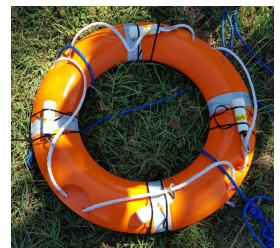




HOBO U23-001A Pro V2 Weatherproof Temperature & Humidity Data Logger (Internal Sensors)

Product Images



Short Description

The HOBO U23-001A Pro v2 Temperature/Relative Humidity data logger is a weatherproof data logger with built-in temperature and relative humidity sensors.

The Relative Humidity sensor provides superior durability in humid environments and is use-replaceable.

Description

Highlighted Features

- Weatherproof housing for use in outdoor or condensing environments
- High accuracy
- Replaceable Relative Humidity sensor provides fast response and superior recovery from condensing conditions
- 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 (HOBOWare Pro is required when using the U-DTW-1 Waterproof shuttle)



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	United States
Explanation	Temperature Sensor
	Operation Range U23-001A internal sensor: -40 to 70°C (-40 to 158°F) U23-002A 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
	Accuracy U23-001A and U23-002A: ±0.25°C from -40 to 0°C (±0.45 from -40 to 32°F), ±0.2°C from 0 to 70°C (±0.36 from 32 to 158°F) U23-003 and U23-004: ±0.21°C from 0° to 50°C (±0.38°F from 32° to 122°F); see Plot A
	Resolution U23-001A and U23-002A: 0.04°C (0.072°F) U23-003 and U23-004: 0.02°C at 25°C (0.04°F at 77°F); see Plot A
	Response Time (Typical to 90%) U23-001A internal sensor: 10 minutes in air moving 1 m/sec U23-002A external temperature sensor: 3 minutes, 45 seconds 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
	Drift U23-001A and U23-002A: <0.01°C (0.018°F) per year U23-003 and U23-004: <0.1°C (0.18°F) per year
	Relative Humidity Sensor (U23-001A, U23-002A only)
	Operation Range 0 to 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 at 25°C (77°F); below 10% and above 90% ±5% typical
	Resolution 0.05%
	Response Time (Typical to 90%) U23-001A: 40 minutes in air moving 1 m/sec with protective cap U23-002A: 15 seconds in air moving 1 m/sec
	Drift <1% per year typical
	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 (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)
	Materials All models: ASA styrene polymer housing and mounting clamp; polypropylene protective cap; Buna-N o-ring(s); U23-001A, U23-002A only: ASA styrene polymer RH sensor cap; modified hydrophobic polyethersulfone membrane
	Cables U23-001A: No cables U23-002A: 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.)
	Environmental Rating Electronics housing is NEMA 6P equivalent (tolerant of brief submergence); Units with RH sensors are NEMA 4 equivalent (splash-resistant)
	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
	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.
	Weight U23-001A: 57 g (1.5 oz); U23-002A: 118 g (3.1 oz); U23-003: 138 g (3.7 oz); U23-004: 102 g (2.7 oz)
	Dimensions Housing measures 10.2 × 3.8 cm (4.0 × 1.5 in.)
	NIST Certificate Temperature certificate available for additional charge
	 The CE Marking identifies this product as complying with all relevant directives in the European Union (EU).
Ideal For	Professional, Agronomy
Brand	Onset HOB0
Onset Product Series	U23
Typical applications	Environmental (Outdoor), Waste Water, Water Quality
Measurements	Humidity, 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)
Radiation Shield Option	RS3-B 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
Temperature & Humidity Calibration Certificate	Temperature & Humidity Calibration @ 20°C and 50RH
	Temperature & Humidity Calibration (please specify measurement points required)