ANTHONY IVESON	ROSETTI MARINO	COMM. MGR.	

5.5 POST TEST CONDITION

the previous chapters are successfully performed.

- All necessary tests are performed and accepted for that system.
- All Communication Cables are tested and completed.
- All panels are in normal operation and no alarm pending.

5.6 REINSTATEMENT AND PRESERVATION TASKS

- All the electrical contacts which were disconnected for the testing purposes must be reconnected.
- After functional tests have been completed, system / sub-systems are left in safety condition and that they are operational.
- all preservation routines identified and required will be included in relevant Preservation ITR within the Proverlis Completions System.

6. OTP AT OFFSHORE SITE

6.1 PLANNING AND MANPOWER

6.1.1 Offshore Site Test Overview

The propose of this test is to recheck the good condition of all equipment and the commissioning of the Instrument Air Package. At the end of the test the equipment will remain in operation.

6.1.2 Planned Tasks with Estimated Manpower

Estimated manpower for the entire duration of the Test:

- 1 E&I commissioning supervisor from Contractor.
- 1 E&I commissioning technicians from Contractor.
- 1 Operator workstation field engineer.

6.1.3 Test Duration Estimate

The test duration should be as follows:

- 1 day.

If necessary, the estimated time can be extended in order to complete all required pre-commissioning and commissioning activities.

6.1.4 Vendor Assistance

- Not applicable

6.1.5 Items Postponed to C&E OTP

- Not applicable

6.1.6 HOLDS

- Not applicable

6.2 OTP TEST REQUIREMENT – OFFSHORE SITE

6.2.1 Pre-Commissioning Achievement

- Not applicable

6.2.2 Commissioning Achievement

- Not applicable

6.2.3 Status of Required Associated Subsystem

Subsystems required for Commissioning of Instrument Air Package:

- SS 83-00 LV 400V Switchboard SG-200N1
- SS 84-10 AC 35kVA UPS (UP-200F3) 230V
- SS 83-20 Distribution Board DP-200N1 230V
- SS 88-00 Earthing System
- SS 55-01 Wastewater Brine Discharge System
- SS 86-00 Server Cabinet
- SS 86-00 Network Cabinet
- SS 79-00 SIS (ESD)
- SS 87-10 PCS System Cabinet

6.2.4 Special Tools & Test Equipment

The following special tool and Test Equipment are required:

- Continuity tester (Multimeter)
- Hart communicator
- Toolbox
- Portable radios (2 pcs + 1 per Technical Room)

TESTING & MEASUREMENT INSTRUMENT USED			
Type	Serial N.	Calibration certificate	Validity

6.2.5 Consumable List

- Not applicable

6.2.6 Commissioning Spare Parts

The commissioning spare parts are indicated in the document 1724000428-COM-LIS-00029 "Commissioning Spare Parts".

6.2.7 Temporary Facilities

- Not applicable

6.3 OTP DESCRIPTION – OFFSHORE SITE

6.3.1 OTP Test Preparation

Step	Description	Result	Verified by	Date
1.	System Ready for Operation (from WORKSITE Phase) (RFO) Certificate is issued and approved.			
2.	All personnel involved in the implementation of this procedure are familiar with its content as well as with associated safety requirements (Toolbox Talk to be conducted before initiation of activities).			
3.	A final walkdown of the system has been completed, to ensure that the system and the area are ready for start-up.			
4.	Verify availability of test equipment as per section 6.2.4.			
5.	All personnel have been duly notified that the system(s) is ready for start-up.			

6.3.2 Electrical Preparation

Step	Description	Result	Verified by	Date
1.	Verify that all relevant associated systems / subsystems are ready.			

6.3.3 Mechanical Preparation

Step	Description	Result	Verified by	Date
1.	Verify that all relevant associated systems / subsystems are ready.			

6.3.4 Instrument Preparation

Step	Description	Result	Verified by	Date
1.	Verify all Panels are available as per section 6.2.3			

6.3.5 Piping Preparation

- Not applicable

6.3.6 Additional Discipline Preparation

- Not applicable

6.4 OTP TEST STEPS - OFFSHORE SITE

6.4.1 Test Preparation

Need to confirm availability of the following systems
:

- SS 83-20 Distribution Board 230V (MCB Q29) is available.
- SS 84-10 UPS (UP-200F3) 230V (MCB Q41) is available.
- SS 83-00 LV 400V SG-200N1 (04/+08 & 05/+08) is available.
- SS 86-00 NETWORK CABINET is available.
- SS 86-00 SERVER CABINET is available.
- SS 79-00 SIS SYSTEM is available.
- SS 87-10 PCS SYSTEM is available.

All systems and subsystems involved in this procedure must be ready and available.

6.4.2 Test Steps

Step	Description	Result	Verified by	Date
Energization of Instrument Air Package				
System 63-00 is completed.				
1.	Check and confirm that the MCB Q41 from UPS (UP-200F3) and MCB Q29 from Distribution Board DP-200N1 230V are ready for power on.			
2.	Confirmed the above we can proceed with energization of the Air Dryer LCP63-LP-001.			
3.	Check on the Air Driver LCP 63-LP-001 that voltage is available for the control circuit and for starting.			
4.	Check and confirm that the A4/08 and A5/08 drawers on the LV 400V switchboard SG-200N1 are ready for power on.			
5.	Confirmed the above we can proceed with energization of the Air Compressors K-63001A / K-63001B.			

Step	Description	Result	Verified by	Date
6.	Check on the Air Compressors K-63001A and K-63001B that the control voltage and the line voltage is available for starting.			
7.	Before starting the compressors, make sure that the Profinet communication between PCS Panel to Air Driver LCP is available and has no communication problem.			
8.	Confirmed the steps 1 to 7, the Instrument Air Package System is ready for start-up.			
9.	Turn the selector 63-HS-004 in local mode and start pushbutton 63-HS-001. Check the correct starting sequence and: • Outlet air dew point -40°C • Outlet air flow 350 Sm^3/h • Outlet air pressure 9 barg • Outlet air temperature 35°c			
10.	The test will only give a positive result if the required parameters are reached. After Validation of the process parameters, give the stop from local 63-HS-002.			
11.	Repeat the sequence of start and stop remotely from the CCR (Central Control Room).			

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

6.4.3 OTP Site Tests Notes and Remarks

6.4.4 OTP Site Tests Certifying Authority Table of Attendances

Name and Surname	Certifying Authority	Position	Signature

6.4.5 OTP Site Tests Final Signatures and Company Acceptance

Name and Surname	Company Representative	Position	Signature

6.5 POST TEST CONDITIONS

- The previous chapters are successfully performed.
- All panels are in normal operation and no alarm pending.

6.6 REINSTATEMENT AND PRESERVATION TASKS

After the test are completed, the system is left in a safe condition and that it is operational.

7. APPENDICES

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

7.1 Vendor SAT Procedure (where applicable)

7.2 Proverlis Summary System Reports

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 63-00 & process: COMM

Electrical	63-00 Instrument Air Package (A-63000)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
A4/+08-QF1	DRAWER AIR PACKAGE 01A - A4/+08-QF1	ONSHORE	C10002854	FP00	100	2025-01-13	-
		ONSHORE	C10002855	FTR-2	100	2024-10-02	-
		ONSHORE	C10002856	FTR-6	100	2024-10-03	-
		ONSHORE	C10003012	FTR-5	0	-	-
A5/+08-QF1	DRAWER AIR PACKAGE 01B - A5/+08-QF1	ONSHORE	C10002857	FP00	100	2025-01-13	-
		ONSHORE	C10002858	FTR-2	100	2024-10-02	-
		ONSHORE	C10002859	FTR-6	100	2024-10-03	-
		ONSHORE	C10003013	FTR-5	0	-	-
DP-200N1-Q29	BREAKER AUX UCP AIR PACKAGE - DP-200N1-Q29	ONSHORE	C10002861	FTR-2	100	2024-10-28	-
UP-200F3-QF34	UCP - INSTRUMENT AIR PACKAGE	ONSHORE	C10004573	FTR-2	100	2024-12-07	-

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 63-00 & process: COMM

Instrumental	63-00 Instrument Air Package (A-63000)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
63-XA-003	A-63000 Instrument air PKG fault	ONSHORE	C10003761	FJ01D	100	2025-02-02	-
63-XS-001	SHUT-DOWN A-63000 Instrument air PKG	ONSHORE	C10003762	FJ01D	100	2025-02-02	-

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 63-00 & process: COMM

Piping	63-00 Instrument Air Package (A-63000)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
63-00	Service Test Instrument Air Package	ONSHORE	C10004906	4245	100	2025-03-28	-

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air

SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000490	A	A-63000	ALL SOLENOIDS HAVE BEEN DISMANTLED FROM THE PACKAGE. SEND TO THE SUB-VENDOR TO BE CHECK. ALL SOLENOID		installed	SLinari 2024-10-29	SLinari 2024-12-18	SLinari 2024-12-18	2024-12-18
C30000496	A	A-63000	CABLING INSIDE CONTROL PANEL NOT REFLECT THE SPECIFICATIONS AND DWG IN TERM OF COLOUR CODING. SEE NCR		NCR CLOSED -	SLinari 2024-10-29	SLinari 2024-12-18	SLinari 2024-12-18	2024-12-18
C30000482	B	A-63000	Check if the set point be set to 9,5 since on the air receiver (63-PT-004) we have a pressure of 8,8 barg		done - max 10 - min 8barg	SLinari 2024-10-29	SLinari 2025-01-24	SLinari 2025-01-24	2025-01-24
C30000483	B	A-63000	Package to be test with PLC set to REMOTE MODE		tested	SLinari 2024-10-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000484	B	A-63000	necessary to set the operating logic to ensure that with a DEW POINT measured > -40°C, the DRYER in operation is exchanged with the		DONE	SLinari 2024-10-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000485	B	A-63000	TO BE IMPLEMENT: THE PRESSURE SWITCHES IN BAD QUALITY MUST BLOCK AIR DRYER (to be verify at yard)		VERIFIED - CLOSED	SLinari 2024-10-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000486	B	A-63000	TO BE IMPLEMENT: THE INTERVENTION TIME OF THE LIMIT SWITCHES (to be verify at yard)		DONE	SLinari 2024-10-29	SLinari 2025-01-24	SLinari 2025-01-24	2025-01-24
C30000487	B	A-63000	TO BE IMPLEMENTED: VALVE POSITION DISCREPANCY (to be verify at yard)		DONE	SLinari 2024-10-29	SLinari 2025-01-24	SLinari 2025-01-24	2025-01-24
C30000488	B	A-63000	VERIFY AND SET THE EXCHANGE OF THE COMPRESSORS WITH THE DUTY/STAND-BY CYCLE TIME. To be verify and to be tested		OTP DONE POINT CLOSED	SLinari 2024-10-29	Vendor 2025-03-19	SLinari 2025-03-19	2025-03-19

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air

SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000489	B	A-63000	TO BE VERIFY AND TEST THE CHANGE OVER COMPRESSOR K-63001A TO K-63001B		DONE	SLinari 2024-10-29	SLinari 2025-01-24	SLinari 2025-01-24	2025-01-24
C30000491	B	A-63000	THE RESET COMMAND TO PACKAGE MUST BE MANAGED BY ESD (CURRENTLY IT'S ON LOCAL PANEL). To be verify with engineering.		AFTER CHECK- RESET COMMAND NOT NECESSARY (SEE EMAIL	SLinari 2024-10-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30000492	B	A-63000	MAX PRESSURE ON VALVE ACTUATORS = 8 BAR IS NOT CONGRUENT WITH OPERATING PRESSURE = 9 BAR.		DONE	SLinari 2024-10-29	SLinari 2025-01-24	SLinari 2025-01-24	2025-01-24
C30000493	B	A-63000	DUE TO THE RUSH TO CONCLUDE ALL TESTS WITHIN ONE DAY, AN EXTENSIVE AND COMPREHENSIVE ON-SITE TEST WILL BE		DONE	SLinari 2024-10-29	SLinari 2025-01-27	SLinari 2025-01-27	2025-01-27
C30000494	B	A-63000	TO BE UPDATED DWG N. 1724000428-MAG-DG-00009 - CORRECT RAL 9002		Re issued	SLinari 2024-10-29	Vendor 2025-03-19	SLinari 2025-03-19	2025-03-19
C30000495	B	A-63000	ALL HARDWIRED AND PROFINET SIGNALS STILL TO BE TESTED		ACTIVITY DONE	SLinari 2024-10-29	SLinari 2025-01-27	SLinari 2025-01-27	2025-01-27
C30000497	B	A-63000	MISSING LEAKAGE TEST REPORTS. To be repeated on site up to rated package pressure		done	SLinari 2024-10-29	SLinari 2025-01-30	SLinari 2025-01-30	2025-01-30
C30000498	B	A-63000	CONTINUITY AND MEGGER TEST REPORTS ARE MISSING. TO BE PROVIDE		done	SLinari 2024-10-29	SLinari 2025-01-30	SLinari 2025-01-30	2025-01-30
C30002432	B	A-63000 C10002354	One of the 10 baseplates for the anchor down points has not been installed on the upper deck structure. See Drawing and 3d excerpt attached	.		KAlbonetti 2025-01-07	2025-01-10	KAlbonetti 2025-01-10	2025-01-10

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air
SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002651	B	V-63001 C10004527	Manhole has not been opened. Internal inspection not completed.	.		KAlbonetti 2025-01-10	2025-03-06	LNovaga 2025-03-06	2025-03-06
C30002654	B	V-63001 C10004527	Valve BLPH-MV-820 installed in place of BLPH-MV-741.	.		KAlbonetti 2025-01-10	2025-01-15	LNovaga 2025-01-15	2025-01-15
C30002655	B	V-63001 C10004527	Item PIT-059 installed in place of the 63-PIT-064.	.		KAlbonetti 2025-01-10	2025-01-15	LNovaga 2025-01-15	2025-01-15
C30002656	B	V-63001 C10004527	For items TI053 and TIT052 the fasteners are bolts L7+nuts 2H but the instruments are in stainless steel. Replace fasteners or add an	.		KAlbonetti 2025-01-10	2025-03-18	LNovaga 2025-03-18	2025-03-18
C30002657	B	V-63001 C10004527	Anchor down system is different from the one marked in the GA drawing 1724000428-MAC-DD-00006. Item 45 has been	.		KAlbonetti 2025-01-10	2025-03-06	LNovaga 2025-03-06	2025-03-06
C30002658	B	V-63001 C10004527	In the GA 1724000428-MAC-DD-00006 ther is no earthing lug marked. In the field there is only one earthing lug instead of two. position has been	.		KAlbonetti 2025-01-10	2025-02-03	LNovaga 2025-02-03	2025-02-03
C30002659	B	V-63001 C10004527	BLPH-MV-740 has rust on the stem.	.		KAlbonetti 2025-01-10	2025-03-06	LNovaga 2025-03-06	2025-03-06
C30002660	B	V-63001 C10004527	the lever of the MBLPH-MV-738 shall be rotated of 180° because it clashes with the vessel body.	.		KAlbonetti 2025-01-10	2025-01-10	KAlbonetti 2025-01-10	2025-01-10
C30002661	B	V-63001 C10004527	BLPH-MV-742 has the lock nuts bended.	.		KAlbonetti 2025-01-10	2025-01-15	LNovaga 2025-01-15	2025-01-15

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air

SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002848	B	V-63001 C10004527	Minor damages to the painting due transportation and installation, also there is rust in the nameplate of the vessel.	.		KAlbonetti 2025-01-14	2025-04-11	LNovaga 2025-04-11	2025-04-11
C30002850	B	A-63000 C10002354	Minor damages to the painting due transportation and installation.	.		KAlbonetti 2025-01-14	2025-04-11	LNovaga 2025-04-11	2025-04-11
C30002853	B	A-63000 C10002354	In the Air package GA nameplate detail the operative temperature range is marked as "-10°C/+90°C" but on the nameplate mounted on	.		KAlbonetti 2025-01-15	2025-02-14	KAlbonetti 2025-02-14	2025-02-14
C30002854	B	A-63000 C10002354	One supporting plate (the one added to close PL C300024) is 10 mm thinner compared to the other.	.		KAlbonetti 2025-01-15	2025-03-06	LNovaga 2025-03-06	2025-03-06
C30002855	B	A-63000 C10002354	There is still part of the wooden crate used for transport fixed on the skid. See attachment for the location.	.		KAlbonetti 2025-01-15	2025-03-05	LNovaga 2025-03-05	2025-03-05

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air

SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001283	A	84311-CEL C10000587	Missing the earth connection between the terminal block (PE) and the earthing bar (PE). see 123A90-DDL-EL-DG-20149 sh.40 (SIDE	.		APolo 2024-12-04	2024-12-06	Gtangianu 2024-12-06	2024-12-06
C30001287	A	83110-CEL C10000629	Missing the earth connection between the terminal block (PE) and the earthing bar (PE). see 123A90-DDL-EL-DG-20149 sh.53 . side A-63000.	.		APolo 2024-12-04	2024-12-06	Gtangianu 2024-12-06	2024-12-06
C30001281	B	84311-CEL C10000587	Missing cable tag SIDE DP-200F3 / Panel A-6300	.		APolo 2024-12-04	2025-02-04	APolo 2025-02-04	2025-02-04
C30001282	B	84311-CEL C10000587	Missing cores identification tag. Cabinet side DP-200F3 / A-63000 . (see document 123A90-DDL-EL-DD-20092 sh.7-8)	.		APolo 2024-12-04	2025-02-15	AAndreani 2025-02-15	2025-02-15
C30001288	B	83110-CEL C10000629	Missing cable tag . side A-63000 / DP-200N1	.		APolo 2024-12-04	2025-02-03	APolo 2025-02-03	2025-02-03
C30001289	B	83110-CEL C10000629	Missing cores identification tag. side DP-200N1 / A-63000 . (see document 123A90-DDL-EL-DD-20092 sh.7-8)	.		APolo 2024-12-04	2025-02-19	AAndreani 2025-02-19	2025-02-19
C30001297	B	83017-CEL-1 C10000537	Cover of terminal block doesn't work properly. See attached photo.	.		Gtangianu 2024-12-04	2025-02-06	APolo 2025-02-06	2025-02-06
C30001298	B	83017-CEL-2 C10000538	Cover of terminal block doesn't work properly. See attached photo.	.		Gtangianu 2024-12-04	2025-02-06	APolo 2025-02-06	2025-02-06
C30001299	B	83017-CEL-2 C10000538	Identification tag wires missing both side the83017-CEL-2 .	.		Gtangianu 2024-12-04	2025-02-19	AAndreani 2025-02-19	2025-02-19

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air
SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001300	B	83017-CEL-1 C10000537	Identification tag wires missing both side the 83017-CEL-1 .	.		Gtangianu 2024-12-04	2025-02-19	AAndreani 2025-02-19	2025-02-19
C30001301	B	83017-CEL-2 C10000538	Missing cable tags inside and outside both panels (83017-CEL-2).	.		Gtangianu 2024-12-04	2025-02-04	Gtangianu 2025-02-04	2025-02-04
C30001302	B	83017-CEL-1 C10000537	Missing cable tags inside and outside both panels (83017-CEL-1).	.		Gtangianu 2024-12-04	2025-02-04	Gtangianu 2025-02-04	2025-02-04
C30001303	B	83017-CEL-1 C10000537	Cover of terminal block on grounding cable is missing. See attached photo.	.		Gtangianu 2024-12-04	2025-02-28	Ecarotenuto 2025-02-28	2025-02-28
C30001304	B	83017-CEL-2 C10000538	Cover of terminal block on grounding cable is missing. See attached photo.	.		Gtangianu 2024-12-04	2025-02-28	Ecarotenuto 2025-02-28	2025-02-28
C30001317	B	A-63000 C10002352	Earthing System is not as indicated by the Electrical Typical Installation Details document . see 123A90-DDL-EL-DD-20090 sh.3	.		APolo 2024-12-04	2025-01-23	APolo 2025-01-23	2025-01-23
C30001318	B	A-63000 C10002352	The cables are not adequately preserved. inside Skid	.		APolo 2024-12-04	2025-01-22	Ecarotenuto 2025-01-22	2025-01-22
C30001379	B	84311-CEL C10000587	The cable gland are not closed in accordance with specification.	.		APolo 2024-12-05	2025-02-25	JKrizanic 2025-02-25	2025-02-25

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air
SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003339	A	63-00-TP-059 C10003666	Missing earthing connection on earthing plate	.		AMancini 2025-01-30	2025-02-08	Ecarotenuto 2025-02-08	2025-02-08
C30003340	A	63-00-TP-059 C10003666	Flange management activity to be done on joint J1 (Connection to A-63000/A). Broken joint done by Commissioning	.		AMancini 2025-01-30	2025-03-20	LNovaga 2025-03-20	2025-03-20
C30000992	B	63-00-TP-059 C10003665	General final touch-up to do.	-		MBruschi 2024-11-28	2025-02-06	KAlbonetti 2025-02-06	2025-02-06
C30000993	B	63-00-TP-059 C10003665	Unmounted spool-A with its erection materials.	-		MBruschi 2024-11-28	2025-01-17	LNovaga 2025-01-17	2025-01-17
C30001053	B	63-00-TP-025 C10003421	All U-BOLTS S-211 not installed (refer to: ISO 123A90-FDL-PP-DI-00127-01 and 123A90-FDL-PP-DI-00127-02)	-		MBruschi 2024-11-29	2025-02-17	KAlbonetti 2025-02-17	2025-02-17
C30001054	B	63-00-TP-025 C10003421	Support PS-02075 (F1) is only tack welded (refer to: ISO 123A90-FDL-PP-DI-00127-01)	-		MBruschi 2024-11-29	2025-02-17	KAlbonetti 2025-02-17	2025-02-17
C30001055	B	63-00-TP-025 C10003421	Spool C is out level of 1,5° (refer to: ISO 123A90-FDL-PP-DI-00127-02)	-		MBruschi 2024-11-29	2025-02-17	KAlbonetti 2025-02-17	2025-02-17
C30001056	B	63-00-TP-025 C10003421	Support PS-02027 (F2) is out of level 1,1° (refer to: ISO 123A90-FDL-PP-DI-00127-02)	-		MBruschi 2024-11-29	2025-02-17	KAlbonetti 2025-02-17	2025-02-17
C30003464	B	63-00-TP-025 C10003422	The support "PS-02027" (F2) is out of level about 1.1°. Isometric 123A90-FDL-PP-DI-00127-01.	.		MBruschi 2025-02-03	2025-03-06	LNovaga 2025-03-06	2025-03-06

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air

SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003552	B	63-00-TP-025 C10003423	General touch up do to, especially near the supports of the piping line.	.		KAlbonetti 2025-02-05			
C30003553	B	63-00-TP-025 C10003423	Color coding and fluid direction are missing.	.		KAlbonetti 2025-02-05	2025-03-21	LNovaga 2025-03-21	2025-03-21
C30004256	B	63-00-TP-059 C10003667	Color coding and fluid direction are missing.	.		LNovaga 2025-03-21			
C30004257	B	63-00-TP-059 C10003667	Missing the insulation pillow around the valve BLPH-MV-269 and joint 032-1J1.	.		LNovaga 2025-03-21	2025-04-04	LNovaga 2025-04-04	2025-04-04
C30004258	B	63-00-TP-059 C10003667	The drainage hole in the insulation is missing.	.		LNovaga 2025-03-21	2025-04-08	LNovaga 2025-04-08	2025-04-08

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air
SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Telecom

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000927	B	63-LP-001/B400-NET-001 C10004349	The copper conductor of the cable armor must be individually connected to the earthing bar - B400-NET-001. See 123A90-DDL-EL-DD-20090.	.		APolo 2024-11-26	2025-02-04	APolo 2025-02-04	2025-02-04
C30000928	B	63-LP-001/B400-NET-001 C10004349	Missing cable tag SS project, externally pannel A-630000.	.		APolo 2024-11-26	2025-01-02	Ecarotenuto 2025-01-02	2025-01-02
C30000929	B	63-LP-001/B400-NET-001 C10004349	Missing cable tag , cabinet input A-630000.	.		APolo 2024-11-26	2025-02-04	APolo 2025-02-04	2025-02-04
C30000957	B	63-LP-001/B400-NET-001 C10004349	The cable is not supported and fixed to the rack (outside panel)anel)	.		APolo 2024-11-27	2025-01-23	APolo 2025-01-23	2025-01-23
C30000961	B	63-LP-001/B400-NET-001 C10004349	Missing cable tag , cabinet input U-63000.	.		APolo 2024-11-27	2025-02-04	APolo 2025-02-04	2025-02-04

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 63 Instrument Air

SUBSYSTEM 63-00 Instrument Air Package (A-63000)

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001270	B	C-63-XA-003/B4 00-SIS-001 C10001458	Missing cable tag SS .	.		APolo 2024-12-04	2025-02-04	APolo 2025-02-04	2025-02-04
C30001271	B	C-63-XA-003/B4 00-SIS-001 C10001458	Missing cores identification tag. Cabinet side A-63000. (see document 123A90-DDL-EL-DD-20092 sh.7-8)	.		APolo 2024-12-04	2025-02-08	Gtangianu 2025-02-08	2025-02-08
C30001275	B	C-63-XS-001/B4 00-SIS-001 C10001451	Missing cores identification tag. Cabinet side B400-SIS-001 / JB A-63000 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2024-12-04	2025-02-08	Gtangianu 2025-02-08	2025-02-08
C30001276	B	C-63-XS-001/B4 00-SIS-001 C10001451	Missing cable tag SS . side A-63000	.		APolo 2024-12-04	2025-02-04	APolo 2025-02-04	2025-02-04
C30001319	B	A-63000 C10002353	Earthing System is not as indicated by the Electrical Typical Installation Details document . see 123A90-DDL-EL-DD-20090 sh.3	.		APolo 2024-12-04	2025-01-23	APolo 2025-01-23	2025-01-23
C30001320	B	A-63000 C10002353	The tubing are not adequately preserved. inside Skid	.		APolo 2024-12-04	2025-01-22	Ecarotenuto 2025-01-22	2025-01-22

7.3 Equipment Related Technical Queries (where applicable)

7.4 As Built Documentation (where applicable)

7.5 Management of Change – Summery Table of Tasks and Details of Affected Related Documentation (where applicable)

7.6 Profinet Signal Table

4814_COES_Dryer — PROFINET SIGNALS TABLE — Rev 1 03/07/2024

N. BYTE	N. BIT	DATA TYPE	TAG	DESCRIPTION	MEANING	SCALING	OFFSET	READ/WRITE	
1000	0	BOOL		SPARE				R	ALARMS
	1	BOOL		SPARE				R	
	2	BOOL		SPARE				R	
	3	BOOL		SPARE				R	
	4	BOOL		SPARE				R	
	5	BOOL		SPARE				R	
	6	BOOL		SPARE				R	
	7	BOOL		SPARE				R	
1001	0	BOOL		SPARE				R	
	1	BOOL		SPARE				R	
	2	BOOL		SPARE				R	
	3	BOOL		SPARE				R	
	4	BOOL		SPARE				R	
	5	BOOL		SPARE				R	
	6	BOOL		SPARE				R	
	7	BOOL		SPARE				R	
1002	0	BOOL	63-PS-054-H	ALARM (DRYER 1) TOWER A PRESSURE SWITCH	0=ALARM, 1=OK			R	
	1	BOOL	63-PS-056-H	ALARM (DRYER 1) TOWER B PRESSURE SWITCH	0=ALARM, 1=OK			R	
	2	BOOL	63-PS-058-H	ALARM (DRYER 2) TOWER A PRESSURE SWITCH	0=ALARM, 1=OK			R	
	3	BOOL	63-PS-060-H	ALARM (DRYER 2) TOWER B PRESSURE SWITCH	0=ALARM, 1=OK			R	
	4	BOOL		SPARE				R	
	5	BOOL		SPARE				R	
	6	BOOL		SPARE				R	
	7	BOOL		SPARE				R	
1003	0	BOOL	63-CMPR-ALARM-FDBCK-001-H	COMPRESSOR 1 - GENERAL ALARM	0=ALARM, 1=OK			R	
	1	BOOL	63-CMPR-ALARM-FDBCK-002-H	COMPRESSOR 2 - GENERAL ALARM	0=ALARM, 1=OK			R	
	2	BOOL	63-20FS-12-H	SOURGE ARRESTER 230VAC_SERVICES - ALARM	0=ALARM, 1=OK			R	
	3	BOOL	63-21FS-12-H	SOURGE ARRESTER 230VAC_UPS - ALARM	0=ALARM, 1=OK			R	
	4	BOOL	63-TH-001-H	INTERNAL CABINET THERMOSTAT - ALARM	0=ALARM, 1=OK			R	
	5	BOOL		SPARE				R	
	6	BOOL		SPARE				R	
	7	BOOL		SPARE				R	
1004	0	BOOL	63-XY-051-H	ALARM 5-WAY VALVE SOV (DRYER 1)	0=ALARM, 1=OK			R	
	1	BOOL	63-XY-052-H	ALARM DEPRESSURIZATION VALVE SOV (DRYER 1)	0=ALARM, 1=OK			R	
	2	BOOL		SPARE				R	
	3	BOOL		SPARE				R	
	4	BOOL		SPARE				R	
	5	BOOL		SPARE				R	
	6	BOOL		SPARE				R	
	7	BOOL		SPARE				R	
1005	0	BOOL	63-XY-053-H	ALARM 5-WAY VALVE SOV (DRYER 2)	0=ALARM, 1=OK			R	
	1	BOOL	63-XY-054-H	ALARM DEPRESSURIZATION VALVE SOV (DRYER 2)	0=ALARM, 1=OK			R	
	2	BOOL		SPARE				R	
	3	BOOL		SPARE				R	
	4	BOOL		SPARE				R	
	5	BOOL		SPARE				R	
	6	BOOL		SPARE				R	
	7	BOOL		SPARE				R	
1006	0	BOOL		SPARE				R	
	1	BOOL		SPARE				R	
	2	BOOL		SPARE				R	
	3	BOOL		SPARE				R	
	4	BOOL		SPARE				R	
	5	BOOL		SPARE				R	
	6	BOOL		SPARE				R	
	7	BOOL		SPARE				R	
1007	0	BOOL	63-AIT-051-LL	DEW POINT TRANSMITTER - LOW LOW ALARM (LL)	0=ALARM, 1=OK			R	
	1	BOOL	63-AIT-051-L	DEW POINT TRANSMITTER - LOW ALARM (L)	0=ALARM, 1=OK			R	
	2	BOOL	63-AIT-051-H	DEW POINT TRANSMITTER - HIGH ALARM (H)	0=ALARM, 1=OK			R	
	3	BOOL	63-AIT-051-HH	DEW POINT TRANSMITTER - HIGH HIGH ALARM (HH)	0=ALARM, 1=OK			R	
	4	BOOL	63-PT-064-LL	PRESSURE TRANSMITTER INSTRUMENT AIR RECEIVER - LOW LOW ALARM (LL)	0=ALARM, 1=OK			R	
	5	BOOL	63-PT-064-L	PRESSURE TRANSMITTER INSTRUMENT AIR RECEIVER - LOW ALARM (L)	0=ALARM, 1=OK			R	
	6	BOOL	63-PT-064-H	PRESSURE TRANSMITTER INSTRUMENT AIR RECEIVER - HIGH ALARM (H)	0=ALARM, 1=OK			R	
	7	BOOL	63-PT-064-HH	PRESSURE TRANSMITTER INSTRUMENT AIR RECEIVER - HIGH HIGH ALARM (HH)	0=ALARM, 1=OK			R	
1008	0	BOOL	63-TIT-051-LL	TEMPERATURE TRANSMITTER INLET AIR - LOW LOW ALARM (LL)	0=ALARM, 1=OK			R	
	1	BOOL	63-TIT-051-L	TEMPERATURE TRANSMITTER INLET AIR - LOW ALARM (L)	0=ALARM, 1=OK			R	
	2	BOOL	63-TIT-051-H	TEMPERATURE TRANSMITTER INLET AIR - HIGH ALARM (H)	0=ALARM, 1=OK			R	
	3	BOOL	63-TIT-051-HH	TEMPERATURE TRANSMITTER INLET AIR - HIGH HIGH ALARM (HH)	0=ALARM, 1=OK			R	
	4	BOOL	63-TIT-052-LL	TEMPERATURE TRANSMITTER INSTRUMENT AIR RECIEVER - LOW LOW ALARM (LL)	0=ALARM, 1=OK			R	
	5	BOOL	63-TIT-052-L	TEMPERATURE TRANSMITTER INSTRUMENT AIR RECIEVER - LOW ALARM (L)	0=ALARM, 1=OK			R	
	6	BOOL	63-TIT-052-H	TEMPERATURE TRANSMITTER INSTRUMENT AIR RECIEVER - HIGH ALARM (H)	0=ALARM, 1=OK			R	
	7	BOOL	63-TIT-052-HH	TEMPERATURE TRANSMITTER INSTRUMENT AIR RECIEVER - HIGH HIGH ALARM (HH)	0=ALARM, 1=OK			R	
1009	0	BOOL	63-FIT-051-LL	FLOW TRANSMITTER OUTLET AIR - LOW LOW ALARM (LL)	0=ALARM, 1=OK			R	
	1	BOOL	63-FIT-051-L	FLOW TRANSMITTER OUTLET AIR - LOW ALARM (L)	0=ALARM, 1=OK			R	
	2	BOOL	63-FIT-051-H	FLOW TRANSMITTER OUTLET AIR - HIGH ALARM (H)	0=ALARM, 1=OK			R	
	3	BOOL	63-FIT-051-HH	FLOW TRANSMITTER OUTLET AIR - HIGH HIGH ALARM (HH)	0=ALARM, 1=OK			R	
	4	BOOL	63 PDIT 051-LL	DIFFERENTIAL PRESSURE TRANSMITTER INLET FILTERS - LOW LOW ALARM (LL)	0=ALARM, 1=OK			R	
	5	BOOL	63 PDIT 051-L	DIFFERENTIAL PRESSURE TRANSMITTER INLET FILTERS - LOW ALARM (L)	0=ALARM, 1=OK			R	
	6	BOOL	63-PDIT-051-H	DIFFERENTIAL PRESSURE TRANSMITTER INLET FILTERS - HIGH ALARM (H)	0=ALARM, 1=OK			R	
	7	BOOL	63 PDIT-051-HH	DIFFERENTIAL PRESSURE TRANSMITTER INLET FILTERS - HIGH HIGH ALARM (HH)	0=ALARM, 1=OK			R	
1010	0	BOOL	63 PDIT-052 LL	DIFFERENTIAL PRESSURE TRANSMITTER OUTLET FILTERS - LOW LOW ALARM (LL)	0=ALARM, 1=OK			R	
	1	BOOL	63-PDIT-052 L	DIFFERENTIAL PRESSURE TRANSMITTER OUTLET FILTERS - LOW ALARM (L)	0=ALARM, 1=OK			R	
	2	BOOL	63-PDIT-052-H	DIFFERENTIAL PRESSURE TRANSMITTER OUTLET FILTERS - HIGH ALARM (H)	0=ALARM, 1=OK			R	
	3	BOOL	63-PDIT-052-HH	DIFFERENTIAL PRESSURE TRANSMITTER OUTLET FILTERS - HIGH HIGH ALARM (HH)	0=ALARM, 1=OK			R	
	4	BOOL		SPARE				R	
	5	BOOL		SPARE				R	
	6	BOOL		SPARE				R	
	7	BOOL		SPARE				R	
1013	0	BOOL	63-AIT-051-BADPV	DEW POINT TRANSMITTER - BAD PROCESS VALUE	0=ALARM, 1=OK			R	
	1	BOOL	63-PT-064-BADPV	PRESSURE TRANSMITTER INSTRUMENT AIR RECEIVER - BAD PROCESS VALUE	0=ALARM, 1=OK			R	
	2	BOOL	63-TIT-051-BADPV	TEMPERATURE TRANSMITTER INLET AIR - BAD PROCESS VALUE	0=ALARM, 1=OK			R	
	3	BOOL	63-TIT 052-BADPV	TEMPERATURE TRANSMITTER INSTRUMENT AIR RECIEVER - BAD PROCESS VALUE	0=ALARM, 1=OK			R	
	4	BOOL	63-FIT 051-BADPV	FLOW TRANSMITTER OUTLET AIR - BAD PROCESS VALUE	0=ALARM, 1=OK			R	
	5	BOOL	63-PDIT-051-BADPV	DIFFERENTIAL PRESSURE TRANSMITTER INLET FILTERS - BAD PROCESS VALUE	0=ALARM, 1=OK			R	
	6	BOOL	63-PDIT-052-BADPV	DIFFERENTIAL PRESSURE TRANSMITTER OUTLET FILTERS - BAD PROCESS VALUE	0=ALARM, 1=OK			R	
	7	BOOL		SPARE				R	PLANT STATUS
1012	0	BOOL	63-ESD-SIS-001-H	PLANT SHUTDOWN ALARM (SIS)	0=SHUTDOWN ALARM, 1=OK			R	
	1	BOOL	63-ALARM-PLANT	PLANT GENERAL ALARM	0=CUMULATIVE STANDARD ALARM, 1=OK			R	
	2	BOOL	63 PLANT READY	PLANT READY	0=NOT READY, 1=READY TO START			R	
	3	BOOL	63 PLANT-RUNNING	PLANT RUNNING	0=STOPPED, 1=RUNNING			R	
	4	BOOL	63-PLANT-LOCA-REM	PLANT IN REMOTE MODE	0=LOCAL (PLC), 1=REMOTE (DCS)			R	
	5	BOOL	63-ALARM-DRY-001	DRYER 1 ALARM	0=ALARM, 1=OK			R	
	6	BOOL	63 ALARM DRY 002	DRYER 2 ALARM	0=ALARM, 1=OK			R	
	7	BOOL		SPARE				R	
1013	0	BOOL	63-CMPR-START-001	COMPRESSOR 1 COMMAND	1=RUN COMMAND (ONLY FOR INFO)			R	
	1	BOOL	63-CMPR-START-002	COMPRESSOR 2 COMMAND	1=RUN COMMAND (ONLY FOR INFO)			R	
	2	BOOL		SPARE				R	
	3	BOOL		SPARE				R	
	4	BOOL	63-CMPR-RUN-FDBCK-001	COMPRESSOR 1 RUNNING	1=RUNNING STATUS RECEIVED			R	
	5	BOOL	63-CMPR-RUN-FDBCK-002	COMPRESSOR 2 RUNNING	1=RUNNING STATUS RECEIVED			R	
	6	BOOL		SPARE				R	
	7	BOOL		SPARE				R	
1014	0	BOOL	63-XY-051	(DRYER 1) 5-WAY VALVE SOV OPEN COMMAND	1=OPEN COMMAND			R	
	1	BOOL	63-XY-052	(DRYER 1) DEPRESSURIZATION VALVE SOV OPEN COMMAND	1=OPEN COMMAND			R	
	2	BOOL	63-XY-053	(DRYER 2) 5-WAY VALVE SOV OPEN COMMAND	1=OPEN COMMAND			R	
	3	BOOL	63-XY-054	(DRYER 2) DEPRESSURIZATION VALVE SOV OPEN COMMAND	1=OPEN COMMAND			R	
	4	BOOL		SPARE				R	
	5	BOOL		SPARE				R	
	6	BOOL		SPARE				R	

