

HOBO MX2300 Series Temperature, RH, and Soil Moisture Loggers

Bluetooth (BLE) weatherproof loggers for outdoor temperature, humidity, and soil moisture measurements

With Onset's HOBO MX2300 Series Temp/RH and Soil Moisture data loggers, you can set up and offload loggers wirelessly from your mobile device or Windows computer - so field data collection is easier than ever!

Remotely access your data in Onset's cloud-based HOBOLink software with the HOBO MX Gateway.

Supported Measurements:

Temperature, Relative Humidity, Soil Moisture, Soil Temperature, Dew Point

Choice of Models

The HOBO MX2300 Series offers seven models covering a broad range of outdoor monitoring applications, from agricultural research to forest ecology studies. The series includes internal sensor models that are highly durable and easy to deploy, and external probe models that are well-suited for monitoring conditions in soils, water, walls, and more.

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



Key Advantages:

- Convenient wireless setup and download via Bluetooth
- Compact, weatherproof housing with built-in mounting
- Current data in real time with Onset's free HOBOLink app
- Ability to easily share downloaded data from your mobile device or Windows laptop

Minimum System Requirements:



HOBOLink
App



Mobile
device

Part number	MX2301A (Internal Temp/RH)	MX2302A (External Temp/RH)	MX2303 (2x External Temp)	MX2304 (External Temp)	MX2305 (Internal Temp)
Temperature Sensor					
Range	-40 to 70°C (-40 to 158°F)		-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		-40 to 70°C (-40 to 158°F)
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				
Relative Humidity Sensor (MX2301, MX2302 only)					
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	0.01%				
Drift	<1% per year typical				
Logger					
Memory	128 KB (63,488 measurements, maximum)		128 KB (84,650 measurements, maximum)		
Operating Range	-40° to 70°C (-40° to 158°F), IP67 and NEMA 6				
Transmission Range	Approximately 30.5 m (100 ft) line-of-sight				
Logging Rate	1 second to 18 hours				
Dimensions	Logger housing: 10.8 x 5.08 x 2.24 cm (4.25 x 2.0 x 0.88 in.)				
Mobile Device Compatibility	iOS 13+, Android 10.0+, Windows 10, and Bluetooth 4.X and up				
CE compliant	Yes				



HOBO MX2305
Temperature



HOBO MX2301A
Temperature/RH



HOBO MX2304
External Temperature



HOBO MX2302A
External Temperature/RH



HOBO MX2303
External Temperature x2



NEW! HOBO MX2306
Soil Moisture



NEW! HOBO MX2307
Soil Moisture & Temperature

NEW! Soil Moisture and Soil Temperature

These two new models feature the robust and accurate TEROS 10 soil moisture sensor with stainless-steel probes, as well as calibration options for both mineral soils and soilless media.



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Part number	MX2306 (Soil moisture)	MX2307 (Soil Moisture/Temp)
	Soil Moisture: Volumetric Water Content (VWC)	
Measurement Range*	0.00 to 0.64 m ³ /m ³ in mineral soils 0.00 to 0.70 m ³ /m ³ in soilless media	
Accuracy	±0.031 m ³ /m ³ typical in mineral soils that have solution EC <8 dS/m ±0.051 m ³ /m ³ typical in soilless media	
Resolution	0.001 m ³ /m ³	
Dielectric Measurement Frequency	70 MHz	
	Temperature Sensor (MX2307)	
Range	-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)	
Resolution	0.04°C (0.072°F)	
Drift	<0.01°C per year (0.018°F per year)	
	Logger	
Memory	110,000 measurements, maximum (472 kB)	
Operating Range	-25° to 60°C (-13° to 140°F)	
Transmission Range	Approximately 30.5 m (100 ft) line-of-sight	
Logging Rate	1 second to 18 hours	
Dimensions	Logger housing: 10.8 x 5.08 x 2.24 cm (4.25 x 2.0 x 0.88 in.)	
Device Compatibility	iOS 13+, Android 10.0+, Windows 10, and Bluetooth 4.X and up	
Cable Length	2 meters	
CE compliant	Yes	

* 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.