

Model 567

Industrial Pressure Transducer

Gauge and Absolute Pressure



Setra System's Model 567 high performance pressure transducer offers customer accessible down-ranging capabilities, making this unit ideal for high overpressure applications. The 5:1 turndown is easily accessed via a switch and potentiometer.

The Model 567's CVD strain gauge design is resistant to aging and virtually insensitive to thermal transients and pressure cycling. The stability of this technology assures the user of excellent reliability, with less than 0.15% drift per year.

The 567 offers enclosures fabricated in 321 SS, 17-4 PH SS, or glass filled polyester IP4, and rated for NEMA 4/IP40, IP65, IP68 operation. This unit is protected against contact by small tools and wires, water projected by a nozzle or jets, and from the extremes of heavy seas.

All wetted parts are constructed of corrosion-resistant 17-4 PH stainless steel, which makes this unit ideal for use with corrosive media.

The Model 567 offers 0.15% FS accuracy, compensated temperature range of 15°F to +120°F (-10°C to 50°C) 0.5% of maximum span, and -4°F to 176°F (-20 to 80°C) for 1% of

maximum span. Operating temperatures as low as -22°F to 212°F (-20°C to 50°C), and gauge, absolute, or compound pressure ranges from -15 psi up to 6000 psi.

The Model 567's modular design is offered in a wide range of voltage or current outputs, and a variety of pressure and electrical connections, enabling this unit to be custom configured for your OEM application

Principle of Operation

Using the well proven Wheatstone Bridge principle, a chemical vapor is deposited in thin layers of silicon and silicon dioxide onto a stainless steel diaphragm to form a very sensitive and accurate polysilicon strain gauge. The elements of the strain gauge are fused together at the atomic level, assuring the strength and integrity of the bond, which exceeds the adhesives used in common bonded strain gauge pressure sensors. Using a custom designed ASIC to perform amplification, temperature calibration, and filtering, each parameter can be fine tuned for optimal performance. This design offers the user the option of configurable output and pressure ranges, sets the zero and span tolerance and ensures interchangeability from unit to unit.

Applications

- Off-Highway
- Natural Gas Equipment
- Power Plants
- Heating, Ventilating & Air-Conditioning
- Refrigeration
- Robotics

Benefits

- Superior Stability
Avoids Down Time
- $\pm 0.15\%$ FS Accuracy
- 5:1 Turndown for High Pressure Applications
- NEMA 4/IP40, IP65, and NEMA 6/IP68 Rated
- Intrinsic Safe Option
- Choice of Enclosure
- Meets \llcorner Conformance Standards

*When it comes to a product to rely on - choose the Model 530.
When it comes to a company to trust - choose Setra.*



Visit Setra On-line:
<http://www.setra.com>

setra
800-257-3872

Model 567 Specifications

Performance Data

Accuracy RSS* (at constant temp)	±0.15% FS
<u>Thermal Effects**</u>	
Compensated Range °F (°C)	+15 to +120 (-10 to +50)
Zero Shift %FS/100°F (100°C)	0.25 (0.5)
Span Shift %FS/100°F (100°C)	0.25 (0.5)
Compensated Range °F (°C)	-4 to +176 (-20 to ±80)
Zero Shift %FS/100°F (100°C)	0.5 (1.0)
Span Shift %FS/100°F (100°C)	0.5 (1.0)
Zero Adjustment	±10% by Potentiometer
Span Adjustment	17% to 100% of Span by Potentiometer/Switches
Acceleration	100g steady acceleration in any direction***
Long-Term Stability	0.15% FS/1 year

Proof Pressure	
Ranges	0.2 to 4 Bar
Ranges	3.00 to 6000 Psi
Burst Pressure	>35 x FS <= 100 Psi (6 Bar)
	>20 X FS <= 1000 Psi (60 Bar)

*RSS of Non-Linearity, Non-Repeatability and Hysteresis.

**Units calibrated at nominal 70°F. Maximum thermal error computed from this datum.

***0.036% FS/g for 0.75 Bar (10 PSI) range decreasing logarithmically to 0.0007% FS/g for 400 BAR (6000 PSI) Range.

Environmental Data

Temperature	
Operating °F (°C)	
w/DIN & 10-6 Bayonet Conn.	-4 to +185 (-20 to +85)
w/IP 67 Cable	-4 to +122 (-20 to +50)
Process /Media	-22 to +212 (-30 to 100)
Storage °F (°C)	
w/DIN & 10-6 Bayonet Conn.	-4 to +185 (-20 to +85)
w/IP 67 Cable	-4 to +122 (-20 to +50)
Process /Media	-22 to +212 (-30 to 100)
Vibration	35g peak sinusoidal, 5 to 2000 Hz
Shock	Withstands Free Fall to IEC 68-2-32 Proc 1

