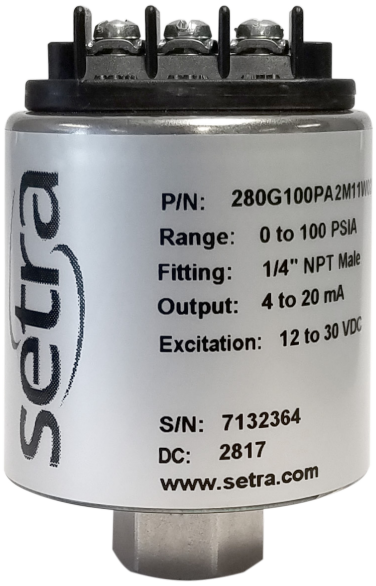
Model 280G

Gauge, Compound & Absolute Pressure Transducer



Setra's Model 280 is a high accuracy transducer for measuring gauge, absolute and compound pressure offering superior performance at an affordable price. Its highly-engineered range specific capacitance sensor enables accuracies up to ±0.073% FS giving the 280 superior linearity to competitive sensors. The 280's design offers customers a low-cost solution for measuring absolute pressure in Test and Measurement applications. The slim design and simple electrical interface allow users to install the unit in many difficult applications. The Model 280 has standard pressure ranges from 25 PSI to 10,000 PSI.

High Accuracy For Demanding Applications

The Model 280 pressure transducer's variable capacitance design uses an all stainless steel sensor cap designed for a specific pressure range. The sensor is linearized and thermally compensated during manufacturing to optimize the sensor's linearity for maximum accuracy in demanding applications.

Low Cost Absolute Sensor

The Model 280 is Setra's highest price to performance sensor for measuring absolute pressure. The simple configurable design enables the transducer to be configured for an absolute reference by adding a hermetically-sealed evacuated enclosure to the existing sensor design, allowing for an affordable price without sacrificing quality.

Improved Serviceability

The transducer's pressure and electrical fittings cover many installation configurations, allowing it to fit into most applications. The Model 280G is equipped with zero and span potentiometers, allowing the user to maintain the high performance over the life of the sensor.

- **High Price-to-Performance Ratio**
- **Rugged Enough For Harsh Applications**
- **Stainless Steel Wetted Materials**

Model 280 Features:

- ±0.073% FS Accuracy
- High Level Output: 0-5 VDC or 4-20 mA
- Solid Stability For Confident Installations
- Exceptional EMI/RFI Performance Prevents False Shutdown
- User Accessible Zero and Span Adjustments
- CE & RoHS compliant

Applications:

- High Pressure
- General Purpose
- Test Stands
- Hydraulics and Pneumatics

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Gauge, Compound & Absolute Pressure Transducer

ORDERING INFORMATION

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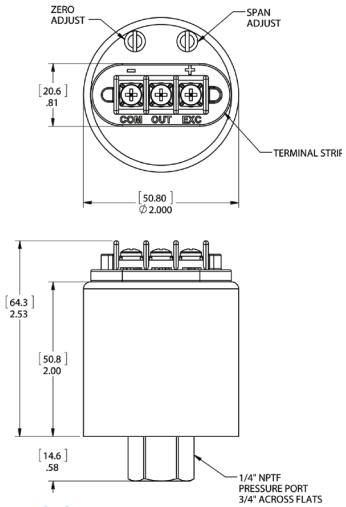
Model	Pressure Range				Pressure Type		Fitting		Output		Termination		Accuracy		Options[2]	
280G= Model 280G	025P	0 to 25 PSI	1R6B	0 to 1.6 Bar	G	Gauge	2F	1/4" NPT Int.	11	4 to 20 mA	T1	Terminal Strip	W	±0.11% FS	NN	None
	050P	0 to 50 PSI	004B	0 to 4 Bar	C	Compound			2S	0.08 to 5.08 VDC (24 VDC EXC)			9[1]	±0.073%	C	11 Point Cal Cert
	100P	0 to 100 PSI	006B	0 to 6 Bar	A	Absolute[1]			3S	0.08 to 5.08 VDC (12 VDC EXC)					Y	Clean For Oxygen
	200P	0 to 200 PSI	010B	0 to 10 Bar											D	Mate Datum
	250P	0 to 250 PSI	016B	0 to 16 Bar											L	Etched Tags
	500P	0 to 500 PSI	025B	0 to 25 Bar												
	10CP	0 to 1,000 PSI	040B	0 to 40 Bar												
	30CP	0 to 3,000 PSI	060B	0 to 60 Bar												
	50CP	0 to 5,000 PSI	100B	0 to 100 Bar												
	10KP	0 to 10,000 PSI[1]	160B	0 to 160 Bar												
			250B	0 to 250 Bar												
			400B	0 to 400 Bar												
			700B	0 to 700 Bar[1]												

