

Model AS-PT

Aircraft Qualified Pressure Transmitter



FCI's Pressure Transmitter Applications

- Fuel
- Hydraulics
- ECS
- Coolant Systems
- Lubrication

FCI's Pressure Transmitter

FCI Aerospace is a world leader in the design and manufacture of sensors for on-board applications on both fixed wing and rotary, commercial and military aircraft, FCI provides an array of products in both COTS and custom solutions for measurement of pressure, liquid level, temperature, and flow.

The FCI AS-PT is small, lightweight pressure transmitter utilizing proven strain-gage and capacitance pressure measurement technologies. The AS-PT can measure wide pressure ranges, up to 11,000 psi [800 bar], with superior accuracy, repeatability, and long-term stability. The sensor and electronics are enclosed and sealed in 316L stainless steel to ensure rugged and reliable measurement with exceptional service life in applications throughout the aircraft.

FCI Pressure Transmitter Features

- Meets and or exceeds MIL-STD-810, DO-160, MIL-STD-704 and MIL-STD-461 requirements
- EMI/RFI, lightning and transient voltage protected
- Available in absolute and sealed gage
- Wide pressure ranges
- Compact, lightweight
- High reliability and accuracy
- Thin film strain-gage and capacitive pressure transducers
- All analog design, contains no software
- Rugged, robust 316L stainless steel welded construction

FCI's Pressure Measurement Technology Advantage

FCI pressure sensors are constructed using either thin film sputtered deposition strain-gage or variable capacitive ceramic sensing technologies. Strain-gage elements are directly welded to the pressure port and capacitive elements are sealed to the housing via an O-ring. Both sensor types achieve a leak-proof design that ensure a robust solution for all pressure applications including hydraulic fluid, fuel, coolants, air and other media types.

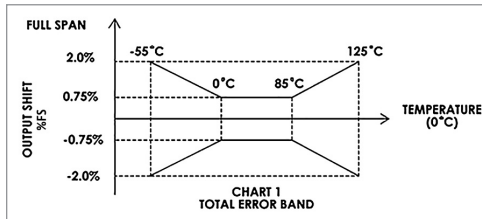
The electronics provide highly repeatable pressure measurement output signals by combining precision analog signal conditioning circuitry with integrated ASIC (Application Specific Integrated Circuit) for linearization. All AS-PT transmitters include multiple-point pressure calibrations and temperature compensation.

The sensor elements and electronics are enclosed in high strength, stainless steel housing that protect them and ensure continuous operation over wide pressure and temperature conditions.



Model AS-PT Pressure Transmitter Specifications

- **Service:** Pressure monitoring of liquid and gas
- **Material of Construction:** All-welded, 300 series stainless steel
- **Enclosure:** Hermetically sealed, 316L stainless steel
- **Electrical Connection:** Military, D38999
- **Process Connection:** Threaded, per SAE-AS4395E04 (.4375-20UNJF-3A)
(other thread types available; consult FCI)
- **Signal Output:** 0.5 Vdc to 4.5 Vdc; impedance: 100 ohms max
- **Electrical Power Input**
Input Voltage: 28 Vdc; 0.4 W max at 28 Vdc
Reverse Polarity: No damage at rated power supply range
Short Circuit: No damage at rated power supply range
- **Weight:** 8 oz [227 g] maximum
- **Pressure Measurement Range**
Ceramic Capacitive: 0 bar to 35 bar [0 psi to 500 psi]
Thin Film Resistive: 0 bar up to 800 bar [0 psi up to 11000 psi]
Consult factory for vented gage and other pressure ranges
- **Proof Pressure:** 2X pressure range
- **Burst Pressure:** up to 4X pressure range
- **Long Term Stability**¹: 0.1% of FS max per year
- **Total Error Band**²: -55 °C to +125 °C see Chart 1 below

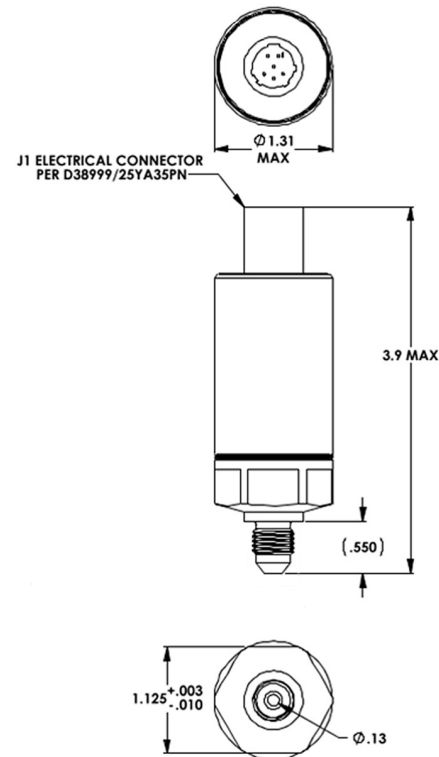


- **Temperature Range:**
Compensated (Operation): -55 °C to 125 °C [-67 °F to 257 °F]
Ambient (Operation): -55 °C to 125 °C [-67 °F to 257 °F]
Storage: -65 °C to 150 °C [85 °F to 302 °F]
- **Time Response:** 10 mS maximum @ T63
- **EMI and Lightning Protection:** MIL-STD-461F and RTCA/DO-160E/F
- **Qualifications:** MIL-STD-810, RTCA/DO-160, MIL-STD-704, MIL-STD-461
- **Quality System Approval:** ISO 9001, AS9100

Notes

1. Long Term Stability – The max deviation in transmitter output over a 1 year period, during which time the pressure and temperature do not exceed their specified max ratings.
2. Total Error Band includes linearity, hysteresis, repeatability, zero and full scale errors and thermal effects

Model AS-PT Pressure Transmitter Drawing



Visit FCI online at www.FCIAerospace.com | FCI is ISO 9001:2000 and AS9100 Certified

FCI World Headquarters

1755 La Costa Meadows Drive | San Marcos, California 92078 USA | Phone: 760-744-6950 Toll Free (US): 800-854-1993

FCI Europe

Persephonestraat 3-01 | 5047 TT Tilburg, The Netherlands | Phone: 31-13-5159989

FCI Measurement and Control Technology (Beijing) Co., LTD

Room 107, Xianfeng Building II, No.7 Kaituo Road, Shangdi IT Industry Base, Haidian District | Beijing 100085, P. R. China
Phone: 86-10-82782381