



Installation Manual for D1530 Series EN Compliant Grade 3 Type A Power Supplies

D1530 Series	
D1531	Grade 3, 1A
D1532	Grade 3, 2A

INSTALLATION

Mount the metal enclosure onto the wall in the usual manner.

Connect the Live, Earth and Neutral terminals to the un-switched fused spur.

Connect 0V, tamper and fault outputs to the control panel as appropriate (see control panel manual for details). Connect 12v and 0v to the system.

Fit the batteries and ensure that the tamper switch is connected to the PCB.

Switch on the AC supply and confirm that the "EPS OK" LED is on.

If not all the batteries are to be fitted, the "Status" LED will blink. Press the "Learn" button, and the "Status" LED will flash quickly while the battery configuration is learned in.

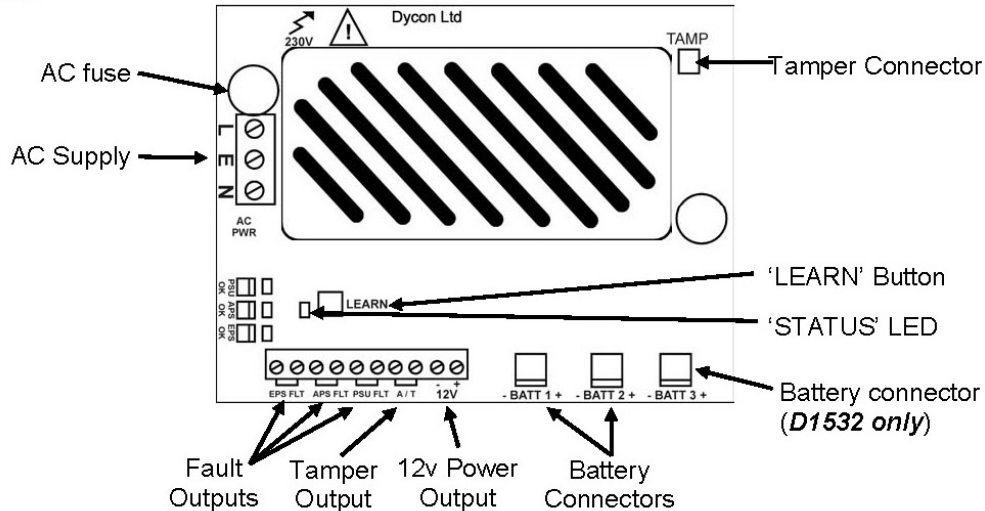
The "Status" LED will start to flash slowly indicating that the batteries are charging. If the "APS OK" LED is off, the battery voltage may be low. Wait for a couple of minutes to confirm that the "APS OK" LED comes on. When the batteries are fully charged, the "Status" LED will go out.

**These products are suitable for use in systems designed to comply with
PD6662: 2004 at Grade 3 and Environmental Class 2.**

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LAYOUT



AC supply

The power supply has 3 terminal blocks for Live, Earth and Neutral connections, and is protected by a 20mm anti-surge fuse. Mains earth is isolated from the 0V output, although, when supplied boxed, mains earth is connected to the metal enclosure.

Tamper output

This output is connected to the tamper connector. These terminals will be shorted when the tamper switch is fitted and closed.

Fault outputs

Three voltage free fault outputs and LEDs are provided with the following functions:

EPS FAULT	APS FAULT	PSU FAULT
Green LED goes out and relay contacts open if:	Green LED goes out and relay contacts open if:	Green LED goes out and
AC power fault	Battery not connected	Output voltage low
PSU over-voltage fault	Battery load test fault	Total power-down
Thermal shutdown	Battery voltage low	
Total power-down	Total power-down	
All outputs open and LEDs out indicates a total power-down		

Status LED

Status LED	Indicates
OFF	Normal
Fast flash	Learning battery configuration
Slow flash	Batteries are charging
One blink	Fault on battery connected to BATT1
Two blinks	Fault on battery connected to BATT2
Three blinks	Fault on battery connected to BATT3 (D1532 only)

12v power output

Terminal blocks are provided to connect to the system. The maximum current available from the “Power output” terminals depends on the type of power supply and the batteries used, shown in the table on the back page.

