"SG-100D1" HV SWBD 6,6kV (UNIT A5)

FUNCTIONAL DIAGRAM

BUS BAR METERING

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
3	08/08/2024	Giulietti	Flamminio	Sigismondi	As-Built (ASB)
2	27/06/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
1	14/05/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)
0	04/04/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

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+A5

DWG n° : 231151/SD/16

Item n° : PF1113279

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

Cover

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00016

SHEET 1

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03

INDEX

Sheet	Description	Revision 0	1	2	3	4	5	6	7	8	Sheet	Description	Revision 0	1	2	3	4	5	6	7	8
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2	Sheets Index																				
3	Legend																				
4	Door Layout																				
5	Power Diagram																				
6	Power Diagram																				
7	110V Protection/Measure Distribution Voltage																				
8	110V Protection/Measure Distribution Voltage																				
9	110V Protection/Measure Distribution Voltage																				
10	230Vac Distribution Voltage																				
11	110Vdc Distribution Voltage																				
12	110Vdc/24Vdc Distribution Voltage																				
13	24Vdc Distribution Voltage																				
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16	Partial discharge monitoring PDCOM																				
17	Command Circuit																				
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20	Terminal strips																				
21	Terminal strip																				
22	Bill of Materials																				
23	Bill of Materials																				
24	Bill of Materials																				

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+A5

DWG n° : 231151/SD/16

Item n° : PF1113279

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

Sheets Index

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00016

SHEET 2

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03

ACRONIMUS LEGEND

ITEM	DESCRIPTION
BB	ARC SENSOR PROTECTION ON MAIN BUS BARS
BGE	EARTHING SWITCH
C1	VOLTAGE PRESENCE
CB	ARC SENSOR PROTECTION ON C.B. / CONTACTOR COMPARTMENT
CC	ARC SENSOR PROTECTION ON CABLE COMPARTMENT
DCO	DOUBLE COMMAND OPERATED CONTACTOR
DI3	UNDERVOLTAGE CONTACTOR
DP1	ALARM RELAY MODULE TEMPERATURE
E1	INTERNAL LIGHT
E8	RESISTOR FERRO-RESONANCE
EH1	INTERNAL SPACE HEATER
Fn	MV FUSE
FP1	PROTECTION RELAY
GS1	DC/DC CONVERTER
HGR	THERMOSTAT
Kn	AUXILIARY RELAY
K1	MV CONTACTOR
K86	BLOCK RELAY
KT1	DE-ENERGIZATION TIMER
LS	MICRO SWITCH ON AUXILIARY DOOR
MAS	MOTOR SPRING CHARGER
MBC	CLOSING COIL
MBO1	OPENING COIL
MBU	UNDERVOLTAGE
ODn	VOLTAGE DISCHARGER
PU1	MEASURING VOLTAGE INSTRUMENT
PTT	V.T. TRUCK
QM	MV CIRCUIT-BREAKER

ITEM	DESCRIPTION
QDn	M.C.B. CIRCUITS PROTECTION
QVn	M.C.B FOR V.T. PROTECTION
RLE1	COIL FOR CONSET CLOSING CIRCUIT-BREAKER
RLE2	COIL FOR UNLOCKING RACK-IN/OUT OPERATION
RLE3	COIL FOR UNLOCKING OPERATION EARTHING
RLE4	COIL FOR UNLOCKING ENCLOSURE DOOR OPERATION
SU1	VOLTAGE SELECTOR
SWH...	ETHERNET SWITCH
TI-Ln	CURRENT TRANSFORMER
TO	OMOPOLAR RING CURRENT TRANSFORMER
TR1	TEMPERATURE CONTROL DEVICE

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+A5

DWG n° : 231151/SD/16

Item n° : PF1113279

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IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

Legend

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00016

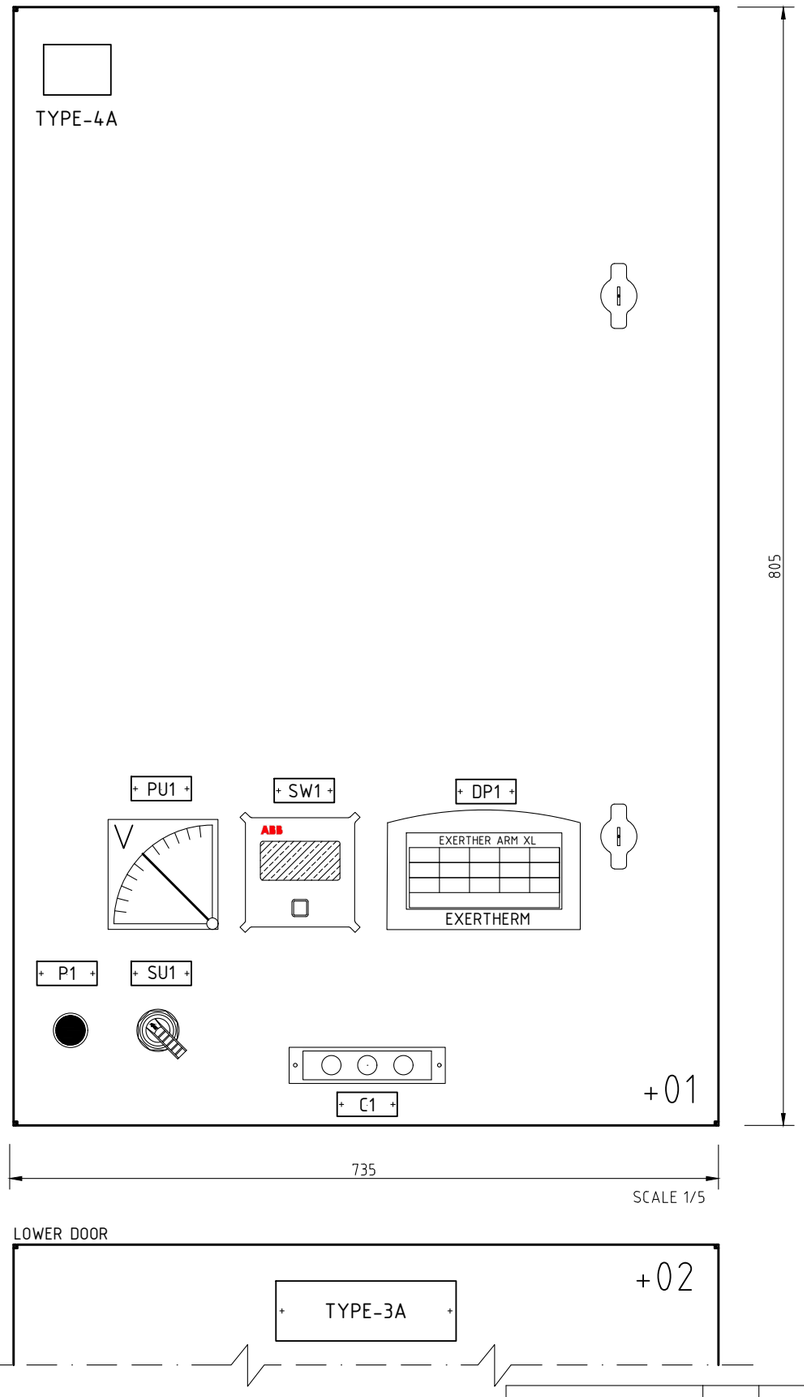
SHEET 3

REV. 03

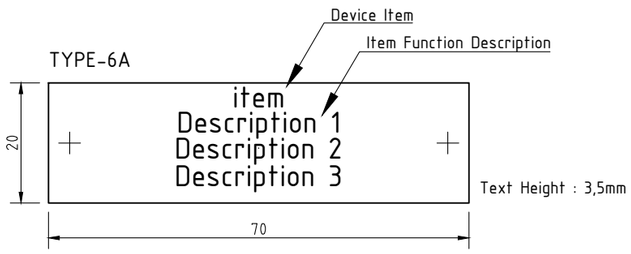
F.to UNI A3: 420mmx297mm

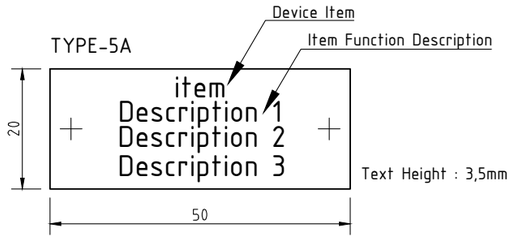
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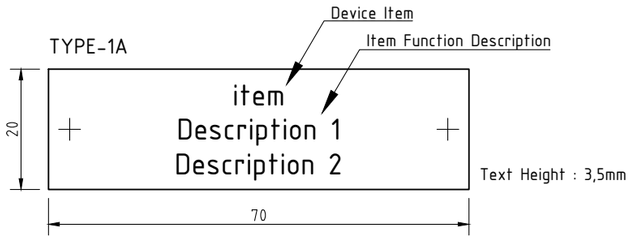
DOOR LAY-OUT

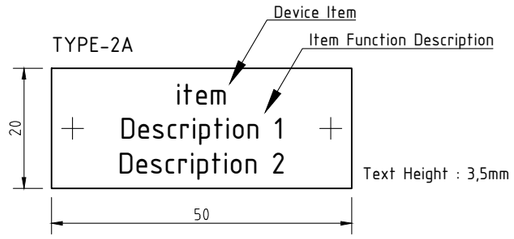


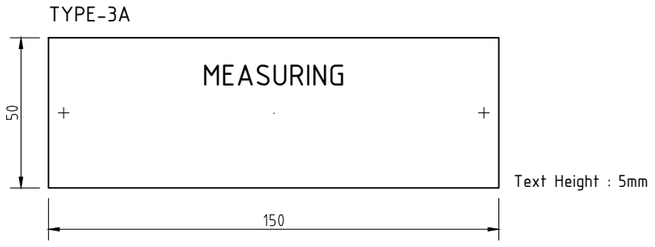
DEVICES name plate					
ITEM	COMPONENT	DESCRIPTION 1	DESCRIPTION 2	DESCRIPTION 3	NOTE
C1	PILOT LIGHT	VOLTAGE	PRESENCE		TYPE-2A
P1	PUSHBUTTON	EARTHING SWITCH	SWITCH	ENABLING	TYPE-5A
SU1	SWITCH	VOLMETRIC	SWITCH		TYPE-2A
PU1	ANALOG INSTRUMENT	BUS-BARS	VOLTAGE		TYPE-1A
SW1	SWICOM	PARTIAL DISCHARGE	MONITORING DISPLAY		TYPE-1A
DP1	ARM XL	INFRARED	TEMPERATURE	DETECTION DISPLAY	TYPE-6A

