



## DUAL - PRESSURE & TEMPERATURE TRANSDUCER

### MODEL 7880



Model 7880

Dual-Pressure & Temperature Transducer

#### FEATURES:

- Dual pressure and temperature outputs
- -65 °F to +250 °F (-59 °C to +120 °C) operating temperature
- Lightweight, 8 oz (0.2 kg)
- Hydrogen and LOX compatible designs
- Designed to meet \*MIL-STD-810 shock and vibration
- 100 or 1000  $\Omega$  platinum RTD

#### APPLICATIONS:

- Propulsion systems
- Military and defense applications
- Space flight vehicles
- Military vehicles

#### PRODUCT OVERVIEW:

GP:50's 7880 aerospace grade pressure and temperature transducer provides reliable measurements from -65 °F to +250 °F (-59 °C to +121 °C) while withstanding the harsh conditions associated with space exploration. The compact size and rugged design are an excellent choice for on-board space flight or military vehicle applications where space and weight constraints are critical.

#### FIELD OPTIONS:

- Custom temperature probe lengths
- 0 to 5 Vdc, 0 to 10 Vdc (4-wire isolated output options) or 4-20 mA output
- 100  $\Omega$  platinum RTD
- 1000  $\Omega$  platinum RTD
- 0-15 to 0-15K PSI, PSIA, PSIS pressure ranges

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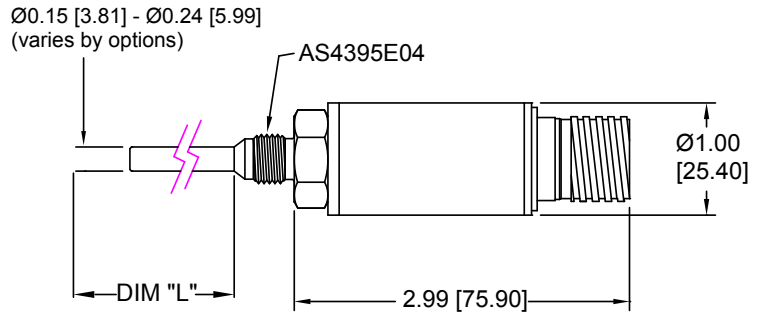
## DIMENSIONAL DRAWING

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	RTD	RTD
F/6	RTD	RTD

L = 0.50 TO 7.00 INCH PROBE LENGTH



## REFERENCE SPECIFICATIONS

ELECTRICAL	MECHANICAL
<ul style="list-style-type: none"> <li>• <b>Output Signal Pressure:</b> 0 to 5 Vdc, 0 to 10 Vdc or 4-20 mA (isolated or non-isolated options available)</li> <li>• <b>Supply Voltage:</b> 10 to 36 Vdc</li> <li>• <b>Temperature Output:</b> 100 Ω 2 wire platinum RTD standard (1,000 Ω platinum RTD optional, 3 or 4 wire also)</li> <li>• <b>Response Time:</b> Pressure: &lt;4 ms Temperature: &lt;2 sec</li> <li>• <b>Connection:</b> PTIH-10-6P std</li> <li>• <b>Circuit Protection:</b> Designed to meet *MIL-STD-461/462 EMI/RFI, some options may affect ratings</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Process connection:</b> per AS4395E04</li> <li>• <b>O-Ring:</b> Buna-N (Nitrile) is standard. For expanded temp ranges -65 °F to 350 °F Fluorosilicone is standard.</li> <li>• <b>Probe Length:</b> 1" from end of port standard (Optional lengths and ports available)</li> </ul>
MATERIALS OF CONSTRUCTION	PRESSURE RANGES
<ul style="list-style-type: none"> <li>• Probe: 17-4 stainless steel (Inconel, Hastelloy and Monel available)</li> <li>• Housing: 316 stainless steel</li> </ul>	Ranges 15 thru 15K PSIA, PSIG or PSISG options (1 thru 1,034 BAR)
ACCURACY	OPERATING / ENVIRONMENT TEMPERATURE:
<ul style="list-style-type: none"> <li>• <b>Static Accuracy:</b> Pressure: <math>\leq \pm 0.3</math> FSO (RSS), (<math>\pm 0.10</math> FSO optional) Temperature: <math>\pm 3\%</math> FSO (<math>\pm 1\%</math> optional) Repeatability: <math>&lt; \pm 0.1</math> FSO Hysteresis: <math>&lt; \pm 0.2</math> FSO Non-linearity: <math>&lt; \pm 0.2</math> FSO</li> </ul>	65°F to +250 °F (-58 °C to +155 °C)
	OPTIONAL
	<ul style="list-style-type: none"> <li>• NIST Traceability/Calibration: ANSI-Z540-1</li> <li>• Workmanship: J-001/NASA 8739.3 standard</li> <li>• Quality System: ISO 9001:2008</li> </ul>

\*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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