

esi

PROTRAN® PR3914

Subsea Pressure Transmitter

- Suitable for ROV and deep sea test equipment
- 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)
- Comprehensive documentation package and certification



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

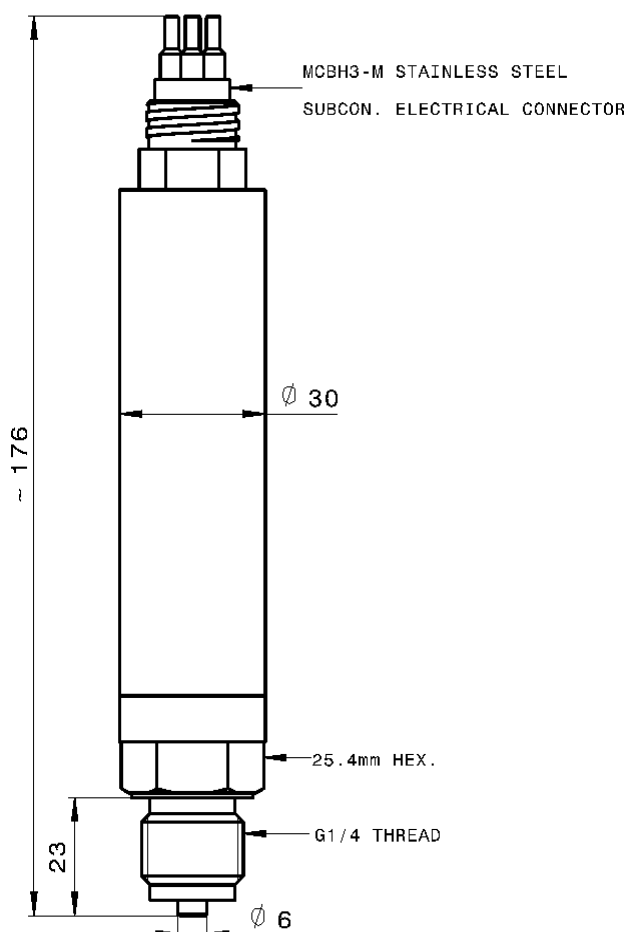
The **PROTRAN© PR3914** subsea pressure transmitter has been designed to meet the demanding requirements of pressure measurement at deep levels of immersion especially in oil industry applications and can be configured to suit a multitude of applications.

Housed in fully welded body with wetted parts 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 the product can withstand external pressures of up to 6,000 metres depth water. Versions with secondary containment are available providing high level product integrity in deep water operation.

Units can be supplied with hyperbaric test certificates to 3,000 metres water submersion. Electrical connection is via strong PTFE Raychem Flexlite leads.

Dimensions (in mm)



Electrical Connection

Pin	mA (2 wire)
1	+supply
2	4-20mA signal
3	N/C

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	PR3914
Sensor Technology:	Silicon-on-Sapphire (SoS)
Output Signal:	4-20 mA (2 wire)
Supply Voltage:	10-36 VDC
Pressure Reference:	Sealed Guage
Protection of Supply Voltage:	Protected against supply voltage reversal up to 50 V
Standard Pressure Ranges:	Typical ranges from 0-10 bar to 0-2000 bar. Contact the sales office for further information
Overpressure Safety:	Contact the sales office for further information
Load driving Capability:	4-20mA: $RL < [UB-10] / 20 \text{ mA}$ (e.g. with supply voltage (UB of 36V, max load (RL) is 1300Ω)
Accuracy NLHR:	$< \pm 0.25 \%$ of span BFSL
Zero Offset & Span	$\pm 0.10 \text{ mA}$
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:	Typical thermal zero and span coefficients $\pm 0.015\%FS/^{\circ}C$
Ingress Protection:	Fully welded housing
Electromagnetic Capability:	Emissions: EN61000-6-4; Immunity: EN61000-6-2; Certification: UKCA and CE Marked
Installation Resistance:	$> 100 \text{ M}\Omega @ 50 \text{ VDC}$
Response time 10-90%:	1 mS
Wetted Parts:	SAE 316 stainless steel housing with titanium alloy measurement cell
Pressure Media:	All fluids compatible with SAE 316 stainless steel and titanium alloy
Pressure Connection:	Many specialised pressure connection options available to suit individual requirements. Contact the sales team for more information
Electrical Connection:	Subsea connector options available
Related Product:	PT100 temperature transducer PR3919 also available. Contact Sales for details
Net. Weight (Kg):	Subject to specification