

[english]



INSTALLATION MANUAL

BOX

BATTERY PACK

BOX

IMPORTANT SAFETY INSTRUCTION

Thanks for your choice of this emergency power supply, that technologically represents the best and safer protection for your electrical devices

Before installing the emergency power supply, read carefully this manual. The user's manual gives instructions about safety, installation and operation. It offers also a whole knowledge of the emergency system and allows to obtain the maximum efficiency.

Keep this manual together with the emergency power supply. It contains instructions regards the functioning of the emergency power supply and regards the user's safety.

Preserve or recycle packing materials.

The packaging is designed to protect the emergency power supply from transport damages.

Warranty does not cover transport damages.

Automotive lead acid batteries are prohibited

CEI EN 50171 standard "Central power supply systems" on 6.12.3 paragraph tell: Lead acid automotive batteries shall not be used.

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1- SAFETY INSTRUCTIONS

The appliances described in this manual must be destined only to the use for which they have been expressly designed. Every other use is to be considered improper. The maker cannot be held responsible for any damage caused by improper, incorrect and unreasonable use. The use of any electrical equipment involves the observance of some fundamental rules. In particular:

- read carefully the installation instructions;
 - do not expose batteries to heat sources;
 - do not touch the equipment with damp or humid hands or feet;
 - do not use the appliance, even with extension, in places used as bathroom or kitchen;
 - in order to disconnect the equipment from the feed network or from batteries, unscrew the clamps carefully and extract cables without forcing them;
 - do not leave the equipment exposed to atmospheric agents (rain, sun, etc).
- Before carrying out any cleaning or maintenance operation, unplug the equipment from the electrical supply network and unplug the batteries fuses. In case of breakdown and/or poor functioning, turn off the equipment, without making any attempt to repair it directly. Address to qualified personnel exclusively.

2- STANDARDS

WARNING: Inside this equipment there are potentially dangerous voltages. All repairs should be addressed exclusively to professional and authorized personnel. Before opening the appliance, unplug all the batteries fuses.

KERT provides, for this product, only sealed lead acid batteries, which comply with Standard CEI EN 60896-2.

The planning of this product has been carried out, in compliance with standards CEI EN

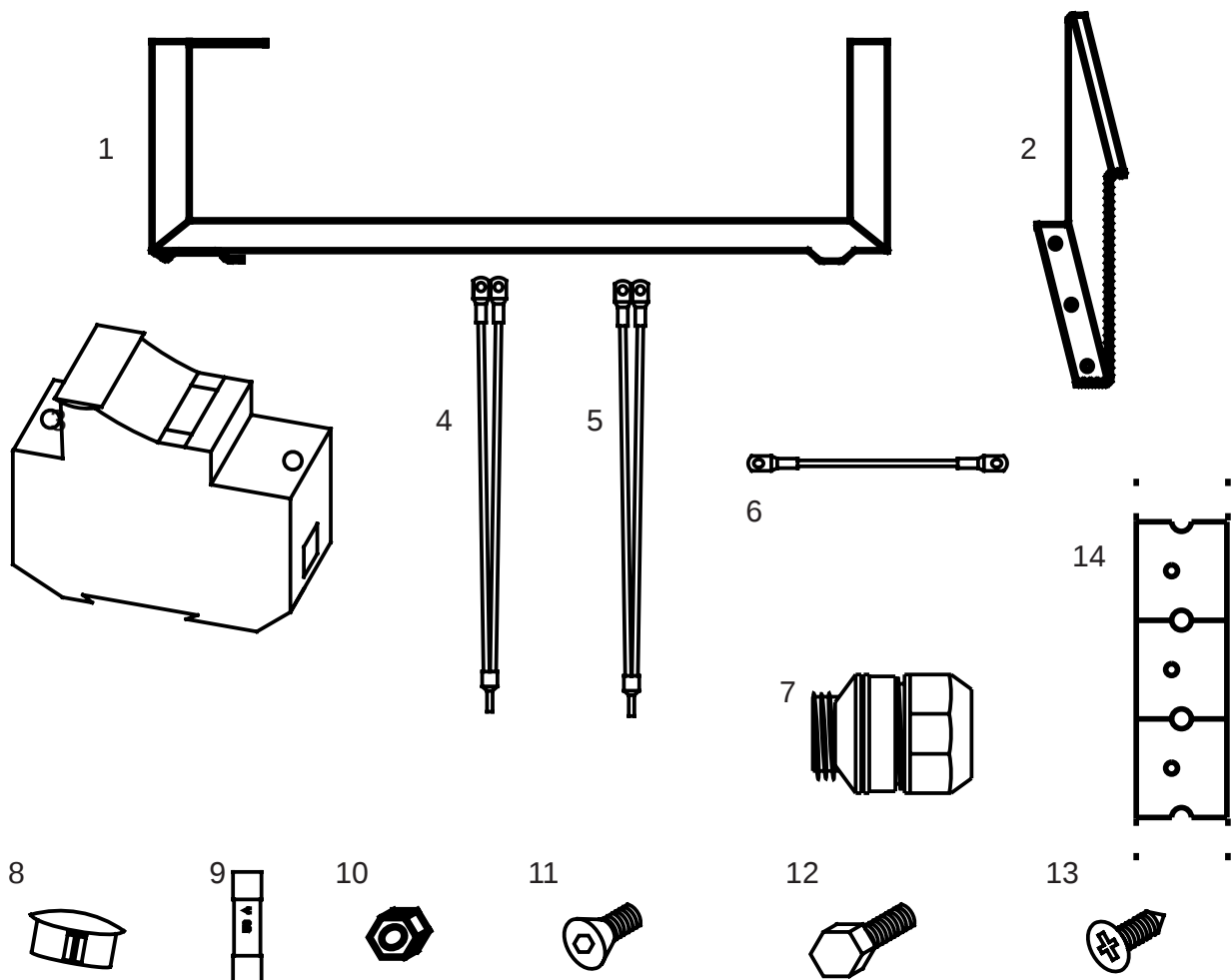
50272-2 and CEI EN 50171, together, about the use of the above-mentioned batteries. KERT is not responsible for any damage caused by using batteries different from those approved by KERT itself.

