BASE LOAD POWER HUB (BLPH)

"SG-200N1" LV SWBD 400/230V

ELECTRICAL FUNCTIONAL DIAGRAM

Claudia Giunchi

Autore firma digitale: Claudia Giunchi
Nome distintivo: CN = Claudia Giunchi email = claudia.giunchi@rosetti.it C = IT O = Rosetti Marino
Data: 2025.12.18 12:51:29 +01'00'

ROSETTI MARINO	RED LINE AS BUILT STAMP
RLMU	✖Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

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IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n° : 231298/SD/30
Item n° : PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Cover

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 001

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

INDEX SHEETS

Sheet	Description	Revision 0	1	2	3	4	5	6	7	8	9
001	Cover	X	X								
002	Index	X	X								
003	Index	X	X								
004	Graphical Symbols	X	X								
005	Graphical Symbols	X	X								
006	General Note	X	X								
007	Selector Switch	X	X								
008	Door Layout	X	X								
009	Protection Display REF615	X	X								
010	Digital Input REF615	X	X								
011	Digital Output REF615	X	X								
012	Logic Diagram	X	X								
013	Logic Diagram	X	X								
014	Logic Diagram	X	X								
015	Signals to IEC61850	X	X								
016	Power Diagram	X	X								
017	Power Diagram	X	X								
018	Power Diagram	X	X								
019	230Vac/24Vdc Distribution Volatage	X	X								
020	230Vac/24Vdc Distribution Volatage	X	X								
021	REF615 Protection Wiring	X	X								
022	Command Circuit	X	X								
023	Command Circuit	X	X								
024	Command Circuit	X	X								
025	REF615 Protection Wiring Digital Input	X	X								
026	REF615 Protection Wiring Digital Input	X	X								

Sheet	Description	Revision 0	1	2	3	4	5	6	7	8	9
027	Module I/O Connection	X	X								
028	Module I/O Connection	X	X								
029	Module I/O Connection	X	X								
030	Module I/O Connection	X	X								
031	Available Signals	X	X								
032	Available Signals	X	X								
033	Terminal Blocks	X	X								
034	Terminal Blocks	X	X								
035	Terminal Blocks	X	X								
036	A-2000 / Electrolyser Auxiliry Load [L3-630]	X	X								
037	A-2000 / Electrolyser Auxiliry Load [L3-630]	X	X								
038	A-2000 / Electrolyser Auxiliry Load [L3-630]	X	X								
039	A-2000 / Electrolyser Auxiliry Load [L3-630]	X	X								
040	A-2000 / Electrolyser Auxiliry Load [L3-630]	X	X								
041	A-2000 / Electrolyser Auxiliry Load [L3-630]	X	X								
042	A-2000 / Electrolyser Auxiliry Load [L3-630]	X	X								
043	A-2000 / Electrolyser Auxiliry Load [L3-630]	X	X								
044	A-2000 / Electrolyser Auxiliry Load [L3-630]	X	X								
045	A-2000 / Electrolyser Auxiliry Load [L3-630]	X	X								
046	A-2000 / Electrolyser Auxiliry Load [L3-630]	X	X								
047	Distribution Aux Voltage Columns [A1]	X	X								
048	Distribution Aux Voltage Columns [A1]	X	X								
049	Distribution Aux Voltage Columns [A2]	X	X								
050	Distribution Aux Voltage Columns [A2]	X	X								
051	Distribution Aux Voltage Columns [A3]	X	X								
052	Distribution Aux Voltage Columns [A3]	X	X								

NO MARK UP
AS COMMISSIONED: M.T.A. Gioia 25/3/25

ROSETTI MARINO **RED LINE AS BUILT STAMP**

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IMESA ELECTRICAL ENGINEERING

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Item n° : PF1002983/30

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TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Index

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 002

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

INDEX SHEETS

Sheet	Description	Revision 0	1	2	3	4	5	6	7	8	9
053	Distribution Aux Voltage Columns [A4]	X	X								
054	Distribution Aux Voltage Columns [A4]	X	X								
055	Distribution Aux Voltage Columns [A5]	X	X								
056	Distribution Aux Voltage Columns [A5]	X	X								
057	Distribution Aux Voltage Columns [A6]	X	X								
058	Distribution Aux Voltage Columns [A6]	X	X								
059	Distribution Aux Voltage Columns [A7]	X	X								
060	Distribution Aux Voltage Columns [A7]	X	X								
061	Switch Connection	X	X								
062	Modbus RTU Chain Network - Connections Typies	X	X								
063	Modbus RTU Chain Network	X	X								
064	Modbus RTU Chain Network [A1+A2+A3]	X	X								
065	Modbus RTU Chain Network [A4+A5]	X	X								
066	Modbus RTU Chain Network [A6+A7]	X	X								
067	Bill of Materials	X	X								
068	Bill of Materials	X	X								
069	Bill of Materials	X	X								
070	Bill of Materials	X	X								
071	Bill of Materials	X	X								
072	Bill of Materials	X	X								
073	Bill of Materials	X	X								
074	Bill of Materials	X	X								
075	Bill of Materials	X	X								
076	Bill of Materials	X	X								
077	Bill of Materials	X	X								
078	Bill of Materials	X	X								

Sheet	Description	Revision 0	1	2	3	4	5	6	7	8	9

NO MARK UP
AS COMMISSIONED: MARIA GIROTTI 25/3/25

ROSETTI MARINO RED LINE AS BUILT STAMP

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Item n°: PF1002983/30

ROSETTI MARINO

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TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Index

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

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 003 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

SYMBOLS LEGEND

NO MARK UP AS COMMISSIONED: MARIA GIRETT. 25/3/25

GRAPHICAL SYMBOLS	DESCRIPTION	GRAPHICAL SYMBOLS	DESCRIPTION	GRAPHICAL SYMBOLS	DESCRIPTION	GRAPHICAL SYMBOLS	DESCRIPTION
QF1	CIRCUIT BREAKER WITH AUTOMATIC RELEASE		CAPACITIVE VOLTAGE DIVIDER		COIL OF A MECHANICALLY LATCHED RELAY		DELAYED ACTION (IN THE DIRECTION OF MOVEMENT FROM THE ARC TOWARDS ITS CENTRE)
	CIRCUIT BREAKER WITH AUTOMATIC RELEASE AND BUILT-IN THERMOMAGNETIC RELEASE		CURRENT TRANSFORMER		INDICATOR, ELECTROMECHANICAL ELEMENT		POSITION SWITCH (LIMIT SWITCH), MAKE CONTACT
	SWITCH DISCONNECTOR		CURRENT TRANSFORMER WITH TWO CORES AND TWO SECONDARY WINDINGS		LAMP (GENERAL SYMBOL)		POSITION SWITCH (LIMIT SWITCH), BREAK CONTACT
d	CONTACTOR		INDICATING INSTRUMENT GENERAL SYMBOL		SEMICONDUCTOR DIODE	E –	OPERATED BY PUSHING
	LOCK WITH FREE KEY WHEN THE DEVICE IS IN OPEN POSITION		INTEGRATING INSTRUMENT (GENERAL SYMBOL)		LED	F –	OPERATED BY TURNING
	LOCK WITH FREE KEY WHEN THE DEVICE IS IN CLOSE POSITION		DISCONNECTING FUSE, NOT WITH LIVE CIRCUIT AND WITH MECHANICAL LINKAGE (STRIKER FUSE)	I DC / I AC	TRANSDUCER OF ALTERNATING CURRENT MEASURE INTO DIRECT CURRENT SIGNAL		THREE HELD POSITIONS TURNING SWITCH
	PLUG AND SOCKET (MALE AND FEMALE)		OPERATING DEVICE (GENERAL SYMBOL)		EARTH, GROUND (GENERAL SYMBOL)		THREE POSITIONS TURNING SWITCH, WITH SPRING THROWBACK TO THE CENTRAL POSITION
	VOLTAGE TRANSFORMER WITH TWO WINDINGS		COIL OF A TIME DELAYED OPERATING RELAY		MAKE CONTACT		MECHANICAL, PNEUMATIC OR HYDRAULIC CONNECTION
	VOLTAGE TRANSFORMER WITH THREE WINDINGS		COIL OF A TIME DELAYED RELEASING RELAY		BREAK CONTACT		MECHANICAL INTERLOCK BETWEEN TWO DEVICES
	CAPACITOR (GENERAL SYMBOL)		BISTABLE RELAY		CHANGE-OVER BREAK BEFORE MAKE CONTACT		RESISTOR (GENERAL SYMBOL)

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IMESA ELECTRICAL ENGINEERING

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TITLE : SG–200N1
FUNCTIONAL DIAGRAM
Graphical Symbols

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

SCALE : NTS

A3 | DRAWING NO. 1723002197–EL–DG–00030 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197–EL–DG–00030 Rev.02

SYMBOLS LEGEND

NO MARK UP AS COMMISSIONED! MATIA GIROTTI 25/3/25

GRAPHICAL SYMBOLS	DESCRIPTION	GRAPHICAL SYMBOLS	DESCRIPTION	GRAPHICAL SYMBOLS	DESCRIPTION	GRAPHICAL SYMBOLS	DESCRIPTION
	HEATING ELEMENT						
	CONNECTION OF CONDUCTORS						
	WITHDRAWABLE TERMINAL (SHORT-CIRCUITABLE ONLY ON C.T. SECONDARY CIRCUITS)						
	SWITCHBOARD TERMINAL						

ROSETTI MARINO RED LINE AS BUILT STAMP	
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TITLE : SG–200N1
FUNCTIONAL DIAGRAM
Graphical Symbols

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

SCALE : NTS

A3

DRAWING NO. 1723002197–EL–DG–00030

SHEET 005

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197–EL–DG–00030 Rev.02

GENERAL NOTES

THE DIAGRAM INDICATES THE FOLLOWING CONDITIONS :

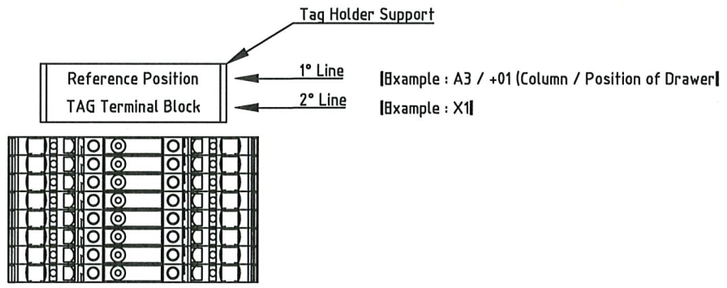
- CIRCUIT-BREAKER IN OPEN POSITION
- DE-ENERGIZED CIRCUITS
- DRAWER INSERTED

THE AUXILIARY CIRCUITS WILL HAVE THE FOLLOWING CHARACTERISTICS :

- 24VDC (+) 1,5mmq RED TYPE CABLE SH-W
- 24vdc (-) 1,5mmq WHITE TYPE CABLE SH-W
- AUXILIARY CONTACTS TO TERMINAL STRIP 1,5mmq BLACK TYPE CABLE SH-W
- 230Vac 1,5mmq BLACK TYPE SH-W
- VOLTMETRICAL CIRCUITS 1,5mmq BLACK TYPE CABLE SH-W
- AMMETRICAL CIRCUIT 2,5mmq BLACK TYPE CABLE SH-W

NO MARK UP
AS COMMISSIONED: MATIA GIROTTI
25/3/25

MARKING DETAIL OF TERMINAL BLOCKS :



RED LINE AS BUILT STAMP

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TITLE : SG-200N1
FUNCTIONAL DIAGRAM
General Note

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

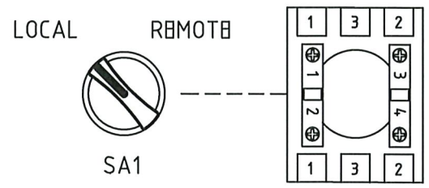
SHEET 006

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

SELECTORS SWITCH DIAGRAMS



NO MARK UP
AS COMMISSIONED: MATIA GIRETTI
25/3/25

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TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Selector Switch

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

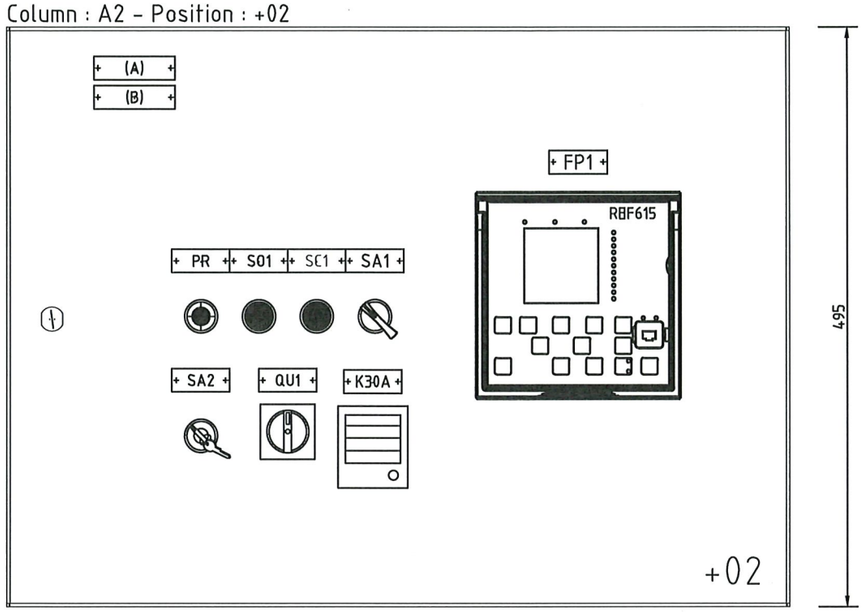
A3	DRAWING NO.	SHEET	REV.
	1723002197-EL-DG-00030	007	02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

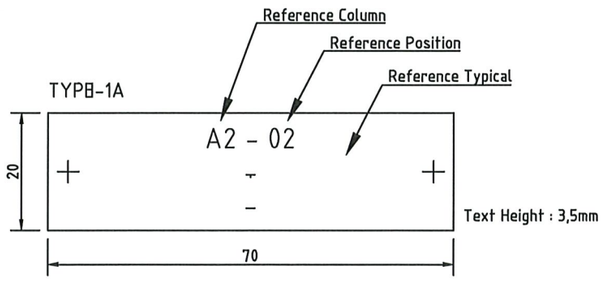
DOOR LAYOUT

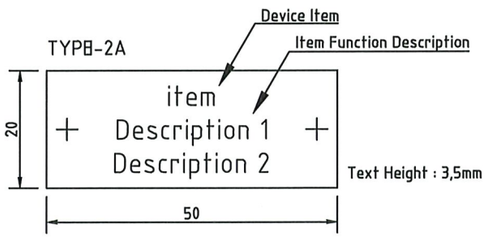
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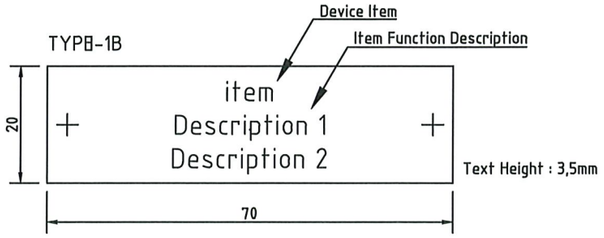


DEVICES name plate				
ITEM	COMPONENT	DESCRIPTION 1	DESCRIPTION 2	NOTE
FP1	PROTECTION RELAY	PROTECTION RELAY	INCOMING TRANSFORMER	TYPE-2A
SC1	PUSH BUTTON	CLOSE COMMAND	CIRCUIT BREAKER	TYPE-2A
SO1	PUSH BUTTON	OPEN COMMAND	CIRCUIT BREAKER	TYPE-2A
SA1	SELECTOR SWITCH	LOCAL - REMOTE	SWITCH	TYPE-2A
SA2	SELECTOR SWITCH	NORMAL - MAINTENANCE	SWITCH	TYPE-2A
PR	LIGHT PUSH BUTTON	RESET LOCK-OUT	TRIP LOCK-OUT	TYPE-2A
K30A	FLAG RELAY	LOSS 230VAC	AUXILIARY VOLTAGE	TYPE-2A
QU1	SWITCH	AUXILIARY VOLTAGE	SWITCH	TYPE-2A

NO MARK UP
AS COMMISSIONED: MATIA GIROTTI
25/3/25







NOTE :

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

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

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TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Door Layout

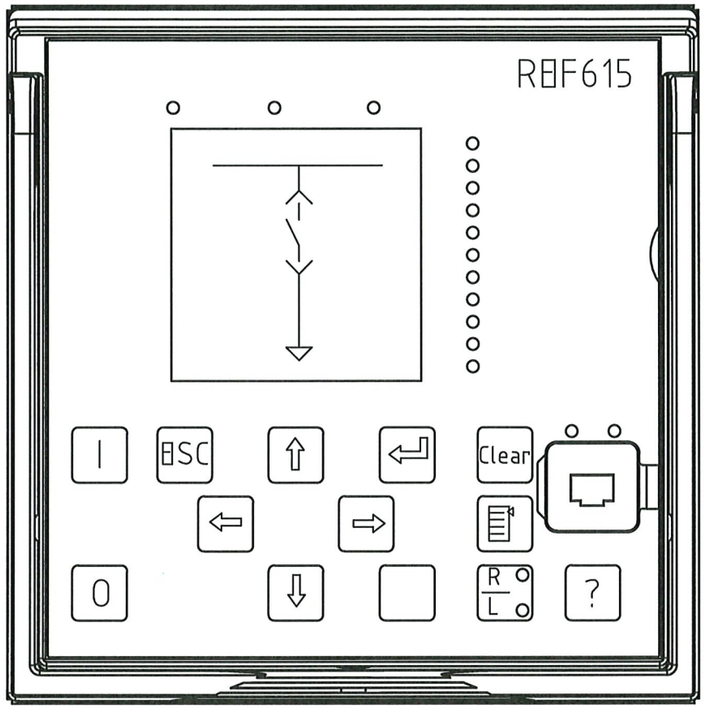
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 008 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

PROTECTION DISPLAY



STATUS INDICATOR LEDs

READY LED	OFF = AUXILIARY SUPPLY VOLTAGE IS DISCONNECTED ON = NORMAL OPERATION FLASHING = INTERNAL FAULT HAS OCCURED (WATCH DOG)
START LED	OFF = NORMAL OPERATION ON = A PROTECTION FUNCTION HAS STARTED FLASHING = A PROTECTION FUNCTION IS BLOCKED
TRIP LED	OFF = NORMAL OPERATION ON = A PROTECTION FUNCTION HAS TRIPPED FLASHING = INTERNAL FAULT HAS OCCURED (WATCH DOG)
n°11 ALARM LEDs	To Function to see Logical Functional Drawings

NO MARK UP
AS COMMISSIONED: MARIA GIROTTI.
25/3/25

NOTE :

1. Circuit-Breaker status and its position will be shown on mimic on protection dispaly
2. Close/Open and Remote/Local push-buttons on Protection relay are disabled

LED				
Item	NAME PLATE	COLOUR		Note
		ALARM	OK	
LED-1	SPRING MOTOR DISCHARGED	RED	-	ALARM = SPRING NOT CHARGED
LED-2	TCS	-	GREEN	ALARM = TRIP CIRCUIT YO ON FAULT
LED-3	MCB's CLOSED	-	GREEN	ALARM = MCB's OPENED
LED-4	50/51 - TRIPPED	RED	-	ALARM = OVERCURRENT PROTECTION TRIPPED
LED-5	C.B. READY	-	GREEN	ALARM = C.B. NOT READY FOR CLOSE
LED-6	LOCKOUT TRIPPED FROM M.V.S. UNIT A4	RED	-	ALARM - LOCKOUT TRIPPED
LED-7	UPSTREAM C.B. CLOSED & INSERTED	-	GREEN	OK = UPSTREAM CIRCUIT CLOSED & INSERTED
LED-8				
LED-9	ARC PROTECTION TRIPPED	RED	-	ALARM - TRIP ARC DETECTION
LED-10				
LED-11				

RED LINE AS BUILT STAMP

RLMU	✖Yes ☐ No
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Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

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= SG-200N1
\+ A2/+02
DWG n° : 231298/SD/30
Item n° : PF1002983/30

IMESA ELECTRICAL ENGINEERING
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Protection Display REF615

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

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 009 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

INPUTS

X110

1 / 2	BI1	C.B. CLOSED
3 / 4	BI2	C.B. OPENED
5 / 6	BI3	C.B. RACKED-IN
7 / 6	BI4	C.B. RACKED-OUT
8 / 9	BI5	C.B. TEST POSITION
10 / 9	BI6	C.B. SPRINGS DISCAHRGED
11 / 12	BI7	LOCAL OPENING COMMAND
13 / 12	BI8	LOCAL CLOSING COMMAND

INPUTS

X-120

1 / 2	BI1	LOCKOUT REALY
3 / 2	BI2	C.B.OPENED OR ISOLATED
4 / 2	BI3	LOCKOUT REALY
5 / 6	BI4	C.B. CLOSED, INSERTED AND E.S. OPENED.

FROM M.V.S. SG-100D1 UNIT A4

INPUTS

X-130

1 / 2	BI1	MCB's CLOSED
3 / 4	BI2	SELECTOR IN MAINTENANCE POSITION
5 / 6	BI3	SELECTOR IN LOCAL POSITION
7 / 8	BI4	TCS ALARM

ARC MODULE

LIGHT SENSOR INPUT 1	X13	ARC "BUS BARS COMPARTMENTS" "BB"
LIGHT SENSOR INPUT 2	X14	ARC "C.B. COMPARTMENT." "CB"
LIGHT SENSOR INPUT 3	X15	ARC "CABLE COMPARTMENT" "CC"

NO MARK UP
AS COMMISSIONED: MATIAS GIRON
25/3/25

RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
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Signature /Date	

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IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= SG-200N1
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DWG n°: 231298/SD/30
Item n°: PF1002983/30

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TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Digital Input REF615

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

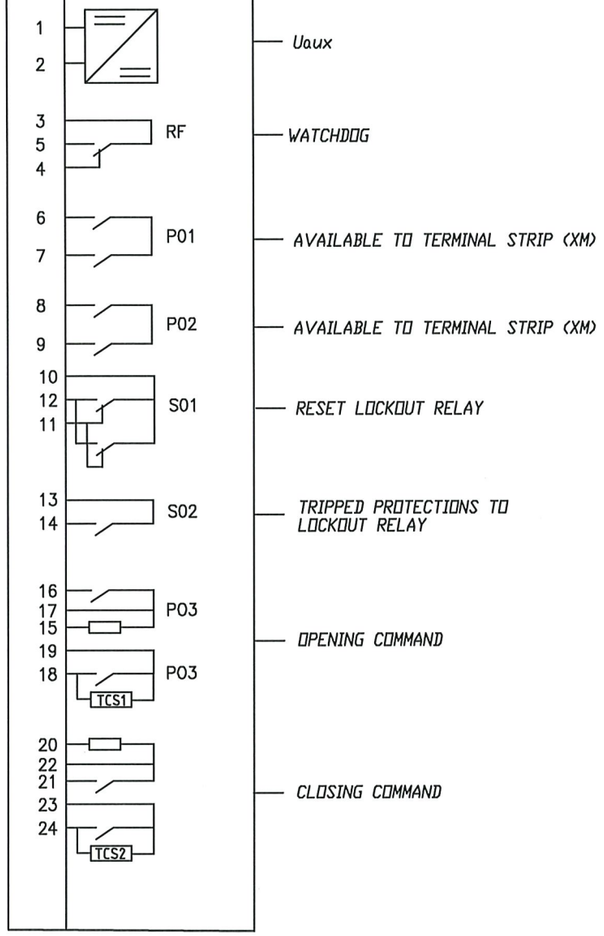
A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

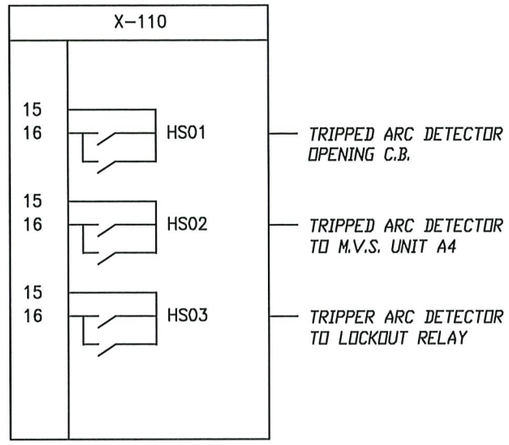
OUTPUT

X–100



OUTPUT

X–110



NO MARK UP

AS COMMISSIONED: M.T.A GIROT.

25/3/25

ROSETTI MARINO	RED LINE AS BUILT STAMP
RLMU	✖ Yes ☐ No
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Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

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IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

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Item n° :	PF1002983/30

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TITLE : SG–200N1
FUNCTIONAL DIAGRAM
Digital Output REF615

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

SCALE : NTS

A3

DRAWING NO. 1723002197–EL–DG–00030

SHEET 011

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197–EL–DG–00030 Rev.02

1	2	3	4	5	6	7	8	9	10

INPUTS

PROTECTIONS RELF615 (FP1)

OUTPUTS

A

B

C

D

50-1 / 3I>>> / DPHHPDOC1 (0 / 1 / Start)

50 / 3I>>> / DPHLPDOC2 (BLOCK; 0 / 1 / Start)

TO EMCS IEC 61850 — ISLAND CONDITION

64 / Io> / DEFLPDEF1 (0 / 1 / Start)

51 / 3I> / DPHLPTOC1 (0 / 1 / Start)

50 / 3I>>> / PHIPTOC1 (BLOCK; 0 / 1 / Start)

TO EMCS IEC 61850 — SWBD ON MAINTENACE

SA2 — SELECTOR IN MAINTENANCE POSITION (0 / 1)

X130-3

CHANGE SETTING PARAMETERS

1 — SG_2_ACT — When selected, will be active 2nd Setting of Protections

ONLY "LIGHT"

50L/50NL ARC ARCSARC1 (0 / 1 / Start) — ARC "MAIN BUS BAR" "BB"

ONLY "LIGHT"

50L/50NL ARC ARCSARC2 (0 / 1 / Start) — ARC "C.B. COMPARTMENT" "CB"

ONLY "LIGHT"

50L/50NL ARC ARCSARC3 (0 / 1 / Start) — ARC "CABLE COMPARTMENT" "CC"

≥1

t=0,5" &

1 / 0

TO EMCS IEC 61850 — 50-PROTECTION OPERATED

TO EMCS IEC 61850 — 51-PROTECTION OPERATED

LED-4 (RED)

RESET K86 014.5A

PROTECTION 013.6B

TO EMCS IEC 61850 — INTERTRIP SEND (TO M.V. SWITCHB.)

