



Resene SmartTouch S1

Touch-Activated electronic lightswitch

Installation Data Sheet

Installation and maintenance is only to be performed by a suitably qualified installer, in-accordance with the appropriate local wiring and safety regulations.

The Resene SmartTouch S1 controller allows control of mains powered lighting directly from a surface coated with Resene SmartTouch conductive coating (the Resene SmartTouch Active Area). Decorative layers, such as paint or wallpaper, are applied over the Resene SmartTouch Active Area, providing an invisible touch-responsive surface. Different Touch Commands are able to control different functions. The system is comprised of Resene SmartTouch conductive coating, Resene SmartTouch S1 controller, and the Resene SmartTouch Smartlink cable.

SPECIFICATIONS

Input Voltage:	240 VAC
Frequency:	50 Hz
Standby Power Consumption:	1.1 W
Number of channels	2
Rated load current (Resistive)	8 AX per channel
Rated load current (Fluorescent)	8 AX per channel
Rated load (LED)	500 W per channel
Minimum Load	5 mA
Switching Element:	Micro gap (μ) relay
Operating Temperature:	0°C to +35°C
Dimensions:	75 (H) x 54 (W) x 26 (D) mm
Terminal Wire Area:	1.0 to 2.5 mm ²
Wireless Protocol:	Bluetooth Low Energy (BLE)
Wireless Range:	10-20 m (indoor)
Device Control:	Touch command, switch, BLE, Timer (1 min to 4 hours)
Complies with:	RoHS, AS/NZS 3100, AS/NZS 60669.2.1 (electrical and EMC), FCC Part 15.247 (EMC), AS/NZS 4268:2017 (EMC)

Resene SmartTouch conductive coating and Smartlink APPLICATION

Consult the Resene SmartTouch conductive coating data sheet for coating application instructions and connection of Smartlink to the conductive coating. The Smartlink cable is supplied 400 mm in length which is suitable for many installations. This can be extended using TPS cable compliant to AS/NZS 5000.2. Ensure any joints are secure and insulated to maintain reinforced insulation requirements. It is recommended that any extensions are less than 5 m.

Application of supplied insulation mastic over the Smartlink connector (coating must be dry) and wrapped around into at least 10 mm of the flush box or around on to the reverse face of the wall lining is recommended to increase strength of the interface.

If the Smartlink connector has not already been installed, follow instructions in the Resene SmartTouch conductive coating data sheet. Setup may be carried out while the connection paint is wet, however, the Resene SmartTouch Active Area must be dry. Information is also available at www.resene.co.nz/smarttouch.

CLEARANCES/CREEPAGE DISTANCES

As Resene SmartTouch conductive coating is a conductive surface, minimum clearances and creepage distances must be maintained during installation.

Distances between screws/fastenings forming part of an electrical installation (or parts that may potentially become live in fault conditions) and the Resene SmartTouch conductive coating and/or the Smartlink connector pad must be a minimum of 6mm. Ensure that no Resene SmartTouch conductive coating is applied in areas that will be locations for lights and other electrical devices as this may interfere with operation or be a safety risk.

Resene SmartTouch S1 INSTALLATION

Installation and maintenance is only to be performed by a suitably qualified installer, in-accordance with the appropriate local wiring and safety regulations.

A short video overview of the electrical installation is available at www.resene.co.nz/smarttouch.

The Resene SmartTouch S1 controller must be installed in an open-back flush box or secured to framing using

the screw-mounting holes. Only install in interior dry spaces. Supplementary enclosures may be required for installations where controllers will be installed outside of a flush box. RCDs are required to be used on all circuits in close proximity to areas coated with Resene SmartTouch conductive coating. These circuits should be identified in the switchboard and should include a description of the conductive coating location. Each controller supports two Active Areas.

SENSOR INPUTS

The Resene SmartTouch S1 controller has four sensor inputs – two for connection to the Active Area and two for sensing the energised state of a load (for two-way switching).

Inputs W1 and W2 sense user Touch Commands on the conductive coating Resene SmartTouch Active Area(s). When two Resene SmartTouch Active Areas are connected, input W1 switches across L1/L2 and W2 switches across L3/L4 as the default configuration. This can be changed using the Installation App.

