

## HOBO U20 Titanium Water Level Data Logger - U20-001-04-Ti

### 13 Foot Depth - saltwater



#### Measures:

Temperature, Barometric Pressure, Water Level

#### Features:

- Lightning protection - no long signal wires, and electronics are shielded in a titanium housing for use in saltwater (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

Qty	1-9	10-99	100+
\$US	\$595	\$553	\$506

Contact Onset at 1-800-564-4377

#### Description:

Providing a narrow range of measurement for the best possible accuracy, this version is ideal for monitoring [water levels](#) and [temperatures](#) in wells, streams, lakes and wetlands.

Like other HOBO Water Level Data Loggers, the 13-foot version offers exceptional value 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 salt water environments.

View how the [HOBO Water Level Logger compares to the Competition](#).

#### Detailed Specifications:

##### Pressure and Water Level Measurements U20-001-04 and U20-001-04-Ti

<b>Operation Range</b>	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
<b>Factory Calibrated Range</b>	69 to 145 kPa (10 to 21 psia), 0Â° to 40Â°C (32Â° to 104Â°F)
<b>Burst Pressure</b>	310 kPa (45 psia) or 18 m (60 ft) depth
<b>Water Level Accuracy*</b>	Typical error: Â±0.075% FS, 0.3 cm (0.01 ft) water Maximum error: Â±0.15% FS, 0.6 cm (0.02 ft) water
<b>Raw Pressure Accuracy**</b>	Â±0.3% FS, 0.43 kPa (0.063 psi) maximum error
<b>Resolution</b>	<0.014 kPa (0.002 psi), 0.14 cm (0.005 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>	-20Â° to 50Â°C (-4Â° to 122Â°F)
<b>Accuracy</b>	Â±0.44Â°C from 0Â° to 50Â°C (Â±0.79Â°F from 32Â° to 122Â°F), see Plot A
<b>Resolution</b>	0.10Â°C at 25Â°C (0.18Â°F at 77Â°F), see Plot A

<b>Response Time (90%)</b>	5 minutes in water (typical)
<b>Stability (Drift)</b>	0.1Â°C (0.18Â°F) per year
<b>Logger</b>	
<b>Real-time Clock</b>	Â± 1 minute per month 0Â° to 50Â°C (32Â° to 122Â°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>	Titanium, VitonÂ® 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>CE</b>	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%.

