



## 550 series SUBSEA PRESSURE transmitter

high pressure 4 to 20 mA transmitter with optional dual redundancy

PSM 550 series transmitters are custom designed for direct installation to subsea control units.

Applications of this type demand reliability and all units undergo stringent quality and performance related tests during manufacture. All welded joints are leak tested using mass spectrometry analysis, each unit is thermally cycled, and following calibration all are run for a 72 hour burn in period. Considered design and quality control provides for the highest possible reliability.



### Features

- ◆ Measurement ranges to 1000 Bar Absolute
- ◆ Up to 700 Bar ambient pressure
- ◆ Secondary containment via glass to metal seal
- ◆ Surface mount PCB for long term stability & reliability
- ◆ 100% redundancy option for critical applications provided by dual independent 4 to 20 mA output
- ◆ Standard 316L Stainless steel body and diaphragm with other materials available for enhanced chemical resistance
- ◆ Fully sealed maintenance free design, with factory certified calibration
- ◆ Traceable 5 point calibration & Hyperbaric testing on request.

For especially critical applications such as Workover units the 550 series can be provided with dual 4-20mA outputs. This version employs two discrete amplifier circuits to offer 100% redundancy.

Since space is often limited in subsea installations, particular attention has been paid to making the design exceptionally compact, the standard construction is under 100 mm body length with a diameter of only 25.4 mm for both single & dual output sensors.

PSM will be pleased to discuss your requirements for standard or custom design sensors.

## STANDARD SPECIFICATIONS

### SENSOR

Type	Full silicon Wheatstone bridge
Construction :	Body assembly - 316L stainless Steel. Barrier diaphragm - 316L Internal fill fluid - Silicone oil (Alternatives construction materials are available)
Cable :	Individually identified 1 metre length Raychem Spec.44 AWG 24 conductors with PTFE Sheath and Raychem protective boot.
Cable entry :	Via glass to metal seal.
Mounting :	Standard 1/2" SAE Male threaded. Alternative threaded / flanged connections available
Nominal Ranges:	1, 10, 50, 100, 200, 400, & 1000 Bar
Calibrated Range :	As required between 1 & 1000 Bar
Power requirement :	12 to 30 V DC with 250 Ohm Load

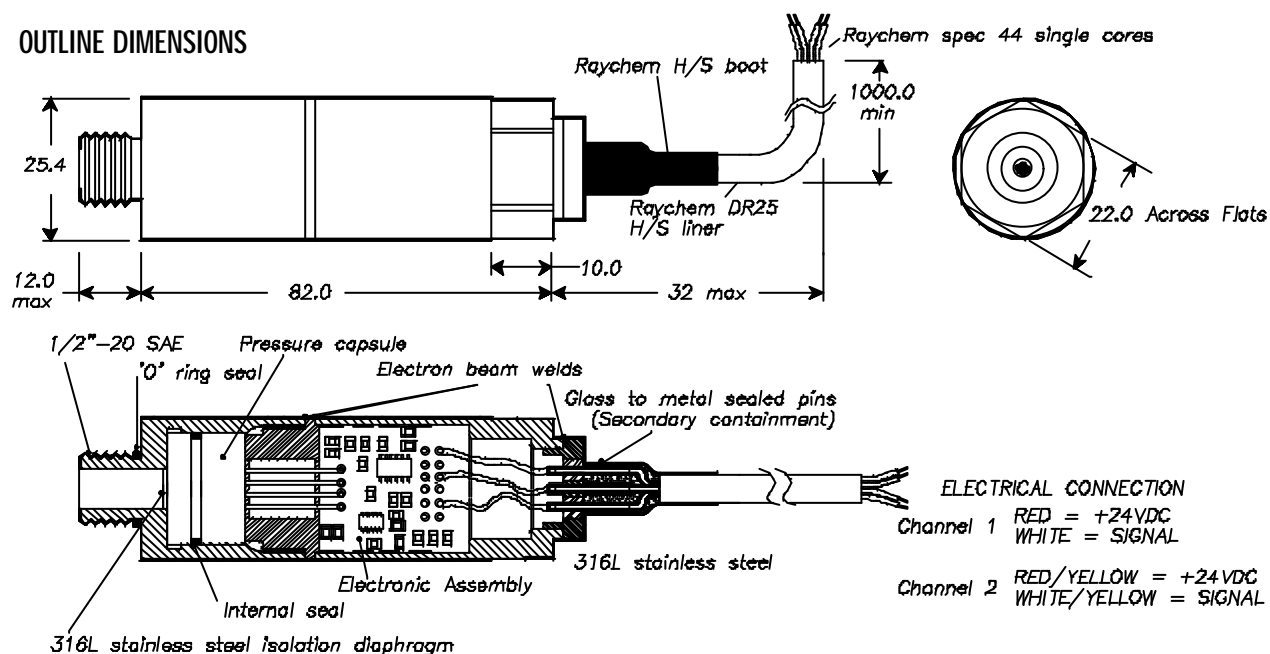
### OPERATIONAL CONDITIONS

Ambient temperature :	-10 to +80°C
Ambient pressure :	Atmospheric to 700 Bar
Immersion medium :	Oil / periodic seawater (permanent seawater with alternative body materials)
Shock :	100g half sine wave 11 ms
Vibration :	10g. 5 to 150 Hz sweep in 3 planes
Overpressure :	Up to 400 Bar 1.5 X Nominal range . 400 to 1000Bar up to 1100 Bar max.
Burst pressure :	1500 Bar , al ranges.

### PERFORMANCE

Calibration :	Fixed factory calibration to required range
Nominal offset :	Zero & Span settings within +/- 1%.- or
Linearity :	Better than +/-0.2% of set span BSL
Hysteresis & Repeatability :	Better than +/-0.1% of set span
Temperature coefficient :	+/- 0.01% set span/°C range & zero
Long term stability :	+/-0.5% of set span per 12months - Zero & Span

### OUTLINE DIMENSIONS



The 550 Series is a registered design. All rights reserved 1998

**PSM Instrumentation Ltd, Burrell Road Industrial Estate Haywards Heath West Sussex , UK.**  
Tel : +44 (0)1444 410040 Fax +44 (0)144 410121 <http://www.psm-sensors.co.uk>