



Installation and Safety Instructions

IP44 Recessed Downlight

12V MR16

31809
33500
83983



These instructions are for your safety. Please read through them thoroughly before use and retain for future reference.

Tools Required (not supplied)

3mm Flat Blade Screwdriver
6mm Cross Headed Screwdriver
Power Drill
66mm Hole Saw / Keyhole Saw
File
Pencil

Sundries / Extras (not supplied)

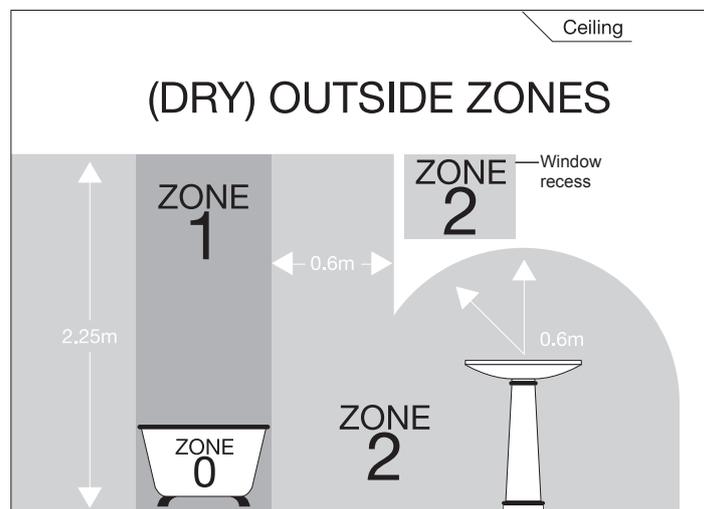
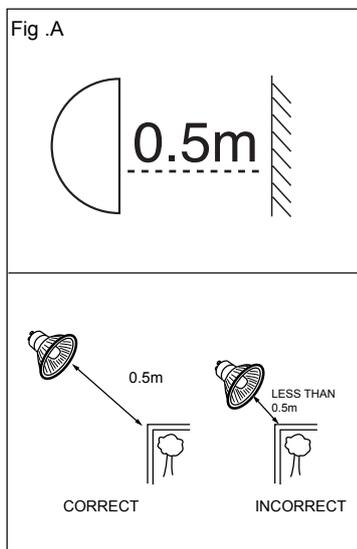
Insulating Tape
Terminal block
Suitable 12V transformer
Sufficient length of FEP cable
GU5.3 MR16 12V Halogen lamp Max. 50W

Before You Start

- If you need any assistance please contact your local trade counter who will be able to help you.
- Decide on an appropriate location for your product (see siting instructions below).
- This product is not suitable for single-handed installation. An assistant will be required during fitting.
- If you are in any doubt about installing this product, consult a qualified electrician.

Siting Instructions

- 1) This product is suitable for indoor use only.
- 2) Do not attach to surfaces which are damp, freshly painted or otherwise electrically conductive (e.g. metallic surfaces).
- 3) This fitting is not suitable for direct mounting on normally flammable surfaces, e.g. wood based materials. It is suitable only for mounting on non-combustible surfaces e.g. plasterboard, masonry. Shown by the symbol on the right.
- 4) The lamp must be positioned so that there is at least 0.5m between the bulb and any illuminated surface (see Fig.A below). Spotlights should be positioned well away from curtains and beds to ensure this distance is maintained.
- 5) This product is specially designed for installation in a bathroom. It is IP44 rated and can be fitted in Zone 2 and Outside (dry) zones of a bathroom - see diagram below.
- 6) The bezel on this product provides the IP44 protection. The electrical parts of this product must be installed in a fully enclosed ceiling void with the bezel fitted to maintain the IP44 rating. Do not use the product without the bezel fitted.



7) If fitting in a bathroom this product must be supplied via a 30mA Residual Current Device (RCD) and installed by a competent person in accordance with the IEE wiring regulations BS7671 and local Building regulations.

8) Expert advice should be sought before installing downlighters in any ceiling forming a fire barrier e.g. ceilings between flats etc.

Ceiling Preparation	Hole Diameter:	66MM
	Minimum Ceiling Cavity Depth:	140MM

- 1) Ensure a minimum depth of ceiling void of 140mm is available. See Fig. 1 on page 3.
- 2) When more than one downlight is to be installed, the distance between units must be at least 0.3m (30cm). Keep transformers as far from the lamp heads as possible to avoid overheating.
- 3) Cut the 66mm diameter mounting holes in the ceiling taking care not to foul any pipes, mains cables or joists beneath the surface.
- 4) All measurements are based on a ceiling with a 12mm thickness. If your ceiling thickness is less than 12mm, deduct approximately 5mm from the ceiling diameter shown above. If the ceiling is thicker than 12mm, gradually increase the hole until a snug fit is achieved. It is always recommended to cut the hole slightly smaller than the size specified, and then file the hole until the recessed unit fits snugly.
- 5) Ensure free movement of air around the fitting by removing any roof void insulation from at least 100mm around the hole. Under no circumstances must these fittings be covered with insulating matting or similar material.



