

SBE 39plus

TEMPERATURE (DEPTH) RECORDER

Overview

The SBE 39plus is a high-accuracy, fast-sampling temperature (pressure optional) recorder with USB interface, internal batteries, and memory. The 39plus is designed for moorings or other long-duration, fixed-site deployments, as well as deployments on nets, towed vehicles, or ROVs.

Data is recorded in memory and can also be output in realtime. Measured data are output in engineering units.

Memory capacity exceeds 9.5 million samples without pressure, or 5.5 million samples with pressure. Sampling every 0.5 sec, this yields approximately 55 days of data without pressure or 32 days with pressure (battery endurance exceeds memory capacity).

Features

- Temperature, Pressure (optional), and time, at user-programmable 0.5-sec to 6-hour intervals.
- Internal USB interface (open housing and plug in cable for setup and fast data upload); plus RS-232 interface (through external connector).
- Internal memory and battery pack (can be powered through external connector).
- 600 m plastic or 10,500 m titanium housing.
- Rigorous 11-point temperature calibration of each sensor.
- Seasoftware V2 Windows software package (setup, data upload, and data processing).
- Next generation SBE 39 — faster sampling, more power and memory, but same housing and compatible output.
- Five-year limited warranty.



Just a few of the configuration choices.

Components

- Aged and pressure-protected thermistor has a long history of exceptional accuracy and stability. It is available in two configurations: embedded in titanium endcap (25-sec time constant) for rugged conditions, or external thermistor in pressure-protected sheath (0.5-sec time constant) for fast sampling.
- Optional strain-gauge pressure sensor with temperature compensation is available in eight ranges (maximum depth 7000 m).
- High-accuracy real-time clock.

Options

- Embedded thermistor (25-sec time constant) for rugged conditions, or external thermistor (0.5-sec time constant) for fast sampling.
- No pressure, or strain-gauge pressure sensor in one of 8 ranges.
- Plastic (600 m) or titanium (10,500 m) housing.
- External connector (XSG or wet-pluggable MCBH) for RS-232 interface, external power, and real-time data.
- Mooring clamp
- Net fender/fairing (conical ends shaped to shed fishing lines and nets)

Field Specifications

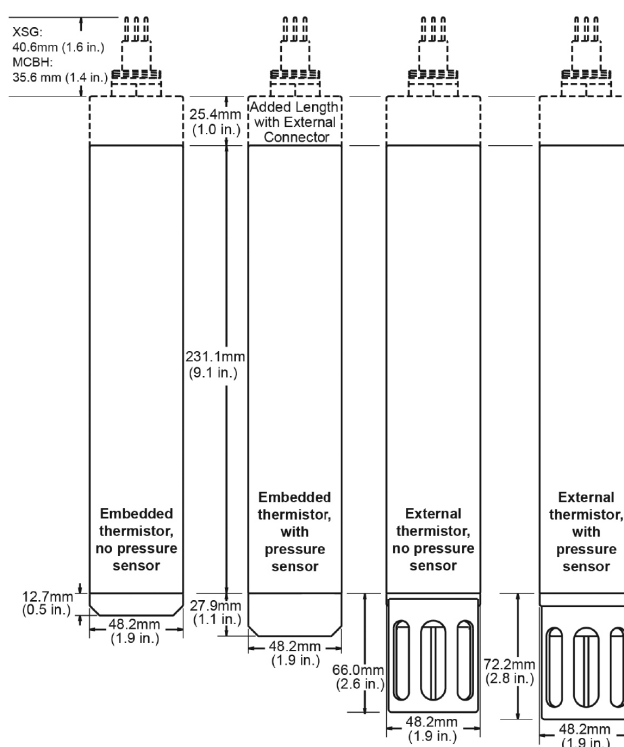
The specifications below represent the expected performance of the instrument when deployed in the field. Under controlled circumstances in a lab, we would expect the instrument to outperform these specifications.

We have chosen to display field specifications to give our users a true measure of how Sea-Bird Scientific instruments perform in harsh environments and applications. It is critical to keep this in mind when comparing specifications with instruments from other manufacturers.

Measurement Range	
Temperature	-5 to +45 °C
Optional Pressure	20 / 100 / 350 / 600 / 1000 / 2000 / 3500 / 7000 (meters of deployment depth capability)
Initial Accuracy	
Temperature	± 0.002 °C (-5 to +35 °C); ± 0.01 °C (+35 to +45 °C)
Optional Pressure	± 0.1% of full scale range
Typical Stability	
Temperature	0.0002 °C per month
Optional Pressure	0.05% of full scale range per year
Resolution	
Temperature	0.0001 °C
Optional Pressure	0.002% of full scale range
Sampling Speed	Up to 2 Hz (2 samples/sec)
Power Supply & Consumption	Lithium battery pack (4 AA Saft LS 14500): > 11,000,000 samples TD
Optional External Power	9 - 30 VDC (requires external connector)
Memory Capacity	9.5 million samples T; 5.5 million samples TD
Housing, Depth Rating, & Weight	PET Plastic: 600 m, Weight (with embedded thermistor, no external connector): 0.6 kg in air, 0.3 kg in water Titanium: 10,500 m, Weight (with external thermistor, no external connector): 1.2 kg in air, 0.7 kg in water

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With optional clamp.