

# pH Sensor

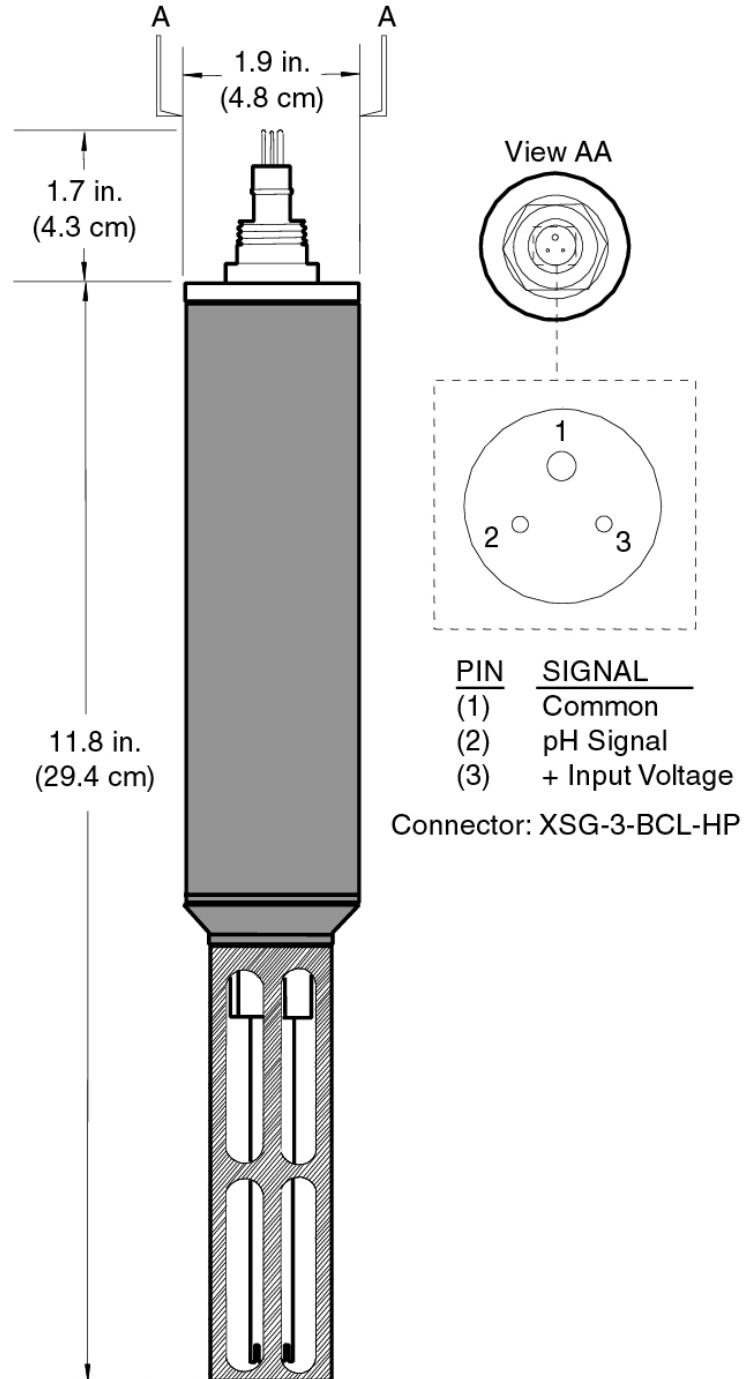
**SBE 18**  


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 600 meters (optionally 1200 meters). The replaceable pH probe is permanently sealed and is supplied with a soaker bottle attachment which prevents the reference electrode from drying out during storage. The sensor and associated interface electronics are 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 CTD Underwater Unit. It can also be used with Sea-Bird's SBE 16 and SBE 19 SEACATs, SBE 25 SEALOGGER CTDs, and SBE 20 SEALOGGERS, 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

<b>Measurement Range</b>	0 - 14 pH
<b>Accuracy<sup>1</sup></b>	0.1 pH
<b>Time Response<sup>2</sup></b>	1 second

<sup>1</sup> Stated accuracy is achievable with frequent field calibrations.

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

## ELECTRICAL/MECHANICAL

<b>Power required:</b>	6 - 24 VDC, 7 ma
<b>Signal output:</b>	0 to +5 V
<b>Materials:</b>	Anodized aluminum (6061-T6) Stainless steel
<b>Operating depth:</b>	1200 meters
<b>Weight:</b>	0.7 kg (1.5 pounds) in air