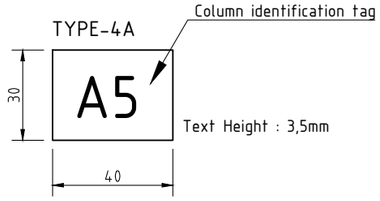












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+A5					
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DWG n° : 231151/SD/16

Item n° : PF1113279

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

Door Layout

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

SCALE : NTS

A3

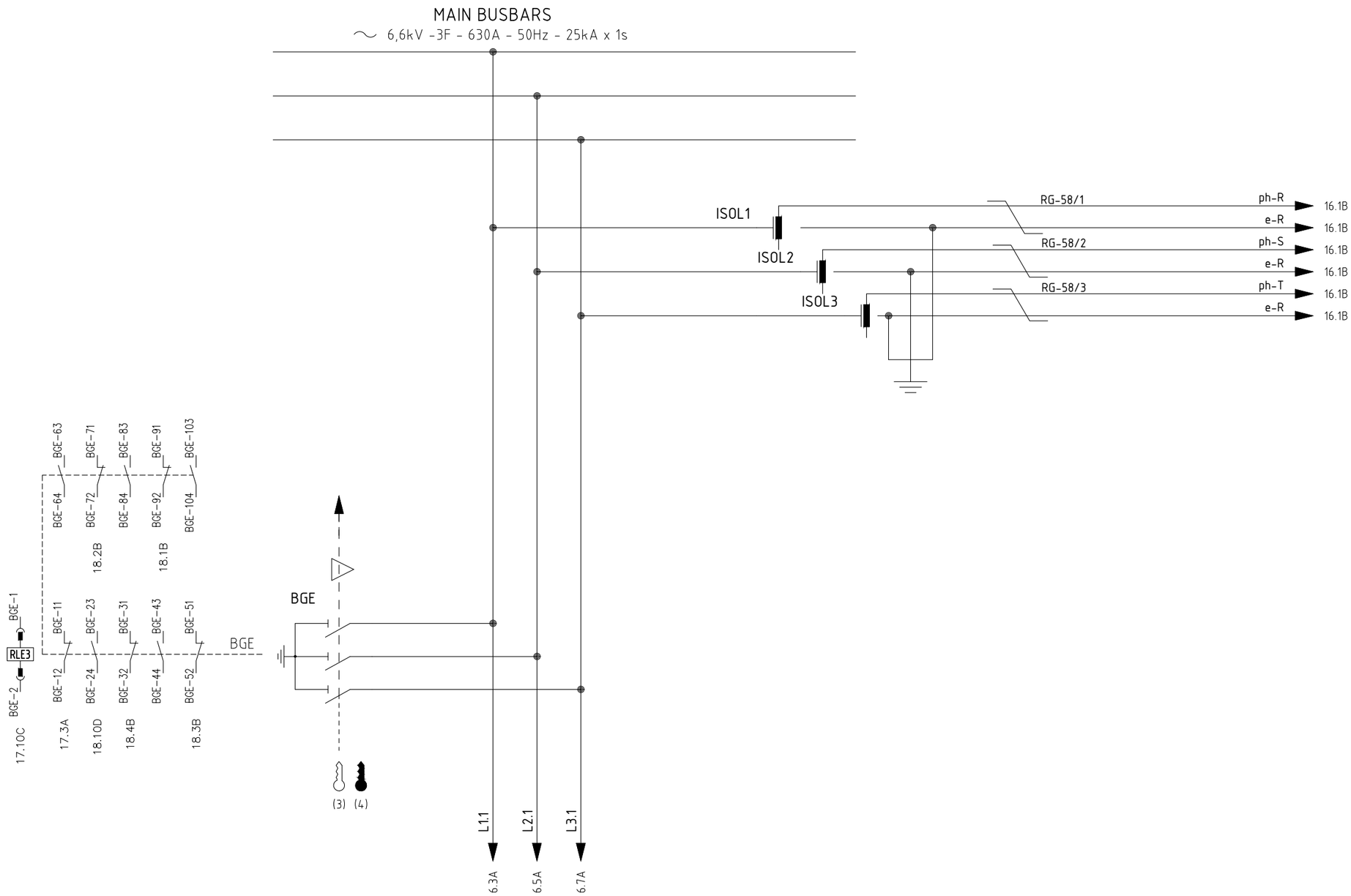
DRAWING NO. 1723002197-EL-DG-00016

SHEET 4

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03



(3) FREE KEY WITH EARTHING SWITCH IN OPEN POSITION

(4) FREE KEY WITH EARTHING SWITCH IN CLOSED POSITION

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

=
+A5

DWG n° : 231151/SD/16

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TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

Power Diagram

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00016

SHEET 5

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03

6.600:rad3V/
1° core : 110:rad3V 20VA Cl 0,5/3P
2° core : 110:rad3V 30VA Cl 0,5/3P
3° core : 110:3V 30VA Cl 3P

PTT

L1.1 5.4D — XU L1 — FF1 2A — 6.9A
L2.1 5.4D — XU L2 — FF2 2A — 6.9B
L3.1 5.4D — XU L3 — FF3 2A — 6.9B

6600:r3/110:r3-110:r3-110:3
TU-L1 — A N — 1a 1n Cl. 0,5/3P — 2a 2n Cl. 0,5/3P — da dn Cl. 3P
6600:r3/110:r3-110:r3-110:3
TU-L2 — A N — 1a 1n Cl. 0,5/3P — 2a 2n Cl. 0,5/3P — da dn Cl. 3P
6600:r3/110:r3-110:r3-110:3
TU-L3 — A N — 1a 1n Cl. 0,5/3P — 2a 2n Cl. 0,5/3P — da dn Cl. 3P

N
L1-a1
L1-b3
L1-a3
L1-a2
L2-a1
L3-a1
L2-a2
L2-b3
L3-a2
L3-b3

FUSE HEALTHY
FF1 6.3A — 12 14
FF2 6.5A — 11 12 14
FF3 6.7A — 3 2 1 4

BT7 ISOLATED — BT7-11 BT7-12 BT7-21 BT7-22 — BT7-10 BT7-20
BT6 CONNECTED — BT6-12 BT6-11 BT6-22 BT6-21 — BT6-10 BT6-20

18.5D

XU 1 — BK 1x1.5 — V1 — 7.1A
XU 2 — BK 1x1.5 — V2 — 7.1A
XU 3 — BK 1x1.5 — V3 — 7.1A
XU 4 — BK 1x1.5 — VN1 — 7.2A
XU 5 — BK 1x1.5 — V5 — 8.1A
XU 6 — BK 1x1.5 — V6 — 8.1A
XU 7 — BK 1x1.5 — V7 — 8.1A
XU 8 — BK 1x1.5 — VN2 — 8.2A
XU 9 — BK 1x1.5 — da1 — 9.1A
XU 10 — E8 27ohm-500W (1 2) — BK 1x1.5 — dn1 — 9.1A
XU 11 — RD 1x1.5 — 5 — 18.4C
XU 12 — RD 1x1.5 — 6 — 18.5C

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DWG n° : 231151/SD/16	3	08/08/2024	Giulietti	Flamminio	Sigismondi	As-Built (ASB)	
Item n° : PF1113279	2	27/06/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)	
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	REV.	DATE	DRN	CHKD	APPD	DESCRIPTION	

IMESA ELECTRICAL ENGINEERING
CROSSWIND
ROSETTI MARINO

TITLE : SG-100D1 – FUNCTIONAL BUS BAR METERING

Power Diagram

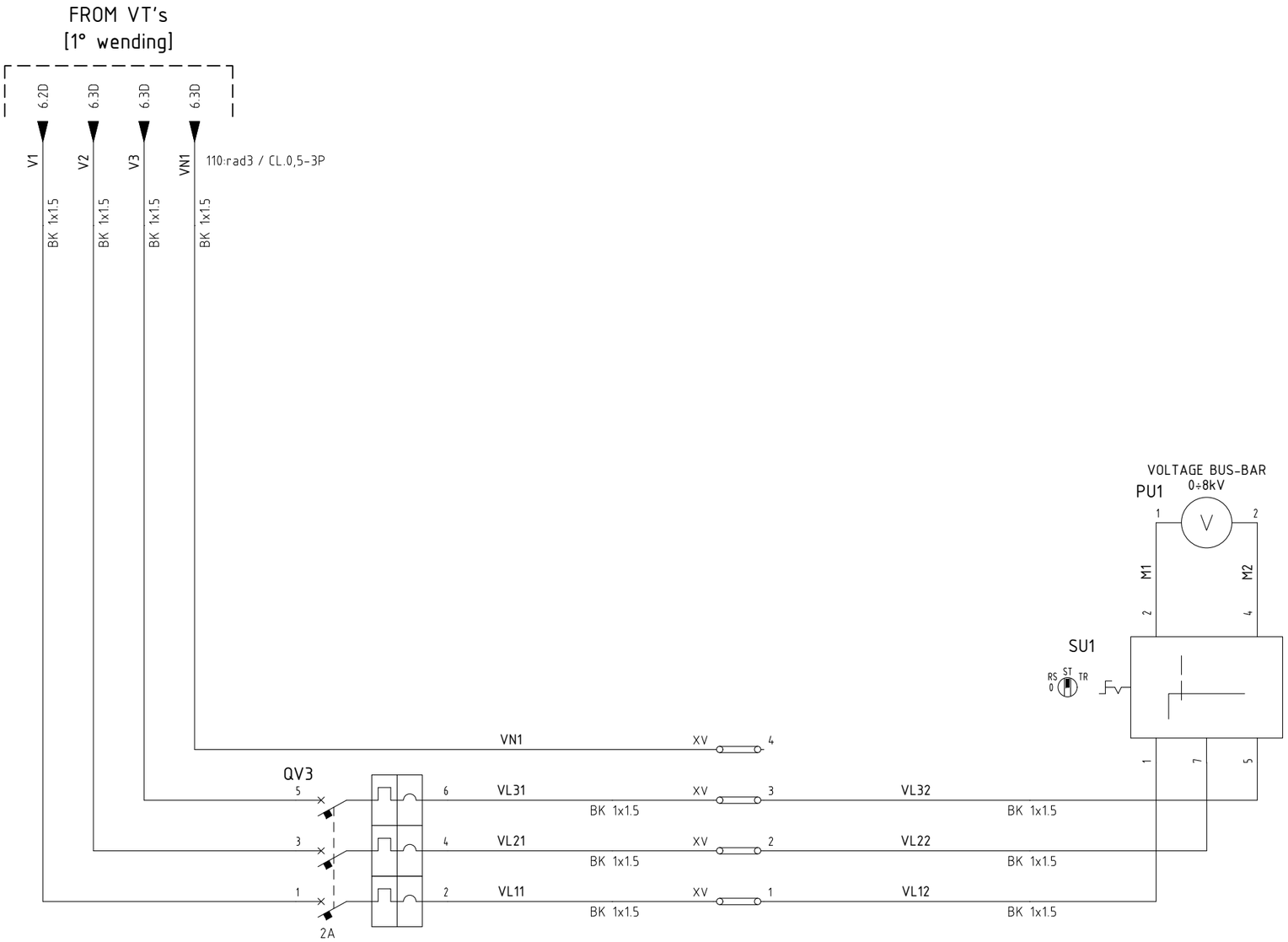
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00016 | SHEET 6 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03

