

Model 256 Gauge Pressure Transducer

Ranges: 0-1 to 0-10000 PSI
0-1.6 to 0-700 BAR
Corrosive Liquids or Gases



Setra's Model 256 industrial pressure transducer is one of the most rugged and reliable sensors available. The Model 256 is packaged in a die-cast aluminum enclosure that is specifically designed for NEMA4/IP65 service. Setra's robust capacitive design is resistant to environmental effects, such as shock, vibration, temperature and EMI/RFI.

Superior mechanical and thermal stability is achieved through Setra's patented variable capacitance sensor. Its fundamentally simple design features an insulated electrode plate in close proximity to the sensor diaphragm, which forms a variable capacitor. As pressure increases or decreases, the capacitance changes. This change

in capacitance is detected and converted to a linear analog signal by Setra's custom ASIC based circuit, producing an output signal proportional to applied pressure.

Available in a wide variety of gauge pressure ranges, the 256 also features adjustable potentiometers for zero and span settings.

Only 3.6" high x 4.0" wide, the Model 256 is designed for compact installations. The removable cover provides easy access to the internal terminal strip for wiring. Installation is quick and easy with 1/2 inch internal threaded conduit ports for electrical termination.

Applications

- Process Control
- Chemical Processing
- Agricultural Irrigation Systems
- Natural Gas Pipeline Monitoring
- Grain Processing
- Industrial Pressure Monitoring

Benefits

- Low Cost
- High Accuracy
- NEMA 4/IP65
- Wide Operating Temperature Range
- Compatible with a Wide Range of Gases or Liquids
- Corrosive Resistant Stainless Steel Wetted Parts
- Choice of Voltage or Current Output
- Operates on Low-Cost Unregulated Power Supply

When it comes to a product to rely on - choose the Model 256. When it comes to a company to trust - choose Setra - an ESOP (Employee Owned) Company.



800-257-3872

Visit Setra Online:
<http://www.setra.com>

PSI Pressure		
Ranges	Proof Pressure	Burst Pressure
0-1	2	250
0-2	4	250
0-5	10	250
0-10	20	500
0-25	100	500
0-50	150	750
0-100	300	1000
0-200	400	2000
0-250	500	2000
0-500	1000	3000
0-1000	2000	5000
0-3000	4500	7500
0-5000	7500	10000
0-10000	12000	12500

Bar Pressure		
Ranges	Proof Pressure	Burst Pressure
0-1.6	6	40
0-4	10	50
0-6	18	60
0-10	30	80
0-16	32	130
0-25	50	170
0-40	80	240
0-60	120	300
0-100	200	400
0-250	380	550
0-400	600	800
0-700	800	1350

NOTE: Setra quality standards are based on ANSI-Z540-1. The calibration of this product is NIST traceable. U.S. Patent nos. 3859575, 4054833

Model 256 Specifications

Performance Data

	Ranges 25 PSI and Higher	Ranges Less Than 25 PSI
Accuracy RSS* (at constant temp)	±0.13% FS	±0.25% FS
Non-Linearity, BFSL	±0.10% FS	±0.22% FS
Hysteresis	0.08% FS	0.10% FS
Non-Repeatability	0.02% FS	0.05% FS
Thermal Effects**		
Compensated Range °F	-4 to +176	-4 to +176
Compensated Range °C	-20 to +80	-20 to +80
Zero Shift %FS/100°F	±1.0	±2.0
Zero Shift %FS/50°C	±0.9	±1.8
Span Shift %FS/100°F	±1.5	±1.5
Span Shift %FS/50°C	±1.4	±1.4
Long Term Stability	0.5% FS/YR	0.5% FS/YR
Warm-up Shift	±0.1% FS total	±0.1% FS total

*RSS of Non-Linearity, Hysteresis and Non-Repeatability.
**Units calibrated at nominal 70°F. Maximum thermal error computed from this datum.

Environmental Data

Temperature	
Operating °F (°C)	-40 to +185 (-40 to +85)
Storage °F (°C)	-40 to +185 (-40 to +85)
Shock	200g
Vibration	20g
Environmental Protection	NEMA 4/IP65

*Operating temperature limits of the electronics only.
Pressure media temperatures may be considerably higher or lower.

Physical Description

Case	Die-Cast Aluminum
Electrical Connections	Two 1/2" internal conduit ports
Pressure Fitting	1/4" NPT external
Weight	13.4 ounces

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.

