



# POWERLOCK BOX

## User manual



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## 1 Colour Coding

Region	Earth	Neutral	L1	L2	L3
Europe	Green	Blue	Brown	Black	Grey
United States	Green	White	Black	Red	Blue
Australia	Green	Black	Red	White	Blue

## 2 Un-packing & content

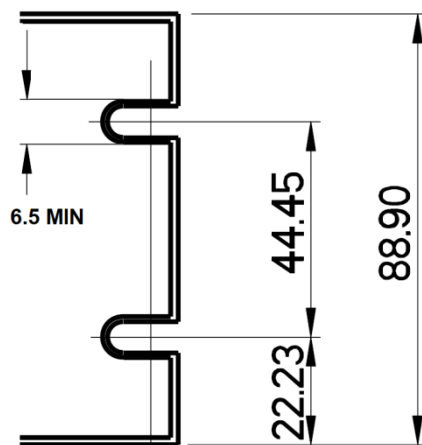
Before unpacking, make sure that the packaging is undamaged. Before unpacking, the part number of the POWERLOCK BOX should be checked against your order. Also check that the current rating label on the unit matches your requirements. The carton should contain the following:

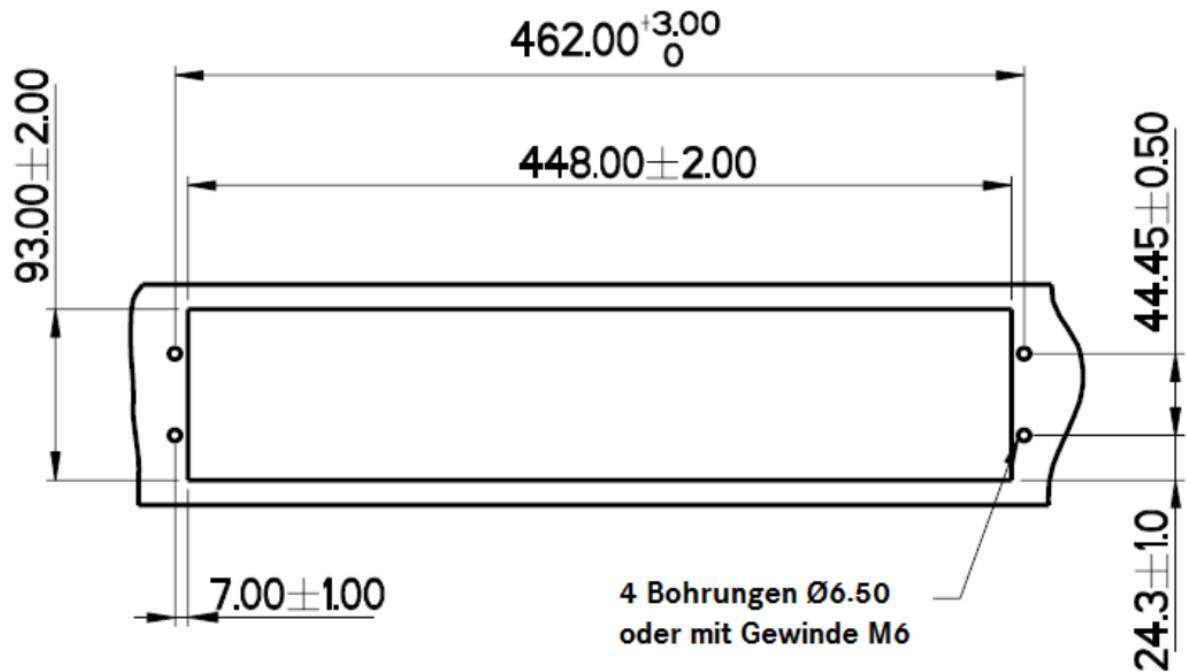
- 1x POWERLOCK BOX
- 1x 6 mm Allen wrench
- 1x 2-pole cable connector for remote sensing
- 1x Operating / Maintenance guide

## 3 Mounting at the control cabinet/ building

### 3.1 Mechanical mounting

POWERLOCK BOXES are designed for standard 19" rack systems or to dedicated panel mounts within buildings or remote cabinets. It is recommended that M6 screws / bolts and flat washers are used, and tightened to a torque of 2.94 Nm min. to 3.43 Nm max. The screws / bolts should be tightened evenly. Adequate support during assembly must be provided.





If the 19" rack does not support all IEC 60297 requirements, the use of additional mounting plates may apply.

### 3.2 Power installation

Caution: Electrical installations should only be carried out by a suitably qualified electrical engineer. It is the responsibility of the installer and user to ensure that the safe practices are adopted.

Power installation: M12 threaded posts on the rear of the unit are for connecting power cables fitted with cable lugs. Each position is marked on the back of the box.

E (Ground), N, L1, L2 & L3. The threaded posts have a spring washer and nut that should be tightened to a torque of 27.5 Nm min. to 31.4 Nm max.

