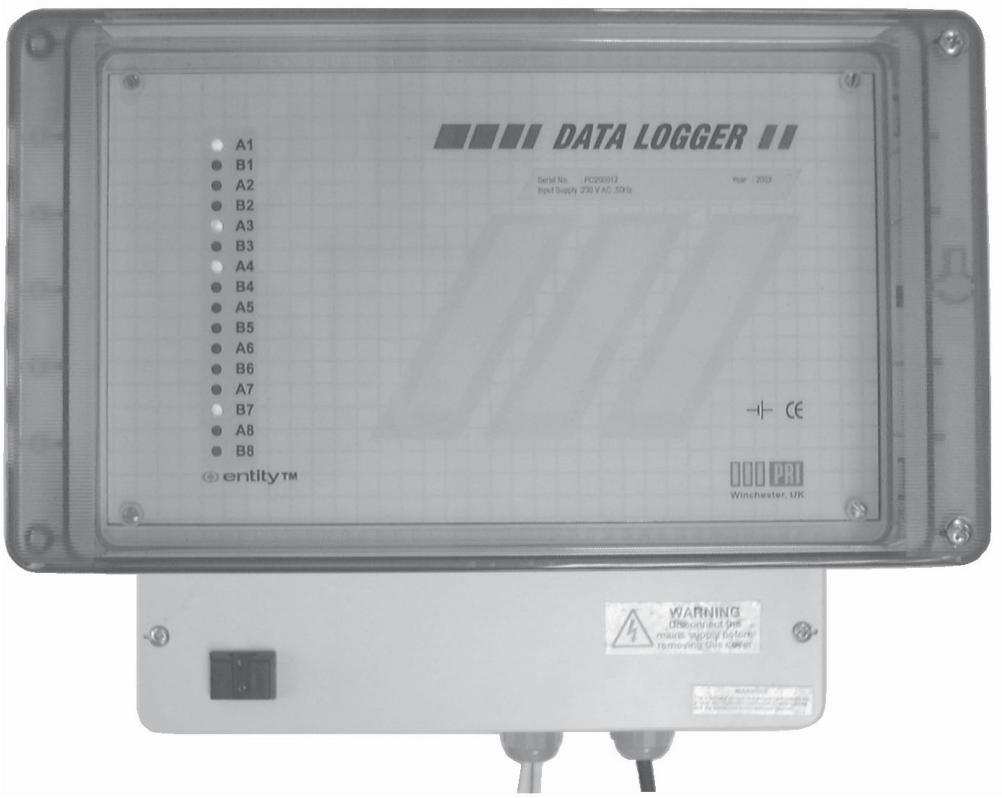
DATALOGGER USER GUIDE



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IMPORTANT SAFETY INFORMATION

Care must be exercised during the installation of dataloggers and associated equipment due to the presence of mains voltages.

Local best practice and regulatory stipulations must always be observed.

Installation should only be performed by suitably trained personnel. Various points under the terminal cover operate at hazardous voltages.

Removing the cover with power applied exposes potentially hazardous voltages.

After installation access to the connectors and conductors must be prevented by fitting the cover supplied, ensuring that it is secured in position with the screws provided.

PRI dataloggers are double-insulated. The electrical supply should be taken from a point fused at 3A using cable rated for 3 A at 230 V.

An external two-pole switch or circuit-breaker must be mounted adjacent to the unit.

Replace fuses only with correctly rated items. The correct rating is shown adjacent to each fuse.

Use or installation other than in accordance with this document may result in safety hazards.

CE MARKING DECLARATION OF CONFORMITY
PRI dataloggers meet standard BS EN 610336:1997, and therefore conform to EU Directive 89/336/EEC 'EMC Directive' as amended by 92/31/EEC and 93/68/EEC.

