



## HOBOnet Wireless Temp/RH Sensor

### Battery Powered (incl. lithium batteries)

A battery-powered wireless sensor that works with the HOBOnet system to monitor air temperature and relative humidity.

#### Important Information

Includes lithium batteries. A complete system requires a HOBOnet MicroRX Station, which has an integrated HOBOnet Wireless Manager, and a HOBOnet Wireless Sensor. HOBOnet Wireless Repeater (RXW-RPTR-B-xxx) can be added to extend the range of both system options.

### Supported Measurements

Dew Point, Relative Humidity, Temperature

### Features

#### Sensor Features

- High accuracy:  $\pm 0.2^{\circ}\text{C}$  ( $\pm 0.36^{\circ}\text{F}$ ) and  $\pm 2.5\%$  RH
- Robust RH sensor withstands extended use in high-humidity environments

#### Wireless Features

- 900 MHz wireless mesh self-healing technology
- 450 to 600 meter (1,500 to 2,000 feet) wireless range and up to five hops
- Up to 50 wireless sensors or 336 data channels per RX Station
- Simple button-push to join the HOBOnet wireless network
- Onboard memory to ensure no data loss

- Powered by 2 user-replaceable lithium AA batteries

## What's in the box

- HOBOnet Wireless Temp/RH Sensor
- Lithium batteries

## Contact Us

Sales (8am to 5pm ET, Monday through Friday)

- Email [sales@onsetcomp.com](mailto:sales@onsetcomp.com)
- Call 1-508-759-9500
- In U.S. toll free 1-800-564-4377
- Fax 1-508-759-9100

Technical Support (8am to 5pm ET, Monday through Friday)

- Contact Product Support [www.onsetcomp.com/support/contact](http://www.onsetcomp.com/support/contact)
- Call 1-508-759-9500
- In U.S. toll free 1-877-564-4377

Onset Computer Corporation  
470 MacArthur Boulevard  
Bourne, MA 02532

## HOBOnet Wireless Temp/RH Sensor (RXW-THC-B-xxx) Specifications

### Sensor

	Temperature	RH
Measurement Range	-40°C to 75°C (-40°F to 167°F)	0–100% RH at -40° to 75°C (-40° to 167°F); exposure to conditions below -20°C (-4°F) or above 95% RH may temporarily increase the maximum RH sensor error by an additional 1%
Accuracy	$\pm 0.25^{\circ}\text{C}$ from -40° to 0°C ( $\pm 0.45^{\circ}\text{F}$ from -40° to 32°F) $\pm 0.20^{\circ}\text{C}$ from 0° to 70°C ( $\pm 0.36^{\circ}\text{F}$ from 32° to 158°F) $\pm 0.25^{\circ}\text{C}$ from 70° to 75°C ( $\pm 0.45^{\circ}\text{F}$ from 158° to 167°F)	$\pm 2.5\%$ from 10% to 90% RH typical to a maximum of $\pm 3.5\%$ including hysteresis at 25°C (77°F); below 10% and above 90% $\pm 5\%$ typical
Resolution	0.02°C (0.036°F)	0.01% RH
Drift	<0.01°C (0.018°F) per year	<1% per year typical
Response Time (typical, to 90% of change)	3 minutes, 45 seconds in air moving 1 m/s	15 seconds in air moving 1 m/s

### Wireless Note

<b>Operating Temperature Range</b>	-40 to 70°C (-40 to 158°F)
<b>Radio Power</b>	12.6 mW (+11 dBm) non-adjustable
<b>Transmission Range</b>	Reliable connection to 457.2 m (1,500 ft) line of sight at 1.8 m (6 ft) high Reliable connection to 609.6 m (2,000 ft) line of sight at 3 m (10 ft) high
<b>Wireless Data Standard</b>	IEEE 802.15.4
<b>Radio Operating Frequencies</b>	RXW-THC-B-900: 904-924 MHz RXW-THC-B-868: 866.5 MHz RXW-THC-B-921: 921 MHz RXW-THC-B-922: 916-924 MHz
<b>Modulation Employed</b>	OQPSK (Offset Quadrature Phase Shift Keying)
<b>Data Rate</b>	Up to 250 kbps, non-adjustable
<b>Duty Cycle</b>	<1%
<b>Maximum Number of Motes</b>	Up to 50 wireless sensors or 336 data channels per one HOBO RX station
<b>Logging Rate</b>	1 minute to 18 hours
<b>Number of Channels</b>	3
<b>Battery Type</b>	Two AA 1.5 V lithium batteries
<b>Battery Life</b>	1 year, typical use
<b>Memory</b>	16 MB
<b>Dimensions</b>	Sensor: 45.97 x 11.43 x 10.16 mm (1.81 x 0.45 x 0.40 inches) Mote: 16.2 x 8.59 x 4.14 cm (6.38 x 3.38 x 1.63 inches)
<b>Weight</b>	223 g (7.87 oz)
<b>Materials</b>	Sensor: Polyamide Mote: PCPBT, silicone rubber seal
<b>Environmental Rating</b>	IP67, NEMA 6

