"SG-100D1" HV SWBD 6,6kV (UNIT A6)

LOGICAL DIAGRAM

INCOMING FEEDER TR-100AD1

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+A6					
3	08/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
2	28/06/2024	Giulietti	Flamminio	Sigismondi	Accepted for construction (AFC)
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0	04/04/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

DWG n° : 231151/SD/23

Item n° : PF1113279

CROSSWIND

ROSETTI MARINO

TITLE :
SG-100D1 - LOGICAL INCOMING FEEDER TR-100AD1

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00023

SHEET 1

REV. 03

Cover

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00023 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
1	Cover																				
2	Sheets index																				
3	Input Protection Relay REX640																				
4	Input Protection Relay REX640																				
5	Output Protection Relay REX640																				
6	Protections REX640																				
7	C.B. Commands																				
8	C.B. Commands																				
9	C.B. Commands																				
10	C.B. Commands																				
11	C.B. Commands																				
12	Measures																				

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IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE :
SG-100D1 - LOGICAL INCOMING FEEDER TR-100AD1

Sheets index

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

SCALE : NTS

A3

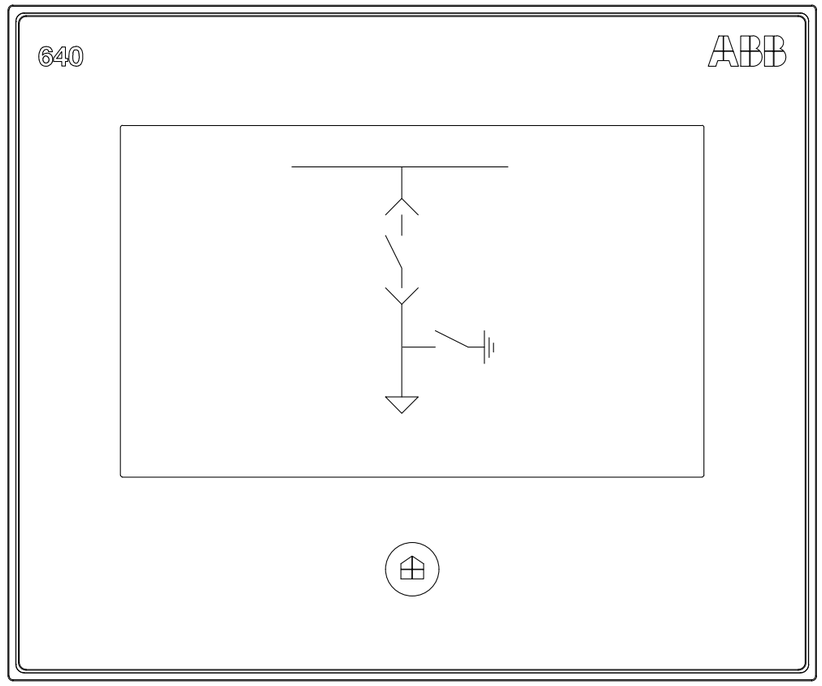
DRAWING NO. 1723002197-EL-DG-00023

SHEET 2

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00023 Rev.03



LHMI - TOUCH DISPLAY

- COMMANDS "CLOSE C.B." AND "OPEN C.B." NON ENABLED
- PUSH BUTTON "REMOTE / LOCAL" NOT ENABLED
- ONLY PUSH BUTTON "RESET" ARC PROTECTION WILL BE ENABLED

LED				
Item	NAME PLATE	COLOUR		Note
		ALARM	OK	
LED-1	27-1/27-2/59-1/59-2 - VOLTAGE PROTECTION	RED	-	ALARM = OVER/UNDER VOLTAGE PROTECTION
LED-2	C.B. READY (TCS)	-	GREEN	OK = TCS OK (C.B. READY)
LED-3	SYNCHRO CHECK	-	GREEN	OK = SYNCHRONISM
LED-4	C.B. READY TO CLOSE	-	GREEN	OK = C.B. READY TO CLOSE
LED-5	50-1/51-1 - TRIPPED	RED	-	ALARM = OVERCURRENT PROTECTION TRIPPED
LED-6	51N/59N-1/59N-2 - TRIPPED	RED	-	ALARM = EARTH PROTECTION TRIPPED
LED-7	EARTHING SWITCH UNLOCKED	-	GREEN	OK = EARTHING SWITCH UNLOCKED
LED-8	RACK-IN/OUT ENABLED	-	GREEN	OK = CONTACTOR TRUCK UNLOCKED
LED-9	ARC PROTECTION TRIPPED	RED	-	ALARM = TRIP ARC PROTECTION
LED-10	GOOSE ALARM	RED	-	ALARM = GOOSE FAULT
LED-11	SPRING DISCHARGED	RED	-	ALARM = C.B. SPRING DISCHARGED

