



HOBO Water Level, Pressure, and Temperature Sensor Module for RX3000

Product Images



Short Description

The RX3000 Water Level Sensor Module enables the RX3000 data logging station to monitor water level, pressure, and temperature, as well as barometric pressure.

Description

The RX3000 Water Level Sensor Module (RXMOD-W1) offers users the ability to monitor water level, pressure, and temperature, as well as barometric pressure, with the HOBOWater Level, Pressure, and Temperature Sensor Module for RX3000 Remote Monitoring Station. It is configured through HOBOLink, Onset's cloud-based software. In addition to a HOBOWater Level, Pressure, and Temperature Sensor Module for RX3000 station, a water

level sensor cable and water level sensor are required (see options below).

Key Features

- Integrated barometric pressure sensor
- Plug-and-play remote water level and flow monitoring.

Additional Information

Country of Manufacture	United States
	<p>Barometric Pressure</p> <p>Operation Range 66 to 107 kPa (9.57 to 15.52 psia)</p> <p>Temperature Calibrated Range -20 to 50°C (-4 to 122°C)</p> <p>Accuracy ±0.2 kPa (±0.029 psi) over full temperature range at fixed pressure; maximum error ±0.5% FS</p> <p>Water Level Accuracy* Typical error: ±0.075% FS, 0.3 cm (0.01 ft) water Maximum error: ±0.15% FS, 0.6 cm (0.02 ft) water</p> <p>Resolution <0.01 kPa (0.0015 psi)</p> <p>Response Time <1 second at a stable temperature</p> <p>Stability (Drift) <0.01 kPa (0.0015 psi) per year</p> <p>Water level system accuracy is the sum of the barometric accuracy (above) and the water level sensor accuracy (below).</p> <p>Pressure (Absolute) and Water Level Measurements MX2001-01-S and MX2001-01-Ti-S</p> <p>Operation Range 0 to 207 kPa (0 to 30 psia); approximately 0 to 9 m (0 to 30 ft) of water depth at sea level, or 0 to 12 m (0 to 40 ft) of water at 3,000 m (10,000 ft) of altitude</p> <p>Factory Calibrated Range 69 to 207 kPa (10 to 30 psia), 0 to 40C (32 to 104F)</p> <p>Burst Pressure 310 kPa (45 psia) or 18 m (60 ft) depth</p> <p>Water Level Accuracy* Typical error: 0.05% FS, 0.5 cm (0.015 ft) water Maximum error: 0.1% FS, 1.0 cm (0.03 ft) water</p> <p>Raw Pressure Accuracy** 0.3% FS, 0.62 kPa (0.09 psi) maximum error</p> <p>Resolution <0.02 kPa (0.003 psi), 0.21 cm (0.007 ft) water</p> <p>Pressure Response Time (90%)*** <1 second at a stable temperature</p> <p>Pressure (Absolute) and Water Level Measurements MX2001-02-S</p> <p>Operation Range 0 to 400 kPa (0 to 58 psia); approximately 0 to 30.6 m (0 to 100 ft) of water depth at sea level, or 0 to 33.6 m (0 to 111 ft) of water at 3,000 m (10,000 ft) of altitude</p> <p>Factory Calibrated Range 69 to 400 kPa (10 to 58 psia), 0 to 40C (32 to 104F)</p> <p>Burst Pressure 500 kPa (72.5 psia) or 40.8 m (134 ft) depth</p> <p>Water Level Accuracy* Typical error: 0.05% FS, 1.5 cm (0.05 ft) water Maximum error: 0.1% FS, 3.0 cm (0.1 ft) water</p> <p>Raw Pressure Accuracy** 0.3% FS, 1.20 kPa (0.17 psi) maximum error</p> <p>Resolution <0.04 kPa (0.006 psi), 0.41 cm (0.013 ft) water</p> <p>Pressure Response Time (90%)*** <1 second at a stable temperature</p> <p>Pressure (Absolute) and Water Level Measurements MX2001-03-S</p> <p>Operation Range 0 to 850 kPa (0 to 123.3 psia); approximately 0 to 76.5 m (0 to 251 ft) of water depth at sea level, or 0 to 79.5 m (0 to 262 ft) of water at 3,000 m (10,000 ft) of altitude</p> <p>Factory Calibrated Range 69 to 850 kPa (10 to 123.3 psia), 0 to 40C (32 to 104F)</p> <p>Burst Pressure 1,200 kPa (174 psia) or 112 m (368 ft) depth</p> <p>Water Level Accuracy* Typical error: 0.05% FS, 3.8 cm (0.125 ft) water Maximum error: 0.1% FS, 7.6 cm (0.25 ft) water</p> <p>Raw Pressure Accuracy** 0.3% FS, 2.55 kPa (0.37 psi) maximum error</p> <p>Resolution <0.085 kPa (0.012 psi), 0.87 cm (0.028 ft) water</p> <p>Pressure Response Time (90%)*** <1 second at a stable temperature</p> <p>Pressure (Absolute) and Water Level Measurements MX2001-04-S and MX2001-04-Ti-S</p> <p>Operation Range 0 to 145 kPa (0 to 21 psia); approximately 0 to 4 m (0 to 13 ft) of water depth at sea level, or 0 to 7 m (0 to 23 ft) of water at 3,000 m (10,000 ft) of altitude</p> <p>Factory Calibrated Range 69 to 145 kPa (10 to 21 psia), 0 to 40C (32 to 104F)</p> <p>Burst Pressure 310 kPa (45 psia) or 18 m (60 ft) depth</p> <p>Water Level Accuracy* Typical error: 0.075% FS, 0.3 cm (0.01 ft) water Maximum error: 0.15% FS, 0.6 cm (0.02 ft) water</p> <p>Raw Pressure Accuracy** 0.3% FS, 0.43 kPa (0.063 psi) maximum error</p> <p>Resolution <0.014 kPa (0.002 psi), 0.14 cm (0.005 ft) water</p> <p>Pressure Response Time (90%)*** <1 second at a stable temperature</p> <p>Water Level Sensor and Cable</p> <p>Dimensions Sensor (MX2001-0x-S and MX2001-0x-Ti-S): 2.54 cm (1.0 inches) diameter, 9.91 cm (3.9 inches) length Cable (CABLE-RWL-xxx): 0.47 cm ±0.03 (0.185 inches ±0.01) diameter, 0.2 to 400 m (0.65 to 1,312 ft) length Note: The length of the water level logger cable can vary -0% to +3% +10 cm (3.9 inches) from the length ordered.</p> <p>Weight Stainless sensor (MX2001-0x-S): Approximately 106 g (3.74 oz) in air; approximately 53.9 g (1.9 oz) in fresh water Titanium sensor (MX2001-0x-Ti-S): Approximately 80 g (2.83 oz) in air; approximately 37 g (1.3 oz) in fresh water Cable (CABLE-RWL-XXX): 39 g (1.38 oz) per 1 meter (3.28 ft)</p> <p>Materials Stainless sensor (MX2001-0x-S): Acetal housing, Viton and Buna-N O-rings, ceramic sensor in stainless steel end cap Titanium sensor (MX2001-0x-Ti-S): Acetal housing, Viton and Buna-N O-rings, ceramic sensor in Titanium end cap Cable (CABLE-RWL-XXX): Polycarbonate end cap, PVC end cap, polycarbonate collar nut, Viton O-rings, polyurethane jacket</p> <p>* Water Level Accuracy: With accurate reference water level measurement, known water density, and a stable temperature environment. ** Raw Pressure Accuracy: Absolute pressure sensor accuracy includes all sensor drift, temperature, and hysteresis-induced errors. *** Changes in Temperature: Allow 20 minutes in water to achieve full temperature compensation of the pressure sensor. There can be up to 0.5% of additional error due to rapid temperature changes. Measurement accuracy also depends on temperature response time.</p>
Explanation	
Brand	Onset HOBO
Typical applications	Environmental (Outdoor), Field Research
Measurements	Barometric Pressure, Water Level, Water Temperature

Additional Options

Water Level, Temperature & Pressure Sensors

Fresh Water Stainless Steel - 4 Metre Range (MX2001-04-S)

Fresh Water Stainless Steel - 9 Metre Range (MX2001-01-S)

Fresh Water Stainless Steel - 30 Metre Range (MX2001-02-S)

Fresh Water Stainless Steel - 76 Metre Range (MX2001-03-S)

Salt Water Titanium - 4 Metre Range (MX2001-04-Ti-S)

Salt Water Titanium - 9 Metre Range (MX2001-01-Ti-S)

Water Level Sensor Cables

1.0m RWL Cable (CABLE-RWLMOD-1.0)

2.0m RWL Cable (CABLE-RWLMOD-2.0)

5.0m RWL Cable (CABLE-RWLMOD-5.0)

10.0m RWL Cable (CABLE-RWLMOD-10.0)

15.0m RWL Cable (CABLE-RWLMOD-15.0)

30.0m RWL Cable (CABLE-RWLMOD-30.0)

60.0m RWL Cable (CABLE-RWLMOD-60.0)