Base Load Power Hub (BLPH)

SG-100D1 EQUIPMENT DATA SHEET INCLUDING MSDS AND WEIGHT DATA SHEET

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ROSETTI MARINO

1	NO COMMENTS - APPROVED - WORK MAY PROCEED
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1 MEDIUM VOLTAGE SWITCHGEAR DATA SHEET

	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

	Mechanical Features	
1	***EXTERNAL DEGREE OF PROTECTION***	IP3X
2	***INTERNAL DEGREE OF PROTECTION***	IP2X
3	***EXTERNAL MECHANICAL IMPACT PROTECTION***	IK10
4	***ACCESSIBILITY***	FRONT AND REAR
5	***TYPE DESIGNATION***	LSC2B-PM
6	***COLOUR PAINTING***	RAL 7035
7	***SURFACE NOT PAINTED***	ZINC PLATED OR TROPICALIZED

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	Switchgear Electrical Features	
1	***RATED VOLTAGE (Ue)***	6,6 kV
2	***RATED INSULATION VOLTAGE (Ur)***	7,2 kV
3	***RATED FREQUENCY (fr)***	50 Hz
4	***RATED POWER-FREQUENCY WITHSTAND VOLTAGE (Ud)***	20 kV
5	***RATED LIGHTNING IMPULSE WITHSTAND VOLTAGE (Up)***	60 kV
6	***RATED NORMAL CURRENT (Ir)***	630 A
7	***RATED SHORT TIME WITHSTAND CURRENT (Ik)***	25 kA
8	***RATED DURATION OF SHORT CIRCUIT (tk)***	1 s
9	***RATED PEAK WITHSTAND CURRENT (Ipk)***	65 kA
10	***INTERNAL ARC CLASSIFICATION IAC***	25 kA x 1 s
11	***ACCESSIBILITY TYPE***	AFLR
12	***NUMBER OF PHASES***	3
13	***PHASES IDENTIFICATION***	L1-L2-L3
14	***EARTHING CIRCUITS MAIN BUSBAR SECTION***	>200mmq
15	***REFERENCE STANDARDS***	IEC 62271-200
16	***CLASS REFERENCE***	not applicable

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2 MEDIUM VOLTAGE CIRCUIT BRAKER DATASHEET

2.1 MEDIUM VOLTAGE CIRCUIT BRAKER DATASHEET (ON CUBICLE A1, A6)

ABB VD4/P 12.06.25 P150 (on unit A6 and A1)

Additional Information

- **Rated Voltage (U_r):** 12 kV
- **Rated Impulse Withstand Voltage (U_{imp}):** 75 kV
- **Power Frequency Withstand Voltage:** 28 kV
- **Rated Frequency (f):**50/60 Hz
- **Rated Current (I_n):** 630 A
- **Rated Short-time Withstand Current Low Voltage (I_{cw}):** for 3 s 25 kA
- **Rated Short-Circuit Making Capacity (I_{cm}):** 63 kA
- **Operating Sequence:** O-0,3S-CO-15S-CO

2.2 MEDIUM VOLTAGE CONTACTOR V-CONTACT DATASHEET (ON CUBICLE A3, A7, A2, A4)

ABB VSC 7/P 3P 7,2kV 400A DOUBLE COMMAND (DCO)

Rated voltage [kV]: 7.2

Rated insulation voltage [kV]: 7.2

Withstand voltage at 50 Hz (1 min) [kV]: 20

Impulse withstand voltage [kVp]: 60

Rated frequency [Hz]: 50-60

Rated service current [A] 400

Number of operations (rated values)

Contactor DCO [op./hour] 1200

2.3 MEDIUM VOLTAGE ENCLOSURE AND EARTHING SWITCH DATASHEET (ON CUBICLE A1, A2, A3, A4, A6, A7)

ABB Power Cube PB1/E L600 12kV 400/630A 25kA-3s

Rated voltage [kV] 12

Rated insulation voltage [kV] 12

Withstand voltage (50 Hz) [kV] 28

Impulse withstand voltage [kV] 75

Rated frequency [Hz] 50-60

Rated normal current (40°C) [A] 400(VSC) / 630 (C.B.)