X100-S02

K86 — 0 TRIPPED PROTECTION / 1 PROTECTION

X110-HS01

FP1 – HS01 — 0 ARC DETECTOR OPENING C.B. / 1

X110-HS02

FP1 – HS02 — 0 ARC DETECTOR TO MV.S. UNIT A4 / 1

X110-HS03

FP1 – HS03 — 0 ARC DETECTOR LOCKOUT RELAY / 1

TO M.V.S. UNIT A4 — 0 / 1 TRIPPED ARC PROTECTION

LED-9 (RED)

014.6A K86

ARC 013.6C

NO MARK UP
AS COMMISSIONED! MATTIA GIROTTI
25/3/25

ROSETTI MARINO RED LINE AS BUILT STAMP

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TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Logic Diagram

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 012

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

INPUTS

RØF615 CONTACTOR COMMANDS

OUTPUTS

S20 LOCAL OPENING COMMAND 0/1 — X110-11

QG1 – S75I C.B. SERVICE 0/1 — X110-5

QG1 – S75E C.B. TEST 0/1 — X110-8

IEC 61850 – EMCS OPENING 0/1

FROM M.V.S. UNIT 4 LOCKOUT RELAY 0/1 — X120-4

FROM M.V.S. UNIT 4 C.B. OPENED OR ISOLATED 0/1 — X120-3

IEC 61850 – EMCS CLOSING 0/1

SA1 SELECTOR IN LOCAL POSITION 0/1 — X130-5

S1C LOCAL CLOSING COMMAND 0/1 — X110-13

LØD-6 (RØD)

INSERT. → 014.3D

INSERT. → 014.4C

TEST → 013.5D

CONNØCTØD

K86-MV → 014.6C

012.9B PROTECTION

014.5A K86

012.7B ARC

NOT

REMOTE → 014.6B

TO EMCS IEC 61850 *SELECTOR IN REMOTE POSITION*

RØMOTØ

LOCAL

TO EMCS IEC 61850 *SELECTOR IN LOCAL POSITION*

LOCAL OPØNING

RØMOTØ OPØNING

RØMOTØ CLOSING

LOCAL CLOSING

014.6A READY

TØST LOCAL CLOSING

LOCAL CLOSING

013.3B TEST

TEST → 014.2C

OPENING → 014.4C

X100-P03 → QG1 0/1 C.B. OPENING

TO EMCS IEC 61850 *RESET LOCKOUT RELAY* — X100-S01 → FP1 0/1 RESET LOCKOUT RELAY

X100-P04 → QG1 0/1 C.B. CLOSING

NO MARK UP
AS COMMISSIONED: MUTA GIROM
25/3/25

ROSETTI MARINO **RED LINE AS BUILT STAMP**

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Signature /Date	

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IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

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DWG n°: 231298/SD/30
Item n°: PF1002983/30

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TITLE : SG–200N1
FUNCTIONAL DIAGRAM
Logic Diagram

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

SCALE : NTS

A3

DRAWING NO. 1723002197–EL–DG–00030

SHEET 013

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197–EL–DG–00030 Rev.02

INPUTS

R□F615 CONTACTOR COMMANDS

OUTPUTS

NO MARK UP
AS COMMISSIONED: MAN.A GIROTTI
25/3/25

K86 RELAY TRIPPED 0/1 — X120-1
FROM M.V.S.UNIT 4 C.B.CLOSED INSER. E.S.OPENED 0/1 — X120-5
UB1 TCS ALARM 0/1 — X130-7
QG1 – S33M C.B. DISCHARGED 0/1 — X110-10
QG1 C.B. OPENED 0/1 — X110-3
QD2–QD3–QV1.A–QV2.A CLOSED AUXILIARY V.T. SECONDARY MCB's 0/1 — X130-1
QG1 C.B. CLOSED 0/1 — X110-1

TO EMCS IEC 61850: K86 TRIPPED
LBD-7 (GRBBN)
LBD-1 (RBD)
LBD-3 (GRBBN)
t=10"
TO EMCS IEC 61850: C.B. OPENED OR IN TEST POS.
TO EMCS IEC 61850: MCB's CLOSED
TO EMCS IEC 61850: C.B. CLOSED AND INSERTED

013.6B TEST
013.5A INSERT.
013.7B OPENING
C.B. OPENED
014.6D WATCHDOG
014.9C TCS
K86 → 013.6B
K86 → 012.4B
K86 → 012.6B
014.6C TCS-EXT

READY → 013.6C
LBD-5 (GRBBN)
013.4C REMOTE
TO EMCS IEC 61850: C.B. READY TO CLOSE
G_S02-X1
XM 0/1 CIRCUIT BREAKER READY TO CLOSE

TCS → 014.4C
LBD-2 (GRBBN)
014.3B TCS-EXT
013.3B K86-MV
NOT
TO EMCS IEC 61850: TSC YO COIL SUPERVISION

014.4D WATCHDOG
WATCHDOG 0/1
TO EMCS IEC 61850: WATCHDOG PROTECTION RELAY
X100-IRF
KIRF 0/1 WATCHDOG

ROSETTI MARINO RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
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IMESA ELECTRICAL ENGINEERING
ROSETTI MARINO

= SG-200N1
+ A2/+02
DWG n°: 231298/SD/30
Item n°: PF1002983/30

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TITLE : SG–200N1
FUNCTIONAL DIAGRAM
Logic Diagram

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

A3 | DRAWING NO. 1723002197–EL–DG–00030 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197–EL–DG–00030 Rev.02

1	2	3	4	5	6	7	8	9	10

INPUTS

REF615 SIGNALS MEASURES AND COMMAND AVAILABLE TO IEC61850

OUTPUTS

Hz	TO EMS IEC 61850 *FREQUENCY*	kW	TO EMS IEC 61850 *ACTIVE POWER (kW)*
COSfi	TO EMS IEC 61850 *POWER FACTOR*	kVA	TO EMS IEC 61850 *APPARENT POWER (kVA)*
		kVAR	TO EMS IEC 61850 *REACTIVE POWER (kVAR)*

A_{L1}	TO EMS IEC 61850 *CURRENT (L1)*
A_{L2}	TO EMS IEC 61850 *CURRENT (L2)*
A_{L3}	TO EMS IEC 61850 *CURRENT (L3)*
V_{L1}	TO EMS IEC 61850 *VOLTAGE (L1)*
V_{L2}	TO EMS IEC 61850 *VOLTAGE (L2)*
V_{L3}	TO EMS IEC 61850 *VOLTAGE (L3)*

LIST SIGNALS (PROTECTIONS - COMMANDS - SIGNALS) SENT TO IEC61850:

- PROTECTION TRIPPED "50"
- PROTECTION TRIPPED "51"
- SELECTOR SWITCH IN LOCAL POSITION
- SELECTOR SWITCH IN REMOTE POSITION
- WATCHDOG PROTECTION RELAY
- K86 TRIPPED
- INTERTRIP SEND TO M.V. SWITCH.
- C.B. CLOSED AND INSERTED
- C.B. OPENED OR ISOLATED
- MCB'S CLOSED
- TCS (YO COIL SUPERVISION)
- C.B. READY TO CLOSE
- OPENING COMMAND
- CLOSING COMMAND

NO MARK UP

AS COMMISSIONED: MARIA GIROTTI

25/3/25

A

B

C

D

ROSETTI MARINO RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
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IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

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Item n° :	PF1002983/30

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TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Signals to IEC61850

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 015

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

"INCOMING TRANSFORMER"

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

INCOMING FROM
HV SWBD "SG-100D1"

TR-200D01
1,6MVA
6.6 / 0.42kV
zcc%=6%
Dyn 11

out of scope
IMESA supply

TO P1 S1 S2 P2

51G PROTECTIVE FUNCTION
ON 6,6kV side

PE (ext)

VENDOR
SWBD supplier

BATTERY LIMIT

PE (swbd)

~ 400V - 50Hz - 2500A - 50kA

L1-A L2-A L3-A N-A

017.1A 017.2A 017.2A 017.2A

LANS Optical Fiber for
Internal Arc Survey
(on Incoming Busbars Compartement)

021.5C CC CC +

AUXILIARY VOLTAGE SWITCH

QU1

QU2

L3-A 3 4 1 1x4 BK

N-A 1 2 2 1x4 BK

16A

Pos.1 = Incoming from
Temporary Generator

Pos.2 = Incoming from
Transformer

1 0 2

Close
on "Pos.2"

QU1 5 6 220/1 1x4 BK 019.1A

QU1 3 4 220/2 1x4 BK 019.1B

DISTRIBUTION
AUXILIARY VOLTAGE

from
TEMPORARY GENERATOR
drawer placed on
"CLA2 / +08"

018.9A L3 QU3 3 4 3 1x4 BK

018.9A N 1 2 4 1x4 BK

16A

Close
on "Pos.1"

ROSETTI MARINO RED LINE AS BUILT STAMP

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IMESA ELECTRICAL ENGINEERING

DWG n° : 231298/SD/30

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ROSETTI MARINO

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TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Power Diagram

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 016

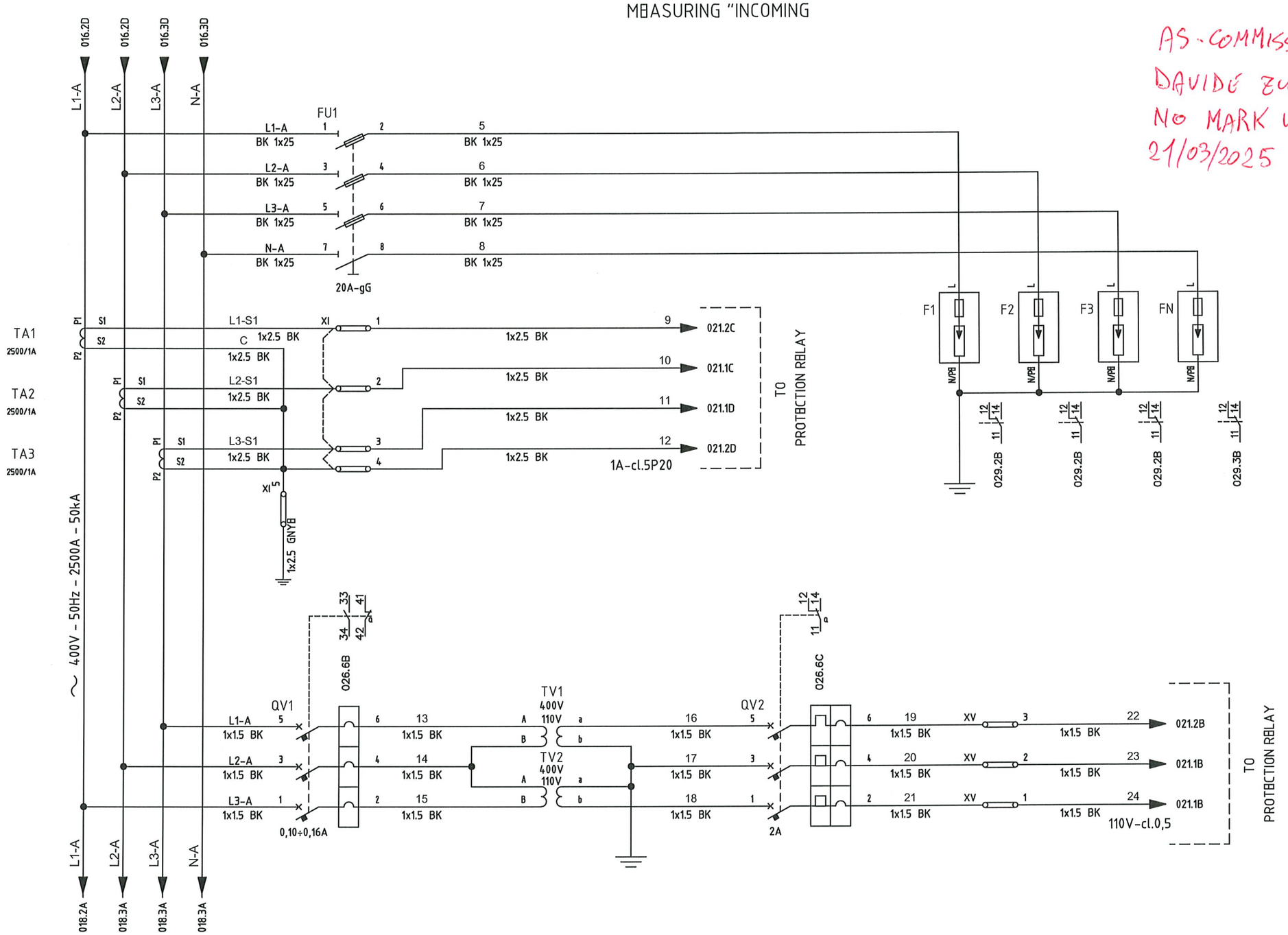
REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

MEASURING "INCOMING

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



=							
+							
DWG n°: 231298/SD/30							
Item n°: PF1002983/30	2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)	
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IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

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TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Power Diagram

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

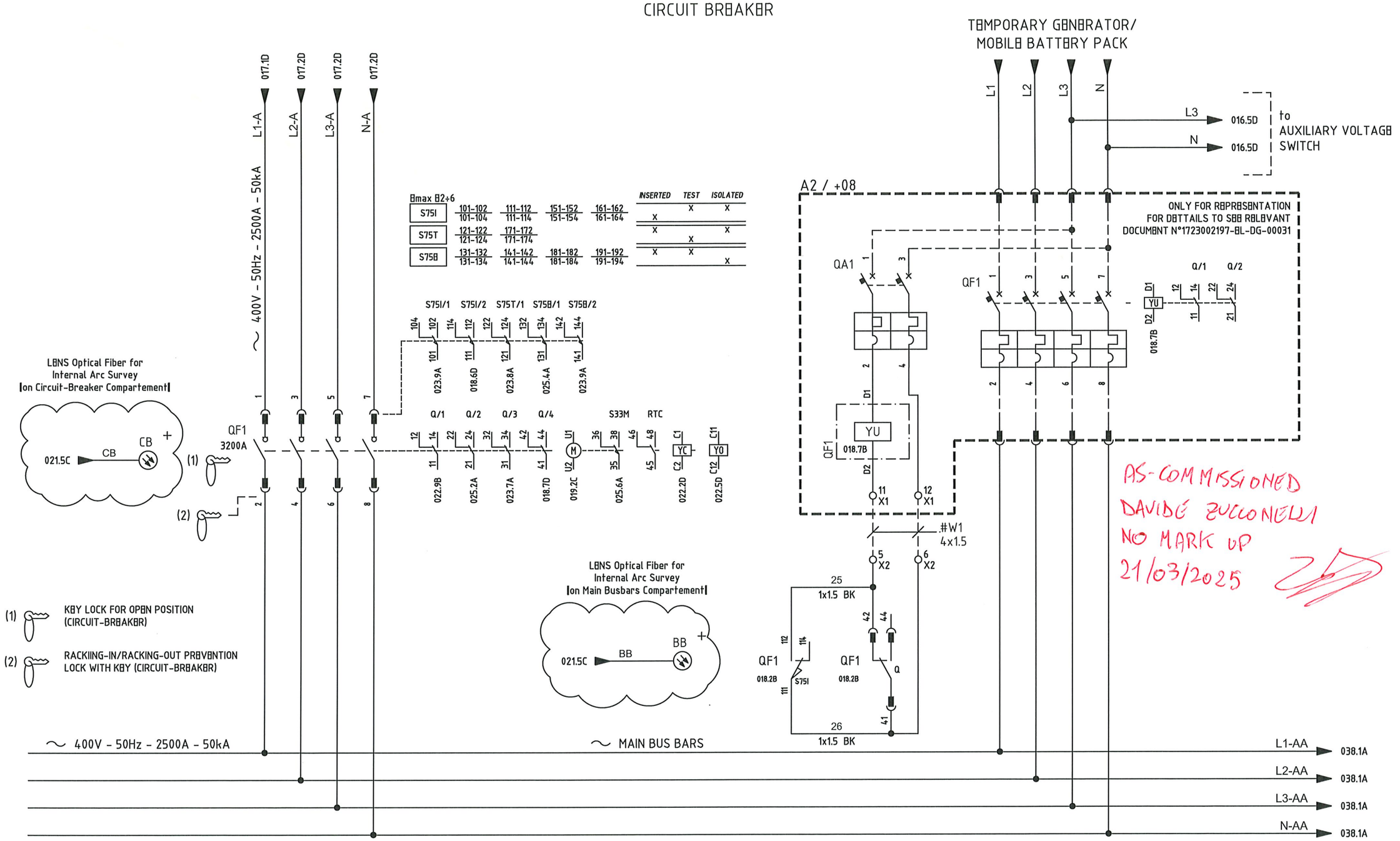
SHEET 017

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

CIRCUIT BREAKER



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

RED LINE AS BUILT STAMP	
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0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Power Diagram

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

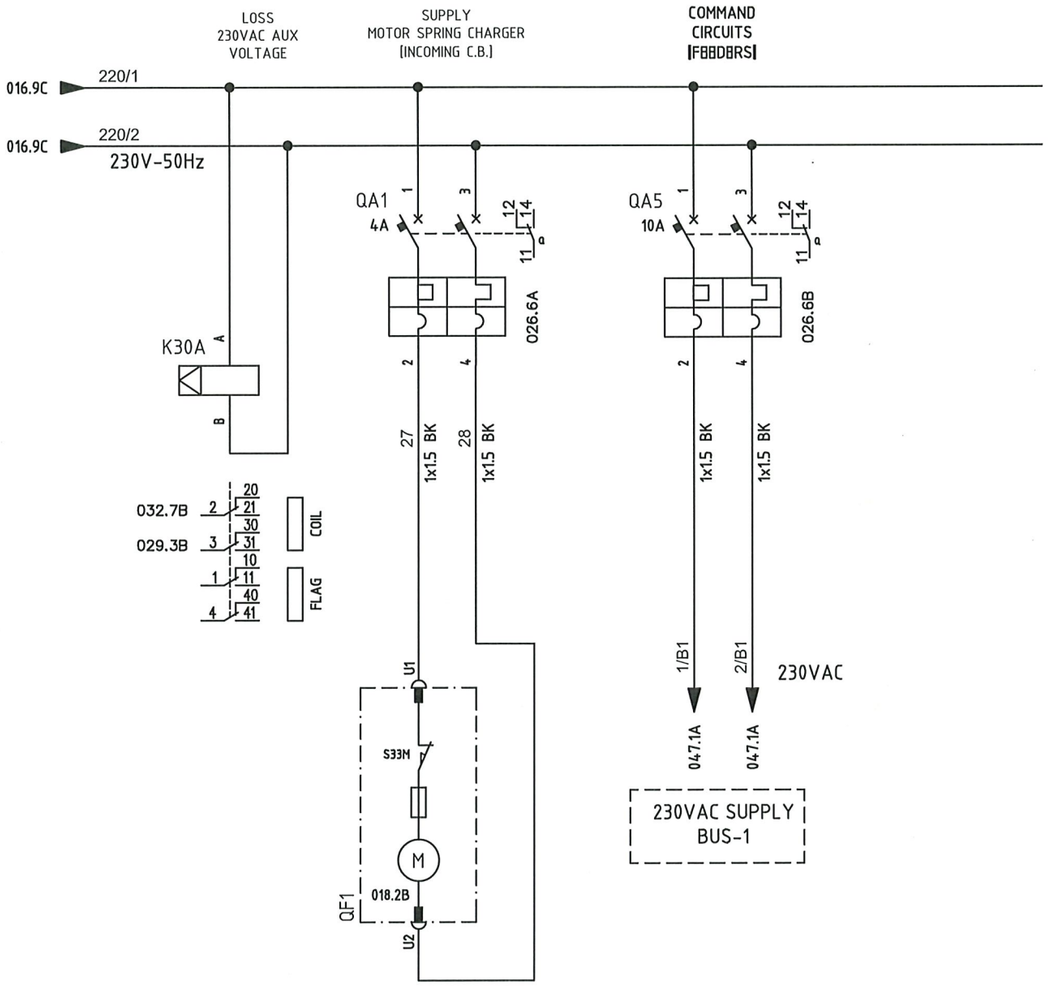
SHEET 018

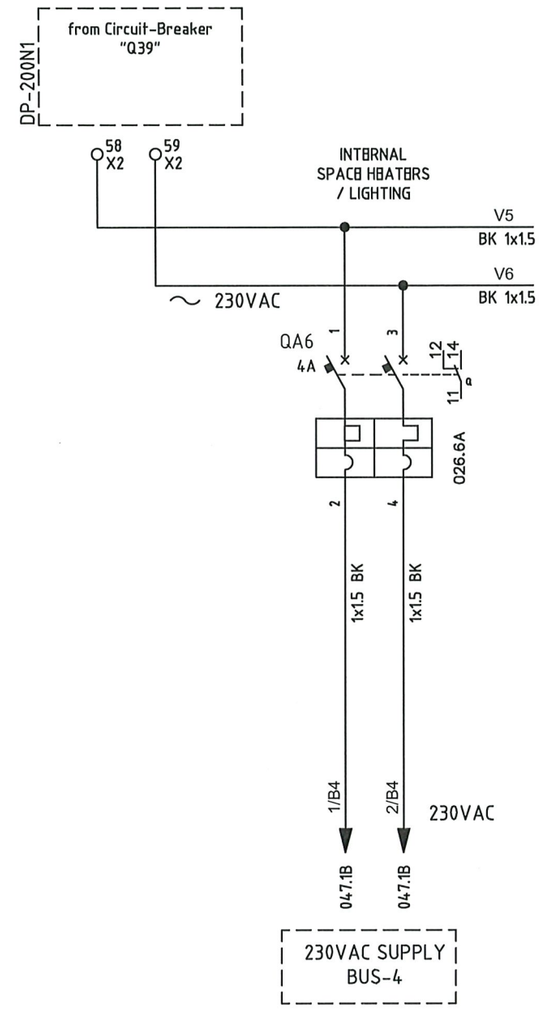
REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

SUPPLY AUXILIARY CIRCUITS





NO MARK UP
AS COMMISSIONED: MARIA GIROTTI
21/3/25

RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick "Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=	SG-200N1
+	A2/+02
DWG n°:	231298/SD/30
Item n°:	PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
230Vac/24Vdc Distribution Volatage

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

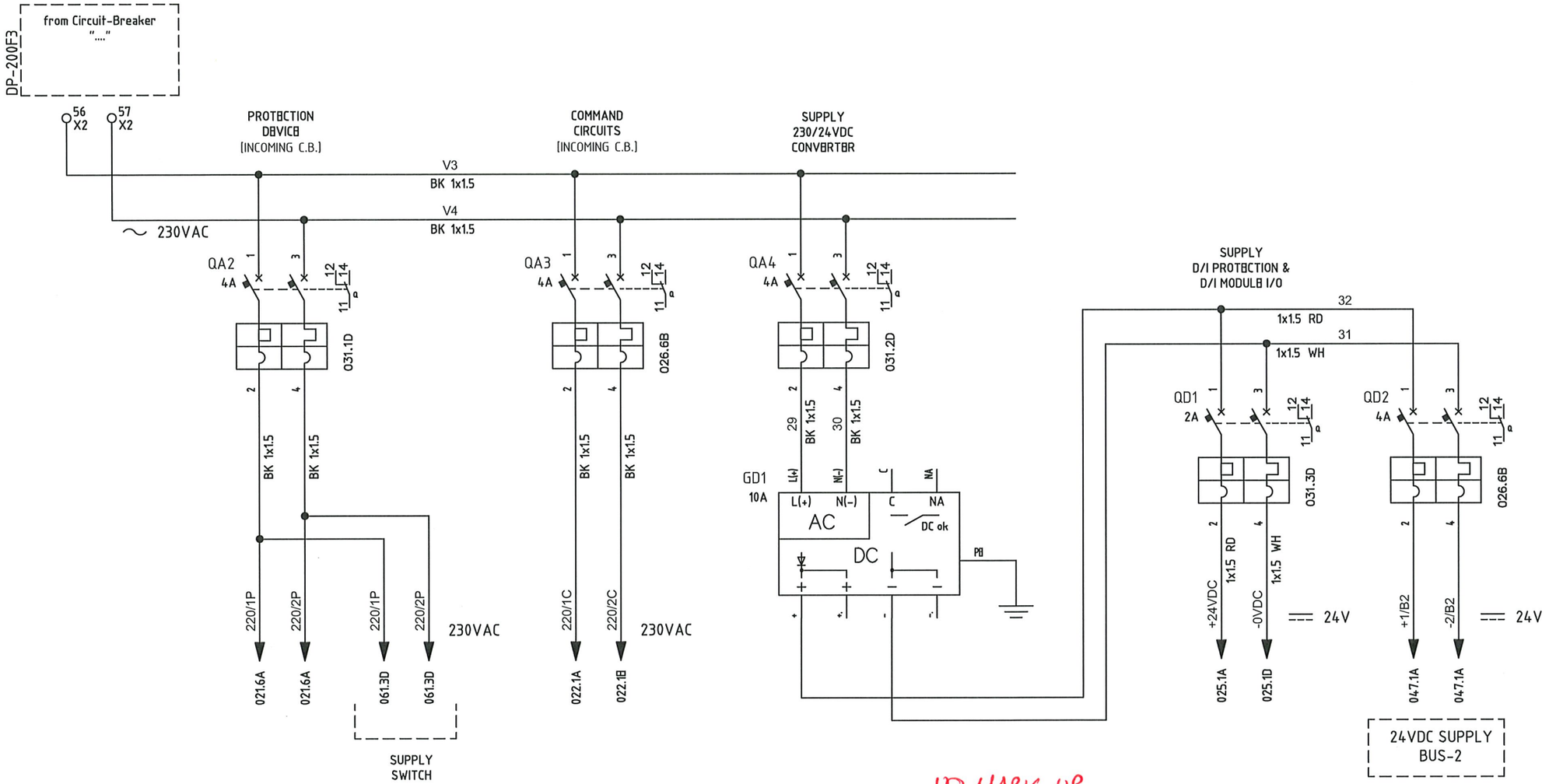
SHEET 019

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

SUPPLY AUXILIARY CIRCUITS



NO MARK UP
AS COMMISSIONED: MARCO GIROTTI
21/3/25

RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n°: 231298/SD/30
Item n°: PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
230Vac/24Vdc Distribution Volatage

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

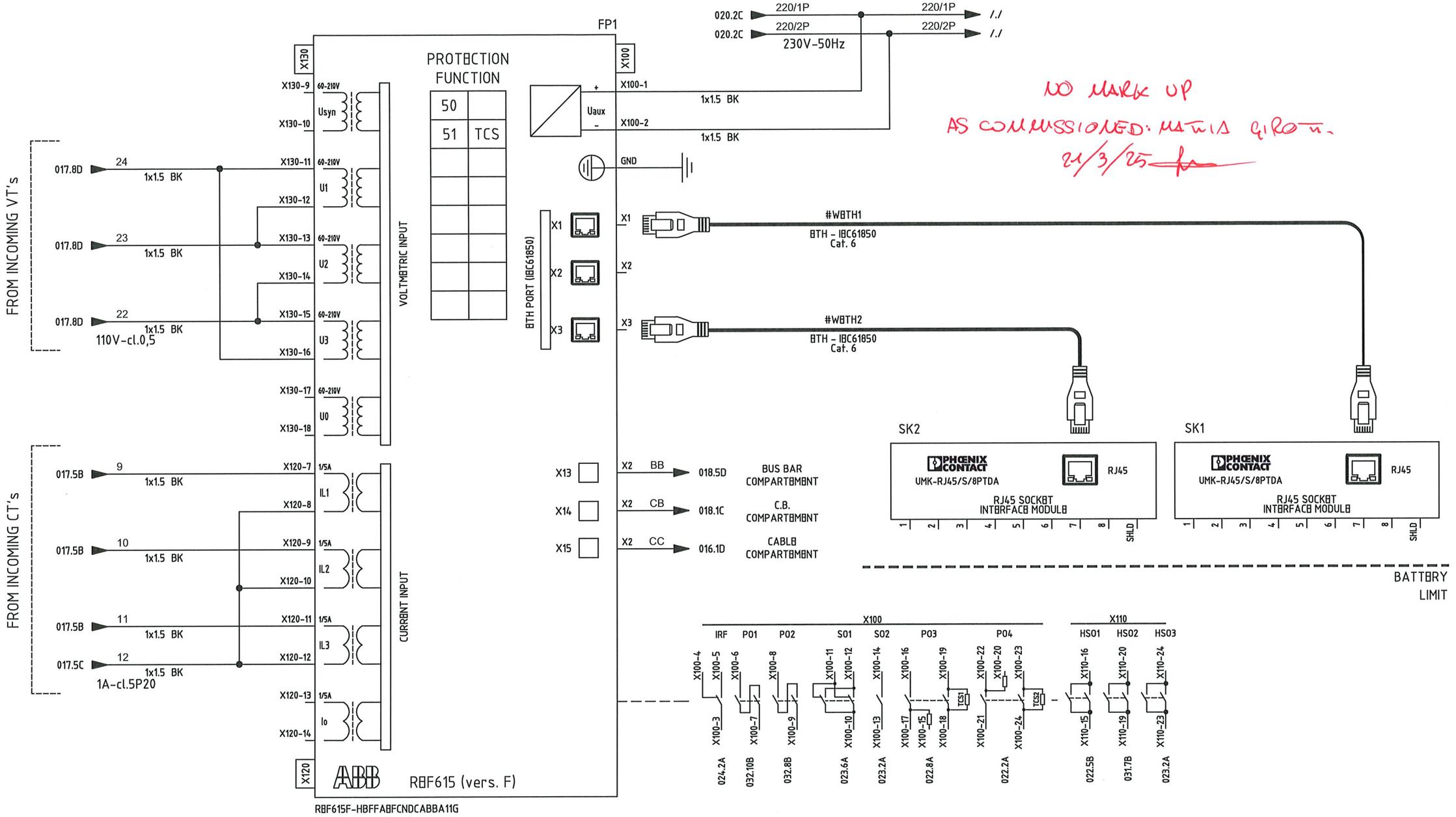
SHEET 020

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

"REF615" PROTECTION WIRING



NO MARK UP
AS COMMISSIONED: MATRIS GIROTTI
21/3/25

RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=	SG-200N1
+	A2/+02
DWG n° :	231298/SD/30
Item n° :	PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
REF615 Protection Wiring

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

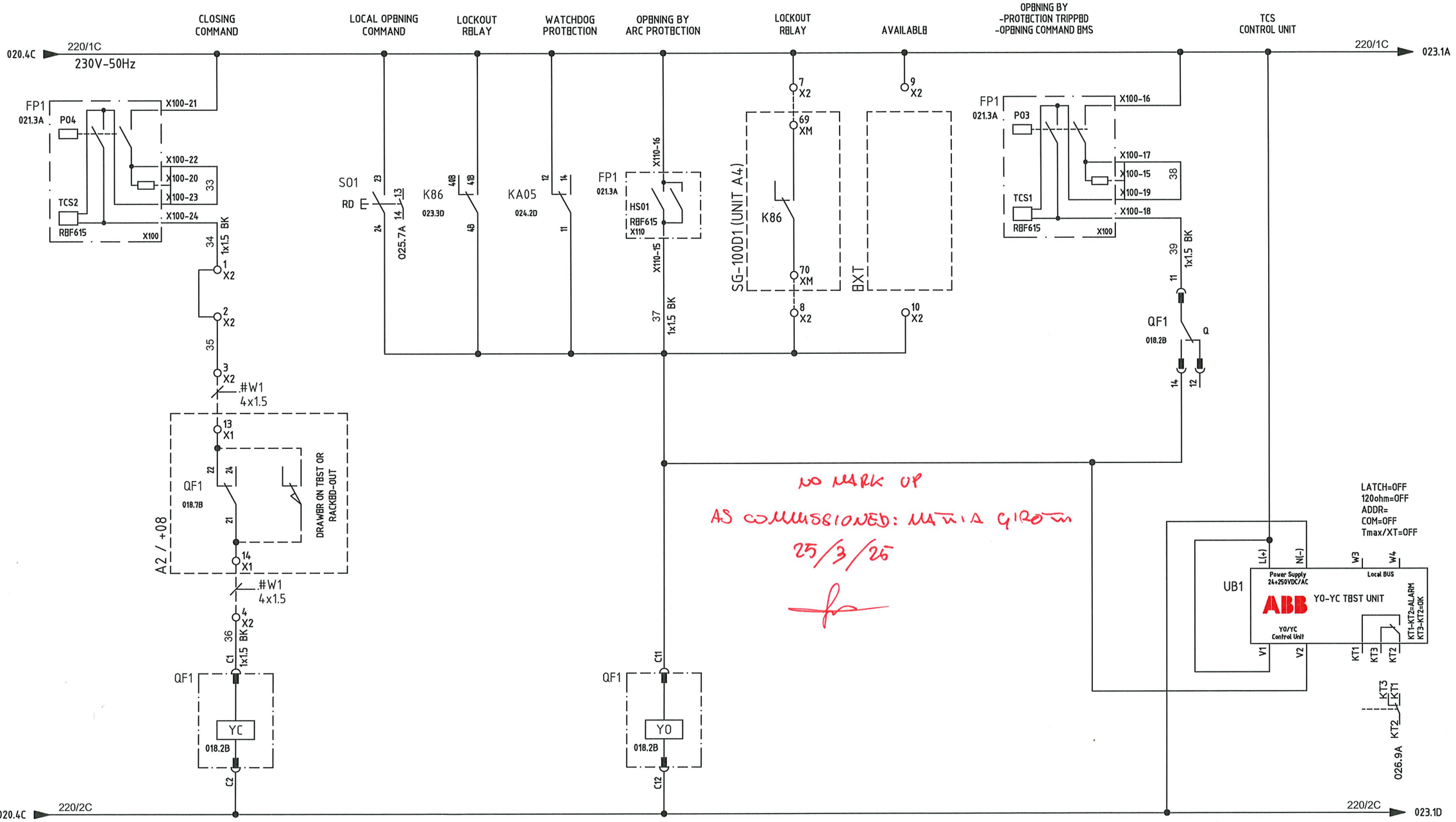
SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 021 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

COMMAND CIRCUITS



RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick "Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=	SG-200N1
+	A2/+02
DWG n° :	231298/SD/30
Item n° :	PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Command Circuit

