



# HOBO U22-001 Pro v2 Water Temperature Data Logger

## Product Images



## Short Description

The HOBO Water Temperature Pro v2 is durable with 12-bit resolution. Complete with a precision sensor for  $\pm 0.2^{\circ}\text{C}$  accuracy, this logger measures temperatures between  $-40^{\circ}\text{C}$  and  $70^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$  to  $158^{\circ}\text{F}$ ) in air and up to  $50^{\circ}\text{C}$  ( $122^{\circ}\text{F}$ ) in water. Its waterproof, streamlined case allows for extended deployment in fresh or salt water. Moreover, the Water Temp Pro v2's optical USB interface makes it possible to offload data even while the logger is wet or underwater.

## Description

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### U22-001 Highlighted Features

- 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.

**IMPORTANT:** HOBO data loggers require [HOBOWare software](#) (USB interface cable included w/CD purchase).

A solar radiation shield is required to obtain accurate air temperature measurements in sunlight (RS1 Solar Radiation Shield, assembly required; or M-RSA pre-assembled Solar Radiation Shield).

## Additional Information

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|------------------------|--|
| Country of Manufacture | United States  |
| Explanation            | <p>To see the full specifications for this product, please see the product manual under the Resources tab.</p> <p><b>Operation range<sup>†</sup>:</b> -40° to 70°C (-40° to 158°F) in air; maximum sustained temperature of 50°C (122°F) in water</p> <p><b>Accuracy:</b> ±0.21°C from 0° to 50°C (±0.38°F from 32° to 122°F)</p> <p><b>Resolution:</b> 0.02°C at 25°C (0.04°F at 77°F)</p> <p><b>Response time:</b> (90%) 5 minutes in water; 12 minutes in air moving 2 m/sec (typical)</p> <p><b>Stability (drift):</b> 0.1°C (0.18°F) per year</p> <p><b>Real-time clock:</b> ± 1 minute per month 0° to 50°C (32° to 122°F)</p> <p><b>Battery:</b> 2/3 AA, 3.6 Volt Lithium, factory-replaceable ONLY</p> <p><b>Battery life (typical use):</b> 6 years with 1 minute or greater logging interval</p> <p><b>Memory (non-volatile):</b> 64K bytes memory (approx. 42,000 12-bit temperature measurements)</p> <p><b>Weight:</b> 42 g (1.5 oz)</p> <p><b>Dimensions:</b> 3.0 cm (1.19 in.) maximum diameter, 11.4 cm (4.5 in.) length; mounting hole 6.3 mm (0.25 inches) diameter</p> <p><b>Wetted materials:</b> Polypropylene case, EPDM® o-rings, stainless steel retaining ring</p> <p><b>Buoyancy (fresh water):</b> +13 g (0.5 oz.) in fresh water at 25°C (77°F); +17 g (0.6 oz.) with optional boot</p> <p><b>Waterproof:</b> To 120 m (400 ft.)</p> <p><b>Shock/drop:</b> 1.5 m (5 ft.) drop at 0°C to 70°C (32°F to 150°F)</p> <p><b>Logging interval:</b> 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.</p> <p><b>Launch modes:</b> Immediate start and delayed start</p> <p><b>Offload modes:</b> Offload while logging; stop and offload</p> <p><b>Battery indication:</b> Battery voltage can be viewed in status screen and optionally logged in datafile. Low battery indication in datafile.</p> <p><b>NIST certificate available:</b> for additional charge</p> <p><b>Environmental Rating:</b> IP68</p> <p>The CE Marking identifies this product as complying with all relevant directives in the European Union (EU).</p> <p><sup>†</sup><b>IMPORTANT:</b> 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.</p> |

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|----------------------|--|
| Contents             | HOBO U22-001 Water Temp Pro V2<br>Communications window protective cap |
| Ideal For            | Professional   |
| Brand                | Onset HOBO   |
| Channel(s)           | 1  |
| Onset Product Series | U22  |
| Typical applications | Environmental (Outdoor), Water Quality                                 |
| Measurements         | Temperature, Water Temperature   |

## Additional Options

|   |   |
|---|---|
| <b>Connectivity Options</b>   | HOBO Universal Optic USB Base Station Base-U-4 (includes Couplers)  |
|   | Waterproof Optic Data Shuttle U-DTW-1 (requires HOBOWare Pro)       |
| <b>Temperature Calibration Certificate</b>                          | 2 Point Temperature Calibration (0°C / 60°C)                        |
|   | 2 Point Temperature Calibration (please specify temperature points) |
|   | 1 Point Temperature Calibration (0°C)                               |
| <b>HOBOWare Pro Software Options</b>                                | HOBOWare Pro on USB Drive (USB cable included)                      |
|   | HOBOWare Pro on CD (USB Cable Included)                             |
|   | HOBOWare Pro - Download Only (USB cable NOT included)               |
| <b>USB Cable (included with HOBOWare Pro on USB Drive &amp; CD)</b> | HOBO U-Series to PC USB Cable                                       |