



RM2402D SERIES

Installation & Operation Instructions

Phone: 1-888-967-5224

Website: workaci.com



CAUTION:

DO NOT USE THIS PRODUCT IN ANY SAFETY RELATED APPLICATIONS WHERE HUMAN LIFE MAY BE AFFECTED.

GENERAL INFORMATION

The RM2402D is a wireless receiver that works with any ACI wireless sensor or input concentrator using 900 MHz spread spectrum technology. The RM2402D has two (2) digital outputs (dry contact) and a low battery/loss of signal digital output (dry contact) for an alarm. The sensors are programmed to the RM2402D using the configuration software (included), a laptop, and CK2432D programming cable. The RM2402D can be used to monitor status or alarms and is compatible with any DDC controller that accepts a dry contact closure.

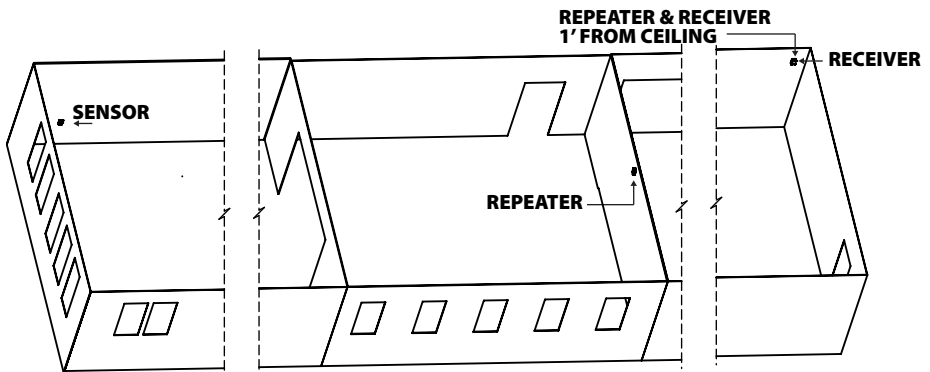
The maximum radio transmission distance is dependent on the building type. In a typical commercial building with steel I-Beam construction, concrete floors with reinforcing rod, and metal stud walls, it can be expected that transmissions will penetrate horizontally approximately 200-300 feet of floor, walls, furniture and air.

Generally, a wireless system will cover at least three floors—one floor above, and one floor below the receiver location. In some buildings with favorable transmission characteristics the system may cover more floors - see **FIGURE 2**, p.2. Wireless sensor transmitters should be installed within 200 to 300 feet of the RM2432D receiver.

RR2552 signal repeaters can be installed as needed to increase transmission distance between sensors and receivers - see **FIGURE 1**.

NOTE: For best results, no more than three (3) repeaters should be installed per wireless system, and no more than two (2) repeaters in series with the (name device), or “transceiver/receiver” for RR2552B.

FIGURE 1: WIRELESS BUILDING DIAGRAM



PRECAUTIONS

SENSORS, REPEATERS AND RECEIVERS SHOULD NOT BE INSTALLED IN THE FOLLOWING AREAS:

- **INSIDE METAL ENCLOSURE / PANEL**
 - **INSIDE OR IMMEDIATELY NEXT TO ELEVATOR SHAFT / ELEVATOR BANKS**
 - **IN FRONT OF OR IMMEDIATELY NEXT TO LARGE TREES OR LARGE BODY OF WATER**
- TRANSMISSION DISTANCE AND PERFORMANCE WILL BE DRASTICALLY REDUCED.**

MOUNTING INSTRUCTIONS

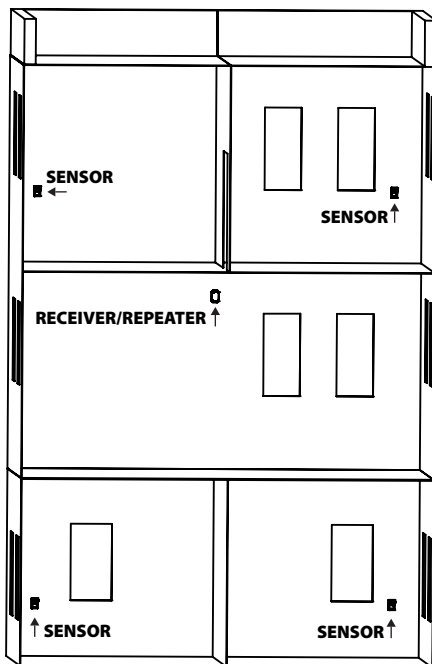
Mount the RM2402D Receiver using four #8 screws (mounting dimensions see **Figure 3**, pg3).

