Smart Switch (L92)

∧∨ Lightwave

Installation

If you plan to install this product yourself, please follow the electrical wiring instructions carefully to ensure the product is installed safely, if in any doubt please consult a qualified electrician.

It is important to install this product in accordance with these instructions. Failure to do so may risk personal safety, create a fire hazard, violate the law and will also void your warranty. LightwaveRF Technology Ltd will not be held responsible for any loss or damage resulting from not correctly following the instruction manual.

IMPORTANT: Any electrical installation must comply with Building Regulations, BS 7671 (IET Wiring Regulations) or local equivalent.

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

IMPORTANT: High-Power inductive loads can potentially damage the device and are not recommended.

You will need

A safe place in which to situate the Switch

Suitable electrical screwdrivers

Knowledge of how to safely turn off/on mains electricity

Your Link Plus and smartphone

Applications

The Smart Switch is designed to switch a load of up to 3680W (max) manually at the switch or remotely using the Lightwave App.

The Switch has a built-in temperature sensor. This allows it to operate automatically based on changes in local temperature and ideal for use as a room thermostat operating electric (panel) heaters. It can also be used to remotely operate a gas boiler and AC units.
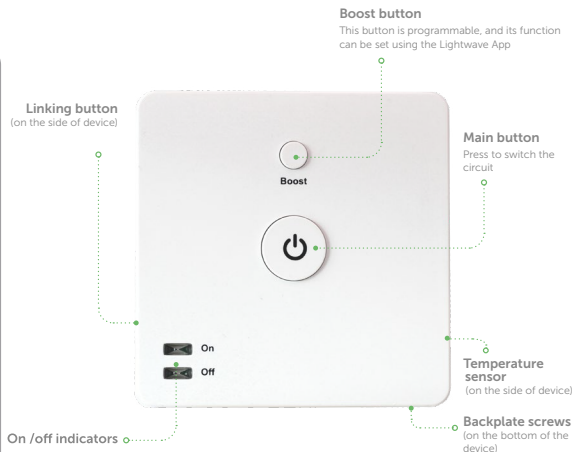
Loading

The max load should not exceed 3680W (16A).

Location

The Smart Switch is a Class II device that does not require a separate housing. It should only be installed and used indoors.

If the Smart Switch is to be utilised as a thermostat, for optimum temperature monitoring the Internal Temperature Sensor (located behind the grille on the right side of the Switch) should not be positioned adjacent to a direct heat source.

If the Switch is used to control a panel heater, it should ideally be positioned either below or adjacent to the bottom corner of the panel heater at a distance greater than 150mm (6"). Where it is not possible to isolate the Switch from direct heat sources, it can be operated in conjunction with a separate thermostat.

Boost button
This button is programmable, and its function can be set using the Lightwave App

Linking button
(on the side of device)

Boost

Main button
Press to switch the circuit

On
Off

Temperature sensor
(on the side of device)

On /off indicators

Backplate screws
(on the bottom of the device)

Specification

RF frequency:	Output rating:	Situation:
868 MHz	3680W (16A)	Indoor use only
Input rating:	**Standby energy use:**	**Warranty:**
230V~ 50Hz	Less than 1W	2 year standard warranty
Terminals:	**Switching:**	
Max 2.5mm² wires	3680W (16A) or Volts free contacts	

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.

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.

2 Installing the Smart Switch & Linking

Carefully follow the instructions in this section in order to install the Smart Switch. Please remember that mains electricity is dangerous. Do not take any risks. For other advice, please contact our dedicated technical support team at www.lightwaverf.com.

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

www.lightwaverf.com/product-manuals

2.1 Turn off the electricity supply

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

2.2 Remove the Backplate and clamp

Remove the backplate by un-tightening the screws located at the bottom edge of the cover and carefully unhooking from the main unit.

2.3 Wire the Switch

Carefully wire the Socket as shown in the diagrams. 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.

