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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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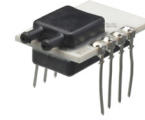
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# Data Sheet

## P1K

# Pressure Sensor



### Main Features

Pressure Ranges	1, 2, 5, 10, +/-1, +/-2, +/- 5 inches of water; 2.5, 5, 12.5, 25, +/-2.5, +/- 5, +/- 12.5 mbar
Electrical Connection	PCB thru hole terminal pins, 2.54 mm [.100 inch] pitch
Pressure Connection	Barbed port, 1.9[.08] diameter
Housing Material	PPS, 40% glass filled, black
Terminal Pin Material	Phosphor bronze, tin plated
Supply Voltage	5.00 Vdc $\pm$ 0.25 Vdc
Output Signal	Ratiometric analog; 5% to 80% of supply voltage

### Attributes

- Compact Package
- Amplified Temperature Compensated Linear Output
- No Position Sensitivity Above 0-2" H<sub>2</sub>O
- EMI/RFI and ESD Protected
- Superior Output Signal Stability
- Printed Circuit Board through Hole Mounting

### Typical Applications

- Variable Air Volume Systems
- Filter Pressure Monitoring
- Duct Air Flow
- Modulated Furnace Controls
- Combustion Airflow
- Gaseous Leak Detection
- **Medical Applications:**  
Oxygen Concentrators, Ventilators, Anesthesia Equipment, CPAP, Wound Therapy.

### Description

The P1K series of pressure sensors incorporates a piezo-resistive sensing element in a compact package. Using a 5 VDC supply voltage, the P1K provides a 0.25 VDC to 4.0 VDC output proportional to pressure. Internal temperature compensation provides an accurate, easy to use sensor. The industry standard terminal pins provides ease of use for your printed circuit board designs.

# Technical Specifications

## Pressure Ranges

from 0 to ...	1" H2O	2" H2O	5" H2O	10" H2O	+/- 1" H2O	+/- 2" H2O	+/- 5" H2O
from 0 to ...	2.5mbar	5mbar	12.5 mbar	20 mbar	+/- 2.5 mbar	+/- 5 mbar	+/- 12.5 mbar
Proof pressure (min)	1.0 PSI/ (70mbar) (min)	1.0 PSI/ (70mbar)	1.0 PSI/ (70mbar)	1.0 PSI/ (70mbar)	1.0 PSI/ (70mbar)	1.0 PSI/ (70mbar)	1.0 PSI/ (70mbar)
Burst pressure factor	1.8 PSI/ (125mbar)	1.8 PSI/ (125mbar)	1.8 PSI/ (125mbar)	1.8 PSI/ (125mbar)	1.8 PSI/ (125mbar)	1.8 PSI/ (125mbar)	1.8 PSI/ (125mbar)

## Physical

Expected Operating Life:	10 million full pressure life cycles
Shelf Life:	10 years minimum
Stability:	+/- 0.5% of full scale span for 1 year
Vibration:	10 G's peak to peak sinusoidal (20 to 1600Hz)
Shock Resistance:	50 G's ½ Sinewave, 11 mSec pulse, 18 pulses (6 per axis)
Weight:	3.5 g max.
Operating Temperature:	-20°C to 85°C
Storage Temperature:	-40°C to 125°C
Humidity:	Up to 92% RH in a non-condensing environment
Media	Dry air

## Performance

Accuracy	0.25% Max (% of full scale span) (RSS of linearity, hysteresis and repeatability)
Temp. Error (0 to 60°C)	0.05%/ C [% of full scale span]
Temp. Error (-20 to 0°C and 60 to 85°C 0 to 60°C)	5% full scale span

