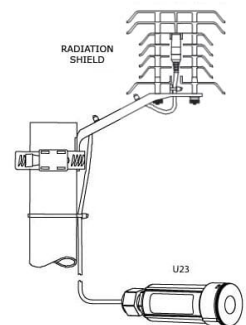




HOBO U23-002A Pro V2 Weatherproof Temp & RH Data Logger (External Sensor)

Product Images



Short Description

The HOBO U23-002A Pro v2 External Temperature/Relative Humidity Data Logger is a weatherproof data logger with an external Temperature and Relative Humidity sensor on a 6-foot cable for fast sensor response and deployment in tight spaces. The Relative Humidity sensor features fast response and superior durability in humid environments, and is user-replaceable.

Description

Key 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.



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	<p>Temperature Sensor</p> <p>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</p> <p>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</p> <p>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</p> <p>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</p> <p>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</p> <p>Relative Humidity Sensor (U23-001A, U23-002A only)</p> <p>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%</p> <p>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</p> <p>Resolution 0.05%</p> <p>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</p> <p>Drift <1% per year typical</p> <p>Logger</p> <p>Operation Range -40° to 70°C (-40° to 158°F)</p> <p>Real-time Clock ±1 minute per month 0° to 50°C (32° to 122°F)</p> <p>Battery 1/2 AA, 3.6 Volt lithium, user-replaceable (HP-B)</p> <p>Battery Life (Typical Use) 3 years with 1 minute or greater logging interval</p> <p>Memory (Non-Volatile) 64K bytes memory (approx. 21,000 temperature and RH measurements)</p> <p>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</p> <p>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.)</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</p> <p>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</p> <p>Offload Modes Offload while logging; stop and offload</p> <p>Battery Indication Battery voltage can be viewed in status screen and optionally logged in datafile. Low battery indication in datafile.</p> <p>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)</p> <p>Dimensions Housing measures 10.2 × 3.8 cm (4.0 × 1.5 in.)</p> <p>NIST Certificate Temperature certificate available for additional charge</p> <p> The CE Marking identifies this product as complying with all relevant directives in the European Union (EU).</p>
Brand	Onset HOBO
Onset Product Series	U23
Typical applications	Environmental (Outdoor), Field Research
Measurements	Dew Point, 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 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)