

PCO Series P-grade

Precision compensated pressure sensors / mV-output

FEATURES

- Ranges from 4 inH₂O to 150 psi, differential, gage or absolute
- Precision temperature compensated
- Calibrated offset and span
- Voltage excitation
- Excellent long term stability

MEDIA COMPATIBILITY

To be used with non-corrosive, non-ionic working fluids such as clean dry air, dry gases and the like.

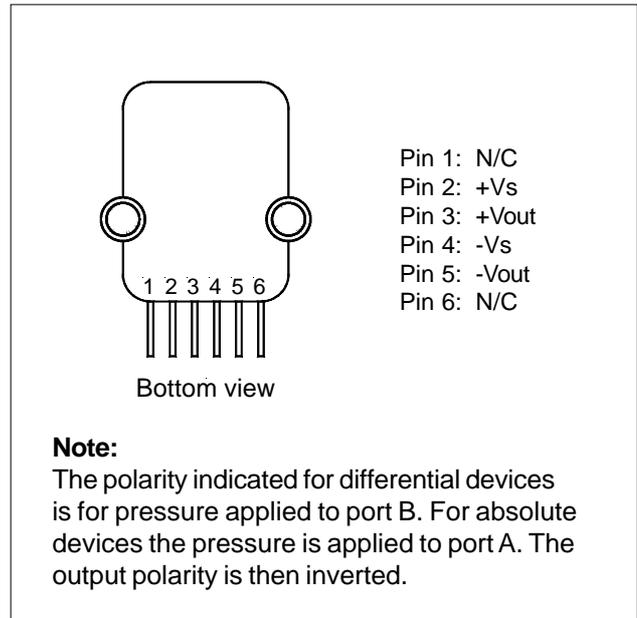


SPECIFICATIONS

Maximum ratings

Supply voltage V_s	16 V _{DC}
Lead temperature (soldering 2-4 sec.)	250 °C
Temperature ranges	
Compensated	0...70 °C
Operating	-25...85 °C
Storage	-40...125 °C
Humidity limits (non-condensing)	0...95 % RH
Common mode pressure	50 psig

ELECTRICAL CONNECTION



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PRESSURE SENSOR CHARACTERISTICS¹

Part no.	Operating pressure	Proof pressure ²	Burst pressure ³	Full scale span ⁴		
				Min.	Typ.	Max.
PCOH004DP	0 ... 4 inH ₂ O	3 psi	15 psi	39.5 mV	40 mV	40.5 mV
PCOP0x3DP	0 ... 0.3 psi	5 psi	15 psi	19.8 mV	20 mV	20.2 mV
PCOP001DP	0 ... 1 psi	5 psi	15 psi	17.82 mV	18 mV	18.18 mV
PCOP005DP	0 ... 5 psi	10 psi	30 psi	59.4 mV	60 mV	60.6 mV
PCOP015DP	0 ... 15 psi	60 psi	120 psi	89.1 mV	90 mV	90.9 mV
PCOP030DP	0 ... 30 psi	90 psi	150 psi	89.1 mV	90 mV	90.9 mV
PCOP100DP	0 ... 100 psi	200 psi	250 psi	99 mV	100 mV	101 mV
PCOP150DP	0 ... 150 psi	200 psi	250 psi	89.1 mV	90 mV	90.9 mV
PCOP015AP	0 ... 15 psia	60 psia	120 psia	89.1 mV	90 mV	90.9 mV
PCOP030AP	0 ... 30 psia	90 psia	150 psia	89.1 mV	90 mV	90.9 mV
PCOP100AP	0 ... 100 psia	200 psia	250 psia	99 mV	100 mV	101 mV

