

Installation Procedure

House Service Cut Outs 60/80A and 100A

WARNING

Installation of the cut outs described in this procedure is to be exclusively carried out by suitably qualified personnel in full compliance with The Electricity at Work Regulations 1989 (SI 1989/635) (as amended) and Local/National Wiring Regulations currently in force. In addition, these works must only be carried out on unenergized (dead) installations.



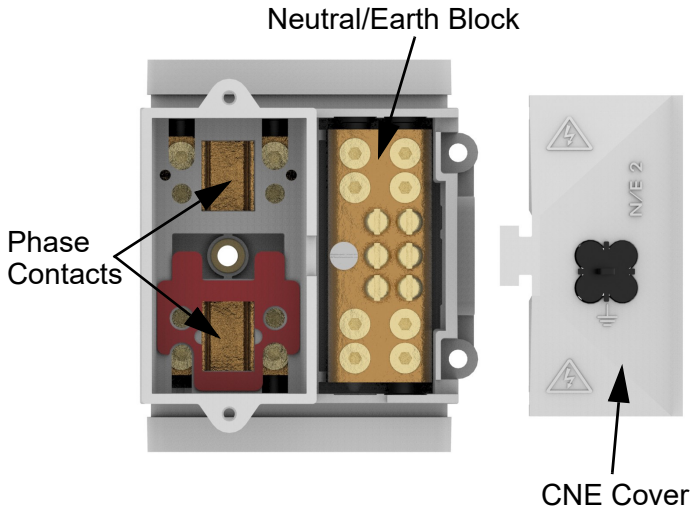
Note: It is recommended that the cut outs are mounted wherever possible on the fire-retardant mounting boards supplied by Lucy Electric Ltd in order to comply with regulations that may be in force locally. The meter cupboard should be accessible at all times and free from obstructions. Potentially flammable material should under no circumstances be stored in the vicinity of the cut out.

Technical Data

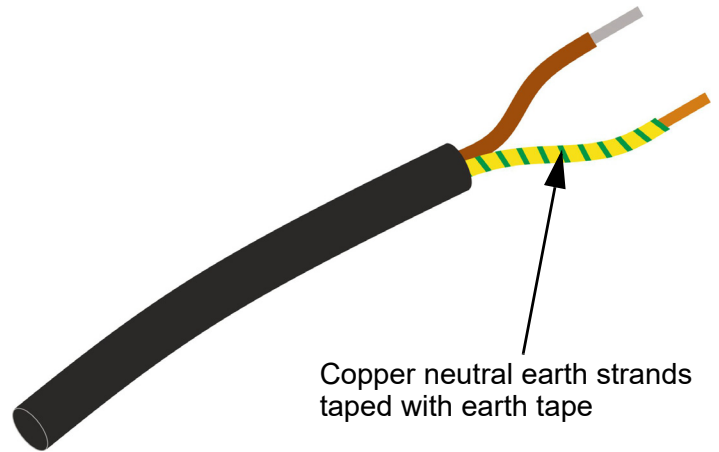
General	
Conductor size range (phase and neutral)	16mm ² up to 35mm ²
Conductor size range (earth)	10mm ²
Suitable cable types	- Concentric or split concentric service cable having solid aluminium phase core and copper stranded neutral / earth - Copper stranded meter tails 25mm ² or 35mm ²
Phase and neutral grub screw type	M8 with 3mm Allen socket head
Phase and neutral grub screw torque	3.25Nm
Earth grub screw type	M6 with slotted head
Earth grub screw torque	2.25Nm
Conductor strip length for phase and neutral	22mm minimum, 25mm maximum
Tool for conductor pinch screws	3mm insulated Allen key
Fuse type	BS1361 Type IIa (22mm diameter x 56mm length) for 60A / 80A ratings BS1361 Type IIb (30mm diameter x 56mm length) for 100A rating

