

SBE 48

Hull Temperature Sensor

The SBE 48 is a high-accuracy temperature recorder with non-volatile memory, designed for shipboard determination of sea surface temperature. Mounted with magnets just below the water line, the SBE 48's temperature sensor is in contact with the inside of the ship's hull. The SBE 48's internal battery runs the real-time clock and can be used to power the instrument for very short deployments; external power is recommended for typical deployments.

Data is recorded in memory and can also be output in real-time in engineering units. Memory capacity exceeds 4.7 million samples of temperature and time; this yields approximately 54 days of data when sampling every 1 sec.



Features

- Temperature and time on command, continuously at approximately 1 sample/sec, or at user-programmable 3-sec to 9-hour intervals.
- RS-232 interface.
- Internal memory (4.7 million samples), powered externally.
- Seasoft® V2 Windows software package (setup, data upload, and data processing).
- Five-year limited warranty.

Components

- Aged and pressure-protected thermistor has a long history of exceptional accuracy and stability.
- High-accuracy real-time clock.

Performance

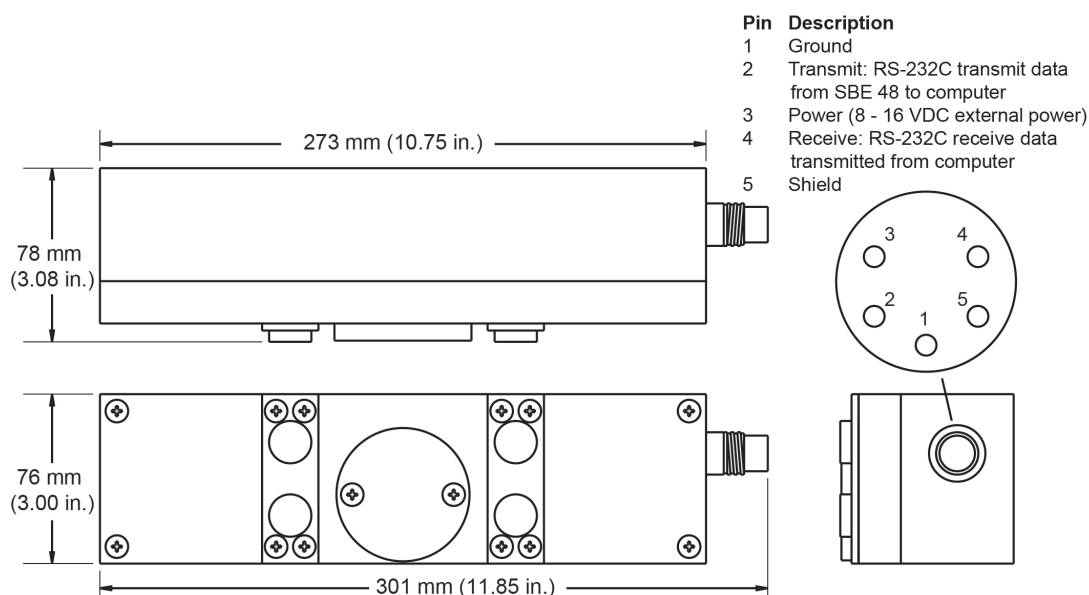
Measurement Range	-5 to +35 °C
Initial Accuracy	± 0.002 °C
Typical Stability	0.0002 °C per month
Resolution	0.0001 °C
Clock Accuracy	1 minute/year
Sampling Speed	Approximately 1 Hz (1 sample/sec), or user-programmable 3-sec to 9-hour intervals
Memory	4.7 million samples (temperature and time)

Electrical

Internal Battery	9V non-hazardous lithium battery: Runs real-time clock (5 - 10 year battery endurance). Can power SBE 48 for up to 180,000 samples if external power not supplied.
External Power	8 - 16 VDC
Power Consumption	Quiescent Current 10 µA Operating Current 0.018 A-sec/sample; 15 mA for continuous sampling

Mechanical

Materials	PVC housing
Weight	2.3 kg



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