Relcross Ltd, Hambleton Avenue, Devizes, Wiltshire, SN10 2RT
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New Enhanced Power Supplies

PS08 24 V DC - 7.0 Amp continuous - 7.5 Amps Intermittent

The enclosure must be fixed to a vertical flat surface at a maximum ambient temperature of 45 degrees C in a well ventilated area
This power supply must be installed in accordance with the current IEE regulations covering low voltage power supplies complying with the low voltage directive SI 1994 No 3260 73/23/EEC (LVD)

Features:

- Over current protection.
- Short circuit protection.
- Thermal overload protection.
- Constant voltage regulation.
- Mains failure or low battery voltage warning, user selectable
- Fire relay interface to fire alarm system.
- Enclosure door 3 LED status indicators.
- PCB mounted engineering status LED indicators, show:
  - Over current
  - Fire alarm relay status
- Battery management electronics providing:
  - Low voltage trip to disconnect battery and extend battery life.
  - Reverse battery polarity protection.
- 3 Fused outputs relay (FR) switched and 1 fused non-switched output all with blown fuse indication by LED.
- Thermostatically controlled cooling fan - cuts in at high load.

Description:
Over current protection
If the load exceeds the power supply maximum current rating, an electronic sensor detects this overload and shuts the power supply down; this is indicated by the red overload LED on the circuit board. To reset the trip condition, turn the mains supply off then wait for the LED to extinguish completely, this may take 40 seconds. Investigate and remove the fault

Battery management, if battery fitted
Under normal conditions, the battery floats at 27.6 Volts. If the mains power fails, the battery takes the load. Eventually the voltage will drop to 21 volts & a relay disconnects the battery, this is automatically reset once the mains has been re-energised. This feature extends battery life by preventing deep discharging and prevents equipment malfunction.

User selectable warning voltage free relay contacts
The electronic voltage detection circuit is configured by selecting a link switch on the PCB for either: MF - Mains failure or LB - Low battery 23.0 volts .

Fire control relay
Terminals FR & FR can be wired to a voltage free fire system and or access control system, relay operation is indicated via the external yellow LED. The relay positive contacts are made via +NC (normally closed) and +NO (normally open). The switched output can be changed from relay energised to make the outputs live to relay de-energised to make outputs live by changing a yellow wire link on the PCB with push on terminals

Cabinet dimensions in mm: 465H * 255W * 90D

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Installation & Commissioning tests

Initial installation test

Prerequisites:

- Disconnect battery – if supplied with battery
- Disconnect all supplied equipment
- Place the handbag link to LB low battery (on PCB).

Test procedure

Switch on mains power; the following indicators should be illuminated:
Red and Green – on the front panel
Green on the PCB

Fire alarm relay

Switch off mains power & connect a link between terminals FR & FR
Switch on mains power – the yellow LED on front panel should now be lit,
Connect a voltmeter between terminals 0v & + on any of the three outputs, this should be live at PSU output voltage

Switch off mains power & remove the link between terminals FR & FR, switch on mains power observe LEDs switch off in the following sequence: red followed by green on PCB then green on front panel last

Battery functionality – optional if fitted

Switch off mains power & connect the battery, place handbag link to MF (mains failure) switch on mains power, then switch off. The power supply is now running on the battery, note the green LED on PCB will be off but the green LED on the front panel will be on. The relay contacts WNO to WNC will change over

Tests with the load connected – battery not connected (if supplied): With the load connected, switch on the mains. The following LEDs should be on: red & green on front panel, with yellow on the PCB, this indicates the test & the power supply loading is correct.

If only the red LED is illuminated there is a short circuit with the load connected. If red, & green on the front panel with green and red (over load) on the PCB illuminated the connected load has exceeded the power supply rated output & must be reduced

Front panel LED	PCB LED	Means
Red + Green	Yellow *	Normal operation
Red + Green + Yellow	Yellow *	Normal operation with fire relay energised
Green	Yellow *	Power supply on battery
Green + Yellow	Yellow *	Power supply on battery with fire relay energised
Red only	None	Dead short on output
Red + Green	Red	Current rating exceeded

* Yellow LED on PCB is normally lit & will go out on mains failure or low battery

The four output blown fuse indicator LEDs will only illuminate when the fuse has blown or missing and a load is connected to the appropriate terminals

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Terminals, connections, fuses & warning LEDs