

FITTING INSTRUCTIONS FOR FLAT PLATE ACCESSORIES

Read these instructions fully before commencing work and retain them for future reference.

SAFETY INSTRUCTIONS

These accessories are to be installed in accordance with the current edition of the IEE Wiring Regulations (BS 7671: Requirements for Electrical Installations) and appropriate statutory regulations.

In the Republic of Ireland the installation must be in accordance with the ETCI National Rules for Electrical Installations – ET 101.

NOTE: IF YOU ARE IN ANY DOUBT ON HOW TO PROCEED, CONSULT A QUALIFIED ELECTRICIAN.

1. Switch OFF the mains supply and remove the appropriate fuse or switch off the appropriate circuit breaker before commencing installation. Ensure that no one else has access that would enable the supply to be inadvertently reconnected.
2. Remove the existing accessory from the wall (if using the new accessory to replace an old one).

3. Remove any plaster debris and dust from the inside of the mounting box (wall box). Ensure that the heads of any box fixing screws do not protrude into the box.
4. For the best mounting results and visual appearance, it is recommended that prior to installation, the mounting surface beneath the accessory frontplate is first prepared to ensure that it is flat and all high spots have been removed.
5. Certain accessories may require that the top and bottom lugs in 1 gang, 4 lug boxes, are bent inwards and out of the way to ensure the correct installation within the box.
6. Before installing accessories, ensure cable is of the correct rating and type.
7. Remove the clip-on front plate by holding the accessory in your hand with the front plate facing away from you. Place your thumbs over the two plastic lugs on the top edge and press outwards. The front plate should lift away from the body.
8. The layout of the terminal connections may differ between fittings, carefully check the location of the terminal connections before wiring.

9. Connect the new accessory as shown in the appropriate wiring diagram ensuring only the copper core(s) enter the terminals and that there are no stray strands. If necessary trim and strip the cable to suit. The terminal screws must be tightened firmly.
 10. The metal back plates of flat plate accessories must be correctly earthed. This is achieved by connecting the fixed earth wire to the earth terminal provided on the accessory or on the metal plate and then connecting a short length of wire from this terminal to the terminal in the back box.
- If the earth wire is bare it should be sheathed with a length of green/yellow sleeving.
11. Secure the accessory to the wall by means of the fixing screws provided, positioning the cables in the box so as to avoid them being trapped. Hold the front plate over the accessory body and push together. As the front plate fits it will click into place.
 12. Replace the appropriate fuse, or switch on the appropriate circuit breaker. Switch on the mains isolator switch.

IMPORTANT NOTICE - WIRING COLOUR CHANGES

As from 1st April 2004 new installations in the UK could be wired using the new EU Harmonised colours for the supply conductors of twin and earth cable:

New Colours Brown = Live Blue = Neutral
Old Colours Red = Live Black = Neutral

The old colours will cease to be used from 1st April 2006.

Flexible cable colours remain unchanged:

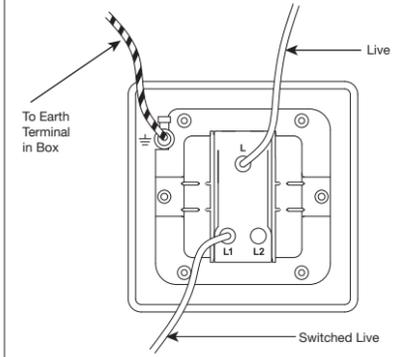
Brown = Live Blue = Neutral

Fire conductor colours for twin and earth cable and flexible cable:

Brown = Live Blue = Neutral

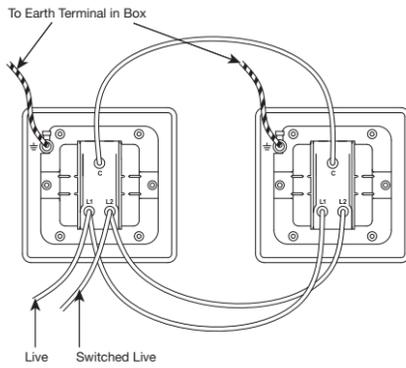
1 GANG 2 WAY SWITCH (1 WAY SWITCHING) INCLUDING RETRACTIVE SWITCH

Connect the cables as shown in the wiring diagram.