Suitable for CNE and SNE networks in both Single pole and Triple pole formats

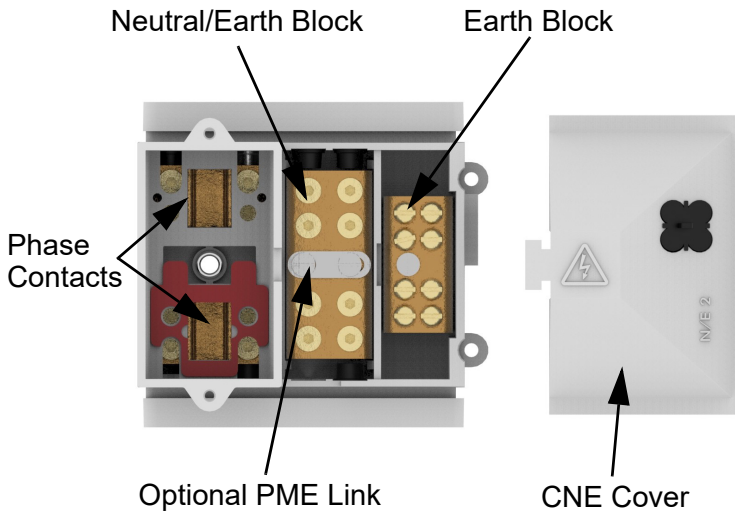
Typical CNE Format



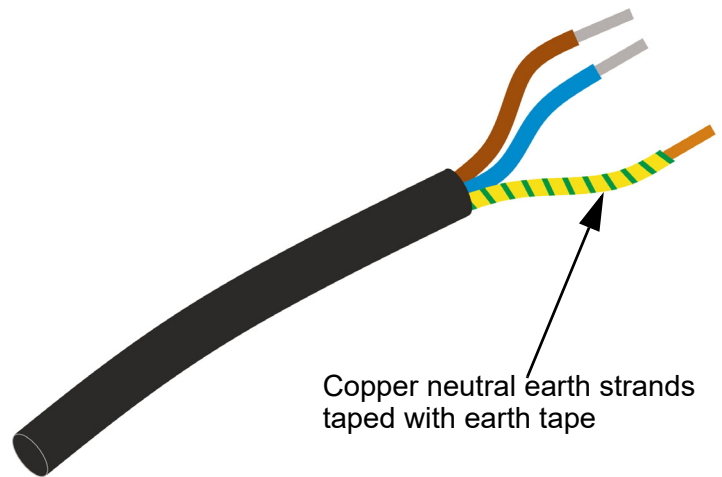
Concentric CNE Service Cable



Typical SNE Format



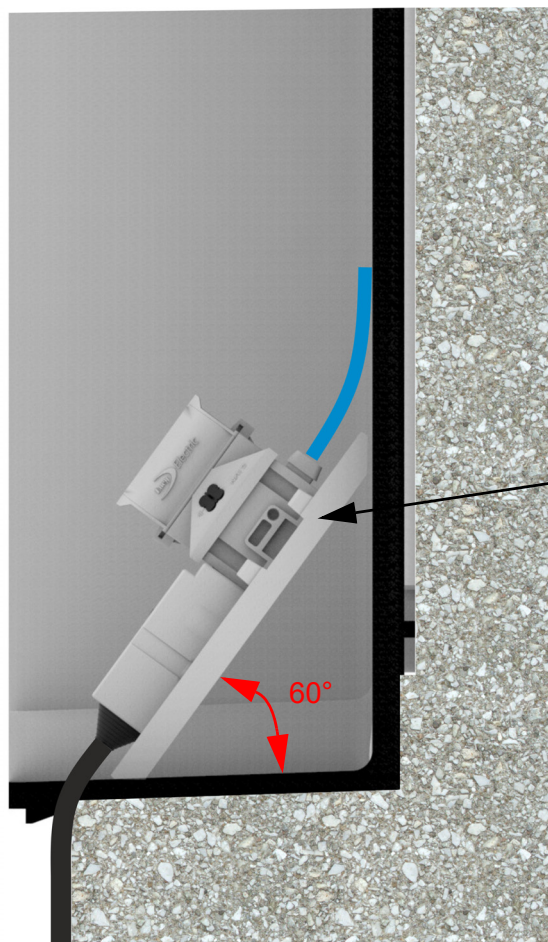
Split Concentric SNE Service Cable



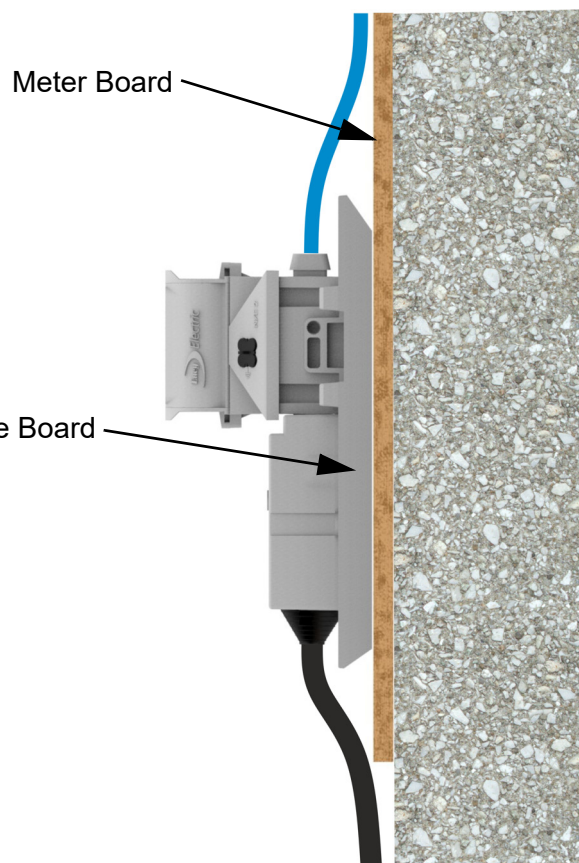
1. Mounting of the single pole variants

1 : Select a suitable position to mount the cut out directly above the exit point of the service cable from the ducting. The Lucy slope board provides as ideal mounting platform as it can either be mounted at it's 60° angle or flat to the bottom of the meter box. When installed at the 60° angle, the severity of the service cable bend will be significantly reduced as the cable is brought into the cut out. Space should be allowed for any supplementary equipment (i.e. meter tail protectors, double pole isolators) that may be installed after the cut out.