This batteries box complies with the general safety standards above mentioned: in order to install it in places, where particular assembling conditions are required, (as an example garages subject to public access), is up to the technician to arrange the adjustment of the appliance in order to respond to the required conditions and technical specifics.

3- PACKAGE CONTENT

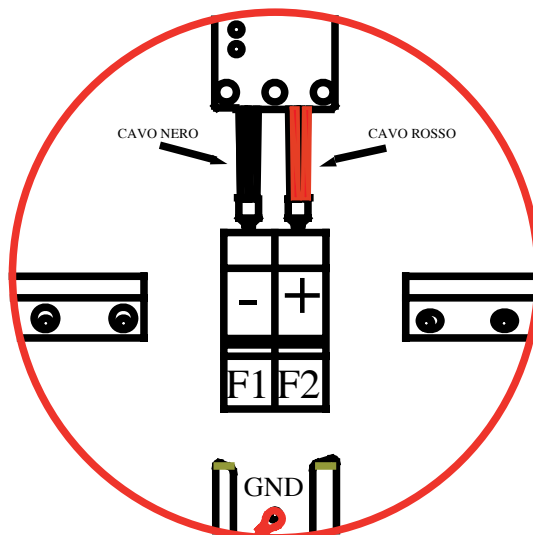
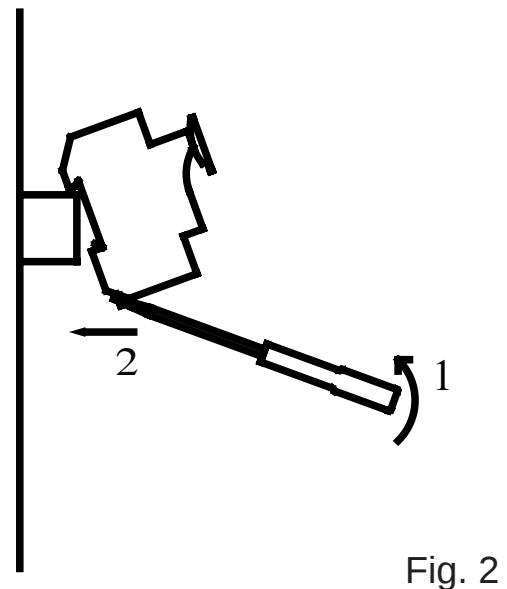
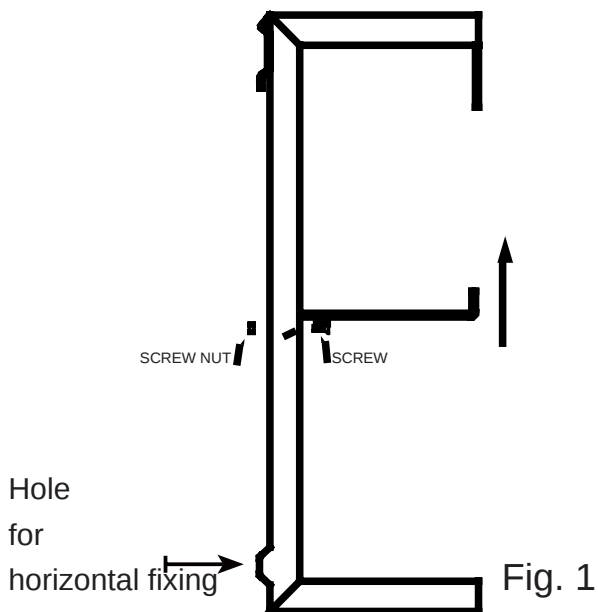
(FIGURA)

