Packs Infotel Limited

M30

ULTIMATE

Installation Instructions

Version 2

Preparations.

You will need the following tools to correctly install the M30.

- 3 Raw plugs capable of accepting a 5 mm screw.
- 3 Phillips Screws of 5 mm for mounting the M30.
- 1 Slotted screw driver.
- 1 Electrical wire cutters.
- 1 Phillips Screwdriver for use with 5 mm screws*
- 1 Spirit level.

*A magnetic version will aid in the installation.

Location

Find a location for the M30 where viewing of the display and alarm indicators is comfortable and practical for the end user. A recommended height would be between 5 and 6 feet (approximately 1.5 to 1.83 metres) from floor level.

Allow adequate room for the M30 case door to open freely without the risk of damaging the M30 case door.

The M30 case is rated with an Ingress Protection of IP65. Therefore the M30 case is rated as:

1. Dust tight
2. Protected against water jets.

Important: The IP65 rating will drop if the wrong size of cable is fitted through the glands.

If the installer is using cable that is smaller than the gland hole (12 mm) and the IP65 rating is still required, then ensure that any space around the cable and gland hole is filled appropriately.

Mounting the M30

Stage 1

Fig .2 Shows the reverse side of the M30 case, it can be seen annotated on the M30 case where the screws for mounting the M30 need to be placed.

This stage should be completed first as it makes the mounting process easy.

Stage 2

Remove screws B & C, leaving screw A in place with approximately 10 mm protruding from the wall.

Stage 3

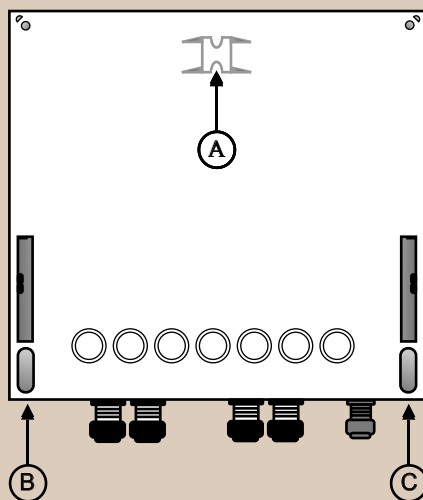Hang the M30 by Screw A as show in Fig .2, adjusting Screw A until the M30 fits snugly to the wall.

Stage 4

Remove the front panel* to the M30 to get access to the mounting holes for Screws B & C. Using an appropriate screwdriver** fit Screws B & C until tight.

*The M30 front panel has the key isolate switch on the front.
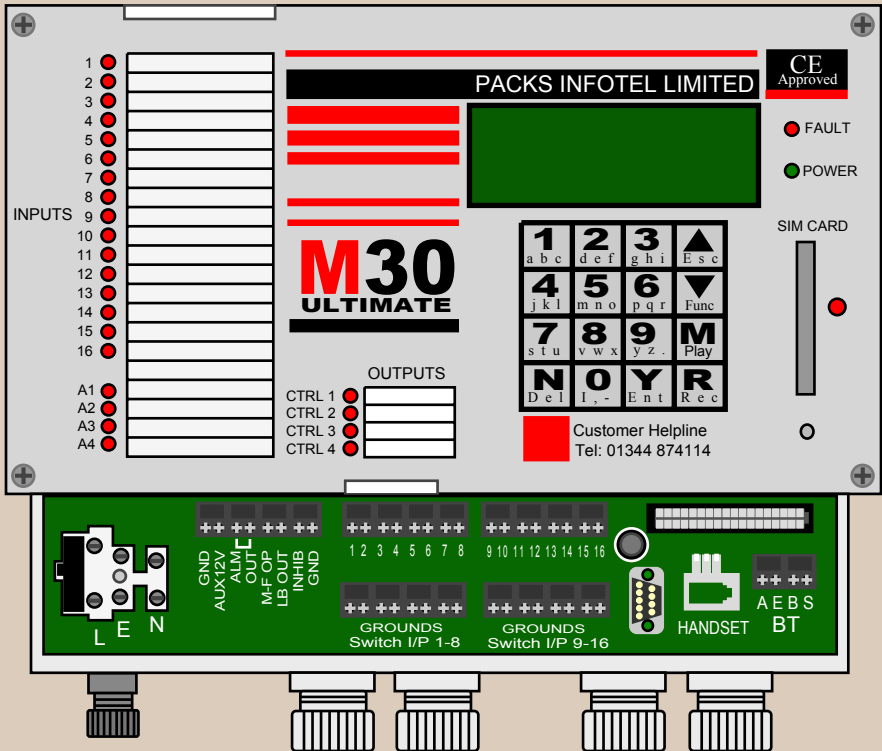**Magnetic tipped screwdrivers will make this job easier.

