



**SSR303**

**One Channel 3 Amp Switch  
(Rx Only) - Z-Wave**

**User and Installation Instructions**



The Secure SSR303 receiver is a single channel receiver originally designed for the control of central heating which can also be operated by third party controllers which support 'Thermostat Mode SET' commands or 'Binary Switch SET' commands.

This SSR303 will act as a repeater once included into the Z-wave network, providing an alternative communication route for units which otherwise would not be within communication distance of each other.

This document provides information specific to the Z wave technology implemented, to ensure interoperability between the SSR303 receiver and other Z-wave products.

## **SSR303 Receiver Unit**

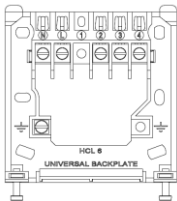
The SSR303 receiver unit receives the Z-Wave radio signals from the 3rd party Z-wave controllers. In the unlikely event of a communication failure it is possible to override the system and switch On and Off using the On/Off buttons on the SSR303 receiver as a local override.

If the override is used to override the system when it is functioning correctly then the override will be cancelled by the next switching operation and normal operation will be resumed. In any case, with no further intervention, normal operation will be restored within one hour of the override being operated.

# Installing the receiver

## Installing the SSR303

The SSR303 receiver should be located as near as is practical to the device to be controlled, as well as a convenient mains electricity supply. To remove the wall plate from the SSR303, undo the two retaining screws located on the underside, the wall plate should now be easily removed. Once the wall plate has been removed from the packaging please ensure the SSR303 is re-sealed to prevent damage from dust, debris etc.



The wall plate should be fitted with the retaining screws located at the bottom and in a position which allows a total clearance of at least 50mm around the SSR303 receiver.

## **Direct Wall Mounting**

Offer the plate to the wall in the position where the SSR303 is to be mounted and mark the fixing positions through the slots in the wall plate. Drill and plug the wall, then secure the plate into position. The slots in the wall plate will compensate for any misalignment of the fixings.

## **Wall Box Mounting**

The wall plate may be fitted directly on to a single gang flush wiring box complying with BS4662, using two M3.5 screws. The receiver is suitable for mounting on a flat surface only; it is not suitable for mounting on an unearthed metal surface.

## **Electrical Connections**

All necessary electrical connections should now be made. Flush wiring can enter from the rear through the aperture in the backplate.

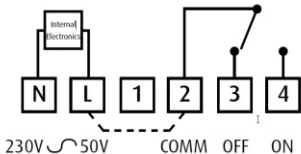
The mains supply terminals are intended to be connected to the supply by means of fixed wiring.

The receiver is mains powered and requires a 3 Amp fused spur.

The recommended cable size is 1.0mm<sup>2</sup>.

The receiver is double insulated and does not require an earth connection, an earth connection block is provided on the backplate for terminating any cable earth conductors. Earth continuity must be maintained and all bare earth conductors must be sleeved. Ensure that no conductors are left protruding outside the central space enclosed by the backplate.

## SSR303 internal wiring diagram



The receiver has voltage Free contacts.

Fit link between L & 2 for mains voltage applications

Please ensure that all installations comply with current IEE regulations.



## Receiver status LED

This unit has three buttons and three LEDs - ON, OFF and Network (from top to bottom) that are used as follows:-

LED indication	Unit mode	Button usage
Solid Off LED Flashing Network LED	Unit is currently excluded from the network	Off and On - No function Network - Network function
Flashing On LED (Green) 3s only Solid Off LED	Unit has been successfully included on the network	Off and On - No function Network - Network function
Solid OFF LED	Unit is reflecting the status Off the relay unit. The output is OFF.  Or, unit has finished the include process.  Or, unit has been included and has just been powered up on the mains	Off and On - switches channel relay off or on respectively.  Network - Network function

## Receiver status LED *continued..*

LED indication	Unit mode	Button usage
Solid ON LED	Unit is reflecting the status of the relay output. The output is ON.	Off and On - switches channel relay off or on respectively.  Network - Network function
Solid OFF LED Solid Network LED	Unit is in failsafe mode and the relay output is OFF.	Off and On - No function Network - Network function
Solid ON LED Solid Network LED	Unit is in Failsafe mode and the relay output has been turned on via the ON button	Off and On - No function Network - Network function

## Connecting to a third party controller

To connect the unit to a 3rd party controller follow these steps, also known as 'inclusion' in Z-wave terminology.

- Ensure the network LED is flashing on the SSR303, if not follow the steps in 'Disconnecting from a network' first.
- Put the 3rd party controller into inclusion mode.
- Press and hold the network button on the SSR303 until the 'ON' LED's start flashing.
- The SSR303 has been included onto the network when the 'OFF' LED goes solid red.

NOTE: If the ON LED does not flash then the include process has been unsuccessful.

## Disconnecting from a network

To disconnect from a Z-wave network, follow the steps,below, also known as 'exclusion' in, Z-wave, terminology

- Put the 3rd party controller into exclusion mode.
- Press and hold the network button on the SSR303.
- The SSR303 has been excluded from the network when the Network LED starts flashing.

NOTE: If the Network LED does not flash the exclude process has been unsuccessful.

## **Node Information Frame - NIF**

Pressing and holding the network button for 1 second will trigger the SSR303 to issue a Node Information Frame and enter learn mode for 1s. This is useful to associate/disassociate the SSR303 with a control group or just to determine the device and command classes supported. This can be done at any time but will not provide any indication to the operator.

## **Z-wave Repeater**

This SSR303 will act as a repeater once included into the Z-wave network, providing an alternative communication route for units which otherwise would not be within communication distance of each other.

## Supported Device and command classes

Z-Wave Device Classes	Implemented Device Class
Generic Device Class	GENERIC TYPE THERMOSTAT
Specific Device Class	SPECIFIC TYPE NOT USED
Basic Device Class	ROUTING SLAVE

Z-Wave Command Classes Support	Description
Manufacturer Specific Command Class	Secure Manufacture ID
Version Command Class	Provides the version number of the Software
Thermostat Mode Command Class	Only 'Off Mode' and 'Heat Mode' are supported within this command class, which can either set or read.  The SSR303 has a failsafe mode where by the relay is turned off if a command has not been received within 60 minutes.

## Supported Device and command classes

Z-Wave Command Classes Support	Description
Binary Switch Command Class	Supports SET and GET to control the relay. Oppose to the Thermostat Command class there is no failsafe mode.
Multi Channel Command Class (Ver 2)	This command is used to independently access the two channels available on the SSR303.
Basic Command Class	The Basic Command Class has been mapped to the Thermostat Mode Command Class as follows: <ul style="list-style-type: none"><li>- Basic SET: Not Supported</li><li>- Basic GET: Thermostat Mode GET</li><li>- Basic REPORT: Thermostat Mode REPORT</li></ul>

Note: All command classes are version 1 unless otherwise stated

## Receiver specification SSR303

Power Supply	230V AC 50Hz
Contact type	Micro disconnection
Voltage free	
Contact rating	3 (1) Amps 230v AC
Operating temperature Range	0-40°C
Double Insulated	
Rated Impulse voltage	Cat 1 – 1500v
Pollution control	Degree2
Enclosure protection	IP30
Case material	Thermoplastic, flame retardant
Dimensions	86mm x 86mm x 36.25mm

***SECURE***

### **Cewe Instrument AB**

Box 1006

611 31 Nyköping

Tel: +46 8 600 80 60

Email: [info@securetogether.eu](mailto:info@securetogether.eu)

Web Site: [www.securetogether.eu](http://www.securetogether.eu)

