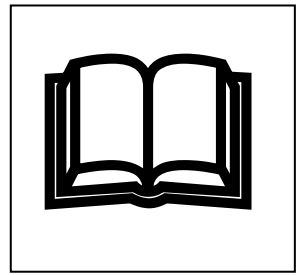


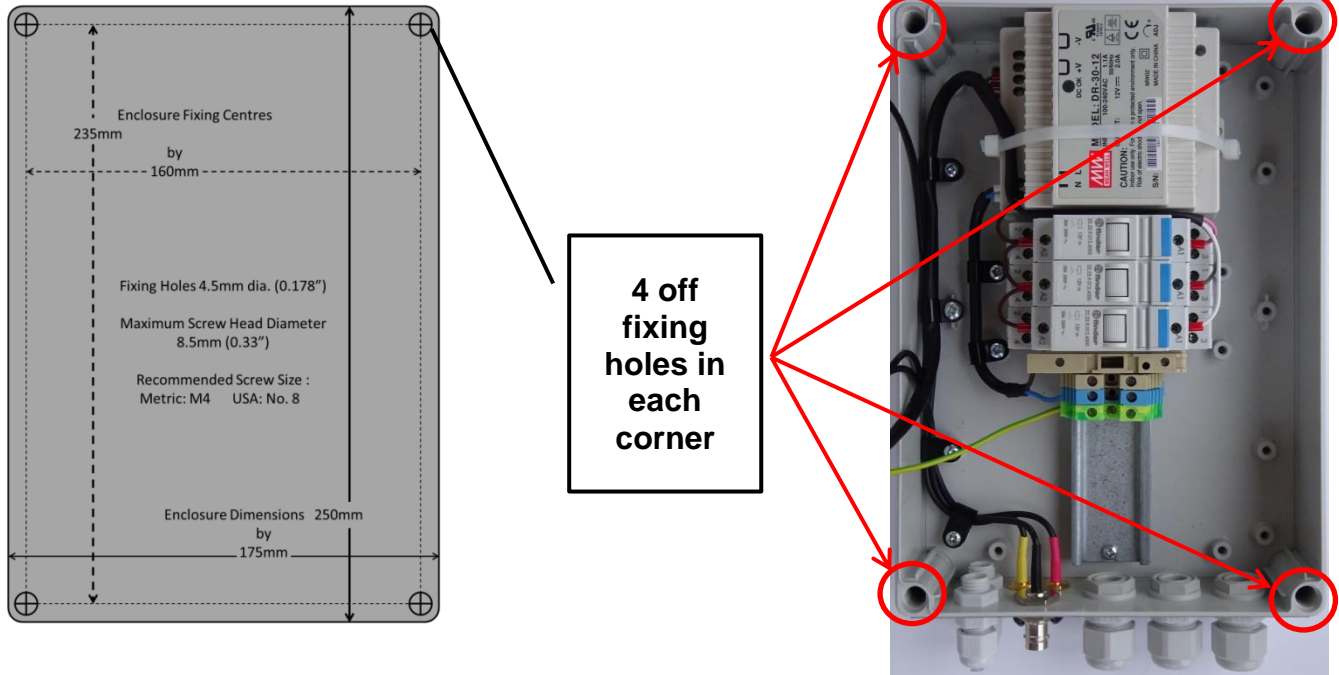


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1.1 Installing the Base Unit

Either by measurement or using the template in Appendix 1 of the manual, mark out and drill (and plug) the surface to which the controller is to be fixed.



If the fixing screws are not in a convenient position for the surface on which the controller is to be fixed then the use of rails, frames or battens is recommended.

DO NOT DRILL HOLES THROUGH THE ENCLOSURE BASE

Fixing screws are in the same position as the top cover retaining screws. The maximum screw diameter is 4.5mm (0.178") and a maximum head diameter of 8.5mm (0.33"). Recommended screw sizes are Metric M4 or USA No. 8 of a suitable length and type for the surface.