1 GANG 2 WAY SWITCH (2 WAY SWITCHING)

Connect the cables as shown in the wiring diagram.



1 GANG 1 WAY AND 2 WAY SWITCH ADDITIONAL FITTING INSTRUCTIONS

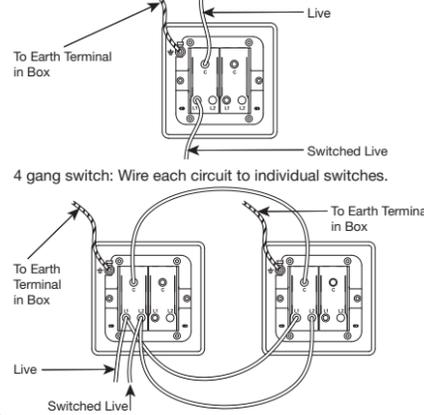
This switch has been designed for installing in a 16mm deep wall box. It is therefore suitable for retrofit installations providing:

- a) Cables enter from the top of the wall box
 - b) Wall box does not protrude from the wall
- If cables enter from the side of the wall box then it is likely that it will need replacing with a deeper 25mm box.
- Individual conductor lengths shall be no longer than 65mm including 10mm bared copper for termination.

It is also recommended that the individual conductors, once connected, are dressed around the sides of the switch to ease switch installation in the box.

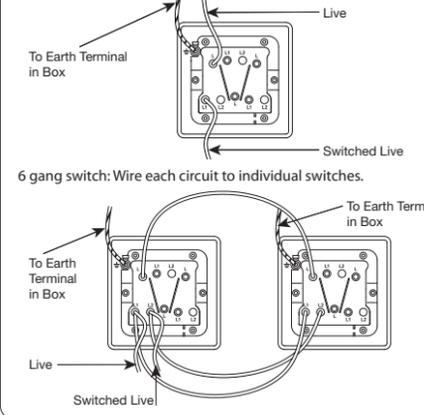
2 GANG AND 4 GANG 2 WAY SWITCH

Connect the cables as shown in the wiring diagram.



3 GANG AND 6 GANG 2 WAY SWITCH

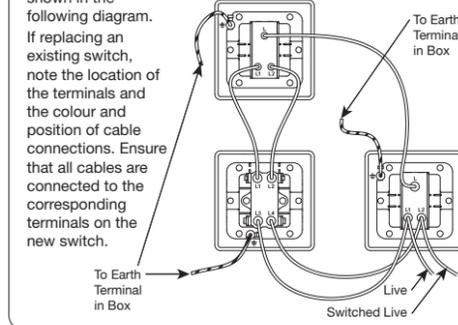
Connect the cables as shown in the wiring diagram.



1 GANG INTERMEDIATE SWITCH

Intermediate switches are used if more than two switches are required to control a two way lighting circuit. They should be fitted between the first and last switches on the circuit.

One particular wiring arrangement, which may be used is shown in the following diagram. If replacing an existing switch, note the location of the terminals and the colour and position of cable connections. Ensure that all cables are connected to the corresponding terminals on the new switch.

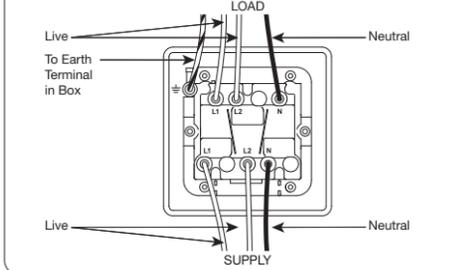


1 GANG TRIPLE POLE DISCONNECTOR

For use with extractor fans fitted with or without timer control. Provides local isolation for maintenance or repair without the need to isolate the complete circuit.

