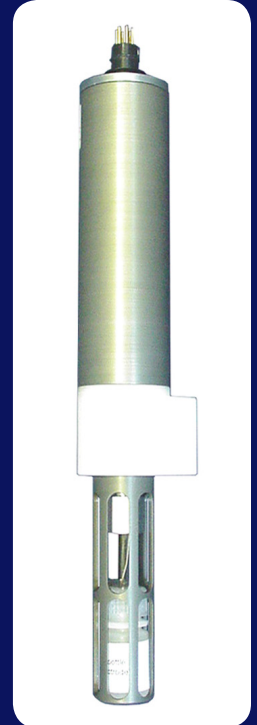


SBE 27

pH / O.R.P (Redox) Sensor

The SBE 27 pH and O.R.P. (Redox) sensor combines a pressure-balanced, glass-electrode, Ag/AgCl reference probe and platinum O.R.P. electrode to provide *in-situ* measurements at depths to 1200 m. 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 is a modular, self-contained package that is easy to install, service, and calibrate.

The SBE 27 is intended for use as an add-on auxiliary sensor for profiling CTDs (SBE 9plus; SBE 19, 19plus, and 19plus V2 SeaCAT; and SBE 25 and 25plus Sealogger). Power / signal interface cables and mounting hardware are available separately.



Deploy with pH probe
in vertical orientation,
as shown

Features

- Voltage output; interface electronics buffer and offset the differential voltages of the pH reference junction and the electrode potential (in water) between the O.R.P. electrode and pH reference junction to produce pH- and O.R.P.-dependent output voltages.
- Factory calibration results tabulated on a certificate furnished with each sensor:
 - pH calibrated against precision buffer solutions (4, 7, and 10 pH \pm 0.02 pH).
 - Extremely stable O.R.P. circuitry does not require subsequent calibrations.
- 1200 m housing.
- Supplied with plastic soaker bottle and KCl soaker solution.
- Seasoftware® V2 Windows software package (computation of pH and O.R.P. in engineering units).
- Five-year limited warranty.

Options

- Straight endcap for vertical mounting, or right angle endcap for horizontal mounting (for example, in an extension stand below an SBE 32 Carousel Water Sampler).
- XSG or wet-pluggable MCBH connector.

Performance

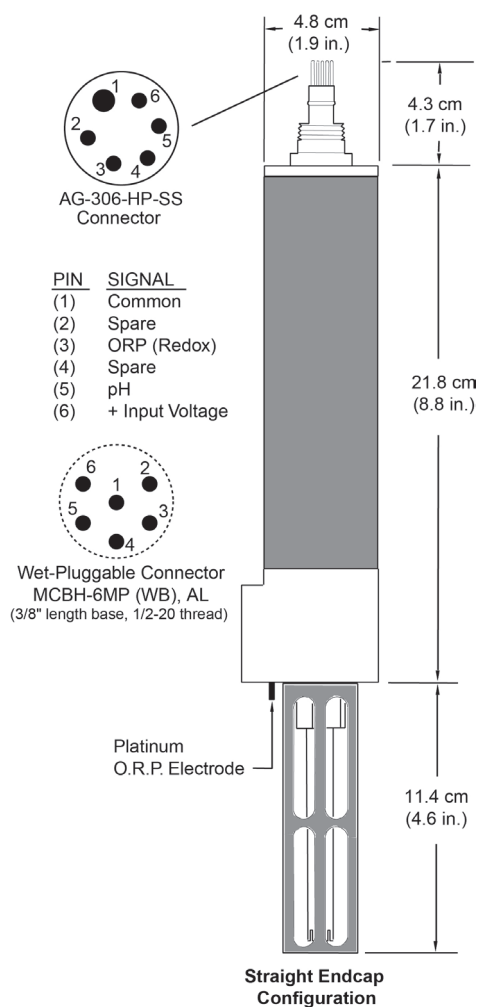
Measurement Range	0 to 14 pH, \pm 1250 mV O.R.P.
Accuracy	\pm 0.1 pH, \pm 1.0 mV O.R.P. <i>(stated pH accuracy achievable with frequent field calibrations)</i>
Time Response	1 sec pH, 10 millisecc O.R.P. <i>(time to reach 63% of final value for a step change in measured parameter)</i>

Electrical

Input Power	6 to 24 VDC, 10 mA
Output Signal	0 to +5 VDC

Mechanical

Housing, Depth rating, & Weight	Anodized aluminum (6061-T6), stainless steel, plastic (acetal copolymer) 1200 m depth rating 0.7 kg in air, 0.3 kg in water
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Note: SBE 27 must always be mounted with the pH probe in a vertical orientation, as shown in drawing at left. A right angle endcap configuration (not shown) is typically required for applications where the CTD is mounted horizontally (for example, in an extension stand below an SBE 32 Carousel Water Sampler) and the SBE 27 is mounted to the CTD.