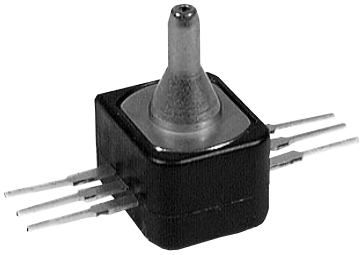
Pressure Sensors
Miniature Signal Conditioned



NEW

FEATURES
- Smallest amplified sensor package
- Minimal PCB space
- Fully signal conditioned
- Operating temperature range from −45° to +125°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°C (−49° to +257°F)				
Storage Temperature	−55° to +125°C (−67° to +257°F)				
Hysteresis & Repeatability	0.15% Span, Typ.				
Ratiometricity (at 4.75 to 5.25 Supply Voltage)	±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.

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	—
0 to 15 psi	0.50 ± 0.11	4.00 ± 0.11	266.6 mV/psi	0.20	+25° to −18°C	±2.00	±0.75	±2.00
					+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	—	—	—
0 to 100 psi	0.50 ± 0.04	4.00 ± 0.09	40.0 mV/psi	0.10	+25° to −18°C	±1.25	±0.75	±1.50
					+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
0 to 150 psi	0.50 ± 0.04	4.00 ± 0.07	26.6 mV/psi	0.10	+25° to −18°C	±0.75	±0.75	±0.75
					+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
0 to 250 psi	0.50 ± 0.04	4.00 ± 0.07	16.0 mV/psi	0.10	+25° to −18°C	±0.75	±0.75	±0.75
					+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

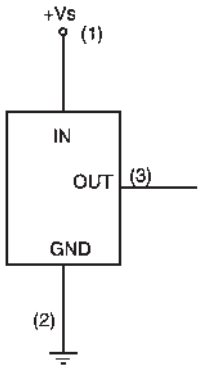
PERFORMANCE SPECIFICATIONS, TEMPERATURE/ACCURACY

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.

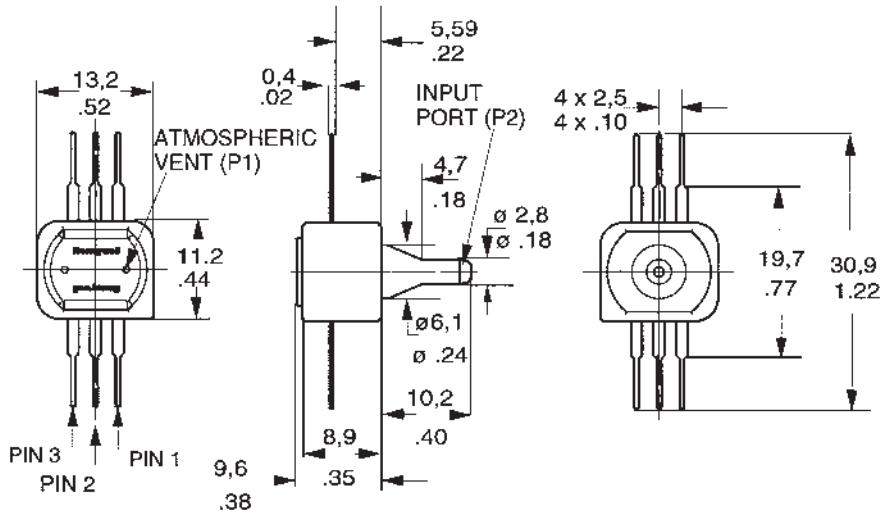
Note 2: Total accuracy is the maximum deviation from the 25°C reference transfer function at any pressure or temperature over the specified ranges. This calculation includes null, span, linearity, hysteresis, repeatability, null shift, and span shift.

ELECTRICAL CONNECTION



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

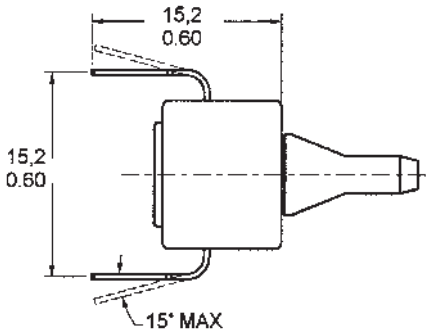
MOUNTING DIMENSIONS (for reference only) mm/In.



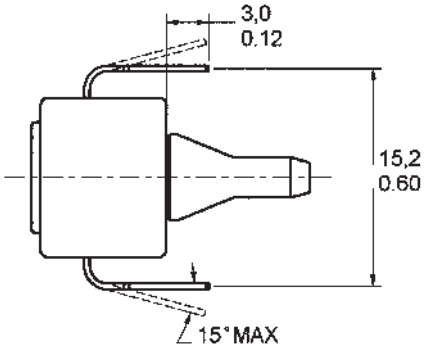
Lead Style 1

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.

Lead Style 2



Lead Style 3



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