



## FLIGHT QUALIFIED LOW LEVEL PRESSURE TRANSDUCER



Model 7100  
Flight Qualified Low Level  
Pressure Transducer

GP:50 Cage Code: ON8Y7

### MODEL 7100

#### FEATURES:

- Aircraft and space flight heritage
- Compact, lightweight all-stainless steel design
- High accuracies up to  $\pm 0.1\%$  FSO
- Wide operating temperature range from  $-65\text{ }^{\circ}\text{F}$  to  $+250\text{ }^{\circ}\text{F}$  ( $-54\text{ }^{\circ}\text{C}$  to  $+121\text{ }^{\circ}\text{C}$ )
- Meets MIL-STD-810F shock and vibration specification
- J-001/NASA 8739.3 workmanship standards for soldered electrical connections
- Secondary containment  $\geq 4,500\text{ PSI}$  (310 BAR)

#### APPLICATIONS:

- Commercial and defense satellites
- Launch vehicles
- Unmanned aerial vehicles
- Military and civilian aircraft
- Ground support and engine test stands
- Ground and engine testing

#### PRODUCT OVERVIEW:

The Model 7100 from GP:50 is a flight-qualified, low level pressure transducer, designed to provide high-accuracy measurements of up to  $\pm 0.1\%$  FSO. Its flight heritage, spanning 25 years, makes it ideal for use within demanding aerospace and defense applications, including those in which higher shock and vibration levels may be present. Its compact and lightweight design facilitates ease of installation within space constrained environments.

#### FIELD OPTIONS:

- "B+ and S Class" electronics
- Temperature output
- Inconel, Hastelloy, and Monel wetted parts
- Wide selection of pressure ports and electrical connections

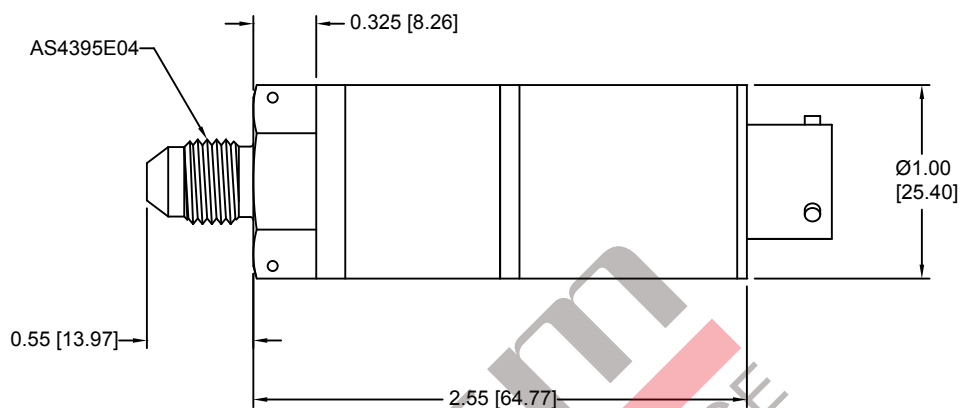
# GP:50 MODEL 7100

## DIMENSIONAL DRAWING

All dimensions are in inches (mm)

### STANDARD WIRING

PIN	MODEL 7100
A/1	+EXC
B/2	+SIG
C/3	-SIG
D/4	-EXC
E/5	N/C
F/6	N/C



## REFERENCE SPECIFICATIONS

ELECTRICAL	MECHANICAL
<ul style="list-style-type: none"> <li>• <b>Output Signal:</b> 1 to 3 mV/V (depending upon selected range) (optional 10 mV/V)</li> <li>• <b>Supply Voltage:</b> 3.5 to 15 Vdc</li> <li>• <b>Load Impedance:</b> 230K <math>\Omega</math> min. for &lt;0.1% FSO attenuation</li> <li>• <b>Output Impedance:</b> 5K <math>\Omega</math> standard, 350 <math>\Omega</math> optional</li> <li>• <b>Input Current:</b> 4-wire isolated Vdc output - 45 mA nominal, non-isolated Vdc - 10 mA nominal</li> <li>• <b>Response Time:</b> 2 ms typical</li> <li>• <b>Connection:</b> PTIH-10-6P (MIL D38999 series) standard</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Process connection:</b> AS4395E04 standard, AS5202-04, 1/4" NPT (M) available</li> <li>• <b>Proof Pressure:</b> 1.5X FSO with 25 PSIA min., 10X optional</li> <li>• <b>Burst Pressure:</b> 3.0X FSO, 15X optional</li> <li>• <b>Secondary containment:</b> Rated at 4,500 PSI (310 BAR) for ranges <math>\geq</math> 50 PSI; 2,400 PSI (166 BAR) for ranges &lt; 50 PSI</li> <li>• <b>Random Vibration:</b> &gt;25 G RMS (20 Hz to 2,000 Hz)</li> <li>• <b>Sinusoidal Vibration:</b> 7.5 G's from 5 Hz to 100 Hz</li> <li>• <b>Pyroshock:</b> &gt;3,500 G's / 12 g</li> <li>• <b>Constant Acceleration:</b> 5 G's for 30 minutes</li> <li>• <b>Approximate Weight:</b> 4 oz (0.1 kg) some options may affect weight</li> </ul>
<b>ACCURACY (HYSTERESIS, NON-LINEARITY &amp; REPEATABILITY @ +70 °F)</b> <ul style="list-style-type: none"> <li>• <b>Static Accuracy (RSS):</b> <math>\pm 0.3\%</math> FSO, <math>\pm 0.10\%</math> FSO</li> <li>• <b>Zero/span balance:</b> <math>\pm 0.5\%</math> FSO</li> <li>• <b>Non-repeatability:</b> <math>&lt; \pm 0.1\%</math> FSO</li> <li>• <b>Hysteresis:</b> <math>&lt; \pm 0.2\%</math> FSO</li> <li>• <b>Non-linearity:</b> <math>&lt; \pm 0.2\%</math> FSO</li> <li>• <b>Thermal Error:</b> <math>\pm 0.5\%</math> FSO/100 °F (<math>\pm 0.25\%</math> FSO improved)</li> <li>• <b>Total Error Band:</b> <math>\pm 1.3\%</math> FSO, 1.0% FSO optional (includes all 5 parameters)</li> </ul>	<b>PRESSURE RANGES</b> <ul style="list-style-type: none"> <li>• 0 to 5 thru 0 to 15K PSIA, PSIG, PSIV, PSISG options (0.3 thru 1,034 BAR)</li> <li>(Certain lower ranges may be oil-filled, consult factory)</li> </ul>
<b>MATERIALS OF CONSTRUCTION</b> <ul style="list-style-type: none"> <li>• <b>Wetted Parts:</b> 17-4 PH stainless steel (Inconel, Hastelloy and Monel available)</li> <li>• <b>Housing:</b> 316L stainless steel</li> </ul>	<b>THERMAL SPECIFICATION</b> <ul style="list-style-type: none"> <li>• <b>Compensated:</b> -10 °F to +180 °F (-23 °C to +82 °C)</li> <li>• <b>Operating:</b> -20 °F to +190 °F (-29 °C to +88 °C) Optional -65 °F to +250 °F (-54 °C to +121 °C)</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>

**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.