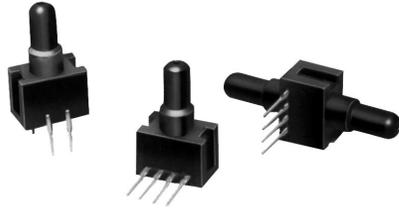


Pressure Sensors

Gage and Differential/Unamplified-Noncompensated

24PC Series

Basic Sensors



FEATURES

- Miniature package
- Variety of gage pressure port configurations - easily and quickly modified for your special needs
- Operable after exposure to frozen conditions
- Ideal for wet/wet differential applications
- Choice of termination for gage sensors
- 2 mA constant current excitation significantly reduces sensitivity shift over temperature*
- Can be used to measure vacuum or positive pressure

24PC SERIES PERFORMANCE CHARACTERISTICS at 10.0 ±0.01 VDC Excitation, 25°C

	Min.	Typ.	Max.	Units
Excitation	---	10	12	VDC
Null Offset	-30	0	+30	mV
Null Shift, 25° to 0°, 25° to 50°C	---	±2.0	---	mV
Linearity, P2 > P1, BFSL	---	±0.25	±1.0	%Span
Span Shift, 25° to 0°, 25° to 50°C	---	±5.0*	---	%Span
Repeatability & Hysteresis	---	±0.15	---	%Span
Response Time	---	---	1.0	msec
Input Resistance	4.0 K	5.0 K	6.0 K	ohms
Output Resistance	4.0 K	5.0 K	6.0 K	ohms
Stability over One Year	---	±0.5	---	%Span
Weight	---	2	---	grams

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40° to +85°C (-40° to +185°F)
Storage Temperature	-55° to +100°C (-67° to +212°F)
Shock	Qualification tested to 150 g
Vibration	Qualification tested to 0 to 2 kHz, 20 g sine
Media (P1 & P2)	Limited only to those media which will not attack polyetherimide, silicon, fluorosilicone, silicone, EPDM and neoprene seals.

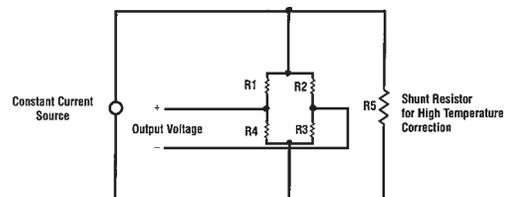
24PC SERIES ORDER GUIDE

Catalog Listing	Pressure Range psi	Span, mV			Sensitivity mV/psi Typ.	Overpressure psi Max.
		Min.	Typ.	Max.		
24PCE Type	0.5	24	35	46	70	20
24PCA Type	1.0	30	45	60	45	20
24PCB Type	5.0	85	115	145	23	20
24PCC Type	15	165	225	285	15	45
24PCD Type	30	240	330	420	11	60
24PCF Type	100	156	225	294	2.25	200
24PCG Type	250	145	212	280	0.85	500

* Non-compensated pressure sensors, excited by constant current instead of voltage, exhibit temperature compensation of Span. Application Note #1 briefly discusses current excitation.

Constant current excitation has an additional benefit of temperature measurement. When driven by a constant current source, a silicon pressure sensor's terminal voltage will rise with increased temperature. The rise in voltage not only compensates the Span, but is also an indication of die temperature.

Constant Current Excitation Schematic



Unamplified

Pressure Sensors

24PC Series

Gage and Differential/Unamplified-Noncompensated

SENSOR SELECTION GUIDE

2 Product Family	4 Circuit Type	PC Pressure Transducer	A Pressure Range	F* Type of Seal	A Type of Port	2 Termination Style	G Pressure Measurement
2 20PC family	4 Noncom- pensated		A 1 psi B 5 psi C 15 psi D 30 psi E 0.5 psi F 100 psi G 250 psi	E EPDM F Fluorosilicone N Neoprene S Silicone	A Straight B Barbed C Luer D Modular H M5 Thread I 90° Port J Needle K Reverse 98 Port L 1/4 - 28 UNF w/Cable Lock M 1/4 - 28 UNF w/o Cable Lock S Manifold	1 1 x 4 (.400") 2 2 x 2 6 1 x 4 (.600")	G Gage D Differential

Example: 24PCAFA2G

Standard, non-compensated 1 psi sensor with fluorosilicone seal, straight port, 2 x 2 terminals, and Gage pressure measurement.

