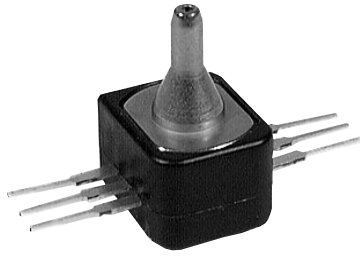


Pressure Sensors

Miniature Signal Conditioned

40PC Series



FEATURES

- Smallest amplified sensor package
- Minimal PCB space
- Fully signal conditioned
- Operating temperature range from -45° to $+125^{\circ}\text{C}$
- Silicon piezoresistive technology
- Monolithic design
- 6 Pin DIP package
- Port designed for O-ring interface
- Excellent media compatibility
- Accuracy of 0.2%

PERFORMANCE CHARACTERISTICS

Pressure Range	± 50 mm Hg	0-15 psi	0-100 psi	0-150 psi	0-250 psi
Overpressure, max.	± 170 mm Hg	45 psi	200 psi	300 psi	500 psi
Supply Voltage	5 VDC ± 0.25				
Supply Current	10 mA max.				
Output Source Current	0.5 mA max.				
Output Sink Current	1.0 mA max.				
Operating Temperature	-45° to $+125^{\circ}\text{C}$ (-49° to $+257^{\circ}\text{F}$)				
Storage Temperature	-55° to $+125^{\circ}\text{C}$ (-67° to $+257^{\circ}\text{F}$)				
Hysteresis & Repeatability	0.15% Span, Typ.				
Ratiometricity (at 4.75 to 5.25 Supply Voltage)	$\pm 0.25\%$ Span, Typ.				
Output Load Capacitance	0.05 microtarads, max.				
Full Scale	-50 mm Hg	0.50 VDC Typ.			
	$+50$ mm Hg	4.50 VDC Typ.			
	All other pressure ranges	4.50 VDC Typ.			
Media Compatibility	P1 port	DRY GASES ONLY: Media must be compatible with epoxy based adhesive			
	P2 port	Media must be compatible with glass, silicon, stainless steel, invar, Sn/Ni plating or Sn/Ag solder			



Amplified

40PC SERIES ORDER GUIDE

Catalog Listing	Pressure Range psi	Pressure Type	Lead Style
40PC001B1A	± 50 mm Hg	Bi-directional	1-unformed
40PC001B2A	± 50 mm Hg	Bi-directional	2-formed away from port
40PC001B3A	± 50 mm Hg	Bi-directional	3-formed towards port
40PC015G1A	0-15	Gage	1-unformed
40PC015G2A	0-15	Gage	2-formed away from port
40PC015G3A	0-15	Gage	3-formed towards port
40PC100G1A	0-100	Gage	1-unformed
40PC100G2A	0-100	Gage	2-formed away from port
40PC100G3A	0-100	Gage	3-formed towards port
40PC150G1A	0-150	Gage	1-unformed
40PC150G2A	0-150	Gage	2-formed away from port
40PC150G3A	0-150	Gage	3-formed towards port
40PC250G1A	0-250	Gage	1-unformed
40PC250G2A	0-250	Gage	2-formed away from port
40PC250G3A	0-250	Gage	3-formed towards port

Note: For tubing and O-Ring interface recommendations, see the 40PC Application Note in the Reference Section.

Pressure Sensors

Miniature Signal Conditioned

40PC Series

OUTPUT PERFORMANCE CHARACTERISTICS @ 25°C, 5VDC (unless otherwise noted)

Pressure Range	Null (VDC)	Span (VDC)	Sensitivity, Typ.	Linearity, B.F.S.L. (% Span) Max.	Null Shift (% Span) Max.	Span Shift (% Span) Max.	Combined Null and Span Shift (% Span) Max.	
±50 mm Hg	2.50 ± 0.050	4.00 Typ.	40.0 mV/mm Hg	0.80	+25° to +50°C	±1.50	±1.50	—
					+25° to 0°C	±1.50	±1.50	—
					+25° to -18°C	±2.00	±0.75	±2.00
0 to 15 psi	0.50 ± 0.11	4.00 ± 0.11	266.6 mV/psi	0.20	+25° to +63°C	±2.00	±0.75	±2.00
					+25° to -45°C	±2.75	±1.00	±3.00
					+25° to +85°C	±2.75	±1.00	±3.00
					+25° to +125°C	—	—	—
					+25° to -18°C	±1.25	±0.75	±1.50
0 to 100 psi	0.50 ± 0.04	4.00 ± 0.09	40.0 mV/psi	0.10	+25° to +63°C	±1.25	±0.75	±1.50
					+25° to -45°C	±2.00	±1.00	±2.50
					+25° to +85°C	±2.00	±1.00	±2.50
					+25° to +125°C	±3.00	±2.00	±3.00
					+25° to -18°C	±0.75	±0.75	±0.75
0 to 150 psi	0.50 ± 0.04	4.00 ± 0.07	26.6 mV/psi	0.10	+25° to +63°C	±0.75	±0.75	±0.75
					+25° to -45°C	±1.00	±1.00	±1.00
					+25° to +85°C	±1.00	±1.00	±1.00
					+25° to +125°C	±1.50	±1.50	±1.50
					+25° to -18°C	±0.75	±0.75	±0.75
0 to 250 psi	0.50 ± 0.04	4.00 ± 0.07	16.0 mV/psi	0.10	+25° to +63°C	±0.75	±0.75	±0.75
					+25° to -45°C	±1.00	±1.00	±1.00
					+25° to +85°C	±1.00	±1.00	±1.00
					+25° to +125°C	±2.00	±2.00	±3.00
					+25° to -18°C	±0.75	±0.75	±0.75