Inputs S1 and S2 provide two-way/multi-way functionality by sensing the state of other switches (if present) connected to the load and toggling the onboard relays when energised. Only use S1 and S2 when two-way switching is required. Typically a two-way strap wire will be used as the input for S1/S2. S1 is the sensor for switching across L1/L2 and S2 is the sensor for switching across L3/L4. Momentary or latching switches are compatible with inputs S1 and S2. See wiring diagrams SLEX and DLEX for details.

SETUP AND CONFIGURATION

Configuration requires the Resene SmartTouch Installation App, available for iOS and android systems. Windows 10 PC compatible software is available on request (contact Resene – requires purchase of a separate Bluetooth dongle). Tuning the device after connection to an Active Surface may be required for correct operation. Various tuning parameters are available; these are described in the Installation App instructions.

Various configurations and controller settings are possible. Options include control of one or two loads from one or two active surfaces, two-way switching, two-way active surfaces, alternative Touch Commands, timer (1 min to 4 hours) for switch-off of both controlled

loads, and control of remote devices with wireless network connections. The controller automatically selects one of two default modes depending on the number of connected active surfaces. The default mode can be changed by disabling one of the onboard relays with the Installation App. See the SmartTouch S1 Configuration Table for details of the default operation modes.

Use the installation app for wireless connection of controllers. Select the controller which will receive Touch Commands and open the mapping window. Add a new Touch Command which will control lights connected to other controllers then set the relays on other nearby controllers to the desired configuration. Note – default Touch Commands will be overridden once an entry is made in the mapping window and all required Touch Commands must be set manually.

Refer to the Resene SmartTouch Controller Setup sheet for full details on tuning and configuring the controller (must be powered).

Resene SmartTouch S1 Configuration Table

Active Surface Inputs	Loads	Active Relay(s)	Configuration	Result
1	1	L1/L2 OR L3/L4	Disable unused relay (recommended)	Single-gang switch operation
	2	L1/L2 AND L3/L4	DEFAULT. No configuration required	Double-gang switch operation - all commands available
2	1	L1/L2 OR L3/L4	Disable unused relay.	Single-gang switch operation from either Active Area (two-way mode equivalent to two-way switch)

	2	L1/L2 AND L3/L4	DEFAULT. No configuration required	Single-gang switch operation from independent Active Areas
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USER OPERATION

The Resene SmartTouch S1 controller is pre-programmed to recognise three default Touch Commands (see the Resene SmartTouch S1 Default Touch Command Recognition Table below). These commands have been selected to combine ease of use and avoidance of false triggers. Alternative commands are available and may be selected during device installation with the Installation App. Use of a Single-Tap Touch Command is not recommended for general use since unintended touches will trigger switching. For very small areas, or locations that are unlikely to be accidentally touched, the use of Single-Tap may be appropriate.

Touch Command options depend on the number of Active Surfaces connected to the controller and the controller configuration, as described in the Resene SmartTouch S1 Configuration Table.

Resene SmartTouch S1 Default Touch Command Recognition

Active Surfaces	Touch Command	Response
1	Double-Tap	Load 1 toggle
	Triple-Tap	Load 2 toggle (if present)
	Tap and Press*	Toggle All**
2 (independent)	Double-Tap	Load 1 (surface 1) or Load 2 (surface 2) toggle
	Tap and Press*	Toggle All**
2 (two-way mode)	Double-Tap	Load 1 toggle
	Tap and Press*	Toggle All**

*Single Tap, remove hand then gently press the surface until lights are activated.

**If all controlled lights are on or off this touch command will toggle them all on/off. If fewer than the maximum number of controlled lights are on, this touch command will switch them off. Where a single load is connected this command toggles the load.

The Resene SmartTouch S1 controller will respond to Touch Commands with intervals between individual touches ranging from approximately 150 to 1000 milliseconds. Larger contact areas produce larger signals; it is recommended that the pads of several

fingers are used to enter Touch Commands during installation testing. A smaller contact area can be used on smaller active surfaces. A short delay before switching will occur after a Touch Command is entered. This is normal and is due to the system waiting for other touches which may be part of a longer Touch Command and for internal signal verification processing.

CAUTIONS AND WARNINGS

This manual must be read and understood before the device is installed. Failure to follow the recommendations in this installation sheet may be dangerous.

