



# Hispec<sup>®</sup> HI2200/2300

High Temperature Transmitter



- High operating and ambient temperatures of up to 200°C
- Pressure ranges to 1,500 bar
- High accuracy
- Temperature compensated option
- Good chemical compatibility for a range of applications
- A range of electrical and process connections available



## Description

HISPEC - HI2200/2300 series of high temperature pressure transducers with state-of-the-art Silicon-Sapphire sensor technology offer levels of accuracy and performance previously unobtainable or prohibitively expensive. It is capable of operating at a constant 200 °C both media and ambient.

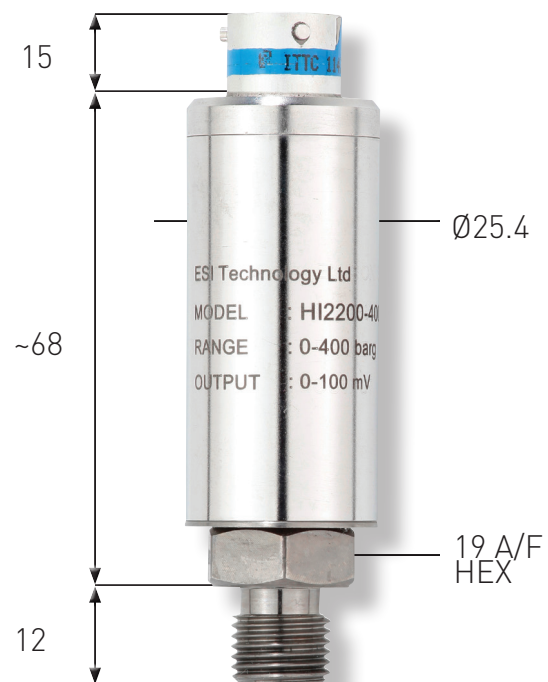
The advanced sensor design consists of a piezoresistive silicon strain gauge circuit, which is epitaxially grown onto the surface of a sapphire diaphragm to form a single crystalline structure. The sapphire sensor element is then molecularly bonded to a titanium alloy sub-diaphragm. This enables the sensor to endure higher over- pressures and provides superb corrosion resistance. The sensor exhibits virtually no hysteresis and excellent long-term stability. With outstanding insulation properties, the sapphire substrate protects the strain gauge circuit and allows the sensor to operate over a very wide temperature range without loss of performance.

With pressure ranges from 0-1 bar to 0- 1,500 bar, the high temperature HISPEC transducer is available in two options; model HI2200 offers a non-compensated and un-rationalised signal output of between 10 mV/V and 20 mV/V, whilst model HI2300 is fully temperature compensated with a rationalised 10 mV/V signal output. All models are available with either PTFE cable outlet or military bayonet style plug to MIL-C-26482, both of which are rated for use at 200 °C. This means that not only does the transducer perform effectively at high media temperatures but uniquely can be used in environments where there are elevated ambient temperatures of up to 200 °C. For instance this device may be mounted inside an oven or thermal chamber.

## Dimensions (in mm)

ELECTRICAL CONNECTION MIL-C-26482	
Pin.	Designation
A	+supply
B	+output
C	-output
D	-supply
E	N/C
F	N/C

ELECTRICAL CONNECTION CABLE OUTLET	
WIRE COLOUR	Designation
RED	+supply
GREEN	+output
YELLOW	-output
BLUE	-supply



## Technical Data

Type	HI2200/HI2210	HI2300/HI2310
<b>Sensor Technology:</b>	Silicon-on-Sapphire (SoS)	
<b>Output Signal:</b>	10 to 20 mV/V (Un-rationalised and un-compensated)	10 mV/V (Rationalised and compensated)
<b>Supply Voltage:</b>	10 VDC (5 – 15V)	
<b>Pressure Reference:</b>	Gauge	
<b>Standard Pressure Ranges (bar):</b>	0 – 1 bar Vac; 0 – 1 bar; 0 – 10 bar; 0 – 25 bar; 0 – 100 bar; 0 – 250 bar; 0 – 700 bar; 0 – 1,500 bar (other ranges available)	
<b>Standard Pressure Ranges (psi):</b>	0-30 in Hg; 0-15 psi; 0-150 psi; 0-300 psi; 0-1,500 psi; 0-3,000 psi; 0-10,000 psi; 0-20,000 psi (other ranges available)	
<b>Overpressure Safety:</b>	2x for ranges 1 bar Vac to 600 bar; 1.5x for 1,000 bar range; 1.1x for 1,500 bar range	
<b>Load Driving Capability:</b>	n/a	
<b>Accuracy NLHR:</b>	≤ ±0.1 % of span BFSL	
<b>Zero Offset and Span Tolerance:</b>	Zero offset: ±1 mV/V; Span Tolerance: 10-20 mV/V	Zero offset: ±1 mV; Span Tolerance: ±1% FS
<b>Operating Ambient Temperature:</b>	-40 °C to +200 °C (-40 °F to +392 °F)	
<b>Operating Media Temperature:</b>	-50 °C to +200 °C (-58 °F to +392 °F)	
<b>Storage Temperature:</b>	+5 °C to +40 °C (+41 °F to +104°F) Recommended Best Practice	
<b>Temperature Effects:</b>	Typical thermal zero and span coefficients compensated ±0.05 %FS/ °C	±2.0 %FS Total error band -20 °C to +150 °C, typical thermal zero and span coefficients ±0.005 %FS/ °C
<b>Electromagnetic Compatibility:</b>	Emissions: EN61000-6-4; Immunity: EN61000-6-2; Certification: CE Marked	
<b>Insulation Resistance:</b>	> 100 MΩ @ 50 VDC	
<b>Response time 10-90 %:</b>	1 mS	
<b>Wetted Parts:</b>	Titanium alloy	
<b>Pressure Media:</b>	All fluids compatible with Titanium alloy	
<b>Pressure Connection:</b>	1/4" BSP male (G1/4) or 1/4" NPT male (others options available)	
<b>Electrical Connection:</b>	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).	
<b>Net. Weight (Kg):</b>	0.1 Kg	

## Order Matrix

Output	Electrical Connection	Wires	Type	Options	Pressure Range	Process Connection			
10-20 mV/V	1m PTFE insulated flying lead	4	HI2200						
	MIL-C-26482 6 pin bayonet	4	HI2210						
10 mV/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 bar</b>									
0-1 barVac						V001			
0-1 bar						0001			
0-10 bar						0010			
0-25 bar						0025			
0-100 bar						0100			
0-250 bar						0250			
0-700 bar						0700			
0-1,500 bar						1500			
<b>Process Connection</b>									
1/4" BSP male (G1/4)						AB			
1/4" NPT male						AM			

### Order Number Example

HI2200-0700AB

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.