"SG-100D1" HV SWBD 6,6kV (UNIT A7)

LOGICAL DIAGRAM

FUELL CELL A-80000

=							
+A7							
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)		
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION		

DWG n° : 231151/SD/27

Item n° : PF1113279

CROSSWIND

ROSETTI MARINO

TITLE :

SG-100D1 - LOGICAL FUEL CELL A-80000

Cover

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00027

SHEET 1

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00027 Rev.03

INDEX

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	Protections REX640									
8	Contactor Commands									
9	Contactor Commands									
10	Contactor Commands									
11	Contactor Commands									
12	Measures									

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

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+A7

DWG n° : 231151/SD/27

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IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE :

SG-100D1 - LOGICAL FUEL CELL A-80000

Sheets index

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

SCALE : NTS

A3

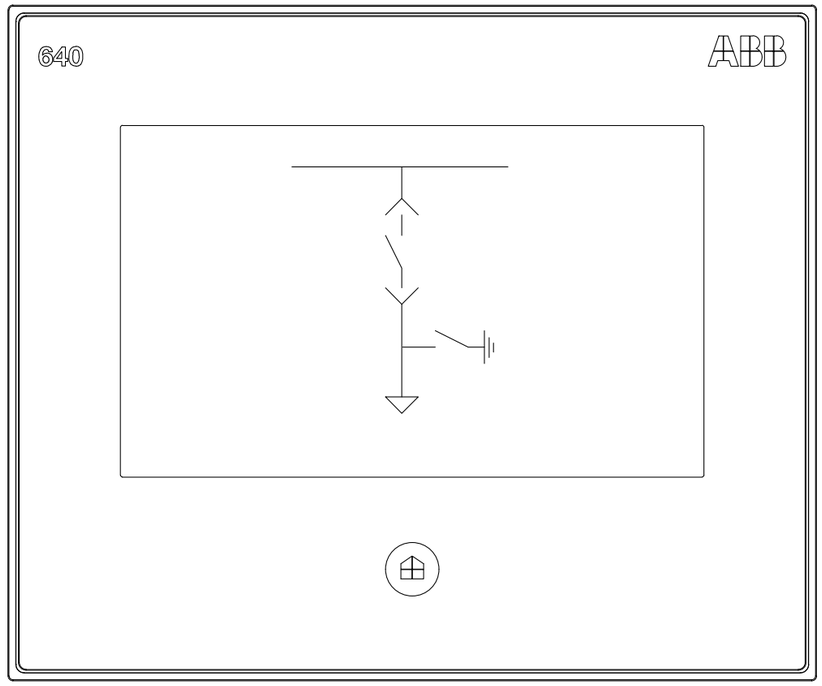
DRAWING NO. 1723002197-EL-DG-00027

SHEET 2

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00027 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

LEDs PAGE 1				
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	CONTACTOR READY (TCS)	-	GREEN	OK = TCS OK (CONTACTOR READY)
LED-3	SYNCHRO CHECK		GREEN	OK = SYNCHRONISM
LED-4	CONTACTOR READY TO CLOSE	-	GREEN	OK = CONTACTOR READY TO CLOSE
LED-5	50-1/51-1/67-1/67-2 - 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	EMERGENCY OPENING BY SIS (ESD)	RED	-	ALARM = ESD TRIPPED

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	FUSES TRIP	RED		ALARM = FUSES TRIP
LED-15	TRIP FROM L.V.	RED		ALARM = L.V. TRIP
LED-16				
LED-17				
LED-18				
LED-19				
LED-20				
LED-21				
LED-22				

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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DWG n° : 231151/SD/27
Item n° : PF1113279

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

TITLE :
SG-100D1 - LOGICAL FUEL CELL A-80000
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-00027

SHEET 3

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00027 Rev.03

INPUTS

B–X1		
1	BI1	CONTACTOR CLOSED
4		
2	BI2	CONTACTOR OPENED
4		
3	BI3	CONTACTOR SERVICE POSITION
4		
5	BI4	CONTACTOR TEST POSITION
8		
6	BI5	EARTH SWITCH OPENED
8		
7	BI6	EARTH SWITCH CLOSED
8		
9	BI7	RELAY TRIPPED
12		
10	BI8	CONTACTOR READY
12		
11	BI9	FUSES TRIPPED
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 L.V. SWITCHBOARD)
18		
B–X2		
1	BI14	UNLOCKING EARTHING SWITCH / TRUCK CONTACTOR
2		