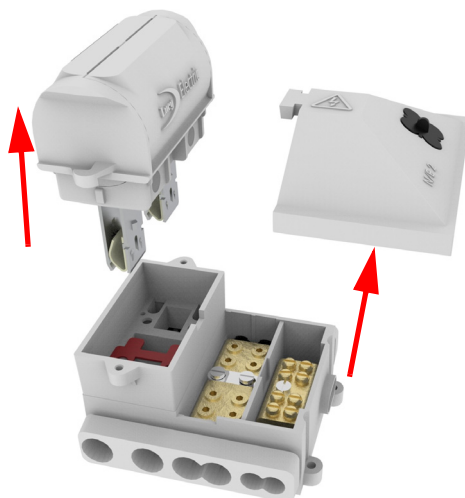
Typical External Wall Meter Box



Alternative (Indoor) Flat Mounting

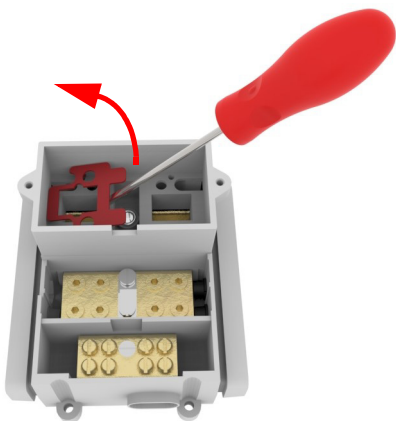


2 : Remove the fuse handle and neutral/earth cover to expose the fixing screws that are contained inside the unit.

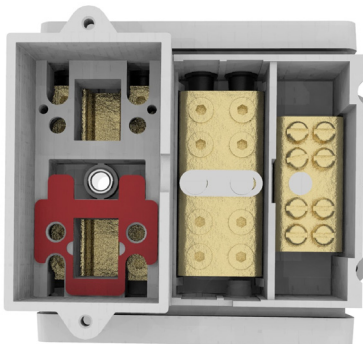


- 3 : Orientate the cut out such that the phase is situated on the left-hand side with the red phase indicator is adjacent to the incoming service cable. Alternatively, if the phase needs to be positioned on the right-hand side, rotate the unit through 180° and reposition the red phase identification tab by unclipping it from the base and transferring to new position. Care should be exercised when re-installing it as the two location tabs require careful alignment.

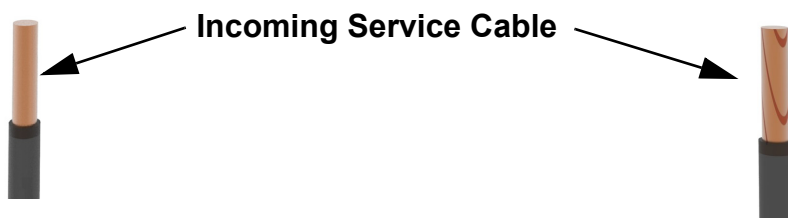
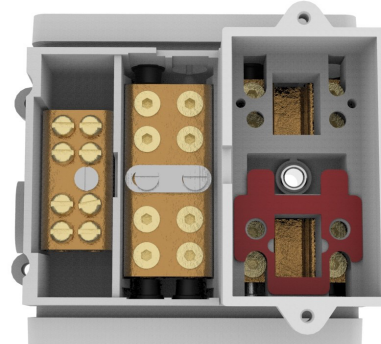
Removal of red phase identification tab



