



FLIGHT HERITAGE LOW LEVEL PRESSURE TRANSDUCER

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°F to $+250^{\circ}\text{F}$ (-54°C to $+121^{\circ}\text{C}$)
- Designed to meet *MIL-STD-810F shock and vibration specification
- J-001/NASA 8739.3 workmanship standards for soldered electrical connections
- Secondary containment $\geq 4,500$ 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-heritage, 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



Model 7100
Flight Heritage Low Level
Pressure Transducer

GP:50 Cage Code: ON8Y7

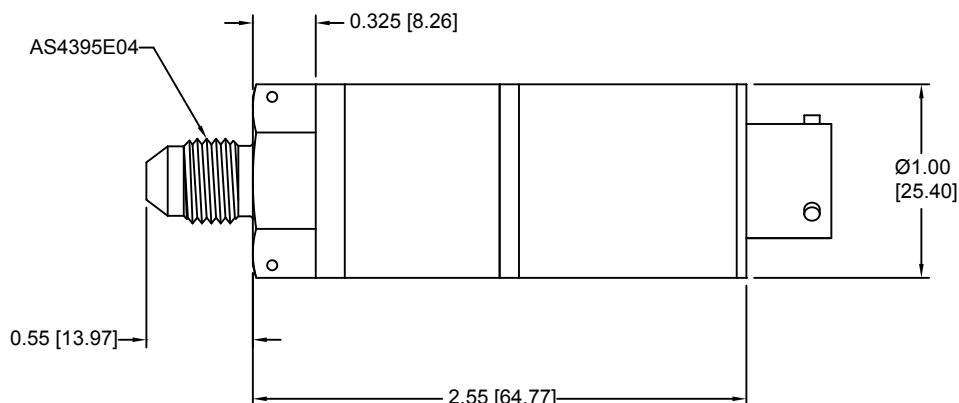
GP:50 MODEL 7100

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

- **Output Signal:** 1 to 3 mV/V (depending upon selected range) (optional 10 mV/V)
- **Supply Voltage:** 3.5 to 15 Vdc
- **Load Impedance:** 230K Ω min. for <0.1% FSO attenuation
- **Output Impedance:** 5K Ω standard, 350 Ω optional
- **Input Current:** 4-wire isolated Vdc output - 45 mA nominal, non-isolated Vdc - 10 mA nominal
- **Response Time:** 2 ms typical
- **Connection:** PTIH-10-6P standard, options available

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

- **Static Accuracy (RSS):** $\pm 0.3\%$ FSO, $\pm 0.10\%$ FSO
- **Zero/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:** $\pm 0.5\%$ FSO/100 °F ($\pm 0.25\%$ FSO improved)
- **Total Error Band:** $\pm 1.3\%$ FSO, 1.0% FSO optional (includes all 5 parameters)

MATERIALS OF CONSTRUCTION

- **Wetted Parts:** 17-4 PH stainless steel (Inconel, Hastelloy and Monel available)
- **Housing:** 316L stainless steel

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

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

MECHANICAL

- **Process connection:** AS4395E04 standard, AS5202-04, 1/4" NPT (M) available
- **O-Ring:** Buna-N (Nitrile) is standard. For expanded temp ranges -65 °F to 350 °F Fluorosilicone is standard.
- **Proof Pressure:** 1.5X FSO with 25 PSIA min., 10X optional
- **Burst Pressure:** 3.0X FSO, 15X optional
- **Secondary containment:** Rated at 4,500 PSI (310 BAR) for ranges ≥ 50 PSI; 2,400 PSI (166 BAR) for ranges < 50 PSI
- **Random Vibration:** > 25 G RMS (20 Hz to 2,000 Hz)
- **Sinusoidal Vibration:** 7.5 G's from 5 Hz to 100 Hz
- **Pyroshock:** $> 3,500$ G's / 12 g
- **Constant Acceleration:** 5 G's for 30 minutes
- **Approximate Weight:** 4 oz (0.1 kg) some options may affect weight

PRESSURE RANGES

- 0 to 5 thru 0 to 15K PSIA, PSIG, PSIV, PSISG options (0.3 thru 1,034 BAR)
(Certain lower ranges may be oil-filled, consult factory)

THERMAL SPECIFICATION

- **Compensated:** -10 °F to +180 °F (-23 °C to +82 °C)
- **Operating:** -20 °F to +190 °F (-29 °C to +88 °C)
Optional -65 °F to +250 °F (-54 °C to +121 °C)
- **NIST Traceability/Calibration:** ANSI-Z540-1
- **Workmanship:** J-001/NASA 8739.3 standard
- **Quality System:** ISO 9001:2008

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.