BASE LOAD POWER HUB (BLPH)

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

GENERAL ARRANGEMENTS DWG AND FOUNDATION LOAD CALCULATION INCLUDING COG

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
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DWG n° : 231298/SD/7
Item n° : PF1002983/26

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"
GENERAL ARRANGEMENTS
Cover

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DA-00007

SHEET 001

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DA-00007 Rev. 03

INDEX SHEETS

Sheet	Description	Revision 0	1	2	3	4	5	6	7	8	9
001	Cover / GENERAL ARRANGEMENTS	X	X	X	X						
002	Index / GENERAL ARRANGEMENTS	X	X	X	X						
003	Switchgear Characteristics / GENERAL ARRANGEMENTS	X	X	X	X						
004	Switchgear Characteristics / GENERAL ARRANGEMENTS	X	X	X	X						
005	Switchgear Name Plate / GENERAL ARRANGEMENTS	X	X	X	X						
006	Switchgear Lay-Out - Front View / GENERAL ARRANGEMENTS	X	X	X	X						
007	Switchgear Lay-Out - Front View / GENERAL ARRANGEMENTS	X	X	X	X						
008	Switchgear Lay-Out - Top View / GENERAL ARRANGEMENTS	X	X	X	X						
009	Switchgear Lay-Out - Bottom View / GENERAL ARRANGEMENTS	X	X	X	X						
010	Switchgear Lay-Out - Base Frame View / GENERAL ARRANGEMENTS	X	X	X	X						
011	Switchgear Lay-Out - Side View / GENERAL ARRANGEMENTS	X	X	X	X						
012	Base Frame Fixing System / GENERAL ARRANGEMENTS	X	X	X	X						
013	Center of Gravity Positioning / GENERAL ARRANGEMENTS	X	X	X	X						

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

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CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n° : 231298/SD/7

Item n° : PF1002983/26

TITLE : "SG-200N1"

GENERAL ARRANGEMENTS
Index

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DA-00007

SHEET 002

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DA-00007 Rev. 03

A	ENVIRONMENTAL DATA	
1	AMBIENT	MARINE - OFFSHORE
2	INSTALLATION	INDOOR
3	AMBIENT AIR TEMPERATURE - DELAY AVERAGE MAXIMUM	35 °C
4	AMBIENT AIR MINIMUM/MAXIMUM TEMPERATURE	-8,4 ÷ +40 °C
5	RELATIVE HUMIDITY AVERAGE	95 %
6	RELATIVE HUMIDITY MAXIMUM	-
7	POLLUTION LEVEL DEGREE	VERY LIGHT

B	SWITCHGEAR ELECTRICAL FEATURES	
1	RATED VOLTAGE (Ue)	0,4/0,23 kV
2	NOMINAL VOLTAGE (Un)	0,4/0,23 kV
3	RATED INSULATION VOLTAGE (Ui)	0,69 kV
4	RATED FREQUENCY (Fn)	50 Hz
5	RATED IMPULSE WITHSTAND (Uimp)	4 kV
6	RATED NORMAL CURRENT (In)	2500 A
7	RATED SHORT TIME WITHSTAND CURRENT (Ik)	50 kA
8	RATED DURATION OF SHORT CIRCUIT (tk)	1 s
9	RATED PEAK WITHSTAND CURRENT (Ipk)	105 kA
10	INTERNAL ARC CLASSIFICATION IAC (only A1 Column)	50 kA
11	ARCING CLASS (only A1 Column)	0,3 s
12	NUMBER OF PHASES	3+1
13	PHASES IDENTIFICATION	L1-L2-L3-N
14	EARTHING CIRCUITS MAIN BUSBAR SECTION	> 300mmq
15	REFERENCE STANDARDS	IEC 61439-2
16	EARTHING SYSTEM	TN-S
17	NEUTRAL BUSBARS SIZING	50% PHASE SECTION

C	SWITCHGEAR MECHANICAL FEATURES	
1	EXTERNAL DEGREE OF PROTECTION	IP30
2	INTERNAL DEGREE OF PROTECTION	IP20
3	EXTERNAL MECHANICAL IMPACT PROTECTION	IK10
4	ACCESSIBILITY	FRONT
5	TYPE DESIGNATION	FORM : 4B (INCOMING) FORM : 4B (OUTGOING)
6	POWER CABLES (INCOMING)	FROM THE TOP (by MCT)
7	POWER CABLES (OUTGOING)	FROM THE TOP (by MCT)
8	AUXILIARY CABLES	FROM THE TOP (by MCT)
9	BASE FRAMES	PROVIDED
10	MIMIC DIAGRAM (BLACK)	not applicable
11	BOTTOM CLOSING	UNDRILLED ALUMINIUM REMOVABLE PLATES
12	PAINTING COLOUR	RAL 7035
13	PAINTING SPECIFICATION CYCLE	C3-MEDIUM, > 60µ (IMESA CYCLE "A")
14	SURFACE NOT PAINTED	ZINC PLATED OR TROPICALIZED
15	FRONT DOORS (AUXILIARY COMPARTMENT)	HINGED WITH KEY LOCKS
16	FRONT DOOR (C.B. COMPARTMENT)	HINGED WITH KEY LOCKS
17	REAR PANELS	BOLTED
18	MINIMUM CLEARANCE	TO THE FRONT 1200 mm
19		TO THE REAR 100 mm
20		TO THE TOP 200 mm
21		TO THE SIDE 100 mm
22	WEIGHTS	4.760 kg ± 10%

