

# esi

## HISPEC<sup>®</sup> HI2200

High Temperature Pressure Transducer

- High operating and ambient temperatures of up to 200°C (392°F)
- Pressure ranges 0-1bar to 0-1500 bar (0-15 psi to 0-20,000 psi)
- High Accuracy
- Temperature compensated option
- Good chemical compatibility for a range of applications
- A range of electrical and process



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.

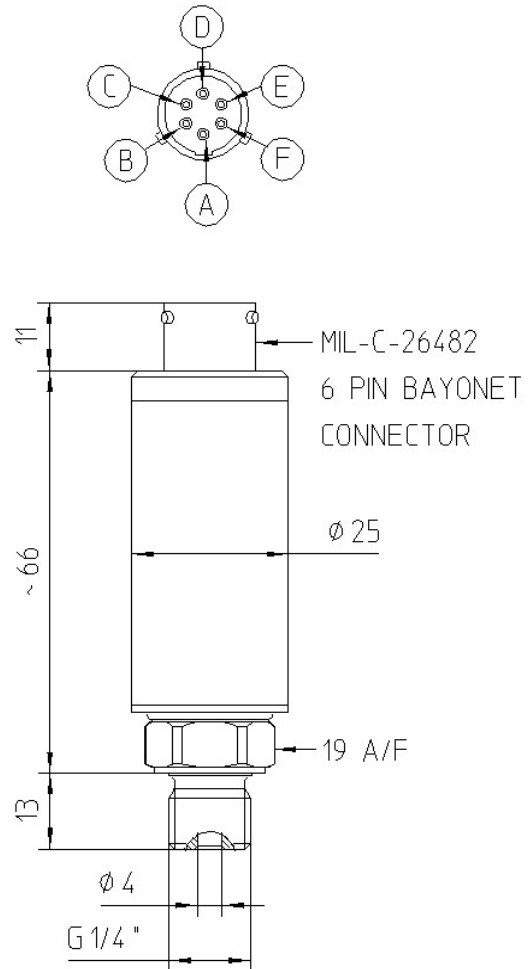
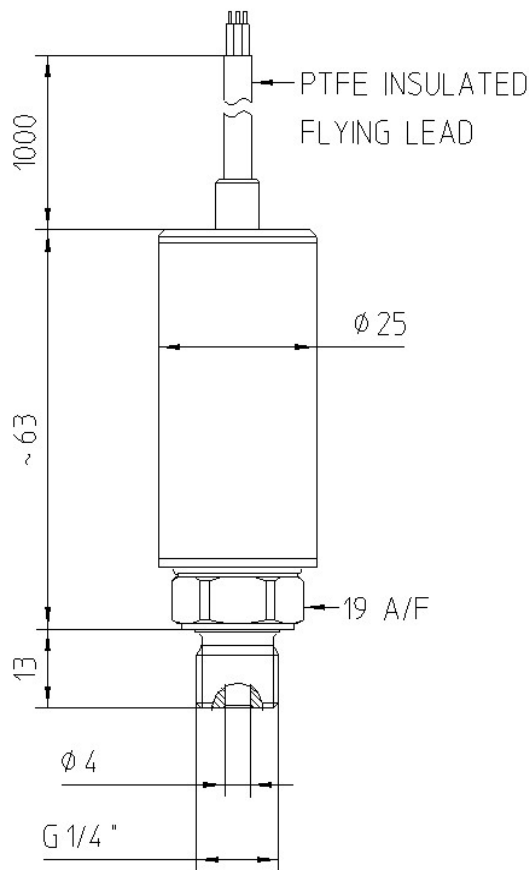
## Specifications

The HISPEC HI2200/2300 series of high temperature pressure transducers with state-of-the-art SOS sensor technology offer levels of accuracy and performance previously unobtainable or prohibitively expensive. It is capable of operating consistently at 200°C both media and ambient at a pressure range up to 1500 bar.