[1] Absolute pressure option not available in 10,000 PSI or 700 Bar ranges
[2] Both boxes must filled in alphabetical order:
- If No options: N + N
- If 1 option: Option Code + N
- If 2 options: Option Code + Option Code

Ordering Example: 280G025PG2F11T1WC - Model 280G, 0 to 25 PSIG, Gauge pressure, 1/4" NPT Female fitting, 4 to 20 mA output, Terminal Strip, ±0.11% FS Accuracy, 11 Point Cal Cert option

DIMENSIONS



PROOF PRESSURE

PSIG RANGES		
Gauge Pressure	Proof Pressure	Burst Pressure
0-25	75	400
0-50	150	750
0-100	300	1,000
0-250	500	2,000
0-500	1,000	3,000
0-1,000	2,000	5,000
0-3,000	4,500	7,500
0-5,000	7,500	10,000
0-10,000	12,500	20,000
3-15	30	200

Note: Setra quality standards are based on ANSI-Z540-1. The calibration of this product is NIST traceable.

BAR RANGES		
Gauge Pressure	Proof Pressure	Burst Pressure
1.6	5	28
4.0	10	50
6.0	18	60
10	30	80
16	32	130
25	50	170
40	80	240
60	120	300
100	200	400
160	250	500
250	380	550
400	600	800
700	800	1,350

GENERAL SPECIFICATIONS

Performance Data		Physical Description	
Accuracy RSS[1] (at constant temperature)	±0.11% FS	Pressure Fittings	See Ordering Information
Non-Linearity, (BFSL) 25 PSIG range[2]	±0.1% FS ±0.2% FS	Vent	Through strip terminal
Hysteresis	0.08% FS	Electrical Connection	3-Pos Terminal Strip ft.
Non-Repeatability	0.02% FS	Case	Stainless Steel
Response Time	10 milliseconds	Zero/Span Adjustments	Top External Access
Long Term Stability	0.5% FS/1 YR	Weight (approx.)	6 oz
Thermal Effects		**Electrical Data (Voltage)**	
Compensated Range	-4 to +176°F (-20 to +80°C)	Excitation/Output	12 to 28 VDC Reverse Excitation Protected
Zero Shift	1.0 (0.9)	Power Consumption	<0.15 watts (approx. 5mA @24VDC)
Span Shift	1.5 (1.4)	Output[8]	0 to 5 VDC[9]
Pressure Media		Output Impedance	100 ohms
Gases or liquids compatible with 17-4 PH or 15-5 PH Stainless Steel.[3]		Circuit	3-Wire (Exc, Out, Com)
Environmental Data		Output Noise	0.0068V RMS
Temperature		**Electrical Data (Current)**	
Operating[4]	-40 to +185°F (-40 to +85°C)	Circuit	2-Wire
Storage	-40 to +185°F (-40 to +85°C)	Output[10]	4 to 20 mA[11]
Acceleration	10g Maximum[5]	External Load	0 to 800 ohms
Shock[6]	200g Operating	Min. Supply Voltage (VDC) = 9 +0.02 x (Resistance of receiver plus line)	
Vibration[7]	20g 50-2000 Hz	Max. Supply Voltage (VDC) = 30 + 0.004 x (Resistance of receiver plus line)	

[1] RSS of Non-Linearity, Non-Repeatability and Hysteresis
[2] 25 PSIG range accuracy is ±0.22% of Full Scale output
[3] Hydrogen not recommended for use with 17-4 PH or 15-5 PH stainless steels.
[4] The high temperature limit of the cable is 200°F (95°C)
[5] Shift in output reading <0.05 psi/g typical; pressure port axis only
[6] Mil-Std. 202, Method 213B, Cond. C
[7] Mil-Std. 202, Method 204, Cond. C
[8] Calibrated into a 50K ohm load, operable into a 5000 ohm load or greater
[9] Zero output factory set to 30mV nominal. Span (FS) output factory set to w/in ±50mV.
[10] Calibrated at factory with a 24VDC loop supply voltage and 250ohm load.
[11] Zero output factory set to w/in ±0.08mA. Span (FS) output factory set to w/in ±0.16mA.

Specifications subject to change without notice.

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