SECTION A: INSTALLATION

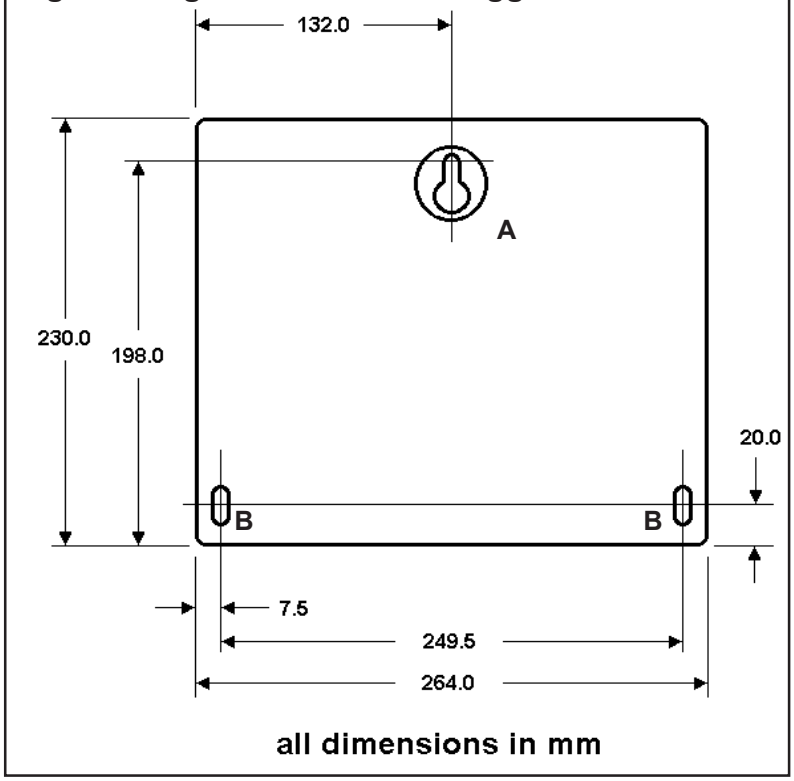
How to fix the datalogger into position

PRI dataloggers are designed for vertical mounting, and can be fitted to meter panels, boards, enclosures or walls. Suitable screws must be selected to ensure a good fixture. Screws of up to M4 or 4BA size can be used. PRI dataloggers use a three-point fixing arrangement. The top screw is located on the datalogger's centre-line and fits into a 'key-hole' locator on the rear-plate of the unit. This screw supports the unit in position on the surface to which it is be attached. Two other screws are fitted through the terminal block of the unit and are used to secure it against the mounting surface.

The fixing centres are as shown on this view of a datalogger rear panel.

