



# Pressure, Level & Temperature Transmitters & Transducers

2770 Long Road, Grand Island, NY 14072 USA

Tel. (716) 773-9300 • Fax (716) 773-5019

sales@gp50.com • www.gp50.com

## PRESSURE TRANSDUCER FOR HIGH TEMPERATURE ENVIRONMENTS

### Model 7780

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

#### 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

#### Typical Applications:

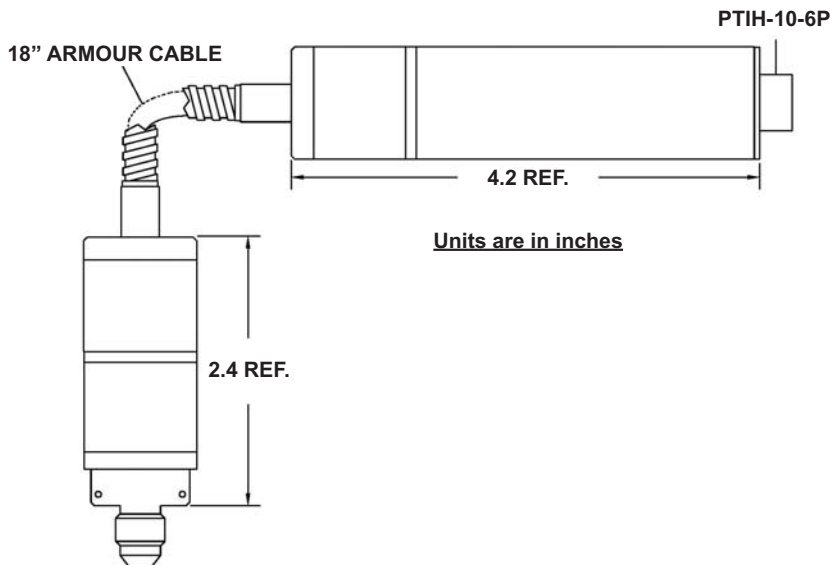
- High Vibration Environments
- Extreme or Harsh Environments
- Manifolds, Propulsion Systems
- Military and Defense Applications



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 9001:2008

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



#### WIRING CODE

	4-20 mA PIN OUT	Vdc PIN OUT
<b>A</b>	+ EXC./SIGNAL OUT	+ EXC.
<b>B</b>	NC	+SIGNAL OUT
<b>C</b>	NC	-SIGNAL OUT
<b>D</b>	- EXC./SIGNAL OUT	- EXC.
<b>E</b>	SHUNT OPTION	SHUNT OPTION
<b>F</b>	SHUNT OPTION	SHUNT OPTION

A5SL-7780.00 Rev A

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.



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

<b>Ranges</b>	15 thru 15,000 PSIA, PSIG or PSISG options
<b>FS Output</b>	3 mV/V at 10 Vdc / 0-5 Vdc / 4-20 dcmA / Isolated ptions
<b>Temperature Sensor</b>	100 ohm 2 wire platinum RTD optional 1000 ohm 2 wire platinum RTD also available
<b>Excitation or Input Voltage Reverse Polarity Protected</b>	18 to 36 Vdc / 9 to 36 Vdc Unregulated
<b>Non-Repeatability</b>	<0.1% FSO
<b>Non-Linearity</b>	<0.2% FSO
<b>Hysteresis</b>	<0.2% FSO
<b>Static Accuracy RSS</b>	<0.3% FSO RSS, 0.1% optional
<b>Pressure Medium (Wetted Materials)</b>	316SS (Inconel, Hatelloy, Monel optional)
<b>Operating/Environmental Temperature</b>	+70°F to +400°F / +20°C to +200°C
<b>Weight</b>	8 oz. (approx.)
<b>Electrical Connector</b>	MIL PTIH-10-6P, D38999 series III optional
<b>Response Time</b>	< 4ms
<b>Meets MIL-STD-461/462 EMI/RFI</b>	Some options will affect EMI/RFI rating
<b>Flex Tubing</b>	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 2mV/V
- 8 10mV/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 0-1,000
- 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
- RF 0-300     RZ 0-10,000
- RH 0-500     SB 0-15,000

#### 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 D38999/27YB98N
- DB D38999/27YA35PN

##### PORTS

- FA MS33649-4, 7/16-20 (F)
- 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)