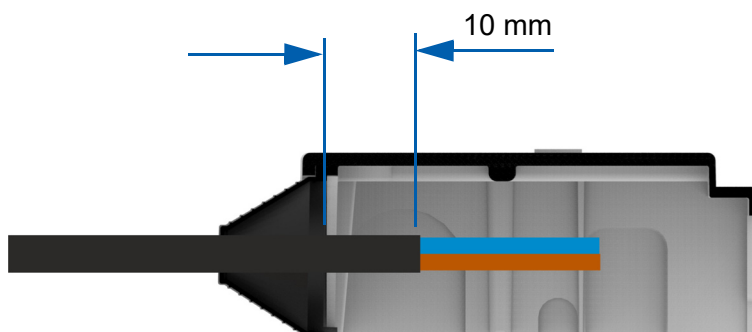
Standard Tab Position



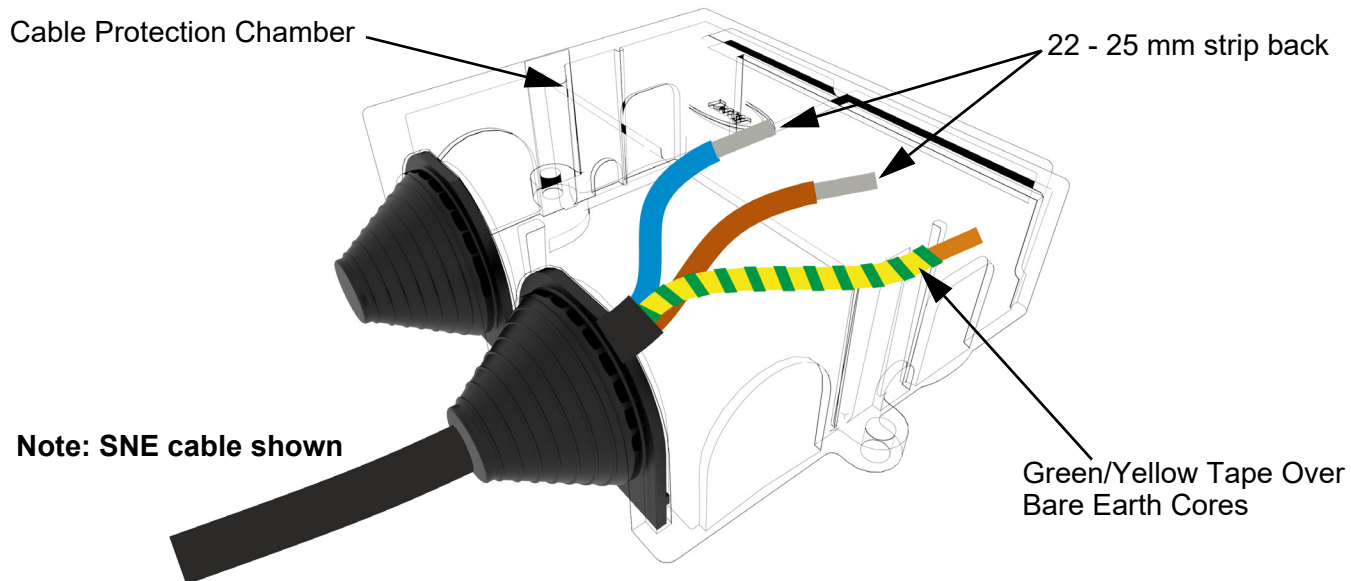
Alternative Tab Position



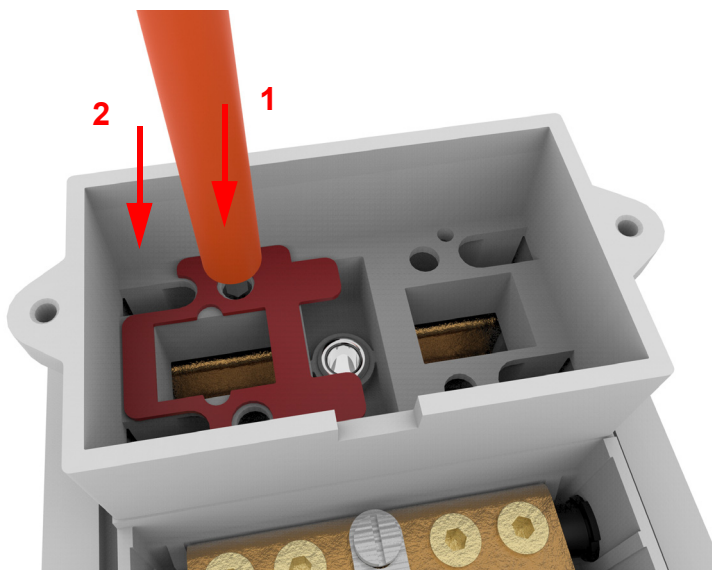
- 4 : Back off the conductor pinch grub screws in the terminal blocks using the approved insulated 3mm insulated Allen key or insulated screwdriver as appropriate. Strip back the outer cable insulation such that approximately 10mm extends inside the cable protection chamber when in the installed position. Insert the prepared conical cable gland over the cable conductors.



