

- -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 PS01 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 PS01 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

PS01 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	kΩ
Output Impedance		3.5	4	6	kΩ
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		-10		80	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 over pressure. Burst pressure 3 times pressure rating. 6) 0-70C compensation for 1-5PSI units.

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

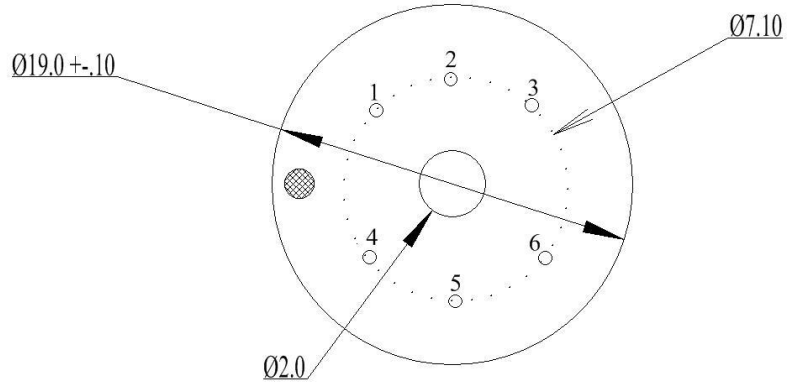
The wetted surfaces are composed of (316SS) stainless steel, or Hastelloy.

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.

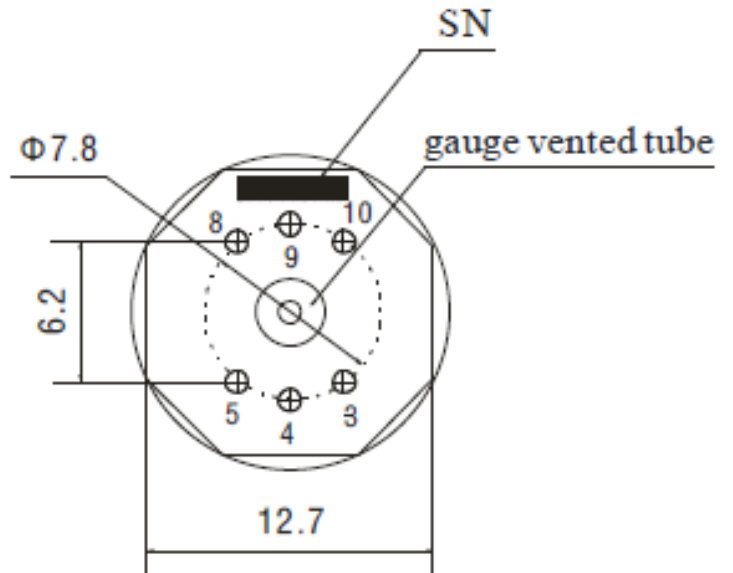
Uncompensated

Pin	Electrical Connection
1	-Out
2	-In
3	+In
4	-In
5	+In
6	+Out



Compensated

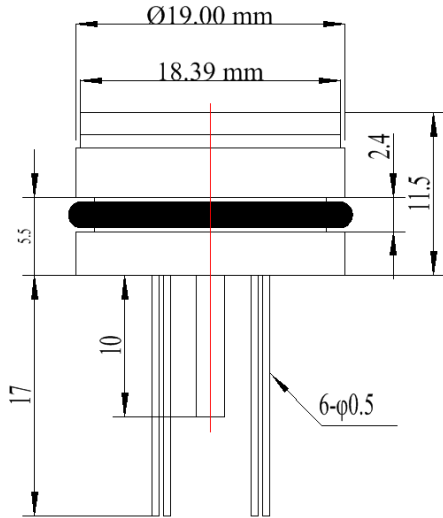
Pin	Electrical Connection
4	+Out
5	+In
8	-In
9	-Out



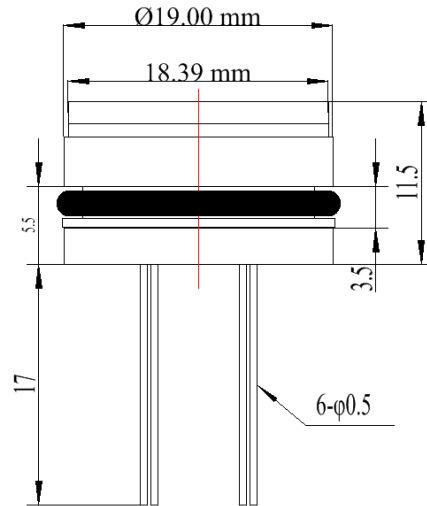
Notes: 1) Compensation range is -10-80C. 2) Custom compensation is available for OEM customers upon request. 3) Compensation Range is 0-70C for 1-5PSI units

Mechanical Dimensions (mm)

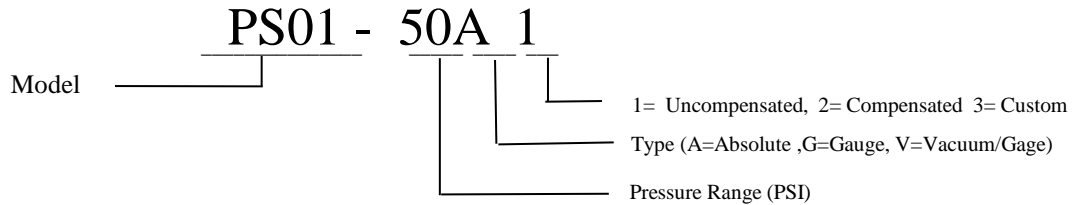
Pressures <1000PSI



Pressures >1000PSI



Part Number Configuration



Standard Part Numbers

Model	Pressure Range PSI	Type	Max Over Pressure
PS01-50A1	50	Absolute	150
PS01-100A1	100	Absolute	300
PS01-300A1	300	Absolute	900

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