

# PRESSURE TRANSDUCER FOR HIGH TEMP ENVIRONMENTS

## Model 7780

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



- High Vibration Environments
- Extreme or Harsh Environments
- Manifolds, Propulsion Systems
- Military and Defense Applications

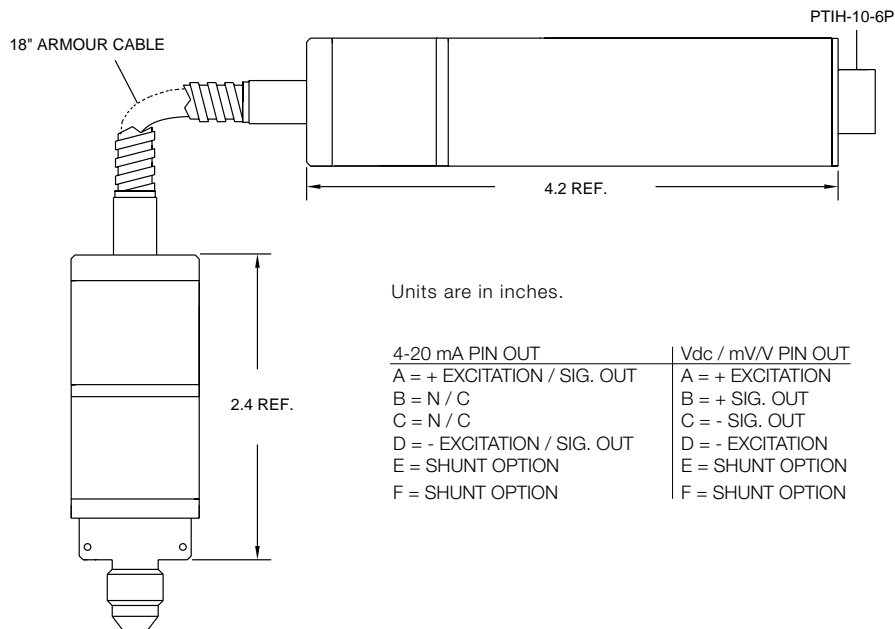
### FEATURES:

- High accuracy, 0.3% RSS standard (0.1% available)
- +70°F to +400°F standard medium
- Lightweight, 8 ounces
- Hydrogen and LOX compatibility
- Designed to meet vibration and shock per MIL-STD-810

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

Designed to: MIL-STD-810C&E  
MIL-STD-461/462D&E



See reverse side for specifications and ordering guide.

# SPECIFICATIONS

These specifications are the standards to which the units are normally constructed. Alterations may be easily and readily accomplished by the standard modification code or by discussion with the factory. Traceability, customer ATP, additional testing and construction options are available. We invite your inquiry.

Ranges	15 thru 15,000 PSIA, PSIG or PSISG options
FS Output at Rated Pressure	3 mV/V @ 10 Vdc / 0-5 Vdc / 4-20 dcmA / Isolated options
Temperature Output	100 Ohm 2 wire platinum RTD optional, 1000 Ohm 2 wire platinum RTD also available
Excitation or Input Voltage	18 to 36 Vdc / 9 to 36 Vdc Unregulated
Reverse Polarity Protected	
Non-Repeatability	< 0.1% FSO
Non-Linearity	< 0.2% FSO
Hysteresis	< 0.2% FSO
Static Accuracy RSS	< 0.3% FSO RSS, 0.1% optional
Pressure Medium (Wetted Materials)	316SS (Inconel, Hastelloy, Monel optional)
Operating/Environmental Temperature	+70°F to +400°F / +20°C to +200°C
Weight	8 oz. (approx.)
Electrical Connector	MIL PTIH-10-6P, D38999 series III optional
Response Time	Under 4 ms
Meets MIL-STD-461/462 EMI/RFI	Some options will affect EMI/RFI rating
Flex Tubing	18" Armored Capillary Tube

## 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: 7780-2-RH-G-CA/FD/GH

### OUTPUT

- 1 3 mV/v
- 2 0-5 Vdc 4 wire hookup
- 3 4-20 dcmA
- 4 0-5 Vdc Isolated
- 5 0-10 Vdc 4 wire hookup
- 6 0-10 Vdc Isolated
- 7 2 mV/V
- 8 10 mV/V
- 9 0-5 Vdc 3 wire hookup
- 10 0-10 Vdc 3 wire hookup

### RANGE (PSI)

- |          |             |
|----------|-------------|
| PP 0-15  | RK 0-750    |
| PR 0-20  | RM 0-1000   |
| PO 0-25  | RO 0-1500   |
| PV 0-50  | RR 0-2000   |
| PZ 0-100 | RT 0-3000   |
| RB 0-150 | RV 0-5000   |
| RD 0-200 | RX 0-7500   |
| RF 0-300 | RZ 0-10,000 |
| RH 0-500 | SB 0-15,000 |

Contact factory  
for non-standard  
pressure ranges

### PRESSURE TYPE

- A Sealed Absolute, ref to vacuum
- G Gage, ref to atmosphere
- SG Sealed Gage, 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)  
(made with an adapter)
- FD MS33656-4, 7/16-20 (M)

#### MISC:

- D Improved Static Accuracy to 0.1%  
and Total Error Band to 1.0%
- GB Alternate Full Scale Outputs
- GH 100% Internal Shunt
- GK Inconel Pressure Cavity
- GL Cleaning for oxygen service
- GP Hastelloy Pressure Cavity
- GU Monel Pressure Cavity
- JA 100 ohm 2 wire RTD
- JB 1000 ohm 2 wire RTD
- ME Shunt Cal, 80% Internal

#### FLEX TUBING:

- GT 30" Armored Capillary Tube
- HS 9" Armored Capillary Tube
- HV 24" Armored Capillary Tube
- HY 12" Armored Capillary Tube
- MT Non-standard Armored Capillary Tube (50" max)

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.