



# HOBOnet Wireless Temperature & Relative Humidity Sensor (Lithium Battery Powered)

## Product Images



## Short Description

HOBOnet Wireless Temp/RH Sensor - pre-configured and ready to deploy. Data is accessed through HOBOLink web-based software.

## Description

The HOBOnet Wireless Temperature and Relative Humidity (RH) Sensor provides a cost-effective and scalable solution for web-enabled monitoring of air temperature and humidity.

HOBOnet Wireless Sensors communicate data directly to the RX Station or pass data through other wireless sensors back to the central station. They are preconfigured and ready to deploy, and data is accessed through HOBOLink, Onset's innovative cloud-based software platform.

## 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

- 868 MHz wireless mesh self-healing technology - UK & Europe Version (contact us if you will be deploying in another region)
- 450 to 600 meter (1,500 to 2,000 feet) wireless range and up to five hops
- Up to 50 wireless sensors 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 (included)

**Note:** 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-868) can be added to extend the range of both system options.

# Additional Information

Country of Manufacture	United States																		
Brand	Onset HOBBO																		
Measurements	Humidity, Temperature																		
Typical applications	Environmental (Outdoor), Field Research, Weather Monitoring																		
Explanation	For full specifications for this product, please see the User Manual found under the Resources tab.																		
	<table border="1"> <thead> <tr> <th>Sensor</th> <th>Temperature</th> <th>RH</th> </tr> </thead> <tbody> <tr> <td><b>Measurement Range</b></td> <td>-40°C to 75°C (-40°F to 167°F)</td> <td>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%</td> </tr> <tr> <td><b>Accuracy</b></td> <td>±0.25°C from -40° to 0°C (±0.45°F from -40° to 32°F) ±0.20°C from 0° to 70°C (±0.36°F from 32° to 158°F) ±0.25°C from 70° to 100°C (±0.45°F from 158° to 212°F)</td> <td>±2.5% from 10% to 90% RH typical to a maximum of ±3.5% including hysteresis at 25°C (77°F); below 10% and above 90% ±5% typical</td> </tr> <tr> <td><b>Resolution</b></td> <td>0.02°C (0.036°F)</td> <td>0.01% RH</td> </tr> <tr> <td><b>Drift</b></td> <td>&lt;0.01°C (0.018°F) per year</td> <td>&lt;1% per year typical</td> </tr> <tr> <td><b>Response Time (typical, to 90% of change)</b></td> <td>3 minutes, 45 seconds in air moving 1 m/s</td> <td>15 seconds in air moving 1 m/s</td> </tr> </tbody> </table>		Sensor	Temperature	RH	<b>Measurement Range</b>	-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%	<b>Accuracy</b>	±0.25°C from -40° to 0°C (±0.45°F from -40° to 32°F) ±0.20°C from 0° to 70°C (±0.36°F from 32° to 158°F) ±0.25°C from 70° to 100°C (±0.45°F from 158° to 212°F)	±2.5% from 10% to 90% RH typical to a maximum of ±3.5% including hysteresis at 25°C (77°F); below 10% and above 90% ±5% typical	<b>Resolution</b>	0.02°C (0.036°F)	0.01% RH	<b>Drift</b>	<0.01°C (0.018°F) per year	<1% per year typical	<b>Response Time (typical, to 90% of change)</b>	3 minutes, 45 seconds in air moving 1 m/s
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Explanation	Wireless Mote																		
	<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-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>	50 motes per one RX Wireless Sensor Network																	
	<b>Power Source</b>	Two AA 1.5 V lithium batteries (included)																	
	<b>Battery Life</b>	1 year, with typical use																	
	<b>Memory</b>	16 MB																	
	<b>Dimensions</b>	Sensor: 5.1 x 33 mm (0.2 x 1.3 inches) Cable length: 2 m (6.56 ft) Mote: 16.2 x 8.59 x 4.14 cm (6.38 x 3.38 x 1.63 inches)																	
	<b>Weight</b>	Sensor and cable: 110 g (3.88 oz); Mote: 223 g (7.87 oz)																	
	<b>Materials</b>	Sensor: Polyamide Mote: PCPBT, silicone rubber seal																	
<b>Environmental Rating</b>	IP67, NEMA																		
<b>Compliance</b>	 RXW-THC-B-868																		
Ideal For	Professional, Agronomy																		