



# Wireless Relative Humidity (RH) Transmitter With Remote Mounted Sensor



#### **FEATURES & BENEFITS**

Wireless Bridge Between RH Sensor and Instrument
0-100% RH Measurement - Accuracy Up To +/- 3%
Remotely Mounted Sensor with Integral Cable
Receiver Models 0-5, 0-10V DC or 4-20mA Output
Up To 1 Mile 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-WM3RP-24 Wireless Relative Humidity Transmitter features a factory programmed transmitter / receiver matched set. The remotely mounted RH sensor is connected to a wireless transmitter that sends sensor measurements to a base receiver up to 1 mile away using license free 2.4 GHz 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 remotely mounted 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: 2.4 GHz

Regulatory: FCC Part 15 (No license required)

Antenna Connection: RP-SMA

Antennas: 5dbi, Omni-directional (Included)

**Transmit/Receive Distance:** with included antennas:

Indoor/Urban 100ft, Line-of-site 600ft

with optional antennas:

Indoor/Urban 300ft, Line-of-site 1 Mile

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: 63mW

RF Output Impedance: 50 Ohm nominal

RF Data Rate: 250 kbps

Operating Power 12-24V DC @ 3W max

Input Type: Remote RH Sensor

Remote Sensor Size: .75 Día x 4.25" (19 Día x 108mm)

Measurement Range: 0-100% RH

Measurement Accuracy: +/- 3% @23 °C

# **Receiver Specifications**

Receive Sensitivity: -100 dBm

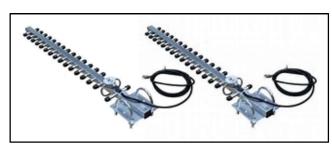
Operating Power: 12-24V DC @ 3W max

**Output:** Analog, 0-5V DC, 0-10V DC or 4-20mA **RF Signal Loss Result:** Holds output at last reading.

Model: WRHX-WM3RP-24



Each Set Includes 5dbi Antennas and 9ft Antenna Extension Cables



Optional 1 Mile Distance Antenna Set

## Regulatory Approvals

FCC(USA) - OUR-XBEEPRO IC (Canada) - 4214A-XBEEPRO

#### Available Models

Model Number	Description
WRHX-WM3RP-24-05	Wireless Relative Humidity (RH) Transmitter/Remote Sensor/Receiver, 0-5V DC Output
WRHX-WM3RP-24-10	Wireless Relative Humidity (RH) Transmitter/Remote/Sensor/Receiver, 0-10 DC Output
WRHX-WM3RP-24-420	Wireless Relative Humidity (RH) Transmitter/Remote Sensor/Receiver, 4-20mA Output

# Available Options

Model Number	Description
DRWC-24-LRANT	Optional Long-Distance Yagi Directional Antenna Set (up to 1 Miles line-of-site)

Note: Continued product improvements make specifications subject to change without notice. Check www.imagineinstruments.com for the latest product information and updates

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