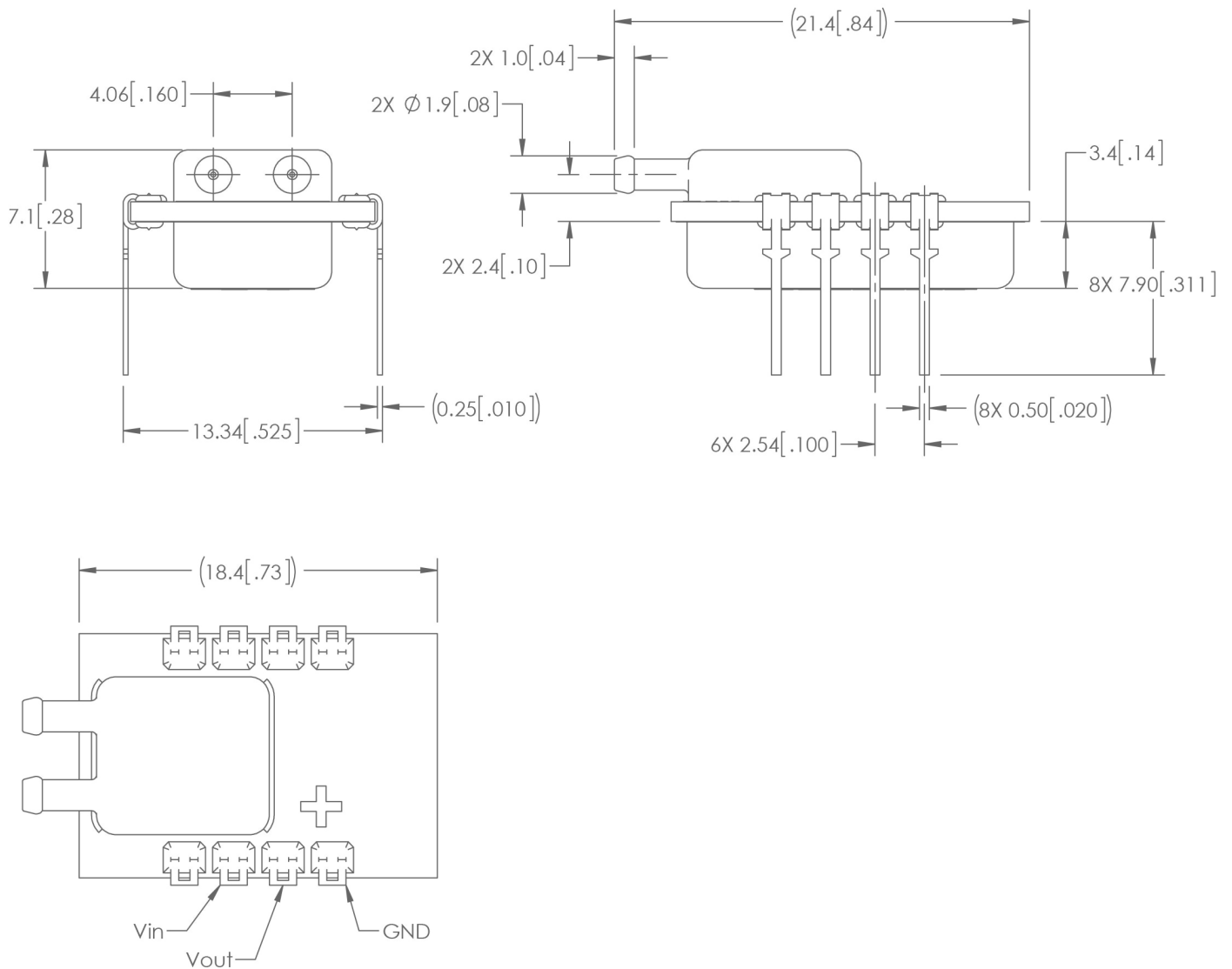
## Electrical

Output Impedance	100 Ohms max.
Excitation Current	4mA max
Minimum Load	25k Ohms between output and ground
Response Time	5 mSec max (63% full scale)

