GENSPEC© GS4200

General Purpose Pressure Transmitter

- Silicon-on-Sapphire sensor technology for outstanding performance
- Pressure ranges to 1,500 bar
- Specialist high strength titanium alloy sensor
- Excellent Corrosion resistance
- High resistance to overpressure and pressure transients
- ATEX/IECEx option available (includes M1 for mining applications)

RoHS 2011/65/EU

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.

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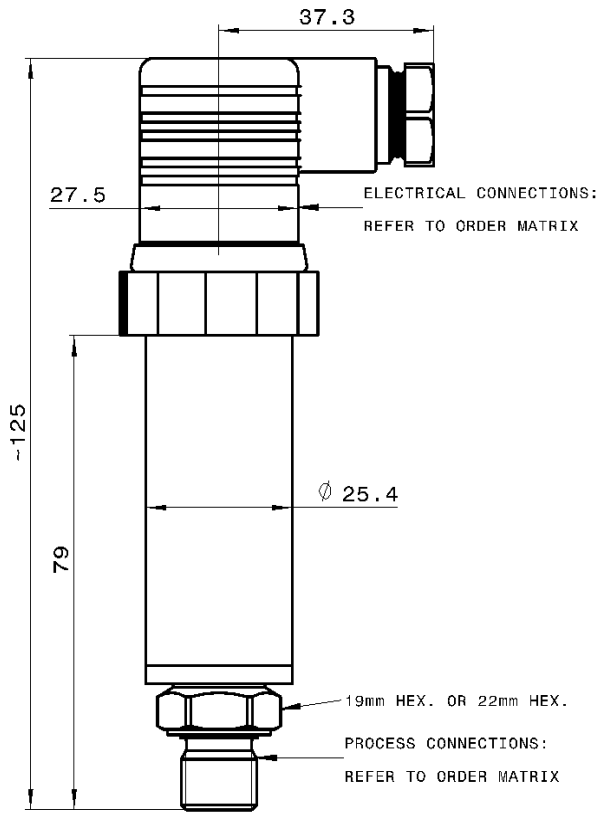
Specifications

The GENSPEC GS4200 series of general purpose pressure transmitters, with state-of-the-art SOS sensor technology, offers a highly accurate and durable sensor capable of withstanding over pressure levels of up to twice the stated pressure range. ATEX and IECEx approval and protection by intrinsic safety is optional and intended for installation and operation in zone 0, gas group IIC, temperature class T4 and zone 20 dust and M1 mining. DNV GL rules for classification of ships, high speed & light craft and DNV GL offshore standards.

Typical applications include:

- Hydraulic systems monitoring
- Aerospace
- General Industrial

Dimensions (in mm)



Electrical Connections

	DIN Connection		
	mA	VDC	
Pin No.	2 wire	3 wire	4 wire
1	+supply	-supply	-supply
2	Iout	+supply	+supply
3	N/C	+output	+output
⏚	to case	to case	-output

	M12 Connection		
	mA	VDC	
Pin No.	2 pin	3 pin	4 pin
1	+supply	-supply	-supply
2	N/C	+supply	+supply
3	Iout	+output	+output
4	N/C	N/C	-output

