

SECURE

SSR 302

User and Installation Instructions



Two channel 3 Amp switch (Rx) – Z-Wave

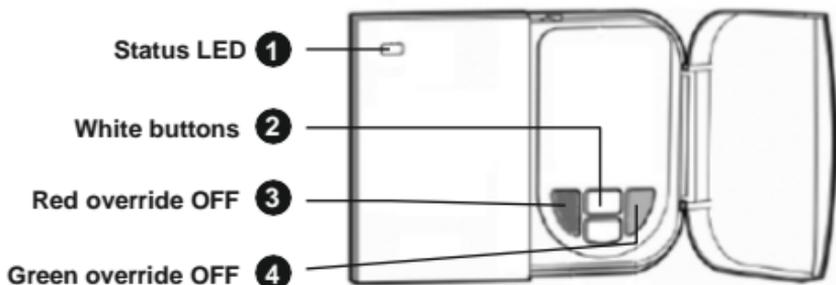
The SSR 302 is a 2-Zone receiver and although it forms part of Secure's central heating control system, it can also be operated by third party controllers which support 'Thermostat Mode SET' commands or 'Binary Switch SET' commands.

This SSR 302 will act as a repeater once added into the Z-Wave network, providing an alternative communication route for units which otherwise would not be within communication distance of each other. The Secure SSR 302 forms part of a Z-Wave Plus™ home automation network.

This document provides information specific to the Z-Wave technology implemented, to ensure interoperability between SSR 302 and other Z-Wave products.

Receiver status LED

The unit has 4 buttons and 1 LED status indicator that are used in combination as follows:



LED indication	Unit mode	Button usage
Flashing Red	Unit is currently removed from a network	Red and Green - Switches channel relay OFF or ON respectively. White buttons - Network function
Flashing Green (3s only)	Unit has been successfully added on to the network	Red and Green - No function, Both White buttons - Network function
Solid Amber	Unit is added on to a network, and a Zone has not timed out to failsafe mode to indicate loss of communication.	Top White button held for Zone 1 or Bottom White button held for Zone 2. Red and Green-switches Zone relay off or on respectively. White buttons - Network function.
Solid Red	Unit is reflecting the status of the Zone selected depending on the white button pressed. Solid Red indicates that the relay for that Zone is OFF.	Top White button held for Zone 1 or Bottom White button held for Zone 2. Red and Green - switches Zone relay off on respectively. White buttons - Network function

Solid Green	Unit is reflecting the status of the Zone selected depending on the white button pressed. Solid Green indicates that the relay for that Zone is ON.	Top White button held for Zone 1 or Bottom White button held for Zone 2. Red and Green - switches Zone relay off or on respectively. White buttons - Network function
Flashing Amber	One of the Zones has entered failsafe mode.	With Top White button held or Bottom White button held the Red and Green buttons switches relay output off and on respectively. White buttons - Network function

Pressing and holding the Network button for 1 second will cause the unit to issue its Node Information Frame and enter Classic learn mode for 2s and then in NWI (Network Wide Inclusion) learn mode to support being added/removed from a network.

Fitting the Receiver

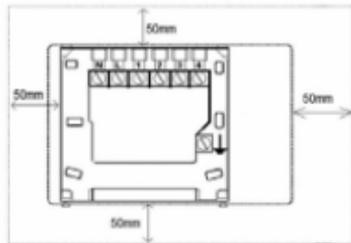
Installation and connection of the receiver should only be carried out by a suitably qualified person. WARNING: ISOLATE MAINS SUPPLY BEFORE COMMENCING INSTALLATION

To remove the backplate from the receiver, undo the two retaining screws located on the underside; the backplate should now be easily removed. Once the backplate has been removed from the packaging, ensure the receiver is re-sealed to prevent damage from dust, debris etc.

The backplate should be fitted with the wiring terminals at the top and in a position which allows a total clearance of at least 50mm around the receiver.

Direct Wall Mounting

The receiver should ideally be located near an existing power supply within an easy wiring location to the items being switched. Offer the plate to the wall in the position where the receiver is to be mounted, remembering that the backplate fits to the left hand side of the receiver. Mark the fixing positions through the slots in the backplate, drill and plug the wall, then secure the plate in position. The slots in the backplate will compensate for any misalignment of the fixings.



