

Model 526

General Purpose/Submersible Pressure Transducer

Gauge, Absolute, and Compound Pressure



Setra System's Model 526 General Purpose pressure transducer is designed with a thicker diaphragm for robust industrial and submersible applications that require exceptional stability and high accuracy.

The Model 526'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 high reliability with less than 0.2% drift per year.

Depending upon the electrical connection selected, when coupled with the Model 526 enclosure, which is fabricated in 316 SS/17-4 PH SS, this unit is rated for IP30, IP65, or IP68 operation.

The Model 526 offers 0.25% FS accuracy (optional 0.15% FS), compensated temperature range of -5°F to +180°F (-20°C to 80°C), and gauge, absolute, or compound pressure ranges from -14.7 psi up to 6000 psi.

The Model 526's modular design is offered in a wide choice of millivolt, voltage or current outputs over almost any pressure range, 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 sensor 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 compensation. 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
- HVAC-Compressors
- Refrigeration
- Robotics

Benefits

- Superior Stability
Avoids Down Time
- $\pm 0.25\%$ FS Accuracy
Optional $\pm 0.15\%$ Accuracy
- IP30, IP65, and IP68 Rated
- High Shock and
Vibration Resistance
- Meets CE Conformance
Standards

*When it comes to a product to rely on - choose the Model 526.
When it comes to a company to trust - choose Setra.*



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

setra
800-257-3872

Model 526 Specifications

Performance Data

Accuracy RSS* (at constant temp)	±0.25% Full Scale
	±0.15% Full Scale, Optional

Thermal Effects**

Compensated Range °F (°C) -5 to +180 (-20 to + 80)

Accuracy 0.25% Full Scale	
Zero Shift %FS/100°F (100°C)	0.8 (1.5)
Span Shift %FS/100°F (100°C)	0.8 (1.5)

Accuracy $\pm 0.15\%$ Full Scale	
Zero Shift %FS/100°F (100°C)	0.5 (1.0)
Span Shift %FS/100°F (100°C)	0.5 (1.0)

Long-Term Stability	0.2% FS/year
Response Time	0.5 ms

Proof Pressure	2 x FS (1.5 x FS for 400 Bar, >=5000 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°F. Maximum thermal error computed from this datum.

Pressure Media

Liquids or gases compatible with 17-4 PH Stainless Steel*

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

Specifications subject to change without notice.

Physical Description

Case Ratings	316, 17-4 PH Stainless Steel IP65 for Elec Codes B3, B1, E2 IP68 for Elec Code UA (Max. Depth 200 Meters H ₂ O) IP30 for Elec Code A2 w/Flying Leads
Wetted Parts	17-4 PH Stainless Steel
Electrical Connection	See Ordering Information Below
Pressure Fitting	See Ordering Information Below
Weight	3.5oz (100g)

Environmental Data

Temperature	
Operating* °F (°C)	
for Elec. Code B1, B3	-40 to +260 (-40 to +125)
for Elec Code A2, E2	-5 to +180 (-20 to +80)
for Elec Code UA	-5 to +125 (-20 to +50)
Storage °F (°C)	
for Elec. Code B1, B3	-40 to +260 (-40 to +125)
for Elec Code A2, E2	-5 to +180 (-20 to +80)
for Elec Code UA	-5 to +125 (-20 to +50)
Vibration	70g Peak to Peak Sinusoidal, 5 to 2000 Hz (Random)
Acceleration	100g Steady Acceleration in any Direction 0.32% F
Shock	20g, 11 ms, per MIL-STD-810E Method 516.4 Procedure

*Operating/Storage temperature limits of the connector only.

Electrical Data (Millivolt)

Circuit	4-Wire (+Exc. -Out, +Out, -Exc)
Excitation	10VDC (15VDC Max.) Regulated
Output*	100 mV (10mV/V)
Bridge Resistance	2600-6000 Ohms
*Zero output is factory set to 1.0% of Full Scale	
*Span output is factory set to 1.0% of Full Scale	

Electrical Data (Voltage)

Circuit	3 - Wire (Exc, Out, Com)
Excitation	1.5 VDC Above Span to 35 VDC @ 6mA **
Output*	0 to 5VDC, 0 to 10VDC, 0.5 to 5.5 VDC, 1 to 5 VDC, 1 to 6 VDC, 1 to 11 VDC, 0.1 to 5.1 VDC, 0.2 to 10.2 VDC

Current Consumption*** Approx.6 mA @ 7.5 VDC output

*Zero output is factory set to <1.0% of Full Scale.

*Span output is factory set to <1.0% of Full Scale.