COMMON PERFORMANCE CHARACTERISTICS¹

Characteristics		Min.	Typ.	Max.	Unit
Zero pressure offset	PCOH004DP, PCO...AP			±0.5	mV
	all others			±0.25	
Combined non-linearity and hysteresis ⁵			±0.1	±0.5	%FS
Temperature effects (0...70 °C) ⁶	Offset		±0.1	±0.5	mV
	Span		±0.2	±1.0	%FS
Input resistance			5		kΩ
Output resistance			3		

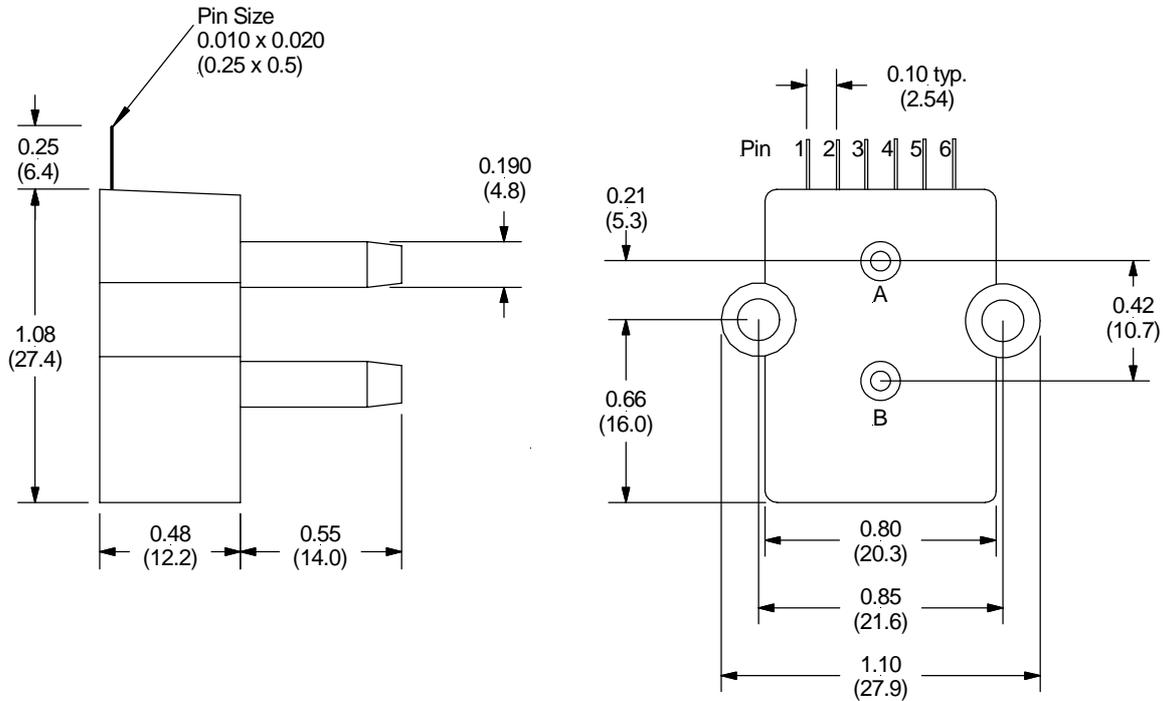
Specification notes:

- Reference conditions: unless otherwise noted, supply voltage $V_S = 12\text{ V}$, $T_A = 25^\circ\text{C}$, common-mode pressure 0, pressure applied to port B. For absolute devices pressure is applied to port A and the output polarity is inversed.
- Proof pressure is the maximum pressure which may be applied without causing durable shifts of the electrical parameters of the sensing element.
- Burst pressure is the maximum pressure which may be applied without causing damage to the sensing element or leaks from the housing.
- Full scale span is the algebraic difference between the output voltage at full-scale pressure and the output at zero pressure. The span is ratiometric to the supply voltage.
- Non-linearity refers to the **Best Straight Line** fit measured for offset pressure, full-scale pressure and ½ full-scale pressure.
- Shifts relative to 25°C.

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PHYSICAL DIMENSIONS



dimensions in inches (mm)

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