



## KIT-D-U20-04

### Water Level Data Logger Deluxe Kit (13')

Combining high accuracy water level measurements with out-of-the-box convenience, this money-saving kit includes everything needed to start logging right away. It is ideal for monitoring water levels and temperatures in wells, streams, lakes and freshwater wetlands, as well as barometric pressure.

This kit includes:

U20-001-04 HOBO data logger (13' range)  
U20-001-04 HOBO data logger (13' range) for Barometric Pressure  
U-1 DTW-1 HOBO waterproof shuttle with coupler  
U20-CASE-1 carrying case  
BHW-PRO-CD HOBOWare Pro software.



Like other HOBO Water Level Loggers, the 13-foot version offers exceptional value and ease-of-use, with no cumbersome vent tubes or desiccants to maintain.

#### Supported Measurements:

Absolute Pressure, Barometric Pressure, Temperature and Water Level

#### Key Advantages:

- Lightning protection - no long signal wires, and electronics are shielded in stainless steel housing (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
- Durable ceramic pressure sensor

## KIT-D-U20-04 Specifications

### Pressure Sensor

**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 - 0.075% FS, 0.3 cm (0.01 ft) water

**Maximum error:** - 0.15% FS, 0.6 cm (0.02 ft) water

**Raw pressure accuracy:\*\*** 0.3% FS, 0.43 kPa (0.063 psi) maximum error

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

**Pressure response time 90%:** < 1 second

**Thermal response time (90%):** † Approximately 10 minutes in water to achieve full temperature compensation of the pressure sensor

### Temperature Sensor

**Operation range:** -20° to 50°C (-4° to 122°F)

**Accuracy:** 0.37°C at 20°C (0.67°F at 68°F)

**Resolution:** 0.1°C at 20°C (0.18°F at 68°F) (10-bit)

**Response time (90%):** 3.5 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)

**Dimensions:** 2.46 cm (0.97 inches) diameter, 15 cm (5.9 inches) length; mounting hole 6.3 mm (0.25 inches) diameter

**Weight:** Approximately 210 g (7.4 oz)

**Wetted materials:** 316 stainless steel, Viton® o-rings, acetyl cap, ceramic sensor

**Shock/drop:** Logger is sensitive to shocks. Handle with care and avoid any impact. Always use proper packaging when shipping the logger.

**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 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

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

\* With accurate reference water level measurement and Barometric Compensation Assistant data

\*\* Absolute pressure sensor accuracy includes all pressure drift, temperature, and hysteresis-induced errors

† Maximum error due to rapid thermal changes is approximately 0.5%





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