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# 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 HOBO RX3000 Remote Monitoring Station. It is configured through HOBOlink, Onset's cloud-based software. In addition to a HOBO 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	
	Barometric Pressure	
		66 to 107 kPa (9.57 to 15.52 psia)
		-20 to 50°C (-4 to 122°C)
	Accuracy	±0.2 kPa (±0.029 psi) over full temperature range at fixed pressure; maximum error ±0.5% FS
		Typical error: ±0.075% FS, 0.3 cm (0.01 ft) water Maximum error: ±0.15% FS, 0.6 cm (0.02 ft) water
	Resolution	<0.01 kPa (0.0015 psi)
	Response Time	<1 second at a stable temperature
	Stability (Drift)	<0.01 kPa (0.0015 psi) per year
	Water level system accuracy is the sum of the barometric accuracy (above) and the water level sensor accuracy (below).  Pressure (Absolute) and Water Level Measurements MX2001-01-5 and MX2001-01-Ti-5	
	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
	Factory Calibrated Range	69 to 207 kPa (10 to 30 psia), 0 to 40C (32 to 104F)
	Burst Pressure	310 kPa (45 psia) or 18 m (60 ft) depth
	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
	Raw Pressure Accuracy**	0.3% FS, 0.62 kPa (0.09 psi) maximum error
	Resolution	<0.02 kPa (0.003 psi), 0.21 cm (0.007 ft) water
	Pressure Response Time (90%)***	* <1 second at a stable temperature
	Pressure (Absolute) and Water Le	evel Measurements MX2001-02-S
	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 littude
	Factory Calibrated Range	69 to 400 kPa (10 to 58 psia), 0 to 40C (32 to 104F)
	Burst Pressure	500 kPa (72.5 psia) or 40.8 m (134 ft) depth
	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
	Raw Pressure Accuracy**	0.3% FS, 1.20 kPa (0.17 psi) maximum error
	Resolution	<0.04 kPa (0.006 psi), 0.41 cm (0.013 ft) water
		* <1 second at a stable temperature
	Pressure (Absolute) and Water Le	
xplanation	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
	Operation Range	to 79.5 m (0 to 262 ft) of water at 3,000 m (10,000 ft) of altitude
	Factory Calibrated Range	69 to 850 kPa (10 to 123.3 psia), 0 to 40C (32 to 104F)
	Burst Pressure	1,200 kPa (174 psia) or 112 m (368 ft) depth
	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
	Raw Pressure Accuracy**	0.3% FS, 2.55 kPa (0.37 psi) maximum error
	Resolution	<0.085 kPa (0.012 psi), 0.87 cm (0.028 ft) water
	Pressure Response Time (90%)**	* <1 second at a stable temperature
	Pressure (Absolute) and Water Le	evel Measurements MX2001-04-S and MX2001-04-Ti-S
	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 n (0 to 23 ft) of water at 3,000 m (10,000 ft) of allitude
	Factory Calibrated Range	69 to 145 kPa (10 to 21 psia), 0 to 40C (32 to 104F)
	Burst Pressure	310 kPa (45 psia) or 18 m (60 ft) depth
	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
	Raw Pressure Accuracy**	0.3% FS, 0.43 kPa (0.063 psi) maximum error
	Resolution	<0.014 kPa (0.002 psi), 0.14 cm (0.005 ft) water
	Pressure Response Time (90%)***	* <1 second at a stable temperature
	Water Level Sensor and Cable	
	Dimensions	Sensor (MX2001-0x-5 and MX2001-0x-Ti-5); 2.54 cm (1.0 inches) diameter, 9.91 cm (3.9 inches) lengt 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.
	Weight	Stainless sensor (MX2001-0x-5): Approximately 106 g (3.74 oz) in air; approximately 53.9 g (1.9 oz) in fresh water Titanium sensor (MX2001-0x-Ti-5): 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)
	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-XXXV): Polycarbonate end cap, PVC end cap, polycarbonate collar nut, Viton O-rings, polyurethane jacket
	** Raw Pressure Accuracy: Absolut	rate reference water level measurement, known water density, and a stable temperature environment. The pressure sensor accuracy includes all sensor drift, temperature, and hysteresis-induced errors. W 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 r Measurement accuracy also depen	rapid temperature changes.
	to 0.5% of additional error due to n Measurement accuracy also depen HOBO	apid temperature changes. ds on temperature response time.
Brand Typical applications Measurements	to 0.5% of additional error due to r Measurement accuracy also depen	apid temperature changes. dds on temperature response time. search

# **Additional Options**

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)