

# Data Sheet

## P6000

### Remote Mount Miniature Pressure Sensor



#### Main Features

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

#### Attributes

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

#### Typical Applications

- |                        |                      |
|------------------------|----------------------|
| Industrial             | Transportation       |
| ▪ Oxygen Concentrators | ▪ Instrumentation    |
| ▪ Respirators          | ▪ Pneumatic Controls |
| ▪ Sleep Apnea          | ▪ Robotics           |

#### 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.

# Technical Specifications

## Pressure Ranges

|                |     |          |          |    |    |      |     |     |
|----------------|-----|----------|----------|----|----|------|-----|-----|
| from 0 to ...  | PSI | 2.5      | 5        | 15 | 30 | 50   | 75  | 100 |
| Proof pressure | PSI | 5        | 10       | 30 | 60 | 100  | 150 | 200 |
| Burst pressure | PSI | 7.5      | 15       | 45 | 90 | 150  | 225 | 300 |
| from 0 to ...  | Bar | 200 mBar | 500 mBar | 1  | 2  | 3.5  | 5   | 7   |
| Proof pressure | Bar | 400mBar  | 1        | 2  | 4  | 7    | 10  | 14  |
| Burst pressure | Bar | 600mBar  | 1.5      | 3  | 6  | 10.5 | 15  | 21  |

## Physical

|                       |  |
|-----------------------|--|
| Operating Life Cycle  | min. 10 million full pressure cycles over the full range                             |
| Vibration Resistance  | 10 G's from 55 to 2000 Hz  |
| Shock Resistance      | 50 G's 1/2 sine wave   |
| Drop Test             | 1m onto concrete surface   |
| Weight                | ≤ 1.3 grams (without mating connector)   |
| Operating Temperature | 0°C to + 85 °C   |
| Storage Temperature   | -30°C to + 100°C   |
| Media                 | Dry or wet (non freezing) media compatible with silicon, FR4, PA66 silicone adhesive |

## Performance

|                     |   |
|---------------------|---|
| Total error band *2 | ±2% of span above 2.5 PSI or 200 mBar ±3% of span up to 2.5 PSI or 200 mBar |
|---------------------|---|

2. Including accuracy, calibration, temperature, non-linearity, hysteresis, non-repeatability, error

## Electrical

|                             |   |
|-----------------------------|---|
| Output Signal               | 0.5...4.5 VDC ratiometric   |
| Operating Supply Signal     | 5 VDC $\pm$ 5%  |
| Power Consumption           | $\leq$ 25 mW  |
| Overvoltage Protection      | 16 VDC  |
| Short-circuit Proofness     | Yes   |
| Insulation Voltage          | 500 VDC   |
| Reverse Polarity Protection | Yes *3  |
| Output Load                 | $\geq$ 5 k $\Omega$   |
| Response Time               | $\leq$ 10 ms max. to 63% of full scale pressure with step change on input |

\*3 for min. 10 seconds on assigned pins

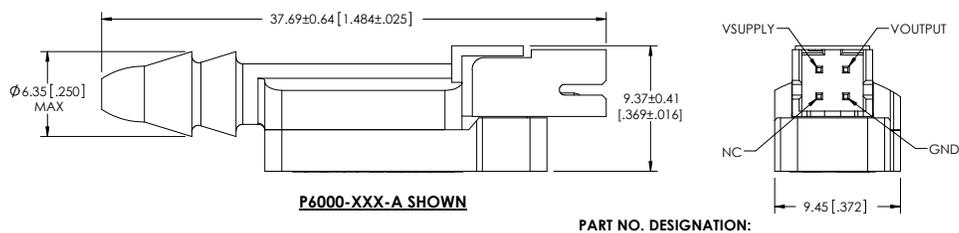
## Approvals & Certificates

|               |  |
|---------------|--|
| CE Compliance | 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. |
| ROHS          | 2002/95/EC RoHS Directive  |

