



The SBE 18 pH Sensor uses a pressure-balanced glass-electrode / Ag/AgCl-reference pH probe to provide *in-situ* measurements at depths up to 1200 meters (3900 ft). The replaceable pH probe is permanently sealed and is supplied with a soaker bottle attachment that prevents the reference electrode from drying out during storage. The sensor and associated interface electronics is a modular, self-contained package that is easy to install, service, and calibrate.

The SBE 18 is intended for use as an add-on auxiliary sensor for profiling CTDs (SBE 9*plus* CTD; SBE 19 and 19*plus* SEACAT; and SBE 25 SEALOGGER CTD). Power / signal interface cables and mounting hardware are available separately.

The SBE 18's interface circuits buffer and offset the differential glass-electrode/reference potential to produce a high-level, pH-dependant, output voltage. Computation of pH in engineering units is typically done using our SEASOFT[®] software.

Sea-Bird calibrates the pH sensor against precision buffer solutions (4, 7, 10 pH $\pm$ 0.02 pH). These calibration results are tabulated on a certificate furnished with each sensor.

SPECIFICATIONS

Measurement range 0 – 14 pH
Accuracy¹ 0.1 pH
Time response² 1 second

ELECTRICAL / MECHANICAL

Power required 6 - 24 VDC, 7 mA
Signal output 0 to +5 V
Materials Anodized aluminum (6061-T6), stainless steel
Operating depth 1200 meters (3900 ft)
Weight 0.7 kg (1.5 lbs) in air, 0.4 kg (0.8 lbs) in water

¹ Stated accuracy achievable with frequent field calibrations.

² Time to reach 63% of final value following step change in pH.