INPUTS

C–X1		
1	BI1	EMERGENCY OPENING BY SIS
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	CLOSED AUXILIARY CIRCUIT MCB's
8		
9	BI7	V.T. HEALTY CIRCUIT
12		
10	BI8	UPS 110VDC SUPPLY A "ON"
12		
11	BI9	UPS 110VDC SUPPLY B "ON"
12		
13	BI10	230VAC SUPPLY "ON"
16		
14	BI11	24VDC SUPPLY "ON"
16		
15	BI12	SPACE HEATER ON
16		
17	BI13	TRANSF. ALARM WINDING TEMPERATURE
18		
B–X2		
1	BI14	TRANSF. TRIP WINDING TEMPERATURE
2		

FORM MEASURE UNIT A5

INPUTS

D–X1		
1	BI1	LOCAL CLOSING COMMAND
4		
2	BI2	LOCAL OPENING COMMAND
4		
3	BI3	CIRC.BREAKER IN TEST POSITION (FROM L.V. SWITCHBOARD)
4		
5	BI4	CIRC.BREAKER TRIPPED (FROM L.V. SWITCHBOARD)
8		
6	BI5	SPACE HEATER "ON"
8		
7	BI6	AVAILABLE REMOTE OPENING COMMNAD
8		
9	BI7	AUXILIARY 230VAC HEALTLTY
12		
10	BI8	MCB AND WATCHDOG PROTECTION, RELAY HEALTH (FROM UNIT A6)
12		
11	BI9	AVAILABLE
12		

ARC MODULE

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

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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+A7					
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DWG n° : 231151/SD/27
Item n° : PF1113279

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

TITLE :
SG–100D1 – LOGICAL FUEL CELL A–80000
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–00027 | SHEET 4 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197–EL–DG–00027 Rev.03

OUTPUT

B–X2

3 4	S01	TRIPPED PRTOECTION	
5 6	S02	EARTHING SWITCH CLOSED TO TERMINAL STRIP	
7 8	S03	AVAILABLE OUT TO TERMINAL	
9 10	S04	RESET LOCKOUT RELAY	
11 12	S05		
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	
4(+) 5(–)	SP02	
6(+) 7(–)	SP03	
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	CONTACTOR READY TO CLOSE
11	SS01	
12 13	SS02	
14 15	POSP1	CONTACTOR CLOSING COMMAND
16 17	POSP2	
18		

OUTPUT

G–X2

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

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+A7						
DWG n° : 231151/SD/27	3	08/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
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	REV.	DATE	DRN	CHKD	APPD	DESCRIPTION

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE :

SG–100D1 – LOGICAL FUEL CELL A–80000

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–00027

SHEET 5

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197–EL–DG–00027 Rev.03

INPUTS

PROTECTIONS REX640 (FP1)

OUTPUTS

7.6D 67

50-1 | 0 | 1 | 3I>>> | PHIPTOC1 | Start

TO EMCS IEC 61850 — 50-1 -PROTECTION OPERATED

51-1 | 0 | 1 | 3I> | PHLPTOC1 | Start

TO EMCS IEC 61850 — 51-1 -PROTECTION OPERATED

TO EMCS IEC 61850 — 51N PROTECTION OPERATED

51N | 0 | 1 | Io> | EFLPTOC1 | Start

59N-2 | 0 | 1 | Vo> | ROVPTOV2 | Start

TO EMCS IEC 61850 — 59N-2 PROTECTION OPERATED

LED-15 (RED)

t=0,5"

RESET K86 9.5A

K86 7.5B

59N 7.8A

LED-5 (RED)

LED-6 (RED)

PROTECTION 8.6B

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

B_X2-S01

K86 | 0 | TRIPPED PROTECTION | 1

KA1 | TRIP PROTECTION FROM LOW VOLTAGE | 0 | 1

D-X1-5

INCOMING VOLTAGE

MAIN BUS BAR VOLTAGE

U3P2 25 SYNC U3P1 SECRSYN | 0 | 1 | Start

SYNCH OK

LED-3 (RED)

SYNCH OK 7.4C

TO EMCS IEC 61850 — 25 SYNCHRO OK

7.5B 59-2

10.6C TRIPPED TRASF.

