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

13 Foot Depth - saltwater



Measures:

Temperature, Barometric Pressure, Water Level

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

Contact Onset at 1-800-564-4377

Features:

- Lightning protection no long signal wires, and electronics are shielded in a titanium housing for use in saltwater (see the <u>Water Level logger sensor location</u> <u>drawing</u>)
- HOBOware Pro software provides easy conversion to accurate water level reading, fully compensated for barometric pressure (<u>see demo</u>) temperature, and water density.
- Multiple-rate sampling (<u>see demo</u>) 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

Description:

Providing a narrow range of measurement for the best possible accuracy, this version is ideal for monitoring <u>water levels</u> and <u>temperatures</u> 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 $\underline{\mathsf{HOBO}}$ Water Level Logger compares to the Competition.

Detailed Specifications:

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

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 m (0 to 23 ft) of water at 3,000 m (10,000 ft) of altitude

Factory Calibrated Range 69 to 145 kPa (10 to 21 psia), 0° to 40°C (32° to 104°F)

Burst Pressure 310 kPa (45 psia) or 18 m (60 ft) depth

Water Level Accuracy* Typical error: $\hat{A}\pm 0.075\%$ FS, 0.3 cm (0.01 ft) water Maximum error: $\hat{A}\pm 0.15\%$ FS, 0.6 cm (0.02 ft) water

Resolution <0.014 kPa (0.002 psi), 0.14 cm (0.005 ft) water

Pressure Response Time (90%)*** <1 second; measurement accuracy also depends on temperature response time

Temperature Measurements (All Models)

Operation Range -20° to 50°C (-4° to 122°F)

Accuracy ±0.44°C from 0° to 50°C (±0.79°F from 32° to 122°F), see Plot A

Resolution 0.10°C at 25°C (0.18°F at 77°F), see Plot A

Response Time (90%) 5 minutes in water (typical)

0.1°C (0.18°F) per year Stability (Drift)

Logger

 $\hat{A}\pm 1$ minute per month $0\hat{A}^{\circ}$ to $50\hat{A}^{\circ}$ C (32 \hat{A}° to 122 \hat{A}° F) **Real-time Clock**

Battery 2/3 AA, 3.6 Volt lithium, factory-replaceable

Battery Life (Typical Use) 5 years with 1 minute or greater logging interval

Memory (Non-volatile) 64K bytes memory (approx. 21,700 pressure and temperature samples)

Stainless steel models: approximately 210 g (7.4 oz) Weight

Titanium models: approximately 140 g (4.8 oz)

2.46 cm (0.97 inches) diameter, 15 cm (5.9 inches) length; mounting hole 6.3 Dimensions

mm (0.25 inches) diameter

Wetted Materials Titanium, Viton® o-rings, acetyl cap, ceramic sensor

Fixed-rate or multiple logging intervals, with up to 8 user-defined logging intervals **Logging Interval**

and durations; logging intervals from 1 second to 18 hours. Refer to the

HOBOware software manual.

Launch Modes Immediate start and delayed start

Offload Modes Offload while logging; stop and offload

Battery voltage can be viewed in status screen and optionally logged in datafile. **Battery Indication**

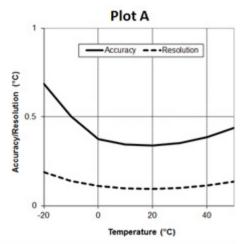
Low battery indication in datafile.

 ϵ 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%.



HOBO Data Loggers

1-800-LOGGERS