



**technische import**

# SUCO Productinformatie

# HI2000



SUCO Robert Scheuffele GmbH & Co. KG

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# Hispec® HI2000

HIGH SPECIFICATION PRESSURE TRANSDUCER



- SILICON-ON-SAPPHIRE SENSOR TECHNOLOGY
- PRESSURE RANGES 0-500mbar TO 0-1500bar
- VOLTAGE OUTPUT
- ACCURACY 0.1% NLHR
- OPTIONAL ATEX APPROVED VERSION
- ALL TITANIUM ALLOY WETTED PARTS
- HIGH SPECIFICATION

## DESCRIPTION

The HISPEC HI2000 series of pressure transducers with state-of-the-art Silicon-on-Sapphire sensor technology offer levels of accuracy and performance previously unobtainable or prohibitively expensive.

The unique Silicon-on-Sapphire sensor technology provides outstanding performance and gives excellent stability over a wide temperature range. 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 completed sensor exhibits virtually no hysteresis and excellent long-term stability. With outstanding insulation properties, the sapphire substrate allows the sensor to operate over a very wide temperature range without loss of performance.

Applications include aerospace, laboratory and test, oil and gas monitoring equipment (down-hole) and subsea. Available in pressure ranges from 0-500mbar to 0-1500bar and with electrical outputs of 10mV/V, 0-5Vdc and 0-10Vdc.

An optional ATEX certified version of this product is available approved for explosion protection for flammable gases (zone 0), dusts (zone 20) and mining areas (group I M1).

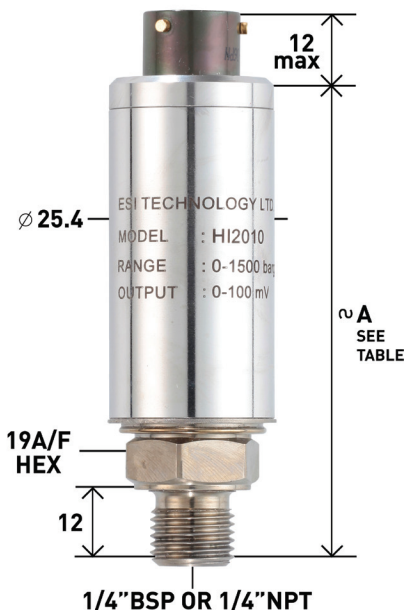


**PRESSURE RANGES**

0-1bar vac through to 1500 bar, see table below for list of all standard pressure ranges.

Range (bar)	Order Code	Range (bar)	Order Code
0-1 Vac	V001	0-40	0040
0-0.5	00.5	0-60	0060
0-1	0001	0-100	0100
0-1.6	01.6	0-160	0160
0-2.5	02.5	0-250	0250
0-4	0004	0-400	0400
0-6	0006	0-600	0600
0-10	0010	0-700	0700
0-16	0016	0-1000	1000
0-25	0025	0-1500	1500

**DIMENSIONS (in mm)**



**ELECTRICAL CONNECTION**  
MIL-C-26482

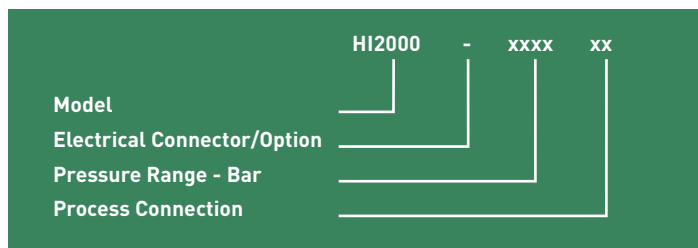
Pin	Designation
A	+supply
B	+output
C	-output
D	-supply
E	N/C
F	N/C

**ELECTRICAL CONNECTION**  
CABLE OUTLET

WIRE COLOUR	Designation
RED	+supply
GREEN	+output
YELLOW	-output
BLUE	-supply

	Dim. A
HI2x00	80
HI2x01/2	95

**ORDERING INFORMATION**



OUTPUT	Model No.
10mV/V	HI2000 / HI2010
0-5Vdc	HI2001 / HI2011
0-10Vdc	HI2002 / HI2012
ELECTRICAL CONNECTION/OPTION	Order Code
Cable Outlet 1m PTFE (models HI2000 HI2001 HI2002)	-
MIL-C-26482 6 pin bayonet (models HI2010 HI2011 HI2012)	-
ATEX certified	EX
PROCESS CONNECTION	Order Code
1/4" BSP male thread	AB
1/4" NPT male thread	AM
EXAMPLE	Order Code
Output Signal 10mV/V	HI2010
MIL-C-26482 6 pin bayonet connector	-
Pressure range 0-25barg	0025
Pressure connection 1/4" BSP male	AB
Correct Part Number	HI2010-0025AB
For options not listed contact sales team	

**SPECIFICATION**

**PRESSURE REFERENCE**

Gauge

**OVERPRESSURE**

Pressure can exceed rated range by the multiple shown below with no damage or change in calibration above  $\pm 0.5\%FS$ .  
2x for ranges -1bar to 600bar  
1.5x for 1000bar  
1.1x for 1500bar

**OUTPUT SIGNAL**

10mV/V (4 wire non-amplified) Zero offset:  $\pm 1mV$ , Span tolerance:  $\pm 1\%FS$   
0-5Vdc, 0-10Vdc (4 wire amplified) Zero Offset and Span Tolerance  $\pm 0.2\%FS$

**SUPPLY VOLTAGE**

Measured across supply terminals on connector plug  
5-15Vdc for 10mV/V version  
13-30Vdc for 0-5Vdc and 0-10Vdc versions

**PROTECTION OF SUPPLY VOLTAGE**

Protected against supply voltage reversal up to 50Vdc (amplified versions)

**ACCURACY (NON LINEARITY, HYSTERESIS & REPEATABILITY)**

$\pm 0.1\% FS$  Typical Max, Best fit straight line.

**PRESSURE MEDIA**

All fluids compatible with titanium alloy.

**OPERATING TEMPERATURE RANGE**

Ambient: -40°C to +125°C  
Media: -50°C to +125°C  
Storage: +5°C to +40°C

**TEMPERATURE EFFECTS**

$\pm 1.0\%FS$  TEB -20°C to +70°C  
Typical thermal zero and span coefficients  $\pm 0.005\%FS/°C$ .

**ATEX APPROVAL**

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 I M1)

**ATEX SAFETY VALUES**

Ui = 28V  
Ii = 119mA  
Pi = 0.65W  
Li = 0.1  
Ci = 0  
Temperature range = -20°C to +70°C  
Max. cable length = 50m

**INSULATION RESISTANCE**

100Mohm @50Vdc all electrical connection to case

**VIBRATION**

30g peak, 10Hz -2KHz, 12mm double amplitude

**MECHANICAL SHOCK**

3x4ft drop on to concrete floor will not degrade performance

**PRESSURE CONNECTION**

1/4" BSP or 1/4" NPT male (others on request)

**ELECTRICAL CONNECTION**

HI200x: PTFE insulated flying lead, conductor size 7/0.1mm  
HI201x: MIL-C-26482 (6 pin bayonet connector). Mating connector available (ESI part no. EC-MIL-10-6S)

**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 with traceability to international standards.



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