Connect the cable conductors as shown in the wiring diagram, ensuring that the correct polarity is maintained between the load and supply conductors.

For extractor fans without timers, there will only be two load and two supply conductors.

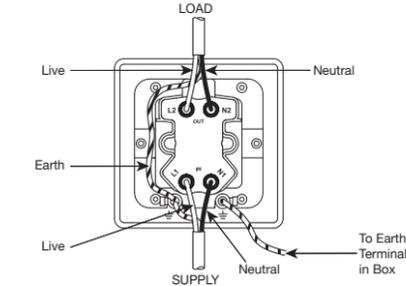


20 AMP + 32 AMP DOUBLE POLE SWITCHES

Connect the cables as shown in the wiring diagram. Ensure that the load cable is connected to the appliance

When used on a ring main there will be two supply cables. Connect both of the cables to the same terminals.

For switches with flex outlets, pass load cable through outlet before connecting to switch. Ensure cable clamp is fitted and tightened across outer sheath of cable.

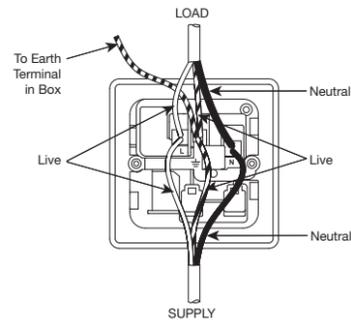


13 AMP SINGLE SWITCHED SOCKET

Connect the cables as shown in the wiring diagram.

The diagram shows connections for a ring main circuit.

For radial circuits or a spur off a ring main there will only be one cable.

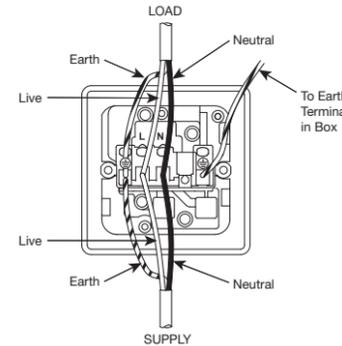


13 AMP DOUBLE POLE SINGLE SWITCHED SOCKET

Connect the cables as shown in the wiring diagram.

The diagram shows connections for a ring main circuit.

For radial circuits or a spur off a ring main there will only be one cable.

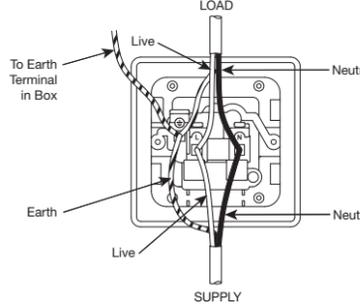


13 AMP UNSWITCHED SOCKET

Connect the cables as shown in the wiring diagram.

The diagram shows connections for a ring main circuit.

For radial circuits or a spur off a ring main there will only be one cable.

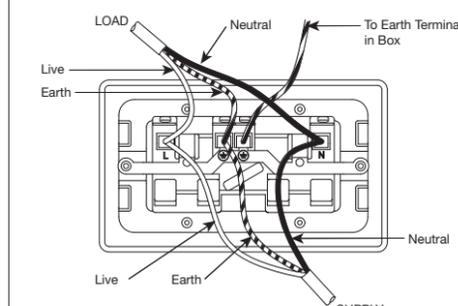


13 AMP 2 GANG UNSWITCHED SOCKET

Connect the cables as shown in the wiring diagram.

The diagram shows connections for a ring main circuit.

For radial circuits or a spur off a ring main there will only be one cable.

