



- Low Pressure
- Brass Port (SS Option)
- -20-105°C Operating Temperature
- Compact Size
- +/- .25% Linearity FS
- Ratio 0.5 - 4.5V
- 5-300 psi pressure ranges
- Absolute or Gage
- Media – Liquid, Air, & Gas
- IP65
- +/-1.5% TEB

### DESCRIPTION

The PPT80 is a pressure transducer manufactured for a high operating temperature range for the most challenging of applications. This silicon pressure transducer was designed for industrial and commercial applications. The stainless steel design and high temperature analog component selection allows the sensor to be used in high temperature applications.

The PPT80 series utilizes MEMS piezo-resistive sensors pressurized on the passive backside of the SS housing which has superior long term stability and accuracy (.25% Linearity).

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

### APPLICATIONS

- Consumer products
- Industrial Automation
- HVAC
- Automotive Engine
- Compressor
- Pneumatic

## Maximum Environmental Ratings

Operating Temperature ..... -20°C to 105°C  
 Storage Temperature Range ..... -30°C to 105°C

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

## PPT80 Operational Characteristics

V <sub>+</sub> = 5V, V <sub>-</sub> = 0V, Temperature = 25°C					
PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS
Supply Voltage	V <sub>DD</sub>	2.8	5	5.5	V
Supply Current	I <sub>DD</sub>	.25	1	1.5	mA
Upper Output Voltage (Note 1)	V <sub>OUT</sub>	4.43	4.5	4.6	V
Lower Output Voltage	V <sub>OUT</sub>	.43	.5	.57	V
Linearity (Note 2)		-0.25		0.25	%FS
Temperature Error (Null and Span) (Note 3)		-1		+1	%FS
Response Time	t <sub>R</sub>		1	10	ms
Total Error Band (Note 4)		-1.5		1.5	%FS
Compensated Temperature Range	C	0		50	C
Operating Temperature Range	C	-25		105	C

Notes:

1) Measured with Supply Voltage at 5V. Output is ratiometric. 2) Defined as best straight line 3) Measured from 0°C to 70°C 4) Measured over compensated temperature range -25-85C

## Application Information

### Package

The one piece body design is made of Brass (SS316L option), which allows for easy manufacturability and long term stability. Automotive grade vibration proof design for engine mount.

### Stability

The silicon MEMS pressure sensor element is mounted to a ceramic base and sealed into the SS housing. The selection of thermally capability materials reduce the mechanical stress on the sensor resulting in greater stability over time and temperature.

Additional stability is gained from factory stabilization of all sensors.

### Pressure port

1/4" -18NPT and 1/8"-18NPT threads are standard SS fittings. 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

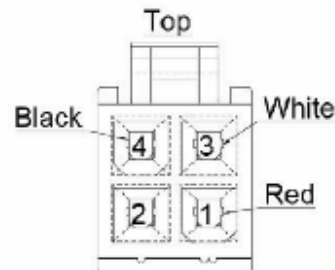
When checking media capability, the wetted surface is composed of only stainless steel (316 or Brass), PPS, and SiO<sub>2</sub>.

### Pressure ranges

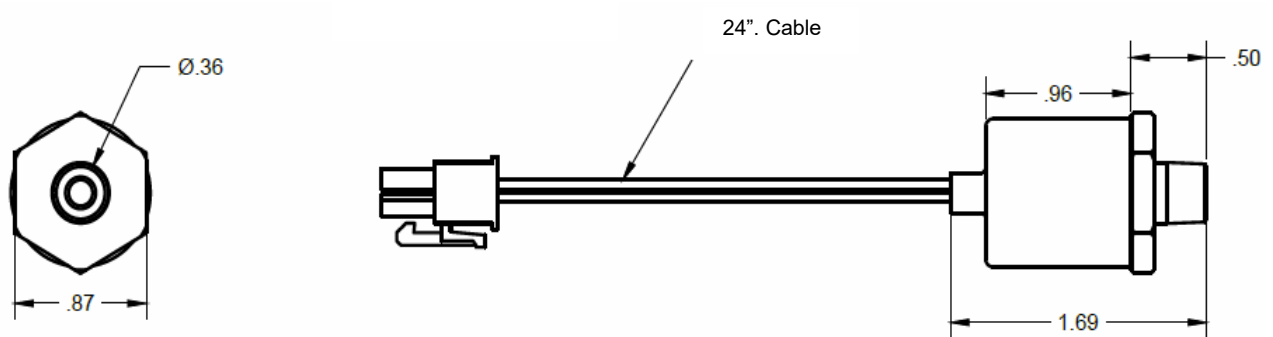
Standard pressure ranges are 15, 50, 100, 150, 200, and 300 psi in absolute and gage. Custom pressure ranges are available for OEM customers.

### Electrical Connection

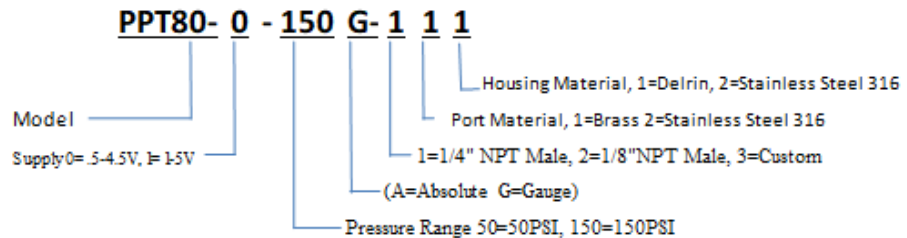
Supply – Pin 1 (Red Wire), Ground – Pin 4 (Black Wire), Output – Pin 3 (White Wire)



## Mechanical Dimensions (inches)



## Part Number Configuration



## Standard Part Numbers

Model	Pressure Range PSI	Type	Max Over Pressure
PPT80-0-50A1	50	Abs/Gage	150
PPT80-0-100A1	100	Abs/Gage	300
PPT80-0-300A1	300	Abs/Gage	900

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