Wireless RELAY™

WR-400™
4-CHANNEL WIRELESS RELAY KIT

VERSION 2

Installation / Operation Manual

Jackson SYSTEMS

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:

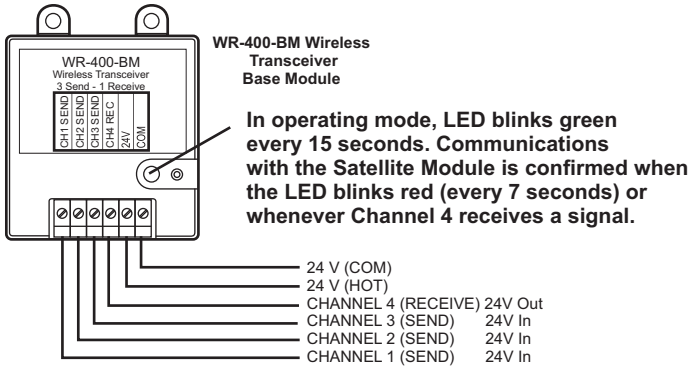
Whenever possible, mount the base module and satellite module on a non-metallic surface close to the equipment. Use a WR-400-E weather proof, plastic enclosure for outdoor applications.

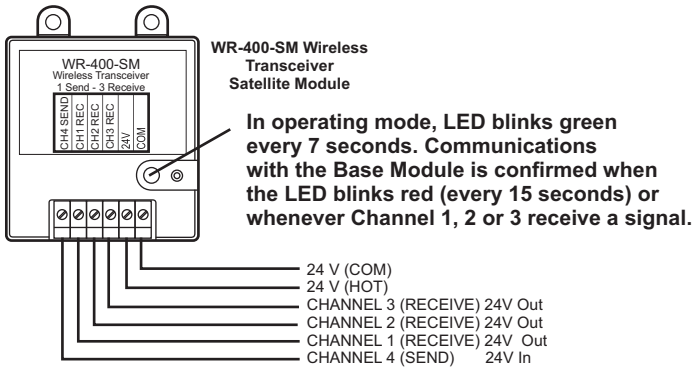
DO NOT INSTALL TRANSCEIVERS IN METAL ENCLOSURES.

Testing the communications link:

Before wiring the base and satellite modules to the equipment, conduct the following communications test:

1. Locate each module in an appropriate location.
2. Provide 24 Volts AC to both modules.
3. After both modules are powered up, the LED on the Base Module will blink green every 15 seconds. Communications with the Satellite Module is confirmed when the LED blinks red every 7 seconds. The Satellite Module LED will blink green every 7 seconds. Communications with the Base Module is confirmed when the LED blinks red every 15 seconds.
4. If communications is not confirmed, relocate one or both modules until their LEDs blink red. Relocating a module just a few feet will usually establish communications.
5. Once communications is established, remove 24 Volts from each module and proceed with wiring the inputs and outputs based on the application requirements.

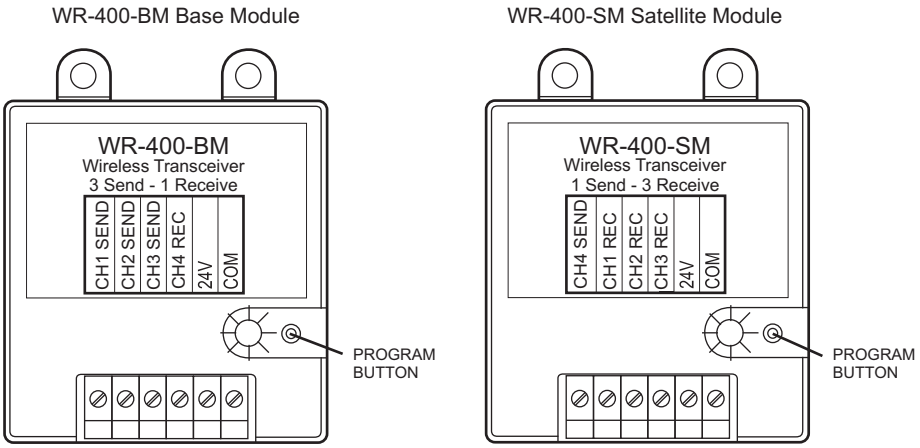




Using multiple transceiver kits in the same location:

If more than one WR-400™ kit is used in the same building, each additional WR-400™ kit must be programmed with a different address. **All kits come from the factory programmed as Address 1**. There are 5 additional addresses available for additional kits allowing up to a total of 24 control channels.
Use a small screwdriver and press in on the program button on the base module (WR-400-BM) and the LED will blink red 1 time, then 2 times up to 6 times. 1 blink equals Address 1, 2 blinks equal Address 2, etc. For example, if you release the program button after 2 blinks, the transmitter is programmed as Address 2.
Take the corresponding satellite module (WR-400-SM) and use the same steps to program it as Address 2.

Note: Changing the Address does not increase signal strength.



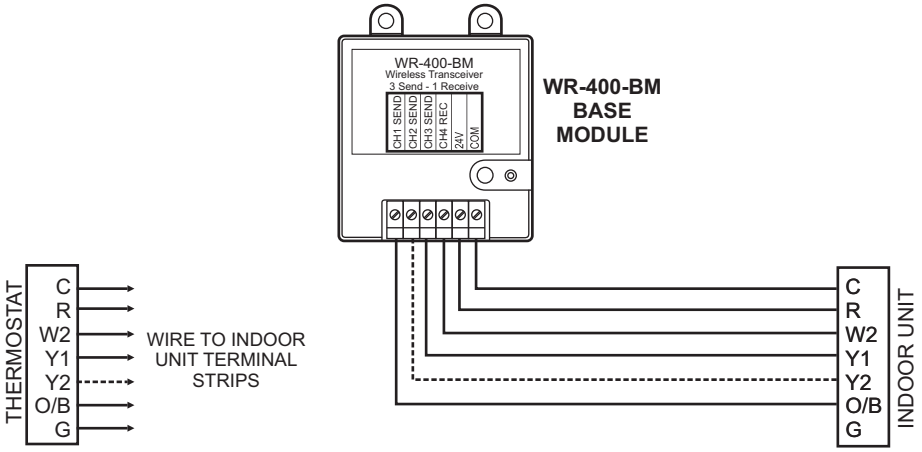
Sequence of Operation:

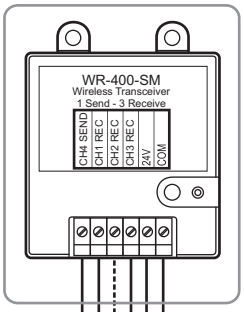
WR-400-BM Base Module
When base module channel 1, 2 or 3 receives a 24 volts signal, the satellite module detects the change and closes its corresponding channel 1, 2 or 3 contact which outputs 24 volts.

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 use a redundant transmission protocol. If either module loses 24 volts or does not receive a valid ON or OFF transmission signal within 60 seconds, all outputs will be turned off.

Typical Heat Pump Application:

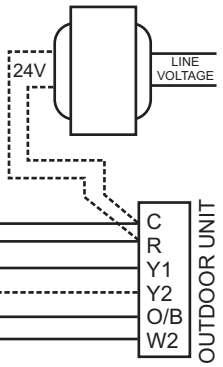




When satellite module is used outdoors, a WR-400-E weather proof, plastic enclosure is recommended. When used with a condensing unit, mount the enclosure on a non-metallic surface when possible.

WR-400-SM SATELLITE MODULE

A separate 24 volt transformer may be required if there are no wires to provide 24 volts from the indoor unit



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:	Up to 6 kits using 4-channels each can be installed in the same building
Frequency:	915MHz proprietary protocol
Range:	Up to 200 feet from receiver
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 200 feet from transmitter
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.

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