



Installation and Operation Instructions RD2432D Remote Spread Spectrum Output Receiver

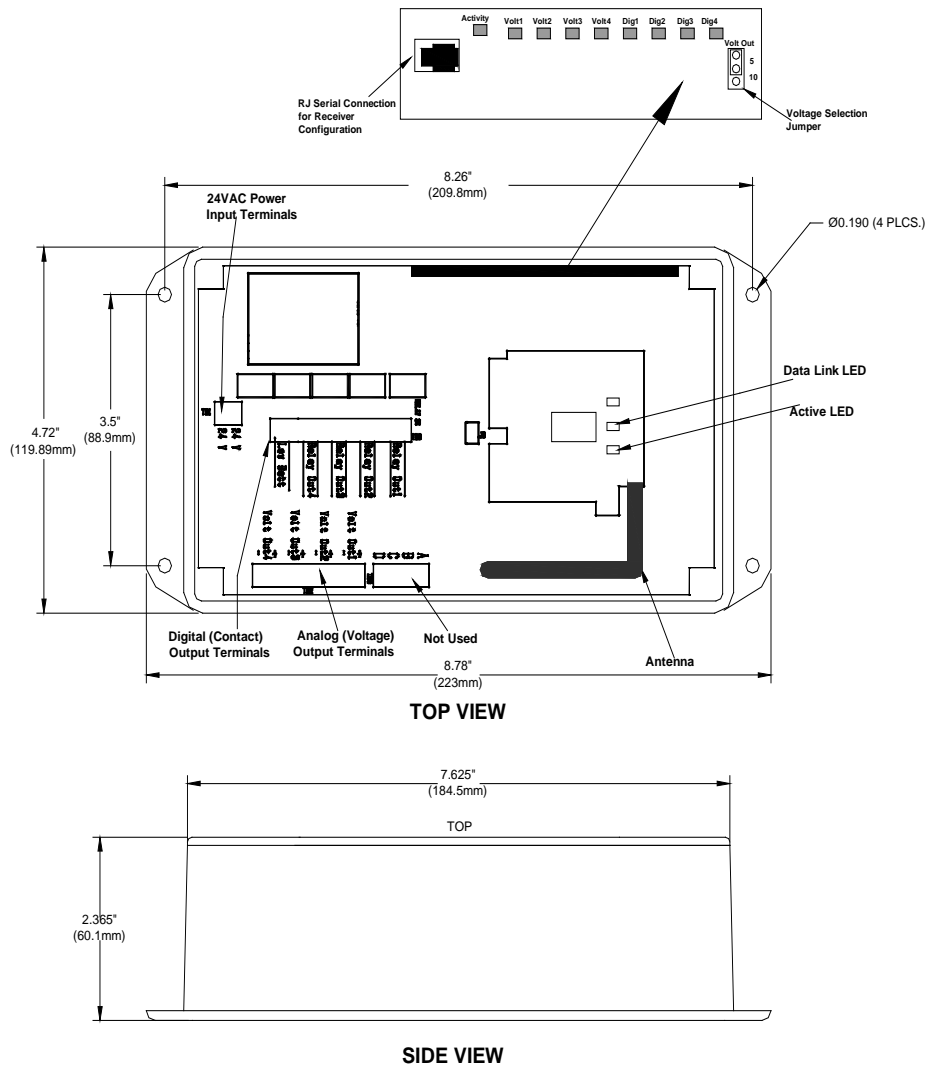


Figure #1

General Description

ACI's mesh network Series 2000 RD2432D wireless output module utilizes reliable Spread Spectrum Radio technology. Together with other ACI wireless transceiver(BACnet, LonWorks, and MODBUS), the system can be used to transmit remote control signals wirelessly. It is compatible with any control systems or DDC panels that accept 0-10VDC or 0-5VDC inputs.

The maximum radio transmission distance is dependent on the building type. The maximum open air transmission distance is one mile. 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 vertically through floors and horizontally through 200 to 500 feet of walls, furniture and air.

Generally a wireless system will cover at least three floors – one floor above, and one floor below the output module location. In some buildings with favorable transmission characteristics the system may cover more floors.

Wireless transceiver or repeaters should be installed within 200 to 500 feet of the RD2432D output module.

RR2552 signal repeaters can be installed as needed to increase transmission distance between transceiver and output modules.

Installation



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.

Mount the RD2432D output module as close to the equipment or controller as possible using four #8 screws (mounting dimensions see Figure #1). The maximum wiring distance for the analog outputs is 100 ft.

Select 0-10VDC or 0-5VDC output by moving J4 jumper(see Figure #1).

Using the RD2432D configuration information, connect the analog and digital outputs to the appropriate control input terminals on the controller using 20AWG wire. The controller input connecting to the RD2432D should have a minimum analog input resistance of 20K Ohms.

While the RD2432D is attempting to connect to the receiver, the Data LED will blink rapidly. Once a connection has been established, the Data-Link LED will blink once to indicate the data transmission has been received and transmitted successfully. The Active LED will blink once every second to indicate that the repeater is functional.



CAUTION

Observe polarity when connecting analog outputs to the controller inputs.

Connect 24VAC 60Hz to the input terminals using 20AWG wire(see Figure #1). Check all connections before applying power to the unit.

Wireless LED Status Indications

The statuses of the 8 sensor LEDs on the top of the plug-in status module board (See Figure #1) shall be continuous “On” during normal operation.



CAUTION

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

PRODUCT SPECIFICATIONS

Supply	Voltage	24VAC 60Hz, 300mA maximum
RF	Data Protocol	IEEE 802.15.4-2003/2006
	Operating Frequency	902-928 MHz
	Output Power	+11 dBm
	Receiver Sensitivity	-110 dBm
	Open Field Range	One mile (line of sight)
Outputs	Analog (4 qty)	0-10VDC or 0-5VDC Minimum controller input resistance greater then 20K Ohms 100ft. maximum wiring distance to controller
	Digital (4 qty)	Pilot Duty Relay Contact Closure Contact Rating – 1 Amp @ 24VAC Max
	Low Battery/Lost Sensor Alarm (1 qty)	Pilot Duty Relay Contact Closure Contact Rating – 1 Amp @ 24VAC Max
Enclosure	Material	ABS (standard), Polycarbonate (Nema 4X)
	Rating	UL 94 5VA (standard), UL 94 HB (Nema 4X)
Environment	Operating Temperature	-40 to 150°F (-40 to 65°C)
	Operating Humidity	0 to 95% RH (non-condensing)
Approvals		FCC

WARRANTY SPECIFICATION

The ACI Wireless Series is 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 web site: www.workaci.com.

RD2432DE

