MONNIT®

Remote Monitoring for Business

HUMIDITY + PoE•X

# PoE•X Humidity Sensor


## General Description

The Power-over-Ethernet (PoE) Humidity (RH) Sensor accurately monitors the relative humidity of the air within a room or enclosure. Additionally, the iMonnit Online Sensor Monitoring and Notification System also calculates dew point and absolute humidity and stores all these 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.

## Monnit PoE•X Sensor Features

- Power-over-Ethernet ready (injector hardware required)
- Embedded LEDs for transmission & online condition indicators
- 50,000 sensor message memory (non-volatile)
- Modbus TCP & SNTP v1 interface capabilities
- No PC required (managed through apps and smart devices)
- Remote update capable w/automatic updates
- Optional 5V DC power supply available

## Technical / Device Specifications

| DEVICE SPECIFICATIONS | |
|---|---|
| Part Number | MNS-P-C1-HU-RH |
| Communication Hardware | 10 / 100 Ethernet Controller |
| PoE Requirements | Class 1 Device (500mW) |
| IEEE Standard Compliance | 802.3AF-2003 / 802.3AT-2009 Class 1 |
| Operation | Full- and Half-Duplex |
| Cross-Over Correction | Automatic MDI / MDI-X |
| Protocols Supported | DHCP, DNS, NTP, UDP, TCP, SNMP, Modbus TCP |
| Input Power | Supplementary Power Requirement |
| Cable Connector | RJ45 |
| Supplementary Power Connector | 2.1 x 5.5 mm barrel jack, center positive |
| Device Memory | Up to 50,000 sensor messages; varies based on sensor type. (Sensor messages will be stored in the event of Internet outage and transferred when connection is restored.) |
| Forced Communication / Reset Hardware | Button |
| Operating Temperature | -20 to +60°C (-4 to 140°F) |
| Storage Temperature | -40 to +85°C (-40 to 185°F) |
| **SENSOR SPECIFICATIONS** | |
| Accuracy | 16.4 ft (5 m) |
| RH Operating Range | 0 - 100% RH |
| RH Response Time | 8 sec ( tau 63% ) |
| Weight | 4.42 oz. (125 g) |

## Sensor Accuracies

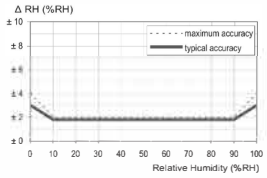



Figure 1. Typical and maximal tolerance at 25°C.

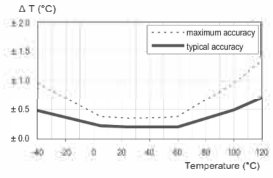



Figure 2. Maximal tolerance for temperature sensor in °C.

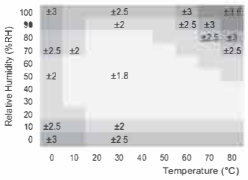



Figure 3. Typical accuracy of relative humidity measurements given in %RH for temperatures between 0 – 80°C.

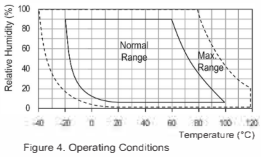
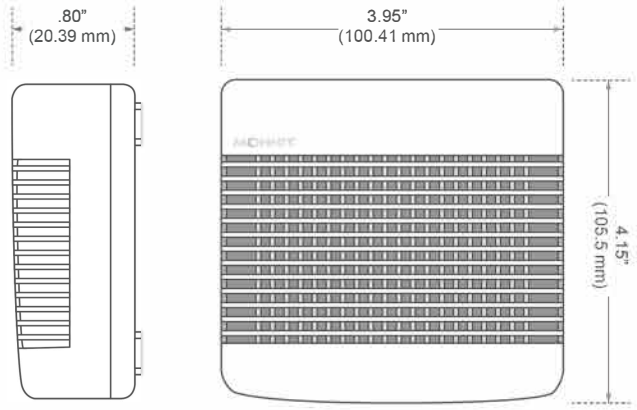



Figure 4. Operating Conditions




## Example Applications

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

## Notes

### Humidity Operating Range

The sensor is designed for operation within the recommended “Normal Range” (see Figure 4 on page 2). Long-term exposure to conditions outside Normal Range, especially at humidity >80%RH, may temporarily offset the RH signal (+3%RH after 60h). After returning to the Normal Range it will slowly return towards calibration state by itself. Prolonged exposure to extreme conditions may shorten the device’s service life

### Software Compatibility

Currently Monnit PoE•X Sensors are only supported in iMonnit Online.

For more information about our products or to place an order, please contact our sales department at 801-561-5555. Visit us on the web at www.monnit.com.