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

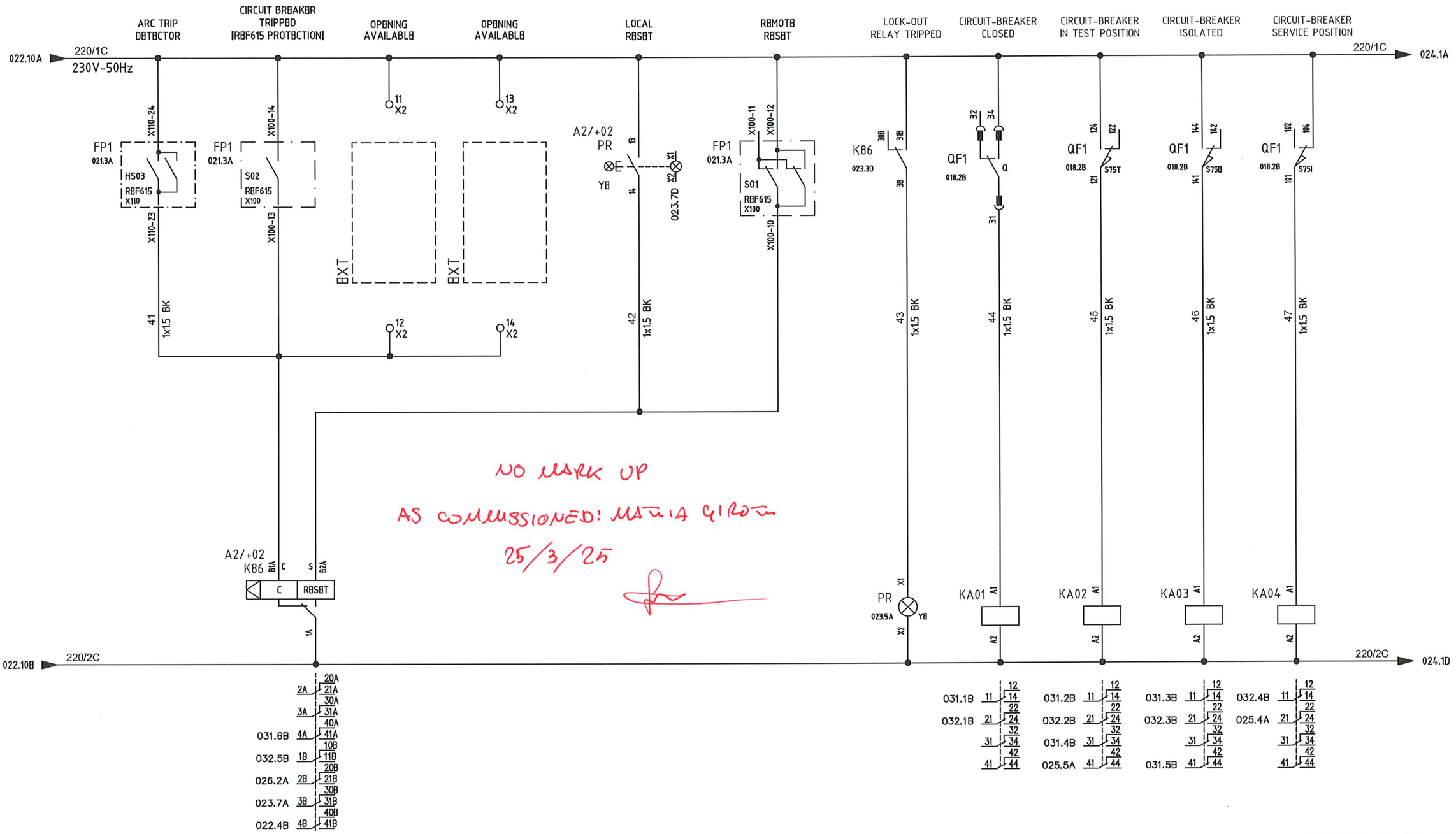
SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 022 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

COMMAND CIRCUITS



NO MARK UP

AS COMMISSIONED: MATIA GIROU

25/3/25

ROSETTI MARINO RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

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Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=	SG-200N1
+	A2/+02
DWG n° :	231298/SD/30
Item n° :	PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
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0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Command Circuit

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 023

REV. 02

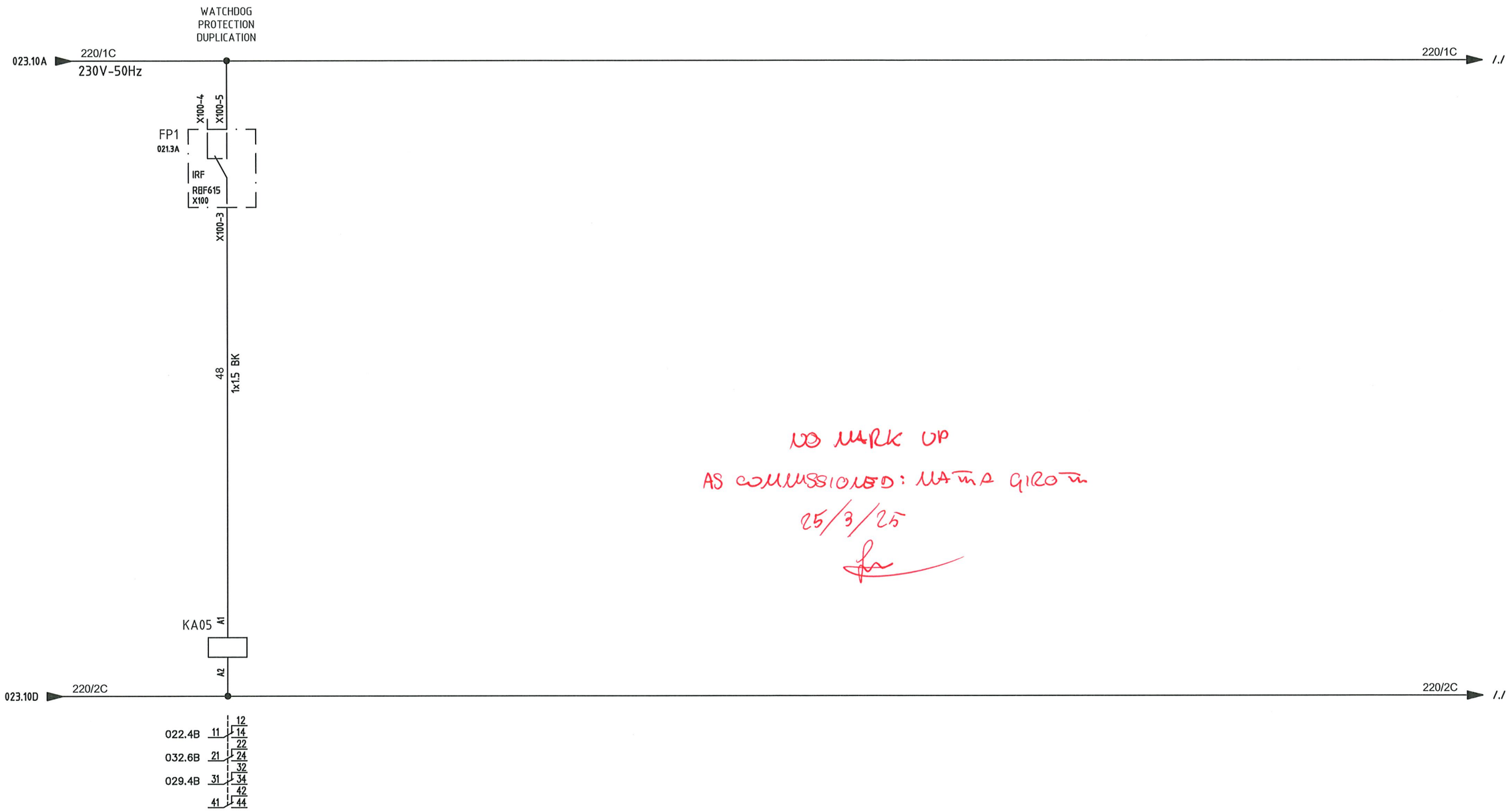
F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10

A | B | C | D

COMMAND CIRCUITS



NO MARK UP

AS COMMISSIONED: MATTIA GIROTTI

25/3/25

RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

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IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n°: 231298/SD/30

Item n°: PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
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0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Command Circuit

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

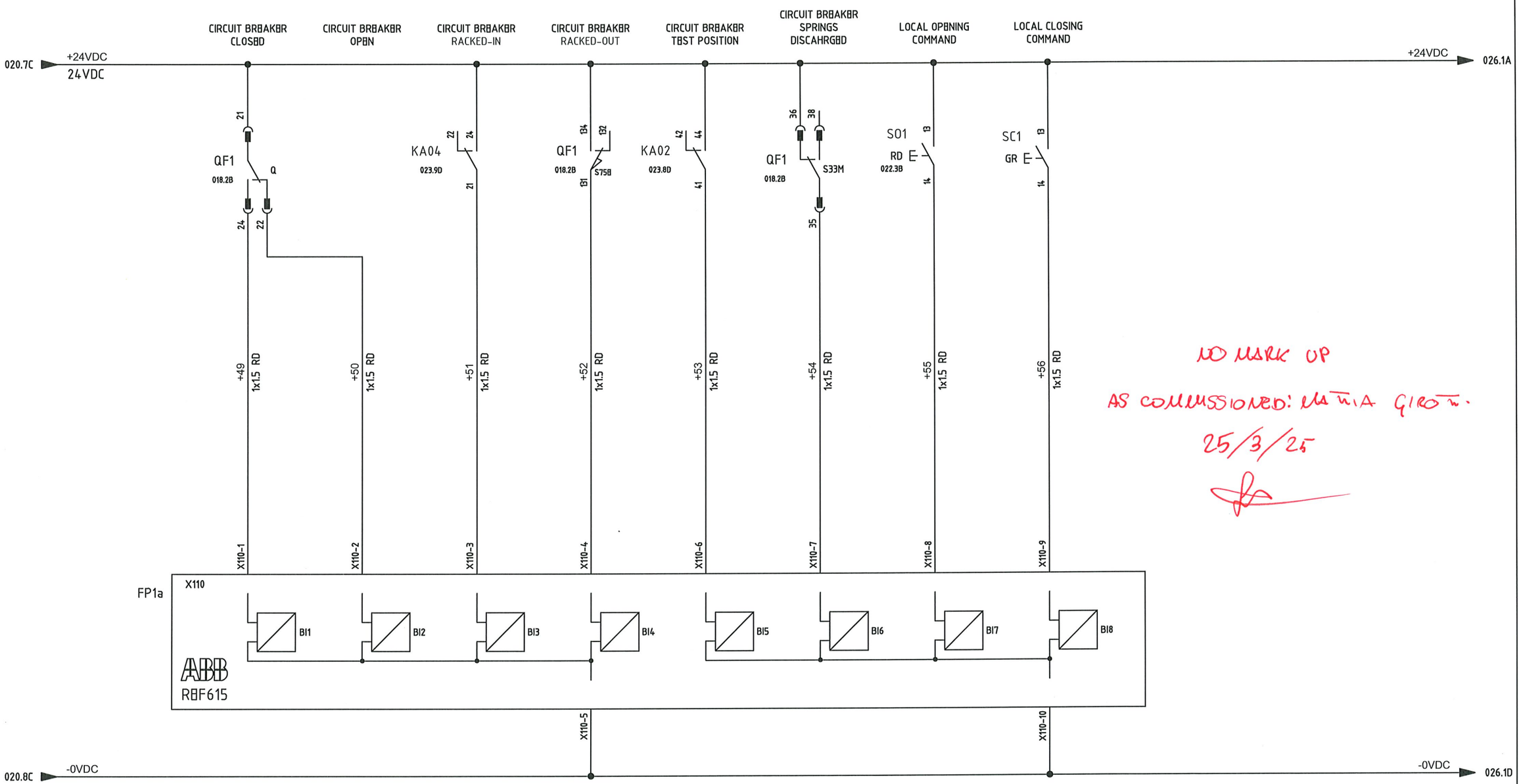
SHEET 024

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

"REF615" PROTECTION WIRING - DIGITAL INPUT



NO MARK UP

AS COMMISSIONED: MARIA GIROT.

25/3/25

ROSETTI MARINO	RED LINE AS BUILT STAMP
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

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Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=	SG-200N1
+	A2/+02
DWG n° :	231298/SD/30
Item n° :	PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
REF615 Protection Wiring Digital Input

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

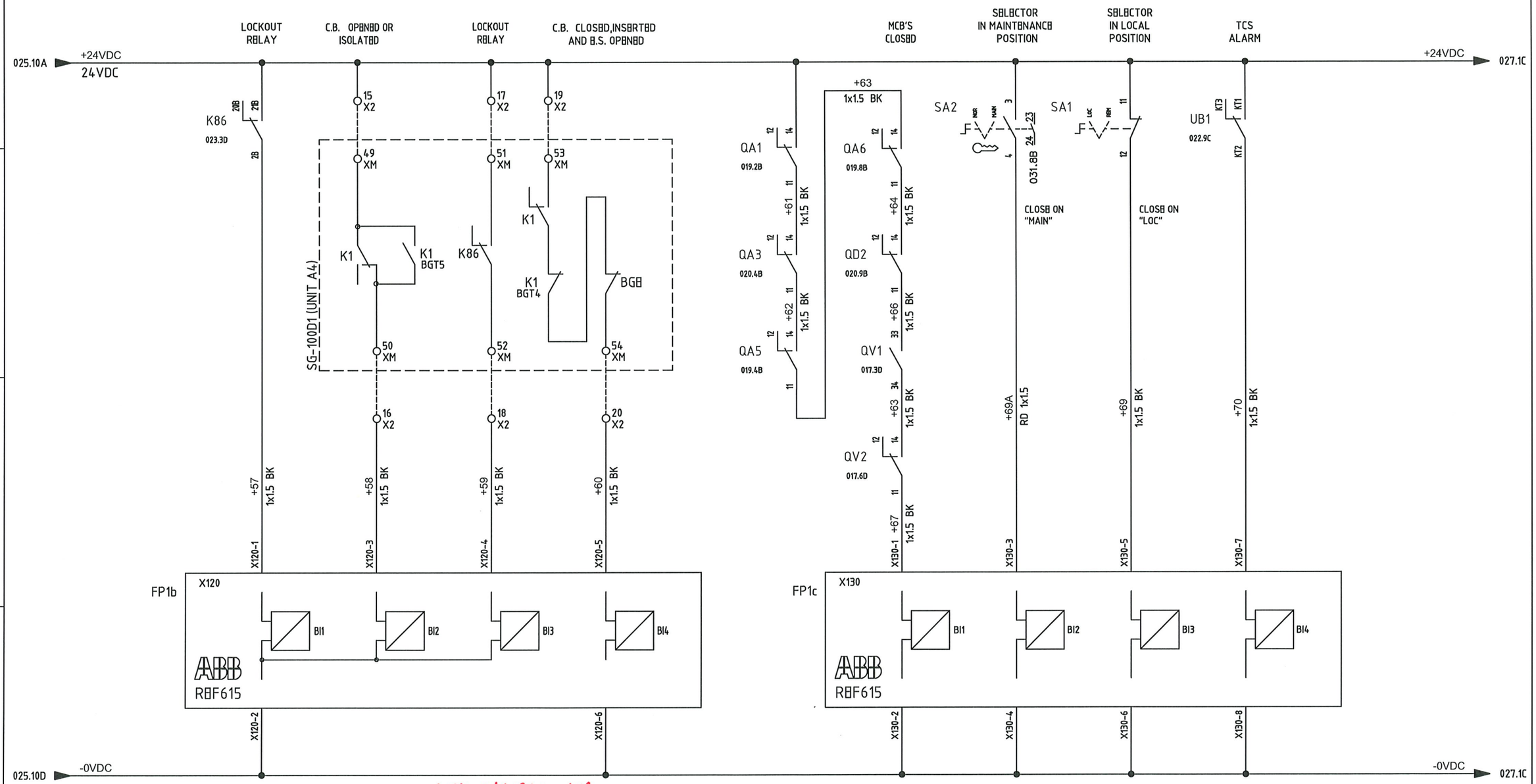
SHEET 025

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

"REF615" PROTECTION WIRING - DIGITAL INPUT



NO MARK UP

AS COMMISSIONED: MATIA GIROTTI 25/3/25

ROSETTI MARINO	RED LINE AS BUILT STAMP
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

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IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=	SG-200N1
+	A2/+02
DWG n° :	231298/SD/30
Item n° :	PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
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TITLE : SG-200N1
FUNCTIONAL DIAGRAM
REF615 Protection Wiring Digital Input

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

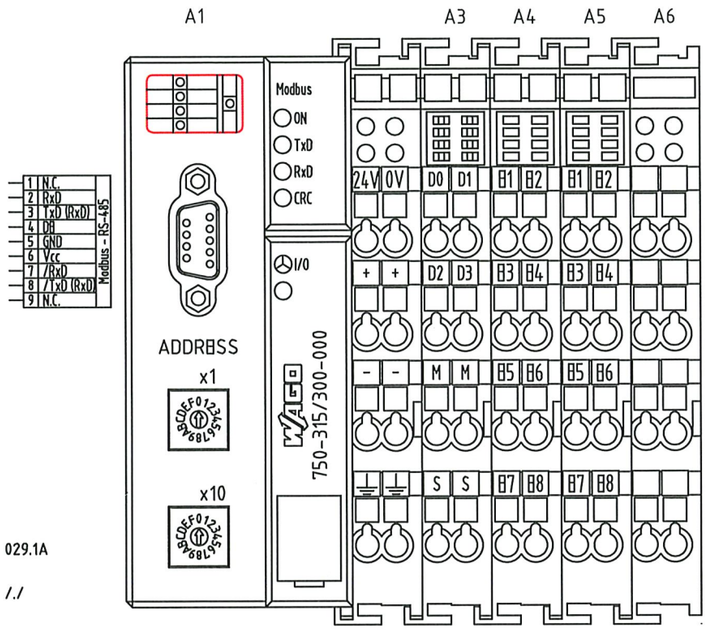
SHEET 026

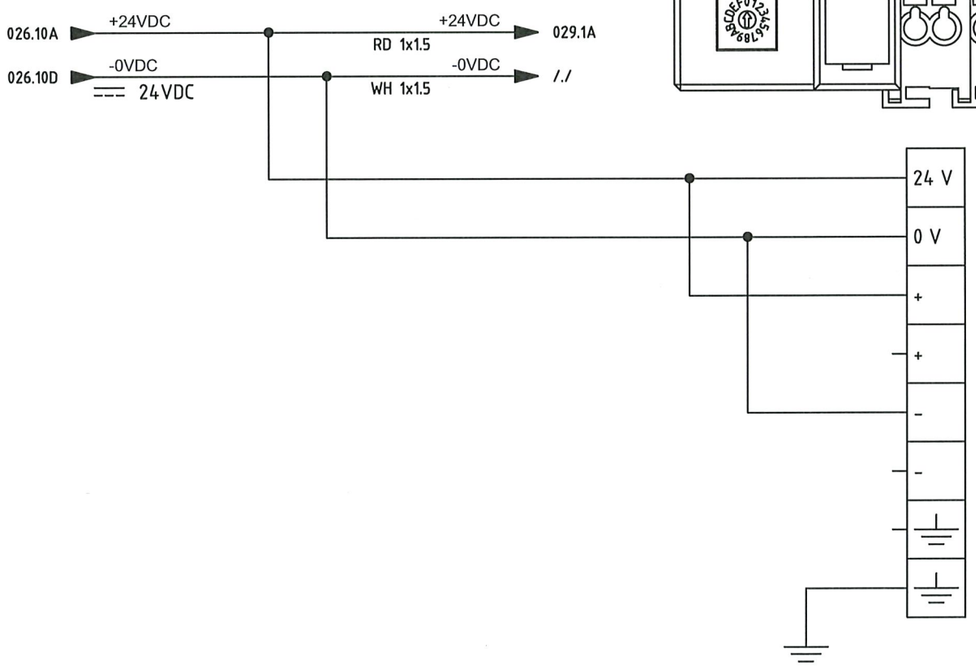
REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

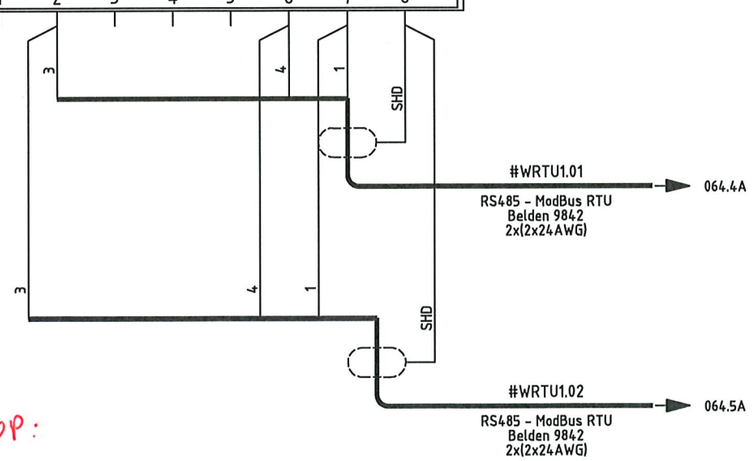
MODULE I/O CONNECTION





Name:	Sheet:
A3	027.5C

CPU: SG-200N1
MOD.: 1



NO MARK UP:
AS COMMISSIONED: MATIA GIROTTI
25/3/25

RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

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IMESA ELECTRICAL ENGINEERING

DWG n°: 231298/SD/30
Item n°: PF1002983/30

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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+					
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Module I/O Connection

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 027

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

MODULE I/O CONNECTION

Quadro: A2/+02	Gruppo Funzione:	Sigla: A4					
CPU: SG-200N1	Rack: 01	Slot: 2					
Pin	Descrizione Pin	Indirizzo	Commento1	Commento2	Commento3	Commento4	Foglio
1 [B1]	DI 1	B0.0	SG-200N1	SURGE ARRESTER	FAULT		029
5 [B2]	DI 2	B0.1	SG-200N1	LOSS 230VAC	AUXILIARY	VOLTAGE	029
2 [B3]	DI 3	B0.2	SG-200N1	WATCHDOG	PROTECTION		029
6 [B4]	DI 4	B0.3	SG-200N1	MOTOR FEEDER	FAULT LOOP	[BUS-3]	029
3 [B5]	DI 5	B0.4	SG-200N1	AVAILABLE			029
7 [B6]	DI 6	B0.5	SG-200N1	AVAILABLE			029
4 [B7]	DI 7	B0.6	SG-200D2	MCBs	HEALTHY		029
8 [B8]	DI 8	B0.7	SG-200D2	AVAILABLE			029

Quadro: A2/+02	Gruppo Funzione:	Sigla: A5					
CPU: SG-200N1	Rack: 01	Slot: 3					
Pin	Descrizione Pin	Indirizzo	Commento1	Commento2	Commento3	Commento4	Foglio
1 [B1]	DI 1	B1.0	DP-200N1	SURGE ARRESTER	FAULT		030
5 [B2]	DI 2	B1.1	DP-200N1	NORMAL AND EMERGENCY	LIGHTING	ON AUTOMATIC	030
2 [B3]	DI 3	B1.2	DP-200N1	NORMAL AND EMERGENCY	LIGHTING	ACTIVATED	030
6 [B4]	DI 4	B1.3	DP-200N1	NORMAL AND EMERGENCY	CIRCUIT-BREAKERS	CLOSED	030
3 [B5]	DI 5	B1.4	DP-200N1	TRACE HEATINGS	ACTIVATED		030
7 [B6]	DI 6	B1.5	DP-200N1	TRACE HEATINGS	CIRCUIT-BREAKERS	CLOSED	030
4 [B7]	DI 7	B1.6	DP-200N1	MAIN AND UTILITIES	CIRCUIT-BREAKERS	CLOSED	030
8 [B8]	DI 8	B1.7	DP-200N1	AVAILABLE			030

Quadro: A2/+02	Gruppo Funzione:	Sigla: A3					
CPU: SG-200N1	Rack: 01	Slot: 1					
Pin	Descrizione Pin	Indirizzo	Commento1	Commento2	Commento3	Commento4	Foglio
1	RTS (RS-232) / Z (RS-485/422)						027
2	CTS (RS-232) / B (RS-485/422)						
3	Common (Ground)						
4	Shield (screen)						
5	TxD (RS-232) / Y (RS-485/422)						
6	RxD (RS-232) / A (RS-485/422)						
7	Common (Ground)						
8	Shield (screen)						

NO MARK UP

AS COMMISSIONED: MASTER COPY.

25/3/25

ROSETTI MARINO **RED LINE AS BUILT STAMP**

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

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IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

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DWG n°: 231298/SD/30

Item n°: PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Module I/O Connection

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

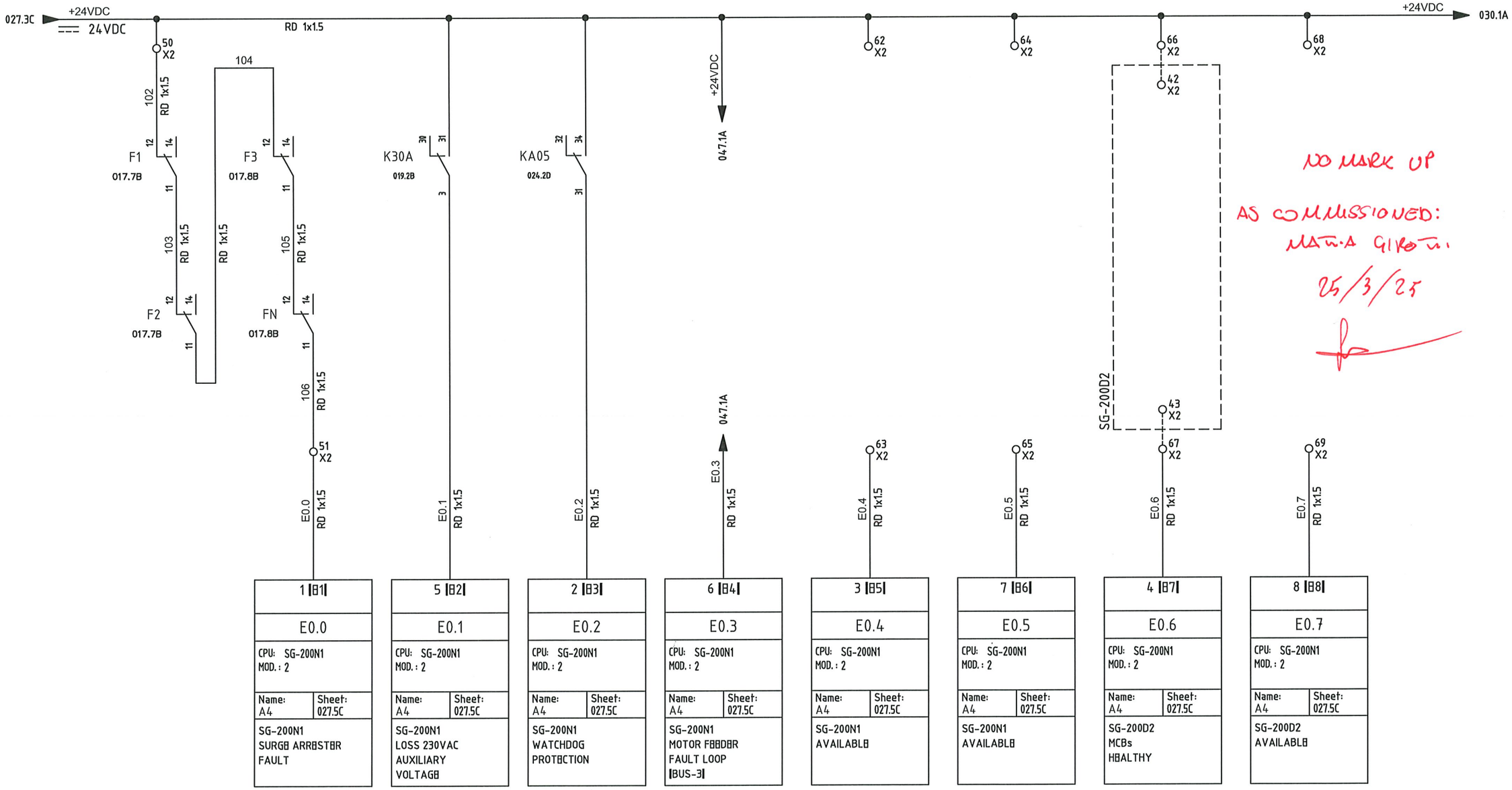
SHEET 028

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

MODULE I/O CONNECTION



NO MARK UP

AS COMMISSIONED:
MATTIA GIROTTI
25/3/25

ROSETTI MARINO **RED LINE AS BUILT STAMP**

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

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IMESA ELECTRICAL ENGINEERING

DWG n°: 231298/SD/30
Item n°: PF1002983/30

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Module I/O Connection

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

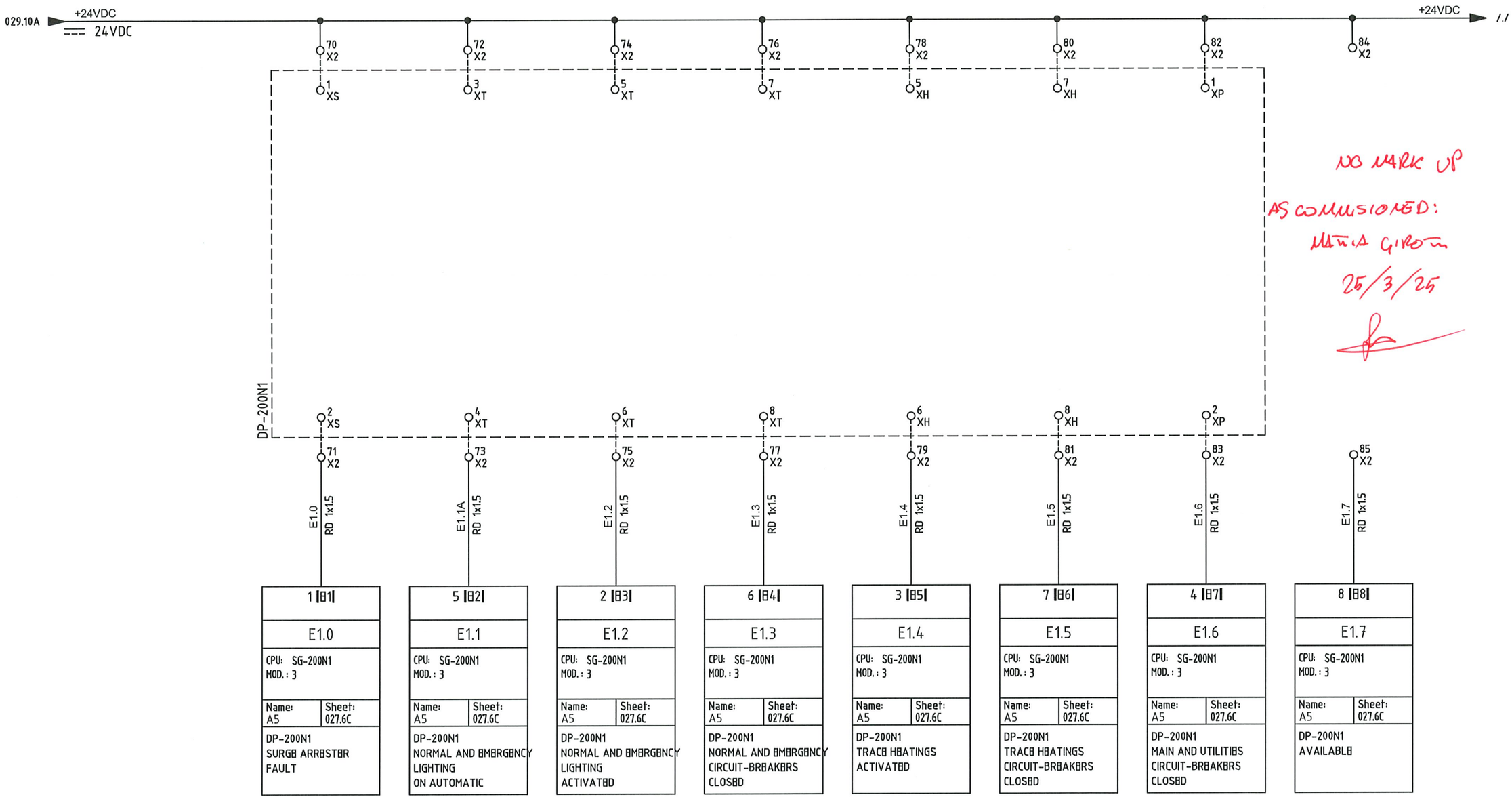
SHEET 029

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

MODULE I/O CONNECTION



1 |B1|	5 |B2|	2 |B3|	6 |B4|	3 |B5|	7 |B6|	4 |B7|	8 |B8|
E1.0	E1.1	E1.2	E1.3	E1.4	E1.5	E1.6	E1.7
CPU: SG-200N1 MOD.: 3	CPU: SG-200N1 MOD.: 3	CPU: SG-200N1 MOD.: 3	CPU: SG-200N1 MOD.: 3	CPU: SG-200N1 MOD.: 3	CPU: SG-200N1 MOD.: 3	CPU: SG-200N1 MOD.: 3	CPU: SG-200N1 MOD.: 3
Name: A5 / Sheet: 027.6C	Name: A5 / Sheet: 027.6C	Name: A5 / Sheet: 027.6C	Name: A5 / Sheet: 027.6C	Name: A5 / Sheet: 027.6C	Name: A5 / Sheet: 027.6C	Name: A5 / Sheet: 027.6C	Name: A5 / Sheet: 027.6C
DP-200N1 SURGE ARRESTER FAULT	DP-200N1 NORMAL AND EMERGENCY LIGHTING ON AUTOMATIC	DP-200N1 NORMAL AND EMERGENCY LIGHTING ACTIVATED	DP-200N1 NORMAL AND EMERGENCY CIRCUIT-BREAKERS CLOSED	DP-200N1 TRACE HEATINGS ACTIVATED	DP-200N1 TRACE HEATINGS CIRCUIT-BREAKERS CLOSED	DP-200N1 MAIN AND UTILITIES CIRCUIT-BREAKERS CLOSED	DP-200N1 AVAILABLE

