HIGH ACCURACY

measurement instruments

PRODUCT DATASHEET

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Roxar subsea
SenCorr PT sensor

intrusive pressure & temperature sensor - 15,000 psi / 1,035 bar

Data Sheet

Subsea Pressure and Temperature (PT) Sensor

A silicon piezoresistive sensor measures both pressure and temperature from the same measurement bridge, giving complete temperature compensation of the pressure reading. The element is placed in a high pressure oil-filled cavity, using a separation diaphragm.

For full redundant Pressure and Temperature measurement, refer to PTPT data sheet.

Interface Details - Mechanical

Connection type to pipe:
- Integral flange API 6A 6BX 2 1/16" 15,000 psi, PSL3, PR1, Incoloy 925 (UNS N09925)
- Ring gasket BX 152
  Temperature range: KX
  Material class: HH

Connector type:
- Duplex (UNS S31803) top cover with interface to Tronic, ODI or Omnitec Anguila interface.

PT body material:
- Inconel 625 (UNS NO6625)

PT element housing and diaphragm:
- Inconel 625 (UNS NO6625)

Sensor weight:
- Approximate 30 kg

Interface Details - Electrical

Power supply:
- 24 VDC (10 to 32 VDC)

Current consumption:
- Maximum 50 mA at 24V, depending on protocol

Communication protocol:
- ModBus, ProfiBus, CanBus, Roxar CorrOcean Native Protocol

Interface Details - Logic

Communication protocol:
- ModBus, ProfiBus, CanBus, Roxar CorrOcean Native Protocol

Communication to Subsea Control System:
- RS485

Specifications

Design water depth:
- 3,000 meters / 10,000 feet

Design life:
- 25 years

Maximum shock:
- 10 g, 11 ms half sine (all 6 axis)

Maximum vibration level:
- Frequency range 5-150 Hz, 5-25 Hz: ±2mm, 25-150 Hz: 5g

Pressure Rating

Operating pressure range - Full Scale Range (FSR):
- 0-1,035 bar / 0-15,000 psi

Maximum test pressure:
- 1,552 bar / 22,500 psi

Pressure accuracies:
- ±0.02%, ±0.05% or ±0.1% of FSR within calibrated temperature range
- ±1 bar from -40°C to 0°C / -40°F to 32°F

Pressure annual drift:
- <0.02% of FSR/year

Pressure resolution:
- 0.001 bar

Pressure repeatability:
- ±0.004% of FSR

Response time pressure:
- Standard: 1 second
- Best: 0.5 second

Temperature Rating

Operating temperature range:
- Standard: -40°C to +125°C / -40°F to +257°F
  Optional: -60°C, +135°C / -76°F, +275°F

Calibrated temperature range:
- Standard: 0°C to +125°C / 32°F to +257°F
  Optional: 0°C to +135°C / 32°F to +275°F

Temperature accuracies:
- ±0.3°C or ±0.5°C / ±0.54°F or ±0.9°F within calibrated temperature range
- ±1°C from -40°C to 0°C / -40°F to 32°F

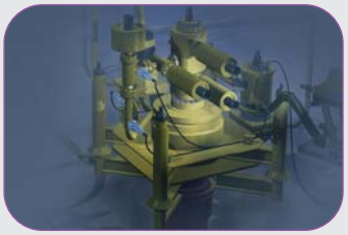
Temperature annual drift:
- <0.1% of FSR/year

Temperature resolution:
- 0.001°C

Temperature repeatability:
- ±0.1°C

Response time temperature:
- Standard: 1 second
- Best: 0.5 second

Roxar subsea SenCorr PT sensor



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