WIRING INSTRUCTIONS

WIRING PRECAUTIONS

- **Do NOT run Digital Output wires in any conduit with line voltage (24/120/230 VAC).**
- **Remove power before wiring. NEVER connect or disconnect wiring with power applied.**
- **The RM2402D is full wave rectified.**
- **It is recommended that you use an isolated UL-listed Class 2 transformer when powering the unit with 24 VAC. Failure to wire the devices with the correct polarity when sharing transformers may result in damage to any device powered by the shared transformer.**

FIGURE 2: WIRELESS MULTILEVEL DIAGRAM



Observe polarity when connecting analog outputs to the controller inputs.

WIRING

Connect 24VAC 60Hz to the TB1 terminals using 16-26 twisted pair wire. Check all connections before applying power to the unit.

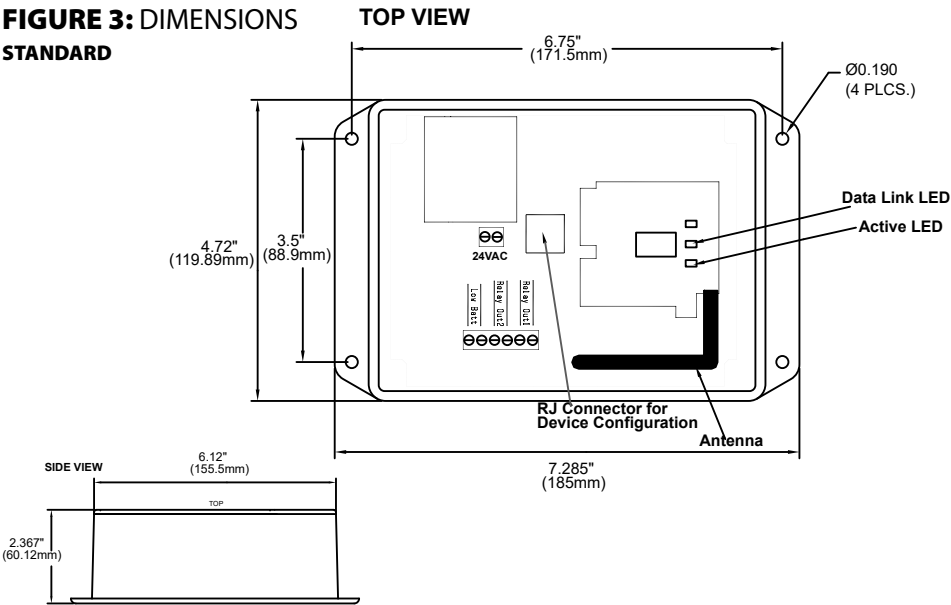
Using the RM2402D configuration information, connect the digital outputs to the appropriate control input terminals on the controller or contactor using 20AWG wire.

Connect 24VAC 60Hz to the input terminals using 18-20AWG wire(See **Figure 3**, p. 3). Check all connections before applying power to the unit.