NO MARK UP
AS COMMISIONED:
MATTIA GIROTTI
25/3/25

RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n°: 231298/SD/30
Item n°: PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Module I/O Connection

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

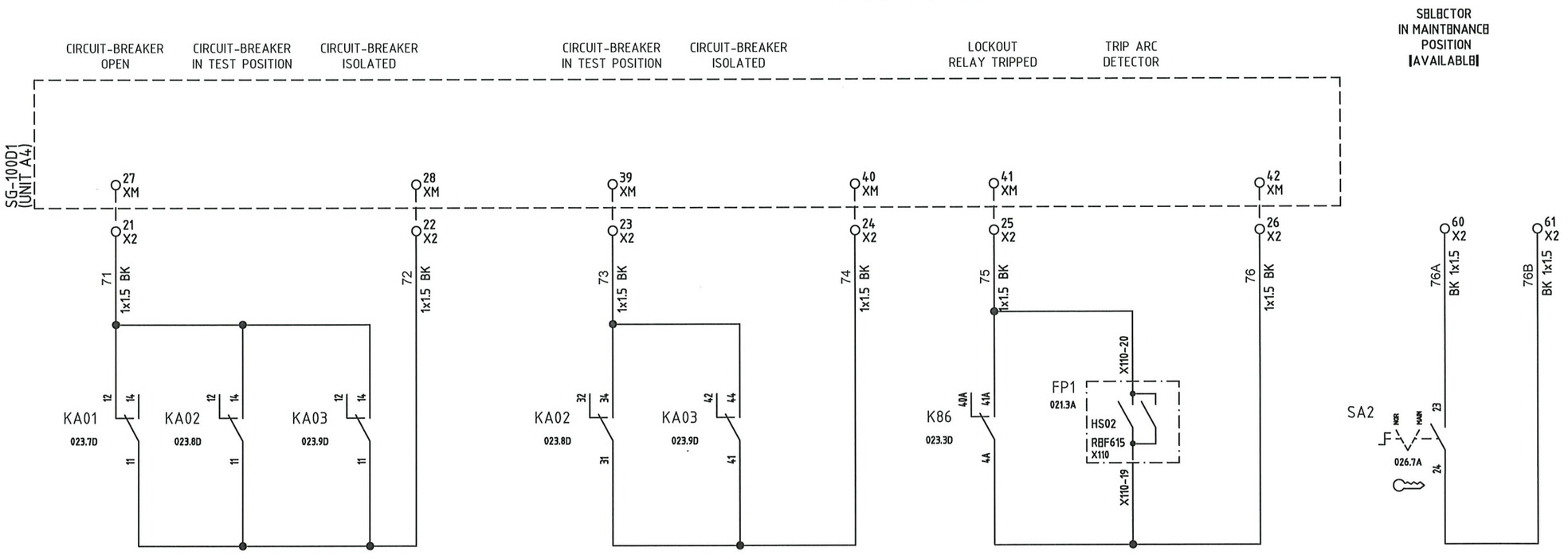
SHEET 030

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

AVAILABLE SIGNALS



NO MARK UP

AS COMMISSIONED: MATIA GIROTTI

25/3/25

RED LINE AS BUILT STAMP	
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IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=	SG-200N1
+	A2/+02
DWG n° :	231298/SD/30
Item n° :	PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Available Signals

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

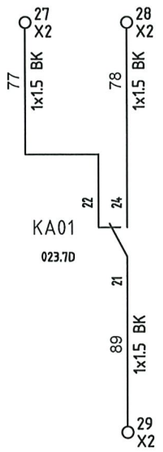
A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 031 | REV. 02

F.to UNI A3: 420mmx297mm

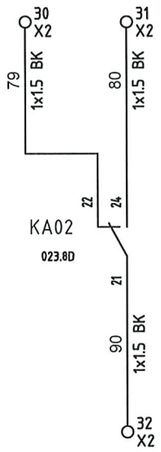
File Name : 1723002197-EL-DG-00030 Rev.02

AVAILABLE SIGNALS

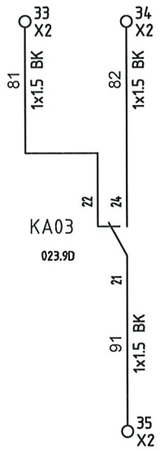
CIRCUIT-BREAKER OPEN/CLOSED



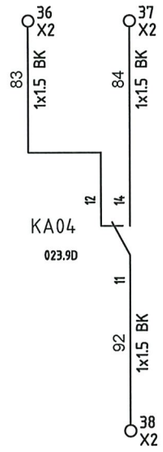
CIRCUIT-BREAKER IN TEST POSITION



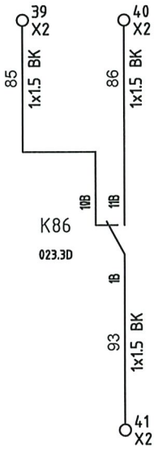
CIRCUIT-BREAKER RACKED-OUT



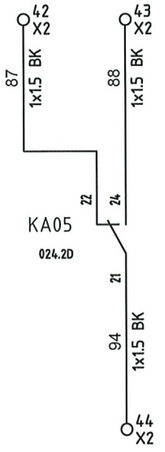
CIRCUIT-BREAKER RACKED-IN



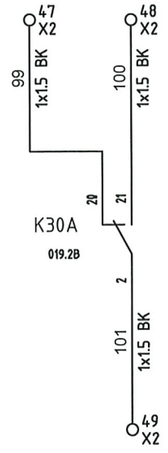
LOCKOUT RELAY TRIPPED



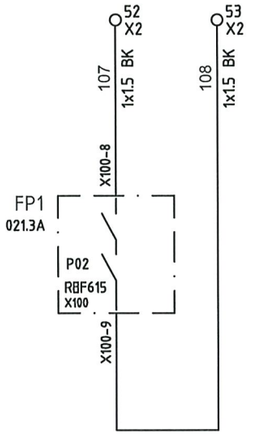
WATCHDOG PROTECTION



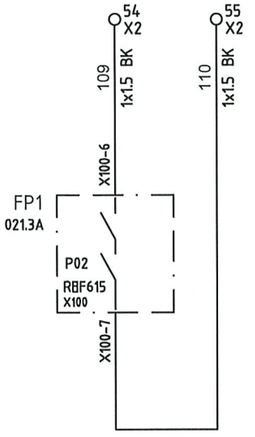
LOSS 230Vac AUXIALIRY VOLTAGE



AVAILABLE



AVAILABLE



NO MARK UP

AS COMMISSIONED: MARIA GIROTTI.

25/3/25

RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
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Signature /Date	

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IMESA ELECTRICAL ENGINEERING

DWG n°: 231298/SD/30

Item n°: PF1002983/30

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
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0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Available Signals

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 032

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

SG-200N1 - A2/+02
XI

NumM	Sheet	Sec.	Type	Terminal Description	Manufacturer
			BT005	BTU End bracket	Cabur
1	017.3B	6	HB220GR	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - spring type	Cabur
2	017.3B	6	HB220GR	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - spring type	Cabur
3	017.3C	6	HB220GR	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - spring type	Cabur
4	017.3C	6	HB220GR	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - spring type	Cabur
5	017.3C	6	HB220GR	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - spring type	Cabur
			HL201GR	HLD.2/PT/GR End section - Grey	Cabur
			BT005	BTU End bracket	Cabur

SG-200N1 - A2/+02
XV

NumM	Sheet	Sec.	Type	Terminal Description	Manufacturer
			BT005	BTU End bracket	Cabur
1	017.7D	6	HB210GR	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type	Cabur
2	017.7D	6	HB210GR	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type	Cabur
3	017.7D	6	HB210GR	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type	Cabur
			HB201GR	HSCB.6/PT/GR End section - Grey	Cabur
			BT005	BTU End bracket	Cabur

NO MARK UP
AS COMMISSIONED: MATIA GIROTTI
25/3/25

RED LINE AS BUILT STAMP

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IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= SG-200N1
\+ A2/+02
DWG n° : 231298/SD/30
Item n° : PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
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0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Terminal Blocks

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 033

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

SG-200N1 - A2/+02
X2

NumM	Sheet	Sec.	Type	Terminal Description	Manufacturer
			BT005	BTU BLOCCHETTO TERMINALE	Cabur
1	022.2B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
2	022.2B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
3	022.2C	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
4	022.2D	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
5	018.7C	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
6	018.7C	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
7	022.6A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
8	022.6B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
9	022.7A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
10	022.7B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
11	023.3A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
12	023.3B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
13	023.4A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
14	023.4B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
15	026.3A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
16	026.3C	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
17	026.4A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
18	026.4C	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
19	026.4A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
20	026.4C	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
21	031.1B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
22	031.3B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
23	031.4B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
24	031.5B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
25	031.6B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
26	031.7B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
27	032.1A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
28	032.1A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
29	032.1B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
30	032.2A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
31	032.2A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
32	032.2B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
33	032.3A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
34	032.3A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
35	032.3B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
36	032.4A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur

SG-200N1 - A2/+02
X2

NumM	Sheet	Sec.	Type	Terminal Description	Manufacturer
37	032.4A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
38	032.4B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
39	032.5A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
40	032.5A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
41	032.5B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
42	032.6A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
43	032.6A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
44	032.6B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
45	031.1D	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
46	031.3D	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
47	032.7A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
48	032.7A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
49	032.7B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
50	029.2A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
51	029.3C	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
52	032.8A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
53	032.9A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
54	032.10A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
55	032.10A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
56	020.1A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
57	020.1A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
58	019.7A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
59	019.8A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
60	031.8B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
61	031.9B	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
62	029.6A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
63	029.6C	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
64	029.7A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
65	029.7C	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
66	029.8A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
67	029.8C	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
68	029.9A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
69	029.9C	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
70	030.3A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
71	030.3C	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
72	030.4A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
73	030.4C	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur

NO MARK UP

AS COMMISSIONED: MARIA GIROTTI 25/3/25

ROSETTI MARINO RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
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Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

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IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= SG-200N1
\+ A2/+02
DWG n°: 231298/SD/30
Item n°: PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Terminal Blocks

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

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 034 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

SG-200N1 - A2/+02

X2

NumM	Sheet	Sec.	Type	Terminal Description	Manufacturer
74	030.4A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
75	030.4C	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
76	030.5A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
77	030.5C	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
78	030.6A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
79	030.6C	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
80	030.7A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
81	030.7C	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
82	030.8A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
83	030.8C	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
84	030.9A	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
85	030.9C	4	HM250GR	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur
			HM251GR	HMT.4/PT/GR Piastrina terminale grigia	Cabur
			BT005	BTU BLOCCHETTO TERMINALE	Cabur

NO MARK UP

AS COMMISSIONED: MARIA GIROTTI

25/3/25

RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

DWG n° : 231298/SD/30

Item n° : PF1002983/30

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Terminal Blocks

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 035

REV. 02

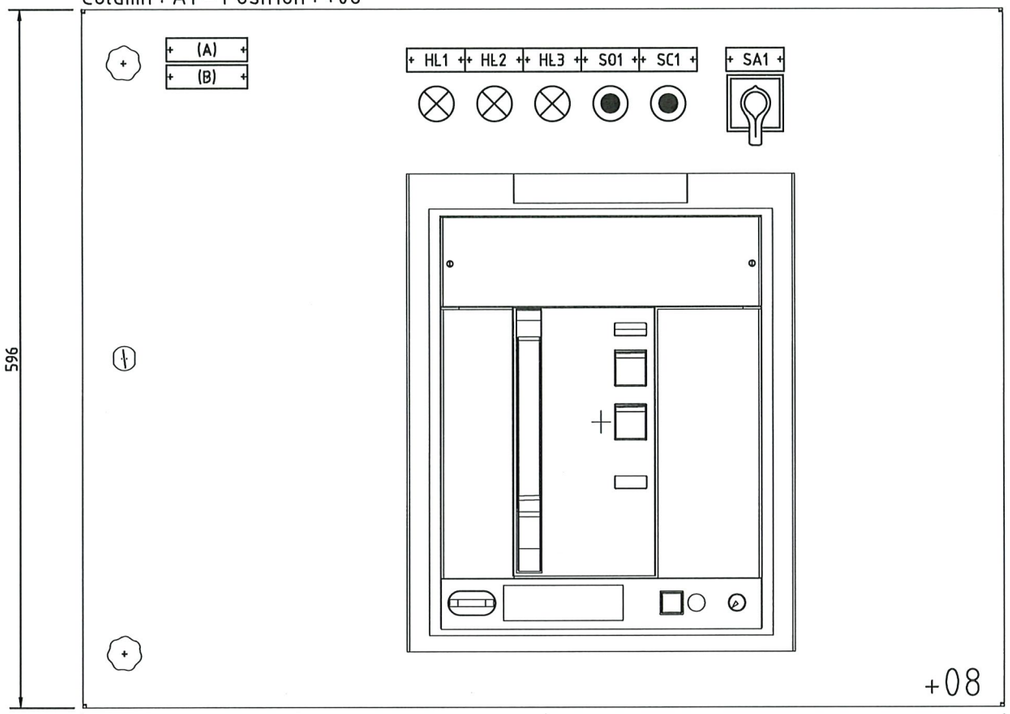
F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

FUNCTIONAL DIAGRAM - "A-20000 ELECTROLYSER AUXILIARY LOAD" [L3-630]

AS-COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025

Column : A1 - Position : +08

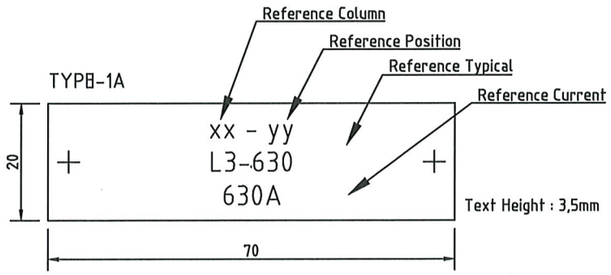


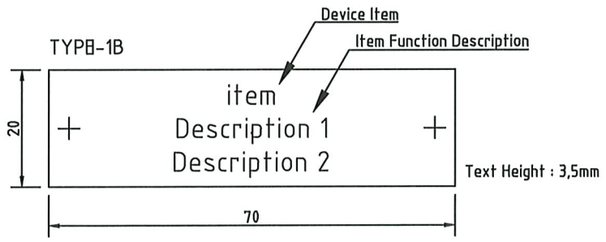
NOTE :

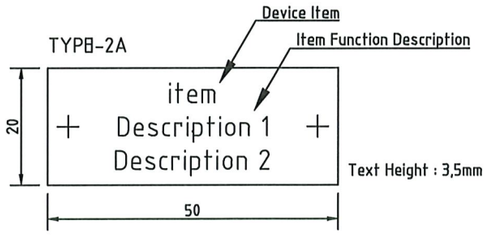
A) IDENTIFICATION name plate (type-1A) , with :
- Drawer position [Column / Position inside SWB]
- Typical name [reference applicability typical used]
- Power [reference applicability typical used]

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

DEVICES name plate				
ITEM	COMPONENT	DESCRIPTION 1	DESCRIPTION 2	NOTE
HL1	PILOT LIGHT	CIRCUIT BREAKER	CLOSED	TYPE-2A
HL2	PILOT LIGHT	CIRCUIT BREAKER	OPENED	TYPE-2A
HL3	PILOT LIGHT	CIRCUIT BREAKER	TRIPPED	TYPE-2A
SO1	PUSH BUTTON	CIRCUIT BREAKER	OPENING COMMAND	TYPE-2A
SC1	PUSH BUTTON	CIRCUIT BREAKER	CLOSING COMMAND	TYPE-2A
SA1	PUSH BUTTON	SELECTOR	LOCAL / REMOTE	TYPE-2A







RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

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Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=	SG-200N1
+	A1/+08
DWG n° :	231298/SD/30
Item n° :	PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
A-2000 / Electrolyser Auxialiry Load [L3-630]

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

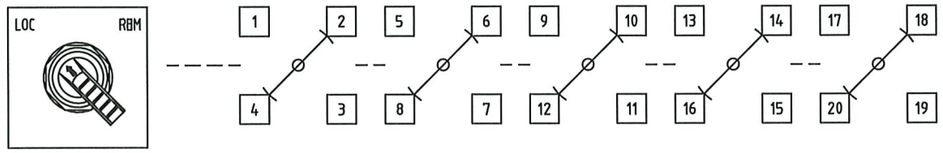
A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 036 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

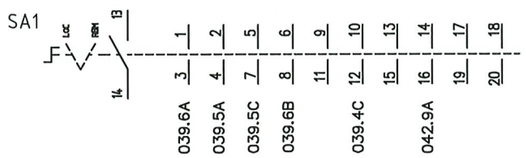
FUNCTIONAL DIAGRAM - "A-20000 ELECTROLYSER AUXILIARY LOAD" [L3-630]

AS-COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025



Control Mode Switch

NOTE:
1. Square plate
2. Fixed position



RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=	SG-200N1
+	A1/+08
DWG n° :	231298/SD/30
Item n° :	PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
A-2000 / Electrolyser Auxialiry Load [L3-630]

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 037

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

FUNCTIONAL DIAGRAM - "A-20000 ELECTROLYSER AUXILIARY LOAD" [L3-630]

AS-COMMISSIONED
GIROTTI MATTIA
NO MARK UP
26/03/2025

~ MAIN BUS BARS
~ 400V - 50Hz - 2500A - 50kA

018.10D L1-AA
018.10D L2-AA
018.10E L3-AA
018.10E N-AA

Bmax B1

			INSERTED	TEST	ISOLATED
S75E	101-102 / 101-104	111-112 / 111-114	X	X	
S75T	121-122 / 121-124	131-132 / 131-134	X	X	X
S75I	141-142 / 141-144	151-152 / 151-154	X	X	X

S75E/1 S75E/2 S75T/1 S75T/2 S75I/1 S75I/2

102 104 112 114 122 124 132 134 144 142 154 152
101 111 121 131 141 151
040.5A 039.5B 039.6C 040.6A

Q/1 Q/2 Q/3 Q/4 S33M RTC S51

12 14 22 24 32 34 42 44 U1 36 38 46 48 96 98 C1 C3 C11 C13 K1
11 21 31 41 U2 35 45 95 C2 C12 K2
040.2A 043.2B 042.4A 038.8C 040.4A 039.5C 039.3C

QF1
630A

(1)
K51 Ekip Hi-Touch

(2)

A-20000
ELECTROLYSER AUXILIARY LOAD

BUS-1
(Command/Signal Circuit)

P
LB3-bus1
048.6A

1 2 3 4 X1
230V-50Hz
200 201

SUPPLY MOTOR SPRING CHARGER C.B.
COMMAND CIRCUITS

QA1
4A
1 3 12 14 11
042.6A

QA2
4A
1 3 12 14 11
042.6B

2 4
202 1x1.5 BK
203 1x1.5 BK

U1
BGS1
MAS M
038.2B
U2
QF1

2 4
204 1x1.5 BK
205 1x1.5 BK
039.1A 039.1B
230V-50Hz

(1) KEY LOCK FOR OPEN POSITION (CIRCUIT-BREAKER)

(2) RACKING-IN/RACKING-OUT PREVENTION (CIRCUIT-BREAKER)

RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=	SG-200N1
+	A1/+08
DWG n° :	231298/SD/30
Item n° :	PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
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TITLE : SG-200N1
FUNCTIONAL DIAGRAM
A-2000 / Electrolyser Auxiliry Load [L3-630]

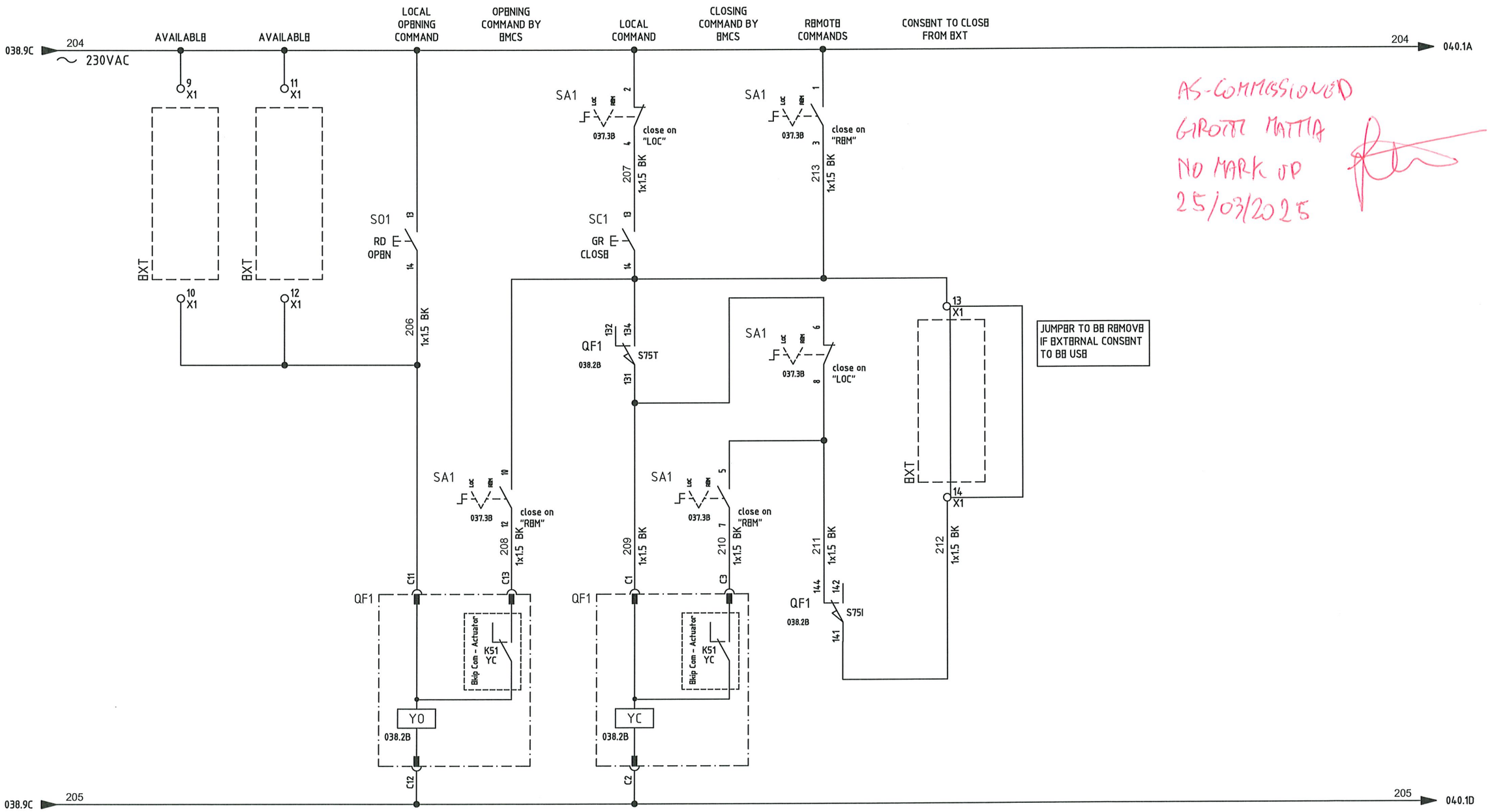
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 038 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

FUNCTIONAL DIAGRAM - "A-20000 ELECTROLYSER AUXILIARY LOAD" [L3-630]



AS-COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025

ROSETTI MARINO RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= SG-200N1
\+ A1/+08
DWG n° : 231298/SD/30
Item n° : PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
A-2000 / Electrolyser Auxiliary Load [L3-630]

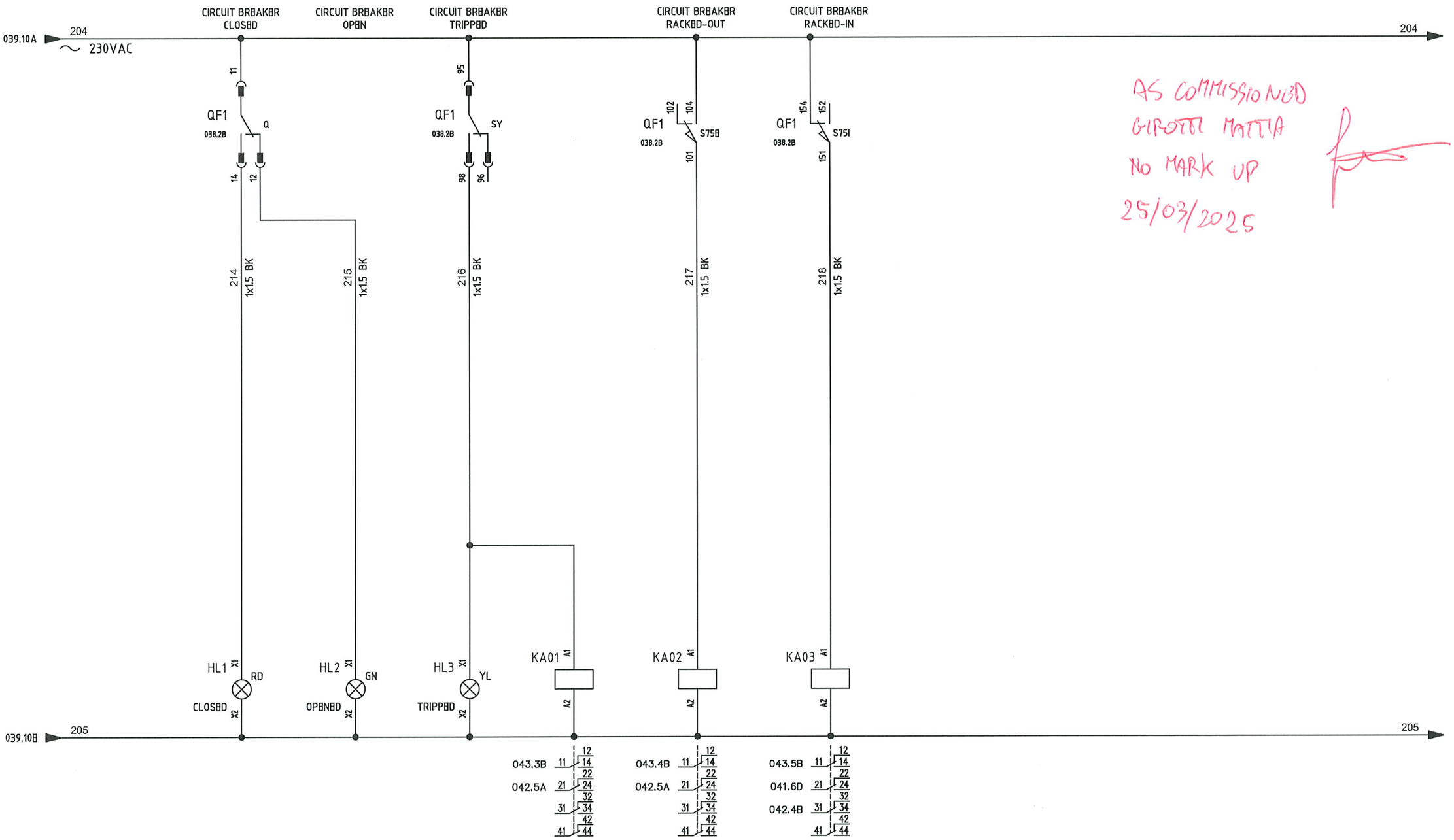
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 039 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

FUNCTIONAL DIAGRAM - "A-20000 ELECTROLYSER AUXILIARY LOAD" [L3-630]



AS COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025

RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick "Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=	SG-200N1
+	A1/+08
DWG n° :	231298/SD/30
Item n° :	PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
A-2000 / Electrolyser Auxiliry Load [L3-630]

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

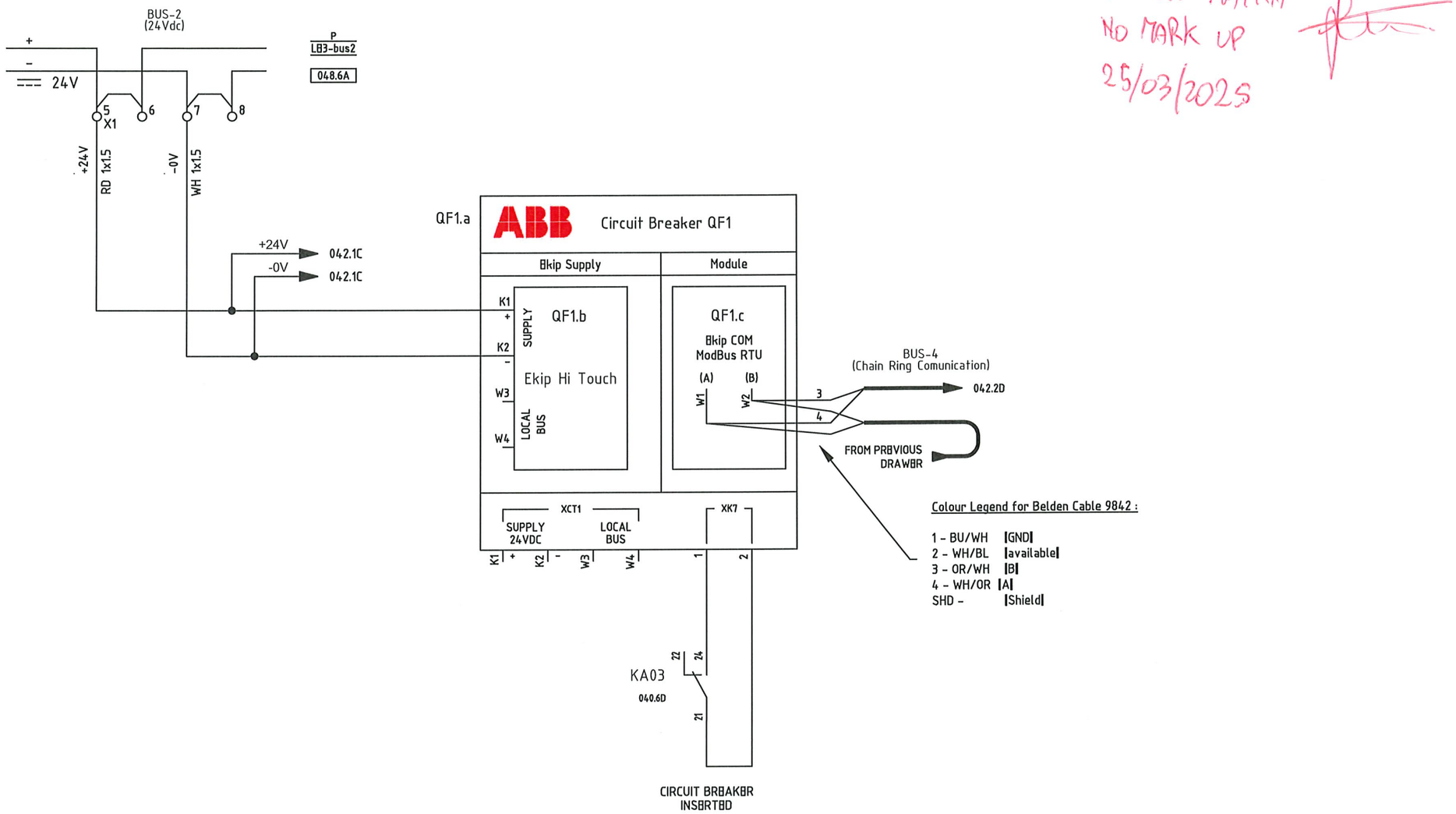
A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 040 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

