

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 HOBO		
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.		
	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	±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
	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 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-THC-B-900: 904–924 MHz RXW-THC-B-868: 866.5 MHz RXW-THC-B-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	50 motes per one RX Wireless Sensor Network	
	Power Source	Two AA 1.5 V lithium batteries (included)	
	Battery Life	1 year, with typical use	
	Memory	16 MB	
	Dimensions	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)	
	Weight	Sensor and cable: 110 g (3.88 oz); Mote: 223 g (7.87 oz)	
	Materials	Sensor: Polyamide Mote: PCPBT, silicone rubber seal	
	Environmental Rating	IP67, NEMA	
	Compliance	 RXW-THC-B-868	
	Ideal For	Professional, Agronomy	