III These units are **Safety Extra Low Voltage** and must not be earthed. If there are any incoming earth cables, they must be joined together and well insulated with good quality insulation tape. This is to ensure earth continuity throughout your property.

UNDER NO CIRCUMSTANCES CONNECT THE MAINS (240V) DIRECTLY TO THESE FITTINGS. A SEPARATE 12V TRANSFORMER MUST BE USED. ALWAYS REFER TO THE SPECIFICATION OF THE TRANSFORMER FOR MAXIMUM LOADING.

Ensure that cable used to connect your transformer to the terminal block of this fitting is made of silicone, FEP or similar heat-resistant material.

Wiring

***Refer to Electrical change sheet for old and new wiring cable colours IMPORTANT.**

Always switch off the electricity supply at the mains during installation and maintenance. We recommend that the fuse is withdrawn or circuit breaker switched off at the distribution board whilst work is in progress (turning off the lightswitch is **not** sufficient). All fittings must be installed by a competent person in accordance with current IEE Wiring Regulations (BS7671) and local Building Regulations. If in doubt, consult a qualified electrician.

- 1) Obtain a suitable transformer. Connect transformer to the mains supply cable through the hole in the ceiling. (Use minimum 1.0 mm² core cable H03VV-F or equivalent). Terminate your Earth and Loop cables as necessary.
- 2) Open terminal block box by loosening screw. Loosen screws on cable clamp and fit supply wiring from transformer output into cable clamp. (See Fig. 2) Ensure that cable used to connect your transformer to the terminal block of this fitting is made of silicone, FEP or similar heat-resistant material.
- 3) Connect transformer output cable to the terminal block. Refit terminal block cover and tighten screw.
- 4) Fit terminal block bracket to downlight by sliding end of bracket into spring coil. (see Fig. 3)
- 5) Check all connections are tight. Tighten cable clamp screw.

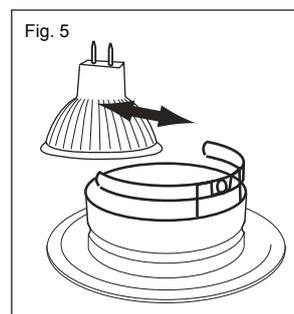
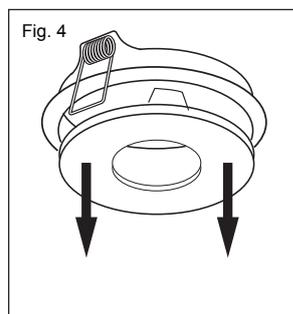
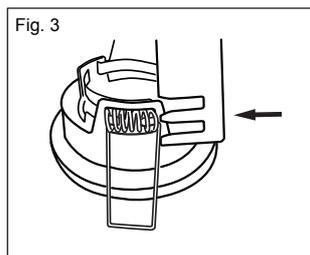
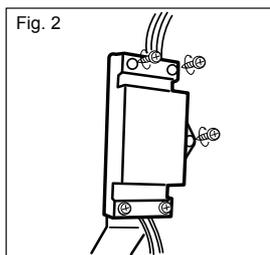
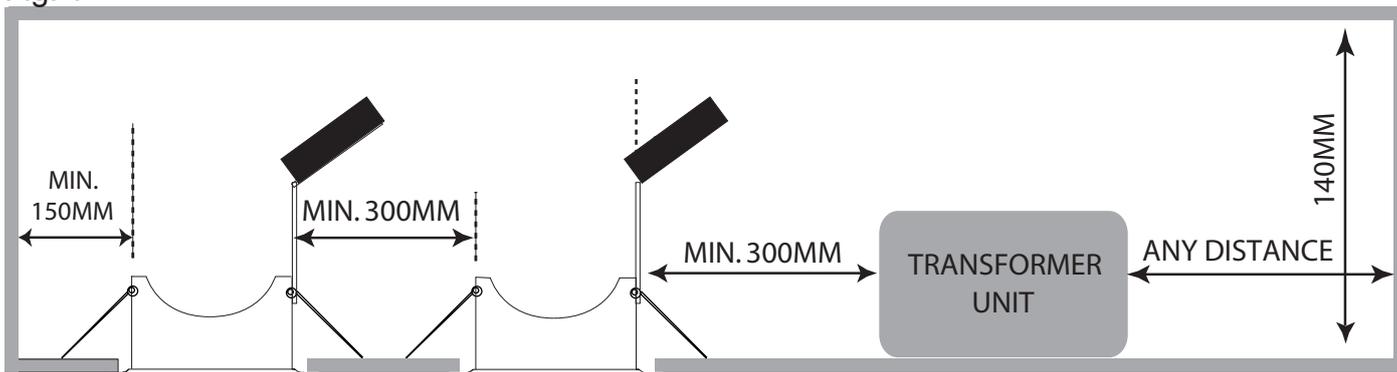
These units must not be earthed. If there are any incoming earth cables, they must be joined together and well insulated with good quality insulation tape. This is to ensure earth continuity throughout your property.

