Onset MX1101

Onset HOBO MX1101 Temperature/Relative Humidity Data Logger User Manual

Model: MX1101

1. INTRODUCTION

The Onset HOBO MX1101 is a wireless data logger designed to measure and transmit temperature and relative humidity data. Utilizing Bluetooth Low Energy (BLE) technology, it allows for convenient data access and configuration via mobile devices running the HOBOmobile app. This manual provides essential information for the proper setup, operation, and maintenance of your MX1101 data logger.

2. SAFETY INFORMATION

- Do not expose the data logger to extreme temperatures outside its specified operating range.
- Avoid exposing the device to water or other liquids beyond its IP50 rating, which indicates protection against dust but not water immersion.
- Use only the specified AAA 1.5 V alkaline batteries. Incorrect battery types may damage the device.
- Dispose of batteries according to local regulations.
- Do not attempt to open or repair the device yourself. Refer to qualified service personnel.

3. PRODUCT OVERVIEW

The HOBO MX1101 is a compact, self-contained data logger featuring an integrated LCD screen for real-time data display and status indicators. It communicates wirelessly with your mobile device via Bluetooth for setup, data download, and management.

Figure 1: Front view of the Onset HOBO MX1101 data logger, showing the LCD display and sensor area.

Key Features:

- **Wireless Communication:** Bluetooth Low Energy (BLE) for connection to mobile devices.
- **Integrated LCD:** Displays current temperature, relative humidity, logging status, battery level, and memory usage.
- **HOBOmobile App:** Free application for iOS and Android for logger configuration, data viewing, and management.
- **Alarm Notifications:** Configurable audible or visual alarms for user-defined thresholds.
- **Burst Logging:** Allows for faster logging intervals when sensor readings exceed or fall below specified limits.
- **High Memory Capacity:** Stores up to 84,650 measurements.

4. SETUP

4.1 Battery Installation

1. Locate the battery compartment on the back of the data logger.
2. Open the compartment cover.
3. Insert two AAA 1.5 V alkaline batteries, ensuring correct polarity.
4. Securely close the battery compartment cover.

4.2 HOBOmobile App Installation

Download the free HOBOmobile app from the Apple App Store (for iOS devices) or Google Play Store (for Android devices). Search for "HOBOmobile" by Onset.

4.3 Connecting to the Data Logger

1. Ensure Bluetooth is enabled on your mobile device.
2. Open the HOBOmobile app.
3. The app will scan for nearby HOBO MX data loggers. Select your MX1101 from the list of discovered

devices.

4. Follow the on-screen prompts in the app to establish a connection.

4.4 Configuring the Logger

Once connected, use the HOBOmobile app to configure the data logger settings, including:

- **Logging Interval:** Set how frequently data is recorded (e.g., 1 minute, 5 minutes).
- **Start/Stop Options:** Define when logging begins and ends.
- **Alarm Thresholds:** Set high and low limits for temperature and humidity to trigger alarms.
- **Burst Logging Settings:** Configure conditions for accelerated logging.
- **Security:** Optionally set a password for logger access.

5. OPERATING

5.1 Starting and Stopping Logging

Logging is initiated and stopped through the HOBOmobile app. Once configured and started, the logger will record data independently until stopped or its memory is full.

5.2 Viewing Data on the LCD

The built-in LCD screen provides immediate access to current readings and logger status. Information displayed typically includes:

- Current Temperature
- Current Relative Humidity
- Logging Status (e.g., RUN, STOP)
- Battery Level Indicator
- Memory Usage Indicator

Note: The LCD's visibility and response time may be affected by temperatures outside the 0 to 50°C (32 to 122°F) range.

5.3 Accessing Data via HOBOmobile App

Connect to the data logger using the HOBOmobile app to:

- View real-time data and historical graphs.
- Check the operational status and alarm notifications.
- Download logged data to your mobile device.
- Export data in various formats (e.g., CSV, Excel) for further analysis.
- Share data files via email or other applications.

6. MAINTENANCE

6.1 Battery Replacement

When the battery indicator on the LCD or in the HOBOmobile app shows low power, replace the two AAA 1.5 V alkaline batteries as described in Section 4.1. Typical battery life is 1 year with a 1-minute logging interval.

6.2 Cleaning

Wipe the exterior of the data logger with a soft, damp cloth. Do not use abrasive cleaners or solvents. Ensure no moisture enters the sensor openings.

