



Installation Guide
Power-D-Box[®]
G2H95A
(19BGT-2-X8345-16R4SW-B0-S541)





CAUTION!

- The Equipment must be located in restricted access locations only.
- A readily accessible disconnect device shall be incorporated in the building installation wiring. If more than one disconnect device is used, marking shall be provided to properly indicate total power disconnection.
- Disconnect all power supply cords before servicing.
- This equipment was designed to permit the connection of the earthed conductor of the DC supply circuit to the earthing conductor at the equipment.
- Installation and service must be performed by qualified 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.
- The supply voltage and frequency must correspond with the electrical data stated in the product specifications section of this Installation Guide.
- If the equipment is not in use over a prolonged period of time, it is recommended to disconnect it from the power source and to protect its parts from the elements.
- With the exception of standardized, generally available components, only original spare parts shall be used.

General Rack Mounting 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) Heat Accumulation - The ventilation required for safe operation of the equipment shall not be compromised by walls or by adjacent installed equipment. Equipment provided with ventilating openings shall be installed so that obstructions do not prevent the free circulation of air through the Equipment.
- d) Installation - Allow for sufficient space for supply- and load-connections.
- 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) Grounding - The Power Distribution Box must be grounded. This equipment is designed to permit the connection of the earthed conductor of the DC supply circuit to the earthing conductor at the equipment. Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).
- 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.

1. Product Specifications

Electrical Data	
Nominal Operating Voltage	Max. DC 80 V per group
Protected Pole	Negative pole protected
Supply Current per Group	Max. 232 A (UL60950-1 Max. 230 A per group)
Load Current per Channel	Max. 85 A for channels 1-3 and max. 30 A for channels 4-8 each group
Number of Circuit Breakers	2 x 8 pcs.
Redundant System	Dual feed A and B
Circuit Breakers	8345-C01A-W0M1-DB1B2B-... 0,1 A to max. 80 A
Operating Ambient Temperature	-30 °C ... + 60 °C
Operating Ambient Temperature UL 60950-1	-30 °C ... + 55 °C
Storage Temperature	-30 °C ... +85 °C
Mechanical Data	
Dimensions	H x W x D / 88,9 mm x 482,6 mm (without mounting brackets) x 310 mm (installation depth including cable strain relief)
Materials	Chassis and front plate: Aluminium
Net Weight	6,46 Kg (per Power Distribution Unit) 12,92 Kg (Power Distribution System consisting of 2 units)
Rack Mounting	4 pcs. M6 x 16 mm screws for 19" rack mounting (not included) Tightening torque 5,3 ... 5,7 Nm
Supply	
Supply Connection	Screw terminals with 35 to 95 mm ² (AWG 2 - AWG 3/0) cables Tightening torque 15 ... 20 Nm
Loads	
Load Connections Channels 1-3	Screw terminals with 1,5 to 16 mm ² (AWG 16 - AWG 6) cables Tightening torque 2,5 ... 3,0 Nm
Load Connections Channels 4-8	Screw terminals with 0,2 to 4 mm ² (AWG 24 - AWG 12) cables Tightening torque 0,6 ... 0,8 Nm
Earthing	
Earthing Connection	2 x M8 grounding bolts Tightening torque max. 6 Nm
Cables	
Recommended	UL compliant, min 95° C, high flex cables
Approvals	
UL	UI 60950-1
CSA	C22.2 No. 60950-1 07