Fig .2

Connecting the Mains

Important: If you are unsure how to wire to the electrical mains please seek the help/guidance of a qualified electrician.

We recommend that the M30 is hard wired to the electrical mains rather than using a plug, this will remove the possibility of accidental disconnection.
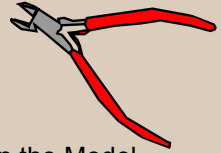

Connect the mains here.

L=Live (Brown)
N=Neutral (Blue)
E=Earth (Yellow)

*MUST BE 230 Vac 50 Hz

*Unless purchased with a specific voltage (e.g. 110 Vac)

Wiring the Inputs/Sensors

Digital Inputs Only

The M30 can accept either 4,8, or 16 inputs depending upon the Model purchased.

Warning:

All digital inputs to the M30 MUST be Volt-Free, under no circumstances should any voltage be connected to the M30 inputs.

If you have a device you wish the M30 to monitor that has a voltage output then a relay MUST be used to supply a volt-free contact.

Making a connection.

The M30 can accept both Normally Open (Closed on Alarm) or Normally Closed (Open on Alarm) contacts.

The M30 is supplied with all inputs configured for Normally Open alarms. This is done purely so that when the M30 is switched on the Installer is not inundated with alarms before making the necessary connections.

However we would recommend where ever possible to wire all inputs as Normally Closed (Open on Alarm), the reason for this is if any of the cores on the cable are broken then the M30 will generate an alarm, whereas the opposite would not.

To see how to wire each input/sensor to the M30 please look at Fig .3

Altering the Input type

To alter the input type (i.e. Normally Open or Normally Closed) the appropriate DIL switch MUST be set correctly. This can be seen in Fig .4
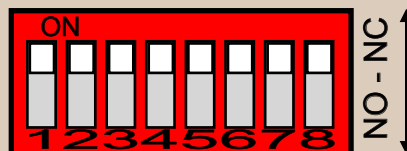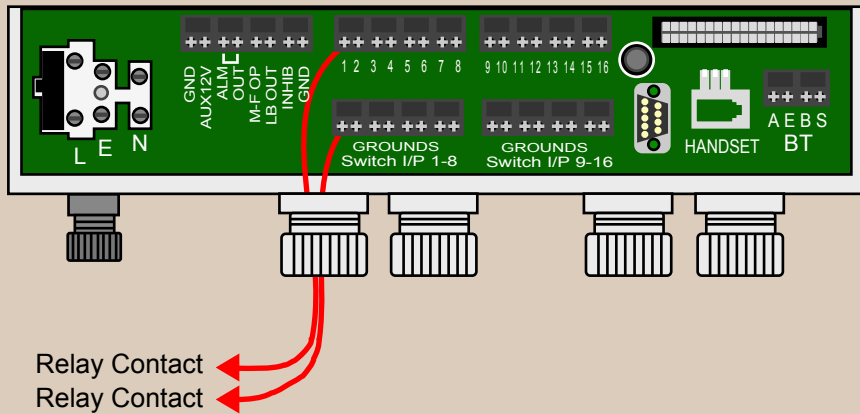
Example of a DIL Switch

Wiring the M30 inputs

Fig .3 below shows how to wire external equipment to be monitored in to channel 1 (input 1).

Since there is no voltage on the relay contacts the wires could be either way around.

Do the same for all other channels.

Fig .3

Note: red wires are for illustrative purpose only wires could be any colour.

Setting Normally Open/Normally Closed Contacts.

Shown in Fig .4 below is the location of the DIL switch that defines the input type for Channels 1-8 (i.e. Normally Open abbreviated as NO, or Normally Closed abbreviated as NC).

To change any Channel/Input to Normally Closed simply move the appropriate switch down. (e.g. if channel 1,2 and 3 are Normally Closed, then move switch's 1,2 and 3 down). The Installer may find this easier to do using a pen.

To change the input type for channels 9-16 use the same process as above with the second DIL switch located directly to the right of the DIL switch shown in Fig.4

