

pH Sensor

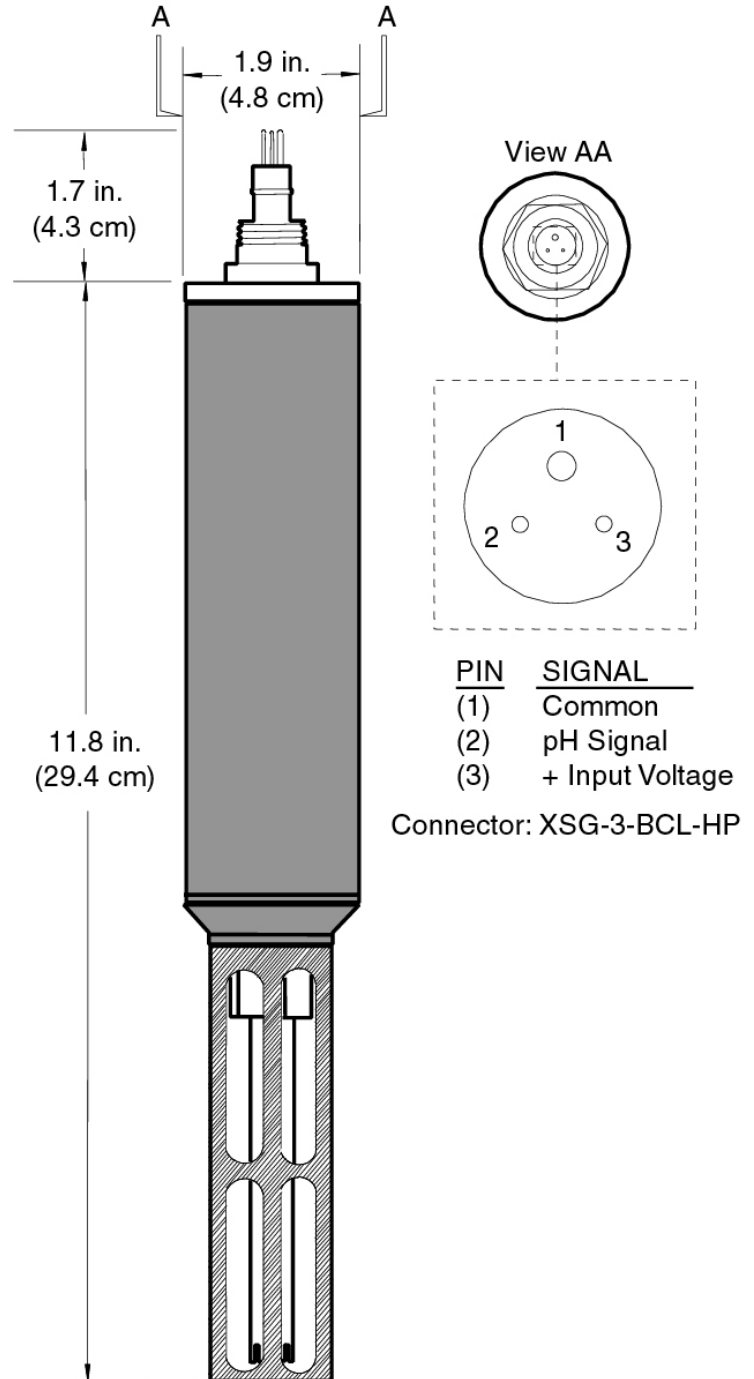
SBE 18


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 primarily intended as a *bolt-on* auxiliary sensor for Sea-Bird's SBE 9*plus* CTD Underwater Unit. It can also be used with Sea-Bird's SBE 16, 16*plus*, 19, and 19*plus* SEACATs, and SBE 25 SEALOGGER CTDs, or as part of a custom instrumentation package. 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 Sea-Bird's 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.



pH SPECIFICATIONS

Measurement Range	0 - 14 pH
Accuracy¹	0.1 pH
Time Response²	1 second

¹ Stated accuracy is achievable with frequent field calibrations.

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

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



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