



bar

AHI2000

High Precision Pressure Transmitter

FEATURES

- Silicon-on-Sapphire sensor technology for outstanding performance
- Pressure ranges to 1500 bar
- High accuracy performance
- Titanium wetted parts for excellent chemical compatibility
- High thermal stability over wide operating temperature
- ATEX/IECEx option available (includes M1 for mining applications)



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

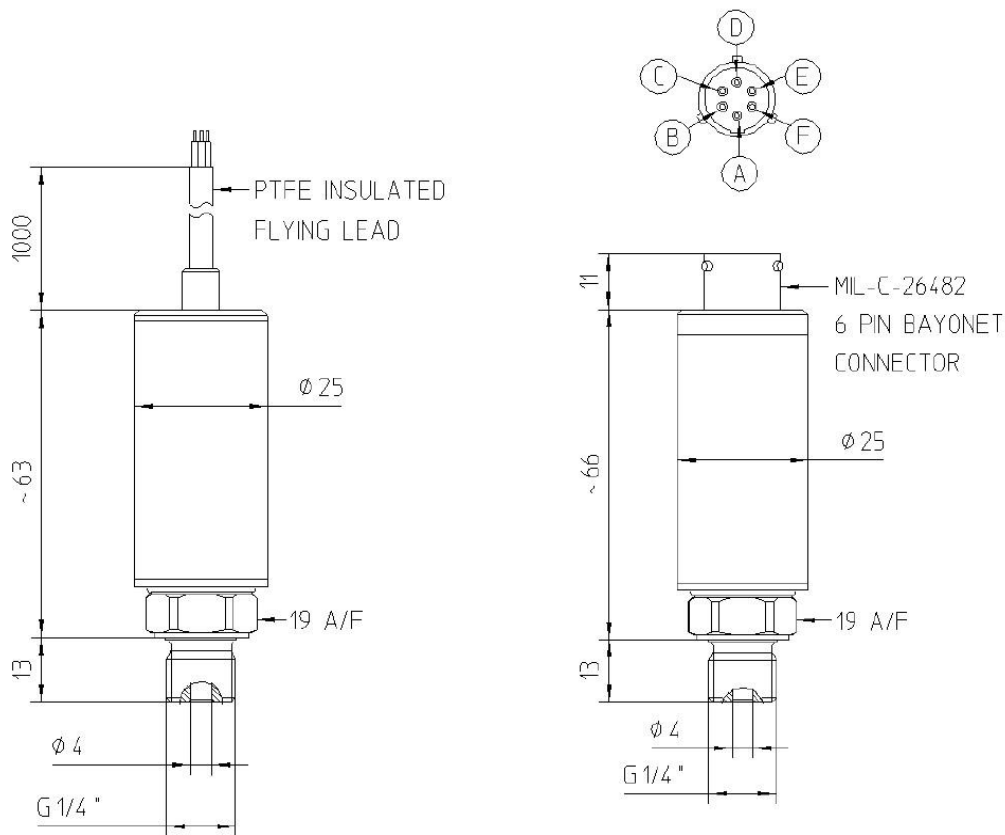
The AHI2000 series of high precision pressure transmitters with state-of-the-art SOS sensor technology offers an operating range up to 1500 bar at an accuracy rate of $< \pm 0.1\%$ of span - a level that was previously unobtainable or prohibitively expensive. ATEX and IECEx approval and protection by intrinsic safety is optional and intended for installation and operation in zone 0, gas group IIC, temperature class T4 and zone 20 dust and M1 mining.