6.3 Environmental Considerations

The MX1101 has an IP50 environmental rating, meaning it is protected against dust ingress but not against water. Operate and store the device within its specified temperature and humidity ranges to ensure optimal performance and longevity.

7. TROUBLESHOOTING

- **Cannot connect to logger:** Ensure Bluetooth is enabled on your mobile device and the logger is within the 100-foot wireless range. Check logger battery level.
- **Logger not recording data:** Verify that logging has been started via the HOBOmobile app. Check memory usage; if full, download data and clear memory.
- **Inaccurate readings:** Ensure the logger is placed in a location representative of the environment being monitored and not exposed to direct sunlight or drafts. Allow sufficient time for the logger to acclimate to new conditions.
- **LCD blank or slow:** This is normal if the ambient temperature is outside the 0 to 50°C (32 to 122°F) range. The logger continues to function, but the display may be affected.
- **Short battery life:** Frequent connections, very short logging intervals, or continuous use of alarms can reduce battery life. Ensure fresh batteries are used.

For further assistance, refer to the HOBOmobile app's help section or the Onset website.

8. SPECIFICATIONS

Figure 2: Dimensions of the Onset HOBO MX1101 data logger, showing a width of 3.34 inches and height of 1.44 inches.

Parameter	Value
Temperature Range	-20 to 70°C (-4 to 158°F)
Temperature Accuracy	±0.21°C from 0 to 50°C (±0.38°F from 32 to 122°F)
Relative Humidity Range	1% to 90% (non-condensing)
Relative Humidity Accuracy	±2% from 20% to 80% typical (max ±4.5% including hysteresis at 25°C); ±6% typical below 20% and above 80%
Memory	128 KB (84,650 measurements maximum)
Battery Life	1 year typical (with 1-minute logging interval)
Battery Type	Two AAA 1.5 V alkaline batteries (user replaceable)
LCD Visibility	0 to 50°C (32 to 122°F)
Dimensions	3.66 x 8.48 x 2.29 cm (1.44 x 3.34 x 0.9 inches)

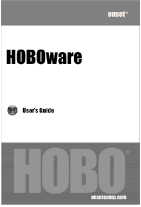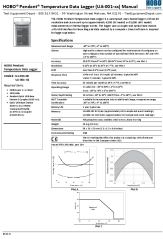| Parameter	Value
Weight	56 grams (1.98 ounces)
Environmental Rating	IP50
Certifications	CE-Approved
Country of Origin	United States

9. WARRANTY AND SUPPORT

The Onset HOBO MX1101 data logger comes with a manufacturer's warranty of 12 months from the date of purchase. For warranty claims, technical support, or service inquiries, please contact Onset customer support directly or visit their official website for detailed contact information and resources.

Related Documents - MX1101

[HOBO MX1101 Temp/RH Data Logger User Manual](#)
Comprehensive user manual for the HOBO MX1101 Temp/RH Data Logger, detailing its features, specifications, setup, operation, and troubleshooting. Learn how to configure, deploy, and read data from this Bluetooth Smart-enabled logger for indoor environmental monitoring.

[HOBO MX801 Submersible Logger Quick Start Guide](#)
A quick start guide for the HOBO MX801 Submersible Logger, detailing its overview, sensor connection, calibration, configuration, deployment, data download, and processing.

[HOBO MX2300 Series Data Logger: Comprehensive User Manual and Specifications](#)
Explore the HOBO MX2300 Series Data Loggers from Onset, designed for reliable temperature and relative humidity monitoring. This manual details setup, operation, specifications, and data management using the HOBOconnect app via Bluetooth Low Energy.

[HOBOware User's Guide - Onset Data Logging Software](#)
Comprehensive user's guide for HOBOware software by Onset, detailing how to launch, read out, plot, and analyze data from HOBO data loggers and wireless HOBOnodes. Covers HOBOware Pro and Lite features, setup, data analysis tools, and device management for environmental monitoring.

[HOBO Pendant Temperature Data Logger UA-001-xx User Manual](#)
Comprehensive user manual for the Onset HOBO Pendant Temperature Data Logger (models UA-001-08 and UA-001-64), detailing specifications, connection, setup, operation, alarm configuration, and battery replacement.

[Onset Conductivity Assistant: Calculating Specific Conductance with Sea Water](#)
A technical guide detailing the calculations performed by the Onset Conductivity Assistant (Version 2.1) for determining specific conductance and salinity in sea water, including revised non-linear temperature compensation methods and data tables.