



CRYOGENIC TEMPERATURE TRANSDUCER

MODEL 7710

FEATURES:

- Cryogenic service down to -320°F (-196°C)
- Accuracy of $\pm 1\%$ FSO
- Hydrogen and LOX compatibility
- Optional 0.5 second temperature response time
- 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.



Model 7710
Cryogenic Temperature Transducer

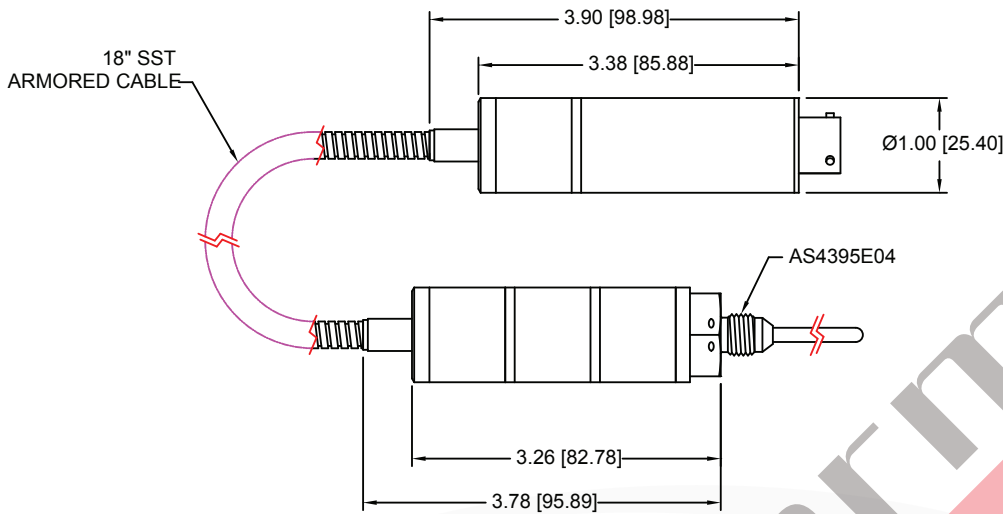
FIELD OPTIONS:

- 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

GP:50 MODEL 7710

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

REFERENCE SPECIFICATIONS

ELECTRICAL
<ul style="list-style-type: none"> • Output Signal: 0 to 5 Vdc, 0 to 10 Vdc (isolated or non-isolated) or 4-20 mA • Supply Voltage: 18 to 36 Vdc • Temperature Output: 100 Ω 2-wire platinum RTD standard 1,000 Ω 2 wire platinum RTD optional • Response Time: <2 sec, 0.5 sec optional • Connection: MIL PTIH-10-6P, D38999 series III optional • Circuit Protection: meets MIL-STD-461/462 EMI/RFI, some options will affect EMI/RFI rating
MATERIALS OF CONSTRUCTION
<ul style="list-style-type: none"> • Probe: 17-4 stainless steel (Inconel, Hastelloy and Monel optional) • Housing: 316 stainless steel • 18" stainless steel flexible armor jacketed cable
ACCURACY
Static Accuracy: $\pm 3\%$ FSO, $\pm 1\%$ optional

MECHANICAL
<ul style="list-style-type: none"> • Process Connection: AS4395E04 pressure port • Probe Length: 1.55" (custom lengths available)
TEMPERATURE RANGES
-320 $^{\circ}$ F to +70 $^{\circ}$ F (-200 $^{\circ}$ C to +20 $^{\circ}$ C)
SYSTEM PRESSURE
<ul style="list-style-type: none"> • Designed for up to 2000 PSI (138 BAR), higher system pressures also available
OPTIONAL
<ul style="list-style-type: none"> • NIST Traceability/Calibration: ANSI-Z540-1 • Workmanship: J-001/NASA 8739.3 standard • Quality System: ISO 9001:2008

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.