

MODEL AS-TT

AIRCRAFT QUALIFIED TEMPERATURE TRANSMITTER



FCI's Temperature Transmitter Features

- High accuracy RTD sensors
- High reliability
- Wide range
- Choice of analog outputs
- Can serve as a two set point temperature switch
- Simple installation
- Lightweight, compact design
- Simple installation
- Exceptional corrosion and abrasion resistance

FCI Temperature Measurement Solutions

FCI Aerospace provides a complete line of temperature measurement solutions for on-board aircraft applications. The products include temperature sensors and elements (AS-TE models), temperature switches (AS-TS models), and temperature transmitters (AS-TT models).

FCI temperature measuring products utilize precision Resistance Temperature Detectors (RTDs) to provide superior accuracy, repeatability and long-life, making them the ideal choice for demanding aerospace applications.

Temperature Transmitter Applications

- Liquid cooling systems
- Air management systems
- Transmission temperature
- Fuel systems
- Electronics pod monitoring

Model AS-TT Temperature Transmitter

FCI Aerospace Model AS-TT temperature transmitters are designed to meet the demanding requirements of commercial and military aircraft customers. Whether for use in fixed wing or rotary aircraft, the AS-TT is fully qualified to comply with high vibration, severe shock, and high acceleration environments and specifications.

The sensors use a platinum RTD integrated with FCI's electronics package to provide a 0 to 10 Volt or 0 to 5 Volt output over the customer specified temperature range. As an added benefit, the transmitter can also optionally provide a discrete high or low output at two different temperature set points to perform as a temperature switch.

The AS-TT can measure over an operating range from -40 °F to 350 °F [-40 °C to 177 °C]. For power and outputs wire-up, they can be specified with flying leads (pigtail cable) to your required length or with your choice of commercial or military connectors.

AS-TT has been fully qualified to meet the high vibration, severe shock, high acceleration, and EMI/RFI environments that our customers expose them to. They have been fully qualified to RTCA/DO-160C environmental, power, and electronic interference requirements.

FCI Aerospace's engineering team utilizes the latest tools in areas like CAD and fluid dynamics modeling, RFI and EMI testing, temperature test chambers to fully test and validate both design and production products. FCI is well qualified to design special versions or variations on the AS-TT presented here and welcome the opportunity to discuss your specific needs.

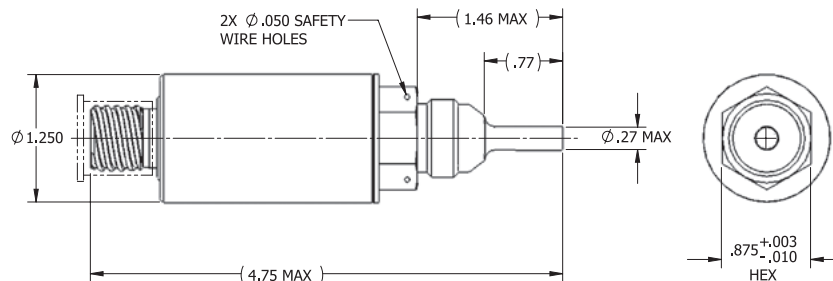
Model AS-TT Temperature Transmitter Specifications

- **Service:** Temperature measuring of liquids or gases
- **Temperature Sensor Type:** Platinum RTD, Class B per IEC 60751
- **Measuring Range**
-40 °F to 350 °F [-40 °C to 177 °C]
- **Accuracy:** $\pm 2^\circ\text{F}$ [$\pm 1,1^\circ\text{C}$]
- **Repeatability:** $\pm 0.9^\circ\text{F}$ [$\pm 0.5^\circ\text{C}$]
- **Response Time**
Air/Gas: 10 seconds
Water/Liquid: 3 seconds
- **Outputs**

Standard	Analog: 0.5 Volts to 4.5 Vdc or 0.5 Volts to 9.5 Vdc		
Optional	One or two switch points per:		
		Open (Leakage) 10 μ A @ 28 Vdc	Closed (Sink) 100 μ A - 250 mA @ 28 Vdc
Switch 1	On Temperature Rise $^{\circ}$ C + 3 $^{\circ}$ C / 0 $^{\circ}$ C	On Temperature Decline $^{\circ}$ C + 0 $^{\circ}$ C / -3 $^{\circ}$ C	
Switch 2	On Temperature Rise $^{\circ}$ C + 3 $^{\circ}$ C / 0 $^{\circ}$ C	On Temperature Decline $^{\circ}$ C + 0 $^{\circ}$ C / -3 $^{\circ}$ C	
Switch Sense Range	-40 $^{\circ}$ F to 350 $^{\circ}$ F [-40 $^{\circ}$ C to 177 $^{\circ}$ C]		
Switch Repeatability	$\pm$ 1.8 $^{\circ}$ F [$\pm$ 1 $^{\circ}$ C]		
Hysteresis	< 18 $^{\circ}$ F [10 $^{\circ}$ C]		

- **Insertion Length:** 0.5 inch to 1.0 inch [12,7 mm to 25,4 mm]
- **Weight:** 8 ounces [227 grams] maximum
- **Environmental Parameters**
Proof Pressure: Up to 1,000 psig [69 bar(g)]
Operating Pressure: 1,500 psig [103 bar(g)]
Altitude: 100,000 ft [30,48 km]
Humidity: 100%
Thermal Shock: $10^\circ\text{C}/\text{min}$ [$18^\circ\text{F}/\text{min}$]
Vibration: MIL-STD-810
Acceleration: 10 gs
- **Material of Construction:** All welded, 300 series stainless steel; titanium or other alloys optional
- **Electrical Connection:** Military or commercial electrical connector; pigtail cable of customer specified type and length
- **Process Connection:** Threaded or flanged
Typical threaded process connection: MS33656
Consult factory for other connections
- **Ambient Operating Temperature (Electronics/Housing)**
-40 °F to 185 °F [-40 °C to 85 °C]
- **Storage Temperature:** -85 °F to 300 °F [-65 °C to 149 °C]
- **Qualifications**
MIL-STD-130 Markings
MIL-STD-810 Environmental testing
MIL-STD-704E Electric power
RTCA/DO-160C Environmental testing
- **Quality Systems Approval:** ISO 9001, AS 9100

Temperature Transmitter with Threaded Mounting Connection



Visit FCI online at www.FCIaerospace.com | FCI is ISO 9001 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

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