



FLIGHT HERITAGE PRESSURE TRANSDUCER



Model 7200
Flight Heritage Pressure Transducer

MODEL 7200

FEATURES:

- Up to $\pm 0.1\%$ FSO accuracy (RSS)
- "B+" and "S Class" electronics available
- Secondary containment rating up to 4,500 PSI (310 BAR)
- Optional 10X proof pressure
- 0 to 1 thru 0 to 15K PSI (69 MBAR to 1,034 BAR)
- Designed to meet *MIL-STD-810F high shock and vibration specifications
- Full NIST traceability
- J-001/NASA 8739.3 standard workmanship

APPLICATIONS:

- Aviation and suborbital spacecraft
- Unmanned aerial vehicles
- Helicopter and rotorcraft
- Commercial and military satellites
- Launch vehicles
- * Ground and engine testing

PRODUCT OVERVIEW:

The Model 7200 series from GP:50 is a flight heritage static pressure transducer, designed to provide high-accuracy pressure measurements within commercial aviation, military, aerospace, UAV, satellite, and defense applications. This highly rugged pressure transducer is designed to meet both *MIL-STD-461 and *MIL-STD-810G standards. It is available in both test and program volumes to suit a variety of requirements.

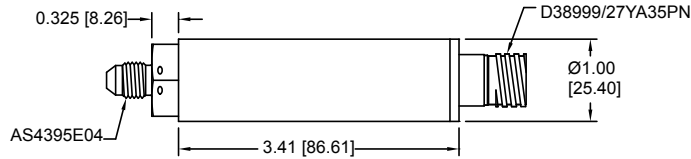
FIELD OPTIONS:

- 0 to 5 Vdc, 0 to 10 Vdc and 4-20 mA outputs
(Optional 4-wire isolated grounds on Vdc Units)
- "B+" and "S Class" electronics
- Temperature output
- Inconel, Hastelloy, and Monel wetted parts
- Wide selection of pressure ports and electrical connections

GP:50 MODEL 7200

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

NOTE: LENGTH MAY VARY ON
RANGES BELOW 50 PSI

REFERENCE SPECIFICATIONS

ELECTRICAL

- **Output Signal:** 0 to 5 Vdc, 0 to 10 Vdc and 4-20 mA
- **Supply Voltage:** 18 to 36 Vdc (Vdc output)
9 to 36 Vdc (4-20 mA output)
- **Load Impedance:**
1,350 Ω max. at 36 Vdc
750 Ω max. at 24 Vdc
300 Ω max. at 18 Vdc
- **Output Current (0 to 5 Vdc):** 2 mA max for
<0.1% FSO attenuation
- **Input Current:** 4 wire isolated Vdc output - 45 mA nominal,
non-isolated Vdc - 10 mA nominal
- **Response Time:** <2 ms typical
- **Connection:** D38999/27YA35PN standard, options available

ACCURACY

- **Static Accuracy (RSS):** < ± 0.3 FSO and ± 0.10 FSO and
 $\pm 0.05\%$ FSO available on model 8200
- **Zero/span balance:** $\pm 0.5\%$ FSO
- **Non-repeatability:** < ± 0.1 FSO
- **Hysteresis:** < ± 0.2 FSO
- **Non-linearity:** < ± 0.2 FSO
- **Thermal Error:** $\pm 0.5\%$ FSO/100 $^{\circ}\text{F}$ ($\pm 0.25\%$ FSO improved)
- **Total Error Band:** $\pm 1.3\%$ FSO (includes all 5 parameters)

MATERIALS OF CONSTRUCTION

- **Wetted Parts:** 17-4 PH sensor (<50 PSI 316L stainless steel)
(Inconel, Hastelloy, and Monel optional)
- **Housing:** 316L stainless steel
- **Pressure ranges** < 50 PSI contain silicon or fomblin oil

MECHANICAL

- **Process connection:** AS4395E04 standard. Consult factory for
other options
- **O-Ring:** Buna-N (Nitrile) is standard. For expanded temp
ranges -65 $^{\circ}\text{F}$ to 350 $^{\circ}\text{F}$ Fluorosilicone is standard.
- **Proof Pressure:** 1.5X FSO, 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:** >2,500 G's / 12 g
- **Constant Acceleration:** 5 G's for 30 minutes
- **Weight:** <8 oz (<0.2 kg) some options may affect weight

PRESSURE RANGES

- 0 to 1 thru 0 to 15K PSIA, PSIG, PSIV, PSISG options
(0.1 thru 1,034.2 BAR)

THERMAL SPECIFICATION

- **Operating:** -40 $^{\circ}\text{F}$ to +190 $^{\circ}\text{F}$ (-40 $^{\circ}\text{C}$ to +88 $^{\circ}\text{C}$)
- **Compensated:** -10 $^{\circ}\text{F}$ to +180 $^{\circ}\text{F}$ (-23 $^{\circ}\text{C}$ to +82 $^{\circ}\text{C}$)
- **Thermal Error:** $\pm 0.5\%$ FSO/100 $^{\circ}\text{F}$ ($\pm 0.25\%$ FSO improved)
- **Expanded Option:** -65 to +250 $^{\circ}\text{F}$ ($\pm 2.3\%$ FSO/100 $^{\circ}\text{F}$)
- **Thermal Error:** $\pm 0.5\%$ FSO/100 $^{\circ}\text{F}$ ($\pm 0.25\%$ FSO improved)
- **NIST Traceability/Calibration:** ANSI-Z540-1
- **Workmanship:** J-001/NASA 8739.3 standard
- **Quality System:** ISO 9001:2008

*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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