Application of some available options may impact standard specifications.

Electrical Data (Voltage)

Circuit	3-Wire (Exc, Out, Com)
Excitation	9 to 30 VDC
Output*	0.1-5.1 VDC for Ranges ≥ 25 PSI**
Output Impedance	100 Ohms
Power Consumption	0.15 Watts

*Calibrated into a 50K ohm load, operable into a 5000 ohm load or greater.

**Zero output factory set to within ±25 mV.

**Span (Full Scale) output factory set to within ±50 mV.

Electrical Data (Current)

Circuit	2-Wire
Output*	4-20 mA for All Ranges**
External Load	0 to 800 Ohms

Minimum supply voltage (VDC) = 9 + 0.02 x (Resistance of receiver plus line).

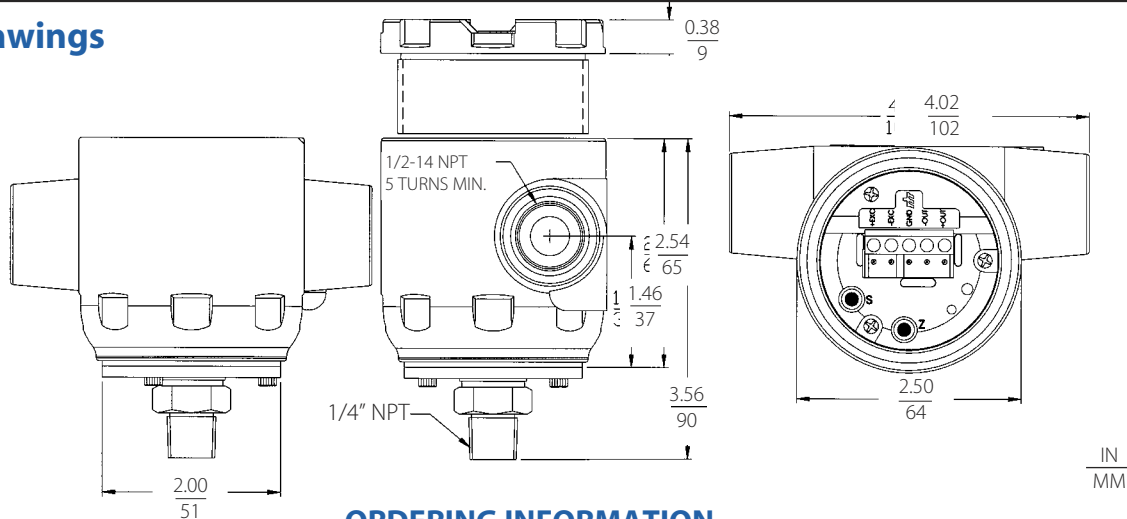
Maximum supply voltage (VDC) = 30 + 0.004 x (Resistance of receiver plus line).

*Calibrated at factory with a 24 VDC loop supply voltage and a 250 ohm load.

**Zero output factory set to within ±0.08 mA.

**Span (Full Scale) output factory set to within ±0.16 mA.

Outline Drawings



ORDERING INFORMATION

Code all blocks in table.

Example: Part No. 2561500PG2M11 for a 256 Transducer, 0 to 500 PSIG Range, 1/4" NPT Pressure Fitting, 4-20 mA Output.

Model	Ranges	Pressure	Pressure Fitting	Output	Optional
2561 = 256	001P = 1 PSI 002P = 2 PSI 005P = 5 PSI 010P = 10 PSI 015P = 15 PSI 025P = 25 PSI 050P = 50 PSI 100P = 100 PSI 150P = 150 PSI 200P = 200 PSI 250P = 250 PSI 500P = 500 PSI 600P = 600 PSI 10CP = 1000 PSI 30CP = 3000 PSI 50CP = 5000 PSI 10KP = 10000 PSI	1R6B = 1.6 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 700B = 700 Bar	G = Gauge Ranges < 25 PSI 2M = 1/4" NPT (Male) 1M = 1/8" NPT (Male) Ranges ≥ 25 PSI 2M = 1/4" NPT (Male) 4M = 1/2" NPT (Male) 2F = 1/4" NPT (Female)	Ranges < 25 PSI 11 = 4-20 mA Ranges ≥ 25 PSI 11 = 4-20 mA 22 = 0.1-5.1 VDC	C = Calibration Certificate

Please contact factory for versions not shown.