	7	BOOL		SPARE				R	
1015	0	BOOL		SPARE				R	
	1	BOOL		SPARE				R	
	2	BOOL		SPARE				R	
	3	BOOL		SPARE				R	
	4	BOOL		SPARE				R	
	5	BOOL		SPARE				R	
	6	BOOL		SPARE				R	
	7	BOOL		SPARE				R	
1016	0	BOOL		SPARE				R	
	1	BOOL		SPARE				R	
	2	BOOL		SPARE				R	
	3	BOOL		SPARE				R	
	4	BOOL		SPARE				R	
	5	BOOL		SPARE				R	
	6	BOOL		SPARE				R	
	7	BOOL		SPARE				R	
1017	0	BOOL		SPARE				R	
	1	BOOL		SPARE				R	
	2	BOOL		SPARE				R	
	3	BOOL		SPARE				R	
	4	BOOL		SPARE				R	
	5	BOOL		SPARE				R	
	6	BOOL		SPARE				R	
	7	BOOL		SPARE				R	
1018	/	REAL (IEEE 754)	63-AIT-051-PV	DEW POINT TRANSMITTER - PROCESS VALUE	range -100..20 °C			R	MEASURES
1022	/	REAL (IEEE 754)	63-PT-064-PV	PRESSURE TRANSMITTER INSTRUMENT AIR RECIEVER - PROCESS VALUE	range 0..16 barg			R	
1026	/	REAL (IEEE 754)	63-TIT-051-PV	TEMPERATURE TRANSMITTER INLET AIR - PROCESS VALUE	range 0..100 °C			R	
1030	/	REAL (IEEE 754)	63-TIT-052-PV	TEMPERATURE TRANSMITTER INSTRUMENT AIR RECIEVER - PROCESS VALUE	range 0..100 °C			R	
1034	/	REAL (IEEE 754)	63-FIT-051-PV	FLOW TRANSMITTER OUTLET AIR - PROCESS VALUE	range 0..500 Sm3/h			R	
1038	/	REAL (IEEE 754)	63-PDIT-051-PV	DIFFERENTIAL PRESSURE TRANSMITTER INLET FILTERS - PROCESS VALUE	range 0..1 bar			R	
1042	/	REAL (IEEE 754)	63-PDIT-052-PV	DIFFERENTIAL PRESSURE TRANSMITTER OUTLET FILTERS - PROCESS VALUE	range 0..1 bar			R	
1046	/	REAL (IEEE 754)		SPARE				R	
1050	/	REAL (IEEE 754)		SPARE - REAL PARAMETER 001	To be defined according to Control Philosophy			R	PARAMETERS
1054	/	REAL (IEEE 754)		SPARE - REAL PARAMETER 002				R	
1058	/	REAL (IEEE 754)		SPARE - REAL PARAMETER 003				R	
1062	/	REAL (IEEE 754)		SPARE - REAL PARAMETER 004				R	
1066	/	REAL (IEEE 754)		SPARE - REAL PARAMETER 005				R	
1070	/	REAL (IEEE 754)		SPARE - REAL PARAMETER 006				R	
1074	/	REAL (IEEE 754)		SPARE - REAL PARAMETER 007				R	
1078	/	REAL (IEEE 754)		SPARE - REAL PARAMETER 008				R	
1082	/	REAL (IEEE 754)		SPARE - REAL PARAMETER 009				R	
1086	/	REAL (IEEE 754)		SPARE - REAL PARAMETER 010				R	
1090	/	INT		SPARE - INTEGER PARAMETER 001		/	0	R	
1092	/	INT		SPARE - INTEGER PARAMETER 002		/	0	R	
1094	/	INT		SPARE - INTEGER PARAMETER 003		/	0	R	
1096	/	INT		SPARE - INTEGER PARAMETER 004		/	0	R	
1098	/	INT		SPARE - INTEGER PARAMETER 005		/	0	R	
1100	/	INT		SPARE - INTEGER PARAMETER 006		/	0	R	
1102	/	INT		SPARE - INTEGER PARAMETER 007		/	0	R	
1104	/	INT		SPARE - INTEGER PARAMETER 008		/	0	R	
1106	/	INT		SPARE - INTEGER PARAMETER 009		/	0	R	
1108	/	INT		SPARE - INTEGER PARAMETER 010		/	0	R	
1110	/	TIME (DINT)		SPARE - TIME PARAMETER 001				R	
1114	/	TIME (DINT)		SPARE - TIME PARAMETER 002				R	
1118	/	TIME (DINT)		SPARE - TIME PARAMETER 003				R	
1122	/	TIME (DINT)		SPARE - TIME PARAMETER 004				R	
1126	/	TIME (DINT)		SPARE - TIME PARAMETER 005				R	
1130	/	TIME (DINT)		SPARE - TIME PARAMETER 006				R	
1134	/	TIME (DINT)		SPARE - TIME PARAMETER 007				R	
1138	/	TIME (DINT)		SPARE - TIME PARAMETER 008				R	
1142	/	TIME (DINT)		SPARE - TIME PARAMETER 009				R	
1146	/	TIME (DINT)		SPARE - TIME PARAMETER 010				R	

scae	4814_COES_Dryer PROFINET SIGNALS TABLE							Rev 1 03/07/2024
N. BYTE	N. BIT	DATA TYPE	TAG	DESCRIPTION	MEANING	SCALING	OFFSET	READ/WRITE	
1150	0	BOOL	63-START-PLANT-CMD	REMOTE START COMMAND	1 = START			W	REMOTE COMMANDS
	1	BOOL	63-STOP-PLANT-CMD	REMOTE STOP COMMAND	0 = STOP			W	
	2	BOOL		SPARE				W	
	3	BOOL	63-ACK-ALARM	REMOTE ALARMS ACKNOWLEDGE	1 = ACK (PULSE 1 sec)			W	
	4	BOOL		SPARE				W	
	5	BOOL		SPARE				W	
	6	BOOL		SPARE				W	
	7	BOOL		SPARE				W	
1151	0	BOOL		SPARE				W	
	1	BOOL		SPARE				W	
	2	BOOL		SPARE				W	
	3	BOOL		SPARE				W	
	4	BOOL		SPARE				W	
	5	BOOL		SPARE				W	
	6	BOOL		SPARE				W	
	7	BOOL		SPARE				W	
1152	/	REAL		SPARE - REAL PARAMETER 001	To be defined according to Control Philosophy				PARAMETERS
1156	/	REAL		SPARE - REAL PARAMETER 002				W	
1160	/	REAL		SPARE - REAL PARAMETER 003				W	
1164	/	REAL		SPARE - REAL PARAMETER 004				W	
1168	/	REAL		SPARE - REAL PARAMETER 005				W	
1172	/	REAL		SPARE - REAL PARAMETER 006				W	
1176	/	REAL		SPARE - REAL PARAMETER 007				W	
1180	/	REAL		SPARE - REAL PARAMETER 008				W	
1184	/	REAL		SPARE - REAL PARAMETER 009				W	
1188	/	REAL		SPARE - REAL PARAMETER 010				W	
1192	/	INT		SPARE - INTEGER PARAMETER 001		/	0	W	
1194	/	INT		SPARE - INTEGER PARAMETER 002		/	0	W	
1196	/	INT		SPARE - INTEGER PARAMETER 003		/	0	W	
1198	/	INT		SPARE - INTEGER PARAMETER 004		/	0	W	
1200	/	INT		SPARE - INTEGER PARAMETER 005		/	0	W	
1202	/	INT		SPARE - INTEGER PARAMETER 006		/	0	W	
1204	/	INT		SPARE - INTEGER PARAMETER 007		/	0	W	
1206	/	INT		SPARE - INTEGER PARAMETER 008		/	0	W	
1208	/	INT		SPARE - INTEGER PARAMETER 009		/	0	W	
1210	/	INT		SPARE - INTEGER PARAMETER 010		/	0	W	
1212	/	TIME (DINT)		SPARE - TIME PARAMETER 001				W	
1216	/	TIME (DINT)		SPARE - TIME PARAMETER 002				W	
1220	/	TIME (DINT)		SPARE - TIME PARAMETER 003				W	
1224	/	TIME (DINT)		SPARE - TIME PARAMETER 004				W	
1228	/	TIME (DINT)		SPARE - TIME PARAMETER 005				W	
1232	/	TIME (DINT)		SPARE - TIME PARAMETER 006				W	
1236	/	TIME (DINT)		SPARE - TIME PARAMETER 007				W	
1240	/	TIME (DINT)		SPARE - TIME PARAMETER 008				W	
1244	/	TIME (DINT)		SPARE - TIME PARAMETER 010				W	

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

Section 6 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

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 63-00 & process: COMM

Piping	63-00 Instrument Air Package (A-63000)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
63-00	Service Test Instrument Air Package	ONSHORE	C10004906	4245	100	2025-03-28	RFO 2

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	63-00	: Service Test Instrument Air Package			Dwg	-
	S/Sys	63-00	: Instrument Air Package (A-63000)			Module	
TASK	code	C10004906		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	COMM	Activity PVP	Discipline	Piping	Form 4245	Service Test

CONDITIONS

Operating pressure: 8,5 bar g

Test Pressure 8,5 bar g

Test Fluid	Air	X	Nitrogen	
	Water		Other	

TIGHTNESS CRITERION

Pressure variation tolerance:

Test Duration: 30MIN

Pressure Recording Means: TEXS

Adhesive Tape:	No
Soap Solution:	Yes
He Tracing:	No

Rotating equipment isolated

ATTACHMENTS

Procedure:	No
Sketches & Drawings:	No
Pressure Records:	No

Comments: TEST PERFORMED BEFORE THE OTP TO VALIDATE THE INTEGRITY OF THE SYSTEM

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ROSETTI MARINO SPA		CPY NOT PRESENT
Name	Ignacio Vago	Anthony Iveson	Witness waived
Date	2025-03-28	2025-03-28	2025-03-28
Signature	PROVERLIS Digitaly signed by Ignacio Vago 2025-03-28T16:43:04.178Z	PROVERLIS Digitaly signed by Anthony Iveson 2025-03-28T17:18:41.511Z	PROVERLIS Digitaly signed by Witness waived 2025-03-28T17:21:30.567Z

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)

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

SAT PROCEDURE NOT REQUIRED, PLEASE REFER TO THE ATTACHED FAT REPORT AND OTP PROCEDURE IN SECT.5.1

ROSETTI MARINO	**INSPECTION REPORT**	**Report No**. IR01-123A90A-29Oct2024_COES	SHEET 1 di 5
		Data *Date 28-29/10/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123 A90***	**COMMESSA FORNITORE** / *Job Vendor* 166-167/24
FORNITORE *Supplier: COES*	**No. Ordine** *P.O. No. 1724000428 - 1724000437*	**OGGETTO** *Object Instrument Air Package / Nitrogen Generator Package*	

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	Instrument Air Package	A-63000	Performance Test	**Satisfactory with PL**
10	1	Nitrogen Generator Package	A-64000	Performance Test	**Not Satisfactory with PL**

DOCUMENTI APPLICABILI / *Applicable Documents*

TITOLO DOCUMENTO / *Document Title*	**NUMERO DOCUMENTO** / *Document Number*	**REVISIONE** / *Revision*	**STATO DOCUMENTO** / *Document Status*
PACKAGE GENERAL ARRANGEMENT AND DIMENSIONAL OUTLINE DRAWINGS- NITROGEN GENERATION PACKAGE	1724000437-MAC-DA-00005	03	AFC – Accepted for construction
PACKAGE GENERAL ARRANGEMENT - INSTRUMENT AIR PACKAGE	1724000428-MAC-DA-00005	03	AFC – Accepted for construction
FAT (FACTORY ACCEPTANCE TEST) PROCEDURE - INSTRUMENT AIR PACKAGE	1724000428-QC-PRO-00024	03	AFC – Accepted for construction
FAT (FACTORY ACCEPTANCE TEST) PROCEDURE - NITROGEN GENERATION PACKAGE	1724000437-QC-PRO-00023	02	IFR – Issued for review
PACKAGE WIRING DIAGRAM INCLUDING LAYOUT OF PACKAGE CONTROL PANEL 63-LP-001 - INSTRUMENT AIR PACKAGE A-63000	1724000428-MAC-DG-00009	02	AFC – Accepted for construction
PACKAGE WIRING DIAGRAM INCLUDING LAYOUT OF PACKAGE CONTROL PANEL - NITROGEN GENERATION PACKAGE	1724000437-MAC-DG-00009	02	AFC – Accepted for construction

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*

On date 28th and 29th of October 2024 the performance test of both the instrument air package and nitrogen generation packages have been carried out according to the shop test notification submitted STN-166-24-003 Rev.2 and STN-167-24-003 Rev.2.
The inspection included the visual and dimensional check as well as the final painting check.

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO *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**. IR01-123A90A-29Oct2024_COES	SHEET 2 di 5
		Data *Date 28-29/10/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123 A90***	**COMMESSA FORNITORE** / *Job Vendor* 166-167/24
FORNITORE *Supplier: COES*	**No. Ordine** *P.O. No. 1724000428 - 1724000437*	**OGGETTO** *Object Instrument Air Package / Nitrogen Generator Package*	

For what concerns the instrument air package, PO no. 1724000428, the test returned positive results as the operative conditions have been reached by the package, however a punch list has been raised and COES agreed to close the same at RM fabrication yard in Ravenna (PL attached).

For what concerns the nitrogen generation package, PO no. 1724000437, the test could not be considered satisfactory since the defective solenoid valves didn't allow the proper closure of the process cycle.

Participants to the test:

- Anthony Iveson (Comm. Manager RM)
- Giandonato Delmisser (Comm. E/I RM)
- Nicola Salvemini (Quality Control RM)
- Davide Lo Sterzo (Project Engineering Manager RM)
- Pasquale Anacleto (Crosswind)
- Luigi Testa (COES)

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

DESCRIZIONE DEI TEST PRESENZIATI / *Description of witnessed tests*	**ESITO** / *Result*
Performance Test for Instrument Air Package (Including visual and dimensional check and painting check)	**Satisfactory with PL**
Performance Test for Nitrogen Generation Package (Including visual and dimensional check and painting check)	**Not Satisfactory with PL**

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*
Temperature and Humidity gauge	Elcometer	319 TOP	SN – ZF29428
Wet film thickness gauge	Elcometer	3236	SN – XB04087
Dry film thickness gauge	Elcometer	456 TOP	SN – SG00559

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

NUMERO DOCUMENTO / *Document Number*	**DESCRIZIONE** / *Description*	**TIPO** / *Type*	**NR. PAGINE** / *No. Pages*
\\	Instrument air package FAT Certificate	Report	2
\\	Nitrogen Generation Package FAT Certificate	Report	2
\\	Instrument air package Punch List	Report	2
\\	Nitrogen Generation Package Punch List	Report	2

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO *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**. IR01-123A90A-29Oct2024_COES	SHEET 3 di 5
		Data *Date 28-29/10/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123 A90***	**COMMESSA FORNITORE** / *Job Vendor* 166-167/24
FORNITORE *Supplier: COES*	**No. Ordine** *P.O. No. 1724000428 - 1724000437*	**OGGETTO** *Object Instrument Air Package / Nitrogen Generator Package*	

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

POS. *Item*	**BREVE DESCRIZIONE MATERIALE** *Material brief description*	**Q.TA' ODA** *Order Q.ty*	**Q.TA' TESTATA** *Tested Q.ty*	**ACCETTATO** *Accepted*	**DATA ACCETTAZIONE** *Acceptance date*
10	Instrument air package	1	1	Yes (Punch List Raised)	**29/10/2024**
10	Nitrogen Generation Package	1	1	No (Punch List Raised)	/

F – CONCLUSIONI / *Conclusions*

COES and RM agreed on opening a punch list for the outstanding points found during the final tests. The packages will be shipped to RM yard, however, COES will organize a team to first close the punch list points and secondly to re-perform the Performance test on the nitrogen generation package which is currently not accepted. The same will have to be organized along with RM personnel.

G – PUNTI IRRISOLTI / *Outstanding points*

The outstanding points have been duly listed in a punch list agreed with the supplier (attached). The resolution of the same has been agreed to be done at RM yard in Ravenna.

H – STATO PACKING LIST / *Packing List Status*	☐ **EMESSO** / *Issued*	☒ **NON EMESSO** / *Not Issued*	DD/MM/YYYY **ULTIMA DATA UTILE** / *Last Date*

PUNCH LIST REPORT: VEDI ALLEGATO N° / *Refer to Attachment n° 01*

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



Instrument Air Package



Instrument Air Package

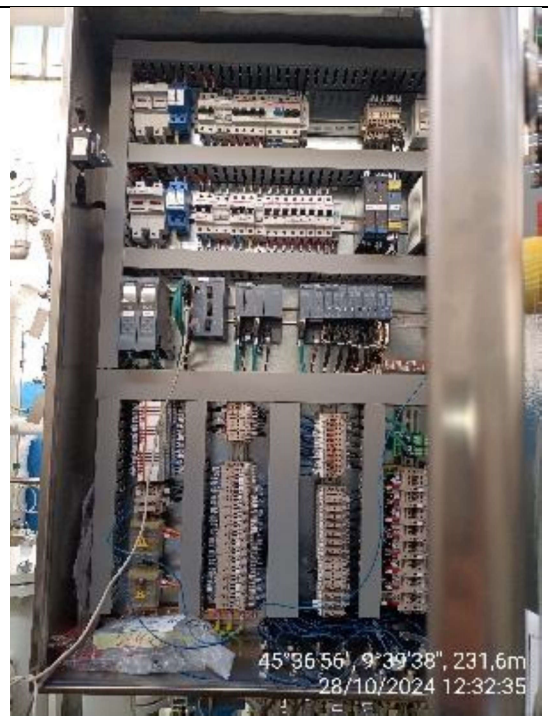
L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO *Supply Management dept.*		

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**. IR01-123A90A-29Oct2024_COES	SHEET 4 di 5
		Data *Date 28-29/10/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123 A90***	**COMMESSA FORNITORE** / *Job Vendor* 166-167/24
FORNITORE *Supplier: COES*	**No. Ordine** *P.O. No. 1724000428 - 1724000437*	**OGGETTO** *Object Instrument Air Package / Nitrogen Generator Package*	



Instrument Air Package



Instrument Air Package



Instrument Air Package



Instrument Air Package

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO *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**. IR01-123A90A-29Oct2024_COES	SHEET 5 di 5
		Data *Date 28-29/10/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123 A90***	**COMMESSA FORNITORE** / *Job Vendor* 166-167/24
FORNITORE *Supplier: COES*	**No. Ordine** *P.O. No. 1724000428 - 1724000437*	**OGGETTO** *Object Instrument Air Package / Nitrogen Generator Package*	



Nitrogen Tank



Air Tank



Nitrogen Generation Package



Nitrogen Generation Package

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.*		

COES Srl
24040 STEZZANO - ITALY - Via Pontida, 265
tel +39 035 2050 511
e.mail: coes@coessrl.com

Sedi operative
24040 STEZZANO – Via Pontida, 265
24040 COMUN NUOVO – Via Europa, 9

FACTORY ACCEPTANCE TEST CERTIFICATE

CUSTOMER:	ROSETTI MARINO
PURCHASE ORDER:	1724000428
PROJECT:	HOLLANDSE KUST NOORD WIND PARK Project
SCOPE OF SUPPLY:	INSTRUMENT AIR PACKAGE
ITEM:	A-63000
INSPECTION AND TEST PLAN:	1724000428-QC-ITP-00002
FAT PROCEDURE:	1724000428-QC-PRO-00024
COES JOB:	166/24

ACTIVITY	RESULT
VISUAL AND DIMENSIONAL CHECK	**CONFORM**
LOCAL PANEL WIRING CHECK	**CONFORM (SEE NOTE 1)**
MARKING AND NAMEPLATES CHECK	**CONFORM (SEE NOTE 1)**
PNEUMATIC LEAKAGE CHECK	**NOT WITNESSED**
FAT PERFORMANCE TEST	**CONFORM (SEE NOTE 1 & 2)**
PAINTING CHECK	**CONFORM**

Notes:
1. See attached punch list
2. Operating conditions have been reached.

Client agrees with Coes to dismount all solenoid valves before shipment preparation and re-install them on RM site (Ravenna Yard) after further investigation to identify and resolve the cause of malfunctioning of solenoid valve installed on Nitrogen Generation package, since all the solenoid valves are the same model.

COES SRL
Via Pontida, 265
24040 STEZZANO (BG)
P.IVA.C.F. 02528570168
Tel. 035 2050511
29/10/24

ROSETTI MARINO SpA
Stefano Linari
Quality Control Dept.
29/10/24
Comm. MGR.

DOC. N°: CDC54946

CDC54946 - FAT REPORT – Attachment

INSTRUMENT AIR PACKAGE

- Start the Compressor K-63001A in LOCAL MODE, immediately it goes into LOAD since the pressure 63-PT-064 is below 8 barg. (The compressor working max 10 barg with set point 9 barg).
- Valves in the AIR DRYER fully open. When the pressure 63-PT-064 reaches 8 barg the logic selects the PRE-FILTER /DRYER / AFTER-FILTER.
- Dryer Cycle:
    1. ADSORPTION TOWER A – REGENERATION TOWER B **240 seconds**
    2. ADSORPTION TOWER A – PRESSURIZED TOWER B **60 seconds**
    3. REGENERATION TOWER A – ADSORPTION TOWER B **240 seconds**
    4. PRESSURIZATION TOWER A – ADSORPTION TOWER B **60 seconds**
- The 63-PDT-051 on H alarm we change (with a delay time of 30 seconds) the PRE-FILTER A with PRE-FILTER B and vice versa. (test simulated by putting the negative chamber in atmosphere).
- The 63-PDT-052 on H alarm we change (with a delay time of 30 seconds) the AFTER-FILTER A with AFTER-FILTER B and vice versa. (test simulated by putting the negative chamber in atmosphere).
- The DEW POINT 63-AIT-051 value (-40.58°C).
- The Pressure switches 63-PS-054 / 63-PS-056 / 63-PS-058 / 63-PS-060 DRYER UNIT 1 & 2 we forced to verify the exchange between the DRYER D-63001A/B al DRYER D-63002A/B and vice versa.
- Stop the Compressor K-63001A.
- Start the Compressor K-63001B in LOCAL MODE (verify the changeover with PUSH BUTTON). Compressor K-63001B in STOP, Compressor K-63001A in SERVICE.

ROSETTI MARINO SpA
Stefano Linari
Quality Control Dept.
29/10/24

COES SRL
Via Portalta, 265
24040 STEZZANO (BG)
P.IVA C.F. 02528570168
Tel. 035/2050611
29/10/24

For acceptance

ROSETTI MARINO

Base Load Power Hub (BLPH)

Punch List Entry Form

CROSSWIND

Sub-system code:	Sub-system description: INSTRUMENT AIR PACKAGE A-63000	Date: 29/10/2024

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.	-		A-63000	RM Comm.	CHECK IF THE SET POINT SHOULD BE SET TO 9.5 SINCE ON THE AIR RECEIVER (63-PT-04) WE HAVE A PRESSURE OF 8.8 barg		B	COES		02/12/24
2.	-		A-63000	RM Comm.	PACKAGE to be test with PLC set to REMOTE MODE		B	COES/RM		02/12/24
3.	-		A-63000	RM Comm.	necessary to set the operating logic to ensure that with a DEW POINT measured > -40°C, the DRYER in operation is exchanged with the DRYER in pause		B	COES/RM		02/12/24
4.	-		A-63000	RM Comm.	TO BE IMPLEMENT: THE PRESSURE SWITCHES IN BAD QUALITY MUST BLOCK AIR DRYER (to be verify at yard)		B	COES/RM		02/12/24
5.	-		A-63000	RM Comm.	TO BE IMPLEMENT: THE INTERVENTION TIME OF THE LIMIT SWITCHES (to be verify at yard)		B	COES		02/12/24
6.			A-63000	RM Comm.	TO BE IMPLEMENTED: VALVE POSITION DISCREPANCY (to be verify at yard)		B	COES		02/12/24
7.			A-63000	RM Comm.	VERIFY AND SET THE EXCHANGE OF THE COMPRESSORS WITH THE DUTY/STAND-BY CYCLE TIME. To be verify and to be tested		B	COES/RM		02/12/24
8.			A-63000	RM Comm.	TO BE VERIFY AND TEST THE CHANGE OVER COMPRESSOR K-63001A TO K-63001B		B	COES		02/12/24
9.			A-63000	RM Comm.	ALL SOLENOIDS HAVE BEEN DISMANTLED FROM THE PACKAGE. SEND TO THE SUB-VENDOR TO BE CHECK. ALL SOLENOID WILL BE RE INSTALLED		A	COES		02/12/24
10.			A-63000	RM Comm.	THE RESET COMMAND TO PACKAGE MUST BE MANAGED BY ESD (CURRENTLY IT'S ON LOCAL PANEL). To be verify with engineering		B	RM		02/12/24
11.			A-63000	RM Comm.	MAX PRESSURE ON VALVE ACTUATORS = 8 BAR IS NOT CONGRUENT WITH OPERATING PRESSURE = 9 BAR		B	COES		02/12/24

12.			A-63000	RM Comm.	DUE TO THE RUSH TO CONCLUDE ALL TESTS WITHIN ONE DAY, AN EXTENSIVE AND COMPREHENSIVE ON-SITE TEST WILL BE MANDATORY BEFORE PERFORMING THE FUNCTIONAL AND PERFORMANCE TESTS OF THE PACKAGE. ALL PERFORMANCE MUST BE TESTED AND ACCEPTED AT THE CONSTRUCTION SITE		B	COES		02/12/24
13.			A-63000	RM Comm.	ALL HARDWIRED AND PROFINET SIGNALS STILL TO BE TESTED		A	COES		02/12/24
14.			A-63000	S.Linari	TO BE UPDATED DWG N. 1724000428-MAG-DG-00009 – CORRECT RAL 9002		B	COES		02/12/24
15.			A-63000	S.Linari	CABLING INSIDE CONTROL PANEL NOT REFLECT THE SPECIFICATIONS AND DWG IN TERM OF COLOUR CODING. SEE NCR **2024-Q-123A90-0009**		A	COES		02/12/24
16.			A-63000	S.Linari	MISSING LEAKAGE TEST REPORTS. To be repeated on site up to rated package pressure		B	COES		02/12/24
17.			A-63000	S.Linari	CONTINUITY AND MEGGER TEST REPORTS ARE MISSING. TO BE PROVIDE		B	COES		02/12/24

Raised by
Contractor / Subcontractor: _____

Checked by
Contractor QA/QC: _____

ROSETTI MARINO SpA
Stefano Linari
Quality Control Dept.
29/10/24

Accepted by
COMPANY: _____

COES SRL
Via Pontida, 265
24040 STEZZANO (BG)
P.I./C.F. 02329570166
Tel. 035/2050611

For acceptance

COES Srl
24040 STEZZANO - ITALY - Via Pontida, 265
tel +39 035 2050 511
e.mail: coes@coessrl.com

Sedi operative
24040 STEZZANO – Via Pontida, 265
24040 COMUN NUOVO – Via Europa, 9

FACTORY ACCEPTANCE TEST CERTIFICATE

CUSTOMER:	ROSETTI MARINO
PURCHASE ORDER:	1724000437
PROJECT:	HOLLANDSE KUST NOORD WIND PARK Project
SCOPE OF SUPPLY:	NITROGEN GENERATION PACKAGE
ITEM:	U-64000
INSPECTION AND TEST PLAN:	1724000437-QC-ITP-00002
FAT PROCEDURE:	1724000437-QC-PRO-00023
COES JOB:	167/24

ACTIVITY	RESULT
VISUAL AND DIMENSIONAL CHECK	**CONFORM**
LOCAL PANEL WIRING CHECK	**CONFORM (SEE NOTE 1)**
MARKING AND NAMEPLATES CHECK	**CONFORM (SEE NOTE 1)**
PNEUMATIC LEAKAGE CHECK	**NOT WITNESSED**
FAT PERFORMANCE TEST	**NOT CONFORM (SEE NOTE 1 & 2)**
PAINTING CHECK	**CONFORM**

Notes:
1. See attached punch list
2. Due to continued Solenoid valves failure, the package cycle phases could not properly be recorded. Coes dismounted all solenoid valves before shipment preparation and re-install them on site (Ravenna Yard) after further investigation to identify and resolve the cause of malfunctioning.
Performance test to be repeated on RM site (Ravenna Yard).

COES SRL
Via Pontida, 265
24040 STEZZANO (BG)
P.I./C.F. 02529570168
Tel. 035/2050611
29/10/24

ROSETTI MARINO SpA
Stefano Linari
Quality Control Dept.
29/10/24
Comm. MGR.

