

# Model 276

## Low Cost Barometric Pressure Transducer

The Model 276 barometric and absolute transducer is designed specifically for OEM applications and system integrators. The 276 brings value to the end customer through its small footprint and stable SETRACERAM™ ceramic sensor. These features enable the 276 to outperform the competition in the price sensitive OEM market. The 276 offers flexibility for designers with multiple electrical and mechanical options, helping reduce costs and deliver projects on time.

### Flexible Design For OEM Applications

The Model 276 pressure transducer is ideal for OEMs and system integrators in the environmental pressure measurement market. The 276 offers multiple options to customize which allows designers to seamlessly integrate the 276 into new or existing hardware and software interfaces.

### Improved Performance With Ceramic Sensor

The 276 utilizes a variable capacitance sensor that is made using ceramic material fused together with glass and gold to form the SETRACERAM™ pressure element. This stable material and design offers class leading thermal performance and low hysteresis, allowing it to be integrated into demanding installations. The ceramic sensor enables improved performance compared to other stainless steel sensors, enabling the 276 to give accurate measurements and better test results.



- Reduce System Enclosure Size
- Multiple Power Options
- Low Power Consumption

### Model 276 Features:

- High Accuracy:  $\pm 0.25\%$  FS
- Stable Ceramic Sensor
- Environmentally Rugged
- Compact Size: 2" dia. x 1" wide
- Excellent Long-Term Stability: 0.25% FS/6 mo.
- Fast Response Time

### Applications

- Environmental Monitoring Systems
- Wind Measurement Systems
- Weather & Environmental Data Logging
- Cleanroom Barometric Pressure Compensation
- Automotive Emissions Test Equipment

# Model 276

## Low Cost Barometric Pressure Transducer



### ORDERING INFORMATION

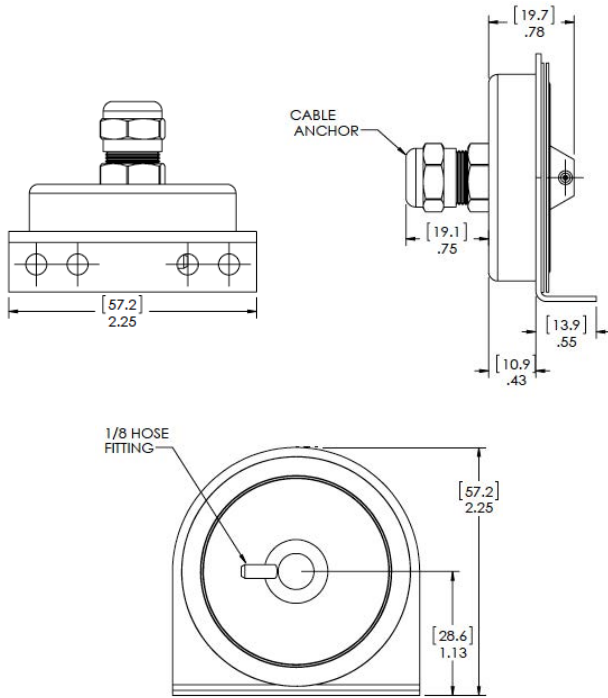
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Model	Pressure Range		Units		Pressure Type		Fitting		Output		Termination		Accuracy		Options	
2761 = 276	600	600-1100	M	mb/hPa	A	Absolute	1B	1/8" Push Tube Fitting	22	0.1 to 5.1 VDC (24 VDC EXC)	02	2' Cable	F	±0.25% FS	NN	None
	800	800-1100	M	mb/hPa			1M	1/8" NPT External	32	0.1 to 5.1 VDC (12 VDC EXC)	10	10' Cable	T	±0.1% FS	C	11 PT Cal. Certificate
	020	20	p	PSI					45	0.5 to 4.5 VDC (5 VDC EXC)	25	25' Cable			D	Mate with Datum
											XX	Consult factory for other cable lengths			L	Etched SS Tag

Example: Part No. 2761600MA1B2202FNN = Model 276, 600 to 1100 mb/hPa, Absolute Pressure, 1/8" Push Tube Fitting, 0.1 to 5.1 VDC Output, 2' Cable Termination, ±0.25% FS Accuracy.

Both boxes must be filled in alphanumeric order:  
 • If No options: N + N  
 • If 1 option: Option Code + N  
 • If 2 options: Option Code + Option Code

### DIMENSIONS



### GENERAL SPECIFICATIONS

Performance Data		Environmental Data	
Accuracy RSS <sup>1</sup> (at constant temp)	±0.25% FS <sup>2</sup>	Temperature	
Non-Linearity (BSFL)	±0.22% FS	Operating °F(°C)	0 to +175 (-18 to +79)
Hysteresis	.05% FS	Storage °F(°C)	-65 to +250 (-55 to +121)
Non-Repeatability	.05% FS	Vibration	2g from 5Hz to 500 Hz
Resolution	Infinite, limited only by output noise level (0.005% FS)	Acceleration	10g
Thermal Effects <sup>3</sup>		Shock	50g Operating, 1/2 since 10ms
Compensated Range °F(°C)	+30 to +130 (0 to +55)	Electrical Data (Voltage)	
Zero/Span Shift %FS/°F (%FS/°C)	1% FS	Circuit	3-Wire <sup>5</sup> (Exc, Out, Com)
Resolution	Infinite, limited only by output noise level (0.0005% FS)	Power Consumption	0.2 Watts (24 VDC)
Time Constant	10 milliseconds to reach 90% final output with step function pressure input	Output Impedance	
Long Term Stability	0.25% FS/6 months	Output Noise	<200 microvolts RMS (0 Hz to 100 Hz)

Pressure Media	
Non-condensing air or gas compatible with stainless steel, alumina ceramics, gold and elastomer.	
Physical Description	
Case	Stainless Steel
Electrical Connection	2 ft. Multiconductor Cable
Pressure Fitting	1/8" Tube Fitting
Approvals	
CE, RoHS	

<sup>1</sup> RSS of Non-Linearity, Hysteresis and Non-Repeatability. Higher accuracy units available on special order.  
<sup>2</sup> FS = 300mb for 800-1100 range; 500 for 600-1100 mb range; and 20 PSI for 0 to 20 PSIA.  
<sup>3</sup> Units calibrated at a nominal 70° F. Maximum thermal error computed from this datum.  
<sup>4</sup> Operating temperature limits of the electronics only. Pressure media temperatures may be considerable higher or lower.  
<sup>5</sup> The separate leads for +EXC, -EXC, +Out, -Out are commoned internally. The shield is connected to the case. For best performance, either the -Exc or -Out should be connected to the case. Unit is calibrated at the factory with -Exc connected to the case. The insulation resistance between all signal leads are tied together and case ground is 100 ohms minimum at 25 VDC.  
<sup>6</sup> Zero and Full Scale Outputs are factory set to within ±0.25% Full Scale.

### PROOF PRESSURE

Type of Pressure	Pressure Range	Maximum Pressure
Barometric	600 to 1100 mb/hPa 800 to 1100 mb/hPa	20 PSIA 20 PSIA
Absolute	0-20 PSIA	30 PSIA