CROSSWIND

ROSETTI MARINO

IMESA ELECTRICAL ENGINEERING

DWG n° : 231298/SD/7

Item n° : PF1002983/26

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TITLE : "SG-200N1"

GENERAL ARRANGEMENTS
Switchgear Characteristics

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DA-00007

SHEET 003

REV. 03

File Name : 1723002197-EL-DA-00007 Rev. 03

F.to UNI A3: 420mmx297mm

D	BUSBAR SYSTEM	
1	MATERIALS	ELECTROLYTIC COPPER
2	BUSBAR SURFACE TREATMENT	not applicable
3	INSULATION BUSBARS (if applicable)	SHEATHED
4	JOINT AND CONNECTIONS TREATMENT	not applicable
5	INSULATION JOINTS (if applicable)	REMOVABLE SOLID DIELECTRIC PROTECTIONS
6	BULKHEADS FOR POWER BARS (if applicable)	YES
7	PHASES IDENTIFICATION	L1 (BROWN)
8		L2 (BLACK)
9		L3 (GREY)
10		N (BLUE)
11		PE (YELLOW / GREEN)
12	MARKING OF PHASES	ADHESIVE LABELS PLACED ON BARS

E	POWER / AUXILIARY CIRCUITS CABLES		
1	LOW VOLTAGE CABLE TYPE		SH-W (MARINE APPROVAL)
2	INSULATION		HLPE (600/1000 V)
	SIZE / COLOUR CODE		
3	MEASURE & CONTROL & SIGNAL CIRCUITS	AC/DC CIRCUIT (Internal Heating / Motor Spring Charger / Internal Distribution)	≥ 2,5 mmq / BLACK
4		VT SECONDARY CIRCUIT	1,5 mmq / BLACK
5		CT SECONDARY CIRCUIT	2,5 mmq / BLACK
6		AC CIRCUIT	≥ 1,5 mmq / BLACK
7		DC CIRCUIT	≥ 1,5 mmq / RED(+) WHITE (-)
8		GROUND CIRCUIT	YELLOW / GREEN
9		PHASES IDENTIFICATION FOR AC POWER CIRCUIT TERMINATION WITH SHRINKABLE SHEATH [cable insulation BLACK]	L1 (BROWN)
10			L2 (BLACK)
11			L3 (GREY)

F	TERMINAL BLOCKS	
1	TERMINAL BLOCK TYPE	SPRING CLAMP (CABUR HMM grey)
2	DISCONNECT/TEST TERMINAL BLOCK TYPE	SPRING CLAMP (CABUR HMM grey)
3	MATERIAL	POLYAMIDE
4	SIZE	≥ 4mmq

G	AUXILIARY CIRCUIT VOLTAGE	
1	AUXILIARY COMMAND CIRCUITS	230 Vac
2	AUXILIARY SIGNALLING CIRCUITS	230 Vac
3	AUXILIARY PROTECTION CIRCUITS	230 Vac
4	SPRING CHARGING MOTOR C.B.	230 Vac
5	INTERNAL LIGHTINGS	230 Vac
6	ANTICONDENSATION HEATER	230 Vac

H	LABELS	
1	MATERIAL	TRAFFOLYTE
2	BACKGROUND	WHITE
3	LETTERS	BLACK
4	LANGUAGE	ENGLISH
5	WARNING LABEL LANGUAGE	ENGLISH
6	FIXING	SCREWED
7	MARKING DEVICES / WIRES	INDIPENDENT
8	AC CIRCUIT	SEQUENTIAL
9	DC CIRCUIT	SEQUENTIAL

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IMESA ELECTRICAL ENGINEERING

DWG n°: 231298/SD/7

Item n°: PF1002983/26

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

GENERAL ARRANGEMENTS
Switchgear Characteristics

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

SCALE : NTS

A3

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SHEET 004

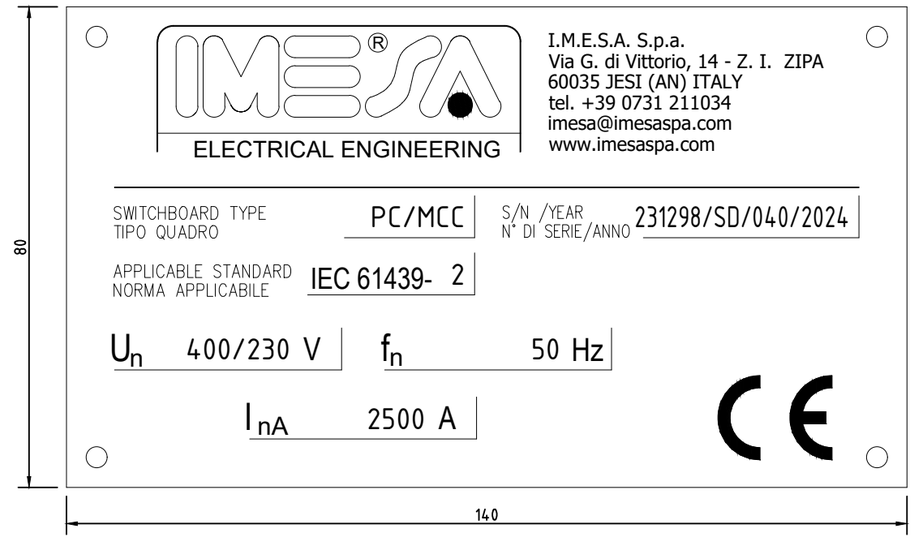
REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DA-00007 Rev. 03

