

Temperature Logger



SUMMARY

- Low-cost, high-accuracy, battery-powered temperature and time logger.
- User-programmed sampling interval ranging from 0.5 second to 9 hours.
- Ideal for countless underwater temperature recording applications.



DESCRIPTION

The SBE 56's pressure-protected thermistor has a 0.5 second time constant, providing excellent accuracy (initial accuracy 0.002 °C) and resolution when fast sampling at 2 Hz (0.5 sec). It has exceptional stability; drift is typically less than 0.002 °C per year. The SBE 56 delivers unprecedented accuracy and stability at a price you would expect to pay for similar recorders that are less accurate.

Before you assume that your application does not require such high accuracy and stability, remember that high stability preserves the initial calibration accuracy and means less frequent (or no) calibrations. For example, if you need only ± 0.01 °C accuracy, you will not have to calibrate the SBE 56 for at least 5 years.

The SBE 56 is equipped with 64 MB memory, high-accuracy real time clock, plastic housing for depths up to 1500 meters (4900 ft), and USB 2.0 interface. Calibration coefficients are stored in memory; the included easy-to-use Java-based software (compatible with nearly any computer operating system) uploads the raw data, applies the coefficients, and outputs and plots finished data in degrees C and date and time.

BATTERY AND MEMORY ENDURANCE

Power consumption is very low. Using one 3.6 volt AA lithium battery, the SBE 56 acquires over 5.3 million samples at 0.5-second intervals (31 days). Sampling 4 times per minute, the battery lasts almost 2 years. The memory can store over 15 million samples (3 times the battery endurance).

SETUP AND DATA UPLOAD

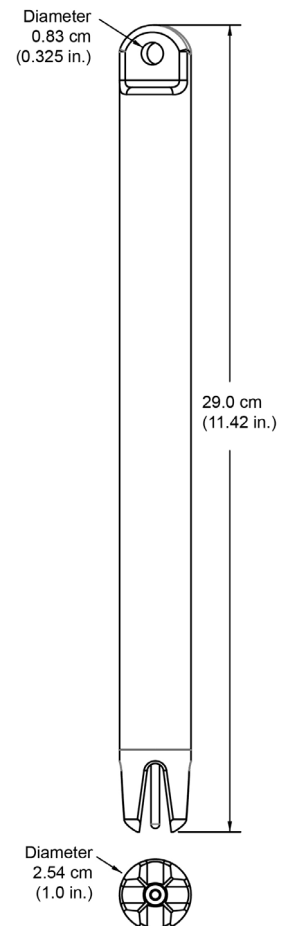
The SBE 56 communicates with a computer via a standard USB 2.0 cable (included). To set up the SBE 56 or upload data, simply open the housing and plug the cable into the internal connector. Uploading large data sets is **fast**, approximately 40 minutes for a full memory (over 15 million samples).

CALIBRATION

Cutting edge design and manufacturing make extreme accuracy and precision possible, but our world-leading calibration capability *proves* it. Every SBE 56 receives a rigorous 11-point temperature calibration in our state-of-the-art computer-controlled calibration bath systems, which are backed by in-house NIST-level metrology standards (water triple point and gallium melting point cells). Every SBE 56 is a true research-quality tool that elevates the quality of your work without straining your budget.

SPECIFICATIONS

Measurement Range	-5 to +45 °C	Initial Accuracy	± 0.002 °C
Typical Stability	0.0002 °C/month (0.002 °C/year)	Resolution	0.0001 °C
Clock Accuracy	5 seconds/month		
Power Supply/Endurance	3.6 V AA Soft LS14500 Lithium Battery (non-hazardous)		
	5.3 million samples at 0.5-second intervals (31 days)		
	5.3 million samples at 1-second intervals (61 days)		
	4.9 million samples at 5-second intervals (284 days)		
	4.1 million samples at 15-second intervals (717 days)		
Data Memory	15.9 million samples		
Housing	Plastic, 1500 m (4900 ft)		
Weight	In air 0.2 kg (0.4 lbs), in water 0.05 kg (0.1 lbs)		



Sea-Bird Electronics, Inc.

13431 NE 20th Street, Bellevue, Washington 98005 USA
www.seabird.com

E-mail: seabird@seabird.com

Telephone: +1 425-643-9866

Fax: +1 425-643-9954