



## HOBO® U20-001-03 Data Logger

### 250-Foot Depth Water Level

The HOBO water level data logger features high accuracy at a great price and ease-of-use, with no cumbersome vent tubes or desiccants to maintain. This data logger is ideal for recording water levels and temperatures in shallow wells, streams, lakes and freshwater wetlands.



#### Key Advantages:

- Lightning protection - no long signal wires, and electronics are shielded in stainless steel housing for use in freshwater (see the Water Level logger sensor location drawing)
- HOBOWare Pro software provides easy conversion to accurate water level reading, fully compensated for barometric pressure (see demo) temperature, and water density.
- Multiple-rate sampling (see demo) allows faster sampling at critical times such as when pumping starts or stops.
- Available in 4 depth ranges
- Ideal for use in wells, streams, lakes, wetlands and tidal areas
- No-vent-tube design for easy reliable deployment
- Available in stainless and titanium versions
- Durable ceramic pressure sensor
- 3-point NIST-traceable calibration certificate included

## HOBO U20-001-03 Data Logger Specifications

Pressure and Water Level Measurements U20-001-03 and U20-001-03-TI	
<b>Operation Range</b>	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
<b>Factory Calibrated Range</b>	69 to 850 kPa (10 to 123.3 psia), 0° to 40°C (32° to 104°F)
<b>Burst Pressure</b>	1200 kPa (174 psia) or 112 m (368 ft) depth
<b>Water Level Accuracy*</b>	Typical error: ±0.05% FS, 3.8 cm (0.125 ft) water Maximum error: ±0.1% FS, 7.6 cm (0.25 ft) water
<b>Raw Pressure Accuracy**</b>	±0.3% FS, 2.55 kPa (0.37 psi) maximum error
<b>Resolution</b>	<0.085 kPa (0.012 psi), 0.87 cm (0.028 ft) water
<b>Pressure Response Time (90%)***</b>	<1 second; measurement accuracy also depends on temperature response time
Temperature Measurements (All Models)	
<b>Operation Range</b>	-20° to 50°C (-4° to 122°F)
<b>Accuracy</b>	±0.44°C from 0° to 50°C (±0.79°F from 32° to 122°F), see Plot A in manual
<b>Resolution</b>	0.10°C at 25°C (0.18°F at 77°F), see Plot A in manual
<b>Response Time (90%)</b>	5 minutes in water (typical)
<b>Stability (Drift)</b>	0.1°C (0.18°F) per year
Logger	
<b>Real-time Clock</b>	± 1 minute per month 0° to 50°C (32° to 122°F)
<b>Battery</b>	2/3 AA, 3.6 Volt lithium, factory-replaceable
<b>Battery Life (Typical Use)</b>	5 years with 1 minute or greater logging interval
<b>Memory (Non-volatile)</b>	64K bytes memory (approx. 21,700 pressure and temperature samples)
<b>Weight</b>	Stainless steel models: approximately 210 g (7.4 oz) Titanium models: approximately 140 g (4.8 oz)
<b>Dimensions</b>	2.46 cm (0.97 inches) diameter, 15 cm (5.9 inches) length; mounting hole 6.3 mm (0.25 inches) diameter
<b>Wetted Materials</b>	316 stainless steel, Viton® o-rings, acetyl cap, ceramic sensor
<b>Logging Interval</b>	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.
<b>Launch Modes</b>	Immediate start and delayed start
<b>Offload Modes</b>	Offload while logging; stop and offload
<b>Battery Indication</b>	Battery voltage can be viewed in status screen and optionally logged in datafile. Low battery indication in datafile.
<b>Environmental Rating</b>	IP68



The CE Marking identifies this product as complying with all relevant directives in the European Union (EU).

\* **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 10 minutes in water to achieve full temperature compensation of the pressure sensor. Maximum error due to rapid thermal changes is approximately 0.5%.

## Contact Us

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Technical Support (8am to 6pm ET, Monday through Friday)

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