NAMEPLATE DATES

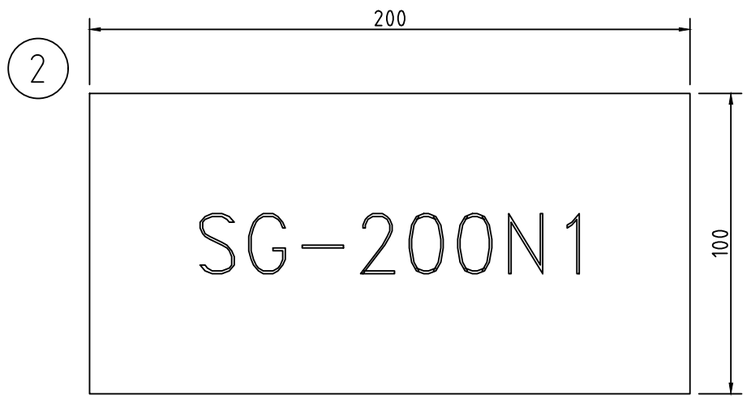
1



Material: Alloy

SWITCHGEAR TAG PLATE

2



Material: Traffolyte

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CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

GENERAL ARRANGEMENTS
Switchgear Name Plate

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

SCALE : NTS

A3

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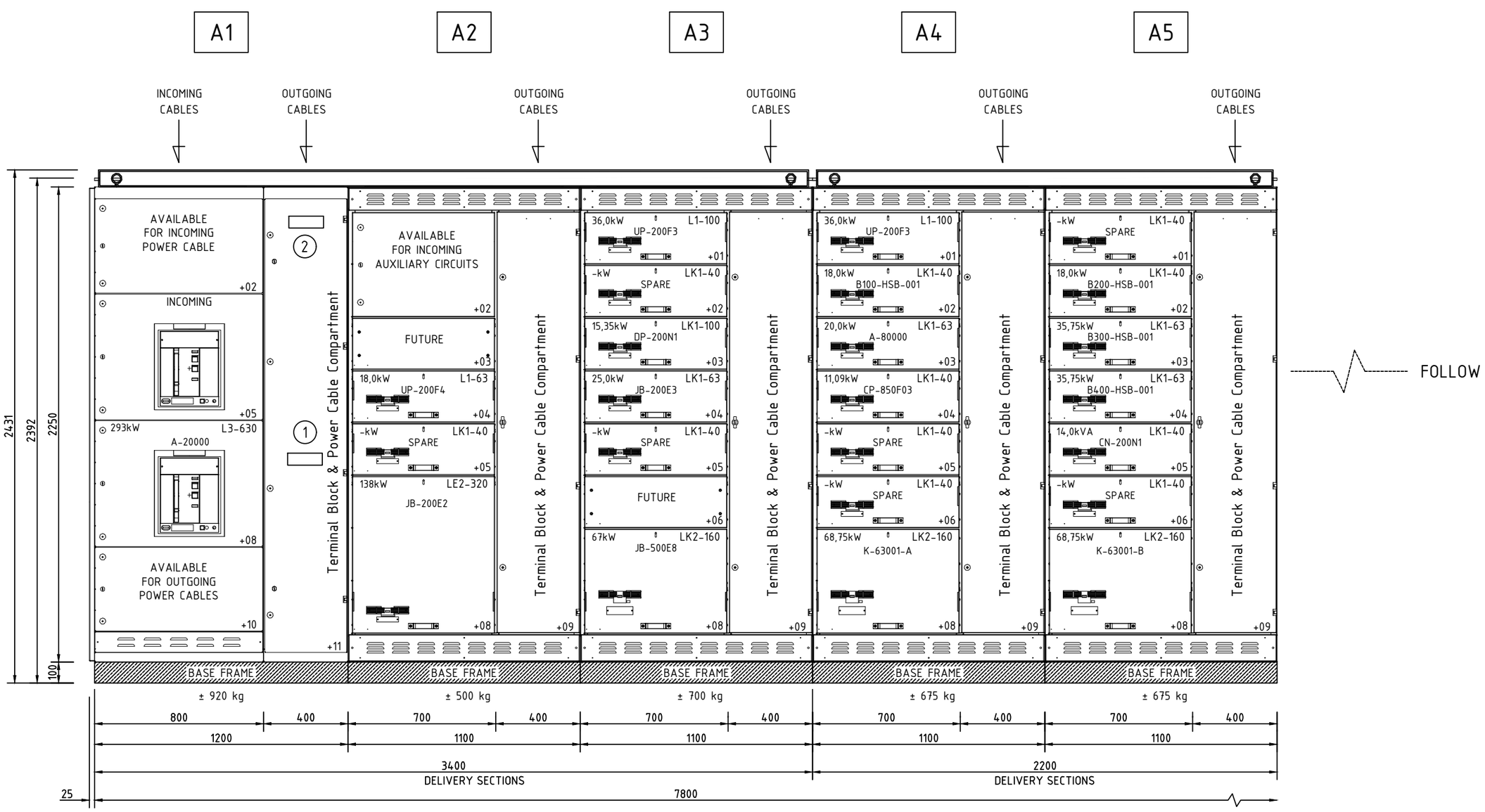
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REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DA-00007 Rev. 03

FRONT VIEW



NOTE :