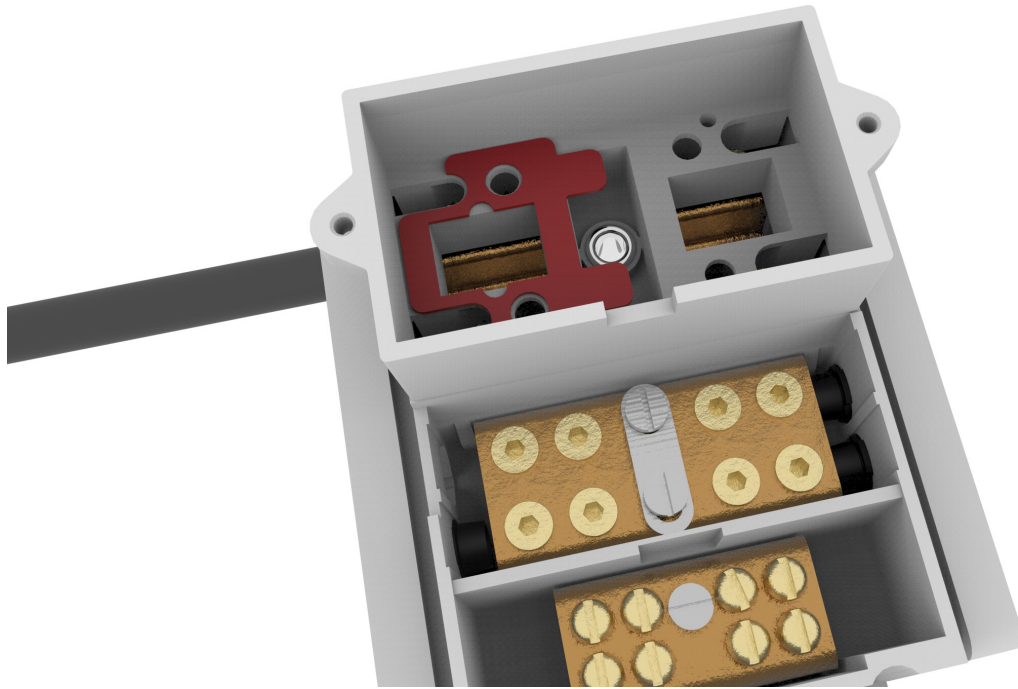
5 : Strip back the phase and neutral (in the case of SNE, split concentric service cable) conductors leaving 22 - 25mm of exposed conductor. Particular care should be taken when stripping back the individual neutral conductors to make sure they are evenly stripped when dressed into their final position.



6 : With the cores fully inserted to the end of the terminals, begin by tightening the grub screw closest to the end of the conductor. If for any reason it fails to retain the conductor or ejects it, this is an indication that the conductor has encountered an obstruction in the terminal bore or the strip length has been wrongly calculated. Corrective action should be taken in these circumstances.



- 7 : Tighten the two grub screws per conductor to the recommended 3.25Nm using a calibrated torque driver in all cable positions except the earth which has a torque setting of 2.25Nm.

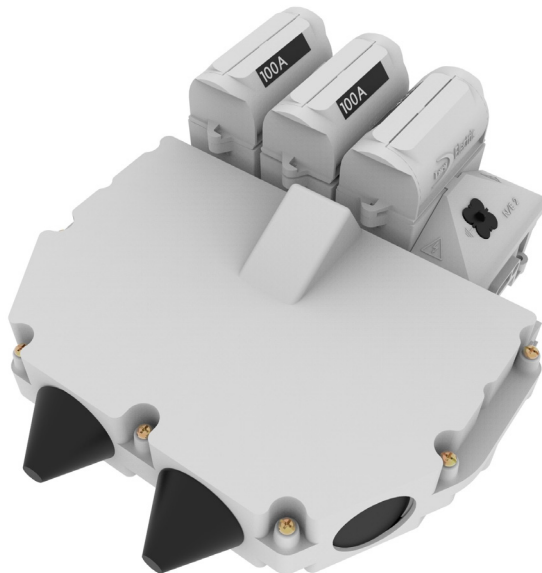


2. Mounting of triple pole variants

- 1 : The principles of installation including the location environment, cable preparation, types of cable, stripping lengths and torque values are all identical to the equivalent single pole variant. Two additional single pole (phase only) units are fixed alongside the phase and neutral cut out (on its phase side) and the designated TPN or TPN+E cable protection covers utilised. Blanking grommets should be in position in all unused cable ports