DOC. N°: CDC54947

CDC54947 - FAT REPORT - Attachment

NITROGEN GENERATOR PACKAGE

- Start sequence in LOCAL MODE.
- Inlet pressure PACKAGE 64-PT051 8.8 barg.
- Start Phase sequence PSA TOWER C-64001A / C-64001B.
    1. TOWER C-64001A GENERATION - TOWER C-64001B DEPRESSURIZATION **50 sec.**
    2. TOWER C-64001A EQUALIZATION - TOWER C-64001B EQUALIZATION **10 sec.**
    3. TOWER C-64001A DEPRESSURIZATION - TOWER C-64001B GENERATION **50 sec.**
    4. TOWER C-64001A EQUALIZATION - TOWER C-64001B EQUALIZATION **10 sec.**

About an hour after the start of the INSTRUMENT AIR PACKAGE and NITROGEN GENERATION PACKAGE we have the following values:

INSTRUMENT AIR PACKAGE

• AIR RECEIVER PRESSURE	63-PT-064	**8.8 barg**
• TEMPERATURE GAUGE AIR RECEIVER	63-TI-053	**20°C**
• DEW POINT ANALYZER	63-AIT-051	**-47.15**
• FLOW TRANSMITTER	63-FT-051	**320 m3/h**

NITROGEN GENERATION PACKAGE

• PSA INLET PRESSURE	64-PT-051	**8.8 barg**
• OXYGEN ANALYZER	64-AT-051	**2.9% / 3.2%**

ROSETTI MARINO SpA
Stefano Linari
Quality Control Dept
29/10/24

COES SRL
Via Pontida, 265
24040 STEZZANO (BG)
P.IVA/C.F. 02529570168
Tel. 035/2050511
29/10/24

For acceptance

Base Load Power Hub (BLPH)

Punch List Entry Form

Sub-system code:	Sub-system description: NITROGEN PACKAGE A-64000	Date: 29/10/2024

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.	-		A-64000	RM Comm.	PACKAGE to be tested with PLC set to REMOTE MODE		B	COES/RM		02/12/2024
2.	-		A-64000	RM Comm.	THE SOLENOID 64-XV-054 DOES NOT WORK. TO BE INVESTIGATE		A	COES		02/12/2024
3.	-		A-64000	RM Comm.	ALL SOLENOIDS HAVE BEEN DISMANTLED FROM THE PACKAGE. SEND TO THE SUB-VENDOR TO BE CHECK. ALL SOLENOID WILL BE RE INSTALLED		A	COES		02/12/2024
4.	-		A-64000	RM Comm.	**During on-site testing phase, it will be necessary to validate that the PACKAGE does not suffer malfunctions due to the low pressure**		B	COES		02/12/2024
5.	-		A-64000	RM Comm.	HARDWIRED & PROFINET SIGNALS STILL TO BE TESTED		B	COES		02/12/2024
6.			A-64000	RM Comm.	MAX PRESSURE ON VALVE ACTUATORS = 8 BAR - IS NOT CONGRUENT WITH OPERATING PRESSURE = 9 BAR		B	COES		02/12/2024
7.			A-64000	RM Comm.	THE OXYGEN VALUE DURING PRESSURIZATION IS NOT STABLE. IN THIS PHASE IT IS POSSIBLE TO CHECK THE CLOSURE OF VALVE 64-XV-058 AND THE OPENING OF THE VALVE OF VENT 64-XV-059		B	COES		02/12/2024
8.			A-64000	RM Comm.	THE RESET COMMAND TO PACKAGE MUST BE MANAGED BY ESD (CURRENTLY IT'S ON LOCAL PANEL). To be verify with engineering		B	RM		02/12/2024
9.			A-64000	RM Comm.	DUE TO THE RUSH TO CONCLUDE ALL TESTS WITHIN ONE DAY, AN EXTENSIVE AND COMPREHENSIVE ON-SITE TEST WILL BE MANDATORY BEFORE PERFORMING THE FUNCTIONAL AND PERFORMANCE TESTS OF THE PACKAGE. ALL PERFORMANCE MUST BE TESTED AND ACCEPTED AT THE CONSTRUCTION SITE		A	COES		02/12/2024

10.			A-64000	RM Comm.	BALL FLOW METER UPSTREAM OF THE 64-AT-051 OXYGEN TO THE NITROGEN GENERATION TO BE ADDED IN PKG PID		B	COES		02/12/2024
12.			A-64000	RM Comm.	ALL THE ALARMS AND SET POINT OF NITROGEN GENERATION PACKAGE TO BE TESTED			COES/RM		02/12/2024
13.			A-64000	S.Linari	TO BE UPDATED DWG N. 1724000437-MAG-DG-00009 – CORRECT RAL 9002		B	COES		02/12/2024
14.			A-64000	S.Linari	CABLING INSIDE CONTROL PANEL NOT REFLECT THE SPECIFICATIONS AND DWG IN TERM OF COLOUR CODING. SEE NCR **2024-Q-123A90-0009**		A	COES		02/12/2024
15.			A-64000	S.Linari	CONTINUITY AND MEGGER TEST REPORTS ARE MISSING. TO BE PROVIDE		B	COES		02/12/2024
16.			A-64000	S.Linari	MISSING LEAKAGE TEST REPORTS. To be repeated on site up to rated package pressure		B	COES		02/12/2024
17.			A-64000	S.Linari	MISSING TAG PLATE ON PSV 64-053 / PSV -64-054			COES		02/12/2024

Raised by
Contractor / Subcontractor: _____

Checked by
Contractor QA/QC: _____

ROSETTI MARINO SpA
Stefano Linari
Quality Control Dept.
29/10/24

Accepted by
COMPANY: _____

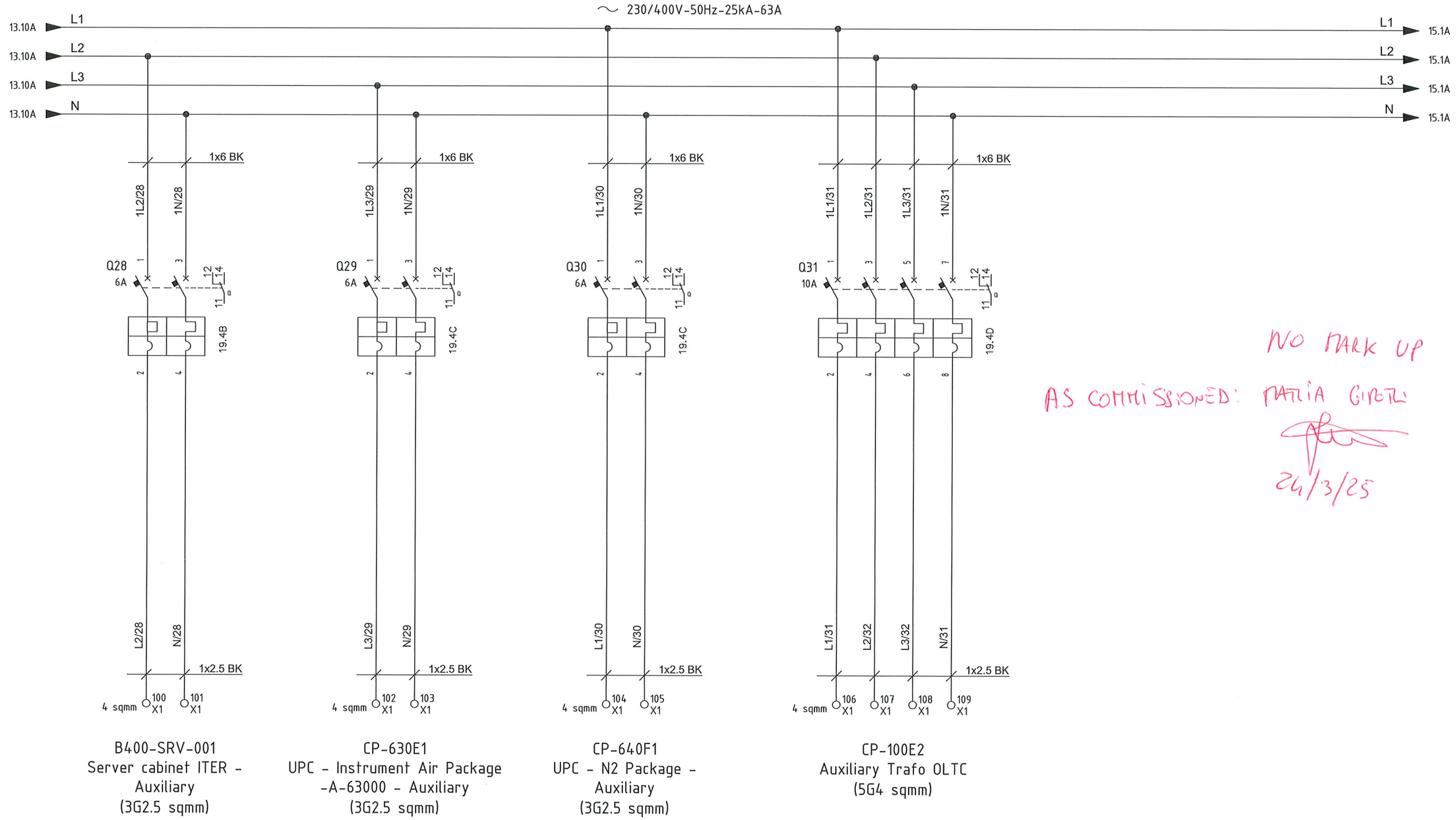
COES SRL
Via Portella, 265
24040 STEZZANO (BG)
P.IVA C.F. 02520570166
Tel. 035/4050611
29/10/24

For acceptance

Section 7.3 Vendor Spares & Special Tools lists references

NOT APPLICABLE

Section 7.4 Vendor Data / Operations / Maintenance Manuals References



B400-SRV-001
Server cabinet ITER - Auxiliary
(3G2.5 sqmm)

CP-630E1
UPC - Instrument Air Package -A-63000 - Auxiliary
(3G2.5 sqmm)

CP-640F1
UPC - N2 Package - Auxiliary
(3G2.5 sqmm)

CP-100E2
Auxiliary Trafo OLTC
(5G4 sqmm)

NO MARK UP

AS COMMISSIONED: MATTIA GIROTTI

24/3/25

VALID FOR CONSTRUCTION
VENDOR DOCUMENT - FDL DWG:
123A90-FDL-1724002197-EL-DG-00033

REV.:	DATE:	SIGNATURE:
3_A	18/03/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n° : 231298/SD/33
Item n° : PF1002888/101

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
3	12/03/2025	Santinelli	Flamminio	Sigismondi	Replaced Twiligh Switch TW1
2	19/08/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
1	05/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for construction (AFC)
0	29/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "DP-200N1"
LV SWBD FUNCTIONAL DIAGRAMS
Functional Drawing

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00033

SHEET 1.4

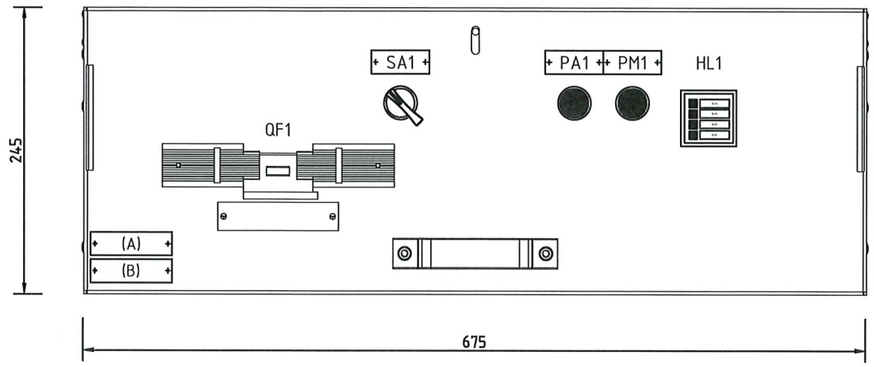
REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00033 Rev. 03

DOOR FRONT LAY-OUT

TYPICAL : LINE FEEDER "LK1-n"

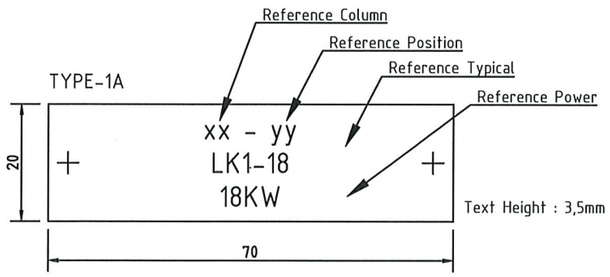


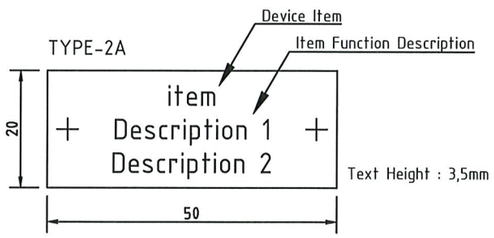
NOTE :

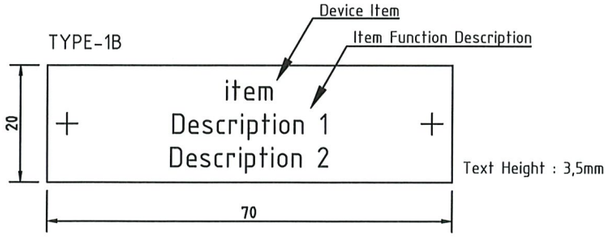
A) IDENTIFICATION name plate (type-1A) , with :
- Drawer position [Column / Position inside SWB]
- Typical name [reference applicability typical used]
- Power [reference applicability typical used]

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 : NAOWA GIROW
26/3/25
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

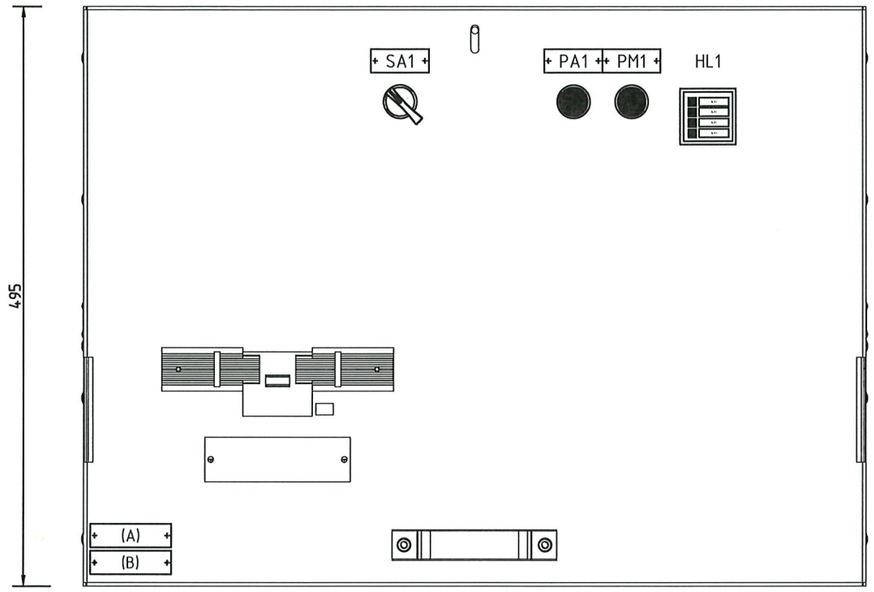
A3 | DRAWING NO. 1723002197-EL-DG-00031 | SHEET 034 | REV. 02

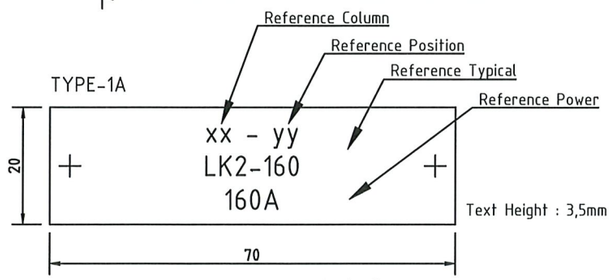
F.to UNI A3: 420mmx297mm

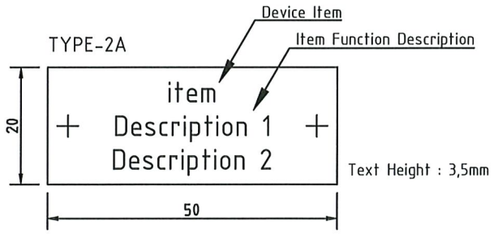
File Name : 1723002197-EL-DG-00031 Rev. 02

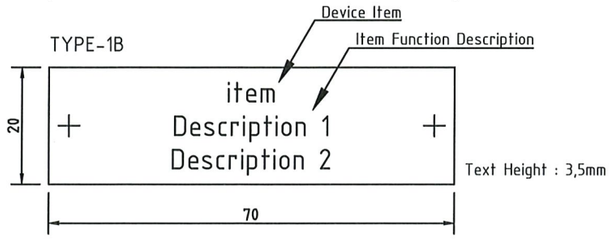
DOOR FRONT LAY-OUT

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: MARCIA GIROTTI
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

File Name : 1723002197-EL-DG-00031 Rev. 02

F.to UNI A3: 420mmx297mm

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 GINOLI
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: NATWA GIRGIN
24/3/25
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)

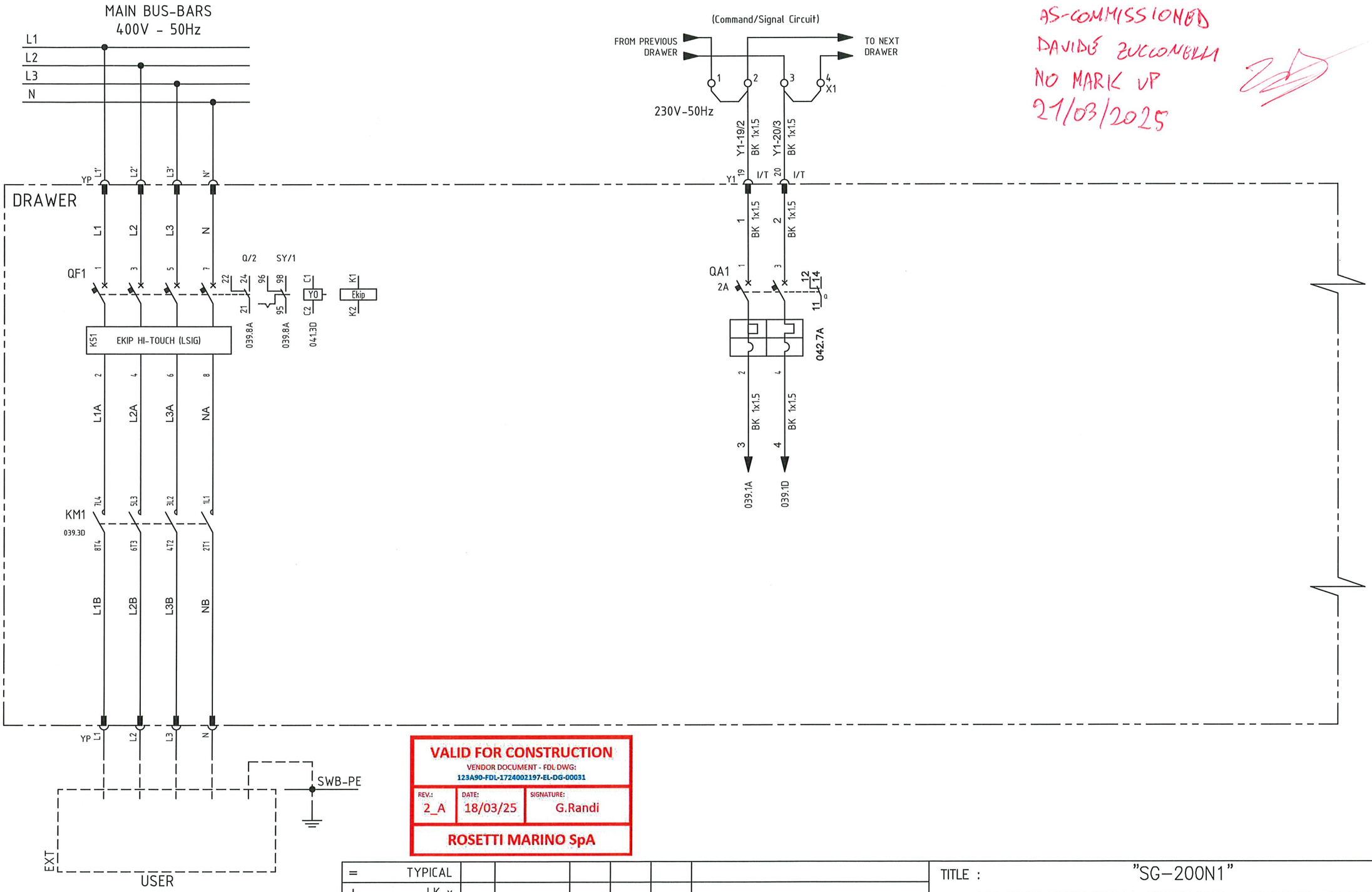
TITLE : "SG-200N1"
LV SWG FUNCTIONAL DIAGRAMS - TYPICAL FEEDERS
Items Acronym - Typical "LK1-n" & "LK2-n"

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)

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

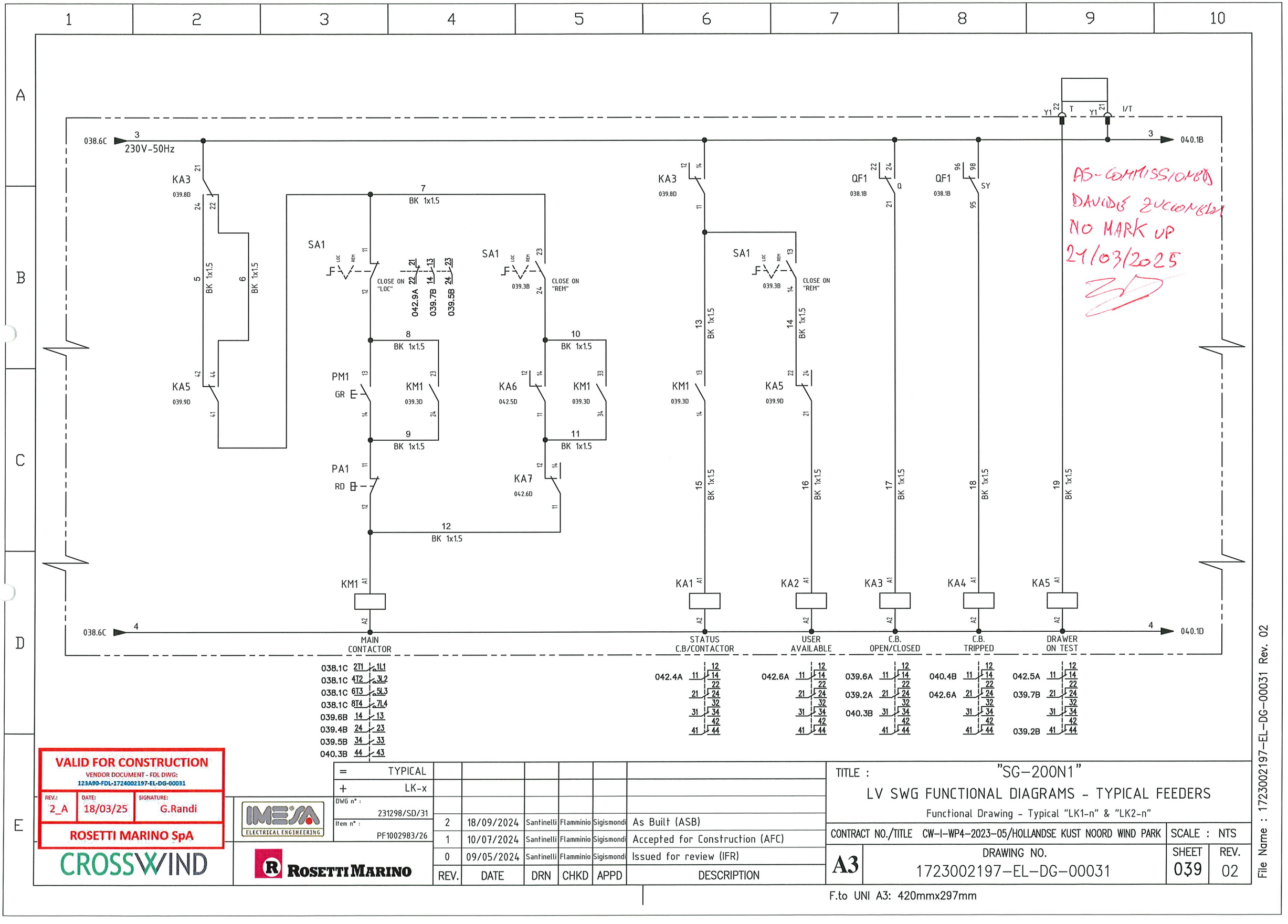
DRAWING NO. 1723002197-EL-DG-00031

SHEET 038

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 02



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"

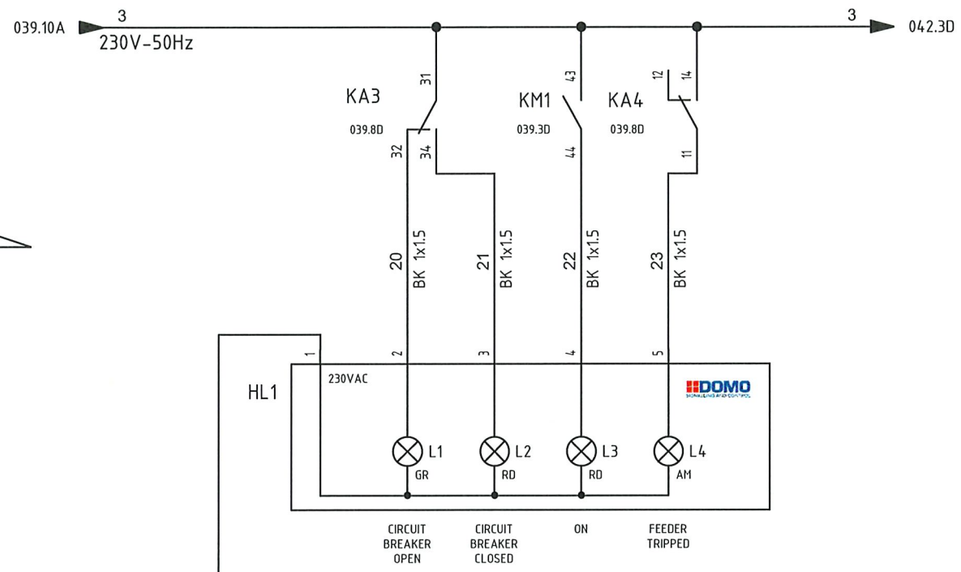
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

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"

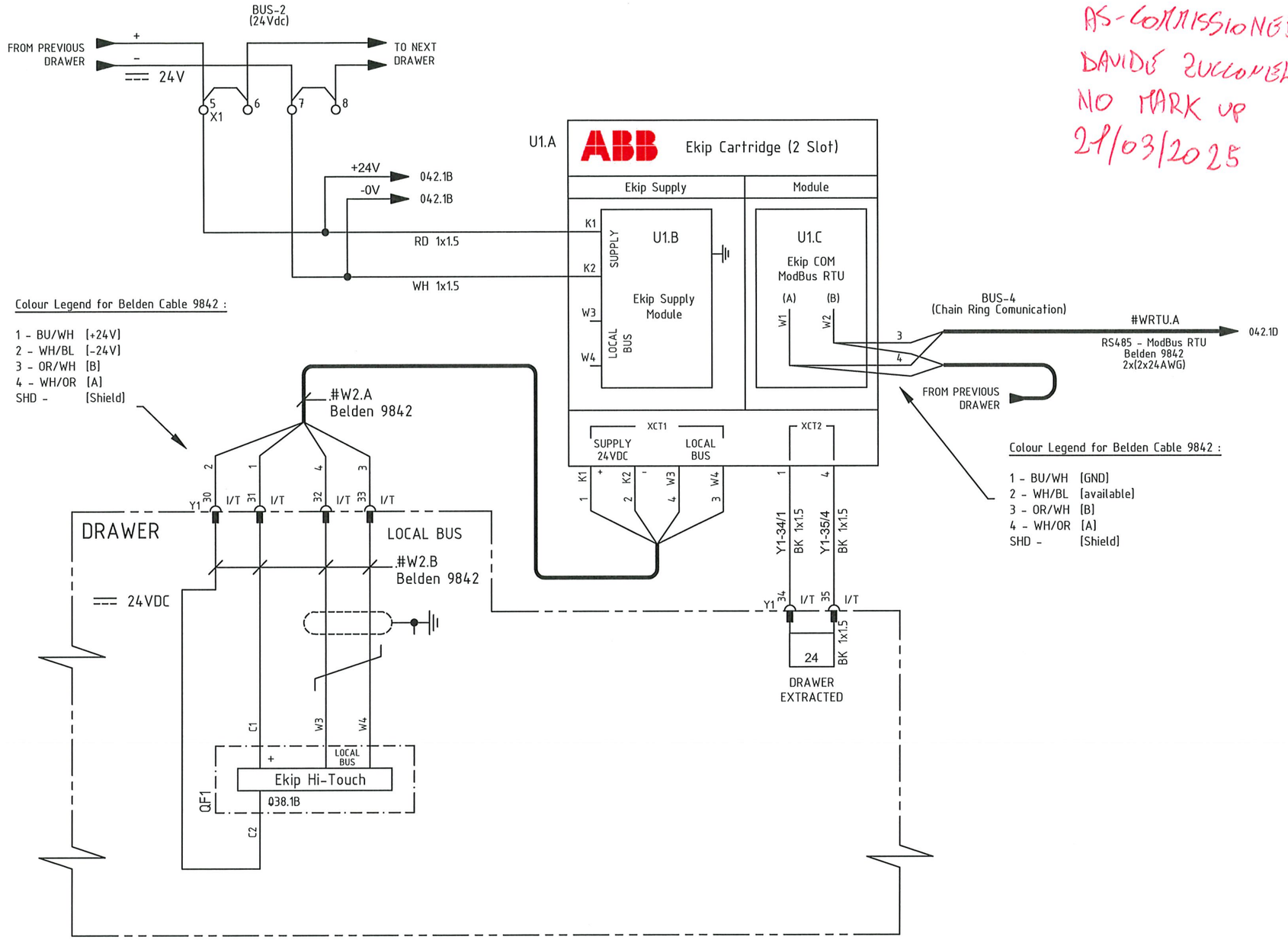
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

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.: 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						
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)		
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION		

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

KA6 A1 33 · KA7 A1 34

040.5D 4

KA6 A2 CONTACTOR CLOSE COMMAND
KA7 A2 CONTACTOR OPEN COMMAND

KA6 039.5B · KA7 039.5C

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

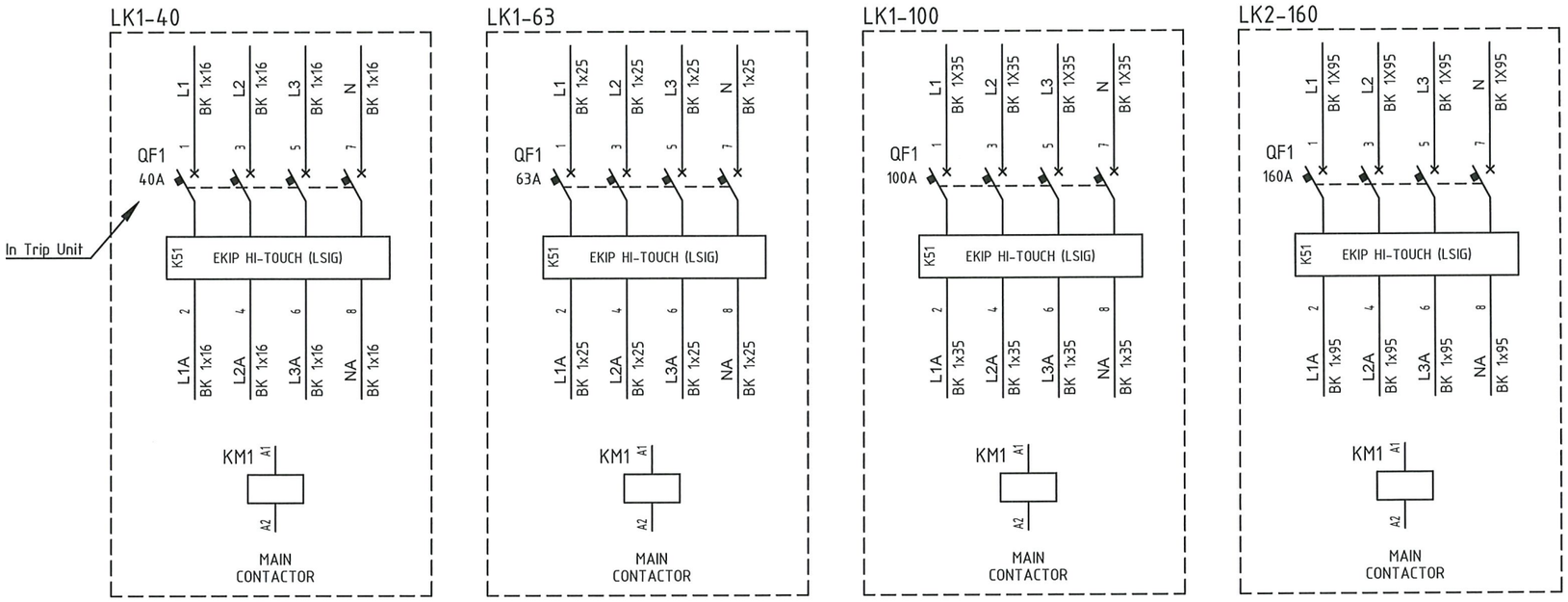
F.to UNI A3: 420mmx297mm

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

TYPICAL - LK-x - Y1

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							

← 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

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

Fito 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.:	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 047 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00031 Rev. 02

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

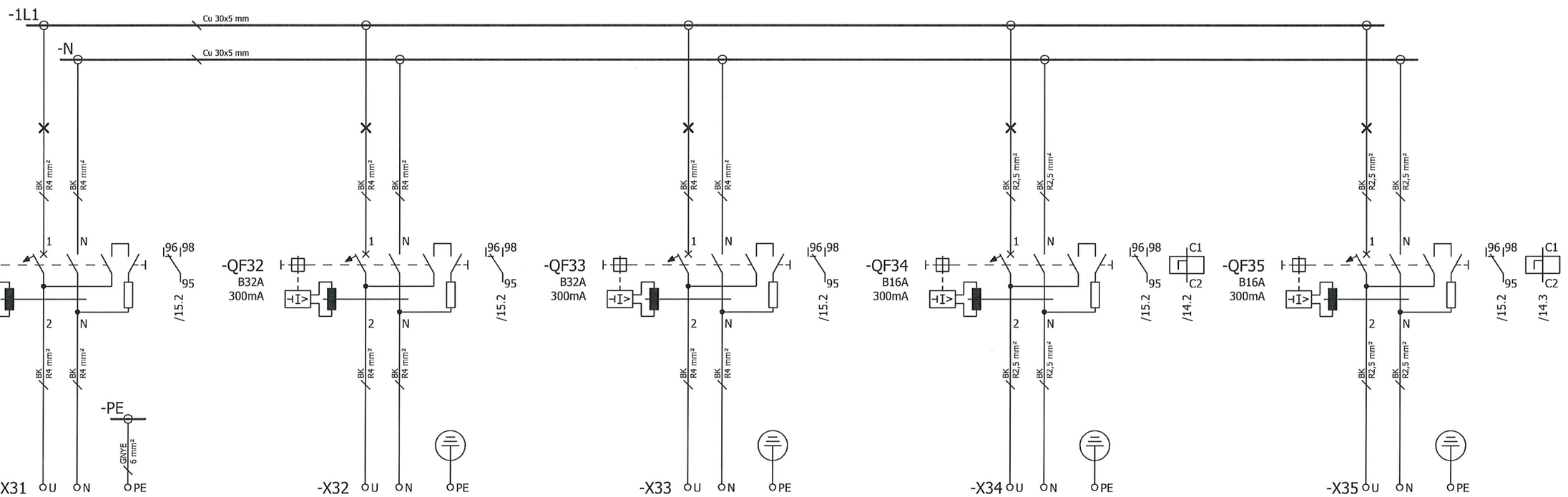
REV.:	DATE:	SIGNATURE:
3_A	15/11/24	G.Randi

ROSETTI MARINO SpA

NO MARK UP

AS COMMISSIONED: MARIA GIROTTI

24/3/25



Load
230V/N/PE~50Hz

SPARE

Load
230V/N/PE~50Hz

SPARE

Load
230V/N/PE~50Hz

SPARE

Load
230V/N/PE~50Hz

CP-630-E1
UCP-INSTRUMENT AIR PACKAGE
1.5KW

Load
230V/N/PE~50Hz

CP-640-E1
UCP-N2 PACKAGE
1.5KW

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 7
sheets 17

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	PACKAGE WIRING DIAGRAM INCLUDING LAYOUT OF PACKAGE CONTROL PANEL	Sheet 1 of 51 Date: 24/01/2025 Rev: 04

AS COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025
LAURENTIU GROZAVU

Base Load Power Hub (BLPH)

INSTRUMENT AIR PACKAGE A-63000

PACKAGE WIRING DIAGRAM

INCLUDING LAYOUT OF PACKAGE CONTROL PANEL 63-LP-001

Document Number: 1724000428-MAC-DG-00009

Document Class: 2

Rev.	Date	Description	Prepared	Reviewed	Approved
04	24/01/2025	Accepted for Construction (AFC)	GT	MC	TM
03	13/12/2024	Accepted for Construction (AFC)	GT	MC	TM
02	22/10/2024	Accepted for Construction (AFC)	GT	MC	TM
01	01/07/2024	Issue for Review (IFR)	GT	MC	TM
00	10/05/2024	Issue for Review (IFR)	GT	MC	TM

COES

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

File: 1724000428-MAC-DG-00009_04

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

	PREPARED	CHECKED AND APPROVED	CUSTOMER APPROVAL	DATE	DESCRIPTION
	ASSOLARI O.	TIRABOSCHI T.		08.05.2024	FIRST ISSUE
A	ASSOLARI O.	TIRABOSCHI T.		30.05.2024	ACCORDING TO CUSTOMER COMMENTS
B	ASSOLARI O.	TIRABOSCHI T.		01.08.2024	ACCORDING TO CUSTOMER COMMENTS
C	ASSOLARI O.	TIRABOSCHI T.		04.09.2024	AS-BUILT
D	ASSOLARI O.	TIRABOSCHI T.		18.11.2024	COMMENTS AFTER COMMISSIONING
E					
F					

	PREPARED	CHECKED AND APPROVED	CUSTOMER APPROVAL	DATE	DESCRIPTION
G					
H					
I					
L					
M					
N					

TEST CERTIFICATE N	2024.135

ELECTRICAL CABINET	=PLANT +LOCATION	WORK ORDER SERIAL NUMBER

TITLE

COMMAND AND CONTROL SWITCHBOARDS DRYER GENERATION PACKAGE 63-LP-001 WIRING DIAGRAM

REF. Netherlands

TECHNICAL AND CONSTRUCTIVE FEATURES

ELECTRICAL

RATED VOLTAGE:

RATED FREQUENCY:
50Hz

RATED CURRENT:
32A

AUXILIARY CIRCUIT SUPPLY:
230Vac~ 24Vdc

SHORT CIRCUIT CURRENT:
10kA

EARTH BUSBAR SECTION:
Cu 20x5 mm²

REFERENCE STANDARDS:
IEC 61439-1

MECHANICALS

DEGREE OF PROTECTION (INT.):
IP20

DEGREE OF PROTECTION (EXT.):
IP66

INTERNAL PAINTING:
STEEL

EXTERNAL PAINTING:
STEEL

SEGREGATION FORM:
--

PAINTING PROCEDURE:
DOCUMENT NUMBER:
1724000428-MAT-PRO-00022

INSTALLATION CONDITIONS

ENVIRONMENT TEMPERATURE:
-5° - 41°C

RELATIVE HUMIDITY:
90%

ALTITUDE:
<= 1000mt s.l.m.

