



Powering Business Worldwide

SITE PLANNING DATA - EBC-Li 128S

External Battery Cabinet with Lithium-Ion batteries

Page 1 Detailed exterior dimensions

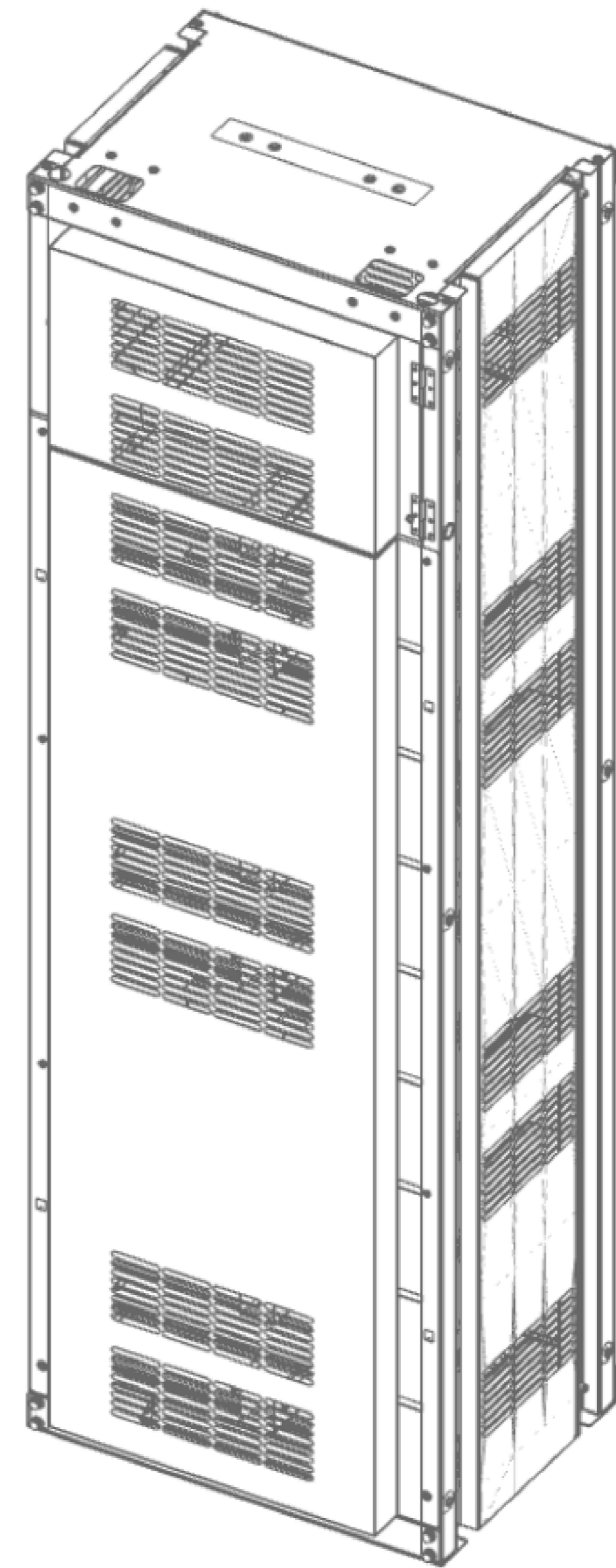
Page 2 Installation details

Page 3 Packing details

Page 4 Component details

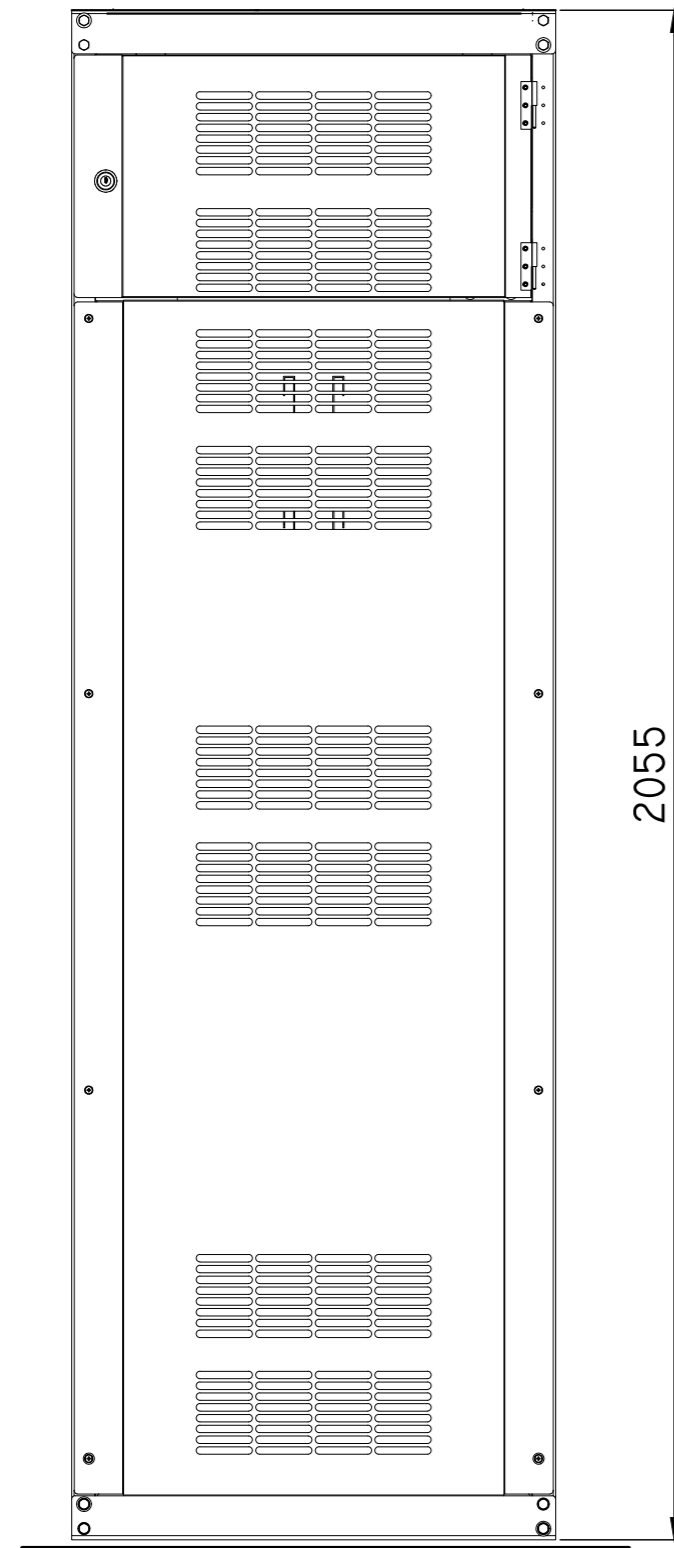
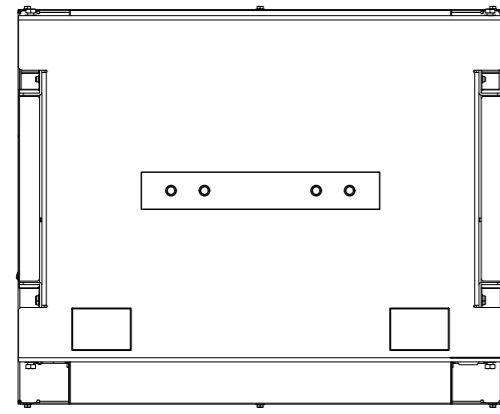
Page 5 Connection and wiring details

Page 6 System connection



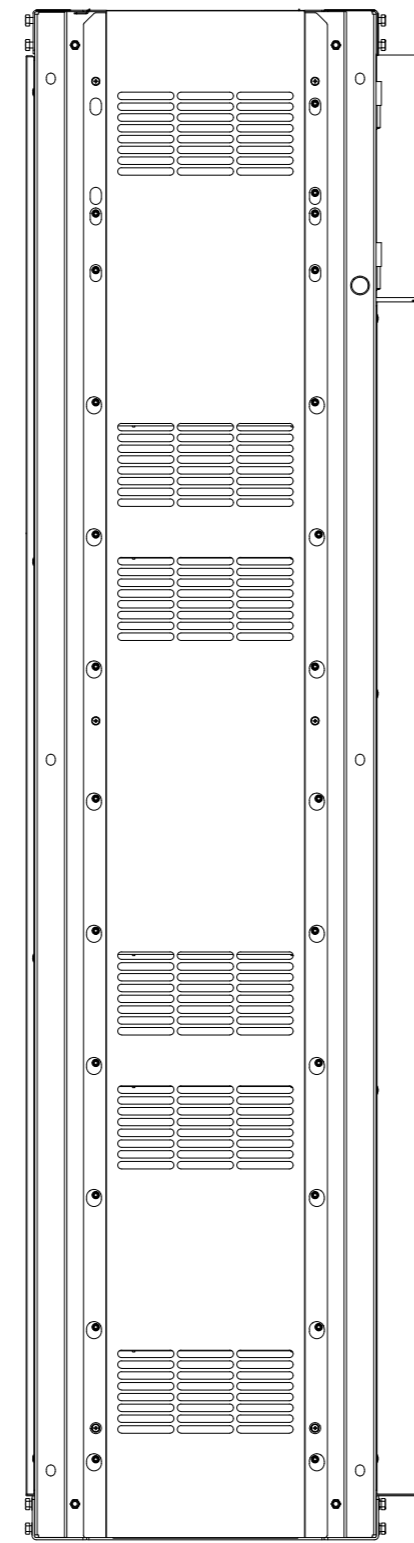
METRIC		EATON	
DIMENSIONS ARE IN MILLIMETERS AFTER PLATING, DIMENSIONS AND TOLERANCES IN ACCORDANCE WITH ASME Y14.5M-1994. SEE NOTES FOR TOLERANCES.			
DESCRIPTION: EBC-Li-128S SITE PLANNING DATA			
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TOP