- n.1 BOX case;..... (1)
- n.2 brackets; (2)
- n.1 fuse carrierPORFUS50A;..... (3)
- n.1 double black cable;(4)
- n.1 double red cable;.....(5)
- n.3 double blu cable;.....(6)
- n.1 connector PG16, diameter 16mm;.....(7)
- n. 1 stopper;.....(8)
- n.2 fuses, 50A;.....(9)
- n. 6 screw nut M5;.....(10)
- n. 6 screws TCE 5x6;.....(11)
- n. 1 screws TE 4x10;.....(12)
- n. 4 screws VITA+ 4.2x9.5N;.....(13)
- n. 1 wall monting bracket.....(14)



4- ASSEMBLING SEQUENCE

1. Fix the two battery brackets (2) using screws (11) and screw nuts (10).
The screw nuts must be placed on the external side of the box.
2. Fix the two fuse carriers (3) to the rivet-fixed support into the box (Fig. 2).
3. Fix red cables (5) and black cables (4) to the fuse carrier site indicated by + e - (Fig. 3).
4. Insert the connector (7) and the stopper (8).
The connector must be inserted on the ingoing side of the cablese;
the stopper on the opposite one.



5- WALL MOUNTING

This box is provided with quick hooking bar, which makes wall mounting effortless and quick.

To fix the batteries box carry out the following steps:

Mount on the wall the bar supplied with the box, near to the emergency power supply (maximum distance 2m) (see Fig.1 and Fig.2). It must be positioned perfectly horizontal. Use pression screw with $\varnothing$ 8mm dowel. The bar has to be fixed on three points at least (It must support until 45Kg).

Hook the box, without batteries, on the wall on the upper part of the bar. To hook the box, first lay it on the wall keeping it above the bar (Step 1, Fig.3); then let it slide down towards the bottom (Step 2, Fig.3) until it is fully hooked.

To prevent the box could slide horizontally along the bar and fall down, it is **OBLIGATORY** to block it with a screw, using one of the two pierced ashlar that are placed on the bottom.

Insert batteries and wiring as described in the following pages.

