ONSET

HOBO
Data Logging Solutions
Australia - New Zealand

HOBO® MX2301A Data Logger

Temperature/RH Data Logger

The HOBO MX2301 is a weatherproof data logger with built-in temperature and relative humidity sensors. Leveraging Bluetooth Low Energy, the logger enables easy, fast set up and data download directly from your mobile device and provides high-accuracy measurements in harsh outdoor environments.

Remotely access your data in Onset's cloud-based HOBOlink software with the new MX Gateway.



Supported Measurements:

Relative Humidity and Temperature

Key Advantages:

- Convenient wireless setup and download via Bluetooth Low Energy (100-foot range)
- Retrieve data in hard-to-reach locations
- Visual alarms alert you to out-of-range conditions
- Compact, weatherproof housing with built-in mounting
- View current data in real time with Onset's free HOBOmobile app
- Share downloaded data easily from your mobile device
- Accuracy: +/- 0.2C° and +/- 2.5% RH

HOBO MX2301A Data Logger Specifications

Temperature Sensor				
Range	MX2301A and MX2305 internal sensors: -40 to 70°C (-40 to 158°F) MX2302A external temperature sensor: -40 to 70°C (-40 to 158°F) MX2303 and MX2304 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	±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) ±0.25°C from 70 to 100°C (±0.45 from 158 to 212°F), MX2303 and MX2304 only			
Resolution	0.04°C (0.072°F)			
Drift	<0.01°C (0.018°F) per year			
RH Sensor (MX2301A, MX2302A only)				
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% (typical) to a maximum of ±3.5% including hysteresis at 25°C (77°F); below 10% RH and above 90% RH ±5% typical			
Resolution	0.01%			
Drift	<1% per year typical			
Memory	128 KB (63,488 measurements, maximum)			
Response Time: Temperature (typical, to 90% of change)		**Without Solar Radiation Shield**	**With RS1/M-RSA Solar Radiation Shield**	**With RS3-B Solar Radiation Shield**
internal sensor		17 minutes in air moving 1 m/sec	24 minutes in air moving 1 m/sec	N/A
Response Time: RH (typical, to 90% of change)		**Without Solar Radiation Shield**	**With RS1/M-RSA Solar Radiation Shield**	**With RS3-B Solar Radiation Shield**
internal sensor		30 seconds in air moving 1 m/sec	40 seconds in air moving 1 m/sec	N/A
Logger				
Radio Power	1 mW (0 dBm)			
Transmission Range	Approximately 30.5 m (100 ft) line-of-sight			
Wireless Data Standard	Bluetooth Smart (Bluetooth Low Energy, Bluetooth 4.0)			
Logger Operating Range	-40° to 70°C (-40° to 158°F)			
Logging Rate	1 second to 18 hours			
Logging Modes	Fixed interval (normal, statistics) or burst			
Memory Modes	Wrap when full or stop when full			
Start Modes	Immediate, push button, date & time, or next interval			
Stop Modes	When memory full, push button, date & time, or after a set logging period			
Time Accuracy	±1 minute per month 0° to 50°C (32° to 122°F)			
Battery Type	2/3 AA 3.6 Volt lithium, user replaceable			
Battery Life	2 years, typical with logging interval of 1 minute and Power Saving Mode disabled; 5 years, typical with logging interval of 1 minute and Power Saving Mode enabled. Faster logging intervals and statistics sampling intervals, burst logging, remaining connected with the app, excessive downloads, and paging may impact battery life.			
Memory	128 KB (63,488 measurements, maximum)			
Full Memory Download Time	Approximately 60 seconds; may take longer the further the device is from the logger			
Dimensions	Logger housing: 10.8 x 5.08 x 2.24 cm (4.25 x 2.0 x 0.88 in.) External temperature sensor diameter: 0.53 cm (0.21 in.) External temperature/RH sensor diameter: 1.17 cm (0.46 in.) External sensor cable length: 2 m (6.56 ft) Solar radiation shield bracket: 10.8 x 8.3 cm (4.25 X 3.25 in.)			
Weight	Logger: 75.5 g (2.66 oz) Solar radiation shield bracket: 20.4 g (0.72 oz)			
Materials	Acetal, silicone gasket, stainless steel screws			

Environmental Rating	NEMA 6 and IP67

CE

The CE Marking identifies this product as complying with all relevant directives in the European Union (EU). This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

Contact Us

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