



## HOBO MX2305 Temperature Data Logger

### Bluetooth-enabled logger

A weatherproof data logger with an internal temperature sensor, leveraging Bluetooth for easy setup and data download.

#### Important Information

Requires a compatible mobile device or Windows computer and the HOBObconnect app. System requirements for the app can be found at the bottom of the HOBObconnect software page.



Compatible with  
**HOBObconnect<sup>®</sup> Monitoring App**

### Supported Measurements

Temperature

### Contact Us

Sales (8am to 5pm ET, Monday through Friday)

- Email [sales@onsetcomp.com](mailto:sales@onsetcomp.com)
- Call 1-508-759-9500
- In U.S. toll free 1-800-564-4377
- Fax 1-508-759-9100

Technical Support (8am to 5pm ET, Monday through Friday)

- Contact Product Support [www.onsetcomp.com/support/contact](http://www.onsetcomp.com/support/contact)
- Call 1-508-759-9500
- In U.S. toll free 1-877-564-4377
- Cable ties

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# HOBO MX2305 Temperature Data Logger (MX2305) Specifications

## Temperature Sensor

<b>Range</b>	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
<b>Accuracy</b>	±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
<b>Resolution</b>	MX2301A and MX2302A: 0.02°C (0.036°F) MX2303, MX2304, and MX2305: 0.04°C (0.072°F)
<b>Drift</b>	<0.01°C (0.018°F) per year

## Relative Humidity Sensor\* (MX2301A, MX2302A only)

<b>Range</b>	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%
<b>Accuracy</b>	±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
<b>Resolution</b>	0.01%
<b>Drift</b>	<1% per year typical

## Response Time (typical, to 90% of change)

Temperature	Without Solar Radiation Shield	With RS1/M-RSA Solar Radiation Shield	With RS3-B Solar Radiation Shield
<b>MX2301A internal sensor</b>	17 minutes in air moving 1 m/sec	24 minutes in air moving 1 m/sec	NA
<b>MX2302A external sensor</b>	3 minutes, 45 seconds in air moving 1 m/sec	7 minutes, 45 seconds in air moving 1 m/sec	6 minutes, 30 seconds in air moving 1 m/sec
<b>MX2303/MX2304 external sensors</b>	3 minutes in air moving 1 m/sec; 20 seconds in stirred water	7 minutes in air moving 1 m/sec	4 minutes in air moving 1 m/sec
<b>MX2305 internal sensor</b>	17 minutes in air moving 1 m/sec	24 minutes in air moving 1 m/sec	NA
RH	Without Solar Radiation Shield	With RS1/M-RSA Solar Radiation Shield	With RS3-B Solar Radiation Shield
<b>MX2301A internal sensor</b>	30 seconds in air moving 1 m/sec	40 seconds in air moving 1 m/sec	NA
<b>MX2302A external sensor</b>	15 seconds in air moving 1 m/sec	30 seconds in air moving 1 m/sec	30 seconds in air moving 1 m/sec

## Logger

<b>Operating Range</b>	-40° to 70°C (-40° to 158°F)
<b>Radio Power</b>	1 mW (0 dBm)
<b>Transmission Range</b>	Approximately 30.5 m (100 ft) line-of-sight
<b>Wireless Data Standard</b>	Bluetooth Low Energy (Bluetooth Smart)
<b>Logging Rate</b>	1 second to 18 hours
<b>Logging Modes</b>	Fixed interval (normal, statistics) or burst
<b>Memory Modes</b>	Wrap when full or stop when full
<b>Start Modes</b>	Immediate, push button, date & time, or next interval

<b>Stop Modes</b>	When memory full, push button, date & time, or after a set logging period
<b>Time Accuracy</b>	±1 minute per month 0° to 50°C (32° to 122°F)
<b>Battery Type</b>	2/3 AA 3.6 Volt lithium, user replaceable
<b>Battery Life</b>	2 years, typical with logging interval of 1 minute and Bluetooth Always On enabled; 5 years, typical with logging interval of 1 minute and Bluetooth Always On disabled. Faster logging intervals and statistics sampling intervals, burst logging, remaining connected with the app, excessive downloads, and paging may impact battery life.
<b>Memory</b>	MX2301A and MX2302A: 128 KB (63,488 measurements, maximum) MX2303, MX2304, and MX2305: 128 KB (84,650 measurements, maximum)
<b>Full Memory Download Time</b>	Approximately 60 seconds; may take longer the further the device is from the logger
<b>Dimensions</b>	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.)
<b>Weight</b>	Logger: 75.5 g (2.66 oz) Solar radiation shield bracket: 20.4 g (0.72 oz)
<b>Materials</b>	Acetal, silicone gasket, stainless steel screws
<b>Environmental Rating</b>	NEMA 6 and IP67



The CE Marking identifies this product as complying with all relevant directives in the European Union (EU).

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\*Per RH sensor manufacturer data sheet