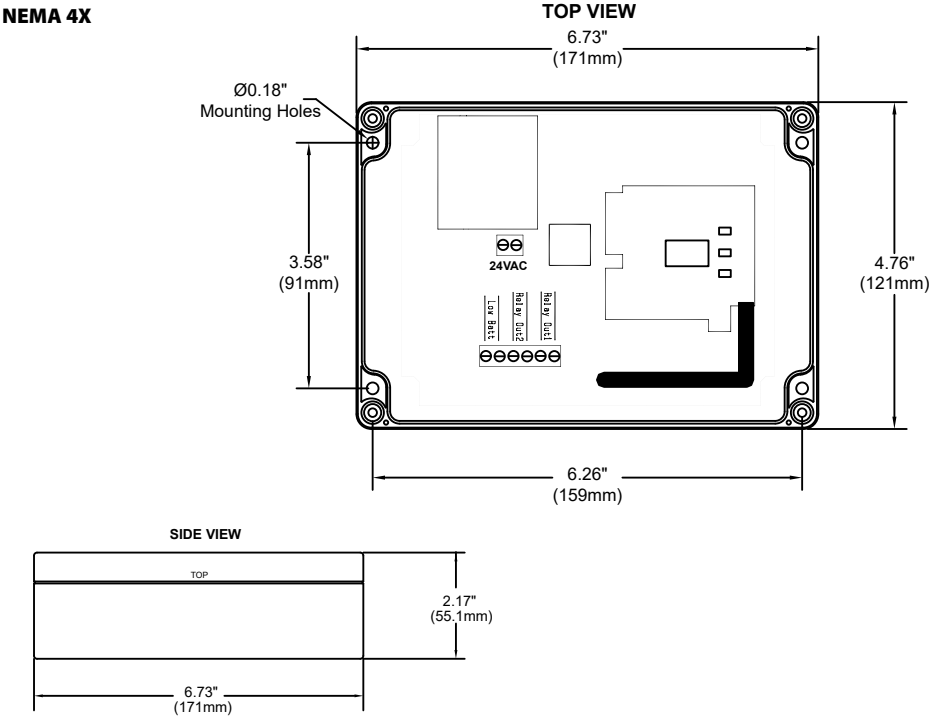
Configuration

Mount the RM2402D Receiver as close to the controller as possible using four #8 screws (mounting dimensions see **Figure 3** (p. 3). The maximum wiring distance for the analog outputs is 100 ft.

FIGURE 3: DIMENSIONS
STANDARD



NEMA 4X



PRODUCT SPECIFICATIONS

Supply Voltage:	24 VAC, 60 Hz (Full wave rectified)
Supply Current:	300 mA
Connections:	Screw Terminal Blocks
Wire Size:	16 AWG (1.31 mm²) to 26 AWG (0.129 mm²)
Terminal Block Torque Rating:	0.37 ft-lb (0.5 Nm) Nominal
Operating Temperature Range:	32 to 140°F (0 to 60°C)
Operating Humidity Range:	30 to 50% RH, Noncondensing
Storage Temperature Range:	-4 to 176°F (-20 to 80°C), 70% RH
Data Protocol:	IEEE 802.15.4-2003/2006
RF Characteristics:	900 MHz, Operating Frequency 10 channels between 902 – 928 MHz Transmitter Power: 11 dBm Receiver Sensitivity: -11 dBm
Transmission Distance:	200 – 300 ft horizontally depending on building type and constructions, and typically one floor above and below the transceiver vertically
Digital Outputs:	Two (2) SPST Pilot Duty Relays, Dry Contact
Contact Rating:	1.0A, 30 VDC @ 104°F (40°C), 0.5A, 125 VAC @ 104°F (40°C) Resistive
Relay Durability:	Mechanical: 5,000,000 operations minimum @ 36K operations/hr Electrical: 100,000 operations minimum (under rated load @ 1.8K operations/hr)
Lost Signal Alarm:	(1) SPDT, Dry contact relay, 1.0A, 30 VDC @ 104°F (40°C), 0.5A, 125 VAC @ 104°F (40°C)
Configuration Software:	Resistive
System Requirements:	Included; Data registers need to be configured prior to use • Laptop with Windows 98, XP, Vista, Windows 7 or Windows 10, Ethernet Port, and 10 GB memory • Direct connection from PC to RM2402D using CK2432D serial to RJ11 Programming Cable • USB to Serial Adapter (Not provided by ACI) • IP Address of PC must have static address of 192.168.0.2 or above
Enclosure Material Flammability Rating:	Standard: ABS Plastic UL94-5VA NEMA 4X: Polycarbonate Plastic UL94 HB

WARRANTY

The RM2402D Series are covered by ACI's Two (2) Year Limited Warranty, which is located in the front of ACI'S SENSORS & TRANSMITTERS CATALOG or can be found on ACI's website: www.workaci.com.

W.E.E.E. DIRECTIVE

At the end of their useful life the packaging and product should be disposed of via a suitable recycling centre. Do not dispose of with household waste. Do not burn.