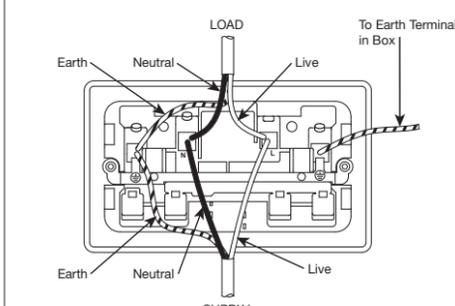


13 AMP 2 GANG SWITCHED SOCKET

Connect the cables as shown in the wiring diagram.

The diagram shows connections for a ring main circuit.

For radial circuits or a spur off a ring main there will only be one cable.

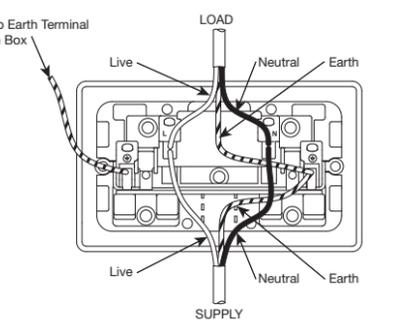


13 AMP DOUBLE POLE 2 GANG SWITCHED SOCKET

Connect the cables as shown in the wiring diagram.

The diagram shows connections for a ring main circuit.

For radial circuits or a spur off a ring main there will only be one cable.

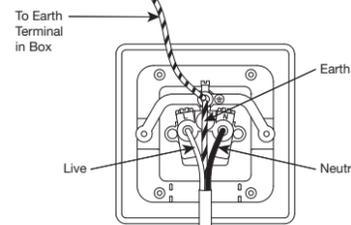


SINGLE SOCKET ROUND PIN

Connect the cables as shown in the wiring diagram.

Do not connect this socket directly to a ring main circuit.

It should only be connected to either a radial circuit, protected by a MCB/fuse of the appropriate rating at the consumer unit/fuseboard, or spurred from a ring main and protected by a fused connection unit fitted with a fuse of the appropriate rating.

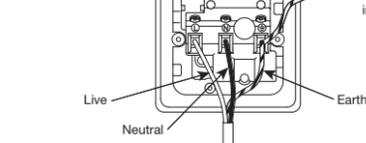


2 AMP UNSWITCHED ROUND PIN SOCKET

15 AMP SINGLE SWITCHED ROUND PIN SOCKET

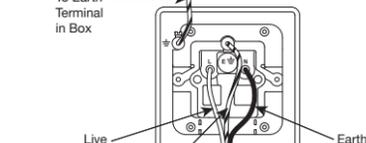
Connect the cables as shown in the wiring diagram.

Do not connect this socket directly to a ring main circuit.



5 AMP UNSWITCHED ROUND PIN SOCKET

Connect the cables as shown in the wiring diagram.



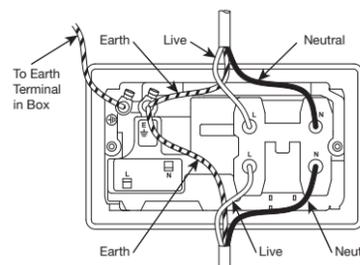
45 AMP COOKER CONTROL UNIT

The product must be earthed.

Connect the cables as shown in the wiring diagram.

Ensure that the load cable is connected to the appliance.

Do not connect this switch directly to a ring circuit.



BARE COPPER MUST BE SHEATHED IN GREEN/YELLOW SLEEVING.

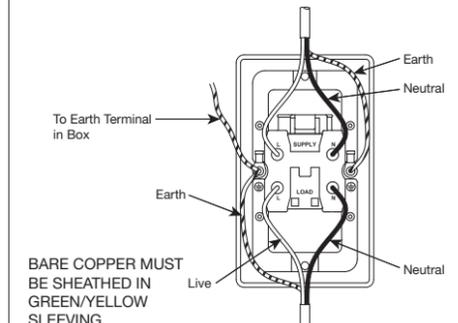
45 AMP 2 GANG SWITCH

The product must be earthed.

Connect the cables as shown in the wiring diagram.

Ensure that the load cable is connected to the appliance.