- **Installation and maintenance is only to be performed by a suitably qualified installer, in accordance with the appropriate local wiring and safety regulations.**
- **All circuits in close proximity to areas coated with Resene SmartTouch conductive coating must be protected by RCDs when installing this system.**
- **The location of conductive coating(s) should be made at the switchboard indicating the relevant RCD(s) with circuits in proximity to conductive coatings and/or containing S1 controllers.**
- Only for control of lighting loads. Do not use this product for any other purpose.
- Only for installation in New Zealand or Australia.
- The surface of the controller may feel warm during operation. This is normal and poses no hazard.
- National regulation and wiring rules must be followed.
- Connect the device only in accordance with the wiring diagrams on this instruction sheet. Improper connections may be dangerous.
- Each individual connected circuit must be protected by a 10 A fuse or circuit breaker.
- Do not connect loads exceeding the values specified.
- Dangerous voltages may be present at the terminals even when the controller is in the off-state. Mains power must be isolated before working on the controller or load. This can be achieved by disconnecting the fuse/circuit breaker.
- More than one supply may need to be disconnected before isolation is achieved as the device can have multiple supplies.
- The device may only be installed inside and in dry spaces.
- Install only in switch boxes/flush boxes which comply with the relevant national standards.

- The device should be installed in a 3-wire system - the device has inputs for a functional earth which is not required in typical installations.