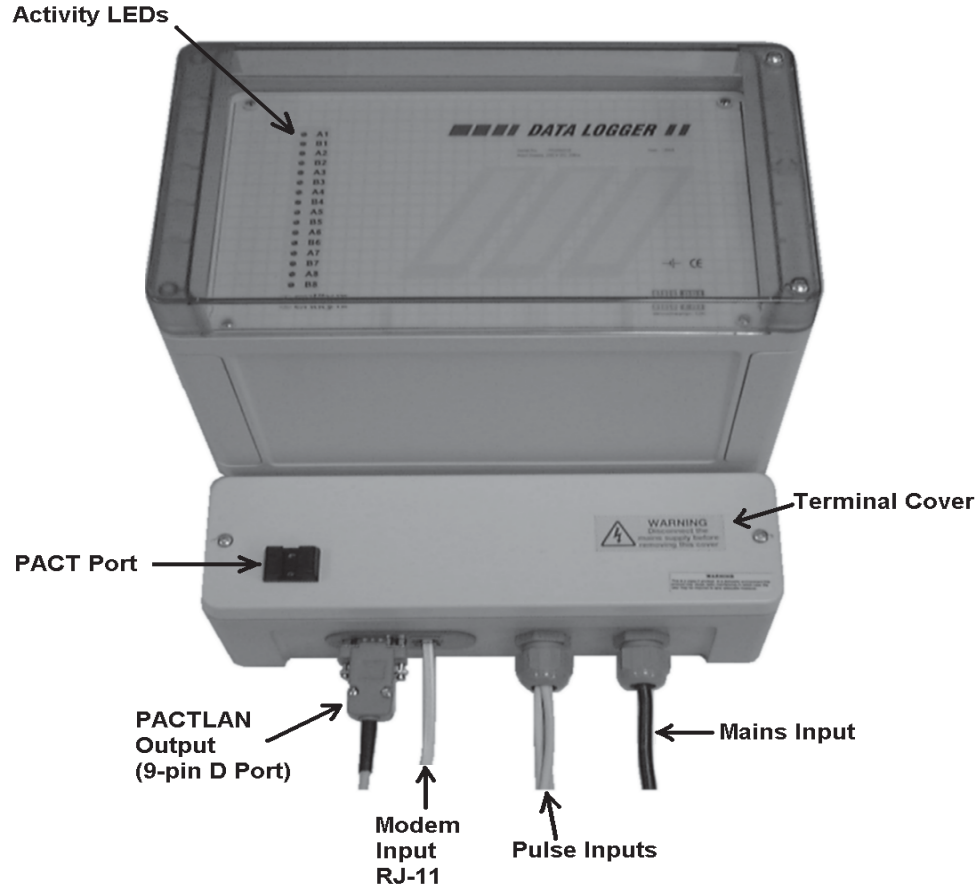
1. Mark out the position of the unit on the mounting surface, drill a hole and fit the top fixing screw (A).
2. Fit the unit over the top fixing screw taking care to align it correctly within the 'key-hole' locator.
3. With the terminal cover removed, mark out the positions of the lower fixing screws (B).
4. Remove the unit, drill holes for the lower fixing screws.
5. Fit the unit over the top fixing screw again.
6. Fit the lower fixing screws.

Fig. 1 Fixing Centres for Datalogger



SECTION B: PHYSICAL ARRANGEMENTS

Fig. 2 Datalogger Principle Components



SECTION C: CONNECTIONS TO EXTERNAL EQUIPMENT

The datalogger should be connected to a spur fused at no more than 3 A, using suitable cable rated at 230 V. The unit is designed to be energized continuously and therefore is not fitted with a power switch. The gland supplied with the unit provides strain-relief so long as it is fitted correctly and sufficiently tightened.

Pulsed input cables should also be fitted using the supplied gland, which should be sufficiently tight to provide strain-relief. Twisted-pair unshielded cabling is recommended. The Datalogger has wetted inputs that can drive up to 500 m of typical 7/0.2 mm cable.

Fig. 3 Connections to Mains and Pulse Inputs

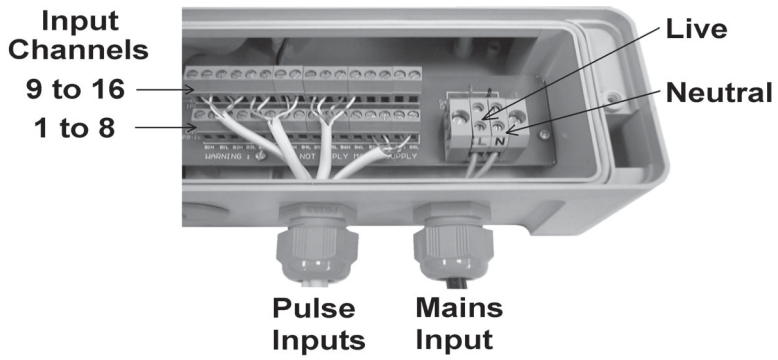
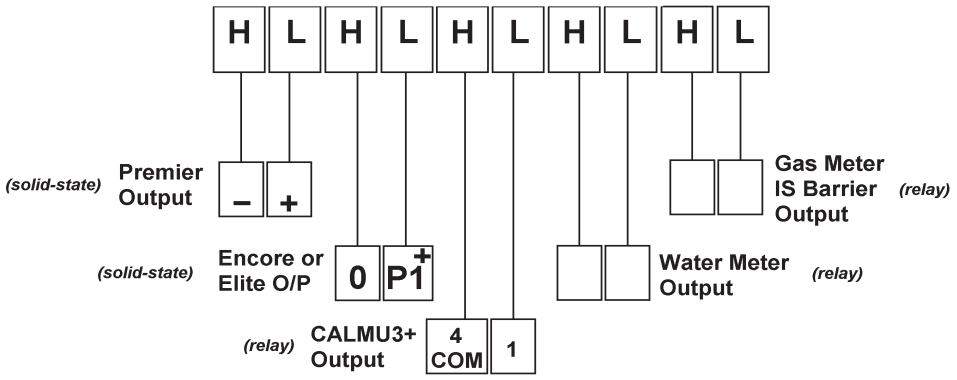