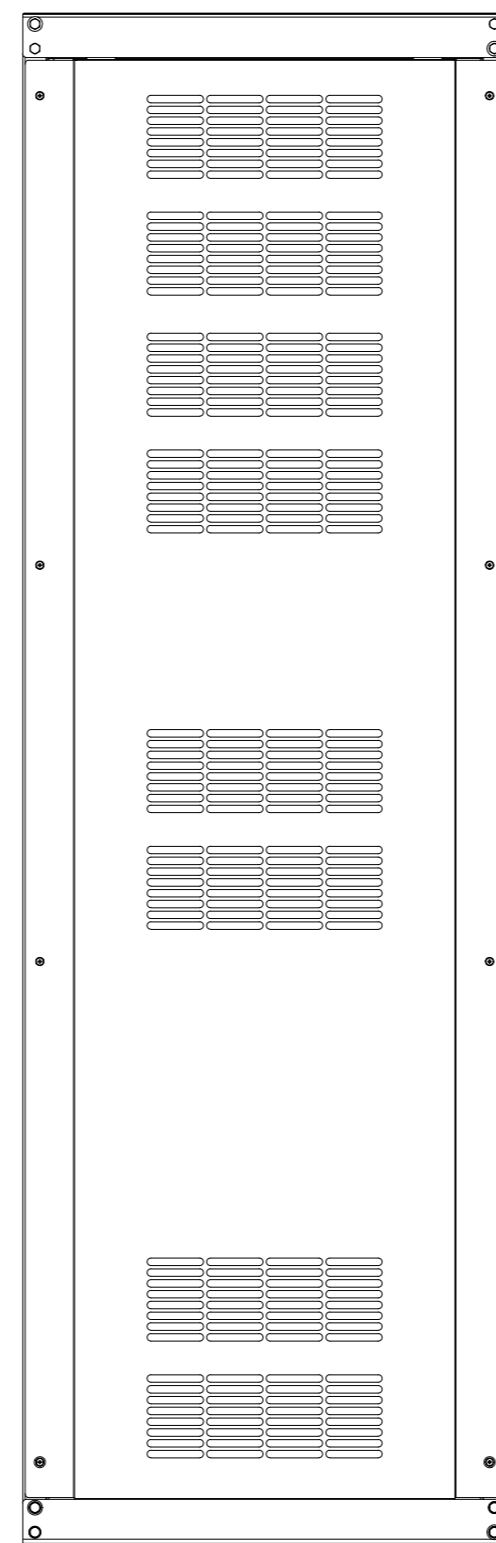


FRONT (WITH FRONT DOOR)

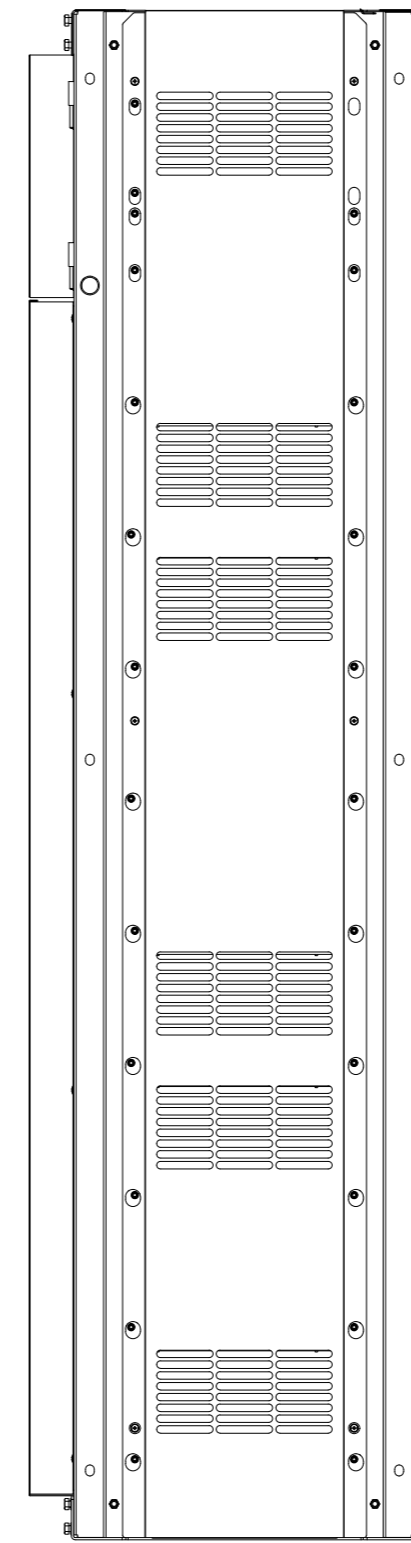
INSULATED
COVER/FLOOR



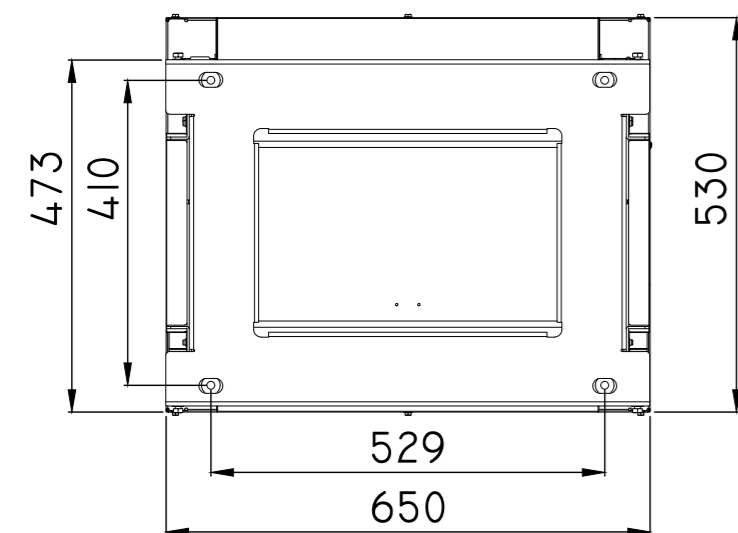
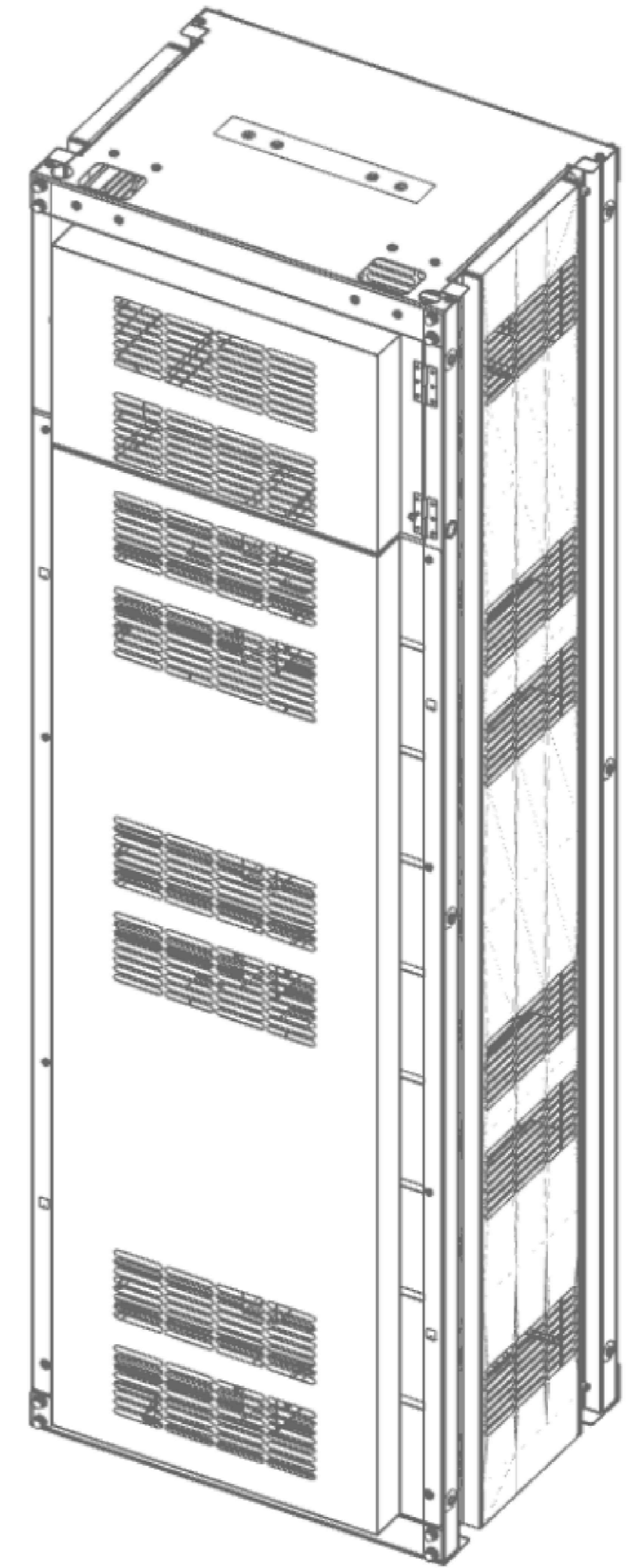
LEFT



