

DP200 BT & RJ

Lightning surge protection for modems and telemetry equipment connected to Public Switched Telephone Networks

- **Protects fax, modems, telemetry and other telecom equipment**
- **Robust - 10kA surge capability**
- **BT or RJ11 style plug and socket**
- **Full 4-wire protection**
- **Immune to power crossing**
- **RFI version available for noisy environments**



The DP200 BT & RJ Series safeguards modems, telemetry outstations and fax machines from induced surges and transient overvoltages caused by lightning and other electrical disturbances. A single lightning strike can easily damage or destroy unprotected equipment and lead to expensive and disruptive system downtime.

Telecom authorities now encourage the end user to fit secondary protection for their equipment. Telecom providers may supply some simple surge protection such as a gas discharge tube at the customers' premises. However, this is generally only to protect the telephone line itself and offers little or no protection for any equipment attached to it.

Hybrid surge protection circuitry is utilised within the DP200 BT & RJ Series to provide the best protection devices currently available. Should mains voltages be applied to the telecom line, for example by falling cables, the DP200 BT or RJ unit's power crossing

immunity prevents damage to both the telecom equipment and the protection device.

The DP200/BT/RFI & DP200/RJ/RFI provide RFI filtering in addition to protection from lightning induced overvoltages. These devices suppress interference due to medium wave radio transmissions, and other sources, which can compromise normal telecom operation.

These robust devices, with a 10kA surge handling capability, come with either a BT style plug and socket (DP200/BT and DP200/BT/RFI) or an RJ11 plug and socket (DP200/RJ and DP200/RJ/RFI).

These self contained units have been specifically designed for use on Public Switched Telecom Networks (PSTN) offering full 4-wire protection.

DP200 BT & RJ devices are easy to

install. Simply loosen the lid retaining screw, remove the lid and screw to a wall or panel. The unit should be earthed with 2.5mm² cable. This cable is screwed into the unit's earth terminal and the other end is connected to the earth of the protected equipment.

Complete protection can be achieved using MTL Surge Technologies' range of ac power surge protection devices to prevent surges entering equipment via their power supply. The MA05 and MA10 range combines a high level of protection with the benefit of RFI filtering thus removing noise and other unwanted signals from the supply.

Specification

All figures typical at 77°F (25°C) unless otherwise stated

- Maximum discharge current**
10kA (8/20µs)
- Primary protector rating**
10kV (10/700µs)
- Leakage current**
10µA at working voltage
- Working voltage**
162V
- Max. continuous operating voltage**
175V
- Ringer Equivalence Number (REN)**
0
- Ambient temperature limits**
-40°F to +158°F - working and storage
(40°C to +70°C) - working and storage
- Humidity**
5% to 95% RH (non-condensing)
- Casing**
Plastic ABS - VO IP50 Rated
- Weight**
4.41 oz (125g) nominal
- Dimensions**
See figure 1

Installation

In order to mount and ground the unit, the DP200 BT or RJ must first be opened by loosening the lid retaining screw and removing the lid. The unit should be connected to a good ground point for optimum protection. This point should be at the power distribution board if the telecomms cable runs close by, otherwise at the power supply ground close to the protected equipment.

Connection to this ground point should be made using 14 AWG wire and should be kept to <1.5 yards. If multiple lines are required, the grounds should not be 'daisy-chained'; each SPD should be grounded separately. Figure 2 shows a complete installation with protection for both ac power and telecom SPDs fitted. The ground is taken from the supply to the telemetry equipment using a short link (<1.5 yards).

The two fixing holes can accommodate either No.6 or No.8 wood screws or up to 3mm diameter bolts. The operation of the DP200 BT or RJ is unaffected by its orientation, although it should not be mounted on a damp surface. Once the grounding and mounting operations are complete, the DP200 BT or RJ is simply reassembled by fitting the lid back onto the base and tightening the lid retaining screw. A comprehensive installation guide is supplied with each unit.