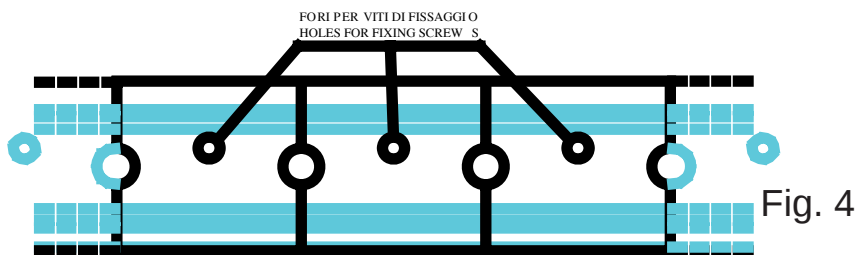


Fig. 4

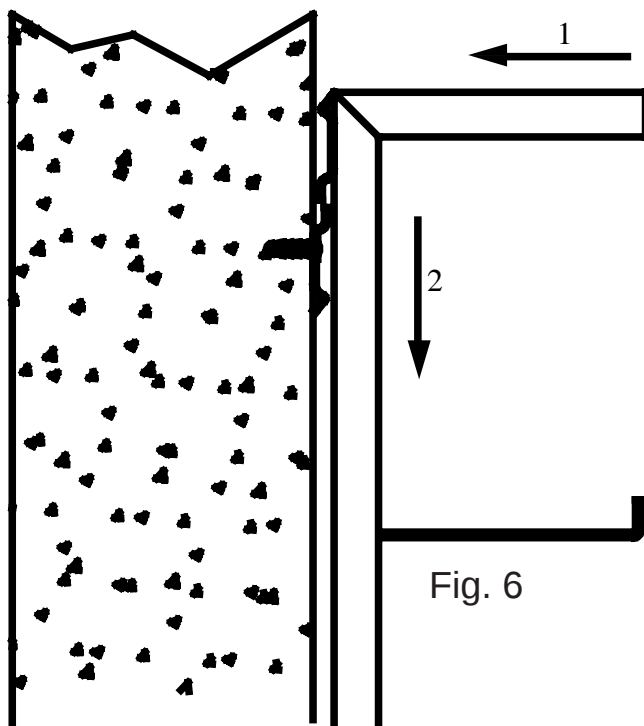


Fig. 6

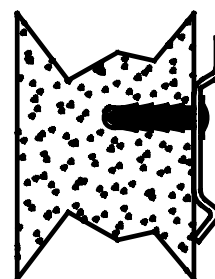


Fig. 5

Make sure that the wall is solid enough to support the full-box weight

6- WIRING SEQUENCE - 24Vdc

The following wiring sequence connects in SERIES six batteries, each one of 12Vdc, for a total nominal value of 24Vdc

WARNING: To avoid damages on the electronic circuit it is important, before wiring the box, to make sure that the emergency power supply is one of those which works at 24Vdc (code SPE500, SPE900D, SPE1000).

- 1) Insert into the box the connection cable, through the connector previously positioned on the preferred side.
- 2) Connect the cables to the bottom side of the fuse carriers in compliance with indicated polarities (- for black, + for red), using a 10-16mm² cable.
- 3) Carry out the ground connection using the screw on the bottom of the box.

WARNING: Step 1) 2) 3) must be carried out before inserting batteries.

