

DUAL HIGH TEMPERATURE PRESSURE TRANSDUCER

Model 7790

Designed for the tough challenges and environmental rigors of space propulsion and aviation pressure testing.

- High Vibration Environments
- Extreme or Harsh Environments
- Manifolds, Propulsion Systems
- Military and Defense Applications

FEATURES:

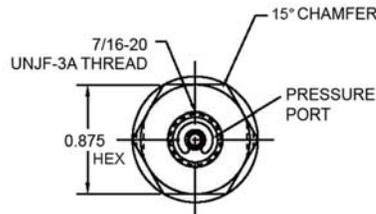
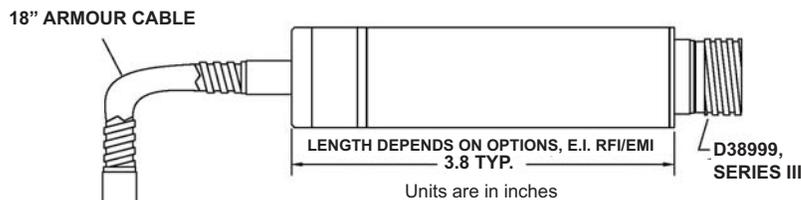
- High accuracy, 0.3% RSS standard (0.1% available) pressure
- High accuracy, 3% FSO standard (1% available) temperature
- +70°F to +400°F standard medium
- Lightweight, 8 ounces
- Hydrogen and LOX compatibility
- Custom probe lengths, 1.55" standard
- Designed to meet vibration and shock per MIL-STD-810
- 2 second time response for temperature, 0.5 sec optional
- 100 ohm platinum RTD standard



All GP:50 Aerospace pressure transducers are manufactured and tested to the following MIL-STD and MIL-Spec standards to insure the highest quality assurance:

- NIST Traceability and Calibration..... MIL-STD-45662A
- Workmanship J-001 / NASA 8739.3 standards
- Quality System ISO 9001:2000

Designed to: MIL-STD-810C&E
MIL-STD-461/462D&E



| | 4-20 mA PIN OUT | Vdc PIN OUT |
|---|-------------------|--------------|
| A | + EXC./SIGNAL OUT | + EXC. |
| B | NC | +SIGNAL OUT |
| C | NC | -SIGNAL OUT |
| D | - EXC./SIGNAL OUT | - EXC. |
| E | SHUNT OPTION | SHUNT OPTION |
| F | SHUNT OPTION | SHUNT OPTION |

GP:50 reserves the right to make product improvements and amendments to the product specifications stated throughout this brochure without prior notification. Please contact the factory on all critical dimensions and specifications for verification.



Pressure, Level & Temperature Transmitters & Transducers

Specifications reflect standard product, improved performance/mechanical options available. Modifications may alter specs, consult factory for more information.

| | |
|---|---|
| Ranges | 15 thru 15,000 PSIA, PSIG or PSISG options |
| FS Output at Rated Pressure | 0-5 Vdc / 4-20 dcmA / Isolated options |
| Temperature Sensor | 100 Ohm 2 wire platinum RTD standard, 1000 Ohm 2 wire platinum RTD optional |
| Excitation or Input Voltage Reverse Polarity Protected | 18 to 36 Vdc |
| Non-Repeatability | <0.1% FSO |
| Non-Linearity | <0.2% FSO |
| Hysteresis | <0.2% FSO |
| Static Accuracy RSS (pressure) | <0.3% FSO RSS, 0.1% optional |
| Static Accuracy (temperature) | 3% FSO, 1% optional |
| Pressure Medium (Wetted Materials) | 316SS (Inconel, Hastelloy, Monel optional) |
| Operating/Environmental Temperature | +70°F to +400°F / +20°C to +200°C |
| Weight | 8 oz. (approx.) |
| Electrical Connector | MIL PTIH-10-6P, D38999 series III optional |
| Response Time | Under 4 ms pressure, 2 seconds for temperature (0.5 sec optional) |
| Meets MIL-STD-461/462 EMI/RFI | Some options will affect EMI/RFI rating |
| Flex Tubing | 18" Armored Capillary Tube |

ORDERING GUIDE:

Some options will affect dimensions, consult factory if important. Use the following codes to identify desired item.

| MODEL | OUTPUT | RANGE | PRESSURE TYPE | OPTIONS |
|-------|--------|-------|---------------|---------|
| ● | — | ● | — | ● |

Example: 7790-2-RH-G-CA/FD/GH

OUTPUT

| | |
|----|------------------------|
| 2 | 0-5 Vdc 4 wire hookup |
| 3 | 4-20 dcmA |
| 4 | 0-5 Vdc Isolated |
| 5 | 0-10 Vdc 4 wire hookup |
| 6 | 0-10 Vdc Isolated |
| 9 | 0-5 Vdc 3 wire hookup |
| 10 | 0-10 Vdc 3 wire hookup |

RANGE (PSI)

| | | | |
|----|-------|----|----------|
| PP | 0-15 | RK | 0-750 |
| PR | 0-20 | RM | 0-1000 |
| PO | 0-25 | RO | 0-1500 |
| PV | 0-50 | RR | 0-2000 |
| PZ | 0-100 | RT | 0-3,000 |
| RB | 0-150 | RV | 0-5,000 |
| RD | 0-200 | RX | 0-7,500 |
| RF | 0-300 | RZ | 0-10,000 |
| RH | 0-500 | SB | 0-15,000 |

Contact factory for non-standard pressure ranges

PRESSURE TYPE

| | |
|----|--------------------------------|
| A | Sealed Absolute, ref to vacuum |
| G | Gauge, ref to atmosphere |
| SG | Sealed Gauge, ref to 14.7 psia |

OPTIONS

CONNECTORS

| | |
|----|-------------------|
| CA | PTIH-10-6P Bendix |
| CI | D38999/27YB98N |
| DB | D38999/27YA35PN |

PORTS

| | |
|----|------------------------|
| FA | MS33649-4, 7/16-20 (F) |
| FD | MS33656-4, 7/16-20 (M) |

MISC:

| | |
|----|--|
| D | Improved Accuracy to 0.1% Pressure, and 1% Temperature |
| GB | Alternate Full Scale Outputs |
| GH | 100% Internal Shunt |
| GK | Inconel Pressure Cavity |
| GL | Cleaning for oxygen service |
| GP | Hastelloy Pressure Cavity |
| GU | Monel Pressure Cavity |
| JB | 1000 ohm 2 wire RTD |
| ME | Shunt Cal, 80% Internal |
| QV | Improved response time to 0.5 seconds |

FLEX TUBING:

| | |
|----|---|
| GT | 30" Armored Capillary Tube |
| HS | 9" Armored Capillary Tube |
| HV | 24" Armored Capillary Tube |
| HY | 12" Armored Capillary Tube |
| MT | Non-standard Armored Capillary Tube (50" max) |

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