



HOBO® MX1105 Data Logger

4-Channel Analog Data Logger

The HOBO MX1105 multi-channel data logger, with four-channel inputs, measures and transmits data wirelessly from a variety of sensors to your mobile device via Bluetooth Low Energy (BLE) technology.

This self-contained wireless data logger lets you use your mobile device and Onset's free HOBOnnect app to access data, at any time, over a 100-foot range via Bluetooth Low Energy (BLE) technology. You can configure the logger, read out data, view data in graphs, check the operational status of loggers, configure alarm notifications, and share data files – all with no dedicated equipment beyond a mobile device. And if used with the new MX Gateway, you can remotely access your data in Onset's cloud-based HOBOLink® software. The MX1105 is ideal for energy audits, building commissioning studies, equipment scheduling, and more.

You can download the HOBOnnect app here:



Key Advantages:

- BLE communications for wireless data offload
- 16-bit resolution for highly accurate measurements
- Stores 1.9 million measurements for longer deployments between offloads
- New Self-Describing sensors with intelligent configuration for fast deployment
- Compatible with existing sensors for a wide range of indoor monitoring
- Audible and visual LCD-screen alarms notify you if a sensor becomes unplugged or a reading exceeds set thresholds

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

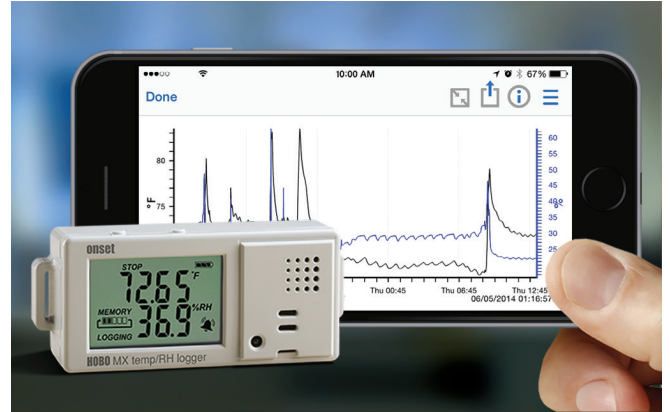


HOBO® MX1101 Data Logger

Bluetooth low energy temperature and relative humidity data logger

Onset's HOBO MX1101 is a Low Energy (BLE) data logger that measures and transmits temperature and relative humidity data wirelessly to mobile devices via BLE Smart technology.

The self-contained wireless data logger, which works with Onset's free HOBOMobile® app for logger setup and data management, enables users to access data anytime from their mobile device over a 100-foot range. It communicates instantly and enables you to "cut the cord" by requiring no dedicated equipment beyond a mobile device for configuring the logger or reading out data. This saves considerable time and money.



Supported Measurements:

Temperature, Relative Humidity, Dew Point

Key Advantages:

- BLE enabled for use with mobile devices
- No internet access, cables, or computer required
- Download data any time from 100 ft. away
- Audible and visual alarms keep you notified of problems
- Easily share data and graph images for analysis

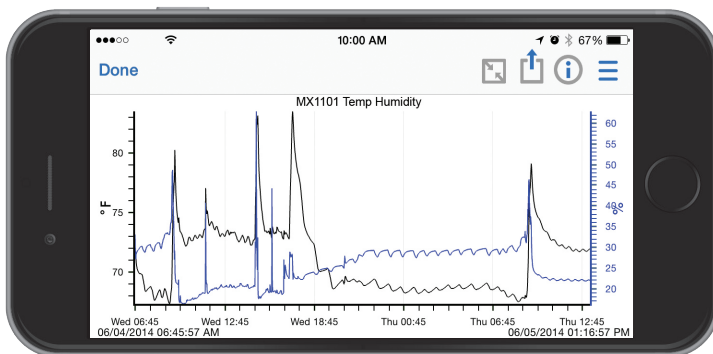
Minimum System Requirements:



HOBOMobile
app



Mobile
device*



Using Onset's free HOBOMobile® app, you can view data in graphs, check the operational status of loggers, configure alarm notifications, and share data files.

The logger is ideal for use in a range of building monitoring applications, such as tracking storage temperatures in a food warehouse, keeping tabs on humidity levels in a museum, or investigating occupant comfort complaints in an office building.



*iOS 8.3, 8.4 & 9.0, or Android 4.4, 5.0, 5.1
and Bluetooth 4.0 or later

► For complete information and accessories, please visit: www.onsetcomp.com

Part number	MX1101
Memory	84,650 Measurements
Sampling Rate	1 second to 18 hours, user selectable
Battery Life	1 year, typical with logging rate of 1 minute and sampling interval of 15 seconds or greater, user replaceable, 2AAA
Dimensions	3.66 x 8.48 x 2.29 cm (1.44 x 3.34 x 0.9 in.)
Temperature	
Range	-20° to 70°C (-4° to 158°F)
Accuracy	±0.21°C from 0° to 50°C (±0.38°F from 32° to 122°F)
Resolution	0.024°C at 25°C (0.04°F at 77°F)
Response Time	7.30 minutes in air moving 1 m/s (2.2 mph)
Relative Humidity	
Range	1% to 95%
Accuracy	±2% from 20% to 80% at 25°C (77°F)
Hysteresis	±2% RH
Resolution	0.01% at 25°C (77°F)
Response Time	20 seconds to 90% in air moving of 1 m/s (2.2 mph)
CE compliant	Yes
Mobile Device Compatibility	iOS 8.3, 8.4 & 9.0, or Android 4.4, 5.0, 5.1 and Bluetooth 4.0 or later
Bluetooth Compatibility	Bluetooth 4.0 or later (Bluetooth Low Energy, Bluetooth Smart)

Note: Temp & RH NIST certification services available for this product. Please visit onsetcomp.com, or call us at 1-800-564-4377.



