



SST3010 T Temperature Transmitter for Ultra Deepwater Applications

**Solartron ISA - High performance
instruments for the life of your reservoir**

Engineering Excellence for Long-term Performance

Operating subsea to ultra deepwater depths of 16,400 ft (5000 m) and high process pressures up to 10,000 psi (690 bar), the SST3010 T temperature transmitter has been developed to monitor well fluids in these most harsh environments.

Solartron ISA's SST family sets the global performance standard for subsea measurement instrumentation in the oil and gas industry. Used by leading exploration companies, SST products have an unsurpassed service history in the field, even in the most demanding and hostile installation environments.

Highly Stable, Accurate Measurement

Solartron ISA has over 25 years of temperature measurement experience and can offer specialist design and measurement solutions to meet with customer requirements.

The SST2010 T is equipped with a 4-wire PT100 to IEC751 Class A RTD situated in an integral thermowell and terminating inside the main housing. The thermowell is positioned directly in the process stream which is the accepted industry standard for optimum accuracy and response time.

Robust Construction

Small and light, yet built for long-term reliability in the hostile ultra deepwater environment, the SST3010 T housing is fully welded duplex stainless steel. A dual compartment design with a glass-to-metal seal provides secondary containment and facilitates the termination of an oil-filled harness. The integral thermowell is designed in accordance with Wake Frequency Calculations to PTC 19.3.

Comprehensive Qualification Testing

Every one of Solartron's subsea devices is fully tested to rigorous standards appropriate to the harsh subsea environment including: Helium leak, electrical, EMC, shock/vibration, temperature soak and cycling. The Solartron name is your assurance that the instrument meets or exceeds the highest international standards.

Key Specifications

- ✓ Depth 16,400ft (5000m)
- ✓ Pressure 10,000psi (690 bar)
- ✓ Accurate to $\pm 0.3\%$ of span
- ✓ Stability $\pm 0.1\%$ per 12 months
- ✓ Optional Redundancy

Features

- ✓ 4-20mA
- ✓ Hart
- ✓ CANopen
- ✓ (Fault Tolerant - SILS Level 2)
- ✓ CANopen (Hi-speed)
- ✓ Modbus (RS485)

Qualifications

- ✓ API 6A / ISO 10423
- ✓ ASME IX
- ✓ ISO 13628-6
- ✓ IEC 61000-4
- ✓ IEC 61000-6
- ✓ ISO 9001



SST3010 T Differential Pressure Transmitter For Ultra-Deepwater Applications

Specifications

Performance Specifications

Transmitter Output

4-20 mA, HART, Modbus, CANopen (High-Speed), CANopen (Fault Tolerant - SIFS Level 2)

Accuracy

Reference accuracy of calibrated span (including the effects of zero-based linearity, hysteresis, and repeatability): $\pm 0.3\%$ of calibrated span

Supply Voltage Effect

0.006% of span / °C

0.001% of span/ volt

Stability

$\pm 0.1\%$ of URL per 12 months

Calibration

UKAS accreditation optional

Functional Specifications

Ambient Temperature Limits

-22 to 176°F (-30 to +80°C)

Process Temperature Limits

-40 to 302°F (-40 to 150°C)

Working Pressure Limits

Maximum working pressure limit 10,000 psi (690 bar)

Maximum test pressure limit 15,000 psi (1035 bar)

INSTALLATION

Supply voltage

10 to 40 VDC for analog operation

16.4 to 32 VDC for digital communications

Load

0 to 1335 Ω for analog operation

250 to 600 Ω for HART

120 Ω for Modbus

1500 for CANopen

PHYSICAL SPECIFICATIONS

Dimensions

Unit height (excluding electrical connection and probe):

4-3/4" / 120 mm

Unit width: 7-7/8" / 200 mm

Probe length: As required

Weight: 37.5 lbs (17 kg) excluding electrical connector and cable

Physical support: Direct mounted

Wetted parts materials

Probe: UNS S31803 duplex

Non-wetted parts materials

Transmitter housing: UNS S31803 duplex

Glass to metal seal: Glass / 316 stainless steel

Electrical connector interface: 316 stainless steel

Cable connection options: Most common subsea electrical connectors



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