



## HIGH-TEMPERATURE PRESSURE TRANSDUCER

### MODEL 7780

#### FEATURES:

- Process temperature rated to +350 °F (+177 °C)
- Onboard remote electronics via stainless steel armored flex cable
- Standard accuracy to +0.3% RSS (Optional +0.1%)
- Lightweight all stainless steel design <10 oz (0.2 kg)
- Hydrogen and LOX compatibility
- Designed to meet MIL-STD-810 vibration and shock requirements

#### APPLICATIONS:

- Fuel and propulsion systems
- Military and defense
- High-temperature process media
- Aircraft engine test stands
- R&D laboratory research

#### PRODUCT OVERVIEW:

The Model 7780 Series from GP:50 is a family of high-temperature pressure transducers, offering consistent measurement accuracy in temperatures up to +350 °F (+177 °C). The Series features a lightweight, all stainless steel construction with choice of either 4-20 mA, 0 to 5 Vdc, or 0 to 10 Vdc output; or optional digital protocols. On-board isolated transducer electronics are remotely mounted via stainless steel armor jacketed flex tubing. The high-reliability of the Model 7780 Series is field-proven over 25 years and hundreds of applications, including higher shock and vibration environments.

#### FIELD OPTIONS:

- Choice of 0 to 5 Vdc, 0 to 10 Vdc (also 4-wire isolated version), 4-20 mA, CANBus, RS485 or USB output
- Alternate remote electronic cable lengths
- Zero and span adjustments
- Cryogenic service down to -320 °F (-196 °C) (see GP:50 Model 7720)



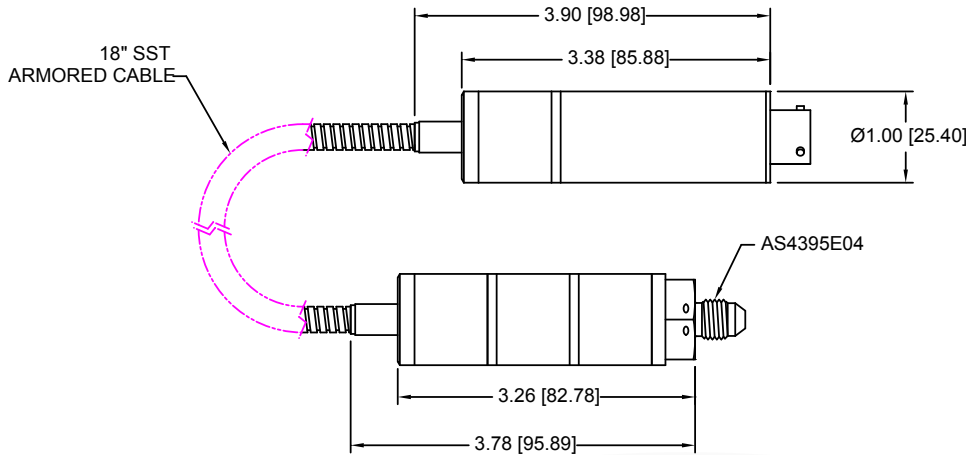
Model 7780

High-Temperature Pressure Transducer

# GP:50 MODEL 7780

## DIMENSIONAL DRAWING

All dimensions are in inches (mm)



### STANDARD WIRING

PIN	VDC	4-20mA
A/1	+EXC	+EXC/SIG
B/2	+SIG	N/C
C/3	-SIG	N/C
D/4	-EXC	-EXC/SIG
E/5	SHUNT (OPT.)	SHUNT (OPT.)
F/6	SHUNT (OPT.)	SHUNT (OPT.)

## REFERENCE SPECIFICATIONS

ELECTRICAL	MECHANICAL
<ul style="list-style-type: none"> <li>• <b>Output Signal:</b> 0 to 5 Vdc, 0 to 10 Vdc (also 4-wire isolated version), 4-20 mA, CANBus, RS485 or USB output</li> <li>• <b>Supply Voltage:</b> 18 to 36 Vdc, 9 to 36 Vdc unregulated</li> <li>• <b>Response Time:</b> 4 ms</li> <li>• <b>Connection:</b> MIL PTIH-10-6P standard, options available</li> <li>• <b>Circuit Protection:</b> meets MIL-STD-461/462 EMI/RFI, some options may affect EMI/RFI rating</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Process connection:</b> AS4395E04 pressure port</li> <li>• <b>Proof Pressure:</b> 1.5X pressure range</li> <li>• <b>Burst Pressure:</b> 2X pressure range</li> </ul>
MATERIALS OF CONSTRUCTION	PRESSURE RANGES
<ul style="list-style-type: none"> <li>• <b>Wetted Parts:</b> 17-4 stainless steel (Optional Inconel, Hastelloy and Monel available)</li> <li>• <b>Housing:</b> 316 stainless steel</li> <li>Flex Tubing 18" armored capillary tube</li> </ul>	<ul style="list-style-type: none"> <li>• Ranges 0 to 150 thru 0 to 15K PSIA, PSIG or PSISG options (10 thru 1,034 BAR)</li> </ul>
ACCURACY (HYSTERESIS, NON-LINEARITY & REPEATABILITY @ +70 °F)	THERMAL SPECIFICATION
<p><b>Static Accuracy (RSS):</b> <math>\leq \pm 0.3\%</math> FSO, <math>\pm 0.10\%</math> FSO available</p> <p><b>Non-repeatability:</b> <math>\leq \pm 0.1\%</math> FSO</p> <p><b>Hysteresis:</b> <math>\leq \pm 0.2\%</math> FSO</p> <p><b>Non-linearity:</b> <math>\leq \pm 0.2\%</math> FSO</p>	<ul style="list-style-type: none"> <li>• <b>Compensated:</b> 70 °F to +385 deg F ( 21°C to +197 °C)</li> <li>• <b>Operating process:</b> -50 °F to +400 °F (-54 °C to +204 °C)</li> <li>• <b>Operating ambient:</b> -50 °F to +195 °F (-54 °C to +91 °C)</li> <li>• <b>Effect on Zero/Span:</b> <math>\pm 2.0\%</math> FSO/100 °F (Improved to <math>\pm 1.0\%</math>/100 °F available)</li> </ul>
OPTIONAL	
<ul style="list-style-type: none"> <li>• <b>NIST Traceability/Calibration:</b> ANSI-Z540-1</li> <li>• <b>Workmanship:</b> J-001/NASA 8739.3 standard</li> <li>• <b>Quality System:</b> ISO 9001:2008</li> </ul>	

**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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