

# INSTRUCTIONS FOR VARILIGHT V-COM DIMMERSWITCHES



## OVERVIEW

Thank you for choosing a VARILIGHT V-Com intelligent programmable dimmerswitch. Use only on an electricity supply of 230V 50Hz AC.

**IMPORTANT:** Read ALL sections below before installing this dimmerswitch.

V-Com dimmers are leading-edge and designed to control TRIAC dimmable LED lighting. To optimise the dimming performance with LED lighting see "Programming" overleaf. For information on compatibility with other types of lighting please see "Loading" overleaf.

This product complies with European Safety Regulations (IEC 669-2-1 or BSEN 60669-2-1) when used in lighting circuits containing MCBs (miniature circuit breakers). These can be rated at 6A, 10A or 16A (preferably 6A for lighting circuits). Your guarantee is not affected if you have an older lighting circuit protected by fuse wire links.

## LOADING

**Always observe the recommended minimum and maximum loads stated on the dimmer.** For mixed loads, follow the LED rating.

Please see [www.varilight.co.uk/dimmers/v-com.html](http://www.varilight.co.uk/dimmers/v-com.html) for the latest loading guidance.

Lighting Type	V-Com Grid Dimmer Push On/Off	V-Com Standard Dimmer Push On/Off			
	Multi Gang Per Gang	1-Gang	2-Gang Per Gang	3-Gang Per Gang	4-Gang Per Gang
GLS	As per rating on dimmer	As per rating on dimmer	As per rating on dimmer	As per rating on dimmer	As per rating on dimmer
Main Halogen					
Low Voltage Halogen					
Eco Halogen					
Dimmable LEDs	Minimum load: as per rating on dimmer. Max. load 100W: <b>Max. number of LEDs permitted is 10</b> Max. load 180W: <b>Max. number of LEDs permitted is 20</b> Max. load 220W: <b>Max. number of LEDs permitted is 26</b> Max. load 300W: <b>Max. number of LEDs permitted is 36</b> Max. load 400W: <b>Max. number of LEDs permitted is 40</b> Max. load 600W: <b>Max. number of LEDs permitted is 60</b>				
	For the latest advice on dimmable LEDs, please visit <a href="http://www.varilight.co.uk/leds">www.varilight.co.uk/leds</a>				

### THIS SWITCH IS RECOMMENDED FOR

- ✓ LED Lighting Requiring TRIAC dimming

### THIS SWITCH IS ALSO COMPATIBLE WITH

- ✓ Good quality dimmable low voltage transformers [see "Transformers"]
- ✓ GU10 or similar good quality mains halogen bulbs; [Choose V-Plus Series Dimmers for the best performance with halogen lighting]
- ✓ Mains voltage incandescent GLS or candle-shaped bulbs

### THIS SWITCH IS NOT SUITABLE FOR

- \* Fluorescent bulbs and tubes
- \* Electric motors

### OVERLOAD PROTECTION

This dimmerswitch is protected against overheating and overload. If an overload occurs the dimmer will turn off. In this case, switch off the dimmer, remove the overload and switch back on again. However, if the dimmerswitch receives a total short-circuit it may be damaged beyond repair.

### TRANSFORMERS

Use only with quality dimmable transformers. For optimum performance choose VARILIGHT transformers.

To calculate load, add the VA ratings of the transformers (not the wattage of the bulbs). Choose transformers with a maximum rating close to their lamp load (e.g. Use a 50VA, 60VA or 70VA transformer to control a 50W low voltage bulb).

N.B. Certain transformers may not behave according to their power rating when used with a dimmer. An overload will result in the safety features switching the dimmer off. If so, change your transformer(s) (VARILIGHT transformer(s) recommended); or remove one (or some) transformer(s) from the circuit; or choose a higher rated dimmer.

## FREQUENTLY ASKED QUESTIONS

For FAQs, please visit: [www.varilight.co.uk/faqs](http://www.varilight.co.uk/faqs)

[www.varilight.co.uk](http://www.varilight.co.uk)

Please **record the batch number** printed on the side of the plastic moulding on the rear of the product. This will assist us in providing any technical support you may require.

**K\_P**

Reg. K007

BATCH NO:

**INSTALLERS** – Please leave these instructions with your customer for future reference.

**WARNING:** Do not apply products with metal faceplates directly to freshly plastered or damp surfaces as product may tarnish. If in doubt, use polythene as a temporary gasket to protect the product. Do not use masking tape on metal faceplates.