Installation

Ensure the ceiling surface is flat and smooth to ensure a good seal.

- 1) Always switch off or disconnect from the mains before installation.
- 2) Feed the supply cable and transformer through the mounting hole. Squeeze the spring clips upwards towards the ceiling and fit the arms into the ceiling hole. Take care when releasing your grip as the springs will snap back and push against the back of the ceiling
- 3) Ensure the transformer is kept a MINIMUM of 300MM away from the lamp body to ensure the cables and transformer are not subjected to excess heat from the lamp.
- 4) Push the unit upward until firmly in position, ensuring that the cable is not trapped.
- 5) Remove front bezel by pulling away.
- 6) Obtain a suitable bulb - 50W Max GU5.3 MR16 12V Halogen- or lower wattage depending on transformer specification. See "Bulb replacement" section below on how to fit.
- 7) Replace the circuit fuse and switch on the mains to test.

Fig. 1



Bulb replacement

- 1) Switch off and allow bulb to cool before replacing.
- 2) Pull-off front bezel to expose bulb. (Fig. 4) Unclip bulb from bezel. (Fig. 5)
- 3) Remove old bulb by holding lampholder and pulling bulb away.

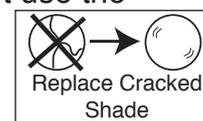
Replace with bulb type 50W MAX. GU5.3 MR16 12V Halogen. Only use self-shielded halogen bulbs marked with the symbol shown on the right. Alternatively, use 12V GU5.3 MR16 lamps of a lower wattage - but check minimum loading of transformer.



- 4) Refit the new bulb into the lampholder, slide into bezel and refit bezel back onto product.

Care & Use

- Always switch off or disconnect from the mains when cleaning the product.
- Wipe clean with a soft dry cloth. Never use scourers, abrasives or chemical cleaners. Do not allow moisture to come into contact with electric parts.
- If the glass shield becomes cracked or damaged it must be replaced. Do not use the product without front bezel attached.



Important- Electrical Changes

Please Read

Changes to Building Regulations

As of 1 January 2005, changes to the Building Regulations affected domestic electrical installations in **England** and **Wales**. You don't need to be a qualified electrician to make changes to your home's electrical system, but the work must be done in accordance with the standards in the Regulations.

You do not need to notify your Local Authority if you do **minor** electrical work such as:-

- replacing or repairing a socket, light or cable in any room
- adding extra spurs, sockets or lights to an existing circuit (except in a kitchen, bathroom or outdoors)
- adding lights to an outdoor wall on an existing circuit (provided there are no exposed outdoor connections, and the circuit is not extended from a kitchen/bathroom).

However, the work must be done to the standards in the Wiring Regulations and you should consider having the work checked by a competent electrician to make sure it is safe.

Before you start **other** electrical work such as:-

- adding new circuits to your existing installation
- any work (other than repairs / replacements) in a room where there is water (e.g. kitchen, bathroom, etc.)
- any work (other than repairs / replacements) outdoors (e.g. installing outdoor sockets, or non-pre-wired garden lighting etc.)

you must **notify** your Local Authority Building Control Department, which has responsibility for ensuring the work is inspected and tested.

Where you have any work done by an electrician who is a member of a competent person self-certification scheme, the electrician will be able to certify the work complies with the Regulations and you do not need to notify your Local Authority.

We recommend that you make yourself aware of the Regulations before you undertake any work and if you require any clarification you should contact your Local Authority Building Control Department.

Changes to Wiring Cable Colours in UK

The IEE Wiring Regulations (BS 7671) have changed the colours in cable used for fixed wiring for all new electrical installations.

The old and the new colours are shown in the table below.

Core colour	OLD	NEW
LIVE	Red	Brown
SWITCHED LIVE	Red, or Black with red sleeve	Brown, or Blue with brown sleeve
NEUTRAL	Black	Blue
EARTH	Bare, with green/yellow sleeve	Bare, with green/yellow sleeve (no change)
2-WAY SWITCHED LIVE	Red, blue and yellow	Brown, black and grey

For new installations after 31st March 2006, only the **new** colours are permitted. Where new cable is added to an existing installation of the old type, special precautions must be taken (including fixing a warning notice at the distribution board or consumer unit).

When installing this product, please note therefore that you may encounter either of the above types of cable.

If you are in any doubt whatsoever regarding the above, please consult a qualified electrician.