

# A E R O S P A C E



### **MODEL 7780** HIGH-TEMPERATURE PRESSURE TRANSDUCER



#### 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.)

**CONSULT FACTORY FOR ACTUAL DIMENSIONS.** 

**REF DIMENSIONS ONLY.** 

#### **PRODUCT OVERVIEW:**

The Model 7780 Series from GP:50 is a family of high-temperature pressure transducers, offering consistent measurement accuracy in temperatures up to +350 °F (+177 °C). The Series features a lightweight, all stainless steel construction with choice of either 4-20 mA, 0 to 5 Vdc, or 0 to 10 Vdc output; or optional digital protocols. Onboard isolated transducer electronics are remotely mounted via stainless steel armor jacketed flex tubing. The high-reliability of the Model 7780 Series is field-proven over 25 years and hundreds of applications, including higher shock and vibration environments.

# FEATURES:

- Process temperature rated to +350 °F (+177 °C)
- Remote electronics via stainless steel flex cable
- 4-20 mA Output
- Standard accuracy to +0.2% FSO BFSL

#### **APPLICATIONS:**

- Fuel and propulsion systems
- Military and defense
- High-temperature process media
- Aircraft engine test stands
- R&D laboratory research

#### **OPTIONS:**

- Digital outputs: CANbus, RS485 or USB
- 0-5 Vdc or 0 to 10 Vdc output (4-wire isolated option)
- Remote electronic cable lengths to 36"
- Zero and span adjustments
- Hydrogen or LXO compatibility options
- Cryogenic service down to -320 °F (-196 °C) (see GP:50 Model 7720)
- Various MIL-SPECS available. Consult factory.



## GP:50 MODEL 7780

### **REFERENCE SPECIFICATIONS**

### (Standard configurations shown, consult factory for other options)

ELECTRICAL	
Output Signal:	4-20 mA 0 to 5 Vdc, 0 to 10 Vdc (isolated options) (CANbus, RS485 or USB options)
Excitation Voltage:	10 to 36 Vdc (Options may affect this)
Response Time:	<5 ms

MATERIALS OF CONSTRUCTION	
Wetted Parts:	17-4 PH (Inconel, Monel or Nitronic 50 available)
Housing:	316 Stainless Steel
O-Ring:	Flourosilicone is standard
Flex Tubing:	18" Armored flex (24" & 36" options)

ACCURACY (RSS): Hysteresis, Non-Linearity & Repeatability @ +70 °F		
Static Accuracy (RSS):	$\leq \pm 0.3\%$ FSO	
Non-linearity:	≤±0.20% FSO (Typ)	
Hysteresis:	≤±0.1% FSO (Typ)	
Repeatability:	≤±0.1% FSO (Typ)	
Zero Balance:	±1.0% FSO	
Span Balance:	±1.0% FSO	

(BFSL method used. Improved options available.)

Calibration:	NIST Traceable Cert
Workmanship:	IPC-A-610 Soldering std
Quality System:	ISO 9100

Options may affect specifications.

Please consult factory for your specific needs.

MECHANICAL	
Process Connection:	AS930-4 pressure port
Electrical Connection:	PTIH-10-6P standard, options available
Proof Pressure:	1.5X pressure range
Burst Pressure:	2X-5X range dependent, 22.5K PSI max
Approximate Weight:	<10 oz (0.2 kg)

#### **PRESSURE RANGES**

0 to 300 thru 0 to 15K PSIA, PSIG or PSISG options (20 thru 1,034 BAR)

THERMAL SPECIFICATIONS		
Operating Process:	-65°F to +350 °F (-54 °C to +177 °C)	
Operating Ambient:	-65°F to +250 °F (-54 °C to +121 °C)	
Compensated Range:	+70 °F to +350 °F (+21.1°C to +177 °C)	
Effect on Zero & Span:	±1.0% FSO/100 °F (Improved specifications available)	



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