



HOBO® U22-001 Data Logger

Water Temperature Pro v2

A durable water temperature data logger with 12-bit resolution. Complete with a precision sensor for $\pm 0.2^{\circ}\text{C}$ accuracy, this logger measures temperatures between -40°C and 70°C (-40°F to 158°F) in air and up to 50°C (122°F) in water. Its waterproof, streamlined case allows for extended deployment in freshwater or saltwater. And its optical USB interface lets you offload data even while the logger is wet or under water. A solar radiation shield is required to obtain accurate air temperature measurements in sunlight (either the assembly-required RS1 Solar Radiation Shield or the pre-assembled M-RSA Solar Radiation Shield).



Key Advantages:

- Research-grade measurements at an affordable price
- Waterproof to 120 meters (400 feet)
- Data readout in less than 30 seconds via fast Optic USB interface
- Compatible with HOBOWare and HOBOWare Pro software for logger setup, graphing, and analysis

HOBO U22-001 Data Logger Specifications

Operation range[†]: -40° to 70°C (-40° to 158°F) in air; maximum sustained temperature of 50°C (122°F) in water

Accuracy: ±0.21°C from 0° to 50°C (±0.38°F from 32° to 122°F)

Resolution: 0.02°C at 25°C (0.04°F at 77°F)

Response time: (90%) 5 minutes in water; 12 minutes in air moving 2 m/sec (typical)

Stability (drift): 0.1°C (0.18°F) per year

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 ONLY

Battery life (typical use): 6 years with 1 minute or greater logging interval

Memory (non-volatile): 64K bytes memory (approx. 42,000 12-bit temperature measurements)

Weight: 42 g (1.5 oz)

Dimensions: 3.0 cm (1.19 in.) maximum diameter, 11.4 cm (4.5 in.) length; mounting hole 6.3 mm (0.25 inches) diameter

Wetted materials: Polypropylene case, EPDM® o-rings, stainless steel retaining ring

Buoyancy (fresh water): +13 g (0.5 oz.) in fresh water at 25°C (77°F); +17 g (0.6 oz.) with optional boot

Waterproof: To 120 m (400 ft.)

Shock/drop: 1.5 m (5 ft.) drop at 0°C to 70°C (32°F to 150°F)

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.

NIST certificate available: for additional charge

Environmental Rating: IP68

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

[†]**IMPORTANT**: The plastic case will become brittle at temperatures lower than -20°C. If the logger is deployed in a location where the temperature drops below -20°C, make sure the logger remains stationary and is not pulled on or struck. Return the logger to above -20°C before handling.

Contact Us

Sales (8am to 5pm ET, Monday through Friday)

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