PHOENIX SENSORS

- -40-125°C Operating Temperature

- 19mm (.748") diameter

- 8 mm (.315") height

- +-.20% Linearity FS

- 3-500 psi pressure ranges

- Gauge, Absolute or Sealed Gage

- Media – Liquid, Air, & Gas

DESCRIPTION

The PPS05 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 applications.

The PPS05 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 ……………..... -20°C to 125°C
Storage Temperature Range …………..-55°C to 125°C

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

PPS05 Operational Characteristics

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

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS
Excitation Voltage	V_{EX}	2	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			.05	.08	%FS
Zero Pressure Offset (note 1)	V_{OS}	-2		2	mV
Linearity (note 2)		-0.3		0.3	%FS
Repeatability			+-.15		%FS
Full Scale Output		60			mV
TCR (Temperature Coefficient)			2300-3300		PPM/C
Temperature Error (Span/Offset @ 35C)		-.5	.3	.5	%FS
Overpressure (note 5)				1	KPSI
Compensated Temperature Range		-10		80	C
Operating Temperature (note 6)		-20		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 1k 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.
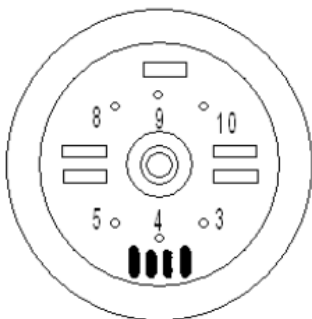
Wetted parts

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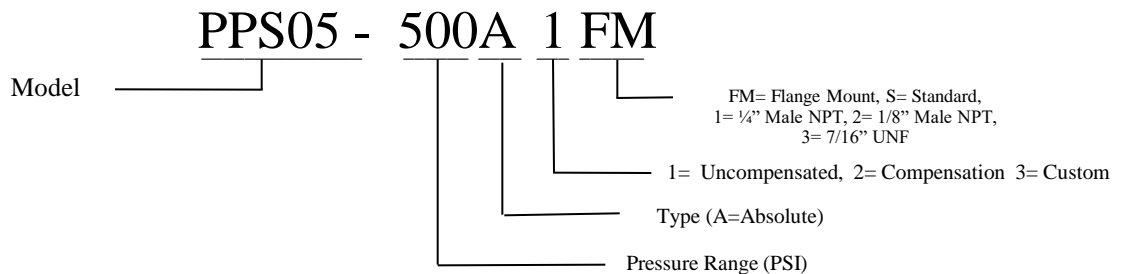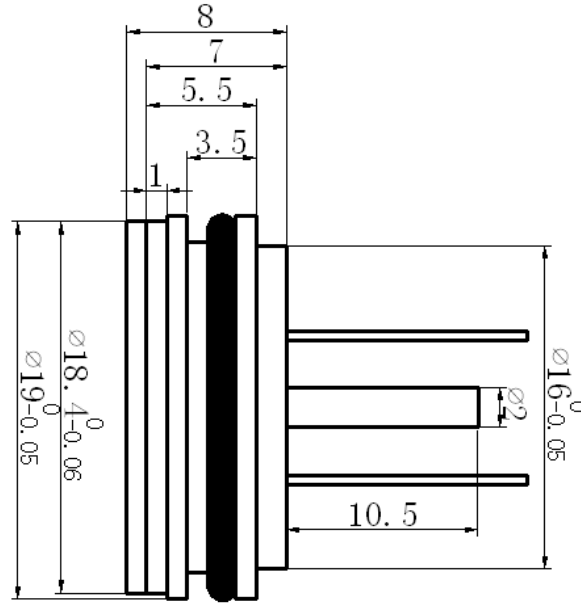
Pressure ranges

Standard pressure ranges are 3, 5, 10, 15, 30, 50, 100, 150, 300, and 500 psi in absolute. Custom pressure ranges are available for OEM customers.

Electrical Connections

Pin	Electric Connection
8	(+IN)
5	(-IN)
9	(+OUT)
4	(-OUT)

PPS05 - 500A 1 FM

Model

FM= Flange Mount, S= Standard,
1= ¼" Male NPT, 2= 1/8" Male NPT,
3= 7/16" UNF

1= Uncompensated, 2= Compensation 3= Custom

Type (A=Absolute)

Pressure Range (PSI)

Notes: 150C high temperature option is represented by "H" at the end of the part number.

Standard Part Numbers

Model	Pressure Range PSI	Type	Max Over Pressure
PPS05-500G1	500	Gauge	1500
PPS05-1kG1	1000	Gauge	3000
PPS05-3kG1	3000	Gauge	9000

Ph: (480) 269-1665 sales@PhoenixSensors.com