



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



ZRF113 ISOLATED CONTACT FIXTURE MODULE

The ZRF113 Isolated Contact Fixture Module is a component of the HomePro lighting control system. Wire the Isolated Contact Fixture Module according to the diagram above and program it from the Wireless Controller to operate loads. Inclusion of this Switch on the ZTH100 Wireless Controller menu allows remote ON/OFF control of load connected.

This Isolated Contact Fixture Module is designed to work with other Z-Wave enabled devices. Z-Wave nodes of other types can be included on the network and will also act as repeaters if they support this function.

As part of a Z-Wave network, the ZRF113 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

CAUTION! Make all connections with the **POWER OFF** to avoid injury to the installer or damage to the device.
WARNING: SHOCK HAZARD. Do not use the manual ON/OFF switch on the ZRF113 to disconnect the load for service. RF Signal can cause it to turn ON.

Strip 3/4" of insulation from the ends of the conductors and make connections as shown in the Wiring Diagram. Connect line and neutral to the BLACK and WHITE flying leads. Connect the load between a power source and the two BLUE wires. Wire this module in series with a 20 amp (maximum) load according to the diagram.

When the relay is turned ON the LED illuminates.

NOTE! Do not install within four inches of fluorescent ballast.

Check connections to be sure they are tight and no bare conductors are exposed.

Make sure the load or installation does not exceed the device rating.

Install into a 4" x 4" electrical box. Clean the mounting surface, remove the protective film from the adhesive tape and firmly press the module in place. To improve RF Range, extend the side antenna wire outside of this electrical box.

Read and understand these instructions before installing. This device is intended for installation in accordance with the National Electric code and local regulations in the United States, or the Canadian Electrical Code and local regulations in Canada. It is recommended that a qualified electrician perform this installation.

For indoor use only. Retain instructions for future use.

If AS101's Auxiliary Switches are used they must be **wired to the same line (or neutral)** also wired to the master unit as well as the load being controlled, and not wired to any other neutral. If multiple neutral wires are tied together in one box, separate the neutral wires to preserve the integrity of the ZRF113 circuit. **Caution!** Do not wire unit "live" (with power on the circuit) and do not allow the yellow wire to contact line voltage, neutral or ground or you will damage the device. See the ZTH100 Wireless Controller operating instructions to include this module under the command of the Wireless Controller.

INCLUDING ZRF113 TO THE NETWORK

STEP 1. Prepare the Controller to include a unit to the network by adding it to a group (method of adding a node to the network). Refer to controller instructions.

STEP 2. The ZRF113 must be in its permanently installed location. Tap the button on the face of the ZRF113 once. Some Z-Wave products include the module on the release of the button.

STEP 3. You should see an indication on your Controller that the "DEVICE WAS INCLUDED" in the network.

NOTE: If you have trouble adding the ZRF113 to a group it may be that the Home ID and Node ID were not cleared from it after testing. You must first "RESET UNIT" with your controller to remove it from the network. If using the ZTH100 select "SETUP" and scroll to "RESET UNIT"

Although adding it to a group includes it in the network, removing it from a group does not remove it from the network. If removed from a group, it functions only as a repeater.

BASIC OPERATION

With the Wireless Controller, the ZRF113 can be remotely switched ON and OFF, and can be included (or excluded) in groups of lights that operate at the same time (a group can also be a single module), and in scenes that set a lighting mood.

Auxiliary Switch

The ZRF113 also supports the AS101 auxiliary switch which allows wall switch control. A second AS101 (maximum is two) can be wired in parallel with the first to create 3-way control.

Internal circuit protection

The ZRF113 internal circuitry is protected by an internal fuse. This internal fuse is factory serviceable only. Check your home circuit breakers before concluding that the product must be returned to manufacturer for repair at a nominal charge.

Button (Local Control)

The button on the face of the ZRF113 allows the user to

- Turn the load attached ON or OFF.
- Include or exclude the module in the Z-Wave system.

When a controller prompts you to "Send Node ID" or to "Press Button on Unit", quickly tap the button once to satisfy those instructions.

- Tapping button toggles the load attached.

If attached, an AS101 auxiliary switch can also be used to Include or Exclude the module from the Z-Wave system. When a controller prompts you to "Send Node ID" or to "Press Button on Unit", quickly tap any auxiliary switch once to satisfy those instructions.