1. Measurement Tollerance + 0,25%
2. Weight Tollerance ± 10%
3. Lifting Beam (Removable after Positioning)
4. Layout doors are represented in the Functional Diagrams

scale 1/20

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Item n° : PF1002983/26

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

GENERAL ARRANGEMENTS
Switchgear Lay-Out - Front View

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DA-00007

SHEET 006

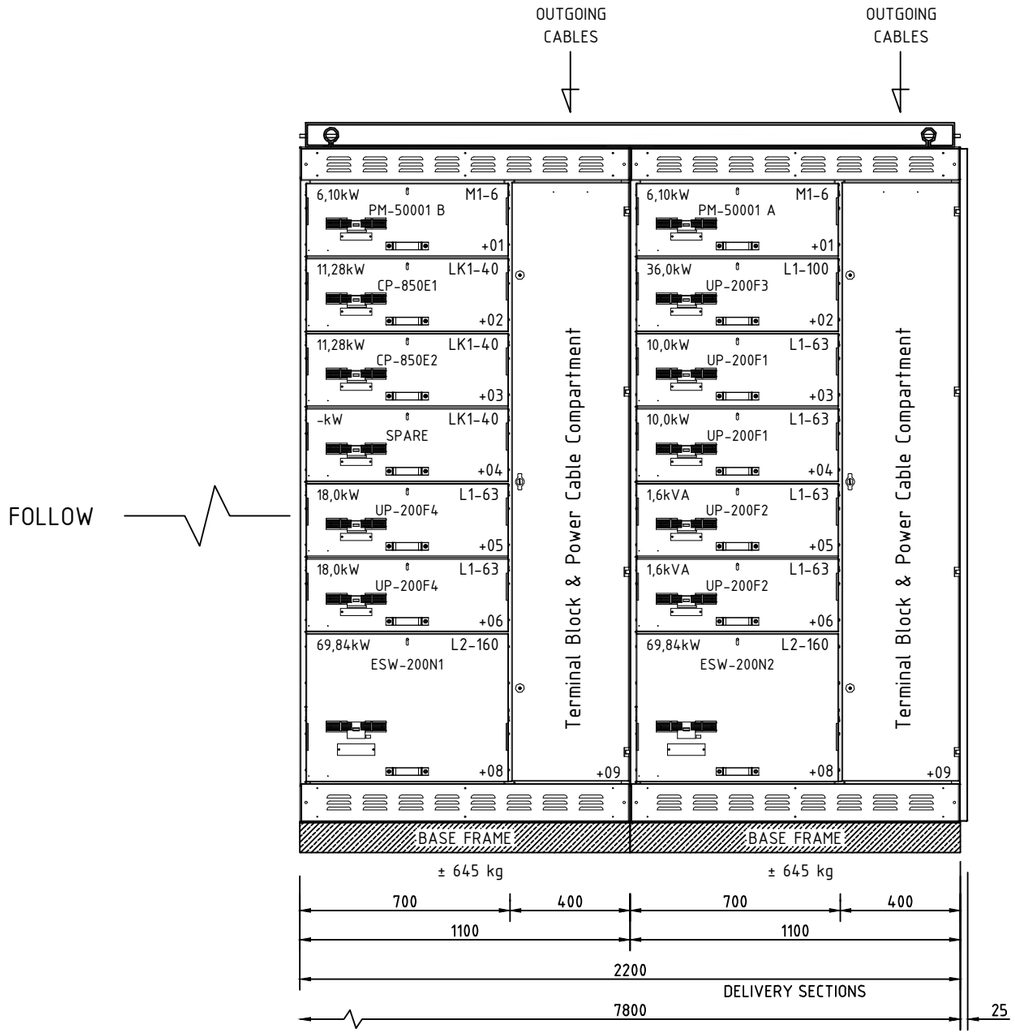
REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DA-00007 Rev. 03

FRONT VIEW

A6 A7



FOLLOW

NOTE :

1. Measurement Tollerance + 0,25%
2. Weight Tollerance ± 10%
3. Lifting Beam (Removable after Positioning)
4. Layout doors are represented in the Functional Diagrams

scale 1/20

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CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n° : 231298/SD/7

Item n° : PF1002983/26

TITLE : "SG-200N1"