Fig .4 (Location on M30 circuit board for Channels 1-8 input type)
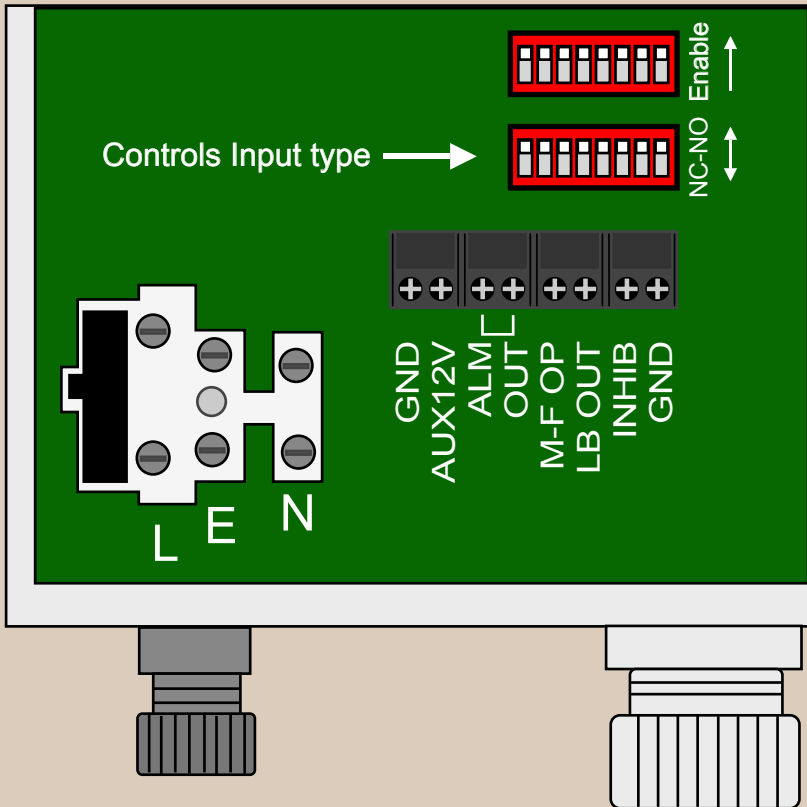
Enabling or Disabling Channels/Inputs

Any channel(s) on the M30 can be disabled so as not to activate in the event of an alarm.

The DIL switch responsible for controlling whether Channels 1-8 are enabled or not is shown if Fig .5 (Note: Switch's are shown in the default Enabled position).

To disable a channel simply move the appropriate DIL Switch Down.

The DIL switch responsible for Enabling/Disabling Channels 9-16 can be found directly to the right on the circuit board.

Fig .5

Enable or Disable Channels 1-8

Enable

NC-NO

GND
AUX12V
ALM OUT
M-F OP
LB OUT
INHIB
GND

L E N
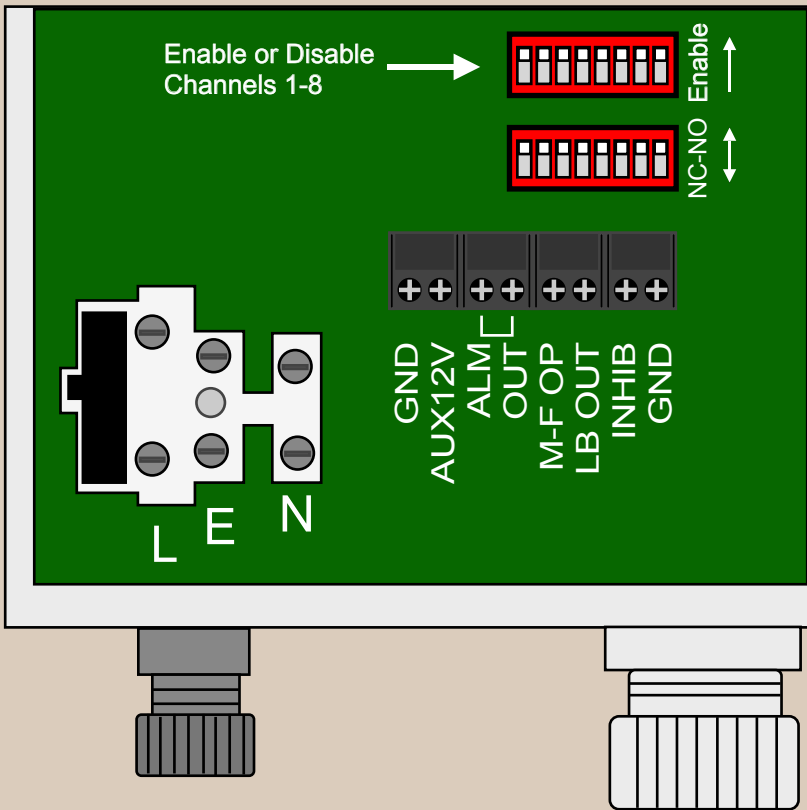
Wiring the Telephone Line

The terminal Block on the M30 responsible for the telephone line is shown in Fig .6.

Only two wires are required to be fitted between the M30 and the telephone line. We recommend that the installer hard wires the M30 to the telephone block to remove any chance of being accidentally unplugged.

Using appropriate 2 pair telephone cable connect Blue/White in to the terminal marked A, then connect White/Blue in to the terminal marked B on the M30.

Open the telephone socket that the M30 will be using and connect Blue/White into terminal 2, then connect White/Blue in to terminal 5.

Depending upon the type of telephone socket, the use of an IDC Insertion tool may be required.

If the installer is unsure of how to install to telephone sockets please seek advice from a qualified engineer.

