MODEL 7880

FEATURES:

- Dual pressure and temperature outputs
- -65 °F to +250 °F (-59 °C to +120 °C) operating temperature
- Lightweight, 8 oz (0.2 kg)
- Hydrogen and LOX compatible designs
- Designed to meet MIL-STD-810 shock and vibration
- 100 or 1000 Ω platinum RTD

APPLICATIONS:

- Propulsion systems
- Military and defense applications
- Space flight vehicles
- Military vehicles

PRODUCT OVERVIEW:

GP:50’s 7880 aerospace grade pressure and temperature transducer provides reliable measurements from -65 °F to +250 °F (-59 °C to +121 °C) while withstanding the harsh conditions associated with space exploration. The compact size and rugged design are an excellent choice for on-board space flight or military vehicle applications where space and weight constraints are critical.

FIELD OPTIONS:

- Custom temperature probe lengths
- 0 to 5 Vdc, 0 to 10 Vdc (4-wire isolated output options) or 4-20 mA output
- 100 Ω platinum RTD
- 1000 Ω platinum RTD
- 0-15 to 0-15K PSI, PSIA, PSIS pressure ranges
DIMENSIONAL DRAWING
All dimensions are in inches (mm)

Standard dimensions shown. Please consult factory for other options.

REFERENCE SPECIFICATIONS

ELECTRICAL
- Output Signal Pressure: 0 to 5 Vdc, 0 to 10 Vdc or 4-20 mA (isolated or non-isolated options available)
- Supply Voltage: 10 to 36 Vdc
- Temperature Output: 100 Ω 2 wire platinum RTD standard (1,000 Ω platinum RTD optional, 3 or 4 wire also)
- Response Time:
  - Pressure: <4 ms
  - Temperature: <2 sec
- Connection: PTIH-10-6P std
- Circuit Protection: Designed to meet *MIL-STD-461/462 EMI/RFI, some options may affect ratings

MATERIALS OF CONSTRUCTION
- Probe: 17-4 stainless steel (Inconel, Hastelloy and Monel available)
- Housing: 316 stainless steel

ACCURACY
- Static Accuracy:
  - Pressure: <±0.3 FSO (RSS), (±0.10 FSO optional)
  - Temperature: ±3% FSO (±1% optional)
  - Repeatability: <±0.1 FSO
  - Hysteresis: <±0.2 FSO
  - Non-linearity: <±0.2 FSO

*Options may affect Mil-specifications. Please consult factory for your specific needs.

MECHANICAL
- Process connection: per AS4395E04
- O-Ring: Buna-N (Nitrile) is standard. For expanded temp ranges -65 °F to 350 °F Flouro silicone is standard.
- Probe Length: 1" from end of port standard (Optional lengths and ports available)

PRESSURE RANGES
Ranges 15 thru 15K PSIA, PSIG or PSISG options (1 thru 1,034 BAR)

OPERATING / ENVIRONMENT TEMPERATURE:
65°F to +250 °F (-58 °C to +155 °C)

OPTIONAL
- NIST Traceability/Calibration: ANSI-Z540-1
- Workmanship: J-001/NASA 8739.3 standard