

Wireless RELAY™

WR-400™ 4-CHANNEL WIRELESS RELAY KIT



VERSION 3

Installation / Operation Manual

JACKSON
SYSTEMS
Controls Done Right™

Introduction:

The WR-400™ Wireless Relay kit contains a 4-channel base transceiver and a 4-channel satellite transceiver. Both transceivers are powered by 24 VAC. The base module has 3 transmitting channels and 1 receiving channel. The satellite module has 3 receiving channels and 1 transmitting channel.

Installation:

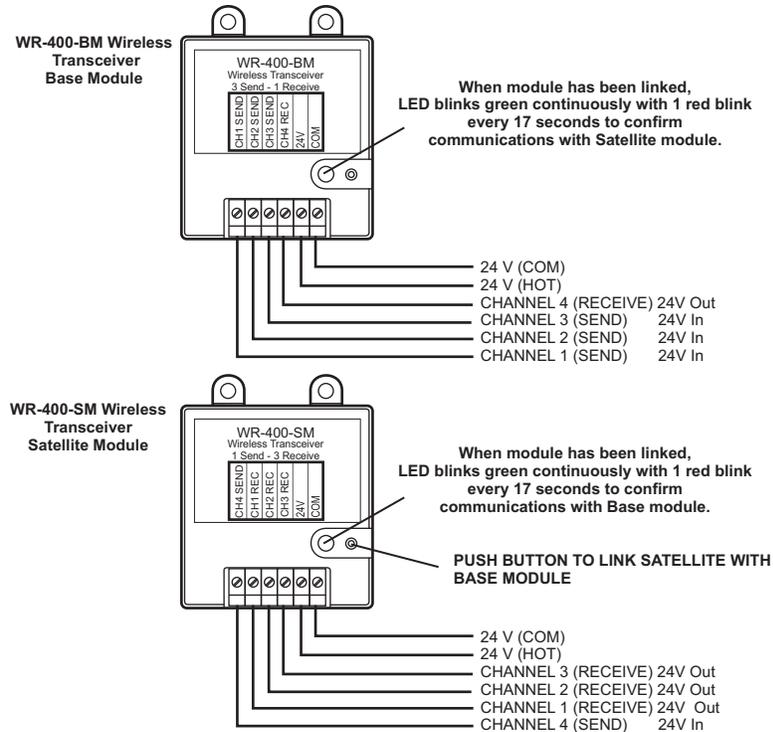
Whenever possible, mount the base module and satellite module on a non-metallic surface close to the equipment. Use a WR-400-E weather proof, plastic enclosure for outdoor applications.

DO NOT INSTALL TRANSCEIVERS IN METAL ENCLOSURES.

Linking Modules

Before wiring the Base and Satellite modules to the equipment, conduct the following communications link:

1. Locate each module in an appropriate location.
2. Provide 24 Volts AC to both modules.
3. After both modules are powered up, their LEDs will blink red.
4. Press and immediately release the button on the Satellite module and it will receive a unique 32-bit address from the Base Module which will be saved in non-volatile memory.
Note: If you press the Satellite module button too long and the LED turns solid green, simply remove 24 volts power and then power it back up.
5. Once communications is established, the LED on each module will blink green continuously with 1 red blink every 17 seconds.
Remove 24 Volts from each module and proceed with wiring the inputs and outputs based on the application requirements.
6. Reapply 24 volt power when all wiring is completed.



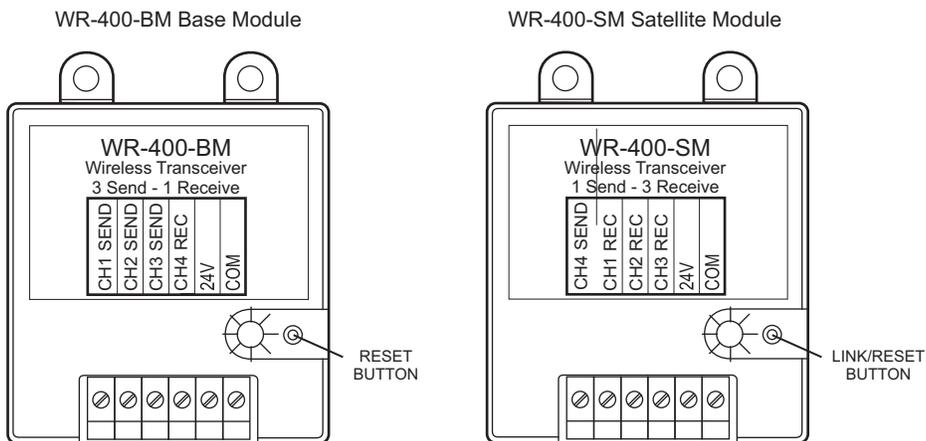
Using multiple transceiver kits in the same location:

If more than one WR-400™ kit is used in the same building, each WR-400™ kit must be linked with its own unique 32-bit address. The WR-400 has over one million unique addresses. Modules can be linked before installation or they can be linked after installation. If they are linked before installation, make sure linked sets are tagged.

1. Apply 24 Volt power only to the Base module and Satellite module to be linked.
2. After both modules are powered up, their LEDs will blink red.
3. Press and immediately release button on the Satellite module and it will receive a unique 32-bit address from the Base Module which will be saved in non-volatile memory.