Wiring Box Mounting

The receiver backplate may be fitted directly onto a single gang steel flush wiring box complying to BS4662 using two M3.5 screws. The receiver is suitable for mounting on a flat surface only. It must not be positioned 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. Surface wiring can only enter from beneath the receiver and must be securely clamped.

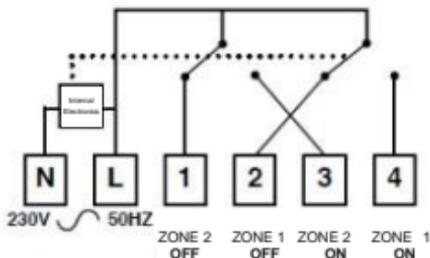
The mains supply terminals are intended to be connected to the supply by means of fixed wiring.

The receiver is mains powered and requires a 3 amp fused spur. The recommended cable sizes are 1.0mm² or 1.5mm²

The receiver is double insulated and does not require an earth connection although an earth connection block is provided on the back plate 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.

Internal Wiring Diagram

The SSR 302 has an integral connection which makes it suitable for mains voltage applications only. No additional linking is required between terminals.



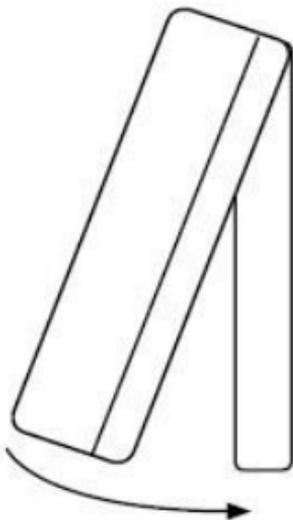
Please ensure that all installations comply with the current regulations.

Fitting the Receiver

If surface wiring has been used, remove the knockout/insert from the bottom thermostat to accommodate it.

Fit the receiver to the backplate, ensure the lugs on the backplate engage with the slots on the receiver.

Swing the bottom of the receiver into position ensuring that the connection pins on the back of the unit locate into the terminal slots in the backplate.



END VIEW OF THE RECEIVER

Adding to a 3rd Party Controller

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

- Ensure the LED is flashing RED on the SSR 302, if not follow the steps in 'Remove from a network' first.
- Put the 3rd party controller into inclusion mode.
- Press and hold both white buttons on the SSR 302 until the LED starts flashing green.
- The SSR 302 has been added onto the network and the LED will go solid amber.

NOTE: If the LED does not flash green, the add process has been unsuccessful.

Removing from a Network

To remove 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 two white buttons on the SSR 302.
- The SSR 302 has been removed from the network when the LED starts flashing red.

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

Node Information Frame - NIF

Pressing and holding the two white buttons for 1 second will trigger the SSR 302 to issue a Node Information Frame and enter Classic learn mode for 2s and then in NWI(Network Wide Inclusion) learn mode. This is useful when associating / disassociating the SSR 302 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.

End Point Capability Reports

The unit supports two static end points for the two channels.

Pressing the Top White button for 1 second will issue an 'end point capability report' for Zone 1.

Pressing the Bottom White button for 1 second will issue an 'end point capability report' for Zone 2.

Broadcasting in this manner has been implemented to support association of a channel with a 3rd party controller that supports Multi-Channel Command Class.

Note: This product can be included and operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers and/or other applications. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

Supported Device and command classes

Z-Wave Plus Device Classes	Implemented Device Class
Generic Device Class:	GENERIC TYPE SWITCH BINARY
Specific Device Class:	SPECIFIC TYPE POWER SWITCH BINARY
Basic Device Class:	ROUTING SLAVE

Command Class	Commands Supported
Manufacturer Specific (V2)	Get
	Report
	Device Specific Get
	Device Specific Report
Manufacturer ID = 0x0059 Product Type ID = 0x0003 Product ID = 0x0006 (SSR 302) Device ID Type 0 and 1 for serial number (Data format Binary, length 4 Bytes)	
Version (V2)	Get
	Report
	Version Command Class Get
	Version Command Class Report
Provides the version number of the Z-Wave stack, Command Class, Firmware and Hardware.	
Z-Wave Plus Info (V2)	Get
	Report
RoleType:ROLE_TYPE_SLAVE_ALWAYS_ON Node Type: ZWAVEPLUS_INFO_REPORT_NODE_TYPE_ZWAVEPLUS_NODE Installer Icon: ICON_TYPE_GENERIC_ON_OFF_POWER_SWITCH User Icon: ICON_TYPE_GENERIC_ON_OFF_POWER_SWITCH	
Association (V2)	Set
	Get
	Report
	Remove
	Supported Groupings Get
	Supported Groupings Report
	Specific Group Get
	Specific Group Report