LED indication

The LED on the ZRF113 will turn on when the load attached is ON. The LED can be user configured however to turn

ON when the load attached is OFF, if so desired. The ZRF113 will flicker its LED when it is transmitting to any of its groups. This can be changed if desired.

Remote Control

The ZRF113 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 ZRF113 supports the ALL ON/ ALL OFF commands.

The ZRF113 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 ZRF113 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 ZRF113 can be setup to respond to ALL ON and ALL OFF commands are:

- ZRF113 will not respond to ALL ON or the ALL OFF command.
- ZRF113 will respond to ALL OFF command but will not respond to ALL ON command.
- ZRF113 will respond to ALL ON command but will not respond to ALL OFF command.
- ZRF113 will respond to ALL ON and the ALL OFF command.

Association

The ZRF113 supports the Association command.

Group 2 and 3 control is not valid for the local button on the ZRF113. An AS101 auxiliary switch must be used.

The ZRF113 can be set to control other Z-Wave devices by "association". You can turn on and off, and even dim, other Z-Wave devices once they are **associated** into either of the 2 groups for the ZRF113.

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

You can control the load connected to the ZRF113 device ON and OFF by tapping the top or bottom **of the auxiliary switch once**. You can brighten or dim devices by holding down the top or bottom **of the auxiliary switch**.

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 auxiliary switch twice**. You can brighten or dim devices by tapping the top or bottom **of the auxiliary switch** once and then holding the switch down. The load attached to the ZRF113 is not affected.

If you **associate** a Z-Wave device into Group 3, you can turn that device on and off by tapping the top or bottom **of the auxiliary switch three times**. You can brighten or dim devices by tapping the top or bottom **of the auxiliary switch twice** and then hold the top down for brighten or bottom for dim. The load attached to the ZRF113 is not affected.

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 ZTH100 controller, refer to the Setup Menu, Association section).

A NOTE ABOUT DIMMERS IN A GROUP: 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 ZRF113 supports the Configuration command.

The ZRF113 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

You can use a ZTH100 to send Configuration commands. (Refer to the Setup Menu, Configuration section)

Set Ignore Start Level Bit When Transmitting Dim Commands

The ZRF113 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. To clear this bit, configure this parameter to the value of 0.

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

LED Transmission Indication

The ZRF113 will flicker its LED when it is transmitting to any of its 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 ZRF113 is set to flicker for only 1 second.

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

Each Configuration Parameter can be set to its default 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 ZRF113 is excluded from the Z-Wave network by using the controller to reset the node (on the ZTH100 select "SETUP" and scroll to "RESET UNIT").

SUC Support

There must be a Static Update Controller in your Z-Wave system for this feature to work.

You can assign an "SUC Route" to the ZRF113. Refer to your controller's instructions on how to do this (if it supports it). Assigning an SUC Route to the ZRF113 allows the ZRF113 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 ZRF113 will only request an update when a transmission fails.

SPECIFICATIONS

Power:	120 VAC, 60 Hz
Signal(Frequency):	908.42 MHz
Maximum Load	
Isolated Contacts:	20 amps maximum General Purpose, 277 VAC, 10 FLA, 60 LRA, 250 VAC,
Motor:	1 H.P. maximum, 120/240 VAC
Incandescent:	TV8 (Tungsten), 120 VAC, 960W maximum
Range:	Up to 100 feet line of sight between the Wireless Controller and /or the closest HomePro Receiver Module

INTEROPERABILITY WITH Z-WAVE™ DEVICES

A Z-Wave™ network can integrate devices of various classes, and these devices can be made by different manufacturers. The ZRF113 can be incorporated into existing Z-Wave™ networks.

The button on the face of the ZRF113 can be used to carry out inclusion (add to a group), association, exclusion (remove from group) or reset (remove from network).

WARRANTY

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

ABOUT ZRF113'S CERTIFICATION

The ZRF113 is certified to comply with applicable FCC and IC rules and regulations governing RF and EMI emissions.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

FCC NOTICE

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Increase the separation between the equipment and receiver.
- Consult the dealer or an experienced radio/TV technician for help.

IC NOTICE

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