PERFORMANCE SPECIFICATIONS, TEMPERATURE/ACCURACY

Temperature Range	Total Accuracy (% Span) Max.			
	0 to 15 psi	0 to 100 psi	0 to 150 psi	0 to 250 psi
25°C	±0.4 (RSS)	±0.2 (RSS)	±0.2 (RSS)	±0.2 (RSS)
-18° to +63°C	±4.0	±2.5	±2.0	±2.0
-45° to +85°C	±4.0	±2.5	±2.0	±2.0
-45° to +125°C		±3.0	±2.5	±3.0

Note 1: Accuracy at 25°C is defined as RSS error for linearity, hysteresis, and repeatability.

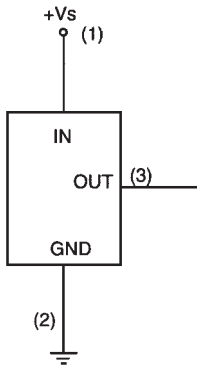
Note 2: Total accuracy is the maximum deviation from the 25°C reference transfer function at any pressure or temperature over the specified ranges. This calculation includes null, span, linearity, hysteresis, repeatability, null shift, and span shift.

Pressure Sensors

Miniature Signal Conditioned

40PC Series

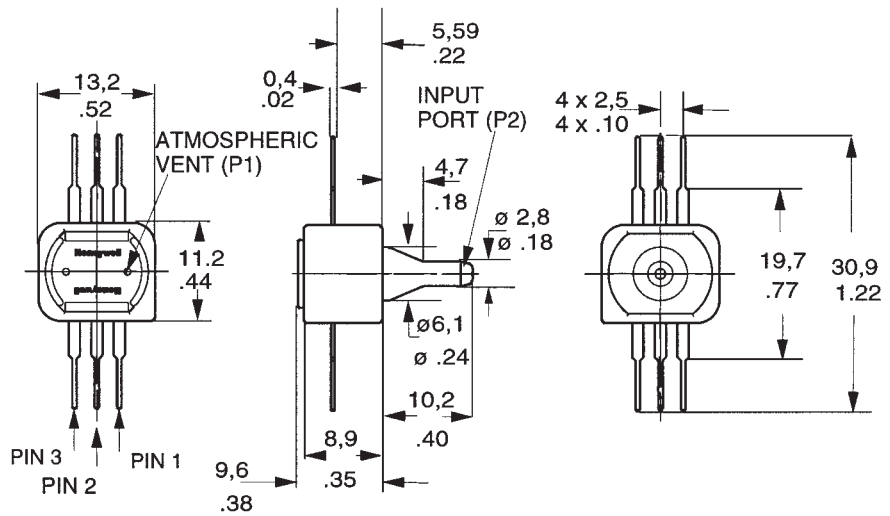
ELECTRICAL CONNECTION



NOTES:

- 1. Square corner marks pin 1 (Vs).
- 2. Output is short circuit protected.

MOUNTING DIMENSIONS (for reference only) mm/In.



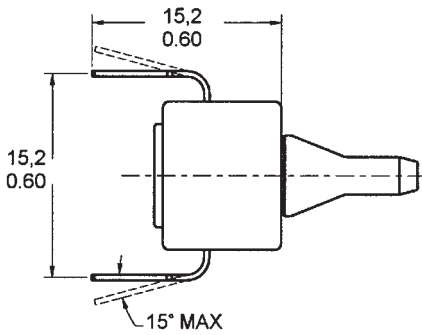
Lead Style 1

NOTE:

- P1 - DRY GASES ONLY: Media must be compatible with epoxy based adhesive.
- P2 - Media must be compatible with glass, silicon, stainless steel, invar, Sn/Ni plating or Sn/Ag solder.

Amplified

Lead Style 2



Lead Style 3