To order specify -

- DP200/BT** (BT plug and socket)
- DP200/BT/RFI** (BT plug and socket and RFI filtering)
- DP200/RJ** (RJ11 plug and socket)
- DP200/RJ/RFI** (RJ11 plug and socket and RFI filtering)

Note: In accordance with our policy of continuous improvement, we reserve the right to change the product's specification without notice

| Typical values | DP200/BT & DP200/RJ | DP200/BT/RFI & DP200/RJ/RFI |
|---------------------------------|-------------------------------|-----------------------------|
| Line resistance | 5 ohms | 10 ohms maximum |
| Limiting voltage | 6kV/3kA 5kV/125A | 250V 205V |
| Bandwidth (600 ohms) | 6MHz | 43kHz |
| Max stopband attenuation | not applicable | 65dB |
| Capacitance | line to line line to earth | <1.5 nF <150 pF |
| Insertion loss | @ 300Hz @3400Hz | 0.06dB 0dB |
| Line balance 300-3400Hz | better than 46dB | better than 46dB |

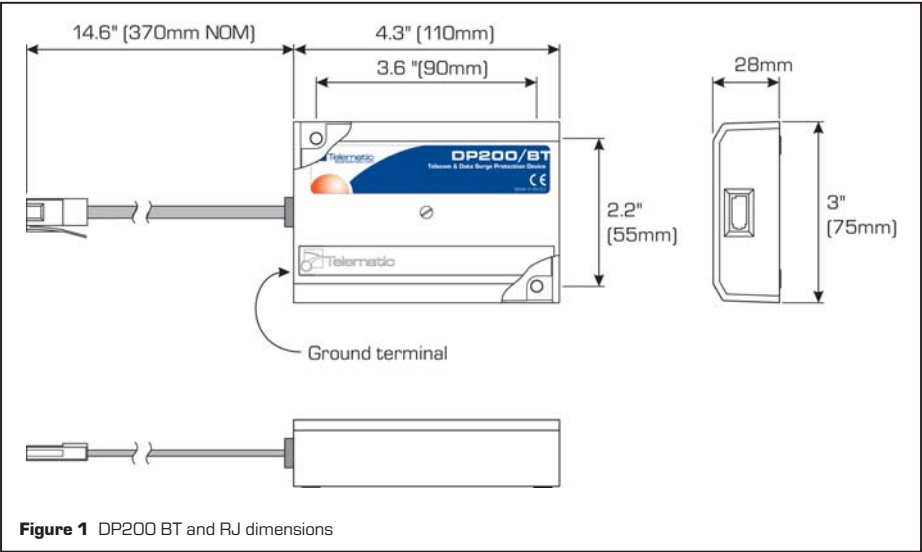


Figure 1 DP200 BT and RJ dimensions

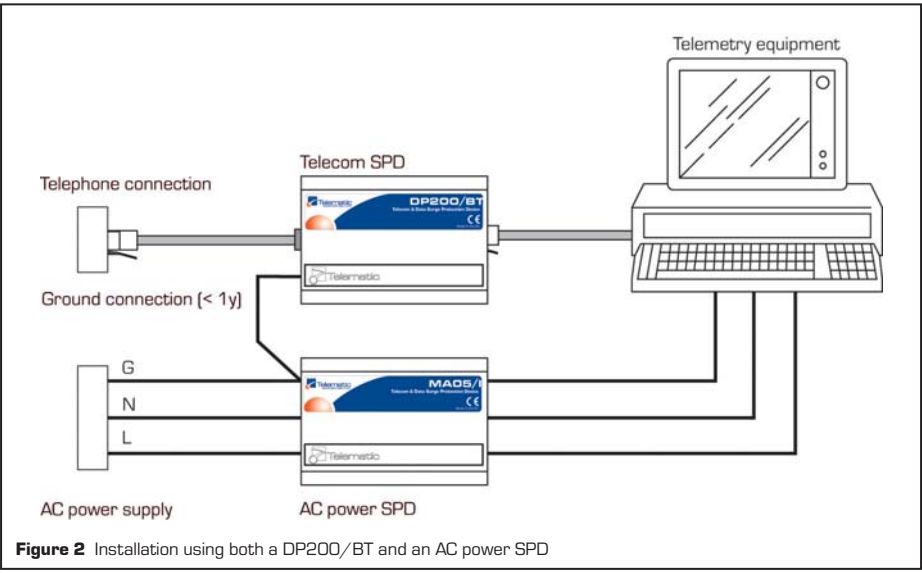


Figure 2 Installation using both a DP200/BT and an AC power SPD

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