Auxiliary power supply (batteries)

Two connectors are provided marked BATT1 and BATT2. A third connector is fitted to the D1532, marked BATT3. By default, the PSU assumes that all batteries will be fitted. If only one is used, this must be connected to the BATT1 connector, and the configuration learned. A second battery must be connected to the BATT2 connector, and the configuration learned.

Battery learning

Battery learning can only be done when the AC power is applied and at least one battery is connected to BATT1. The battery learn process is initiated by pressing the Learn button; the Status LED will flash rapidly and the current battery configuration will be learnt into non-volatile memory. The battery configuration will remain in memory even after a complete power-down.

Battery protection

The batteries and electronic circuitry are protected against reverse polarity connected by a self resetting electronic fuse. The batteries are also protected against deep discharge, which will be invoked when the battery terminal voltage has dropped to 10.5v.

Battery monitoring

The batteries are monitored for low voltage, disconnection and load test. When more than one battery is fitted, they are monitored individually.

Maintenance

This unit is to be used by service personnel only; there are no user serviceable parts. No maintenance is required other than routine periodic testing and replacement of the standby batteries. For further information on routine battery replacement, please contact your battery supplier or manufacturer.

Specifications

Power supply	Type A, Security Grade 3, Environmental Class 2
AC input voltage	230v +10% -15%, 50Hz ± 15%
AC input fuse	20mm anti-surge fuse rated at
- D1531	- 230V 1A
- D1532	- 230V 2A
Output voltage	13.7v nominal
Output ripple	Less than 50mV (less than 0.4% @ 13.7v)
Battery recharge time	Less than 24 hours
Operating temperature range	-10°C to +40°C

PSU rating

Power supplies conforming to the new European standards are specified differently from older designs. The following information will give a rough indication of how to compare the current availability figures for new power supplies. The “New Rating” current can be drawn from the PSU even when the standby batteries are flat.

Example: an EN compliant power supply rated at 1A is able to provide 1A to the system even with flat batteries connected and the mains supply at its minimum rating. To achieve this, a 1A power supply could have an overall rating of up to 2.7A depending on the batteries allowed.

Current available

To meet the relevant standby durations for PD6662, it is important that the current taken from the power supply does not exceed the figures in the table below. To meet the requirements of EN50131-1, the figures below must be divided by 2.2 (e.g. 1.5A becomes 0.68A).

	D1531	D1532		D1531	D1532
1 x 7 AH	0.5A	0.5A	1 x 8 AH	0.6A	0.6A
2 x 7 AH	1.0A	1.0A	2 x 8 AH	1.0A	1.2A
3 x 7 AH	N/A	1.5A	3 x 8 AH	N/A	1.8A
1 x 17 AH	N/A	1.3A	1 x 18 AH	N/A	1.4A
2 x 17 AH	N/A	2.0A	2 x 18 AH	N/A	2.0A

Note: in both the above tables, it is assumed that the system transmits a “Mains Fail” event to the ARC. If it does not, the required standby time is doubled, thus all the available current figures must be halved.

Product part numbers

D1531-B Grade 3, 1 Amp PSU in “B” size housing to accept 7 / 8AH batteries

D1532-B Grade 3, 2 Amp PSU in “B” size housing to accept 7 / 8AH batteries

D1532-C Grade 3, 2 Amp PSU in “C” size housing to accept 7 / 8 / 17 / 18AH batteries

Size and weights

	PCB	“B” size housing	“C” size housing
Size (h x w x d mm)	130 x 100 x 38	260 x 320 x 87	430 x 345 x 90
Weight (kilos)	0.19	3.2	4.5

In case of problems, telephone Dycon Technical Support on +44 (0)1443 471064 or email technical@dyconsecurity.com.