Fig .6
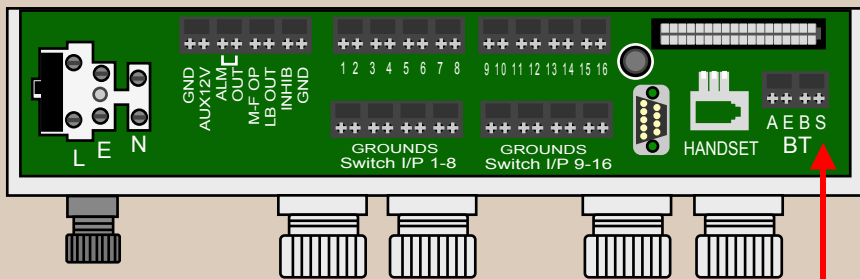
Connect the Telephone line here

Additional Information.

(A) Push button Power off. The M30 uses a rechargeable battery so that normal functions can continue in the event of a mains power cut. Therefore simply removing the mains power to the M30 will not switch off the M30. To switch all power to the M30 off including the battery the push button MUST be depressed.

(B) LIM (Line Interface Module) Socket. The LIM board interfaces the M30 with the telephone socket. A lightning arrestor is fitted as standard. If the installer chooses to remove the LIM board for easier access whilst wiring the M30, remember to place the LIM board back in the socket with the components facing down towards the ground.

(C) Telephone Handset Connection used for recording messages in to the M30 (see M30 Operating instructions for more details).

(D) RS232 Output. For Packs Infotel engineers only.

(E) Multi-function terminal block (see page 10 for more information).

Fig .7
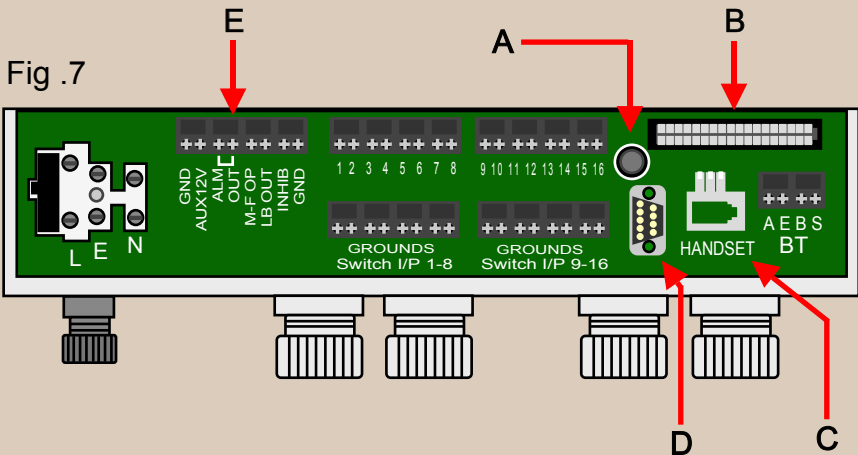
Multi-Function Terminal

Fig .8 below shows the location on the M30 Circuit board of the Multi-Function terminal block.

Beginning from the left most terminal that for explanatory reasons shall be called T1 to the right most terminal, that shall be called T8, the following explains the function of each terminal.

(T1) GND - Ground (Mains Earth)

(T2) AUX 12 V - Auxiliary output (12 Volts under load)

(T3)
(T4) ALM OUT - Alarm Output. This is a normally open contact. In the event on an active alarm the Alarm Output contacts will close during the Alarm delay period (see M30 operating instructions for more information on Alarm delays). At the end of the Alarm delay the contacts will default back to normally open. The Alarm output could be used for example to drive a local siren/sounder (maximum load 250 ma).

(T5) M-F OP - Mains failure output. Connect a wire from this terminal to any of the M30 alarm channels to generate an Alarm in the event of mains failure to the M30.

(T6) LB OUT - M30 Low standby battery. Can be used to generate an alarm on the M30 in the event of low standby battery.

(T7) INHIB - Inhibit the M30 from dialling out or being interrogated. Normally connected to a Key switch before despatch to customer.

(T8) GND - Ground (Mains Earth)

Multi-Function Terminal

Fig .8
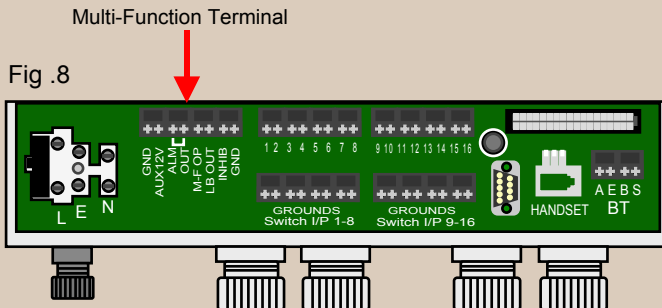
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Notes