Mount the base of the enclosure and ensure that the fixing screws are secure but do not over-tighten as this could damage the enclosure and compromise the IP65 rating.

Once the base has been fitted, the unit can be wired up (next section). Take care not to damage the Power Supply Unit, Relay Driver board and Relays during the installation of cables.

In anticipation that many installations will only require two cables to be fitted, one of the cable glands is fitted with a nylon plug to ensure integrity of the enclosure if only two cables are required. To use this gland, simply remove the plug. If replacing, do not over-tighten as this may permanently damage the gasket.

1.2 Installing the Cellular Radio antenna

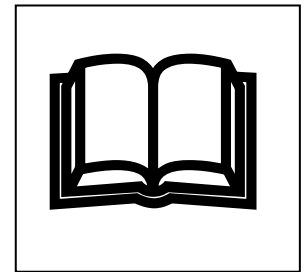
The Cellular Radio antenna is shipped attached to/in the outer packaging. Carefully remove it from the plastic bag and screw onto the external aerial connector. Do not over-tighten as this may permanently damage the aerial or socket but ensure it is fully home.

Be careful when handling the front panel to ensure that the antenna is not damaged.



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1.3 Electrical Installation

It is recommended that mains cables are fixed first to avoid damage to aerial or signal cables.

If the FEC RLC is to be operated from a mains power supply it must be connected to the supply using a fused double pole isolator.

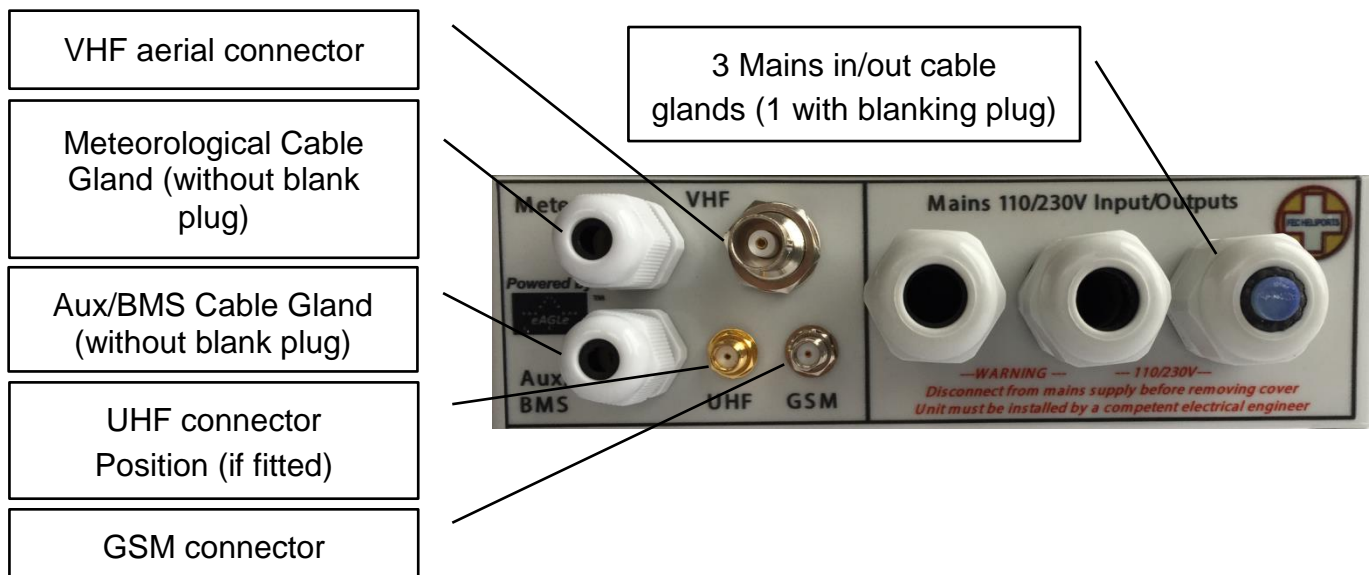
The controller has a maximum power consumption of 30watts so if the supply is only powering the controller (the switched circuits being separate) then a 5 Amp fuse should be used.

