

SeaConnect™ Temperature and Pressure Sensor

The RMSpumptools SeaConnect™ Sensor performs pressure and temperature measurements on completion and production systems in subsea environments to a water depth of 3,000m. It is typically used for Subsea Christmas Trees and are mandatory to monitor these variables during production.



Operational Requirements

Design Life: 25 years
 Recalibration: 10 years
 Process Connection: API 6BX 1.13/16" 10ksi flange
 Electrical Connection: JIC 8 with oil filled hose
 Ring Gasket: BX-151 and 2-239 elastomeric seal
 Location of installation: Subsea Tree Valves or at Manifolds
 Working Pressure: 0 - 10,000psi
 Working Temperature: -10 - 121°C

Qualification

Qualified Pressure: 3,800psi
 Maximum withstand pressure: 8,600psi (body)
 20,000psi (probe)
 Vibration Test: 12-300Hz at 5g on the 3 axis
 Thermal cycling at 4°C, 25°C, 50°C and 60°C with 2 hours
 on each temperature for 5 days

Electronic Specification

Power Supply: 12-36VDC
 Signal Output: 4-20mA current loop
 The output is made via electrical penetrators
 Insulation: 10MΩ / 50VAC (temperature and pressure)
 The electronic signal conditioning uses AD/DA converters 16 bits
 The reading of the values of pressure and temperature can
 be made by HART protocol (temperature) and RS485
 Modbus (pressure)

Sensor Specification

Pressure:
 Compensated Temperature: 0 - 120°C
 Calibrated Pressure: 0 - 10,000psi
 Resolution: 0.03% FS
 Accuracy: 0.2% FS (Total Error Band)
 Long Term Stability: 0.1% FS / year
Temperature:
 Calibrated Temperature: 0 - 120°C
 Resolution: 0.03% FS
 Accuracy: 1% FS (Total Error Band)
 Long Term Stability: 0.5% FS / year

Key Product Features

Reduced Size:
 40cm total length, from the flush to the JIC
Reduced Weight:
 15kg. Easy handling and installation
Facilitated Calibration:
 Calibration performed by HART and Modbus output
Materials:
 All units are manufactured with qualified materials for
 subsea use and for corrosive environments, accordingly
 to the HH class on API 6A / NACE MR-0175
Two Choices of Materials:
 Can be supplied in 316L SS (UNS S31603) or Super
 Duplex (UNS 32550)



* The Sensor is offered as part of the SeaConnect System in partnership with Transeletron (ezSensing).