

The SBE 29 pressure sensor, used on our SBE 25 SEALOGGER CTD, is a modular sensor consisting of a mechanical strain-gauge pressure transducer with thermistor temperature compensation. The SBE 29 measures absolute pressure in one of seven full-scale pressure ranges from 20 to 7,000 meters depth. The sensor elements and their interface electronics are modular and self-contained, providing easy installation, service, and calibration.

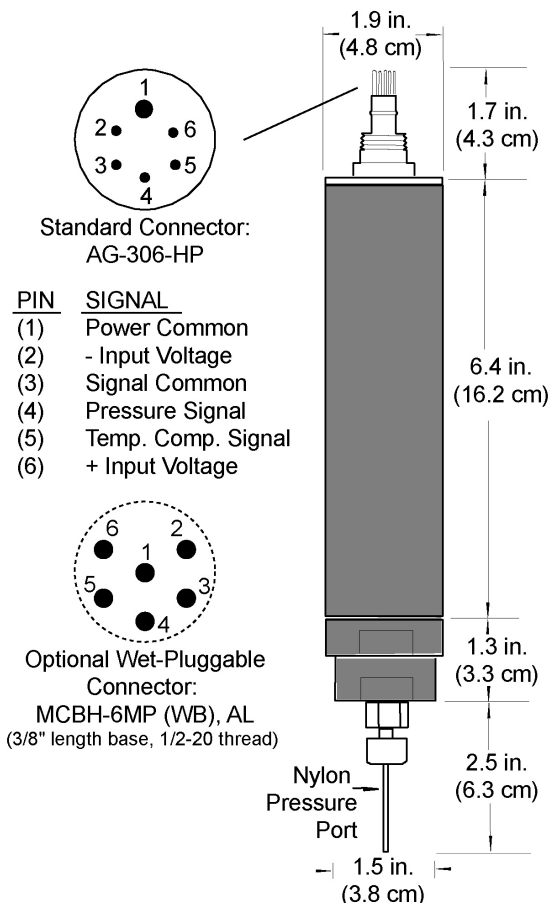
The SBE 29 interface electronics provide a pressure-dependent output voltage (+5 to -5) and a temperature-compensation voltage of 0 to +5 VDC (30K ohm thermistor at 25° C). Temperature-corrected pressure in engineering units [Pnum] is computed using the following equation:

$$P_{num} = V_p * 819 - (TC * T/1024)$$

where

- V_p = pressure signal voltage
- TC = compensation value
(from SBE 29 calibration sheet)
- T = temperature [°C]
= $-V_t * 21.02373 + 40.293$ [°C]
where V_t = TC signal voltage.

Each sensor is calibrated over its full scale range using a dead weight tester. Calibration results are tabulated on a certificate furnished with each sensor.



SPECIFICATIONS

Measurement Range	20/100/350/1000/2000/3500/7000 m (expressed in meters of deployment depth capability)
Accuracy	0.1% of full scale
Typical Stability (per year)	0.05% of full scale
Power Required	+10 and -10 VDC at 15 mA
Housing Materials	
Less than 3500 m:	anodized aluminum (6061)
3500 m and more:	anodized aluminum (7075)
Weight	
in air:	0.7 kg (1.6 lbs)
in water:	0.3 kg (0.7 lbs)