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HOBO MX1104 Wireless Temperature, Relative Humidity & Light (+1 x External Analogue Input) Data Logger

Product Images

Short Description

The HOBO MX1104 multi-channel data logger measures and transmits temperature, relative humidity, and light intensity data wirelessly. It also includes an external analogue input to attach a variety of additional sensors.

Access your data wirelessly from your smartphone, tablet or Windows computer within a 100-foot range.

Description

Access your data directly from your mobile phone, tablet, or Windows computer when within 100 foot line-of-sight range of the logger - with the free HOBOconnect app.

To enable cloud data storage and analysis - add an MX Data Plan (select from options above).

To enable near real-time remote monitoring and alerts via email/text message - add an MX Data Plan and MX Gateway (select options above). Note: The MX Gateway must be indoors.

Key Features

- Bluetooth Low Energy wireless communications
- 16-bit resolution for highly accurate measurements
- Stores 1.9 million measurements for longer deployments between offloads
- New Self-Describing sensors with automatic configuration for fast deployment
- Compatible with existing sensors for a wide range of indoor monitoring
- Audible and visual LCD-screen alarms notify you if sensor becomes unplugged or a reading exceeds set thresholds
- Optional cloud data access and remote monitoring/alerts.

Requires a compatible mobile device or Windows computer and the HOBOconnect app.

This data logger operates in an indoor environment.

Supported Measurements: 4-20mA, AC Current, AC Voltage, Air Velocity, Carbon Dioxide, Compressed Air Flow, DC Current, DC Voltage, Dew Point, Differential Pressure, Gauge Pressure, Kilowatts (kW), Light Intensity, Relative Humidity and Temperature

You can download the HOBOconnect app here

Additional Information

Country of Manufacture	United States
Brand	HOBO
Measurements	4-20mA, Air Velocity, CO2, Compressed Air Flow, Current AC, Current DC, Dew Point, Differential Pressure, Humidity, Kilowatts (kW), Light Intensity, Pressure, Temperature, Voltage AC, Voltage DC
Typical applications	Building Monitoring, Building Performance, Environmental (Indoor), HVAC, Thermal Comfort
HOBO Product Series	MX1100
Explanation	To see the full specifications for this product, please see the product manual found under the Resources tab.

Temperature Sensor (MX1104)	
Range	-20° to 70°C (-4° to 158°F)
Accuracy	±0.20°C from 0° to 50°C (±0.36°F from 32° to 122°F)
Resolution	0.002°C at 25°C (0.004°F at 77°F)
Drift	<0.1°C (0.18°F) per year

RH Sensor* (MX1104)	
Range	0% to 100% at -20° to 70°C (-4° to 158°F); exposure to conditions above 95% 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% and above 90% ±5% typical
Resolution	0.01%
Drift	<1% per year typical

Response Time (MX1104)	
Temperature	11 minutes in air moving 1 m/s (2.2 mph)
RH	30 seconds to 90% in airflow of 1 m/s (2.2 mph)

Light Sensor (M1104)	
Range	0 to 167,731 lux (15,582 lum/ft2)
Accuracy	±10% typical for direct sunlight (see Light Measurement on page 4 for more details)

Logger with Cable Type	SD-MA-420 or CABLE-4-20mA	SD-VOLT-2.5 or CABLE-2.5-STEREO	SD-VOLT-05 or CABLE-ADAP5	SD-VOLT-10 or CABLE-ADAP10	SD-VOLT-24 or CABLE-ADAP24
Measurement Range	0 to 20.1 mA	0 to 2.5 V	0 to 5.0 V	0 to 10 V	0 to 24 V
Accuracy	±0.001 mA ±0.2% of reading	±0.1 mV ±0.1% of reading	±0.2 mV ±0.3% of reading	±0.4 mV ±0.3% of reading	±1.0 mV ±0.3% of reading
Resolution	0.3 µA	40 µV	80 µV	160 µV	384 µV