LEDs PAGE 2				
Item	NAME PLATE	COLOUR		Note
		ALARM	OK	
LED-12	SPACE HEATER "ON"	RED	-	ALARM = SPACE HEATER "ON"
LED-13	TRANSF. PROTECTIONS	RED		ALARM = PROTECTIONS TRIP
LED-14				
LED-15				
LED-16				
LED-17				
LED-18				
LED-19				
LED-20				
LED-21				
LED-22				

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= +A6

DWG n° : 231151/SD/23

Item n° : PF1113279

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE :
SG-100D1 - LOGICAL INCOMING FEEDER TR-100AD1
Input Protection Relay REX640

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

A3 | DRAWING NO. 1723002197-EL-DG-00023 | SHEET 3 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00023 Rev.03

INPUTS

B–X1		
1	BI1	C.B. CLOSED
4		
2	BI2	C.B. OPENED
4		
3	BI3	C.B. SERVICE POSITION
4		
5	BI4	C.B. TEST POSITION
8		
6	BI5	EARTH SWITCH OPENED
8		
7	BI6	EARTH SWITCH CLOSED
8		
9	BI7	RELAY TRIPPED
12		
10	BI8	C.B. SPRING DISCHARGED
12		
11	BI9	PROTECTION RELAY TRANSFORMER
12		
13	BI10	SELECTOR IN LOCAL POSITION
16		
14	BI11	SELECTOR IN REMOTE POSITION
16		
15	BI12	EXTERNAL CLOSING INTERLOCK
16		
17	BI13	CIRC.BREAKER OPENED (FROM 66kV SWITCHBOARD)
18		
B–X2		
1	BI14	UNLOCKING EARTHING SWITCH / TRUCK C.B.
2		

INPUTS

C–X1		
1	BI1	TRANSF.TRIP OIL LEVEL INDICATOR
4		
2	BI2	V.T. HEALTY CIRCUIT
4		
3	BI3	EARTHING SWITCH OPEN (FROM MEASURING UNIT)
4		
5	BI4	CLOSED AUXILIARY CIRCUIT MCB's
8		
6	BI5	CLOSED AUXILIARY V.T. SECONDARY MCB's
8		
7	BI6	TRANSF. ALARM MEMBRANE CONTROL
8		
9	BI7	TRANSF. TRIP OIL LEVEL
12		
10	BI8	TRANSF. ALARM OIL TEMPERATURE
12		
11	BI9	TRANSF. TRIP OIL TEMPERATURE
12		
13	BI10	TRANSF. ALARM OIL LEVEL
16		
14	BI11	TRANSF. SELF DEHY-DRATING BREATHER ALARM
16		
15	BI12	TRANSF. TRIP OIL PRESSURE
16		
17	BI13	TRANSF. ALARM WINDING TEMPERATURE
18		
B–X2		
1	BI14	TRANSF. TRIP WINDING TEMPERATURE
2		

INPUTS

D–X1		
1	BI1	LOCAL CLOSING COMMAND
4		
2	BI2	LOCAL OPENING COMMAND
4		
3	BI3	TRANSF. ALARM OIL LEVEL
4		
5	BI4	TR-100AD1 GENERAL ALARM
8		
6	BI5	SPACE HEATER "ON"
8		
7	BI6	SYNCHRONIZATION CLOSING COMMAND FROM BESS
8		
9	BI7	TRANSF. TRIP BUCHHOLZ
12		
10	BI8	RR-100D1 NER GENERAL ALARM
12		
11	BI9	TRANSF. ALARM BUCHHOLZ
12		