FUNCTIONAL DIAGRAM - "A-20000 ELECTROLYSER AUXILIARY LOAD" [L3-630]

AS COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025



Colour Legend for Belden Cable 9842 :

1 - BU/WH [GND]
2 - WH/BL [available]
3 - OR/WH [B]
4 - WH/OR [A]
SHD - [Shield]

RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
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IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= SG-200N1
+ A1/+08
DWG n° : 231298/SD/30
Item n° : PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
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0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
A-2000 / Electrolyser Auxiliry Load [L3-630]

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 041

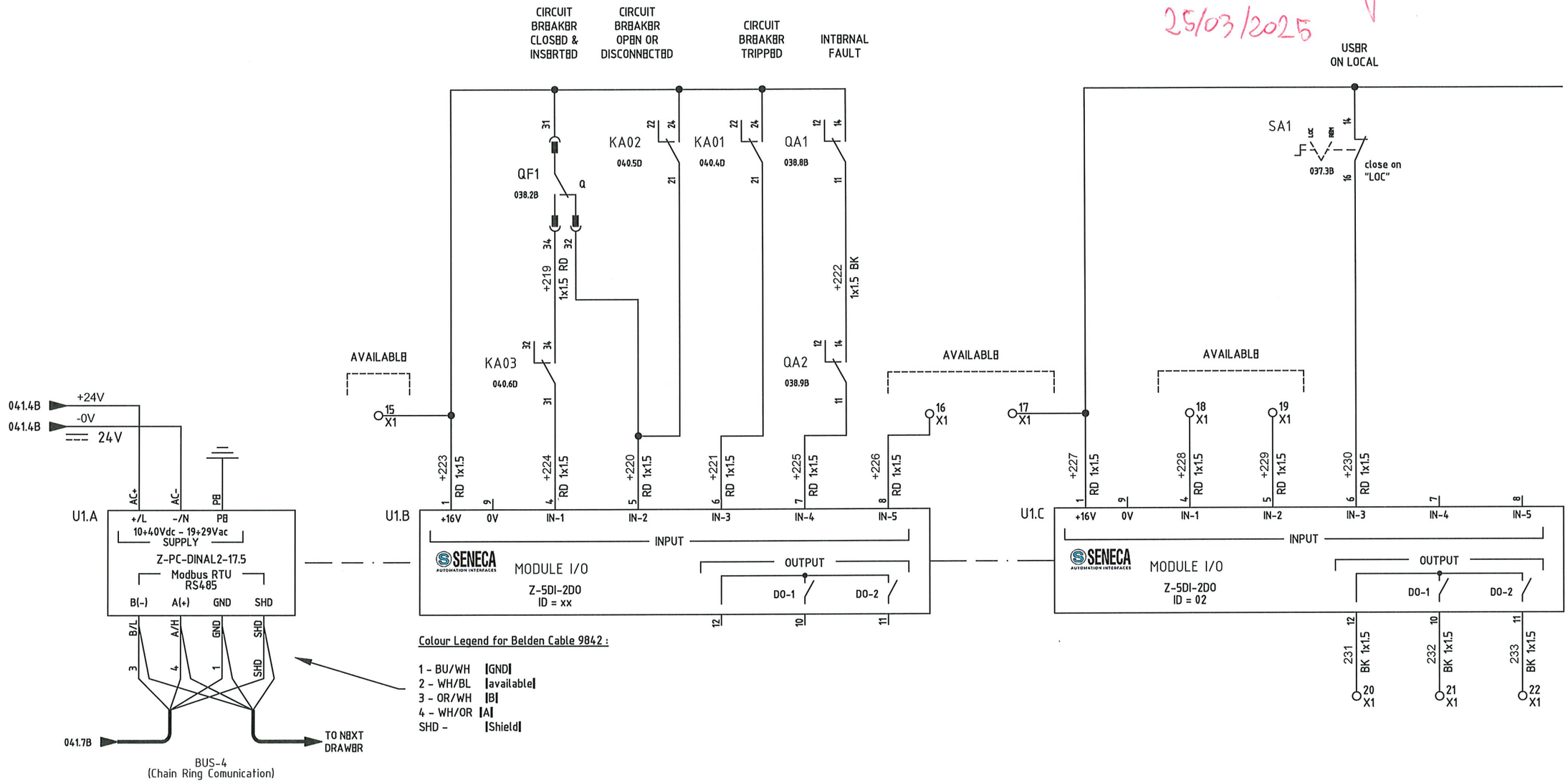
REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

FUNCTIONAL DIAGRAM - "A-20000 ELECTROLYSER AUXILIARY LOAD" [L3-630]

AS COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025



Colour Legend for Belden Cable 9842 :

1 - BU/WH [GND]
2 - WH/BL [available]
3 - OR/WH [B]
4 - WH/OR [A]
SHD - [Shield]

ROSETTI MARINO	RED LINE AS BUILT STAMP
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick "Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

=	SG-200N1
+	A1/+08
DWG n° :	231298/SD/30
Item n° :	PF1002983/30

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
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TITLE : SG-200N1
FUNCTIONAL DIAGRAM
A-2000 / Electrolyser Auxiliry Load [L3-630]

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 042

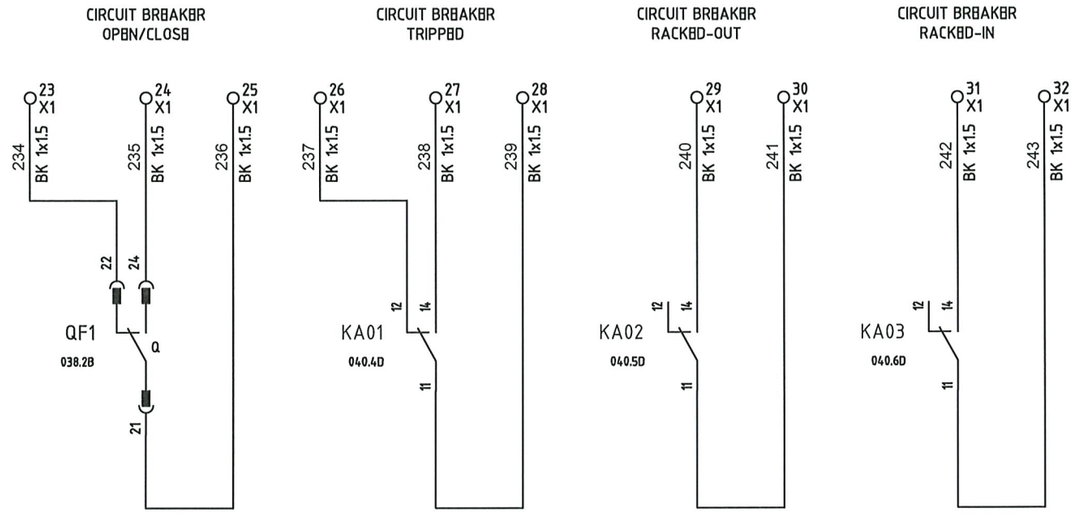
REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

FUNCTIONAL DIAGRAM - "A-20000 ELECTROLYSER AUXILIARY LOAD" [L3-630]

AS COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025



RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
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IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=	SG-200N1
+	A1/+08
DWG n° :	231298/SD/30
Item n° :	PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
A-2000 / Electrolyser Auxiliary Load [L3-630]

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

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 043 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

AS COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025

SG-200N1 - A1/+08
X1

NumM	Sheet	Sec.	Type	Terminal Description	Manufacturer
			BT003	BT/3 End bracket	Cabur
1	038.6A	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
			HD101GR	HMD/PT/GR End section - Grey	Cabur
3	038.6A	2.5	HD100GR__	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
4	038.7A	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	041.3A	2.5	HD100GR__	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
8	041.3A	2.5	HD100GR__	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
9	039.2A	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
10	039.2B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
11	039.3A	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
12	039.2B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
13	039.7B	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
14	039.7C	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
15	042.3C	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
16	042.6C	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
17	042.7C	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
18	042.8C	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
19	042.8C	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
20	042.9D	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
21	042.9D	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
22	042.10D	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
23	043.1A	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
24	043.2A	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
25	043.2A	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
26	043.3A	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
27	043.3A	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
28	043.4A	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
29	043.4A	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
30	043.5A	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
31	043.5A	2.5	HD400GR__	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur
32	043.6A	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

ROSETTI MARINO RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

DWG n° : 231298/SD/30
Item n° : PF1002983/30

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
A-2000 / Electrolyser Auxialiry Load [L3-630]

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 044

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

Nome/Item	Fg/Sh	Tipo/Type	Q.tà	Descrizione/Description	Costruttore/Manufacturer	Ubicazione (descrizione)	Quadro (descrizione)
HL1	040	BO 562 2	1	ML1-100R RBD LAMP	ABB	SG-200N1	A1/+08
		BO 569 7	1	MCBH-00 FIXING SUPPORT 3 CONTACTS	ABB	SG-200N1	A1/+08
		KV 035 7	1	MLBL-07R RBD LBD BLOCK INTBGRATBD 230VAC	ABB	SG-200N1	A1/+08
HL2	040	BO 563 0	1	ML1-100G GRBBN LAMP	ABB	SG-200N1	A1/+08
		BO 569 7	1	MCBH-00 FIXING SUPPORT 3 CONTACTS	ABB	SG-200N1	A1/+08
		KV 036 5	1	MLBL-07G GRBBN LBD BLOCK INTBGRATBD 230VAC	ABB	SG-200N1	A1/+08
HL3	040	BO 564 8	1	ML1-100Y YBLLOW LAMP	ABB	SG-200N1	A1/+08
		BO 569 7	1	MCBH-00 FIXING SUPPORT 3 CONTACTS	ABB	SG-200N1	A1/+08
		KV 037 3	1	MLBL-07Y YBLLOW LBD BLOCK INTBGRATBD 230VAC	ABB	SG-200N1	A1/+08
KA01	040	BR 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LBD	ABB	SG-200N1	A1/+08
		BR 686 6	1	CR-M4SS SOCKBT STANDARD X 2/4 C/O(CR-M)	ABB	SG-200N1	A1/+08
		BR 609 8	1	CR-MH HOLDBR FOR CR-M RBLAY	ABB	SG-200N1	A1/+08
KA02	040	BR 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LBD	ABB	SG-200N1	A1/+08
		BR 686 6	1	CR-M4SS SOCKBT STANDARD X 2/4 C/O(CR-M)	ABB	SG-200N1	A1/+08
		BR 609 8	1	CR-MH HOLDBR FOR CR-M RBLAY	ABB	SG-200N1	A1/+08
KA03	040	BR 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LBD	ABB	SG-200N1	A1/+08
		BR 686 6	1	CR-M4SS SOCKBT STANDARD X 2/4 C/O(CR-M)	ABB	SG-200N1	A1/+08
		BR 609 8	1	CR-MH HOLDBR FOR CR-M RBLAY	ABB	SG-200N1	A1/+08
QA1	038	S550253	1	S202M C 4 AUTOMATIC CIRCUIT-BRBAKBR 10KA 2P	ABB	SG-200N1	A1/+08
		A563819	1	S2-CS/H6R AUXILIARY STATB CONTACT 1CO	ABB	SG-200N1	A1/+08
QA2	038	S550253	1	S202M C 4 AUTOMATIC CIRCUIT-BRBAKBR 10KA 2P	ABB	SG-200N1	A1/+08
		A563819	1	S2-CS/H6R AUXILIARY STATB CONTACT 1CO	ABB	SG-200N1	A1/+08
QF1	038	1SDA072819R1	1	B1.2C 1250 Bkip Hi-Touch LSIG In=1000A 4p MP	ABB	SG-200N1	A1/+08
		1SDA073908R1	1	B1.2 W FP 250÷1600A 4P FIXBD PART HR-HR	ABB	SG-200N1	A1/+08
		1SDA073762R1	1	AUP 6 CONTACT AUX INS/TBST/BST TO B1.2	ABB	SG-200N1	A1/+08
		1SDA073687R1	1	CLOSING COIL YC 220÷240VAC/DC TO B1.2÷B6.2	ABB	SG-200N1	A1/+08
		1SDA073711R1	1	MOTOR SPRING CHARGBR 220÷250Vac/dc TO B1.2	ABB	SG-200N1	A1/+08
		1SDA073770R1	1	RTC 250V B1.2	ABB	SG-200N1	A1/+08
		1SDA074166R1	2	Module Bkip Actuator Bmax B1.2÷B6.2÷XT7÷XT7M	ABB	SG-200N1	A1/+08
		1SDA073782R1	1	KLC-D BLOCK KBY ON OPBN POSITION TO B1.2	ABB	SG-200N1	A1/+08
		1SDA073822R1	1	KLP-D INSBRTBD/ISOLATBD KBY BLOCK TO B1.2	ABB	SG-200N1	A1/+08
		1SDA073854R1	1	PBC PUSHBOTTOM COVBR OP/CL FOR B1.2	ABB	SG-200N1	A1/+08
		1SDA074173R1	1	MODUL BKIP SUPPLY 24÷48VDC	ABB	SG-200N1	A1/+08
		1SDA074150R1	1	Module Bkip Com Modbus RTU Bmax B1.2÷B6.2	ABB	SG-200N1	A1/+08
		1SDA112845R1	1	RATING PLUG In=630A B1.2÷-B6.2	ABB	SG-200N1	A1/+08
SA1	037	R601-205_02-W002	1	SWITCH R16 2/5 - 2 STAY POSITION	Cometric	SG-200N1	A1/+08
		Q4820030	1	Frontplate 48x48mm (LOC-RBM)	Cometric	SG-200N1	A1/+08
SC1	039	KW 076 0	1	MP1-10G PUSH BUTTON GRBBN WITH BLACK RING	ABB	SG-200N1	A1/+08
		BO 569 7	1	MCBH-00 FIXING SUPPORT 3 CONTACTS	ABB	SG-200N1	A1/+08
		BO 570 5	1	MCB-10 CONTACT NO FOR PUSHBUTTONS	ABB	SG-200N1	A1/+08
S01	039	KW 075 2	1	MP1-10R PUSH BUTTON RBD WITH BLACK RING	ABB	SG-200N1	A1/+08
		BO 569 7	1	MCBH-00 FIXING SUPPORT 3 CONTACTS	ABB	SG-200N1	A1/+08
		BO 570 5	1	MCB-10 CONTACT NO FOR PUSHBUTTONS	ABB	SG-200N1	A1/+08
U1.A	042	Z-PC-DINAL2-17.5	1	DIN RAIL 2SLOT WITH HBAD FOR "Z-5DI-2DO"	SBNBCA	SG-200N1	A1/+08

ROSETTI MARINO — RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

MATTIA NO MARK UP 25/03/2025

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n° : 231298/SD/30

Item n° : PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
A-2000 / Electrolyser Auxialiry Load [L3-630]

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

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 045 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

Nome/Item	Fg/Sh	Tipo/Type	Q.tà	Descrizione/Description	Costruttore/Manufacturer	Ubicazione (descrizione)	Quadro (descrizione)
U1.B	042	Z-5DI-2DO	1	I/O MODUL 5DI+2DO modbus RS485 Vaux=10÷40Vdc 19÷28Vac	SENECA	SG-200N1	A1/+08
U1.C	042	Z-5DI-2DO	1	I/O MODUL 5DI+2DO modbus RS485 Vaux=10÷40Vdc 19÷28Vac	SENECA	SG-200N1	A1/+08
X1		HD400GR__	24	HMD.2N/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur	SG-200N1	A1/+08
		HD100GR__	8	HMD.2/GR Two-level feed-through Terminal Block - Grey (2.5 mmq) - Spring type	Cabur	SG-200N1	A1/+08
		BT003	2	BT/3 End bracket	Cabur	SG-200N1	A1/+08
		HD101GR	1	HMD/PT/GR End section - Grey	Cabur	SG-200N1	A1/+08
		HD201GR	1	HMD.1/PT/GR End section - Grey	Cabur	SG-200N1	A1/+08

AS COMMISSIONED
GIROTTI MATTIA
NO MARK UP
25/03/2025

=							
+							
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)		
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)		
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)		
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION		

ROSETTI MARINO RED LINE AS BUILT STAMP

RLMU	✖Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

DWG n° : 231298/SD/30
Item n° : PF1002983/30

ROSETTI MARINO

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
A-2000 / Electrolyser Auxiliary Load [L3-630]

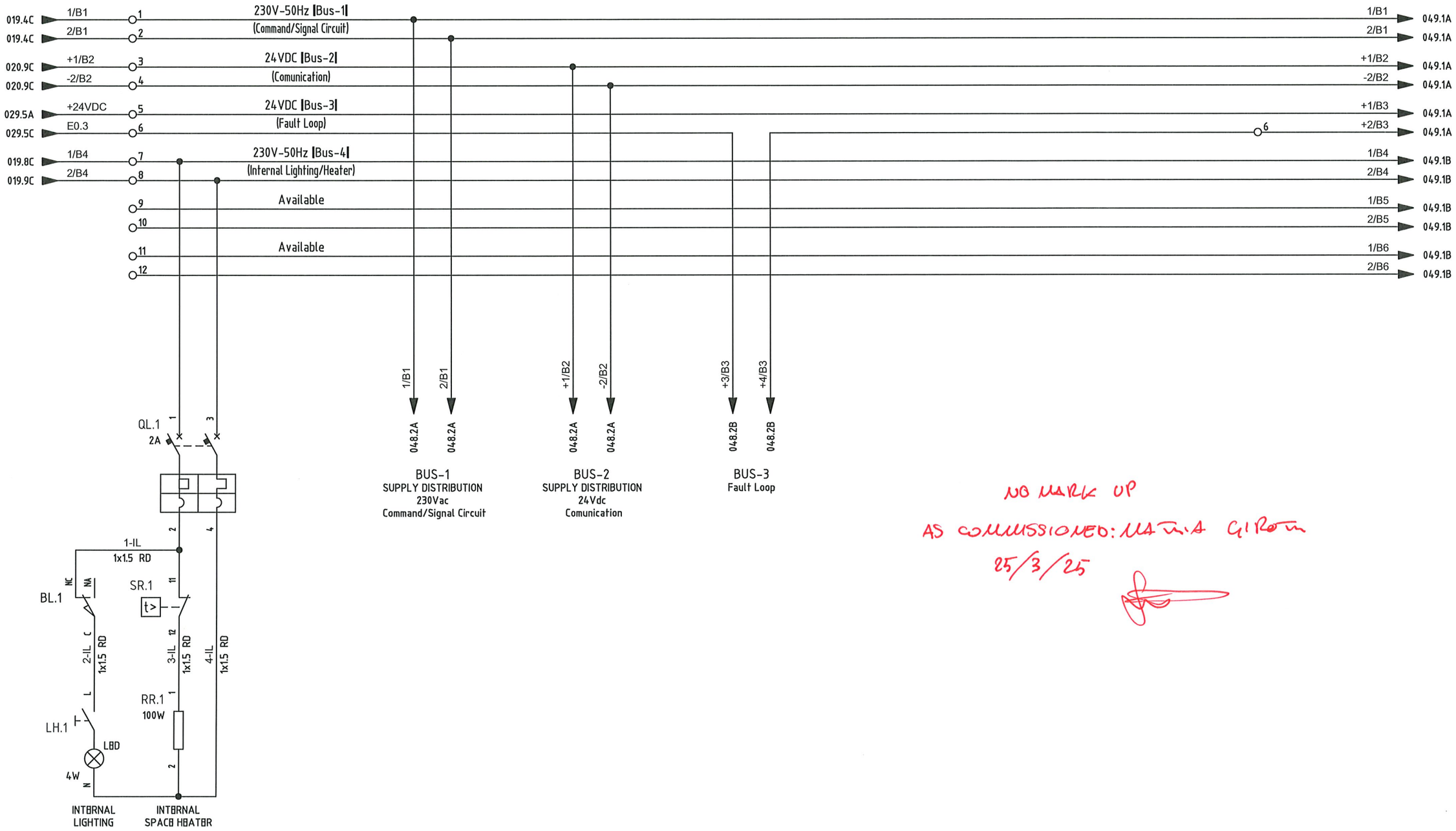
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 046 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

DISTRIBUTION AUX VOLTAGE COLUMNS



NO MARK UP
AS COMMISSIONED: MARIA GIROTTI
25/3/25

ROSETTI MARINO	RED LINE AS BUILT STAMP
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick "Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= SG-200N1
\+ A1
DWG n°: 231298/SD/30
Item n°: PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Distribution Aux Voltage Columns [A1]

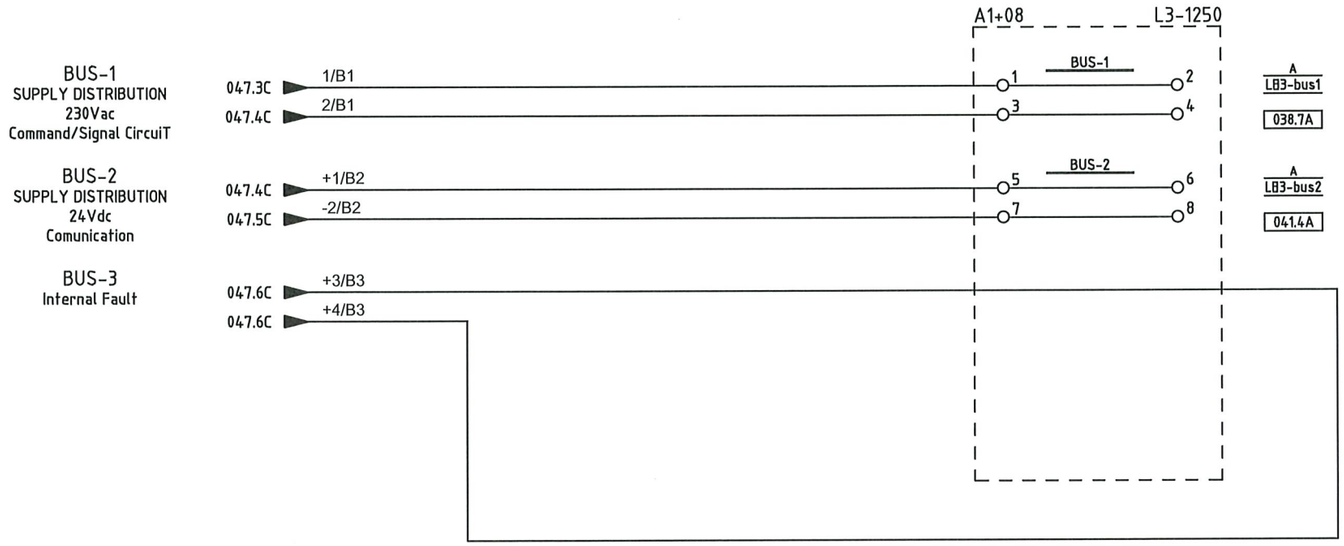
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 047 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

DISTRIBUTION AUX VOLTAGE COLUMNS



NO MARK UP

AS COMMISSIONED: MATA GIBOTA.

25/3/25

RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= SG-200N1
\+ A1
DWG n° : 231298/SD/30
Item n° : PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Distribution Aux Voltage Columns [A1]

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 048

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

DISTRIBUTION AUX VOLTAGE COLUMNS

047.10A	1/B1	1	230V-50Hz [Bus-1] (Command/Signal Circuit)	1/B1 → 051.1A
047.10A	2/B1	2		2/B1 → 051.1A
047.10A	+1/B2	3	24VDC [Bus-2] (Comunication)	+1/B2 → 051.1A
047.10A	-2/B2	4		-2/B2 → 051.1A
047.10A	+1/B3	5	24VDC [Bus-3] (Fault Loop)	+1/B3 → 051.1A
047.10A	+2/B3	6		+2/B3 → 051.1A
047.10B	1/B4	7	230V-50Hz [Bus-4] (Internal Lighting/Heater)	1/B4 → 051.1B
047.10B	2/B4	8		2/B4 → 051.1B
047.10B	1/B5	9	Available	1/B5 → 051.1B
047.10B	2/B5	10		2/B5 → 051.1B
047.10B	1/B6	11	Available	1/B6 → 051.1B
047.10B	2/B6	12		2/B6 → 051.1B

1/B1 → 050.2A; 2/B1 → 050.2A

BUS-1
SUPPLY DISTRIBUTION
230Vac
Command/Signal Circuit

+1/B2 → 050.2A; -2/B2 → 050.2A

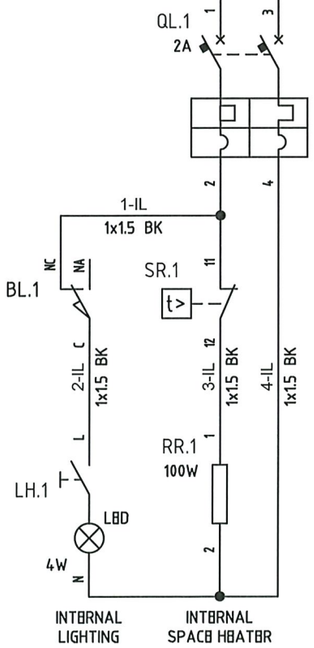
BUS-2
SUPPLY DISTRIBUTION
24Vdc
Comunication

+3/B3 → 050.2B; +4/B3 → 050.2B

BUS-3
Fault Loop

+1/B2 → 063.1A; -2/B2 → 063.1A

SUPPLY
ModBus converter



NO MARK UP

AS COMMISSIONED: MARIUS GIROTTI

25/3/25

RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=	SG-200N1
+	A2
DWG n° :	231298/SD/30
Item n° :	PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Distribution Aux Voltage Columns [A2]

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

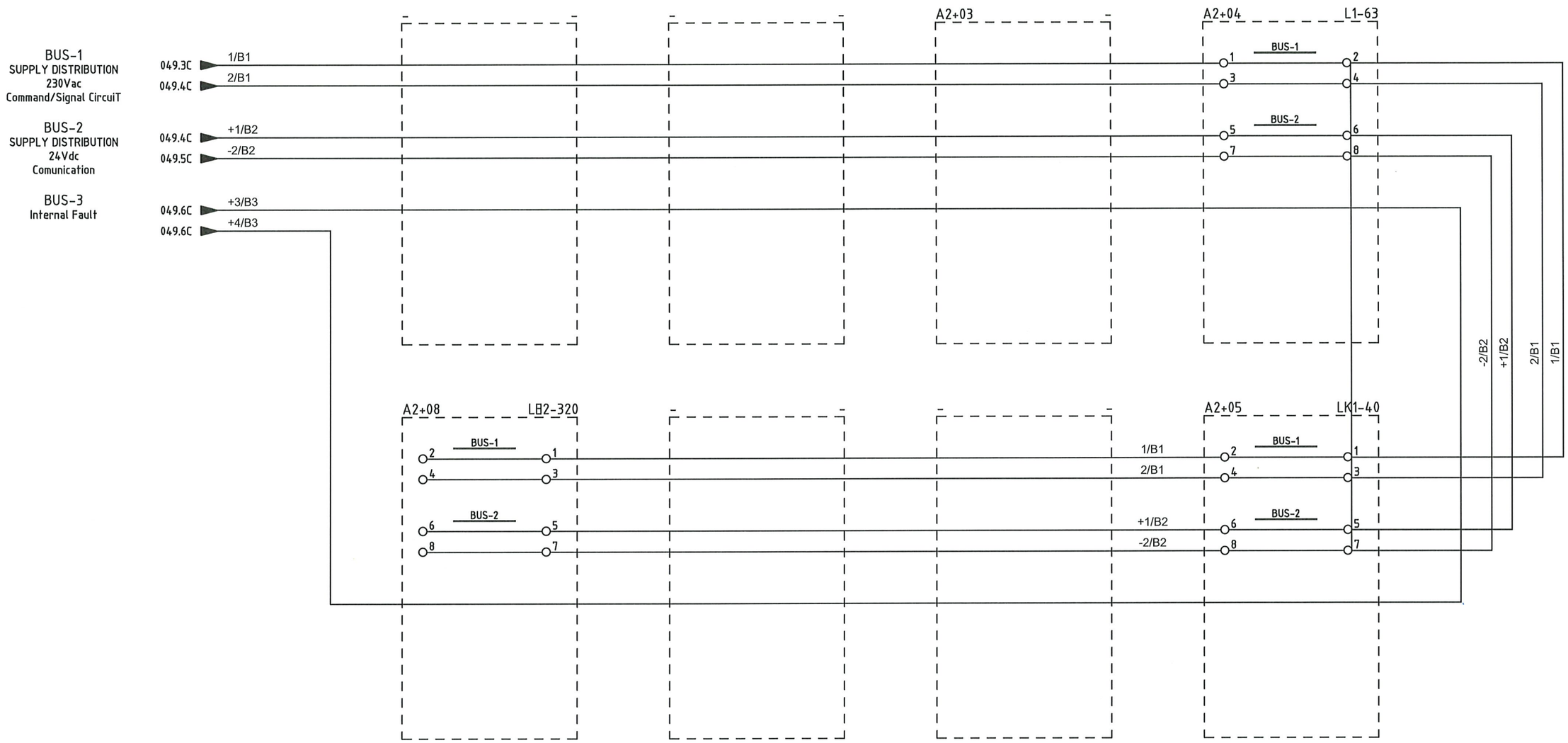
SHEET 049

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

DISTRIBUTION AUX VOLTAGE COLUMNS



NO MARK UP
AS COMMISSIONED: MARIA GIROU
25/3/25

RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick "Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= SG-200N1
\+ A2
DWG n°: 231298/SD/30
Item n°: PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Distribution Aux Voltage Columns [A2]

