Model AS-PT

Aircraft Qualified Pressure Transmitter

FCI-Aerospace is a world leader in design and manufacture of sensors for commercial and military aircraft applications. FCI provides an array of sensor solutions for applications in level detection, temperature measurement, flow measurement, and pressure measurement.

FCI Aerospace's pressure transmitters combine to meet the demand for full qualification compliance* with the performance and measurement capability necessary to meet a variety of applications on the aircraft, including:

- Fuel
- Hydraulics
- ECS
- Coolant Systems
- Lubrication

FCI Pressure Transmitter Features

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

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 accurate and repeatable pressure measurement output signals by utilizing precision analog signal conditioning circuitry and integrated ASIC (Application Specific Integrated Circuit) for linearization combined with 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.

** FCI has qualified the AS-PT Series pressure transmitters to a hybrid qualification test plan. This test plan consisted of combining all MIL-STD and DO-160 test requirements to form combined, hybrid tests that envelope the highest levels in any of the test categories from either test standards.*

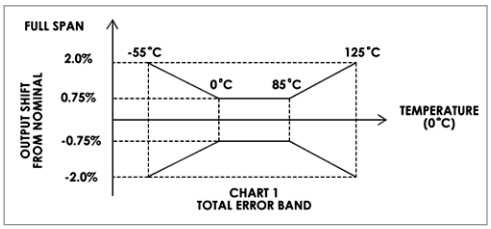
Model AS-PT Pressure Transmitter Specifications

- **Service:** Pressure monitoring of liquid and gas
- **Material of Construction:** All-welded, 300 series stainless steel
- **Electrical Connection:** Military, D38999/25YA35PN
- **Process Connection:** Threaded, per SAE-AS4395E04 (.4375-20UNJF-3A)
- **Weight:** 8 oz [227 g] maximum
- **Pressure Measurement Range**

  Ceramic Capacitive: 0 bar(a) to 35 bar(a) [0 psia to 500 psia)]

  Thin Film Resistive: 0 bar(a) up to 800 bar(a) [0 psia up to 11000 psia]

  Consult factory for gauge and other pressure ranges
- **Proof Pressure:** 2X pressure range
- **Burst Pressure:** up to 4X pressure range
- **Time Response:** 10 mS maximum @ T63
- **Long Term Stability** [1]**:** 0.1% of FS max per year
- **Accuracy** [2]**:** 0.25% of FS (BFSL)
  Total Error Band [3]**:** -55 °C to +125 °C *see Chart 1 below*



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. Accuracy – Combined arithmetic errors of non-linearity, repeatability and hysteresis at 25°C.
3. Total Error Band includes linearity, hysteresis, repeatability, zero and full scale errors and thermal effects

- **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]
- **Power Supply**

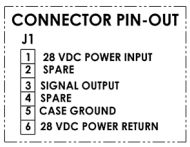
  Input Voltage: 28 Vdc; 0.4 W max at 28 Vdc

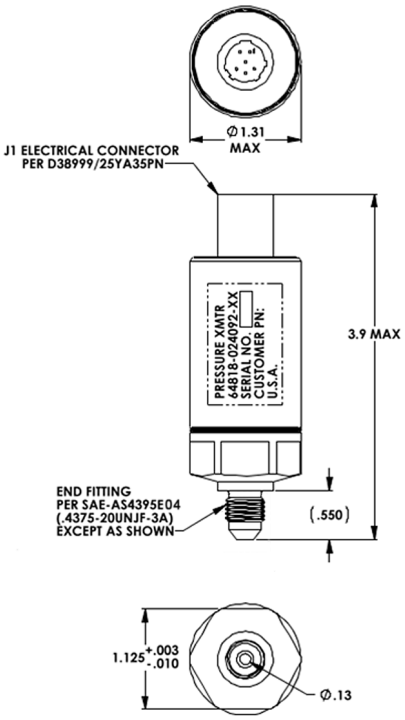
  Reverse Polarity: No damage at rated power supply range

  Short Circuit: No damage at rated power supply range
- **Signal Output:** 0.5 Vdc to 4.5 Vdc; impedance: 100 ohms max
- **Qualifications:** MIL-STD-810, RTCA/DO-160, MIL-STD-704, MIL-STD-461

  Vibration, shock ,temp shock, altitude, humidity, explosive atmosphere, fluid susceptibility, salt fog, rain, sand and dust, indirect lightning section 22 (induced cat XXF3X, XXK44), and pin injection cat A3XXX) electrical power characteristics (normal voltage transients, undervoltage, overvoltage), RF susceptibility (CS101, CS114, CS115, CS116, RS103, RS101, RF Emission, CE 101, CE102,RE101, RE102)
- **Quality System Approval:** ISO 9001, AS9100

Model AS-PT Pressure Transmitter Wiring and Dimesional Drawing





Visit FCI online at www.FluidComponents.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 **Fax:** 760-736-6250

FCI Europe
Persephonestraat 3-01 | 5047 TT Tilburg, The Netherlands | **Phone:** 31-13-5159989 **Fax:** 31-13-5799036

FCI Measurement and Control Technology (Beijing) Co., LTD | www.fluidcomponents.cn
Room 107, Xianfeng Building II, No.7 Kaituo Road, Shangdi IT Industry Base, Haidian District | Beijing 100085, P. R. China
Phone: 86-10-82782381 **Fax:** 86-10-58851152