ONSET

HOBO® KIT-S-U20-04

Water Level Data Logger Starter 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.

This kit includes:

> U20-001-04 HOBO data logger (13' range) BASE-U-4 base station with the required coupler BHW-PRO HOBOware Pro software.

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.

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 (use barometric pressure data from nearby weather station).
- Multiple-rate sampling (see demo) 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
- Durable ceramic pressure sensor

HOBO KIT-S-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), see Plot A
Resolution: 0.1°C at 20°C (0.18°F at 68°F) (10-bit), see Plot A
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%