

# P6000

## Remote Mount Miniature Pressure Sensor

### Description

The P6000 series pressure sensors incorporate a silicon, piezo resistive sensing element in a compact package. Using a 5VDC 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
- Custom Packaging and Pressure Ranges

### Applications

#### Industrial

- Oxygen Concentrators
- Respirators
- Sleep Apnea

#### Transportation

- Instrumentation
- Pneumatic Controls
- Robotics

### MAIN FEATURES

<b>Pressure Ranges</b>	0 to 2.5 up to 0 – 100 PSI and 0 to 200 mBar up to 0 to 7 Bar
<b>Electrical Connection</b>	Hirose electrical connector 30 AWG, 12" lead wires
<b>Pressure Connection</b>	Barb for 3/16 ID tubing
<b>Housing Material</b>	Polyamide 66, 30% glass fiber reinforced
<b>Output Signal</b>	0.5 - 4.5 VDC



## Pressure Ranges

<b>From 0 to ...</b>	PSI	2.5	5	15	30	50	75	100
<b>Proof Pressure</b>	PSI	5	10	30	60	100	150	200
<b>Burst Pressure</b>	PSI	7.5	15	45	90	150	225	300

<b>From 0 to ...</b>	Bar	200 mBar	500 mBar	1	2	3.5	5	7
<b>Proof Pressure</b>	Bar	400 mBar	1	2	4	7	10	14
<b>Burst Pressure</b>	Bar	600 mBar	1.5	3	6	10.5	15	21

## Physical

<b>Operating Life Cycle</b>	min. 10 million full pressure cycles over the full range
<b>Vibration Resistance</b>	10 G's from 55 to 2000 Hz
<b>Shock Resistance</b>	50 G's ½ sine wave
<b>Drop Test</b>	1m onto concrete surface
<b>Weight</b>	≤ 1.3 grams (without mating connector)
<b>Operating Temperature</b>	0°C to + 85 °C
<b>Storage Temperature</b>	-30°C to + 100°C
<b>Media</b>	Dry or wet (non freezing) media compatible with silicon, FR4, PA66 silicone adhesive

## Performance

<b>Total Error Band<sup>2</sup></b>	±2% of span above 2.5 PSI or 200 mBar ±3% of span up to 2.5 PSI or 200 mBar
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2. Including accuracy, calibration, temperature, non-linearity, hysteresis, non-repeatability, error

## Electrical

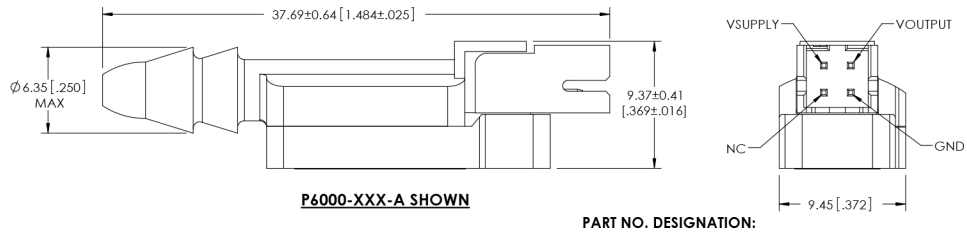
<b>Output Signal</b>	0.5...4.5 VDC ratiometric
<b>Operating Supply Signal</b>	5 VDC ± 5%
<b>Power Consumption</b>	≤ 25 mW
<b>Overvoltage Protection</b>	16 VDC
<b>Short-circuit Proofness</b>	Yes
<b>Insulation Voltage</b>	500 VDC
<b>Reverse Polarity Protection</b>	Yes <sup>3</sup>
<b>Output Load</b>	≥ 5 kΩ
<b>Response Time</b>	≤ 10 ms max. to 63% of full scale pressure with step change on input

\*3 for min. 10 seconds on assigned pins



# DIMENSIONS

Dimensions in mm [Inch]





## ORDERING OPTIONS

Example: P6000-30G-A

P6000 Pressure Sensor, 0 - 30 PSI, Gage, Pin Header with no Mating Connector.

**P6000 - 30 G - A**

**Family**  
P6000

**Pressure Ranges**  
 2.5: 0 - 2.5 PSIG\*  
 5: 0 - 5 PSIG\*  
 15: 0 - 15 PSIG or PSIA  
 30: 0 - 30 PSIG or PSIA  
 50: 0 - 50 PSIG or PSIA  
 75: 0 - 75 PSIG or PSIA  
 100: 0 - 100 PSIG or PSIA  
 0.2B: 0 - 200 mBarG\*  
 0.5B: 0 - 500 mBarG\*  
 1B: 0 - 1 BarG or BarA  
 2B: 0 - 2 BarG or BarA  
 3.5B: 0 - 3.5 BarG or BarA

**Reference**  
 A: Absolute  
 G: Gage

**Electrical Termination**  
 A: Hirose Electrical Connector  
 B: Hirose electrical connection with matting connector 12" lead wires



## AGENCY APPROVALS & CERTIFICATIONS



2002/95/EC RoHS Directive



Pressure equipment directive 89 /336 /EEC, IEC/EN 61326-1: 2006, IEC/EN 61000-4-2: 2001, IEC/EN 61000-4-3: 2006, IEC/EN 61000-4-8: 2001.

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