If the same supply is to be used both to power the controller and the switched circuits then the cable, switch and fuse rating need to be sized accordingly.

WARNING – If the circuits to be switched are fed from a separate isolator it is imperative that this is also isolated before work is commenced.

1.4 Circuit Connectors and Cable Entry

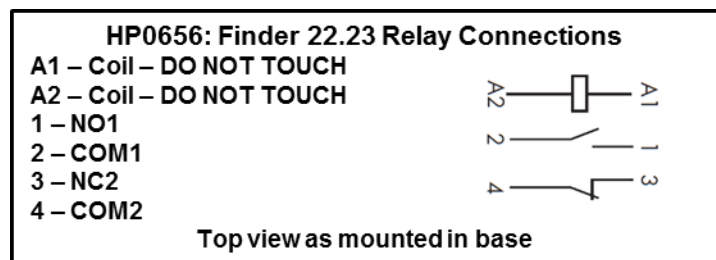
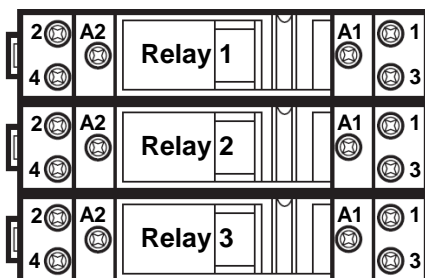
The Picture below shows the connectors and cable entry arrangements on the bottom of the base for RLC V3 units



1.5 Relays

Three 20 Amp Finder type 22.23 relays are fitted to the controller. Each has 1 Normally Open (NO) and 1 Normally Closed (NC) contact set as shown in the schematic (box right).

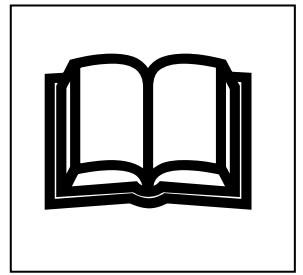
Optionally Finder type 22.22 with 2 NO contact sets each can be fitted.