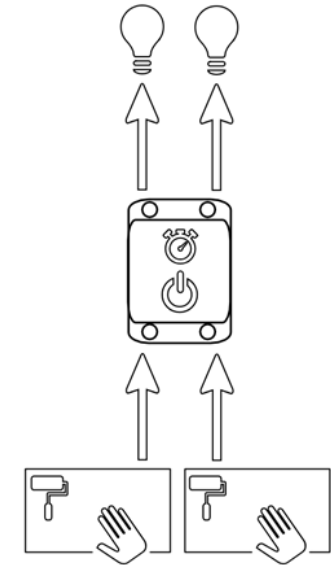
PRODUCT WARRANTY

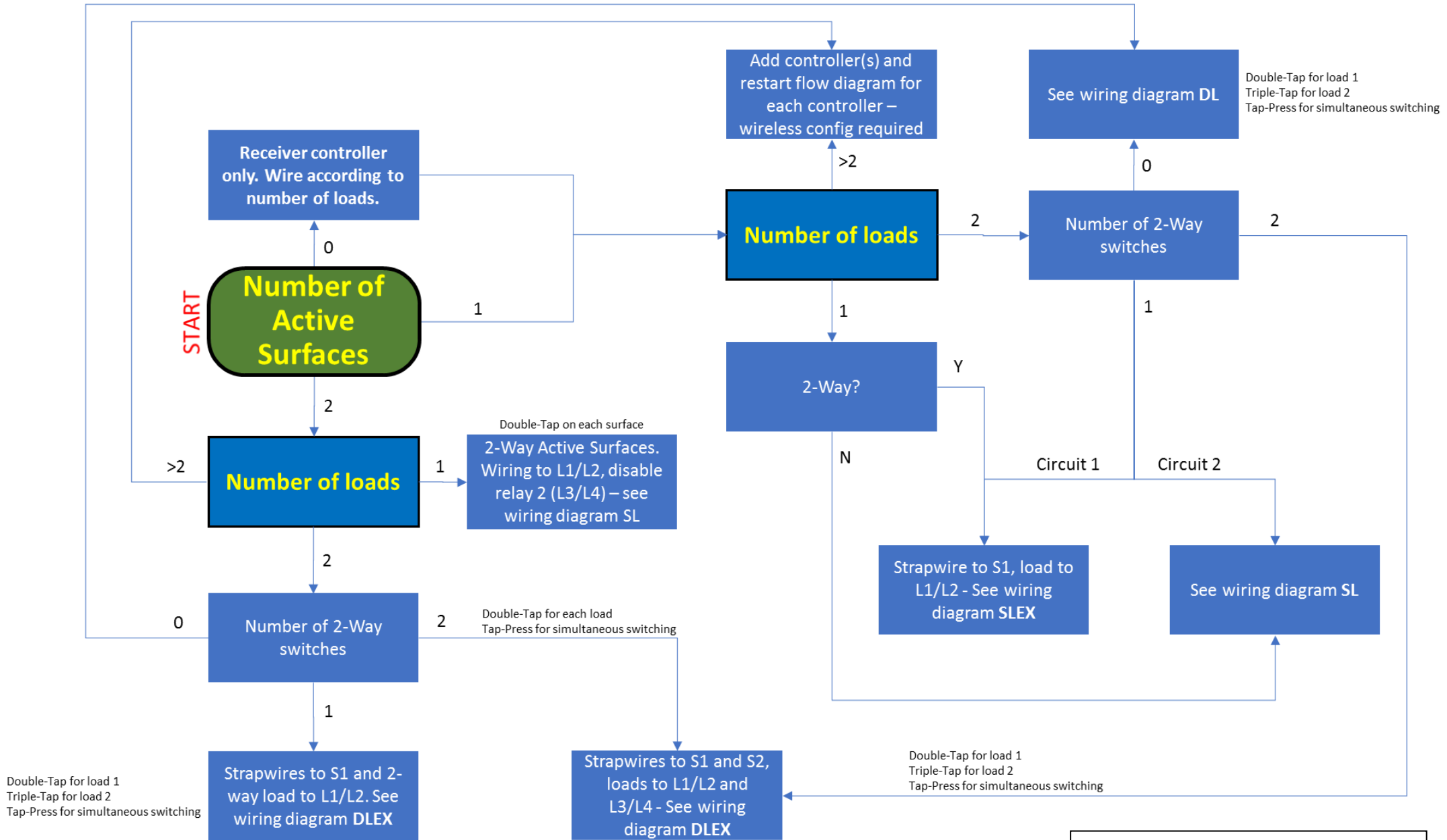
The Resene SmartTouch S1 controller has a 12 month warranty from the date of purchase providing the unit is installed according to these instructions, local wiring regulations, and Codes of Practice. This warranty is void on any unit which has been tampered with, damaged by accident, improperly operated or incorrectly installed. This guarantee is in addition to, and does not in any way affect the rights under the Consumer Guarantees Act 1993, if the Act applies to the supply of this product and you are not acquiring the product for a business use. If the Act applies and any term is inconsistent with the terms or requirements of the Act, that term shall be invalid without affecting the remaining terms of the warranty.

Note: Under the CGA 1993, Resene Paints Ltd advises that this product does not contain user serviceable components, thus, spare parts and repair facilities are not available. In the event of a warranty claim, the product must be returned to the point of purchase or direct to Australia/New Zealand distributors together with the proof of purchase.

CONTACT

Resene Paints Ltd
 Email: advice@resene.co.nz
 0800 RESENE (737 363)
www.resene.co.nz





SL = Single Load wiring diagram
DL = Dual Load wiring diagram
SLEX = Single Load with external 2-way switch wiring diagram
DLEX = Dual Load with external 2-way switch wiring diagram

