



# Install Guide

## SBG-8340-F-16-V0031



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## 1. Important Information



### CAUTIONS

- Approved rules of technique have to be used during installation and connection.
- PDU must be located in restricted access locations only.
- Installation and service must be performed by qualified and electrically instructed personnel and meet local electrical codes or operating company guidelines.
- The use of protective equipment, including insulated tools, is recommended during installation or service at all times.
- Failure to properly ground this equipment can create hazardous conditions to installation personnel and to the equipment.
- Before connecting or disconnecting input power cables, make sure that input power to panel is turned off.
- Do not install breakers in reset position. Doing so may damage breakers or panel.
- The delivered equipment may vary slightly from the version described herein.

### GENERAL RACK MOUNT GUIDELINES:

- a) Elevated Operating Ambient – If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature specified by the manufacturer.
- b) Mechanical Loading – Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
- c) Reduced Air Flow – Installation of the equipment in a rack should be such that the amount of airflow required for safe operation of the equipment is not compromised.
- d) Installation – Sufficient room for supply and load connections and the appropriate cable bending radius must be observed.
- e) Circuit Overloading – Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on over-current protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
- f) Equipment Earthing – Equipment shall be mounted to an earthed rail system within the rack.
- g) Cable Strain Relief – Generally accepted electrical codes and regulations require an effective cable strain relief.



Waste Management Guidelines: Power-D-Box must not be disposed among common domestic waste. Packaging and packaging materials are recyclable.

## 2. Product Specifications

Electrical Data	
Operating Voltage	DC 48 V / 60 V
Protected Pole	Minus pole
Number of Circuit Breakers	Up to 16 for each redundant feed left and right (Daisy chained power modules can double the number of CBEs / Loads)
Redundant System	Non-redundant operation
Nominal Current (Unit)	Max. 1 x 150 A
Nominal Current per Channel	Max. 30 A or 25 A with CBE mounted Max. load 30 A per load if CBE is not mounted side by side as a bloc assembly, or 25 A max. load if CBE is mounted side by side as a bloc assembly
Circuit Breakers	Type 8340-F410-P1M1-KNH0-xxA / 0,1 A...25 A (hot swappable)
Ambient Temperature	0° C bis + 55° C
Storage Temperature	-20 ° C bis + 70 ° C
Mechanical Data	
Dimensions and Weight	Length: 554 mm Heigth: 95 mm Depth: 110 mm Weight: 2980 g (net weight without Circuit breakers) Hole-to-hole distance for mounting holes: 530 mm
Installation	For vertical system integration. Modules supplied in a set consisting of left- and right modules.
Supplies	
Cable Cross Section	10 - 50 mm <sup>2</sup>
Connection / Tightening Torque	Feed through terminals HDFK-50 (plus and minus) on top and bottom. Tightening torque 6 - 8 Nm
Loads	
Cable Cross Section	0,25 mm <sup>2</sup> to 4 mm <sup>2</sup>
Connection / Tightening Torque	Feed through terminals HDFK-4 (plus and minus) Tightening torque 0,6- 0,8 Nm
Conformity	
Regulations / Standards	EN / UL 60950

### 3. Product Description

- Compact aluminium power distribution system for vertical system integration with redundant left and right module supplied as a set.
- Integrated power distribution module with slots for up to 16 hot swappable plug-type circuit breakers 8340-F410-P1M1-KNH0-xxA (not included).
- Main power connections (minus and plus) feed through terminals located on PDU's top and bottom ends (daisy chain operation optional), see specifications **(Fig 1, 2)**.
- Load connections (minus- and plus) by screw terminals , see specifications **(Fig 1, 2)**.
- Internal wiring through busbars (minus, plus), back-of-hand-proof insulation.
- CBE extraction tool attached to PDU chassis **(Fig 2)**.
- Flanges for vertical system integration.
- Loads labeled 1 ... 16 from bottom to top **(Fig 1, 2)**.
- Snap-in plastic covers for unused CBE slots included **(Fig 2)**.
- Tool-free front plate removal - front plate can be removed even during PDU operation **(Fig 2)**.

