



Guidelines – How To Wire MFP Modules

NOTE:

This document mainly provides guidance on wiring in relation to mains (domestic electricity supply) switching applications for this module. The guidelines are based on UK electrical fittings and UK electrical regulations. Installers in other countries will recognise similar basic principles but must consult and adapt to their own regulations

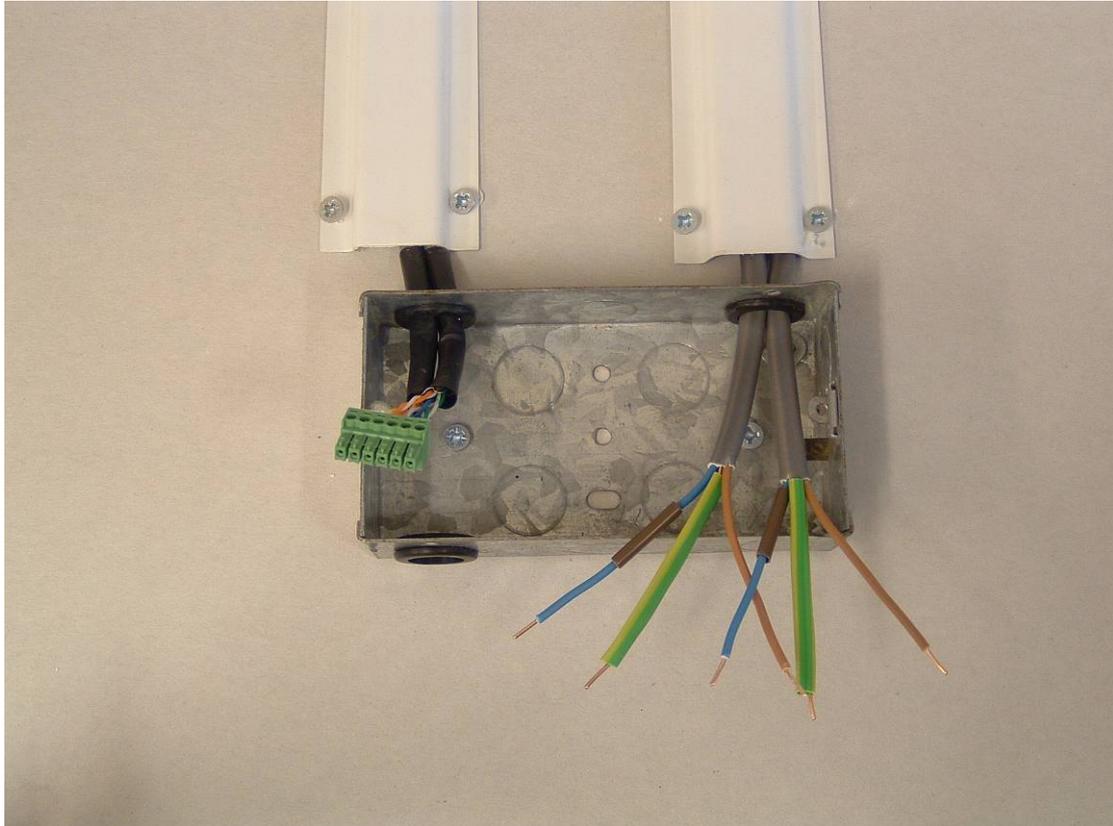
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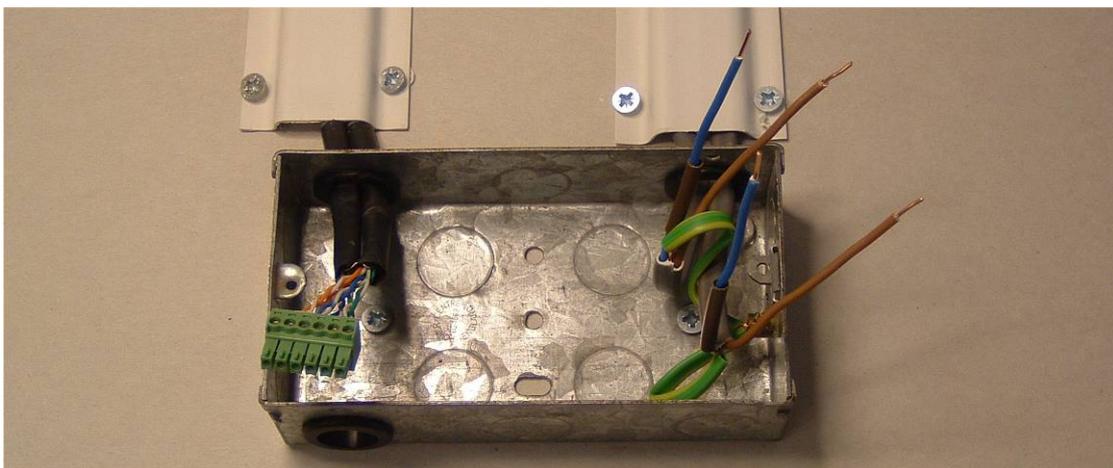
Choice of UK pattress