Do not connect this switch directly to a ring circuit.



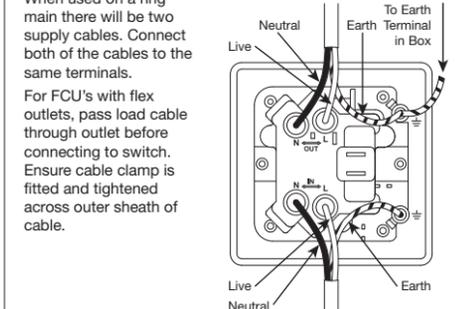
BARE COPPER MUST BE SHEATHED IN GREEN/YELLOW SLEEVING.

13 AMP SWITCHED FUSED CONNECTION UNIT

Fitted with a 13 Amp fuse. Connect the cables as shown in the wiring diagram. Ensure that the load cable is connected to the appliance.

When used on a ring main there will be two supply cables. Connect both of the cables to the same terminals.

For FCU's with flex outlets, pass load cable through outlet before connecting to switch. Ensure cable clamp is fitted and tightened across outer sheath of cable.

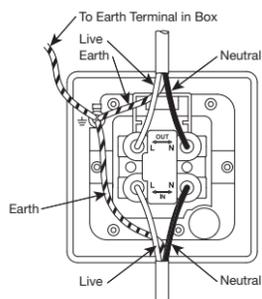


13 AMP UNSWITCHED FUSED CONNECTION UNIT

Fitted with a 13 Amp fuse. Connect the cables as shown in the wiring diagram. Ensure that the load cable is connected to the appliance.

When used on a ring main there will be two supply cables. Connect both of the cables to the same terminals.

For FCU's with flex outlets, pass load cable through outlet before connecting to switch. Ensure cable clamp is fitted and tightened across outer sheath of cable.



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DIMMERS

Important Safety Fitting Instructions

1. Before commencing work, isolate the circuit.
2. Do not overload or underload the dimmer.
3. Use the correct type of dimmer for the connected load.
4. Isolate supply before installing or removing bulb.

Dimmer Switch Installation

1. Disconnect wires from the old switch.
2. On square, four lugged boxes, bend the top and bottom lugs inwards and out of the way.
3. Install the dimmers as shown in the relevant wiring diagram, ensuring that no wires are trapped between the plate and the box. The earth terminal on the plate must be connected to the earth terminal in the box. Fix the plate with the screws provided. Do not over tighten the fixing screws.
4. Re-connect the power to the circuit and test operation.
5. It is normal for a faint buzzing sound to be heard from a dimmer switch. This is from the radio interference suppression coil and is no cause for concern.

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CIRCUIT AND OTHER EQUIPMENT COMPATIBILITY

To ensure optimum performance and reliability is obtained from this dimmer switch during its lifetime the following recommendations and precautions should be followed as appropriate to the type of dimmer:

CIRCUITS

It is recommended that the lighting circuit incorporating this dimmer is protected by a 6A or up to a 10A maximum Type B miniature circuit breaker.

Only use two-way (push) dimmers in two-way switching circuits. Only use one two-way dimmer in a two-way switching circuit.

LAMPS

These dimmer switches are suitable for dimming incandescent lamps and dimmable CFL lamps only and are NOT to be used with Fluorescent lamps.

Light Emitting Diode (LED) lamps of any description or motor loads.

When using mains voltage Tungsten Halogen lamps, it is essential that these types of lamps incorporate internal fuses and are from quality lamp manufacturers. The use of inferior

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low quality lamps without internal fuses is not recommended and will invalidate any guarantee or warranty supplied with the dimmer switch.

Unless Compact Fluorescent (CFL) lamps are marked 'Dimmable' they must NOT be used with these dimmer switches. Use of non-dimmable CFL lamps may permanently damage the dimmer or the lamp and will invalidate any guarantee or warranty supplied with the dimmer switch.