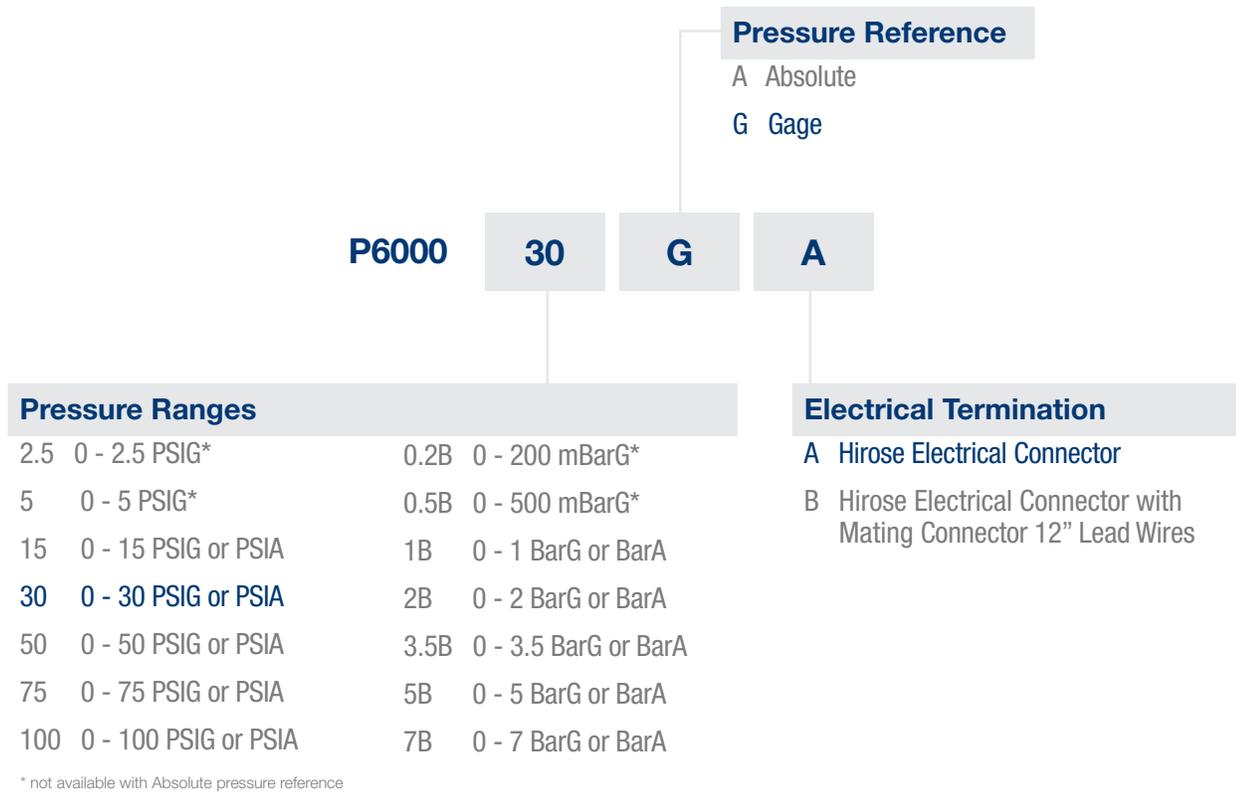
## Dimensions

### Pressure Sensor

Dimensions in mm. [Inch]



# How to Order



**Example:**

P6000-30-G-A

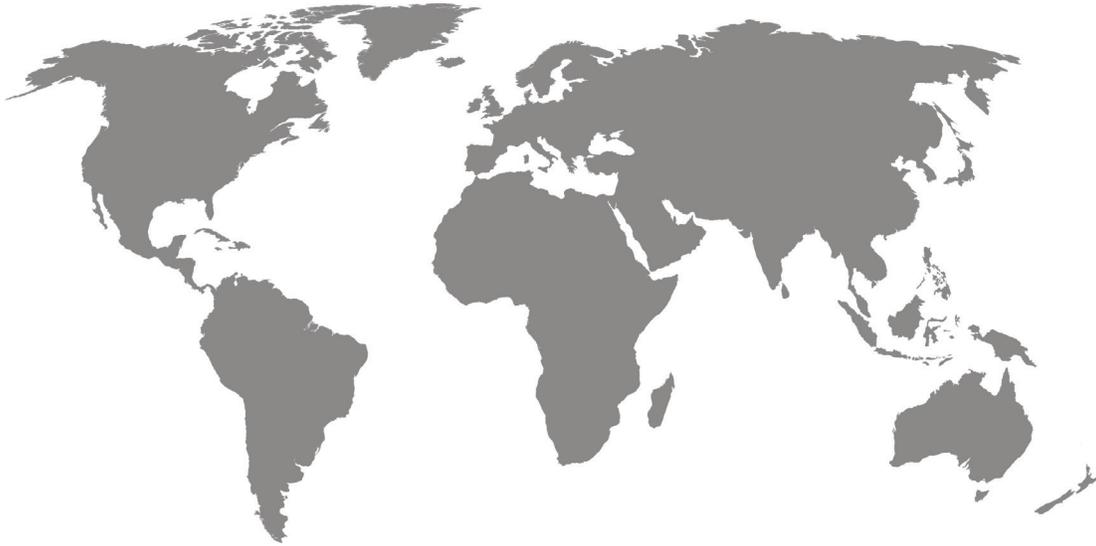
**Description:**

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



Before installation and operation, ensure that the appropriate pressure sensor has been selected in terms of pressure range, design and specific measuring conditions. Non-compliance can result in serious injury and/or damage to the equipment.

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