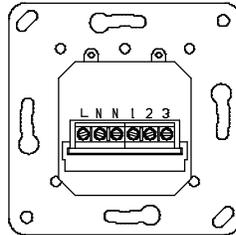




ZRM230



ZRM230 Connections:

- L: Line Voltage Input
- N: Line Neutral
- N: Load Neutral (Line Neutral)
- 1: Switched Load Output
- 2: Auxiliary Switch reference (Line Neutral)
- 3: Auxiliary Switch Signal Input



Note: This module must be “Included in the Network” **only where it will be permanently installed**. The proper operation of this node in the mesh network is dependent on it knowing its location with respect to other nodes. You cannot “test bench” configure this module, then install.

ZRM230 WALL MOUNTED SWITCH

The ZRM230 Wall Mounted 3-Way Switch is a component of the HomePro lighting control system.

This Wall Mounted Switch is designed to work with other Z-Wave enabled devices. Z-Wave nodes of other types can be added to the system and will also act as repeaters if they support this function of repeating the signal received to other modules in the system.

As part of a Z-Wave network, the ZRM230 will also act as a wireless repeater to insure that commands intended for another device in the network are received. This is useful when the device would otherwise be out of the radio range of the wireless controller.

There are no field repairable assemblies on this unit.. If service is needed, the unit must be returned where purchased.

INSTALLATION

DANGER! SHOCK HAZARD. Read and understand these instructions before installing. It is recommended that a qualified electrician perform this installation. Make sure the load controlled by the switch does not exceed 6 amps. For indoor use only. Retain instructions for future use.

Wire this Switch in place of a current wall switch according to the legend above. See the ZTH200 Wireless Controller operating instructions to add this module under the command of the Wireless Controller.

1. Remove the paddles. Using small screw driver, push out the paddles through holes in back side of mounting plate. The paddles can also be pried out from the face, from the top or the bottom of the paddles.
2. Remove the four screws through the retaining ring holding the Trim ring to the mounting plate. This will allow removal of Trim ring. When removing the Trim ring make sure not to bend or disrupt the shape of the antenna wire.
3. Wire the product according to the diagram.
4. Install the product in the wall box.
5. Reinstall the Trim ring and the retaining ring with the four screws. Position of this ring is important. The stamped word “Bottom” on the Metal and retaining ring will be aligned with each other. Again do not disrupt the integrity of the antenna wire.
6. Return the paddles to the face of the product. These simply press into place. Make sure the LED windows are also toward the stamped word “Bottom” on the retaining ring.

INCLUDING ZRM230 TO THE NETWORK

Including to the Network (Must be installed in permanent location, not on test bench).

1. Setup the controller you are using to include a device into network.
2. Tap either the top or bottom of the left switch once

Excluding from the Network

1. Setup the controller you are using to exclude a device from the network.
2. Tap either the top or the bottom of the left switch once.

BASIC OPERATION

(Local Control)

The left switch on the ZRM230 allows the user to:

- Turn ON or OFF the attached load .
- Include or exclude the module from the Z-Wave system
- Control other Z-Wave enabled devices (one “associated” group of 5 each - Group 1).

The right switch on the ZRM230 allows the user to:

- Control other Z-Wave enabled devices (two “associated” groups of 5 each - Groups 2 & 3).

When a controller prompts you to “Send Node ID” or to “Press Button on Unit”, quickly tap the left switch ON or OFF once to satisfy those instructions.

- Tapping top of the left switch turns the load attached ON.
- Tapping bottom of the left switch turns the load attached OFF.
- Pressing and holding the left switch does not effect the load attached but will allow dimming and brightening of Z-Wave dimmers if associated. Same for the right switch.

Caution: When dimmers are at the lowest setting, even though the load looks like its off, it still has power. Tap bottom of switch to turn off completely. **It is best to turn off the power at the circuit breaker to service the load.**

Note: Upon restoration of power after a power loss, the ZDW230 returns to previous known state.

LED indication

The LED on the ZRM230 will turn on when the load attached is on. However, the LED can be user configured to turn on when the load attached is off, if so desired, to act as a night light.

The ZRM230 will flicker its LED when it is transmitting to any of its 4 groups. This can be changed if desired. See “LED Transmission Indication”.