BACK (WITH BACK COVER)



RIGHT



BOTTOM

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DESCRIPTION: EBC-LI-I28S DETAILED EXTERIOR DIMENSIONS			
ORIGINATED: N. HYPPIÄNEN	22.01.2019	ECO:	NAME:
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Battery configuration (160kW, 10mins)

Average Current [A]	Discharging time [min]	Total Energy (kWh)
Discharge 205	20	2,2
Discharge 326	10,0	2,8
Discharge 402	8,3	4,3
Charge 22,3	210	0,3

EBC-LI HEAT DISSIPATION.

BATTERY HEAT REJECTION MAX 500W PER RACK DURING AND AFTER DISCHARGE

NOTE: HEAT ENERGY CREATED DURING DISCHARGE IS REJECTED TO ROOM WITHIN FOLLOWING SEVERAL HOURS

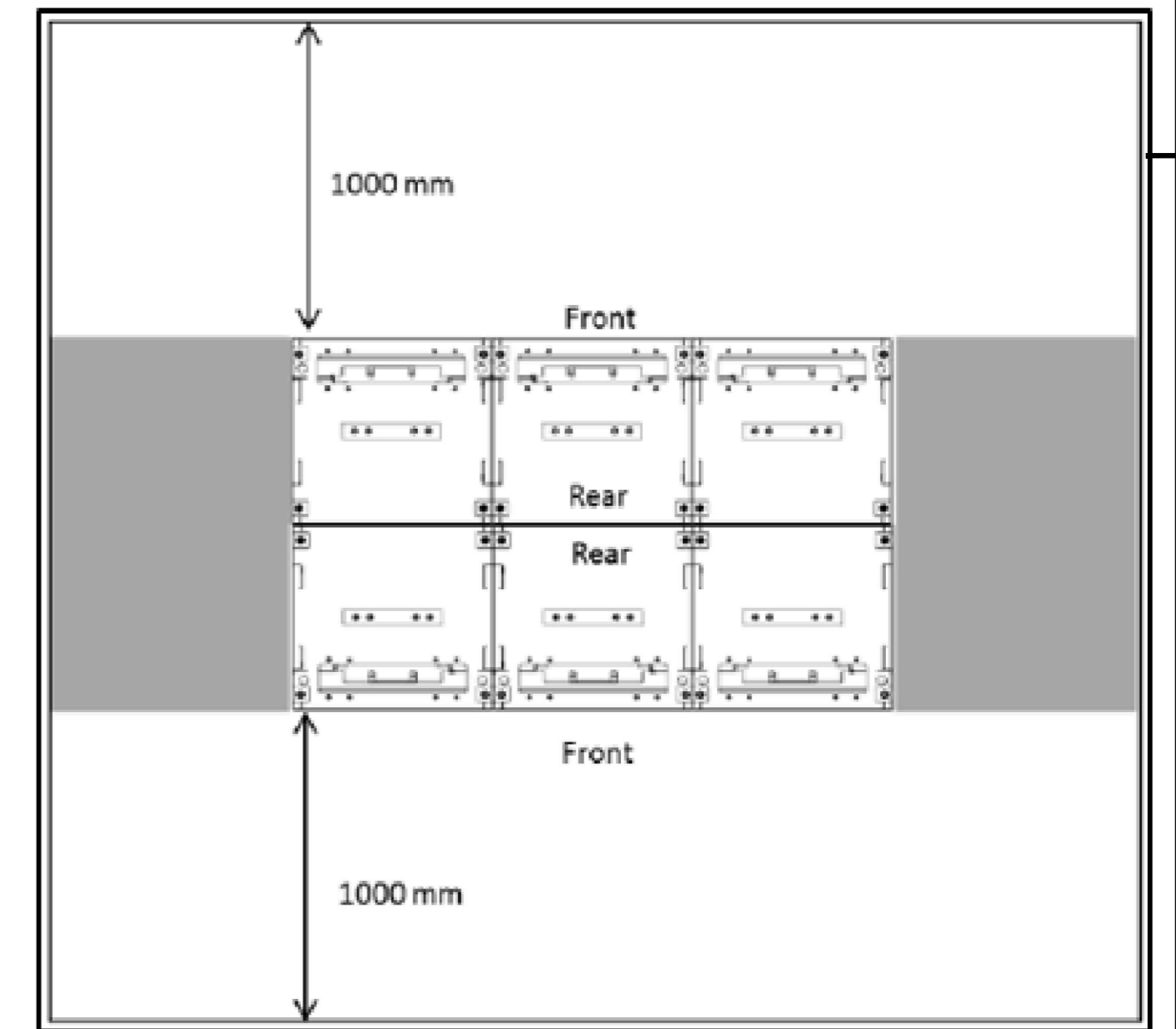
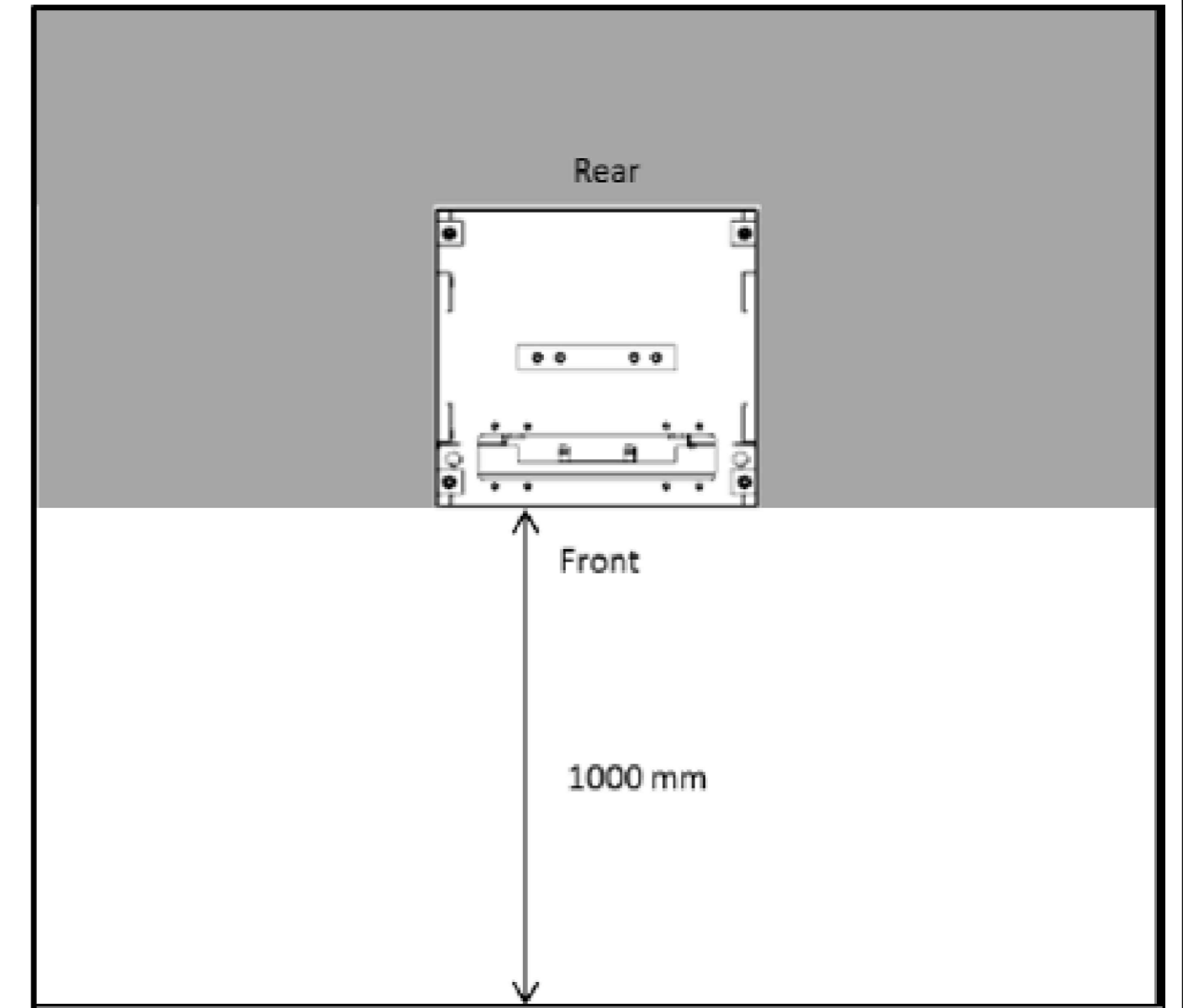
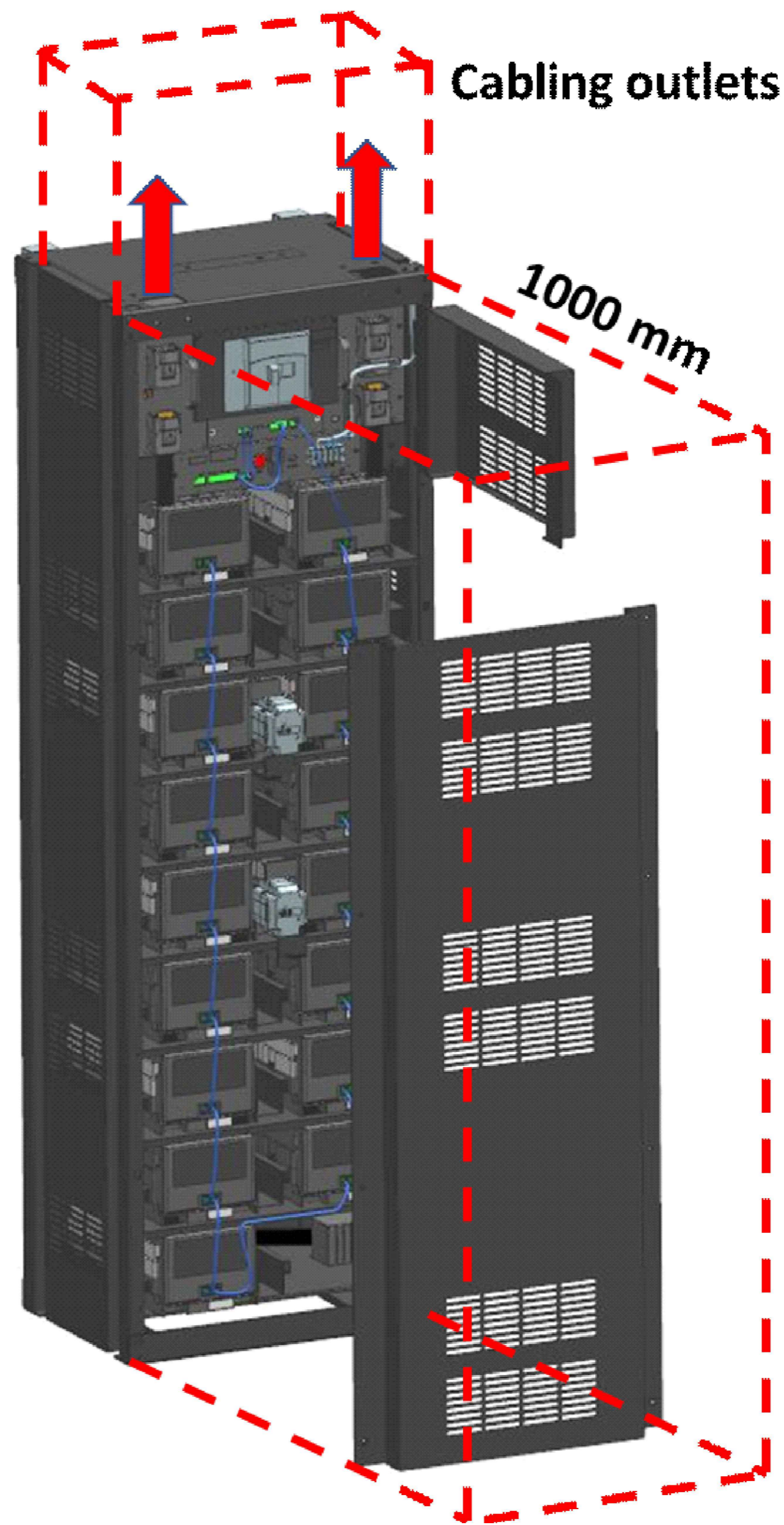
CLEARANCE IS NEEDED ONLY IN FRONT OF THE CABINET, AND ON TOP OF THE CABINET FOR THE CABLING.