Logger	
Operating Range	-20° to 70°C (-4° to 158°F)
Radio Power	1 mW (0 dBm)
Transmission Range	Approximately 30.5 m (100 ft) line-of-sight
Wireless Data Standard	Bluetooth Low Energy (Bluetooth Smart)
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
Restart Mode	Push button
Time Accuracy	±1 minute per month at 25°C (77°F)
Battery Type	Two AAA 1.5 V alkaline batteries, user replaceable
Battery Life	1 year, typical with logging interval of 1 minute and Bluetooth Always On enabled; 2 years, typical with logging interval of 1 minute and Bluetooth Always On disabled; and temperatures between 0° and 50°C (32° and 122°F). Faster logging intervals and statistics sampling intervals, burst logging, remaining connected with the app, excessive downloads, and paging may impact battery life.
Memory	4 MB (1.9 million measurements, maximum)
Full Memory Download Time	Approximately 4 to 15 minutes depending on the mobile device; may take longer the further the device is from the logger
LCD	LCD is visible from 0° to 50°C (32° to 122°F); the LCD may react slowly or go blank in temperatures outside this range
Size	11.28 x 5.41 x 2.92 cm (4.44 x 2.13 x 1.15 in.)
Weight	123 g (4.34 oz)
Environmental Rating	IP54

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

*Per RH sensor manufacturer data sheet

Dimensions	11.28 x 5.41 x 2.92 cm
Batteries	2 x AAA 1.5V alkaline batteries, user replaceable
Power	Battery Only

Additional Options

Optional cloud data storage and analysis - select an annual MX Data Plan from the options below (one Data Plan required per logger)	MX-Speed (Supports up to 4 measurements with 1 minute logging)
	MX-Data (Supports up to 10 measurements with 5 minute logging)
Optional near real-time remote monitoring and alerts via email/text message (requires an MX Gateway, plus one MX Data Plan for each MX Logger)	MX Gateway for HOBO MX Data Loggers (SKU: MXGTW1)
Carbon Dioxide Sensor (hold down Crtl key & click to select multiple items)	Telaire 7001 Carbon Dioxide Sensor (TEL-7001)
	Telaire 7001 CO2 Sensor Output Cable - required with CO2 Sensor (CABLE-CO2)
Temperature & Humidity Calibration Certificate	Temperature & Humidity Calibration @ 20°C and 50RH
	Temperature & Humidity Calibration (please specify measurement points required)
Differential Pressure (hold down Crtl key & click to select multiple items)	Differential Air Pressure & Air Velocity Transducer Sensor with LCD Display (T-VER-PX3UL)
	0-5 Volt DC Input Cable (CABLE-ADAP5)
	Switched AC Power Adapter (P-AC-1)
Self-Describing Air/Water/Soil Temperature Sensor - Cable Length	0.3 Metres (SD-TEMP-01)
	1.8 Metres (SD-TEMP-06)
	5.1 Metres (SD-TEMP-20)
	15.2 Metres (SD-TEMP-50)
Self-Describing DC Voltage Input Cable	0 to 2.5 V DC (SD-VOLT-2.5)
	0 to 5 V DC (SD-VOLT-05)
	0 to 10 V DC (SD-VOLT-10)
	0 to 10 V DC (SD-VOLT-24)
Self-Describing Split-Core AC Current Transformer Sensor	2–20 AMP (SD-CT-020)

	5–50 AMP (SD-CT-050)
	10–100 AMP (SD-CT-100)
	20–200 AMP (SD-CT-200)
	60–600 AMP (SD-CT-600)
Other Sensors	4-20 MA Input Cable Self-Describing Sensor (SD-MA-420)
	Food-Grade Stainless Steel Temperature Self-Describing Sensor (6 ft cable) (SD-TEMP-SS-06)
	Pipe Temperature Self-Describing Sensor (6 foot cable) (SD-TEMP-P-06)