

# HOBO<sup>®</sup>

## Data Loggers

### HOBO MX800 Multiparameter Water Quality Data Loggers

*The ultimate solution for collecting  
critical water level & water quality data*

An affordable, highly configurable solution for monitoring water conductivity, temperature, depth, and dissolved oxygen. HOBO MX800 series Bluetooth loggers come in an easy-to-deploy fully submersible model (MX801) and a direct-read model (MX802) for convenient data offload without removing the sensor from the water.

#### Supported Measurements

Water conductivity/salinity, temperature, level, and dissolved oxygen



#### Key Advantages

- Fast data offload via Bluetooth to HOBObconnect app
- Interchangeable sensors – swap out sensors for different applications
- Water detect feature indicates when logger was out of the water (MX801)
- Built-in barometric pressure sensor plus time-saving direct data offload without removing sensor from the water (MX802)
- Guided calibration ensures accurate data

#### Minimum System Requirements



HOBObconnect  
App



Mobile or  
Windows  
device

#### Get more water quality measurements with one data logger

An adapter lets you attach two sensors to one MX800 logger, so you can measure dissolved oxygen, conductivity, temperature, and depth with a single platform.



**CT Sensor (W-CT)**



**CTD Sensor (W-CTDxx)**



**DO Sensor (W-DO)**



► For complete information and accessories, please visit: [www.onsetcomp.com](http://www.onsetcomp.com)

### Sensors

W-CT and W-CTD-xx		W-DO	
	Conductivity	Temperature	DO / Temperature
Range	Electrical conductivity and specific conductance: 0 to 100,000 µS/cm	-20° to 50°C (-40° to 122°F), non-freezing water	0 to 60 mg/L; 0-600% Saturation / -5 to 50°C (23 to 104°F), non-freezing
Accuracy	Conductivity: +/-2% or 15 µS/cm whichever is greater Salinity: +/-2% of reading or 0.1 PSU, whichever is greater	±0.15°C (±0.27°F) from 0° to 50°C (32° to 122°F)	Out-of-box: ±0.2 mg/L over the range of 0 to 20 mg/L; +0.1 mg/L with user calibration / 0.15°C (0.27°F)
Resolution	0.1 µS/cm from 0 to 1,000 µS/cm 1 µS/cm from 1,000 to 10,000 µS/cm 10 µS/cm from 10,000 to 100,000 µS/cm	0.01°C at 25°C (0.018°F at 77°F)	0.01 mg/L / 0.01°C (0.04°F)

### Pressure & Depth (CTD Sensors only)

Part Number	W-CTD-01	W-CTD-02	W-CTD-03	W-CTD-01
Range	0 to 207 kPa (0 to 30 psia); 0 to 9 m (0 to 30 ft) water depth at sea level	0 to 400 kPa (0 to 58 psia); 0 to 30.6 m (0 to 100 ft) water depth at sea level	0 to 850 kPa (0 to 123.3 psia); 0 to 76.5 m (0 to 251 ft) water depth at sea level	0 to 145 kPa (0 to 21 psia); 0 to 4 m (0 to 13 ft) water depth at sea level
Water Level Accuracy*	Typical error: +/-0.05% FS, 0.5 cm (0.015 ft) water	Typical error: ±0.05% FS, 1.5 cm (0.05 ft) water	Typical error: ±0.05% FS, 3.8 cm (0.125 ft) water	Typical error: ±0.075% FS, 0.3 cm (0.01 ft) water
Resolution	0.21 cm (0.007 ft)	0.41 cm (0.013 ft)	0.87 cm (0.028 ft)	0.14 cm (0.005 ft)
Raw Pressure Accuracy**	±0.3% FS, 0.62 kPa (0.09 psi) maximum error	±0.3% FS, 1.20 kPa (0.17 psi) maximum error	±0.3% FS, 2.55 kPa (0.37 psi) maximum error	±0.3% FS, 0.43 kPa (0.063 psi) maximum error

### Data Loggers

Part number	MX801	MX802
Operating Range	-40° to 50°C (-40° to 122°F), cannot be frozen in ice	
Transmission Range	Approximately 30.5 m (100 ft) line-of-sight	
Wireless Data Standard	Bluetooth 5	
Maximum Cable Length	N/A	120m (400 ft)
Logging Rate	5 second to 18 hours	
Water Detect	Events are logged when logger is submerged or removed from the water (MX801 only)	N/A
Time Accuracy	±1 minute per month 0° to 50°C (32° to 122°F)	
<b>Barometric Pressure (MX802 only)</b>		
Measurement & Calibrated Range	N/A	66 to 107 kPa (9.6 to 15.5 psia), -20° to 50°C (-4° to 122°F)
Accuracy*	N/A	Typical error: ±0.2 kPa (0.029 psi) Maximum error: ±0.5 kPa (0.073 psi)
Resolution	N/A	<0.01 kPa (0.0015 psi)
Battery	Four AA, 1.5 V lithium batteries, user replaceable	
Battery Life	With W-CTD or W-CT sensors: 2 years, typical with 1-minute logging interval or slower With W-DO sensor: 1-year, typical with 5-minute logging interval or slower	
Memory	730,000 measurements, divided between channels (4 Mbyte memory)	
Materials	Outer enclosure: Polycarbonate/PBT blend with brass inserts; Interior: Polycarbonate/PBT; Gasket: Silicone foam. Cable channel: Santoprene™ TPE	
Dimensions	Logger diameter: 4.14 cm (1.63 inches), Length without sensor: 20 cm (8 inches)	
Weight	MX801 Logger: 213g (7.51 oz)	MX802 Logger: 215g (7.58 oz)
Environmental Rating	IP68; waterproof to 100m (with sensor(s) attached)	IP67, NEMA 6; Weatherproof (with cable or Termination Plug attached); this model is not waterproof
CE & UKCA Compliant	Yes	

\* Pressure Accuracy: Absolute pressure sensor accuracy includes all sensor drift, temperature, and hysteresis-induced errors.

\*\* Raw Pressure Accuracy: Absolute pressure sensor accuracy includes all sensor drift, temperature, and hysteresis-induced errors.