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

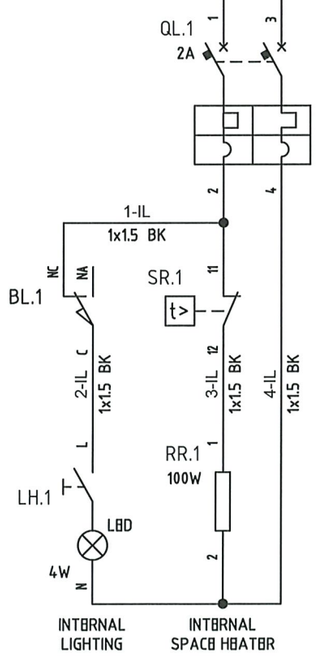
A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 050 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

DISTRIBUTION AUX VOLTAGE COLUMNS

049.10A	1/B1	1	230V-50Hz [Bus-1] (Command/Signal Circuit)	1/B1	053.1A
049.10A	2/B1	2		2/B1	053.1A
049.10A	+1/B2	3	24VDC [Bus-2] (Comunication)	+1/B2	053.1A
049.10A	-2/B2	4		-2/B2	053.1A
049.10A	+1/B3	5	24VDC [Bus-3] (Fault Loop)	+1/B3	053.1A
049.10A	+2/B3	6		+2/B3	053.1A
049.10B	1/B4	7	230V-50Hz [Bus-4] (Internal Lighting/Heater)	1/B4	053.1B
049.10B	2/B4	8		2/B4	053.1B
049.10B	1/B5	9	Available	1/B5	053.1B
049.10B	2/B5	10		2/B5	053.1B
049.10B	1/B6	11	Available	1/B6	053.1B
049.10B	2/B6	12		2/B6	053.1B



1/B1 2/B1 → 052.2A 052.2A — BUS-1 SUPPLY DISTRIBUTION 230Vac Command/Signal Circuit

+1/B2 -2/B2 → 052.2A 052.2A — BUS-2 SUPPLY DISTRIBUTION 24Vdc Comunication

+3/B3 +4/B3 → 052.2B 052.2B — BUS-3 Fault Loop

NO MARK UP
AS COMMISSIONED: MARIA GIROU
25/3/25

ROSETTI MARINO	RED LINE AS BUILT STAMP
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= SG-200N1
\+ A3
DWG n° : 231298/SD/30
Item n° : PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Distribution Aux Voltage Columns [A3]

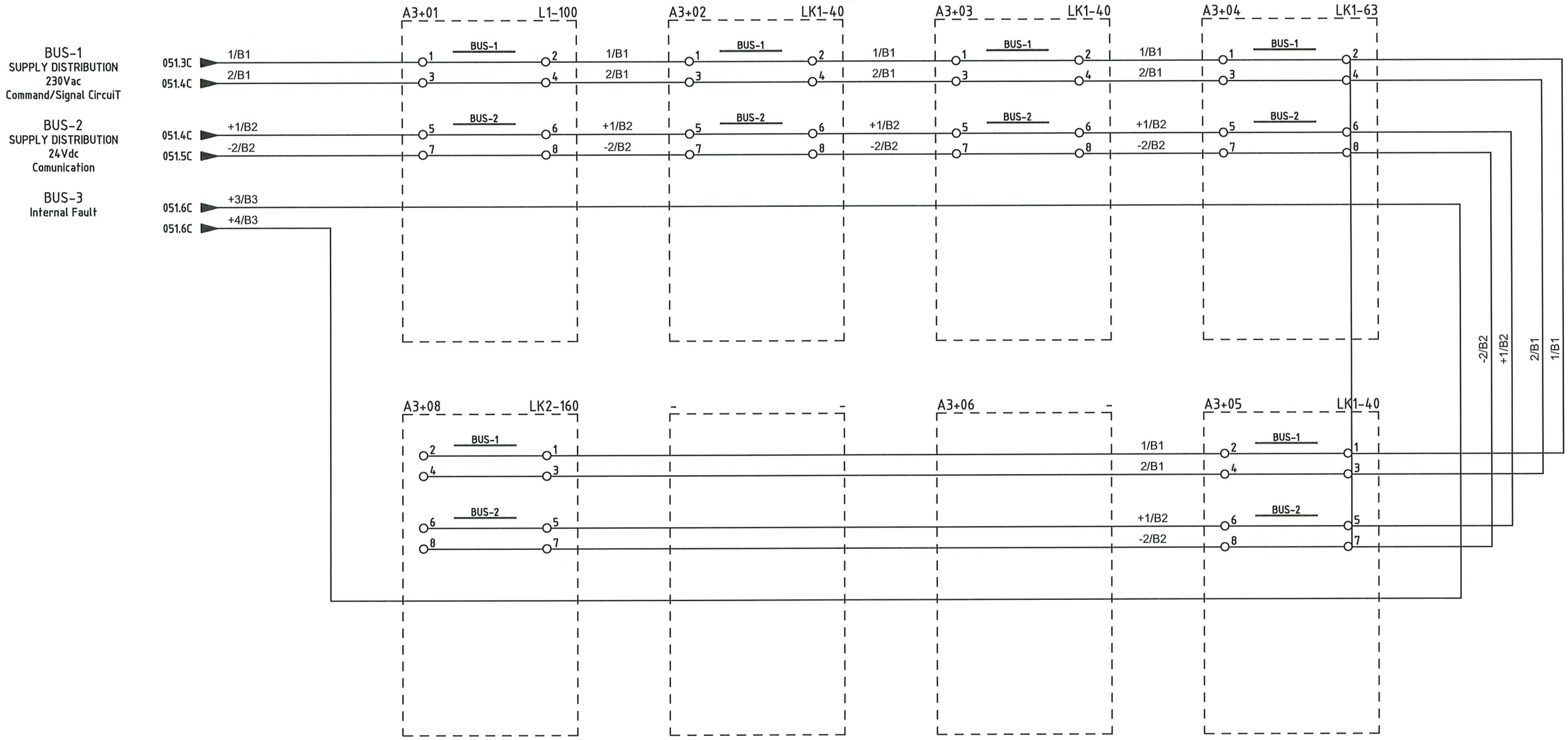
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 051 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

DISTRIBUTION AUX VOLTAGE COLUMNS



NO MARK UP

AS COMMISSIONED: MARIA GIROM

25/3/25

RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick "Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= SG-200N1
\+ A3
DWG n°: 231298/SD/30
Item n°: PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Distribution Aux Voltage Columns [A3]

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

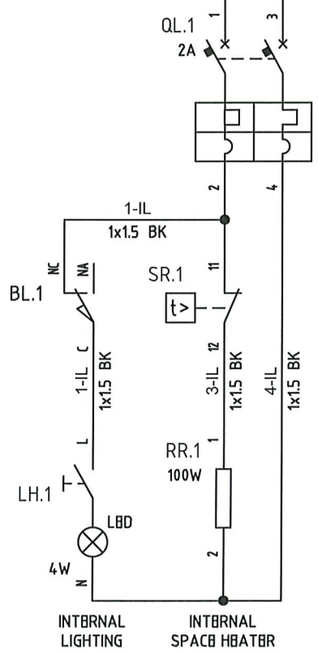
A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 052 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

DISTRIBUTION AUX VOLTAGE COLUMNS

051.10A	1/B1	1	230V-50Hz [Bus-1] (Command/Signal Circuit)	1/B1 055.1A
051.10A	2/B1	2		2/B1 055.1A
051.10A	+1/B2	3	24VDC [Bus-2] (Comunication)	+1/B2 055.1A
051.10A	-2/B2	4		-2/B2 055.1A
051.10A	+1/B3	5	24VDC [Bus-3] (Fault Loop)	+1/B3 055.1A
051.10A	+2/B3	6		+2/B3 055.1A
051.10B	1/B4	7	230V-50Hz [Bus-4] (Internal Lighting/Heater)	1/B4 055.1B
051.10B	2/B4	8		2/B4 055.1B
051.10B	1/B5	9	Available	1/B5 055.1B
051.10B	2/B5	10		2/B5 055.1B
051.10B	1/B6	11	Available	1/B6 055.1B
051.10B	2/B6	12		2/B6 055.1B



1/B1	2/B1	+1/B2	-2/B2	+3/B3	+4/B3	+1/B2	-2/B2
054.2A	054.2A	054.2A	054.2A	054.2B	054.2B	063.4A	063.4A
BUS-1 SUPPLY DISTRIBUTION 230Vac Command/Signal Circuit		BUS-2 SUPPLY DISTRIBUTION 24Vdc Comunication		BUS-3 Fault Loop		SUPPLY ModBus converter	

NO MARK UP
AS COMMISSIONED: M. A GIROTTI
25/3/25

ROSETTI MARINO	RED LINE AS BUILT STAMP
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

=	SG-200N1
+	A4
DWG n°:	231298/SD/30
Item n°:	PF1002983/30

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Distribution Aux Voltage Columns [A4]

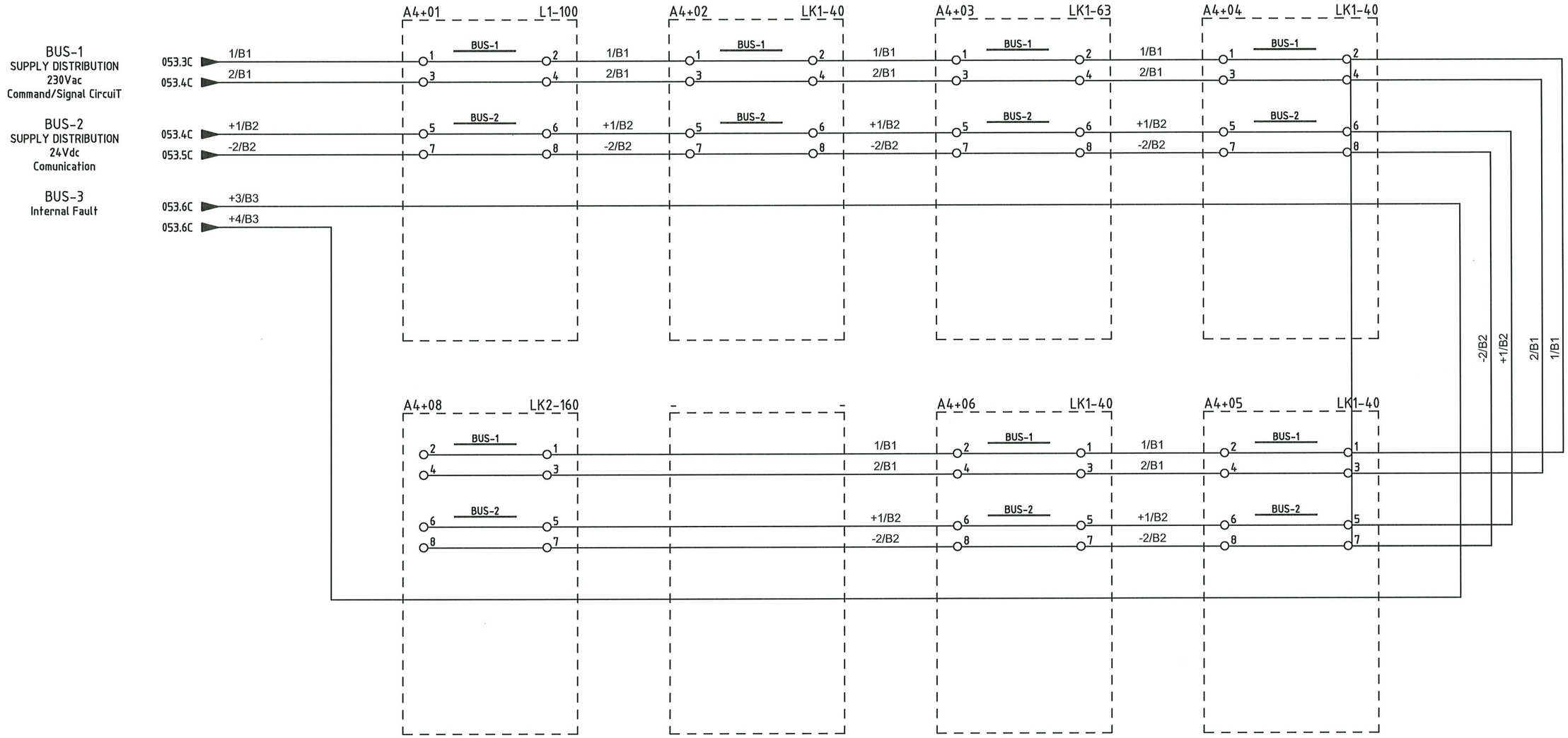
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 053 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

DISTRIBUTION AUX VOLTAGE COLUMNS



NO MARK UP

AS COMMISSIONED: MARCO GIROTTO.

25/3/25

RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= SG-200N1
\+ A4
DWG n° : 231298/SD/30
Item n° : PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Distribution Aux Voltage Columns [A4]

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

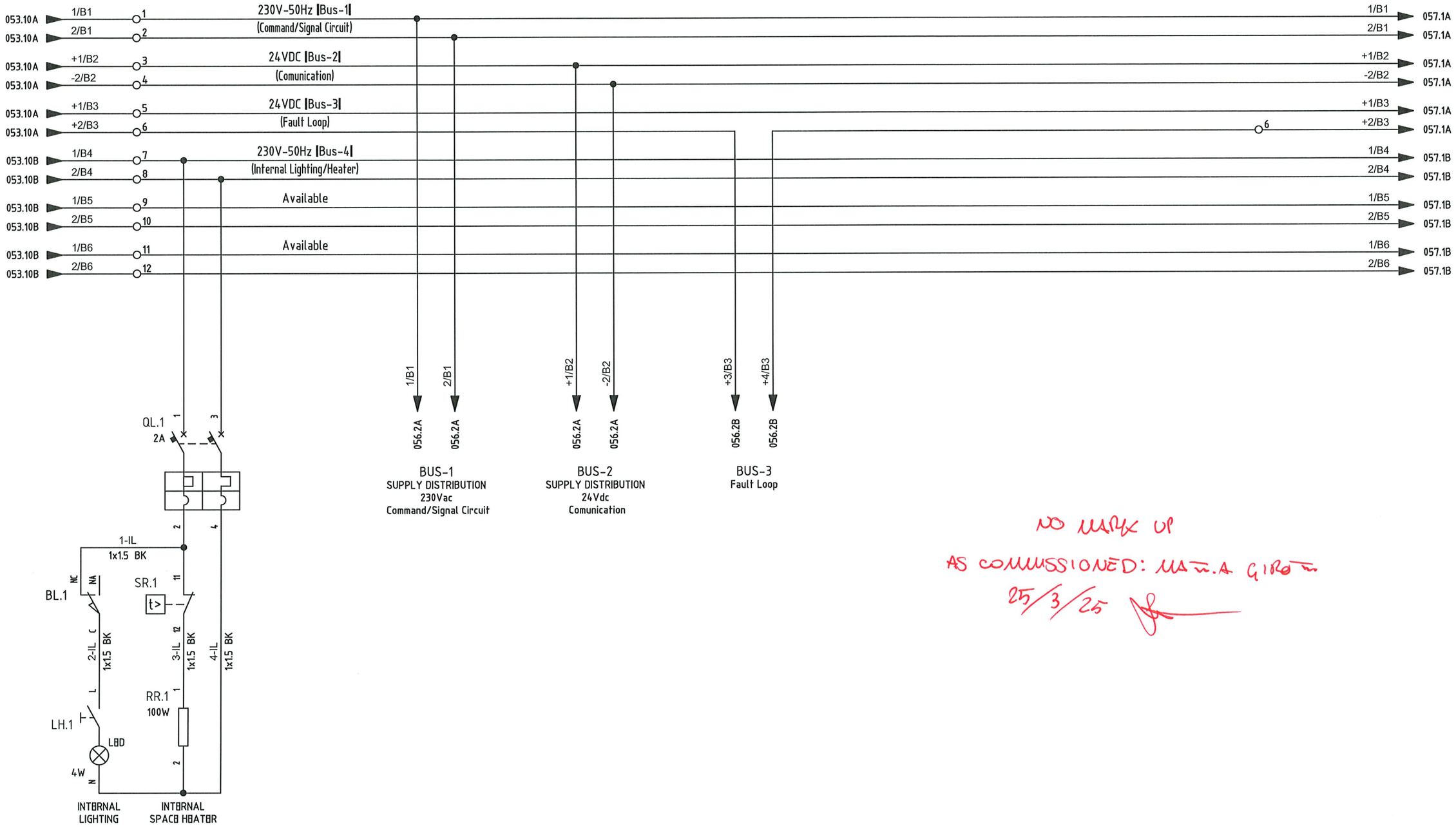
SHEET 054

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

DISTRIBUTION AUX VOLTAGE COLUMNS



NO MARK UP
AS COMMISSIONED: MARCO GIROTTO
25/3/25

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

RED LINE AS BUILT STAMP

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= SG-200N1
\+ A5
DWG n°: 231298/SD/30
Item n°: PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Distribution Aux Voltage Columns [A5]

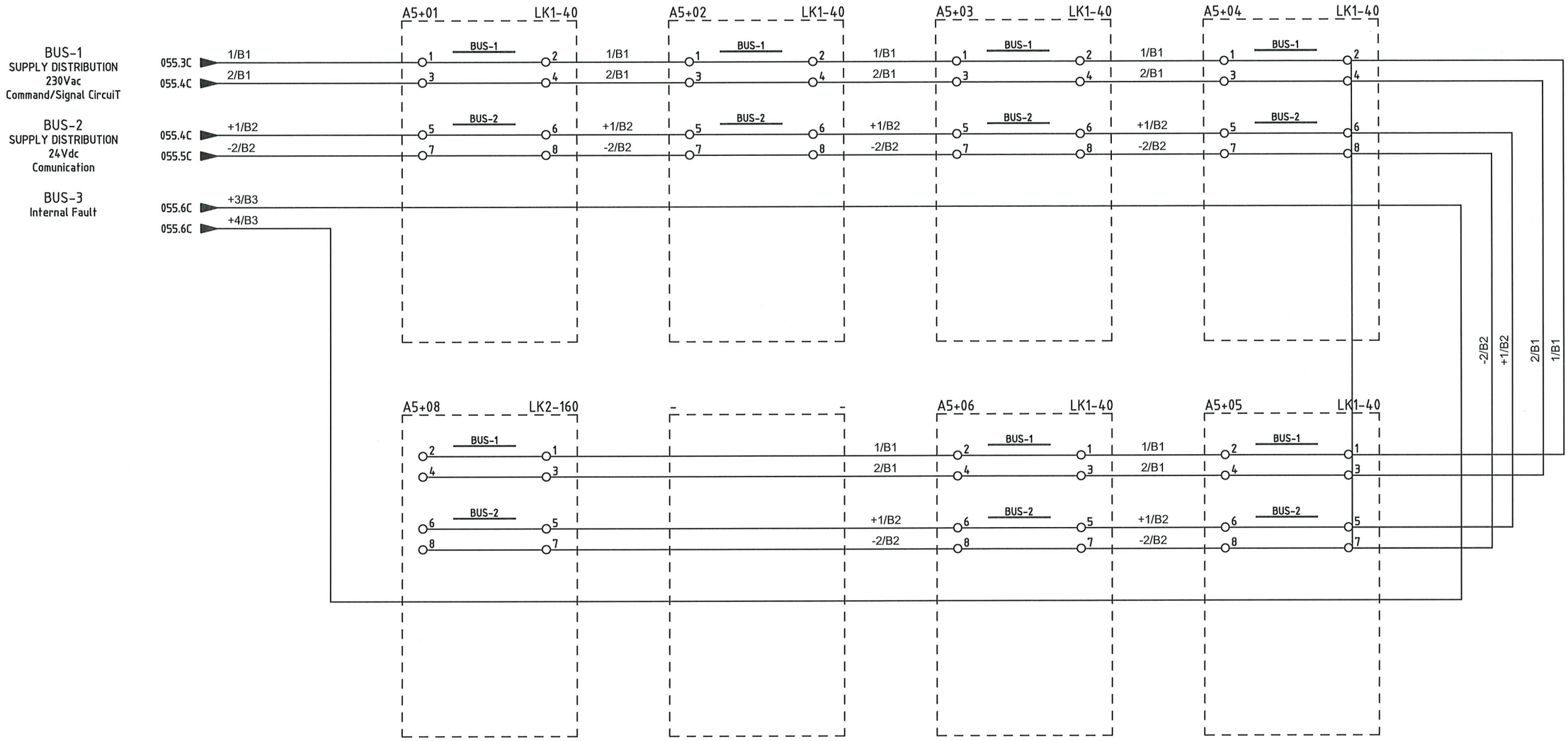
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 055 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

DISTRIBUTION AUX VOLTAGE COLUMNS



NO MARK UP
AS COMMISSIONED: M.A. GIBBI
25/3/25

RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick "Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=	SG-200N1
+	A5
DWG n° :	231298/SD/30
Item n° :	PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Distribution Aux Voltage Columns [A5]

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

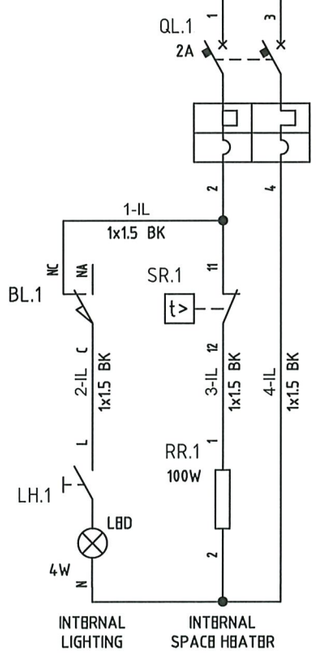
A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 056 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

DISTRIBUTION AUX VOLTAGE COLUMNS

055.10A	1/B1	1	230V-50Hz [Bus-1] (Command/Signal Circuit)	1/B1 → 059.1A
055.10A	2/B1	2		2/B1 → 059.1A
055.10A	+1/B2	3	24VDC [Bus-2] (Comunication)	+1/B2 → 059.1A
055.10A	-2/B2	4		-2/B2 → 059.1A
055.10A	+1/B3	5	24VDC [Bus-3] (Fault Loop)	+1/B3 → 059.1A
055.10A	+2/B3	6		+2/B3 → 059.1A
055.10B	1/B4	7	230V-50Hz [Bus-4] (Internal Lighting/Heater)	1/B4 → 059.1B
055.10B	2/B4	8		2/B4 → 059.1B
055.10B	1/B5	9	Available	1/B5 → 059.1B
055.10B	2/B5	10		2/B5 → 059.1B
055.10B	1/B6	11	Available	1/B6 → 059.1B
055.10B	2/B6	12		2/B6 → 059.1B



1/B1 → 058.2A
2/B1 → 058.2A

BUS-1
SUPPLY DISTRIBUTION
230Vac
Command/Signal Circuit

+1/B2 → 058.2A
-2/B2 → 058.2A

BUS-2
SUPPLY DISTRIBUTION
24Vdc
Comunication

+3/B3 → 058.2B
+4/B3 → 058.2B

BUS-3
Fault Loop

+1/B2 → 063.8A
-2/B2 → 063.8A

SUPPLY
ModBus converter

NO MARK UP
AS COMMISSIONED: MATTIA GIROTTI
25/3/25

RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick "Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= SG-200N1
\+ A6
DWG n°: 231298/SD/30
Item n°: PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Distribution Aux Voltage Columns [A6]

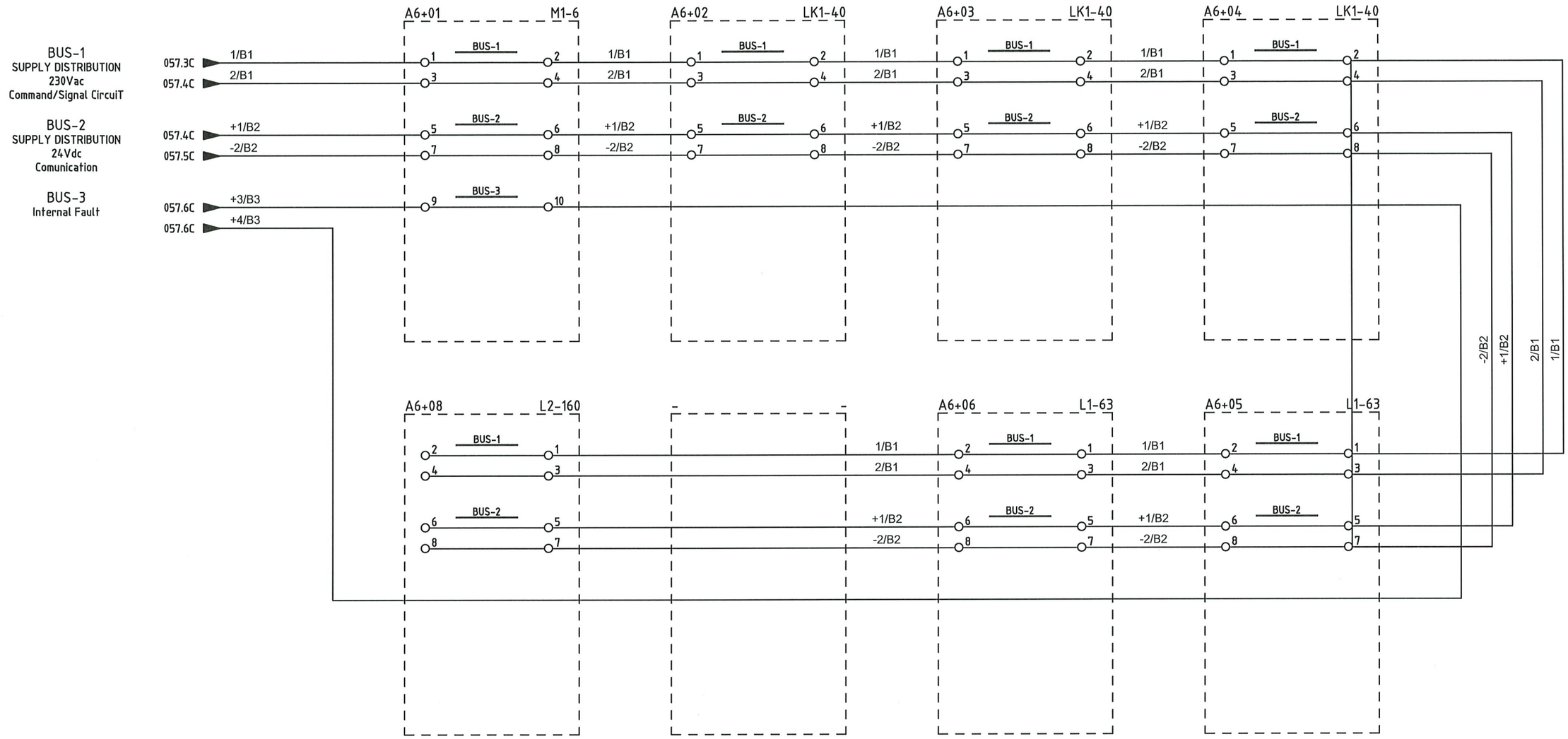
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 057 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

DISTRIBUTION AUX VOLTAGE COLUMNS



NO MARK UP

AS COMMISSIONED: MARIA GIRON.

25/3/25

RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

= SG-200N1
\+ A6
DWG n°: 231298/SD/30
Item n°: PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Distribution Aux Voltage Columns [A6]

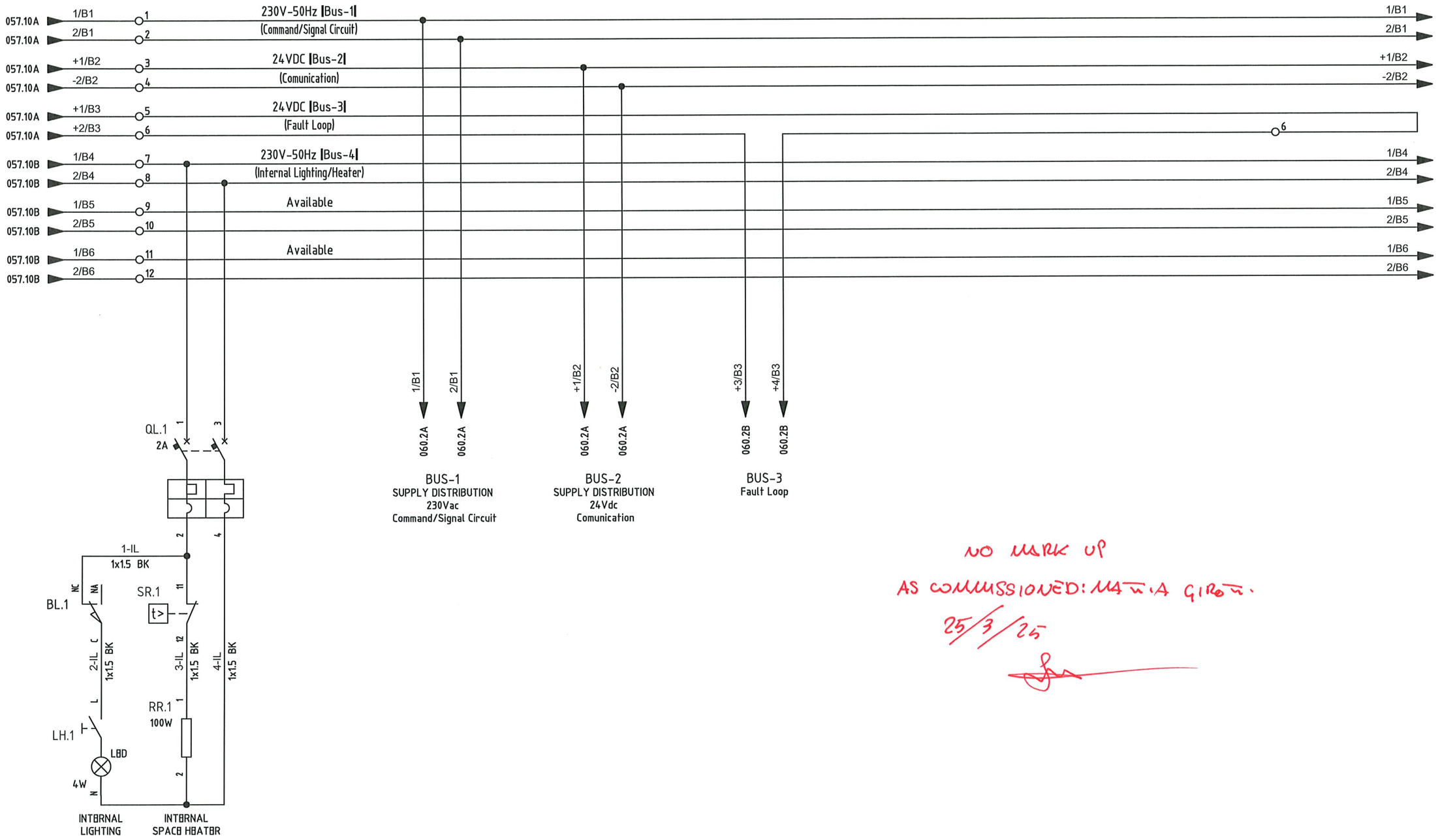
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 058 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

DISTRIBUTION AUX VOLTAGE COLUMNS



NO MARK UP

AS COMMISSIONED: MATIA GIROTTI.

