



Model: WRHX-WM3-900

## Wireless Relative Humidity (RH) Transmitter



### FEATURES & BENEFITS

- Wireless Bridge Between RH Sensor and Instrument
- 0-100% RH Measurement - Accuracy Up To +/- 3%
- Receiver Models 0-5, 0-10V DC or 4-20mA Output
- Up To 6 Miles Line-of-site Transmit/Receive Distance
- Powered by any 12V-24V DC Supply
- Rugged Painted Aluminum Enclosures
- Pre-configured, Ready-To-Operate
- Sold As Transmitter/Receiver Matched Set
- License Free Radio Operation

### APPLACATIONS

- Relative Humidity Measurement
- Remote Sensor Monitoring & Control
- Air Quality Monitoring

### Description

Model WRHX-WM3-900 Wireless Relative Humidity Transmitter features a factory programmed transmitter / receiver matched set. The transmitter sends RH sensor measurements to a base receiver up to 6 miles away using license free 900 MHz RF technology. The receiver base provides analog voltage or current output. Each Transmitter/Receiver set is factory coded as a matched set and requires no field programming.

### Transmitter Operation

The wireless transmitter reads data from a RH sensor and then sends the measured data over the air to a remote location. The measured relative humidity signals are converted to digital packets and then transmitted via a license free radio transmission to a waiting control receiver.

### Receiver Operation

The wireless receiver decodes any incoming radio packets and converts them into linear voltage or current output signals for interfacing with PLCs, Controllers, Data Loggers or Process Measurement Instruments.

## General Specifications

**Radio Frequency:** 900 MHz  
**Regulatory:** FCC Part 15 (No license required)  
**Antenna Connection:** RP-SMA  
**Antennas:** 7dbi, Omni-directional (Included)  
**Transmit/Receive Distance:**  
 with included antennas:  
 Indoor/Urban 1000ft, Line-of-site 1 Mile  
 with optional antennas:  
 Indoor/Urban 1600ft, Line-of-site 6 Miles  
**Transmitter/Receiver Code Matching:** Factory set  
**Wire Connection:** Terminal Blocks  
**Operating Temperature:** -22 to 113 °F (-30 to 45 °C)  
**Enclosures:** Rugged Painted Aluminum Enclosures

## Transmitter Specifications

**RF Power Output:** 100mW  
**RF Output Impedance:** 50 Ohm nominal  
**RF Data Rate:** 10 kbps  
**Operating Power:** 12-24V DC @ 3W max  
**Input Type:** RH Sensor  
**Measurement Range:** 0-100% RH  
**Measurement Accuracy:** +/- 3% @23 °C

## Receiver Specifications

**Receive Sensitivity:** -100 dBm  
**Operating Power:** 12-24V DC @ 3W max  
**Output:** Analog, 0-5V DC, 0-10V DC or 4-20mA  
**RF Signal Loss Result:** Holds output at last reading.

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Each Set Includes 7dbi Antennas and 9ft Antenna Extension Cables



Optional 6 Mile Distance Antenna Set

## Regulatory Approvals

FCC(USA) - MCQ-XBEEESC  
 IC (Canada) - 1846A-XBEEESC

Model Number	Description
WRHX-WM3-900-05	Wireless Relative Humidity (RH) Transmitter/Receiver, 0-5V DC Output
WRHX-WM3-900-10	Wireless Relative Humidity (RH) Transmitter/Receiver, 0-10 DC Output
WRHX-WM3-900-420	Wireless Relative Humidity (RH) Transmitter/Receiver, 4-20mA Output

## Available Options

Model Number	Description
DRWC-900-LRANT	Optional Long-Distance Yagi Directional Antenna Set (up to 6 Miles line-of-site)

Note: Continued product improvements make specifications subject to change without notice. Check [www.imagineinstruments.com](http://www.imagineinstruments.com) for the latest product information and updates

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