



# FLIGHT QUALIFIED LOW LEVEL PRESSURE TRANSDUCER

## Model 7100

Designed for the tough challenges and environmental rigors of space propulsion and aviation pressure testing.

### FEATURES:

- High accuracy, 0.3% RSS standard (0.1% RSS available)
- Nominal 3mV/V output, up to 10mV/V with options
- Mechanical isolation prevents contact shifts
- Space and flight qualified
- Cleaning to MIL-STD-1246 available
- Multiple output option
- Input leads can be reversed or shorted without circuit damage
- 4500 psi secondary containment

### Heritage Includes:

- NASA
- Lockheed Martin (EELV)
- EELV
- Johns Hopkins APL
- Shuttle Upgrade
- Boeing
- TRW-ABL
- Dept. of Defense

- Satellites: Commercial and defense
- Ground & Engine Test
- Launch Vehicles
- Aircraft Systems / Avionics



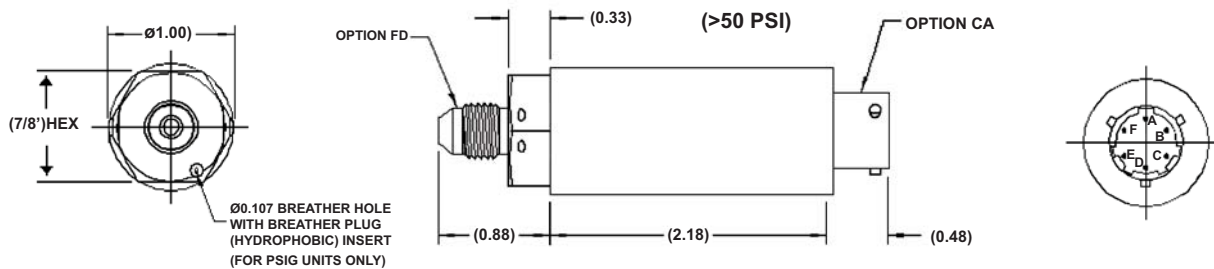
(Low Range)  
 <50 PSI

All GP:50 Aerospace pressure transducers are manufactured and tested to the following MIL-STD and MIL-Spec standards to insure the highest quality assurance:

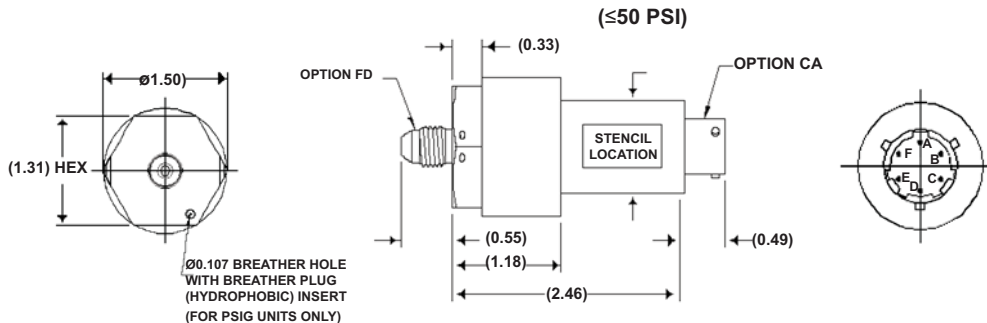
- NIST Traceability and Calibration..... MIL-STD - 45662A
- Workmanship ..... J-001 / NASA 8739.3 standards
- Quality System ..... ISO 9001:2000

Transducer Design Meets: MIL-STD-810F MIL-STD-461E

SEE INSTALLATION MANUAL FOR PINOUT ASSIGNMENT BASED ON ELECTRONICS OPTIONS



Units are inches



PIN OUT FOR OPTIONS 1,7,8	
A/1	+ EXC.
B/2	+ SIGNAL
C/3	- SIGNAL
D/4	- EXC.
E/5	RTD (OPTIONAL)
F/6	RTD (OPTIONAL)

GP:50 reserves the right to make product improvements and amendments to the product specifications stated throughout this brochure without prior notification. Please contact the factory on all critical dimensions and specifications for verification.