EBC-LI POWER CABLE ACCESS IS LOCATED ONLY ON THE TOP OF THE CABINET.

SIGNAL CABLING BETWEEN ADJACENT CABINETS CAN BE ROUTED THROUGH SIDE PANELS.

NOTE!

1. INSTALLED WEIGHT OF THE UNIT: 493 KG
2. FLOOR LOADING: 1430 KG/M²
3. RECOMMENDED OPERATION TEMPERATURE: 23±5 °C



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DIMENSIONS ARE IN MILLIMETERS AFTER PLATING, DIMENSIONS AND TOLERANCES IN ACCORDANCE WITH ASME Y14.5M-1994. SEE NOTES FOR TOLERANCES.			
DESCRIPTION: EBC-LI-I28S INTERIOR DETAILS AND INSTALLATION CLEARANCE			
ORIGINATED: N. HYPPIÄNEN	22.01.2019	ECO:	NAME:
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			SCALE: N/A
			SHEET: 2 OF 6

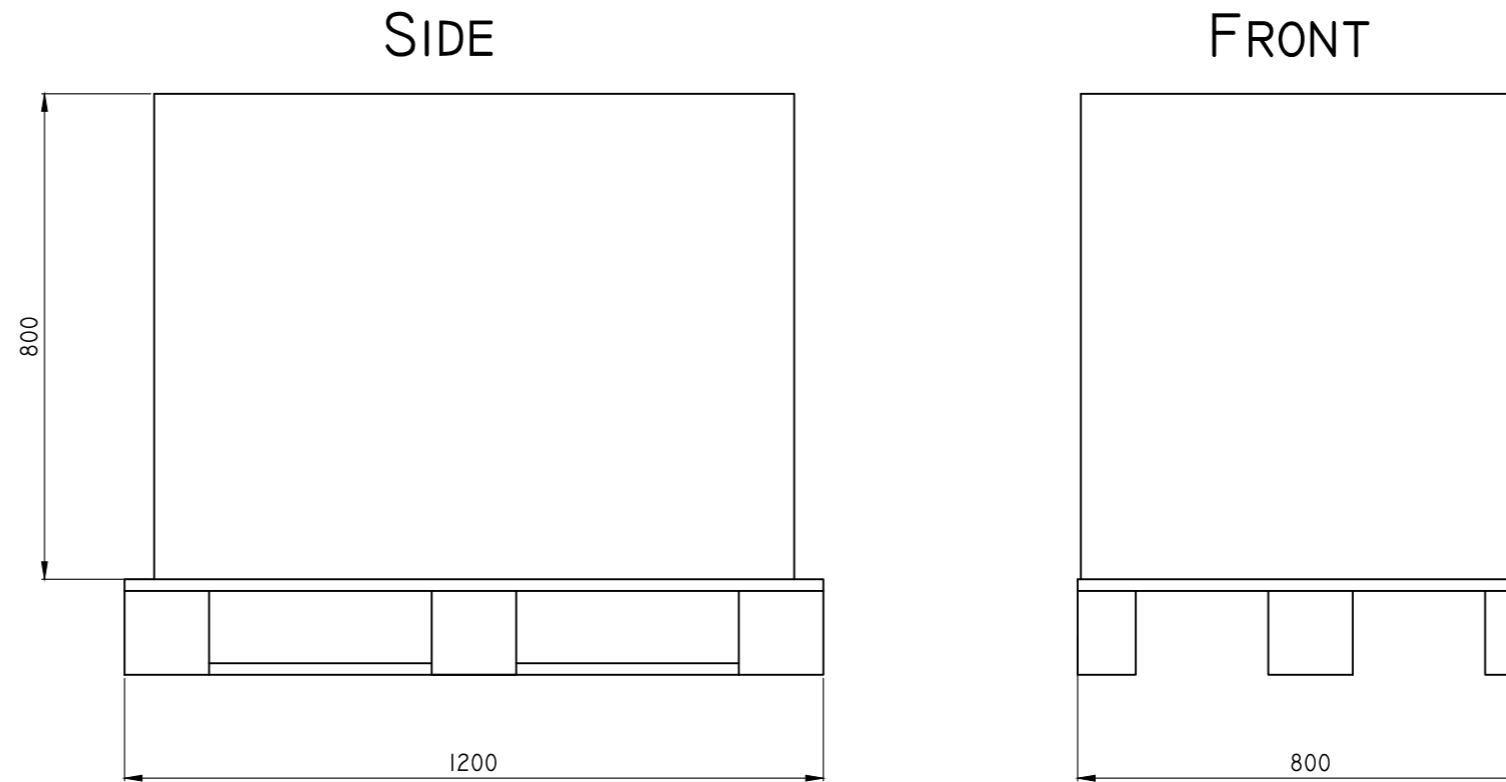
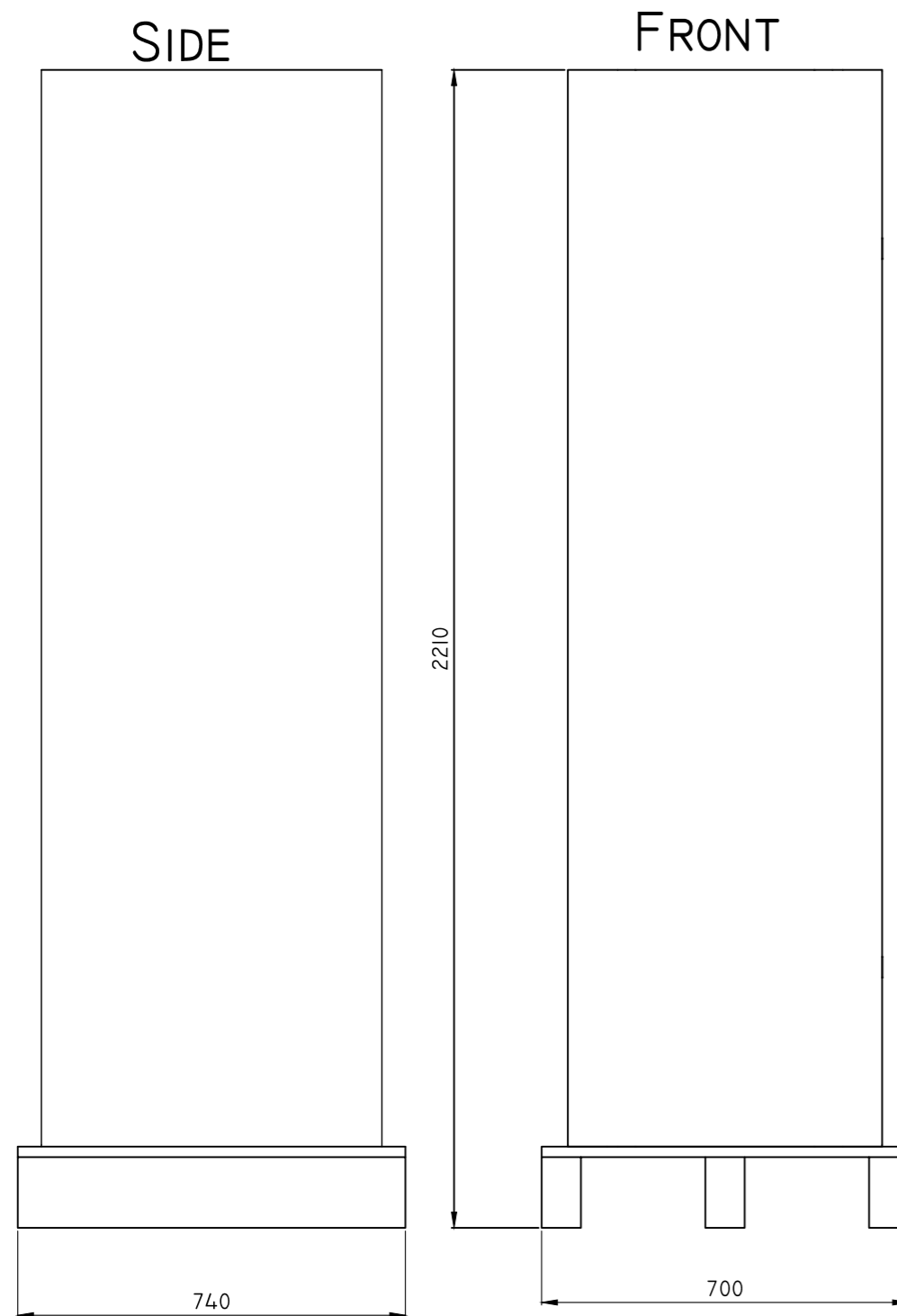
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FRAME - 200 KG

BATTERY MODULES - 285 KG

NOTE!

CONSISTS OF HAZARDOUS MATERIAL, REFER TO PRODUCT MATERIAL SAFETY DATA SHEET (MSDS) FOR DETAILS.

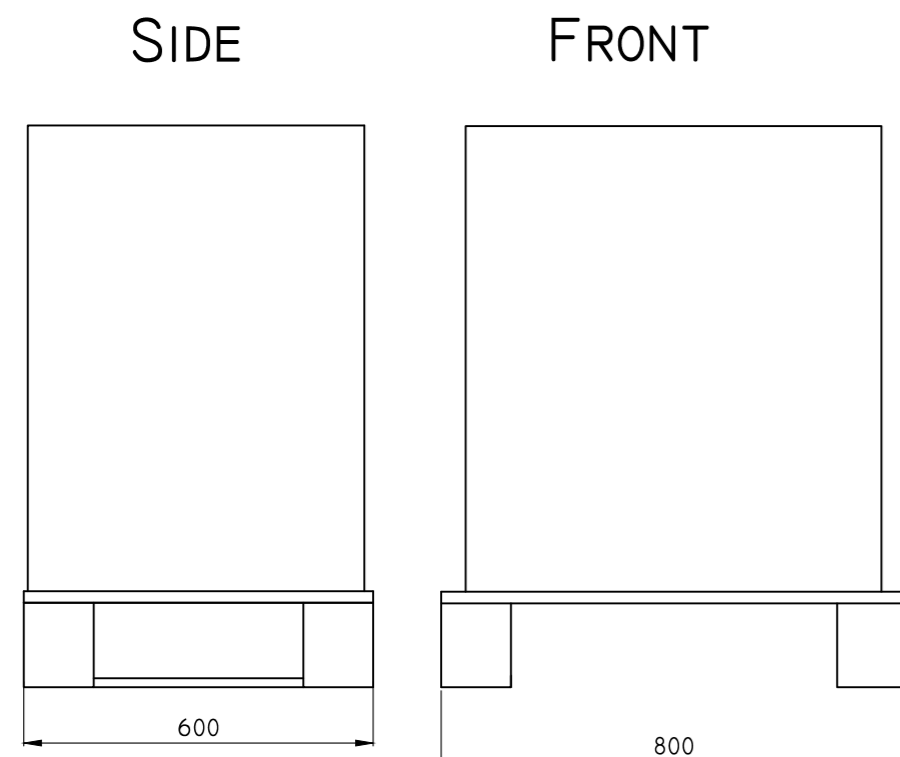


ACCESSORIES - 60 KG
(CABLES, SWITCHGEAR, SMPS)

GROSS WEIGHT - 540 KG

NOTE!

1. FINAL PRODUCT IS PACKED AND DELIVERED ON 3 DIFFERENT PALLETS.
2. STORAGE TEMPERATURE: 0 - 40°C (0-30°C FOR BATTERY MODULES)
 - 2.1. TO MINIMIZE CAPACITY DEGRADATION, STORAGE TEMPERATURE OF LESS THAN 10°C AND 3.630V PER CELL IS RECOMMENDED
3. STORAGE HUMIDITY: LESS THAN 90% RH (RECOMMENDED TO BE LESS THAN 60% RH)
4. STORAGE PERIOD: LESS THAN 6 MONTHS
 - 4.1. THE CAPACITY DEGRADATION WILL OCCUR DEPENDING ON STORAGE TIME
5. REFER TO PRODUCT SPECIFICATION FOR GENERAL HANDLING GUIDANCE.