It is recommended that insulated spanners are used when making these connections.

### 3.3 Connector for remote sensing

A 2-pole Trident connector is at the back of the POWERLOCK BOX to enable remote sensing.



The 2 pole connector mounted on the rear is connected to a micro-switch inside the unit: If all connectors are in place and the unit is locked, the micro switch is locked. A complete assembly instructions for this connector are shown at the end of this document.



Micro switch with POWERLOCK BOX - open



Micro switch with POWERLOCK BOX - closed

## 4 Installation and usage

### 4.1 Warnings

- This box should only be operated by suitably qualified persons.
- Only original POWERLOCK connectors should be used with this unit. The use of non-approved connectors may cause damage to the box and will invalidate any warranty.
- Ensure that the current rating of the cables and connectors being used are suitable for the current rating of the POWERLOCK BOX and connected supply.
- Do not connect / disconnect under load!

### 4.2 Connection with cable connectors

The necessary mating connectors have to be ordered separately and are not part of the delivery. Recommended cross-sections are printed on the rear of the box:

400- 120 mm<sup>2</sup> and 660 A – 240 mm<sup>2</sup>.

1. Use the Allen wrench to open the cover (version with safety cover).
2. The POWERLOCK connectors are plugged sequentially in a row. Starting on the left with the Ground/Earth connection (Green) going to the right with N, L1, L2, L3.
3. Insert the Ground (Green) connector, aligning the “PUSH” arrow on the label of the connector in a 12 o’clock position. Fully insert the connector until it bottoms in the cavity and turn through 45 degrees clockwise until the connector locks with an audible ‘click’.
4. Repeat the above process for the Neutral connector and the rest of the connectors. If at any time a connectors does not rotate fully, check if the previous connector is fully turned.
5. The lock is located to the right of the L3 connector on the front panel. The needed square drive key is provided.

6. Remove the key. All connectors are now locked in place and cannot be removed until the box is unlocked.
7. To remove the connectors, ensure that the power is turned off and reverse the above procedure.

## 5 Technical data

The POWERLOCK BOX is CE labeled and fullfills all relevant requirements.

Current rating	400 or 660 ampere (depending on the version)	
Voltage rating	1000V AC / 1500V DC	
Dielectric strength	9500 V DC	
Micro-switch operating voltage	125 V AC max.	
Micro-switch operating current	5 A	
Operating temperature	- 30°C to +85°C	
Environmental protection	IP65 connectors plugged IP65 with closed safety cover (box with cover)	
Weight	3,25 kg (without cover)	3,75 kg (with cover)
Flammability rating	UL94 - V0	
Mating cycles	500	

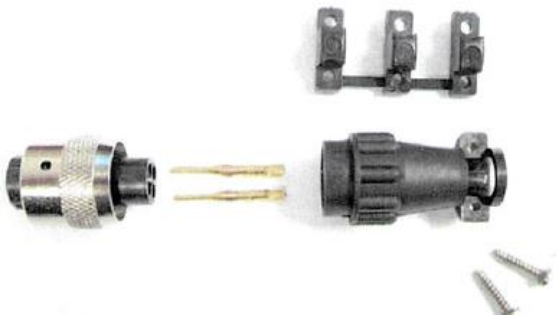
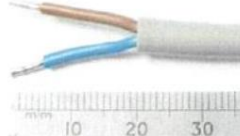


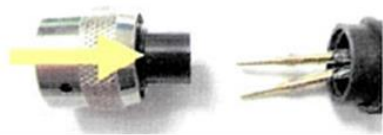


## 6 Maintenance & disposal

- Mounting and maintenance should only be performed by qualified staff.
- Periodic greasing of the O-Ring seals on the connector ports is recommended.
- The POWERLOCK BOX should regularly be inspected for damage, including a visual inspection of the source contacts.
- Periodic retention testing of PS (Power Source) contacts is recommended to confirm that contact life has not been exceeded

Disposal:

- After use the device should be disposed of in accordance with national or local authority guidelines.
- The carton and its packing are recyclable and should be disposed according to national or local authority guidelines.

## 7 Appendix – Mounting of the micro switch connector

<p>Bag content Trident connector</p>	
<p>1. Cross-sectional area 14 - 26 AWG 2. Strip 6 mm of the wire. Twist the braids and pre-tin contacts and wire.</p>	
<p>3. Solder wire to contact</p>	
<p>4. Separate the endbell clamping parts 5. Pass the wires/cable through the endbell</p>	
<p>6. Insert the insulator into the coupling nut</p>	
<p>7. Insert contacts into cavities A &amp; C. Position B &amp; D are preloaded to prevent a wrong positioning of the contacts.</p>	
<p>8. Screw the endbell to the connector and hand tighten</p>	
<p>9. Select and fit a suitable clamp bar for your wire/cable and tighten screws.</p>	