Auxiliary Switch

An AS200 auxiliary switch on the ZRW230 (providing 3 or 4-Way operation) will also control Group 2 and 3 with multiple taps. Single tap = Group 1 ON/OFF, Hold = Group 1 Dim/Bright, Double tap = Group 2 ON/OFF, Tap - Press & hold = Group 2 Dim/Bright, and Triple tap = Group 3 ON/OFF, Double Tap - Press & hold = Group 3 Dim/Bright

Remote Control

The ZRM230 will respond to BASIC and BINARY commands that are part of the Z-Wave system. Refer to your controller’s instructions as to whether your controller can transmit those commands.

ADVANCED OPERATION

All On/All Off

The ZRM230 supports the ALL ON/ ALL OFF commands.

The ZRM230 can be set to respond to ALL ON and ALL OFF commands 4 different ways.

Refer to your controller for information on how to set the ZRM230 to operate in the manner you desire. Some controllers may be only able to set certain settings of ALL ON/ALL OFF response.

The 4 different ways the ZRM230 can be setup to respond to ALL ON and ALL OFF commands are:

1. ZRM230 will not respond to ALL ON or the ALL OFF command.

2. ZRM230 will respond to ALL OFF command but will not respond to ALL ON command.
3. ZRM230 will respond to ALL ON command but will not respond to ALL OFF command.
4. ZRM230 will respond to ALL ON and the ALL OFF command.

Association

The ZRM230 supports the Association command.

The ZRM230 can be set to control other Z-Wave devices. **These devices must be in their permanently installed location.** You can turn on and off, and even dim other Z-Wave devices once they are “**associated**” into 1 of 4 groups within the ZRM230.

Each group is turned on or off (or dimmed) by tapping or holding the switch a differing amount of times.

Group 1 Control: If you **associate** a Z-Wave device into Group 1, you can turn that device ON and OFF by tapping the top or bottom of the left switch. The load attached to the ZRM230 will also turn on or off. Associating nodes into group 2 or 3 will cause a very slight delay before the command is transmitted to group 1 nodes.

You can brighten the controlled device by pushing and holding the top of the left switch, dim by pushing and holding the bottom of the left switch.

Group 2 Control: If you **associate** a Z-Wave device into Group 2, you can turn that device ON and OFF by tapping the top or bottom of the right switch. You can brighten or dim devices by pushing and holding the top of the right switch, dim by pushing and holding the bottom of the right switch. The load attached to the ZRM230 is not affected.

The LED on the right switch will indicate the status of group 2. Group 2 will be polled at a specific interval and the LED on the right switch will indicate the status of Group 2. The polling interval can be configured.

Group 3 Control: If you **associate** a Z-Wave device into Group 3, you can turn that device ON or OFF by tapping the top or bottom of the switch *twice*. You can brighten or dim devices by tapping the switch **once** then push and hold the top or bottom of the right switch. The load attached to the ZRM230 is not affected.

Group 4 Control: If you associate a Z-Wave device into Group 4, that device will be commanded to turn on or off when the ZRM230 is commanded to turn on or off. Caution: The ZRM230 will not transmit to Z-Wave devices in Group 4 if it is already in the state that the Z-Wave command commanded it to.

You can associate up to **5** Z-Wave devices into *each* of these groups.

For instructions on how to “associate” a Z-Wave device into one of these groups, refer to your wireless controller instructions. (If you are using the ZTH200 controller, refer to the Setup Menu, Association section).

A note about dimming, if you combine Z-Wave enabled dimmers and other types of Z-Wave devices in a group, place a Z-Wave enabled dimmer into the empty group first to ensure that the dimming operates correctly.

Configuration

The ZRM230 supports the Configuration command.

The ZRM230 can be configured to operate slightly differently than how it works when you first install it. Using the Configuration command you can configure the following:

- **Set Ignore Start Level Bit When Transmitting Dim Command**
- **Suspend Group 4**
- **Night Light Operation**
- **Invert Switch**
- **Poll Group 2 Interval (minutes)**
- **Poll Group 2**

You can use a ZTH200 to send Configuration commands. (Refer to the Setup Menu, Configuration section) Set Ignore

Start Level Bit When Transmitting Dim Commands

- **Parameter No: 1**
- **Length: 1 Byte**
- **Valid Values = 0 or 1 (default value is 1)**

The ZRM230 can send Dim commands to Z-Wave enabled dimmers. The Dim command has a start level embedded in it. A dimmer receiving this command will start dimming from that start level. However, the command also has a bit that indicates whether the dimmer should ignore the start level. If the bit is set to 1, the dimmer will ignore the start level and instead start dimming from its current level. If this bit is set to 0, the dimmer will ignore the start level.

