



HOBOnet 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 Wind Speed and Direction Sensor records wind speed, wind gust, and wind direction.

HOBOnet Wireless Sensors communicate data directly to the RX3000 weather 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

- Provides average wind speed, highest 3-second wind gust, and average wind direction for the measurement interval
- Designed to meet World Meteorological Organization (WMO) guidelines

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 per RX3000
- 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

The RXW-WCF-868 sensor supports the following measurements: Evapotranspiration and Wind

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 found 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 76 m/sec (0 to 170 mph)
	Accuracy	Wind Direction 0 to 355 degrees
	Resolution	±1.1 m/sec (±2 mph) or ±5% of reading, whichever is greater
	Starting Threshold	±7 degrees
	Turning Radius	0.5 m/sec (1.1 mph)
	Measurement Definition	1.4 degrees (0 to 355 degrees)
		1 m/sec (2.2 mph)
		Approximately 135 mm (5.25 in.)
		Unit vector averaging used; vector components for each wind measurement are calculated every three seconds for duration of logging interval
		Cup revolutions are accumulated 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
	Wireless Mote	
	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
	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-WCF-900: 904–924 MHz RXW-WCF-868: 866.5 MHz RXW-WCF-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
	Battery Type/ Power Source	Two AA 1.2V 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)
	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
	Memory	16 MB
	Dimensions	Sensor: 470 x 191 x 121 mm (18.5 x 7.5 x 4.75 in.) 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)
	Weight	Sensor and cable: 1.332 kg (2 lb, 15 oz) Mote: 223 g (7.87 oz)
	Materials	Sensor: Polycarbonate wind cups, sealed stainless steel bearing, UV-resistant ABS wind vane and black-anodized aluminum anemometer arm Mote: PCPBT, silicone rubber seal
	Environmental Rating	Sensor: Weatherproof Mote: IP67, NEMA 6
	Compliance	<input checked="" type="checkbox"/> RXW-WCF-868
Ideal For	Professional, Agronomy	