



## RD2432D Remote Spread Spectrum Wireless Output Device

### General Description

The RD2432 wireless output module utilizes reliable Spread Spectrum Mesh Network Radio technology. Together with other Trs wireless transceiver (BACnet, LonWorks & MODBUS), the system can be used to transmit remote control signals wirelessly. It is compatible with any control systems or DDC panels that accept 0-10 VDC or 0-5 VDC inputs.

The maximum radio transmission distance is dependent on 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 RD2432 output module.

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

### Ordering Information

Model	Description
RD2432D	Output module with four (4) analog output (0-10 VDC or 0-5 VDC selectable) and four (4) digital outputs (relay contacts)
RD2432D-24DC	Same as RD2432D except with 24VDC power input
RD2432DE	Same as RD2432D except in NEMA4 enclosure
RD2432DE-24DC	Same as RD2432D-24DC except in NEMA4 enclosure

### Features

- For wireless sensor and wireless control applications
- Receives wireless command information from BACnet, LonWorks or MODBUS Transceiver and outputs a corresponding on/off or analog signals to any equipment or DDC controller/panel,
- Up to 4 analog outputs ( 0-10 VDC or 0-5 VDC **field selectable**) and 4 digital outputs (relay contact)
- Positive feedback from RD2432 to Transceiver
- Multiple RD2432 can be used with one transceiver
- Reliable Spread Spectrum Mesh network technology

### Specifications

#### Input Power:

- 24 VAC 60 Hz, 300 mA nominal
- 24VDC, 300 mA nominal

#### Dimensions:

- 8.8" x 4.7" x 2.25"

#### Operating Conditions:

- -40 F to 150 F
- 5 to 95% non-condensing

#### Case

- Flame Retardant ABS Plastic (Black)
- UL Flame Rating – 94-5VA

#### Four Analog Output Channels

- 0 – 10 VDC or 0 – 5 VDC
- Minimum controller input resistance should be greater than 20 KOhm
- 100 ft. maximum wiring distance to controller

#### Four Digital Outputs

- Pilot Duty Relay Contact Closure
- Contact Rating – 1 A at 24VAC Max.

#### One Low Battery/Lost Sensor Alarm

- Pilot Duty Relay Contact Closure
- Contact Rating – 1 A at 24VAC Max.

#### RF Characteristics

- Operating Frequency Channel
  - 902-928 MHz
- Receiver Sensitivity (avg. power)
  - -110 dBm

#### Approvals

- FCC Certified

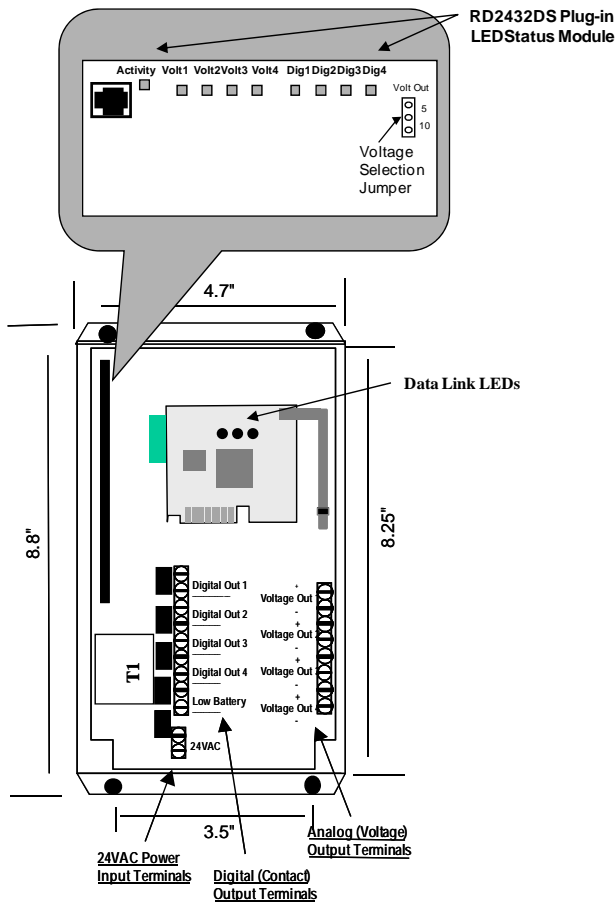


Figure 1

**CAUTION**

Sensors, Repeaters and output modules 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 a large body of water

Transmission distance and performance will be drastically reduced.

**CAUTION**

Do not use this product in any safety related applications where human life may be affected.

**Limitation of Liability** - Trs Systems' liability shall not exceed the purchase price paid for the products giving rise to any liability. In no event shall Trs be liable for any special, consequential or incidental damages arising in any way from using this product by the customers.

**Installation**

Mount the RD2432 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 5VDC output by moving the J4 jumper (Figure 1)

Using the RD2432 configuration information, connect the analog and digital outputs to the appropriate control input terminals on the controller using 20 AWG wire. The controller input connecting to the RD2432 should have a minimum analog input resistance of 20 KOhms.

While the RD2432 is attempting to connect to the transceiver the Data-Link LED will blink rapidly 8-10 times every 10 seconds. Once a connection has been established the Data-Link LED will blink once to indicate the data transmission has been received successfully. The Data-Link LED will continue to blink once for every data transmission.

**Caution**

Observe polarity when connecting analog outputs to the controller inputs.

Connect 24 VAC 60 Hz to the input terminals using 20 AWG 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.