



HOBO U23-004 Pro V2 Temperature Logger with 1 x External Waterproof Sensor

Product Images



Short Description

The HOBO Pro v2 Temperature/External Temperature data logger is a weatherproof data logger with an external soil/water temperature sensor on a 6-foot cable useful for situations where just one temperature probe is required. An internal temperature sensor is also included.

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Highlighted Features

- Weatherproof housing for use in outdoor or condensing environments
- High accuracy
- Small-diameter external sensor versions for measurements in tight spaces
- Optic USB interface for fast and reliable download
- Compatible with HOBOWare and HOBOWare Pro software for logger setup, graphing and analysis



IMPORTANT: HOBO U23 data loggers require either the [BASE-U-4](#) or the [U-DTW-1](#) Data Shuttle to offload data and launch loggers.

HOBO loggers require [HOBOWare software](#) (free download).

Additional Information

Country of Manufacture	<p>United States</p> <p>Temperature Sensor Operation range internal sensors: -40° to 70°C (-40° to 158°F) U23-002 external temperature sensor: -40° to 70°C (-40° to 158°F) U23-003 and U23-004 external sensors: -40° to 100°C (-40° to 212°F), with tip and cable immersion in fresh water up to 50°C (122°F) for one year</p> <p>Accuracy: ±0.21°C from 0° to 50°C (±0.38°F from 32° to 122°F); see Plot A Resolution: 0.02°C at 25°C (0.04°F at 77°F); see Plot A</p> <p>Response Time (typical to 90%) U23-001 internal sensor: 40 minutes in air moving 1 m/sec U23-002 external temperature sensor: 5 minutes in air moving 1 m/sec U23-003 and U23-004 external sensors: 3 minutes in air moving 1 m/sec; 30 seconds in stirred water</p> <p>Stability (drift): < 0.1°C (0.18°F) per year</p> <p>Relative Humidity Sensor (U23-001, U23-002 only) Operation range: 0-100% RH, -40° to 70°C (-40° to 158°F) Exposure to conditions below -20°C (-4°F) or above 95% RH may temporarily increase the maximum RH sensor error by an additional 1% Accuracy: ±2.5% from 10% to 90% RH (typical), to a maximum of ±3.5% including hysteresis. See Plot B for full range. Resolution: 0.03%</p> <p>Response Time (typical to 90%) U23-001: 40 minute in air moving 1 m/sec with protective cap U23-002: 5 minutes in air moving 1 m/sec with protective cap</p> <p>Stability (drift): < 1% per year typical</p> <p>Logger Operation range: -40° to 70°C (-40° to 158°F) Real-time clock: ± 1 minute per month 0° to 50°C (32° to 122°F) Battery: 1/2 AA, 3.6 Volt lithium, user-replaceable (part # HP-B) Battery life (typical use): 3 years with 1 minute or greater logging interval Memory (non-volatile): 64K bytes memory (approx. 21,000 temperature and RH measurements)</p>
Explanation	<p>Materials All models: ASA styrene polymer housing and mounting clamp; polypropylene protective cap; Buna-N o-ring(s) U23-001, U23-002 only: ASA styrene polymer RH sensor cap; modified hydrophobic polyethersulfone membrane</p> <p>Cables U23-001: No cables U23-002: One 184 cm (6 ft.) PVC cable; sensor diameter 1 cm (0.38 in.) U23-003: Two 184 cm (6 ft.) PVC cables; sensor diameter 0.5 cm (0.20 in.) U23-004: One 184 cm (6 ft.) PVC cable; sensor diameter 0.5 cm (0.20 in.)</p> <p>Environmental rating: Electronics housing is NEMA 6P equivalent (tolerant of brief submergence); Units with RH sensors are NEMA 4 equivalent (splash-resistant)</p> <p>Launch modes: Immediate start; delayed start 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) 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.</p> <p>Weight U23-001: 57 g (1.5 oz) U23-002: 118 g (3.1 oz) U23-003: 138 g (3.7 oz) U23-004: 102 g (2.7 oz)</p> <p>Dimensions: Housing measures 10.2 × 3.8 cm (4.0 × 1.5 in.) NIST certificate: Temperature certificate available for additional charge</p> <p>The CE Marking identifies this product as complying with the relevant directives in the European Union (EU).</p>
Brand	Onset HOBO
Channel(s)	2
Onset Product Series	U23
Typical applications	Environmental (Indoor), Environmental (Outdoor), Field Research, Food Safety, Product Safety, Weather Monitoring
Measurements	Soil Temperature, Temperature, Water Temperature

Additional Options

Connectivity Options	HOBO Universal Optic USB Base Station Base-U-4 (includes Couplers)
	Waterproof Optic Data Shuttle U-DTW-1 (requires HOBOWare Pro)
Temperature Calibration Certificate	2 Point Temperature Calibration (0°C / 60°C)
	2 Point Temperature Calibration (please specify temperature points)
	1 Point Temperature Calibration (0°C)
Radiation Shield Option	RS3 Radiation Shield
HOBOWare Pro Software Options	HOBOWare Pro on USB Drive (USB cable included)
	HOBOWare Pro on CD (USB Cable Included)
	HOBOWare Pro - Download Only (USB cable NOT included)
USB Cable (included with HOBOWare Pro on USB Drive & CD)	HOBO U-Series to PC USB Cable