INSTALLATION:
FOR EXTERNAL

CABLE INCOMING:
FROM LOW

CABLE OUTGOING:
FROM LOW

WIRING

COLORS

POWER CIRCUITS:
BLACK

ac AUXILIARY CIRCUITS:
BLACK

dc AUXILIARY CIRCUITS:
BLACK

CIRCUITS NOT ISOLATED BY GENERAL DEVICE:
ORANGE

EARTH CIRCUITS:
YELLOW/GREEN

SECTIONS

POWER CIRCUITS:
MINIMUM 2,5mm²

AUXILIARY CIRCUITS:
MINIMUM 1,5mm²

ELECTRONIC CIRCUITS:
MINIMUM 0,5mm²

CURRENT MEASURE CIRCUITS:
2,5mm²

VOLTAGE MEAUSURE CIRCUITS:
2,5mm²

CABLE TYPE:
FS17

TERMINALS

AUXILIARY:
2,5mm²

VOLTAGE MEAUSURE CIRCUITS:
6mm² WITH DISCONNECTING SLIDE-LINK

CURRENT MEASURE CIRCUITS:
6mm² WITH DISCONNECTING SLIDE-LINK AND SHORT-CIRCUIT CROSS CONNECT.

THE SECTIONS OF THE WIRE DON'T SPECIFIED ARE mm²: THE COLORS OF THE WIRE DON'T SPECIFIED ARE:

COES S.r.l.
Via Pontida , 265
24040 Stezzano (BG)-Italy
Tel. +39 035 2050 511 Fax +39 035 2050 532
www.coessrl.com coes@coessrl.com

LEVELS	DRAWING N.	PLANT	PAGE
COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	d241025-WD		01
	WORK ORDER N. 2024.4814_001	LOCATION	NEXT 02
DESCRIPTION: COVER			TOTAL 50

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

LETTER	TYPE OF COMPONENT	EXAMPLE	MARK
A	ASSEMBLED	LASER MASER REGULATOR	A
		TRANSISTOR AMPLIFIER INTEGRATED CIRCUITS AMPLIFIER MAGNETIC AMPLIFIER VALVE AMPLIFIER	AD AJ - AP AM - AT AV - AR
B	TRASDUCER OF QUANTITY NON-ELECTIC TO ELECTRIC OR VICEVERSA	PHOTOELECTRIC CELL ELECTRIC DYNAMOMETER CRISTAL TRASDUCER MICROPHONE PICK-UP LOUDSPEAKER SYNCRONOUS TRANSMITTER	B
		TRANSDUCER OR ANALOGIC SENSOR OR NUMERIC WITH MULTIPLE STEPS (USABLE FOR INDICATION OR THE MEASURE): PRESSURE TRANSDUCER POSITION TRANSDUCER ROTATION TRANSDUCER (TACHOMETRIC GENERATOR) TEMPERATURE TRANSDUCER VELOCITY TRANSDUCER	 BP BQ BR BT BV
C	CAPACITORS	CAPACITORS	C
D	BYNARY ELEMENTS DEVICE OF DELAY DEVICE OF STORAGE	DEVICE AND INTEGRATED CIRCUITS DIGITAL: DELAY LINE ELEMENT BISTABLE ELEMENT MONOSTABLE RECORDER MEMORY MAGNETIC RECORDER ON TAPE OR ON DISC	D
E	MATERIALS SUNDRIES	DEVICE NOT SPECIFIED IN THIS TABLE	E
		HEATER ILLUMINATION LAMP VENTILATOR	EH EL EV
F	PROTECTION DEVICE	OVER-VOLTAGE DEVICE SOURGE ARRESTER	F
		DEVICE OF PROTECTION WITH CURRENT THRESHOLD WITH INSTANTANEOUS ACTION DEVICE OF PROTECTION WITH CURRENT THRESHOLD WITH DELAYED ACTION DEVICE OF PROTECTION WITH CURRENT THRESHOLD WITH INSTANTANEOUS ACTION AND DELAYED FUSE DEVICE OF PROTECTION WITH VOLTAGE THRESHOLD	FA FR FS FU FV
G	GENERATOR POWER SUPPLY	ROTATING GENERATOR QUARZ OSCILLATOR	G
		BATTERY OF ACCUMULATORS CONVERTER OF FREQUENCY ROTATING OR STATIC POWER SUPPLY	GB GF GS
H	SEGNALLING DEVICE	ACUSTIC SIGNAL OPTICAL / LUMINOUS INDICATOR	HA HL
K	RELAY CONTACTOR	RELÈ ISTANTANEO CON TUTTO O NIENTE O CONTATTORI ISTANTANEO RELÈ BISTABILI O CONTATTORI INTERBLOCCATI (RELÈ CON TUTTO O NIENTE CON ACCOPPIATORE MECCANICO O MAGNETE PERMANENTE) CONTATTORI RELÈ POLARIZZATO RELÈ REED RELÈ TEMPO CON TUTTO O NIENTE (TIMER)	KA KL KM KP KR KT
L	INDUCTOR, REACTOR	INDUCTOR, RECTOR, COIL	L
M	MOTOR	MOTOR	M
N	ANALOG CIRCUIT INTEGRATED	OPERATIONAL AMPLIFIER ANALOG/DIGITAL HYBRID APPARATUS	N

LETTER	TYPE OF COMPONENT	EXAMPLE	MARK
P	TEST DEVICE AND INSTRUMENT	DEVICE OF MEASURE INDICATOR RECORDERS AND INTEGRATORS GENERATOR OF SIGNALS	P
		AMPEROMETER COUNTER OF IMPULSES WATTMETER APPARATUS RECORDER CLOCK / COUNTER OF HOURS OF SERVICE VOLTMETER	PA PC PJ PS PT PV
Q	MANOEUVRE APPARATUS FOR POWER CIRCUITS	SWITCH AUTOMATIC MOTOR PROTECTION DISCONNETTING SWITCH	QF QM QS
R	RESISTOR	FIXED OR VARIABLE (RHEOSTAT) RESISTOR	R
		POTENTIOMETER DERIVATIVE RESISTOR WITH INTRINSIC VARIATION DEPENDENT OF TEMPERATURE (THERMISTOR) RESISTOR WITH INTRINSIC VARIATION DEPENDENT OF VOLTAGE (VARISTOR)	RP RS RT RV
S	COMMAND OR CONTROL APPARATUS	SELECTOR OR COMMUTATOR PUSH BUTTON (INTO DEVICE ELECTRONIC OF COMMAND WITH PROXIMITY) SENSORS WITH ALL OR NOTHING NUMERIC (WITH STEP SINGLE) OF NATURE MECCANIC AND ELECTRONIC: - SENSOR OF LEVEL OF LIQUID - SENSOR OF PRESSURE - SENSOR OF POSITION (INTO OF PROXIMITY) - SENSOR OF ROTATION - SENSOR OF TEMPERATURE	SA SB SL SP SQ SR ST
T	TRANSFORMER	CURRENT TRANSFORMER COMMAND CIRCUITS POWER SUPPLY TRANSFORMER POWER TRANSFORMER MAGNETIC STABILIZER VOLTAGE TRANSFORMER	TA TC TM TS TV
U	MODULATOR CONVERTER	DISCRIMINATOR DEMODULATOR FREQUENCY CONVERTER ENCODER CONVERTER INVERTER TELEGRAPHIC TRANSLATOR	U
V	ELECTRONIC TUBE SEMICONDUCTOR	ELECTRONIC TUBE GAS DISCHARGE TUBE DIODE TRANSISTOR THYRISTOR	V
		RECTIFIER FOR COMMAND CIRCUITS POWER SUPPLY	VC
W	TRANSMISSION WAYS WAVE GUIDES AERIALS	WIRE CABLE BUS BAR WAVE GUIDE WAVE GUIDE DIRECTIONAL COUPLER DIPOLE PARABOLIC AERIAL	W
X	TERMINAL OUTLET PLUG	CONNECTING BUS BAR TEST PLUG PLUG OUTLET TERMINAL BOARD	XB XJ XP XS XT
Y	APPARATUS MECHANICS ELECTRICALLY OPERATED	ELECTROMAGNET ELECTROMAGNETIC BRAKE ELECTROMAGNETIC FRICTION MAGNETIC MANDREL OR TABLE ELECTROMAGNETIC VALVE	YA YB YC YH YV
Z	TRANSFORMER, IMPEDANCE ADAPTOR EQUALIZER, BAND LIMITER	EQUALIZER OF LINE COMPRESSOR CRYSTAL FILTER	Z

REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

PLANT
COMMAND AND CONTROL SWITCHBOARDS
DRYER - WIRING DIAGRAM

DESCRIPTION
MARKS OF IDENTIFIERS ACC. TO IEC 204-2

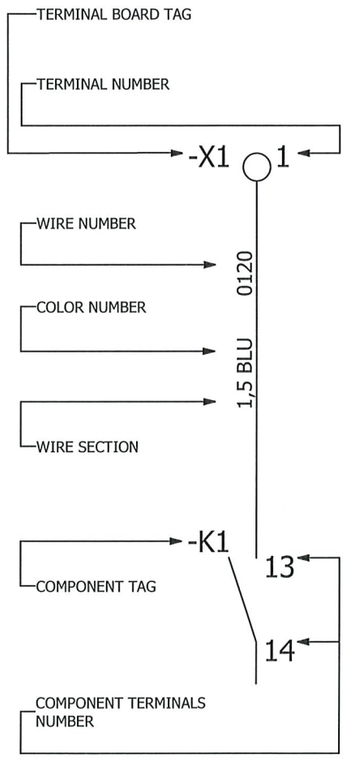
PREPARED	CHECKED	PLANT	PAGE
ASSOLARI O.	TIRABOSCHI T.	= DRYER	02
DATE	APPROVED	LOCATION	NEXT
08.05.2024		+ QE	03
WORK ORDER N	DRAWING N		TOTAL SHEETS
2024.4814_001	d241025-WD		50

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

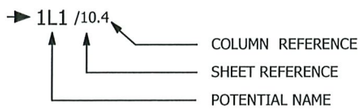
TABLE SYMBOLS

DEFINITION OF IDENTIFIERS (CEI3-34)		
CODE 1	PLANT	=
CODE 2	LOCATION	+
CODE 3	TAG	-
CODE 4	TERMINAL	:

NUMERATION WIRES AND TERMINALS
(CEI 16-1)



POTENTIAL CHAIN



SYMBOL	DESCRIPTION
	TERMINAL
	COLLECTOR BUS-BAR CONNECTION
	FUSE TERMINAL
	FUSE TERMINAL WITH LED
	PUSH BUTTONS
COLOR	HEAD
COLOR	GENERICS
COLOR	LUMINOUS
	SELECTORS
NC	POSITION 0/1
NO	POSITION 1/0/2 FIXED
	POSITION 1/0/2 IMPULSIVE
COLOR	LUMINOUS
	WITH KEY
COLOR COLOR	LED - LAMP
COLOR	LIGHTING BODY FOR OPERATOR LIGHT
	ISOLATED BARRIER (SWITCH AMPLIFIER)
	ISOLATED BARRIER (TEMPERATURE REPEATER)

SYMBOL	DESCRIPTION
	AUXILIARY RELAY POWER RELAY
	TIMED RELAY DELAYED TO EXCITATION
	TIMED RELAY DELAYED TO THE DROP-OUT
	RELAY STEP BY STEP
	POWER CONTACT
	OPEN AND CLOSE AUXILIARY CONTACT
	EXCHANGE AUXILIARY CONTACT
	NORMALLY OPEN NORMALLY CLOSE AUXILIARY CONTACT DELAYED ON OPENING
	NORMALLY OPEN NORMALLY CLOSE AUXILIARY CONTACT DELAYED ON CLOSING
RC	OVERVOTAGE LIMITER

SYMBOL	DESCRIPTION
	TOROIDAL TRANSFORMER
NETWORK ANALIZER	NETWORK ANALIZER
	GENERIC PROTECTION COMMON: -VOLTMETRIC -AMMETRIC -TRANSDUCER
V	VOLTMETER
A	AMMETER
	COMMUTATOR: VOTMETRIC
	AMMETRIC
...n	DIODE MODULE
	Ac/Dc POWER SUPPLY
	BIT PLC
i6 DI5 10A1 /10.1 %I0.5 _ABC000_DEF_GHI PLC BIT COMMENT	PIN NUMBER PIN DESCRIPTION TAG CARD REF. SHEET.COLUMN PLC ADRESS SYMBOLIC ADRESS PLC BIT COMMENT
E4.5 -E0:7 /10.1 PLC BIT COMMENT	TAG CARD PIN DESCRIPTION PLC ADRESS SHEET REFERENCE COLUMN REFERENCE PLC BIT COMMENT

SYMBOL	DESCRIPTION
	HORN
	RESISTOR
	OUTLET SOCKET
	FAN
	MECHANICAL INTERLOCKED
	KEY FREE WITH CLOSED DOOR
	KEY FREE
	KEY LOCKED
	CONNECTOR
	LIMIT SWITCH
P>	AIR PRESSURE SWITCH
L	LEVEL SWITCH
F	SENSOR FILTER
T f	THERMOSTAT
	REED MAGNETIC PROXIMITY SENSOR

REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

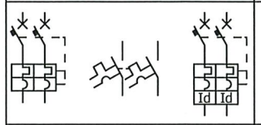
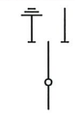
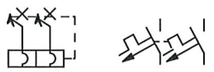
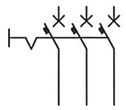
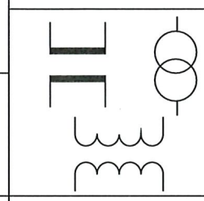
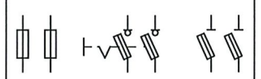
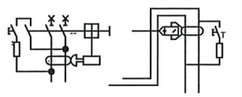
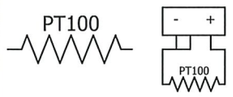
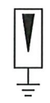
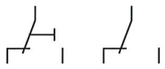
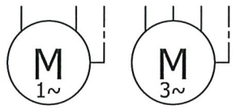
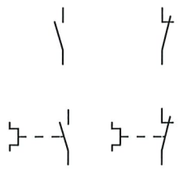
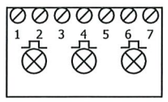
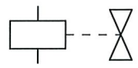
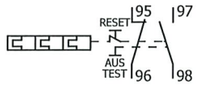
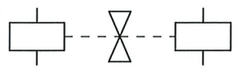
coes 20 coes 1997 - 2017

PLANT
COMMAND AND CONTROL SWITCHBOARDS
DRYER - WIRING DIAGRAM

DESCRIPTION
COMMON SYMBOLS

PREPARED	CHECKED	PLANT	PAGE
ASSOLARI O.	TIRABOSCHI T.	= DRYER	03
DATE	APPROVED	LOCATION	NEXT
08.05.2024		+ QE	04
WORK ORDER N	DRAWING N		TOTAL SHEETS
2024.4814_001	d241025-WD		50

TABLE SYMBOLS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SWITCH DISCONNETING SWITCH		GEARED MOTOR DEVICE		LINE/EARTH DISCONNECTING SWITCH MEDIUM VOLTAGE		CURRENT TRANSFORMER
	SWITCH: MAGNETOTHERMAL MAGNETOTERMAL+DIFFERENTIAL	YO	OPENING COIL		LINE/EARTH DISCONNECTING SWITCH MEDIUM VOLTAGE		VOLTAGE TRANSFORMER
	AUTOMATIC SWITCH	YC	CLOSING COIL		MEDIUM VOLTAGE SWITCH		POWER TRANSFORMER
	DISCONNETTING SWITCH WITH FUSE	YU	MINIMUM VOLTAGE COIL		EARTH DISCONNETTING SWITCH MEDIUM VOLTAGE		
	DIFFERENTIAL SWITCH MINIATURE DIFFERENTIAL		THERMIC PROBE PT100		CAPACITIVE LIVE LINE INDICATOR		
	SOURGE ARRESTER		THERMOCOUPLE				
	EXCHANGE AUXILIARY CONTACT OF: -POSITION -SIGNALLING FOR SWITCH-DISCONNECTOR		ASYNCHRONOUS MOTOR SINGLE-PHASE THREE-PHASE				
	NORMALLY OPEN/CLOSE AUXILIARY CONTACT FOR: -SWITCH-DISCONNECTING SWITCH -AUTOMATIC/MAGNETOTH. SWITCH -THERMAL RELAY		THREE-PHASE FLASHING-LIGHT				
			SIMPLE SOLENOID VALVE				
	RELAY THERMAL WITH AUXILIARY CONTACTS		DOUBLE SOLENOID VALVE				

REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

PLANT COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED ASSOLARI O.	CHECKED TIRABOSCHI T.	PLANT = DRYER	PAGE 04
	DATE 08.05.2024	APPROVED	LOCATION + QE	NEXT 05
DESCRIPTION COMMON SYMBOLS	WORK ORDER N 2024.4814_001	DRAWING N d241025-WD		TOTAL SHEETS 50

INDEX PAGES

PAGE	DATE	PREPARED	DESCRIPTION	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.
=DRYER+QE/01	08.05.2024	ASSOLARI O.	COVER	30.05.2024	A	01.08.2024	B	04.09.2024	C	18.11.2024	D																
=DRYER+QE/02	08.05.2024	ASSOLARI O.	MARKS OF IDENTIFIERS ACC. TO IEC 204-2	30.05.2024	A																						
=DRYER+QE/03	08.05.2024	ASSOLARI O.	COMMON SYMBOLS	30.05.2024	A																						
=DRYER+QE/04	08.05.2024	ASSOLARI O.	COMMON SYMBOLS	30.05.2024	A																						
=DRYER+QE/05	08.05.2024	ASSOLARI O.	INDEX PAGES	30.05.2024	A	01.08.2024	B	04.09.2024	C	18.11.20274	D																
=DRYER+QE/06	08.05.2024	ASSOLARI O.	INDEX PAGES	30.05.2024	A	01.08.2024	B	04.09.2024	C	18.11.20274	D																
=DRYER+QE/10	08.05.2024	ASSOLARI O.	EXTERNAL VIEWS	30.05.2024	A	01.08.2024	B																				
=DRYER+QE/11	08.05.2024	ASSOLARI O.	INTERNAL VIEWS	30.05.2024	A			04.09.2024	C																		
=DRYER+QE/20	08.05.2024	ASSOLARI O.	INCOMING LINE 230Vac SERVICES	30.05.2024	A			04.09.2024	C																		
=DRYER+QE/21	08.05.2024	ASSOLARI O.	INCOMING LINE 230Vac FROM UPS	30.05.2024	A			04.09.2024	C																		
=DRYER+QE/22	08.05.2024	ASSOLARI O.	SAFETY RELAY 24Vdc	30.05.2024	A			04.09.2024	C																		
=DRYER+QE/25	08.05.2024	ASSOLARI O.	NETWORK ARCHITECTURE	30.05.2024	A																						
=DRYER+QE/30	08.05.2024	ASSOLARI O.	PLC CONFIGURATION			01.08.2024	B																				
=DRYER+QE/35	08.05.2024	ASSOLARI O.	SUMMARY CPU	30.05.2024	A																						
=DRYER+QE/36	08.05.2024	ASSOLARI O.	SUMMARY CARDS I/O RACK																								
=DRYER+QE/37	08.05.2024	ASSOLARI O.	SUMMARY CARDS I/O RACK	30.05.2024	A																						
=DRYER+QE/38	08.05.2024	ASSOLARI O.	SUMMARY CARDS I/O RACK			01.08.2024	B																				
=DRYER+QE/40	08.05.2024	ASSOLARI O.	SUMMARY CARDS I/O RACK	30.05.2024	A	01.08.2024	B																				
=DRYER+QE/41	08.05.2024	ASSOLARI O.	SUMMARY CARDS I/O RACK			01.08.2024	B																				
=DRYER+QE/42	08.05.2024	ASSOLARI O.	SUMMARY CARDS I/O RACK	30.05.2024	A																						
=DRYER+QE/43	08.05.2024	ASSOLARI O.	SUMMARY CARD PN COUPLER AND SWITCH SCALANCE																								
=DRYER+QE/44	08.05.2024	ASSOLARI O.	POWER SUPPLY CPU AND CARDS I/O RACK	30.05.2024	A																						
=DRYER+QE/45	08.05.2024	ASSOLARI O.	POWER SUPPLY PN/PN COUPLER																								
=DRYER+QE/46	08.05.2024	ASSOLARI O.	DIGITAL INPUT I/O RACK	30.05.2024	A																						
=DRYER+QE/47	08.05.2024	ASSOLARI O.	DIGITAL INPUT I/O RACK	30.05.2024	A			04.09.2024	C																		
=DRYER+QE/48	08.05.2024	ASSOLARI O.	DIGITAL INPUT I/O RACK			01.08.2024	B																				
=DRYER+QE/49	08.05.2024	ASSOLARI O.	DIGITAL INPUT I/O RACK			01.08.2024	B																				
=DRYER+QE/51	08.05.2024	ASSOLARI O.	DIGITAL OUTPUT I/O RACK	30.05.2024	A																						
=DRYER+QE/52	08.05.2024	ASSOLARI O.	DIGITAL OUTPUT I/O RACK	30.05.2024	A	01.08.2024	B																				
=DRYER+QE/53	08.05.2024	ASSOLARI O.	DIGITAL OUTPUT I/O RACK			01.08.2024	B																				

AS COMMISSIONED NO MARK UP
GIROTTI MATTIA 25/03/2025
LAURENTI e GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
D	18.11.20274	O.A.			
C	04.09.2024	O.A.			
B	01.08.2024	O.A.			
A	30.05.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER
	DATE: 08.05.2024	APPROVED:	LOCATION: + QE
DESCRIPTION: INDEX PAGES	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD	TOTAL SHEETS: 50
			PAGE: 05
			NEXT: 06

INDEX PAGES

PAGE	DATE	PREPARED	DESCRIPTION	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.
=DRYER+QE/54	08.05.2024	ASSOLARI O.	ANALOG INPUT I/O RACK	30.05.2024	A																						
=DRYER+QE/55	08.05.2024	ASSOLARI O.	ANALOG INPUT I/O RACK	30.05.2024	A																						
=DRYER+QE/60	08.05.2024	ASSOLARI O.	AUXILIARY CIRCUIT SWTCH 5 PORT PROFINET																								
=DRYER+QE/61	08.05.2024	ASSOLARI O.	CONNECTION ProfiNet INTERNAL SWITCHBOARD	30.05.2024	A																						
=DRYER+QE/62	08.05.2024	ASSOLARI O.	CONNECTION ProfiNet INTERNAL SWITCHBOARD	30.05.2024	A																						
=DRYER+QE/70	08.05.2024	ASSOLARI O.	TERMINAL BOARD -X1																								
=DRYER+QE/71	08.05.2024	ASSOLARI O.	TERMINAL BOARD -X2																								
=DRYER+QE/72	08.05.2024	ASSOLARI O.	TERMINAL BOARD -XA	30.05.2024	A			04.09.2024	C																		
=DRYER+QE/73	08.05.2024	ASSOLARI O.	TERMINAL BOARD -XDI																								
=DRYER+QE/74	08.05.2024	ASSOLARI O.	TERMINAL BOARD -XDI																								
=DRYER+QE/75	08.05.2024	ASSOLARI O.	TERMINAL BOARD -XDO			01.08.2024	B																				
=DRYER+QE/76	08.05.2024	ASSOLARI O.	TERMINAL BOARD -XY			01.08.2024	B																				
=DRYER+QE/77	08.05.2024	ASSOLARI O.	TERMINAL BOARD -XAI					04.09.2024	C																		
=DRYER+QE/78	08.05.2024	ASSOLARI O.	TERMINAL BOARD -XAI					04.09.2024	C																		
=DRYER+QE/79	08.05.2024	ASSOLARI O.	TERMINAL BOARD -XCOM					04.09.2024	C																		
=DRYER+QE/85	08.05.2024	ASSOLARI O.	COMPONENT LIST	30.05.2024	A	01.08.2024	B																				
=DRYER+QE/86	08.05.2024	ASSOLARI O.	COMPONENT LIST	30.05.2024	A	01.08.2024	B																				
=DRYER+QE/87	08.05.2024	ASSOLARI O.	COMPONENT LIST	30.05.2024	A	01.08.2024	B																				
=DRYER+QE/88	08.05.2024	ASSOLARI O.	COMPONENT LIST	30.05.2024	A	01.08.2024	B																				
=DRYER+QE/89	08.05.2024	ASSOLARI O.	COMPONENT LIST	30.05.2024	A	01.08.2024	B																				

AS COMMISSIONED NO MARK UP
GIROTTI MATTIA 25/03/2025

LAURENȚIU GROZAVU

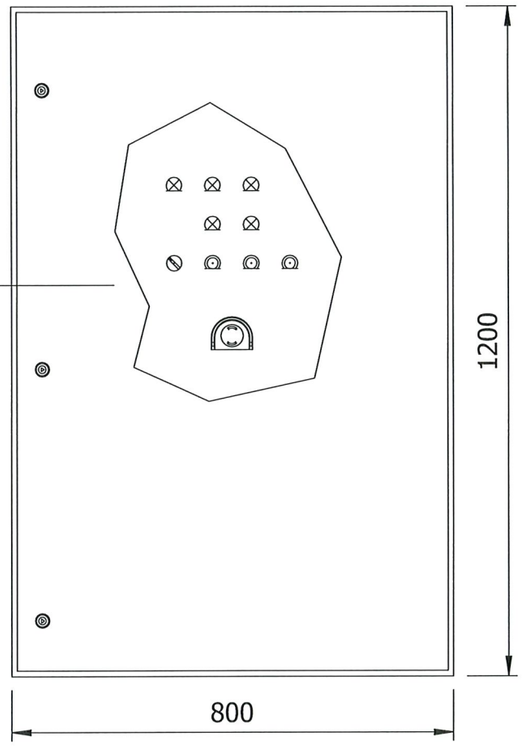
REV.	DATE	PREPARED	REV.	DATE	PREPARED
D	18.11.20274	O.A.			
C	04.09.2024	O.A.			
B	01.08.2024	O.A.			
A	30.05.2024	O.A.			

coes 20th coes 1997 - 2017

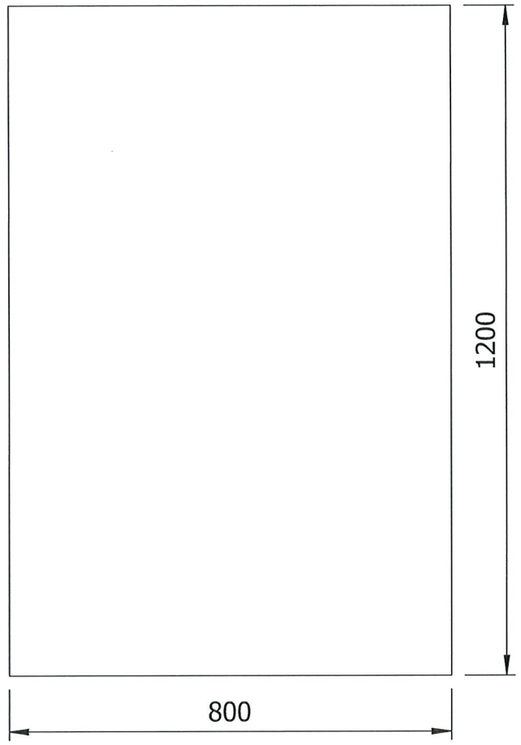
PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER
	DATE: 08.05.2024	APPROVED:	LOCATION: + QE
DESCRIPTION: INDEX PAGES	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD	TOTAL SHEETS: 50
			PAGE: 06
			NEXT: 10

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

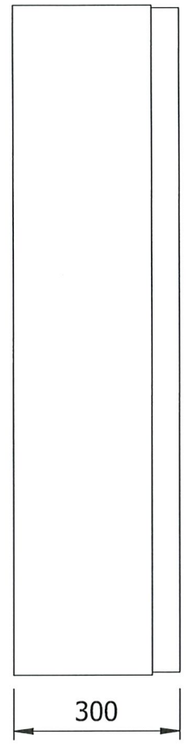
63-LP-001
FRONT



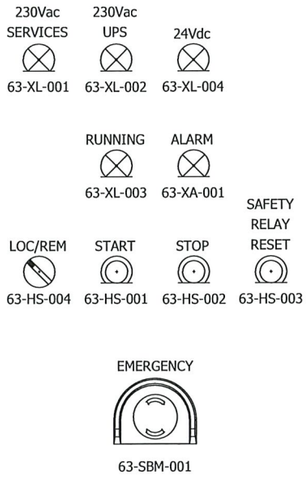
FRONT WITHOUT DOOR



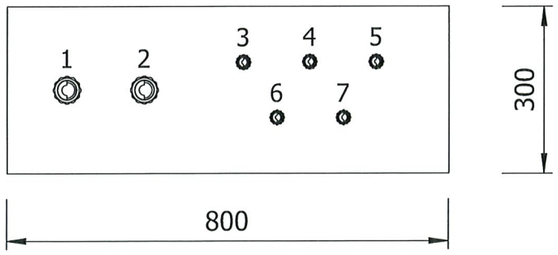
SIDE



OPERATORS
EXAMPLE



FRONT BOTTTOM



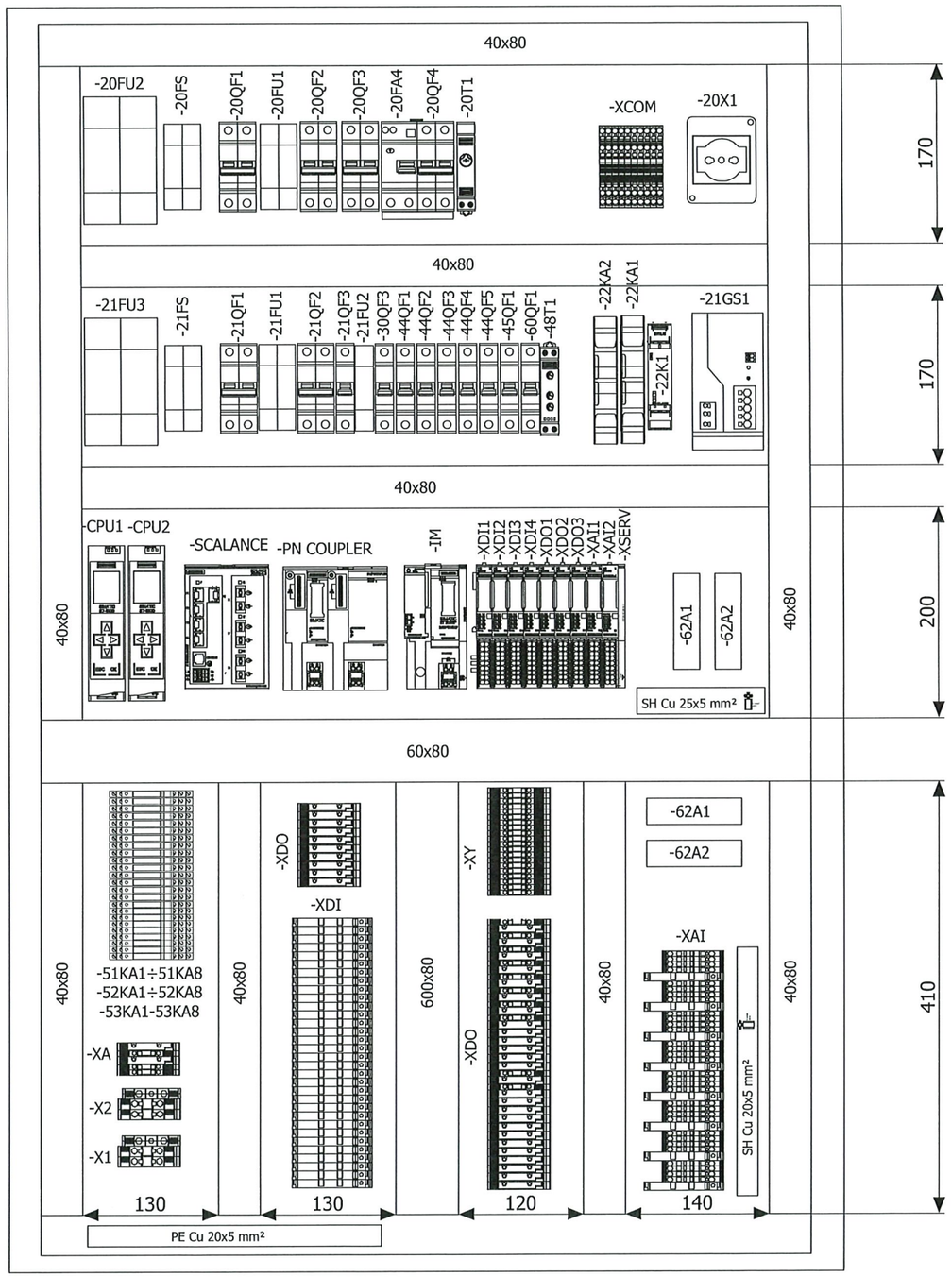
1 =M40 CABLE "83017-CEL-1"
2 =M40 CABLE "83017-CEL-2"
3 =M20 CABLE "84311-CEL"
4 =M20 CABLE "83110-CEL"
5 =M20 CABLE "C-63-XS-001/B400-SIS-001"
6 =M20 CABLE "C-63-XA-003/B400-SIS-001"
7 =M20 CABLE "63-LP-001/B400-NET-001"

