DUAL CRYOGENIC PRESSURE & TEMPERATURE TRANSDUCER

MODEL 7730

Model 7730
Dual Cryogenic Pressure &
Temperature Transducer

FEATURES:

- Cryogenic service down to -320 °F (-196 °C)
- Isolated electronics provide 4-20 mA, 0-5 Vdc or digital outputs
- Remote electronics via stainless steel armored cable
- High accuracy, 0.3% RSS standard (0.1% available)
- Lightweight, 8 oz. (0.2 kg)
- Hydrogen and LOX compatibility
- Designed to meet vibration and shock per MIL-STD-810
- Up to 0.5 second thermal response time
- Platinum RTD

APPLICATIONS:

- Liquefied fuel pressures
- Manifolds, propulsion systems
- Military and defense programs
- Liquid gas custody transfer

PRODUCT OVERVIEW:

GP:50's 7730 cryogenic series provides pressure and temperature measurement in one device down to -320 °F (-196 °C). The remote mounted electronics offers a high level output of 4-20 mA, 0 to 5 Vdc or various digital protocols at high accuracies. 100 or 1,000 Ω platinum RTD is available as well as dual analog outputs.

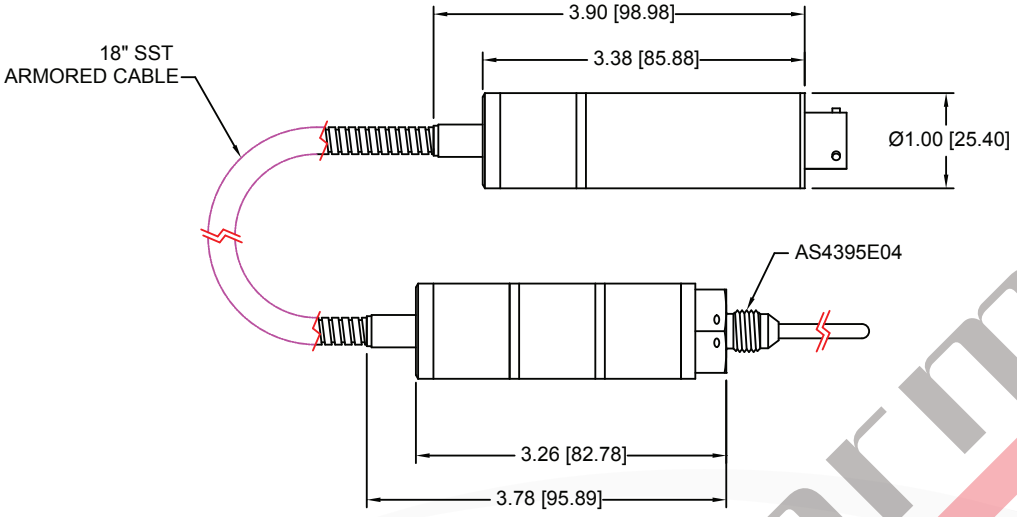
FIELD OPTIONS:

- 0 to 5 Vdc, 0 to 10 Vdc or 4-20 mA output
- RS232, RS485 and Can outputs
- Custom probe lengths
- Zero and span adjustments
- Optional electrical connections
- High-temp version to +350 °F (+177 °C) (see Model 7780)

GP:50 MODEL 7730

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

REFERENCE SPECIFICATIONS

ELECTRICAL

- **Output Signal**: 0 to 5 Vdc, 0 to 10 Vdc (3 and 4 wire isolated or non-isolated) and 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**:
  Pressure: <4 ms
  Temperature: <2 seconds (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

- Wetted Parts: 17-4 stainless steel (Inconel, Hastelloy and Monel available)
- Housing: 316 stainless steel
  Flex Tubing 18" Armored Capillary Tube

ACCURACY (HYSTERESIS, NON-LINEARITY & REPEATABILITY @ +70 °F)

Static Accuracy:
Pressure (RSS): <±0.3 FSO, ±0.10 FS0 available
Temperature: 3% FSO, 1% optional

Non-repeatability: <± 0.1 FSO
Hysteresis: <±0.2 FSO
Non-linearity: <±0.2 FSO

MECHANICAL

- **Process connection**: AS4395E04 pressure port
- **Probe length (temp)**: 1.55" (custom lengths available)
- **Proof Pressure**: 1.5X pressure range
- **Burst Pressure**: 2X pressure range

PRESSURE RANGES

- 0 to 15 thru 0 to 15K PSIA, PSIG or PSISG options (1 thru 1,034 BAR)

TEMPERATURE RANGES

- -320 °F to +70 °F (-200 °C to +20 °C)

THERMAL SPECIFICATIONS

- **Compensated**: -320 °F to +70 °F (-196 °C to +21.1 °C)
- **Operating Range**:

(Ambient) -40 °F to +185 °F (-40 °C to +85 °C)
(Process) -320 °F to +265 °F (-196 °C to +129 °C)

- **Effect on Zero/Span**:

±1.0% FSO/100 °F for ranges≥ 1K PSI (69 BAR)
±2.0% FSO/100 °F for ranges <1K PSI (69 BAR)

OPTIONAL

- 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.