ENERWAVE®

INSTALLATION INSTRUCTIONS

ZWN-RSM1S

Smart Single Relay Switch Module
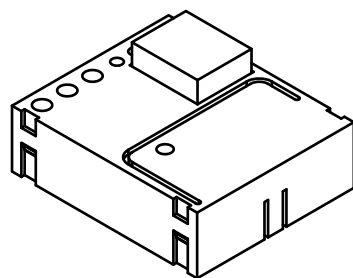
◆ **SPECIFICATIONS**

Voltage...120-277VAC, 50/60Hz
Maximum Load requirement..10A
Z-Wave Frequency... 908.42MHz(US)
Operating Temperature...32° F-104° F
Size...2.02" ×1.71" ×0.82"
Range...Up to 100 feet line of sight
between the Wireless Controller and the closest Z-Wave receiver module.

◆ **FEATURES**

● Work with existing light switches, required neutral wire
● Slim size module with build in Z-Wave technology
● Acts as a Z-Wave repeater to extend the range
● On/Off control via Z-Wave controller, manual wall switch, and/or built-in button.
● Connected switch still works even if the module is failed.

◆ **DESCRIPTION**

Z-Wave unifies all your home electronics into an integrated wireless network and helps them talk to each other. Any Z-Wave enabled item can be added to the network, and making your home electronics fully compatible.

The ZWN-RSM1S Switch Module is a component of lighting control system, it can not be used separately but should turn an existing switch into a Z-Wave switch. This ZWN-RSM1S module is a Z-Wave enabled device and is fully compatible with any Z-Wave enabled network. In a Z-Wave network, each device is designed to act as a wireless repeater. Once the ZWN-RSM1S module is installed and setup with in your wall, it will retransmit the RF signal from one device to another until the intended device is reached. This ensures that the signal is received by its intended destination by routing the signal around obstacles and radio dead spots.

WARNINGS AND CAUTIONS

To be installed and/or used in accordance with appropriate electrical codes and regulations. Exercise extreme caution when using Z-Wave devices to control appliances. Operation of the Z-Wave device may be in a different room than the controlled appliance, also an unintentional activation may occur if the wrong button on the remote is pressed. Z-Wave devices may automatically be powered on due to timed event programming.Depending upon the appliance, these unattended or unintentional operation could possibly result in a hazardous condition.

Z-Wave enabled devices should never be used to supply power to, or control the On/Off status of medical and/or life support equipment.

If you are unsure or uncomfortable about performing the installation, please consult a qualified electrician.

◆ **INSTALLATION**

Wiring Diagram 1:

Com
Load
Hot
Neutral
NC
NO
Neutral
Line (Black)
Neutral (White)
Switch 1
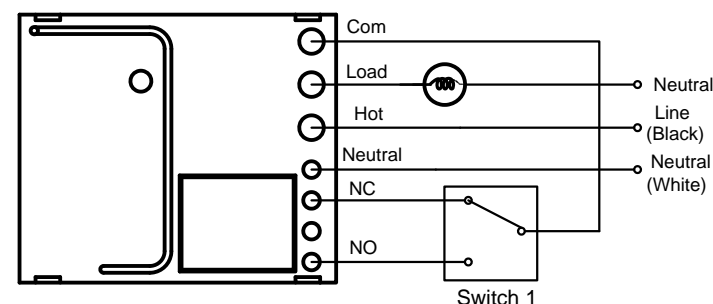
Please note that Switch 1 must be a 3-way switch. When the electrical part of ZWN-RSM1S becomes invalid, the connected switch still works. Connected switch can not activate learning mode to be included or excluded with the Z-Wave network.

Wiring Diagram 2:

Com
Load
Hot
Neutral
Aux
NO
Neutral
Line (Black)
Neutral (White)
Switch 1
Line
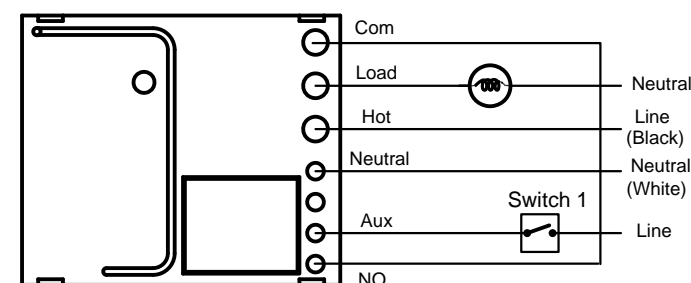
Please note that Switch 1 is a regular switch. When the electrical part of ZWN-RSM1S becomes invalid, the connected switch does not work. With this wiring, flick connected switch can activate learning mode to be included or excluded with the Z-Wave network.

Please consult an electrician if you have trouble identifying the type of wiring circuit you wish to convert or if you do not feel confident in your ability to convert the circuit to Z-Wave control.
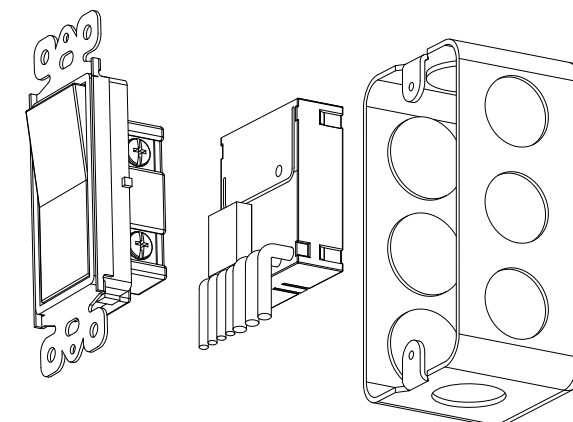
1. WARNING: To avoid fire, shock, or death. Turn off power at circuit breaker or fuse and test that power is off before wiring.
2. Remove wall plate and switch mounting screws.
3. Carefully remove the existing switch from the switch box.
4. Disconnect the wiring from the existing switch.
5. Connect the ZWN-RSM1S module as shown in the wiring diagram.
6. Check connections to be sure they are tight and no bare conductors are exposed.
7. Insert the ZWN-RSM1S module into the box first, then wire the existing switch.
8. Attach the wall plate.
9. Restore power at the circuit breaker and test the system.

