# Installation Manual for D1521 & D1522 EN50131/PD6662- Compliant Grade 2 Power Supplies

| Products | |
|---|---|
| D1521 | Grade 2, 1A |
| D1522 | Grade 2, 2A |

**INSTALLATION**

Mount the metal enclosure onto the wall.

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

Connect the tamper and fault outputs to the control panel as appropriate (see control panel manual for details).

Connect the 12v power output to the system.

Ensure that the tamper switch is connected to the PCB. Fit the batteries.

Switch on the AC supply and confirm that the “EPS” and “APS” LEDs are on.

**This product is suitable for use in systems designed to comply with EN50131/PD6662 at Grade 2 and Environmental Class 2**

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**External power supply (AC supply)**

The power supply has a three-way terminal block 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 voltage free output is connected to the tamper connector. These terminals will be shorted when the tamper switch is fitted and closed.

**Fault outputs**

Two voltage free fault outputs and LEDs are provided to monitor for External Power Supply (EPS) fault and for Auxiliary Power Supply (APS) fault.

| EPS FAULT | APS FAULT |
|---|---|
| **Green LED goes out and relay contacts open if :**<br>• AC power fault<br>• Unit powered down<br>• Thermal shutdown | **Green LED goes out and relay contacts open if :**<br>• Battery voltage lower than 10.8v<br>• Unit powered down |
| **Both outputs open and all LEDs out indicates a total power-down** | |

**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 4. The "12V OK" LED indicates that 12V is available from these terminal blocks.

**Auxiliary power supply (batteries)**

Two battery connectors are provided marked BATT1 and BATT2. These power supplies are compatible with 7AH or 8AH Sealed Lead Acid or Gel batteries.

If two batteries are to be used, they must individually be fitted to connectors BATT1 and BATT2.

**Battery protection**

The batteries and electronic circuitry are protected against reverse polarity connection 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.

**Specifications**

| | |
|---|---|
| Power supply | Type A, Security Grade 2, Environmental Class 2 |
| AC input voltage | 230v +10% -15%, 50Hz ± 15% |
| AC input fuse | 230VAC anti-surge fuse rated at: D1521 1A; D1522 -3A |
| Output voltage | 13.7v nominal |
| Output ripple | Less than 50mV (less than 0.4% @ 13.7v) |
| Battery recharge time | Less than 72 hours |
| Operating temperature range | -10°C to +40°C |

**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.

**PSU rating**

Power supplies conforming to the European standards are specified differently from older designs. The following information will give a rough idea 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 can 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 2.5A.

**Current available for EN50131 / PD6662 Grade 2 systems**

To meet the standby durations for EN50131 & 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).

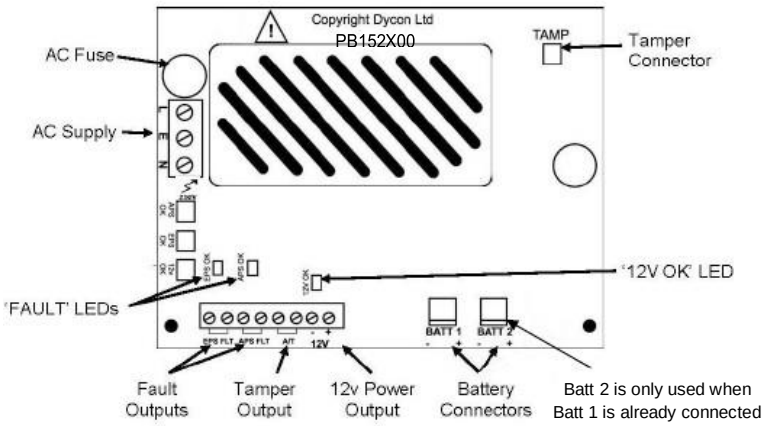
| Battery Type | D1521 | D1522 | Battery Type | D1521 | D1522 |
|---|---|---|---|---|---|
| 1 x 7AH | 0.5A | 0.5A | 1 x 8Ah | 0.6A | 0.6A |
| 1 x 7AH | 1.0A | 1.0A | 2 x 8Ah | 1.0A | 1.2A |
| 1 x 7AH | N/A | 1.5A | 3 x 8Ah | N/A | 1.8A |
| 1 x 17AH | N/A | 1.3A | 1 x 18Ah | N/A | 1.4A |
| 1 x 17AH | N/A | 2.0A | 2 x 18Ah | N/A | 2.0A |

**Standard housing options, sizes, weights and battery capacities**

| 1A version D1521 | 2A version D1522 | Description | Suitable Batteries | Dimensions H x W x D (mm) | Weight |
|---|---|---|---|---|---|
| D1521-A | D1522-A ** | Steel, small-size A housing | 1 x 7/8Ah | 235 x 170 x 85 | 1.46kg |
| D1521-B * | D1522-B * | Steel, medium-size B housing | 2 x 7/8Ah or 1 x 17Ah | 260 x 320 x 90 | 2.30kg |
| D1521-XB * | D1522-XB * | Steel, clam-shell lid, XB housing | 2 x 7/8Ah or 2 x 17Ah | 260 x 320 x 90 | 3.10kg |
| D1521-XLB * | D1522-XLB * | Steel, standard-size XLB housing | 2 x 7/8Ah or 2 x 17Ah | 295 x 425 x 90 | 3.25kg |
| D1521-XLBD * | D1522-XLBD * | Steel, extra-deep XLBD housing | Up to 4 x 17Ah | 295 x 490 x 165 | 5.20kg |
| D1521-C * | D1522-C * | Steel, large C-size housing | 2 x 7/8Ah or 2 x 17Ah | 345 x 430 x 90 | 3.40kg |
| D1521-E * | D1522-E * | Steel, extra-large E-size housing | 2 x 7/8Ah or 2 x 17Ah | 405 x 500 x 90 | 4.65kg |
| D1521-W | D1522-W ** | Plastic IP65, W-size housing | 1 x 2.1Ah or 1 x 7/8Ah | 245 x 195 x 90 | 1.45kg |
| D1521-G * | D1522-G * | Steel very large G-size housing | 2 x 24Ah or 4 x 17Ah | 690 x 455 x 165 | 8.75kg |
| D1542-P | D1522-P | PCB-only version | Depends on housing | 140 x 94 x 47 | 0.26kg |

**Notes: * To specify a black version, please add a -BK product code suffix to the part number, e.g. D1522-XLB-BK**
**** Depending on the actual system EN50131/PD6662 Grade 2 battery standby requirements, this may need a separate, additional battery box**

**PCB LAYOUT**




**In case of problems, telephone Dycon Technical Support on +44 (0)1443 471 900,**

**or email: sales@dyconpower.com**