

## Low Pressure Differential, Gage, Vacuum Gage/Amplified

### 160PC SERIES ORDER GUIDE, VACUUM GAGE AND GAGE TYPE

Catalog Listing	Pressure Range "H <sub>2</sub> O	Shift Null, Sensitivity, Combined**			Sensitivity V/"H <sub>2</sub> O	Overpressure psi Max.	Linearity, B.F.S.L.		Repeatability & Hysteresis % Span Typ.
		25 to 5° 25 to 45°C	25 to -18° 25 to +63°C	25 to -40° 25 to 85°C			P2 > P1	P2 < P1	
		%Span							
		Max.	Max.	Max.			Max.	Max.	
161PC01D	0-27.68	---	±1.00	±2.00	0.18	5	---	±1.00	±0.15 Vacuum Gage
162PC01G	0-27.68	---	±1.00	±2.00	0.18	5	---	±1.00	±0.15 Gage

### 160PC SERIES ORDER GUIDE, DIFFERENTIAL TYPE

Catalog Listing	Pressure Range "H <sub>2</sub> O	Shift Null, Sensitivity, Combined**			Sensitivity V/"H <sub>2</sub> O	Overpressure psi Max.	Linearity, B.F.S.L.		Repeatability & Hysteresis % Span Typ.
		25 to 5° 25 to 45°C	25 to -18° 25 to +63°C	25 to -40° 25 to 85°C			P2 > P1	P2 < P1	
		%Span							
		Max.	Max.	Max.			Max.	Max.	
162PC01D	0-27.68	---	±1.00	±2.00	0.18	5	±2.00	---	±0.15
163PC01D36	±5	±1.00	---	---	0.50	5	±2.00	±1.00	±0.25
164PC01D37	0-10	±1.00	---	---	0.50	5	±2.00	---	±0.25
163PC01D75	±2.5	±1.25	---	---	1.00	5	±2.00	±1.00	±0.25
164PC01D76	0-5	±1.25	---	---	1.00	5	±2.00	---	±0.25

### 160PC SERIES ORDER GUIDE, DIFFERENTIAL TYPE @ 10 VDC ±0.01 EXCITATION, 25°C

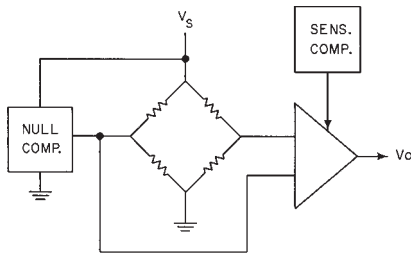
Catalog Listing	Pressure Range cmH <sub>2</sub> O	Shift Null, Sensitivity, Combined**			Sensitivity V/cmH <sub>2</sub> O	Overpressure cmH <sub>2</sub> O Max.	Linearity, B.F.S.L.		Repeatability & Hysteresis % Span Typ.
		25 to 5° 25 to 45°C	25 to -18° 25 to +63°C	25 to -40° 25 to 85°C			P2 > P1	P2 < P1	
		%Span							
		Max.	Max.	Max.			Max.	Max.	
163PC01D48	-20 to +120	±0.75*	---	---	0.36	350	±1.5	---	±0.15

\*Null shift. Span shift is ±1.00/Span

\*\*% Span specification applies to each shift independently (Null, Sensitivity, or Combined)

## Low Pressure Differential, Gage, Vacuum Gage/Amplified

### INTERNAL CIRCUITRY



### NULL AND SENSITIVITY TEMPERATURE SHIFT

Amplified pressure sensors are 100% tested to insure that the maximum null and sensitivity temperature shift does not exceed the specification. The diagram below illustrates how null and sensitivity shift relates to temperature. Note that the maximum shift occurs at temperature extremes. Therefore, if a sensor is not ex-

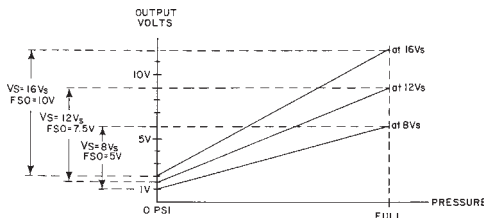
posed to the entire temperature range, the maximum null and sensitivity shift will actually be less than the value specified.