A5SL-7100.00 Rev E



Specifications reflect standard product, improved performance/mechanical options available. Modifications may alter specs, consult factory for more information.

Ranges	5 thru 15,000 PSIA, PSIG or PSISG options
FS Output at Rated Pressure	3 mV/V at 10 Vdc, other options available
Temperature Output	100 ohm 2 wire platinum RTD optional 1000 ohm 2 wire platinum RTD also available
Proof Pressure	1.5X with (25 psia min) 10X optional
Burst Pressure	3.0X (4500 psi secondary containment) (300 min) 15X optional
Excitation or Input Voltage	3.5 to 15 Vdc
Non-Repeatability	<0.1% FSO
Non-Linearity	<0.2% FSO
Hysteresis	<0.2% FSO
Thermal Error	Zero ±0.5% / 100F Span ±0.5% / 100F
Static Accuracy RSS (HYS, Non-Linearity, Non-repeatability)	<0.3% FSO RSS, 0.1% optional
Error Band (all 5 parameters)	1.3% FSO, 1.0% optional
Pressure Medium (Wetted Materials)	316SS port, 15-5 sensor (Inconel, Hastelloy optional)
Temperature Compensation	-10°F to +180°F / -20°C to +80°C, expanded range optional
Operating/Environmental Temperature	-20°F to +190°F / -30°C to +90°C
Weight	4 oz. (some options may affect weight)
Pressure Port	MS 33656-4 (M)
Electrical Connector	PTIH-10-6P, MIL D38999 series III
Shunt Cal 80% / 100% Optional	Internal ±0.5%FS
Vibration, Shock, Acceleration Design meets MIL-STD-810F	25 Grms / 100G's Pk/Pk/ 3500 G Pyroshock / 12g
Response Time	Under 5 ms
Meets MIL-STD 461 EMI/RFI	Some options will affect EMI/RFI rating

## ORDERING GUIDE:

Some options will affect dimensions, consult factory if important.  
 Use the following codes to identify desired item.

MODEL	OUTPUT	RANGE	PRESSURE TYPE	OPTIONS
●	—	●	—	●

Example: 7100-1-RH-A-CA/FD/GH

### OUTPUT

- 1 3 mV/V
- 7 2 mV/V
- 8 10 mV/V

### PRESSURE RANGE (PSI)

- |    |        |    |          |
|----|--------|----|----------|
| PJ | 0-5 *  | RF | 0-300    |
| PN | 0-10 * | RH | 0-500    |
| PP | 0-15 * | RK | 0-750    |
| PR | 0-20 * | RM | 0-1,000  |
| PO | 0-25 * | RO | 0-1,500  |
| PV | 0-50   | RR | 0-2,000  |
| PZ | 0-100  | RT | 0-3,000  |
| RB | 0-150  | RV | 0-5,000  |
| RD | 0-200  | RX | 0-7,500  |
|    |        | RZ | 0-10,000 |

\* CAN DIA 1.5"

### PRESSURE TYPE

- A Sealed Absolute, ref to vacuum
- G gauge, ref to atmosphere
- SG Sealed Gauge, ref to 14.7 psia

### OPTIONS CONNECTORS

- CA PTIH-10-6P Bendix
- CI D38999/27YB98PN
- DB D38999/27YA35PN

### PORTS

- FA MS33649-4, 7/16-20 (F)
- FD MS33656-4, 7/16-20 (M)
- FJ 1/4 NPT (M)

### MISC.

- D Improved Static Accuracy to 0.1% and Total Error Band to 1.0%
- GB Alternate full scale outputs
- GD 10X Proof Pressure (may affect overall performance, not available with options D, GP, GF, GK)
- GF Expanded process temperature range, -65 to 250° F  
Error Band 2.3%
- GH 100% Internal Shunt
- GK Inconel Pressure Cavity
- GL Cleaning for oxygen service
- GP Hastelloy Pressure Cavity
- JA 100 ohm 2 wire RTD
- JB 1000 ohm 2 wire RTD
- ME Shunt cal, 80% Internal
- MR Non-Standard Wiring