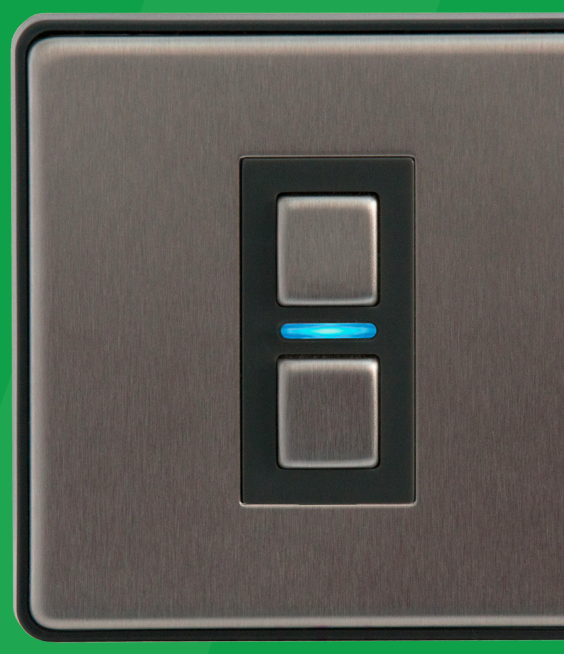
Lightwave

Smart
Dimmer

Quick Start Guide
Model No. L21

Let's get started



Before you start

You will need

- A back-box with a minimum depth of 35mm
- Suitable electrical screwdrivers
- Suitable dimmable lamps (bulbs)
- Knowledge of how to safely turn off/on mains electricity
- Your Link Plus, smartphone and Dimmer

Installing yourself?

Please note that all Lightwave products can be legally DIY installed in your own home; however, if in doubt, always consult a qualified electrician.

It is important to install this product in accordance with these instructions. Failure to do so may risk personal safety, could create a fire hazard and will also void your warranty.

If conducting an insulation resistance test, any hard-wired Lightwave devices must be disconnected from the mains, or damage to the unit may occur.

Help video & further guidance

For additional guidance, and to watch a video that will help guide you through the installation process, please visit the support section on **www.lightwaverf.com**

In the box

L21 Dimmer

Dimmer spacer

x2 Fixing screws

Specification

RF frequency:
868 MHz
Input rating:
230V~ 50Hz
Output rating:
350W max
Incandescent Load:
10W min 350W max
Back Box Depth:
35mm min
Earthing Requirement:
Not essential (double insulated)
Standby Energy Use:
Less than 1W
Wiring:
Neutral wire NOT required
Warranty:
2 year standard warranty
Circuit Type:
non-SELV

Hints and tips

Get the best out of your install

Back box and spacers

This Lightwave Smart Dimmer requires a 35mm deep back box in which to mount it. If you have a back box that is shallower than 35mm, then a Lightwave spacer can be used to provide up to 10mm of extra clearance from the wall.

LED Lamp compatibility

Lightwave dimmers are designed to work with the majority of dimmable LEDs, but, as every lamp can behave differently, it is advisable to choose variants that have been tested and proven to work well. If you plan to use LEDs, we strongly recommend that you consult our compatibility chart (see www.lightwaverf.com). The LEDs must be dimmable (not all varieties are), and you should not exceed the maximum loading recommendations provided on the compatibility chart or damage could occur.

Compatible lamps

- Mains voltage incandescent lamps (max 350W)
- GU10 / HI spot halogen lamps (max 350W)
- Selected dimmable LEDs (see www.lightwaverf.com)

Not compatible with:

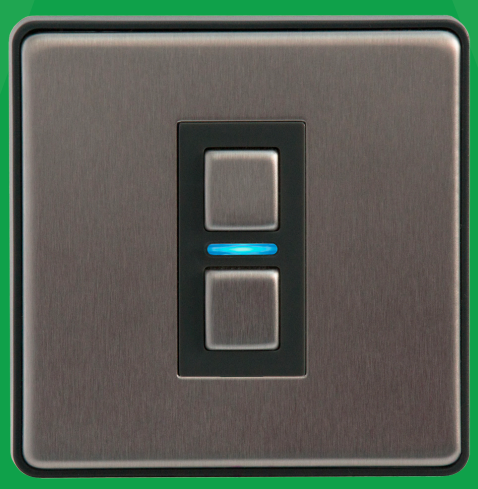
- Wirewound transformers (generally older style)
- Electric motors
- CFLs and CFL tubes
- Incandescent lamps under 10W

Automations

Using the Link Plus and Lightwave App, you can create custom automations for Lightwave devices. Automations provide a whole host of clever features, including timers, group actions, triggers and wireless 2-way switching. Find out more by exploring the Lightwave App.

