



Genspec[®] GS5000

GENERAL PURPOSE PRESSURE TRANSDUCER



- SILICON-ON-SAPPHIRE SENSOR TECHNOLOGY
- PRESSURE RANGES 0-10bar TO 0-600bar
- ACCURACY $\pm 0.25\%$ NLHR
- 4-20mA OUTPUT AS STANDARD (0-10Vdc OPTIONAL)
- TITANIUM AND STAINLESS STEEL WETTED PARTS
- M12 & DIN 43650 ELECTRICAL CONNECTION
- ROBUST DESIGN

DESCRIPTION

The GENSPEC GS5000 pressure transmitter is designed to meet the operational requirements of demanding pressure measurement applications where good quality, fast delivery and low cost are of the highest priority.

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. The completed sensor exhibits virtually no hysteresis and excellent long-term stability. With outstanding insulation properties, the sapphire substrate protects the strain gauge and allows the sensor to operate over a very wide temperature range without loss of performance.

Accuracy is $\pm 0.25\%$ with an over pressure limit of 4 times typically the rated pressure range. The standard output is 4-20mA. All models are supplied with integral G1/4 type A or E thread with other optional connections available. The titanium and stainless steel wetted parts offer excellent corrosion resistance. Versions are also available offering IP66 sealing for installations requiring high levels of environmental protection. Applications for the GS5000 include the continuous monitoring of hydraulic systems with oil, gas and water.

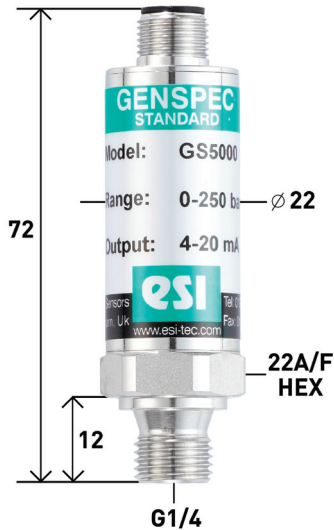


PRESSURE RANGES

0 to 10bar through to 0 to 600bar, see table below for list of all standard pressure ranges.

Range (bar)	Order Code	Range (bar)	Order Code
0-10	0010	0-100	0100
0-16	0016	0-160	0160
0-25	0025	0-250	0250
0-40	0040	0-400	0400
0-60	0060	0-600	0600

DIMENSIONS (in mm)



ELECTRICAL CONNECTION

DIN43650

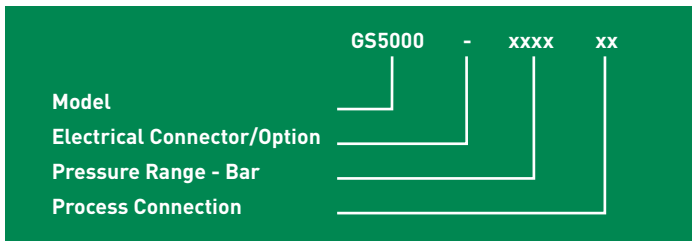
Pin No.	2 wire	3 wire
1	+supply	common
2	4-20mA signal	+supply
3	n/c	+output
	to case	to case

ELECTRICAL CONNECTION

M12

Pin No.	2 wire	3 wire
1	+supply	+supply
2	n/c	+output
3	4-20mA signal	common
4	n/c	n/c

ORDERING INFORMATION



Output

4-20mA (2wire)
0-10Vdc (3wire)

Electrical Connection / Option

DIN 43650 plug and socket
M12 connector

Process Connection

1/4" BSP male DIN3852-A
1/4" BSP male DIN3852-E with Viton Gasket
1/4" NPT male thread

EXAMPLE

Output signal 4-20mA
M12 connector
Pressure range 0-400barg
1/4" BSP male DIN3852-E with Viton Gasket
Correct Part Number

For options not listed contact sales team

Model No.

GS5000
GS5002

Order Code

-

A

FA

FE

AM

AM

Order Code

GS5000

A

0400

FE

GS5000A0400FE

SPECIFICATION

PRESSURE REFERENCE

Gauge

OVERPRESSURE

Pressure can exceed rated range by the multiple shown below with no damage or change in calibration above $\pm 0.5\%FS$.

4x (typical) for ranges up to 400bar
1650bar maximum for 600bar version

OUTPUT SIGNAL

4-20mA (2 wire configuration) as standard.
Optional outputs available are 0-10Vdc (3 wire)

SUPPLY VOLTAGE(U_b)

Measured across supply terminals on connector plug
10-36Vdc for 4-20mA (2 wire)
13-30Vdc for 0-10Vdc (3 wire)

PROTECTION OF SUPPLY VOLTAGE

Protected against supply voltage reversal up to 50Vdc

LOAD DRIVING CAPABILITY

4-20mA version $< (U_b - 10V) / 20mA$
0-10Vdc version $> 4.7k\Omega$

ACCURACY (NON LINEARITY, HYSTERESIS & REPEATABILITY)

$\pm 0.5\%$ Tolerance
 $\pm 0.25\%$ FS NLHR (typical)

PRESSURE MEDIA

All fluids compatible with titanium alloy and stainless steel

OPERATING TEMPERATURE RANGE

Compensated: $-40^\circ C$ to $+85^\circ C$
Ambient: $-40^\circ C$ to $+125^\circ C$
Media: $-50^\circ C$ to $+125^\circ C$

TEMPERATURE EFFECTS

Typical thermal zero and span coefficients $\pm 0.01\%FS/^\circ C$

ELECTROMAGNETIC-COMPATIBILITY

Emissions: EN61000-6-3
Immunity: EN61000-6-2
Certification: CE marked

PRESSURE CONNECTION

G1/4 Male type A and E

ELECTRICAL CONNECTION

Mating socket with screw terminal connections to DIN 43650, rated IP65 or M12 rated IP67. Options include flying lead with optional cable length.

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.