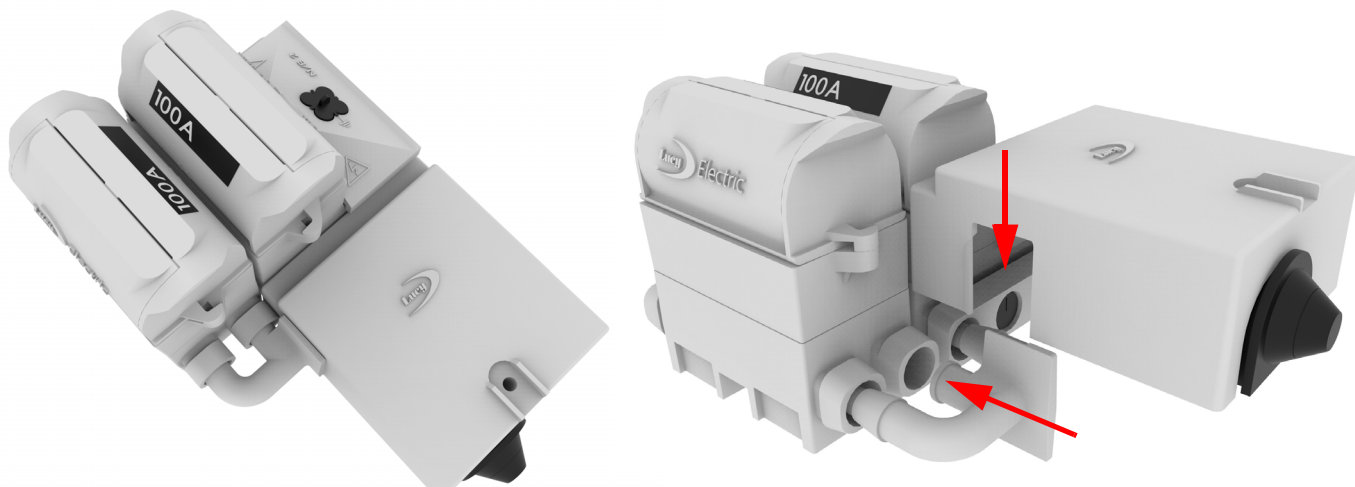


2 : In addition, on Triple pole variants only, a cable sealing chamber is available which offers complete encapsulation of the cable crutch and the splayed cores



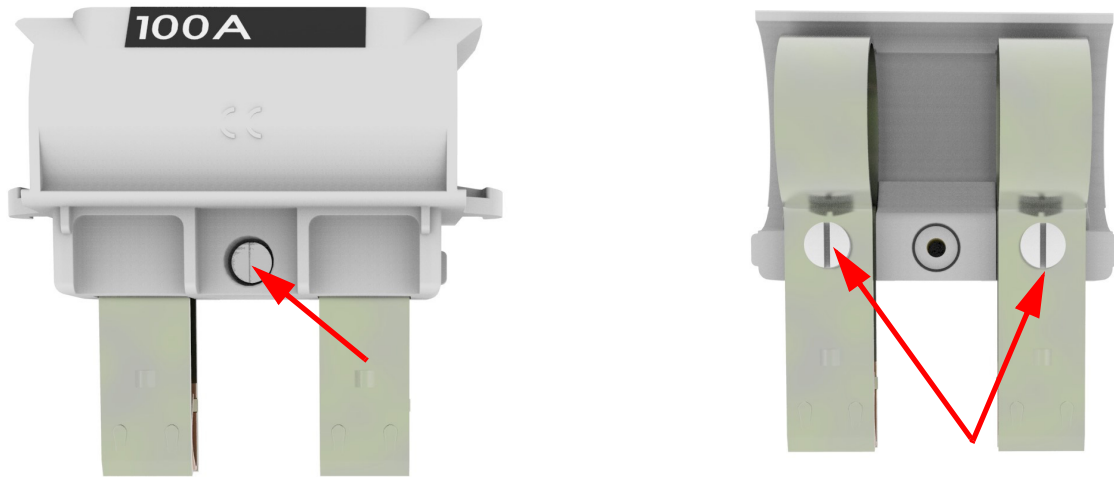
3. Connection of loop supply

1 : A single loop service may be taken from the left-hand side of the incoming phase cut out both in single phase and three phase installations. Install only the designated Lucy Electric accessory into the left-hand terminal of the phase unit and tighten the grub screws to 3.25Nm. Take either the single phase cable protection chamber or the three phase equivalent, remove the knock out in the side of the body such that the cover fits over the phase link and securely tighten down to backboard. The integral pad on the link will maintain the unit IP rating