9.4B FUSE

ONLY "LIGHT"

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

ONLY "LIGHT"

50L/50NL ARC ARCSARC2 | 0 | 1 | Start — ARC "CONTACTOR COMPART." "CB"

ONLY "LIGHT"

50L/50NL ARC ARCSARC3 | 0 | 1 | Start — ARC "CABLE COMPARTEMENT" "CC"

GOOSE FROM INCOMINGS: UNIT :A6

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)

t=0,5"

9.5A K86 ARC 8.6C

LED-9 (RED)

GOOSE TO INCOMINGS: UNIT :A6

0 TRIPPED ARC PROTECTION 1

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DWG n°: 231151/SD/27

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IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : SG-100D1 – LOGICAL FUEL CELL A-80000

Protections REX640

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00027

SHEET 6

REV. 03

F.to UNI A3: 420mmx297mm

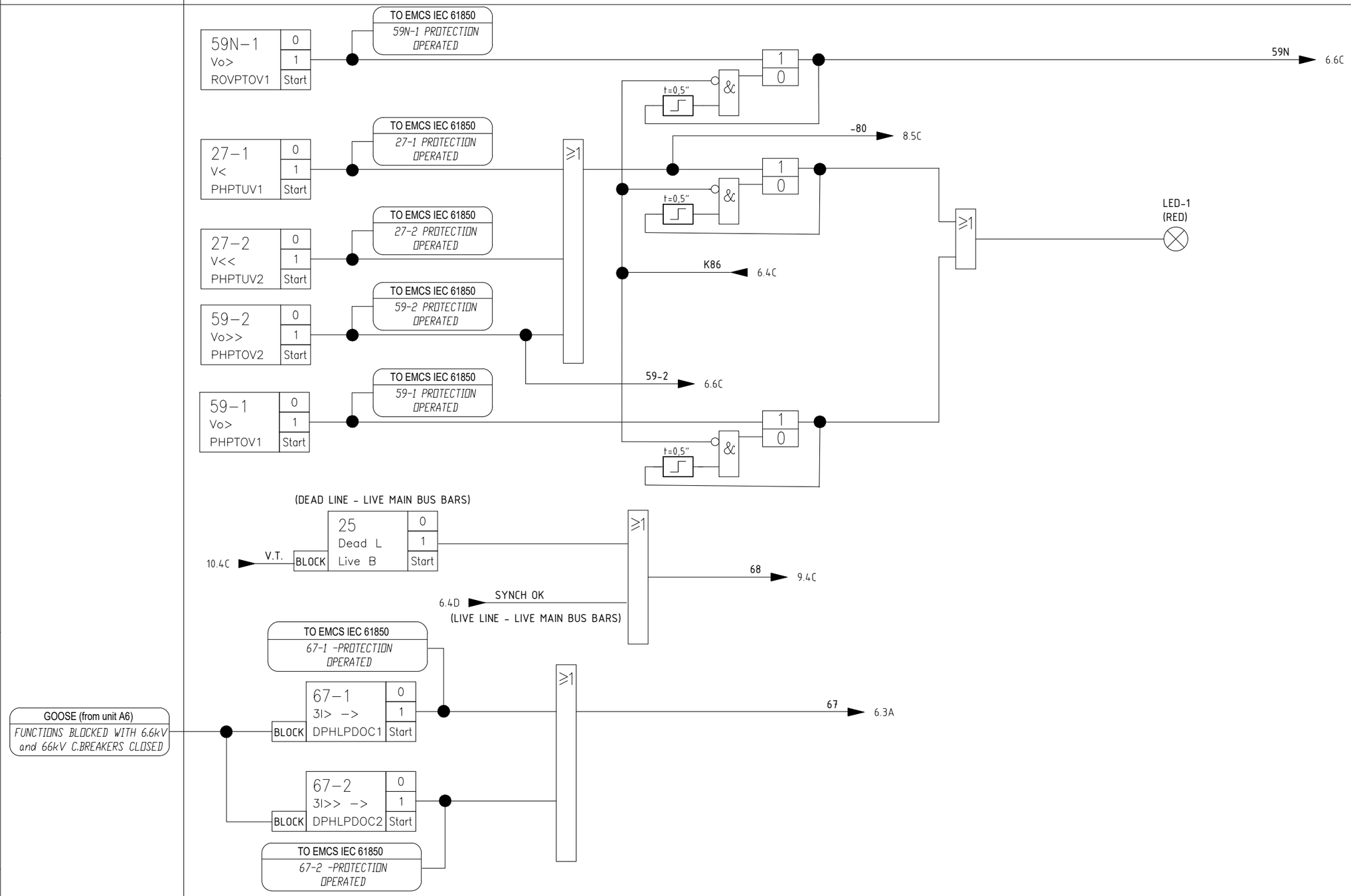
File Name : 1723002197-EL-DG-00027 Rev.03