2. Product Description

- 19", 2U Power Distribution System consisting of **two** aluminium 2U power distribution units.
- Designed for power distribution cabinet installation.
- Redundant setup with 2 x 8 load outputs in groups A and B.
- Fits plug-in type hydraulic-magnetic circuit breakers type 8345-C01A-W0M1-DB1B2B-xxA rated 0,1 A ...80 A
- **Negative pole protected.**
- Supplies through rear screw-type terminals, cable cross section 35 - 95 mm².
- Supply cable feed from the rear, terminal operation by screw driver from above.
- Rear load terminals as screw terminals. Cable feed from the rear, terminal operation by screw driver from the top.
- Load channels 1 to 3 with cable cross sections 1.5 to 16 mm², channels 4 to 8 with cable cross sections 0.25 to 4 mm².
- Supply terminals labeled A+/A- and B+/B-.
- Load terminals labeled A1+/A1- ... A8+/A8- and B1+/B1- ... B8+/B8-.
- M8 grounding bolts for each group on right, respectively on the left rear side panels.
- Optional: Plus pole grounding bridge connected, thus providing for positive supply pole to earth connection.
- Condition as delivered: Bridge disconnected (Grounding bridge connection see fig. 5, 6).
- Integrated group signaling for each supply group. Connection through 3-pole Phoenix connectors located in the rear section of the unit.
- Removable one-piece front plate to provide access to circuit breakers.
- Front plate labeling above circuit breakers A1 ... A8 and B1 ... B8.
- Plastic snap-in label holder for individual marking attached below circuit breakers (each PDB delivered with 24 pieces blank labels).
- Top and bottom covers made of perforated sheet metal for enhanced air circulation.
- Open circuit breaker slots in the front plate shall be closed with plastic cover pieces (plastic covers enclosed as accessories).
- Installation depth 310 mm (including cable strain relief).
- Breaker removal tool located on the PDU's front panel reverse side.
- *Circuit breakers are not part of the delivery*