ARC MODULE

LIGHT SENSOR INPUT 1	Slot A1 X11	ARC "MAIN BUS BAR" "BB"
LIGHT SENSOR INPUT 2	Slot A1 X12	ARC "C.B. COMPART." "CB"
LIGHT SENSOR INPUT 3	Slot A1 X13	ARC "CABLE COMPARTEMENT" "CC"
LIGHT SENSOR INPUT 4	Slot A1 X14	

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CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n° : 231151/SD/23

Item n° : PF1113279

TITLE :

SG–100D1 – LOGICAL INCOMING FEEDER TR–100AD1

Input Protection Relay REX640

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

SCALE : NTS

A3

DRAWING NO. 1723002197–EL–DG–00023

SHEET 4

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197–EL–DG–00023 Rev.03

OUTPUT

B–X2

3 4	S01	TRIPPED PRTOECTION	
5 6	S02	EARTHING SWITCH (CLOSED)	
7 8	S03		
9 10	S04	RESET LOCKOUT RELAY	
11 12	S05	C.B. OPENED	
13 14	S06		
15 16	S07		
17 18	S08		

OUTPUT

C–X2

3 4	S01		
5 6	S02		
7 8	S03		
9 10	S04		
11 12	S05		
13 14	S06		
15 16	S07		
17 18	S08		

OUTPUT

D–X2

3(–)	SP01	TRIPPED ARC DETECTOR ALL SWITCHBOARD	
4(+)			
5(–)	SP02	TRIPPED ARC CABLE COMPARTEMENT	
6(+)			
7(–)	SP03	TRIPPED ARC DETECTOR ALL SWITCHBOARD	
8(+)			
9(–)	SP04		
10(+)			
11(–)	SP05 (I)		
12(+)			
13(–)	SP06 TCS		
14(+)			
15(–)	SP07 (I)		
16(+)			
17(–)	SP08 TCS		
18(+)			

OUTPUT

G–X1

1 2		Uaux	
3 5 4	RF	WATCHDOG	
6 8 7	S01	E.SWITCH UNLOCKED	
9 10	S02	C.B. READY TO CLOSE	
11 12	SS01	BREAKER FAILURE TRIP	
13 14	SS02		
15 16	POSP1	C.B. CLOSING COMMAND	
17 18	POSP2		

OUTPUT

G–X2

1 3 2	S03	C.B. TRUCK UNLOCKED	
4 6 5	(I) PODP1		
7 8	P01_TCS TCS	C.B. OPENING COMMAND	
9 11 10	(I) PODP2		
12 13	P02_TCS TCS		
14 16 15	(I) PODP3		
17 18	P03_TCS TCS		

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Item n° : PF1113279

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

TITLE :
SG–100D1 – LOGICAL INCOMING FEEDER TR–100AD1
Output Protection Relay REX640

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

SCALE : NTS

A3

DRAWING NO. 1723002197–EL–DG–00023

SHEET 5

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197–EL–DG–00023 Rev.03

INPUTS

PROTECTIONS REX640 (FP1)

OUTPUTS

50-1 / 3I>>> / PHIPTOC1 (0 / 1 / Start)
TO EMCS IEC 61850: 50-1 -PROTECTION OPERATED

51-1 / 3I> / PHLPTOC1 (0 / 1 / Start)
TO EMCS IEC 61850: 51-1 -PROTECTION OPERATED

51N / Io> / EFLPTOC1 (0 / 1 / Start)
TO EMCS IEC 61850: 51N PROTECTION OPERATED

59N-2 / Vo> / ROVPTOV2 (0 / 1 / Start)
TO EMCS IEC 61850: 59N-2 PROTECTION OPERATED

t=0,5" &
RESET K86 → 9.5A
K86 → 7.5B
59N → 7.9A

LED-5 (RED)
LED-6 (RED)

59 / 3U> / VMMXU2 (0 / 1 / Start)
Vn=0.9 t=1sec. (main bus bars)
TO EMCS IEC 61850: LIVE VOLTAGE ON THE MAIN BUS-BARS

PROTECTION → 8.6B

TO EMCS IEC 61850: INTERTRIP SEND (TO 66kV MSBD. SWITCHB.)