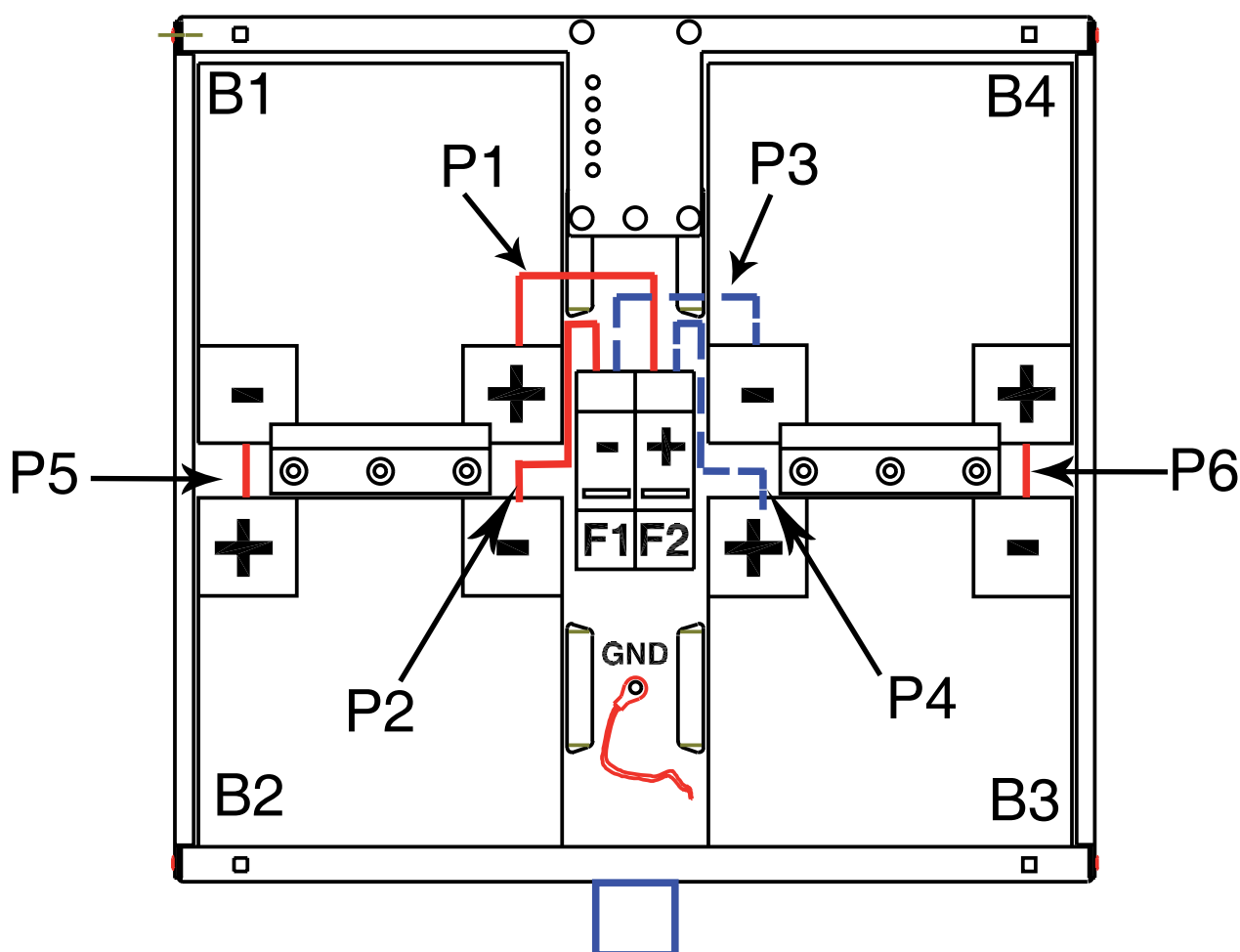
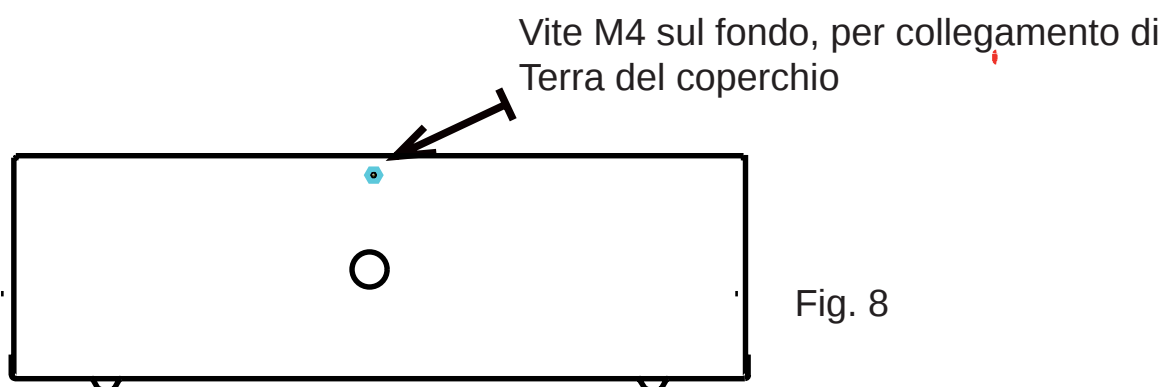


Fig. 7

- 4) Insert the 12V/27Ah batteries as shown in Fig.7: terminals must be on the user's side. **WARNING:** do not short the batteries terminals on the metal box.
- 5) Connect P2 (4) outgoing from fuse carrier F1 to the negative pole (-) of B2.
- 6) Connect P3 (4) outgoing from fuse carrier F1 to the negative pole (-) of B4.
- 7) Connect P1 (5) outgoing from fuse carrier F2 to the positive pole (+) of B1.
- 9) Connect P4 (5) outgoing from fuse carrier F2 to the positive pole (+) of B3.
- 8) Connect P5 (6) between the positive pole of B2 and the negative pole of B1.
- 10) Connect P6 (6) between the positive pole of B4 and the negative pole of B3.
- 11) Check the voltage upstream fo the fuse carrier and make sure that it is 24Vdc.
- 12) If voltage is correct insert the fuses (9) into fuse carriers and check that downstream fuse carrier voltage is 24Vdc.
- 13) Close the frontal cover. For the earth connection lock strongly the M4 screw positioned at the bottom of the box (Fig.8).