*Other media seal materials may be available.

See Accessory Guide, page 27.

Not all combinations are established. Contact 800 number before final design.

Pressure Sensors

Gage and Differential/Unamplified

22/24/26PC Series

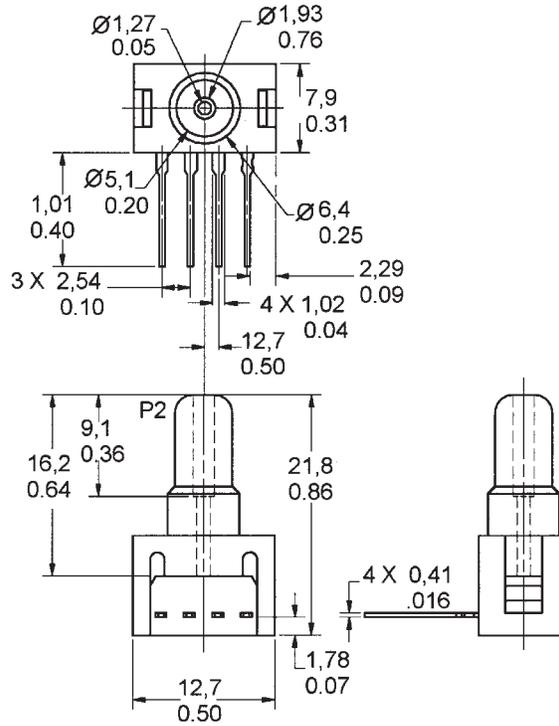
GAGE SENSOR

Pressure is applied to port P2. Port P1 vents to ambient pressure

Mounting Dimensions (for reference only)

1 x 4 Termination (Style 1), Straight Port (Style A)

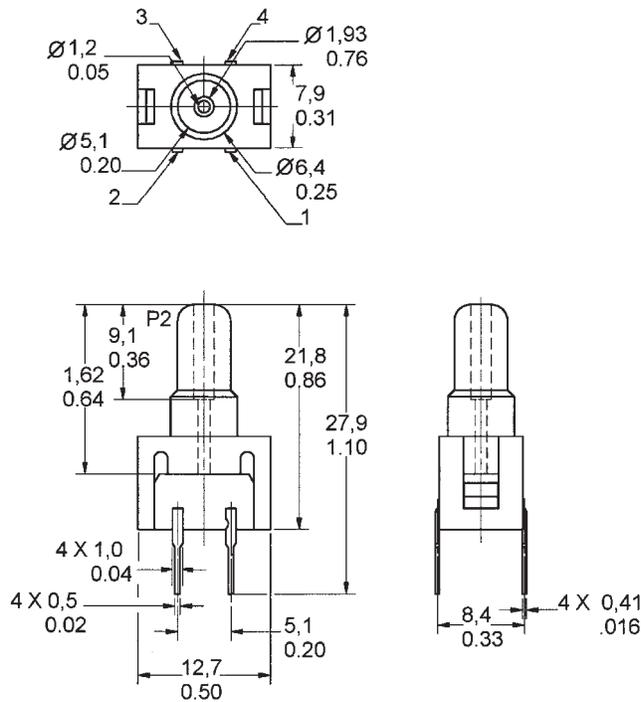
Pin 1 is notched, and is shown at the right of the package. Pin 2 is next to Pin 1, etc.



Unamplified

2 x 2 Termination (Style 2), Straight Port (Style A)

Pin 1 is notched and is shown at lower right corner. Pins 2, 3, and 4 are clockwise.