B_S01-X2

K86 (0 / 1): TRIPPED PROTECTION

FP1e "XM" (0 / 1): TRIPPED ARC CABLE COMPART. TO 66kV
D_SP02-X2

t=1" ARC TRIP → 11.5D
ARC → 8.6B

FP1e "MB01" (0 / 1): TRIPPED ARC DETECTOR ALL SWITCH
D_SP01-X2

FP1e "K86" (0 / 1): TRIPPED ARC DETECTOR ALL SWITCH
D_SP03-X2

LED-9 (RED)
9.6A K86 → 1 / 0

TO EMCS IEC 61850: TRIPPED ARC CABLE COMPARTMENT (TO 66kV MSBD. SWITCHB.)

INCOMING VOLTAGE
MAIN BUS BAR VOLTAGE
25 / SYNC / SECRSYN (0 / 1 / Start)
SYNCH OK → SYNCH OK → 7.4D
LED-3 (RED)

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. COMPART." "CB"
ONLY "LIGHT"
50L/50NL / ARC / ARCSARC3 (0 / 1 / Start) → ARC "CABLE COMPARTEMENT" "CC"

GOOSE FROM FEEDERS:

TRIPPED ARC PROTECTION FOR:
- ARC DETECTED ON MAIN BUS BAR (FROM ALL UNITS)
- ARC DETECTED ON C.B. / CONTACTOR COMPARTEMENT (FROM ALL UNITS)
- ARC DETECTED ON CABLE COMPARTEMENT (ONLY CONTACTOR UNIT)

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+A6
DWG n°: 231151/SD/23
Item n°: PF1113279

IMESA ELECTRICAL ENGINEERING
CROSSWIND
ROSETTI MARINO

TITLE :
SG-100D1 - LOGICAL INCOMING FEEDER TR-100AD1
Protections REX640

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE : NTS
A3
DRAWING NO. 1723002197-EL-DG-00023
SHEET 6
REV. 03

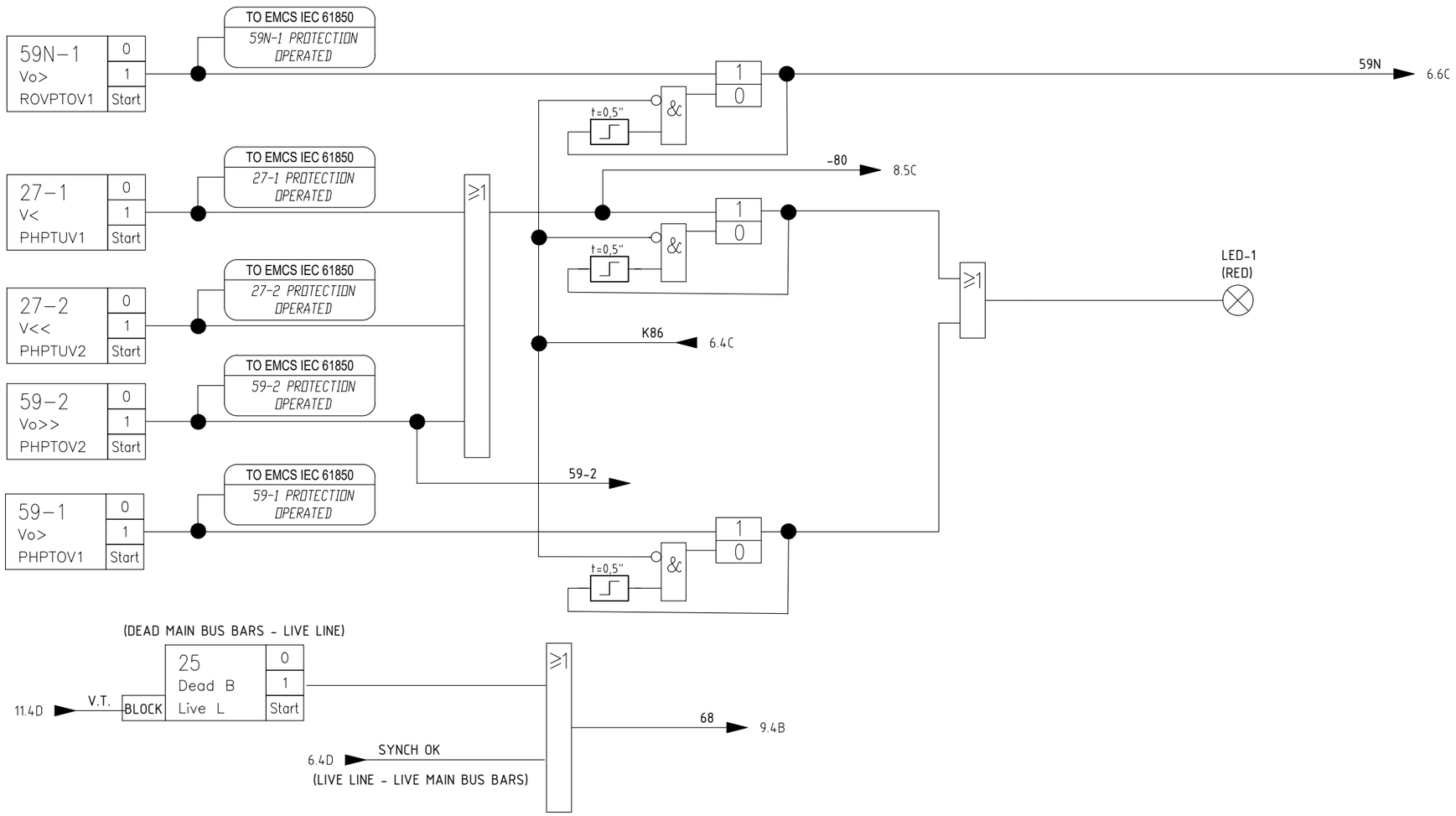
F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00023 Rev.03

