



SmartTouch S1

Touch-Activated Electronic Light Switch

- 1  Follow the installation instructions
- 2  Configure the system

Prerequisites

- Smartlink cable securely attached to conductive coating

Product Information

More detailed product information for the SmartTouch S1 controller and SmartTouch conductive coating is available on the Resene Conductive Coatings website.



- Overview of the SmartTouch system
- Installation overview videos
- SmartTouch S1 Datasheet
- Configuring system behaviour
- Troubleshooting guide

Safety



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 channel 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.

The SmartTouch System

The Resene SmartTouch S1 controller allows control of mains powered lighting directly from a surface coated with Resene SmartTouch conductive coating (the Active Area). Decorative layers, such as paint or wallpaper, are applied over the 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.

- Works 'out of the box' with default Touch Commands
- Two 'Active Areas' supported
- 2-way/multiway compatible with external switches
- 2-way function from both Active Areas
- Timer function
- Wireless remote-control functions
- Configure with Android/iOS app

Specifications

Input Voltage:	240 VAC
Frequency:	50 Hz
Standby Power Consumption:	1.1 W
Number of channels	2
Rated load current (Resistive)	10 A max (combined channels). 8 A max per individual channel.
Rated load current (Fluorescent)	10 A max (combined channels). 8 A max per individual channel.)
Rated load (LED)	100 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)

SmartTouch conductive coating application and Smartlink connection

Consult the Resene SmartTouch conductive coating datasheet 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 datasheet. Setup may be carried out while the connection paint is wet, however, the Active Area must be dry. Information is also available at www.reseneconductivecoatings.co.nz.

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 SmartTouch conductive coating and/or the Smartlink connector pad must be a minimum of 6 mm. Ensure that no 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.

Installation

Installation and maintenance is only to be performed by a suitably qualified installer, in accordance with the appropriate local wiring and safety regulations. **Note - not suitable for use with steel frame construction.**

Sensor Inputs



W1/W2	Inputs for Active Areas coated with Resene SmartTouch conductive coating
S1/S2	Inputs for two-way switching (sensing energised state of external switch)
FE	Functional earth. Not required when installing according to wiring diagrams

See the Configuration Table for details on operation modes based on number of Active Surface inputs. Default operation can be changed using the installation app.

SmartTouch S1 Configuration Table

Active Surface Inputs	Loads	Active Relay(s)	Configuration	Result
1	1	L1/L2 OR L3/L4	Disable unused relay using the app (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 using the app.	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

Setup and Configuration



Download the SmartTouch Installation App, available for iOS and Android systems. Follow the setup guide included with the app or consult the Resene Conductive Coatings website for the setup guide.

Set a password as minimum setup. Configuration is required for larger Active Areas, changing default operation modes, and accessing additional features and functions.

User operation

Default operation has three Touch Commands.

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.

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.

Wiring



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

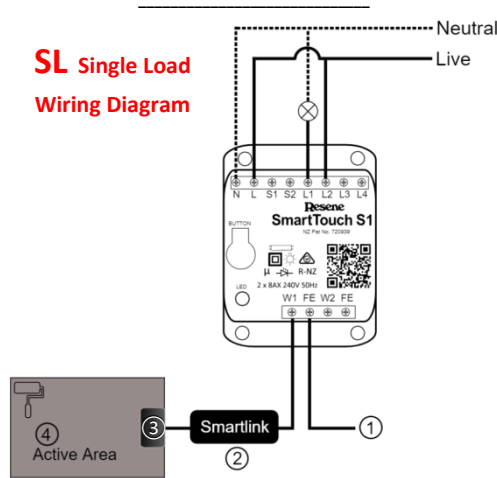
① Optional functional earth – typically not required.

② Supplied Smartlink interface cable with Smartlink connector pad ③.

④ SmartTouch conductive coating (Active Surface). See the Resene SmartTouch conductive coating Technical Datasheet.

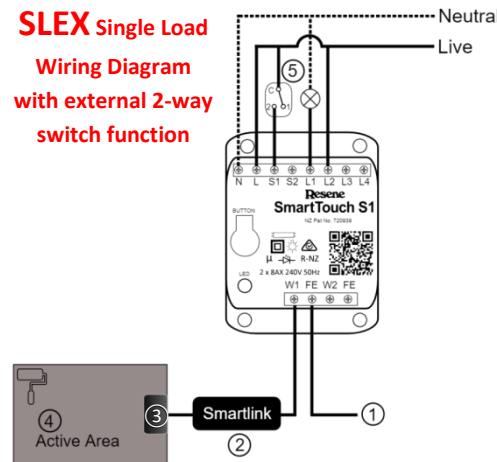
⑤ Two-way switch connection.

SL Single Load Wiring Diagram



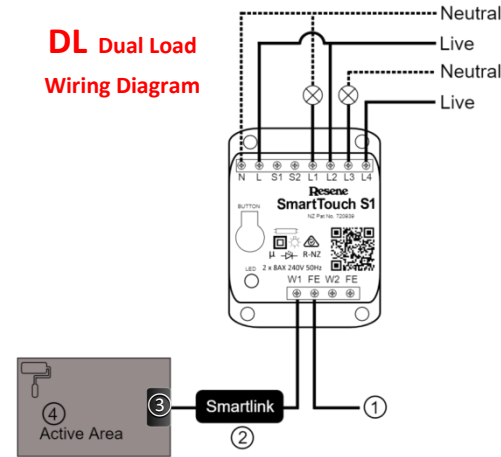
Input W1 (shown) or W2 controls switching across terminals L1/L2 or L3/L4 respectively. A single load can be controlled from two separate Active Areas by connecting each surface to a separate input (W1 and W2) with Smartlink cables. In this configuration connect the load to either L1/L2 or L3/L4 and 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.

SLEX Single Load Wiring Diagram with external 2-way switch function



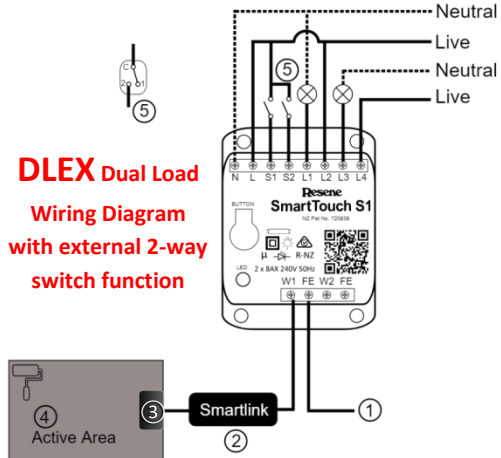
Input W1 (shown) or W2 controls switching across terminals L1/L2 AND L3/L4. Connecting a second Smartlink cable to W2 results in the Active Surface connected to W1 switching load L1/L2 and the Active Surface connected to W2 switching load L3/L4. When earthed, only one earth connector is required per device. Typically better S/N is achieved without earthing.

DL Dual Load Wiring Diagram



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

DLEX Dual Load Wiring Diagram with external 2-way switch function



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

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.

Basic Troubleshooting

If no touch signals can be detected or the background signal is at a level about 16000 units, check that the coating is not in contact with earthed material or the substrate is not attached to earthed steel frames, metal columns/beams or reinforced concrete. The system will not function correctly in these situations. See the Resene conductive coatings website for more troubleshooting help.

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