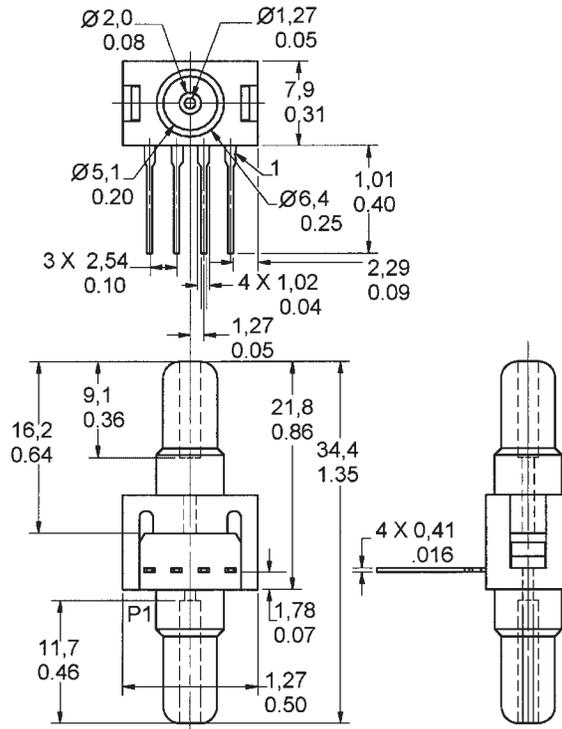
Pressure Sensors

Gage and Differential/Unamplified

22/24/26PC Series

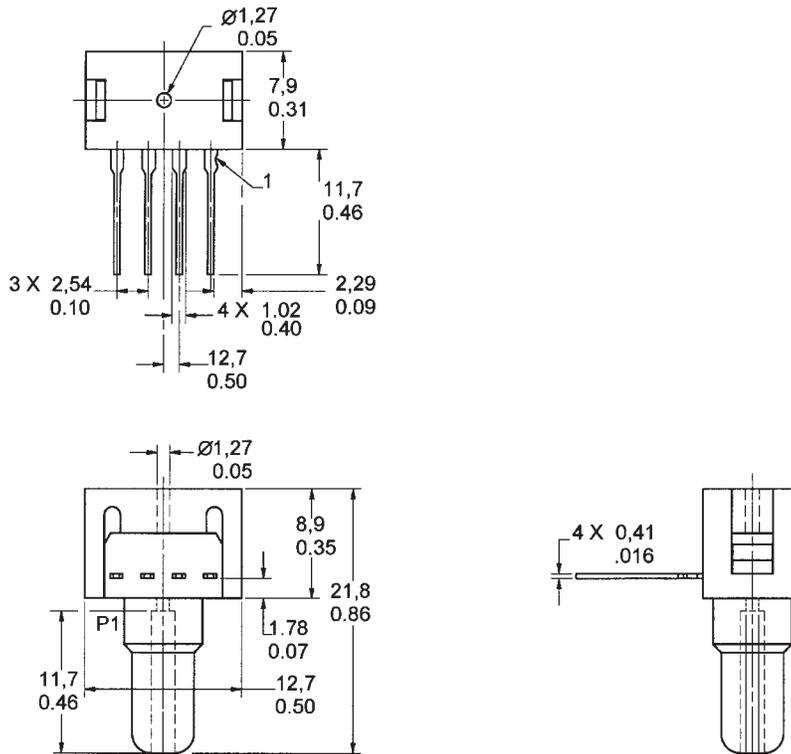
Straight Port, 1 x 4 Termination (Style 1) ONLY

Port 1 is near terminals



Absolute Sensor

1 x 4 Termination (Style 1), Port 1 is near terminals



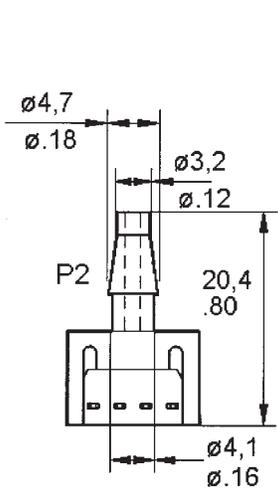
Pressure Sensors

Gage and Differential/Unamplified

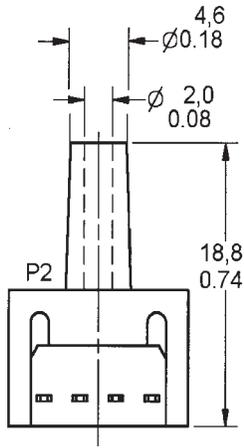
22/24/26PC Series

OTHER GAGE SENSOR PORT STYLES (2 x 2 or 1 x 4 Termination)

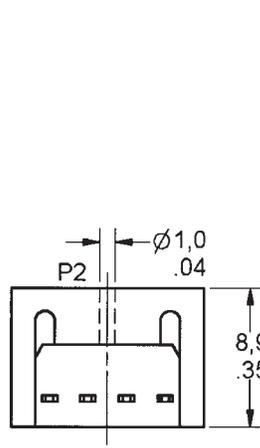
B Barbed



C Luer



D Modular



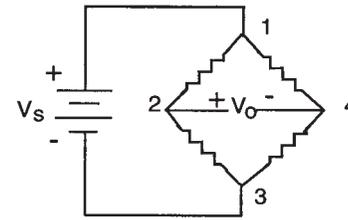
20PC SERIES CIRCUIT - NOTES

1. Circled numbers refer to Sensor Terminals (interface pins).
2. V_O increases with pressure change.
3. $V_O = V_2 - V_4$
4. Pin 1 designated with a notch.