It is recommended that a 35mm deep pattress is used as shown below. This is suitable for recessing into brickwork and subsequently finishing with off with a plaster such that the box is flush with the surface of the wall.

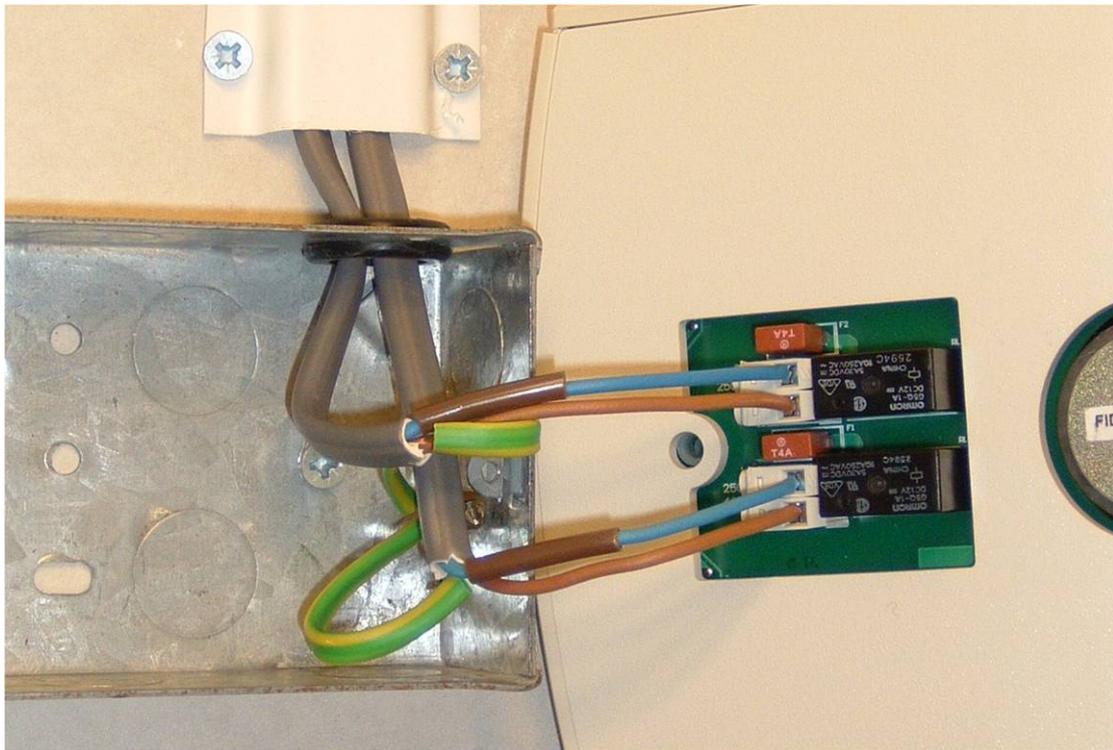
The network cable(s) enter the box on the left hand side and should be capped with suitable protection for plastering. The mains wiring for switching the lights should enter on the right hand side and both should have rubber grommets fitted around the holes that have been knocked out the pattress. It is also recommended that the minimum distance between the Cat5 cable and mains wiring is 100mm.



