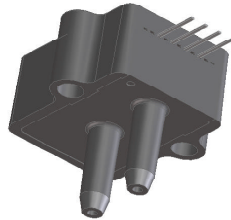


# Millivolt Output Pressure Sensors

Vacuum Pressure Sensor



## Features

- 0 to 15 PSIA Pressure Range
- 0.5 % linearity...high accuracy version
- Temperature Compensated
- Calibrated Zero and Span

## Applications

- Medical Instrumentation
- Environmental Controls
- HVAC

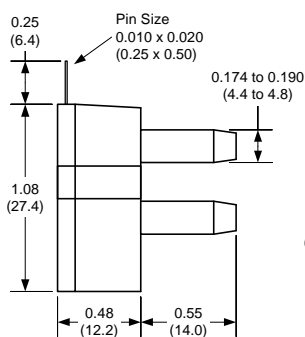
## General Description

The Millivolt Output pressure sensors is based upon a proprietary packaging technology to reduce output offset or common mode errors. This model provides a calibrated millivolt output with excellent output offset characteristics. In addition the sensor utilizes a silicon, micromachined, stress concentration enhanced structure to provide a very linear output to measured pressure.

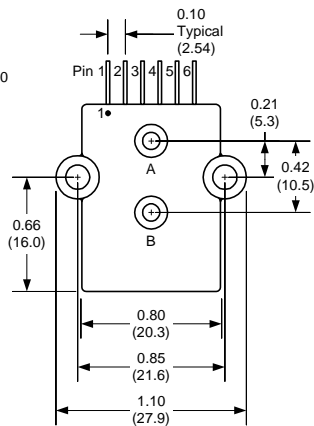
These calibrated and temperature compensated sensors give an accurate and stable output over a wide temperature range. This series is intended for use with non-corrosive, non-ionic working fluids such as air, dry gases and the like. The H-GRADE is a high accuracy version of the millivolt output pressure sensors.

The output of the device is ratiometric to the supply voltage and operation from any D.C. supply voltage up to +16 V is acceptable.

## Physical Dimensions



NOTES:  
1) Dimensions in inches (millimeters)



- pin 1: N/C
- pin 2: +V supply
- pin 3: +Voutput
- pin 4: -Vsupply
- pin 5: -Voutput
- pin 6: N/C

## Pressure Sensor Characteristics Maximum Ratings

Supply Voltage VS	16 Vdc
Common-mode pressure	50 psig
Lead Temperature (soldering 2-4 sec.)	250°C

## Environmental Specifications

Temperature Ranges	
Compensated	0 to 70° C
Operating	-25 to 85° C
Storage	-40 to 125° C
Humidity Limits	0 to 95% RH (non condensing)

## Standard Pressure Range

Part Number	Operating Pressure	Nominal Span	Proof Pressure	Burst Pressure
15 PSI-A-HGRADE-MV	0 - 15 PSIA	60mV	60 PSIA	120 PSI

## Performance Characteristics for 15 PSI-A-HGRADE-MV

Parameter, note 1	Minimum	Nominal	Maximum	Units
Operating Range, absolute pressure		15.0		PSIA
Output Span, note 5	89.1	90.0	90.9	mV
Offset Voltage @ zero absolute pressure			±0.5	mV
Offset Temperature Shift (0°C-70°C), note 2			±500	uV
Linearity, hysteresis error, note 4		0.25	0.5	% fs
Span Shift (0°C-70°C), note 2			±1	% fs

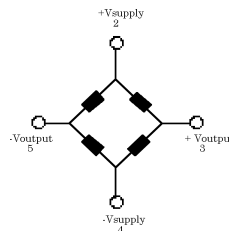
## Specification Notes

- NOTE 1: ALL PARAMETERS ARE MEASURED AT 12.0 VOLT EXCITATION, FOR THE NOMINAL FULL SCALE PRESSURE AND ROOM TEMPERATURE UNLESS OTHERWISE SPECIFIED. PRESSURE MEASUREMENTS ARE WITH POSITIVE PRESSURE APPLIED TO PORT B.
- NOTE 2: SHIFT IS RELATIVE TO 25°C.
- NOTE 3: SHIFT IS WITHIN THE FIRST HOUR OF EXCITATION APPLIED TO THE DEVICE.
- NOTE 4: MEASURED AT ONE-HALF FULL SCALE RATED PRESSURE USING BEST STRAIGHT LINE CURVE FIT.
- NOTE 5: THE VOLTAGE ADDED TO THE OFFSET VOLTAGE AT FULL SCALE PRESSURE.

**Pressure Response: for any pressure applied the response time to get to 90% of pressure applied is typically less than 100 useconds.**

## Equivalent Circuit

Input Resistance	5.0 k ohm
Output Resistance	3.0 k ohm



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