It is recommended that a maximum number of 5 dimming CFL lamps only should be connected to an individual dimmer switch.

LOW VOLTAGE TRANSFORMERS

Only use Low Voltage dimmers with transformers. Do not use mains voltage dimmers.

Always check transformer compatibility BEFORE installation and if in doubt always check with the dimmer Helpline or the transformer manufacturer

The Low Voltage dimmer switches use leading edge (phase delay) dimming technology and must therefore be used with compatible good quality dimmable electronic or wire-wound transformers. Trailing edge (phase cut) dimmable transformers must not be used.

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Do NOT mix electronic and magnetic transformers on the same dimmer switch.

It is recommended that a maximum number of 5 Low Voltage transformers should only be connected to an individual dimmer switch.

It is recommended that dimmable electronic transformers be loaded to at least 70% of their rated maximum wattage.

When running multiple lamps on dimmable electronic transformers ensure that all lamps are working correctly. Replace failed lamps as soon as possible as a single failed lamp may cause flickering of other lamps.

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LOADING TABLE

PLATE SIZE	No. of Dimmers	Max. each Dimmer	Min. each Dimmer	Total per Plate
1	250W/VA	60W/VA	250W/VA	
1	400W/VA	60W/VA	400W/VA	
2	250W/VA	60W/VA	500W/VA	

Maximum load of 500W/VA for the plate should not be exceeded.

PLATE SIZE	No. of Dimmers	Max. each Dimmer	Min. each Dimmer	Total per Plate
3	250W/VA	60W/VA	750W/VA	
4	250W/VA	60W/VA	1000W/VA	

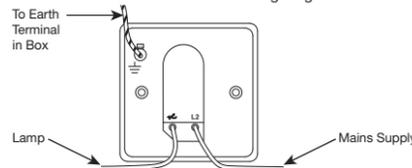
Maximum load of 1000W/VA for the plate should not be exceeded.

NOTE: The dimmer VA rating refers to the total circuit load, not the lamp load. Allowances must be made for transformer losses typically 20% for wire wound laminated and toroidal transformers and 15% for dimmable electronic transformers.

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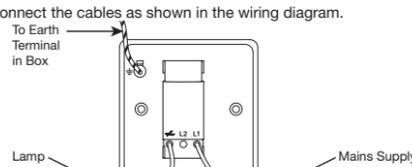
INSTALLATION WIRING DIAGRAM 1 WAY DIMMER

Connect the cables as shown in the wiring diagram.



INSTALLATION WIRING DIAGRAM 2 WAY DIMMERS WIRED IN 1 WAY CIRCUIT

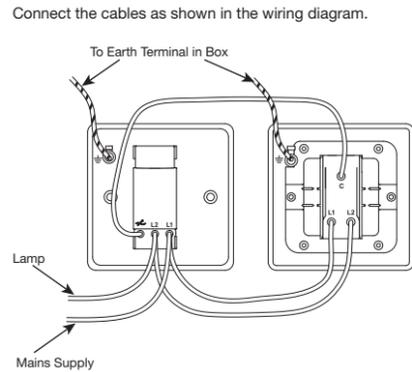
Connect the cables as shown in the wiring diagram.



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INSTALLATION WIRING DIAGRAM 2 WAY DIMMERS WIRED IN 2 WAY CIRCUIT

Connect the cables as shown in the wiring diagram.