1	2	3	4	5	6	7	8	9	10

INPUTS

PROTECTIONS REX640 (FP1)

OUTPUTS



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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+A7

DWG n° : 231151/SD/27

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IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE :

SG-100D1 - LOGICAL FUEL CELL A-80000

Protections REX640

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00027

SHEET 7

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00027 Rev.03

INPUTS

REX640 CONTACTOR COMMANDS

OUTPUTS

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

K1 – BGT4 CONTACTOR SERVICE 0/1 → B-X1-3

K1 – BGT5 CONTACTOR TEST 0/1 → B-X1-5

XM REMOTE AVAILABLE OPENING COMMAND 0/1 → D-X1-7

QA2 AUXILIARY 230VAC HEALTLY (ALL SWITCH.) 0/1 → D-X1-9

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

KGR SPACE HEATER ON FROM MEASURE UNIT A5 0/1 → C-X1-15

IEC 61850 – EMCS OPENING 0/1

IEC 61850 – EMCS CLOSING 0/1

TO EMCS IEC 61850: *AUXIL 230Vac HEALTY (ALL SWITCH)*

TO EMCS IEC 61850: *SELECTOR IN REMOTE POSITION*

TO EMCS IEC 61850: *SELECTOR IN LOCAL POSITION*

TO EMCS IEC 61850: *RESET LOCKOUT RELAY*

TEST → 8.5D

INSERT. → 9.3D

INSERT. → 9.4C

INSERT.

INSERT.

INSERT.

REMOTE → 9.7B

LOCAL → 11.4B

7.6A –80

8.3B TEST

6.9B PROTECTION

9.5A K86

UNDERVOLTAGE

6.6E ARC

9.6B READY

REMOTE

LOCAL

REMOTE CLOSING

LOCAL CLOSING

LOCAL CLOSING

TEST LOCAL CLOSING

LOCAL OPENING

REMOTE OPENING

OPENING → 9.4C

TEST → 11.3C

LED-12 (RED)

G_PODP1-X2 → K1 0/1 CONTACTOR OPENING

G_POSP1-X1 → K1 0/1 CONTACTOR CLOSING

B_S04-X2 → FP1c 0/1 RESET LOCKOUT RELAY

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CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

TITLE :

SG–100D1 – LOGICAL FUEL CELL A–80000

Contactor Commands

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

SCALE : NTS

A3

DRAWING NO. 1723002197–EL–DG–00027

SHEET 8

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197–EL–DG–00027 Rev.03

INPUTS

REX640 CONTACTOR COMMANDS

OUTPUTS

K86 RELAY TRIPPED 0/1 — B-X1-9

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

XM FROM L.V.SWDB C.B.OPENED 0/1 — B-X1-17

DO1 CONTACTOR READY (TCS) 0/1 — B-X1-10

BGF2 FUSE TRIPPED 0/1 — B-X1-11

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

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

K1 CONTACTOR OPENED 0/1 — B-X1-2

QD2 – 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

KSIL EMERGENCY OPENING BY SIS 0/1 — C-X1-1

K1 CONTACTOR CLOSED 0/1 — B-X1-1

TO EMCS IEC 61850 *K86 TRIPPED*

K86 → 6.6D

K86 → 8.6B

K86 → 6.4C

LED-2 (GREEN)

TO EMCS IEC 61850 *CONTACTOR READY (TCS)*

LED-14 (RED)

FUSE → 6.6D

E.S. OPEN → 11.4B

E.S. OPENED

E.S. CLOSED → 9.8C

7.5C → 68

8.5B → INSERT.