110V:rad3 TO VOLTAGE INDICATOR



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+A5							
DWG n° : 231151/SD/16	3	08/08/2024	Giulietti	Flamminio	Sigismondi	As-Built (ASB)	
Item n° : PF1113279	2	27/06/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)	
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	REV.	DATE	DRN	CHKD	APPD	DESCRIPTION	

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

110V Protection/Measure Distribution Voltage

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00016

SHEET 7

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03

110V: rad3 DISTRIBUTION from MEASURE CUBICLE

FROM VT's
[2° wending]

110:rad3 / CL.0,5-3P

V5 6.4D — BK 1x1.5
V6 6.5D — BK 1x1.5
V7 6.5D — BK 1x1.5
VN2 6.5D — BK 1x1.5

QV5

18.4D 11 12 14

3	4	VN31	1x1.5 BK	XV 15	VN32	15 XM
1	2	V31	1x1.5 BK	XV 16	V32	16 XM

2A

AVR TO TAP CHANGER TRANSFORMER

QV2

18.4D 11 12 14

7	8	VN21	BK 1x1.5	XV 8		NV BK 1x1.5
5	6	V71	BK 1x1.5	XV 7		L3V BK 1x1.5
3	4	V61	BK 1x1.5	XV 6		L2V BK 1x1.5
1	2	V51	BK 1x1.5	XV 5		L1V BK 1x1.5

2A

QV4

18.1D 11 12 14

7	8	VN22	BK 1x1.5	XV 11	VN23	11 XM
5	6	V72	BK 1x1.5	XV 12	V73	12 XM
3	4	V62	BK 1x1.5	XV 13	V63	13 XM
1	2	V52	BK 1x1.5	XV 14	V53	14 XM

2A

SYNCHRONIZER TO THE BESS

110:√3V VOLTMETRIC LINE - STAR
(FOR PROTECTION/MEASURE)

TO NEXT PANEL

110V-cl.0,5/3P

13 XC — 15 XC — 17 XC — 19 XC
14 XC — 16 XC — 18 XC — 20 XC

TO NEXT PANEL

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+A5
DWG n° : 231151/SD/16
Item n° : PF1113279

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

110V Protection/Measure Distribution Voltage

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

SCALE : NTS

A3

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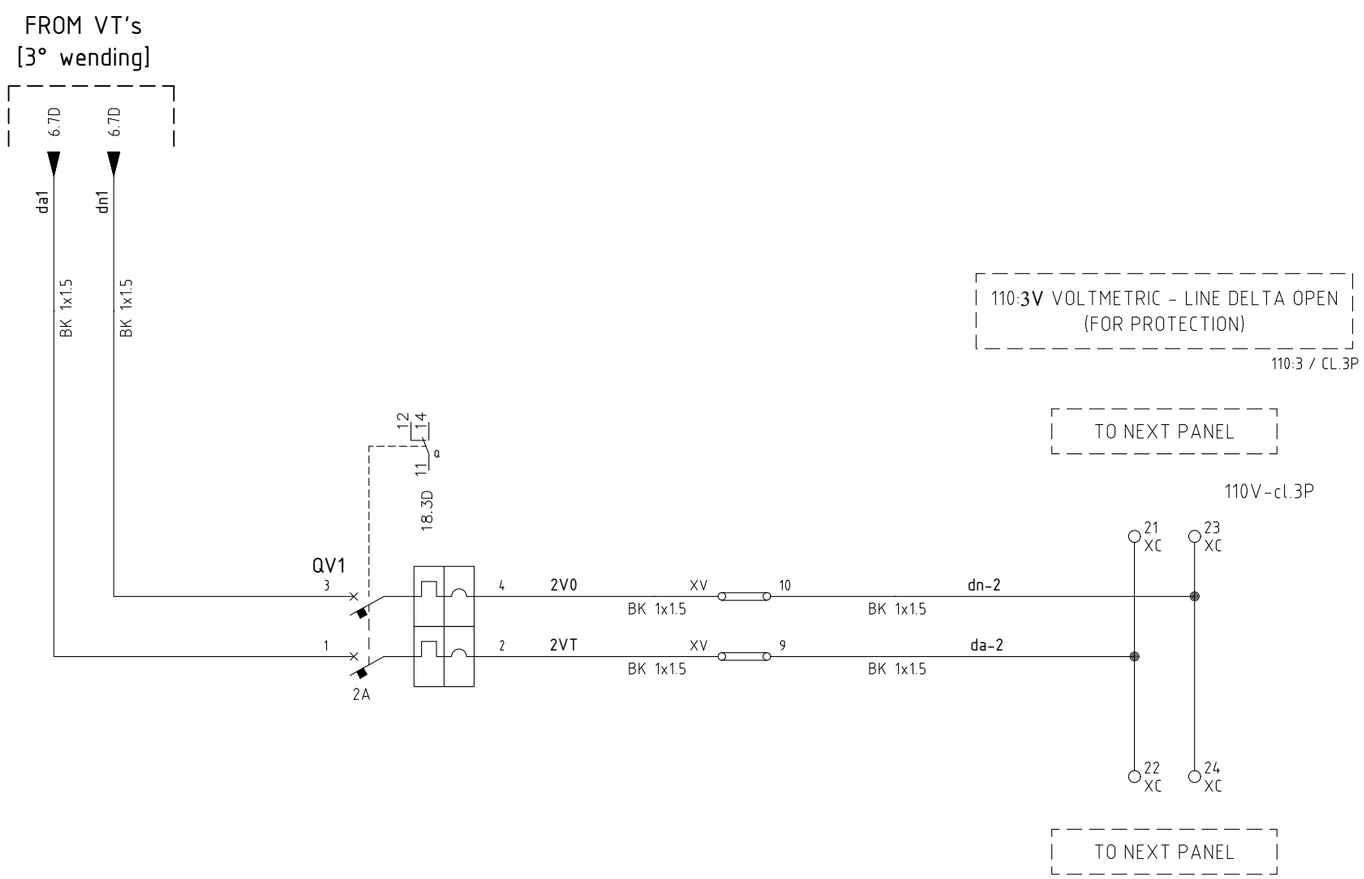
SHEET 8

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03

110V:3 DISTRIBUTION VOLTAGE TO MEASURE CUBICLE



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+A5					
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DWG n° : 231151/SD/16
Item n° : PF1113279

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

110V Protection/Measure Distribution Voltage

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00016

SHEET 9

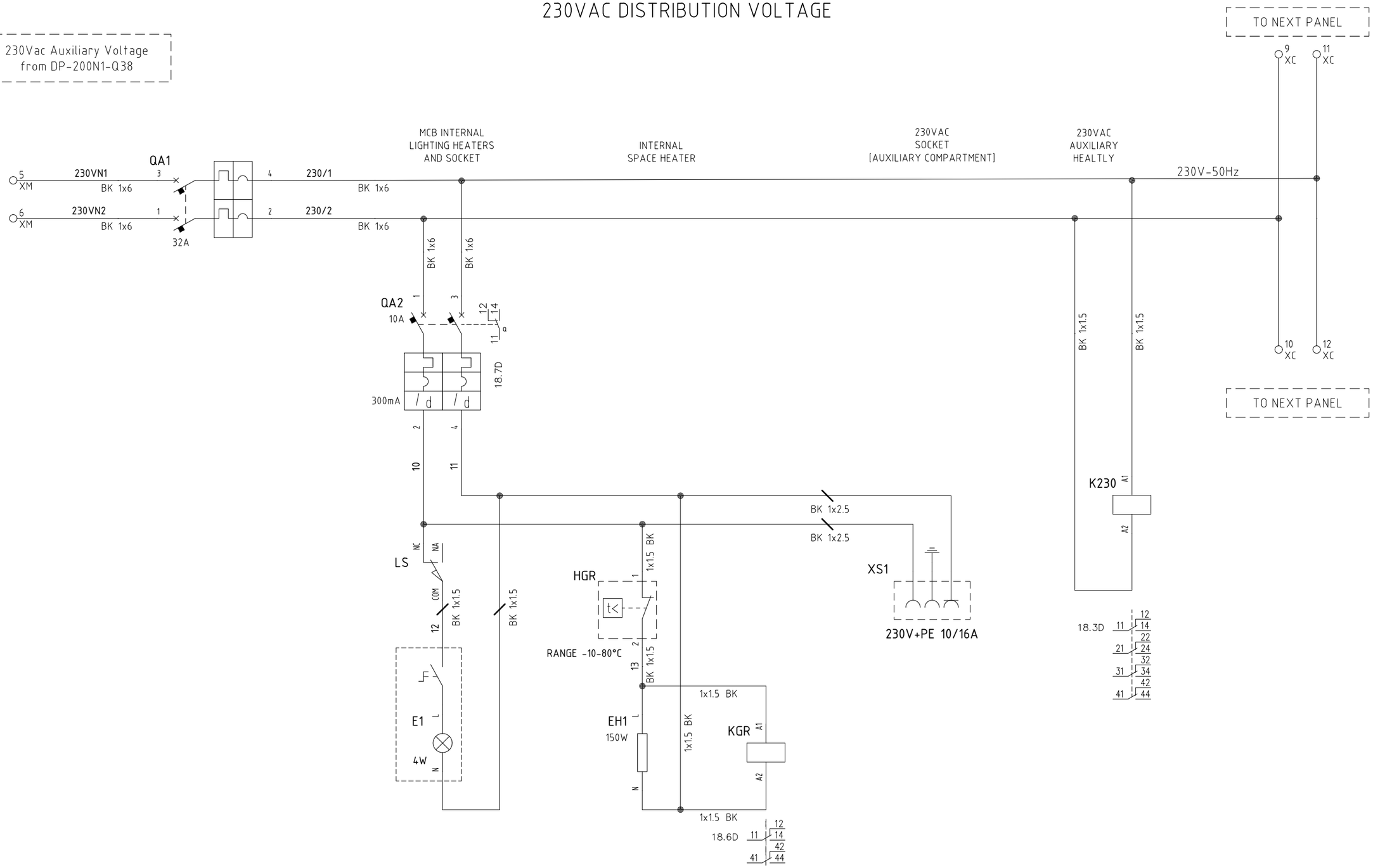
REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03