## GUARANTEE

In case of any defect, return the dimmer to our service department. Varilight undertakes to repair or replace, at its discretion, goods which have become defective within 10 years of purchase, solely as a result of faulty materials and workmanship, provided that:-

- The unit has been correctly fitted according to the instructions and has not been used with an incompatible load, fluorescent tubes, or overloaded beyond its rating, and has only been used on a 230V 50Hz AC power supply.
- The dimmer module has not been tampered with or taken apart.
- The unit is securely packed and safely returned to Service Department, Carylly Lea, Faygate, Horsham, West Sussex, RH12 4SJ (Tel. (01293) 223333) together with a letter stating the guarantee registration number below, the date and place of purchase, the type and wattage of the lighting or other load being controlled and the details of the fault. This guarantee states Varilight's entire liability, which does not extend to cover consequential loss or damage or installation costs arising from a defective product. The guarantee does not apply to problems arising from any incompatibility between your lamps and the dimmer switch. This guarantee does not in any way affect the statutory rights of the purchaser and is offered so that you may have the benefit of our technical facilities.

**GUARANTEE REGISTRATION NUMBER K007.**

## FITTING YOUR DIMMERSWITCH

Read these instructions carefully. Incorrect installation may damage the dimmer beyond repair.

**In case of any doubt or difficulty consult a qualified electrician.**

- 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 dimmerswitch.
  - Ensure that any wall box is free of plaster lumps or projecting screw heads.
  - Dimmerswitches 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. A box having 4 fixing lugs cannot be used without modifying it. The top and bottom lugs must be broken off or bent flat.
  - To connect the wiring for 1-way or 2-way circuits refer to the diagrams overleaf under the heading "1-Way, 2-Way and Multi-Way Circuits". Take care that no bare wires project out of the terminals. Keep wires together in a terminal if they were together in your old switch.
  - Dimmerswitches having a metal front plate must be earthed by means of the earthing point on the dimmer.
  - After connecting the wires screw the dimmerswitch 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.
  - Once installation is complete. Switch on the mains supply and switch on the dimmer, turning the control knob to give the desired light level.
- Important:** Disconnect the dimmer before carrying out insulation resistance testing. Failing to do so could damage a dimmer and make the guarantee invalid.

## 1-WAY, 2-WAY & MULTI-WAY CIRCUITS

Your VARILIGHT V-Com intelligent dimmerswitch is suitable for 1-way or 2-way lighting circuits. It has a push on/push off action to switch and a rotary action to dim. There are 3 screw terminals per module.

### 1-WAY CIRCUITS

In 1-way lighting circuits each light is controlled by one switch.

Your dimmerswitch should replace this switch. See Figure 1. Remove your old switch and copy the wiring configuration for your dimmerswitch. Connect wires either way round to the 'C' terminal and one of the 'L' terminals. The other 'L' terminal is not used in a 1-way circuit. (P.T.O)

**2-WAY CIRCUITS**

2-way lighting circuits have two switches turning the same lights on and off from 2 different locations (eg. at the top and bottom of the stairs). You must only replace one of these switches with a dimmerswitch or the lights will flicker. See Figures 2 and 3 which show typical 2-way circuits. Remove your old switch and copy the wiring configuration for the dimmer.

The wire(s) fitted in the "common" terminal of the old switch should be fitted into the "C" terminal of the dimmerswitch. The wires fitted into the other two terminals of the old switch should be fitted either way round into terminals "L1" and "L2" of the dimmerswitch.

**MULTI-GANG DIMMERSWITCHES**

To fit 2 gang (or 3 or 4 gang) dimmerswitches treat each group of terminals at the back of the unit as a separate dimmerswitch wiring them into the lighting circuits as described above. If required, one terminal from each dimmer module may be joined together with a short length of wire to copy the wiring configuration of the old switch.

**PROGRAMMING**

**OPTIMISING THE PERFORMANCE OF YOUR DIMMERSWITCH**

When you first install the dimmer switch it will automatically default to MODE 1. This mode is the best one for almost all types of LED lighting but if the lights are flashing in MODE 1 you may be able to improve the dimming performance by changing the driving mode. [See "Changing the driving mode" below.] You can always reset to MODE 1. Additionally, the minimum and maximum brightness setting of the dimmer can be adjusted to achieve the optimum dimming range for a particular load as follows.

**ADJUSTING THE MINIMUM BRIGHTNESS**

If your lights are flickering when they are dimmed to a low level you can increase the minimum brightness setting of the dimmer, which may prevent this from happening. If the lights are brighter than you would like when the dimmer is set to minimum, you can try reducing the minimum brightness setting of the dimmer.

1. Switch on and set the dimmer knob to the MINIMUM position (turn fully anti-clockwise).
2. Press to turn the lights off and back on again at least 3 times [OFF-ON x 3], leaving approximately one second between presses.
3. The lights will step up and down in brightness, and stay at a low light level or go off, to show that the dimmer is in CONFIGURATION MODE.
4. Turn the knob fully clockwise. The lights will come on and allow you to adjust the minimum brightness.
5. Adjust the brightness that you are happy with as the minimum. Leave the dimmer in this position.
6. After 3 seconds the dimmer will notice that you have stopped adjusting the minimum. The lights will step up and down in brightness to show that the dimmer has returned to normal operation.
7. Continue to use the dimmer as normal.