AS COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025
LAURENTIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			
A	30.05.2024	O.A.			

coes 20 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER	PAGE: 10
	DATE: 08.05.2024	APPROVED:	LOCATION: + QE	NEXT: 11
DESCRIPTION: EXTERNAL VIEWS	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD		TOTAL SHEETS: 50

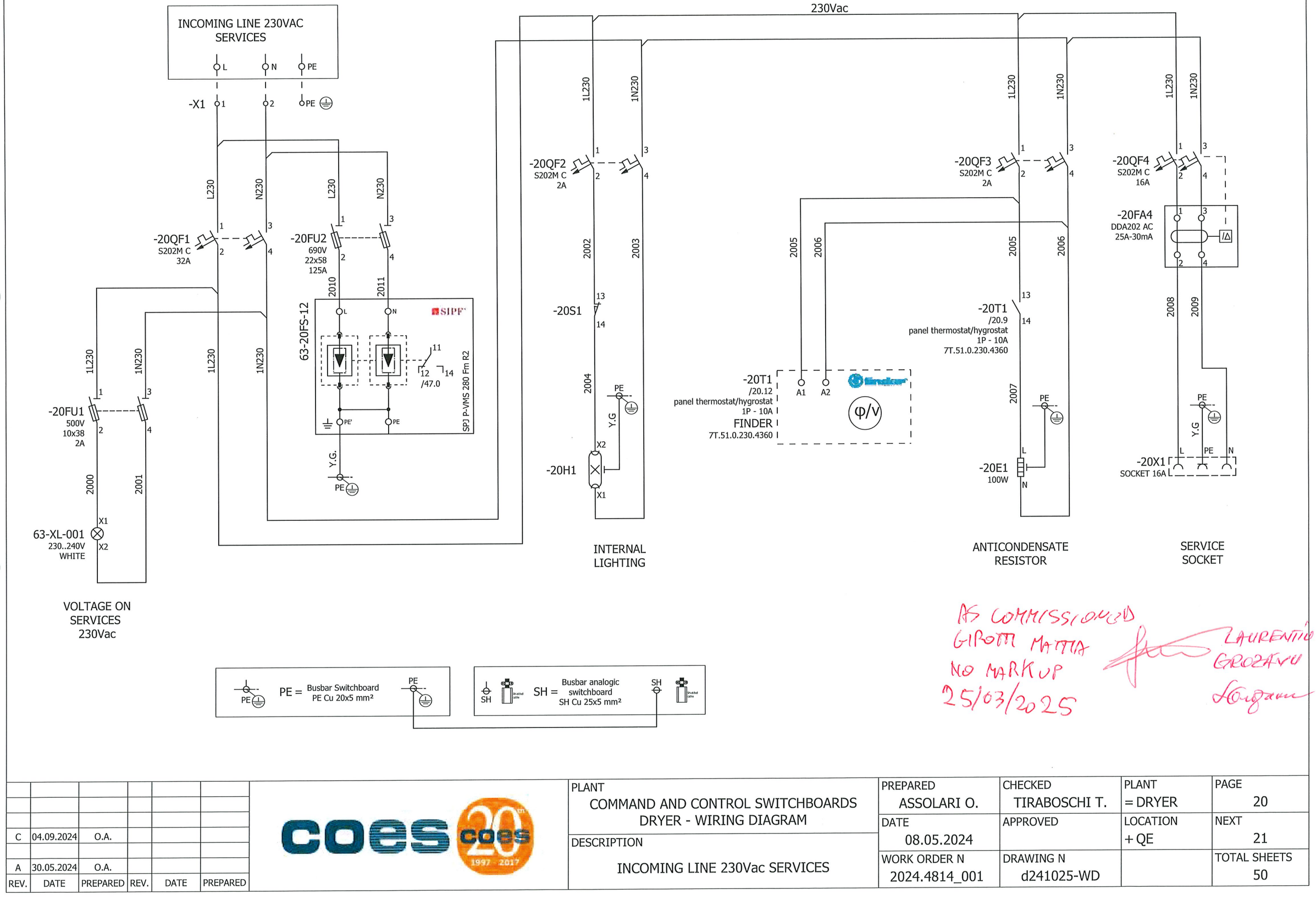


63-LP-001
INTERNAL

AS COMMISSIONING
GIROTTI MATTIA
NO MARK UP
25/03/2025
LAURENTIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
C	04.09.2024	O.A.			
A	30.05.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER	PAGE: 11
DESCRIPTION: INTERNAL VIEWS	DATE: 08.05.2024	APPROVED:	LOCATION: + QE	NEXT: 20
	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD		TOTAL SHEETS: 50



AS COMMISSIONED
GIROTTI MATTIA
NO MARKUP
25/03/2025

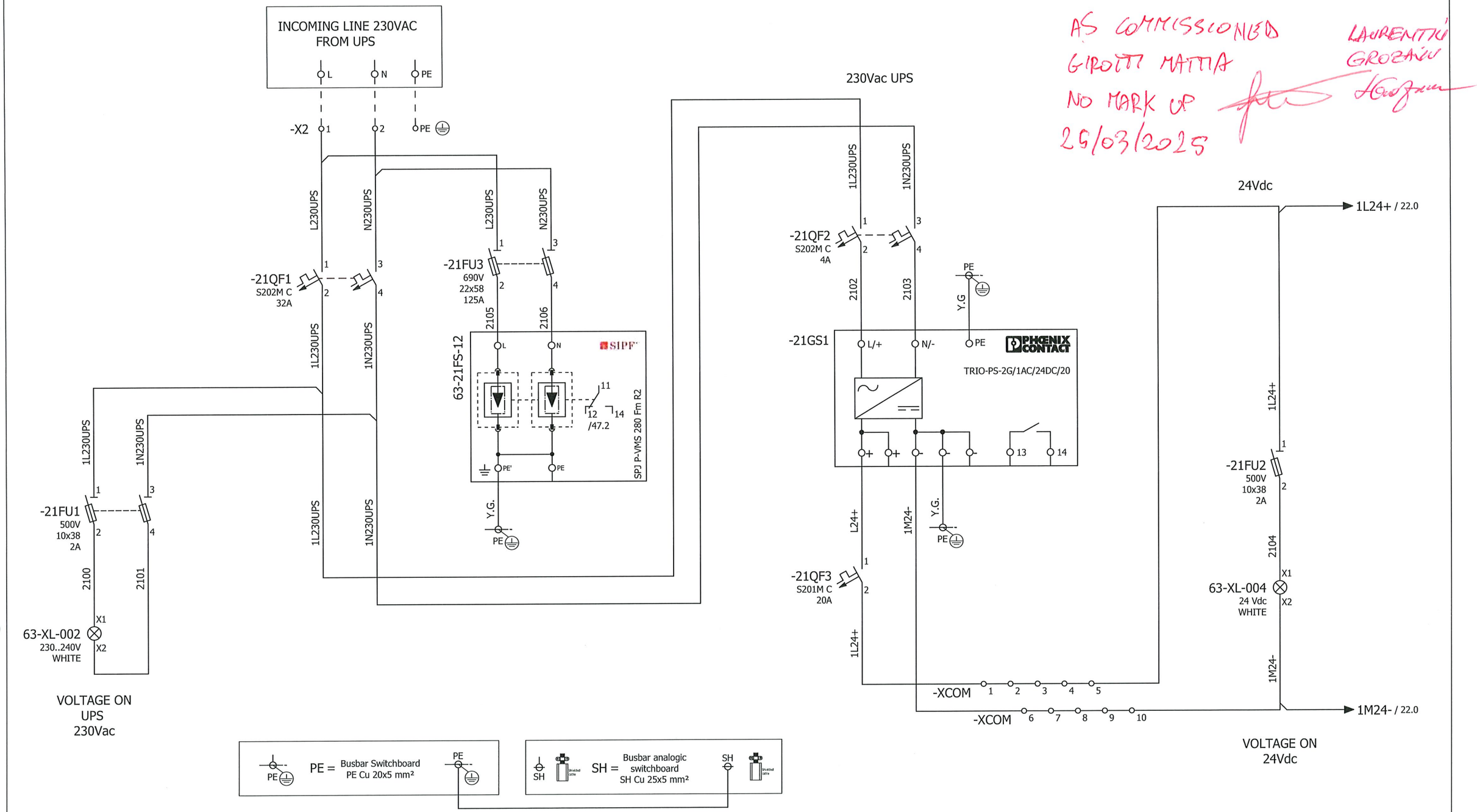
LAURENTIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
C	04.09.2024	O.A.			
A	30.05.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER	PAGE: 20
DESCRIPTION: INCOMING LINE 230Vac SERVICES	DATE: 08.05.2024	APPROVED:	LOCATION: + QE	NEXT: 21
	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD		TOTAL SHEETS: 50

AS COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025

LAURENTIU GROZAVU



REV.	DATE	PREPARED	REV.	DATE	PREPARED
C	04.09.2024	O.A.			
A	30.05.2024	O.A.			

coes 20 coes 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER
	DATE: 08.05.2024	APPROVED:	LOCATION: + QE
DESCRIPTION: INCOMING LINE 230Vac FROM UPS	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD	

PAGE	NEXT	TOTAL SHEETS
21	22	50

0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15

24Vdc

21.15 / 1L24+ → 1L24+ / 30.0

AS COMMISSIONED
GIROTTI MATTIA
MARK UP
25/03/2025
LAURENTIU GROZAVU

+FIELD
/ +24V
/ 0Vdc
Shut-Down Command from SIS 63-XS-001
(0=FAULT)

-XA 1 2 5x20F 2A

2200 2201

-22KA1
RELAY SIL
1 2 3 4
GMI.D5244D
Output I
15/16 14 13 COM NO NC
19/20 18 17 COM NO NC

2202 2203

1L24+

63-SBM-001 /22.6 RED EMERGENCY
21 22

-XA 3 5x20F 2A

2204 2205

63-HS-003 /47.10 SAFETY RELAY RESET
13 14

2206 2207

22L24+

2208 2209

63-SBM-001 /22.9 RED EMERGENCY
21 22

-22K1
SIEMENS 3SK1111-1AB30
A1 T1 IN1 T2 IN2 T3 IN3 T4 IN F/S
13 23 33 41
Logic
Autostart / Monitored Start
A2
14 24 34 42

1M24-

22L1+ 22L2+

22L2+ / 51.0
VALVE POWER SUPPLY

22L1+ / 47.14
SHUTDOWN INDICATION

2210

-22KA2
RELAY SIL
1 2 3 4
GMI.D5244D
Output I
15/16 14 13 COM NO NC
19/20 18 17 COM NO NC

2211 2212

-XA 4 5

+FIELD
CUMULATIVE CRITICAL ALARM TO SIS 63-XA-003
(0=FAULT)

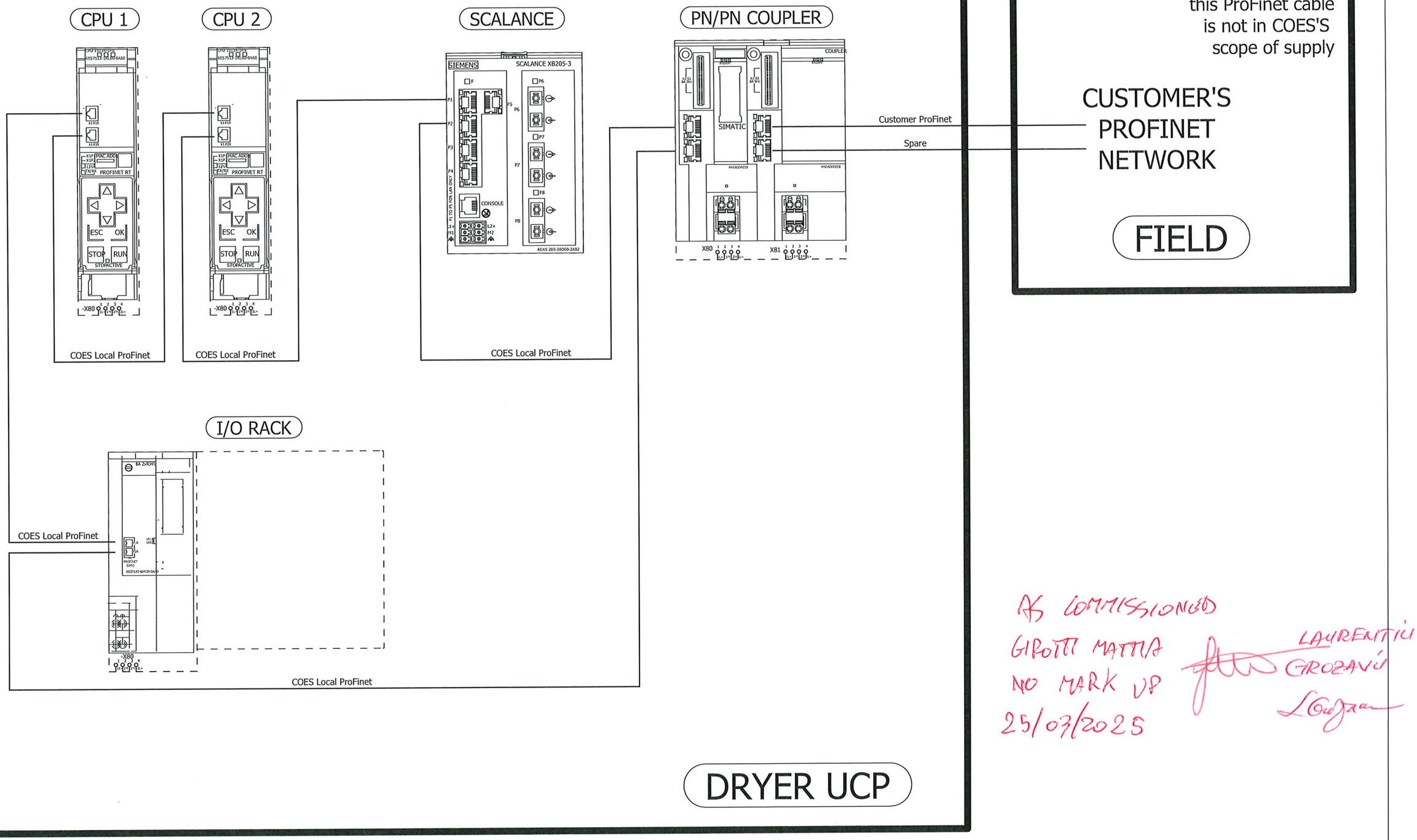
21.15 / 1M24- → 1M24- / 30.0

REV.	DATE	PREPARED	REV.	DATE	PREPARED
C	04.09.2024	O.A.			
A	30.05.2024	O.A.			

coes 20th 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER
DESCRIPTION: SAFETY RELAY 24Vdc	DATE: 08.05.2024	APPROVED:	LOCATION: + QE
	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD	

PAGE	NEXT	TOTAL SHEETS
22	25	50

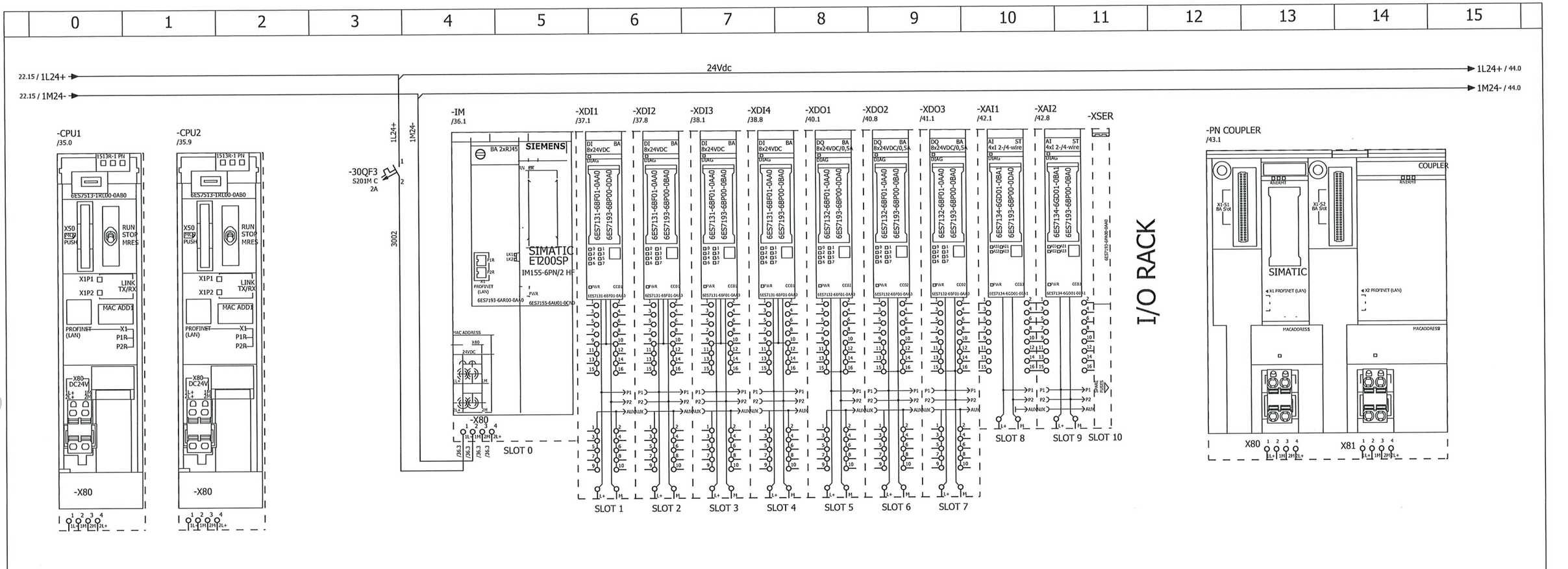


AS COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025
LAURENTIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER
	DATE: 08.05.2024	APPROVED:	LOCATION: + QE
DESCRIPTION: NETWORK ARCHITECTURE	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD	

PAGE	NEXT	TOTAL SHEETS
25	30	50



AS COMMISSIONED
GIPOTTI MATTIA
NO MARK UP
25/03/2025

LAURENTIU GROZAVU

						PLANT	PREPARED	CHECKED	PLANT	PAGE
						COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	ASSOLARI O.	TIRABOSCHI T.	= DRYER	30
							DATE	APPROVED	LOCATION	NEXT
B	01.08.2024	O.A.				DESCRIPTION	08.05.2024		+ QE	35
						PLC CONFIGURATION	WORK ORDER N	DRAWING N		TOTAL SHEETS
REV.	DATE	PREPARED	REV.	DATE	PREPARED		2024.4814_001	d241025-WD		50

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

-CPU1
/30.0
/44.10
SIE.6ES7513-1RL00-0AB0
SIE.6ES7954-8LF03-0AA0

S7-1500 SIEMENS
CPU 1513 R

X1P1 R: PN /61.1
X1P2 R: PN /61.2

-X80:1 1L+ /44.10 POWER SUPPLY CPU 1513R-1PN - CPU1
-X80:2 1M /44.10
-X80:3 2M /44.10
-X80:4 2L+ /44.11

6ES7513-1RL00-0AB0

-CPU2
/30.1
/44.13
SIE.6ES7513-1RL00-0AB0
SIE.6ES7954-8LF03-0AA0

S7-1500 SIEMENS
CPU 1513 R

X1P1 R: PN /61.5
X1P2 R: PN /61.6

-X80:1 1L+ /44.13 POWER SUPPLY CPU 1513R-1PN - CPU2
-X80:2 1M /44.13
-X80:3 2M /44.13
-X80:4 2L+ /44.13

6ES7513-1RL00-0AB0

AS COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025
LAURENTIU GROZAVU

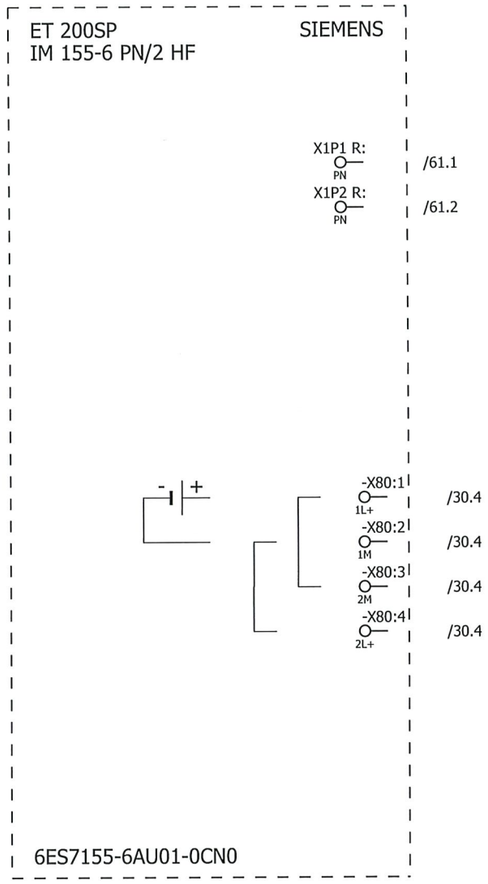
REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

coes 20th 1997 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER	PAGE: 35
	DATE: 08.05.2024	APPROVED:	LOCATION: + QE	NEXT: 36
DESCRIPTION: SUMMARY CPU	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD		TOTAL SHEETS: 50

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

/30.4
-IM
SIE.6ES7155-6AU01-0CN0
SIE.6ES7193-6AR00-0AA0



AS COMMISSIONED
GIPOTTI MATTIA
NO MARK UP
25/03/2025
LAURENTIU GROZAVU

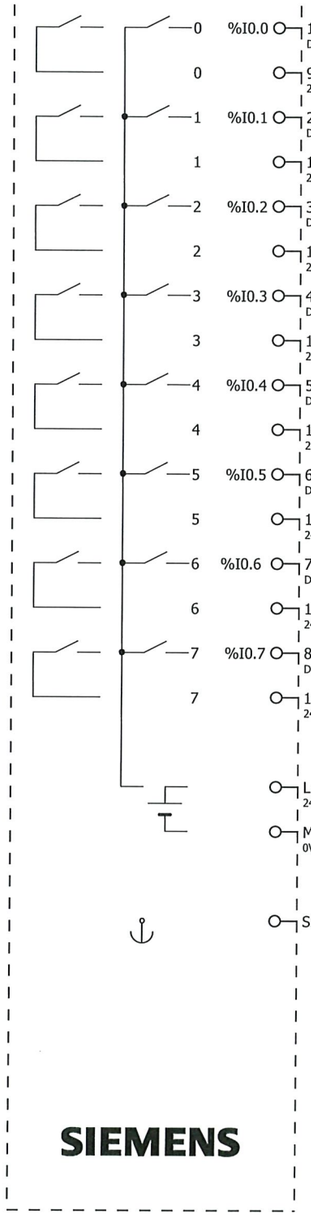
REV.	DATE	PREPARED	REV.	DATE	PREPARED

coes 20th coes 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER	PAGE: 36
DESCRIPTION: SUMMARY CARDS I/O RACK	DATE: 08.05.2024	APPROVED:	LOCATION: + QE	NEXT: 37
	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD		TOTAL SHEETS: 50

6ES7131-6BF01-0AA0
6ES7193-6BP00-0DA0

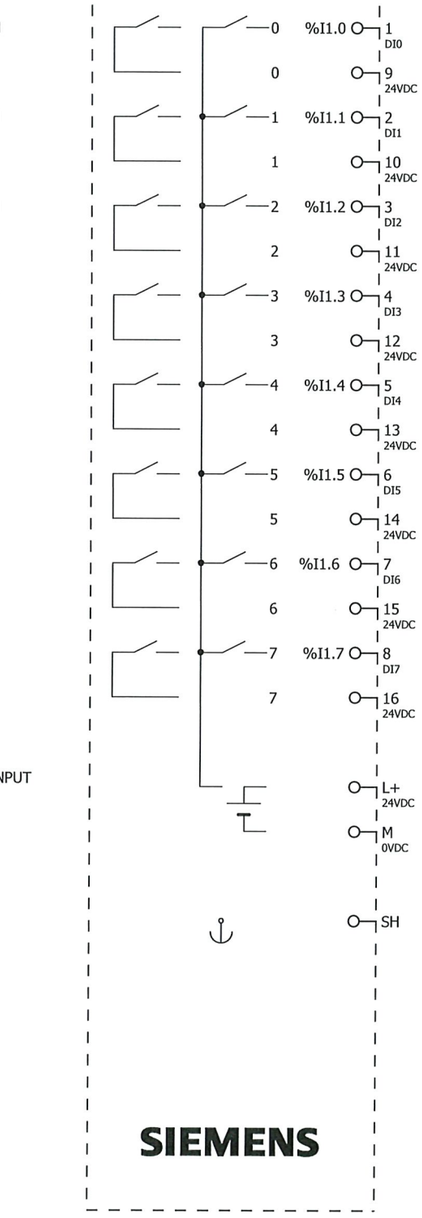
-XDI1
/30.5



/46.0	63-PS-054	(DRYER 1) TOWER A PRESSURE SWITCH	
/46.2	63-PS-056	(DRYER 1) TOWER B PRESSURE SWITCH	
/46.4	63-PS-058	(DRYER 2) TOWER A PRESSURE SWITCH	
/46.6	63-PS-060	(DRYER 2) TOWER B PRESSURE SWITCH	
/46.8	63-CMPR-RUN-FDBCK-001	COMPRESSOR 1 RUNNING	
/46.10	63-CMPR-ALARM-FDBCK-001	COMPRESSOR 1 COMMON ALARM	
/46.12	63-CMPR-RUN-FDBCK-002	COMPRESSOR 2 RUNNING	
/46.14	63-CMPR-ALARM-FDBCK-002	COMPRESSOR 2 COMMON ALARM	
/44.1		POWER SUPPLY WHITE CARD DIGITAL INPUT -XDI1	
/44.1			

6ES7131-6BF01-0AA0
6ES7193-6BP00-0BA0

-XDI2
/30.6



/47.0	63-20FS-12	SOURGE ARRESTER 230VAC_SERVICES OK	
/47.2	63-21FS-12	SOURGE ARRESTER 230VAC_UPS OK	
/47.4	63-TH-001	INTERNAL CABINET THERMOSTAT	
/47.6	63-HS-001	LOCAL START PUSH BUTTON	
/47.8	63-HS-002	LOCAL STOP PUSH BUTTON	
/47.10	63-HS-003	LOCAL ALARM RESET	
/47.12	63-HS-004	LOCAL REMOTE SELECTOR STATUS	
/47.14	63-ESD-001	SHUTDOWN ALARM FROM SIS - INDICATION ONLY	

AS-COMMISSIONED
GROTTI MATTIA
NO MARK UP
25/03/2025
LAURENTIU GROZAVU

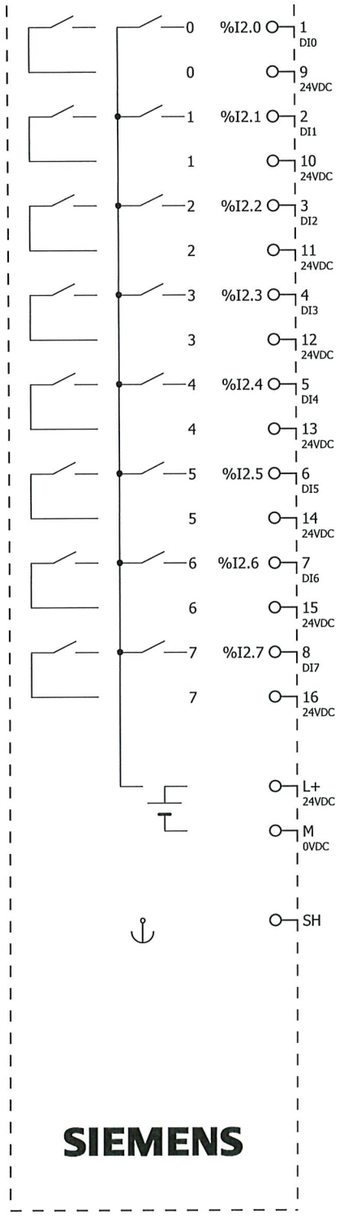
REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

coes 20th coes 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER / PAGE: 37
DESCRIPTION: SUMMARY CARDS I/O RACK	DATE: 08.05.2024	APPROVED:	LOCATION: + QE / NEXT: 38
	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD	TOTAL SHEETS: 50

6ES7131-6BF01-0AA0
6ES7193-6BP00-0BA0

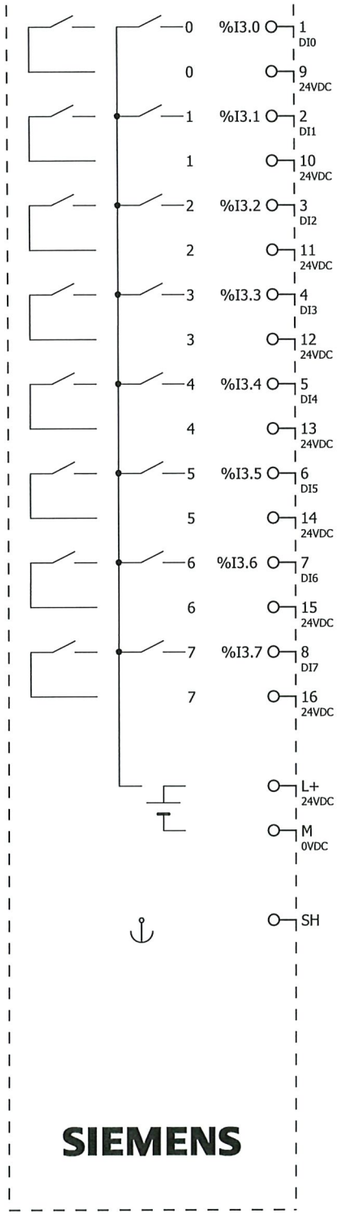
-XDI3
/30.7



/48.0	63-ZSH-055	VALVE 63-XV-055 OPEN LIMIT SWITCH
/48.2	63-ZSL-055	VALVE 63-XV-055 CLOSED LIMIT SWITCH
/48.4	63-ZSH-056	VALVE 63-XV-056 OPEN LIMIT SWITCH
/48.6	63-ZSL-056	VALVE 63-XV-056 CLOSED LIMIT SWITCH
/48.8	63-ZSH-057	VALVE 63-XV-057 OPEN LIMIT SWITCH
/48.10	63-ZSL-057	VALVE 63-XV-057 CLOSED LIMIT SWITCH
/48.12	63-ZSH-058	VALVE 63-XV-058 OPEN LIMIT SWITCH
/48.14	63-ZSL-058	VALVE 63-XV-058 CLOSED LIMIT SWITCH

6ES7131-6BF01-0AA0
6ES7193-6BP00-0BA0

-XDI4
/30.7



/49.0	63-ZSH-059	VALVE 63-XV-059 OPEN LIMIT SWITCH
/49.2	63-ZSL-059	VALVE 63-XV-059 CLOSED LIMIT SWITCH
/49.4	63-ZSH-060	VALVE 63-XV-060 OPEN LIMIT SWITCH
/49.6	63-ZSL-060	VALVE 63-XV-060 CLOSED LIMIT SWITCH
/49.8		SPARE
/49.10		SPARE
/49.12		SPARE
/49.14		SPARE

AS COMMISSIONED
GROTTI MATTIA
NO MARK UP
25/03/2025
LAURENTIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			

coes 20 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER
	DATE: 08.05.2024	APPROVED:	LOCATION: + QE
DESCRIPTION: SUMMARY CARDS I/O RACK	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD	

PAGE	NEXT	TOTAL SHEETS
38	40	50

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

6ES7132-6BF01-0AA0
6ES7193-6BP00-0DA0

-XDO1
/30.8

0 %Q0.0	1 DQ0	/51.0	63-XY-051	(DRYER 1) 5-WAY VALVE SOV COMMAND	
0	9 M				
1 %Q0.1	2 DQ1	/51.2	63-XY-052	(DRYER 1) DEPRESSURIZATION VALVE SOV COMMAND	
1	10 M				
2 %Q0.2	3 DQ2	/51.4	63-XY-053	(DRYER 2) 5-WAY VALVE SOV COMMAND	
2	11 M				
3 %Q0.3	4 DQ3	/51.6	63-XY-054	(DRYER 2) DEPRESSURIZATION VALVE SOV COMMAND	
3	12 M				
4 %Q0.4	5 DQ4	/51.8	63-XL-003	RUNNING STATUS LAMP	
4	13 M				
5 %Q0.5	6 DQ5	/51.10	63-XA-001	GENERAL ALARM LAMP	
5	14 M				
6 %Q0.6	7 DQ6	/51.12	63-CMPR-START-001	COMPRESSOR 1 REMOTE START/STOP	
6	15 M				
7 %Q0.7	8 DQ7	/51.14	63-CMPR-START-002	COMPRESSOR 2 REMOTE START/STOP	
7	16 M				
	L+ 24VDC	/44.3		POWER SUPPLY WHITE CARD DIGITAL OUTPUT -XDO1	
	M 0VDC	/44.3			
	SH				

SIEMENS

6ES7132-6BF01-0AA0
6ES7193-6BP00-0BA0

-XDO2
/30.8

0 %Q1.0	1 DQ0	/52.0	63-ALARM-DRY-001	DRYER 1 ALARM
0	9 M			
1 %Q1.1	2 DQ1	/52.2	63-ALARM-DRY-002	DRYER 2 ALARM
1	10 M			
2 %Q1.2	3 DQ2	/52.4	63-XV-055	VALVE 63-XV-055 COMMAND
2	11 M			
3 %Q1.3	4 DQ3	/52.6	63-XV-056	VALVE 63-XV-056 COMMAND
3	12 M			
4 %Q1.4	5 DQ4	/52.8	63-XV-057	VALVE 63-XV-057 COMMAND
4	13 M			
5 %Q1.5	6 DQ5	/52.10	63-XV-058	VALVE 63-XV-058 COMMAND
5	14 M			
6 %Q1.6	7 DQ6	/52.12	63-XV-059	VALVE 63-XV-059 COMMAND
6	15 M			
7 %Q1.7	8 DQ7	/52.14	63-XV-060	VALVE 63-XV-060 COMMAND
7	16 M			
	L+ 24VDC			
	M 0VDC			
	SH			

