



# Technical Section

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## Touch and Remote Control Intelligent Safety Dimmer Range

*Use only on an electricity supply of 200-250 volts AC*

Thank you for choosing VARILIGHT. If you have purchased a Master Unit and a Slave Unit(s) you can create a 2- or (multi-) way dimming system (see "Using Master and Slave Units..." below). This range is designed to control all incandescent lighting circuits (including low voltage transformer circuits). For best results with Low Voltage Lighting use VARILIGHT Low Voltage Transformers.

**Safety Feature:** Your dimmer is protected against overload. If an overload occurs it will automatically turn the brightness down or turn off until the overload is removed and the dimmer is switched off and then switched back on again. If the dimmer receives a total short-circuit it may cease to function. (In this case return the unit to our service department at the address below and not to your supplier. The service department will repair your dimmer free of charge. See guarantee below)

### USES FOR THE SWITCH

Your VARILIGHT intelligent safety dimmer is suitable for: mains voltage GLS bulbs; mains voltage halogen bulbs; fans; most electronic transformers (including those requiring trailing-edge control) and toroidal transformers. Do not use for fluorescent, compact fluorescent bulbs or non-toroidal wire-wound transformers. Maximum load must be reduced by 25% for mains voltage halogen & candle bulbs.

When using electronic LV transformers add the VA ratings of the transformers, not the wattage of the bulbs. There is an absolute maximum of 5 transformers, except with VARILIGHT LV Transformers when you can add the bulb wattages up to the dimmer "max. load" with up to 10 transformers.

#### Troubleshooting:

These dimmers will run hot when used on a full load (up to 50°C). This is within the design parameters of the switch and is safe. However, if you are unhappy with this temperature, reduce the load.

When using this dimmer to control low voltage lighting transformers, choose transformers with a maximum rating close to their lamp load (eg. Use a 60VA transformer to control a 50W low voltage bulb); except with VARILIGHT LV Transformers - any lamp loading will work.

**Note:** Certain transformers may not behave according to their power rating when used with a dimmer. An overload will result in the safety features of this dimmer turning down the brightness. If so change your transformers to ones which do not appear as an overload, remove one (or some) transformer(s) from the circuit or choose a higher rated dimmer instead. Some wire-wound transformers may make excessive noise when dimmed. Only one such transformer can be used per dimmer.

## FITTING THE SWITCH

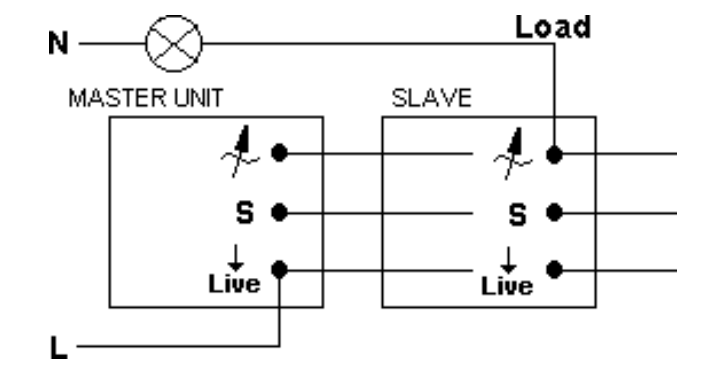
Read the instructions below carefully. In case of any doubt or difficulty consult a qualified electrician.

1. Switch off at the mains, then remove the existing switch and disconnect the wiring from the switch terminals at the rear, taking note of the present wiring of the switch and the marking on the terminals. Where there are two or more wires together in the old switch, they must be kept together in the dimmer.
2. Ensure that any wall box is free of plaster lumps or projecting screw heads. Dimmers on single-sized plates can be fitted to wall boxes having 60.3mm screw fixing centres and those with double-sized plates to wall boxes with 120.6mm fixing centres. Most models can be fitted into a box with a minimum depth of 25mm, or a normal surface mounted switch box. A box having 4 fixing lugs cannot be used without modifying it. The top and bottom lugs must be broken off or bent flat.
3. To connect the wiring, refer to the diagrams below. Take care that no bare wires project out of the terminals.
4. Dimmers having a metal front plate must be earthed by means of the earthing point on the dimmer.
5. After connecting the wires screw the dimmer gently into the wall box so that the front plate is not distorted or cracked. Do not trap the wiring between the rear of the dimmer and the back of the wall box.
6. Turn on the mains electricity.

Your VARILIGHT Remote Control and Touch Master Dimmer is suitable for 1-way circuits.

It can be used for 2-way circuits only if wired as shown below and using a VARILIGHT slave unit. Intermediate and multi-way dimming require extra slave units and suitable wiring. (If you cannot understand the wiring diagram below call out a qualified electrician.)

**In 1-way lighting circuits** each light is controlled by one switch. A Master Dimmer should replace this switch. The live wire must be connected to the terminal marked "Live" and the "load" wire to the terminal marked " ". To fit 2 gang (or 3 or 4 gang) dimmers treat each group of terminals at the back of the unit as a separate dimmer, wiring them into the lighting circuits as above. You may need a short length of wire to connect together the "Live" terminals.

