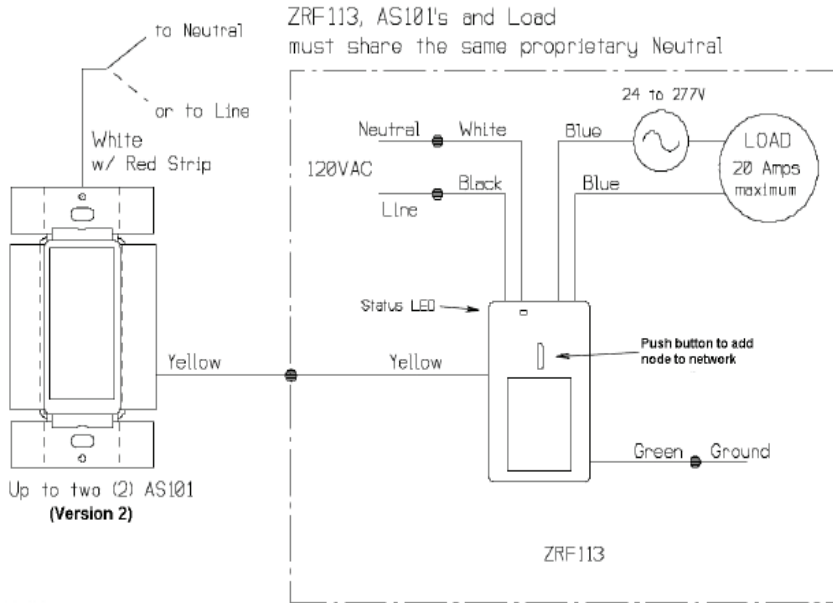
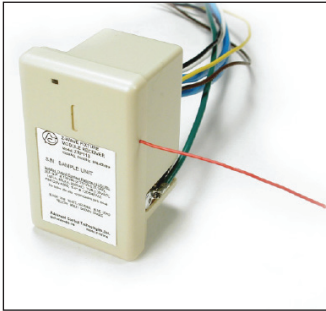


*Radio Frequency (RF) Controlled, 120 VAC, Scene Capable, Isolated Contact Fixture Module, Release 5.1, 300 Series*



The product is compatible with other Z-Wave™ enabled products.

## LRF-20 ISOLATED CONTACT FIXTURE MODULE

The LRF-20 Isolated Contact Fixture Module is a component of the Evolve 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 EHC-100 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 LRF-20 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.

**DANGER! SHOCK HAZARD.** 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.

## INSTALLATION

Wire this module in series with a (maximum) 20 amp load according to the diagram above.

AS101's are required to be **wired to the same line (or neutral)** which is also wired to the master unit as well as the load being controlled, and not wired to any other neutral. If multiple neutrals are tied together in one box, separate the neutrals to preserve the integrity of the LRF-20 circuit. See the EHC-100 Wireless Controller operating instructions to include this module under the command of the Wireless Controller.

### Fixture Mounted Configuration

Push the button on the face to configure the module to operate from the wireless controller (see EHC-100 instructions). With the Wireless Controller, the LRF-20 can be switched ON and OFF remotely, and can be

included 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.

### **Switch power ON and OFF with Auxiliary Switch**

The LRF-20 can also be controlled from an AS101 ver.2 auxiliary switch in another location. A second AS101v2 (maximum is two) can be wired in parallel with the first to create 4-way control.

### **Other functions**

The button on the LRF-20 also plays a role as a reset in addition to including the module in groups and scenes. This is described in more detail in the Wireless Controller instructions.

### **Over-current protection**

The LRF-20 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 LRF-20 allows the user to

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

**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 LRF-20 must be in its permanently installed location.**

- **To add a node:** Tap the button.
- **To remove a node:** Tap the button 3 times, then press and hold (Ex. tap, tap, tap, hold)

**STEP 3.** You should see an indication on your Controller that the “DEVICE WAS INCLUDED” or “DEVICE WAS EXCLUDED” in the network.

*If attached, an AS101 ver.2 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”, follow steps 1 through 3 above to satisfy those instructions.*

### **LED indication**

The LED on the LRF-20 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 LRF-20 will flicker its LED when it is transmitting to any of its 4 groups. This can be changed if desired.

### **Remote Control**

The LRF-20 will respond to BASIC and BINARY and SCENE 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**

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### **All On/All Off**

*The LRF-20 supports the ALL ON/ ALL OFF commands.*

The LRF-20 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 LRF-20 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 LRF-20 can be setup to respond to ALL ON and ALL OFF commands are:

- LRF-20 will not respond to ALL ON or the ALL OFF command.
- LRF-20 will respond to ALL OFF command but will not respond to ALL ON command.
- LRF-20 will respond to ALL ON command but will not respond to ALL OFF command.
- LRF-20 will respond to ALL ON and the ALL OFF command.

## SPECIFICATIONS

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Power: 120 VAC, 50/60 Hz

Signal (Frequency): 908.42 MHz

Maximum Load

Isolated Contacts: 20 amps G.P. maximum, 277 VAC, 10FLA, 60LRA, 250VAC,

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 Evolve Receiver Module

## INTEROPERABILITY WITH Z-WAVE™ DEVICES

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A Z-Wave™ network can integrate devices of various classes, and these devices can be made by different manufacturers. The LRF-20 can be incorporated into existing Z-Wave™ networks.

The button on the face of the LRF-20 can be used to carry out inclusion, association, or exclusion.

## WARRANTY

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For warranty and general product information visit our web site at [www.act-solutions.com](http://www.act-solutions.com)

## ABOUT LRF-20'S CERTIFICATION

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The LRF-20 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:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### 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.

