



HOBOnet Wireless Ultrasonic Wind Speed & Direction Sensor

Product Images



Short Description

The HOBOnet Wireless Wind Speed and Direction Sensor - preconfigured and ready to deploy. Data is accessed through HOBOLink web-based software.

Description

The HOBOnet Wireless Ultrasonic Wind Speed & Direction Sensor is compact and rugged with no moving parts.

Because this sensor is ultrasonic it can measure very low wind speeds, down to 0.4 m/s (compared to 1.0 m/s for HOBO mechanical sensors). HOBOnet Wireless Sensors communicate data directly to the HOBO RX3000 or the HOBO MicroRX 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

- Compact and rugged with no moving parts
- No starting threshold – suitable for low wind speeds
- No wind direction dead band – accurate wind data in all directions
- Powered by its own built-in solar panel

Wireless Features

- 868 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 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.

Note: A complete [HOBOnet](#) system requires at least one [HOBO RX3000](#) Remote Monitoring Station, a [HOBOnet Wireless Manager](#), and a [HOBOnet Wireless Sensor](#). [HOBOnet Wireless Repeaters](#) can be added to extend the range.

For full specifications for this product, please see the User Manual under the Resources tab below.

Additional Information

Country of Manufacture	United States	
Brand	Onset HOBO	
Measurements	Wind Direction, Wind Speed	
Typical applications	Environmental (Outdoor), Field Research, Weather Monitoring	
Explanation	Sensor	
	Measurement Range	Wind Speed/Gust 0 to 41.16 m/s (0 to 92.07 mph)
	Accuracy	Wind Direction 0 to 359 degrees
	Resolution	Accuracy ±0.8 m/s (1.79 mph) or ±4% of reading, whichever is greater
	Measurement Definition	Resolution 1 degree (0 to 359 degrees)
	Operating Temperature Range Without Icing	Measurement Definition Wind speed readings are taken every three seconds for the duration of the logging interval. Wind speed: Average speed for the entire logging interval. Gust speed: The highest three-second wind recorded during the logging interval. See Measurement Operation.
	Wireless Mote	Operating Temperature Range Without Icing -15°C to 55°C (5°F to 131°F)
	Operating Temperature Range	Wireless Mote
	Radio Power	Operating Temperature Range -25° to 60°C (-13° to 140°F) with rechargeable batteries -40 to 70°C (-40 to 158°F) with lithium batteries
	Transmission Range	Radio Power 12.6 mW (+11 dBm) non-adjustable
	Wireless Data Standard	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
	Radio Operating Frequencies	Wireless Data Standard IEEE 802.15.4
	Modulation Employed	Radio Operating Frequencies RXW-WCF-900: 904–924 MHz RXW-WCF-868: 866.5 MHz RXW-WCF-922: 916–924 MHz
	Data Rate	Modulation Employed OQPSK (Offset Quadrature Phase Shift Keying)
	Duty Cycle	Data Rate Up to 250 kbps, non-adjustable
	Maximum Number of Motes	Duty Cycle <1%
	Battery Type/ Power Source	Maximum Number of Motes 50 motes per one RX Wireless Sensor Network
	Battery Life	Battery Type/ Power Source Sensor: Photovoltaic panel, LIFEPO4 3.2 V -600 mAh battery Mote: Two AA 1.2 V rechargeable NiMH batteries powered by built-in solar panel or two AA 1.5 V lithium batteries for operating conditions of -40 to 70°C (-40 to 158°F)
	Memory	Battery Life With NiMH batteries: Typical 3–5 years when operated in the temperature range -20° to 40°C (-4°F to 104°F) and positioned toward the sun (see Deployment and Mounting), operation outside this range will reduce the battery service life With lithium batteries: 1 year, typical use
	Dimensions	Memory 16 MB
	Weight	Dimensions Sensor length: 380 mm (14.96 inches) Sensor head diameter: 60 mm (2.36 inches) Sensor rod diameter: 16 mm (0.63 inches) Cable length: 3 m (9.8 ft) Mote: 16.2 x 8.59 x 4.14 cm (6.38 x 3.38 x 1.63 inches)
	Materials	Weight Sensor and cable: 200 g (7 oz) Mote: 223 g (7.87 oz)
	Environmental Rating	Materials Sensor: Polyacetal Mote: PCPBT, silicone rubber seal
	Compliance	Environmental Rating Sensor: Weatherproof Mote: IP67, NEMA 6
		Compliance <input checked="" type="checkbox"/> RXW-WCG-868
Ideal For	Professional, Agronomy	