

HOBO[®] RXW-TMB-x-xxx Sensor

HOBOnet Wireless Temperature

The HOBOnet Wireless Temperature Sensor provides a costeffective and scalable solution for web-enabled monitoring of air temperature. HOBOnet wireless sensors communicate data directly to a HOBO 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.





Key Advantages:

Sensor Features

- Measurement range of -40° to 100°C (-40° to 212°F)
- High accuracy: ± 0.2°C (± 0.36°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 HOBO RX station
- Simple button-push to join the HOBOnet wireless network
- Onboard memory to ensure no data loss
- Powered by rechargeable AA batteries and built-in solar panel

HOBO RXW-TMB-x-xxx Sensor Specifications

Sensor Heasurement 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) ±0.25°C from 70° to 70°C (±0.35°F from 32° to 158°F) ±0.25°C from 70° to 10°C (±0.45°F from 32° to 158°F) ±0.25°C from 70° to 10°C (±0.45°F from 158° to 212°F) Resolution 0.02°C (0.038°F) Drift <	0	
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 (±0.35°F from 32° to 158°F) Resolution 0.02°C (0.036°F) Drift <0.01°C (0.018°F) per year	Sensor	
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Drift <0.01°C (0.018°F) per year	Accuracy	±0.20°C from 0° to 70°C (±0.36°F from 32° to 158°F)
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 Reliable connection to 609.6 m (2.000 ft) line of sight at 3 m (10 ft) high Reliable connection to 609.6 m (2.000 ft) line of sight at 3 m (10 ft) high Reliable connection to 609.6 m (2.000 ft) line of sight at 3 m (10 ft) high Reliable connection to 609.6 m (2.000 ft) line of sight at 3 m (10 ft) high Reliable connection to 609.6 m (2.000 ft) line of sight at 3 m (10 ft) high Reliable connection to 609.6 m (2.000 ft) line of sight at 3 m (10 ft) high Reliable connection to 609.6 m (2.000 ft) line of sight at 3 m (10 ft) high Reliable connection to 609.6 m (2.000 ft) line of sight at 3 m (10 ft) high Reliable connection to 609.6 m (2.000 ft) line of sight at 3 m (10 ft) high Reliable connection to 609.6 m (2.000 ft) line of sight at 3 m (10 ft) high Reliable connection to 609.6 m (2.000 ft) line of sight at 3 m (10 ft) high Reliable Connection to 200 Store (0.000 ft) line of sight at 3 m (10 ft) high Reliable Connection to 200 Store (0.000 ft) line of sight at 3 m (10 ft) high Reliable Connection to 200 Store (0.000 ft) line of sight at 3 m (10 ft) high Reliable Connection to 200 Store (0.000 ft) line of sight at 3 m (10 ft) high Reliable Connection to 200 Store (0.000 ft) line of sight at 3 m (10 ft) high RW-TMB-4.000 ft) line of sight at 3 m (10 ft) high RW-TMB-4.000 ft) line of sight at 3 m (10 ft) high RW-TMB-4.000 ft) line of sight at 3 m (10 ft) high RW-TMB-4.000 ft) line of sight at 3 m (10 ft) high RW-TMB-4.000 ft) line of sight at 3	Resolution	0.02°C (0.036°F)
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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-x921: 921 MHz RXW-TMB-x-922: 916-924 MHz RXW-TMB-x921: 921 MHz RXW-TMB-x-922: 916-924 MHz RXW-TMB-x921: 921 MHz Modulation Employed OQPSK (Offset Quadrature Phase Shift Keying) Data Rate 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 and cable: 7.6 g (0.27 oz), RXW-TMB-1-xxx; 35.2 g (1.24 oz), 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: T.6 g (0.27 oz), RXW-TMB-1-xxx; 35.2 g (1.24 oz), RXW-TMB-1-xxx Mote: IP67, NEMA 6 Sensor and cable: IP67 oz) Compliance Marks FC RXW-TMB-1-900 and RXW-TMB-6-900		2 minutes, 30 seconds in air moving 1 m/sec
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Transmission Range Reliable connection to 457.2 m (1,500 ft) line of sight at 1.8 m (6 ft) high Wireless Data Standard IEEE 802.15.4 Radio Operating Frequencies RXW-TMB-x-900: 904-924 MHz RXW-TMB-x-921: 921 MHz RXW-TMB-x-922: 916-924 MHz RXW-TMB-x-922: 916-924 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%	Operating Temperature Range	-40° to 70°C (-40° to 158°F)
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%	Radio Power	12.6 mW (+11 dBm) non-adjustable
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Duty Cycle <1%	Modulation Employed	OQPSK (Offset Quadrature Phase Shift Keying)
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: 5.1 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 Compliance Marks FC RXW-TMB-1-900 and RXW-TMB-6-868 RXW-TMB-1-921 and RXW-TMB-6-921	Data Rate	Up to 250 kbps, non-adjustable
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Memory 16 MB Dimensions Sensor: 5.1 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 Compliance Marks FC RXW-TMB-1-900 and RXW-TMB-6-900 Image: RXW-TMB-1-921 and RXW-TMB-6-868 RXW-TMB-1-921 and RXW-TMB-6-921	Battery Type	Two AA 1.5 V lithium batteries
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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 Compliance Marks FC RXW-TMB-1-900 and RXW-TMB-6-900 C RXW-TMB-1-868 and RXW-TMB-6-868 RXW-TMB-1-921 and RXW-TMB-6-921	Dimensions	Cable length: 0.3 m (1 ft), RXW-TMB-1-xxx; 1.8 m (6 ft), RXW-TMB-6-xxx
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Mote: IP67, NEMA 6 Compliance Marks FC RXW-TMB-1-900 and RXW-TMB-6-900 CE RXW-TMB-1-868 and RXW-TMB-6-868 RXW-TMB-1-921 and RXW-TMB-6-921	Materials	
RXW-TMB-1-921 and RXW-TMB-6-921	Environmental Rating	
RXW-TMB-1-921 and RXW-TMB-6-921	Compliance Marks	
A		CE RXW-TMB-1-868 and RXW-TMB-6-868
RXW-TMB-1-922 and RXW-TMB-6-922		RXW-TMB-1-921 and RXW-TMB-6-921
		RXW-TMB-1-922 and RXW-TMB-6-922

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

Technical Support (8am to 6pm ET, Monday through Friday)

- Contact Product Support www.onsetcomp.com/support/contact
- Call 1-508-759-9500
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