

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.*



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<http://www.setra.com>

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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 ±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 316, 17-4 PH Stainless Steel
Ratings IP65 for Elec Codes B3, B1, E2
IP68 for Elec Code UA (Max. Depth 200 Meters H₂O)
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 10 VDC (15 VDC 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

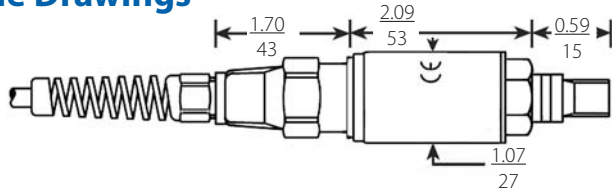
Electrical Data (Current)

Circuit 2-Wire
Output* 4 to 20 mA**
Loop Supply Voltage 24 VDC, (7-35 VDC)
Maximum Loop Resistance (Vs-7) x 50 Ohms
*Zero output factory set to within ±0.16 mA.

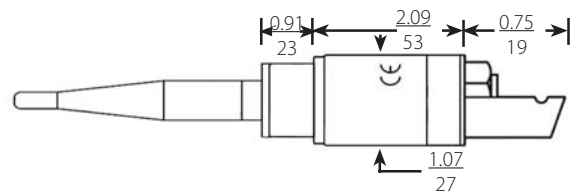
*Span output factory set to within ±0.16 mA.

**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

in mm

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 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 20CP = 2000 PSI 30CP = 3000 PSI 40CP = 4000 PSI 50CP = 5000 PSI 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	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 600B = 600 BAR	G = Gauge A = Absolute* C = Compound* <i>*Compound and absolute ranges available through 300psi only.</i>	1M = 1/8-27 NPT Male 1F = 1/8-27 NPT Female 2M = 1/4-18 NPT Male J7 = 7/16 -20 UNF Male SAE #4 (J1926-2) G2 = G 1/4 Male G3 = G 1/4 Female	BP = 100 mV 11 = 4-20 mA 28 = 1-6 VDC 2R = 1-11 VDC 27 = 1-5 VDC 24 = 0.5-5.5 VDC 2B = 0-5 VDC 2C = 0-10 VDC 29 = 0.2-10.2 VDC 22 = 0.1-5.1 VDC	B3 = 10-6 Bayonet Connector UA = Molded Immersible Cable (up to 200 Meters [656 ft.]) B1 = 8-4 Bayonet Connector A2 = 1/2" Conduit Connector w/1 Meter (3.28 ft.) Flying Leads E2 = Large DIN 43650 Connector w/Mating Plug	F = 0.25% FS S = 0.15% FS, Optional	A = Intrinsic Safe (ETL approved for Class 1, Div. 1, Groups C & D, hazardous areas.)					

Submersible Units

W1 = Plastic Nose Cone
W2 = Stainless Steel Sink Weight Nose Cone

Please contact factory for configurations not shown.