INPUTS

PROTECTIONS REX640 (FP1)

OUTPUTS



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

TITLE :
SG-100D1 - LOGICAL INCOMING FEEDER TR-100AD1
C.B. Commands

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00023

SHEET 7

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00023 Rev.03

INPUTS

REX640 C.B. COMMANDS

OUTPUTS

S20 LOCAL OPENING COMMAND (0/1) → D-X1-2

K1 – BGT4 C.B. SERVICE (0/1) → B-X1-3

K1 – BGT5 C.B. TEST (0/1) → B-X1-5

XM SYNCHRONIZ. CLOSING COMMAND FROM BESS (0/1) → D-X1-7

XM FROM 66kV M.V.SWBD C.B. OPENED (0/1) → B-X1-17

SA1 SELECTOR IN REMOTE POSITION (0/1) → B-X1-14

SA1 SELECTOR IN LOCAL POSITION (0/1) → B-X1-13

S1C LOCAL CLOSING COMMAND (0/1) → D-X1-1

KGR SPACE HEATER "ON" (0/1) → D-X1-6

IEC 61850 – EMCS OPENING (0/1)

IEC 61850 – EMCS CLOSING (0/1)

TEST → 8.5D

REMOTE → 9.7B

LOCAL → 11.4B

TO EMCS IEC 61850 *SELECTOR IN REMOTE POSITION*

TO EMCS IEC 61850 *SELECTOR IN LOCAL POSITION*

INSERT. → 9.3D

INSERT. → 9.4C

INSERT. → -83 → 9.6D

INSERT. → -83 → 11.3C

INSERT. ← 7.6B -80

LOCAL OPENING

REMOTE OPENING

6.9B PROTECTION

9.5A K86

6.8D ARC

UNDERVOLTAGE

SYNCHRONIZ. CLOSING FROM BESS

REMOTE CLOSING FROM IEC61850

LOCAL CLOSING

9.6B READY

TEST LOCAL CLOSING

8.3B TEST → 11.3C

LED-12 (RED)

≥1 → G_PODP1-X2 → K1 C.B. OPENING (0/1)

OPENING → 9.4C

TO EMCS IEC 61850 *RESET LOCKOUT RELAY* → B_S04-X2 → FP1c RESET LOCKOUT RELAY (0/1)

≥1 → G_POSP1-X1 → K1 C.B. CLOSING (0/1)

