

RXW-TMB-1-900 • RXW-TMB-1-868 • RXW-TMB-1-922 • RXW-TMB-1-921 •
RXW-TMB-6-900 • RXW-TMB-6-868 • RXW-TMB-6-922 • RXW-TMB-6-921



HOBOnet Wireless Temperature Sensor

1-foot and 6-foot cable options available

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

Important Information

Includes lithium batteries. A complete system requires a HOBOnet RX Station, a HOBOnet Wireless Manager, and a HOBOnet Wireless Sensor. HOBOnet Wireless Repeaters can be added to extend the range of both system options.

Supported Measurements

Air Temperature, Soil Temperature, Temperature, Water Temperature

Features

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

- 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 HOBOnet 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 Temperature Sensor
- Lithium batteries
- Zip ties

Contact Us

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

- Email sales@onsetcomp.com
- Call 1-508-759-9500
- In U.S. toll free 1-800-564-4377
- Fax 1-508-759-9100

Onset Computer Corporation
470 MacArthur Boulevard
Bourne, MA 02532

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

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

HOBOnet Wireless Temperature Sensor (RXW-TMB-x-xxx) Specifications

Sensor

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

Wireless Mote

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