Lightwave

www.lightwaverf.com



Environmentally friendly disposal

Old electrical appliances must not be disposed of together with residual waste, but have to be disposed of separately. The disposal at the communal collecting point via private persons is for free. The owner of old appliances is responsible to bring the appliances to these collecting points or to similar collection points. With this little personal effort, you contribute to recycle valuable raw materials and the treatment of toxic substances.

EU Declaration of Conformity

Product: Single Channel Dimmer
Model/Type: L21
Manufacturer: LightwaveRF

Address: Innovation Campus Birmingham, Faraday Wharf, Holt Street, Birmingham, B7 4BB

This declaration is issued under the sole responsibility of the LighwaveRF. The object of the declaration described above is in conformity with the relevant union harmonisation legislation.

Directive 2011/65/EU ROHS, Directive 2014/53/EU: (The Radio Equipment Directive)

Conformity is shown by compliance with the applicable requirements of the following documents:

Reference and date:
EN301489-3 V1.6.1: (EMC), EN300220-2 V3.1.1 (RF), EN62479:2010 (RF Exposure), EN60669-2-5:2013 (Safety)

Signed for and on behalf of:
Place of Issue: Birmingham
Date of Issue: 20th August 2017
Name: John Shermer
Position: CTO

1 Install the Dimmer

The easiest way to learn how to install the Lightwave Dimmer is to watch our short installation video which is accessible at

www.lightwaverf.com/product-manuals

Carefully follow the instructions in this section in order to install the dimmer. Please remember that live electricity is dangerous. Do not take any risks. If in any doubt, consult a qualified professional. For other advice, please contact our dedicated technical support team on 0121 250 3625.

1.1 Turn off the mains electricity supply

Turn off the mains power supply to your existing lighting circuit at the consumer unit.

1.2 Remove the existing switch

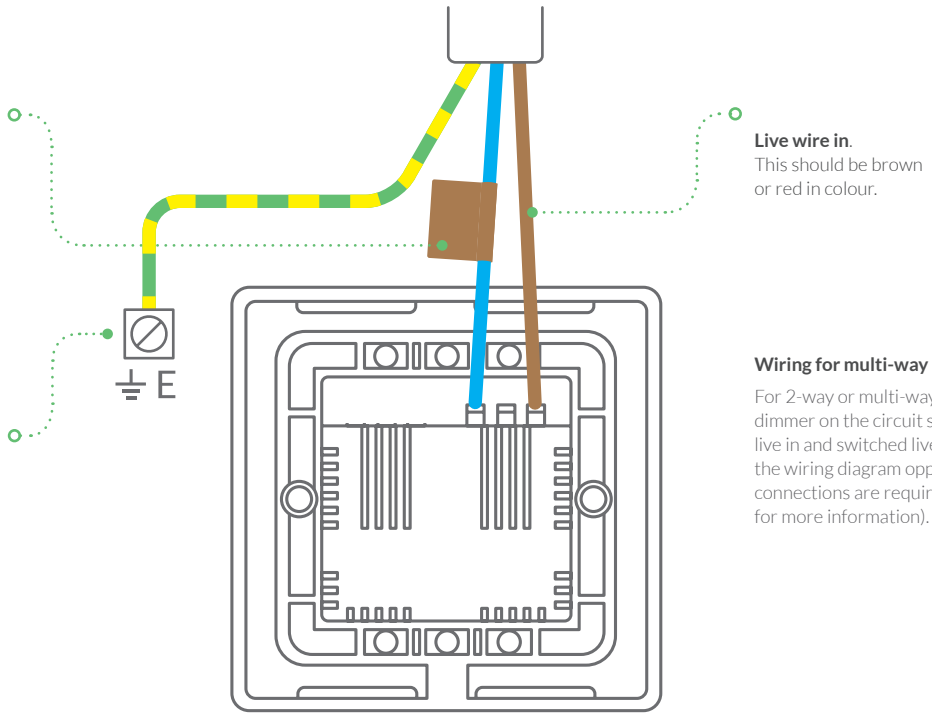
Unscrew the existing light-switch and remove the wires. It is often a good idea to take a quick photo of the existing wiring configuration. This can help you to remember which wires connect to which terminals if there are more than two, or if they are not distinctly labelled. The existing wiring should be colour coded and arranged as per the wiring diagram provided in these instructions, however, please be aware that not all existing wiring will conform to this standard and may differ.

1.3 Remove the faceplate

Remove the faceplate from the Lightwave Dimmer by carefully inserting a screwdriver into the small slot located at the bottom edge of the cover.

1.4 Wire the dimmer

Carefully wire the dimmer as shown in the diagram. Be aware that existing cables can vary in colour and may not always be correctly labelled. If in any doubt, always consult a qualified electrician. Replace the faceplate by hooking it onto the top edge of the Dimmer and clipping in the bottom. Check the wiring and load; remember not to exceed the 350W incandescent load and to only use recommended dimmable LED lamps.