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IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

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SG–100D1 – LOGICAL INCOMING FEEDER TR–100AD1

C.B. Commands

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

SCALE : NTS

A3

DRAWING NO. 1723002197–EL–DG–00023

SHEET 8

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197–EL–DG–00023 Rev.03

INPUTS

REX640 C.B. COMMANDS

OUTPUTS

K86 RELAY TRIPPED 0/1 — B-X1-9

XM EXTERNAL CLOSING INTERLOCK 0/1 — B-X1-15

QM "BGS2" C.B. DISCHARGED 0/1 — B-X1-10

BGE EARTHING SWITCH OPENED 0/1 — B-X1-6

BGE EARTHING SWITCH CLOSED 0/1 — B-X1-7

QM C.B. OPENED 0/1 — B-X1-2

QD2 – QD3 – QD4 CLOSED AUXILIARY CIRCUIT MCB's 0/1 — C-X1-5

QV4 – QV5 CLOSED AUXILIARY V.T. SECONDARY MCB's 0/1 — C-X1-6

QM C.B. CLOSED 0/1 — B-X1-1

TO EMCS IEC 61850: *K86 TRIPPED*

K86 → 6.7D

K86 → 8.6B

K86 → 6.5C

LED-11 (RED)

t=12"

7.5C → 68

LED-4 (GREEN)

READY → 8.6C

8.4C → REMOTE

TO EMCS IEC 61850: *C.B. READY TO CLOSE* → G_S02-X1 → XM 0/1 C.B. READY TO CLOSE

E.S. OPEN → 11.4B

E.S. OPENED

11.8D → TCS

8.5B → INSERT.

8.7B → OPENING

E.S. CLOSED → 9.8C

C.B. OPEN → 11.5D

C.B. OPEN → 11.4B

C.B. OPENED

11.4D → V.T.

8.5A → INSERT.

C.B. CLD&INS

TO EMCS IEC 61850: *C.B CLOSED AND INSERTED*

C.B. CLD&INS

8.5B → -83 → C.B. 66kV OPEN

GOOSE: *DEACTIVATION OF PROTECTION FUNCTIONS ON UNITS 2,3,4,7*

9.3C → E.S. CLOSED → B_S02-X2 → XM 0/1 E.SWITCH CLOSED

G_SS01-X1 → XM 0/1 AVAILABLE

B_S04-X2 → XM 0/1 C.B. OPENED

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DWG n° : 231151/SD/23

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IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE :

SG–100D1 – LOGICAL INCOMING FEEDER TR–100AD1

C.B. Commands

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

SCALE : NTS

A3

DRAWING NO. 1723002197–EL–DG–00023

SHEET 9

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197–EL–DG–00023 Rev.03

INPUTS

REX640 CONTACTOR COMMANDS

OUTPUTS

K94P-OLTC TRANSF.TRIPPED PROTEC. RELAY TRANSF.	0/1	B-X1-11
26OT TRANSF. ALARM OIL TEMPERATURE	0/1	C-X1-10
K94OT TRANSF.TRIPPED OIL TEMPERATURE	0/1	C-X1-11
89T.1 TRANSF.ALARM MEMBRANE CONTROL	0/1	C-X1-7
89T.2 TRANSF. SELFDRATING BREATHER ALARM	0/1	C-X1-14
K94P TRANSF.TRIPPED OIL PRESSURE	0/1	C-X1-15
49T TRANSF.ALARM WINDING TEMPERATURE	0/1	C-X1-17
K94WT TRANSF.TRIPPED WINDING TEMPERATURE	0/1	C-X2-1
97T TRANSF. ALARM BUCHHOLZ	0/1	D-X1-11
K94B TRANSF. TRIPPED BUCHHOLZ	0/1	D-X1-9
71OT TRANSF. ALARM OIL LEVEL	0/1	C-X1-13
K94L TRANSF. TRIPPED OIL LEVEL	0/1	C-X1-9
71OLTC TRANSF. ALARM OIL LEVEL INDICATOR	0/1	D-X1-3
K94L-OLTC TRANSF. TRIPPED OIL LEVEL INDICATOR	0/1	C-X1-1

