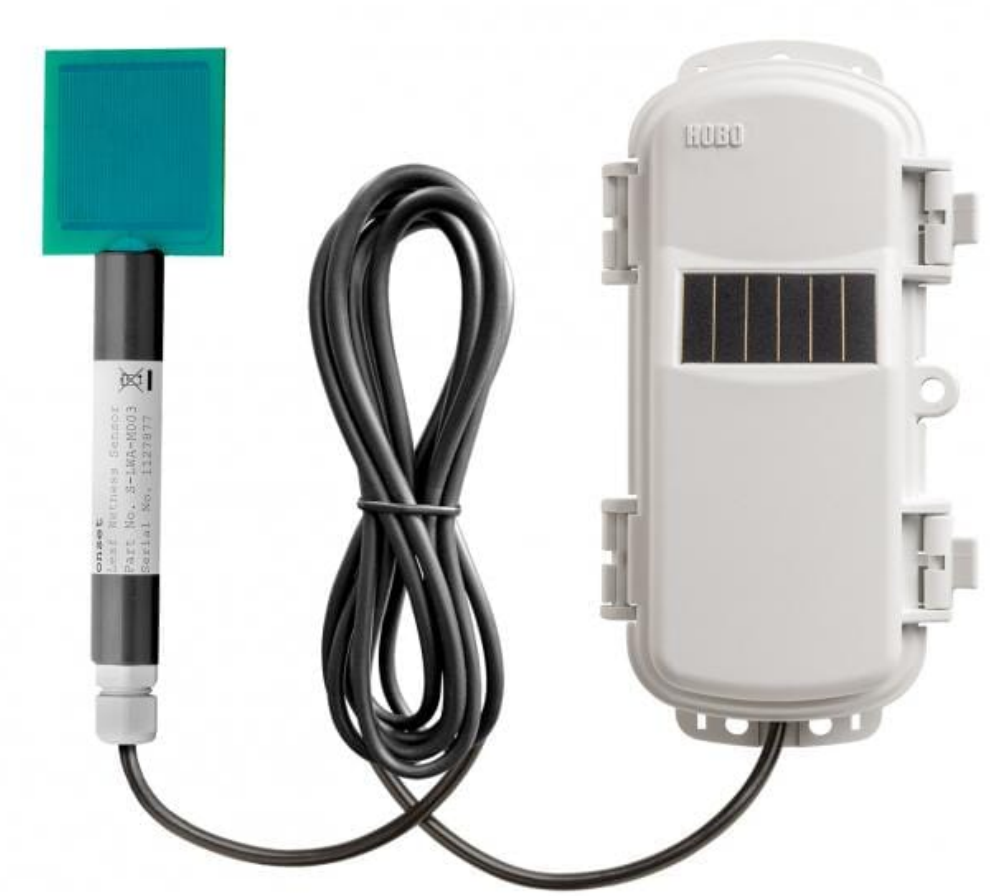




HOBOnet Leaf Wetness Sensor

Product Images



Description

The HOBOnet Leaf Wetness Sensor provides accurate leaf wetness data for a variety of growing and research applications.

The sensor is ready to use and does not require any painting or coating. It uses a capacitive grid that is less sensitive to surface residues than resistive grid-based sensors, and comes preconditioned for long-term

stability and consistent measurements between sensors. HOBOnet Wireless Sensors communicate data directly to the HOBOnet RX3000, or the HOBOnet MicroRX station, or pass data through other wireless sensors back to the central station.

Sensors are easily linked to the [HOBOnet](#) network, and data can be accessed through [HOBOLink](#), Onset's innovative cloud-based software platform.

Sensor Features

- Does not require any painting or coating
- Preconditioned for consistent measurements
- 3-metre cable and mounting bracket included.

Wireless Features

- 868 MHz wireless mesh self-healing technology
- 450 to 600 metre (1,500 to 2,000 feet) wireless range and up to five hops
- Up to 50 wireless sensors or 336 data channels per HOBOnet 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 [HOBOnet RX3000](#) Remote Monitoring Station, a [HOBOnet Wireless Manager](#), and a [HOBOnet Wireless Sensor](#), OR one [HOBOnet MicroRX Station](#) (which has an integrated HOBOnet Wireless Manager) and a [HOBOnet Wireless Sensor](#). [HOBOnet Wireless Repeaters](#) can be added to extend the range.

Additional Information

Country of Manufacture	United States																																																				
Brand	Onset HOBO																																																				
Measurements	Leaf Wetness																																																				
Typical applications	Environmental (Outdoor), Field Research																																																				
Explanation	<p>The country of origin for this product is the United States. To see the full specifications for this product, please see the product manual found under the Resources tab.</p> <p>Sensor</p> <table border="0"> <tr> <td>Measurement Range</td> <td>0 (dry) to 100% (wet)</td> </tr> <tr> <td>Sensor Type</td> <td>Capacitive grid</td> </tr> <tr> <td>Interchangeability Between Sensors (Over the Range 10-90% Wet)</td> <td>±10%</td> </tr> <tr> <td>Repeatability</td> <td>±5%; see Note 1</td> </tr> <tr> <td>Resolution</td> <td>0.59%</td> </tr> <tr> <td>Stability (Drift)</td> <td>< ±5% per year (in typical growth conditions)</td> </tr> <tr> <td>Service Life</td> <td>3 years in typical growth conditions</td> </tr> </table> <p>Wireless Mote</p> <table border="0"> <tr> <td>Operating Temperature Range</td> <td>-25° to 60°C (-13° to 140°F) with rechargeable batteries -40 to 70°C (-40 to 158°F) with lithium batteries</td> </tr> <tr> <td>Radio Power</td> <td>12.6 mW (+11 dBm) non-adjustable</td> </tr> <tr> <td>Transmission Range</td> <td>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</td> </tr> <tr> <td>Wireless Data Standard</td> <td>IEEE 802.15.4</td> </tr> <tr> <td>Radio Operating Frequencies</td> <td>RXW-LWA-900: 904-924 MHz RXW-LWA-868: 866.5 MHz RXW-LWA-922: 916-924 MHz RXW-LWA-921: 921 MHz</td> </tr> <tr> <td>Modulation Employed</td> <td>OQPSK (Offset Quadrature Phase Shift Keying)</td> </tr> <tr> <td>Data Rate</td> <td>Up to 250 kbps, non-adjustable</td> </tr> <tr> <td>Duty Cycle</td> <td><1%</td> </tr> <tr> <td>Maximum Number of Motes</td> <td>50 motes per one RX Wireless Sensor Network</td> </tr> <tr> <td>Logging Rate</td> <td>1 minute to 18 hours</td> </tr> <tr> <td>Number of Data Channels</td> <td>2</td> </tr> <tr> <td>Battery Type/ Power Source</td> <td>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)</td> </tr> <tr> <td>Battery Life</td> <td>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</td> </tr> <tr> <td>Memory</td> <td>16 MB</td> </tr> <tr> <td>Dimensions</td> <td>Sensor grid: 4.7 x 5.1 cm (1.8 in x 2.0 inches) Sensor housing: 12.2 x 1.8 cm (4.8 in x 0.7 inches) Mounting bracket: 20 x 3 x 0.5 cm (8 x 1.3 x 0.2 inches) Cable length: 2 m (6.56 ft) Mote: 16.2 x 8.59 x 4.14 cm (6.38 x 3.38 x 1.63 inches)</td> </tr> <tr> <td>Weight</td> <td>Sensor and cable: 127 g (4.5 oz); 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