### Typical applications include:

- Industrial
- High temperature laboratory and test
- Aerospace

## 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	HI2200/ HI2210	HI2300/ HI2310
Sensor Technology:	Silicon-on-Sapphire (SOS)	
Output Signal:	10 to 20 mV/V (un-rationalised and un-compensated)	10 mV/V (rationalised and compensated)
Supply Voltage:	10 VDC (5-15V)	
Pressure Reference:	Gauge	
Standard Pressure Ranges (bar):	0-1 bar Vac; 0-1 bar; 0-1.6 bar; 0-2.5 bar; 0-6 bar; 0-10 bar; 0-16 bar; 0-25 bar; 0-60 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 inHg; 0-15 psi; 0-30 psi; 0-100 psi; 0-150 psi; 0-300 psi; 0-1000 psi; 0-1500 psi; 0-3000 psi; 0-6000 psi; 0-9000 psi; 0-15000 psi; 0-21750 psi (other ranges available)	
Overpressure Safety:	2x for ranges 1 bar Vac to 600 bar; 1.5x for 1000 bar range; 1.1x for 1500 bar range	
Accuracy NLHR:	$\leq \pm 0.1\%$ of span BFSL for pressure ranges $\geq 0-16$ bar $\leq \pm 0.15\%$ of span BFSL for pressure ranges $< 0-16$ bar	
Zero Offset and Span Tolerance:	Zero offset: $\pm 1$ mV/V Span tolerance: 10-20 mV/V	Zero/Span tolerance: $\pm 1\%$ FS
Operating Ambient Temperature:	-40°C to +200°C (-40°F to +392°F)	
Operating Media Temperature:	-50°C to +200°C (-58°F to +392°F)	
Storage Temperature:	+5°C to +40°C (+41°F to +104°F) Recommended best practice	
Temperature Effects:	Typical thermal zero and span coefficients compensated $\pm 0.05\%$ FS/°C	$\pm 2.0\%$ FS Total Error Band -20°C to +150°C; typical thermal zero and span coefficients $\pm 0.005\%$ FS/°C
Insulating Resistance:	$\geq 100$ M $\Omega$ @ 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 (other options available)	
Electrical Connection:	HI2x00: PTFE insulated flying lead, conductor size 7/0.1 mm. HI2x10: MIL-C-26482 6 pin bayonet connector (Accessory not included: mating connector type MS3116F10-6S)	
Ingress Protection:	IP66	
Net Weight:	0.1 Kg (approx.)	

## Order Matrix

Output	Electrical Connection	Wires	Type	Options	Pressure Range	Process Connection			
10-20mV/V	1m PTFE insulated flying lead	4	HI2200						
	MIL-C-26482 6 pin bayonet	4	HI2210						
10mV/V	1m PTFE insulated flying lead	4	HI2300						
	MIL-C-26482 6 pin bayonet	4	HI2310						
<b>Options</b>									
No special options							-		
<b>Pressure Range in barg</b>									
0-1 bar Vac							V001		
0-1 bar (0-15 psi)					0001				
0-1.6 bar (0-23 psi)					01.6				
0-2.5 bar (0-36 psi)					02.5				
0-6 bar (0-87 psi)					0006				
0-10 bar (0-150 psi)					0010				
0-16 bar (0-232 psi)					0016				
0-25 bar (0-300 psi)					0025				
0-60 bar (0-870 psi)					0060				
0-100 bar (0-1,500 psi)					0100				
0-250 bar (0-3,000 psi)					0250				
0-400 bar (0-5,800 psi)					0400				
0-600 bar (0-8,702 psi)					0600				
0-1000 bar (0-14,500 psi)					1000				
0-1500 bar (0-20,000 psi)					1500				
<b>Process Connection</b>									
1/4" BSP male (G1/4)						AB			
1/4" NPT male						AM			

**Order Number Example** HI2200-0600AB

For options not listed please contact the sales team

**DISCLAIMER** : ESI Technology Ltd operates a policy of continuous product development. We reserve the right to change specification without prior notice. All products manufactured by ESI Technology Ltd are calibrated using precision calibration equipment, traceable to national measurement standards.