**Temperatures > 100°C/212°F supply is limited to 24 VDC.

***Minimum Load Resistance: (FS output/2) Kohms

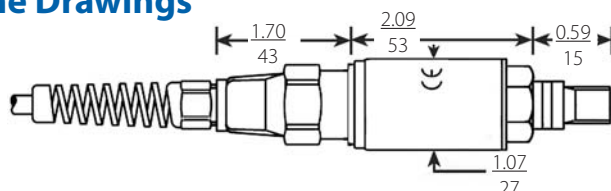
Electrical Data (Current)

Circuit	2-Wire
Output*	4 to 20 mA**
Loop Supply Voltage	24 VDC, (7-35 VDC)
Maximum Loop Resistance	(V _S -7) x 50 Ohms

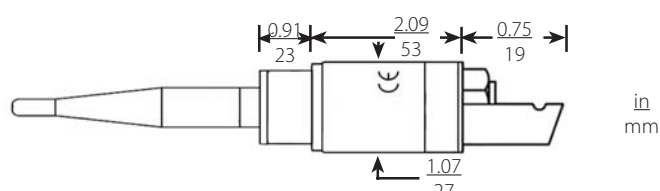
*Zero output factory set to within ± 0.16 mA.
*Span output factory set to within ± 0.16 mA.

**Temperatures > 100°C/212°F supply is limited to 24 VDC.

Outline Drawings



*Shown w/Conduit Connector with Cable
& 1/8-27 NPT Pressure Fitting*



Shown w/Molded Immersible Cable
& Plastic Nose Cone

ORDERING INFORMATION

Code all blocks in table.

Example: Part No 5261030PG1M11E2F - For a Model 522 Pressure Transducer, 30 PSI, Gauge Pressure, 1/8-27 NPT Male Pressure Fitting, 4-20 mA Output, Large Din Plug w/Mate, 0.25% Accuracy

5	2	6	1													
Model				Range				Pressure	Pressure Fitting	Output	Elec. Termination		Accuracy	Option		
5261 = 526				015P = 15 PSI	001B = 1 BAR	G = Gauge			1M = 1/8-27 NPT Male	BP = 100 mV	B3 = 10-6 Bayonet Connector		F = 0.25% FS	A = Intrinsic Safe		
				030P = 30 PSI	0R6B = 1.6 BAR	A = Absolute*			1F = 1/8-27 NPT Female	11 = 4-20 mA			S = 0.15% FS,	(ETL approved for		
				060P = 60 PSI	2R5B = 2.5 BAR	C = Compound*			2M = 1/4-18 NPT Male	28 = 1-6 VDC	UA = Molded Immersible Cable (up to 200 Meters [656 ft.])		Optional	Class 1, Div. 1,		
				100P=100 PSI	004B = 4 BAR	<i>*Compound and absolute ranges available through 300psi only.</i>			J7 = 7/16 -20 UNF Male SAE #4 (J1926-2)	2R = 1-11 VDC	B1 = 8-4 Bayonet Connector			Groups C & D, hazardous areas.)		
				150P = 150 PSI	006B = 6 BAR				G2 = G 1/4 Male	27 = 1-5 VDC	A2= 1/2" Conduit Connector w/1 Meter (3.28 ft.) Flying Leads					
				200P = 200 PSI	010B = 10 BAR				G3 = G 1/4 Female	24 = 0.5-5.5 VDC	E2 = Large DIN 43650 Connector w/Mating Plug					
				300P = 300 PSI	016B = 16 BAR					2B = 0-5 VDC						
				500P = 500 PSI	025B = 25 BAR					2C = 0-10 VDC						
				600P = 600 PSI	040B = 40 BAR					29 = 0.2-10.2 VDC						
				10CP = 1000 PSI	060B = 60 BAR					22 = 0.1-5.1 VDC						
				15CP = 1500 PSI	100B = 100 BAR											
				20CP = 2000 PSI	160B = 160 BAR											
				30CP = 3000 PSI	250B = 250 BAR											
				40CP = 4000 PSI	400B = 400 BAR											
				50CP = 5000 PSI	600B = 600 BAR											
				60CP = 6000 PSI												
				000P = -14.7 to 0 PSI												
				015P = -14.7 to 15 PSI												
				045P = -14.7 to 45 PSI												
				085P = -14.7 to 85 PSI												
				135P = -14.7 to 135 PSI												
				185P = -14.7 to 185 PSI												
				285P = -14.7 to 285 PSI												

Submersible Units

W1 = Plastic Nose Cone

W2 = Stainless Steel Sink Weight Nose Cone

Please contact factory for configurations not shown.

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