GENERAL ARRANGEMENTS
Switchgear Lay-Out - Front View

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

SCALE : NTS

A3

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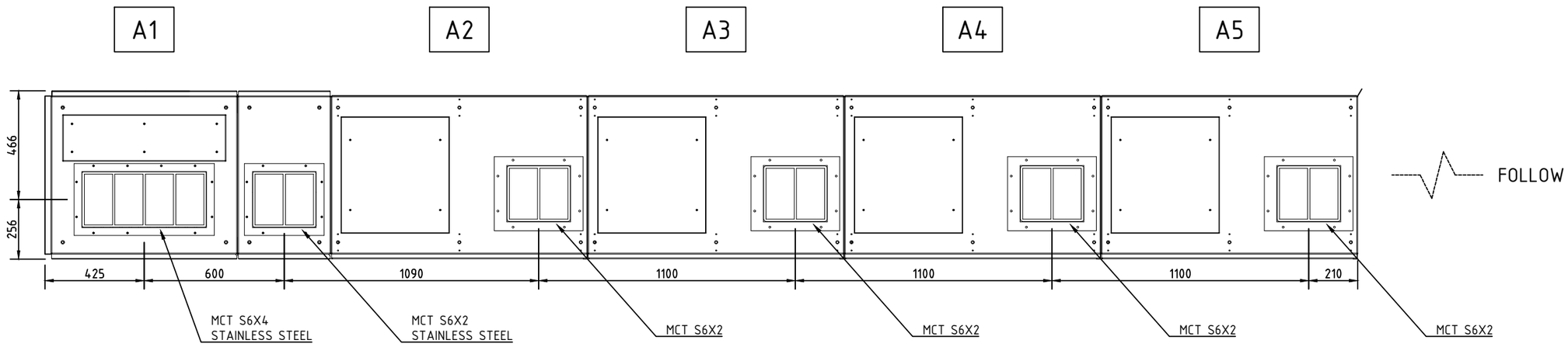
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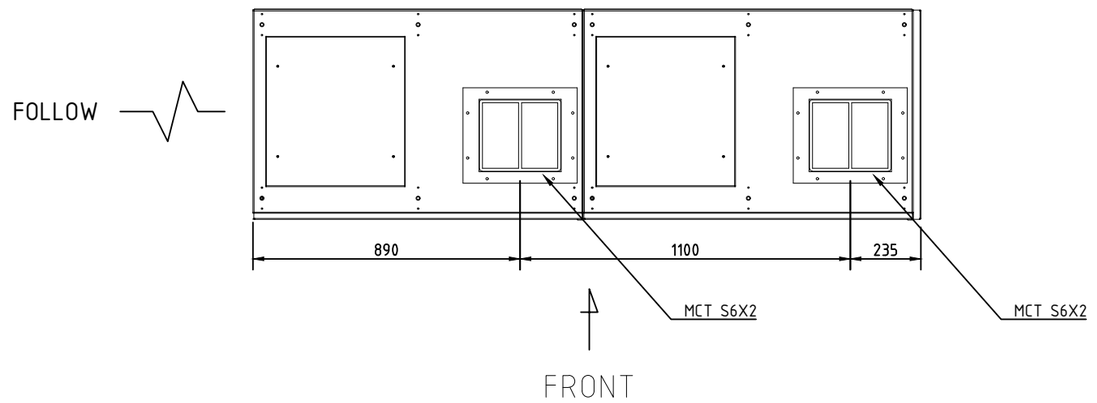
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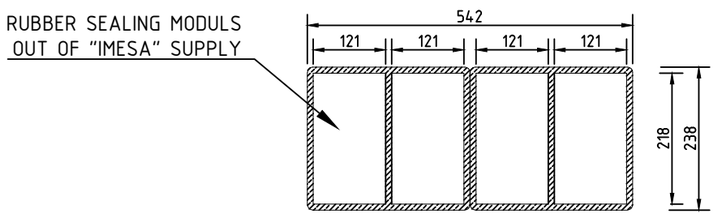
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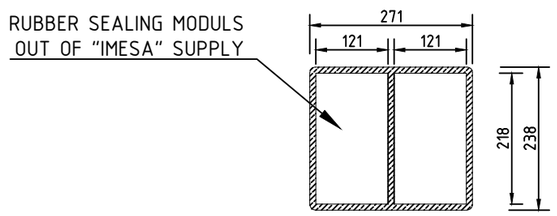
TOP VIEW







"S6X4" MCT DETAILS



"S6X2" MCT DETAILS

scale 1/20

NOTE :

1. Measurement Tollerance + 0,25%

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CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n° : 231298/SD/7

Item n° : PF1002983/26

TITLE : "SG-200N1"

GENERAL ARRANGEMENTS
Switchgear Lay-Out - Top View

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

SCALE : NTS

A3

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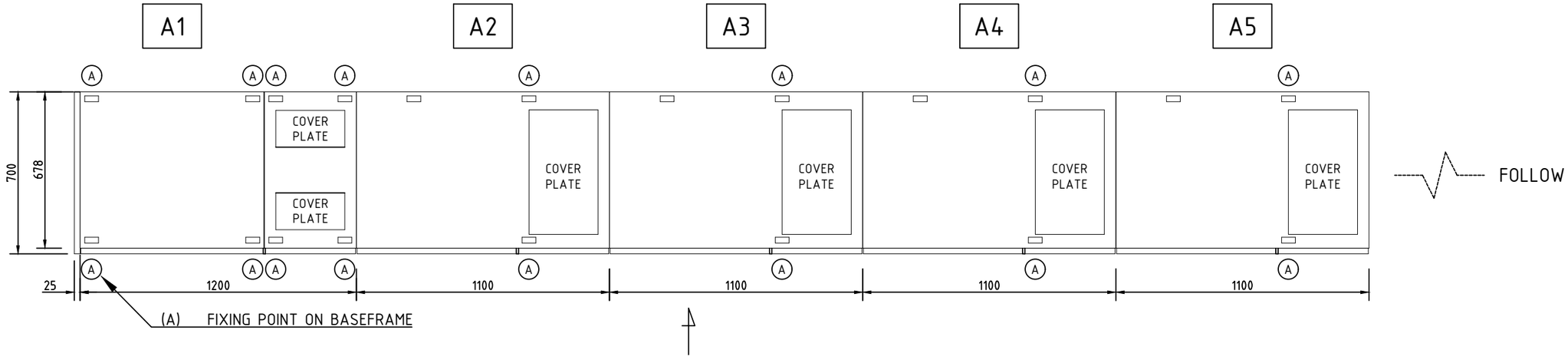
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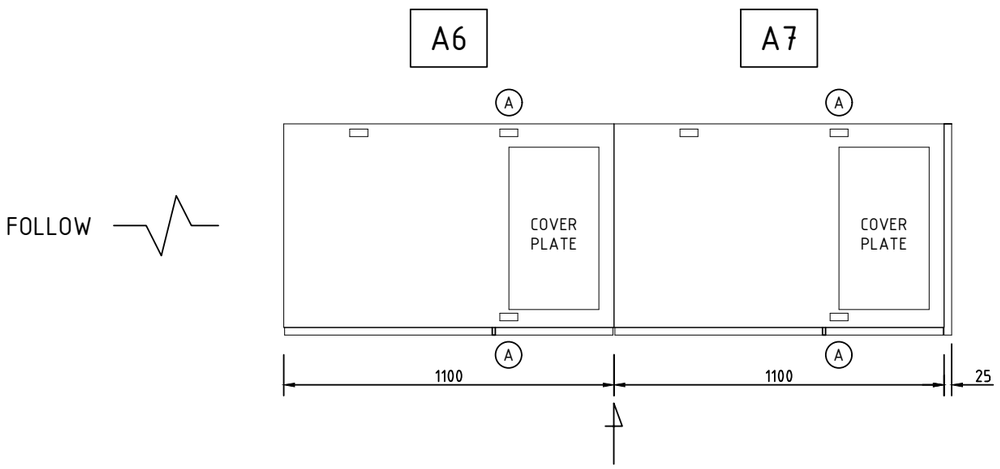
REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DA-00007 Rev. 03

