



HOBO U20L-02 Water Level Data logger (0-30m)

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.

Description

The HOBO U20L-02 is a low-cost, research-grade water level data logger for continuously measuring water level and temperature in a wide range of underwater environments. It features 0.1% measurement accuracy,

a polypropylene housing for use in both fresh and salt water, and a non-vented design for convenient and hassle-free deployment.


Key Features

- Ideal for use in both fresh and saltwater environments, including wells, streams, lakes, wetlands, and tidal areas
- For depths up to 30 metres (100 feet)
- Durable ceramic pressure sensor withstands freezing
- HOBOWare Pro software provides easy conversion to accurate water level reading, fully compensated for barometric pressure, temperature, and water density in wells, streams, lakes etc
- The self-contained non-vented design eliminates installation/maintenance issues and errors associated with vent tubes, desiccant maintenance, water ingress etc.

Measures: Water Level, Temperature, Barometric Pressure

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. Please see Connectivity Options below.

Additional Information

Country of Manufacture	United States	
Explanation	<p>Pressure (Absolute) and Water Level Measurements U20L-02</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 40°C (32° to 104°F)</p> <p>Burst Pressure 500 kPa (72.5 psia) or 40.8 m (134 ft) depth</p> <p>Water Level Accuracy* Typical error: ±0.1% FS, 3.0 cm (0.1 ft) water Maximum error: ±0.2% FS, 6.0 cm (0.2 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; measurement accuracy also depends on temperature response time</p> <p>Temperature Measurements</p> <p>Operation Range -20° to 50°C (-4° to 122°F)</p> <p>Accuracy ±0.44°C from 0° to 50°C (±0.79°F from 32° to 122°F), see Plot A in manual</p> <p>Resolution 0.10°C at 25°C (0.18°F at 77°F), see Plot A in manual</p> <p>Response Time (90%) 10 minutes in water (typical)</p> <p>Stability (Drift) 0.1°C (0.18°F) per year</p> <p>Logger</p> <p>Real-time Clock ±1 minute per month 0° to 50°C (32° to 122°F)</p> <p>Battery 2/3 AA, 3.6 Volt lithium, factory-replaceable</p> <p>Battery Life (Typical Use) 5 years with 1 minute or greater logging interval</p> <p>Memory (Non-volatile) 64K bytes memory (approx. 21,700 pressure and temperature samples)</p> <p>Weight Approximately 154 g (5.43 oz) in air Approximately 53.9 g (1.9 oz) in fresh water</p> <p>Dimensions 3.18 cm (1.25 inches) diameter, 15.24 cm (6.0 inches) length; mounting hole 6.3 mm (0.25 inches) diameter</p> <p>Wetted Materials Polypropylene housing and lanyard; Viton and Buna-N O-rings; ceramic sensor in acetyl end cap; stainless steel screws suitable for saltwater</p> <p>Logging Interval 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 <i>HOBOWare User's Guide</i> for details.</p> <p>Launch Modes Immediate start and delayed start</p> <p>Offload Modes Offload while logging; stop and offload</p> <p>Battery Indication Battery voltage can be viewed in status screen and optionally logged in datafile. Low battery indication in datafile.</p> <p>Environmental Rating IP68</p> <p> The CE Marking identifies this product as complying with all relevant directives in the European Union (EU).</p> <p>* Water Level Accuracy: With accurate reference water level measurement, known water density, accurate Barometric Compensation Assistant data, 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. Maximum error due to rapid thermal changes is approximately 0.5%.</p>	
	Ideal For	Professional
	Brand	Onset HOBO
	Onset Product Series	U20L
	Typical applications	Environmental (Outdoor), Field Research, Water Quality
	Measurements	Barometric Pressure, Pressure, Temperature, Water Level

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