Pin Designation

- Pin 1 = V_S (+)
- Pin 2 = Output (+)
- Pin 3 = Ground (-)
- Pin 4 = Output (-)

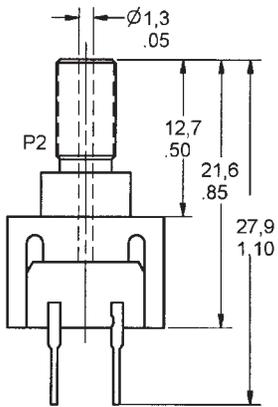
EXCITATION



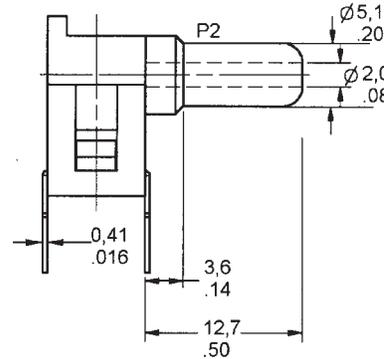
Unamplified

H M5 Thread

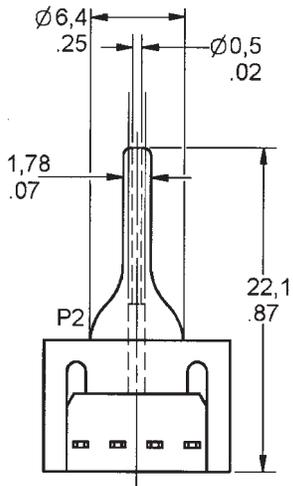
O-Ring Size 007 O-Ring Counterbore
1,02 mm (.040) deep $\pm 0,13$ (.005) x 7,6 mm (.30) $\pm 0,8$ (.003)



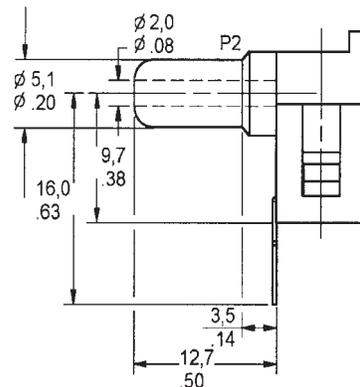
I 90°



J Needle



K Reverse 90°



Pressure Sensors

Gage and Differential/Unamplified

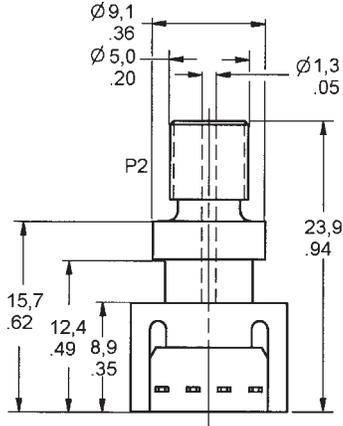
22/24/26PC Series

OTHER GAGE SENSOR PORT STYLES (2 x 2 or 1 x 4 Termination)

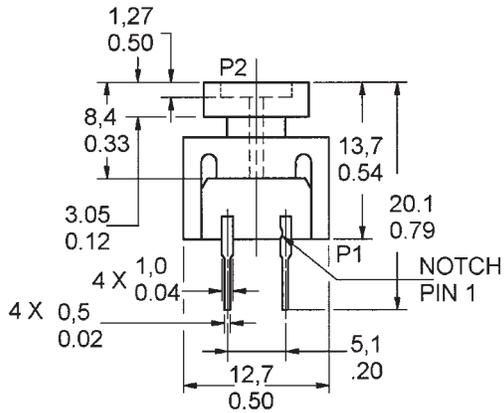
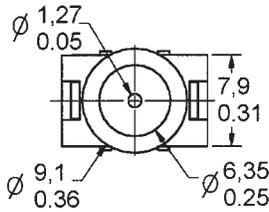
M 1/4-28 UNF Thread

O-Ring Size 009 O-Ring Counterbore

1,02 mm (.040) deep $\pm 0,05$ (.002) x 9,1 mm (.360) $\pm 0,8$ (.003)



S Manifold



20PC Construction