BOTTOM VIEW





NOTE :
1. Measurement Tollerance + 0,25%

scale 1/20

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=					
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CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n° : 231298/SD/7

Item n° : PF1002983/26

TITLE : "SG-200N1"

GENERAL ARRANGEMENTS
Switchgear Lay-Out - Bottom View

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DA-00007

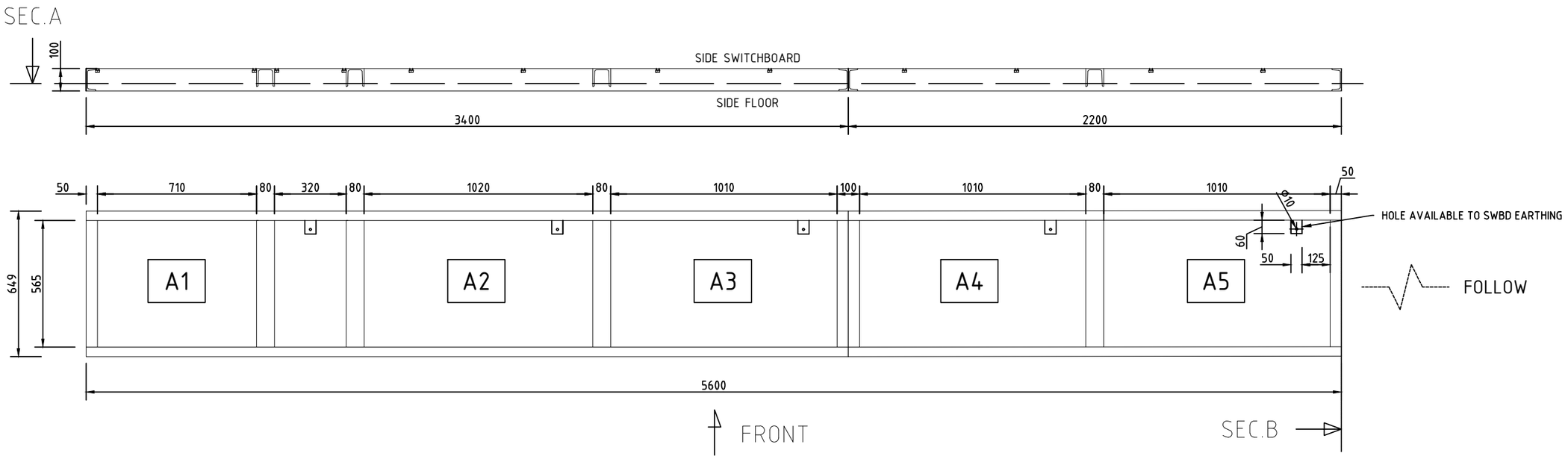
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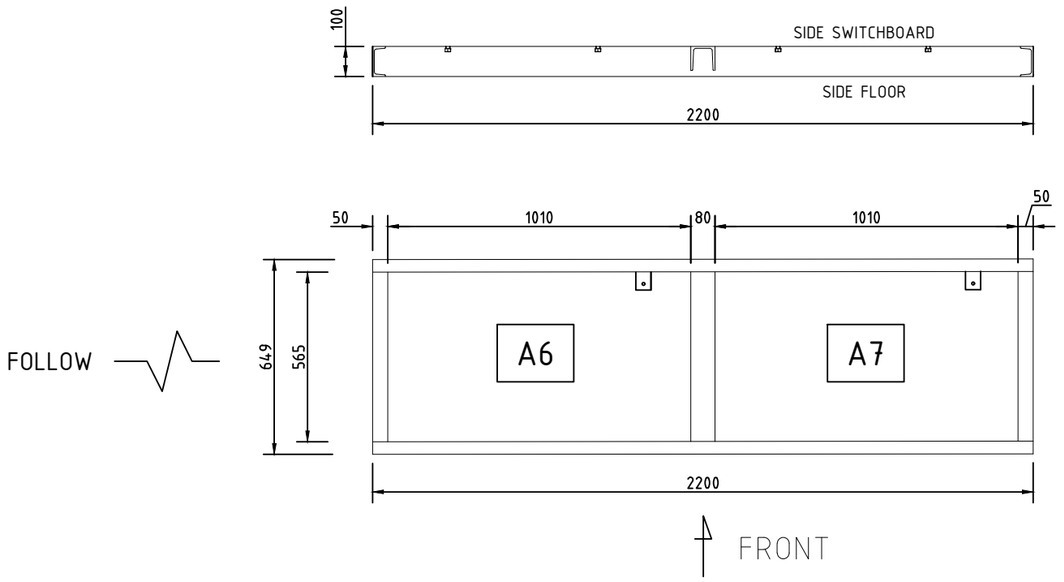
REV. 03