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Technical Data

Type	GS4200	GS4201	GS4202/GS4212	GS4203/GS4213
Sensor Technology:	Silicon-on-Sapphire (SOS)			
Output Signal:	4-20 mA (2 wire)	10 mV/V Typical (4 wire)	0-5 V (4 or 3 wire)	0-10 V (4 or 3 wire)
Supply Voltage:	10-36 VDC	10 VDC (5-15 V)	13-30 VDC	13-30 VDC
Pressure Reference:	Gauge			
Protection of Supply Voltage:	Protected against supply voltage reversal up to 50 V (amplified versions)			
Standard Pressure Ranges (bar):	0 – 1 bar Vac; 0 – 1 bar; 0-2.5 bar; 0-6 bar; 0 – 10 bar; 0-16 bar; 0 – 25 bar; 0 – 100 bar; 0 – 250 bar; 0-400 bar; 0 –600 bar; 0-1,000 bar; 0 – 1,500 bar (other ranges available)			
Standard Pressure Ranges (psi):	0-30 in Hg; 0-15 psi; 0-30 psi; 0-100 psi; 0-150 psi; 0-200 psi; 0-300 psi; 0-1500 psi; 0-3000 psi; 0-6000 psi; 0-8700 psi; 0-15000 psi; 0-20000 psi (other ranges available)			
Overpressure Safety:	2x for ranges -1 bar to 600 bar; 1.5x for 1,000 bar range; 1.1x for 1,500 bar range			
Load Driving Capacity:	**4 – 20 mA:** RL < [UB - 10 V] / 20 mA (e.g. with supply voltage (UB) of 36 V, max. load (RL) is 1300 Ω) **10 mV/V:** n/a; **0 – 5 V:** max. load RL > 5 KΩ; **0 – 10 V:** max. load RL > 10 KΩ			
Accuracy NLHR:	≤ ±0.25 % of span BFSL (Optional higher accuracy version of ≤ ±0.1 % of span BFSL available)			
Zero Offset and Span Tolerance:	±0.5 %FS at room temperature (GS4201: ±1 mV); ±5 %FS (approx.) adjustment with easy access trimming potentiometers on amplified versions only			
Operating Temperatures:	**Ambient:** -40 °C to +85 °C (-40 °F to +185 °F) **Media:** -50 °C to +125 °C (-58 °F to +257 °F)			
Storage Temperature:	+5 °C to +40 °C (+41 °F to +104°F) Recommended Best Practice			
Temperature Effects:	±1.5 %FS total error band for -20 °C to +70 °C. Typical thermal zero and span coefficients ±0.015 %FS /°C			
ATEX/IECEx Approval Option (4-20 mA version only):	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 1 M1)	n/a	n/a	
ATEX/IECEx Safety Values:	Ui = 28 V Ii = 119 mA Pi = 0.65 W Li = 0.1 µH Ci = 74 nF Temperature Range = -20 °C to +70 °C Max. cable length = 45 m	n/a	n/a	
DNV-GL Approval:	Temperature: D; Humidity: B; Vibration: B; EMC: B; Enclosure: C (contact sales for more information)			
Electromagnetic Compatibility:	Emissions: BS EN61000-6-3; Immunity: BS EN61000-6-2; Certification: CE/UKCA Marked			
Insulation Resistance:	> 100 MΩ @ 50 VDC			
Response Time 10-90%:	1 mS			
Wetted Parts:	Titanium alloy (1/4" BSP male (G1/4) and ¼"NPT male thread; thread options typically Titanium alloy/316L stainless steel			
Pressure Media:	All fluids compatible with Titanium alloy (1/4" BSP male (G1/4); 1/4" NPT male); thread options typically Titanium alloy/316L stainless steel			
Pressure Connection:	1/4" BSP male (G1/4); 1/4" NPT male; 1/2" BSP male (G1/2); 1/2" NPT male and 1/4" BSP female (others options available)			
Electrical Connection:	Mating socket EN175301-803 Form A (ex DIN43650) rated IP65 with PG9 cable entry (other options available)			
Net Weight:	0.2 Kg			

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Order Matrix

Output	Wires	Type	Options	Pressure Range	Process Connection	Other Options
4-20 mA	2	GS4200				
10 mV/V	4	GS4201				
0-5 V	4	GS4202				
	3	GS4212				
0-10 V	4	GS4203				
	3	GS4213				

Options	
DIN EN175301 plug and socket (IP65)	-
Cable outlet 1m screened (IP65)	A
M12 connector (IP67 when mated with equivalent connector)	B
Cable outlet 1m screened IP67 protection	C
ATEX/IECEx certified with DIN EN175301 plus and socket	EX
DNV GL approval	M
DNV GL approval plus ATEX/IECEx certified	EXM

Pressure Range	
0-1 bar Vac	V001
0-1 bar	0001
0-2.5 bar	02.5
0-6 bar	0006
0-10 bar	0010
0-16 bar	0016
0-25 bar	0025
0-100 bar	0100
0-250 bar	0250
0-400 bar	0400
0-600 bar	0600
0-1000 bar	1000
0-1500 bar	1500

Process Connection	
1/4" BSP male (G1/4)	AB
1/2" BSP male (G1/2)	AC
1/4" NPT male	AM
1/2" NPT male	AN

Other Options	
ATEX/IECEx certified with M12 connector	-M12

Order Number Example	GS4200EX0400AB-M12

For options not listed please contact the sales team

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