TO EMCS IEC 61850	TRIPPED PROTECTION RELAY TRANSF.
TO EMCS IEC 61850	ALARM OIL TEMPERATURE
TO EMCS IEC 61850	TRIPPED OIL TEMPERATURE
TO EMCS IEC 61850	ALARM MEMBRANE CONTROL
TO EMCS IEC 61850	SELF DEHYDRATING BREATHER ALARM
TO EMCS IEC 61850	TRIPPED OIL PRESSURE
TO EMCS IEC 61850	ALARM WINDING TEMPERATURE
TO EMCS IEC 61850	TRIPPED WINDING TEMPERATURE
TO EMCS IEC 61850	ALARM BUCHHOLZ
TO EMCS IEC 61850	TRIPPED BUCHHOLZ
TO EMCS IEC 61850	ALARM OIL LEVEL
TO EMCS IEC 61850	TRIPPED OIL LEVEL
TO EMCS IEC 61850	ALARM OIL LEVEL INDICATOR
TO EMCS IEC 61850	TRIPPED OIL LEVEL INDICATOR

≥1

LED-13 (RED)

WATCHDOG 0/1

TO EMCS IEC 61850 — WATCHDOG PROTECTION RELAY

G_RF-X1

KIRF 0/1 WATCHDOG

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
3	08/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
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1	21/05/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)
0	04/04/2024	Giulietti	Flamminio	Sigismondi	Issued for review (IFR)

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+A6

DWG n° : 231151/SD/23

Item n° : PF1113279

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE :
SG-100D1 - LOGICAL INCOMING FEEDER TR-100AD1

C.B. Commands

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00023

SHEET 1.0

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00023 Rev.03

INPUTS

REX640 CONTACTOR COMMANDS

OUTPUTS

BGE
EART.SWITCH OPENED FROM MEASURING UNIT 0 / 1
C-X1-3

KT1
UNLOCKING E.SWITCH/C.B. TRUCK 0 / 1
B-X2-1

XM
TR-100AD1 GENERAL ALARM 0 / 1
D-X1-5

XM
PR-100D1 NER GENERAL ALARM 0 / 1
D-X1-10

QV1/2/3-PTT-FF1/2/3
VT HEALTY CIRCUIT 0 / 1
C-X1-2

≥1

TO EMCS IEC 61850
C.B OPENED OR ISOLATED

&

9.3C C.B. OPEN

9.4B E.S. OPEN

8.4D LOCAL

8.5C -83 66kV Switchboard C.B. INCOMING OPENED

8.6E TEST

&

9.3C C.B. OPEN

6.9C ARC TRIP

V.T. 7.2C

V.T. 9.5D

TO EMCS IEC 61850
TR-100AD1 GENERAL ALARM

TO EMCS IEC 61850
PR-100D1 NER GENERAL ALARM

TO EMCS IEC 61850
VT HEALTY CIRCUIT

T.C.S.
TCS1
TCSSCBR
ALARM

TO EMCS IEC 61850
TSC MB01 COIL SUPERVISION

NOT

TCS 9.4C

LED-2 (GREEN)

LED-8 (GREEN)

GOOSE

LED-10 (RED)

LED-7 (GREEN)

B_S05-X2

G_S03-X2

G_S01-X1

XM
0 C.B. OPENED
1

RLE2
0 C.B. TRUCK UNLOCKED
1

RLE3
0 EARTHING SWITCH UNLOCKED
1

GOOSE TO ALL FEEDERS:

TRIPPED ARC PROTECTION FOR:
- ARC DETECTED ON MAIN BUS BAR (FROM ALL UNITS)
- ARC DETECTED ON C.B. / CONTACTOR COMPARTEMENT (FROM ALL UNITS)
- ARC DETECTED ON CABLE COMPARTEMENT (ONLY CONTACTOR UNIT AND INCOMING)

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IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE :
SG-100D1 - LOGICAL INCOMING FEEDER TR-100AD1
C.B. Commands

