



HOBOnet Wireless Temperature Sensor (Lithium Battery Powered) - 1ft Probe Cable

Product Images



Short Description

The HOBOnet Wireless Temperature Sensor provides a cost-effective and scalable solution for web-enabled monitoring of air temperature. HOBOnet wireless sensors communicate data directly to a HOBOnet 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 cloud-based software platform.

Description

Sensor Features

- Measurement range of -40° to 100°C (-40° to 212°F)
- High accuracy: $\pm 0.2^{\circ}\text{C}$ ($\pm 0.36^{\circ}\text{F}$)
- Stainless-steel sensor tip

Wireless Features

- 868 MHz wireless mesh self-healing technology
- 450 to 600 metre (1,500 to 2,000 feet) wireless range and up to five hops
- Up to 50 wireless sensors or 336 data channels per HOBOnet RX station
- Simple button-push to join the HOBOnet wireless network
- Onboard memory to ensure no data loss
- Powered by 2 user-replaceable rechargeable 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).

[6-foot probe cable option also available \(SKU: RXW-TMB-6-868\)](#)

Additional Information

Country of Manufacture	United States																																														
Brand	Onset HOBO																																														
Measurements	Soil Temperature, Temperature, Water Temperature																																														
Typical applications	Building Monitoring, Building Performance, Environmental (Indoor), Environmental (Outdoor), Field Research, HVAC, Weather Monitoring																																														
Onset Product Series	RX																																														
Explanation	<p>For full specifications for this product, please see the User Manual found under the Resources tab.</p> <p>Sensor</p> <table border="0"> <tr> <td>Measurement Range</td> <td>-40° to 100°C (-40° to 212°F)</td> </tr> <tr> <td>Accuracy</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> </tr> <tr> <td>Resolution</td> <td>0.02°C (0.036°F)</td> </tr> <tr> <td>Drift</td> <td><0.01°C (0.018°F) per year</td> </tr> <tr> <td>Response Time (typical, to 90% of change)</td> <td>2 minutes, 30 seconds in air moving 1 m/sec</td> </tr> </table> <p>Wireless Mote</p> <table border="0"> <tr> <td>Operating Temperature Range</td> <td>-40° to 70°C (-40° to 158°F)</td> </tr> <tr> <td>Radio Power</td> <td>12.6 mW (+11 dBm) non-adjustable</td> </tr> <tr> <td>Transmission Range</td> <td>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</td> </tr> <tr> <td>Wireless Data Standard</td> <td>IEEE 802.15.4</td> </tr> <tr> <td>Radio Operating Frequencies</td> <td>RXW-TMB-x-900: 904–924 MHz RXW-TMB-x-868: 866.5 MHz RXW-TMB-x-921: 921 MHz RXW-TMB-x-922: 916–924 MHz</td> </tr> <tr> <td>Modulation Employed</td> <td>OQPSK (Offset Quadrature Phase Shift Keying)</td> </tr> <tr> <td>Data Rate</td> <td>Up to 250 kbps, non-adjustable</td> </tr> <tr> <td>Duty Cycle</td> <td><1%</td> </tr> <tr> <td>Maximum Number of Motes</td> <td>Up to 50 wireless sensors or 336 data channels per one HOBO RX station</td> </tr> <tr> <td>Logging Rate</td> <td>1 minute to 18 hours</td> </tr> <tr> <td>Number of Data Channels</td> <td>2</td> </tr> <tr> <td>Battery Type</td> <td>Two AA 1.5 V lithium batteries</td> </tr> <tr> <td>Battery Life</td> <td>1 year, typical use</td> </tr> <tr> <td>Memory</td> <td>16 MB</td> </tr> <tr> <td>Dimensions</td> <td>Sensor: 5.3 x 33 mm (0.2 x 1.3 inches) Cable length: 0.3 m (1 ft), RXW-TMB-1-xxx; 1.8 m (6 ft), RXW-TMB-6-xxx Mote: 16.2 x 8.59 x 4.14 cm (6.38 x 3.38 x 1.63 inches)</td> </tr> <tr> <td>Weight</td> <td>Sensor and cable: 7.6 g (0.27 oz), RXW-TMB-1-xxx; 35.2 g (1.24 oz), RXW-TMB-6-xxx Mote: 223 g (7.87 oz)</td> </tr> <tr> <td>Materials</td> <td>Sensor: Stainless steel waterproof tip Mote: PCPBT, silicone rubber seal</td> </tr> <tr> <td>Environmental Rating</td> <td>Sensor and cable: Immersion in water up to 50°C (122°F) for 1 year Mote: IP67, NEMA 6</td> </tr> </table>	Measurement Range	-40° to 100°C (-40° to 212°F)	Accuracy	±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)	Resolution	0.02°C (0.036°F)	Drift	<0.01°C (0.018°F) per year	Response Time (typical, to 90% of change)	2 minutes, 30 seconds in air moving 1 m/sec	Operating Temperature Range	-40° to 70°C (-40° to 158°F)	Radio Power	12.6 mW (+11 dBm) non-adjustable	Transmission Range	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	Wireless Data Standard	IEEE 802.15.4	Radio Operating Frequencies	RXW-TMB-x-900: 904–924 MHz RXW-TMB-x-868: 866.5 MHz RXW-TMB-x-921: 921 MHz RXW-TMB-x-922: 916–924 MHz	Modulation Employed	OQPSK (Offset Quadrature Phase Shift Keying)	Data Rate	Up to 250 kbps, non-adjustable	Duty Cycle	<1%	Maximum Number of Motes	Up to 50 wireless sensors or 336 data channels per one HOBO RX station	Logging Rate	1 minute to 18 hours	Number of Data Channels	2	Battery Type	Two AA 1.5 V lithium batteries	Battery Life	1 year, typical use	Memory	16 MB	Dimensions	Sensor: 5.3 x 33 mm (0.2 x 1.3 inches) Cable length: 0.3 m (1 ft), RXW-TMB-1-xxx; 1.8 m (6 ft), RXW-TMB-6-xxx Mote: 16.2 x 8.59 x 4.14 cm (6.38 x 3.38 x 1.63 inches)	Weight	Sensor and cable: 7.6 g (0.27 oz), RXW-TMB-1-xxx; 35.2 g (1.24 oz), RXW-TMB-6-xxx Mote: 223 g (7.87 oz)	Materials	Sensor: Stainless steel waterproof tip Mote: PCPBT, silicone rubber seal	Environmental Rating	Sensor and cable: Immersion in water up to 50°C (122°F) for 1 year Mote: IP67, NEMA 6
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Contents	<ul style="list-style-type: none"> • HOBOnet Wireless Temperature Sensor • Lithium batteries • Zip ties 																																														
Ideal For	Professional, Agronomy																																														
Power	Battery only																																														