Typical applications include:

- Laboratory and Test
- Aerospace
- Oil and Gas monitoring (downhole)



DIMENSIONS (in mm)



ELECTRICAL CONNECTIONS

Cable Outlet	
Wire Colour	Designation
Red	+supply
Green	+output
Yellow	-output
Blue	-supply

MIL-C-26482 Outlet	
PIN	Designation
A	+supply
B	+output
C	-output
D	-supply
E	N/C
F	N/C



TECHNICAL DATA

Type	AHI2000 / AHI2010	AHI2xx1 / AHI2xx4	AHI2xx2 / AHI2xx5
Sensor Technology:	Silicon-on-Sapphire (SOS)		
Output Signal:	0-10 mV/V (4 wire)	0-5 V (4 or 3 wire)	0-10 V (4 or 3 wire)
Supply Voltage:	0-10 VDC (5-15V)	13-30 VDC	13-30 VDC
Pressure Reference:	Gauge		
Protection of Supply Voltage:	n/a	Protected against supply voltage reversal up to 50 V (amplified versions)	
Standard Pressure Ranges (bar):	0-1 bar Vac; 0-1 bar; 0-10 bar; 0-25 bar; 0-100 bar; 0-250 bar; 0-400 bar; 0-600 bar; 0-1000 bar; 0-1500 bar (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:	4x 0.5 bar range; 2x for ranges 1 bar to 600 bar; 1.5 for 1000 bar; 1.1x for 1500 bar range		
Load Driving Capacity:	10 mV/V: n/a; 0 – 5 V: max. load RL > 5 K Ω – 10 V: max. load RL > 10 K Ω		
Accuracy NLHR:	±0.1 % of span BFSL		
Zero Offset and Span Tolerance:	±0.5 %FS at room temperature (HI2000/HI2010: ±1 mV)		
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 coefficients ±0.005 %FS/ °C		
ATEX/IECEx Approval Option (4-20 mA version only):	Ex II 1 G Ex ia IIC T4 Ga (zone 0) Ex II 1 D Ex ia IIIC T135 °C Da (zone 20) Ex I M 1 Ex ia I Ma (group 1 M1)	n/a	n/a
ATEX/IECEx Safety Values:	Ui = 28 V Ii = 119 mA Pi = 0.65 W Li = 0.1 µH Ci = 74 nF Temperature Range = -20 °C to +70 °C Max. cable length = 45 m	n/a	n/a
Electromagnetic Compatibility:	Emissions: EN61000-6-4; Immunity: EN61000-6-2; Certification: CE Marked		
Insulation Resistance:	> 100 M Ω @ 50 VDC		
Response Time 10-90%:	1 mS		
Wetted Parts:	Titanium alloy		
Pressure Media:	All fluids compatible with Titanium alloy		
Pressure Connection:	1/4” BSP male (G1/4) or 1/4” NPT male (others options available)		
Electrical Connection:	HI200x: PTFE insulated flying lead, conductor size 7/0.1 mm. HI201x: MIL-C-26482 6 pin bayonet connector (Accessory not included: mating connector type MS3116F10-6S)		
Net Weight:	0.2 Kg		



ORDER MATRIX

Output	Electrical Connection	Wires	Type	Options	Pressure Range	Process Connection	
10 mV/V	Cable outlet 1m PTFE	4	AHI2000				
	MIL-C-26482 6 pin bayonet	4	AHI2010				
0-5 V	Cable outlet 1m PTFE	4	AHI2001				
		3	AHI2004				
	MIL-C-26482 6 pin bayonet	4	AHI2011				
		3	AHI2014				
0-10 V	Cable outlet 1m PTFE	4	AHI2002				
		3	AHI2005				
	MIL-C-26482 6 pin bayonet	4	AHI2012				
		3	AHI2015				
Options							
No special options required							
ATEX/IECEx certified (HI2000 & HI2010 only)							
Pressure Range							
0-1 bar Vac							V001
0-1 bar							0001
0-10 bar							0010
0-25 bar							0025
0-100 bar							0100
0-250 bar							0250
0-400 bar							0400
0-600 bar							0600
0-1000 bar							1000
0-1500 bar					1500		
Process Connection							
1/4" BSP male (G1/4)							AB
1/4" NPT male							AM
Order Number Example		AHI2000EX0020AB					

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.