This diagram indicates the temperature shift pertaining to a few listings. Maximum null and sensitivity shift varies from listing to listing.

### NOTES

1. Terminals are labeled on the sensor.
2. Input and output share a common ground.
3.  $R_i$  must be greater than or equal to 3000 ohms.

### RATIOMETRICITY

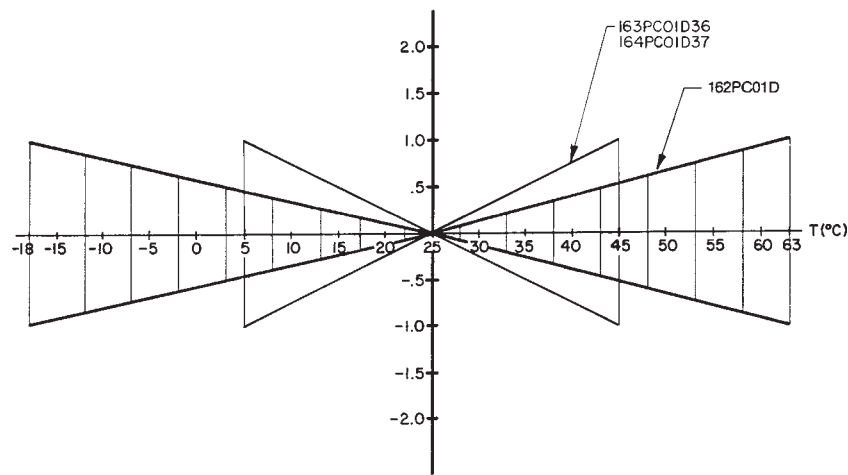


Ratiometricity refers to the output voltage being directly proportional to supply voltage. 160PC sensors in this catalog are calibrated at 8 VDC supply voltage (except 163PC) to provide a 1-6 volt (5 V Span) output swing. For example, if supply increases by 50% to 12 VDC, the output voltage increased by 50% to 1.5-9 volts (7.5 V Span).

### NOTE

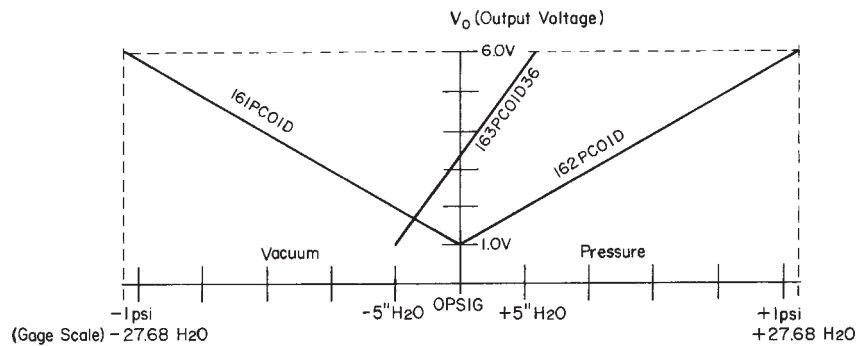
The output is not perfectly ratiometric. See Accuracy specifications for the degree of error.

NULL AND SENSITIVITY SHIFT (% F.S.O.)



Amplified

### SCALING OF 160PC SERIES SENSORS WITH 8V EXCITATIONS



161PC01D	Vacuum Gage	$V_o = 1 \text{ V at } 0 \text{ psig \& } 6 \text{ V at } -1 \text{ psi}$
162PC01D	Differential	$V_o = 1 \text{ V at } 0 \text{ psig \& } 6 \text{ V at } 1 \text{ psi}$
163PC01D36	Differential	$V_o = 1 \text{ V at } -5'' \text{ H}_2\text{O \& } 6 \text{ V at } -5'' \text{ H}_2\text{O}$

**NOTE:** 161PC sensors are scaled for greater pressure on the P1 side of the chip. 162PC sensors are scaled for greater pressure on the P2 side of the chip. Other scalings available upon request.