3. Principle Wiring Diagram

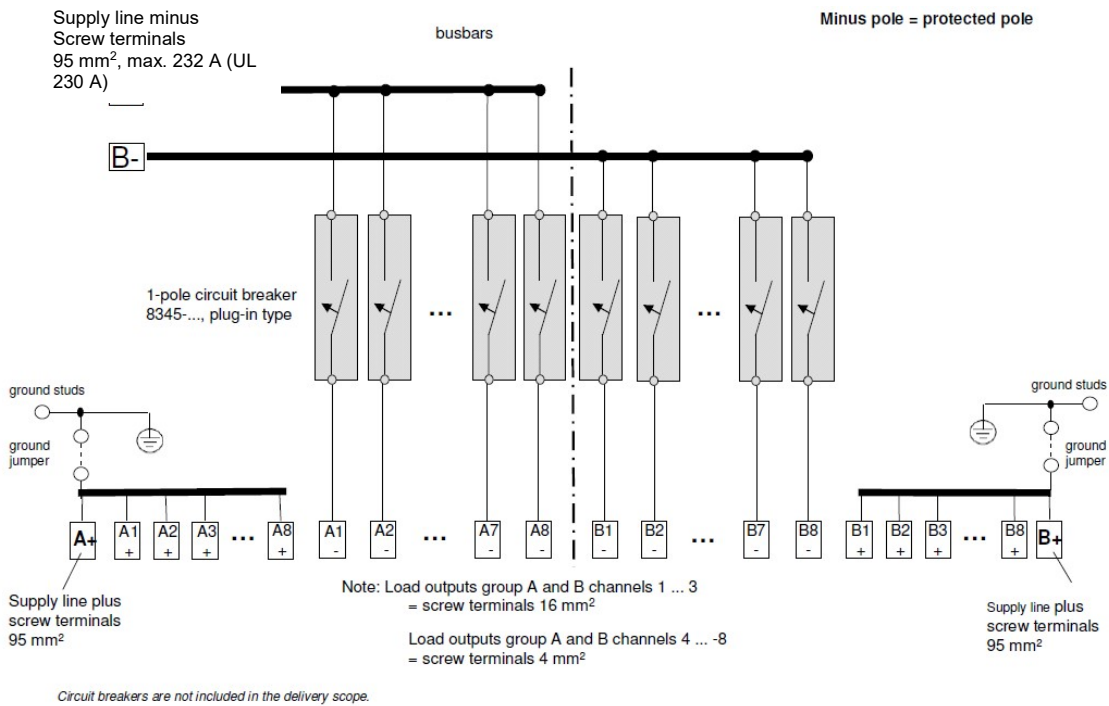


Fig. 1- Principle wiring diagram

