Model 567

Industrial Pressure Transducer

Gauge and Absolute Pressure

Setra'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.

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) for 0.5% of maximum span, and -4°F to 176°F (-20 to 80°C) for 1% of maximum span. Operating media temperatures as low as -22°F to 212°F (-20°C to 50°C), and gauge, and absolute 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.

Depending upon the electrical connection selected, when coupled with the Model 567 enclosure, which is fabricated in 321 SS, 17-4 PH SS, and Polyester, this unit is rated for IP40, IP65, or IP68 operation.

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. A custom designed ASIC performs signal amplification and temperature calibration. This technology 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
- ±0.15% FS Accuracy
- 5:1 Turndown for High Pressure Applications
- IP40, IP65, and IP68 Rated
- Intrinsic Safe Option
- Choice of Enclosure
- Meets CE Conformance Standards

When it comes to a product to rely on - choose the Model 567. When it comes to a company to trust - choose Setra

ISO 9001: 2000 Certified

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

setra

800-257-3872

159 Swanson Road, Boxborough, MA 01719/Telephone: 978-263-1400/Fax: 978-264-0292

Model 567 Specifications

Performance Data

Accuracy RSS* (at constant temp)	±0.15% FS
Thermal Effects**	
Compensated Range ℉ (℃)	+15 to +120 (-10 to +50)
Zero Shift %FS/100℉ (100℃)	0.25 (0.5)
Span Shift %FS/100℉ (100℃)	0.25 (0.5)
Compensated Range ℉ (℃)	-4 to +176 (-20 to ±80)
Zero Shift %FS/100℉ (100℃)	0.5 (1.0)
Span Shift %FS/100℉ (100℃)	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	2 x Full Scale (1.5 x FS for 400 Bar, ≥ 5000 psi)
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)
	>5 X Fs <=6000 Psi (400 Bar)

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

**Units calibrated at nominal 70℉. 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* ℉ (℃)	
for/DIN & 10-6 Bayonet Conn.*	-4 to +185 (-20 to +85)
for/IP 67 Cable*	-4 to +122 (-20 to +50)
Process /Media	-22 to +212 (-30 to100)
Storage ℉ (℃)	
for/DIN & 10-6 Bayonet Conn.*	-4 to +185 (-20 to +85)
for/IP 67 Cable*	-4 to +122 (-20 to +50)
Process /Media	-22 to +212 (-30 to100)
Vibration	35g peak sinusoidal, 5 to 2000 Hz
Shock	Withstands Free Fall to IEC 68-2-32 Proc 1

*Operating/Storage temperature limits of the connector only.

.

Physical Description

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

Physical Description (Cont'd)

Wetted Parts	17-4 PH Stainless Steel
Electrical Connection	10-6 Bayonet, Large DIN Conn., IP67 Immersible 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

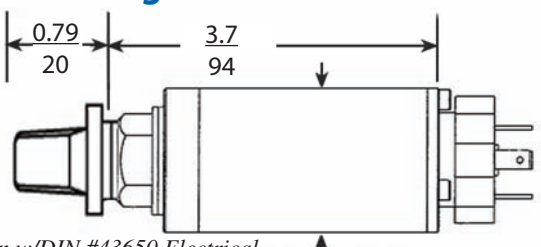
Pressure Media

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

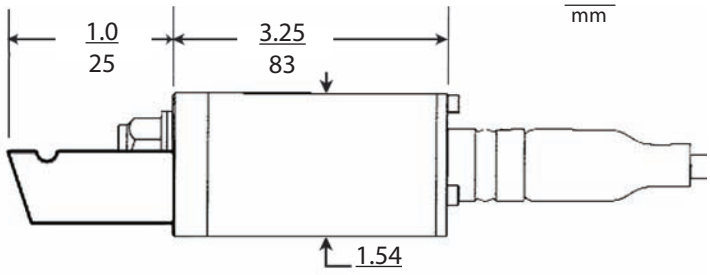
*Note: Hydrogen not recommended for use with 17-4 PH Stainless Steel

Outline Drawings

in
mm



Shown w/DIN #43650 Electrical Connector and 1/4-18 NPT Male Pressure Fitting



Shown w/Immersble Cable and Plastic Nose Cone

ORDERING INFORMATION

Code all blocks in table.

.**Example**: Part No 5671030PGG311B3S - For a Model 567 Pressure Transducer, 30 PSI, Gauge Pressure, G 1/4 Female Pressure Fitting, 4-20 mA, Undamped Output, 10-6 Bayonet, 0.15% Accuracy

☐☐☐☐ – ☐☐☐☐ — ☐ — ☐☐ — ☐☐ — ☐☐ — S — ☐

Model
5671 = 567

Range

015P = 15 PSI	**001B** = 1 BAR
030P = 30 PSI	**0R6B** = 1.6 BAR
060P = 60 PSI	**2R5B** = 2.5 BAR
100P=100 PSI	**004B** = 4 BAR
150P = 150 PSI	**006B** = 6 BAR
200P = 200 PSI	**010B** = 10 BAR
300P = 300 PSI	**016B** = 16 BAR
500P = 500 PSI	**025B** = 25 BAR
600P = 600 PSI	**040B** = 40 BAR
10CP = 1000 PSI	**060B** = 60 BAR
15CP = 1500 PSI	**100B** = 100 BAR
30CP = 3000 PSI	**160B** = 160 BAR
40CP = 4000 PSI	**250B** = 250 BAR
50CP = 5000 PSI	**400B** = 400 BAR
60CP = 6000 PSI	**500M** = 500 Millibar/hPa

Pressure
G = Gauge
A = Absolute (15 PSI up to 300 PSI)

Pressure Fitting
J7 = 7/16-20 UNF Male SAE #4 (J1926-2)
G3 = G 1/4 Female
G4 = G1/2 Male
2M = 1/4-18 NPT Male
4M = 1/2-14 NPT Male

Immersible Sensors
W1 = Plastic Nose Cone
W2 = Stainless Steel Nose Cone Sink Weight
W3 = Plastic Nose Cone w/Restrictor

Output
11 = 4 to 20 mA, Undamped
1U = 4 to 20 mA, Damped 3 Second Response

Elec. Termination
B3 = 10-6 Bayonet Connector
E2 = Large DIN #43650 Connector w/Mating Plug
UA = Molded Immersible Cable (Up to 200 Meters [656 ft.])

Accuracy
S = 0.15% FS

Option
B = Intrinsic Safe, Zener*
G = Intrinsic Safe, Galvanic*
*CENELEC approved intrinsically safe EEXIA IIC T4.

Please contact factory for configurations not shown.

SSP567 Rev A 04/16/03

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