2.4 Replace the Clamp and backplate

Screw in the cable clamp to secure the cables, and replace the backplate by hooking it onto the top edge of the Switch and clipping in the bottom. Tighten the screws at the bottom to secure the plate.

Linking

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

Using the Lightwave App, select 'add device', and follow the in-app instructions.

On the Switch, press and hold down the link button until the LEDs flash blue & red alternately then release it. The Switch is now in linking mode.
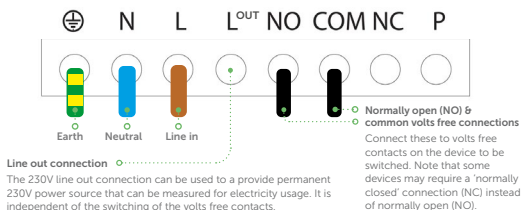
The LED indicators on the Switch will flash blue to confirm that it is linked.

Unlinking the Switch (clear memory)

To unlink the Switch, enter linking mode by holding down the linking button until the LEDs flash blue & red. Release the button, then hold it for a second time until the LEDs flash red quickly to confirm that the memory has been cleared.
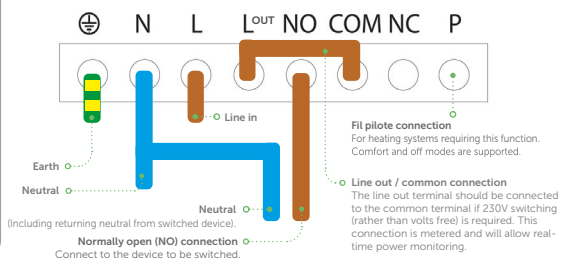
Circuit diagram 1: switching a volts free circuit or combi boiler

Using this wiring configuration will allow the Smart Switch to operate volts free contacts on a device such as gas boilers, AC and ventilation units.

Earth   Neutral   Line in

Line out connection
The 230V line out connection can be used to a provide permanent 230V power source that can be measured for electricity usage. It is independent of the switching of the volts free contacts.

Normally open (NO) & common volts free connections
Connect these to volts free contacts on the device to be switched. Note that some devices may require a 'normally closed' connection (NC) instead of normally open (NO).

Circuit diagram 2: switching a load in-line

This wiring configuration connects the Smart Switch in-line in order to control a single circuit of up to 3680W. In this configuration electricity usage of the device connected will also be measured.

Earth
Neutral
(Including returning neutral from switched device).

Line in

Normally open (NO) connection
Connect to the device to be switched.

Neutral

Fil pilote connection
For heating systems requiring this function. Comfort and off modes are supported.

Line out / common connection
The line out terminal should be connected to the common terminal if 230V switching (rather than volts free) is required. This connection is metered and will allow real-time power monitoring.

3 Linking the Smart Switch & other functions

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

Permanently slow flashing red LEDs indicate that a software or hardware error has been encountered. Press the main button to reset the device. If the error lights persist, please contact Lightwave support via www.lightwaverf.com/support.

Energy Monitoring

Similar to Lightwave Smart Sockets, the Smart Switch can monitor the energy usage of electrical devices that are connected to each independent circuit. The data for each circuit is then displayed in the Lightwave App.

Locking the Relay

The Smart Switch can be 'locked' using the App so that the manual buttons will not operate any of the circuits. A locked switch is signified by a slow flashing magenta LED. To lock / unlock the Switch, press the 'lock' button on the Smartphone App. Clearing the memory will remove the lock.

LED indicator light summary

Off LED (only) red:
Circuit off

On LED (only) blue:
In manual mode circuit is on, in controller mode the controller is active

On LED (only) pulsating blue:
In controller mode circuit is active

On & off LED flashing magenta:
device is locked

On & off LED flashing blue & red:
device in linking mode

On & off LED flashing red:
memory full

On & Off LED slow flashing red:
Error

On & Off LED flashing cyan:
firmware update in progress (do not interrupt)

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