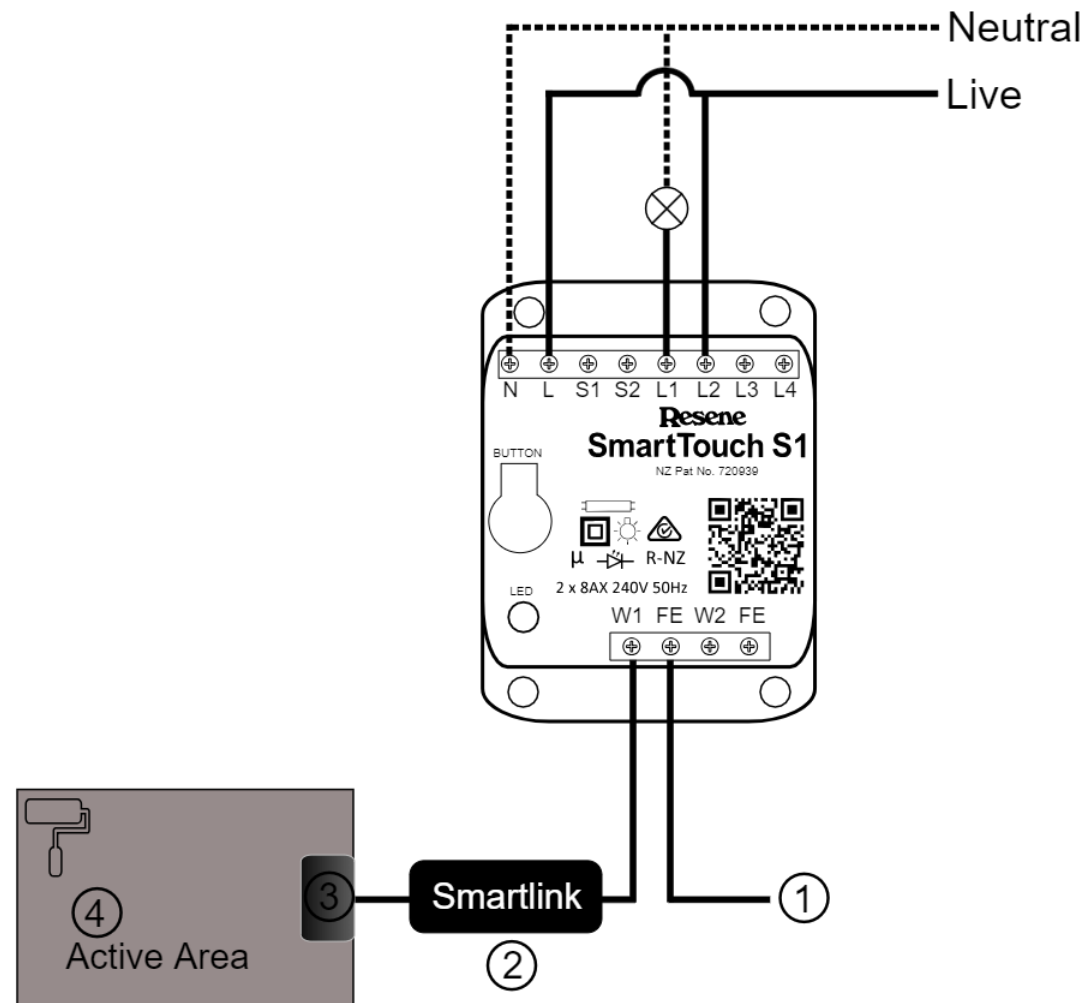
WIRING DIAGRAMS

1. Switch off all mains supplies.
2. Wire the device as per the wiring diagram for the appropriate configuration.
3. Secure the device e.g. cable tie in flush box, screw into timber framing.
4. Switch on the mains supplies.

Input W1 (shown) or W2 controls switching across terminals L1/L2 or L3/L4 respectively. A single load can be controlled from two separate Active Areas by connecting each surface to a separate input (W1 and W2) with Smartlink cables. In this configuration connect the load to either L1/L2 or L3/L4 and disable the other relay circuit using the Installation App. Each active surface functions as a 2-way switch in this mode.

When earthed, only one earth connector is required per device. Typically better S/N is achieved without earthing.

- ① Optional functional earth – typically not required.
- ② Supplied Smartlink interface cable with Smartlink connector pad ③.
- ④ Resene SmartTouch conductive coating (Active Surface). See the Resene SmartTouch conductive coating Technical Data Sheet.