230VAC DISTRIBUTION VOLTAGE

230Vac Auxiliary Voltage
from DP-200N1-Q38



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+A5							
DWG n° : 231151/SD/16	3	08/08/2024	Giulietti	Flamminio	Sigismondi	As-Built (ASB)	
Item n° : PF1113279	2	27/06/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)	
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	REV.	DATE	DRN	CHKD	APPD	DESCRIPTION	

TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

230Vac Distribution Voltage

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00016

SHEET 10

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03

110VDC DISTRIBUTION VOLTAGE

+DP-200F1
-Q12

110+/1A
RD 1x6

RD 1x1,5

VC1

QD01

1 XM — 110+/1 — 1x6 RD — 3 — 4

2 XM — 110-/1 — 1x6 WH — 1 — 2

25A

KN1 A1 / A2

WH 1x1,5

110-/1A
WH 1x6

18.9B

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

110+
1x6 RD
12.1A

110-
1x6 WH
12.1A

+DP-200F1
-Q13

110+/2A
RD 1x6

RD 1x1,5

VC2

QD02

3 XM — 110+/2 — 1x6 RD — 3 — 4

4 XM — 110-/2 — 1x6 WH — 1 — 2

25A

KN2 A1 / A2

WH 1x1,5

110-/2A
WH 1x6

18.10B

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

1x6 RD

1x6 WH

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+A5							
DWG n° : 231151/SD/16	3	08/08/2024	Giulietti	Flamminio	Sigismondi	As-Built (ASB)	
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IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

110Vdc Distribution Voltage

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

SCALE : NTS

A3

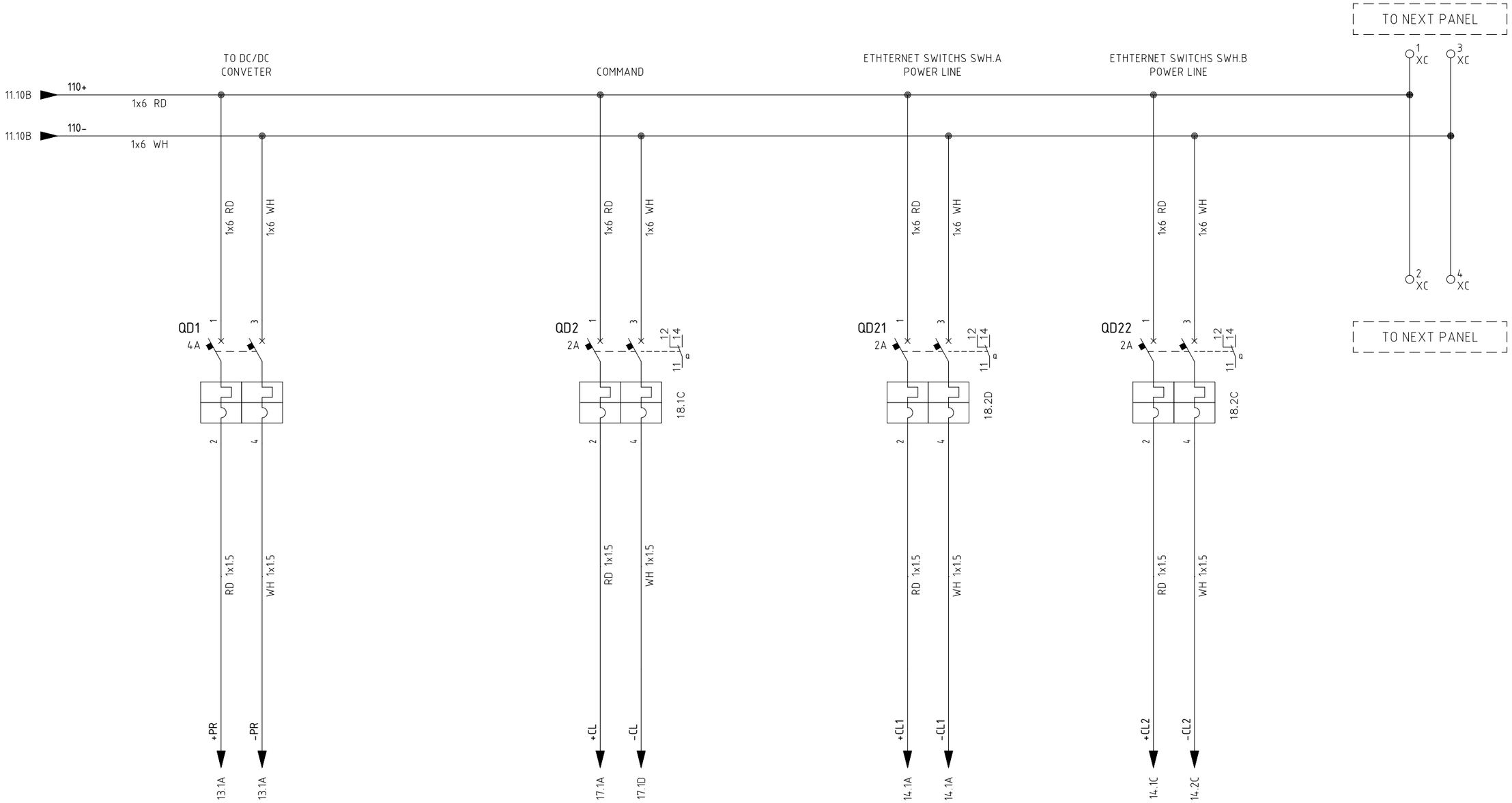
DRAWING NO. 1723002197-EL-DG-00016

SHEET 1.1

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+A5					
3	08/08/2024	Giulietti	Flamminio	Sigismondi	As-Built (ASB)
2	27/06/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
1	14/05/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)
0	04/04/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

DWG n° : 231151/SD/16
Item n° : PF1113279

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

110Vdc/24Vdc Distribution Voltage

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

SCALE : NTS

A3

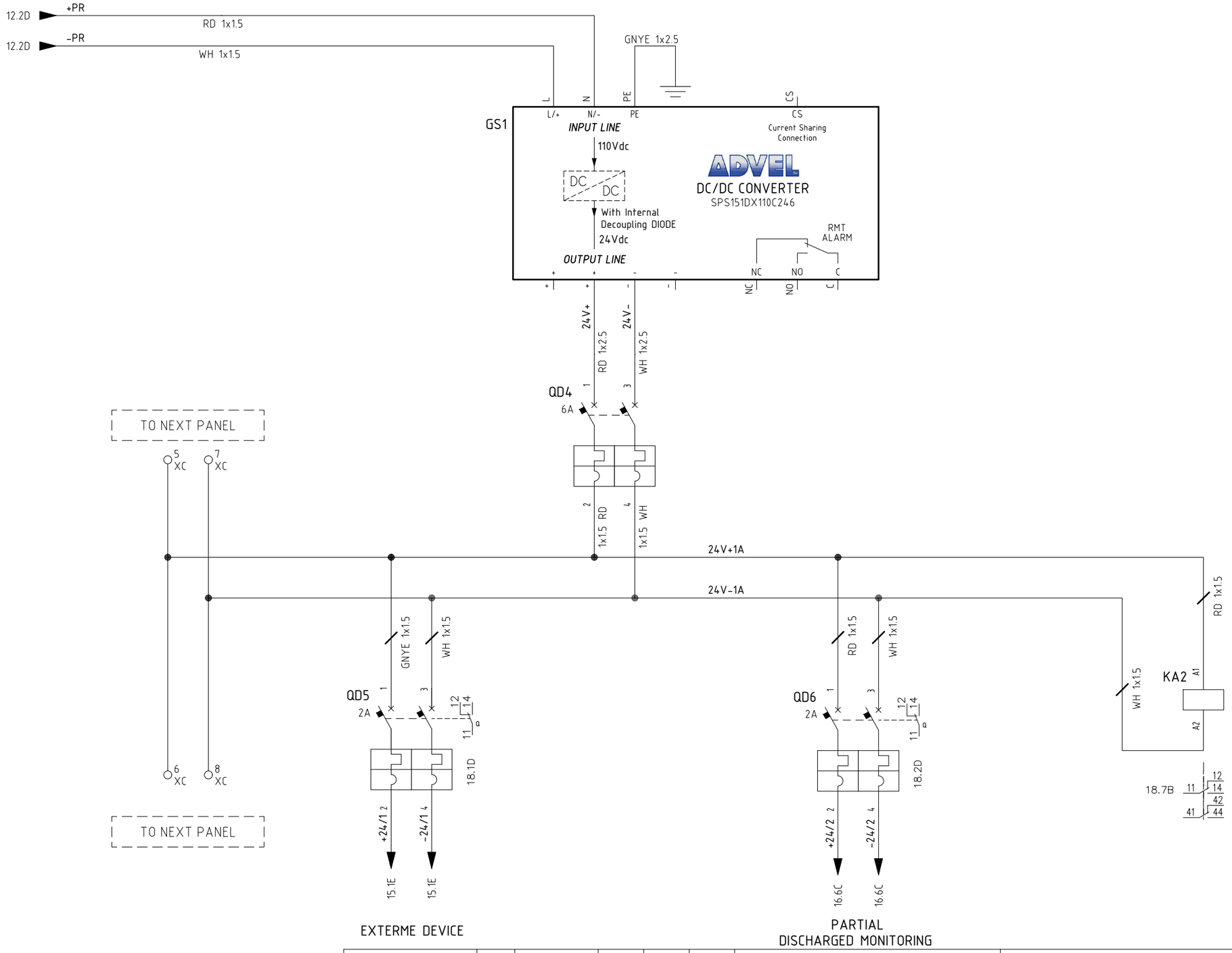
DRAWING NO. 1723002197-EL-DG-00016

SHEET 12

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03



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+A5							
DWG n° : 231151/SD/16	3	08/08/2024	Giulietti	Flamminio	Sigismondi	As-Built (ASB)	
Item n° : PF1113279	2	27/06/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)	
	1	14/05/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)	
	0	04/04/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)	
	REV.	DATE	DRN	CHKD	APPD	DESCRIPTION	