8.7B → OPENING

CONT.OPEN → 11.4B

CONTACTOR OPENED

TO EMCS IEC 61850 *MCB's CLOSED*

LED-11 (RED)

8.5A → INSERT.

TO EMCS IEC 61850 *CONTACTOR CLOSED AND INSERTED*

10.4C → V.T.

READY → 8.6C

LED-4 (GREEN)

8.4C → REMOTE

TO EMCS IEC 61850 *CONTACTOR READY TO CLOSE*

G_S02-X1 — XM 0/1 CONTACTOR READY TO CLOSE

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

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+A7						
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IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE :

SG-100D1 – LOGICAL FUEL CELL A-80000

Contactor Commands

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00027

SHEET 9

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00027 Rev.03

INPUTS

REX640 CONTACTOR COMMANDS

OUTPUTS

XC CLOSED AUX. CIRCUIT MCB's	0 / 1	C-X1-7
XC VT HEALTY CIRCUIT	0 / 1	C-X1-9
XC UPS 110VDC SUPPLY A "ON"	0 / 1	C-X1-10
XC UPS 110VDC SUPPLY B "ON"	0 / 1	C-X1-11
XC 230VAC SUPPLY "ON"	0 / 1	C-X1-13
XC 24VDC SUPPLY "ON"	0 / 1	C-X1-14

C-X1-7 → TO EMCS IEC 61850 *CLOSED AUX. CIRCUIT MCB's*

C-X1-9 → TO EMCS IEC 61850 *VT HEALTY CIRCUIT*

C-X1-10 → TO EMCS IEC 61850 *UPS 110VDC SUPPLY A "ON"*

C-X1-11 → TO EMCS IEC 61850 *UPS 110VDC SUPPLY B "ON"*

C-X1-13 → TO EMCS IEC 61850 *230VCA SUPPLY "ON"*

C-X1-14 → TO EMCS IEC 61850 *24VDC SUPPLY "ON"*

FROM MEASURE UNIT A5

49T TRANSF.ALARM WINDING TEMPERATURE	0 / 1	C-X1-17
K94WT TRANSF.TRIPPED WINDING TEMPERATURE	0 / 1	C-X2-1

C-X1-17 → TO EMCS IEC 61850 *ALARM WINDING TEMPERATURE*

C-X2-1 → TO EMCS IEC 61850 *TRIPPED WINDING TEMPERATURE*

C-X2-1 → LED-13 (RED)

C-X2-1 → TRIPPED TRASF. → 6.6D

C-X2-1 → V.T. → 7.2C

C-X2-1 → V.T. → 9.5D

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

C-X1-2 → TO EMCS IEC 61850 *VT HEALTY CIRCUIT*

WATCHDOG (0 / 1) → TO EMCS IEC 61850 *WATCHDOG PROTECTION RELAY* → G_RF-X1 → KIRF 0 WATCHDOG / 1

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
3	08/08/2024	Giulietti	Flamminio	Sigismondi	As Built (ASB)
2	28/06/2024	Giulietti	Flamminio	Sigismondi	Accepted for construction (AFC)
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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DWG n° : 231151/SD/27

Item n° : PF1113279

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

TITLE :

SG-100D1 - LOGICAL FUEL CELL A-80000

Contactor Commands

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00027

SHEET 10

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00027 Rev.03

INPUTS

REX640 CONTACTOR COMMANDS

OUTPUTS

BGE
EART.SWITCH OPENED 0
FROM MEASURING UNIT 1

C-X1-3

TO EMCS IEC 61850
EARTHING SWITCH OPENED FROM MEASURE UNIT

KT1
UNLOCKING 0
E.SWITCH/CONT. TRUCK 1

B-X2-1

QB1
LOW VOLTAGE CIR.BREAK 0
IN TEST POSITION 1

D-X1-3

QD1 – KIRF (UNIT A6)
MCB AND WATCHDOG 0
PROTEC. RELAY HEALTHY 1

D-X1-10

TO EMCS IEC 61850
PROTECTION RELAY UNIT 6 HEALTHY

9.3C CONT.OPEN

9.4B E.S. OPEN

8.4D LOCAL

8.6E TEST

≥1

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&

TO EMCS IEC 61850
CONTACTOR OPENED OR ISOLATED

LED-8
(GREEN)

