



Designed for long-term monitoring of pH in estuaries, lakes, streams, rivers, and oceans. This logger leverages Bluetooth technology to communicate wirelessly with Onset's free HOB0connect app running on your mobile device or Windows computer, making logger setup, calibration, and data offload quick and easy. Plus, a guided pH calibration process in the HOB0connect app makes an otherwise complicated process easier to follow. This affordable, compact logger delivers high resolution data and dramatically cuts the time and effort needed to collect it.

Features:

- Guided pH calibration following on-screen prompts in HOB0connect app
- Rugged PVC housing for deployment in both freshwater and saltwater environments
- Quick and easy data offload via Bluetooth to mobile devices or Windows computers
- Water detection system for longer battery life and less maintenance
- Potentiometric pH electrode with plastic body, gel electrolyte, and double cloth junction
- User-replaceable battery, pH electrode, and anti-biofouling copper guard
- Accuracy of ± 0.10 pH units within $\pm 10^\circ\text{C}$ of temperature at calibration

What's In The Box

- MX2501 pH and Temperature Data Logger
- pH electrode
- Bottle of storage solution that can also be used as a storage container for the electrode
- Anti-biofouling copper guard
- Tube of silicone grease
- AA battery

Technical Specifications:

pH Sensor

	:	pH	:	mV
Range	:	2.00 to 12.00 pH	:	-512 to 512 mV
Accuracy	:	±0.10 pH units within ±10°C of temperature at calibration		: ±0.20 mV
Resolution	:	0.01 pH	:	0.02 mV
Response Time	:	1 minute typical to 90% at constant temperature in stirred water		
Sample Ionic Strength	:	≥ 100 µS/cm		

Temperature Sensor

Range	:	-2° to 50°C (28.4° to 122°F)
Accuracy	:	±0.2°C (±0.36°F)
Resolution	:	0.024°C at 25°C (0.04°F at 77°F)
Response Time	:	7 minutes typical to 90% in stirred water

Logger

Operating Range	:	-2° to 50°C (28.4° to 122°F) — non-freezing
Buoyancy	:	Fresh water: 13.6 g (0.48 oz) negative
Salt water	:	: 19.6 g (0.69 oz) negative
Waterproof	:	To 40 m (131.2 ft)
Water Detection	:	Water conductivity level of 100 µS/cm or greater is necessary for reliable detection of water. Deionized water or water below 100 µS/cm may not be detected.
		The water conductivity circuit may not reliably detect water that has frozen around the electrodes, i.e. below 0°C (32°F).
Radio Power	:	1 mW (0 dBm)
Transmission Range	:	Approximately 30.5 m (100 ft) line-of-sight in air
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 is full, push button, date & time, or after a set logging period
Time Accuracy	:	±1 minute per month 0° to 50°C (32° to 122°F)

Battery Type	:	One AA 1.5 Volt, user-replaceable
Battery Life	:	1 year typical at 25°C (77°F) with logging interval of 1 minute and Bluetooth Always On selected in software. 2 years typical at 25°C (77°F) with logging interval of 1 minute and Bluetooth Off Water Detect enabled in software. 3 years typical at 25°C (77°F) with logging interval of 1 minute and Bluetooth Always Off selected in software. Faster logging intervals and statistics sampling intervals, burst logging, remaining connected with the app, excessive downloads, and paging may impact battery life.
pH Electrode Typical		
Minimum Life	:	6 months in sample with ionic strength $\geq 100 \mu\text{S}/\text{cm}$
Memory	:	152 KB (43,300 measurements, maximum)
Full Memory Download Time	:	Approximately 60 seconds; may take longer the farther the mobile device is from the logger
Dimensions	:	22.86 x 4.27 cm (9.0 x 1.68 inches); mounting hole 0.64 cm (0.25 inches)
Weight	:	268.2 g (9.46 oz)
Wetted Materials	:	Logger: PVC housing and sensor end cap, polycarbonate closure caps and mounting end cap with a TPE switch pH electrode: plastic-bodied with Pellon® junctions and gel electrolyte, glass pH sensor bulb
Environmental Rating	:	IP68
CE	:	The CE Marking identifies this product as complying with all relevant directives in the European Union (EU).