4. Illustrations

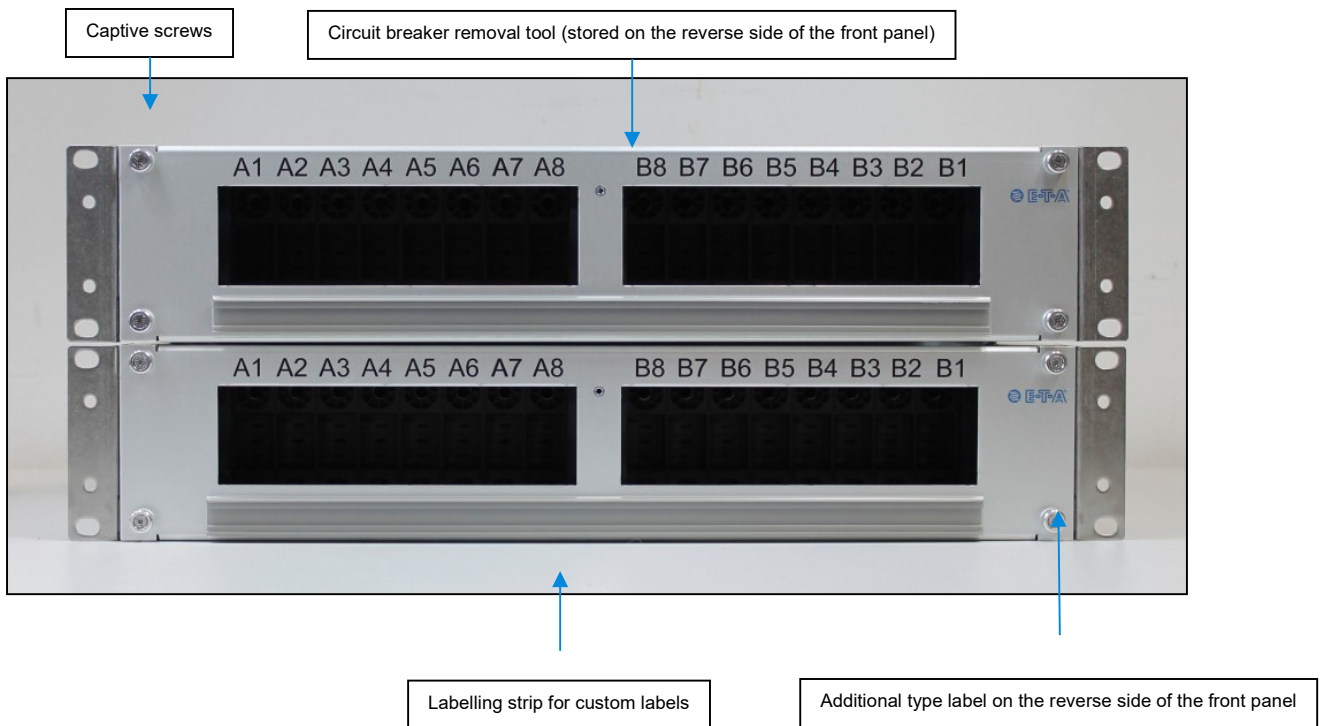
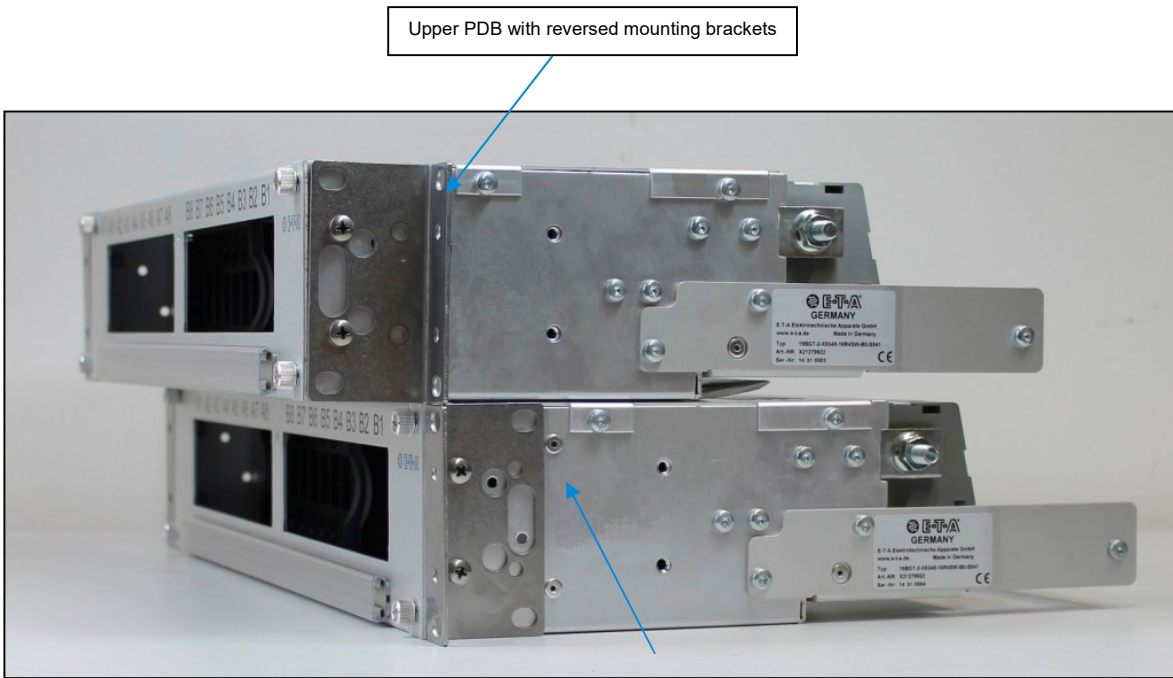