NOTA: n. 1 cable (6) is unemployed.



7- WIRING SEQUENCE - 48Vdc

The following wiring sequence connects in SERIES six batteries, each one of 12Vdc, for a total nominal value of 48Vdc

WARNING: To avoid damages on the electronic circuit it is important, before wiring the box, to make sure that the emergency power supply is one of those which works at 48Vdc (codes SPE2000D, SPE3000D).

- 1) Insert into the box the connection cable, through the connector previously positioned on the preferred side.
- 2) Connect the cables to the bottom side of the fuse carriers in compliance with indicated polarities (- for black, + for red), using a 10-16mm² cable.
- 3) Carry out the ground connection using the screw on the bottom of the box.

WARNING: Step 1) 2) 3) must be carried out before inserting batteries.

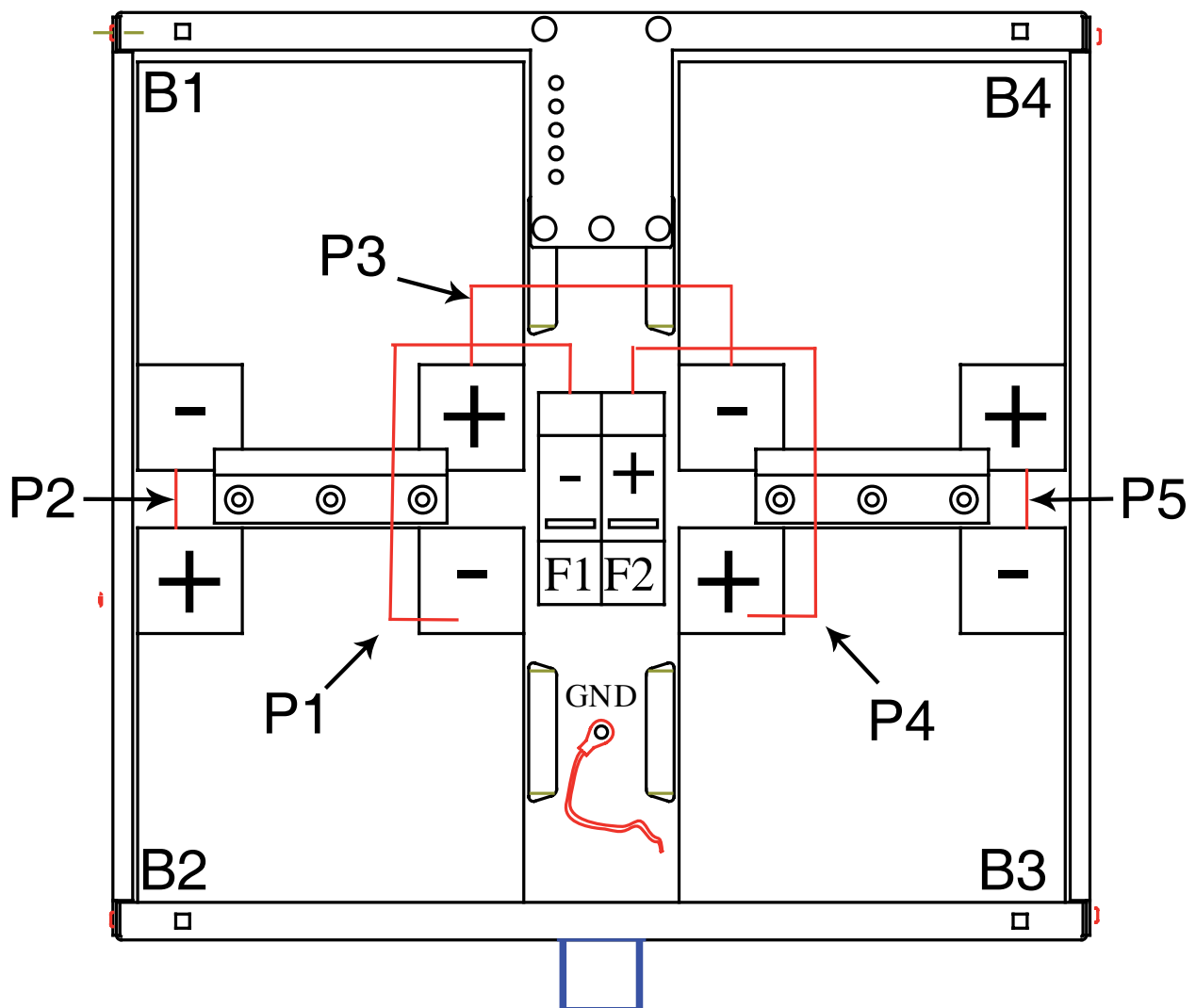
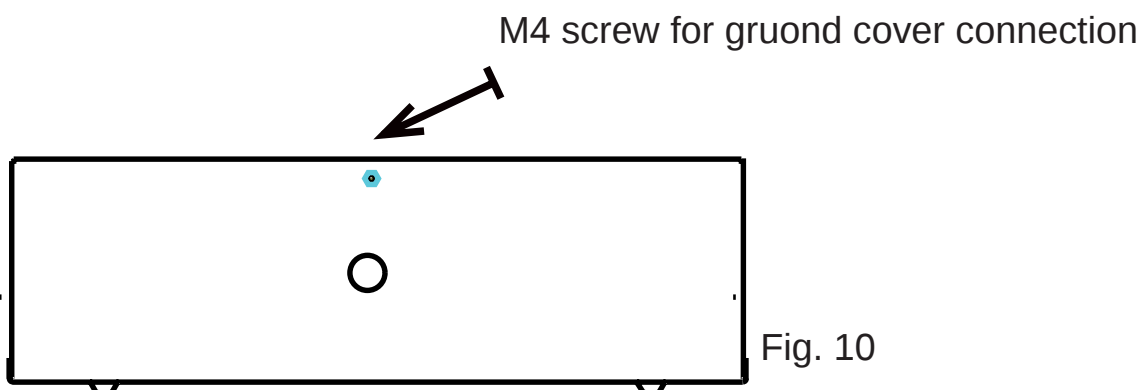


