

# esi

## 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)



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.

## Specifications

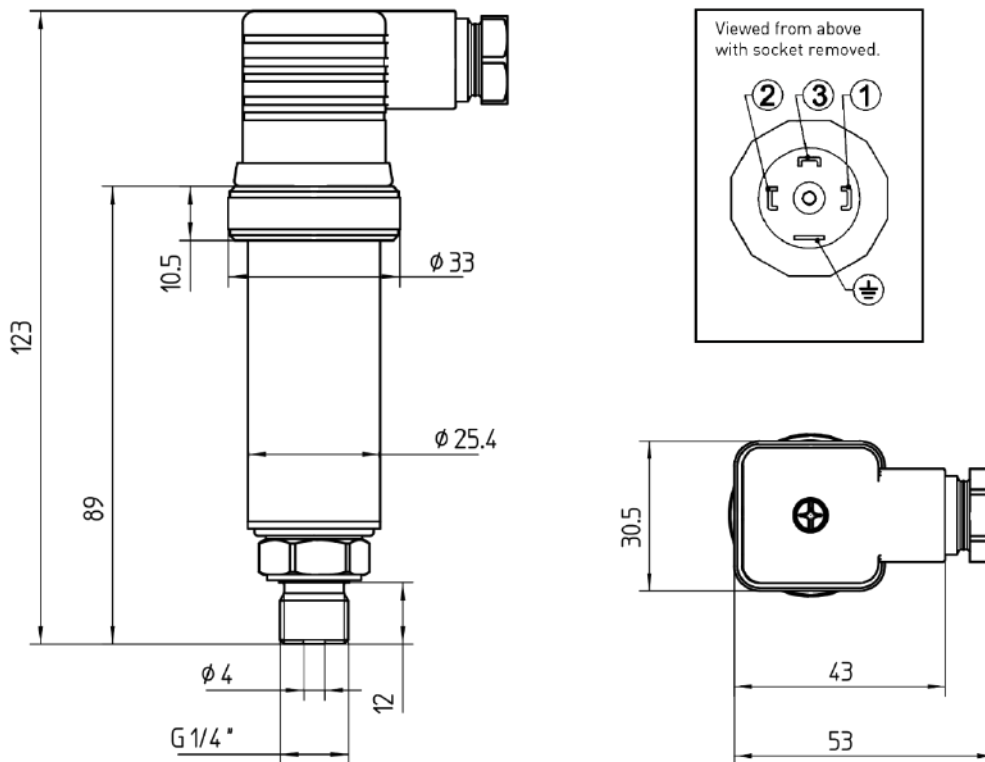
The **GENSPEC GS4200** series of general purpose pressure transmitters, with state-of-the-art SOS sensor technology, offers a highly accurate and durable sensor capable of withstanding over pressure levels of up to twice the stated pressure range. ATEX and IECEx approval and protection by intrinsic safety 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

Pin No.	mA		VDC
	2 wire	3 wire	4 wire
1	+supply	common	-supply
2	4-20mA	+supply	+supply
3	N/C	+output	+output
⊥	to case	to case	-output

## Technical Data

Type	GS4200	GS4201	GS4202/GS4212	GS4203/GS4213
<b>Sensor Technology:</b>	Silicon-on-Sapphire (SOS)			
<b>Output Signal:</b>	4-20 mA (2 wire)	0-10 mV/V (4 wire)	0-5 V (4 or 3 wire)	0-10 V (4 or 3 wire)
<b>Supply Voltage:</b>	10-36 VDC	10 VDC (5-15 V)	12-30 VDC	13-30 VDC
<b>Pressure Reference:</b>	Gauge			
<b>Protection of Supply Voltage:</b>	Protected against supply voltage reversal up to 50 V (amplified versions)			
<b>Standard Pressure Ranges (bar):</b>	0 – 1 bar Vac; 0 – 0.5 bar; 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)			
<b>Standard Pressure Ranges (psi):</b>	0-30 in Hg; 0-7.5 psi; 0-15 psi; 0-30 psi; 0-100 psi; 0-150 psi; 0-200 psi; 0-300 psi; 0-1,500 psi; 0-3,000 psi; 0-6,000 psi; 0-8,700 psi; 0-15,000 psi; 0-20,000 psi (other ranges available)			
<b>Overpressure Safety:</b>	4x for 0.5 bar range; 2x for ranges -1 bar to 600 bar; 1.5x for 1,000 bar range; 1.1x for 1,500 bar range			
<b>Load Driving Capacity:</b>	4 – 20 mA: $RL < [UB - 10 V] / 20 \text{ mA}$ (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			
<b>Accuracy NLHR:</b>	≤ ±0.25 % of span BFLS (Optional higher accuracy version of ≤ ±0.1 % of span BFLS available)			
<b>Zero Offset and Span Tolerance:</b>	±0.5 %FS at room temperature (GS4201: ±1 mV); ±5 %FS (approx.) adjustment with easy access trimming potentiometers on amplified versions only			
<b>Operating Temperatures:</b>	<b>Ambient:</b> 40 °C to +85 °C (-40 °F to +185 °F) <b>Media:</b> -50 °C to +125 °C (-58 °F to +257 °F)			
<b>Storage Temperature:</b>	+5 °C to +40 °C (+41 °F to +104°F) Recommended Best Practice			
<b>Temperature Effects:</b>	±1.5 %FS total error band for -20 °C to +70 °C. Typical thermal zero and span coefficients ±0.015 %FS /°C			
<b>ATEX/IECEX Approval Option (4-20 mA version only):</b>	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	n/a
<b>ATEX/IECEX Safety Values:</b>	U <sub>i</sub> = 28 V I <sub>i</sub> = 119 mA P <sub>i</sub> = 0.65 W L <sub>i</sub> = 0.1 μH C <sub>i</sub> = 74 nF Temperature Range = -20 °C to +70 °C Max. cable length = 45 m	n/a	n/a	n/a
<b>DNV-GL Approval:</b>	Temperature: D; Humidity: B; Vibration: B; EMC: B; Enclosure: C (contact sales for more information)			
<b>Electromagnetic Compatibility:</b>	Emissions: EN61000-6-3; 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 (1/4" BSP male (G1/4) and 1/4"NPT male thread; thread options typically Titanium alloy/316L stainless steel			
<b>Pressure Media:</b>	All fluids compatible with Titanium alloy (1/4" BSP male (G1/4); 1/4" NPT male); thread options typically Titanium alloy/316L stainless steel			
<b>Pressure Connection:</b>	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)			
<b>Electrical Connection:</b>	Mating socket EN175301-803 Form A (ex DIN43650) rated IP65 with PG9 cable entry (other options available)			
<b>Net Weight:</b>	0.2 Kg			

## Order Matrix

Output	Wires	Type	Options	Pressure Range	Process Connection
4-20 mA	2	GS4200			
10 mV/V	4	GS4201			
0-5 V	4	GS4202			
	3	GS4212			
0-10 V	4	GS4203			
	3	GS4213			
<b>Options</b>					
DIN EN175301 plug and socket			-		
Cable outlet 1m screened			A		
M12 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		
<b>Pressure Range</b>					
0-1 bar Vac				V001	
0-0.5 bar				00.5	
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	
<b>Process Connection</b>					
1/4" BSP male (G1/4)					AB
1/2" BSP male (G1/2)					AC
1/4" NPT male					AM
1/2" NPT male					AN

### Order Number Example

GS4200B1500AB

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.