**ADJUSTING THE MAXIMUM BRIGHTNESS**

If your lights are flickering when they are set to a high brightness level you can decrease the maximum brightness setting of the dimmer, which may prevent this from happening. If the lights are not as bright as you would like when the dimmer is set to maximum, you can try increasing the maximum brightness setting of the dimmer.

1. Switch off and set the dimmer knob to the MAXIMUM position (turn fully clockwise).
2. Turn the lights on and back off again. ON - OFF, roughly once per second.
3. Set the dimmer knob to the MINIMUM position (turn fully anticlockwise).
4. Turn the lights on and back off again. ON - OFF, roughly once per second.
5. Set the dimmer knob to the MAXIMUM position (turn fully clockwise).
6. Turn the lights on.
7. The lights will step up and down in brightness to show that the dimmer is in CONFIGURATION MODE, then either stay at a low light level or go off.
8. Turn the knob fully anticlockwise. The lights will come on and allow you to adjust the maximum brightness.
9. Adjust the brightness that you are happy with as the maximum. Leave the dimmer in this position.
10. After 3 seconds the dimmer will notice that you have stopped adjusting the maximum. The lights will step up and down in brightness to show that the dimmer has returned to normal operation.
11. Continue to use the dimmer as normal, with your new maximum brightness.

**CHANGING THE DRIVING MODE**

Unless the lights are flashing it is likely that the best dimming performance that the lamps can deliver is achieved in MODE 1.

If the lights are flashing then you may be able to improve the performance of your lamps by manually changing the driving mode to MODE 2, or in a small number of cases, MODE 3.

1. Switch on and set the dimmer knob to the MAXIMUM position (turn fully clockwise).
2. Press to turn the lights off and back on again at least 3 times [OFF-ON x 3], leaving approximately one second between presses.

3. The lights will step up and down in brightness to show that the dimmer is in CONFIGURATION MODE, then stay at a low light level or go off.
  4. To select MODE 2, turn the knob fully anti-clockwise or to select MODE 3, first turn the knob fully anti-clockwise then fully clockwise.
  5. The lights will FLASH 2 or 3 TIMES to show which mode the dimmer is in.
  6. The dimmer can now be operated normally in the new mode.
- To return the dimmer to MODE 1 follow the same procedure. In this case, both options in step 4 will cause the lights to FLASH ONCE to indicate that you have successfully returned the dimmer to MODE 1. [To check which MODE the dimmer is operating in omit step 4.]

**DRIVE FUNCTION**

Some LED lights require a large amount of power to come on and so do not illuminate at low brightness levels. This dimmer is equipped with a DRIVE function to cater for LED lights that require more power at start-up. To enable the DRIVE function

1. Switch off and set the dimmer knob to the MINIMUM position (turn fully anticlockwise).
  2. Turn the lights on and back off again. [ON-OFF] roughly once per second.
  3. Set the dimmer knob to the MAXIMUM position (turn fully clockwise)
  4. Turn the lights on and back off again. [ON-OFF] roughly once per second.
  5. Set the dimmer knob to the MINIMUM position (turn fully anticlockwise)
  6. Turn the lights on.
  7. The lights will step up and down in brightness to show that the dimmer is in CONFIGURATION MODE, then either stay at a low light level or go off.
  8. Turn the knob fully clockwise to switch on the DRIVE function. The lights will flash once.
  9. Continue to use the dimmer as normal with your new maximum brightness.
- To disable the DRIVE function, repeat the above but omit step 8.

**RESETTING THE DIMMER**

If you change your lights we recommend you reset the dimmer to the factory default settings.

1. Switch on and set the dimmer knob to the MAXIMUM position.
2. Press to turn the lights off and back on again at least 3 times [OFF-ON x 3], leaving approximately one second between presses.
3. Wait for the dimmer to step the lights up and down. Then press to turn the lights off and back on again at least 3 more times [OFF-ON x 3], leaving approximately one second between presses.
4. The dimmer will reset all its settings to factory defaults. The lights will come on, then fade away to off.
5. Continue to use the dimmer as normal

**CHILD LOCK**

You can prevent your dimmer from accidentally going into programming mode by following these instructions. To enable the Child Lock feature

1. Switch off the dimmer and set the dimmer knob to the MAXIMUM position (turn fully clockwise).
2. Turn the lights on and back off again twice. ON - OFF - ON - OFF, roughly once per second.
3. Set the dimmer knob to the MINIMUM position (turn fully anticlockwise).
4. Turn the lights on and back off again twice. ON - OFF - ON - OFF, roughly once per second.
5. Set the dimmer knob to the MAXIMUM position (turn fully clockwise).
6. Turn the lights ON - OFF - ON, roughly once per second.
7. The lights will step up and down in brightness to show that the dimmer has returned to normal operation.
8. Continue to use the dimmer as normal, with your new Child Lock setting.
9. To disable Child Lock, repeat the whole procedure again.

**NB.** It has been noted that some LEDs do not show the programming as well as others. If you are having difficulty seeing the programming steps, you can replace one LED lamp with a halogen one for the duration of the programming in order to see the steps more clearly.