Suspend Group 4

- **Parameter No: 2**
- **Length: 1 Byte**
- **Valid Values = 0 or 1 (default value is 0)**

You may wish to disable transmitting commands to Z-Wave devices that are in Group 4 without “disassociating” those devices from the group. Setting parameter 2 to the value of 1 will stop the ZRM230 from transmitting to devices that are “associated” into Group 4.

Night Light

- **Parameter No: 3**
- **Length: 1 Byte**
- **Valid Values = 0 or 1 (default value is 0)**

The LED on the ZRM230 will by default, turn ON when the load attached is turned ON. To make the LED turn ON when the load attached is turned OFF instead, set parameter 3 to a value of 1.

Invert Switch

- **Parameter No: 4**
- **Length: 1 Byte**
- **Valid Values = 0 or 1 (default value is 0)**

To change the top of the switch to OFF and the bottom of the switch ON , set parameter 4 to 1. Note: If you invert the switches and also install the product upside down, remember the load will now be controlled by the right, not the left switch.

Poll Group 2 Interval (minutes)

- **Configuration Parameter 20.**
- **One Byte**
- **Valid Values = 1 through 255 (Default value is 2)**

Poll Group 2

- **Configuration Parameter 22. (Default value is 1)**
- **One Byte**
- **If value is 0, the ZRM230 will not poll group 2.**
- **If value is 1, the ZRM230 will poll group 2 at the interval set in Configuration Parameter 20.**

Enable Shade Control Group 2

- **Parameter 14**
- **Length: 1 Byte**
- **Valid Values: 0 or 1 (default value is 0)**

The ZRW230 can operate shade control devices via its group 2 if this configuration parameter is set to 1.

Enable Shade Control Group 3

- **Parameter 15**
- **Length: 1 Byte**
- **Valid Values: 0 or 1 (default value is 0)**

The ZRM230 can operate shade control devices via its group 3 if this configuration parameter is set to 1.

LED Transmission Indication

- **Parameter 19**
- **Length: 1 Byte**
- **Valid Values = 0 , 1, 2 (default value is 2)**

The ZRM230 will flicker its LED when it is transmitting to any of its 4 groups. This flickering can be set to not flicker at all (set to 0), to flicker the entire time it is transmitting (set to 1), or to flicker for only 1 second when it begins transmitting (set to 2). By default, the ZRM230 is set to flicker for only 1 second.

Each Configuration Parameter can be set to its default setting by setting the default bit in the Configuration Set command. See your controller's instructions on how to do this (and if it supports it).

All Configuration commands will be reset to their default state when the ZRM230 is reset from the Z-Wave system.

Powerlevel

The ZRM230 supports the Powerlevel command.

The Powerlevel command allows controllers to set and get the RF transmit power level of a node and test specific links between nodes with specific RF transmit power. Refer to your controller's instructions, if it supports this command, for more information. This command is typically used by professional installers.

SUC Support

There must be a **Static Update Controller** in your Z-Wave system for this feature to work. The Static Controller can act as a gateway in the system, since other nodes always know its position (not moved after addition to the network). The "always listening" advantage of the Static Controller is that other nodes can transmit information frames to it whenever needed.

You can assign an "SUC Route" to the ZRM230. Refer to your controller's instructions on how to do this (if it supports it). Assigning an SUC Route to the ZRM230 allows it to request an update of the Z-Wave devices that are in between it and the Z-Wave device it was trying to transmit to. The ZRM230 will only request an update when a transmission fails.

SPECIFICATIONS

Power:	230 VAC, 50 Hz
Signal (Frequency):	868.42 MHz
Maximum Load - Resistive:	6 amps (1380 watts) maximum, 230 VAC
Range:	Up to 30 meters line of sight between the Wireless Controller and /or the closest Z-Wave Receiver Module

INTEROPERABILITY WITH Z-WAVE™ DEVICES

A Z-Wave™ network can integrate devices of various classes made by different manufacturers. The ZRM230 can be incorporated into existing Z-Wave™ networks.

The top or bottom of the ZRM230 switch can be used to carry out inclusion, association, or exclusion.

WARRANTY

For warranty and general product information visit our web site at www.act-solutions.com