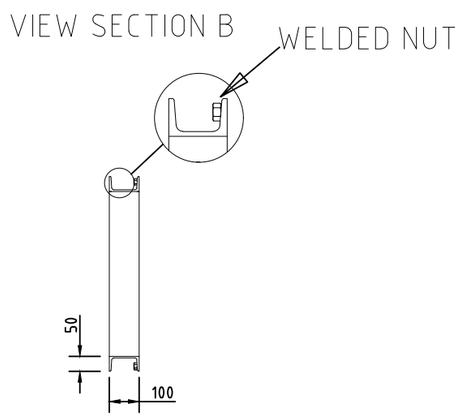
F.to UNI A3: 420mmx297mm

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BASE FRAME VIEW







NOTE :
1. Measurement Tollerance + 0,25%

scale 1/20

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IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

GENERAL ARRANGEMENTS
Switchgear Lay-Out - Base Frame View

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

SCALE : NTS

A3

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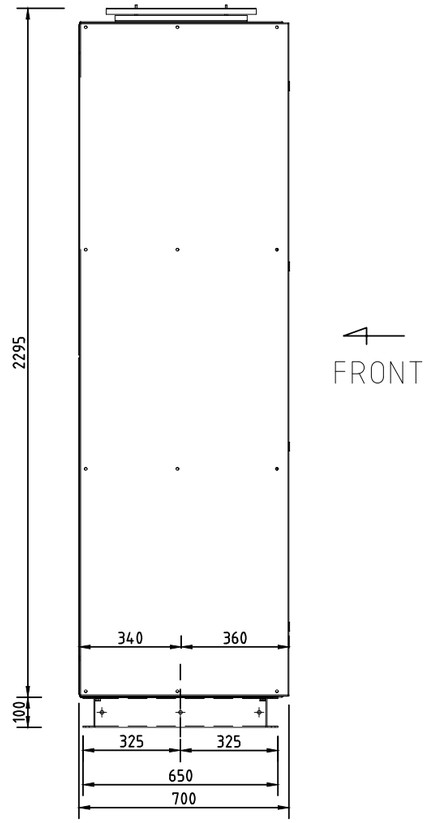
SHEET 010

REV. 03

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SIDE VIEW



NOTE :
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scale 1/20

=						
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Item n° : PF1002983/26

