

# P6000/P6010

## Miniature Pressure Sensors



### Description

The P6000 series pressure sensors incorporate a silicon piezoresistive sensing element in a compact package.

Using a 5v input, the sensors provide a 0.5 to 4.5Vdc output proportional to pressure. Internal temperature compensation provides an accurate, easy to use device.

The innovative remote mounting capability and customization features allow system designers to decouple their pressure sensing from PCB's.

### Features

- Rugged, Miniature Package
- Amplified, Temperature Compensated Linear Output
- Remote Mounting Option
- EMI/RFI & ESD Protected
- Enhanced Accuracy Option (P6010)
- Custom Packaging and Pressure Ranges



### Applications

- Medical
  - Oxygen Concentrators
  - Respirators
  - Sleep Apnea
- Industrial
  - Instrumentation
  - Pneumatic Controls
  - Robotics

### Standard Full Scale Pressure Ranges

- 0-30 cm H<sub>2</sub>O
- 0-100 and 0-500 mBar (Gage)  
0-1, 0-2, 0-3.5 and 0-5 Bar (Gage or Absolute)
- 0-1, 0-2.5, 0-5, PSIG  
0-15, 0-30, 0-50, and 0-75 PSIA or PSIG

### Technical Specifications

Note: Performance Specifications with 5v ± .002 Vdc supply at 25°C

Pressure Ranges:	0-30 cm H <sub>2</sub> O 0-100 and 0-500 mBar (Gage) 0-1, 0-2, 0-3.5 and 0-5 Bar (G) or (A) 0-1, 0-2.5, 0-5, PSIG 0-15, 0-30, 0-50, and 0-75 PSIA or PSIG
Proof Pressure:	2X Max. Pressure (150 PSI Max)
Burst Pressure:	3X Max. Pressure (200 PSI Max)
Supply Voltage:	5.0 ± 0.25 Vdc
Supply Current:	4mA Max.
Output Voltage (Ratiometric):	0.5 to 4.5 Vdc
Voltage Ratiometricity:	±1.5% of span Max.
Total Error Band:	±2% Span Max. (P6000) or ±1% Span Max. (P6010)
Output Impedance:	100 Ohms Max.
Operating Temperature:	-20 to 85°C
Storage Temperature:	-40°C to +125°C
Service Life:	10,000,000 cycles min.

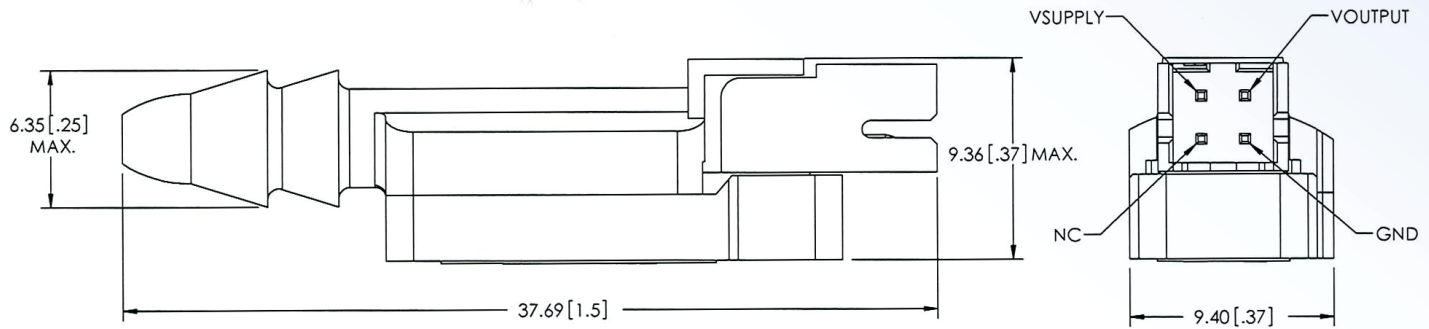
Vibration:	10 G From 20 Hz to 2000 Hz
Shock:	50 G 1/2 sine wave
Humidity:	95% RH, non-condensing
Weight:	1.3 grams Max.
Electrical Termination:	Pin Header Pin Header with Mating Connection with Lead wires 12" long
Preferred Mounting Position:	Position Insensitive
Pressure Connection:	Barb for 3/16 ID tubing
Recommended Interface Impedance:	5K Ohm Min. resistance between transducer output and ground, in parallel with 0.2 mF Max. capacitance
Over-Voltage Protection:	16 Vdc
Reverse Polarity Protection:	-6 Vdc



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### Outline Drawings



### How to Order

A typical order number has three codes, separated by two hyphens. Standard seal material is silicone. Standard pressure connection is barbed tube fitting

#### P6000 Pressure Transducer\*

##### Pressure Range

<b>A</b>	0-30 cm H <sub>2</sub> O
<b>0.1B</b>	0-100 mBar [G]
<b>0.5B</b>	0-500 mBar [G]
<b>1B</b>	0-1 Bar [G] or [A]
<b>2B</b>	0-2 Bar [G] or [A]
<b>3.5B</b>	0-3.5 Bar [G] or [A]
<b>5B</b>	0-5 Bar [G] or [A]

<b>01</b>	0-1 PSIG
<b>2.5</b>	0-2.5 PSIG
<b>05</b>	0-5 PSIG
<b>15</b>	0-15 PSIG [G] PSIA [A]
<b>30</b>	0-30 PSIG [G] PSIA [A]
<b>50</b>	0-50 PSIG [G] PSIA [A]
<b>75</b>	0-75 PSIG [G] PSIA [A]

##### Electrical Termination

<b>A</b>	Pin Header
<b>B</b>	Pin Header with mating connector 12" Lead wires

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**Example: P6000 - 30A - A for 30 PSIA (Absolute) with pin header**

**\* For high accuracy version specify P6010 vs. P6000 Example: P6010 - 30A - A**

Contact Kavlico for accuracy options, custom packaging, alternative pressure ranges, pressure connections or other OEM or application specific requirements.



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