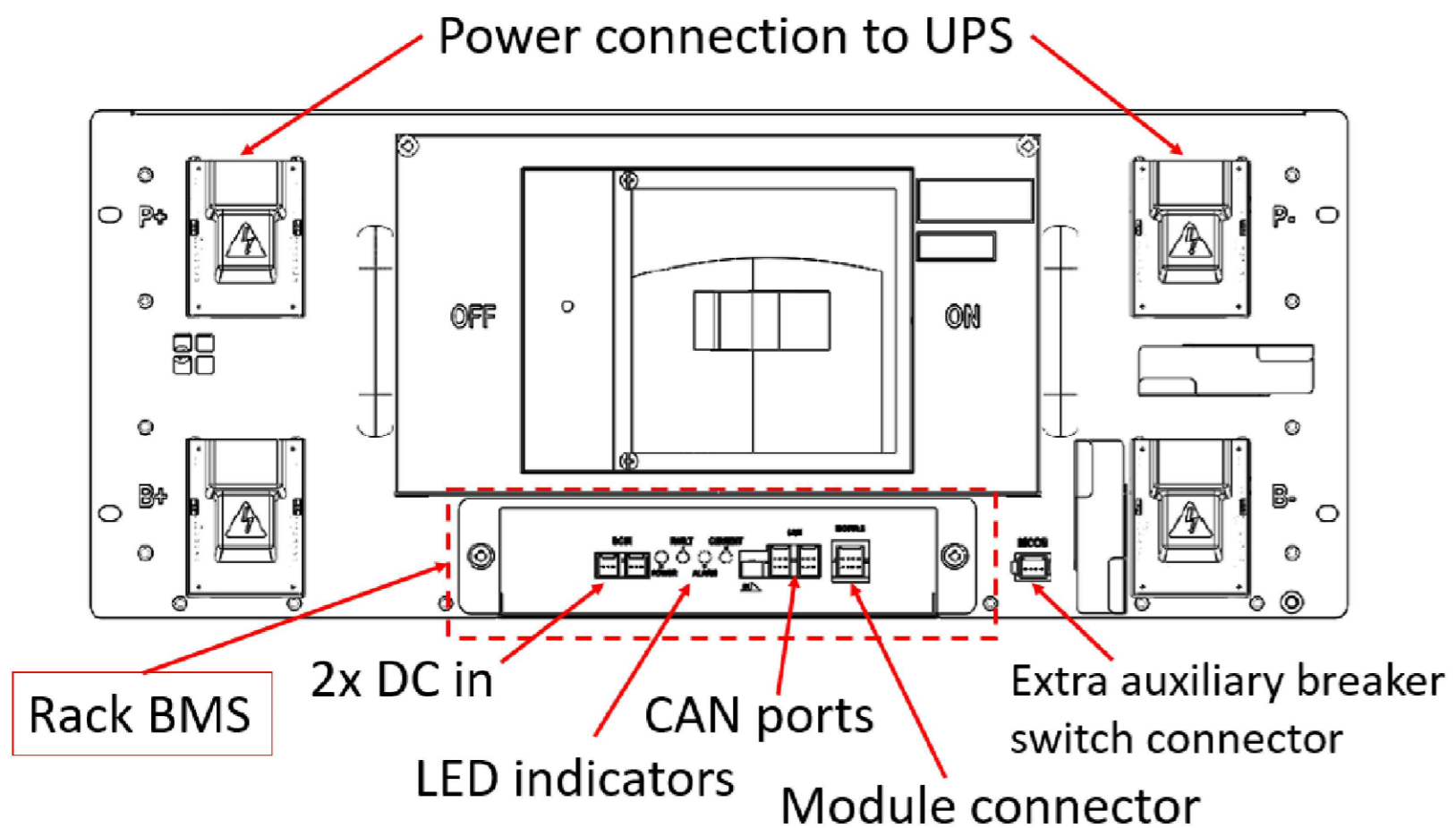


Factory provided cables:	
Switchgear to Module #1 signal cable	
Module to module signal cables	
Internal 24 V DC power cables (SMPS to Switchgear)	
CAN cable - SMPS to Switchgear	
Signal cable for multiple rack solutions, adjacent installation	

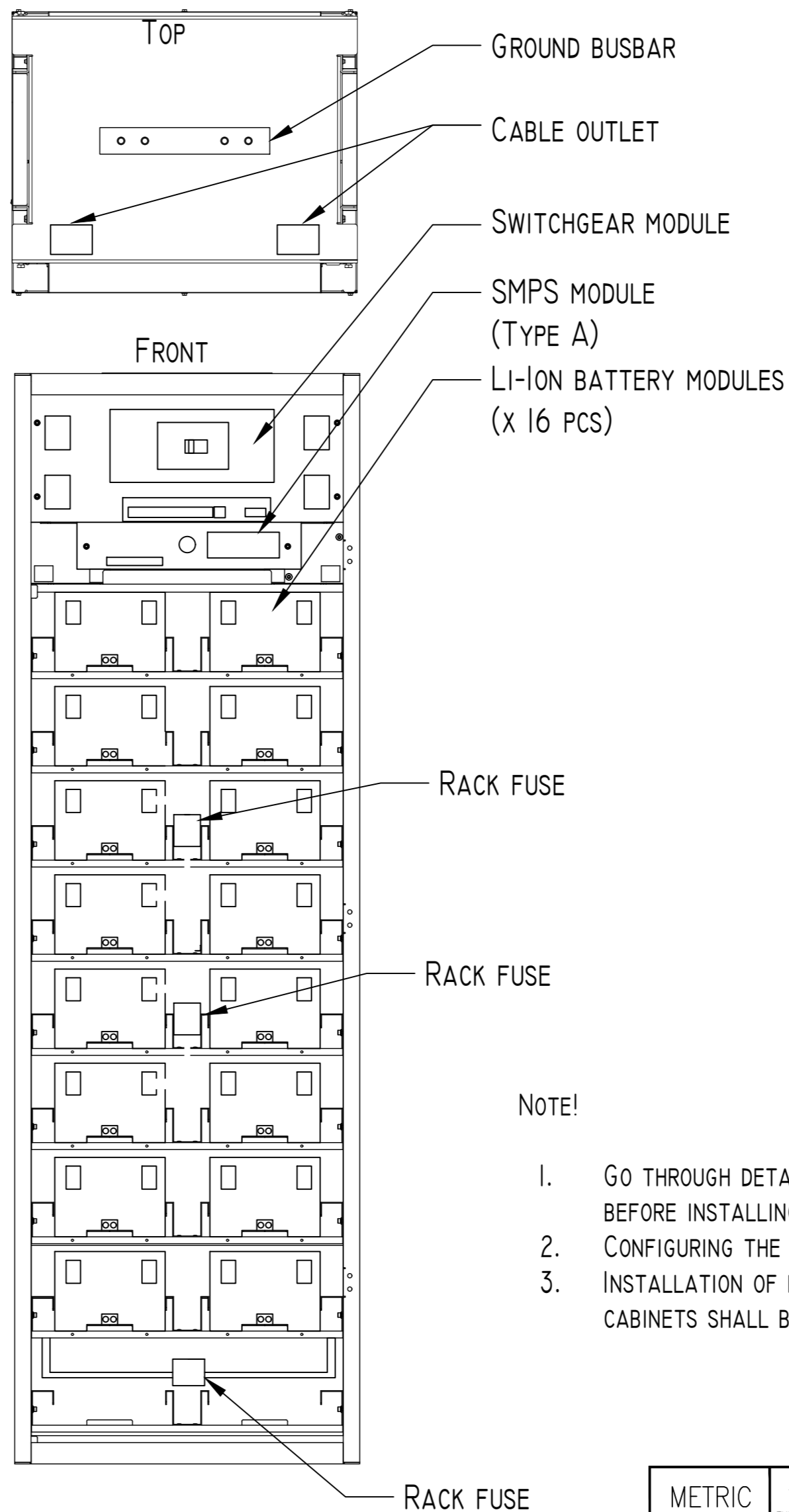
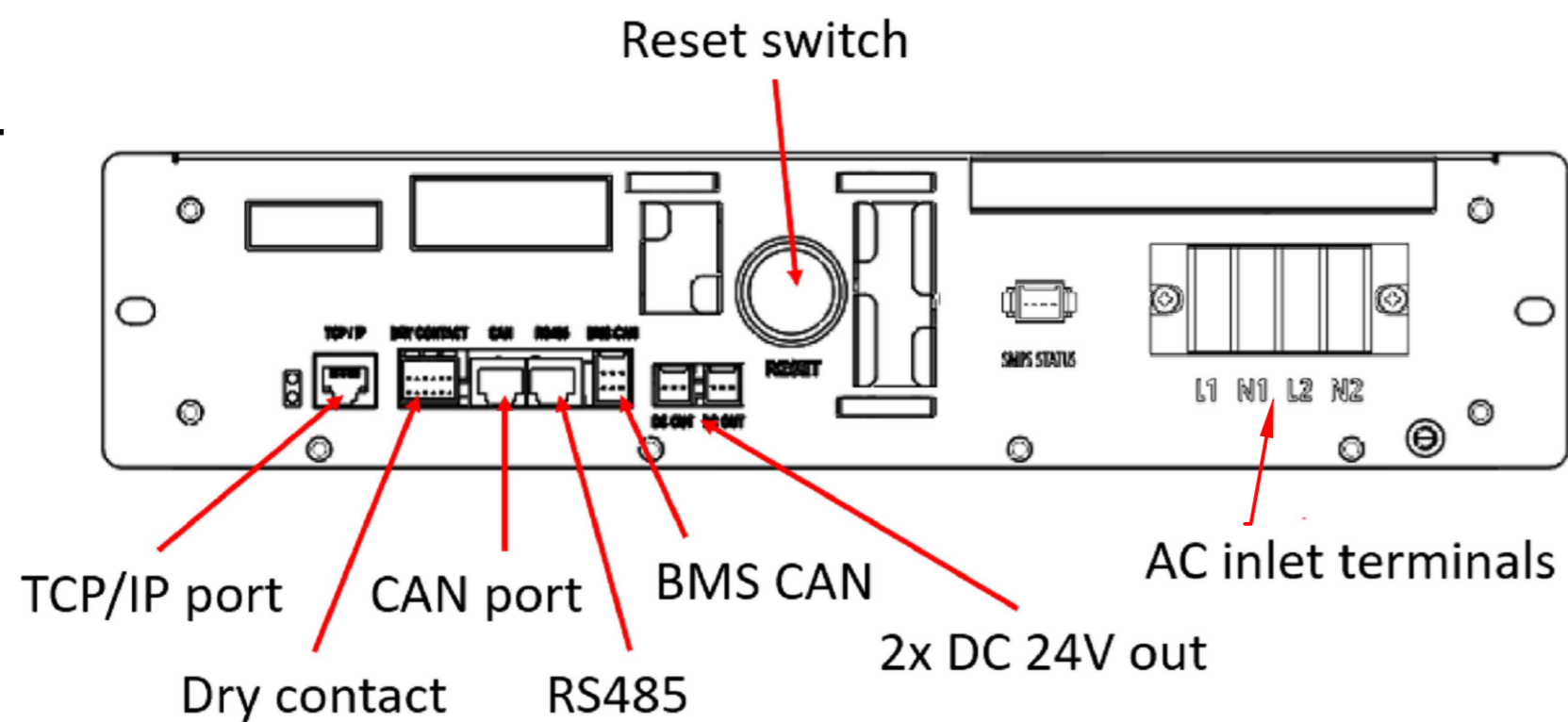
Not factory-provided cables:	Connector type
TCP/IP Cable	VS-08-BU-RJ45/LP-1
AC input cables (SMPS)	

