Genspec® GS4400

General Purpose Pressure
Transmitter with RS-485 Interface

- Silicon-on-Sapphire sensor technology for outstanding performance
- Pressure ranges to 1,500 bar (21,755 psi)
- Excellent corrosion resistance
- High strength titanium pressure port
- High resistance to overpressure and pressure transients
- High accuracy option
- RS-485 communication up to 1200 m
- Selectable baud rate
- Resistant to interference from noise

RoHS 2011/65/EU

CE

Description

The GENSPEC GS4400 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.

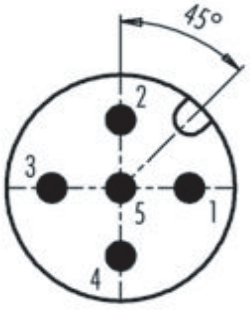
Providing a half-duplex digital RS-485 output signal and 0-5V analog output, the GS4400 provides high stability and repeatability. It can be configured to suit a multitude of applications and with proprietary RS-485 protocol, each sensor can be allocated a unique device address and connected in series to other sensors and devices on the same communications link.

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 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.

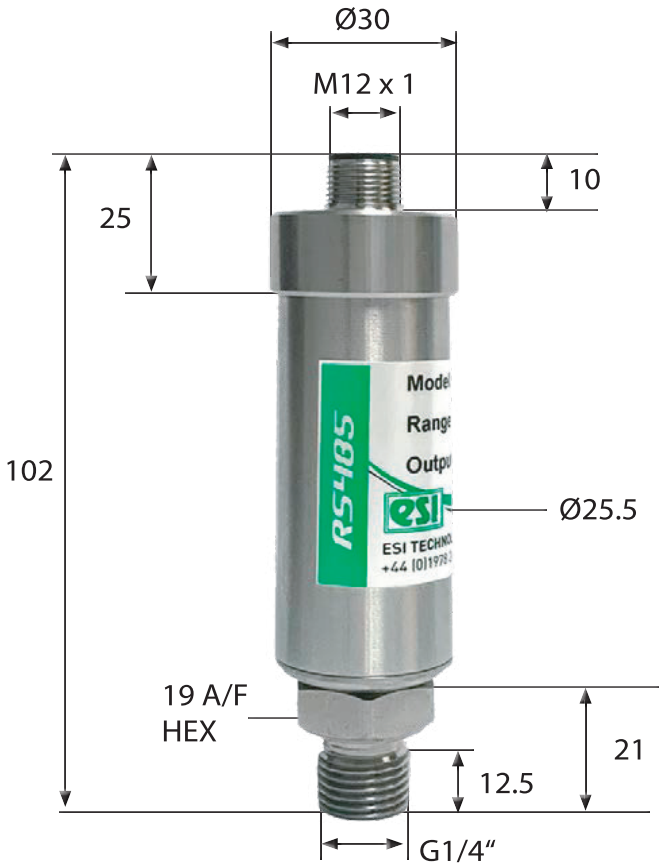
Standard digital accuracy is 0.15%, with an exceptional overpressure limit. All models are supplied with integral 1/4"BSP male with a range of other process connection options. The titanium alloy wetted parts offer unbeatable corrosion resistance and the M12 electrical connection is rated IP67 for high levels of environmental protection.

Applications for the GS4400 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.

Dimensions
(in mm)



Pin No	Designation
1	RS485(B)
2	RS485(A)
3	Common Ground
4	DS Power IN
5	Analog Output
Case	Case GND



GS4400BXXXXAB

Genspec® GS4400 General Purpose Pressure Transmitter with RS-485 Interface

Technical Data

Type:	GS4400
Sensor Technology:	Silicon-on-Sapphire
Output Signal (Digital):	Proprietary RS-485 Protocol
Digital Signal Baud Rate:	1200, 2400, 4800, 9600, 14400, 19200, 28800, 57600
Output Signal (Analogue):	0V – 5V analogue output, 16bit
Sample Rate:	5Hz (max – digital), 1kHz (max – analogue)
Zero Output:	0V
Full Scale Output:	5V
Calibration Output:	Combination of digital and analog signal
Zero Adjustment Range:	User Programmable
Span Adjustment Range:	User Programmable
Supply Voltage:	6-36VDC
Pressure Reference:	Sealed Gauge
Protection of Supply Voltage:	Supply: up 36V Analog Output: -0.3V to 5.3V Digital Output: ±15KV ESD
Standard Pressure Ranges (bar):	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)
Standard Pressure Ranges (psi):	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)
Overpressure Safety:	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
Accuracy NLHR:	digital: ±0.15% of span BFSL, analog: ±0.25% of span BFSL
Zero Offset and Span Tolerance:	±0.6% FS
Operating Ambient Temperature:	-40°C to 85°C (-40°F to +185°F)
Operating Media Temperature:	-40°C to 85°C (-40°F to +185°F)
Storage Temperature:	+5 °C to +40 °C (+41 °F to +104°F) Recommended Best Practice
Temperature Effects:	±1%
Electromagnetic Compatibility:	Emissions: EN61000-6-3+A1 Immunity: EN61000-6-2 Certification: CE Marked
Response time 10-90 %:	(1000/update rate) + 1ms, <17ms
Bus Addressing:	User Programmable
Wetted Parts:	Titanium Alloy
Pressure Media:	All fluids compatible with Titanium alloy
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:	M12, 5 pin connector, see table 1
Net. Weight (Kg):	<0.2 kg

Order Matrix

Output	Wires	Type	Electrcal Connection	Pressure Range	Process Connection
RS485	6	GS4400			

Electrical Connection	
M12 Connector	B

Pressure Range in bar	
0-1bar Vac (0-30 in Hg)	V001
0-0.5 bar (0-7.5 psi)	00.5
0-1 bar (0-15 psi)	0001
0-2.5 bar (0-30 psi)	02.5
0-6 bar (0-100 psi)	0006
0-10 bar (0-150 psi)	0010
0-16 bar (0-200 psi)	0016
0-25 bar (0-300 psi)	0025
0-100 bar (0-1,500 psi)	0100
0-250 bar (0-3,000 psi)	0250
0-400 bar (0-6,000 psi)	0400
0-600 bar (0-8,700 psi)	0600
0-1,000 bar (0-15,000 psi)	1000
0-1,500 bar (0-20,000 psi)	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

Order Number Example	GS4400B0600AB

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.