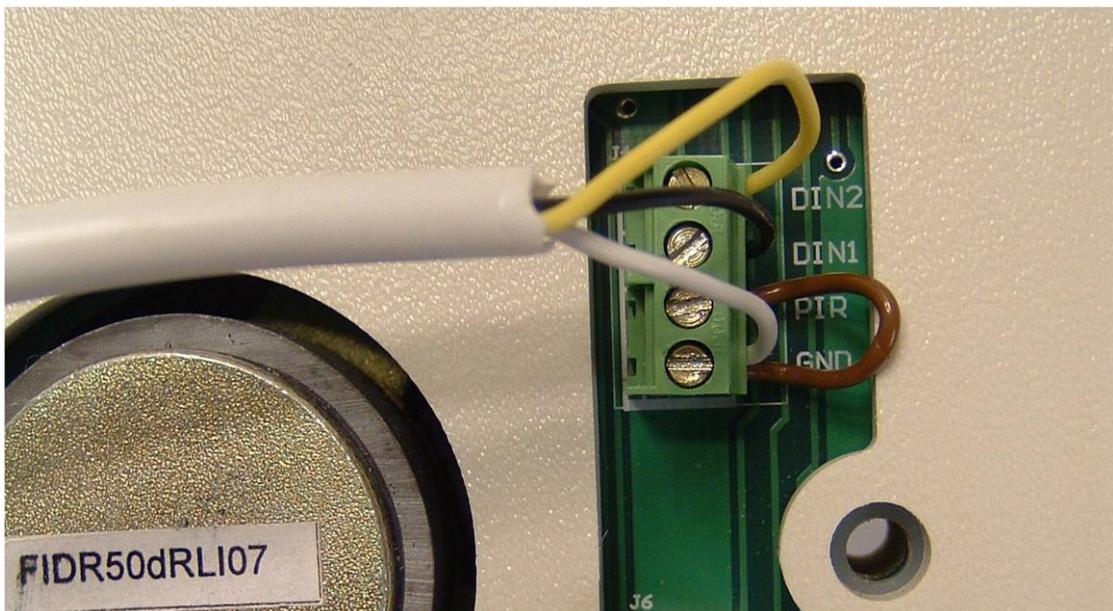
The earth wires from the mains light switch cables should be sleeved and connected to the pattress earth lug. As it is likely that the MFP attaches to a lighting circuit, (4A fused relays) the blue wires should be fitted with a brown sleeve to indicate they are also live wires (see below).



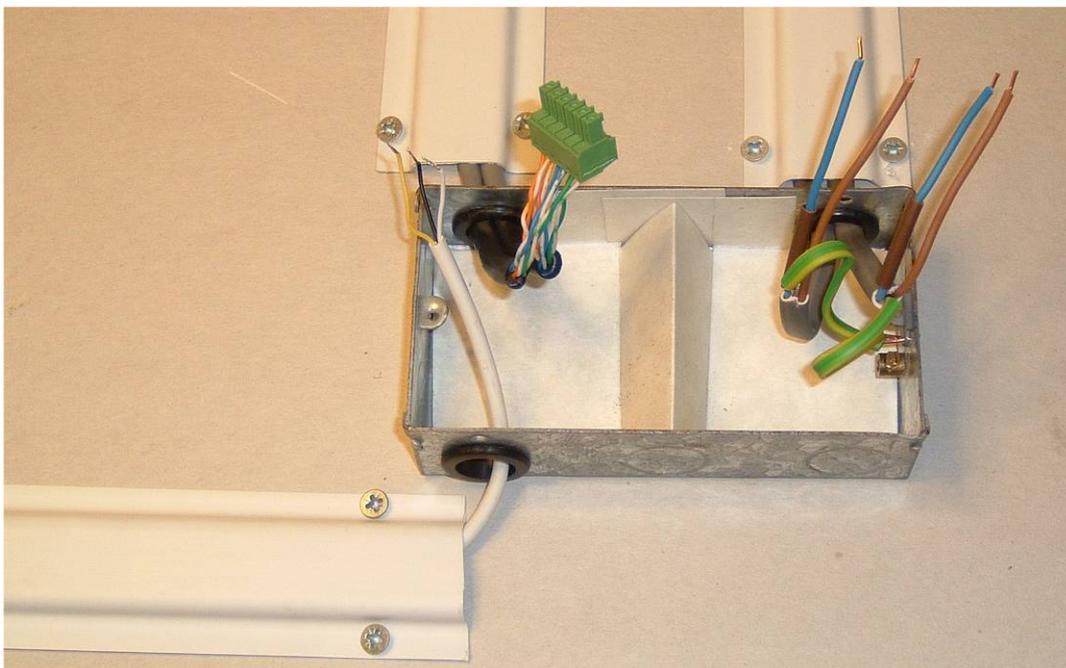
The MFP provides a pair of switching relays which are used to switch power to the lights. As the house will typically be wired such that a flat twin pair is presented to the switch, this is connected to the MFP relay terminals as below.



