

esi

PROTRAN® PR3915

Dual Redundant Pressure Transmitter

- Two pressure sensors and electronics for reliable dual redundancy
- Silicon-on-Sapphire sensor technology for outstanding performance
- Submersible to 3,000 meters sea level
- Hyperbaric testing to 3,300m depth
- Pressure ranges available to 1,000 bar
- Environmental Stress Screening (ESS Testing)



The advanced sensor design consists of a piezoresistive silicon strain gauge circuit, which is epitaxially grown onto the surface of a sapphire diaphragm to form a single crystalline structure. The sapphire sensor element is then molecularly bonded to a titanium alloy sub-diaphragm.

This enables the sensor to endure higher over-pressures and provides superb corrosion resistance. The sensor exhibits virtually no hysteresis and excellent long-term stability over wide temperature ranges.

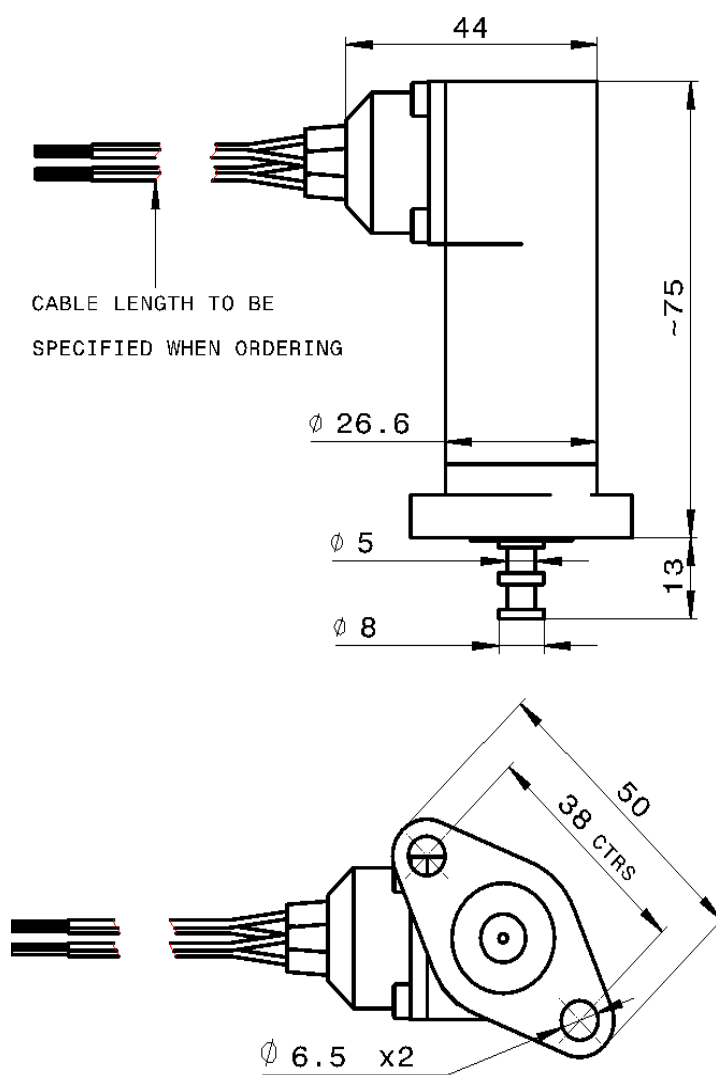
Specifications

The **PR3915 Dual Redundant Subsea pressure transmitter** has been designed to meet the requirements of the sub-sea oil industry. It is valve-mountable and configured to mount directly to the industry standard control valve flange arrangement.

Housed in a fully welded body with wetted parts, and conforming to the NACE recommendation for material corrosion resistance, this product will provide a durable solution for long term accurate pressure measurement even when permanently situated in extreme depth sub-sea environments.

Intended for permanent immersion in pressurised dielectric oil and protected from ingress with a high pressure glass-to-metal lead through, the product can withstand external pressure up to 3,000 metres depth water and provides secondary pressure containment up to 1,650 bar. Units can be supplied with hyperbaric test certificates to 3,000metres water submersion. Electrical connection is via strong PTFE Raychem Flexlite leads.

Dimensions (in mm)



DISCLAIMER: ESI Technology Ltd operates a policy of continuous product development. We reserve the right to change specification without prior notice. All products manufactured by ESI Technology Ltd are calibrated using precision calibration equipment, traceable to national measurement standards.

Technical Data

Type	PR3915
Sensor Technology:	Silicon-on-Sapphire (SoS)
Output Signal:	4-20 mA (2 wire)
Supply Voltage:	10-36 VDC
Pressure Reference:	Sealed Gauge
Protection of Supply Voltage:	Protected against supply voltage reversal up to 50 V
Standard Pressure Ranges :	0-595 bar; 0-759 bar; 0-1,035 bar (other options available)
Overpressure Safety:	2x ranges for up to 759 bar; 1.5x for 1035 bar
Load driving Capability:	4-20 mA : $RL < [UB-10V] / 20 \text{ mA}$ (e.g with supply voltage (UB) of 36V max. load (RL) is 1300)
Accuracy NLHR:	< +0.25 % of span BFUL
Zero Offset & Span Tolerance:	±0.10 mA
Operating Ambient Temperature:	-20°C to +40°C (-4°F +104°F)
Operating Media Temperature:	-20°C to +40°C (-4°F +104°F)
Storage Temperature:	+5°C to +40°C (+41°F to +104°F) Recommended Best Practice
Temperature Effects:	+0.015 %FS total error band for -20 to +70°C. Typical thermal zero and span coefficients +0.005 %FS/°C
Ingress Protection:	Fully welded housing
Electromagnetic Compatibility:	Emissions: EN61000-6-4; Immunity: EN61000-6-2; Certification: UKCA and CE Marked
Insulation Resistance:	> 500 MΩ @ 50 VDC
Response time 10-90:	1mS
Wetted Parts:	SAE 316 stainless steel with titanium alloy measurement cell
Pressure Media:	All fluids compatible with SAE 316 stainless steel titanium alloy
Pressure Connection:	Many specialised pressure connection options available to suit individual requirements. Contact the sales team for more information.
Electrical Connection:	Cable outlet or Subsea connector options available
Net. Weight (Kg):	Subject to specification