SIEMENS

AS COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025
LAURENTIU GROZAVU

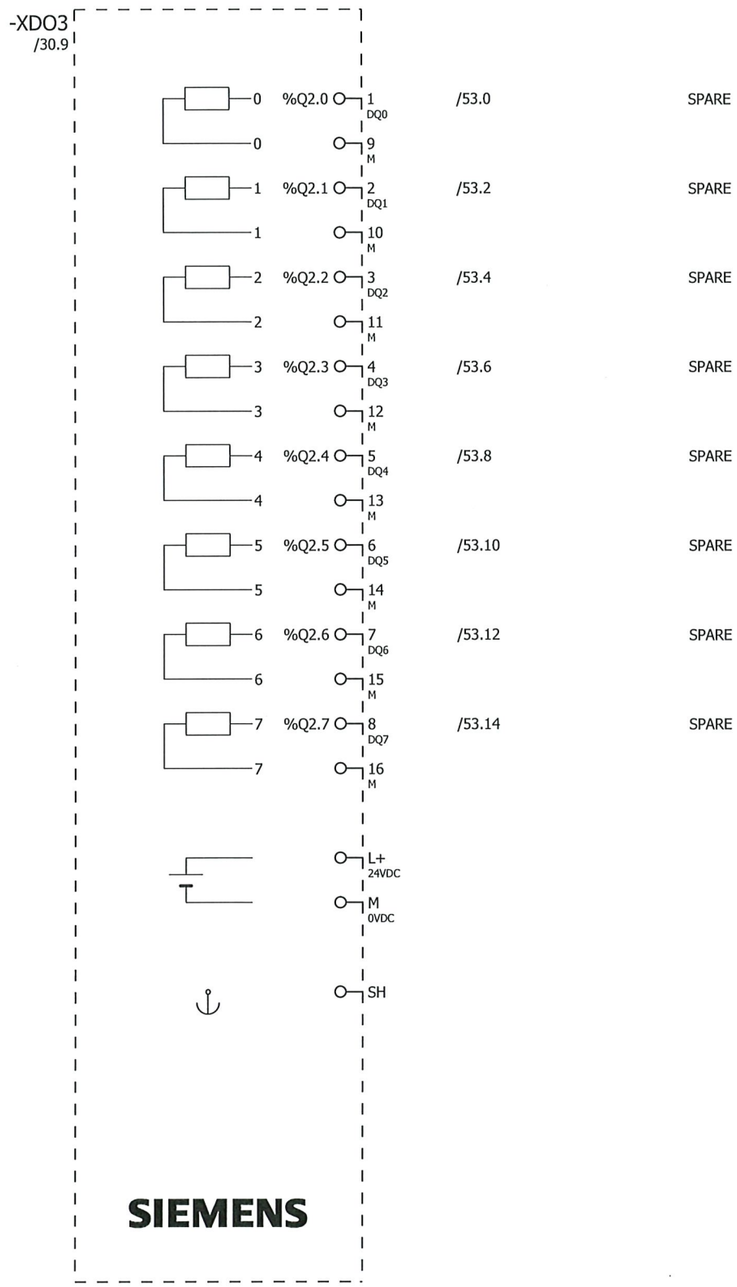
REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			
A	30.05.2024	O.A.			

coes 20 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER	PAGE: 40
	DATE: 08.05.2024	APPROVED	LOCATION: + QE	NEXT: 41
DESCRIPTION: SUMMARY CARDS I/O RACK	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD		TOTAL SHEETS: 50

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

6ES7132-6BF01-0AA0
6ES7193-6BP00-0BA0



/53.0	SPARE	
/53.2	SPARE	
/53.4	SPARE	
/53.6	SPARE	
/53.8	SPARE	
/53.10	SPARE	
/53.12	SPARE	
/53.14	SPARE	

AS COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025

LAURENȚIU
GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			

coes 20th 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER
	DATE: 08.05.2024	APPROVED:	LOCATION: + QE
DESCRIPTION: SUMMARY CARDS I/O RACK	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD	

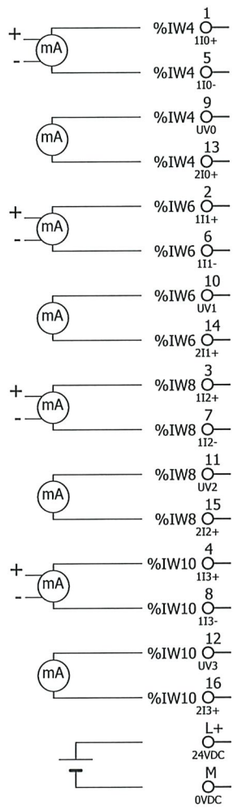
PAGE	NEXT	TOTAL SHEETS
41	42	50

/30.9

-XAI1

SIE.6ES7134-6GD01-0BA1
SIE.6ES7193-6BP00-0DA0

ET 200SP SIEMENS
AI 4xI 2-/4-wire ST



/54.1			
/54.1			
/54.2	63_PT_064	PRESSURE TRANSMITTER INSTRUMENT AIR RECIEVER	
/54.2			
/54.5			
/54.5			
/54.6	63_TIT_051	TEMPERATURE TRANSMITTER INLET AIR	
/54.6			
/54.9			
/54.9			
/54.10	63_TIT_052	TEMPERATURE TRANSMITTER INSTRUMENT AIR RECIEVER	
/54.10			
/54.13			
/54.13			
/54.14	63_AIT_051	DEW POINT TRANSMITTER	
/54.14			
/44.6		POWER SUPPLY WHITE CARD ANALOG INPUT -XAI1	
/44.7			

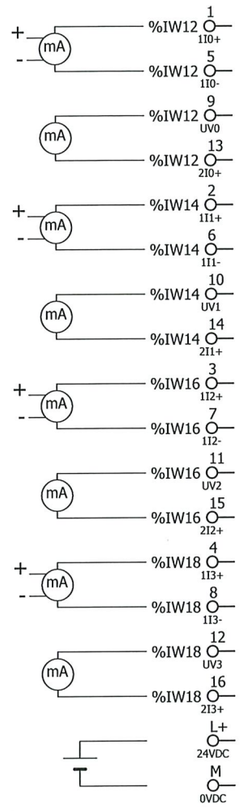
6ES7134-6GD01-0BA1

/30.10

-XAI2

SIE.6ES7134-6GD01-0BA1
SIE.6ES7193-6BP00-0BA0

ET 200SP SIEMENS
AI 4xI 2-/4-wire ST



/55.1			
/55.1			
/55.2	63_FIT_051	FLOW TRANSMITTER OUTLET AIR	
/55.2			
/55.5			
/55.5			
/55.6	63_PDIT_051	DIFFERENTIAL PRESSURE TRANSMITTER INLET FILTERS	
/55.6			
/55.9			
/55.9			
/55.10	63_PDIT_062	DIFFERENTIAL PRESSURE TRANSMITTER OUTLET FILTERS	
/55.10			
/55.13			
/55.13			
/55.14	_XAI_45	SPARE	
/55.14			

6ES7134-6GD01-0BA1

AS COMMISSIONED
GROTTI MATTIA
NO MARK UP
25/03/2025
LAURENTIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

coes 20 1997 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER
	DATE: 08.05.2024	APPROVED:	LOCATION: + QE
DESCRIPTION: SUMMARY CARDS I/O RACK	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD	

PAGE	NEXT	TOTAL SHEETS
42	43	50

-PN COUPLER
/30.12

6ES7158-3AD10-0XA0
6ES7193-6RA00-1AN0

X80:1 1L+	/45.1	POWER SUPPLY PN/PN COUPLER CARD (X80)
X80:2 1M	/45.2	
X80:3 2M	/45.1	
X80:4 2L+	/45.1	

K1
X300
X1P1 R: PN — /61.9
X1P2 R: PN — /61.11
6ES7193-6AF00-0AA0

-K2
X301
X1P1 R: PN — /61.12
X1P2 R: PN — /61.13
6ES7193-6AF00-0AA0

X81:1 1L+	/45.3	POWER SUPPLY PN/PN COUPLER CARD (X81)
X81:2 1M	/45.4	
X81:3 2M	/45.4	
X81:4 2L+	/45.4	

SIEMENS

-SCALANCE
/60.1
/60.11
/61.0
/43.10
SIE.6GK5205-3BD00-2AB2

SCALANCE
XB205-3

SIEMENS		
P1/IE	P1 IE	/61.1
P2/IE	P2 IE	/61.2
P3/IE	P3 IE	/61.2
P4/IE	P4 IE	/61.3
P5/IE	P5 IE	/61.4
CONS/RJ11	CONS RJ11	/61.5
P6_RXT/FX	P6_RXT FX	/61.5
P6_TXT/FX	P6_TXT FX	/61.6
P7_RXT/FX	P7_RXT FX	/61.7
P7_TXT/FX	P7_TXT FX	/61.8
P8_RXT/FX	P8_RXT FX	/61.9
P8_TXT/FX	P8_TXT FX	/61.9

6GK5205-3BD00-2AB2

SCALANCE
/43.7

SCALANCE
XB205-3

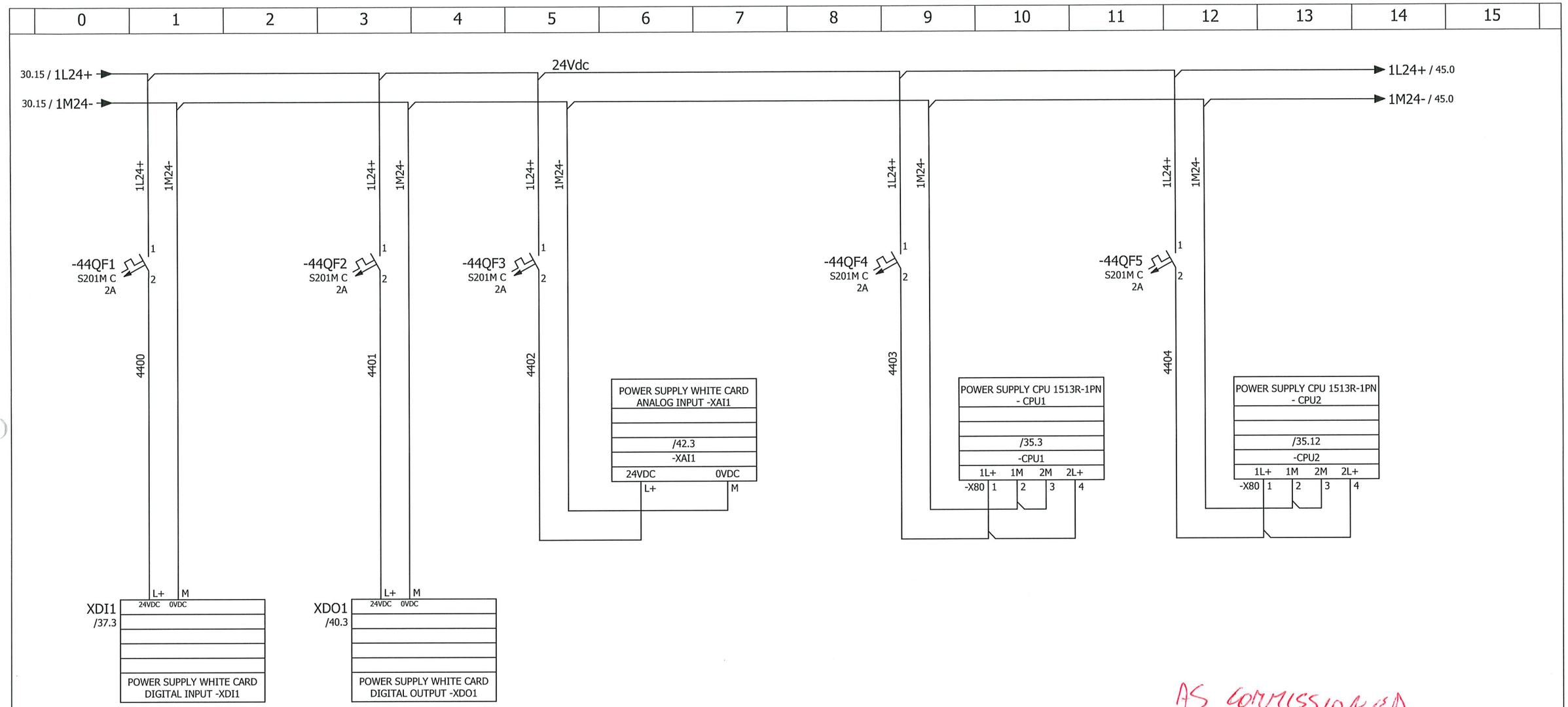
SIEMENS		
L1+/24VDC	L1+ 24VDC	/60.2
M1/GND	M1 GND	/60.3
FGND1/Functional GND	FGND1 Functional GND	/60.5
L2+/24VDC	L2+ 24VDC	/60.6
M2/GND	M2 GND	/60.7
FGND2/Functional GND	FGND2 Functional GND	/60.9

AS COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025
LAURENTIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED

coes 20th coes 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER / PAGE: 43
DESCRIPTION: SUMMARY CARD PN COUPLER AND SWITCH SCALANCE	DATE: 08.05.2024	APPROVED:	LOCATION: + QE / NEXT: 44
	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD	TOTAL SHEETS: 50

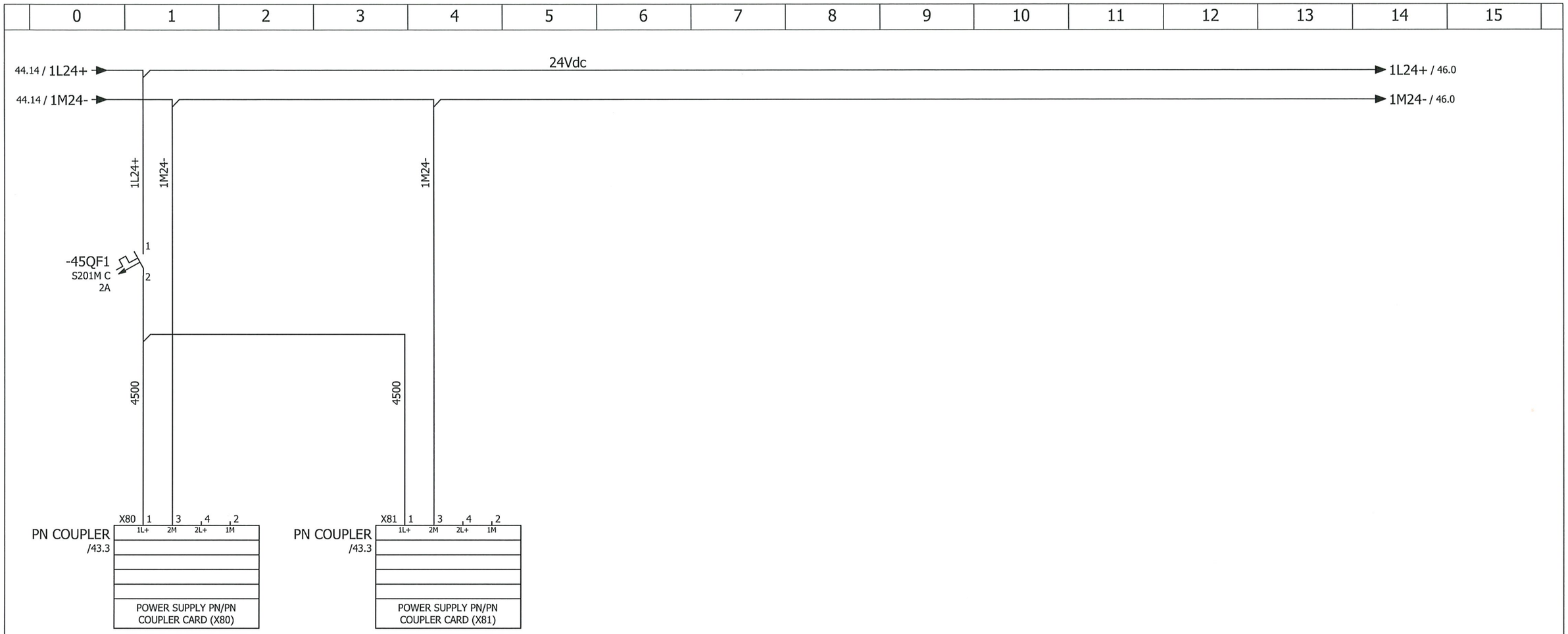


AS COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025
LAURENȚIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

coes 20 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER	PAGE: 44
DESCRIPTION: POWER SUPPLY CPU AND CARDS I/O RACK	DATE: 08.05.2024	APPROVED:	LOCATION: + QE	NEXT: 45
	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD		TOTAL SHEETS: 50



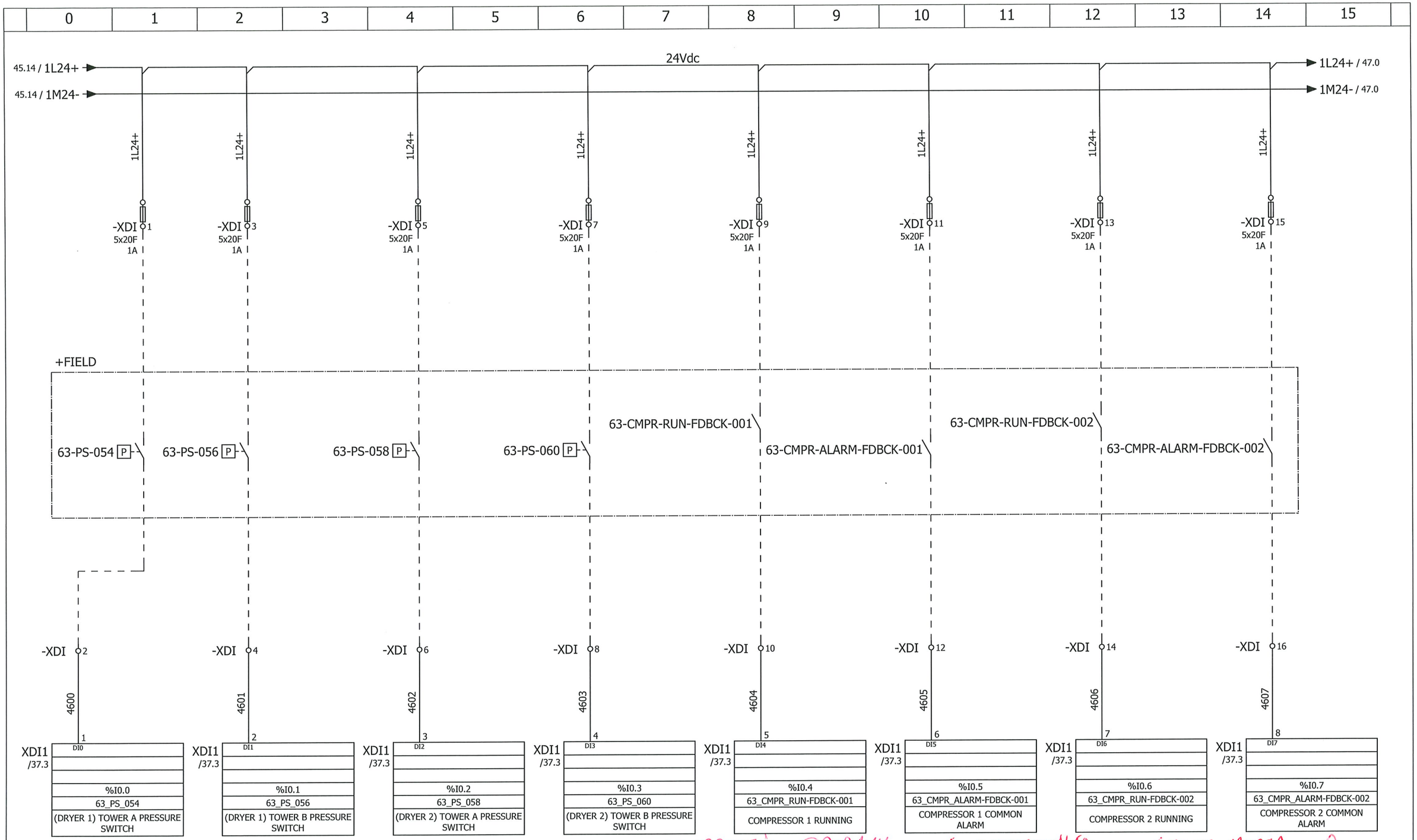
AS COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025

LAURENTIU
GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED

coes 20th coes 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER / PAGE: 45
DESCRIPTION: POWER SUPPLY PN/PN COUPLER	DATE: 08.05.2024	APPROVED:	LOCATION: + QE / NEXT: 46
	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD	TOTAL SHEETS: 50



LAURENTIU GROZAVU AS COMMISSIONED GIROTTI MATTIA
NOMARK UP 25/03/2025

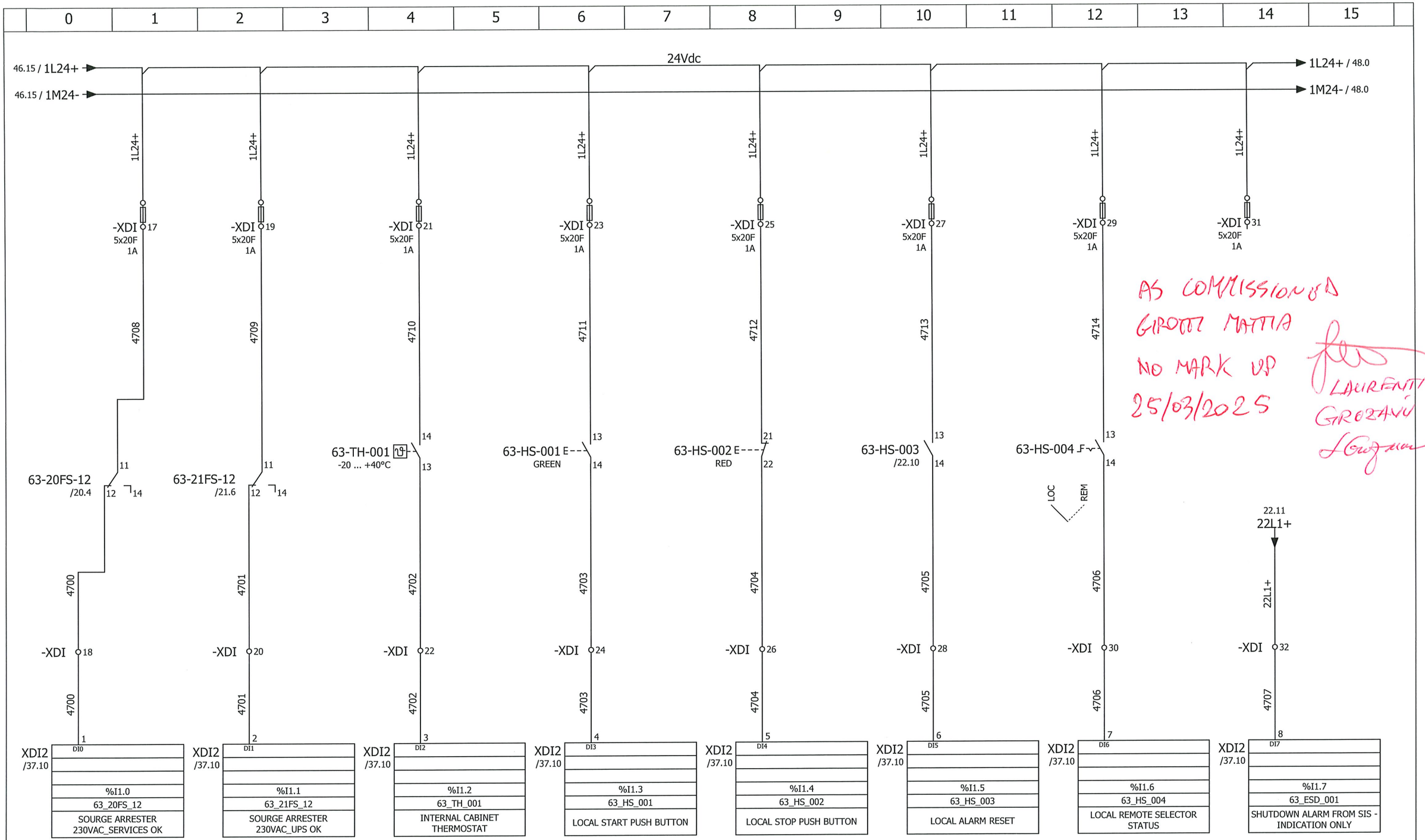
REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

coes 20th coes 1997 2017

PLANT
COMMAND AND CONTROL SWITCHBOARDS
DRYER - WIRING DIAGRAM

DESCRIPTION
DIGITAL INPUT I/O RACK

PREPARED	CHECKED	PLANT	PAGE
ASSOLARI O.	TIRABOSCHI T.	= DRYER	46
DATE	APPROVED	LOCATION	NEXT
08.05.2024		+ QE	47
WORK ORDER N	DRAWING N		TOTAL SHEETS
2024.4814_001	d241025-WD		50

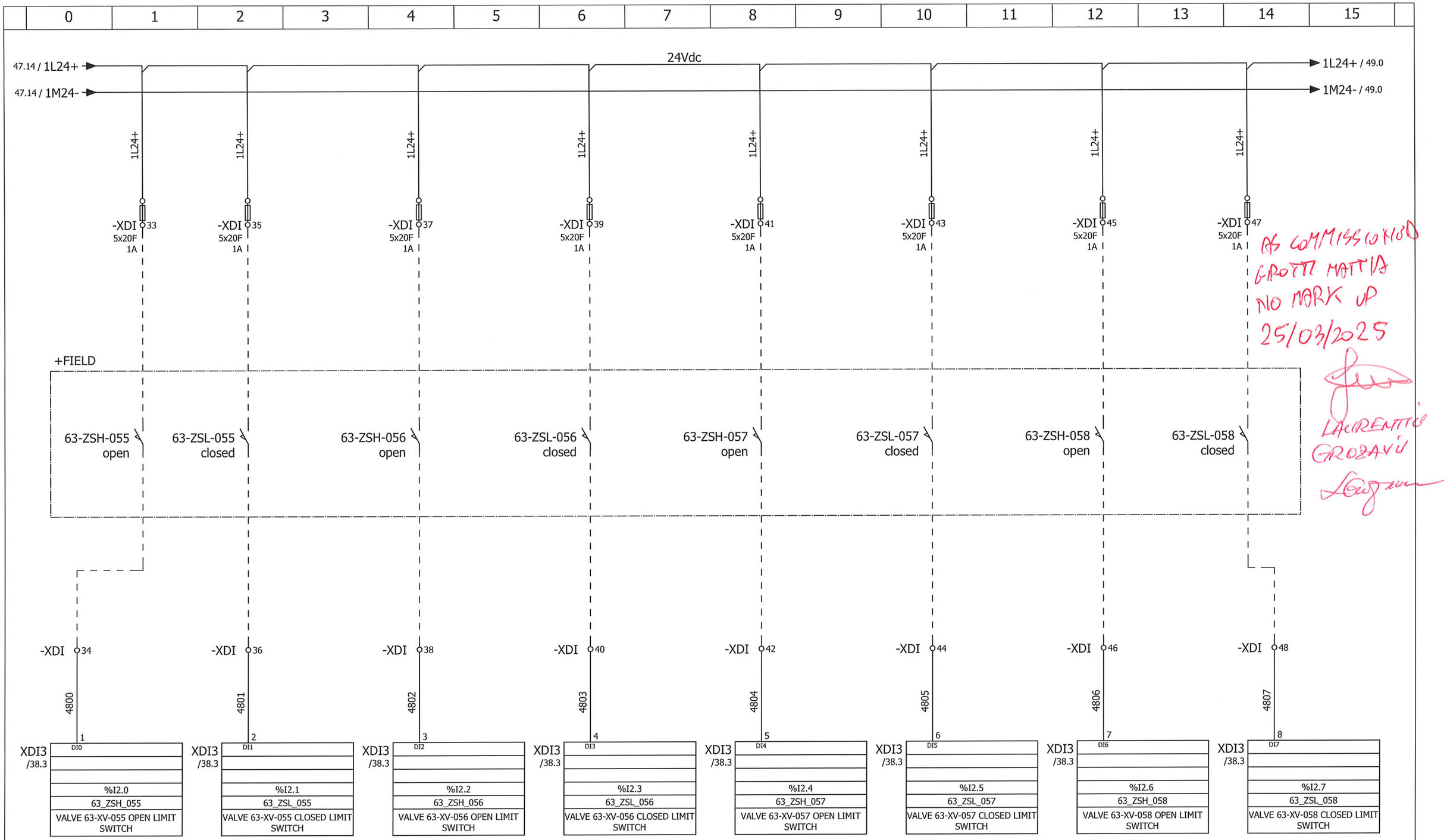


AS COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025
LAURENTIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
C	04.09.2024	O.A.			
A	30.05.2024	O.A.			

coes 20th 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER	PAGE: 47
DESCRIPTION: DIGITAL INPUT I/O RACK	DATE: 08.05.2024	APPROVED:	LOCATION: + QE	NEXT: 48
	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD		TOTAL SHEETS: 50



AS COMMISSIONED
GROTTI MATTIA
NO MARK UP
25/03/2025

LAURENTIU GROZAVU

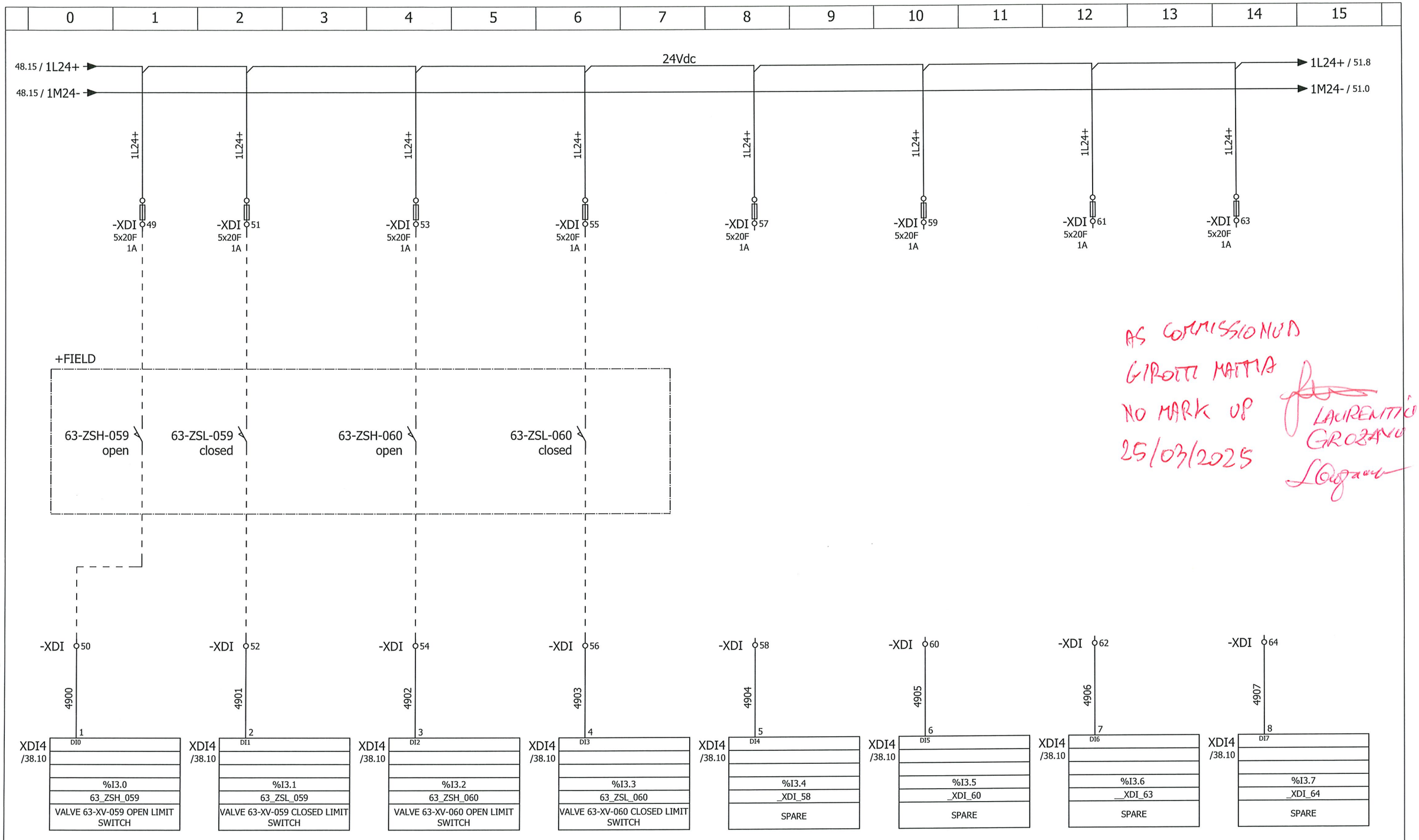
REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			

coes 20 1997 - 2017

PLANT
COMMAND AND CONTROL SWITCHBOARDS
DRYER - WIRING DIAGRAM

DESCRIPTION
DIGITAL INPUT I/O RACK

PREPARED	CHECKED	PLANT	PAGE
ASSOLARI O.	TIRABOSCHI T.	= DRYER	48
DATE	APPROVED	LOCATION	NEXT
08.05.2024		+ QE	49
WORK ORDER N	DRAWING N		TOTAL SHEETS
2024.4814_001	d241025-WD		50



AS COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025
LAURENTIU GROZAVU

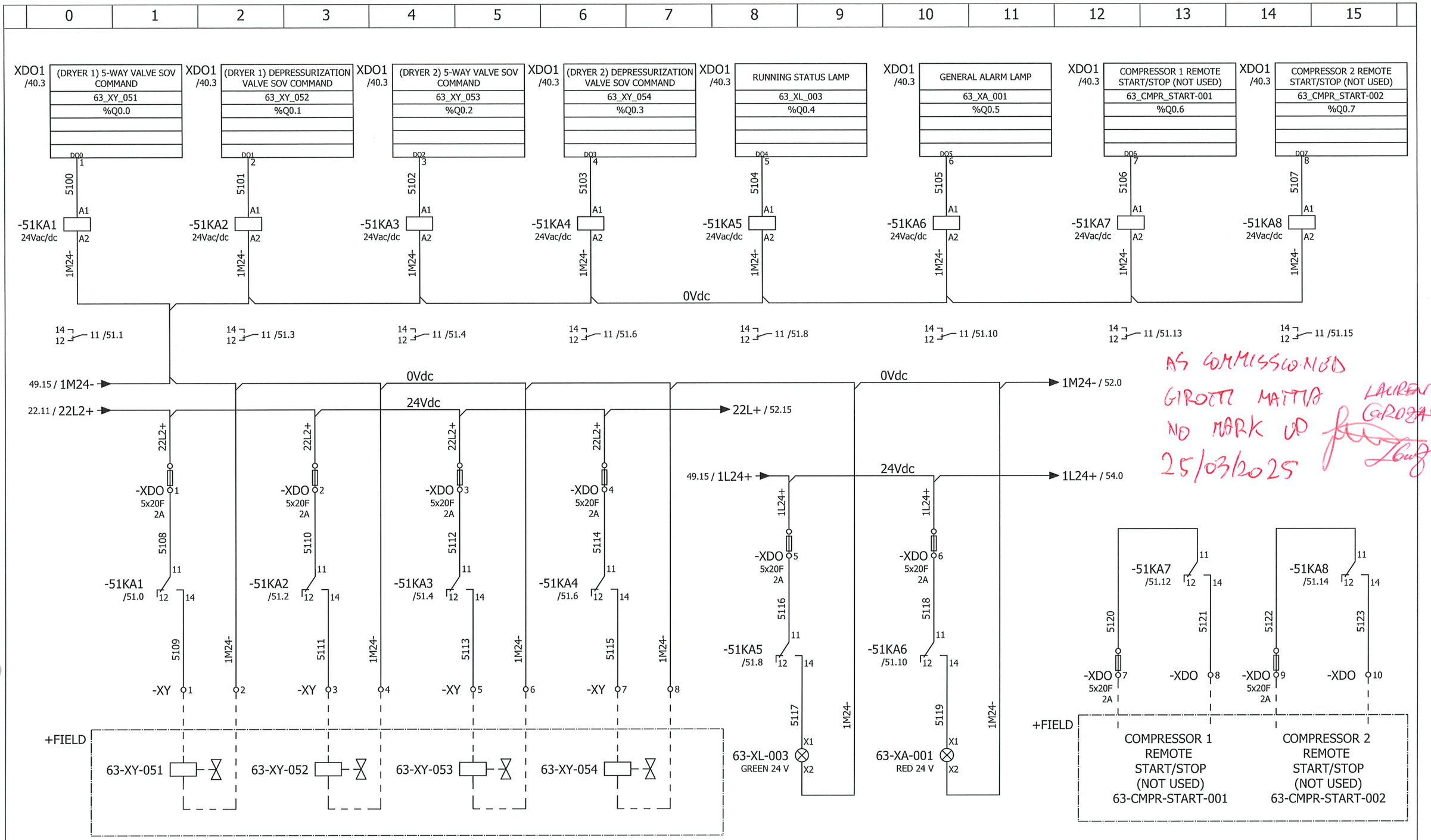
REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			

coes 20th 1997 - 2017

PLANT
COMMAND AND CONTROL SWITCHBOARDS
DRYER - WIRING DIAGRAM

DESCRIPTION
DIGITAL INPUT I/O RACK

PREPARED	CHECKED	PLANT	PAGE
ASSOLARI O.	TIRABOSCHI T.	= DRYER	49
DATE	APPROVED	LOCATION	NEXT
08.05.2024		+ QE	51
WORK ORDER N	DRAWING N		TOTAL SHEETS
2024.4814_001	d241025-WD		50



