



# HOBO MX2307 Wireless Soil Moisture and Temperature Data Logger - Optional Remote Monitoring

## Product Images



## Short Description

HOBO MX Soil Moisture Data Loggers are the industry's only low-cost, fully integrated soil moisture loggers with Bluetooth wireless data offload. Available in two models – one that measures soil moisture ([HOBO MX2306](#)) and one that measures both soil moisture and temperature (HOBO MX2307) – these loggers are ideal for researchers and growers looking for the accurate data they need to save water, improve crop yields, reduce harmful runoff, and protect ecosystems.

With just a mobile phone, tablet, or Windows laptop running Onset's free HOBObconnect app, users get convenient wireless setup and data download via Bluetooth when within 100 feet of the logger – making it easy to retrieve data from hard-to-access field locations. And for indoor areas, such as greenhouses, users can add the [MX Gateway](#) for remote access to data in [HOBOLink](#), Onset's innovative cloud-based software

platform.

## Description

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### Key Features

- Ready to deploy, with pre-attached sensors
- Easy configuration and data offload with the free HOBOnnect app
- Durable TEROS 10 soil moisture sensor lasts over 10 years in the field
- For use in both mineral soils and soilless media
- Sturdy, sharp stainless-steel spikes for easy installation and better soil contact
- Option to view data in Percent of Field Capacity





### Important Info

HOBOnnect MX2306 & 2307 data loggers require a compatible mobile device or Windows computer and the HOBOnnect app.

Download the free HOBOnnect app for your iOS or Android mobile device or Windows computer today.



# Additional Information

Country of Manufacture	United States
Brand	Onset HOBO
Measurements	Soil Moisture, Soil Temperature
Typical applications	Environmental (Outdoor), Field Research
Onset Product Series	MX2300
Explanation	The country of origin for this product is the United States.
	<b>Soil Moisture: Volumetric Water Content (VWC)</b>
	<b>Measurement Range*</b> 0.00 to 0.64 m³/m³ in mineral soils 0.00 to 0.70 m³/m³ in soilless media
	<b>Accuracy</b> ±0.031 m³/m³ typical in mineral soils that have solution EC <8 dS/m ±0.051 m³/m³ typical in soilless media
	<b>Resolution</b> 0.001 m³/m³
	<b>Dielectric Measurement Frequency</b> 70 MHz
	<b>Temperature Sensor (MX2307)</b>
	<b>Range</b> -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)
	<b>Resolution</b> 0.04°C (0.072°F)
	<b>Drift</b> <0.01 °C per year (0.018°F per year)
	<b>Response Time</b> 3 minutes in air moving 1 m/s; 20 seconds in stirred water 4 minutes in air moving 1 m/s with RS3-B Solar Radiation Shield
	<b>Logger</b>
	<b>Operating Range</b> -25° to 60°C (-13° to 140°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> 110,000 measurements, maximum (472 kB)
	<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.) Soil moisture sensor: 7.5 x 5.1 x 2.4 cm (2.95 x 2.02 x 0.95 inches) Soil moisture sensor needle length: 5.4 cm (2.13 inches) Soil moisture sensor needle diameter: 0.32 cm (0.13 inches) Temperature sensor (MX2307) diameter: 0.53 cm (0.21 in.) Sensor cable length: 2 m (6.56 ft)
	<b>Weight</b> MX2306: 229 g (80 oz) MX2307: 267 g (94 oz)
	<b>Materials</b> Logger: Acetal, silicone gasket, stainless steel screws Soil Moisture Sensor: ASA plastic body with polyurethane epoxy filling and stainless steel pins Temperature Sensor (MX2307): Stainless steel waterproof tip Cable: PVC, UV resistant and rodent repellent (soil moisture sensor cable)
	<b>Environmental Rating</b> Temperature sensor and cable (MX2307): Immersion in water up to 50°C (122°F) for 1 year
	<b>Compliance Marks</b>    
	* The sensor data can be post-calibrated if necessary (e.g. the sensor is used in non-mineral soil types or higher than standard accuracy is required). Users can apply a calibration equation to the data exported from the app. The VWC range will depend on the calibration equation.
Contents	• HOBO MX2306 or HOBO MX2307 Data Logger with 2m cable(s) and attached sensor(s) • HOBO MX Soil Moisture Logger Quick Start Guide • Screws • Cable ties
Ideal For	Professional, Agronomy
Power	Battery only
Power	Powered by user-replaceable 2 or 3 AA 3.6 Volt lithium batteries

# Additional Options

Optional Remote Cloud Access to Your Data	MX Gateway for HOBO MX Data Loggers (SKU: MXGTW1)
	HOBOLink Service Plan (One Year Subscription (SKU: SP-620)) - one required per MX Gateway
Solar Radiation Shields	Solar Radiation Shield (RS3-B)
Verification Clip	Verification Clip (TEROS-CLIP)