G_S03-X2

RLE2
0 CONTACTOR
1 TRUCK UNLOCKED

LED-7
(GREEN)

G_S01-X1

RLE3
0 EARTHING SWITCH
1 UNLOCKED

GOOSE

LED-10
(RED)

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DWG n° : 231151/SD/27
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IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE :
SG-100D1 – LOGICAL FUEL CELL A-80000
Contactor Commands

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00027

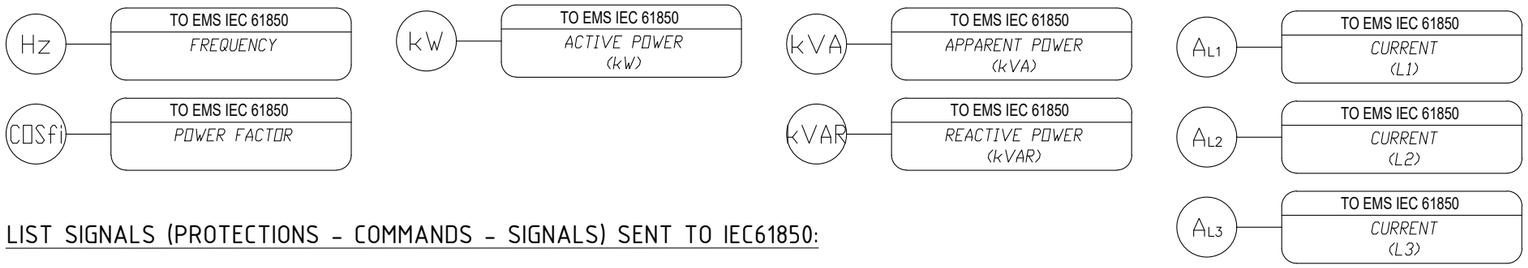
SHEET 1.1

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00027 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"
- PROTECTION TRIPPED "67-1"
- PROTECTION TRIPPED "67-2"
- SELECTOR SWITCH IN LOCAL POSITION
- SELECTOR SWITCH IN REMOTE POSITION
- TRANSFORMER PROTECTION TRIPPED "WINDING TEMPERATURE"
- TRANSFORMER PROTECTION ALARM "WINDING TEMPERATURE"
- WATCHDOG PROTECTION RELAY
- V.T. HEALTLY CIRCUIT
- INTERTRIP SEND TO L.V.SWITCHB.
- K86 TRIPPED
- CONTACTOR CLOSED AND INSERTED
- CONTACTOR OPENED OR ISOLATED
- MCB'S CLOSED
- CONTACTOR READY (TCS)
- CONTACTOR READY TO CLOSE
- OPENING COMMAND
- CLOSING COMMAND
- PROTECTION RELAY UNIT 3 HEALTHY
- AUXILIARY 230VAC HEALTHY (ALL SWITCHBOARD)

- MCB'S CLOSED (FROM MEASURE UNIT A5)
- V.T. HEALTLY CIRCUIT (FROM MEASURE UNIT A5)
- UPS 110VDC A SUPPLY "ON" (FROM MEASURE UNIT A5)
- UPS 110VDC B SUPPLY "ON" (FROM MEASURE UNIT A5)
- 230VAC SUPPLY "ON" (FROM MEASURE UNIT A5)
- 24VDC SUPPLY "ON" (FROM MEASURE UNIT A5)
- EARTHING SWITCH OPENED (FROM MEASURE UNIT A5)

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+A7					
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CROSSWIND

ROSETTI MARINO

IMESA ELECTRICAL ENGINEERING

DWG n° : 231151/SD/27

Item n° : PF1113279

TITLE :

SG-100D1 - LOGICAL FUEL CELL A-80000

Measures

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00027

SHEET 12

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00027 Rev.03