



HOBO U20-001-04 Fresh Water Level Data logger (0-4m)

Product Images



Short Description

An accurate, low cost data logger designed to record water level fully compensated for barometric pressure in wells, streams, lakes etc. Range is from 0-4m/0-13 feet.

Description

An accurate, low cost data logger designed to record water level, fully compensated for barometric pressure in wells, streams, lakes etc. Range is from 0-4m/0-13 feet.


Features:

- The Water Level logger can also be used in air to record barometric pressure.
- Use the Titanium models in salt water.
- Download to the Waterproof Shuttle or Base Station.
- The no-vent design eliminates installation/maintenance issues and errors associated with vent tubes, desiccant maintenance, water ingress etc.

Measures Absolute Pressure, Barometric Pressure, Temperature and Water Level.

IMPORTANT Requires HOBOWare Pro software and either a U-DTW-1 Waterproof Shuttle or the Base-U-4 Optic USB Base Station for configuration and data offload. See Connectivity Options below.

Additional Information

Country of Manufacture	United States												
Explanation	<div>Pressure and Water Level Measurements U20-001-04 and U20-001-04-Ti</div> <div><div>Operation Range</div><div>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</div></div> <div><div>Factory Calibrated Range</div><div>69 to 145 kPa (10 to 21 psia), 0° to 40°C (32° to 104°F)</div></div> <div><div>Burst Pressure</div><div>310 kPa (45 psia) or 18 m (60 ft) depth</div></div> <div><div>Water Level Accuracy*</div><div>Typical error: ±0.075% FS, 0.3 cm (0.01 ft) water Maximum error: ±0.15% FS, 0.6 cm (0.02 ft) water</div></div> <div><div>Raw Pressure Accuracy**</div><div>±0.3% FS, 0.43 kPa (0.063 psi) maximum error</div></div> <div><div>Resolution</div><div><0.014 kPa (0.002 psi), 0.14 cm (0.005 ft) water</div></div> <div><div>Pressure Response Time (90%***)</div><div><1 second; measurement accuracy also depends on temperature response time</div></div> <div>Temperature Measurements (All Models)</div> <div><div>Operation Range</div><div>-20° to 50°C (-4° to 122°F)</div></div> <div><div>Accuracy</div><div>±0.44°C from 0° to 50°C (±0.79°F from 32° to 122°F), see Plot A in manual</div></div> <div><div>Resolution</div><div>0.10°C at 25°C (0.18°F at 77°F), see Plot A in manual</div></div> <div><div>Response Time (90%)</div><div>5 minutes in water (typical)</div></div> <div><div>Stability (Drift)</div><div>0.1°C (0.18°F) per year</div></div> <div>Logger</div> <div><div>Real-time Clock</div><div>± 1 minute per month 0° to 50°C (32° to 122°F)</div></div> <div><div>Battery</div><div>2/3 AA, 3.6 Volt lithium, factory-replaceable</div></div> <div><div>Battery Life (Typical Use)</div><div>5 years with 1 minute or greater logging interval</div></div> <div><div>Memory (Non-volatile)</div><div>64K bytes memory (approx. 21,700 pressure and temperature samples)</div></div> <div><div>Weight</div><div>Stainless steel models: approximately 210 g (7.4 oz) Titanium models: approximately 140 g (4.8 oz)</div></div> <div><div>Dimensions</div><div>2.46 cm (0.97 inches) diameter, 15 cm (5.9 inches) length; mounting hole 6.3 mm (0.25 inches) diameter</div></div> <div><div>Wetted Materials</div><div>316 stainless steel, Viton® o-rings, acetyl cap, ceramic sensor</div></div> <div><div>Logging Interval</div><div>Fixed-rate or multiple logging intervals, with up to 8 user-defined logging intervals and durations; logging intervals from 1 second to 18 hours. Refer to the HOBOWare software manual.</div></div> <div><div>Launch Modes</div><div>Immediate start and delayed start</div></div> <div><div>Offload Modes</div><div>Offload while logging; stop and offload</div></div> <div><div>Battery Indication</div><div>Battery voltage can be viewed in status screen and optionally logged in datafile. Low battery indication in datafile.</div></div> <div><div>Environmental Rating</div><div>IP68</div></div> <div><div></div><div>The CE Marking identifies this product as complying with all relevant directives in the European Union (EU).</div></div> <div><div>* Water Level Accuracy: With accurate reference water level measurement, known water density, accurate Barometric Compensation Assistant data, and a stable temperature environment.</div><div>** Raw Pressure Accuracy: Absolute pressure sensor accuracy includes all sensor drift, temperature, and hysteresis-induced errors.</div><div>*** Changes in Temperature: Allow 10 minutes in water to achieve full temperature compensation of the pressure sensor. Maximum error due to rapid thermal changes is approximately 0.5%.</div></div> <tr><td>Ideal For</td><td>Professional</td></tr> <tr><td>Brand</td><td>Onset HOB0</td></tr> <tr><td>Channel(s)</td><td>2</td></tr> <tr><td>Onset Product Series</td><td>U20</td></tr> <tr><td>Typical applications</td><td>Environmental (Outdoor), Field Research, Water Quality</td></tr> <tr><td>Measurements</td><td>Barometric Pressure, Pressure, Temperature, Water Level</td></tr>	Ideal For	Professional	Brand	Onset HOB0	Channel(s)	2	Onset Product Series	U20	Typical applications	Environmental (Outdoor), Field Research, Water Quality	Measurements	Barometric Pressure, Pressure, Temperature, Water Level
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Additional Options

Connectivity Options	HOBO Universal Optic USB Base Station Base-U-4 (includes Couplers)
	Waterproof Optic Data Shuttle U-DTW-1 (requires HOBOWare Pro)
HOBOWare Pro Software Options	HOBOWare Pro on USB Drive (USB Cable Included)
	HOBOWare Pro on CD (USB Cable Included)
	HOBOWare Pro - Download Only (USB Cable NOT Included)
Well Cap for Mounting HOBO Loggers in Wells	WELL-CAP-01