Product supports one group (Lifeline) and have a maximum of 4 node. No current active group.	
Multi Channel Association (V3)	Multi Channel Association Set
	Multi Channel Association Get
	Multi Channel Association Report
	Multi Channel Association Remove
	Multi Channel Association Supported Groupings Get
	Multi Channel Association Supported Groupings Report
Used to add nodes having endpoints. Product supports one group (Lifeline) and has a maximum of 4 nodes.	
Association Group Info (V1)	Group Name Get
	Group Name Report
	Group Info get
	Group Info Report
	Group Command List Get
	Group Command List Report
Only one association group is supported Group 1: name - "Lifeline" Profile MSB - ASSOCIATION_GROUP_INFO_REPORT_PROFILE_GENERAL Profile LSB - ASSOCIATION_GROUP_INFO_REPORT_PROFILE_GENERAL_LIFELINE Supported Command class and command - COMMAND_CLASS_SWITCH_BINARY, SWITCH_BINARY_REPORT	
Thermostat Mode (V1)	Set
	Get
	Report
	Supported Get
	Supported Report

Only 'Idle Mode' and 'Heat Mode' are supported within this command class, which can either set or read.

The SSR 302 has a failsafe mode where by the relay is turned off if another Thermostat Mode SET command has not been received within 60 minutes.

Switch Binary (V1)	Set
	Get
	Report

Supports SET and GET to control the relay.
Opposed to the Thermostat command class there is no failsafe mode. If Binary Switch SET command is received than previously active failsafe mode closed.

Basic (V1)	Set
	Get
	Report

The Basic command class has been mapped to Switch Binary command class as follows:

Basic Set : Mapped to Switch Binary Set.

Basic Get : Mapped to Switch Binary Get.

Basic Report : Mapped to Switch Binary Report

Same as Switch Binary command class there is no failsafe mode. If Basic SET command is received than previously active failsafe mode closed.

Power Level (V1)	Power Level Set
	Power Level Get
	Power Level Report
	Power Level Test Node Set
	Power Level Test Node Get
	Power Level Test Node Report

Power Level Command Class defines RF transmit power controlling commands useful when installing or testing a network.

Multi Channel (V4)	Multi Channel End Point Get
	Multi Channel End Point Report
	Multi Channel Capability Get
	Multi Channel Capability Report
	Multi Channel End Point Find
	Multi Channel Command Encapsulation

This command is used to independently access the two channels available on the SSR 302.

Product has 2 identical, non-dynamic end points with no aggregated endpoints.

Each endpoint capability reports:

Generic Device Class: SWITCH BINARY

Specific Device Class: POWER SWITCH BINARY

Supported Command Class:

COMMAND_CLASS_ZWAVEPLUS_INFO

COMMAND_CLASS_BASIC

COMMAND_CLASS_THERMOSTAT_MODE

COMMAND_CLASS_SWITCH_BINARY

COMMAND_CLASS_ASSOCIATION

COMMAND_CLASS_ASSOCIATION_GROUP_INFO

Note: For more information about Z-Wave command classes and their use refer to "SDS12652 and SDS12657 Z-Wave Command Class Specification" version 8 or above.

Device reset:

(Please use this procedure only when the primary controller is missing or otherwise inoperable)

Follow "Removing from a Network" process.

Note: After removing from existing Z-Wave network, device comes in factory default state and will not send device reset locally notification.

SSR 302 (receiver) specification

Electrical

Purpose of control	Electronic multipurpose control (Independently Mounted)
Contact rating	3(1)A, 230V AC
Control type	Micro-Interruption
Supply	230V AC, 50Hz only
Control action	Type 1B
Operating time Limitation	Intermittent
Software class	Class A
Receiver category	Category 3
Power class	Class B

Mechanical

Dimensions	120mm x 90mm x 32mm
Case material	thermoplastic, flame retardant
Ball pressure test Temperature	75°C
Mounting	Industry standard wall plate

Environmental

Impulse voltage rating	Cat II 2500V
Enclosure protection	IP 30
Pollution degree	Degree 2
Operating temperature range	0°C to +40°C

Compliance

Design standards	EN 60730-2-7, RoHS, CE 
	R&TTE
	ETSI EN 300 220-2
	ETSI EN 301 489-3





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