



HOBOnet Rainfall (metric) Sensor

Product Images



Short Description

HOBOnet Rainfall (metric) Sensor - preconfigured and ready to deploy. Data is accessed through HOBOLink web-based software.

Description

The HOBOnet Wireless AeroCone® Rain Gauge records rainfall in 0.2-millimeter 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.

Sensor Features

- Resolution of 0.2 millimeters
- 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.

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 | Rainfall | |
| Typical applications | Environmental (Outdoor), Field Research, Weather Monitoring | |
| Explanation | <h3>Sensor</h3> <p>Measurement Range 0 to 10.2 cm (0 to 4 in.) per hour, maximum 4,000 tips per logging interval</p> <p>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</p> <p>Resolution 0.01 in.</p> <p>Calibration Requires annual calibration; can be field calibrated</p> | |
| | <h3>Wireless Mote</h3> <p>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</p> <p>Radio Power 12.6 mW (+11 dBm) non-adjustable</p> <p>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</p> <p>Wireless Data Standard IEEE 802.15.4</p> <p>Radio Operating Frequencies RXW-RGF-900: 904–924 MHz RXW-RGF-868: 866.5 MHz RXW-RGF-922: 916–924 MHz</p> <p>Modulation Employed OQPSK (Offset Quadrature Phase Shift Keying)</p> <p>Data Rate Up to 250 kbps, non-adjustable</p> <p>Duty Cycle <1%</p> <p>Maximum Number of Motes 50 motes per one RX Wireless Sensor Network</p> <p>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)</p> <p>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</p> <p>Memory 16 MB</p> <p>Dimensions Sensor: 16.5 cm opening diameter (6.5 in.) x 24 cm (9.5 in.) high; 214 cm² (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)</p> <p>Weight Sensor and cable: 1.2 kg (2.7 lbs) Mote: 223 g (7.87 oz)</p> <p>Materials Sensor: UV-stabilized ABS plastic housing; tipping bucket mechanism with magnetic reed switch pivots on metal shaft Mote: PCPBT, silicone rubber seal</p> <p>Environmental Rating Sensor: Weatherproof Mote: IP67, NEMA 6</p> <p>Compliance Marks  RXW-RGF-868</p> | |
| | Ideal For | Professional, Agronomy |