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

GENERAL ARRANGEMENTS
Switchgear Lay-Out - Side View

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DA-00007

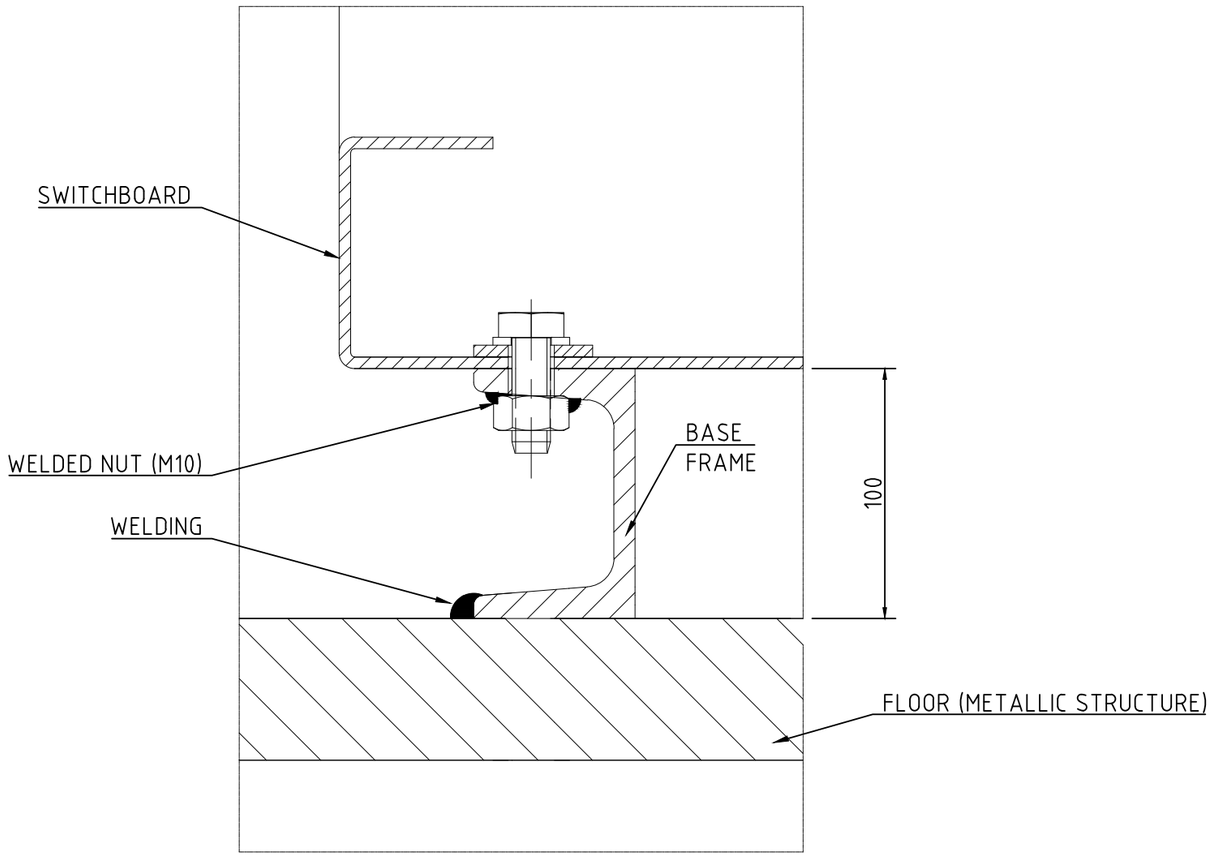
SHEET 011

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DA-00007 Rev. 03

BASE FRAME FIXING SYSTEM



NOTE :
1. Measurement Tollerance + 0,25%

scale 1/20

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
3	28/08/2024	Flamminio	Santinelli	Santinelli	As Built (ASB)
2	22/05/2024	Flamminio	Santinelli	Santinelli	Accepted for Construction (AFC)
1	28/03/2024	Flamminio	Santinelli	Santinelli	Issued for review (IFR)
0	21/02/2024	Flamminio	Santinelli	Santinelli	Issued for review (IFR)

IMESA ELECTRICAL ENGINEERING

DWG n° : 231298/SD/7

Item n° : PF1002983/26

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

GENERAL ARRANGEMENTS
Base Frame Fixing System

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DA-00007

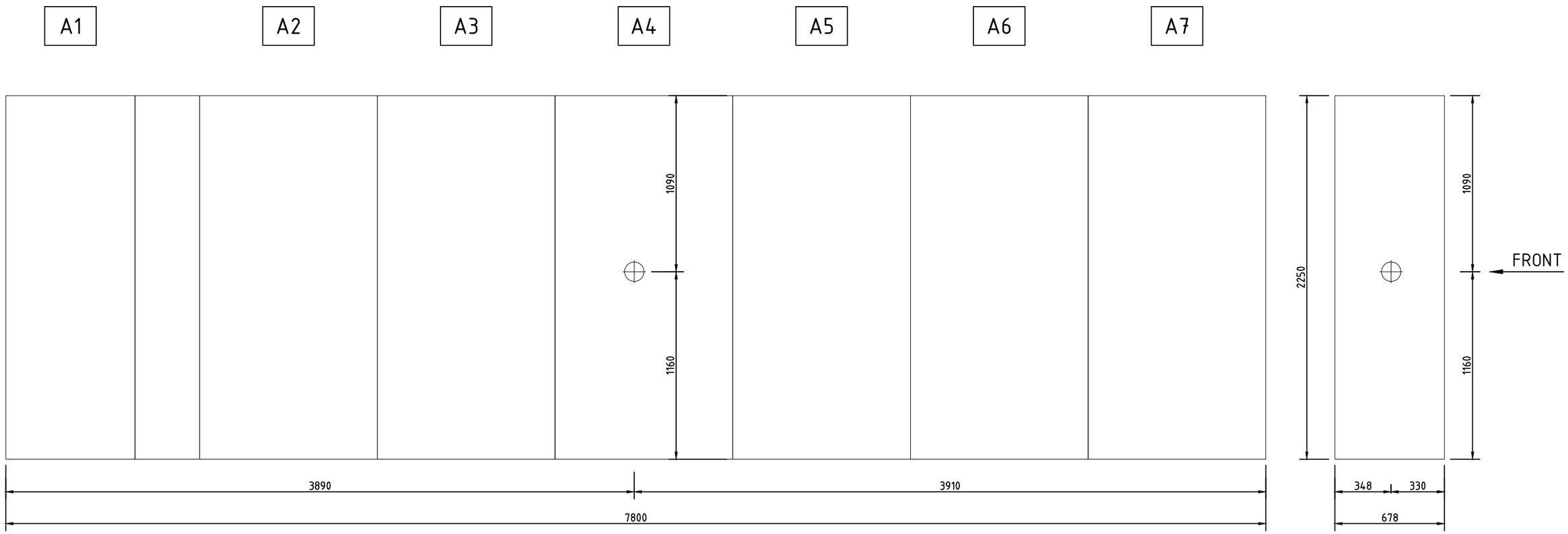
SHEET 012

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DA-00007 Rev. 03

CENTER OF GRAVITY POSITIONING



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
3	28/08/2024	Flamminio	Santinelli	Santinelli	As Built (ASB)
2	22/05/2024	Flamminio	Santinelli	Santinelli	Accepted for Construction (AFC)
1	28/03/2024	Flamminio	Santinelli	Santinelli	Issued for review (IFR)
0	21/02/2024	Flamminio	Santinelli	Santinelli	Issued for review (IFR)

IMESA ELECTRICAL ENGINEERING

DWG n° : 231298/SD/7

Item n° : PF1002983/26

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

GENERAL ARRANGEMENTS
Center of Gravity Positioning

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DA-00007

SHEET 013

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DA-00007 Rev. 03