

RXW-RGE-900 • RXW-RGE-868 • RXW-RGE-922 • RXW-RGE-921

HOBOnet Rainfall (inches) Sensor

A wireless sensor that records rainfall in 0.01-inch increments; communicates data to the HOBOb RX3000 or the HOBOb MicroRX station; preconfigured and ready to deploy.

Important Information

A complete system requires at least one HOBOb RX3000 Remote Monitoring Station, a HOBOnet Wireless Manager, and a HOBOnet Wireless Sensor OR one HOBOb MicroRX Station (which has an integrated HOBOnet Wireless Manager) and a HOBOnet Wireless Sensor. HOBOnet Wireless Repeaters (RXW-RPTR-xxx or RXW-RPTR-B-xxx) can be added to extend the range.



Supported Measurements

Rainfall

Features

Sensor Features

- Resolution of 0.01 inch
- Bird spikes
- Debris screen that locks in place
- 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 or 336 data channels per HOBOb 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

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

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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 Rainfall (inches) Sensor (RXW-RGE-xxx) Specifications

Sensor	
Measurement Range	0 to 10.2 cm (0 to 4 in.) per hour, maximum 4,000 tips per logging interval
Accuracy	±4.0%, ±1 rainfall count between 0.2 and 50.0 mm (0.01 and 2.0 in.) per hour; ±5.0%, ±1 rainfall count between 50.0 and 100.0 mm (2.0 and 4.0 in.) per hour
Resolution	0.01 in. (RXW-RGE-xxx) or 0.2 mm (RXW-RGF-xxx)
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-RGE-900 and RXW-RGF-900: 904-924 MHz RXW-RGE-868 and RXW-RGF-868: 866.5 MHz RXW-RGE-921 and RXW-RGF-921: 921 MHz RXW-RGE-922 and RXW-RGF-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 HOBOnet RX station
Logging Rate	1 minute to 18 hours
Number of Data Channels	2
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: 16.5 cm opening diameter (6.5 in.) x 24 cm (9.5 in.) high; 214 cm ² (33.2 in. ²) collection area Cable length: 2 m (6.6 ft) Mote: 16.2 x 8.59 x 4.14 cm (6.38 x 3.38 x 1.63 inches)
Weight	Sensor and cable: 1.2 kg (2.7 lbs) Mote: 223 g (7.87 oz)
Materials	Sensor: UV-stabilized ABS plastic housing; tipping spoon mechanism with magnetic reed switch pivots on metal shaft Mote: PCPBT, silicone rubber seal
Environmental Rating	Sensor: Weatherproof Mote: IP67, NEMA 6

