

Temperature Logger

SBE 56


The SBE 56 is a low-cost, high-accuracy, battery-powered temperature logger that also records time.

Buy the SBE 56 and use it until the included battery is depleted, and you will have over 7 million measurements that cost less than 1/100th of a cent each. That's less than 1 Dollar for each 10,000 measurements. Replace the battery (about 7 Dollars), and the next 7 million measurements are practically free.



The SBE 56 includes a pressure-protected thermistor with a 0.5 second time constant, providing excellent accuracy and resolution when fast sampling at 1 Hz. It has exceptional stability; drift is typically less than 0.002 °C per year. Equipped with 64 MB memory, high-accuracy real time clock, plastic housing for depths up to 1000 meters (3280 ft), USB 2.0 interface, and easy-to-use Java-based software for communication, data upload, data conversion, and plotting on nearly any computer operating system. The SBE 56 delivers unprecedented accuracy and stability at a price you would expect to pay for similar recorders that are 10 times 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 $\pm 0.01^\circ\text{C}$ accuracy, you won't have to calibrate the SBE 56 for at least 5 years.

The SBE 56 is ideal for countless underwater temperature recording applications. It samples at a user-programmed interval ranging from 1 second to 9 hours. Calibration coefficients are stored in memory and the included software uploads the raw data, applies the coefficients, and outputs finished data in degrees C and date and time.

BATTERY AND MEMORY ENDURANCE

SBE 56 power consumption is very low. Using one 3.6 volt AA lithium battery, the SBE 56 can acquire over 7 million temperature samples when sampling at 1-second intervals (84 days). Sampling six times per minute, the battery will last nearly 2 years. The memory can store over 15 million samples (about 2 times the battery endurance).

SETUP AND DATA UPLOAD

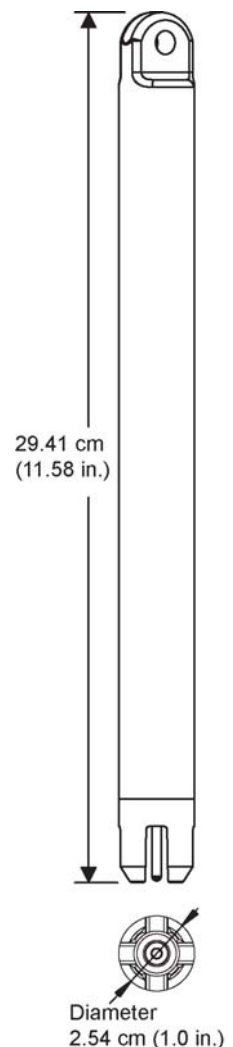
The SBE 56 communicates with a computer via a standard USB 2.0 cable (included). To set up the SBE 56 or upload data, simply open the housing and plug the cable into the internal connector. Uploading large data sets is **fast**, approximately 40 minutes for a full memory (over 15 million samples).

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	$\pm 0.002^\circ\text{C}$
Typical Stability	0.0002°C/month	Resolution	0.0001°C
Clock Accuracy	5 seconds/month		
Power Supply/Endurance	3.6 V AA Saft LS14500 Lithium Battery (non-hazardous)		
	7.2 million samples at 1-second intervals (84 days)		
	6.5 million samples at 5-second intervals (380 days)		
	5.8 million samples at 10-second intervals (682 days)		
Data Memory	15.9 million samples		
Housing	Plastic, 1000 m (3280 ft)		
Weight	In air 0.2 kg (0.4 lbs), in water 0.05 kg (0.1 lbs)		



Sea-Bird Electronics, Inc.

1808 136th Place NE, Bellevue, Washington 98005 USA
Website: <http://www.seabird.com>

E-mail: seabird@seabird.com
Telephone: (425) 643-9866
Fax: (425) 643-9954