Model 201

Very Low Differential Gauge Pressure

DESCRIPTION

Setra's Model 201 is an accurate, low cost pressure transducer for measuring very low differential of gauge pressure. The 201's all-welded no o-ring construction results in a leak-free design, idea for the most critical low range applications. The 201 process connection is designed to be used with pressure media compatible with stainless steel and 600 Series Inconel.

Setra's patented variable capacitance sensor design combines the ultimate in simplicity, with high accuracy and superior thermal stability. It features an Inconel diaphragm and an insulated electrode. As pressure increases or decreases, the capacitance changes. This change in capacitance is detected and converted to a fully conditioned linear current output signal.

It's rugged design, 45 PSI high overpressure capability, and wide operating temperature make the Model 201 ideal for the most demanding applications.

BENEFITS

- Low Full Scale Range
- All-Welded Construction
- No O-Rings
- Wide Compensated Operating Temp.
- High Overpressure of 45 PSI
- Can be used for Gauge or Differential Pressure Measurements
- Meets CE Conformance Standards

APPLICATIONS

- Vapor Recovery Systems
- Exhaust Gas Control Systems
- Industrial Scrubbers

SPECIFICATIONS

Performance Data		Physical Description		Electrical Data (Voltage)	
Accuracy RSS [1] (at constant temperature)	±0.5% FS	Case [4]	Stainless Steel	Circuit	2-Wire
Non-Linearity, (BFSL)	±0.45% FS	Electrical Connection	2ft. Multiconductor Cable (Std), 3 Screw Terminal Block	Output [8]	4 to 20 mA [9]
Hysteresis	0.25% FS	Pressure Fitting	1/4" NPT Internal	External Load	0 to 800 Ohms
Non-Repeatability	0.25% FS	Weight	6 ounces	Minimum Supply Voltage (VDC)	12 + 0.02 x (Resistance of receiver plus line)
Thermal Effects [2]		Vent [5]	Through Cable	Maximum Supply Voltage (VDC)	30 + 0.004 x (Resistance of receiver plus line)
Compensated Range °F(°C)	-25 to +175 (-33 to +80)	Zero/Span Adjustment	Top External Access	**Pressure Media**	
Zero Shift %FS/°F (%FS/°C)	2.0 (1.8)	**Environmental Data**		**Positive Pressure Media** Liquids or Gases Compatible with Stainless Steel and Inconel **Reference Pressure Media** Clean Dry Air or Non-Corrosive G	
Span Shift %FS/°F (%FS/°C)	1.5 (1.4)	Temperature			
Warm-Up Shift	0.1% FS/15 Minutes	Operating °F(°C) [6]	-40 to +175 (-40 to +80)		
Response Time	20 Millisecond	Storage °F(°C)	-40 to +185 (-40 to +85)		
Proof Pressure [3]	45 PSI	Acceleration	10g Maximum		
Burst Pressure	100 PSI	Shock [7]	50g Operating		

[1] RSS of Non-Linearity, Hysteresis and Non-Repeatability.
[2] Units calibrated at nominal 70°F. Maximum thermal error is computed from this datum.
[3] Proof Pressure: The maximum pressure that may be applied without changing performance beyond specifications (±0.5% FS zero shift)
[4] NEMA 4 Rated when A1 electrical termination is ordered
[5] When T1 terminal strip is ordered, venting is through zero or span screw.
[6] Operating temperature limits of the electronics only. Pressure media temperatures may be considerably higher or lower.
[7] Mil-Std. 202F, Method 213D, Cond. C
[8] Calibrated at factory with a 24 VDC loop supply voltage and a 250 ohm load.
[9] Zero output factory set to within ±.08mA. Span (Full Scale) output factory set to within ±.08mA

GAUGE PRESSURE RANGES

0 to 2 PSI	0 to 5"W.C.	0 to 10 mbar	0 to 1 kPa
0 to 20 PSI	0 to 10"W.C.	0 to 20 mbar	0 to 2 kPa
0 to ±1 PSI	0 to 50"W.C.	0 to 100 mbar	0 to 10 kPa
0 to ±2 PSI	0 to ±2.5"W.C.	0 to ±5 mbar	0 to ±0.5 kPa
	0 to ±5"W.C.	0 to ±10 mbar	0 to ±1 kPa
	0 to ±25"W.C.	0 to ±20 mbar	0 to ±5 kPa

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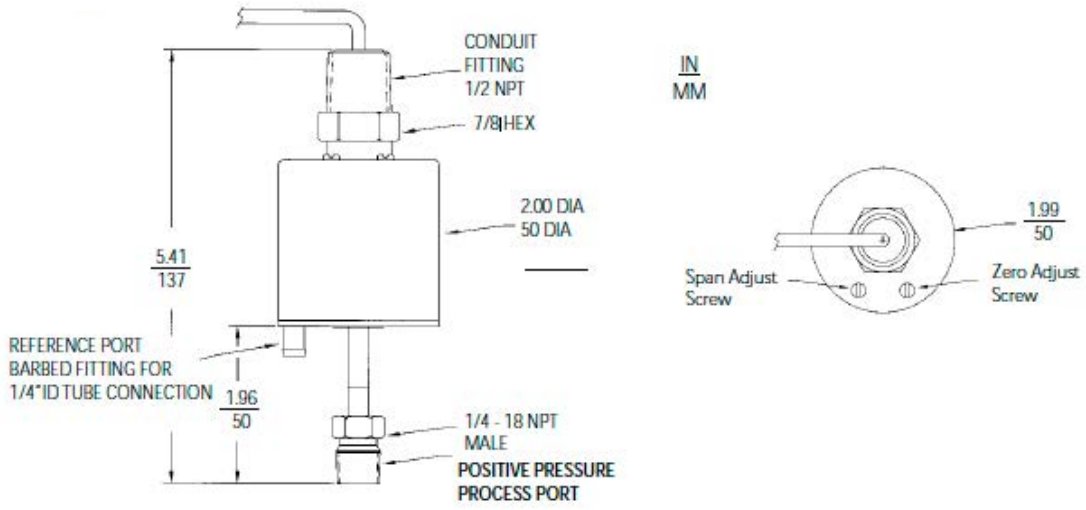
DRAWINGS & DIMENSIONS



ORDERING INFORMATION

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Model		Pressure Range				Fitting		Output		Termination		Accuracy	
2011	201	005WD	5 in. W.C.	001KD	1 kPa	2M	1/4" 18 NPT Male	11	4 to 20 mA	A1	Conduit	H	±0.5% FS
		010WD	10 in. W.C.	002KD	2 kPa	2T	1/4" Tube Stub			02	2 ft. of Cable	F	±0.25% FS
		050WD	50 in. W.C.	010KD	10 kPa	2F	1/4" 18 NPT Female			T1	Terminal Strip		
		2R5WB	±2.5 in. W.C.	0R5KB	±0.5 kPa	J7	7/16" SAE 37° Flare						
		005WB	±5 in. W.C.	001KB	±1 kPa								
		025WB	±25 in. W.C.	005KB	±5 kPa								
		002PD	2 PSI	010MD	10 Millibar								
		020PD	20 PSI	020MD	20 Millibar								
		001PB	±1 PSI	100MD	100 Millibar								
		002PB	±2 PSI	005MB	±5 Millibar								
				010MB	±10 Millibar								
				050MB	±50 Millibar								

Ordering Example: Part No. 2011005WG2M1102H is a Model 201, 0 to 5 in. W.C., 1/4 NPT Fitting, 4 to 20 mA Output, 2 ft. of Cable and 0.5% FS Accuracy.

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