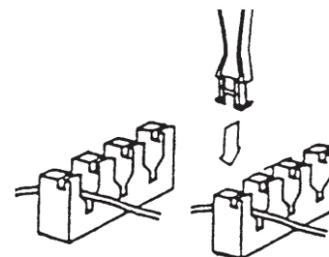
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TELEPHONE SOCKETS

1. Master sockets should only be fitted by an authorised engineer.
2. Secondary sockets are for adding extensions. These may be from a master socket or from another secondary socket. The procedure is the same for both arrangements. The maximum number of extension sockets is normally 5.
3. The unit is suitable for mounting on a 1 gang flush mounting box (wall box) with a minimum depth of 25mm.
4. On the reverse side of the socket there are two rows of terminals numbered 1 to 6. Terminals are connected using 4 core telephone cable. Terminals 2, 3, 4 and 5 on the master socket are connected to terminals 2, 3, 4 and 5 on the secondary socket. As long as the same cable colour is used for the same terminal on each socket, the actual colours used are not important.
5. Terminals will either be of the screw connectors or insulation displacement connectors (IDC). To attach the wire to IDC type terminals, position the wire as shown in Fig. 1, leaving 12mm overhanging. Press the wire into the connector using the tool provided, and remove any excess wire.

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6. Telephone sockets fitted with metal front plates are fitted with earth terminals. The earth terminals on the socket should be connected to the earth terminal in the wall box by means of a short length of copper wire. If the wire is bare, it could be sleeved with green/yellow sleeving.



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CO-AXIAL AND SATELLITE SOCKETS

Connect the cables as shown in the wiring diagram.

Carefully slit the outer cable sheath and peel back to the required length. Remove the excess and expose the underlying copper braided screen.

Roll the braided screen over the top of the outer sheath and trim back a short length of inner insulation to expose the centre conductor. Slacken the screws that retain the cable clamp and also the screw that clamps the centre conductor.

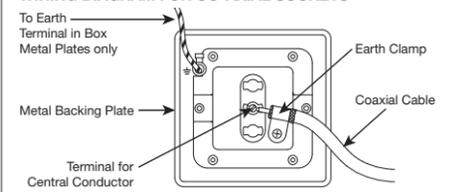
Position the cable so that the section covered by the braided screen sits beneath the cable clamp and the centre conductor sits within the centre conductor terminal. Tighten the screws on the cable clamp and tighten the centre conductor terminal screw. Ensure that the braided screen does not come into contact with the centre conductor terminal.

In the case of accessories having metal front plates and fitted with earth terminals, the earth terminal on the accessory should be connected to the earth terminal in the wall box by means of a short length of copper wire. If this wire is bare, it should be sleeved with green/yellow sleeving.

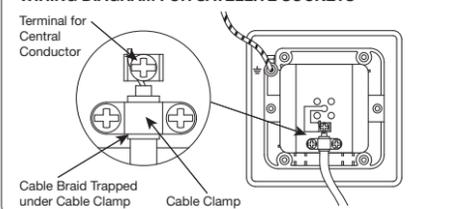
For 2 gang sockets, connect to each socket separately, as described above.

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WIRING DIAGRAM FOR CO-AXIAL SOCKETS



WIRING DIAGRAM FOR SATELLITE SOCKETS

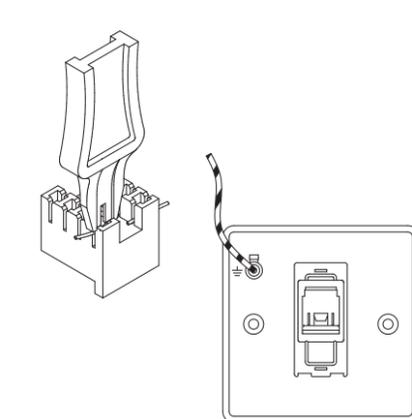


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RJ11 AND RJ45 DATA OUTLETS

These accessories require a minimum box depth of 35mm. On the reverse of the accessory, remove the top cover to expose the terminal connectors. There are two rows of terminals, each having a number of colour coded connectors. Determine whether the wiring scheme is T568A or T568B and use the appropriate colour code guide to identify the correct position of each of the cables. To attach the wire to the terminal connectors, position the wire as shown in Fig 2. Press the wire into the connector using the tool provided. Once all cables are connected, remove any excess wire and replace the top cover. In the case of accessories having metal front plates and fitted with earth terminals, the earth terminal on the accessory should be connected to the earth terminal in the wall box by means of a short length of copper wire. If this wire is bare, it should be sleeved with green/yellow sleeving.