Fig. 4 Pulse Input Connections to External Devices



The datalogger input channels are wetted with a dc voltage. Polarity must therefore be observed when connecting to devices with solid-state outputs, such as Sprint, Premier, Encore or Elite meters.

Each input has a pair of terminals, labelled 'H' and 'L'. These must be connected in the manner shown in Figure 4. 16-channel dataloggers have two rows of connnectors; the lower one is for inputs 9 to 16.

SECTION D: COMMUNICATING WITH DATALOGGERS

PRI dataloggers are fitted with three interfaces for commnunications with external devices.

The PACT port can be used for interrogation by local or remote PCs. A permanent connection can be made as part of a PACTLAN network, using a PACT Netbox. The PACT port can also be used for connecting a notebook PC using a PACT lead.

The Modem Input RJ-11 port can be used to connect the datalogger integral modem to a telephone line.

The PACTLAN Output can be used to connect the datalogger to a network of other PRI meters or dataloggers. The PACTLAN network can only be accessed remotely via the internal modem. It is not possible to access the PACTLAN network through the PACT port, so it is not possible to use a datalogger as a 'PACTLAN repeater'.

Each datalogger channel is identified by number based on the hardware serial number which is used by PRI software, such as EASEii and Principal, when reading out the half-hourly data.

Channel Number Format

8-channel: PD1Ynnnn 16-channel: PD2Ynnnn

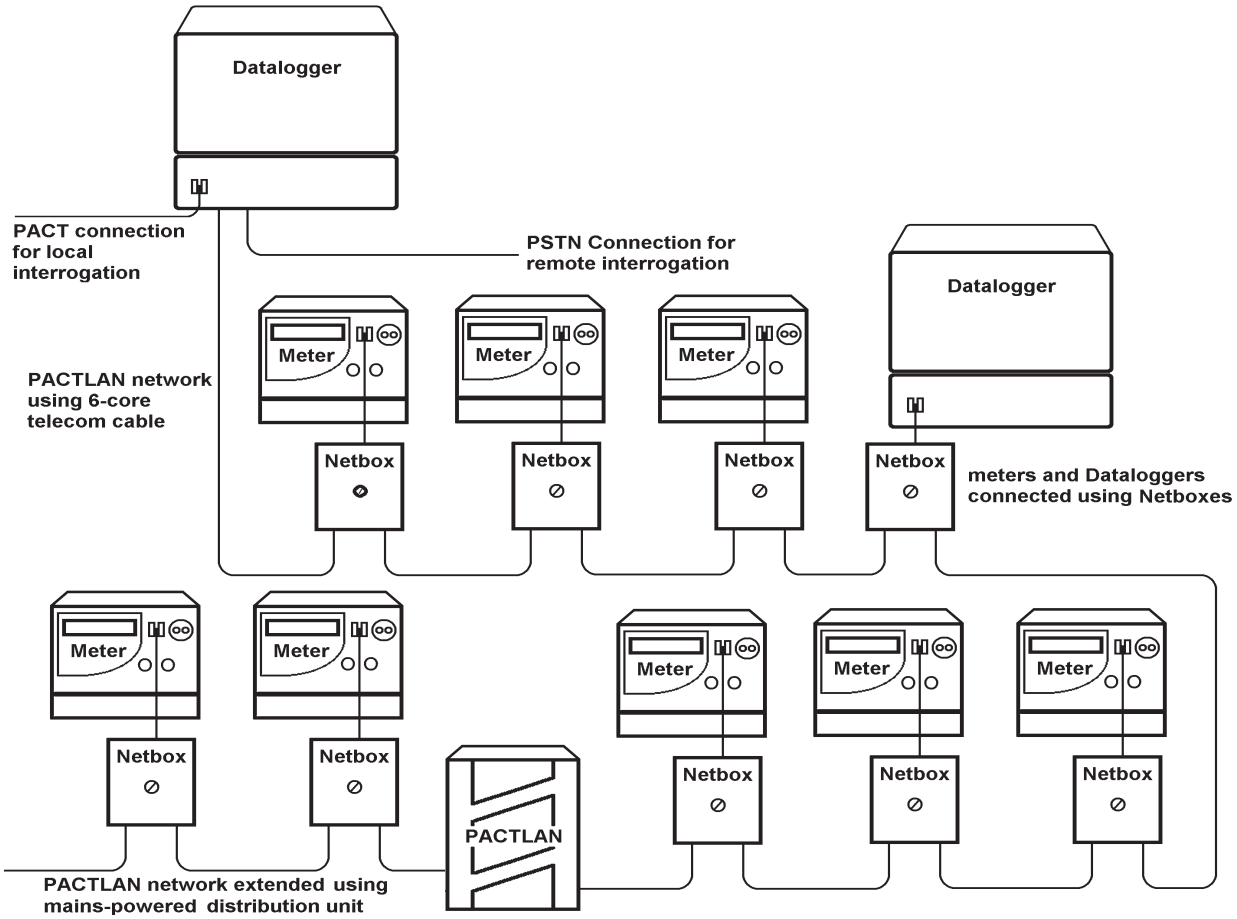
Where Y is the channel number, and nnnn is the unique hardware serial number for the datalogger.

For example, a datalogger with serial number PD101234 would have 8 channels addressable by software as PD101234, PD111234, PD121234, PD131234, PD141234, PD151234, PD161234 and PD171234. 16-channel dataloggers have channels numbered 0 through F as the fourth character in the address number.