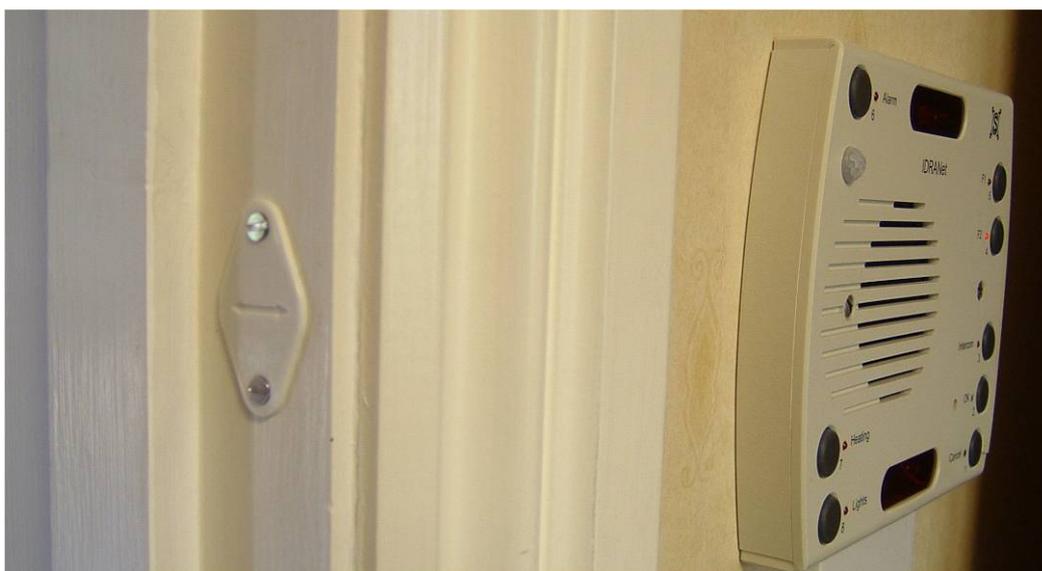
In addition, the MFP provides two digital inputs which can be used to connect to any switch inputs such as door contacts, break glass, pressure mats etc. The connection to these should use suitable wire e.g. alarm cable. Long cable runs (>10m), or cable runs passing close to strong sources of electrical noise (e.g. mains wiring) may benefit from a shielded cable. In general this is not necessary and the choice of colours is arbitrary, but it should be consistent throughout the property to make testing easier. If an external PIR unit is not being used, the PIR-GND link must have a shorting link.



The picture below shows the entry on the bottom left of low voltage cables to door switch contacts or additional PIRs. This pattress has been fitted with an insulating barrier consisting of a formed section of Nomex 410. It provides a physical barrier between the mains and low voltage cables.



One of the MFP inputs can typically be connected to a door switch, which provides information to Cortex about the door state, (e.g. for enhanced occupancy assessment/ alarm purposes). The image shows such a magnetic switch fitted to the door side framework, providing a convenient short wiring run to the MFP.



Additional Notes

1. Mains wiring should be rated and comply with current regulations. If in doubt consult a qualified electrician.
2. It is acceptable to route the low voltage wiring to the right if the door connections require it
3. The Cat5 cable should be protected with suitable capping up to the pattress (not shown).
4. If the panel is not used for switching mains, it can be used for low voltage wiring e.g. to energize an alarm bell. Check the specifications of each relay output for suitability.
5. The MFP may be used in bathrooms but **MUST NOT** be used to switch mains circuits. A separate module should be used outside the bathroom to automate the lights inside the bathrooms. The MFP can be used to switch 24Vdc (or less) equipment (low voltage lighting) as long as it is located in Zone 3 (see 16th Edition).