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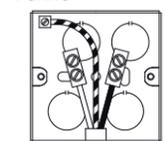


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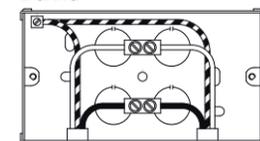
1 AND 2 GANG BLANK PLATES

If using the blank plate to cover the position of an existing accessory, ensure that any remaining cables are isolated and terminated at a convenient junction. Where possible remove the cables from inside the wall box. If the cable cannot be isolated, ensure that the bare ends of the live and neutral cables are terminated separately, within suitably sized terminal blocks. The terminal blocks should then be covered with insulating tape for additional safety. Any earth cables must be sheathed in green/yellow sleeving and connected to the earth terminal in the wall box. In all instances, it is important that the earthing circuit is maintained when removing an accessory.

1 GANG



2 GANG



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If the accessory to be removed is on a ring main it is important that, after removal, the connections for the ring circuit are maintained. This can be achieved by connecting all the live cables together, and then all the neutral cables together with suitably sized terminal blocks. The terminal blocks should then be covered with insulating tape for additional safety. All earth cables must be sheathed in green/yellow sleeving and connected to the earth terminal in the wall box.

In the case of metal blanking plates fitted with earth terminals, the earth terminal on the plate should be connected to the earth terminal in the wall box by means of a short length of copper wire.

*BARE COPPER MUST BE SHEATHED IN GREEN/YELLOW SLEEVING

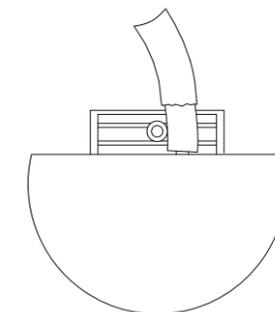
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DIPLEXER AND TRIPLEXER

1. Undo the screw to remove the terminal cover on the rear of the socket.
2. Remove 20mm of outer cable sheath and trim inner insulation to expose 10mm of the central conductor.
3. Ensure that any excess braided screen is wrapped around the inner insulation and is not touching the central conductor.
4. Push the centre conductor of the co-axial cable into the terminal.
5. Position the cable so that the section covered by the braided screen does not come in contact with the centre conductor terminal. Refit and tighten the terminal cover, clamping the braided screen beneath.
6. In the case of accessories having metal front plates and fitted with earth terminals, the earth terminal on the accessory should be connected to the earth terminal in the wall box by means of a short length of copper wire. If this wire is bare, it should be sleeved with green/yellow sleeving.

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Recommended cable type: CT100 (or equivalent).



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DIPLEXER AND TRIPLEXER

(with Secondary Telephone Socket)

For screw type connections or insulation displacement connectors (IDC) refer to section marked 'Telephone Sockets'.

For push wire connections see below;

1. Remove 50mm of outer sheath and strip back 6mm from the ends of each conductor.
2. Carefully push end of exposed wire into the appropriate numbered conductor hole.

Note: As long as the same colour is used for the same terminal on each socket, the actual colours used are not important.

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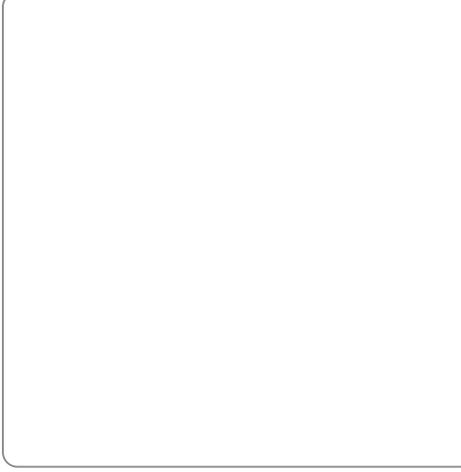
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