Rated short-time withstand current (3 s) [kA] 25

Electrical Specification of the earthing switch

Short time withstand current / Short- circuit making capacity	25 kA (3s)
Peak current	63 kA

2.4 MEDIUM VOLTAGE ENCLOSURE AND EARTHING SWITCH DATASHEET (ON CUBICLE A5)

ABB Power Cube PB1/RE L600 12kV 630A 25kA-3s (with withdrawable compartment for TV)

Rated voltage [kV] 12

Rated insulation voltage [kV] 12

Withstand voltage (50 Hz) [kV] 28

Impulse withstand voltage [kV] 75

Rated frequency [Hz] 50-60

Rated normal current (40°C) [A] 630

Rated short-time withstand current (3 s) [kA] 25

Electrical Specification of the earthing switch

Short time withstand current / Short- circuit making capacity	25 kA (3s)
Peak current	63 kA

3 MEDIUM VOLTAGE FUSES DATASHEET

3.1 MEDIUM VOLTAGE FUSE DATASHEET (ON CUBICLE A3 AND A7)

ABB CEF 6/12kV 160A (on A3 and A7 cubicle)

Product Name: CEF 6/12kV 160A 442/87mm S

Standards: IEC 60282-1, VDE 0670-T4, VDE 0670-T402

Rated Voltage (U_r): 12 kV

Rated Frequency (f): 50 Hz

Rated Current (I_n): 160 A

3.2 MEDIUM VOLTAGE FUSES DATASHEET (ON CUBICLE A2)

ABB CEF 6/12kV 63A (on A2 cubicle)

Product Name: CEF 6/12kV 63A 442/65mm S

Standards: IEC 60282-1, VDE 0670-T4, VDE 0670-T402

Rated Voltage (U_r): 12 kV

Rated Frequency (f): 50 Hz

Rated Current (I_n): 63 A

3.3 MEDIUM VOLTAGE FUSES DATASHEET (ON CUBICLE A4)

ABB CMF 6/12kV 250A (on A4 cubicle)

Product Name: CMF 6/12kV 250A 442/87mm S

Standards: IEC 60282-1

Rated Voltage (U_r): 7,2 kV

Input Voltage Type: AC

Rated Frequency (f): 50 Hz

Rated Current (I_n): 250 A

4 MEASURE AND PROTECTION TRANSFORMERS DATASHEETS

4.1 VOLTAGE TRANSFORMER DATASHEET

ABB *TJP4.3 (Custom realization for Crosswind project) (on cubicle A1, A2, A3, A5, A6, A7)*

Highest voltage for equipment	7,2 kV
Power frequency test voltage, 1 min.	20 kV
Lightning impulse test voltage	60 kV

6,6kV: √3/110: √3-110: √3-110:3

1° winding: (110:√3) ***Cl. 0,5-3P - Pr. 20VA***

2° winding: (110:√3) ***Cl. 0,5-3P - Pr. 30VA***

3° winding: (110:3) ***Cl. 3P - Pr. 30VA***

4.2 CURRENT TRANSFORMER DATASHEET

4.2.1 Current Transformer Datasheet ATB 10-BS

Esitas Current Transformer ATB 10-BS

Operating Voltage Um (kV): 7,2

Rated power frequency withstand voltage (1minute) (kV): 20

Rated impulse test voltage (1,2/50 us) full vawe (kV): 60

Rated Frequency (Hz): 50

Rated short-time thermal current (Ith) (1s) (kA): 25

Rated dynamic current (Idyn) (kA): 65

Note:

Regarding electrical characteristics like:

Transformation Ratio, current, measure class, protection class, safety factor, burden etc.. refer to Single Linee Diagram (document number 1723002197-EL-DG-00010_04)

5 WEIGHT M.V. SWITCHBOARD SG-100D1

1) SWITCHBOARD SG-100D1 UNIT 1 - WEIGHT 1185 Kg

2) SWITCHBOARD SG-100D1 UNIT 2 - WEIGHT 980 Kg

3) SWITCHBOARD SG-100D1 UNIT 3 - WEIGHT 980 Kg

4) SWITCHBOARD SG-100D1 UNIT 4 - WEIGHT 730 Kg

5)

6) SWITCHBOARD SG-100D1 UNIT 5 - WEIGHT 640 Kg

7) SWITCHBOARD SG-100D1 UNIT 6 - WEIGHT 1020 Kg

8) SWITCHBOARD SG-100D1 UNIT 7 - WEIGHT 1180 Kg

TOTAL WEIGHT 6715 Kg