Each channel has an activity LED on the front panel that is illuminated to indicate when a pulse is detected. The LEDs are labelled A1 to A8 for 8-channel devices, corresponding to inputs 1 to 8 on the input connector. The additional LEDs on 16-channel units are labelled B1 to B8 for inputs 9 to 16 on the input connector.

The load survey is returned at 1200 bd, time-stamped against GMT, as 'non-specific pulses' (BF) data.

Fig. 5 Connecting Dataloggers to a PACTLAN Network



SECTION E: DATALOGGER PART NUMBERS AND SPECIFICATION

Dimensions:	264 wide x 228 high x 240 deep (mm)
Weight:	3.2 kg
Enclosure:	IP65; ABS, UL 94 HB
Part Numbers:	8-channel:0300-0265; 16-channel: 0300-0264
Data Storage:	8-channel model: 70 days of half-hourly values 16-channel model: 35 days of half-hourly values Data are maintained for at least 30 days in the event of a power interruption
Data Inputs:	Self-wetted (up to 3 mA at approximately 12 V dc) for use with volt-free contacts. Inputs are designed for use with unshielded twisted-pair 7/0.2 cable up to 500 m long. The inputs incorporate debouncing and can detect pulses down to 50 mS duration at up to 4 Hz. Front-mounted indicator LEDs show activity on each input channel.
Time Reference:	Internal batttery-backed real-time clock
Communications:	Front-mounted PACT (RS-232 compatible) serial communications port (1200 bd) Integral V22 modem with RJ-11 socket mounted on the base of the unit 9-pin D-type connector on base of unit for built-in PACTLAN distribution unit for connecting up to 16 compatible PRI meters or dataloggers
Accessories:	Glands for mains and pulse input cables. PACTLAN adapter cable; 9-pin D plug to free end, 5 m long.