



## CRYOGENIC TEMPERATURE TRANSDUCER

### MODEL 7710

#### FEATURES:

- Cryogenic service down to -320 °F (-196 °C)
- Accuracy of  $\pm 1\%$  FSO
- Lightweight, < 10 oz. (0.2 kg)
- Hydrogen and LOX compatibility
- Remote electronics provide high-level output
- Rugged all-stainless steel design

#### APPLICATIONS:

- Aerospace ground support
- Rocket propulsion systems
- Military and defense
- Fuel test stands
- Cryogenic custody transfer

#### PRODUCT OVERVIEW:

The Model 7710 from GP:50 is a cryogenic temperature transducer, designed to provide high-reliability low-temperature measurements to -320°F (-196 °C) within a rugged, all-stainless steel package. Remotely mounted electronics provide a high-level signal output of either 4-20 mA; 0 to 5 Vdc; or 0 to 10 Vdc, as well as choice of RS232, RS485 or CAN protocol, for improved cryogenic measurement accuracy and higher resolution. Stainless steel armor jacketed cabling provides added protection from extreme environmental conditions.

#### FIELD OPTIONS:

- Custom temperature probe lengths
- 0 to 5 Vdc, 0 to 10 Vdc or 4-20 mA output
- RS232, RS485 or CAN protocol
- Cleaned for oxygen service
- Alternate remote cable lengths
- MIL-STD-810F conformance
- Hastelloy, Monel or Inconel wetted parts
- ISO Class 5 cleanroom compliance

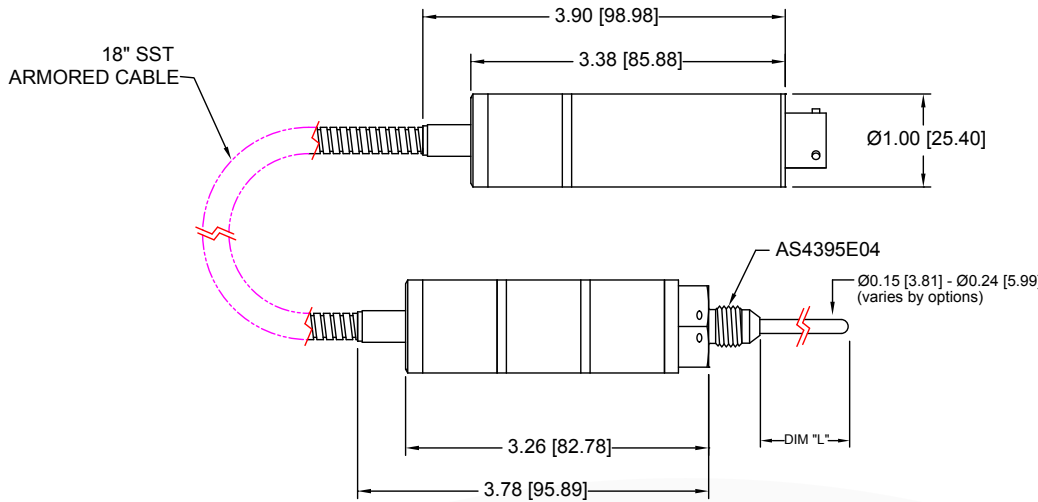


Model 7710  
Cryogenic Temperature Transducer

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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	N/C	N/C
F/6	N/C	N/C

L = 0.50 TO 7.00 INCH PROBE LENGTH

## REFERENCE SPECIFICATIONS

ELECTRICAL	MECHANICAL
<ul style="list-style-type: none"> <li>• <b>Output Signal:</b> 0 to 5 Vdc, 0 to 10 Vdc (isolated or non-isolated) or 4-20 mA</li> <li>• <b>Supply Voltage:</b> 18 to 36 Vdc</li> <li>• <b>Temperature Output:</b> 100 Ω 2-wire platinum RTD standard, 1,000 Ω 2 wire platinum RTD optional</li> <li>• <b>Response Time:</b> &lt;2 sec</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 will affect EMI/RFI rating</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Process Connection:</b> AS4395E04 pressure port</li> <li>• <b>Probe Length:</b> 1.55" (custom lengths available)</li> </ul>
<b>MATERIALS OF CONSTRUCTION</b> <ul style="list-style-type: none"> <li>• Probe: 17-4 stainless steel (Inconel, Hastelloy and Monel optional)</li> <li>• Housing: 316 stainless steel</li> <li>• Tubing 18" Flexible metal hose</li> </ul>	<b>TEMPERATURE RANGES</b> <p>-320 °F to +70 °F (-200 °C to +20 °C)</p>
<b>ACCURACY</b> <p>Static Accuracy: ±3% FSO, ±1% optional</p>	<b>SYSTEM PRESSURE</b> <ul style="list-style-type: none"> <li>• Designed for up to 2000 PSI (138 BAR), higher system pressures also available</li> </ul>
	<b>OPTIONAL</b> <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>

**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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