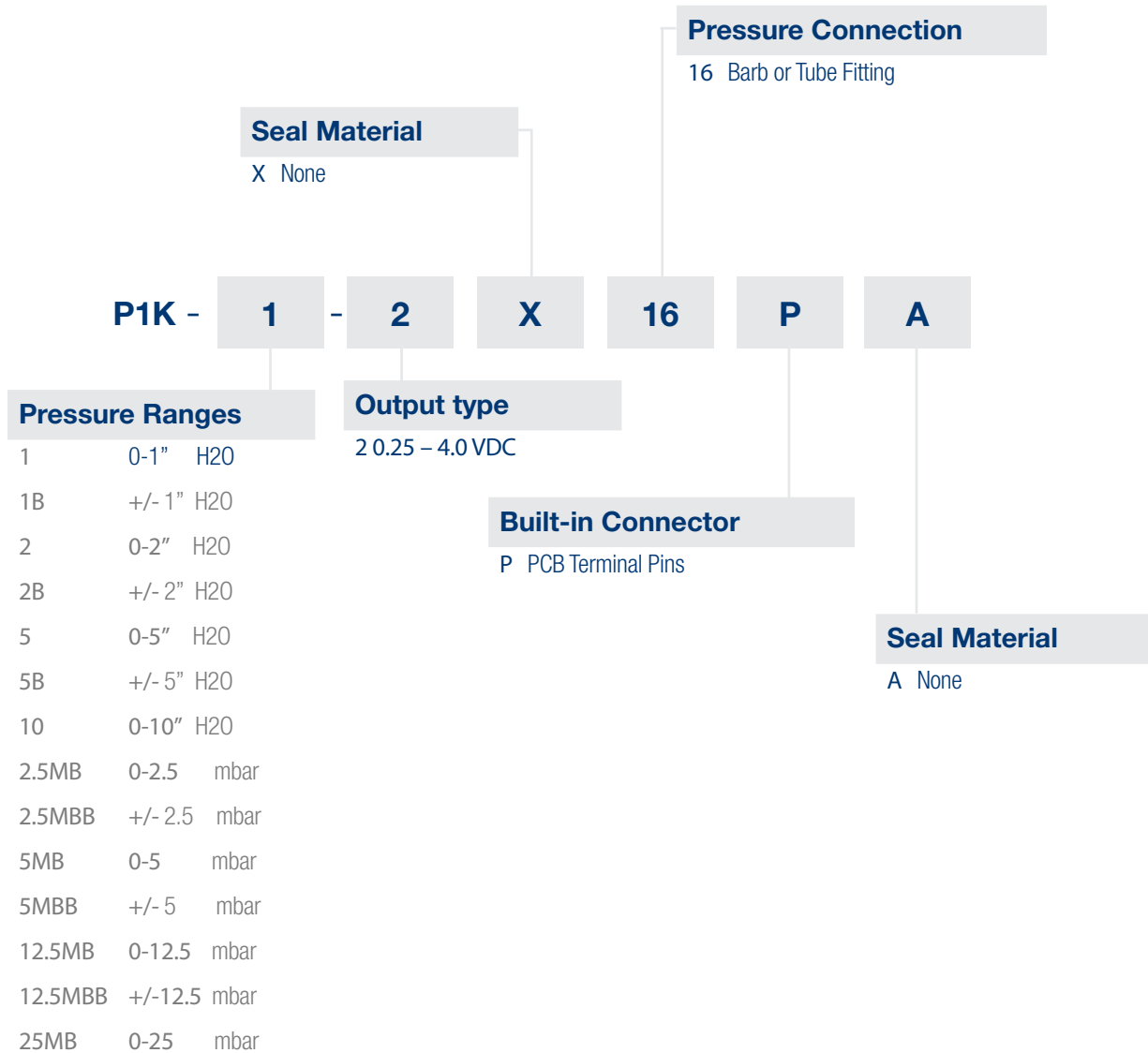
## Approvals & Certificates

RoHS

## Dimensions



# How to Order



**Example:**

P1K-1-2X16PA

**Description:**

P1K Pressure sensor 0 -1" H2O, .25 to 4.0 VDC output, no internal material seal, barbed tube fitting port with PCB Terminal Pin connection, no external material seal



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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