Physical Description

Case	321 Stainless Steel, 17-4 PH and Glass Filled Polyester
Ratings	IP40 (NEMA) w/10-6 Bayonet Conn. IP65 (NEMA) w/Bayonet, Absolute Unit IP65 (NEMA) w/DIN #43650 Conn. IP68 (NEMA) w/ IP67 Cable

Physical Description (Cont'd)

Wetted Parts	17-4 PH Stainless Steel
Electrical Connection	10-6 Bayonet, DIN Conn. IP67 Cable
Pressure Fitting	See Ordering Information Below
Weight	8.8oz (250g)

Electrical Data (Current)

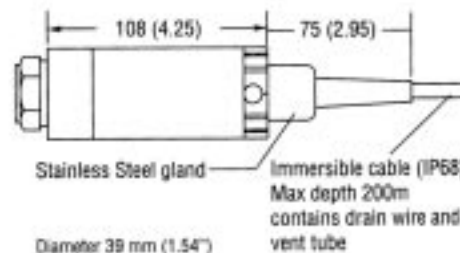
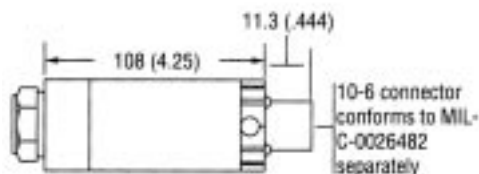
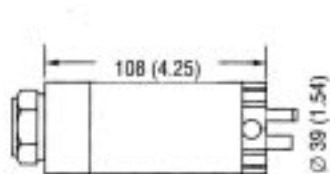
Circuit	2-Wire
Output*	4 to 20 mA
Loop Supply Voltage	8 to 40 VDC
Maximum Loop Resistance	(Vs-8) x 50 Ohms
*Zero output factory set to within ±0.16 mA	
*Span output factory set to within ±0.16 mA	

Pressure Media

Liquids or gases compatible with 321 Stainless Steel, 17-4 PH Stainless Steel, and Glass Filled Polyester

*Note: Hydrogen not recommended for use with 17-4 PH Stainless Steel

Outline Drawings



ORDERING INFORMATION

Code all blocks in table.

Example: Part No 5671030PGG2S1ZZL2 - For a Model 522 Pressure Transducer, 30 PSI, Gauge Pressure, 1/4 Male Pressure Fitting, 4-20 mA, Undamped Output, 10-6 Bayonet, 0.15% Accuracy

Model	Range	Pressure	Pressure Fitting	Output	Elec. Termination	Accuracy	Option
5671 = 567	015P = 15 PSI 030P = 30 PSI 060P = 60 PSI 100P = 100 PSI 150P = 150 PSI 200P = 200 PSI 300P = 300 PSI 500P = 500 PSI 600P = 600 PSI 10CP = 1000 PSI 15CP = 1500 PSI 30CP = 3000 PSI 40CP = 4000 PSI 50CP = 5000 PSI 60CP = 6000 PSI	001B = 1 BAR 0R6B = 1.6 BAR 2R5B = 2.5 BAR 004B = 4 BAR 006B = 6 BAR 010B = 10 BAR 016B = 16 BAR 025B = 25 BAR 040B = 40 BAR 060B = 60 BAR 100B = 100 BAR 160B = 160 BAR 250B = 250 BAR 400B = 400 BAR 500M = 500 Millibar/hPa	G = Gauge A = Absolute G2 = G 1/4 Male J7 = 7/16 -20 UNF-3A Male G4 = G1/2 Manometer 2M = 1/4-18 NPT Male 4M = 1/2-14 NPT Male <u>Immersible Sensors</u> W1 = Plastic Nose Cone W2 = Nose Cone w/Sink Weight W3 = Plastic Nose Cone w/Restrictor	11 = 4 to 20 mA, Undamped 1U = 4 to 20 mA, Damped 3 Second Response	B3 = 10-6 Bayonet Connector E2 = DIN #43650, Mate Supplied N2 = IP 67 Cable	S = 0.15% FS	H = Intrinsic Safe, Zener* H = Intrinsic Safe, Galvanic* *CENELEC approved intrinsically safe EExia IIC T4.

Please contact factory for configurations not shown.

While we provide application assistance on all Setra products, both personally and through our literature, it is the customer's responsibility to determine the suitability of the product in the application.

159 Swanson Road, Boxborough, MA 01719/Tel: 978-263-1400;
Toll Free: 800-257-3872; Fax: 978-264-0292; email: sales@setra.com

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