



## HIGH LINE AEROSPACE DIFFERENTIAL PRESSURE TRANSDUCER

### MODEL 7400

#### FEATURES:

- High static line option to 10K PSI (689 BAR)
- True wet-wet design
- All stainless steel wetted parts
- High-accuracy to  $\pm 0.3\%$  FSO
- Designed to meet \*MIL-STD-810F shock and vibration specification
- J-001/NASA 8739.3 workmanship standards for soldering

#### APPLICATIONS:

- Ground support systems
- Aircraft engine test stands
- Hydraulic test stands
- Launch vehicles
- Ground and engine testing

#### PRODUCT OVERVIEW:

The Model 7400 from GP:50 is a high-line, high-pressure, aerospace grade differential pressure transducer. Its true wet-wet all stainless steel design allows it to effectively measure both corrosive fluid and industrial gas pressures to high degrees of accuracy and repeatability. Its optional 10X proof pressure and 10K PSI (689 BAR) line rating also facilitates its use within demanding aircraft engine and hydraulic systems. In addition to expanded ranges, a variety of pressure ports, electrical connections, outputs, and wetted part materials are available. Please consult the factory for details.

#### FIELD OPTIONS:

- 4-20 mA, 0-5 and 0-10 Vdc isolated and non-isolated outputs
- Optional 10X proof and 10K PSI line rating
- RTD temperature output
- Inconel, Hastelloy, and Monel wetted parts
- Wide selection of pressure ports and electrical connections



Model 7400  
High Line Aerospace  
Differential Pressure Transducer

GP:50 Cage Code: ON8Y7

# GP:50 MODEL 7400

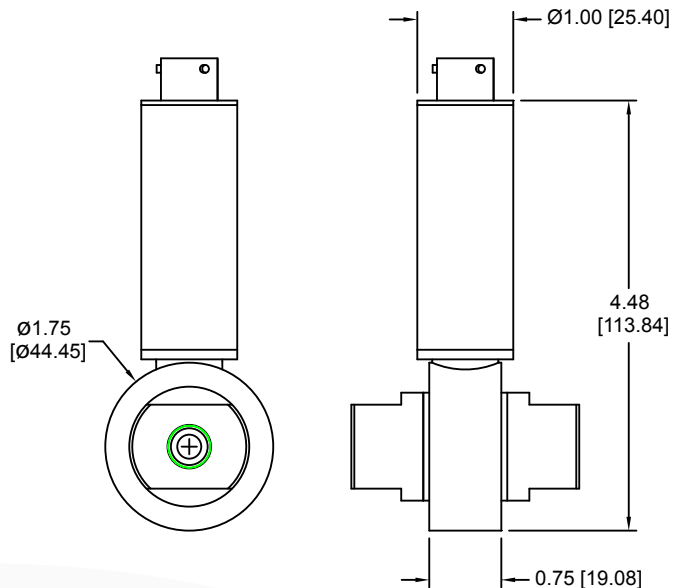
## DIMENSIONAL DRAWING

All dimensions are in inches (mm)

### STANDARD WIRING

PIN	4-20mA	4-WIRE MV/V & 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 JUMPERED



## REFERENCE SPECIFICATIONS

ELECTRICAL	MECHANICAL
<ul style="list-style-type: none"> <li><b>Output Signal:</b> 4-20 mA, 0 to 5 Vdc or 0 to 10 Vdc (3-wire or optional 4-wire isolated)</li> <li><b>Supply Voltage:</b> 18 V to 36 Vdc (others available)</li> <li><b>Load Impedance (4-20 mA):</b> 1,350 Ω max. at 36 Vdc, 750 Ω max. at 24 Vdc, 300 Ω max. at 18 Vdc</li> <li><b>Output Current (Vdc):</b> 2 mA max. for &lt;0.1% FSO attenuation</li> <li><b>Input Current:</b> 4 -wire isolated Vdc options - 45 mA nominal, non-isolated Vdc -10 mA nominal</li> <li><b>Response Time:</b> 4 ms typical</li> <li><b>Connection:</b> PTIH-10-6P standard (please consult factory for other options)</li> </ul>	<ul style="list-style-type: none"> <li><b>Process connection:</b> AS5202-04 (Other ports available)</li> <li><b>Proof Pressure:</b> (high &amp; low side) 2X pressure range or 10K PSI (689 BAR) max, whichever is less</li> <li><b>Burst Pressure:</b> (high &amp; low side) 3X pressure range or 4,500 PSI (310 BAR) max, whichever is less</li> <li><b>Static Line Pressure:</b> 3K PSI (207 BAR), optional 10K PSI (689 BAR)</li> <li><b>Random Vibration:</b> &gt;25 G RMS (20 Hz to 2,000 Hz)</li> <li><b>Approximate Weight:</b> 1.5 lbs (0.7 kg) (some options may affect weight)</li> </ul>
<b>ACCURACY</b> (HYSTERESIS, NON-LINEARITY & REPEATABILITY @ +70 °F) <ul style="list-style-type: none"> <li><b>Static Accuracy (RSS):</b> &lt;±0.3% FSO</li> <li><b>Zero/span balance:</b> ±0.5% FSO</li> <li><b>Non-repeatability:</b> &lt; ±0.1% FSO</li> <li><b>Hysteresis:</b> &lt; ±0.2% FSO</li> <li><b>Non-linearity:</b> &lt; ±0.2% FSO</li> <li><b>Thermal Error:</b> ±1.0% FSO/100 °F</li> <li><b>Total Error Band:</b> ±2.3% FSO (includes all 5 parameters)</li> <li><b>Line Pressure Effect (Zero):</b> <ul style="list-style-type: none"> <li>&lt;±1% FSO at 1,000 PSI (69 BAR),</li> <li>&lt;±2.5% FSO at 3,000 PSI (207 BAR),</li> <li>&lt;±5% FSO at 10K PSI (689 BAR) optional</li> </ul> </li> </ul>	<b>PRESSURE RANGES</b> <ul style="list-style-type: none"> <li>0 to 30 thru 0 to 7,500 PSID (2 thru 517 BAR) (bidirectional or unidirectional)</li> </ul>
<b>MATERIALS OF CONSTRUCTION</b> <ul style="list-style-type: none"> <li><b>Wetted Parts:</b> 316L stainless steel</li> <li><b>Housing:</b> 300 series stainless steel</li> <li><b>Internal Fill:</b> Silicon Oil (Fomblin Oil Available)</li> </ul>	<b>THERMAL SPECIFICATION</b> <ul style="list-style-type: none"> <li><b>Compensated:</b> 0 °F to +180 °F (-18 °C to +82 °C)</li> <li><b>Operating:</b> -20 °F to +190 °F (-29 °C to +88 °C)</li> <li><b>Storage:</b> -65 °F to +250 °F (-53 °C to +121 °C)</li> <li><b>Effect on Zero/Span:</b> ±2.0% FSO/100 °F (Improved to +/-0.5%/100 °F available)</li> <li><b>NIST Traceability/Calibration:</b> ANSI-Z540-1</li> <li><b>Workmanship:</b> J-001/NASA 8739.3 standard</li> <li><b>Quality System:</b> ISO 9001:2008</li> </ul>

\*Options may affect Mil-specifications.  
Please consult factory for your specific needs.

**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.

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