Single Load Wiring Diagram

SL

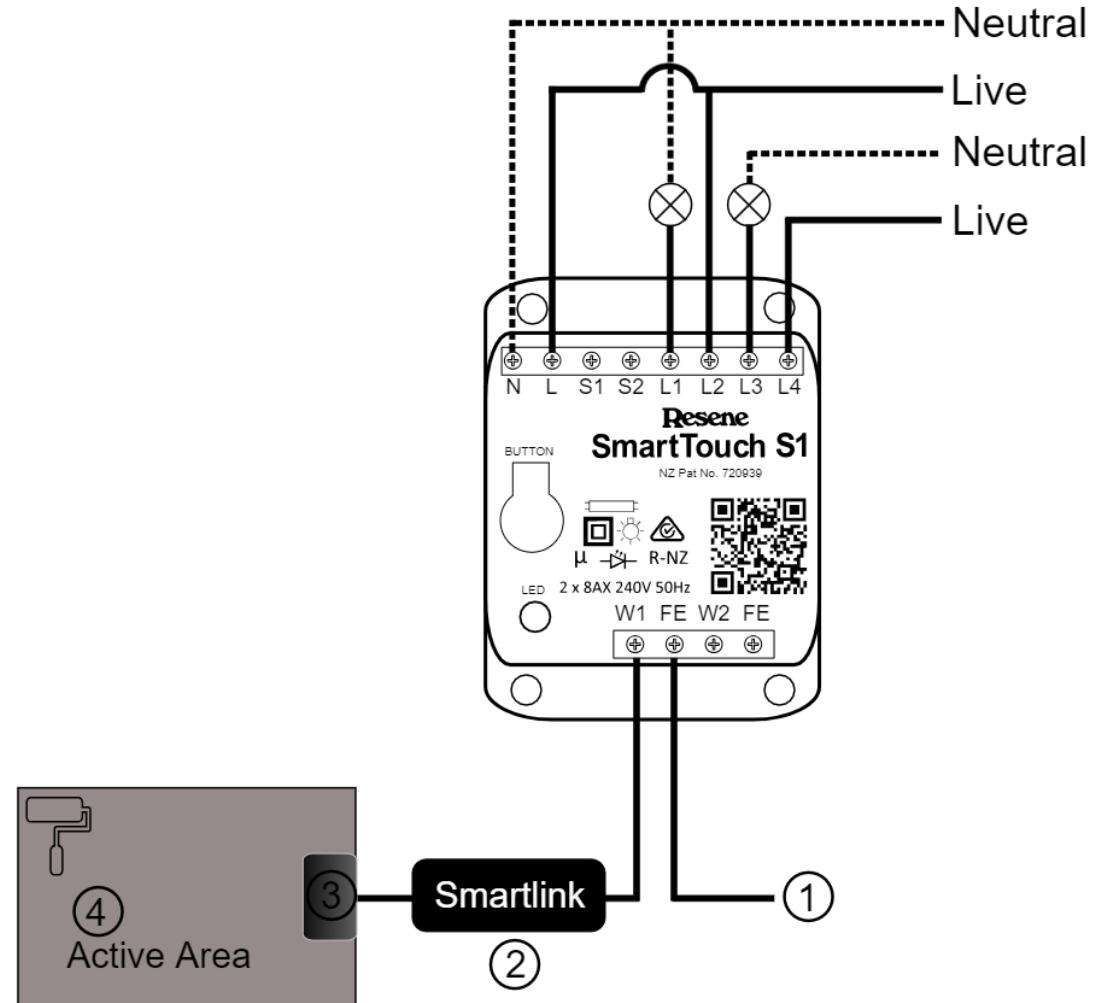
1. Switch off all mains supplies.
2. Wire the device as per the wiring diagram for the appropriate configuration.
3. Secure the device e.g. cable tie in flush box, screw into timber framing.
4. Switch on the mains supplies.

Input W1 (shown) or W2 controls switching across terminals L1/L2 AND L3/L4.

Connecting a second Smartlink cable to W2 results in the Active Surface connected to W1 switching load L1/L2 and the Active Surface connected to W2 switching load L3/L4.

When earthed, only one earth connector is required per device. Typically better S/N is achieved without earthing.

- ① Optional functional earth – typically not required.
- ② Supplied Smartlink interface cable with Smartlink connector pad ③.
- ④ Resene SmartTouch conductive coating (Active Surface). See the Resene SmartTouch conductive coating Technical Data Sheet.