Note: If you press the Satellite module button too long and the LED turns solid green, simply remove 24 volt power and then power it back up.

4. Once communications is established, the LED on each module will blink green continuously with 1 red blink every 17 seconds.
5. Repeat Sep 1 - 4 for each Base and Satellite module to be linked.



Restoring modules to unlinked state

The Base and Satellite modules can be set to the factory unlinked state by holding each push button in one at a time while applying 24VAC power. The LED on each module will blink red continuously confirming that it is now unlinked.

Sequence of Operation:

WR-400-BM Base Module

When base module channel 1, 2 or 3 receives a 24 volts signal, the satellite module detects the change and closes its corresponding channel 1, 2 or 3 contact which outputs 24 volts.

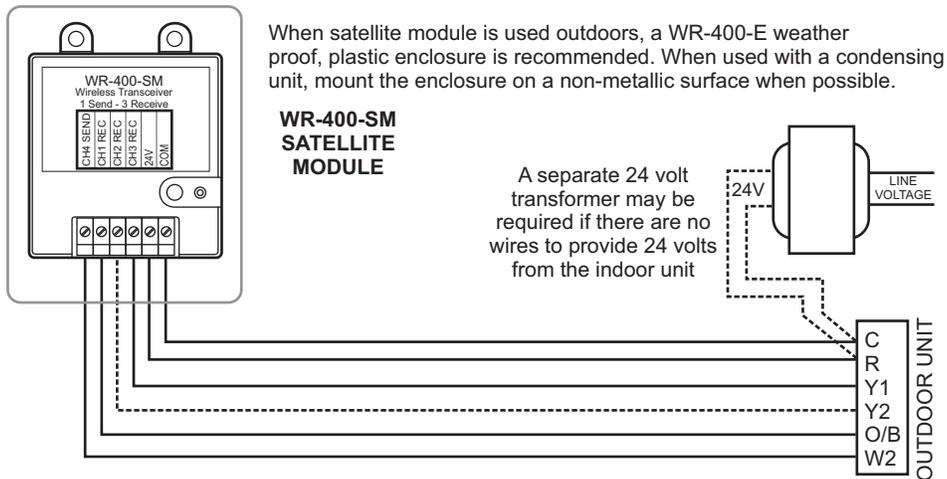
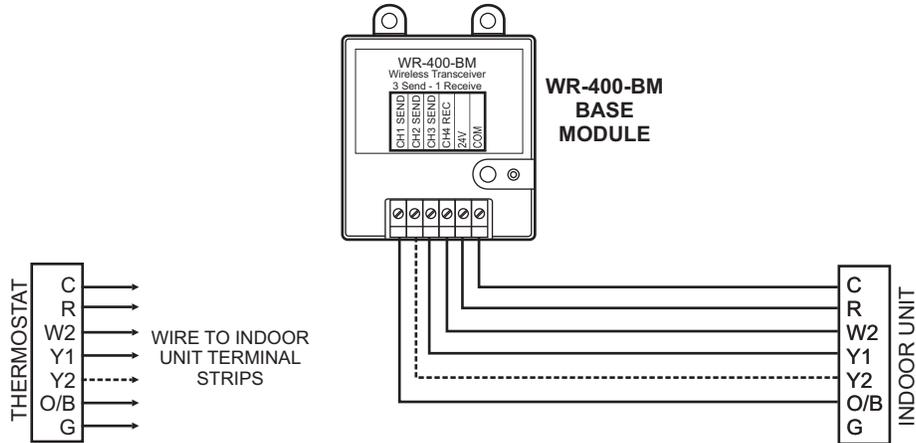
WR-400-SM Satellite Module

When satellite module channel 4 receives a 24 volt signal, the base module detects the change and closes its channel 4 contact which outputs 24 volts.

Failsafe Protection:

Both modules continuously confirm communications with one another. If either module loses 24 volts or if communications is lost between the linked pair, the module LEDs will no longer blink red every 17 seconds. If power or communications is not restored in 10 minutes, all relay outputs will go to an open state.

Typical Heat Pump Application:



USE SEPARATE ISOLATION RELAYS IF LOADS EXCEED 30 VAC, 1 AMP PER CHANNEL

Specifications:

WR-400-BM Base Module

Power: 24VC, 2.8VA
 Channels: 4 (3 Send - 1 Receive)
 Contact Rating: 1 Amp per channel
 Addresses: 1 million
 Frequency: 915MHz proprietary protocol
 Range: Up to 100 feet from Satellite module
 Dimensions: 2.25" x 2.50" x 1.00" (WxHxD)

WR-400-SM Satellite Module

Power: 24VAC, 2.8VA
 Channels: 4 (1 Send - 3 Receive)
 Contact Rating: 1 Amp per channel
 Frequency: 915MHz proprietary protocol
 Range: Up to 100 feet from Base module
 Dimensions: 2.25" x 2.50" x 1.00" (WxHxD)

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.

JACKSON
SYSTEMS
 Controls Done Right™

5418 Elmwood Avenue, Indianapolis, IN 46203-6025
 Toll Free: 888.652.9663 Fax: 317.227.1034
 www.jacksonsystems.com