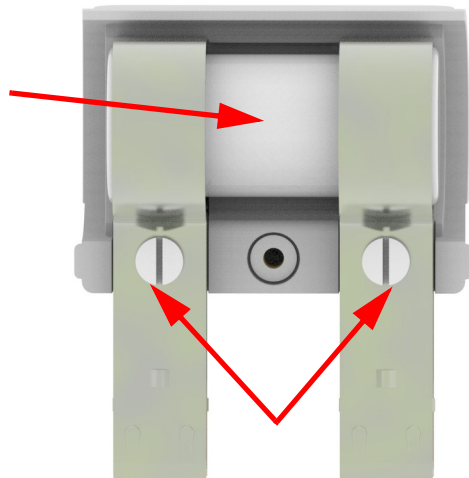


4. Installation of the fuse in the fuse handle (if not fitted)

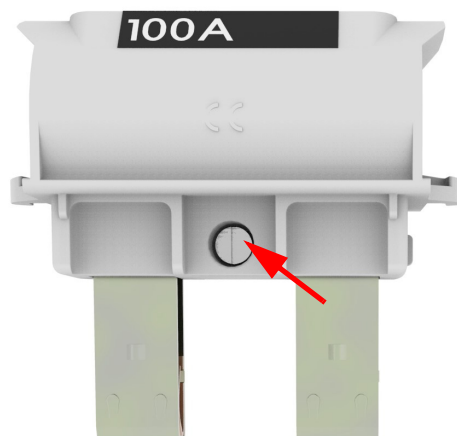
- 1 : Unscrew the slotted screw in the centre of the fuse handle and separate the two halves. Slacken off the two fuse clip clamp screws such that the appropriate diameter fuse can be inserted into position.



- 2 : With the fuse centrally located in the clamps, retighten both clamp screws against their fixed abutment shoulders. The torque setting is common with the terminal settings at 3.25Nm.



- 3 : Replace the other fuse handle half and secure with the slotted screw.

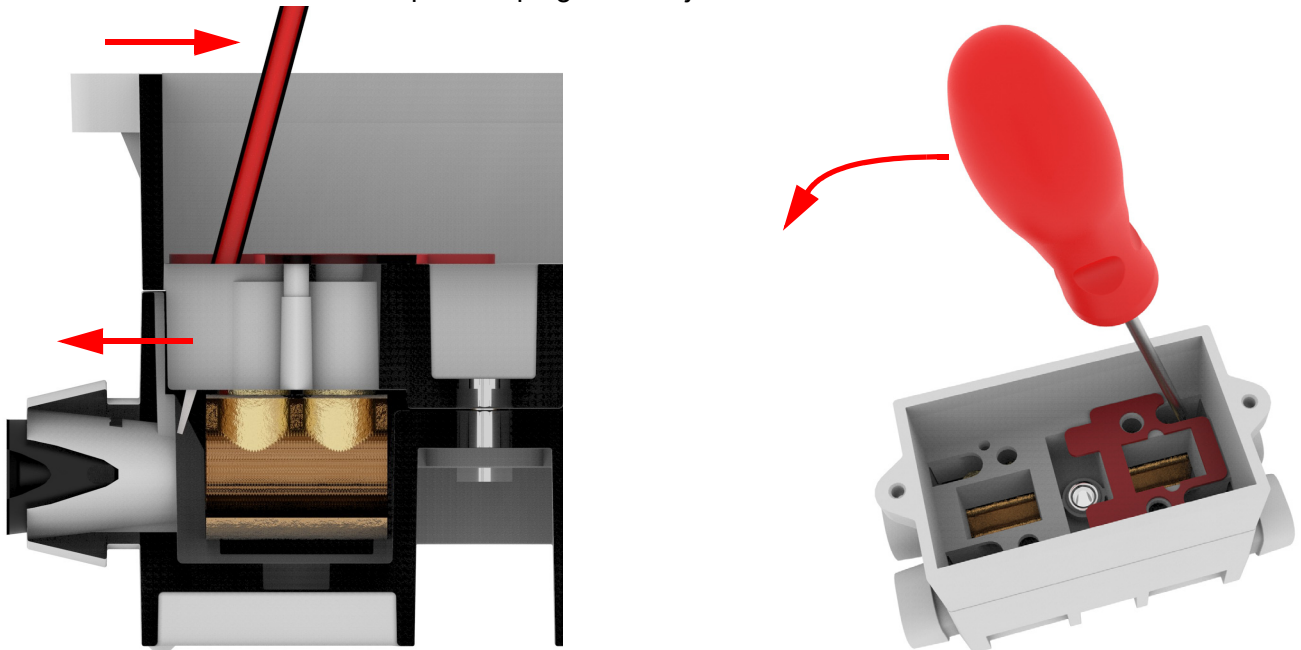


- 4 : If it is safe to do so, replace the fuse handle pressing firmly onto the base. Apply the seals as appropriate using the wire seal lugs on the top and bottom edges of the turret