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

24Vdc Distribution Voltage

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

SCALE : NTS

A3

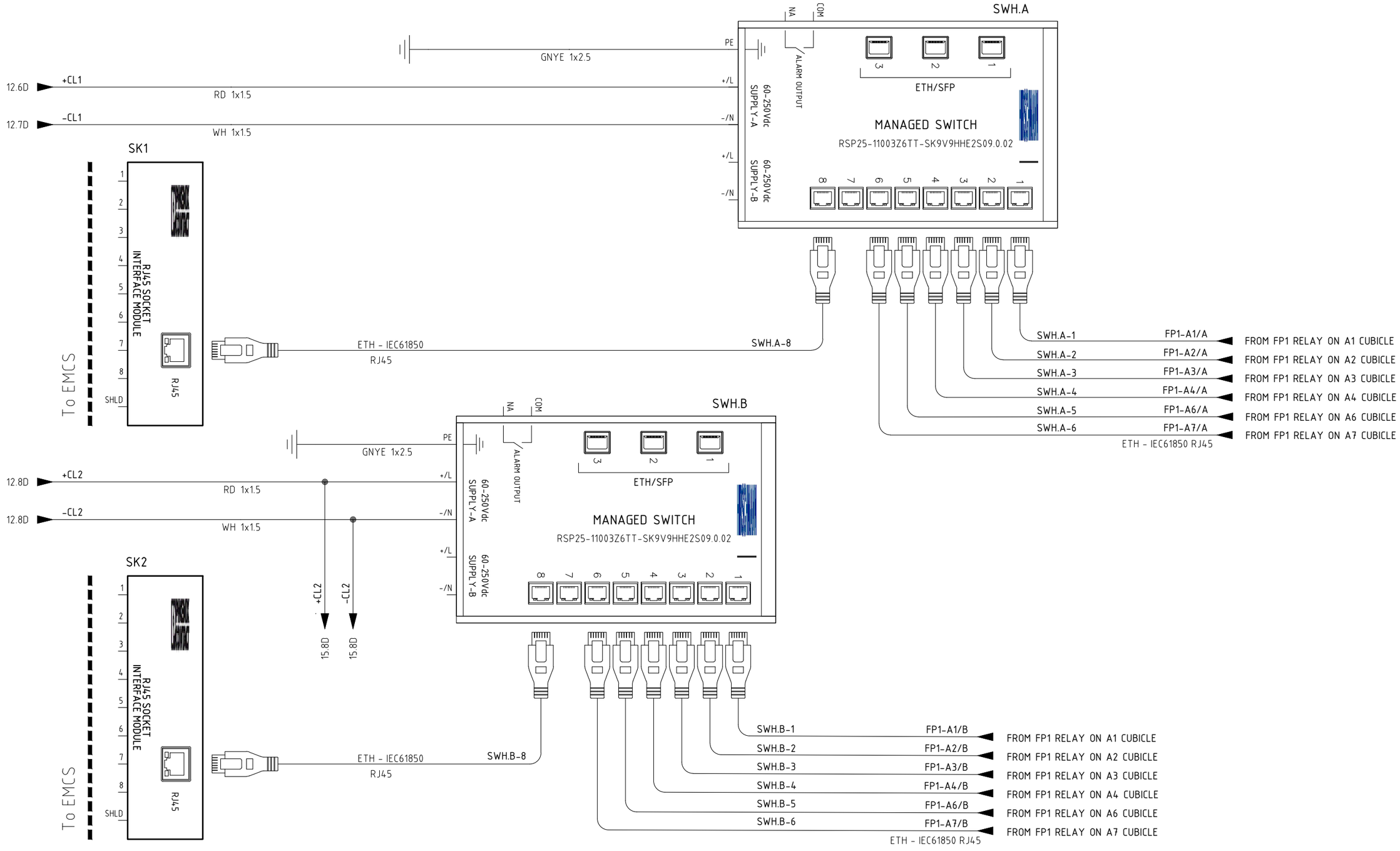
DRAWING NO. 1723002197-EL-DG-00016

SHEET 1,3

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03



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+A5						
3	08/08/2024	Giulietti	Flamminio	Sigismondi	As-Built (ASB)	
2	27/06/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)	
1	14/05/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)	
0	04/04/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)	
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION	

DWG n° : 231151/SD/16
Item n° : PF1113279

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

Switchs

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00016

SHEET 14

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03

ETH-TR1
PATCH CORD CAT.6 RJ45

DP1
EXERTHERM ARM XL
ALARM RELAY MODULE XL
ARM XL
WARNING CRITICAL COM FAILURE MCC ALARM
AL1 AL2 AL3 AL4
MODBUS TCP/IP
MODBUS RS485
24VDC POWER SUPPLY
+V -0V PE COM Y2 Y3 Y4 Y5
1x2.5 GNYE
1x1.5 RD
1x1.5 WH
DP1-A7/2
RJ45 TO DB9 MALE 800455
ARM XL COMMS CABLE
FROM EXERTHERM -TR1 CELL PACKAGE UNIT A7

SENSORS ON TV CONNECTION TO MAIN BUS BAR
L1VT L2VT L3VT
+ - Shld
RED BLACK

SENSORS ON MAIN BUS BAR
L1BB L3BB

TR1
Ain+ Ain- Ch1 Ch2 Ch3 Ch4 Ch5 Ch6 Ch7 Ch8
EXERTHERM PERMANENT INFRARED HOTSPOT DETECTION
MODBUS RS485 X0 X1
IN 24VDC POWER SUPPLY
OUT 24VDC POWER SUPPLY
PE GNYE 1x2.5

13.3D +24/1 RD 1x1.5
13.4D -24/1 WH 1x1.5

TO PREVIOUS PANEL A4
TR1-A5/1 PATCH CORD CAT.6 RJ45
TR1-A5/2 PATCH CORD CAT.6 RJ45
TO NEXT PANEL A6

SK3
PHOENIX CONTACT RJ45
RJ45 SOCKET INTERFACE MODULE
1 2 3 4 5 6 7 8 SHLD

To EMCS

ETH - ModBus TCP Cat. 6

SWH.C
HIRSCHMANN
ETHERNET SWITCH
RSPS25-0600226YT-SK9Z9HHE2S07.1.05
ETH/SFP
1 2 3 4
SPW
ETH-TR1
ETH-SW
PATCH CORD CAT.6 RJ45
16.10D
60-250Vdc SUPPLY
L N
+CL2 -CL2
14.3D 14.4D
1x2.5 GNYE

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+A5							
DWG n° : 231151/SD/16	3	08/08/2024	Giulietti	Flamminio	Sigismondi	As-Built (ASB)	
Item n° : PF1113279	2	27/06/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)	
	1	14/05/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)	
	0	04/04/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)	
	REV.	DATE	DRN	CHKD	APPD	DESCRIPTION	

IMESA ELECTRICAL ENGINEERING
CROSSWIND
ROSETTI MARINO

TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

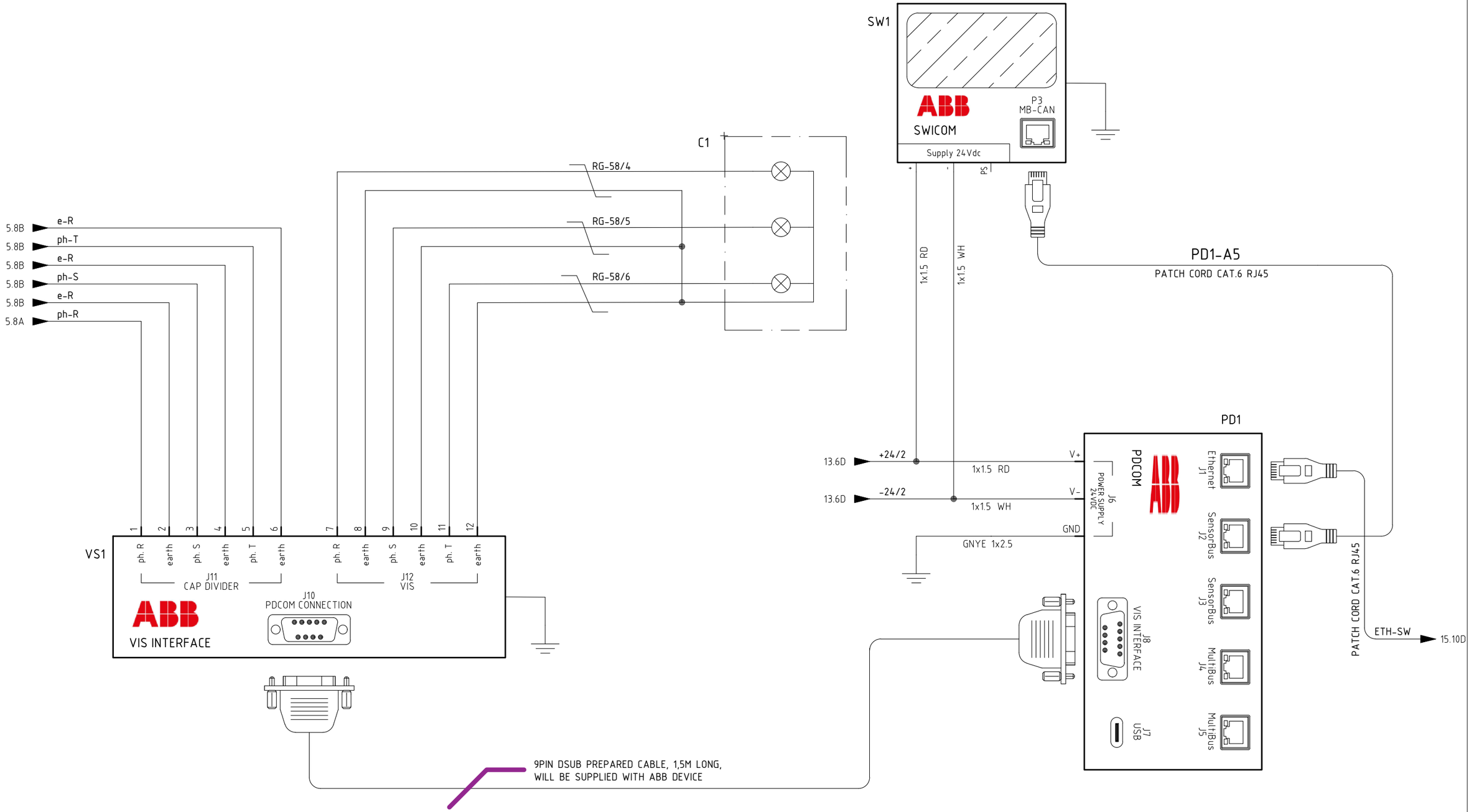
Extherm Device

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

A3 | DRAWING NO. 1723002197-EL-DG-00016 | SHEET 15 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03



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+A5							
DWG n° : 231151/SD/16	3	08/08/2024	Giulietti	Flamminio	Sigismondi	As-Built (ASB)
Item n° : PF1113279	2	27/06/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
	1	14/05/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)
	0	04/04/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)
	REV.	DATE	DRN	CHKD	APPD	DESCRIPTION