◆ **OPERATIONS**

Program Button   Antenna
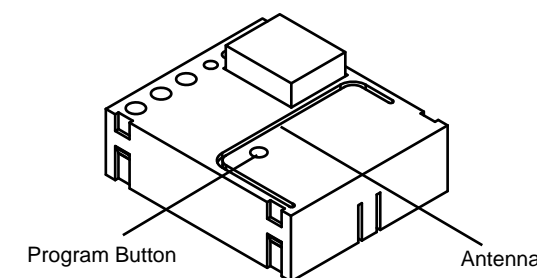
TIPS FOR ARRANGING THE ANTENNA:

● Locate the antenna as far from metal elements as possible to prevent interferences.
● Metal surfaces in the direct vicinity of the antenna may impair signal reception.
● Do not cut or shorten the antenna - its length is perfectly matched.

Basic Operation

The connected device can be turned ON in two ways:
1. Manual control with the button on the connected switch.
2. Z-Wave remote controller.

Manual Control

Turn the household appliance on/off by pressing the button on the connected switch to perform manual function, this function is as same as traditional switch.

Remote Control

When the ZWN-RSM1S switch module is included in a Z-Wave network, it can be turned on/off remotely by a portable controller or a Z-Wave enabled gateway controller.

Z-Wave network inclusion/exclusion

Press and release the program button of ZWN-RSM1S module that setting it into learning mode to include/exclude the module with Z-Wave network. Flick once of the connected switch will also set the ZWN-RSM1S module into learning mode for one second. For controller inclusion/exclusion mode, please refer to the manual of the controller.

With wiring diagram 1 : Only program button can activate learning mode to include or exclude the module with the Z-Wave network.

With wiring diagram 2 : Both program button and connected switch can activate learning mode to include or exclude the module with the Z-Wave network.

if the Z-Wave network failed to add ZWN-RSM1S, please try exclusion first.

Please Note: After a power failure, the ZWN-RSM1S switch module returned to the OFF state.

ADVANCED OPERATION

The following Advanced Operation parameters require that you have an advanced controller. However, basic remotes do not have this capability.

All-ON and All-OFF

Depending upon your primary controller, the ZWN-RSM1S module can be set to respond to ALL-ON and ALL-OFF commands in up to four different ways. Some controllers may not be able to change the response from its default setting. Please refer to your controller's instructions for information on whether or not it supports the configuration function and if so, how to change this setting.

The four possible responses are:

- It will respond to ALL-ON and the ALL-OFF command (default).
- It will not respond to ALL-ON or ALL-OFF commands.
- It will respond to the ALL-OFF command but will not respond to the ALL-ON command.
- It will respond to the ALL-ON command but will not respond to the ALL-OFF command.

Unsolicited Report Configuration

ZWN-RSM1S can send unsolicited status report to primary controller(Node ID 0x1) when switch toggled due to some controllers designed as gateway. If your controller is not a gateway or does not need the status or you think it could confuse your Z-Wave network, you can use Command_Class_Configuration to disable this function. By default setting, this function is disabled.

Configuration details
-Parameter number: 3
-Parameter size: 1
-Parameter value: 0.. Disabled
　　　　　　　　1-232......................Other controller nodeID
　　　　　　　　255......................................Send broadcast

◆ **WIRELESS RANGE**

This device complies with the Z-Wave standard of open-air, line of sight transmission distances of 100 feet. Actual performance in a home depends on the numbers of walls between the remote controller and the destination device, the type of construction and the number of Z-Wave enabled devices installed in the control network. Most Z-Wave enabled devices act as signal repeater and multiple devices result in more possible transmission routes which helps eliminate " RF dead-spots."

Things to consider regarding RF range:

- Each wall or obstacle (i.e.:refrigerator, big screen TV, etc.)between the remote or Z-Wave device and the destination device will reduce the maximum range of 100 feet by approximately 25-30%.
- Brick, tile or concrete walls block more of the RF signal than walls made of wooden studs and plasterboard (drywall).
- Wall mounted Z-Wave devices installed in metal junction boxes may suffer a significant loss of range (approximately 30%) since the metal box blocks a large part of the RF signal.

Effects of Home Construction on Wireless Range Between Z-Wave Enabled Devices.

Note: The distances shown in the table below are typical examples. Actual performance in your home will vary.

From the Remote (or repeating Z-Wave module) to destination device:					
Type of Construction		Wood Frame with Drywall		Brick, Tile or Concrete	
		Plastic J-Boxes*	Metal J-Boxes	Plastic J-Boxes*	Metal J-Boxes
Number of Walls or Obstacles	0**	100'	80'	100'	80'
	1	70'	56'	60'	48'
	2	49'	39'	36'	29'
	3	34'	27'	21'	17'

Restoring Factory Defaults

All Configuration Parameters can all be restored to their factory default settings by using your primary controller to delete/reset the device.