AS COMMISSIONED
GIROTTI MATTIA LAURENTIU GROZAVU
NO MARK UP
25/03/2025

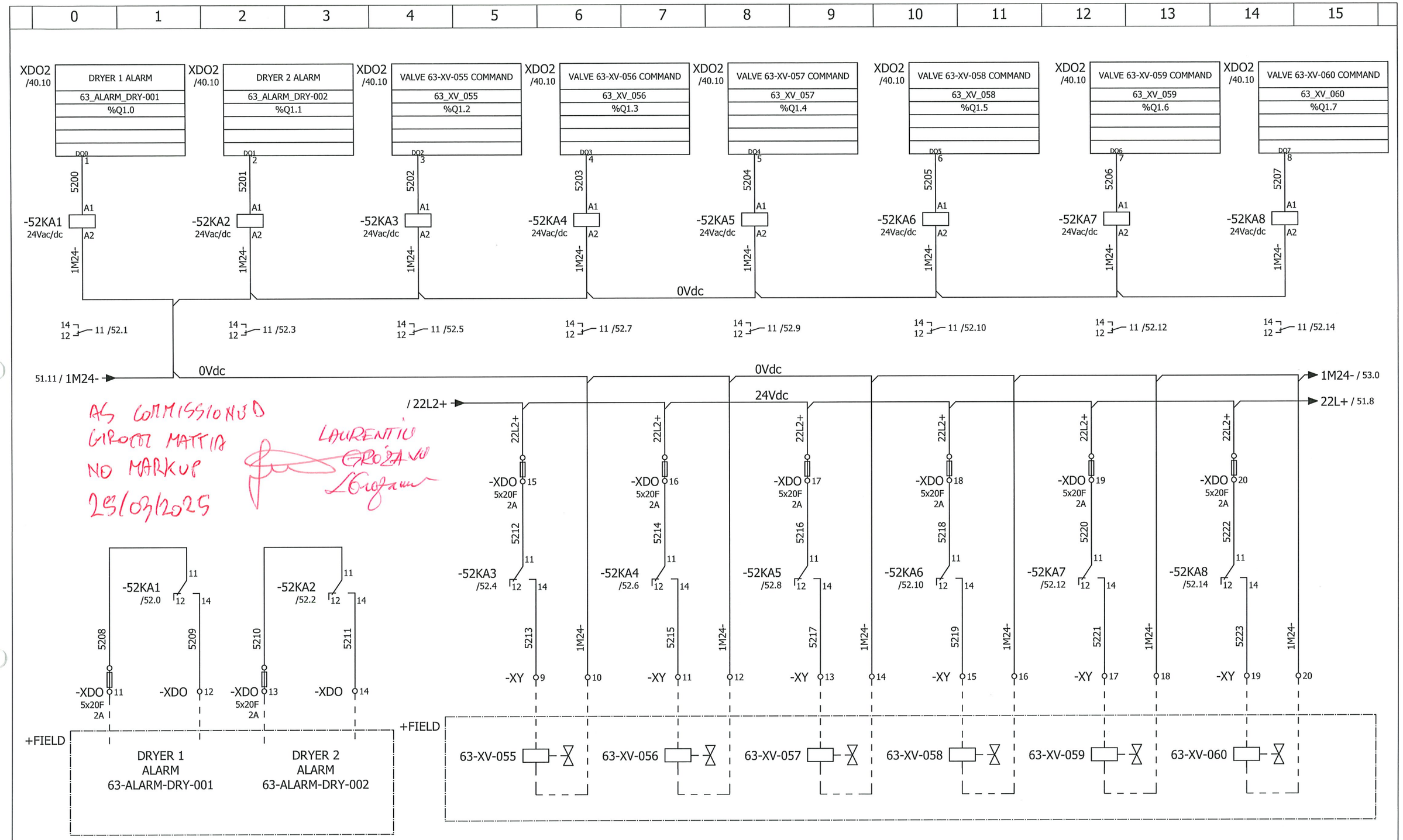
REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

coes 20 1997 - 2017

PLANT
COMMAND AND CONTROL SWITCHBOARDS
DRYER - WIRING DIAGRAM

DESCRIPTION
DIGITAL OUTPUT I/O RACK

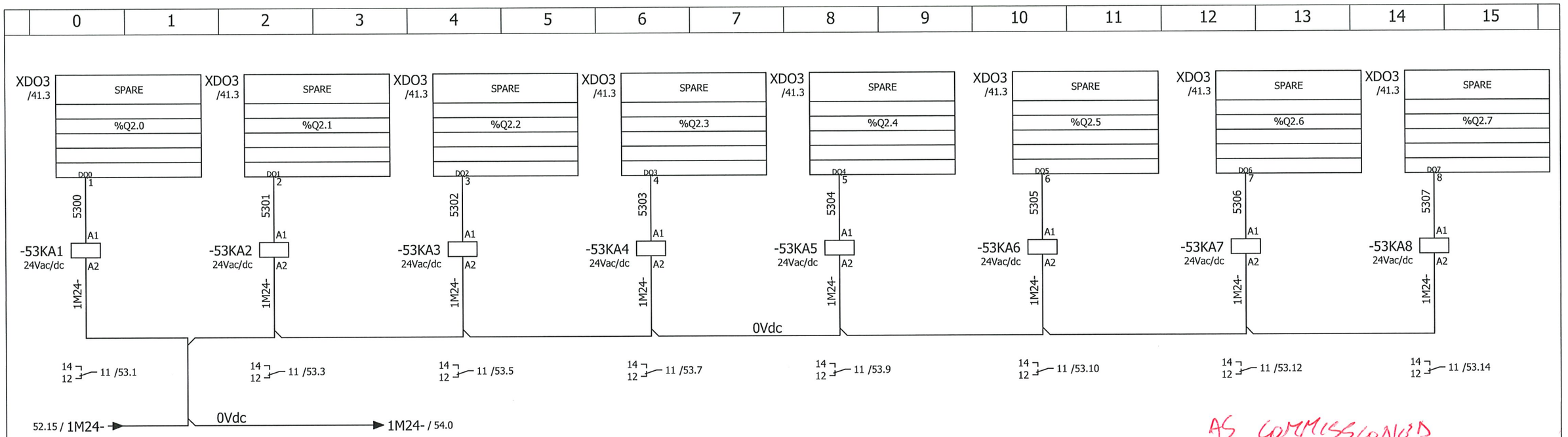
PREPARED	CHECKED	PLANT	PAGE
ASSOLARI O.	TIRABOSCHI T.	= DRYER	51
DATE	APPROVED	LOCATION	NEXT
08.05.2024		+ QE	52
WORK ORDER N	DRAWING N		TOTAL SHEETS
2024.4814_001	d241025-WD		50

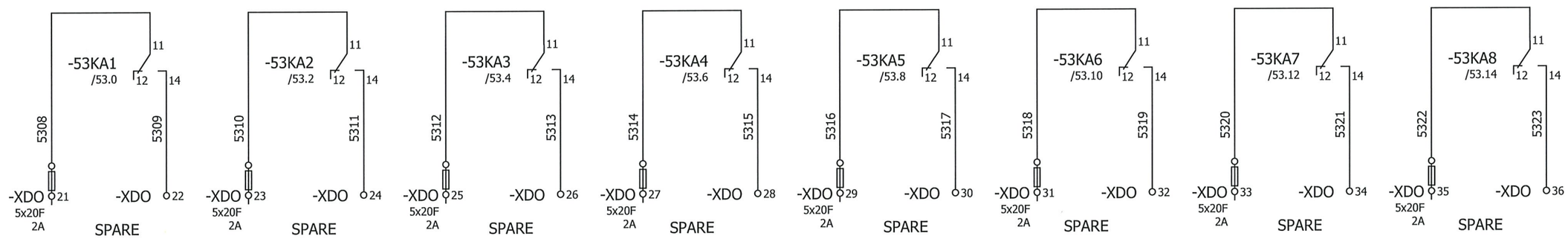


AS COMMISSIONED
GIROTTI MATTIA
NO MARKUP
25/03/2025
LAURENTIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			
A	30.05.2024	O.A.			

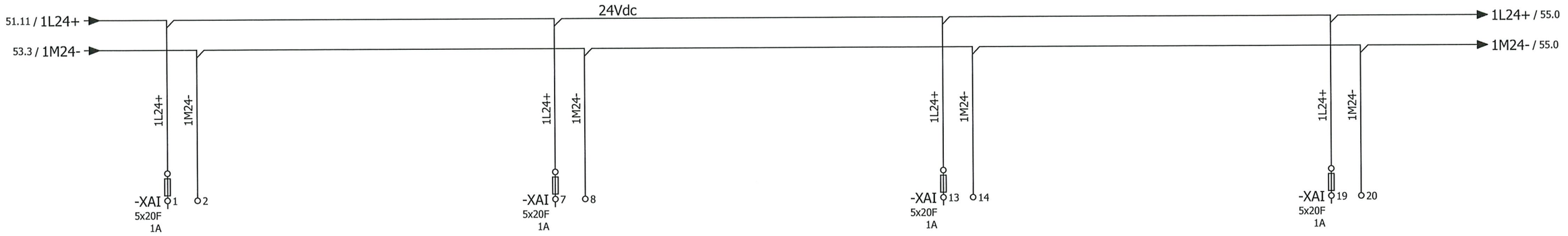
PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER	PAGE: 52
	DATE: 08.05.2024	APPROVED:	LOCATION: + QE	NEXT: 53
DESCRIPTION: DIGITAL OUTPUT I/O RACK	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD		TOTAL SHEETS: 50

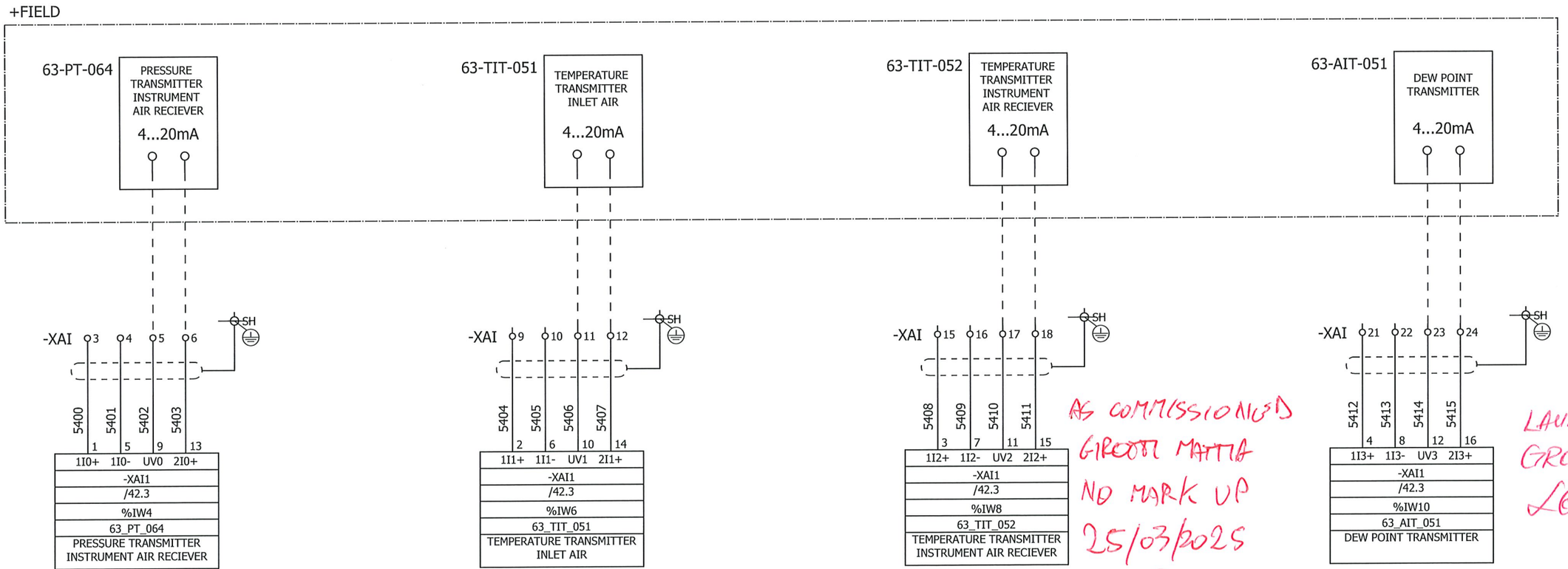




AS COMMISSIONED
GIPOTTI MATTIA
NO MARK UP
25/03/2025
LAURENTIU GROZAVU

						PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER	PAGE: 53
						DESCRIPTION: DIGITAL OUTPUT I/O RACK	DATE: 08.05.2024	APPROVED:	LOCATION: + QE	NEXT: 54
							WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD		TOTAL SHEETS: 50
B	01.08.2024	O.A.								
REV.	DATE	PREPARED	REV.	DATE	PREPARED					





AS COMMISSIONED
GIACOMI MATTIA
NO MARK UP
25/03/2025

LAURENTIU GROZAVU
LGrozavu

A	30.05.2024	O.A.			
REV.	DATE	PREPARED	REV.	DATE	PREPARED

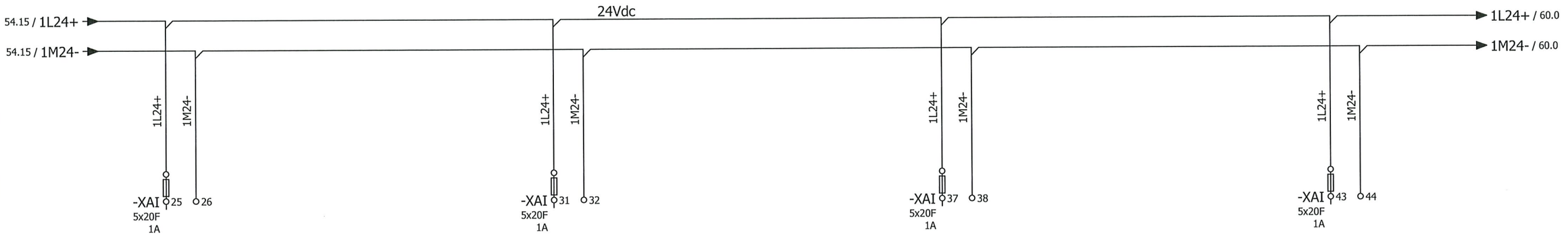
coes 20 coes 1997 2017

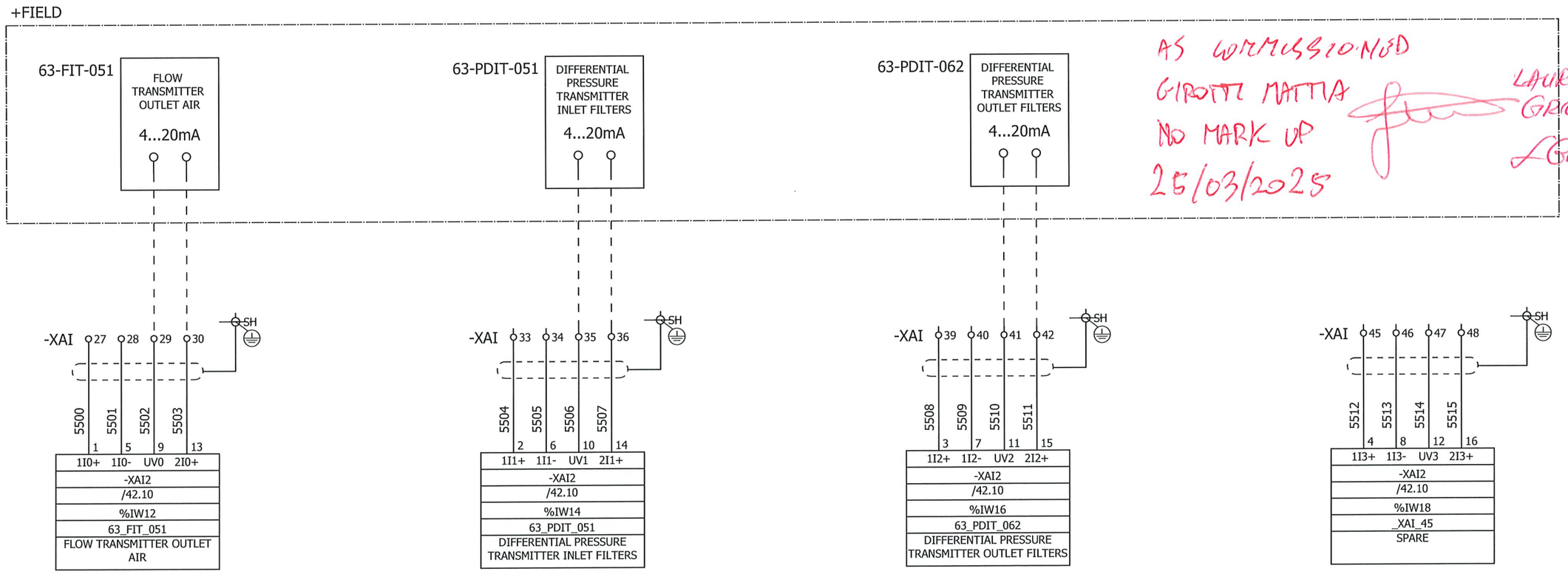
PLANT
COMMAND AND CONTROL SWITCHBOARDS
DRYER - WIRING DIAGRAM

DESCRIPTION
ANALOG INPUT I/O RACK

PREPARED ASSOLARI O.	CHECKED TIRABOSCHI T.	PLANT = DRYER	PAGE 54
DATE 08.05.2024	APPROVED	LOCATION + QE	NEXT 55
WORK ORDER N 2024.4814_001	DRAWING N d241025-WD		TOTAL SHEETS 50

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15





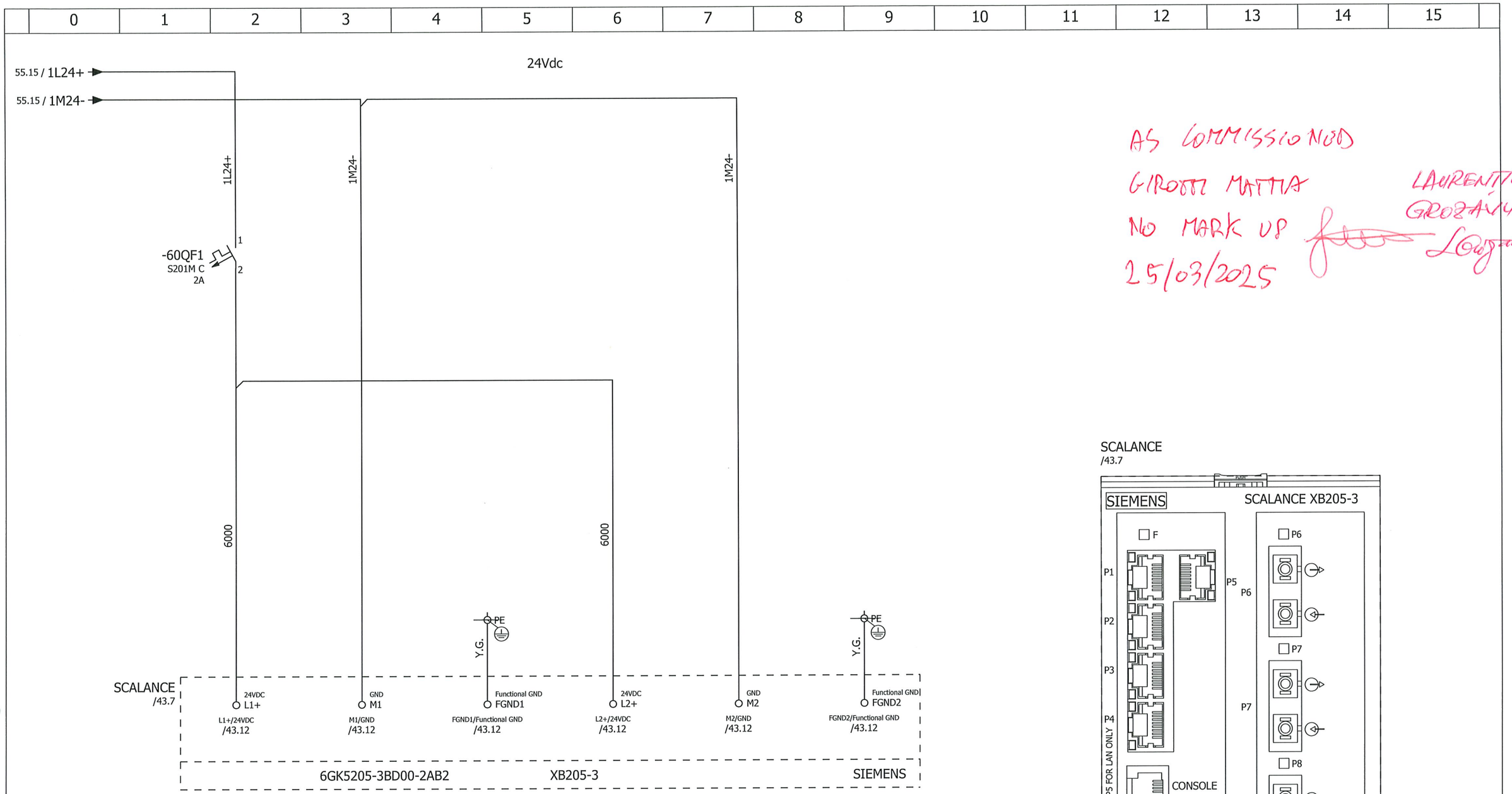
AS WORMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025
LAURENTIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

coes 20th 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER
	DATE: 08.05.2024	APPROVED:	LOCATION: + QE
DESCRIPTION: ANALOG INPUT I/O RACK	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD	

PAGE	NEXT	TOTAL SHEETS
55	60	50



AS COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025
LAURENTIS
GROZAVU
LOGIUDICE

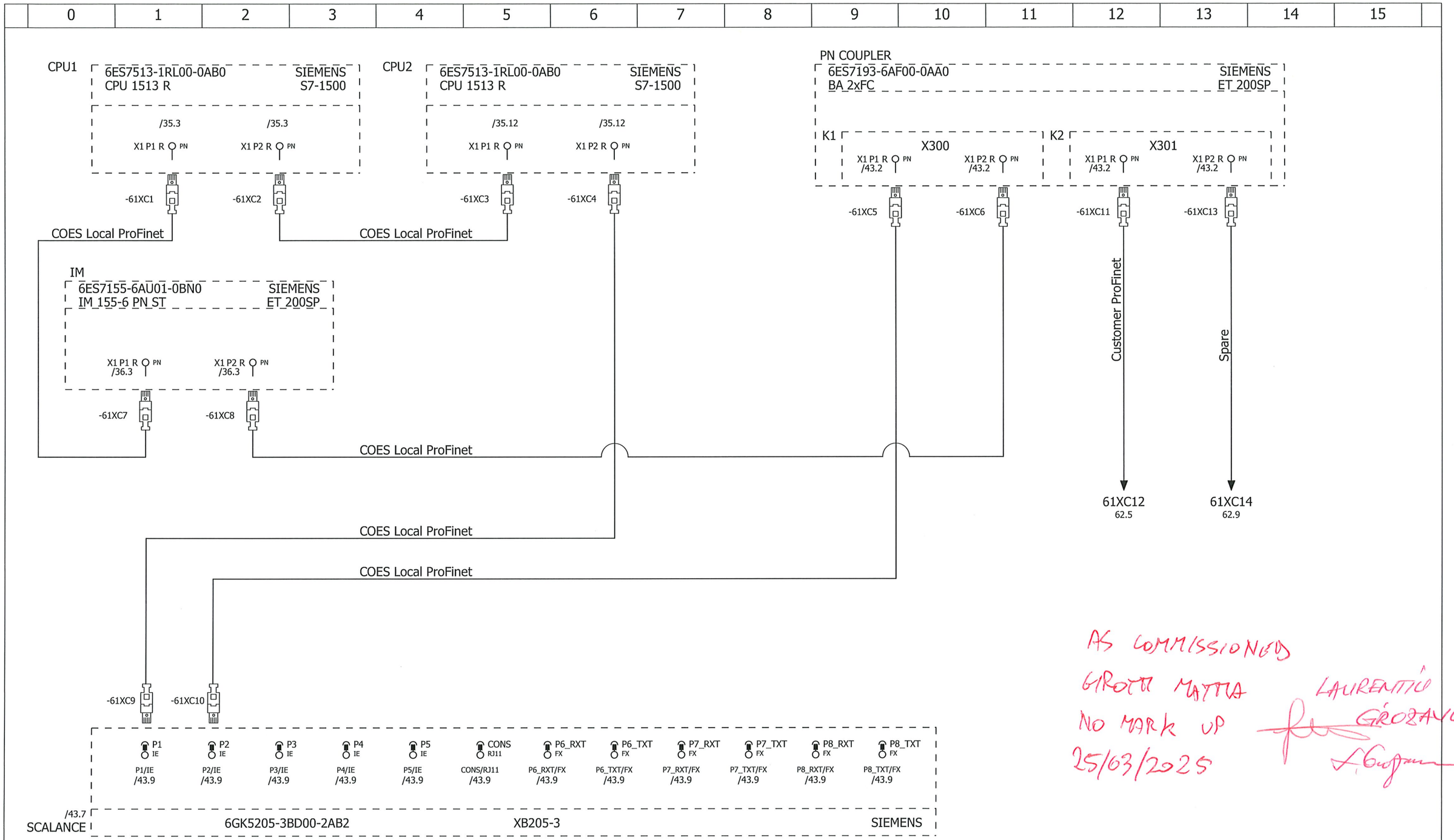
SCALANCE
/43.7

REV.	DATE	PREPARED	REV.	DATE	PREPARED

coes 20 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER
	DATE: 08.05.2024	APPROVED:	LOCATION: + QE
DESCRIPTION: AUXILIARY CIRCUIT SWTCH 5 PORT PROFINET	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD	

PAGE: 60	NEXT: 61	TOTAL SHEETS: 50

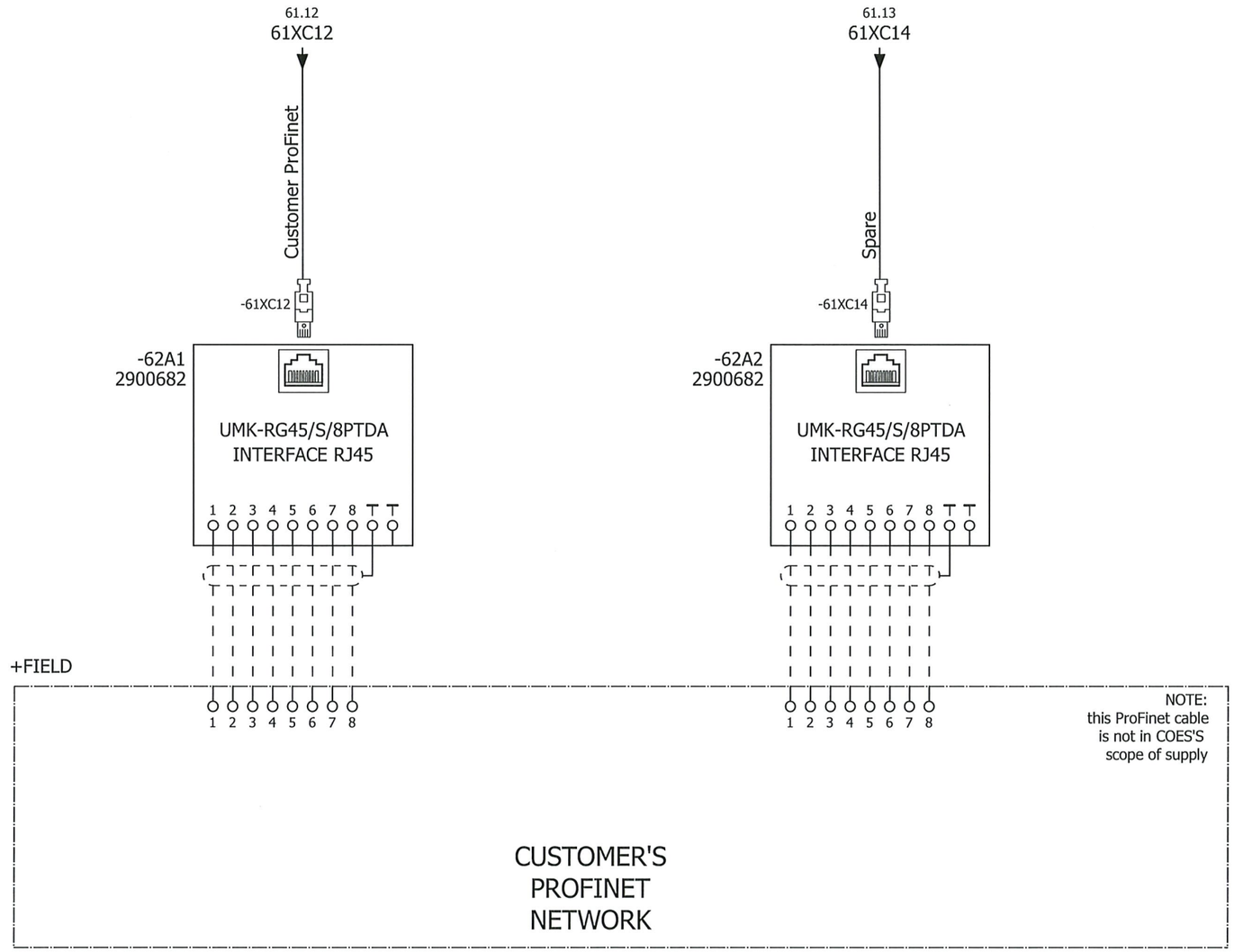


AS COMMISSIONED
GROTTA MATTIA
NO MARK UP
25/03/2025
LAURENTIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER
	DATE: 08.05.2024	APPROVED:	LOCATION: + QE
DESCRIPTION: CONNECTION ProfiNet INTERNAL SWITCHBOARD	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD	TOTAL SHEETS: 50
			PAGE: 61
			NEXT: 62

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	



AS COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025
LAURENTTIU
GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER
	DATE: 08.05.2024	APPROVED:	LOCATION: + QE
DESCRIPTION: CONNECTION ProfiNet INTERNAL SWITCHBOARD	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD	

PAGE	62
NEXT	70
TOTAL SHEETS	50

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

TERMINAL STRIP

=DRYER+QE-X1

SWITCHBOARD	DESTIN. DEVICE	SHEET AND COLUMN	/20.2	/20.2	/20.3
		CONNECT.	1	3	
		DEVICE IDENT. CODE	-20QF1	-20QF1	-PE
		WIRING	L230	N230	
	TERMINAL JUM	TERM. TYPE	WDU 10	WDU 10	WPE 10
			-	-	-
		TERM. NUM.	1	2	PE
PLANT	DESTIN. DEVICE	CONNECT.			
		DEVICE IDENT. CODE	-L	-N	

AS COMMISSIONED NO MARK UP

GIROTTI MATTIA 25/03/2025

LAURENȚIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED

coes 20th coes 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER	PAGE: 70
	DATE: 08.05.2024	APPROVED:	LOCATION: + QE	NEXT: 71
DESCRIPTION: TERMINAL BOARD -X1	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD		TOTAL SHEETS: 50

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

TERMINAL STRIP

=DRYER+QE-X2

SWITCHBOARD – DESTIN. DEVICE: SHEET AND COLUMN	SWITCHBOARD – DESTIN. DEVICE: CONNECT.	SWITCHBOARD – DESTIN. DEVICE: DEVICE IDENT. CODE	SWITCHBOARD – DESTIN. DEVICE: WIRING	TERMINAL JUM: TERM. TYPE	TERMINAL JUM	TERMINAL JUM: TERM. NUM.	PLANT – DESTIN. DEVICE: CONNECT.	PLANT – DESTIN. DEVICE: DEVICE IDENT. CODE
/21.3	1	-21QF1	L230UPS	WDU 10	-	1		-L
/21.3	3	-21QF1	N230UPS	WDU 10	-	2		-N
/21.4		-PE		WPE 10	-	PE		

AS COMMISSIONED NO MARK UP
GIROTTI, MATTIA 25/03/2025
LAURENTIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED

coes

PLANT	PREPARED	CHECKED	PLANT	PAGE
COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	ASSOLARI O.	TIRABOSCHI T.	= DRYER	71
	DATE 08.05.2024	APPROVED	LOCATION + QE	NEXT 72
DESCRIPTION: TERMINAL BOARD -X2	WORK ORDER N 2024.4814_001	DRAWING N d241025-WD		TOTAL SHEETS 50

TERMINAL STRIP

=DRYER+QE-XA

SWITCHBOARD – DESTIN. DEVICE: SHEET AND COLUMN	CONNECT.	DEVICE IDENT. CODE	WIRING	TERMINAL JUM: TERM. TYPE		TERM. NUM.	PLANT – DESTIN. DEVICE: CONNECT.	DEVICE IDENT. CODE
/22.1				WSI 6	-	1	1	-22KA1
/22.2				WDU 2.5	-	2	2	-22KA1
/21.14	1	-21FU2	1L24+	WSI 6	-	3	A1	-22K1
/22.10	13	-22K1	1L24+					
/22.13	15/16	-22KA2	2211	WDU 2.5	-	4		
/22.13	14	-22KA2	2212	WDU 2.5	-	5		

AS COMMISSIONED NO MARK UP
GIBOTTI MATTIA
LAURENȚIU GROZAVU 25/03/2025

REV.	DATE	PREPARED	REV.	DATE	PREPARED
C	04.09.2024	O.A.			
A	30.05.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER	PAGE: 72
	DATE: 08.05.2024	APPROVED:	LOCATION: + QE	NEXT: 73
DESCRIPTION: TERMINAL BOARD -XA	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD		TOTAL SHEETS: 50