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

TITLE : SG-100D1 – FUNCTIONAL BUS BAR METERING

Partial discharge monitoring PDCOM

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00016

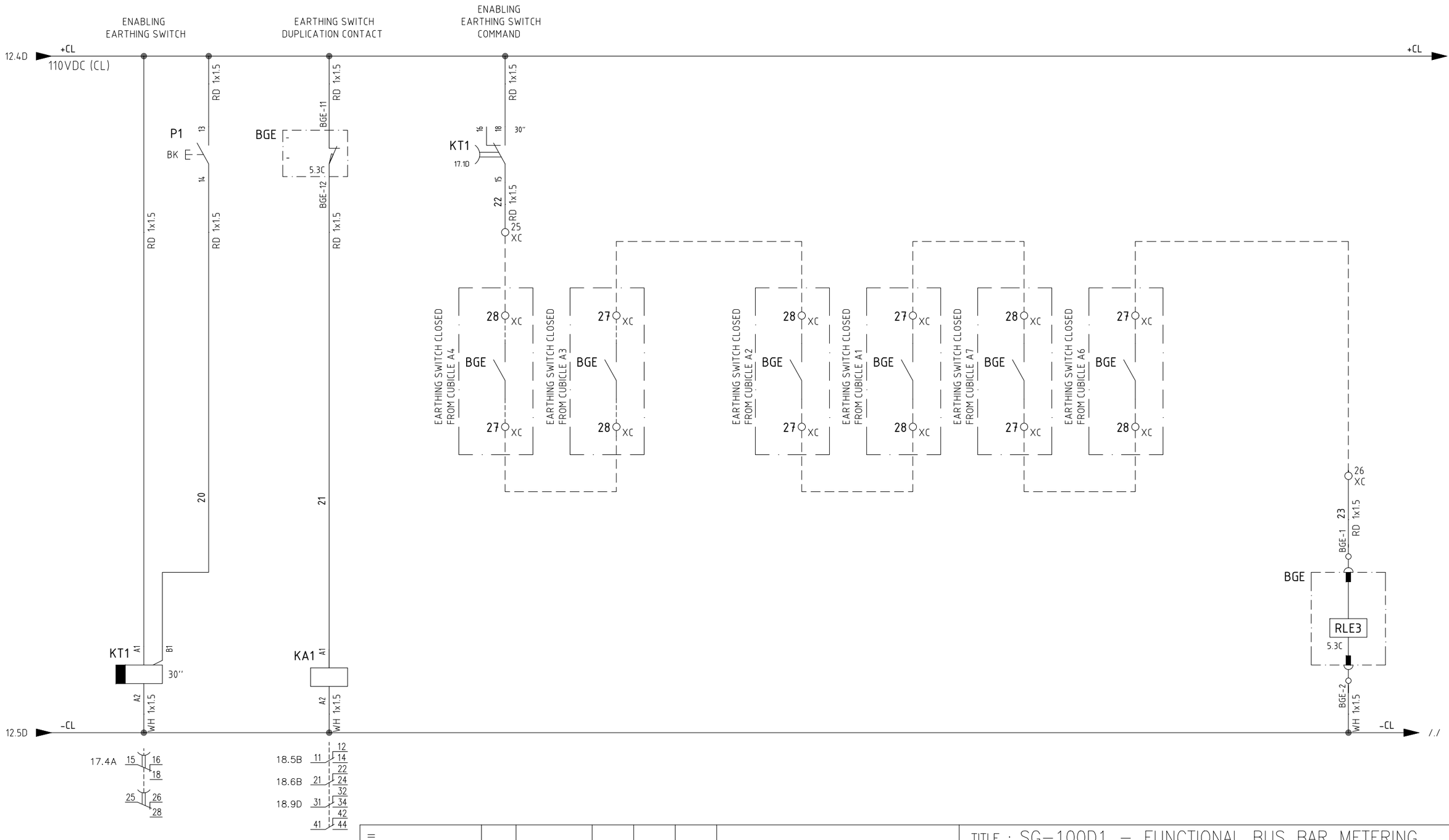
SHEET 1.6

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03

COMMAND CIRCUITS



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+A5						
DWG n° : 231151/SD/16	3	08/08/2024	Giulietti	Flamminio	Sigismondi	As-Built (ASB)
Item n° : PF1113279	2	27/06/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
	1	14/05/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)
	0	04/04/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)
	REV.	DATE	DRN	CHKD	APPD	DESCRIPTION

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

Command Circuit

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00016

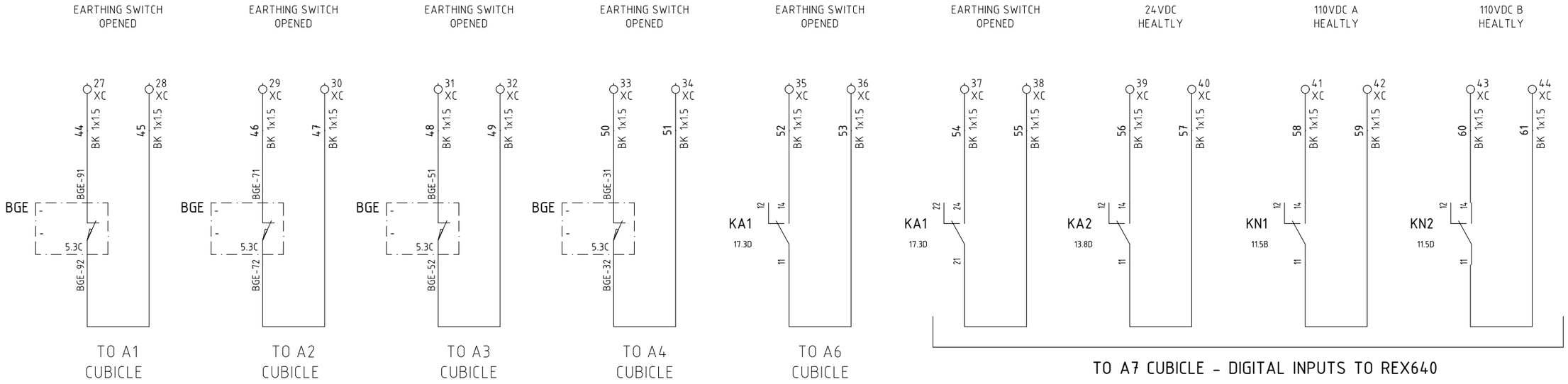
SHEET 17

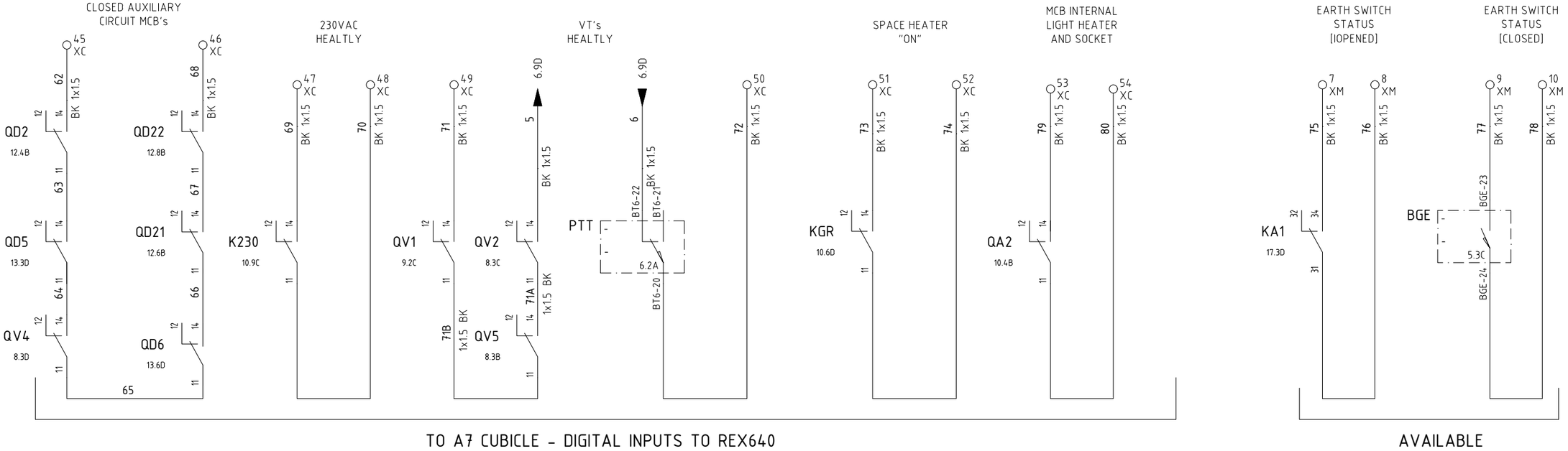
REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03

AVAILABLE SIGNALS





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+A5							
DWG n° : 231151/SD/16	3	08/08/2024	Giulietti	Flamminio	Sigismondi	As-Built (ASB)	
Item n° : PF1113279	2	27/06/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)	
	1	14/05/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)	
	0	04/04/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)	
	REV.	DATE	DRN	CHKD	APPD	DESCRIPTION	

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

Availables Signals

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00016

SHEET 18

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03

TYP - METERING

XC

Interconnection Terminals

NumM	Fg.	Sez.	Tipo	Costruttore	Descrizione
1	12.9A	6	HM320GR	Cabur	HMM.6/GR Feed-through Terminal Block - Grey (6 mmq)
2	12.9B	6	HM320GR	Cabur	HMM.6/GR Feed-through Terminal Block - Grey (6 mmq)
3	12.10A	6	HM320GR	Cabur	HMM.6/GR Feed-through Terminal Block - Grey (6 mmq)
4	12.10B	6	HM320GR	Cabur	HMM.6/GR Feed-through Terminal Block - Grey (6 mmq)
			HM321GR	Cabur	HMT.6/PT/GR End section - Grey
5	13.2C	6	HM320GR	Cabur	HMM.6/GR Feed-through Terminal Block - Grey (6 mmq)
6	13.2D	6	HM320GR	Cabur	HMM.6/GR Feed-through Terminal Block - Grey (6 mmq)
7	13.2C	6	HM320GR	Cabur	HMM.6/GR Feed-through Terminal Block - Grey (6 mmq)
8	13.2D	6	HM320GR	Cabur	HMM.6/GR Feed-through Terminal Block - Grey (6 mmq)
			HM321GR	Cabur	HMT.6/PT/GR End section - Grey
9	10.10A	6	HM320GR	Cabur	HMM.6/GR Feed-through Terminal Block - Grey (6 mmq)
10	10.10B	6	HM320GR	Cabur	HMM.6/GR Feed-through Terminal Block - Grey (6 mmq)
11	10.10A	6	HM320GR	Cabur	HMM.6/GR Feed-through Terminal Block - Grey (6 mmq)
12	10.10B	6	HM320GR	Cabur	HMM.6/GR Feed-through Terminal Block - Grey (6 mmq)
			HM321GR	Cabur	HMT.6/PT/GR End section - Grey
13	8.6B	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
14	8.7D	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
15	8.7B	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
16	8.7D	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
17	8.7B	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
18	8.7D	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
19	8.7B	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
20	8.7D	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
			HM251GR	Cabur	HMT.4/PT/GR End section - Grey
21	9.5B	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
22	9.5C	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
23	9.6B	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
24	9.6C	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
			HM251GR	Cabur	HMT.4/PT/GR End section - Grey
25	17.4B	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
26	17.10C	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
27	18.1A	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
28	18.2A	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
29	18.2A	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
30	18.3A	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
31	18.3A	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
32	18.4A	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
33	18.4A	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
34	18.5A	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
35	18.5A	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
36	18.6A	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type