HOBO® MX1104 Data Logger

Analog/Temp/RH/Light Data Logger

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

This self-contained wireless data logger lets you use your mobile device and Onset's free HOBOnnect app to access data, at any time, over a 100-foot range via Bluetooth Low Energy (BLE) technology. You can configure the logger, read out data, view data in graphs, check the operational status of loggers, configure alarm notifications, and share data files – all with no dedicated equipment beyond a mobile device. And if used with the new MX Gateway, you can remotely access your data in Onset's cloud-based HOBOLink® software.

You can download the HOBOnnect app here:



Key Advantages:

- BLE communications for wireless data offload
- 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

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				

Rometec srl - www.rometec.it - info@rometec.it - Rometec srl - www.rometec.it - info@rometec.it

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



HOBO® MX1102 Logger

Bluetooth Smart-enabled CO₂, temperature and relative humidity data logger

Onset's HOBO MX1102 CO₂ logger makes it more convenient than ever to measure and record CO₂ in buildings and other non-condensing environments. It measures CO₂ from 0 – 5,000 parts per million (ppm) – and our free HOBOMobile app allows you to access data right from your mobile phone or tablet within a 100-foot range.

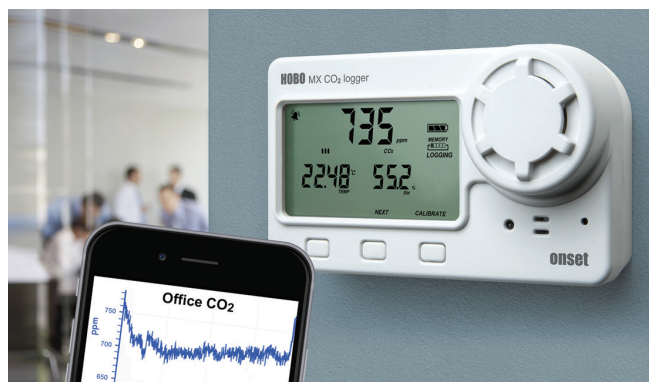
The MX1102 also features a USB port so it can be used with a computer running HOBOWare Pro graphing and analysis software.

Supported Measurements:

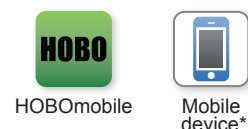
CO₂, Temperature, Relative Humidity, Dew Point

Key Advantages:

- Wireless communication via Bluetooth Low Energy (BLE)
- Six-month battery life at 5-minute CO₂ logging rate
- Easy to deploy and offload using free HOBOMobile App
- Visual and audible high & low alarm thresholds
- Self-calibrating CO₂ sensor technology ensures optimal accuracy at lower maintenance costs



Minimum System Requirements:



HOBOMobile

Mobile device*



*iOS 8.3, 8.4 & 9.0, or Android 4.4, 5.0, 5.1 and Bluetooth 4.0 or later



► For complete information and accessories, please visit: www.onsetcomp.com

Part number	MX1102
Memory	84,650 Measurements
Logging Rate	1 second to 18 hours
Battery Life	6 months, typical with logging and sampling intervals of 5 minutes or slower; 6 months or less with logging and sampling intervals faster than 5 minutes while logging CO ₂ , user replaceable, 4AA
Dimensions	7.62 x 12.95 x 4.78 cm (3.0 x 5.1 x 1.88 inches)
CO₂	
Range	0 to 5,000 ppm
Accuracy	±50 ppm ±5% of reading at 25°C (77°F), less than 70% RH and 1,013 mbar
Warm-up Time	15 seconds
Calibration	Auto or manual to 400 ppm
Non-linearity	<1% of FS
Temperature	
Range	0° to 50°C (32° to 122°F)
Accuracy	±0.21°C from 0° to 50°C (±0.38°F from 32° to 122°F)
Resolution	0.024°C at 25°C (0.04°F at 77°F)
Response Time	12 minutes to 90% in airflow of 1 m/s (2.2 mph)
Relative Humidity	
Range	1% to 70% RH when CO ₂ sensor is enabled (non-condensing) 1% to 90% RH when CO ₂ sensor is disabled (non-condensing)
Accuracy	±2% from 20% to 80% typical at 25°C (77°F)
Hysteresis	±2% RH
Resolution	0.01% at 25°C (77°F)
Drift	<1% per year typical
Response Time	CO₂: 1 minute to 90% in airflow of 1 m/s (2.2 mph), Temp: 12 minutes to 90% in airflow of 1 m/s (2.2 mph), RH: 1 minute to 90% in airflow of 1 m/s (2.2 mph)
CE compliant	Yes
Mobile Device Compatibility	iOS 8.3, 8.4 & 9.0, and Bluetooth 4.0 or later
Bluetooth Compatibility	Bluetooth 4.0 or later (Bluetooth Low Energy, Bluetooth Smart)

Note: Temp & RH NIST certification services available for this product. Please visit onsetcomp.com, or call us at 1-800-564-4377.