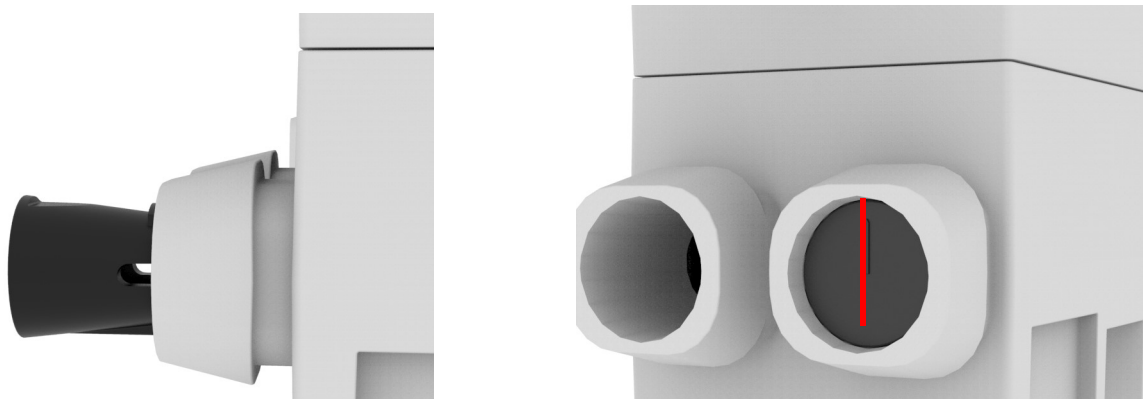


5. Blanking grommet removal

- 1 : From the inside of the unit insert a screwdriver or similar between the end of the sealing plug and gently lever towards the centre of the unit whereupon the plug will be ejected.



- 2 : When replacing a sealing plug, make sure that the alignment tab on its front face is in the 12 o'clock position then press the plug fully into position.



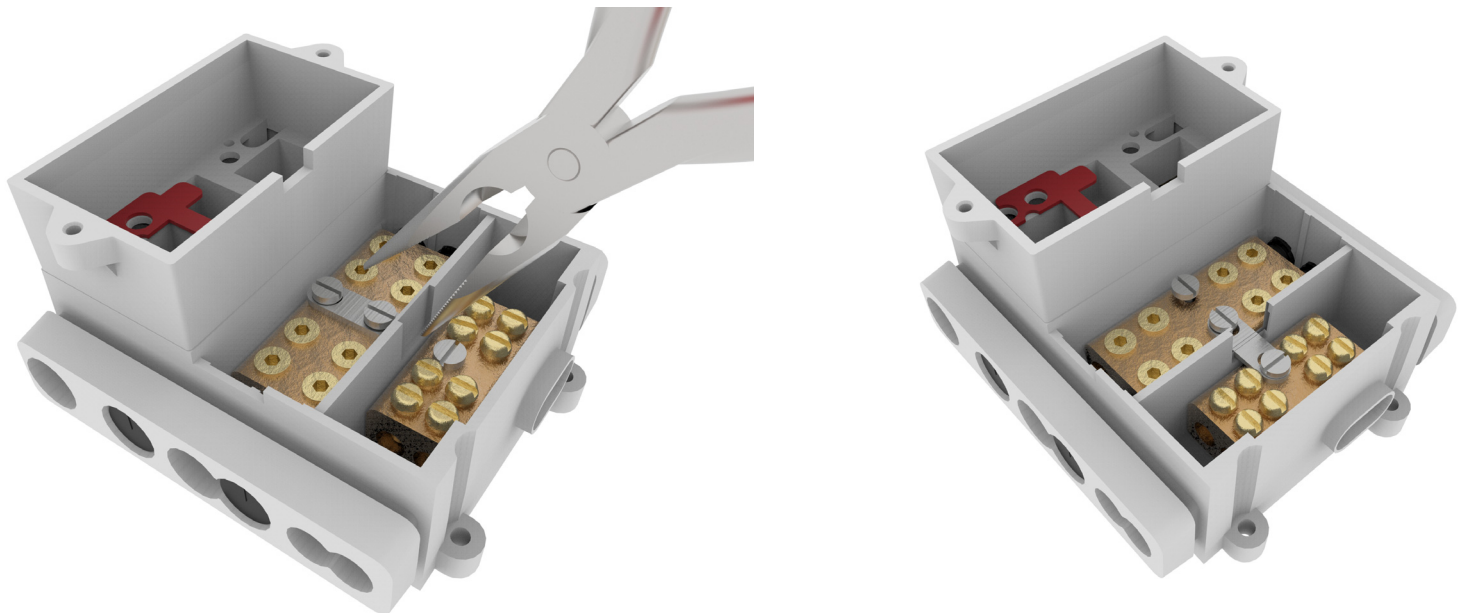
6. Neutral/earth blanking grommet removal

- 1 : To gain access to the earth terminal block to connect a timer, simply remove the plug by lifting upwards from the cut out body using a pair of fine nose pliers. The plug should be replaced afterwards.



7. PME link option

- 1 : On SNE type cut outs, the optional PME link may be used to join the two neutral and earth blocks. Using a pair of fine nose pliers, break out the small section of wall between the compartments and reposition the tinned link securely tightening the two slotted screws. **Recommended torque 2Nm.**



8. External earth connection

The CNE variants of the cut outs have as standard the facility to connect the installation earth conductors via a side conductor port. This is also now a feature of the SNE cut outs and is particularly useful in the situation shown below where a meter tail protection device has been fitted.



9. Live replacement Cut Out for legacy (PILC) installations

Please consult Lucy Electric for separate installation instructions relating to this variant.