Fig. 2 - Front view, PDU installed in cabinet's bottom position

As an alternative mounting option for system extensions and easy terminal access, the upper PDB's mounting brackets may be reversed as shown in fig. 3.



Upper PDB with reversed mounting brackets
 Lower PDB with level mounting brackets
 Fig. 3 - Upper PDB with mounting brackets reversed

5. Supply and Load Connections

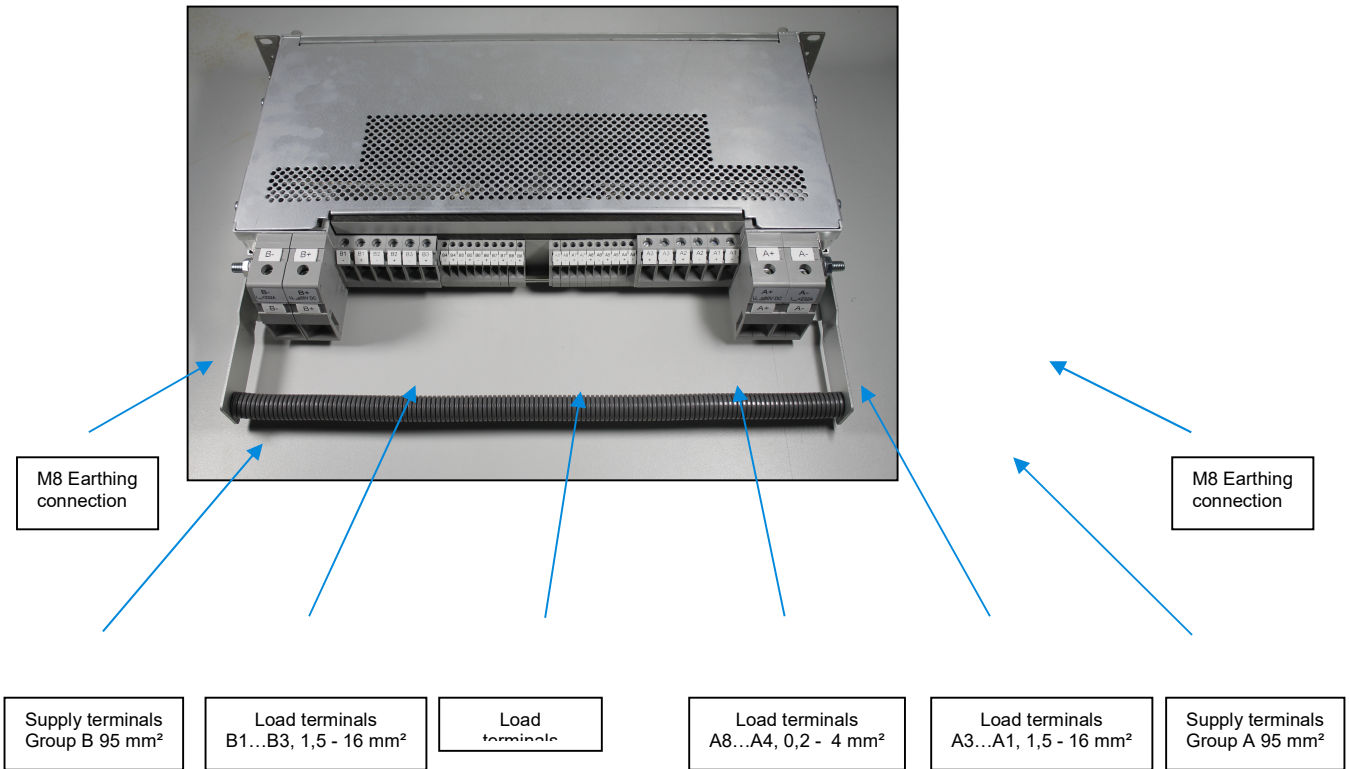


Fig. 4 - PDU rear view

6. Condition as Delivered

A **Grounding Bridge** for each group provides positive supply to earth connection.

Condition as delivered: **Plus pole not grounded (open).**

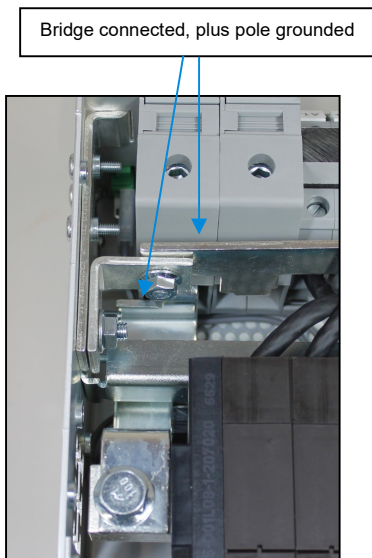


Fig. 5 - Plus pole grounded (Group A)

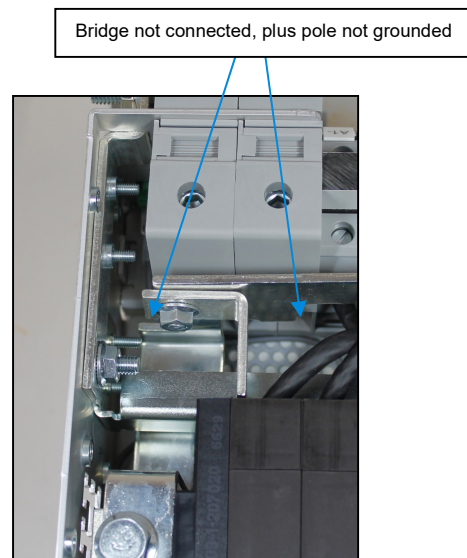


Fig. 6 - Plus pole not grounded (Group A)

Cable Strain Relief

Condition as delivered: **Cable strain relief installed**

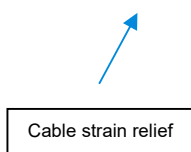
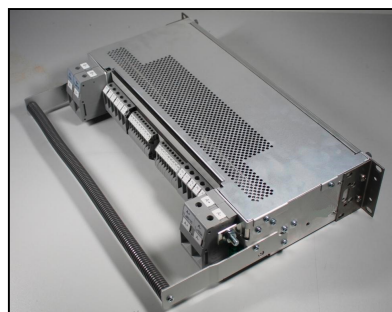


Fig. 7 - Cable strain relief installed



IMPORTANT NOTE:

Please follow these instructions carefully and retain this Installation Guide for further reference. Failure to comply or misuse of this equipment could result in serious injury to personnel, damage to 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. This installation manual reflects the current technical specifications at time of print. We reserve the right to change the technical or physical specifications.



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