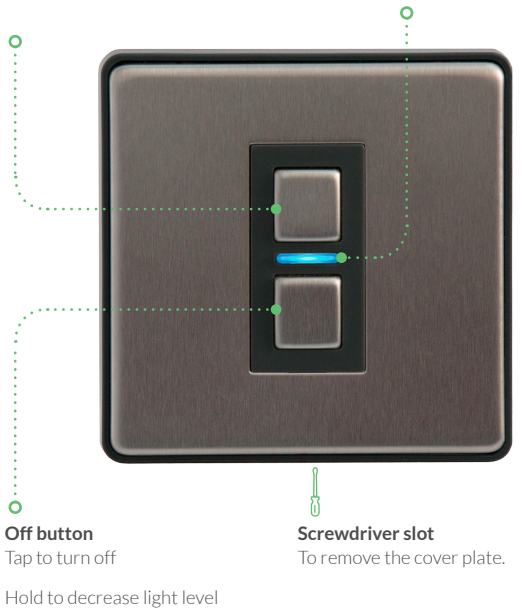
Switched live wire out. This should be blue or black in colour. It may be marked by brown/red tape to emphasise that it is not a neutral wire.

Earth wire this should also be connected to earth terminal in the back box if one exists (important when using metal back boxes).

Live wire in. This should be brown or red in colour.

Wiring for multi-way switching

For 2-way or multi-way switching each dimmer on the circuit simply requires a live in and switched live wire out as per the wiring diagram opposite. No other connections are required (see section 3 for more information).



On button
Tap to turn on
Hold to raise light level
Double tap to go to full brightness

LED
Indicator light

Off button
Tap to turn off
Hold to decrease light level

Screwdriver slot
To remove the cover plate.

2 Calibration

Once the dimmer has been installed, lamps added to the circuit and the power switched on, it will enter calibration mode. This mode calculates the appropriate settings and dimming range to maximise compatibility with the lamps being used on the circuit.

Automatic calibration

If the dimmer has not previously been calibrated, it will automatically calibrate itself to the lamps detected on the circuit after 5 seconds. If the dimmer has been calibrated previously, these settings will be restored unless the on button is pressed within 5 seconds to overwrite them with a new calibration (recommended if lamps are changed). Auto calibration is denoted by flashing green LEDs.

Manual calibration (use in the event of persistent lamp flicker or instability)

Pressing the off button within 5 seconds of introducing power to the Dimmer will initiate manual calibration. This is initially denoted by flashing green and red LEDs. Pressing the on and off buttons now will extend or shorten the lower dimming limit. Pressing both buttons together will save the setting. Next, flashing green and blue LEDs denote that pressing the on and off buttons will now alter the upper limit. Press both buttons to save this setting.

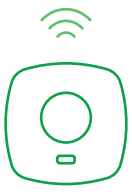
3 Link the Dimmer

To be able to command the Dimmer, you will need to link it to the Link Plus.

Please follow the in-app instructions which will explain how to link devices.

On the Socket, press and hold down 'on' / 'off' button until the LED flashes blue and red alternately then release it. The Dimmer is now in linking mode.

Hold



Using the Lightwave App, press the button you want to link to (the App instructions will guide you through this). The blue light on the Dimmer switch will flash to confirm that it is now linked to the App.

4 Other Dimmer functions

Unlinking the Dimmer

To unlink the Dimmer and clear the memory, enter linking mode by holding down both on/off buttons until the LED flashes red. Release the buttons, then hold the off button until the LED flashes rapidly to confirm that the memory has been cleared. On clearing the memory, automatic calibration will be initiated.

Locking the Dimmer

The Dimmer can be 'locked' using the App so that the manual buttons will not operate it. If it is locked on, then the Dimmer will not turn off manually. A locked dimmer is signified by a slow flashing magenta LED. To lock / unlock the Dimmer, press the 'lock' button on the Smartphone App. Clearing the memory will remove the lock.

Changing the colour of the indicator LED

The colour of the LED indicator lights on the Dimmer can be changed or the LED turned off using the Lightwave App. See the App for more details.

Multi-way switching

Lightwave Dimmers perform 2-way or multi-way switching wirelessly. This means that they can be wired into a circuit using only a live in and switched live out, and communication between them is carried out via wireless RF frequency. Dimmers can be linked to perform multi-way switching using the 'group' automation feature on the Lightwave App (see the App for more details).

Firmware updates

Firmware updates are over the air software improvements that keep your device up to date as well as providing new features. Updates can be approved from the App before being implemented, and generally take 2-5 minutes. The LED will flash cyan in colour during an update. Please do not interrupt the process during this time.

Error reporting

A permanently flashing red LED indicates that a software or hardware error has been encountered. Press the on/off button to reset the indicator LED. If the error light persists, please contact Lightwave support via www.lightwaverf.com/support.

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For advice, troubleshooting and technical support, please see www.lightwaverf.com/support