



SUBSEA DIFFERENTIAL PRESSURE TRANSDUCER



Model 7540
Subsea Differential Pressure Transducer

MODEL 7540

FEATURES:

- Ranges from 30 thru 7,500 PSID (2 thru 517 BAR)
- Up to 10K PSI (689 BAR) line and proof pressure
- Depths to 30K ft WC (9,144 meters)
- Compact, seawater rated design
- Designed to meet stringent MIL-Spec requirements
- NIST traceable
- Optional improved accuracy to $\pm 0.05\%$ FSO (BFSL)

APPLICATIONS:

- Submarine hydraulic systems
- Submarine propulsion systems
- Subsea oil wellhead pressures
- BOP control systems

PRODUCT OVERVIEW:

The Model 7540 from GP:50 is a highly rugged differential pressure transducer, designed to address the tough environmental challenges of subsea and other marine service environments. It is designed to meet stringent MIL and MIL-Spec standards for high-reliability within extreme environments.

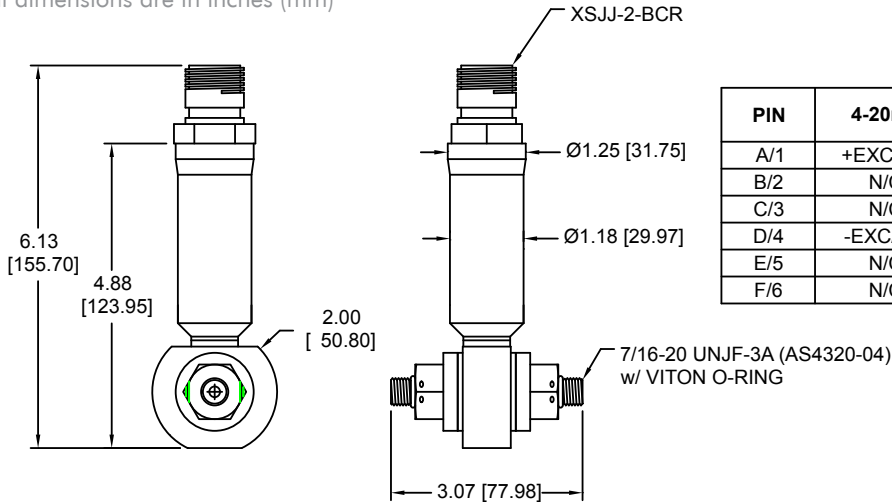
FIELD OPTIONS:

- 0-5 Vdc, 0-10 Vdc or 4-20 mA output
- Optional digital output (CANbus, RS485, USB)
- 316L stainless steel, Inconel or Hastelloy construction
- 10K PSI (689 BAR) static line pressure
- Wide selection of subsea rated connectors
- Bidirectional or unidirectional output
- RS232 and CANbus options available, consult factory

GP:50 MODEL 7540

DIMENSIONAL DRAWING

All dimensions are in inches (mm)



STANDARD WIRING

PIN	4-20mA	4-WIRE VDC ISOLATED	4-WIRE VDC NON-ISOLATED	3-WIRE VDC
A/1	+EXC/SIG	+EXC	+EXC	+EXC
B/2	N/C	+SIG	+SIG	+SIG
C/3	N/C	-SIG	-SIG*	N/C
D/4	-EXC/SIG	-EXC	-EXC*	-EXC/SIG
E/5	N/C	N/C	N/C	N/C
F/6	N/C	N/C	N/C	N/C

*COMMONS JUMPED

REFERENCE SPECIFICATIONS

ELECTRICAL

- **Output Signal:** 0-5 Vdc, 0-10 Vdc and 4-20 mA (CANBus RS485 and USB)
- **Supply Voltage:** 18 to 36 Vdc (Vdc output)
9 to 36 Vdc (4-20 mA output)
- **Load Impedance (4-20 mA):**
1,350Ω max. at 36 Vdc
750Ω max. at 24 Vdc
300Ω max. at 18 Vdc
- **Output Current (0 to 5 Vdc):** 2 mA max for $\pm 0.1\%$ FSO attenuation
- **Input Current:** 10 mA nominal
4-wire isolated Vdc output - 45 mA nominal
- **Response Time:** <4 ms
- **Connection:** XSJJ-2-BCR (Seacon 2-pin) standard, other options available, consult factory

STATIC ACCURACY (BFSL) (HYSTERESIS, NON-LINEARITY & REPEATABILITY @ +70 °F)

- **Static Accuracy:** $< \pm 0.3\%$ FSO, $\pm 0.10\%$ FSO or $\pm 0.05\%$ FSO
- **Zero balance/span balance:** $\pm 0.5\%$ FSO
- **Non-repeatability:** $< \pm 0.1\%$ FSO
- **Hysteresis:** $< \pm 0.2\%$ FSO
- **Non-linearity:** $< \pm 0.2\%$ FSO
- **Thermal Error:** $\pm 1.0\%$ FSO/100 °F
- **Total Error Band:** $\pm 2.3\%$ FSO (includes all 5 parameters)

MATERIALS OF CONSTRUCTION

- **Wetted Parts:** 316L stainless steel and Inconel 625
- **Housing:** 316L stainless steel (optional Inconel, Hastelloy or Monel)

MECHANICAL

- **Process connection:** 7/16-20 UNJF-3A (AS4320-04)
- **Proof Pressure:** 2X Pressure Range or 10K PSI (689 BAR), whichever is less (10X optional)
- **Burst Pressure:** 3X Pressure Range or 10.5K PSI (724 BAR), whichever is less (15X optional)
- **Line Pressure:** 3K PSI (207 BAR), optional 10K PSI (689 BAR)
- **Line Pressure Effect (Zero):**
 $< \pm 1\%$ FSO at 1K PSI (69 BAR)
 $< \pm 2.5\%$ FSO at 3K PSI (207 BAR)
 $< \pm 5\%$ FSO at 10K PSI option (689 BAR)
- **Approximate Weight:** 2 lb (0.9 Kg some options may affect weight)

PRESSURE RANGES

- 30 thru 7,500 PSID (2.1 thru 517.1 BAR) bidirectional or unidirectional

THERMAL SPECIFICATION

- **Compensated Ambient:** 0 °F to +180 °F (-18 °C to +82 °C) (expanded ranges available)
- **Operating Ambient:** -10 °F to +190 °F (-23 °C to +88 °C) (expanded ranges available)
- **NIST Traceability/Calibration:** ANSI-Z540-1
- **Workmanship:** J-001/NASA 8739.3 standard
- **Quality System:** ISO 9001:2008

**Standard configurations shown.
Please consult factory for other options.**

All specifications are for reference purposes only. In the interests of continuous product improvement, all specifications are subject to change without notice. Please contact GP:50 for assistance with your application.