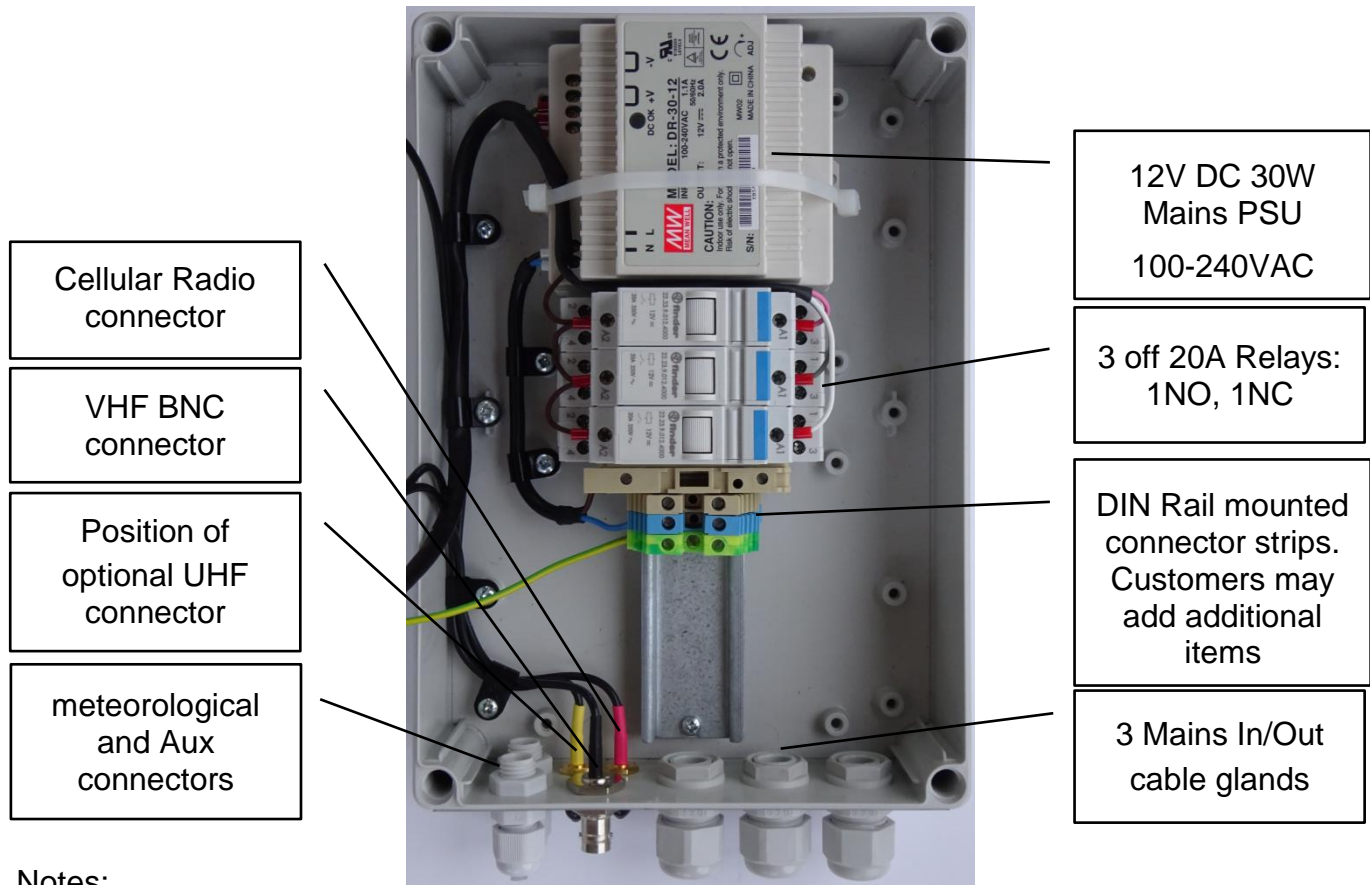
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1.6 Mains wiring

The arrangement of the base units is shown below:



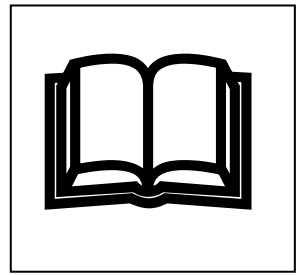
Notes:

- 1) Live (Brown), Neutral (Blue) and Earth (Green/Yellow) 4mm IMO DIN rail mounted connector strips are provided for customer wiring.
- 2) Additional connectors can be added by the customer but pay particular attention to:
 - a. Such connectors are often open on one side. Care must be taken to ensure that the open side is always covered by its neighbour or end plate.
 - b. The earth connector is fixed and grounded to the DIN rail by a central screw. To move this connector, slacken the central screw, move as required and re-tighten.
 - c. The Earth connector provides the earth bonding connection to the controller.
 - d. The connectors must be gently pushed tight against the PSU and Relay Interface Board to ensure that these items are prevented from sliding on the rail.
- 3) The controller is fitted with a mains powered 12V Power Supply Unit (PSU). The installer must connect this to the incoming mains supply via the fuse (provided) using suitable 2 core cable (2x1mm 240V). The PSU is double insulated and is not earthed.
- 4) The relays are rated at 20A AC for a resistive load.
- 5) If higher currents or highly inductive loads are to be switched by the controller the use of an external 'Contactor' of the correct rating must be used.



