



RXW-RGE-xxx Sensor

HOBOnet Rainfall (inches) Sensor

The HOBOnet Wireless AeroCone® Rain Gauge records rainfall in 0.01-inch increments. 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.

Supported Measurements:

Rainfall



Key Advantages:

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 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

RXW-RGE-xxx Sensor 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. |
| Calibration | Requires annual calibration; can be field calibrated |

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: 904–924 MHz RXW-RGE-868: 866.5 MHz RXW-RGE-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: 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 bucket mechanism with magnetic reed switch pivots on metal shaft Mote: PCPBT, silicone rubber seal |
| Environmental Rating | Sensor: Weatherproof Mote: IP67, NEMA 6 |
| Compliance Marks |  RXW-RGE-900  RXW-RGE-868  RXW-RGE-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
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Technical Support (8am to 8pm ET, Monday through Friday)

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