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

TERMINAL STRIP

=DRYER+QE-XDI

TERM. NUM.	TERM. TYPE (TERMINAL JUM)	WIRING	SWITCHBOARD DESTIN. DEVICE – DEVICE IDENT. CODE	SWITCHBOARD DESTIN. DEVICE – CONNECT.	SHEET AND COLUMN	PLANT DESTIN. DEVICE – CONNECT.	PLANT DESTIN. DEVICE – DEVICE IDENT. CODE
1	KDKS 1/35 DB		+FIELD-63-PS-054		/46.1	1	-45QF1
2			+FIELD-63-PS-054		/46.1	1	-XDI1
3	KDKS 1/35 DB		+FIELD-63-PS-056		/46.2		
4			+FIELD-63-PS-056		/46.2	2	-XDI1
5	KDKS 1/35 DB		+FIELD-63-PS-058		/46.4		
6			+FIELD-63-PS-058		/46.4	3	-XDI1
7	KDKS 1/35 DB		+FIELD-63-PS-060		/46.6		
8			+FIELD-63-PS-060		/46.6	4	-XDI1
9	KDKS 1/35 DB		+FIELD-63-CMPR-RUN-FDBCK-001		/46.8		
10			+FIELD-63-CMPR-RUN-FDBCK-001		/46.8	5	-XDI1
11	KDKS 1/35 DB		+FIELD-63-CMPR-ALARM-FDBCK-001		/46.10		
12			+FIELD-63-CMPR-ALARM-FDBCK-001		/46.10	6	-XDI1
13	KDKS 1/35 DB		+FIELD-63-CMPR-RUN-FDBCK-002		/46.12		
14			+FIELD-63-CMPR-RUN-FDBCK-002		/46.12	7	-XDI1
15	KDKS 1/35 DB		+FIELD-63-CMPR-ALARM-FDBCK-002		/46.14		
16			+FIELD-63-CMPR-ALARM-FDBCK-002		/46.14	8	-XDI1
17	KDKS 1/35 DB	4708	-63-20FS-12	11	/47.0		
18		4700	-63-20FS-12	12	/47.0	1	-XDI2
19	KDKS 1/35 DB	4709	-63-21FS-12	11	/47.2		
20		4701	-63-21FS-12	12	/47.2	2	-XDI2
21	KDKS 1/35 DB	4710	-63-TH-001	14	/47.4		
22		4702	-63-TH-001	13	/47.4	3	-XDI2
23	KDKS 1/35 DB	4711	-63-HS-001	13	/47.6		
24		4703	-63-HS-001	14	/47.6	4	-XDI2
25	KDKS 1/35 DB	4712	-63-HS-002	21	/47.8		
26		4704	-63-HS-002	22	/47.8	5	-XDI2
27	KDKS 1/35 DB	4713	-63-HS-003	13	/47.10		
28		4705	-63-HS-003	14	/47.10	6	-XDI2
29	KDKS 1/35 DB	4714	-63-HS-004	13	/47.12		
30		4706	-63-HS-004	14	/47.12	7	-XDI2
31	KDKS 1/35 DB						
32		22L1+	-22K1	14	/22.10	8	-XDI2
33	KDKS 1/35 DB		+FIELD-63-ZSH-055		/48.1		
34			+FIELD-63-ZSH-055		/48.1	1	-XDI3
35	KDKS 1/35 DB		+FIELD-63-ZSL-055		/48.2		
36			+FIELD-63-ZSL-055		/48.2	2	-XDI3
37	KDKS 1/35 DB		+FIELD-63-ZSH-056		/48.4		
38			+FIELD-63-ZSH-056		/48.4	3	-XDI3
39	KDKS 1/35 DB		+FIELD-63-ZSL-056		/48.6		
40			+FIELD-63-ZSL-056		/48.6	4	-XDI3

AS COMMISSIONED NO MARK UP
GIROTTI MATTIA 25/03/2025
LAURENTIU GROZANU

REV.	DATE	PREPARED	REV.	DATE	PREPARED

PLANT	PREPARED	CHECKED	PLANT	PAGE
COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	ASSOLARI O.	TIRABOSCHI T.	= DRYER	73
DESCRIPTION	DATE	APPROVED	LOCATION	NEXT
TERMINAL BOARD -XDI	08.05.2024		+ QE	74
	WORK ORDER N	DRAWING N		TOTAL SHEETS
	2024.4814_001	d241025-WD		50

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

TERMINAL STRIP

=DRYER+QE-XDI

TERM. NUM.	SWITCHBOARD – DESTIN. DEVICE: SHEET AND COLUMN	CONNECT.	DEVICE IDENT. CODE	WIRING	TERMINAL JUM: TERM. TYPE	PLANT – DESTIN. DEVICE: CONNECT.	DEVICE IDENT. CODE
41	/48.8		+FIELD-63-ZSH-057		KDKS 1/35 DB		
42	/48.8		+FIELD-63-ZSH-057			5	-XDI3
43	/48.10		+FIELD-63-ZSL-057		KDKS 1/35 DB		
44	/48.10		+FIELD-63-ZSL-057			6	-XDI3
45	/48.12		+FIELD-63-ZSH-058		KDKS 1/35 DB		
46	/48.12		+FIELD-63-ZSH-058			7	-XDI3
47	/48.14		+FIELD-63-ZSL-058		KDKS 1/35 DB		
48	/48.14		+FIELD-63-ZSL-058			8	-XDI3
49	/49.1		+FIELD-63-ZSH-059		KDKS 1/35 DB		
50	/49.1		+FIELD-63-ZSH-059			1	-XDI4
51	/49.2		+FIELD-63-ZSL-059		KDKS 1/35 DB		
52	/49.2		+FIELD-63-ZSL-059			2	-XDI4
53	/49.4		+FIELD-63-ZSH-060		KDKS 1/35 DB		
54	/49.4		+FIELD-63-ZSH-060			3	-XDI4
55	/49.6		+FIELD-63-ZSL-060		KDKS 1/35 DB		
56	/49.6		+FIELD-63-ZSL-060			4	-XDI4
57					KDKS 1/35 DB		
58						5	-XDI4
59					KDKS 1/35 DB		
60						6	-XDI4
61					KDKS 1/35 DB		
62						7	-XDI4
63					KDKS 1/35 DB	5	-XDO
64						8	-XDI4

AS COMMISSIONED NO MARK UP

GIROTTI MATTIA
LAURENTIU GROZAVU 25/03/2025

REV.	DATE	PREPARED	REV.	DATE	PREPARED

PLANT	PREPARED	CHECKED	PLANT	PAGE
COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	ASSOLARI O.	TIRABOSCHI T.	= DRYER	74
	DATE: 08.05.2024	APPROVED	LOCATION: + QE	NEXT: 75
DESCRIPTION: TERMINAL BOARD -XDI	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD		TOTAL SHEETS: 50

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

TERMINAL STRIP

=DRYER+QE-XDO

TERM. NUM.	TERM. TYPE	TERMINAL JUM	SWITCHBOARD – DESTIN. DEVICE – SHEET AND COLUMN	SWITCHBOARD – DESTIN. DEVICE – CONNECT.	SWITCHBOARD – DESTIN. DEVICE – DEVICE IDENT. CODE	WIRING	PLANT – DESTIN. DEVICE – CONNECT.	PLANT – DESTIN. DEVICE – DEVICE IDENT. CODE
1	WSI 6	•	/51.1	11	-51KA1	5108	24	-22K1
2	WSI 6	•	/51.3	11	-51KA2	5110		
3	WSI 6	•	/51.4	11	-51KA3	5112		
4	WSI 6	•	/51.6	11	-51KA4	5114		
5	WSI 6	•	/51.8	11	-51KA5	5116	63	-XDI
6	WSI 6	•	/51.10	11	-51KA6	5118	1	-XAI
7	WSI 6	-	/51.12				11	-51KA7
8	WDU 2.5	-	/51.13	14	-51KA7	5121		
9	WSI 6	-	/51.14				11	-51KA8
10	WDU 2.5	-	/51.15	14	-51KA8	5123		
11	WSI 6	-	/52.0				11	-52KA1
12	WDU 2.5	-	/52.1	14	-52KA1	5209		
13	WSI 6	-	/52.2				11	-52KA2
14	WDU 2.5	-	/52.3	14	-52KA2	5211		
15	WSI 6	•	/52.5	11	-52KA3	5212		
16	WSI 6	•	/52.7	11	-52KA4	5214		
17	WSI 6	•	/52.9	11	-52KA5	5216		
18	WSI 6	•	/52.10	11	-52KA6	5218		
19	WSI 6	•	/52.12	11	-52KA7	5220		
20	WSI 6	•	/52.14	11	-52KA8	5222		
21	WSI 6	-					11	-53KA1
22	WDU 2.5	-	/53.1	14	-53KA1	5309		
23	WSI 6	-					11	-53KA2
24	WDU 2.5	-	/53.3	14	-53KA2	5311		
25	WSI 6	-					11	-53KA3
26	WDU 2.5	-	/53.5	14	-53KA3	5313		
27	WSI 6	-					11	-53KA4
28	WDU 2.5	-	/53.7	14	-53KA4	5315		
29	WSI 6	-					11	-53KA5
30	WDU 2.5	-	/53.9	14	-53KA5	5317		
31	WSI 6	-					11	-53KA6
32	WDU 2.5	-	/53.10	14	-53KA6	5319		
33	WSI 6	-					11	-53KA7
34	WDU 2.5	-	/53.12	14	-53KA7	5321		
35	WSI 6	-					11	-53KA8
36	WDU 2.5	-	/53.14	14	-53KA8	5323		

AS COMMISSIONED
GIROTTI, MATTIA
LAURENTIU GROZAVU

NO MARK UP
25/03/2025

REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			

PLANT	PREPARED	CHECKED	PLANT	PAGE
COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	ASSOLARI O.	TIRABOSCHI T.	= DRYER	75
	DATE: 08.05.2024	APPROVED	LOCATION: + QE	NEXT: 76
DESCRIPTION: TERMINAL BOARD -XDO	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD		TOTAL SHEETS: 50

TERMINAL STRIP

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

=DRYER+QE-XY

II

SWITCHBOARD

DESTIN. DEVICE

TERMINAL JUM

SHEET AND COLUMN	CONNECT.	DEVICE IDENT. CODE	WIRING	TERM. TYPE		TERM. NUM.	CONNECT.	DEVICE IDENT. CODE
							PLANT	
							DESTIN. DEVICE	
/51.1	14	-51KA1	5109	WDU 2.5	-	1		+FIELD-63-XY-051
/51.0	A2	-51KA1	1M24-	WDU 2.5		2		+FIELD-63-XY-051
/51.2	A2	-51KA2	1M24-					
/51.3	14	-51KA2	5111	WDU 2.5	-	3		+FIELD-63-XY-052
				WDU 2.5		4		+FIELD-63-XY-052
/51.4	14	-51KA3	5113	WDU 2.5	-	5		+FIELD-63-XY-053
				WDU 2.5		6		+FIELD-63-XY-053
/51.6	14	-51KA4	5115	WDU 2.5	-	7		+FIELD-63-XY-054
/51.9	X2	-63-XL-003	1M24-	WDU 2.5		8		+FIELD-63-XY-054
/52.5	14	-52KA3	5213	WDU 2.5	-	9		+FIELD-63-XV-055
/52.0	A2	-52KA1	1M24-	WDU 2.5		10		+FIELD-63-XV-055
/52.2	A2	-52KA2	1M24-					
/52.7	14	-52KA4	5215	WDU 2.5	-	11		+FIELD-63-XV-056
				WDU 2.5		12		+FIELD-63-XV-056
/52.9	14	-52KA5	5217	WDU 2.5	-	13		+FIELD-63-XV-057
				WDU 2.5		14		+FIELD-63-XV-057
/52.10	14	-52KA6	5219	WDU 2.5	-	15		+FIELD-63-XV-058
				WDU 2.5		16		+FIELD-63-XV-058
/52.12	14	-52KA7	5221	WDU 2.5	-	17		+FIELD-63-XV-059
				WDU 2.5		18		+FIELD-63-XV-059
/52.14	14	-52KA8	5223	WDU 2.5	-	19		+FIELD-63-XV-060
/53.0	A2	-53KA1	1M24-	WDU 2.5		20		+FIELD-63-XV-060
/53.2	A2	-53KA2	1M24-					

AS COMMISSIONED NO MARK UP
GIROTTI MATTIA 25/03/2025
LAURENTIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			

coes 20 coes 1997 - 2017

PLANT
COMMAND AND CONTROL SWITCHBOARDS
DRYER - WIRING DIAGRAM

DESCRIPTION
TERMINAL BOARD -XY

PREPARED	CHECKED	PLANT	PAGE
ASSOLARI O.	TIRABOSCHI T.	= DRYER	76
DATE	APPROVED	LOCATION	NEXT
08.05.2024		+ QE	77
WORK ORDER N	DRAWING N		TOTAL SHEETS
2024.4814_001	d241025-WD		50

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

TERMINAL STRIP

=DRYER+QE-XAI

TERM. NUM.	SWITCHBOARD DESTIN. DEVICE – SHEET AND COLUMN	SWITCHBOARD DESTIN. DEVICE – CONNECT.	SWITCHBOARD DESTIN. DEVICE – DEVICE IDENT. CODE	SWITCHBOARD DESTIN. DEVICE – WIRING	TERMINAL JUM – TERM. TYPE	PLANT DESTIN. DEVICE – CONNECT.	PLANT DESTIN. DEVICE – DEVICE IDENT. CODE
1					KDKS 1/35 DB	6	-XDO
2	/52.0	A2	-52KA1	1M24-			
	/52.2	A2	-52KA2	1M24-			
3	/54.1	1	-XAI1	5400	WDU 2.5		
4	/54.1	5	-XAI1	5401	WDU 2.5		
5	/54.2	9	-XAI1	5402	WDU 2.5		+FIELD-63-PT-064
6	/54.2	13	-XAI1	5403	WDU 2.5		+FIELD-63-PT-064
7					KDKS 1/35 DB		
8							
9					WDU 2.5	2	-XAI1
10					WDU 2.5	6	-XAI1
11	/54.6		+FIELD-63-TIT-051	0Vdc	WDU 2.5	10	-XAI1
12	/54.6		+FIELD-63-TIT-051	0Vdc	WDU 2.5	14	-XAI1
13					KDKS 1/35 DB		
14							
15					WDU 2.5	3	-XAI1
16					WDU 2.5	7	-XAI1
17	/54.10		+FIELD-63-TIT-052	0Vdc	WDU 2.5	11	-XAI1
18	/54.10		+FIELD-63-TIT-052	0Vdc	WDU 2.5	15	-XAI1
19					KDKS 1/35 DB		
20							
21					WDU 2.5	4	-XAI1
22					WDU 2.5	8	-XAI1
23	/54.14		+FIELD-63-AIT-051	0Vdc	WDU 2.5	12	-XAI1
24	/54.14		+FIELD-63-AIT-051	0Vdc	WDU 2.5	16	-XAI1
25					KDKS 1/35 DB		
26							
27	/55.1	1	-XAI2	5500	WDU 2.5		
28	/55.1	5	-XAI2	5501	WDU 2.5		
29	/55.2	9	-XAI2	5502	WDU 2.5		+FIELD-63-FIT-051
30	/55.2	13	-XAI2	5503	WDU 2.5		+FIELD-63-FIT-051
31					KDKS 1/35 DB		
32							
33					WDU 2.5	2	-XAI2
34					WDU 2.5	6	-XAI2
35	/55.6		+FIELD-63-PDIT-051	0Vdc	WDU 2.5	10	-XAI2
36	/55.6		+FIELD-63-PDIT-051	0Vdc	WDU 2.5	14	-XAI2
37					KDKS 1/35 DB		
38							
39					WDU 2.5	3	-XAI2

AS COMMISSIONED NO MARK UP
GIROTTI MATTIA 25/03/2025
LAURENȚIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
C	04.09.2024	O.A.			

PLANT	PREPARED	CHECKED	PLANT	PAGE
COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	ASSOLARI O.	TIRABOSCHI T.	= DRYER	77
	DATE: 08.05.2024	APPROVED:	LOCATION: + QE	NEXT: 78
DESCRIPTION: TERMINAL BOARD -XAI	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD		TOTAL SHEETS: 50

TERMINAL STRIP

=DRYER+QE-XAI

TERM. NUM.	SWITCHBOARD / DESTIN. DEVICE: SHEET AND COLUMN	CONNECT.	DEVICE IDENT. CODE	WIRING	TERMINAL JUM: TERM. TYPE	TERMINAL JUM (jumper)	PLANT / DESTIN. DEVICE: CONNECT.	DEVICE IDENT. CODE
40					WDU 2.5	-	7	-XAI2
41	/55.10		+FIELD-63-PDIT-062	0Vdc	WDU 2.5	-	11	-XAI2
42	/55.10		+FIELD-63-PDIT-062	0Vdc	WDU 2.5	-	15	-XAI2
43					KDKS 1/35 DB		1	-60QF1
44	/60.3	M1	-SCALANCE	1M24-		-		
45					WDU 2.5	-	4	-XAI2
46					WDU 2.5	-	8	-XAI2
47					WDU 2.5	-	12	-XAI2
48					WDU 2.5	-	16	-XAI2

AS COMMISSIONED NO MARKUP
GIROTTI MATTIA 25/03/2025
LAURENȚIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
C	04.09.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER	PAGE: 78
DESCRIPTION: TERMINAL BOARD -XAI	DATE: 08.05.2024	APPROVED:	LOCATION: + QE	NEXT: 79
	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD		TOTAL SHEETS: 50

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

TERMINAL STRIP

=DRYER+QE-XCOM

TERM. NUM.	TERM. TYPE	TERMINAL JUM	SWITCHBOARD – DESTIN. DEVICE: SHEET AND COLUMN	SWITCHBOARD – DESTIN. DEVICE: CONNECT.	SWITCHBOARD – DESTIN. DEVICE: DEVICE IDENT. CODE	SWITCHBOARD – DESTIN. DEVICE: WIRING	PLANT – DESTIN. DEVICE: CONNECT.	PLANT – DESTIN. DEVICE: DEVICE IDENT. CODE
1	ZDK 4-2 V	jumped 1–5	/21.9	2	-21QF3	1L24+		
2	ZDK 4-2 V	jumped 1–5						
3	ZDK 4-2 V	jumped 1–5						
4	ZDK 4-2 V	jumped 1–5						
5	ZDK 4-2 V	jumped 1–5					1	-21FU2
6	ZDK 4-2 V	jumped 6–10	/21.10	-	-21GS1	1M24-		
7	ZDK 4-2 V	jumped 6–10						
8	ZDK 4-2 V	jumped 6–10						
9	ZDK 4-2 V	jumped 6–10						
10	ZDK 4-2 V	jumped 6–10					X2	-63-XL-004

AS COMMISSIONED NO MARK UP
GIROTTI MATTIA
LAURENȚIU GROZAVU 25/03/2025

REV.	DATE	PREPARED	REV.	DATE	PREPARED
C	04.09.2024	O.A.			

PLANT	PREPARED	CHECKED	PLANT	PAGE
COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	ASSOLARI O.	TIRABOSCHI T.	= DRYER	79
DESCRIPTION	DATE	APPROVED	LOCATION	NEXT
TERMINAL BOARD -XCOM	08.05.2024		+ QE	85
	WORK ORDER N	DRAWING N		TOTAL SHEETS
	2024.4814_001	d241025-WD		50

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

COMPONENT LIST

COMPONENT TAG	QUANTITY	DESCRIPTION	ARTICLE CODE	CONSTRUCTOR	SHEET
-63-20FS-12	1	SPJ P-VMS 280 Fm R surge arrester Type 2 single-phase for L-(PE)N systems	SPJ316227	SIPF	20
-63-21FS-12	1	SPJ P-VMS 280 Fm R surge arrester Type 2 single-phase for L-(PE)N systems	SPJ316227	SIPF	21
-63-HS-001	1	Green flush complete pushbutton Ø22 spring return 1NO "unmarked"	SE.XB4BA31	SCHNEIDER	47
-63-HS-002	1	Red flush complete pushbutton Ø22 spring return 1NC "unmarked"	SE.XB4BA42	SCHNEIDER	47
-63-HS-003	1	Blue flush complete pushbutton Ø22 spring return 1NO	SE.XB4BA61	SCHNEIDER	22
-63-HS-003	1	Harmony XB4/XB5 1NO contact	SE.ZBE101	SCHNEIDER	22
-63-HS-004	1	Black selector switch Ø22 2-position stay put 1NO+1NC 600V	SE.XB4BD25	SCHNEIDER	47
-63-SBM-001	1	Red Ø40 Emergency stop, switching off Ø22 latching turn release 2NC+1NO	SE.XB4BS84441	SCHNEIDER	22
-63-SBM-001	1	Round guard for Ø 40 Emergency stop, plastic, yellow, 63.5 mm	SE.ZB4BZ1905	SCHNEIDER	22
-63-TH-001	1	Panel thermostat, 1 contacts NO (-20...+40)°C	FIN.7T.81.0.000.2301	FINDER	47
-63-XA-001	1	Red complete pilot light Ø22 plain lens with integral LED 24V	SE.XB4BVB4	SCHNEIDER	51
-63-XL-001	1	White complete pilot light Ø22 plain lens with integral LED 230...240V	SE.XB4BVM1	SCHNEIDER	20
-63-XL-002	1	White complete pilot light Ø22 plain lens with integral LED 230...240V	SE.XB4BVM1	SCHNEIDER	21
-63-XL-003	1	Green complete pilot light Ø22 plain lens with integral LED 24V	SE.XB4BVB3	SCHNEIDER	51
-63-XL-004	1	White complete pilot light Ø22 plain lens with integral LED 24V	SE.XB4BVB1	SCHNEIDER	21
-62A1	1	UMK-RJ45/S/8PTDA - VARIOFACE module for connecting a RJ45 socket with spring-cage double connection terminal blocks in direct plug-in method.	PXC.2900682	PHOENIX CONTACT	62
-62A2	1	UMK-RJ45/S/8PTDA - VARIOFACE module for connecting a RJ45 socket with spring-cage double connection terminal blocks in direct plug-in method.	PXC.2900682	PHOENIX CONTACT	62
-CPU1	1	SIMATIC S7-1500R CPU 1513R-1 PN, 300KB program/1,5MB data	SIE.6ES7513-1RL00-0AB0	SIEMENS	35
-CPU1	1	SIMATIC S7 MEMORY CARD, 24 MB	SIE.6ES7954-8LF03-0AA0	SIEMENS	35
-CPU2	1	SIMATIC S7-1500R CPU 1513R-1 PN, 300KB program/1,5MB data	SIE.6ES7513-1RL00-0AB0	SIEMENS	35
-CPU2	1	SIMATIC S7 MEMORY CARD, 24 MB	SIE.6ES7954-8LF03-0AA0	SIEMENS	35
-20E1	1	HEATER 100W 230VAC 90X80X110	HJSHT100	ALFA PLASTIC	20
-20FA4	1	Residual current device DDA202 type AC 25A 30mA - 2P	ABB.2CSB202001R1250	ABB	20
-20FU1	1	FUSE HOLDER 2P 10X38 , 32A 690V	LOV.FB01F2P	LOVATO	20
-20FU1	2	CYLINDRICAL FUSE C10G2 10x38, GG, 2A, 500V AC	KMC10G2	EATON BUSSMAN	20
-20FU2	1	FUSE HOLDER TYPE 2P 22x58 690VAC - 100/125A	Q25802	ETI	20
-20FU2	2	FUSE gL/gG 22x58 125A	gl258125	OMEGA	20
-21FU1	1	FUSE HOLDER 2P 10X38 , 32A 690V	LOV.FB01F2P	LOVATO	21

AS COMMISSIONED
GIROTTI MATTIA

NO MARK UP
25/03/2025

LAURENTIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			
A	30.05.2024	O.A.			

coes 20th 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER	PAGE: 85
	DATE: 08.05.2024	APPROVED:	LOCATION: + QE	NEXT: 86
DESCRIPTION: COMPONENT LIST	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD		TOTAL SHEETS: 50

COMPONENT LIST

COMPONENT TAG	QUANTITY	DESCRIPTION	ARTICLE CODE	CONSTRUCTOR	SHEET
-21FU1	2	CYLINDRICAL FUSE C10G2 10x38, GG, 2A, 500V AC	KMC10G2	EATON BUSSMAN	21
-21FU2	1	FUSE HOLDER 1P 10X38 , 32A 690V	LOV.FB01F1P	LOVATO	21
-21FU2	1	CYLINDRICAL FUSE C10G2 10x38, GG, 2A, 500V AC	KMC10G2	EATON BUSSMAN	21
-21FU3	1	FUSE HOLDER TYPE 2P 22x58 690VAC - 100/125A	Q25802	ETI	21
-21FU3	2	FUSE gL/gG 22x58 125A	gl258125	OMEGA	21
-21GS1	1	TRIO-PS-2G/1AC/24DC/20 Primary-switched TRIO POWER power supply input: 100VAC...240VAC single-phase, output: 24 V DC/20 A	PXC.2903151	PHOENIX CONTACT	21
-20H1	1	Plafoniera lineare a led, 110÷240V AC, 50/60HZ,600 lm, 368mm	050PEL3C	NEW ELFIN	20
-IM	1	ET 200SP PROFINET INTERFACE MODULE IM155-6PN/2 HF , INCLUDING SERVER MODULE (6ES7193-6PA00-0AA0	SIE.6ES7155-6AU01-0CN0	SIEMENS	36
-IM	1	SIMATIC ET 200SP, BUSADAPTER BA 2X RJ45, 2 RJ45 SOCKETS FOR PROFINET	SIE.6ES7193-6AR00-0AA0	SIEMENS	36
-22K1	1	SIRIUS safety relay Basic unit Standard series Relay enabling circuits 3 NO contacts plus Relay signaling circuit 1 NC contact Us = 24 V AC/DC screw terminal	SIE.3SK1111-1AB30	SIEMENS	22
-22KA1	1	SIL 2 - SIL 3 Digital Relay Output Loop Powered DIN-Rail and terminal board Models D5244D - 2 channels relay output ,provides 2 port isolation (input/output) Supply 24Vdc	GMI.D5244D	gmi	22
-22KA2	1	SIL 2 - SIL 3 Digital Relay Output Loop Powered DIN-Rail and terminal board Models D5244D - 2 channels relay output ,provides 2 port isolation (input/output) Supply 24Vdc	GMI.D5244D	gmi	22
-51KA1	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	51
-51KA2	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	51
-51KA3	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	51
-51KA4	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	51
-51KA5	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	51
-51KA6	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	51
-51KA7	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	51
-51KA8	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	51
-52KA1	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	52
-52KA2	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	52
-52KA3	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	52
-52KA4	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	52
-52KA5	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	52
-52KA6	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	52
-52KA7	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	52
-52KA8	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	52

AS COMMISSIONED
GIROTTI MATTIA

NO MARK UP
25/03/2025

LAURENTIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			
A	30.05.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER / PAGE: 86
DESCRIPTION: COMPONENT LIST	DATE: 08.05.2024	APPROVED:	LOCATION: + QE / NEXT: 87
	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD	TOTAL SHEETS: 50

COMPONENT LIST

COMPONENT TAG	QUANTITY	DESCRIPTION	ARTICLE CODE	CONSTRUCTOR	SHEET
-53KA1	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	53
-53KA2	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	53
-53KA3	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	53
-53KA4	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	53
-53KA5	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	53
-53KA6	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	53
-53KA7	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	53
-53KA8	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	53
-PN COUPLER	1	SIMATIC PN/PN Coupler for deterministic data exchange between max.4 PN-Controller per subnet, , PROFIsafe data exchange, I/O-, MSI-, MSO- and data record communication, redundant power supply, PN-connection via SIMATIC BusAdapter (BA)	SIE.6ES7158-3AD10-0XA0	SIEMENS	43
-PN COUPLER	1	5 pcs. strain relief for PROFINET cable at SIMATIC BusAdapter	SIE.6ES7193-6RA00-1AN0	SIEMENS	43
-20QF1	1	Miniature Circuit Breaker - S202M - 2P - C - 32 A	ABB.2CDS272001R0324	ABB	20
-20QF2	1	Miniature Circuit Breaker - S202M - 2P - C - 2 A	ABB.2CDS272001R0024	ABB	20
-20QF3	1	Miniature Circuit Breaker - S202M - 2P - C - 2 A	ABB.2CDS272001R0024	ABB	20
-20QF4	1	Miniature Circuit Breaker - S202M - 2P - C - 16 A	ABB.2CDS272001R0164	ABB	20
-21QF1	1	Miniature Circuit Breaker - S202M - 2P - C - 32 A	ABB.2CDS272001R0324	ABB	21
-21QF2	1	Miniature Circuit Breaker - S202M - 2P - C - 4 A	ABB.2CDS272001R0044	ABB	21
-21QF3	1	Miniature Circuit Breaker - S201M - 1P - C - 20 A	ABB.2CDS271001R0204	ABB	21
-30QF3	1	Miniature Circuit Breaker - S201M - 1P - C - 2 A	ABB.2CDS271001R0024	ABB	30
-44QF1	1	Miniature Circuit Breaker - S201M - 1P - C - 2 A	ABB.2CDS271001R0024	ABB	44
-44QF2	1	Miniature Circuit Breaker - S201M - 1P - C - 2 A	ABB.2CDS271001R0024	ABB	44
-44QF3	1	Miniature Circuit Breaker - S201M - 1P - C - 2 A	ABB.2CDS271001R0024	ABB	44
-44QF4	1	Miniature Circuit Breaker - S201M - 1P - C - 2 A	ABB.2CDS271001R0024	ABB	44
-44QF5	1	Miniature Circuit Breaker - S201M - 1P - C - 2 A	ABB.2CDS271001R0024	ABB	44
-45QF1	1	Miniature Circuit Breaker - S201M - 1P - C - 2 A	ABB.2CDS271001R0024	ABB	45
-60QF1	1	Miniature Circuit Breaker - S201M - 1P - C - 2 A	ABB.2CDS271001R0024	ABB	60
-20S1	1	Limit switch ausiliary contacts 1NO+1NC	PIZ.FR505	PIZZATO	20
-SCALANCE	1	SCALANCE XB205-3	SIE.6GK5205-3BD00-2AB2	SIEMENS	43
-20T1	1	Panel thernostat/hygrostat, 1 pole, 10 A - NO - (+10...+60)°C / (50...90)% - Nominal voltage 110...230 VAC/DC	FIN.7T.51.0.230.4360	FINDER	20

AS COMMISSIONED GIROTTI MATTIA

NO MARKUP 25/03/2025

LAURENTIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			
A	30.05.2024	O.A.			

coes 20 1997 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER / PAGE: 87
	DATE: 08.05.2024	APPROVED:	LOCATION: + QE / NEXT: 88
DESCRIPTION: COMPONENT LIST	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD	TOTAL SHEETS: 50

COMPONENT LIST

COMPONENT TAG	QUANTITY	DESCRIPTION	ARTICLE CODE	CONSTRUCTOR	SHEET
-20X1	1	Shuko/Italian std. socket 2P+T 16A (two module white system series)	GW20246	GEWISS	20
-20X1	1	Wall mounting modular box IP40 (2 modules)	GW27002	GEWISS	20
-XAI1	1	ET 200SP, AI 4XI 2-/4-WIRE ST, PU 1	SIE.6ES7134-6GD01-0BA1	SIEMENS	42
-XAI1	1	BASEUNIT TYPE A0, BU15-P16+A0+2D	SIE.6ES7193-6BP00-0DA0	SIEMENS	42
-XAI2	1	ET 200SP, AI 4XI 2-/4-WIRE ST, PU 1	SIE.6ES7134-6GD01-0BA1	SIEMENS	42
-XAI2	1	BASEUNIT TYPE A0, BU15-P16+A0+2B	SIE.6ES7193-6BP00-0BA0	SIEMENS	42
-61XC1	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC2	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC3	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC4	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC5	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC6	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC7	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC8	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC9	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC10	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC11	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC12	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	62
-61XC13	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC14	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	62
-XDI1	1	SIMATIC ET 200SP DI 8x 24V DC Basic ,sink input	SIE.6ES7131-6BF01-0AA0	SIEMENS	37
-XDI1	1	BASEUNIT TYPE A0, BU15-P16+A0+2D	SIE.6ES7193-6BP00-0DA0	SIEMENS	37
-XDI2	1	SIMATIC ET 200SP DI 8x 24V DC Basic ,sink input	SIE.6ES7131-6BF01-0AA0	SIEMENS	37
-XDI2	1	BASEUNIT TYPE A0, BU15-P16+A0+2B	SIE.6ES7193-6BP00-0BA0	SIEMENS	37
-XDI3	1	SIMATIC ET 200SP DI 8x 24V DC Basic ,sink input	SIE.6ES7131-6BF01-0AA0	SIEMENS	38
-XDI3	1	BASEUNIT TYPE A0, BU15-P16+A0+2B	SIE.6ES7193-6BP00-0BA0	SIEMENS	38
-XDI4	1	SIMATIC ET 200SP DI 8x 24V DC Basic ,sink input	SIE.6ES7131-6BF01-0AA0	SIEMENS	38
-XDI4	1	BASEUNIT TYPE A0, BU15-P16+A0+2B	SIE.6ES7193-6BP00-0BA0	SIEMENS	38

AS COMMISSIONED
MIROTTI MATTIA

NO MARK UP
25/03/2025

LAURENTIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			
A	30.05.2024	O.A.			

coes 20th coes 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER / PAGE: 88
DESCRIPTION: COMPONENT LIST	DATE: 08.05.2024	APPROVED:	LOCATION: + QE / NEXT: 89
	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD	TOTAL SHEETS: 50

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

COMPONENT LIST

COMPONENT TAG	QUANTITY	DESCRIPTION	ARTICLE CODE	CONSTRUCTOR	SHEET
-XDO1	1	SIMATIC ET 200SP, DQ 8x 24V DC/0,5A Basic, Source output	SIE.6ES7132-6BF01-0AA0	SIEMENS	40
-XDO1	1	BASEUNIT TYPE A0, BU15-P16+A0+2D	SIE.6ES7193-6BP00-0DA0	SIEMENS	40
-XDO2	1	SIMATIC ET 200SP, DQ 8x 24V DC/0,5A Basic, Source output	SIE.6ES7132-6BF01-0AA0	SIEMENS	40
-XDO2	1	BASEUNIT TYPE A0, BU15-P16+A0+2B	SIE.6ES7193-6BP00-0BA0	SIEMENS	40
-XDO3	1	SIMATIC ET 200SP, DQ 8x 24V DC/0,5A Basic, Source output	SIE.6ES7132-6BF01-0AA0	SIEMENS	41
-XDO3	1	BASEUNIT TYPE A0, BU15-P16+A0+2B	SIE.6ES7193-6BP00-0BA0	SIEMENS	41

AS COMMISSIONED GIROTTI MATTIA
NO MARK UP 25/03/2025
LAURENȚIU GROZAVU

REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			
A	30.05.2024	O.A.			

coes 20 coes 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS DRYER - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = DRYER / PAGE: 89
	DATE: 08.05.2024	APPROVED:	LOCATION: + QE / NEXT:
DESCRIPTION: COMPONENT LIST	WORK ORDER N: 2024.4814_001	DRAWING N: d241025-WD	TOTAL SHEETS: 50

Section 8 LIST OF MODIFICATIONS

NOT APPLICABLE

Section 8.1 List of changes

NOT APPLICABLE

Section 9 SUPPORTING DOCUMENTS

NOT APPLICABLE