Dual Load Wiring Diagram **DL**

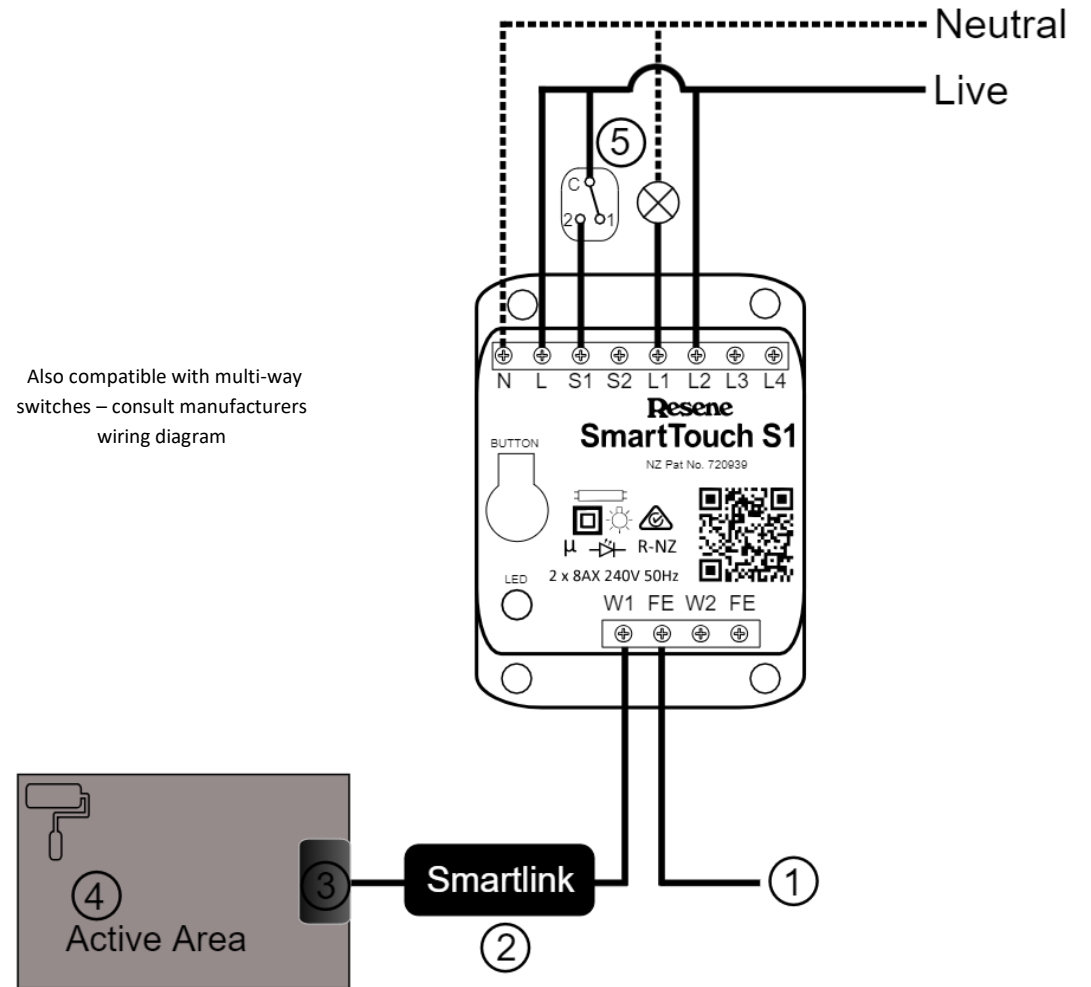
1. Switch off all mains supplies.
2. Wire the device as per the wiring diagram for the appropriate configuration.
3. Secure the device e.g. cable tie in flush box, screw into timber framing.
4. Switch on the mains supplies.

Input W1 (shown) or W2 controls switching across terminals L1/L2 or L3/L4 respectively. A single load can be controlled from two separate Active Areas by connecting each surface to a separate input (W1 and W2) with Smartlink cables. In this configuration, connect the load to either L1/L2 or L3/L4 and disable the other relay circuit using the Installation App. Each active surface functions as a 2-way switch in this mode.

Connect the external switch to sensor S1 (shown, connect to S2 if using W2 input) for two-way switching functionality.

When earthed, only one earth connector is required per device. Typically better S/N is achieved without earthing.

- ① Optional functional earth – typically not required.
- ② Supplied Smartlink interface cable with Smartlink connector pad ③.
- ④ Resene SmartTouch conductive coating (Active Surface). See the Resene SmartTouch conductive coating Technical Data Sheet.



