

### FEATURES

- -40-125°C (150°C Option) Operating Temperature
- .355" diameter (10mm) - Compact Size
- $\pm 0.25\%$  Linearity FS
- 1,000-15,000 psi pressure ranges
- Absolute or Sealed Gage
- Media – Liquid, Air, & Gas

### DESCRIPTION

The PPS03M is a miniature pressure sensor manufactured for variety of high pressure applications. This silicon pressure transducer has been designed for medical, industrial, and commercial applications. The stainless steel design and high temperature component selection allows the sensor to be used in high temperature (150C available upon request) applications.

The PPS03M series utilizes MEMS piezo-resistive sensors inside of a media isolated SS housing which has superior long term stability and accuracy.

The design is simple, cost effective, and proves reliable for OEM customers. Please contact us for Custom design availability.

### APPLICATIONS

- Medical Devices
- Industrial Automation
- Agricultural Equipment
- Chemical Process
- Natural Gas

## Maximum Environmental Ratings

Operating Temperature ..... -40°C to 125°C  
Storage Temperature Range ..... -40°C to 125°C

Proof pressure..... 2x full scale pressure (15kpsi Max)  
Burst pressure ..... 3x full scale pressure (15kpsi Max)

$V_+ = 5V$ ,  $V_- = 0V$ , Temperature = 25°C

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS
Excitation Voltage	$V_{EX}$	4.75	5.0	10	V
Excitation Current	$I_{EX}$		1.5	2.0	mA
Input Impedance		2	5	8	kΩ
Output Impedance		3.5	5	6	kΩ
Hysteresis			± 0.05	± .075	%FS
Zero Pressure Offset (note 1)	$V_{OS}$	3		3	mV
Linearity (note 2)			±0.15	±0.25	%FS
Repeatability			±0.05	±0.075	%FS
Full Scale Output		70			mV
TCR (Temperature Coefficient)			2300-3300		PPM/C
Temperature Error (Span/Offset @ 35C)			±0.75	±1.0	%FS
Overpressure (note 5)		2X FS		15000	PSI
Compensated Temperature Range		-10		80	C
Operating Temperature		-40		125	C

Notes: 1) Measured at zero pressure. 2) Defined as best straight line 3) Media Temperature 30C 4) Air Temperature 30C 5) 3 times pressure or 10,000 PSI whichever is lower.

## Application Information

### Package

The body design is made of stainless steel (SS316L), which allows for easy manufacturability and long term stability. Automotive grade vibration proof design for engine mount. Viton O-ring used.

### Stability

The silicon MEMS media isolated pressure sensor is mounted to a ceramic base and sealed into the SS housing. Proprietary factory calibration and analysis provide the customer with the most stable product possible with this technology.

### Pressure port

1/4" -18NPT and 1/8" -18NPT threads are an option found in the PPT5X and PPT8X series. Custom port fittings for OEM customers.

### Media

The pressure port is tolerant to most media including but not limited to oil, air, gas, some corrosive media, and salt water.

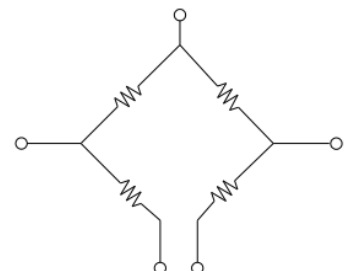
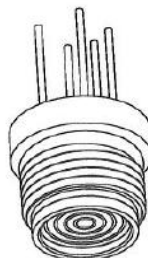
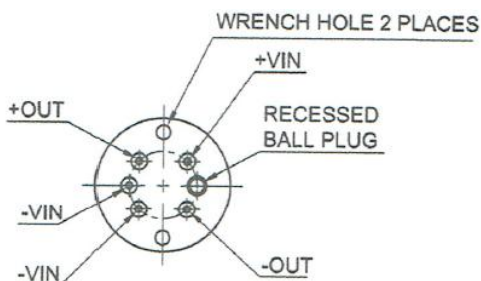
### Wetted parts

The wetted surfaces are composed of (316SS) stainless steel, or Hastelloy.

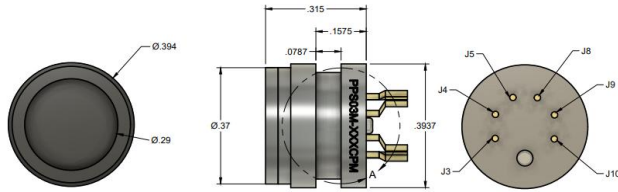
### Pressure ranges

Standard pressure ranges are 1000, 2500, 5000, 7500, and 10000 psi in absolute. Custom pressure ranges are available for OEM customers.

## Electrical Connections

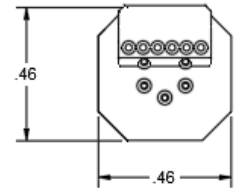
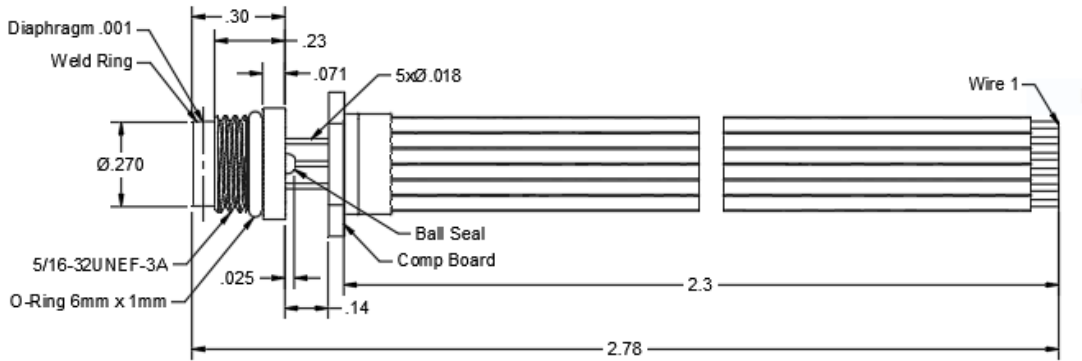


## 1: Uncompensated



PINOUT	
J3	-
J4	+IN
J5	+OUT
J8	-IN
J9	-IN
J10	-OUT

## 2: Compensated



## Phoenix Sensors Nomenclature

Model	Pressure Range	Pressure Type	Compensation	Port
PPS03M	1K = 1,000PSI	S = Sealed Gauge	1 = Uncompensated	S = Standard (No Port)
	....	A = Absolute	2 = Compensated	1 = 1/4" NPT
	15K = 15,000PSI		3 = Custom	2 = 1/8"NPT
				3 = 7/16" UNF
				4 = 9/16" UNF AN

Example: PPS03M-10KS11 10,000PSI, Sealed Gauge, Uncompensated, 1/4"NPT

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