

DH2630D, E & F Wireless Humidity and Temperature Duct Sensor

General Description

The mesh network DH2630 is a battery operated spread spectrum wireless duct mounted humidity (and temperature) sensor.

The sensor is encapsulated in a 9.7" long plastic probe and is available with humidity only (DH2630A) and humidity and temperature (DH2630B & C) models.

Trs Systems Series 2000 wireless sensors utilize reliable Spread Spectrum Mesh Network 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 WH2630 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 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.

Ordering Information

Model	Description
DH2630D	Duct mounted 3% humidity sensor with a 9.7" sensing probe
DH2630E	Duct mounted 3% humidity sensor and temperature sensor (25 F to 125 F) with a 9.7" sensing probe
DH2630F	Duct mounted 3% humidity sensor and temperature sensor (-40 F to 160 F) with a 9.7" sensing probe



Features

- 0-100% RH measurement
- 25 F to 125 F or -40 F to 160 F
- +/- 2% accuracy (30-80% RH)
- +/- 1 degree F
- Advanced RH sensor technology
- No calibration required
- Excellent long term stability, response time and reset rate
- Battery powered sensors
- Wireless – easy to install & relocate
- Long battery life (approximately 3 years with one battery)
- Low battery LED + remote low battery alarm notification
- Reliable Spread Spectrum Mesh Network radio technology

Specifications

Input Voltage:

- Battery - Type 3.0V LiMNO2 1400 mAH (Duracell DL123A)

Dimensions:

- Housing: 2" x 2-3/4" x 4-1/2"
- Probe length: 9.7"
- Probe Diameter: 3/4"

Operating Conditions:

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

Sensing Ranges & Accuracy:

- 25 F to 125 F or -40 to 160 F
- +/- 1 degree F
- 0 to 100% RH
- +/- 2% RH (20 to 80% RH)

Open Field Range:

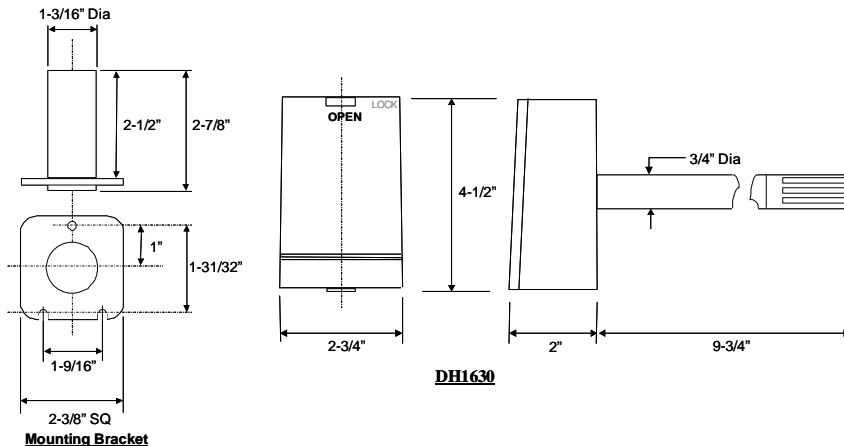
- One mile line of sight

Transmitter Characteristics:

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

Approvals:

- FCC certified



Installation

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

⚠ CAUTION

Observe battery polarity when installing battery.

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.

⚠ 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.

Locate the sensor at the straight section of the duct and away from heating, cooling or humidifying elements. Cut a 1 ¼" diameter hole in the side of the duct. Mount the bracket to the duct, inserting the gasket between the sensor and duct before attaching with screws. With the sensor protrusion pointing away – rotate the mounting lever clockwise to the right. Insert the sensor head into the bracket aligning the protrusions on the mounting plate with the grooves in the mounting bracket on the duct. Secure the sensor by rotating the lever 45° counter-clockwise.

Since the sensor is located at the tip of the probe, consideration should be made to place the tip of the probe in the middle of the airflow. Locate and record the duct sensor TXID numbers located on a label on the inside of the enclosure cover.

The cover of the sensor can be removed by pushing the locking tap on the side of the housing. When the sensor housing has been secured to the air duct, install the battery. Installing the battery will activate the sensor.

To install the cover, insert the case tabs into the case and snap the cover into the locking tab.

⚠ 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.