Also compatible with multi-way switches – consult manufacturers wiring diagram

Single Load Wiring Diagram with external 2-way switch function

SLEX

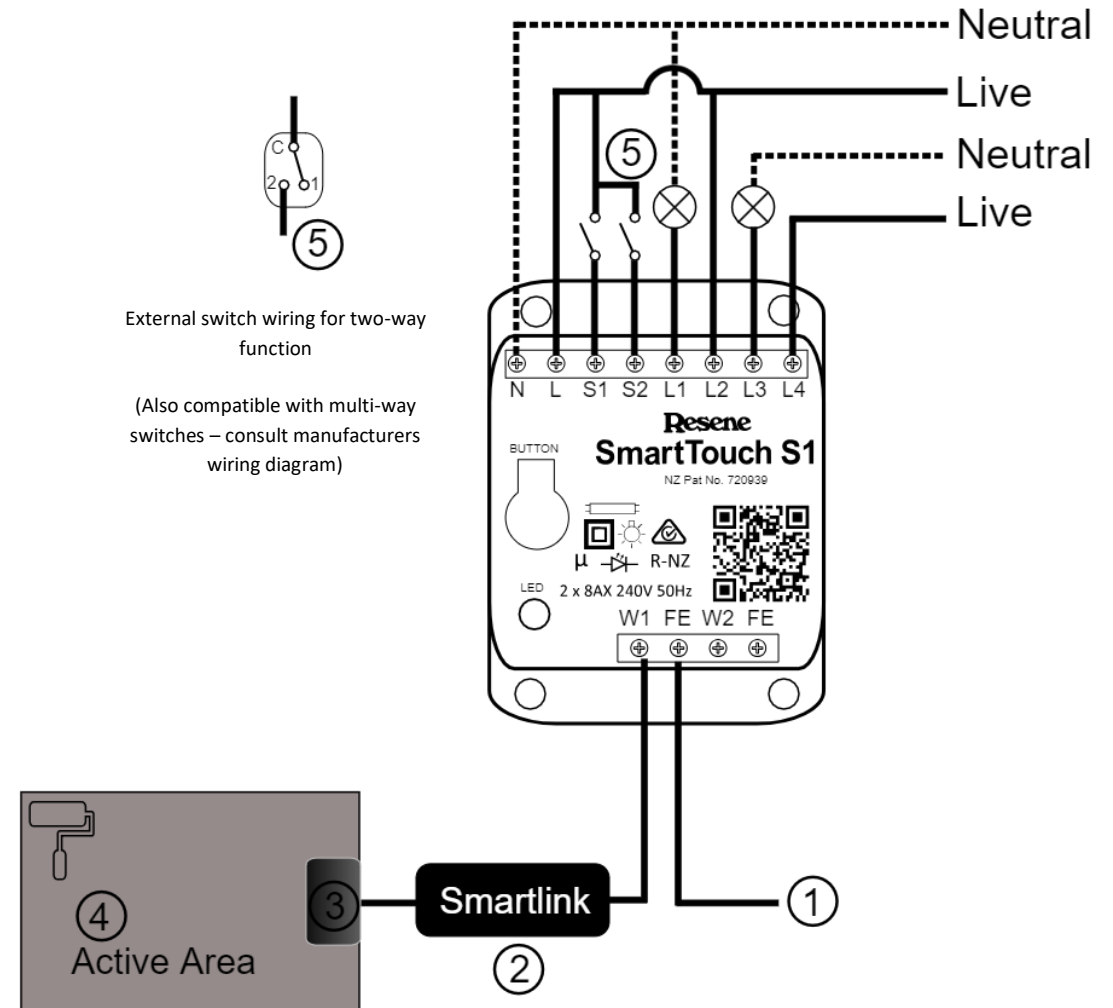
1. Switch off all mains supplies.
2. Wire the device as per the wiring diagram for the appropriate configuration.
3. Secure the device e.g. cable tie in flush box, screw into timber framing.
4. Switch on the mains supplies.

Input W1 (shown) OR W2 controls switching across terminals L1/L2 AND L3/L4.

Connecting a second Smartlink cable to W2 results in the Active Surface connected to W1 switching load L1/L2 and the Active Surface connected to W2 switching load L3/L4.

When earthed, only one earth connector is required per device. Typically better S/N is achieved without earthing.

- ① Optional functional earth – typically not required.
- ② Supplied Smartlink interface cable with Smartlink connector pad ③.
- ④ Resene SmartTouch conductive coating (Active Surface). See the Resene SmartTouch conductive coating Technical Data Sheet.



**Dual Load Wiring Diagram
with 2-way switch function**

DLEX