## 4. Illustrations

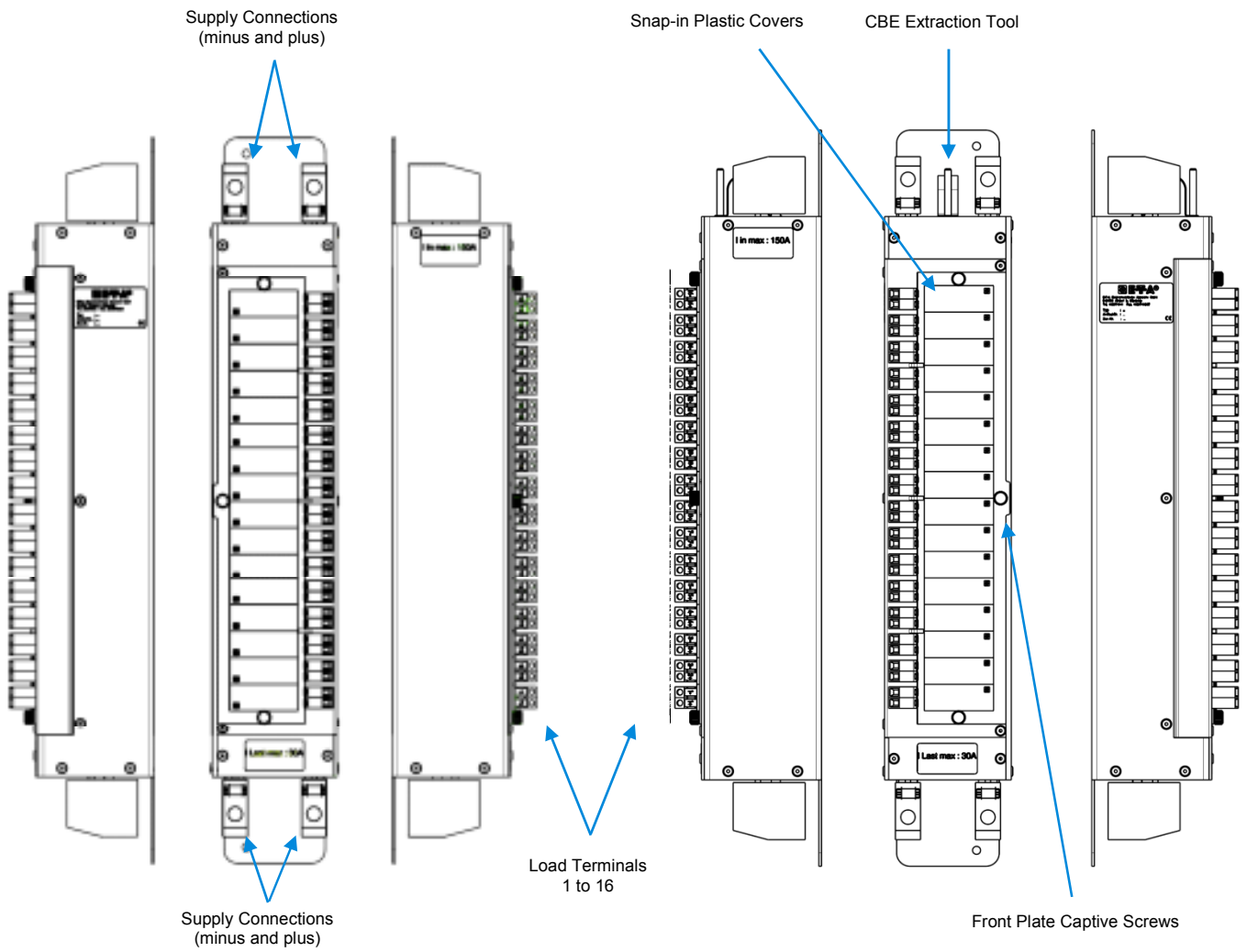


Fig. 1 - Left Hand Side Module

Fig. 2 - Right Hand Side Module

## 5. Principle Wiring Diagram

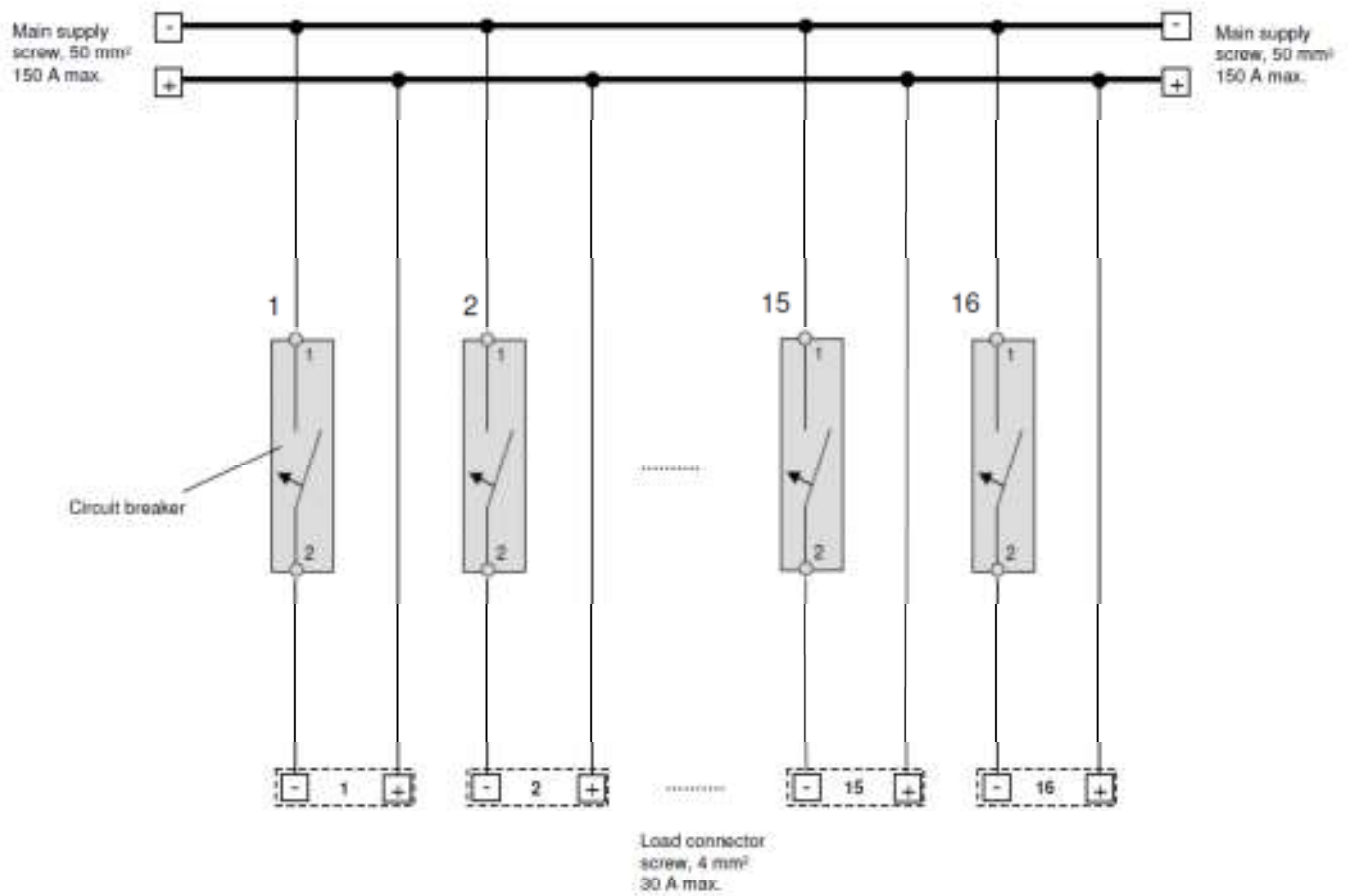


Diagram shows one of two devices only, circuit breakers not included!

Fig. 3 - Principle Wiring Diagram

## 7. Connections



**CAUTION:** When working under live power conditions, only insulated tools must be used!

### 7.1 Supply Connections

- Feed-through supply cable terminals (minus- and plus) are located on unit's top, respectively bottom end. (Fig. 1, 2). Applicable tightening torque see specifications.
- Supply cable cross sections see specifications.

