



Two Way Repeater
NEMA 4X Enclosure

Two Way Repeater

RR2552

Remote Spread Spectrum Repeater (Signal Router)

The RR2552 signal repeater utilizes reliable Spread Spectrum Radio technology. It can be installed easily in minutes to increase the transmission distance between wireless sensors and the receivers. Together with the Meshnet900™ receivers and controllers, wireless sensors can be used with any LonWorks™, BACnet™, MODBUS communication protocols, or DDC system. Each network can have up to a maximum of 63 wireless repeaters per network through the use of the 8 position dip switch inside of the unit. Repeaters or signal routers are dedicated to only one system to eliminate any cross talk between the different wireless sensors and transceivers within the building. Without the use of the RR2552B wireless repeater, all systems will be a point to point system, meaning that the sensor and transceiver will communicate directly with each other. Multiple repeaters can be used to extend the transmission distance to thousands of feet inside any commercial or industrial building. The Data-Link LED confirms the data transmission was received by the receiver for fast and reliable positioning of the repeaters during installation. There is no need for special wireless installation equipment or site survey tools and can be used with any LonWorks™, BACnet™, MODBUS, DDC system or panel. (See additional notes on repeater use on reverse side)

The RR2552 is covered by ACI's Two (2) Year Limited Warranty. The warranty can be found in the front of ACI's Sensors & Transmitters catalog, as well as on ACI's web site, www.workaci.com.



SPECIFICATIONS

Input Power	24 VAC, 60 Hz
RF Characteristics	Operating Frequency: 902-928 MHz Transmitter Power: 11 dBm, Receiver Sensitivity: -110 dBm
Open Field Range	One Mile (line of sight)
Operating Temperature Range	32 to 140°F (0 to 60°C)
Operating Humidity Range	5 to 95%, non-condensing
Network Addresses	1-64 maximum
Product Dimensions	Standard Housing: (L) 6.13" (W) 4.62" (H) 2.25" NEMA 4X Housing: (L) 6.73" (W) 4.76" (H) 2.17"

ORDERING

Please select one Wireless Device (A).

A Wireless Device

- RR2552B** (Two Way Repeater)
- RR2552BE** (Two Way Repeater) (NEMA 4X Enclosure)

BUILD PART NUMBER

After completing (A) from the above table, fill in the Part Number Table below. An example part number is offered.

A

EXAMPLE: RR2552BE

The RR2552 Signal Router/Repeater requires 24 VAC power in order for the unit to continually transmit and receive wireless network signals and alarms. This enables the sensors to have a 3-5 year typical battery life, since the sensors do not use each other to make up part of the wireless mesh network. The design concept is that the wireless sensors will communicate with the closest network signal router/repeater or network transceiver and upon a loss of communication with a sensor, the sensor will then look for another signal router/repeater on the same network number or for the transceiver directly in order to complete communications. When setting up your wireless mesh network, the theory is that you want to give your sensors multiple signal paths from the actual sensor location back to the transceiver through an intricate 2D/3D system design. In larger sensor networks, the ideal situation is to design your wireless network such that each one of your sensors has a number of paths back to the network transceiver. This will improve the overall system reliability by overcoming obstacles such as rearranging furniture in rooms, upgrading of HVAC or mechanical systems and anything else that may cause your wireless signal patterns to change within your building over time. Remember that when setting up your wireless mesh network, it is best to locate all of your transceivers and signal routers as high up as you can in as open a space as possible in order to provide you with longer transmission distances. Note that most wireless networks are directional and by rotating your sensors, routers or transceivers 90 or 180 degrees when mounting will improve your overall system reliability.

Sensors, Repeaters and Receivers should NOT be installed in the following areas:

- Inside a metal enclosure/panel
- Inside or immediately next to an elevator shaft/elevator banks
- In front of, or immediately next to, large trees, aquariums, holding tanks, or other liquid related obstructions

Transmission distance and performance will be drastically reduced. Performance of the device is generally better when the repeater is installed elevated from the ground as much as possible.

Mount the RR2552 to the wall using four #10 screws. Check to see that the Test Mode Jumper (J1) has been moved from "Battery" to "24 VAC".

Connect 24V 60 Hz to the power input terminals using 20 AWG wire.