



## CRYOGENIC PRESSURE TRANSDUCER

### MODEL 7720

#### FEATURES:

- Reliable cryogenic performance to  $-320\text{ }^{\circ}\text{F}$  ( $-196\text{ }^{\circ}\text{C}$ )
- Hydrogen and LOX compatible
- Isolated remote electronics via stainless steel armored flex tubing
- Standard accuracy to  $+0.3\%$  FSO (Optional  $+0.1\%$  FSO)
- Lightweight, all stainless steel construction ( $<10\text{ oz.}$ ;  $0.2\text{ kg}$ )
- Meets MIL-STD-810 vibration and shock requirements
- Choice of  $4\text{-}20\text{ mA}$ ,  $0\text{-}5\text{ Vdc}$ ,  $0\text{-}10\text{ Vdc}$  or optional digital output

#### APPLICATIONS:

- LNG pressures
- Aerospace propulsion systems
- Military and defense programs
- Liquid gas custody transfer

#### PRODUCT OVERVIEW:

The Model 7720 Series from GP:50 is a family of cryogenic pressure transducers, offering consistent measurement accuracy in temperatures as low as  $-320\text{ }^{\circ}\text{F}$  ( $-196\text{ }^{\circ}\text{C}$ ). The Series features a lightweight, all stainless steel construction with choice of either  $4\text{-}20\text{ mA}$ ,  $0\text{ to }5\text{ Vdc}$ , or  $0\text{ to }10\text{ Vdc}$  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 7720 Series has been successfully field-proven over 25 years and hundreds of critical applications.

#### FIELD OPTIONS:

- $0\text{ to }5\text{ Vdc}$ ,  $0\text{ to }10\text{ Vdc}$  or  $4\text{-}20\text{ mA}$  output
- RS232, RS485 and CAN outputs
- Zero and span adjustments
- Optional electrical connections
- High-temperature version to  $+350\text{ }^{\circ}\text{F}$  ( $+177\text{ }^{\circ}\text{C}$ ) (see Model 7780)

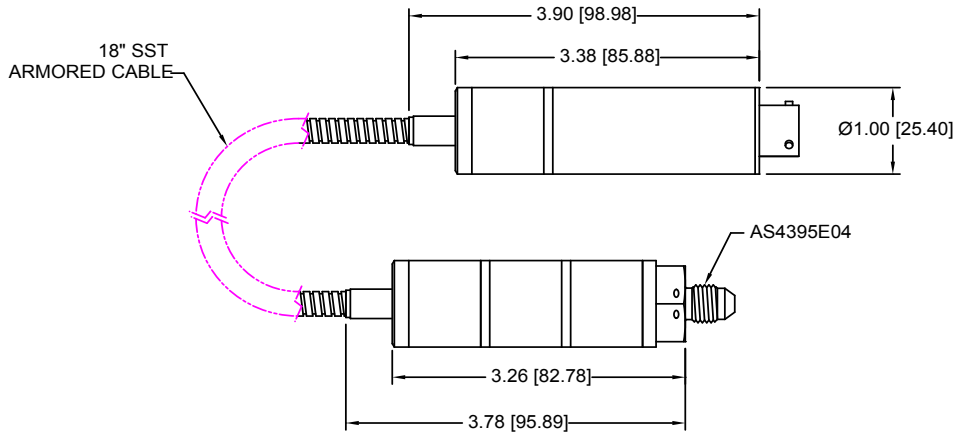


Model 7720  
Cryogenic Pressure Transducer

# GP:50 MODEL 7720

## 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

- **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, 9 to 36 Vdc (unregulated)
- **Response Time:** 4 ms
- **Connection:** MIL PTIH-10-6P standard, options available
- **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 (Optional Inconel, Hastelloy and Monel)
- **Housing:** 316 stainless steel  
Tubing 18" Flexible metal hose

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

- **Static Accuracy (RSS):**  $< \pm 0.3\%$  FSO,  $\pm 0.10\%$  FSO
- **Non-repeatability:**  $< \pm 0.1\%$  FSO
- **Hysteresis:**  $< \pm 0.2\%$  FSO
- **Non-linearity:**  $< \pm 0.2\%$  FSO

### MECHANICAL

- **Process connection:** AS4395E04 pressure port
- **Proof Pressure:** 1.5X range
- **Burst Pressure:** 2X range

### PRESSURE RANGES

- Ranges 0 to 150 thru 0 to 5K PSIA or PSISG (10 thru 207 BAR)

### THERMAL SPECIFICATIONS

- **Compensated:** -320 °F to +70 °F (-196 °C to +21.1 °C)
- **Operating Temperature 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:**  
 $\pm 1.0\%$  FSO/100 °F for ranges  $\geq 1$ K PSI (69 BAR)  
 $\pm 2.0\%$  FSO/100 °F for ranges  $< 1$ K PSI (69 BAR)

### OPTIONAL

- NIST Traceability/Calibration: ANSI-Z540-1
- Workmanship: J-001/NASA 8739.3 standard
- Quality System: ISO 9001:2008

**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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