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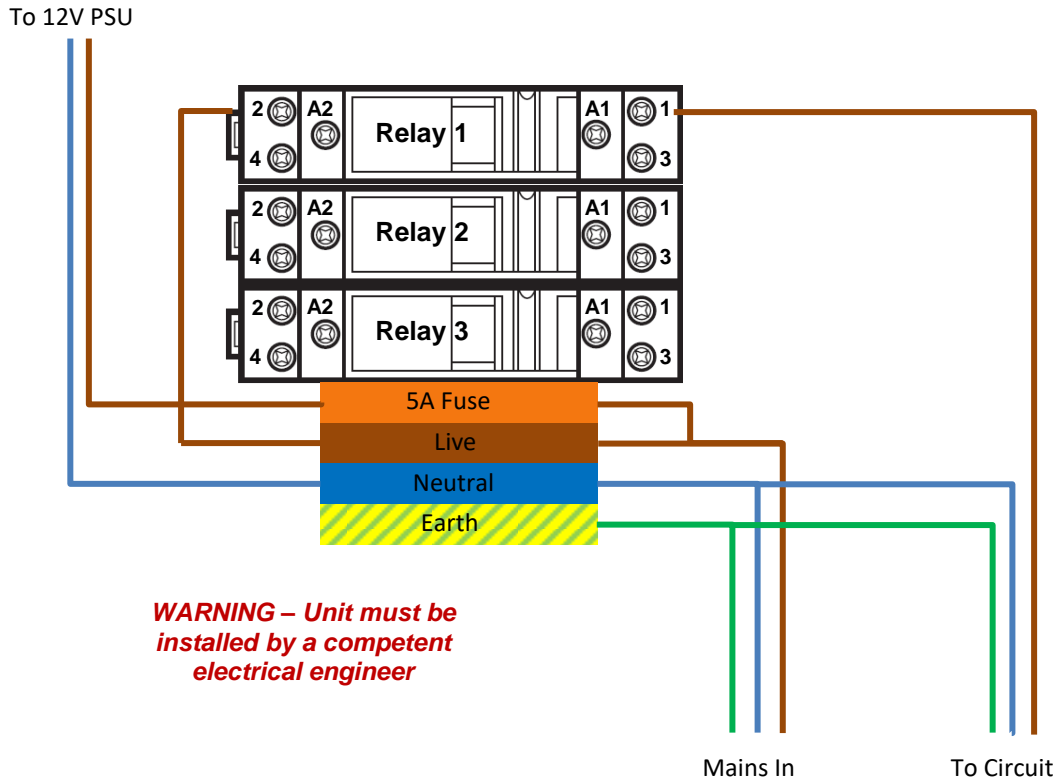
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1.7 Basic Wiring Diagram

A simplified circuit diagram is shown below for a single switched circuit.

NB – To allow the lights to be operated in the event of a unit failure it is strongly recommended that a mains by-pass switch is incorporated into the circuit by a qualified electrician.



Notes

- 1) The 5A fuse in the DIN rail holder is for fusing the feed to the 12V PSU only.
- 2) Installers can add additional DIN rail mounting Live, Neutral and Earth terminals.
- 3) DIN Rail mounting fuse holders may also be added.
- 4) If additional items are added to the rail, follow the instructions below.
- 5) Secondary circuit load characteristics may require an external contactor.

DIN Rail Mounted Items

DIN rail mounting terminals etc. generally 'snap' onto the rail with plastic clips either side.

The Earth terminal has grips onto the rail which are metal, connected to the terminal block (to earth the rail) and actuated by the middle screw (of three).

To add terminal blocks:

- a) Slacken the middle screw of the earth block and slide it down the rail (there is no need to remove it)
- b) Snap in the required additional terminals (sliding others as required)
- c) Push the earth terminal back up to ensure no gaps between terminal and re-tighten the middle screw

NB – Ensure that no live connections are exposed by the insertion of additional connectors.