



- SILICON-ON-SAPPHIRE SENSOR TECHNOLOGY
- SEALED TO IP65 (IP66 & IP67 OPTIONAL)
- $\pm 0.25\%$ ACCURACY
- 4-20 mA OUTPUT AS STANDARD (0-100mVdc, 0-5Vdc or 0-10Vdc OPTIONAL)
- PRESSURE RANGES 0-500mbar TO 0-1500bar
- WIDE OPERATING TEMPERATURE RANGE
- OUTSTANDING PERFORMANCE AND STABILITY
- AVAILABLE FROM STOCK
- CE APPROVED
- INTRINSICALLY SAFE OPTION

The GENSPEC GS4200 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 and provides superb corrosion resistance. The completed sensor exhibits virtually no hysteresis and excellent long-term stability. With outstanding insulation properties, the sapphire substrate protects the strain gauge circuit from electromagnetic pulse radiation 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 twice the rated pressure range, this together with the standard output of 4-20 mA and easy access for re-calibration affirm the excellent design. All models are supplied with integral 1/4" BSP or pressure connections. Optional connections are available. The all titanium alloy wetted parts offer unbeatable corrosion resistance. Versions are also available offering IP66 sealing for installations requiring high levels of environmental protection. Applications for the GS4200 include the continuous monitoring of hydraulic systems with oil, gas, water and other process liquids, industrial, medical and aerospace industries. Also ideal for the measurement and control of pressure in refrigeration, pneumatic, compressor, HVAC and engine monitoring systems.

An optional ATEX certified version of this product is available approved to II 1 GD EEx ia IIC T4 (zone 0) and Ex iaD 20 T200°C (zone 20) TA = -20 to +70°C. This option has the following safety values; Ui=28V, li=93mA, Pi=0.65W, Li=0, Ci=74nF



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ellison sensors international

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SPECIFICATION

PRESSURE RANGES:

0-0.5bar through to 1500bar, see table below for list of all standard pressure ranges.

OVERPRESSURE:

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

- 4x for 0.5bar range
- 2x for ranges 1bar-600bar
- 1.5x for 1000bar
- 1.1x for 1500bar

OUTPUT SIGNAL:

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

- 0-5Vdc,
- 0-10Vdc,
- 0-100mVdc.

ZERO OFFSET AND SPAN SETTING:

± 0.08 mA
 $\pm 5\%$ FS zero adjustment with easy access trimming potentiometer.

SUPPLY VOLTAGE:

Measured across supply terminals on connector plug
13-36Vdc for 4-20mA versions
13-30Vdc for 0-5Vdc and 0-10Vdc versions
5-15Vdc for 0-100mVdc version

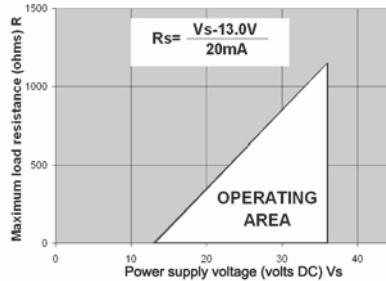
REVERSAL OF SUPPLY VOLTAGE:

Protected against supply voltage reversal up to 50Vdc

LOAD DRIVING CAPABILITY

(4-20mA version only):

Calculate maximum load see chart below.



E.g. with supply voltage load of 36vdc, maximum load is 1150ohms.

COMBINED NON-LINEARITY AND HYSTERESIS:

$\pm 0.25\%$ FS Best fit straight line definition.

REPEATABILITY:

$\pm 0.1\%$ FS Defined as maximum error between three consecutive pressure cycles.

LONG TERM STABILITY:

$\pm 0.1\%$ FS/year non-cumulative

PRESSURE MEDIA:

All fluids compatible with titanium alloy.

OPERATING TEMPERATURE RANGE:

Ambient: -40°C to $+85^\circ\text{C}$
Media: -50°C to $+125^\circ\text{C}$
Storage: 5°C to 40°C

TEMPERATURE EFFECTS:

$\pm 1.5\%$ FS total error band for -20°C to 70°C Typical thermal zero and span coefficients $\pm 0.015\%$ FS/ $^\circ\text{C}$

ELECTROMAGNETIC COMPATIBILITY:

Emissions EN61000-6-4
Immunity EN61000-6-2
Certification CE marked

PRESSURE CONNECTION:

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

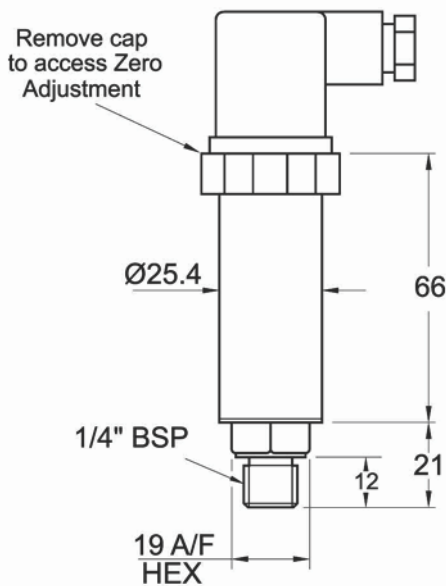
ELECTRICAL CONNECTION:

Mating socket with screw terminal connections to DIN 43650, rated IP65. Options include; alternative connectors; fly-lead with optional cable length and cable gland rated to IP66.

WEIGHT:

95grams for standard unit with DIN43650 socket fitted.

DIMENSIONS (in mm)



ELECTRICAL CONNECTION

Pin No.	2 wire	4 wire
1	+supply	+supply
2	4-20mA signal	-supply
3	not fitted	+output
⊥	to case	-output

ORDER DETAILS

State model number and pressure range required:-
e.g. GS4200 0-6barg

Model No.	OUTPUT
GS4200	4-20mA
GS4201	0-100mVdc
GS4202	0-5Vdc
GS4203	0-10Vdc

PRESSURE RANGES

0 - 1bar Vac	0 - 40bar
0 - 500mbar	0 - 60bar
0 - 1bar	0 - 100bar
0 - 1.6bar	0 - 160bar
0 - 2.5bar	0 - 250bar
0 - 4bar	0 - 400bar
0 - 6bar	0 - 600bar
0 - 10bar	0 - 1000bar
0 - 16bar	0 - 1500bar
0 - 25bar	

CALIBRATION

All products manufactured by Ellison Sensors are calibrated using precision calibration equipment with traceability to international standards.

Ellison Sensors operates a policy of continuous product development. We reserve the right to change specification without prior notice.

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