METRIC		EATON	
DIMENSIONS ARE IN MILLIMETERS AFTER PLATING, DIMENSIONS AND TOLERANCES IN ACCORDANCE WITH ASME Y14.5M-1994. SEE NOTES FOR TOLERANCES.			
DESCRIPTION: EBC-LI-I28S SHIPPING AND PACKING DETAILS			
ORIGINATED: N. HYPPIÄNEN	22.01.2019	ECO:	NAME: HPO-1045367
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SWITCHGEAR CONNECTIONS



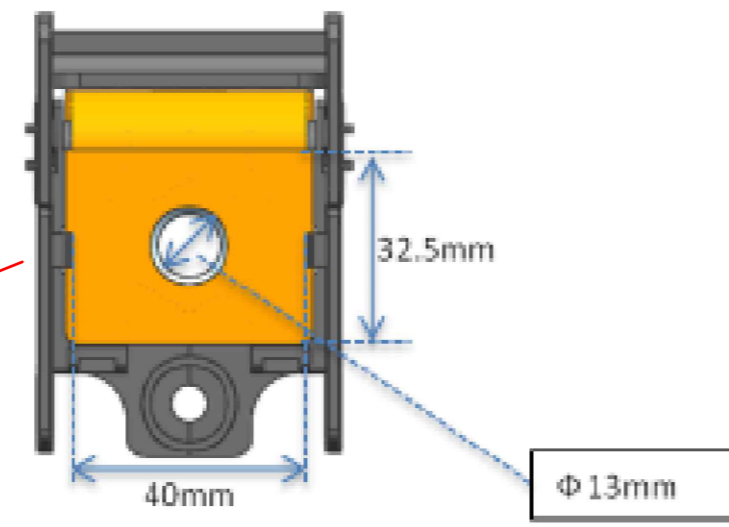
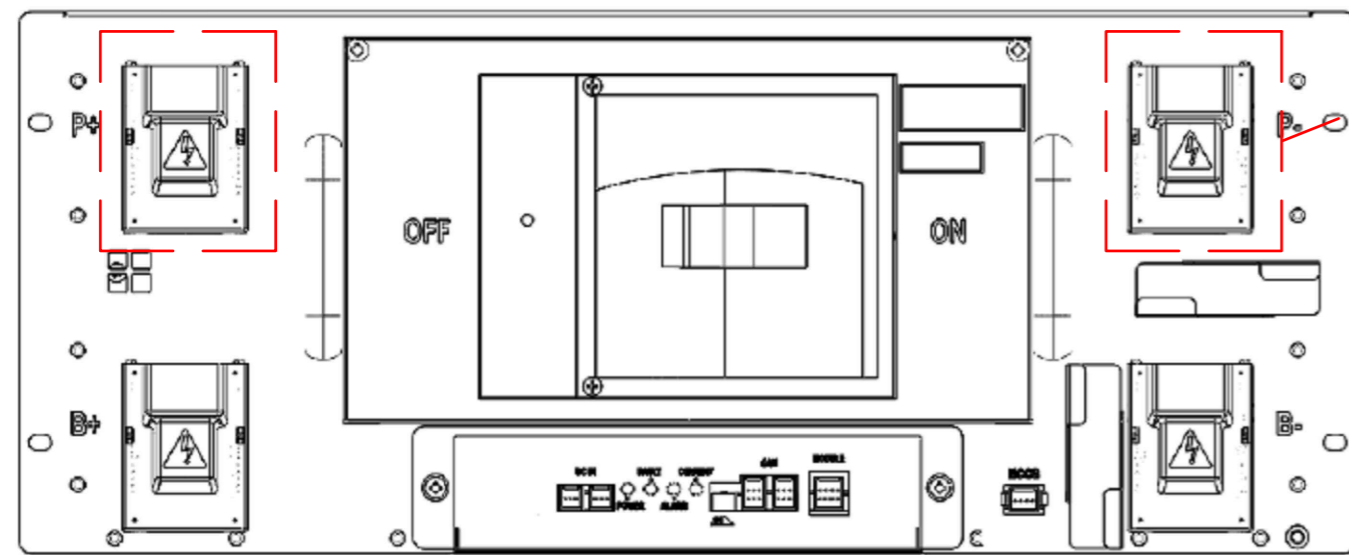
SMPS CONNECTIONS (TYPE A)



NOTE!

1. GO THROUGH DETAILED INSTALLATION GUIDANCE IN MANUFACTURER INSTALLATION MANUAL BEFORE INSTALLING THE PRODUCT.
2. CONFIGURING THE BMS SYSTEM IS MADE THROUGH ELP-MON SOFTWARE.
3. INSTALLATION OF MULTIPLE CABINETS IN PARALLEL: SYSTEM BMS OF ONLY ONE OF THE CABINETS SHALL BE USED FOR CONFIGURING SYSTEM AND FOR REMOTE MONITORING.