TYP - METERING

XC

Interconnection Terminals

NumM	Fg.	Sez.	Tipo	Costruttore	Descrizione
37	18.6A	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
38	18.7A	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
39	18.7A	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
40	18.8A	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
41	18.9A	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
42	18.9A	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
43	18.10A	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
44	18.10A	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
45	18.1C	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
46	18.2C	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
47	18.3C	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
48	18.3C	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
49	18.3C	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
50	18.5C	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
51	18.6C	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
52	18.6C	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
53	18.7C	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
54	18.7C	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
			HM251GR	Cabur	HMT.4/PT/GR End section - Grey

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DWG n° : 231151/SD/16

Item n° : PF1113279

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
3	08/08/2024	Giulietti	Flamminio	Sigismondi	As-Built (ASB)
2	27/06/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
1	14/05/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)
0	04/04/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

Terminal Strips

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00016

SHEET 19

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03

TYP - METERING

XM

Interface Terminals

NumM	Fg.	Sez.	Tipo	Costruttore	Descrizione
1	11.1B	10	HM330GR	Cabur	HMM.10/GR Feed-through Terminal Block - Grey (10 mmq)
2	11.1B	10	HM330GR	Cabur	HMM.10/GR Feed-through Terminal Block - Grey (10 mmq)
			HM331GR	Cabur	HMT.10/PT/GR End section - Grey
3	11.1C	10	HM330GR	Cabur	HMM.10/GR Feed-through Terminal Block - Grey (10 mmq)
4	11.1D	10	HM330GR	Cabur	HMM.10/GR Feed-through Terminal Block - Grey (10 mmq)
			HM331GR	Cabur	HMT.10/PT/GR End section - Grey
5	10.1A	10	HM330GR	Cabur	HMM.10/GR Feed-through Terminal Block - Grey (10 mmq)
6	10.1B	10	HM330GR	Cabur	HMM.10/GR Feed-through Terminal Block - Grey (10 mmq)
			HM331GR	Cabur	HMT.10/PT/GR End section - Grey
7	18.9C	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
8	18.9C	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
9	18.10C	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
10	18.10C	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
			HM251GR	Cabur	HMT.4/PT/GR End section - Grey
11	8.6D	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
12	8.6D	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
13	8.6D	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
14	8.6D	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
15	8.6B	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
16	8.6B	4	HM250GR	Cabur	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type
			HM251GR	Cabur	HMT.4/PT/GR End section - Grey

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+A5

DWG n° : 231151/SD/16

Item n° : PF1113279

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
3	08/08/2024	Giulietti	Flamminio	Sigismondi	As-Built (ASB)
2	27/06/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
1	14/05/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)
0	04/04/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

Terminal strips

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00016

SHEET 20

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03

TYP - METERING

XV

Voltmetric Terminals

NumM	Fg.	Sez.	Tipo	Costruttore	Descrizione
			HB201GR	Cabur	HSCB.6/PT/GR End section - Grey
1	7.4D	6	HB210GR	Cabur	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type
2	7.4D	6	HB210GR	Cabur	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type
3	7.4D	6	HB210GR	Cabur	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type
4	7.4C	6	HB210GR	Cabur	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type
			HB201GR	Cabur	HSCB.6/PT/GR End section - Grey
5	8.5C	6	HB210GR	Cabur	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type
6	8.5C	6	HB210GR	Cabur	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type
7	8.5C	6	HB210GR	Cabur	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type
8	8.5C	6	HB210GR	Cabur	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type
			HB201GR	Cabur	HSCB.6/PT/GR End section - Grey
9	9.4C	6	HB210GR	Cabur	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type
10	9.4B	6	HB210GR	Cabur	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type
			HB201GR	Cabur	HSCB.6/PT/GR End section - Grey
11	8.5D	6	HB210GR	Cabur	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type
12	8.5D	6	HB210GR	Cabur	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type
13	8.5D	6	HB210GR	Cabur	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type
14	8.5D	6	HB210GR	Cabur	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type
			HB201GR	Cabur	HSCB.6/PT/GR End section - Grey
15	8.5B	6	HB210GR	Cabur	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type
16	8.5B	6	HB210GR	Cabur	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type
			HB201GR	Cabur	HSCB.6/PT/GR End section - Grey

CROSSWIND

ROSETTI MARINO

IMESA ELECTRICAL ENGINEERING

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DWG n° : 231151/SD/16

Item n° : PF1113279

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
3	08/08/2024	Giulietti	Flamminio	Sigismondi	As-Built (ASB)
2	27/06/2024	Giulietti	Flamminio	Sigismondi	Accepted for Construction (AFC)
1	14/05/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)
0	04/04/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

Terminal strip

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00016

SHEET 21

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03

Nome/Item	Fg/Sh	Tipo/Type	Q.tà	Descrizione/Description	Costruttore/Manufacturer	Ubicazione (descrizione)	Quadro (descrizione)
BGE	5	1VCF599700R0131	1	EARTHING SWITCH ST-E 17.31 150	ABB	A5	BUS BAR METERING
		1VCF599505R0001	1	5 AUX CONTACTS FOR EARTHING SWITCH	ABB	A5	BUS BAR METERING
		1VCF599504R0063	1	KEY LOCKS ON EARTHING SWITCH	ABB	A5	BUS BAR METERING
		1VCF599700R0290	1	EARTHING SWITCH OPERATING LEVER	ABB	A5	BUS BAR METERING
C1	16	43931118	1	VPIS 3,3÷36KV - DEVICE SIGNALLING VOLTAGE PRESENT KIT	ELECTRONSYSTEM	A5	BUS BAR METERING
DP1	15	900451	1	Alarm Relay Module XL (ARM XL) - 4.3" Touchscreen Display	Exertherm	A5	BUS BAR METERING
E1	10	74041	1	LED LAMP 4W 4000K 313x30x22	Beghelli	A5	BUS BAR METERING
E8	6	1VCF501000R0001	1	RESISTOR TR318 27R/J 27ohm 500W L=2,5M	ABB	A5	BUS BAR METERING
EH1	10	R1R150230	1	SPACE HEATER SKR 150W ALIM. 220VCA	Torresan	A5	BUS BAR METERING
FF1	6	1YMB751209M1502	1	FUSE-LINKS FOR VOLTAGE TRANSFORMER PROTECTION 6/12kV 2A 192x53mm - CEF-VT	ABB	A5	BUS BAR METERING
FF2	6	1YMB751209M1502	1	FUSE-LINKS FOR VOLTAGE TRANSFORMER PROTECTION 6/12kV 2A 192x53mm - CEF-VT	ABB	A5	BUS BAR METERING
FF3	6	1YMB751209M1502	1	FUSE-LINKS FOR VOLTAGE TRANSFORMER PROTECTION 6/12kV 2A 192x53mm - CEF-VT	ABB	A5	BUS BAR METERING
GS1	13	SPS151DX110C246	1	DC/DC CONVERTER 110VDC/24VDC 150W SPS151DX110C246	ADVEL	A5	BUS BAR METERING
HGR	10	TRT-10A230V-NC	1	Regolable Thermostat -10÷80°C 1NC IP20 DIN Mounting	Fandis	A5	BUS BAR METERING
K230	10	ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	A5	BUS BAR METERING
		ER 728 6	1	CR-MH1 METAL RETAINING JUMPER	ABB	A5	BUS BAR METERING
		ER 552 0	1	CR-M230AC2L AUXILIARY RELAY 230VAC WITH 4 CONTACTS	ABB	A5	BUS BAR METERING
KA1	17	ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	A5	BUS BAR METERING
		ER 728 6	1	CR-MH1 METAL RETAINING JUMPER	ABB	A5	BUS BAR METERING
		ER 589 2	1	CR-M110DC4L SUPPLY 110VDC 4C/O 250V/6A LED	ABB	A5	BUS BAR METERING
KA2	13	ER 545 4	1	CR-M024DC2L AUXILIRY RELAY 24VDC WITH 2 CONTACTS	ABB	A5	BUS BAR METERING
		ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	A5	BUS BAR METERING
		ER 728 6	1	CR-MH1 METAL RETAINING JUMPER	ABB	A5	BUS BAR METERING
KGR	10	ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	A5	BUS BAR METERING
		ER 728 6	1	CR-MH1 METAL RETAINING JUMPER	ABB	A5	BUS BAR METERING
		ER 552 0	1	CR-M230AC2L AUXILIARY RELAY 230VAC	ABB	A5	BUS BAR METERING
KN1	11	ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	A5	BUS BAR METERING
		ER 728 6	1	CR-MH1 METAL RETAINING JUMPER	ABB	A5	BUS BAR METERING
		ER 589 2	1	CR-M110DC4L SUPPLY 110VDC 4C/O 250V/6A LED	ABB	A5	BUS BAR METERING
KN2	11	ER 686 6	1	CR-M4SS SOCKET STANDARD X 2/4 C/O(CR-M)	ABB	A5	BUS BAR METERING
		ER 728 6	1	CR-MH1 METAL RETAINING JUMPER	ABB	A5	BUS BAR METERING
		ER 589 2	1	CR-M110DC4L SUPPLY 110VDC 4C/O 250V/6A LED	ABB	A5	BUS BAR METERING
KT1	17	H3DKM2ACDC24240	1	MULTIFUNCTION TIMER RELAY Vaux=24÷240Vac/dc - 2SC	Omron	A5	BUS BAR METERING
L1I	15	801100	1	IR.06-EM.SC Sensor, ΔT, ABS Housing, 10mtr Cable	Exertherm	A5	BUS BAR METERING
L1MS	15	801100	1	IR.06-EM.SC Sensor, ΔT, ABS Housing, 10mtr Cable	Exertherm	A5	BUS BAR METERING
L2I	15	801100	1	IR.06-EM.SC Sensor, ΔT, ABS Housing, 10mtr Cable	Exertherm	A5	BUS BAR METERING
L3I	15	801100	1	IR.06-EM.SC Sensor, ΔT, ABS Housing, 10mtr Cable	Exertherm	A5	BUS BAR METERING
L3MS	15	801100	1	IR.06-EM.SC Sensor, ΔT, ABS Housing, 10mtr Cable	Exertherm	A5	BUS BAR METERING
LS	10	Z15GW2-1-1453270	1	MICROSWITCH 1sc	Omron	A5	BUS BAR METERING
		APB-PG	1	COVER TO MICRO-SWITCH	Omron	A5	BUS BAR METERING
P1	17	KW 080 2	1	MP1-10B BLACK PUSH BUTTON UNSTABLE	ABB	A5	BUS BAR METERING
		EO 569 7	1	MCBH-00 FIXING SUPPORT 3 CONTACTS	ABB	A5	BUS BAR METERING
		EO 570 5	1	MCB-10 CONTACT NO FOR PUSHBUTTONS	ABB	A5	BUS BAR METERING
PD1	16	1VC123000074Q02	1	PDCOM	ABB	A5	BUS BAR METERING

