



HOBO[®] MX2303 Data Logger

MX2303 Two External Temperature Sensors Data Logger

The HOBO MX2303 is a weatherproof data logger with two external temperature 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:

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°

HOBO MX2303 Data Logger Specifications

Temperature Sensor

| | |
|-------------------|--|
| Range | MX2301 and MX2305 internal sensors: -40 to 70°C (-40 to 158°F) MX2302 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 (MX2301, MX2302 only)

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|-------------------|--|
| 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 | 0.05% |
| Drift | <1% per year typical |

| 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 |
|--|--|---------------------------------------|-----------------------------------|
| MX2301 internal sensor | 17 minutes in air moving 1 m/sec | 24 minutes in air moving 1 m/sec | N/A |
| MX2302 external sensor | 2 minutes, 30 seconds in air moving 1 m/sec | 6 minutes in air moving 1 m/sec | 5 minutes in air moving 1 m/sec |
| MX2303/MX2304 external sensors | 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 |
| MX2305 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 |
|---|---------------------------------|---------------------------------------|-----------------------------------|
| MX2301 internal sensor | 1 minute in air moving 1 m/sec | 1 minute in air moving 1 m/sec | N/A |
| MX2302 external sensor | 4 minutes in air moving 1 m/sec | 4 minutes in air moving 1 m/sec | 4 minutes in air moving 1 m/sec |

Logger

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|----------------------------------|--|
| 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 (84,650 measurements, maximum) |
| Full Memory Download Time | Approximately 60 seconds; may take longer the further the device is from the logger |

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| 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 |

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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