



Wi-Fi Humidity Sensor

Technical Overview

General Description

The OEM Wi-Fi Humidity (RH) sensor allows you to monitor the relative humidity of the air within a room or enclosure. Ideal for monitoring humidity within greenhouses, museums, saunas and humidors. They can also be used for building applications such as controlling mold, mildew or dust mites. An integrated 802.11 b/g radio allows the sensor to work with any existing Wi-Fi network. OEM Wi-Fi sensors can be easily programmed with your Wi-Fi network's WEP or WPA(2) security via the free Wi-Fi Setup Utility (PC application) and a USB programming cable (available in the [Monnit web store](#)). User defined transmission intervals (heartbeats) and sensor threshold settings ensure that sensor data is received when needed, based on the application.

Features

- +/- 1.8% accuracy (between 10% - 90% RH).
- Calculates dewpoint.
- Scientific grade sensor.
- Logs data if Wi-Fi network is disrupted.
- Free iMonnit basic online wireless sensor monitoring and notification system to configure sensors, view data and set alerts via SMS text and email.

(iMonnit online software is available as an OEM private / white label platform.)

Principle of Operation

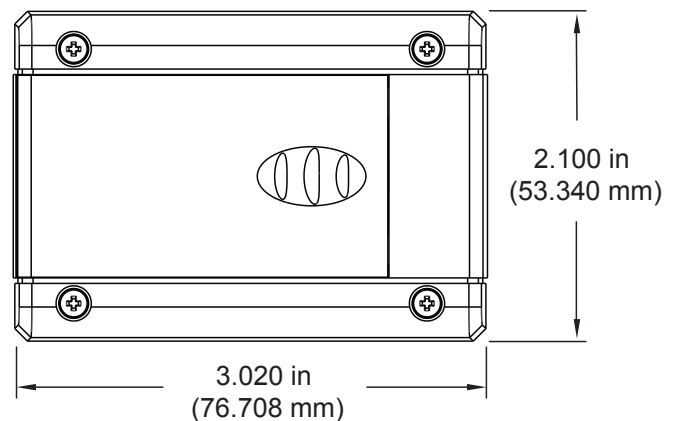
The OEM Wi-Fi Humidity (RH) Sensor measures the relative humidity at the device. The sensor returns RH and temperature values to the iMonnit Online Sensor Monitoring and Notification System. The system calculates dewpoint from the data and stores all three data points in the online system where the data can be reviewed and exported as a data sheet or graph. Notifications can be set up through the online system to alert the user when defined thresholds have been met or exceeded.

OEM Wi-Fi Sensor Electronics Specifications

- Power: 2 replaceable 1.5V "AA" batteries (included)
- Communication: 802.11 b/g
(2.412 - 2.484 GHz)
- Wi-Fi Security: Open, WEP, WPA, WPA2
- Dimensions: 3.02" x 2.1" x 1.27"
- Transmission Range: Up to 250 ft. *
- Battery Life: Up to 5 years.**

* Actual range may vary depending on environment.
** Battery life is affected by sensor type, Wi-Fi security type, distance from Wi-Fi router, reporting frequency and other variables.




Height: 1.270 in (32.258 mm)



Applications

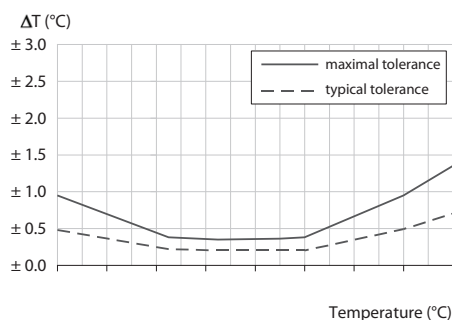
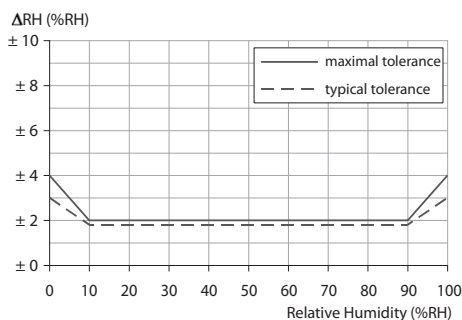
- Greenhouse humidity monitoring
- Agriculture environmental monitoring
- Art gallery and museum environmental monitoring
- Humidor monitoring
- General weather and environmental monitoring

Technical Specifications

Networking Standards	IEEE 802.11 b/g
Frequency Band	2.412 - 2.484 GHz
Wi-Fi Security Standards	Open, WEP, WPA, WPA2
Wi-Fi Security Programming	Via PC software using USB cable. (Can be changed through online software.)
Network Settings	Auto DHCP/DNS or Static
Data Logging	Standard - On Wi-Fi disruption, unit will log the first 50 readings and transmit when Wi-Fi connection is re-established. Premiere - Unit can record up to 50,000 readings and transmit when Wi-Fi is available.
Power consumption	4uA sleep, 35mA active RX, 180mA TX (at +12dBm)
Battery Life	Up to 5 years depending on sensor type, Wi-Fi security, distance from Wi-Fi router, reporting frequency and other variables. (Testing surpassed 90,000 transmissions until battery depletion.)
Wi-Fi Data Rate	Auto configures to best rate for maximum range.
Wireless Range	Up to 250 ft. device range (typical to standard Wi-Fi devices).
Electronics Operating Temperature	Using Alkaline Batteries: -18°C to +55°C (0°F to +130°F) Using Lithium Batteries: -40°C to +85°C (-40°F to +185°F)
LED Light	Status / activity
Certifications	   Industry Canada FCC ID: T9J-RN171. IC: RSS-210 low-power communication device. CE ID: 0681.

Humidity Sensor Specifications

Accuracy	± 1.8% under normal conditions (10% - 90% RH)
Energy Consumption	80uW (at 12bit, 3V, 1 measurement / s)
RH Operating Range	0 – 100% RH
T Operating Range	-40 – +125°C (-40 – +257°F)
RH Response Time	8 sec (tau63%)



- * Hardware can not withstand negative voltage. Please take care when connecting a power device.
- ** At temperatures above 100°C, it is possible for the board circuitry to lose programmed memory.

For more product information, to get a quote, or to place an order, please contact our sales department at 801-561-5555. Visit us on the web at www.oemsensors.com.

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