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DWG n° : 231151/SD/16

Item n° : PF1113279

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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1	14/05/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)
0	04/04/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

Bill of Materials

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

A3 | DRAWING NO. 1723002197-EL-DG-00016 | SHEET 2.2 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03

Nome/Item	Fg/Sh	Tipo/Type	Q.tà	Descrizione/Description	Costruttore/Manufacturer	Ubicazione (descrizione)	Quadro (descrizione)
PTT	6	1VCF498412R0100	1	TV/F COMPARTMENT 12/17kV IP4X L=590mm OUTLET ON THE BACK WITH N°3 VT + N°14 MAIN CONTACTS + N°2+2 SERVICE/ISOLATED POSITION CONTACTS	ABB	A5	BUS BAR METERING
		1VCF499800R0302	1	NAMEPLATE IN ENGLISH LANGUAGE FOR TV/F	ABB	A5	BUS BAR METERING
PU1	7	F96EVXYYYXC1	1	VOLTMETER 96x96 90° SCALE 0÷8kV ON TV 6,6kV/110V	FRER	A5	BUS BAR METERING
QA1	10	A563819	1	S2-CS/H6R AUXILIARY STATE CONTACT 1CO	ABB	A5	BUS BAR METERING
		S600613	1	M.C.B. S202 M - D32A	ABB	A5	BUS BAR METERING
QA2	10	A563819	1	S2-CS/H6R AUXILIARY STATE CONTACT 1CO	ABB	A5	BUS BAR METERING
		S550284	1	S202M C10 AUTOMATIC CIRCUIT-BREAKER 10KA 2P	ABB	A5	BUS BAR METERING
		B427917	1	DDA202 AC 25A 300MA RCD BLOCK 2P	ABB	A5	BUS BAR METERING
QD1	12	S600422	1	S202M D 4 AUTOMATIC CIRCUIT-BREAKER 10KA 2P	ABB	A5	BUS BAR METERING
QD01	11	S600545	1	S202M D25 AUTOMATIC CIRCUIT-BREAKER 10KA 2P	ABB	A5	BUS BAR METERING
QD2	12	S550239	1	S202M C 2 AUTOMATIC CIRCUIT BREAKER 10KA 2P	ABB	A5	BUS BAR METERING
		B427917	1	DDA202 AC 25A 300MA RCD BLOCK 2P	ABB	A5	BUS BAR METERING
QD02	11	S600545	1	S202M D25 AUTOMATIC CIRCUIT-BREAKER 10KA 2P	ABB	A5	BUS BAR METERING
QD4	13	S600446	1	S202M D 6 AUTOMATIC CIRCUIT-BREAKER 10KA 2P	ABB	A5	BUS BAR METERING
QD5	13	A563819	1	S2-CS/H6R AUXILIARY STATE CONTACT 1CO	ABB	A5	BUS BAR METERING
		S550239	1	S202M C 2 AUTOMATIC CIRCUIT BREAKER 10KA 2P	ABB	A5	BUS BAR METERING
QD6	13	A563819	1	S2-CS/H6R AUXILIARY STATE CONTACT 1CO	ABB	A5	BUS BAR METERING
		S550239	1	S202M C 2 AUTOMATIC CIRCUIT BREAKER 10KA 2P	ABB	A5	BUS BAR METERING
QD21	12	S550239	1	S202M C 2 AUTOMATIC CIRCUIT BREAKER 10KA 2P	ABB	A5	BUS BAR METERING
QD22	12	S550239	1	S202M C 2 AUTOMATIC CIRCUIT BREAKER 10KA 2P	ABB	A5	BUS BAR METERING
QV1	9	S550239	1	S202M C 2 AUTOMATIC CIRCUIT BREAKER 10KA 2P	ABB	A5	BUS BAR METERING
		A563819	1	S2-CS/H6R AUXILIARY STATE CONTACT 1CO	ABB	A5	BUS BAR METERING
QV2	8	S550680	1	S204M C 2 AUTOMATIC CIRCUIT-BREAKER 10KA 4P	ABB	A5	BUS BAR METERING
		A563819	1	S2-CS/H6R AUXILIARY STATE CONTACT 1CO	ABB	A5	BUS BAR METERING
QV3	7	S550383	1	S203M C 2 AUTOMATIC CIRCUIT BREAKER 10KA 3P	ABB	A5	BUS BAR METERING
		A563819	1	S2-CS/H6R AUXILIARY STATE CONTACT	ABB	A5	BUS BAR METERING
QV4	8	S550680	1	S204M C 2 AUTOMATIC CIRCUIT-BREAKER 10KA 4P	ABB	A5	BUS BAR METERING
		A563819	1	S2-CS/H6R AUXILIARY STATE CONTACT 1CO	ABB	A5	BUS BAR METERING
QV5	8	S550239	1	S202M C 2 AUTOMATIC CIRCUIT BREAKER 10KA 2P	ABB	A5	BUS BAR METERING
		A563819	1	S2-CS/H6R AUXILIARY STATE CONTACT 1CO	ABB	A5	BUS BAR METERING
SK1	14	2900682	1	UMK-RJ45/S/8PTDA Modul VARIOFACE	Phoenix Contact	A5	BUS BAR METERING
SK2	14	2900682	1	UMK-RJ45/S/8PTDA Modul VARIOFACE	Phoenix Contact	A5	BUS BAR METERING
SK3	15	2900682	1	UMK-RJ45/S/8PTDA Modul VARIOFACE	Phoenix Contact	A5	BUS BAR METERING
SPW	15	M-FAST SFP-TX/RJ45	1	SFP TX Fast Ethernet Transceiver with RJ45	HIRSCHMANN	A5	BUS BAR METERING
SU1	7	CA10-A004-600-FT2	1	VOLTMETER SWITCH PH-PH 4 POSITION	KRAUS & NAIMER	A5	BUS BAR METERING
SW1	16	1VCF681000R0101	1	SWICOM INTERFACE TO ETHERNET SWTCH	ABB	A5	BUS BAR METERING
SWH.A	14	RSP25-11003Z6TT-SK9V9HHE2S09.0.02	1	Managed Industrial Switch for DIN Rail, fanless design Fast Ethernet Type - Enhanced (PRP, Fast MRP, HSR, NAT with L3 type) - 8 x RJ45	HIRSCHMANN	A5	BUS BAR METERING
SWH.B	14	RSP25-11003Z6TT-SK9V9HHE2S09.0.02	1	Managed Industrial Switch for DIN Rail, fanless design Fast Ethernet Type - Enhanced (PRP, Fast MRP, HSR, NAT with L3 type) - 8 x RJ45	HIRSCHMANN	A5	BUS BAR METERING
SWH.C	15	RSPS25-06002Z6YT-SK9Z9HHE2S07.1.05	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	A5	BUS BAR METERING

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DWG n° : 231151/SD/16

Item n° : PF1113279

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

Bill of Materials

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

A3 | DRAWING NO. 1723002197-EL-DG-00016 | SHEET 23 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03

Nome/Item	Fg/Sh	Tipo/Type	Q.tà	Descrizione/Description	Costruttore/Manufacturer	Ubicazione (descrizione)	Quadro (descrizione)
TR1	15	800208	1	MODBUS DATACARD 8 CHANNELS	Exertherm	A5	BUS BAR METERING
TU-L1	6	TJP4.3_002	1	VT ON RESIN 7,2KV 50-60Hz 6600:r3/110:r3-110:r3-110:3 Cl.0,5-3P Pr.20VA, Cl.0,5-3P Pr.30VA, Cl.3P Pr.30VA	ABB	A5	BUS BAR METERING
TU-L2	6	TJP4.3_002	1	VT ON RESIN 7,2KV 50-60Hz 6600:r3/110:r3-110:r3-110:3 Cl.0,5-3P Pr.20VA, Cl.0,5-3P Pr.30VA, Cl.3P Pr.30VA	ABB	A5	BUS BAR METERING
TU-L3	6	TJP4.3_002	1	VT ON RESIN 7,2KV 50-60Hz 6600:r3/110:r3-110:r3-110:3 Cl.0,5-3P Pr.20VA, Cl.0,5-3P Pr.30VA, Cl.3P Pr.30VA	ABB	A5	BUS BAR METERING
VC1	11	KBPC5006	1	SILICON BRIDGE RECTIFIER 400-600V 50A	GENERIC	A5	BUS BAR METERING
VC2	11	KBPC5006	1	SILICON BRIDGE RECTIFIER 400-600V 50A	GENERIC	A5	BUS BAR METERING
VS1	16	1VCF681000R0104	1	INTERFACE BETWEEN PDCOM AND CAPACITIVE ISOLATORS	ABB	A5	BUS BAR METERING
XC		HM250GR	42	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type	Cabur	A5	BUS BAR METERING
		HM320GR	12	HMM.6/GR Feed-through Terminal Block - Grey (6 mmq)	Cabur	A5	BUS BAR METERING
		HM251GR	3	HMT.4/PT/GR End section - Grey	Cabur	A5	BUS BAR METERING
		HM321GR	3	HMT.6/PT/GR End section - Grey	Cabur	A5	BUS BAR METERING
XM		HM250GR	10	HMM.4/GR Feed-through Terminal Block - Grey (4 mmq) - spring type	Cabur	A5	BUS BAR METERING
		HM330GR	6	HMM.10/GR Feed-through Terminal Block - Grey (10 mmq)	Cabur	A5	BUS BAR METERING
		HM251GR	2	HMT.4/PT/GR End section - Grey	Cabur	A5	BUS BAR METERING
		HM331GR	3	HMT.10/PT/GR End section - Grey	Cabur	A5	BUS BAR METERING
XS1	10	E 9447 7	1	SOCKET	ABB	A5	BUS BAR METERING
XV		HB210GR	16	HSCB.6/GR Disconnect by slide link Terminal Block - Grey (6 mmq) - Spring type	Cabur	A5	BUS BAR METERING
		HB201GR	6	HSCB.6/PT/GR End section - Grey	Cabur	A5	BUS BAR METERING

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DWG n° : 231151/SD/16

Item n° : PF1113279

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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TITLE : SG-100D1 - FUNCTIONAL BUS BAR METERING

Bill of Materials

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00016

SHEET 24

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00016 Rev.03