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00023

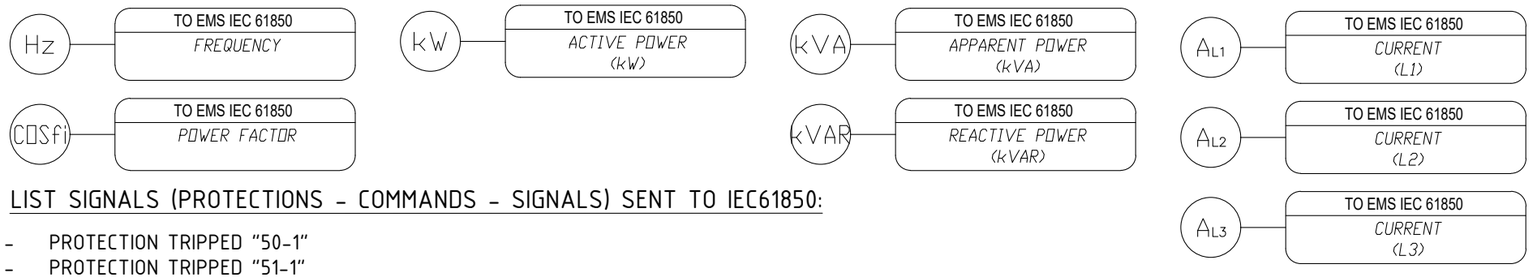
SHEET 1.1

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00023 Rev.03

INPUTS	REX640 SIGNALS MEASURES AND COMMAND AVAILABLE TO IEC61850	OUTPUTS



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

- PROTECTION TRIPPED "50-1"
- PROTECTION TRIPPED "51-1"
- PROTECTION TRIPPED "51N"
- SYNCHRO "OK"
- PROTECTION TRIPPED "59N-1"
- PROTECTION TRIPPED "59N-2"
- PROTECTION TRIPPED "27-1"
- PROTECTION TRIPPED "27-2"
- PROTECTION TRIPPED "59-1"
- PROTECTION TRIPPED "59-2"
- SELECTOR SWITCH IN LOCAL POSITION
- SELECTOR SWITCH IN REMOTE POSITION
- TRANSFORMER PROTECTION TRIPPED "OIL TEMPERATURE"
- TRANSFORMER PROTECTION ALARM "OIL TEMPERATURE"
- TRANSFORMER PROTECTION TRIPPED "OIL PRESSURE"
- TRANSFORMER PROTECTION SELF DEHYDRATING BREATHER ALARM
- TRANSFORMER PROTECTION TRIPPED "WINDING TEMPERATURE"
- TRANSFORMER PROTECTION ALARM "WINDING TEMPERATURE"
- TRANSFORMER PROTECTION ALARM BUCHHOLZ
- TRANSFORMER PROTECTION TRIPPED BUCHHOLZ
- TRANSFORMER PROTECTION RELAY OLTC
- TRANSFORMER PROTECTION ALARM LEVEL OIL
- TRANSFORMER PROTECTION TRIPPED LEVEL OIL
- TRANSFORMER PROTECTION ALARM OIL LEVEL INDICATOR
- TRANSFORMER PROTECTION TRIPPED OIL LEVEL INDICATOR
- TRANSFORMER PROTECTION ALARM MEMBRANE CONTROL
- WATCHDOG PROTECTION RELAY
- V.T. HEALTLY CIRCUIT
- INTERTRIP SEND TO 66kV SWITCHB.
- K86 TRIPPED
- C.B. CLOSED AND INSERTED
- C.B. OPENED OR ISOLATED
- MCB'S CLOSED
- C.B. READY (TCS)
- C.B. READY TO CLOSE
- OPENING COMMAND
- CLOSING COMMAND
- LIVE VOLTAGE 6.6kV ON THE MAIN BUS-BARS
- TRIPPED ARC CABLE COMPARTMENTE TO 66kV SWITCHBOARD
- TR-100AD1 GENERAL ALAM
- RR-100D1 NER GENERAL ALARM

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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+A6					
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IMESA ELECTRICAL ENGINEERING

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CROSSWIND

ROSETTI MARINO

TITLE :
SG-100D1 - LOGICAL INCOMING FEEDER TR-100AD1

Measures

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00023

SHEET 12

REV. 03

F.to UNI A3: 420mmx297mm

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