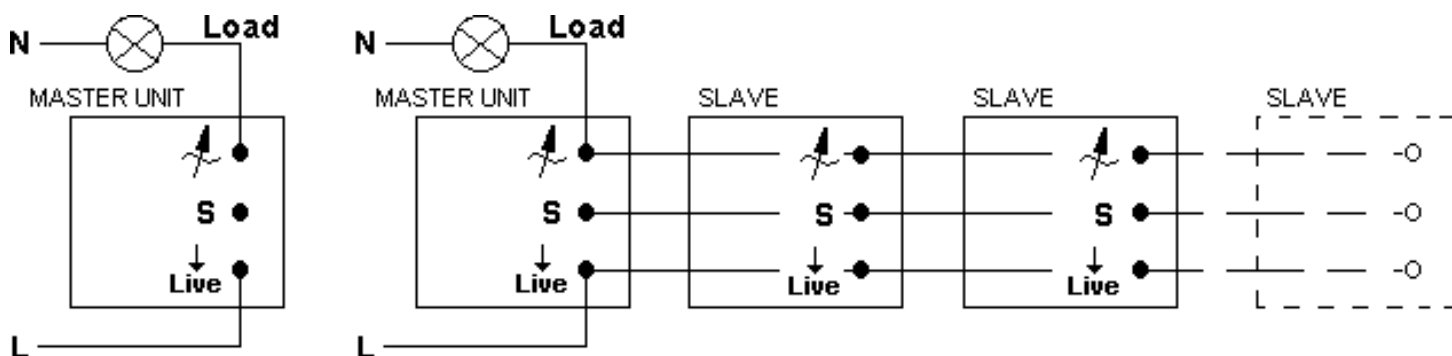


## Using Master and Slave Units in 2-Way and Intermediate Circuits

2-way lighting circuits have two switches (intermediate circuits have 3 or more switches) turning the same lights on and off from 2 (or more) locations (eg. at the top and bottom of the stairs). In suitable circuits one of the switches will have a live wire connected. Replace this switch with a Master Dimmer and the other switch(es) with Slave Units to allow dimming from more than one location. Note: If your 2-way or intermediate circuit does not have three direct connections between the switches (as in the diagram) the circuit must be rewired using conventional "2-way" wire (red, blue, yellow & earth).

Master Dimmer: Connect the live wire to the terminal marked "Liveo" and the "load" wire to the terminal marked "L".

Slave Units: Must be wired to the Master unit as follows: "Liveo" to "Liveo", "S" to "S" and "L" to "L".



### OPERATION OF THE SWITCH

If your dimmer does not have a remote control function, you need only read (a) & (c) below. If you have purchased a remote control dimmer read (a), (b) and (c) below. For slave units (a) applies.

#### (a) Touch Control

To initialise the dimmer, touch the circular sensor on the front of the plate once for 2 seconds. The dimmer will respond by making the light(s) brighter. A single touch will now turn the light(s) on or off. To dim the lights, keep contact with the sensor until the desired light level is reached. While contact with the sensor is maintained, the brightness will cycle up and down. To change the direction of the dimming cycle remove contact and then touch the sensor again. When the brightness reaches the level you desire, remove contact with the sensor. If you have a 2- (or multi-) gang model you need to initialise each sensor in the same way.

#### (b) Remote Control

This dimmer can also be programmed to respond to any button on a remote control unit. If there is a button that you do not currently use on a remote control unit you already have at home then you can use it to control the dimmer. Otherwise a dedicated remote control unit can be purchased to control the dimmer.

The dimmer needs to be taught to recognise the button on the remote control unit you intend to use. To do this, follow the instructions below:-

1. To set the dimmer into learning mode, pause for 60 seconds and then touch the sensor 6 times. The dimmer will respond by turning the light(s) on and off 3 times. After this the lights will cycle up and down once and turn off.
2. Choose a spare button on your remote control unit. Within 15 seconds (and from a distance of about 1 to 2 metres) press and hold down the chosen button releasing after about 2 seconds. The dimmer will cycle the light (s) on and off once.
3. To confirm your choice, press and hold down the same button again releasing after about 2 seconds. If the programming has been successful, the light(s) will cycle on and off twice. If this does not happen then return to

step 1 above and try again. If the problem persists, try a different button, a different remote control unit or purchase the dedicated VARILIGHT controller.

4. You can now use this button on the remote control to operate the dimmer. As with the touch sensor, a single touch on the remote control button will turn the light(s) on and off. Holding the button down will make the brightness cycle up and down. To change the direction of the dimming cycle remove contact and then press the button again. Release contact from the button when the desired light level is reached. The dimmer can still be operated using the touch sensor.

5. For 2- (or multi-) gang models, repeat steps 1 to 4 for each sensor, teaching each one a different button so you can control each one separately. You can change your choice of control button by following steps 1 to 4 again at any time.

## **GUARANTEE**

Important: In case of any defect return the dimmer to our service department. This guarantee is in addition to and not in derogation of the statutory rights of the purchaser and is offered so that you may have the benefit of our technical facilities. Should any defect occur in this unit within 12 months of its purchase we will replace or repair the defective unit free of charge provided that:-

- a) The unit has been correctly fitted according to the instructions and has not been used with fluorescent bulbs, compact fluorescent bulbs, or overloaded beyond its rating, and has only been used on 200-250V AC.
- b) The dimmer module has not been tampered with or taken apart.

## **GUARANTEE REGISTRATION NUMBER 620.**

Safety Feature: Your dimmer is protected against overload. If an overload occurs it will automatically turn the brightness down or turn off until the overload is removed and the dimmer is switched off and then switched back on again.

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