METRIC		EATON		EATON	
DIMENSIONS ARE IN MILLIMETERS AFTER PLATING, DIMENSIONS AND TOLERANCES IN ACCORDANCE WITH ASME Y14.5M-1994. SEE NOTES FOR TOLERANCES.					
DESCRIPTION: EBC-LI-I28S WIRING AND CONNECTION DETAILS					
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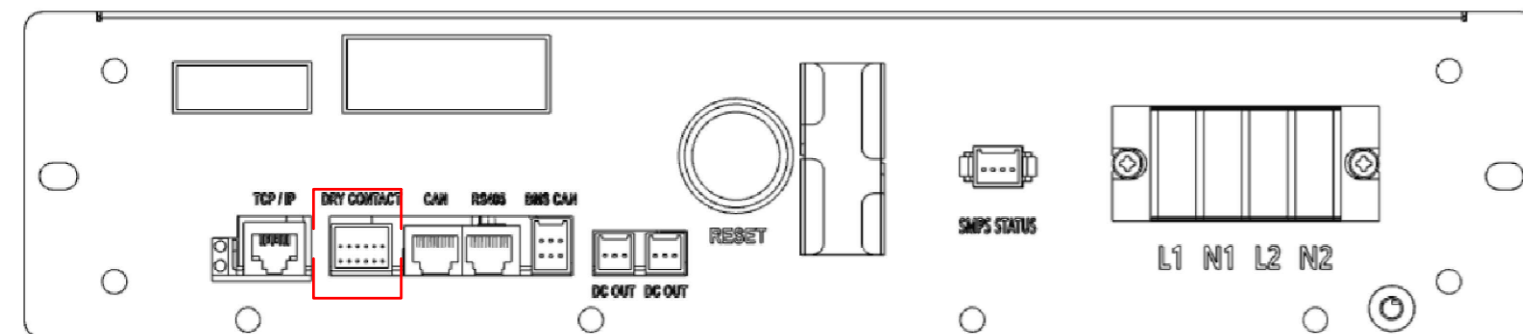
P+/P- CONNECTORS
(FRONT, COVER OFF)

	Size	Torque
Rack anchoring*	M16 bolt	140 Nm
Ground wire *	≥ 70 mm ²	30 Nm
Ground wire fasteners *	M12x30	
Switchgear and SMPS to rack	M5x10	5.1 - 6.1 Nm
Switchgear and SMPS ground	M5x10	5.1-6.1 Nm
Battery to SG (busbar) (B+/B-)	M12 bolt (SG)	30 Nm
	M8 bolt (Batt)	8.16-11.94 Nm
Batt to batt (busbar)	M8 bolt	8.16-11.94 Nm
Power cable connection*	M12 cable lug	30 Nm

*Not factory-provided

UPS power	Suggested power cable sizes
50 kW / 50 kVA	35 mm ² , Cu
100 kW / 100 kVA	95 mm ² , Cu
150 kW / 150 kVA	150 mm ² , Cu
175 kW / 200 kVA	185 mm ² , Cu

SMPS DRY CONTACT TERMINATIONS (FRONT VIEW OF SMPS TYPE A)



Connector	S12B-J11DK-TXR	JST
Harness Housing	J11DF-12V-KX	-
Harness terminal	SF1F-21T-P0.6	AWG 18-22

PIN NO.	PIN Name	Function
B1	Major Common	Overvoltage Protection Undervoltage Protection
A1	Major Normally Closed	Overtemperature Protection
B2	Major Normally Open	Overcurrent Protection
A2	Minor Common	Voltage Imbalance Error
B3	Minor Normally Closed	Voltage Sensing Error Undertemperature Protection
A3	Minor Normally Open	Temperature Imbalance Error
B4	MCCB Status Common	All MCCB's are off: A4, B4 is closed
A4	MCCB Status Normally Closed	One of the MCCB's is on: B5, B4 is closed
B5	MCCB Status Normally Open	
A5	Reserved	
B6	Input	Set Condition: UPS opens B6, A6 contacts for more than 3 seconds.
A6	GND	Action : Battery MCCB Trip

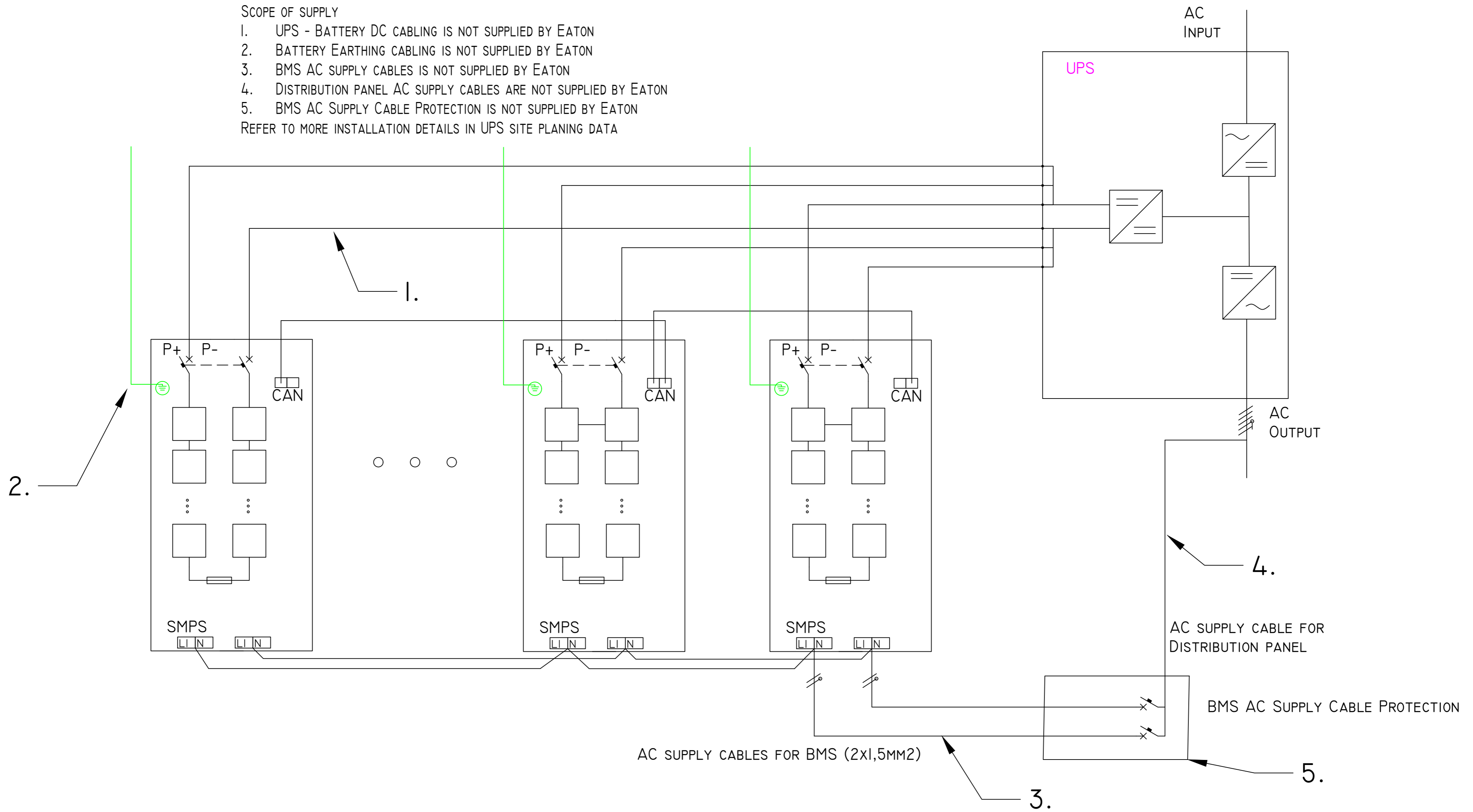
NOTE!

1. GO THROUGH DETAILED INSTALLATION GUIDANCE IN MANUFACTURER INSTALLATION MANUAL BEFORE INSTALLING THE PRODUCT.
2. POWER CABLE SIZING IS BASED ON IEC 60364-5-52, TABLE B.52.2
 - 2.1. INSTALLATION METHOD C
 - 2.2. AMBIENT TEMP. 30 DGR C
 - 2.3. CONDUCTOR TEMP. 70 DGR C (PVC INSULATION)
 - 2.4. BUNDLING CABLES WITH OTHER CIRCUITS NOT ALLOWED
 - 2.5. CABLE SIZES ARE CALCULATED FOR IX EBC-LI - IX UPS SYSTEMS, IN MULTIPLE CABINET SYSTEMS, CABLE SIZES VARIES
- 2.2. EBC-LI CABINETS ARE NOT POSSIBLE TO DAISY CHAIN

METRIC	THIRD ANGLE PROJECTION	EATON	EATON
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DESCRIPTION: EBC-LI-I28S WIRING AND CONNECTION DETAILS			
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SCOPE OF SUPPLY

1. UPS - BATTERY DC CABLING IS NOT SUPPLIED BY EATON
 2. BATTERY EARTHING CABLING IS NOT SUPPLIED BY EATON
 3. BMS AC SUPPLY CABLES IS NOT SUPPLIED BY EATON
 4. DISTRIBUTION PANEL AC SUPPLY CABLES ARE NOT SUPPLIED BY EATON
 5. BMS AC SUPPLY CABLE PROTECTION IS NOT SUPPLIED BY EATON
- REFER TO MORE INSTALLATION DETAILS IN UPS SITE PLANING DATA



METRIC		THIRD ANGLE PROJECTION		EATON		EATON	
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