## 7.2 Load Connections

- Feed-through load cable terminals (plus and minus) connections labeled 1 to 16 located on unit's front (**Fig. 1, 2**). Applicable tightening torque see specifications.
- Load cable cross sections see specifications.

## 8. Circuit Breaker Removal and Replacement



### CAUTION:

The circuit breakers are of a plug-type design with hot-swap capability. Do not remove or insert a breaker in reset ('ON') position. Doing so may damage breaker or entire unit. To switch off a circuit breaker, use the toggle switch and toggle down the actuator to its 'OFF' position.

- Before removing a circuit breaker, make sure the toggle switch is in "OFF" position.
- Remove the circuit breaker retaining cover by loosening the 3 captive screws securing the cover (**Fig. 4**).
- In order to remove a circuit breaker, use the circuit breaker extraction tool located on top of the left hand side module, and pull the breaker straight out from the panel (**Fig. 2**). Put the extraction tool back into its storage position.
- When inserting a breaker, make sure the breaker is properly inserted and fully seated. Verify that the breaker is installed in the proper orientation.
- Following service, fit circuit breaker retaining cover back onto the unit. Make sure the cover attaches soundly to the front of the unit by directing the two guiding pins (**Fig. 5, 6**) into their respective slots. Be certain the captive screws fit into their threads and fasten correctly.
- After the breaker is inserted, all connections are made and the cover is back in place and fastened, use the circuit breaker toggle switch and toggle up the actuator into its 'ON' Position.

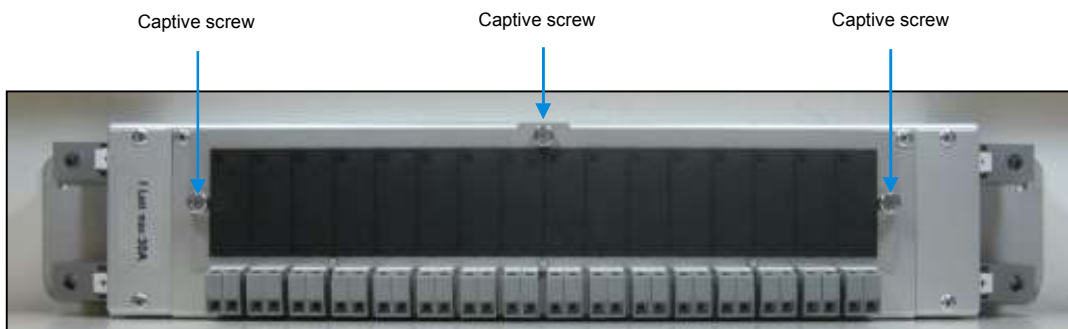


Fig. 4 - Front View

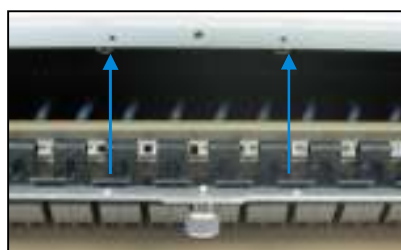


Fig. 5 - Front Plate Guiding Pins and Slots, i

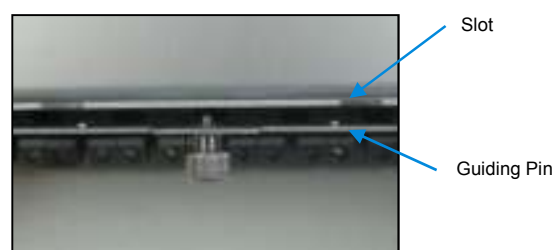


Fig. 6 - Front Plate Guiding Pins and Slots, ii





## **IMPORTANT NOTE:**

**Please follow these instructions carefully. Failure to comply, or misuse of this equipment, could result in serious damage to both the equipment itself and to the installation. The manufacturer is unable to accept responsibility for customer or third party liability, warranty claims or damage caused by incorrect installation or improper handling resulting from non-observance of these instructions.**



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