Fig. 9

- 4) Insert the 12V/27Ah batteries as shown in Fig.9: terminals must be on the user's side. WARNING: do not short the batteries terminals on the metal box.
- 5) Connect both cables of P4 (5) outgoing from F2 to the positive pole (+) of B3.
- 6) Connect both cables of P1 (4) outgoing from F1 to the negative pole (-) of B2.
- 7) Connect P5 (6) between the positive pole of B4 and the negative pole of B3.
- 8) Connect P3 (6) between the positive pole of B1 and the negative pole of B4.
- 9) Connect P2 (6) between the positive pole of B2 and the negative pole of B1.
- 10) Check the voltage upstream to the fuse carrier and make sure that it is 48V.
- 11) If voltage is correct insert the fuses (9) into fuse carriers and check that downstream fuse carrier voltage is 48V.
- 12) Close the frontal cover. For the earth connection lock strongly the M4 screw positioned at the bottom of the box (Fig.10).



8- TECHNICAL DATA

Battery tipe	Maintenance free lead acid batteries 12V/27Ah
Nominal Voltage	24Vdc 48Vdc
Maximum number of allowed batteries	4
Protection fuses	2x50A 250V 14x51 mm - Power line
IP rating	IP53
Dimensions	A398 x L420 x P140 mm
Weight	7.5 Kg (without batteries) 45 Kg (with four 12V/27Ah batteries)
Standards	CEI UNI EN 50171 ; EN 50272-2 for the battery pack CEI UNI EN 60896-2 for the batteries

9- DISPOSAL

Dispose these products only through specialized and authorized collecting centres.

They must not be considered as a normal urban waste.



10- RoHS DIRECTIVE

This product complies to Directive RoHS 2002/95/CE.
RoHS Directive do not applies on batteries used in this battery pack.

11- WARRANTY

This appliance is guarantee for 24 months from any kind of construction defects (except all parts that are weared for normal use).

Warranty decade whenever occur a manumission of the appliance or it is not use according to user's manual.

For every control or repair (warranty or not) the appliance is **MUST** be delivered to the dealer.

If it is impossible to find the dealer you can directly send the appliance to K.E.R.T. srl.

Free domicile to KERT is necessary to send us all devices in case of malfunctioning or any kind of problem.

KERT srl is not liable for transport damages or loss.

KERT srl is not liable for damage to people and things that use its products.

WARNING: warranty is valid only if the device is followed by invoice or receipt.

If they are not available, we refer to construction date.



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