



Featuring high accuracy at a great price and ease-of-use, with no cumbersome vent tubes or desiccants to maintain, this logger is ideal for recording water level and temperature up to 30-ft depths in shallow wells, streams, lakes, freshwater wetlands (stainless-steel), saltwater/brackish wetlands and tidal areas (titanium).

Features:

- Lightning protection - no long signal wires, and electronics are shielded in a metal housing
- HOBOWare Pro software provides easy conversion to accurate water level reading, fully compensated for barometric pressure, temperature, and water density
- Multiple-rate sampling allows faster sampling at critical times such as when pumping starts or stops
- Available in four 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

Technical Specifications:**Pressure and Water Level Measurements U20-001-01 and U20-001-01-TI**

Operation Range	:	0 to 207 kPa (0 to 30 psia); approximately 0 to 9 m (0 to 30 ft) of water depth at sea level, or 0 to 12 m (0 to 40 ft) of water at 3,000 m (10,000 ft) of altitude
Factory Calibrated Range	:	69 to 207 kPa (10 to 30 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: $\pm 0.05\%$ FS, 0.5 cm (0.015 ft) water Maximum error: $\pm 0.1\%$ FS, 1.0 cm (0.03 ft) water
Raw Pressure Accuracy**	:	$\pm 0.3\%$ FS, 0.62 kPa (0.09 psi) maximum error
Resolution	:	<0.02 kPa (0.003 psi), 0.21 cm (0.007 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	:	$\pm 0.44^\circ\text{C}$ from 0° to 50°C ($\pm 0.79^\circ\text{F}$ from 32° to 122°F), see Plot A in manual
Resolution	:	0.10°C at 25°C (0.18°F at 77°F), see Plot A in manual
Response Time (90%)	:	5 minutes in water (typical)
Stability (Drift)	:	0.1°C (0.18°F) per year

Logger

Real-time Clock	:	± 1 minute per month 0° to 50°C (32° to 122°F)
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)
Weight	:	Stainless steel models: approximately 210 g (7.4 oz) Titanium models: approximately 140 g (4.8 oz)
Dimensions	:	2.46 cm (0.97 inches) diameter, 15 cm (5.9 inches) length; mounting hole 6.3 mm (0.25 inches) diameter
Wetted Materials	:	316 stainless steel, Viton® o-rings, acetyl cap, ceramic sensor
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 HOBOWare software manual.
Launch Modes	:	Immediate start and delayed start
Offload Modes	:	Offload while logging; stop and offload
Battery Indication	:	Battery voltage can be viewed in status screen and optionally logged in datafile. Low battery indication in datafile.
Environmental Rating	:	Ip68

* 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%.