bar

AHI3000

High Precision TEDS Pressure Transmitter

FEATURES

- High accuracy and performance
- Silicone-on-Sapphire sensor technology for outstanding stability
- Pressure ranges to 1,500 bar (ranges to 20,000 psi)
- 10mV/V output
- TEDS Ready, on-board 20Kbit EEPROM

The advanced sensor design consists of a piezoresistive silicon strain gauge circuit, which is epitaxially grown onto the surface of a sapphire diaphragm to form a single crystalline structure. The sapphire sensor element is then molecularly bonded to a titanium alloy sub-diaphragm.

This enables the sensor to endure higher over-pressures and provides superb corrosion resistance. The sensor exhibits virtually no hysteresis and excellent long-term stability over wide temperature ranges.

SPECIFICATIONS

The Transducer Electronic Data Sheet (TEDS) feature permits on-board storage of data in accordance with the IEEE 1451.4 standard for smart transducers. IEEE 1451.4 defines the method of encoding TEDS information for a broad range of sensor types and applications.

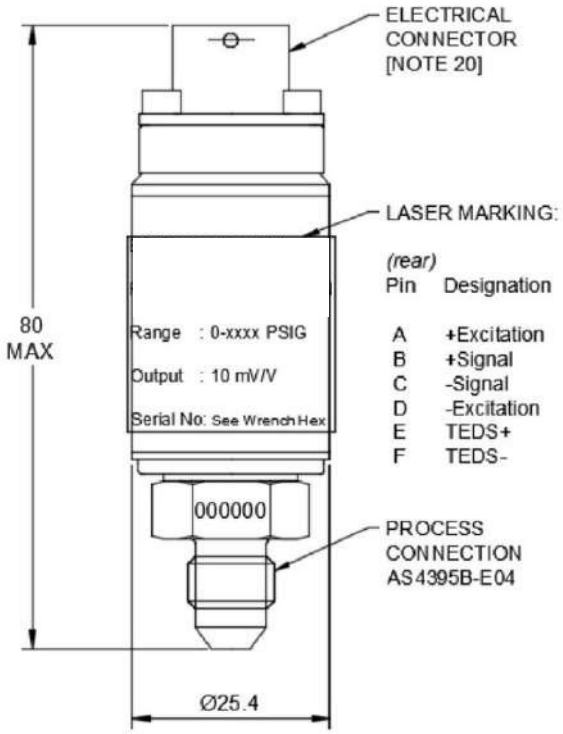
The AHI3000 TEDS Ready pressure transducer is equipped with a data ready EEPROM onto which critical information can be uploaded. The information requied by an instrument or measurement system can be stored on-board the transducer. Data needed to identify, characterise, interface and properly use the signal from an analog sensor is therefore stored within the device for convenient access.

Typical applications include:

• Aerospace

Version I 06.2024

DIMENSIONS (in mm)



ELECTRICAL CONNECTIONS

MIL-DTL-26482	
PIN	**Designation**
A	+excitation
B	+signal
C	-signal
D	-excitation
E	TEDS+
F	TEDS+

TECHNICAL DATA

Type	AHI3000	
Sensor Technology:	Silicon-on-Sapphire (SOS)	
Output Signal:	0-10 mV/V	
Supply Voltage:	0-10 VDC (5-15V)	
Pressure Reference:	Gauge	
Protection of Supply Voltage:	n/a	Protected against supply voltage reversal up to 50 V (amplified versions)
Standard Pressure Ranges (bar):	0-10 bar; 0-16 bar; 0-25 bar; 0-40 bar; 0-60 bar; 0-100 bar; 0-160 bar; 0-250 bar; 0-400 bar; 0-600 bar; 0-1000 bar; 0-1500bar (other ranges available)	
Standard Pressure Ranges (psi):	0-30 in Hg; 0-15 psi; 0-150 psi; 0-300 psi; 0-1500 psi; 0-3000 psi; 0-6000 psi; 0-10000 psi; 0-15000 psi; 0-20000 psi (other ranges available)	
Overpressure Safety:	1.5x for ranges 0 to 41 bar; 1.1x for ranges 62 to 103 bar; 1.5 x for ranges 138 to 690 bar	
Load Driving Capacity:	N/A	
Accuracy NLHR:	±0.15 % of span BFSL	
Zero Offset and Span Tolerance:	<±1 mV/V; Span Tolerance: 10 mV/V	
Operating Temperatures:	**Ambient:** -40 °C to +85 °C (-40 °F to +185 °F) **Media:** -50 °C to +125 °C (-58 °F to +257 °F)	
Storage Temperature:	+5 °C to +40 °C (+41 °F to +104°F) Recommended Best Practice	
Temperature Effects:	±1.0 %FS total error band for -20 °C to +70 °C. Typical thermal zero and span coeficients ±0.005 %FS/ °C	
Electromagnetic Compatibility:	Emissions: EN61000-6-4; Immunity: EN61000-6-2; Certification: CE Marked	
Insulation Resistance:	> 100 MΩ @ 50 VDC	
Response Time 10-90%:	<1ms	
Wetted Parts:	Titanium alloy	
Pressure Media:	All fluids compatible with Titanium alloy	
Pressure Connection:	MS33649-4 AS4395 (7/16-20 UNJF-3A) Other options available	
Electrical Connection:	MIL-DTL-26482, size 10-6P, Nickel plated	
Net. Weight:	0.9 Kg	

Version | 06.2024

ORDER MATRIX

Output	Electrical Connection	Pins	Type	Options	Pressure Range	Process Connection
10 mV/V	MIL-DTL-26482 6 Pin bayonet	6	AHI3010			

Options	
No special options required	-

Pressure Range	
0-10 bar	0010
0-16 bar	0016
0-25 bar	0025
0-40 bar	0040
0-60 bar	0060
0-100 bar	0100
0-160 bar	0160
0-250 bar	0250
0-400 bar	0400
0-600 bar	0600
0-1000 bar	1000
0-1500 bar	1500

Process Connection	
MS33649-4 AS4395 (7/16-20 UNJF-3A)	FN

Order Number Example	AHI3010-0690FN

For options not listed please contact the sales team

DISCLAIMER: We reserve the right to change specifications without prior notice. specifications without prior notice. All manufactured products are calibrated with precision calibration equipment that is traceable to national measurement standards.