

- -40-125°C Operating Temperature
- 19mm diameter
- $\pm .25\%$  Linearity FS
- $\pm .08\%$  Repeatability
- 1-5000 psi pressure ranges
- Absolute or Gage
- Media – Liquid, Air, & Gas

### DESCRIPTION

The PPS01 is a media isolated pressure sensor manufactured for a variety of low pressure applications. This silicon pressure transducer has been designed into medical, industrial, military, 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 PPS01 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 ..... -55°C to 125°C

Proof pressure ..... 3x full scale pressure  
 Burst pressure ..... 5x full scale pressure

## PPS01 Operational Characteristics

$V_+ = 5V$ ,  $V_- = 0V$ , Temperature = 30°C

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS
Excitation Voltage	$V_{EX}$	4.75	5.0	9.25	V
Excitation Current	$I_{EX}$		1	1.9	mA
Input Impedance		3	5	8	k $\Omega$
Output Impedance		3.5	4	6	k $\Omega$
Hysteresis			.05	.08	%FS
Zero Pressure Output (note 1)	$V_{OS}$			+-4	mV/V
Linearity (note 2)		-0.25	+- .15	0.25	%FS
Repeatability			+- .05	+- .07	%FS
Full Scale Output (5V Source)		60	70		mV
Temperature Error (Span/Offset @ 35C)			.75	1	%FS
Overpressure (note 5)				2x	PSI
Compensated Temperature Range		0		50	C
Operating Temperature		-40		125	C

Notes: 1) Measured at zero pressure with 5.00V source. 2) Defined as best straight line 3) Media Temperature 30C 4) Air Temperature 30C 5) 2 times pressure. Burst pressure 3 times pressure rating.

## 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 APT5X and APT8X series . Other port fittings such as 7/16-20UNF, and 1/4" BSP are available 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

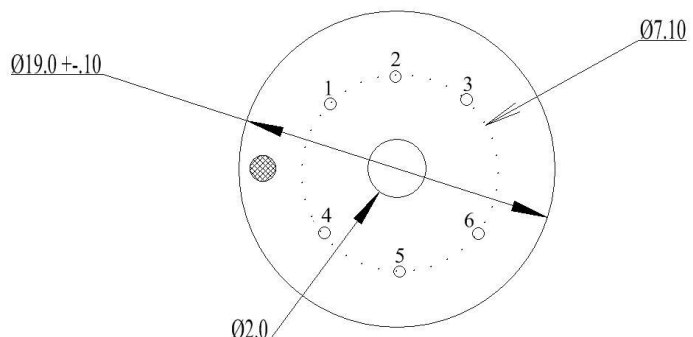
The wetted surfaces are composed of (316SS) stainless steel, or Hastelloy.

### Pressure ranges

Standard pressure ranges are 5, 10, 25, 50, 100, 150, 200, and 300 psi in absolute and gage. Custom pressure ranges are available for OEM customers.

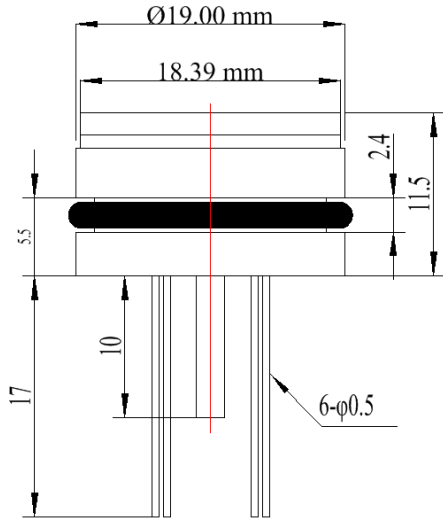
## Electrical Connections

Pin	Electrical Connection
1	-In
2	-Out
3	Not Used
4	-In
5	+Out
6	+In

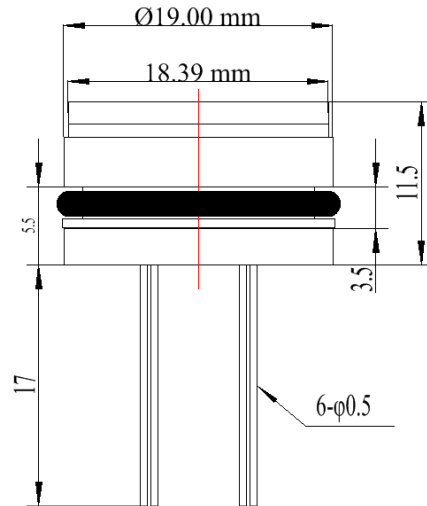


## Mechanical Dimensions (mm)

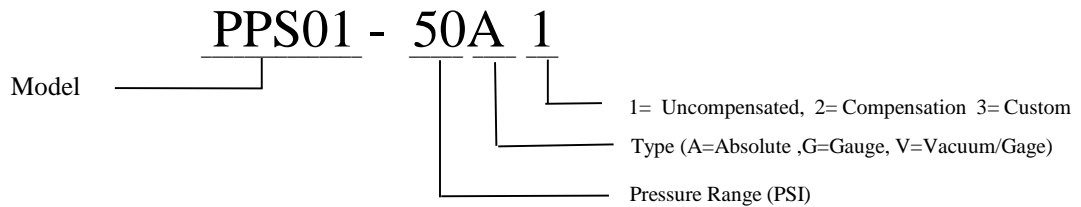
**Pressures <1000PSI**



**Pressures >1000PSI**



## Part Number Configuration



## Standard Part Numbers

Model	Pressure Range PSI	Type	Max Over Pressure
PPS01-50A1	50	Absolute	150
PPS01-100A1	100	Absolute	300
PPS01-300A1	300	Absolute	900

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