25/3/25

RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick "Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=	SG-200N1
+	A7
DWG n° :	231298/SD/30
Item n° :	PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Distribution Aux Voltage Columns [A7]

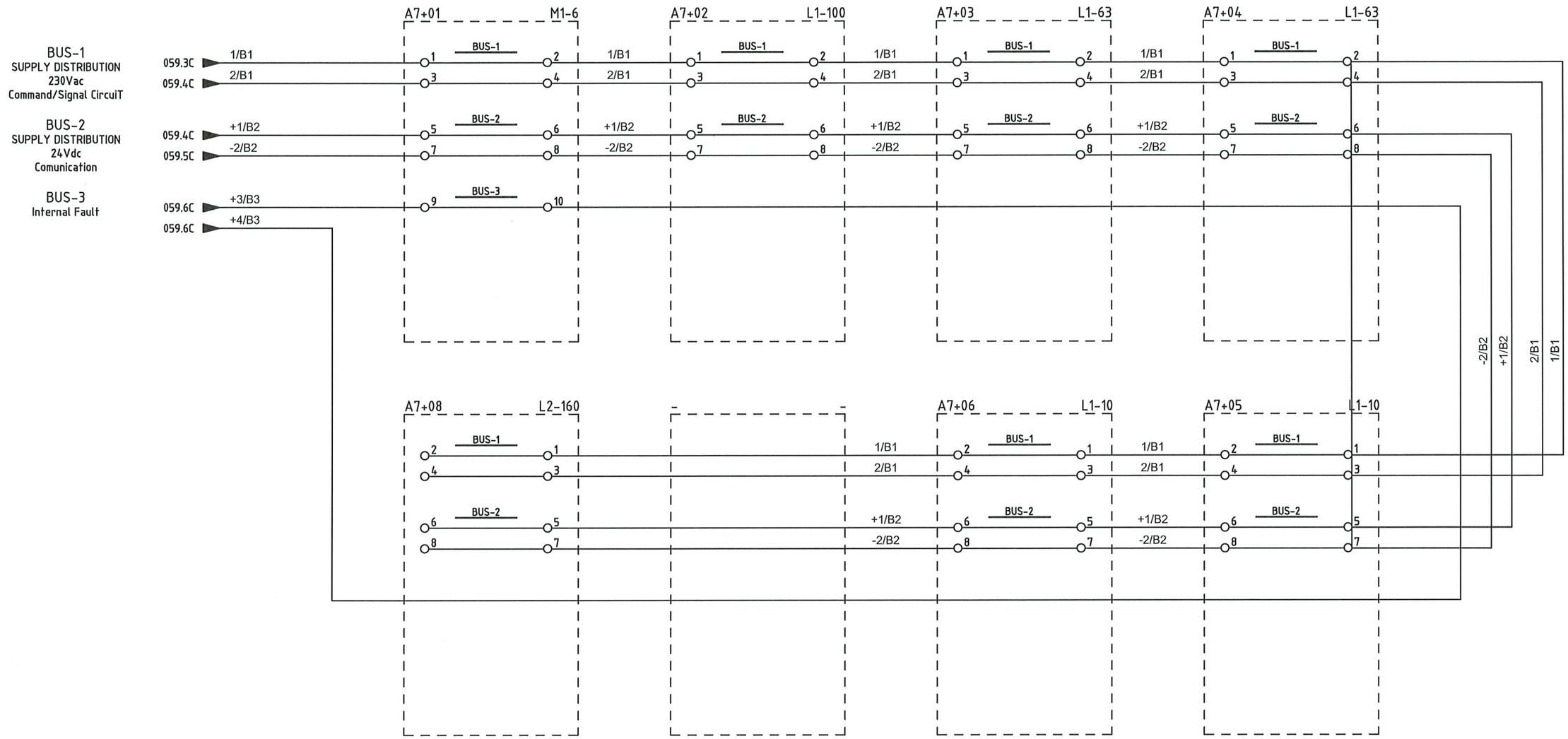
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 059 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

DISTRIBUTION AUX VOLTAGE COLUMNS



NO MARK UP
AS COMMISSIONED: MARIA GIROTTI
25/3/25

ROSETTI MARINO **RED LINE AS BUILT STAMP**

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick "Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=	SG-200N1
+	A7
DWG n° :	231298/SD/30
Item n° :	PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Distribution Aux Voltage Columns [A7]

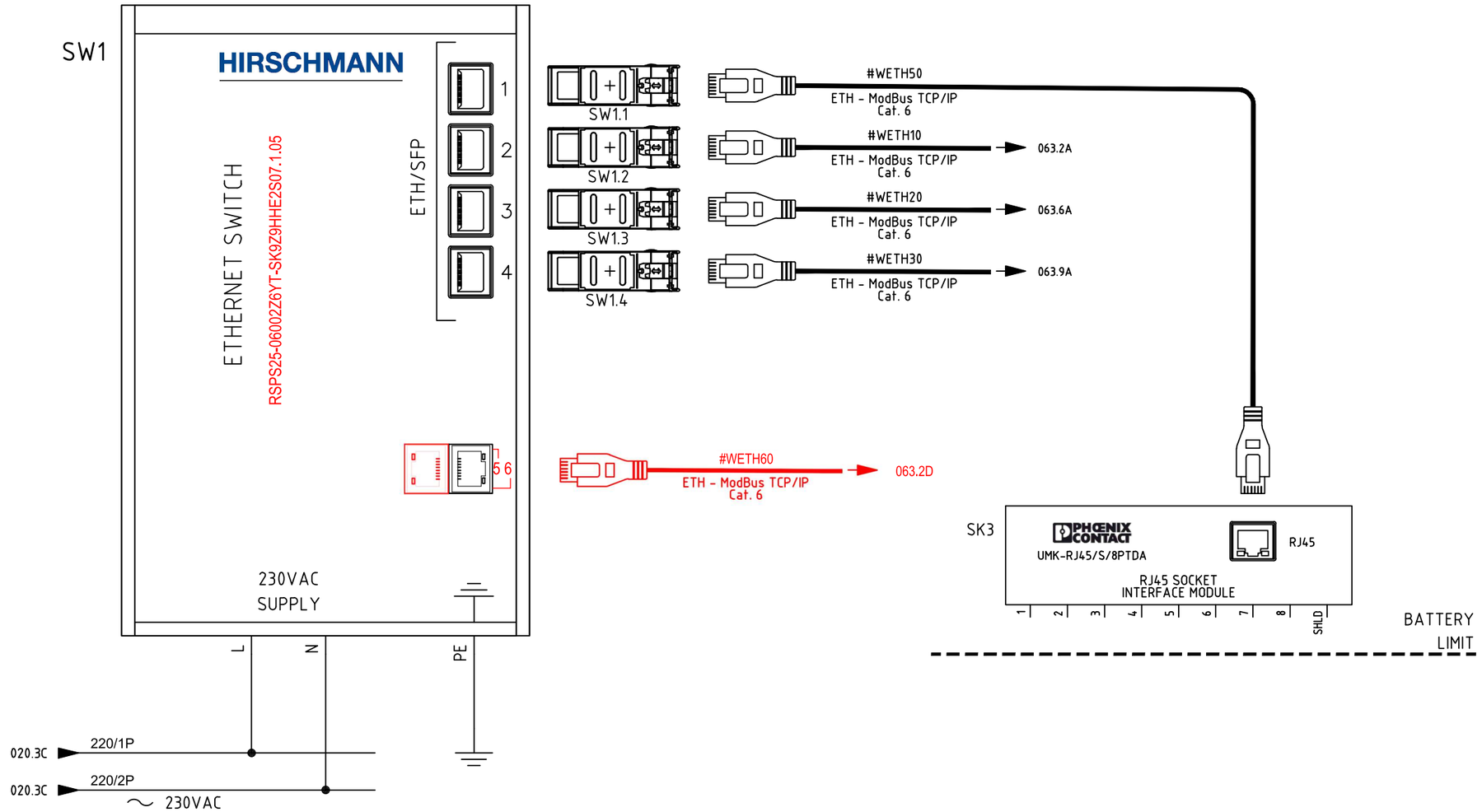
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 060 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

SWITCH CONNECTION



RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=	SG-200N1
+	A2/+09
DWG n° :	231298/SD/30
Item n° :	PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Switch Connection

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 061

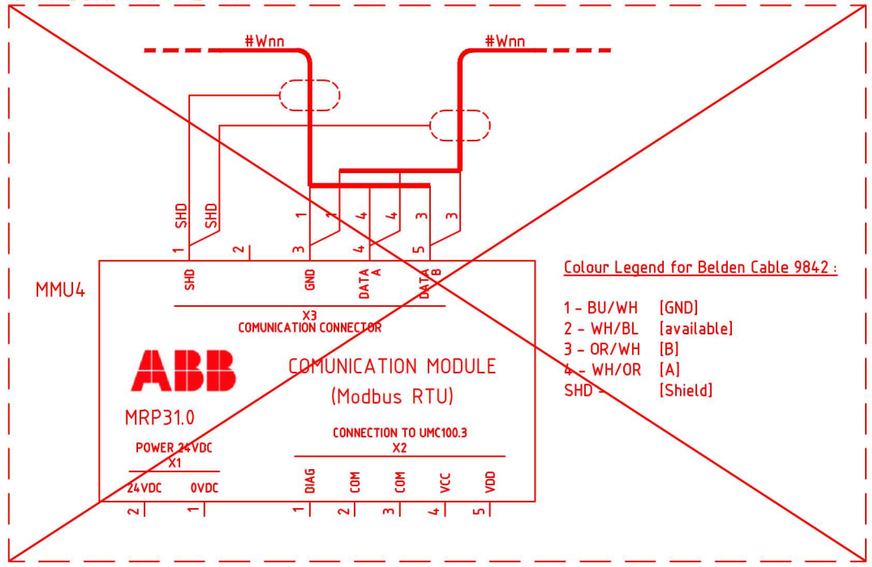
REV. 02

F.to UNI A3: 420mmx297mm

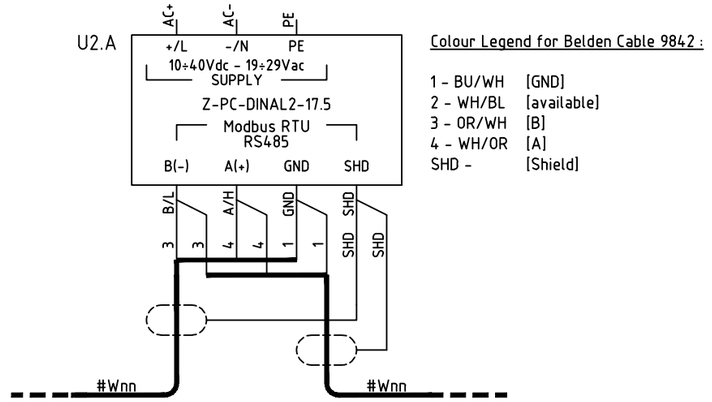
File Name : 1723002197-EL-DG-00030 Rev.02

Modbus RTU Chain Network - Connection Typies

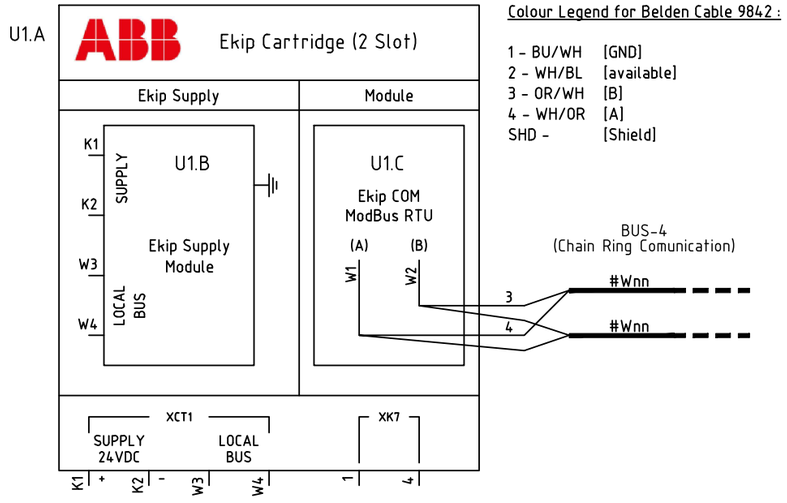
CONNECTION TYPE- A



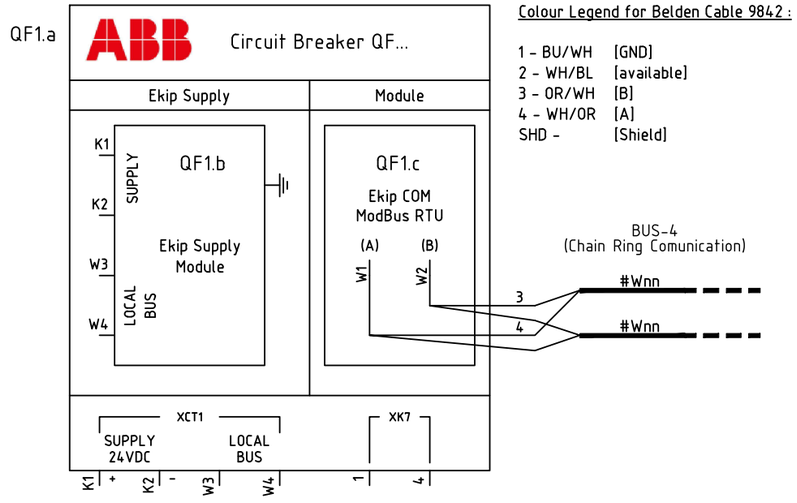
CONNECTION TYPE- B



CONNECTION TYPE- C



CONNECTION TYPE- D



RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n° : 231298/SD/30

Item n° : PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1

FUNCTIONAL DIAGRAM

Modbus RTU Chain Network - Connections Typies

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

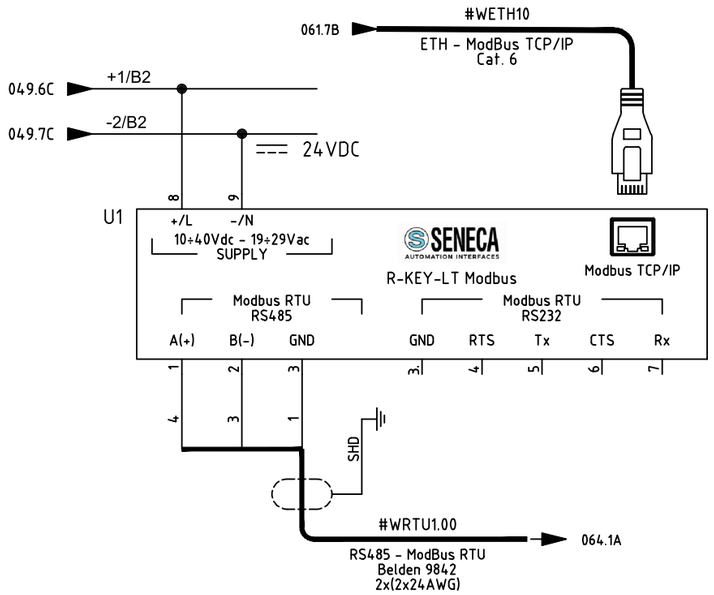
SHEET 062

REV. 02

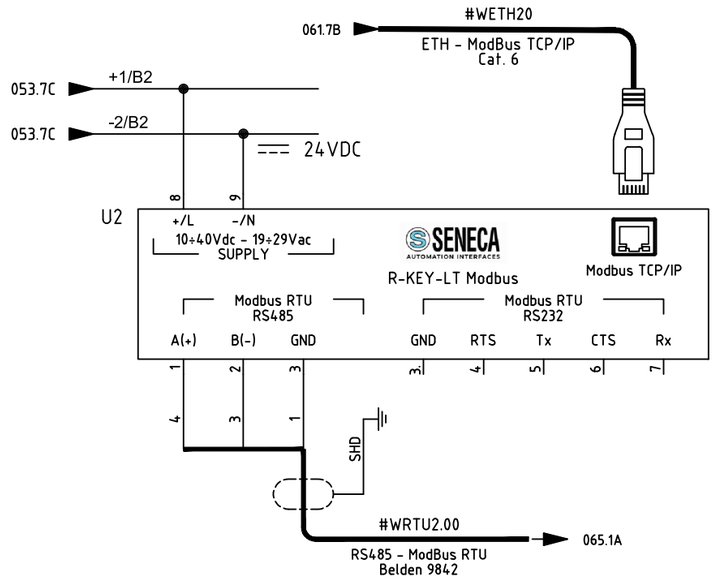
F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

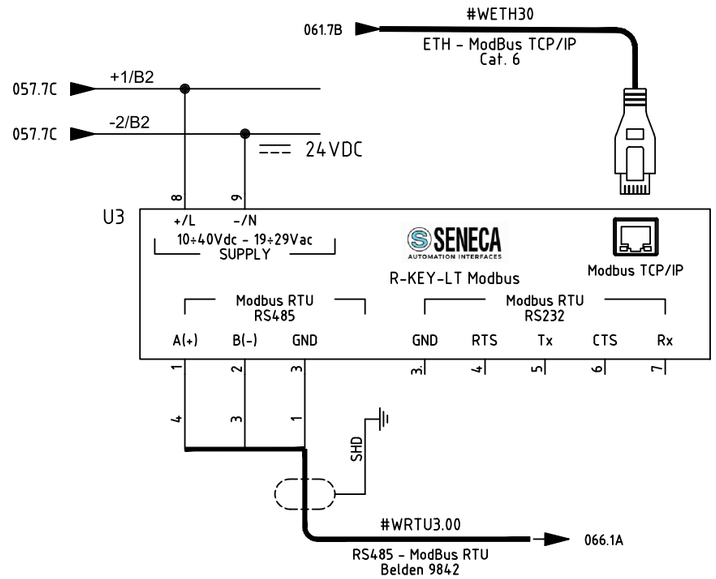
Modbus RTU Chain Network



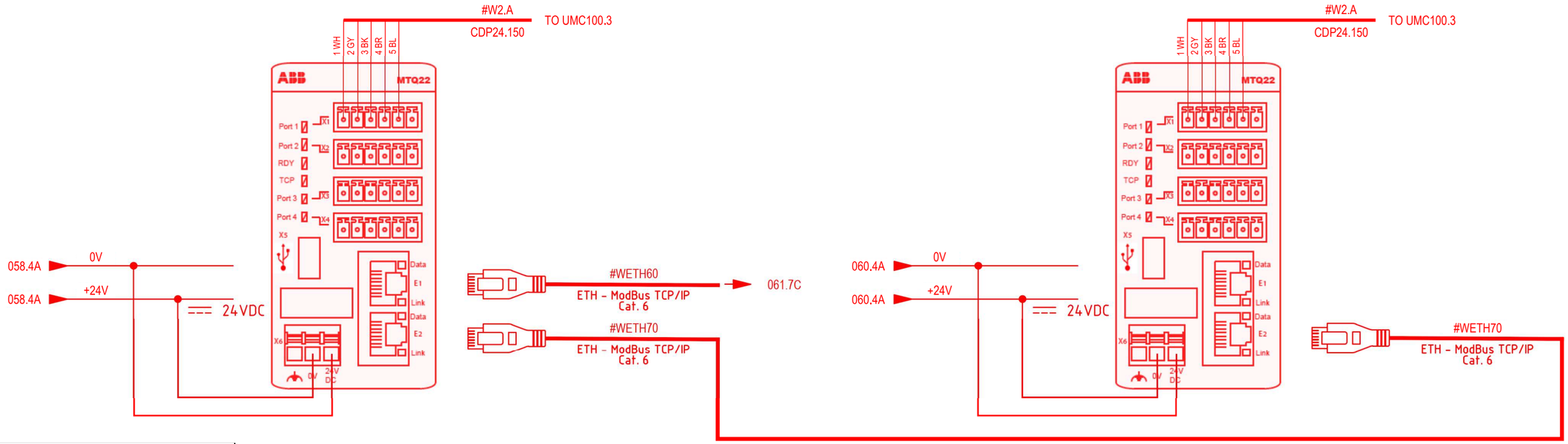
SECTION 1 - Modbus RTU Chain Network [A1+A2+A3]



SECTION 2 - Modbus RTU Chain Network [A4+A5]



SECTION 3 - Modbus RTU Chain Network [A6+A7]



RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n° : 231298/SD/30
Item n° : PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Modbus RTU Chain Network

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 063

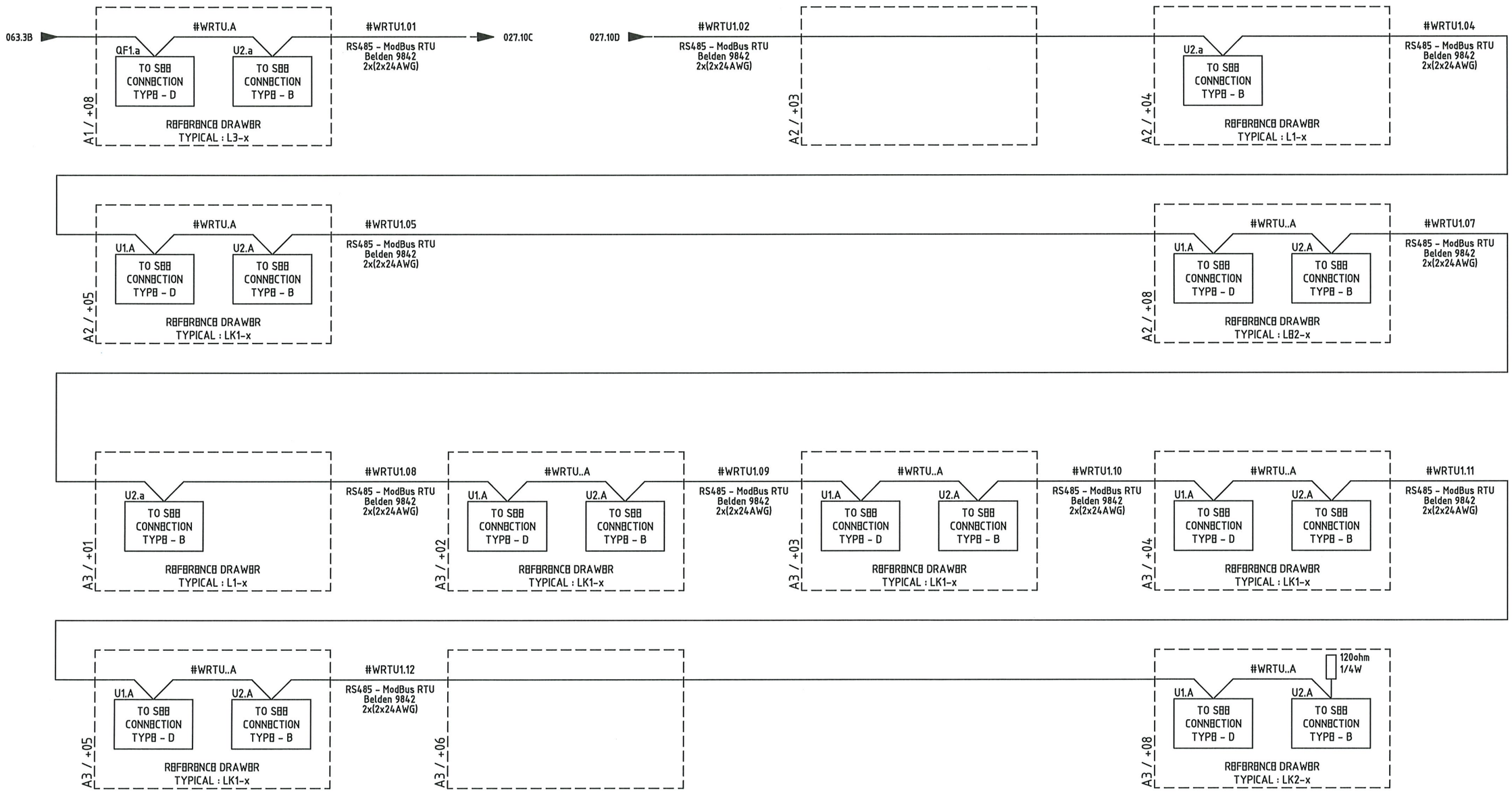
REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

SECTION 1 – Modbus RTU Chain Network [A1+A2+A3]

NO MARK UP AS COMMISSIONED: MATTIA GIROTTI 25/3/25



NOTE :

ROSETTI MARINO	RED LINE AS BUILT STAMP
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick "Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n° : 231298/SD/30

Item n° : PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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+					
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
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0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG–200N1
FUNCTIONAL DIAGRAM
Modbus RTU Chain Network [A1+A2+A3]

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

SCALE : NTS

A3

DRAWING NO. 1723002197–EL–DG–00030

SHEET 064

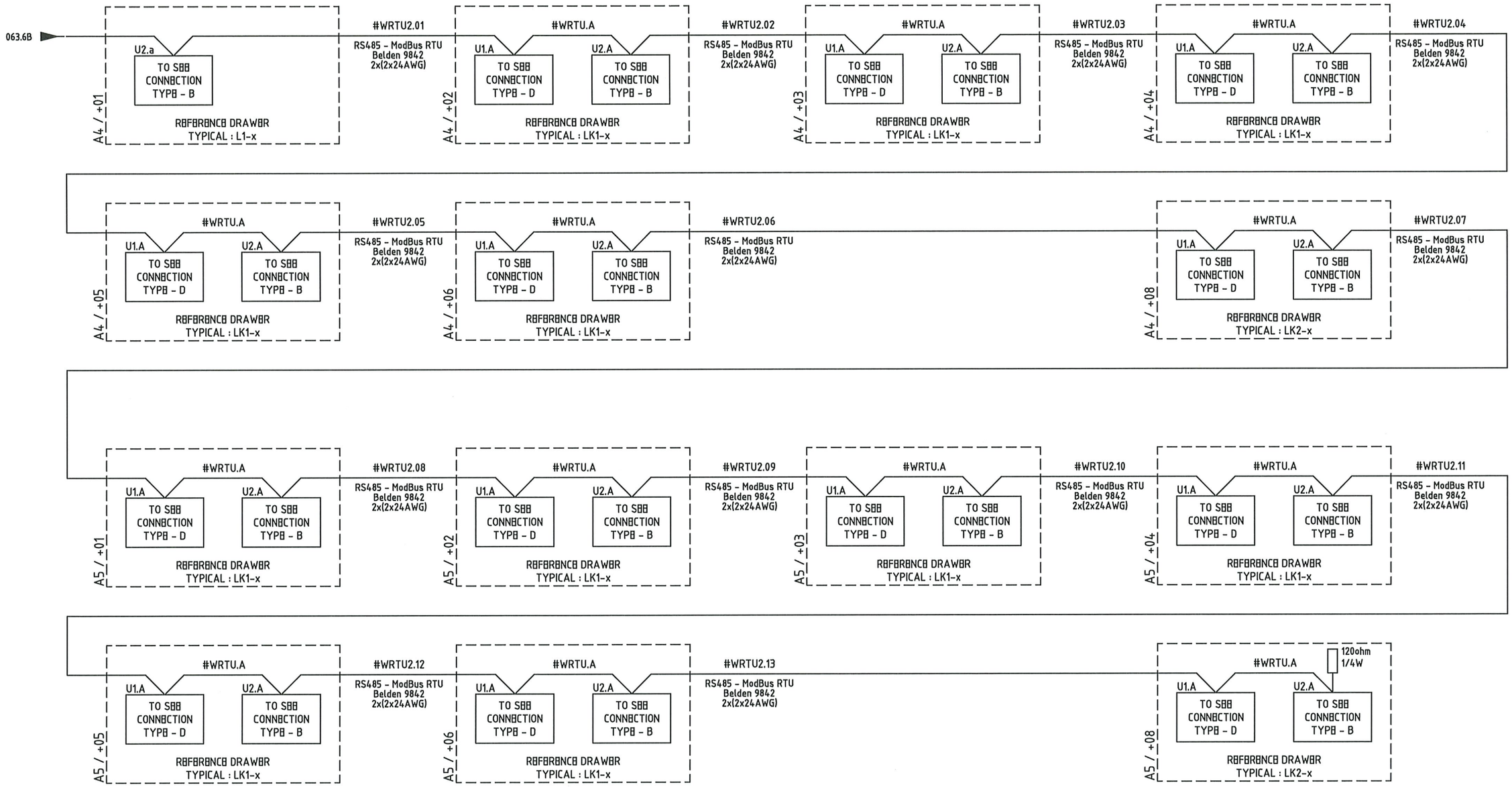
REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197–EL–DG–00030 Rev.02

SECTION 2 - Modbus RTU Chain Network [A4+A5]

NO MARK UP AS COMMISSIONED: Matteo Giroto 25/3/25



NOTE :

ROSETTI MARINO	RED LINE AS BUILT STAMP
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick "Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n° : 231298/SD/30

Item n° : PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Modbus RTU Chain Network [A4+A5]

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

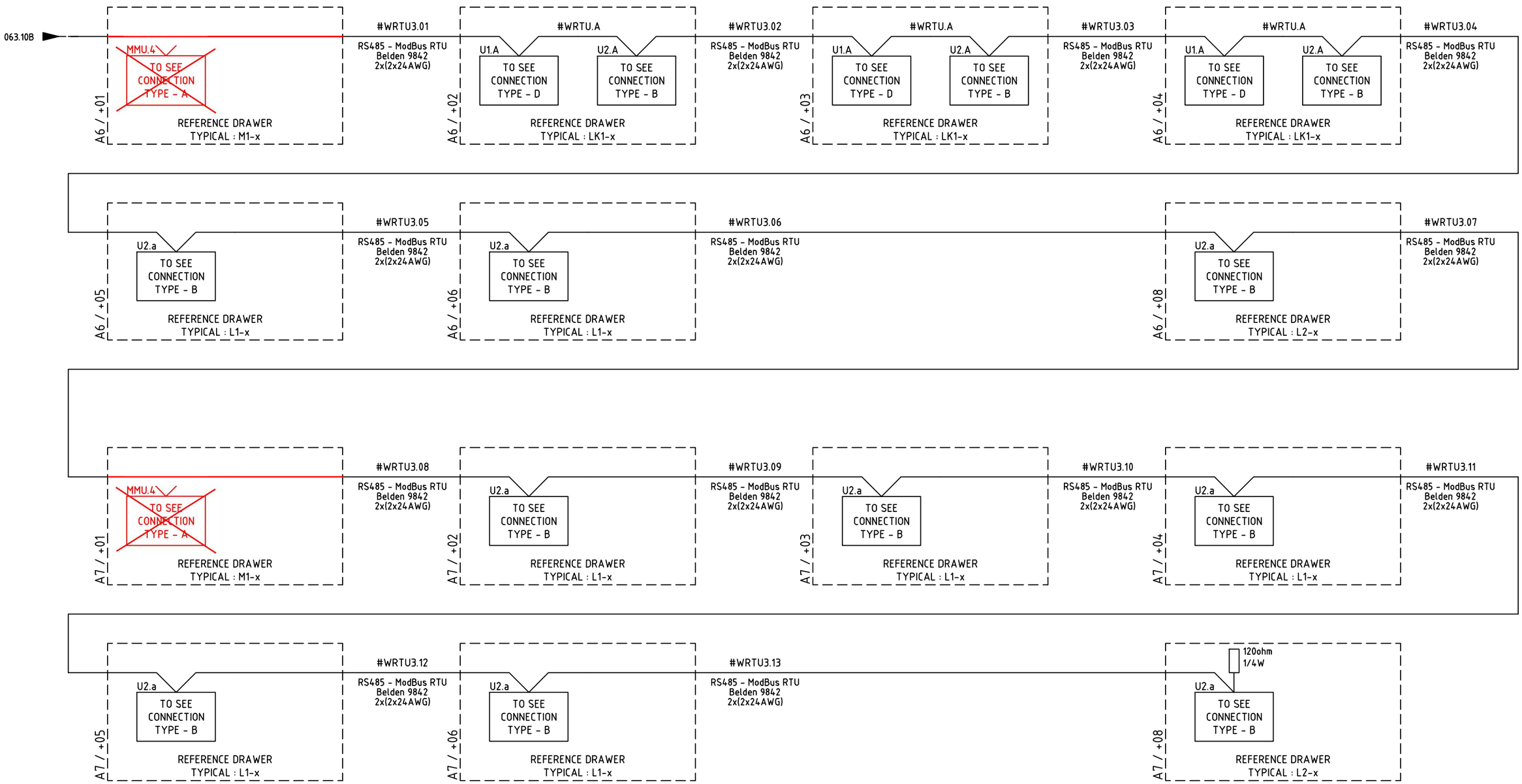
SHEET 065

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

SECTION 3 - Modbus RTU Chain Network [A6+A7]



RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

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DWG n° : 231298/SD/30
Item n° : PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Modbus RTU Chain Network [A6+A7]

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

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 066 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

Nome/Item	Fg/Sh	Tipo/Type	Q.tà	Descrizione/Description	Costruttore/Manufacturer	Ubicazione (descrizione)	Quadro (descrizione)
QF1	018	1SDA0735541R1	1	□4.2N/MS In=3200A 4p W MP	ABB	SG-200N1	A1/+05
		1SDA073914R1	1	□4.2 W FP 3200 4P FIX□D PART HR-HR	ABB	SG-200N1	A1/+05
		1SDA073764R1	1	AUP 5 CONTACT AUX INS/T□ST/□ST TO □2.2÷□6.2 - L□FT SID□	ABB	SG-200N1	A1/+05
		1SDA073674R1	1	OP□NING COIL YO 220÷240VAC/DC TO □12÷□6.2	ABB	SG-200N1	A1/+05
		1SDA073687R1	1	CLOSING COIL YC 220÷240VAC/DC TO □1.2÷□6.2	ABB	SG-200N1	A1/+05
		1SDA073725R1	1	MOTOR SPRING CHARG□R 220÷250Vac/dc TO □2.2÷□6.2	ABB	SG-200N1	A1/+05
		1SDA073773R1	1	RTC 250V □2.2...□6.2	ABB	SG-200N1	A1/+05
		1SDA073806R1	1	KLP-D K□Y BLOCK ON POSITION DRAWN-IN/T□ST/DRAWN-OUT TO □2.2÷□6.2	ABB	SG-200N1	A1/+05
		1SDA073858R1	1	PBC OP□N AND CLOS□ PUSHBOTTON COV□R PROT□CTION TO □2.2÷□6.2	ABB	SG-200N1	A1/+05
		1SDA073791R1	1	KLC-D BLOCK K□Y ON OP□N POSITION TO □2.2÷□6.2	ABB	SG-200N1	A1/+05
TA1	017	TAR1052K5N01V18	1	M□ASUR□ CT BUSBAR PASSING 105x55 2500/1A Cl.5P20 Pr.5VA	FR□R	SG-200N1	A1/+05
TA2	017	TAR1052K5N01V18	1	M□ASUR□ CT BUSBAR PASSING 105x55 2500/1A Cl.5P20 Pr.5VA	FR□R	SG-200N1	A1/+05
TA3	017	TAR1052K5N01V18	1	M□ASUR□ CT BUSBAR PASSING 105x55 2500/1A Cl.5P20 Pr.5VA	FR□R	SG-200N1	A1/+05

NO MARK UP

AS COMMISSIONED: MARIA GIROTTI

25/3/25

ROSETTI MARINO RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

DWG n° : 231298/SD/30

Item n° : PF1002983/30

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Bill of Materials

CONTRACT NO./TITLE CW-1-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 067

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

Nome/Item	Fg/Sh	Tipo/Type	Q.tà	Descrizione/Description	Costruttore/Manufacturer	Ubicazione (descrizione)	Quadro (descrizione)
BL.1	047	APB-PG	1	COVER TO MICRO-SWITCH	Omron	SG-200N1	A1/+09
		Z15GW2-1-1453270	1	MICROSWITCH 1sc	Omron	SG-200N1	A1/+09
LH.1	047	BEG74041	1	LAMP 4W 220-240V 50-60HZ COD.74041 - RGL P LED 4W 313MM 4000K	Beghelli	SG-200N1	A1/+09
QL.1	047	S550239	1	S202M C 2 AUTOMATIC CIRCUIT BREAKER 10KA 2P	ABB	SG-200N1	A1/+09
RR.1	047	R1R100230	1	SPACE HEATER SKR 100W ALIM. 220VCA	Torresan	SG-200N1	A1/+09
SR.1	047	TRT-10A230V-NC	1	Regolable Thermostat -10÷80°C 1NC IP20 DIN Mounting	Fandis	SG-200N1	A1/+09
XCL		HM210GR	13	HMM.4/1+2/GR Feed-through Terminal Block - Grey 1 input and 2 outputs (4 mmq) - Spring type	Cabur	SG-200N1	A1/+09

NO MARK UP
AS COMMISSIONED: MARIA GIRON
25/3/25

RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n° : 231298/SD/30
Item n° : PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
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TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Bill of Materials

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 068

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

Nome/Item	Fg/Sh	Tipo/Type	Q.tà	Descrizione/Description	Costruttore/Manufacturer	Ubicazione (descrizione)	Quadro (descrizione)
A1	027	750-315/300-000	1	Accoppiatore fieldbus MODBUS, RS-485, 115,2 kBd	Wago	SG-200N1	A2/+02
A3	027	750-652	1	Interfaccia seriale RS 232 C / RS 485 configurabile	Wago	SG-200N1	A2/+02
A4	027	750-430	1	Modulo 8 ingressi digitali 24 V DC 3.0ms	Wago	SG-200N1	A2/+02
A5	027	750-430	1	Modulo 8 ingressi digitali 24 V DC 3.0ms	Wago	SG-200N1	A2/+02
A6	027	750-600	1	Modulo terminatore	Wago	SG-200N1	A2/+02
BB	018	1VCF698000R0012	1	OPTICAL FIBER CABLE PRE-MANUFACT. LENS L=5M	ABB	SG-200N1	A2/+02
CB	018	1VCF698000R0012	1	OPTICAL FIBER CABLE PRE-MANUFACT. LENS L=5M	ABB	SG-200N1	A2/+02
CC	016	1VCF698000R0012	1	OPTICAL FIBER CABLE PRE-MANUFACT. LENS L=5M	ABB	SG-200N1	A2/+02
F1	017	961205	1	LV SURGE ARRESTER DVCI 1 255 FM Uc=255V Tipo 1+Tipo 2 / Classe I + Classe II	DEHN	SG-200N1	A2/+02
		900417	1	WIRING SYSTEM 4POLES TYPE EB149	DEHN	SG-200N1	A2/+02
F2	017	961205	1	LV SURGE ARRESTER DVCI 1 255 FM Uc=255V Tipo 1+Tipo 2 / Classe I + Classe II	DEHN	SG-200N1	A2/+02
F3	017	961205	1	LV SURGE ARRESTER DVCI 1 255 FM Uc=255V Tipo 1+Tipo 2 / Classe I + Classe II	DEHN	SG-200N1	A2/+02
FN	017	961205	1	LV SURGE ARRESTER DVCI 1 255 FM Uc=255V Tipo 1+Tipo 2 / Classe I + Classe II	DEHN	SG-200N1	A2/+02
FP1	021	REF615F-HBFFAEFCNDCABBA11G	1	MULTIFUNCTION RELAY REF615F (vers. F) 4I+5U 16BI+6BO+3HSO IEC61850+MODBUS (3xRJ45-ETH) 45÷250VDC/100÷240VAC	ABB	SG-200N1	A2/+02
FU1	017	M204733	1	E 93N/32 FUSE HOLDER E 90 3P+N, 32A	ABB	SG-200N1	A2/+02
		M277323	4	E 9F10 GG20 FUSIBILE GG 10,3X38, 20A, 500VC	ABB	SG-200N1	A2/+02
GD1	020	XCSL1240W024VAA	1	CSL1-2400W/024V/AA Switching power supply Easy Power 1-phase 85...264 Vac / 24 Vdc 10 A	Cabur	SG-200N1	A2/+02
K30A	019	A4RCND230VCA	1	DE-ENERGITATION FLAG RELAY Vaux=230VAC 2SC (Coil) + 2sc (Flag)	Torresan	SG-200N1	A2/+02
K86	023	RMBE13-A230T	1	MONOSTABLE RELAY 230VAC 7SC-5A TROP.	Amra	SG-200N1	A2/+02
		PAVM321	1	SOCKET WITH SCREW TO RELAY TYPE PAVM321	Amra	SG-200N1	A2/+02
KA01	023	ER 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LED	ABB	SG-200N1	A2/+02
		ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	SG-200N1	A2/+02
		ER 728 6	1	CR-MH1 METAL RETAINING JUMPER	ABB	SG-200N1	A2/+02
KA02	023	ER 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LED	ABB	SG-200N1	A2/+02
		ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	SG-200N1	A2/+02
		ER 728 6	1	CR-MH1 METAL RETAINING JUMPER	ABB	SG-200N1	A2/+02
KA03	023	ER 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LED	ABB	SG-200N1	A2/+02
		ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	SG-200N1	A2/+02
		ER 728 6	1	CR-MH1 METAL RETAINING JUMPER	ABB	SG-200N1	A2/+02
KA04	023	ER 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LED	ABB	SG-200N1	A2/+02
		ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	SG-200N1	A2/+02
		ER 728 6	1	CR-MH1 METAL RETAINING JUMPER	ABB	SG-200N1	A2/+02
KA05	024	ER 592 6	1	CR-M230AC4L SUPPLY 230VAC 4C/O 250V/6A LED	ABB	SG-200N1	A2/+02
		ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	SG-200N1	A2/+02
		ER 728 6	1	CR-MH1 METAL RETAINING JUMPER	ABB	SG-200N1	A2/+02
PR	023	KW 101 6	1	MP1-11Y P. INSTABLE LIGHT. YELLOW BLACK RING	ABB	SG-200N1	A2/+02
		KV 037 3	1	MLBL-07Y YELLOW LED BLOCK INTEGRATED 230VAC	ABB	SG-200N1	A2/+02
		EO 569 7	1	MCBH-00 FIXING SUPPORT 3 CONTACTS	ABB	SG-200N1	A2/+02
		EO 570 5	1	MCB-10 CONTACT NO FOR PUSHBUTTONS	ABB	SG-200N1	A2/+02
QA1	019	S550253	1	S202M C 4 AUTOMATIC CIRCUIT-BREAKER 10KA 2P	ABB	SG-200N1	A2/+02
		A563819	1	S2-CS/H6R AUXILIARY STATE CONTACT 1CO	ABB	SG-200N1	A2/+02
QA2	020	S550253	1	S202M C 4 AUTOMATIC CIRCUIT-BREAKER 10KA 2P	ABB	SG-200N1	A2/+02

NO MARK UP AS COMMISSIONED: MARIA GIRON 25/3/25

ROSETTI MARINO RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick "Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

DWG n°: 231298/SD/30
Item n°: PF1002983/30

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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+					
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Bill of Materials

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 069

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

Nome/Item	Fg/Sh	Tipo/Type	Q.tà	Descrizione/Description	Costruttore/Manufacturer	Ubicazione (descrizione)	Quadro (descrizione)
QA2	020	A563819	1	S2-CS/H6R AUXILIARY STATE CONTACT 1CO	ABB	SG-200N1	A2/+02
QA3	020	S550253	1	S202M C 4 AUTOMATIC CIRCUIT-BREAKER 10KA 2P	ABB	SG-200N1	A2/+02
		A563819	1	S2-CS/H6R AUXILIARY STATE CONTACT 1CO	ABB	SG-200N1	A2/+02
QA4	020	S550253	1	S202M C 4 AUTOMATIC CIRCUIT-BREAKER 10KA 2P	ABB	SG-200N1	A2/+02
		A563819	1	S2-CS/H6R AUXILIARY STATE CONTACT 1CO	ABB	SG-200N1	A2/+02
QA5	019	S550284	1	S202M C10 AUTOMATIC CIRCUIT-BREAKER 10KA 2P	ABB	SG-200N1	A2/+02
		A563819	1	S2-CS/H6R AUXILIARY STATE CONTACT 1CO	ABB	SG-200N1	A2/+02
QA6	019	S550253	1	S202M C 4 AUTOMATIC CIRCUIT-BREAKER 10KA 2P	ABB	SG-200N1	A2/+02
		A563819	1	S2-CS/H6R AUXILIARY STATE CONTACT 1CO	ABB	SG-200N1	A2/+02
QD1	020	S550239	1	S202M C 2 AUTOMATIC CIRCUIT BREAKER 10KA 2P	ABB	SG-200N1	A2/+02
		A563819	1	S2-CS/H6R AUXILIARY STATE CONTACT 1CO	ABB	SG-200N1	A2/+02
QD2	020	S550253	1	S202M C 4 AUTOMATIC CIRCUIT-BREAKER 10KA 2P	ABB	SG-200N1	A2/+02
		A563819	1	S2-CS/H6R AUXILIARY STATE CONTACT 1CO	ABB	SG-200N1	A2/+02
QU1	016	230 7	1	OT16F3C SWITCH 3P 1-0-2 16A	ABB	SG-200N1	A2/+02
		629 0	1	OHBS2AJ011 SQUARE BLACK HANDLE 1-0-2	ABB	SG-200N1	A2/+02
		324 8	1	OXS6X180 SHAFT 180MM	ABB	SG-200N1	A2/+02
QU2	016	M200883	1	E 92/32 FUSE HOLDER E 90 2P, 32A	ABB	SG-200N1	A2/+02
		M277543	2	E 9F10 GG16 FUSE GG 10,3X38, 16A, 500VC	ABB	SG-200N1	A2/+02
QU3	016	M200883	1	E 92/32 FUSE HOLDER E 90 2P, 32A	ABB	SG-200N1	A2/+02
		M277543	2	E 9F10 GG16 FUSE GG 10,3X38, 16A, 500VC	ABB	SG-200N1	A2/+02
QV1	017	MO1320V16	1	MO132-0,16A MAGNETIC MOTOR STARTER	ABB	SG-200N1	A2/+02
		P 096 0	2	HK1-11 AUX LATERLA CONTACT 1NA+1NC FOR MS116/132	ABB	SG-200N1	A2/+02
QV2	017	S550383	1	S203M C 2 AUTOMATIC CIRCUIT BREAKER 10KA 3P	ABB	SG-200N1	A2/+02
		A563819	2	S2-CS/H6R AUXILIARY STATE CONTACT 1CO	ABB	SG-200N1	A2/+02
SA1	026	KW 329 3	1	M2SS2-10B SEL. 2P 90. NERO GH. NERA	ABB	SG-200N1	A2/+02
		O 570 5	2	MCB-10 CONTACT NO FOR PUSHBUTTONS	ABB	SG-200N1	A2/+02
		O 569 7	1	MCBH-00 FIXING SUPPORT 3 CONTACTS	ABB	SG-200N1	A2/+02
		O 571 3	1	MCB-01 CONTATTO NC PER PULSANTI	ABB	SG-200N1	A2/+02
SA2	026	KW 416 8	1	M2SSK2-101 SELECTOR WITH KEY 2P (0-1) (KEY REMOVABLE ON "0")	ABB	SG-200N1	A2/+02
		O 570 5	2	MCB-10 CONTACT NO FOR PUSHBUTTONS	ABB	SG-200N1	A2/+02
		O 569 7	1	MCBH-00 FIXING SUPPORT 3 CONTACTS	ABB	SG-200N1	A2/+02
SC1	025	KW 076 0	1	MP1-10G PUSH BUTTON GREEN WITH BLACK RING	ABB	SG-200N1	A2/+02
		O 569 7	1	MCBH-00 FIXING SUPPORT 3 CONTACTS	ABB	SG-200N1	A2/+02
		O 570 5	1	MCB-10 CONTACT NO FOR PUSHBUTTONS	ABB	SG-200N1	A2/+02
SK1	021	2900682	1	UMK-RJ45/S/8PTDA Modul VARIOFACE	Phoenix Contact	SG-200N1	A2/+02
SK2	021	2900682	1	UMK-RJ45/S/8PTDA Modul VARIOFACE	Phoenix Contact	SG-200N1	A2/+02
SK3	061	2900682	1	UMK-RJ45/S/8PTDA Modul VARIOFACE	Phoenix Contact	SG-200N1	A2/+02
SO1	022	KW 075 2	1	MP1-10R PUSH BUTTON RED WITH BLACK RING	ABB	SG-200N1	A2/+02
		O 569 7	1	MCBH-00 FIXING SUPPORT 3 CONTACTS	ABB	SG-200N1	A2/+02
		O 570 5	2	MCB-10 CONTACT NO FOR PUSHBUTTONS	ABB	SG-200N1	A2/+02
SW1	061	RSPS25-0600Z6YT-SK9Z9HHH2SXX.X	1	Managed Industrial Switch for DIN Rail, fanless design Fast Ethernet Type - Enhanced (PRP, Fast MRP, HSR, NAT with L3 type) - 2 x RJ45; 4 x SFP - V=48V÷320VDC -88÷265VAC)	HIRSCHMANN	SG-200N1	A2/+02
SW1.1	061	M-FAST SFP-TX/RJ45	1	SFP TX Fast Ethernet Transceiver with RJ45	HIRSCHMANN	SG-200N1	A2/+02

NO MARK UP AS COMMISSIONED: MATTIA GIROTTI 25/3/25

ROSETTI MARINO **RED LINE AS BUILT STAMP**

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

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DWG n°: 231298/SD/30

Item n°: PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Bill of Materials

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 070

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

Nome/Item	Fg/Sh	Tipo/Type	Q.tà	Descrizione/Description	Costruttore/Manufacturer	Ubicazione (descrizione)	Quadro (descrizione)
SW1.2	061	M-FAST SFP-TX/RJ45	1	SFP TX Fast Ethernet Transceiver with RJ45	HIRSCHMANN	SG-200N1	A2/+02
SW1.3	061	M-FAST SFP-TX/RJ45	1	SFP TX Fast Ethernet Transceiver with RJ45	HIRSCHMANN	SG-200N1	A2/+02
SW1.4	061	M-FAST SFP-TX/RJ45	1	SFP TX Fast Ethernet Transceiver with RJ45	HIRSCHMANN	SG-200N1	A2/+02
TV1	017	9SBMCTV	1	TERMINAL COVER FOR VT (n°2 pz)	FREER	SG-200N1	A2/+02
		TTV010400XC0__1	1	Voltage Transformer 400V/110V - cl.0,5 10VA - TROP	FREER	SG-200N1	A2/+02
TV2	017	9SBMCTV	1	TERMINAL COVER FOR VT (n°2 pz)	FREER	SG-200N1	A2/+02
		TTV010400XC0__1	1	Voltage Transformer 400V/110V - cl.0,5 10VA - TROP	FREER	SG-200N1	A2/+02
UB1	022	1SDA082751R1	1	YO/YC TEST UNIT TmaxT/XT-X1-Emax-Emax2 Vaux=24÷250Vac/dc	ABB	SG-200N1	A2/+02
X2		HM250GR	85	HMM.4/GR Morsetto passante grigio (4 mmq) - a molla	Cabur	SG-200N1	A2/+02
		BT005	2	BTU End bracket	Cabur	SG-200N1	A2/+02
		HM251GR	1	HMT.4/PT/GR End section - Grey	Cabur	SG-200N1	A2/+02
XI		HB220GR	5	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - spring type	Cabur	SG-200N1	A2/+02
		BT005	2	BTU End bracket	Cabur	SG-200N1	A2/+02
		HL201GR	1	HLD.2/PT/GR End section - Grey	Cabur	SG-200N1	A2/+02
XV		HB210GR	3	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type	Cabur	SG-200N1	A2/+02
		BT005	2	BTU End bracket	Cabur	SG-200N1	A2/+02
		HB201GR	1	HSCB.6/PT/GR End section - Grey	Cabur	SG-200N1	A2/+02

NO MARK UP
AS COMMISSIONED: MATTIA GIROTTI
25/3/25

ROSETTI MARINO RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

DWG n° : 231298/SD/30
Item n° : PF1002983/30

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Bill of Materials

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 071

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

Nome/Item	Fg/Sh	Tipo/Type	Q.tà	Descrizione/Description	Costruttore/Manufacturer	Ubicazione (descrizione)	Quadro (descrizione)
X1		HM250GR	4	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type	Cabur	SG-200N1	A2/+08

NO MARK UP
AS COMMISSIONED: MATTIA GIRETTI
25/3/25

RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

DWG n°: 231298/SD/30
Item n°: PF1002983/30

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Bill of Materials

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 072

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

Nome/Item	Fg/Sh	Tipo/Type	Q.tà	Descrizione/Description	Costruttore/Manufacturer	Ubicazione (descrizione)	Quadro (descrizione)
BL.1	049	APB-PG	1	COVER TO MICRO-SWITCH	Omron	SG-200N1	A2/+09
		Z15GW2-1-1453270	1	MICROSWITCH 1sc	Omron	SG-200N1	A2/+09
LH.1	049	BEG74041	1	LAMP 4W 220-240V 50-60HZ COD.74041 - RGL P LED 4W 313MM 4000K	Beghelli	SG-200N1	A2/+09
QL.1	049	S550239	1	S202M C 2 AUTOMATIC CIRCUIT BREAKER 10KA 2P	ABB	SG-200N1	A2/+09
RR.1	049	R1R100230	1	SPACE HEATER SKR 100W ALIM. 220VCA	Torresan	SG-200N1	A2/+09
SR.1	049	TRT-10A230V-NC	1	Regolable Thermostat -10÷80°C 1NC IP20 DIN Mounting	Fandis	SG-200N1	A2/+09
U1	063	R-KEY-LT	1	GATEWAY CONVERTER MODBUS RTU/MODBUS TCP/IP Vaux=24Vdc	SENECA	SG-200N1	A2/+09
XCL		HM210GR	13	HMM.4/1+2/GR Feed-through Terminal Block - Grey 1 input and 2 outputs (4 mmq) - Spring type	Cabur	SG-200N1	A2/+09

NO MARK UP
AS COMMISSIONED: MARIA GIROTTI
25/3/25

ROSETTI MARINO RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	Claudia Cavoli

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n° : 231298/SD/30
Item n° : PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Bill of Materials

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

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 073 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

Nome/Item	Fg/Sh	Tipo/Type	Q.tà	Descrizione/Description	Costruttore/Manufacturer	Ubicazione (descrizione)	Quadro (descrizione)
BL.1	051	APB-PG	1	COVER TO MICRO-SWITCH	Omron	SG-200N1	A3/+09
		Z15GW2-1-1453270	1	MICROSWITCH 1sc	Omron	SG-200N1	A3/+09
LH.1	051	BEG74041	1	LAMP 4W 220-240V 50-60HZ COD.74041 - RGL P LED 4W 313MM 4000K	Beghelli	SG-200N1	A3/+09
QL.1	051	S550239	1	S202M C 2 AUTOMATIC CIRCUIT BREAKER 10KA 2P	ABB	SG-200N1	A3/+09
RR.1	051	R1R100230	1	SPACE HEATER SKR 100W ALIM. 220VCA	Torresan	SG-200N1	A3/+09
SR.1	051	TRT-10A230V-NC	1	Regolable Thermostat -10÷80°C 1NC IP20 DIN Mounting	Fandis	SG-200N1	A3/+09
XCL		HM210GR	13	HMM.4/1+2/GR Feed-through Terminal Block - Grey 1 input and 2 outputs (4 mmq) - Spring type	Cabur	SG-200N1	A3/+09

NO MARK UP
AS COMMISSIONED: MARA GIROTTI
25/3/25

RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n°: 231298/SD/30
Item n°: PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Bill of Materials

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

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 074 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

Nome/Item	Fg/Sh	Tipo/Type	Q.tà	Descrizione/Description	Costruttore/Manufacturer	Ubicazione (descrizione)	Quadro (descrizione)
BL.1	053	APB-PG	1	COVER TO MICRO-SWITCH	Omron	SG-200N1	A4/+09
		Z15GW2-1-1453270	1	MICROSWITCH 1sc	Omron	SG-200N1	A4/+09
LH.1	053	BEG74041	1	LAMP 4W 220-240V 50-60HZ COD.74041 - RGL P LED 4W 313MM 4000K	Beghelli	SG-200N1	A4/+09
QL.1	053	S550239	1	S202M C 2 AUTOMATIC CIRCUIT BREAKER 10KA 2P	ABB	SG-200N1	A4/+09
RR.1	053	R1R100230	1	SPACE HEATER SKR 100W ALIM. 220VCA	Torresan	SG-200N1	A4/+09
SR.1	053	TRT-10A230V-NC	1	Regolable Thermostat -10÷80°C 1NC IP20 DIN Mounting	Fandis	SG-200N1	A4/+09
U2	063	R-KEY-LT	1	GATEWAY CONVERTER MODBUS RTU/MODBUS TCP/IP Vaux=24Vdc	SENECA	SG-200N1	A4/+09
XCL		HM210GR	13	HMM.4/1+2/GR Feed-through Terminal Block - Grey 1 input and 2 outputs (4 mmq) - Spring type	Cabur	SG-200N1	A4/+09

NO MARK UP
AS COMMISSIONED: MARIA GIRON
25/3/25

	RED LINE AS BUILT STAMP
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

DWG n° : 231298/SD/30
Item n° : PF1002983/30

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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+					
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Bill of Materials

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

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 075 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

Nome/Item	Fg/Sh	Tipo/Type	Q.tà	Descrizione/Description	Costruttore/Manufacturer	Ubicazione (descrizione)	Quadro (descrizione)
BL.1	055	APB-PG	1	COVER TO MICRO-SWITCH	Omron	SG-200N1	A5/+09
		Z15GW2-1-1453270	1	MICROSWITCH 1sc	Omron	SG-200N1	A5/+09
LH.1	055	BEG74041	1	LAMP 4W 220-240V 50-60HZ COD.74041 - RGL P LED 4W 313MM 4000K	Beghelli	SG-200N1	A5/+09
QL.1	055	S550239	1	S202M C 2 AUTOMATIC CIRCUIT BREAKER 10KA 2P	ABB	SG-200N1	A5/+09
RR.1	055	R1R100230	1	SPACE HEATER SKR 100W ALIM. 220VCA	Torresan	SG-200N1	A5/+09
SR.1	055	TRT-10A230V-NC	1	Regolable Thermostat -10÷80°C 1NC IP20 DIN Mounting	Fandis	SG-200N1	A5/+09
XCL		HM210GR	13	HMM.4/1+2/GR Feed-through Terminal Block - Grey 1 input and 2 outputs (4 mmq) - Spring type	Cabur	SG-200N1	A5/+09

NO MARK UP
AS COMMISSIONED: MATCH GIVEN
25/3/25

RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

Notes: Tick"Yes" only when the document reflects the final as-commissioned condition and the red-line mark-up (RLMU) has been incorporated without a new revision.
Tick "No" if the last approved revision already represents the final condition, with no redline markup required.

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n° : 231298/SD/30
Item n° : PF1002983/30

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
2	28/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
1	08/07/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
0	10/06/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Bill of Materials

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

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 076 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

Nome/Item	Fg/Sh	Tipo/Type	Q.tà	Descrizione/Description	Costruttore/Manufacturer	Ubicazione (descrizione)	Quadro (descrizione)
BL.1	057	APB-PG	1	COVER TO MICRO-SWITCH	Omron	SG-200N1	A6/+09
		Z15GW2-1-1453270	1	MICROSWITCH 1sc	Omron	SG-200N1	A6/+09
LH.1	057	BEG74041	1	LAMP 4W 220-240V 50-60HZ COD.74041 - RGL P LED 4W 313MM 4000K	Beghelli	SG-200N1	A6/+09
QL.1	057	S550239	1	S202M C 2 AUTOMATIC CIRCUIT BREAKER 10KA 2P	ABB	SG-200N1	A6/+09
RR.1	057	R1R100230	1	SPACE HEATER SKR 100W ALIM. 220VCA	Torresan	SG-200N1	A6/+09
SR.1	057	TRT-10A230V-NC	1	Regolable Thermostat -10÷80°C 1NC IP20 DIN Mounting	Fandis	SG-200N1	A6/+09
U3	063	R-KEY-LT	1	GATEWAY CONVERTER MODBUS RTU/MODBUS TCP/IP Vaux=24Vdc	SENECA	SG-200N1	A6/+09
XCL		HM210GR	13	HMM.4/1+2/GR Feed-through Terminal Block - Grey 1 input and 2 outputs (4 mmq) - Spring type	Cabur	SG-200N1	A6/+09

NO MARK UP
AS COMMISSIONED: MARA GIROTTI
25/3/25

RED LINE AS BUILT STAMP	
RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

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IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

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Item n° : PF1002983/30

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TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Bill of Materials

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

A3 | DRAWING NO. 1723002197-EL-DG-00030 | SHEET 077 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02

Nome/Item	Fg/Sh	Tipo/Type	Q.tà	Descrizione/Description	Costruttore/Manufacturer	Ubicazione (descrizione)	Quadro (descrizione)
BL.1	059	APB-PG	1	COVER TO MICRO-SWITCH	Omron	SG-200N1	A7/+09
		Z15GW2-1-1453270	1	MICROSWITCH 1sc	Omron	SG-200N1	A7/+09
LH.1	059	BEG74041	1	LAMP 4W 220-240V 50-60HZ COD.74041 - RGL P LED 4W 313MM 4000K	Beghelli	SG-200N1	A7/+09
QL.1	059	S550239	1	S202M C 2 AUTOMATIC CIRCUIT BREAKER 10KA 2P	ABB	SG-200N1	A7/+09
RR.1	059	R1R100230	1	SPACE HEATER SKR 100W ALIM. 220VCA	Torresan	SG-200N1	A7/+09
SR.1	059	TRT-10A230V-NC	1	Regolable Thermostat -10÷80°C 1NC IP20 DIN Mounting	Fandis	SG-200N1	A7/+09
XCL		HM210GR	13	HMM.4/1+2/GR Feed-through Terminal Block - Grey 1 input and 2 outputs (4 mmq) - Spring type	Cabur	SG-200N1	A7/+09

NO MARK UP
AS COMMISSIONED: MARIA GIRON
25/3/25

RED LINE AS BUILT STAMP

RLMU	✖ Yes ☐ No
Description	This document represents the final as-built version incorporating the latest approved information.
Reviewed & Confirmed by	Rosetti Marino S.P.A.
Signature /Date	

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IMESA ELECTRICAL ENGINEERING

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TITLE : SG-200N1
FUNCTIONAL DIAGRAM
Bill of Materials

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00030

SHEET 078

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00030 Rev.02