

OA2630A Wireless Outside Air Temperature & Humidity Sensor



General Description

The mesh network OA2630 is a battery operated spread spectrum wireless outdoor air temperature and humidity sensor with a naturally ventilated 8-Plate Solar Radiation Shield to protect the sensor from precipitation and solar radiation.

If needed the distance from the sensor to the receivers can be extended using the Trs RR2552 repeater.

Trs Systems mesh network Series 2000 wireless sensors utilize reliable Spread Spectrum Radio technology. They can be installed easily in minutes eliminating hundreds of feet of wire and saving installation cost while reducing installation labor risks.

The Series 2000 sensor Data-Link LED confirms the data transmission was received by the receiver for fast and reliable positioning of the sensor during installation. *There is no need for special wireless installation equipment or tool.*

Together with the Trs Systems Series 2000 receivers and controllers, the Trs Systems wireless sensors can be used with any LON, BacNet, MODbus, or DDC control system or panel.

The maximum radio transmission distance is dependent on building type. The maximum open air line-of-sight 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 150 to 500 feet of walls, furniture and air.

Ordering Information

<u>Model</u>	<u>Description</u>
OA1630A	Outside air temperature & humidity sensor

Features

- 8-Plate Solar Radiation Shield/Housing
- 0-100% RH measurement
- -40 F to 160 F
- +/- 3% accuracy (10-90% RH)
- +/- 1 degree F
- Advanced RH sensor technology
- NO calibration required
- Excellent long term stability and reset rate
- Battery powered sensors
 - Wireless Mesh Network – easy to install & relocate sensors without additional wireless installation tools
 - Long battery life (approximately 5 years) with standard models
 - Low battery alarms
 - Reliable Spread Spectrum Mesh Network radio technology

Specifications

Input Voltage:

- Battery - One or two type 3.0V LiMNO2 1400 mAH (e.g. Duracell DL123A)

Dimensions:

- 8.25" x 7.25" x 10.75"

Operating Conditions:

- Temperature -40 F to 160 F
- Humidity 0 to 100% RH non-condensing

Sensing Accuracy:

- +/- 1 degree F
- +/- 3% RH (10 to 90% RH)

Open Field Range:

- One mile line of sight

Construction:

- UV Stabilized Thermoplastic Plates
- UV Resistant NEMA 4 Case
- White

Transmitter Characteristics

- Center Transmit Frequency
 - 923.58 MHz
- Transmitter Power - 11 dB

Approvals - RF

- FCC certified

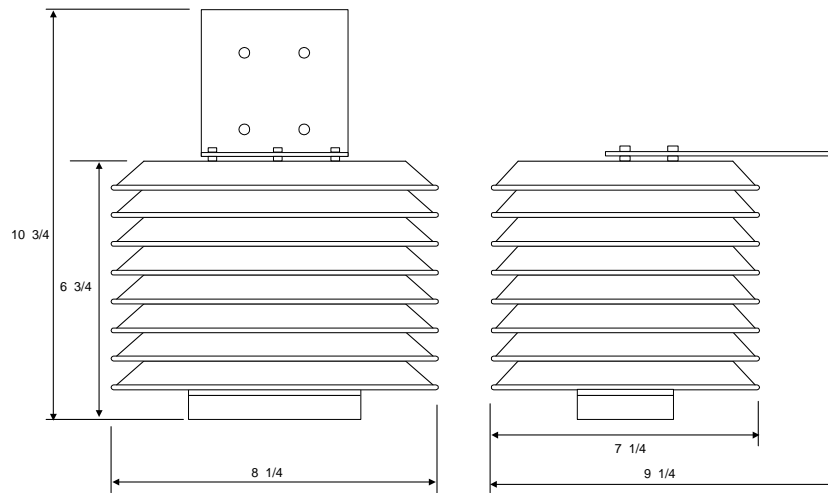


Figure 1

Installation

Wireless outside air sensors should be installed within 200 to 500 feet of the receiver. RR2552 signal repeaters can be installed as needed to increase transmission distance between sensors and receivers.

To select the proper sensor location, first install and power the receiver. Observing polarity insert the battery into the sensor to activate it. The mesh networked Series 2000 system does not require any additional wireless equipment to determine the proper location of the sensors.

While the sensor is attempting to connect to the receiver 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. The data transmission rate is programmed into the sensor (normally 1 minute intervals). To manually initiate a data transmission press the push button switch located by the negative terminal of the battery.

The OA1630 can be mounted on the side of a wall, wooden post, or a metal pipe with an outside diameter between 1" and 1 1/4".

- The outdoor sensor works best in a location with a steady breeze. Mount away from fences, trees or other obstructions.
- If attaching to a building the preferred location would be the north side of the building.

The sensor has a Low Battery LED that will start to blink continuously when the battery voltage is low. A low battery signal is also sent to the receiver for remote indication that the battery should be replaced. If the battery is not replaced in approximately 2 months the battery voltage will become so low that the Low Battery and Data-Link LEDs will not blink. Replace the battery and the Data-Link LED will start blinking while the sensor is re-establishing communications with the receiver. Prior to reattaching the cover - locate and record the wall sensor ID Number located on a label on the back of the cover.

Reattach the cover securely to prevent rain from entering the case.



CAUTION

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 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.

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