



- Differential Pressure - .05 PSI Resolution
- -10-80°C Operating Temperature
- +/- .15% Linearity FS
- 4-20mA , 0-5V output
- Line Pressure up to 3X High Side Pressure
- 316SS Port
- Media – Liquid, Air, & Gas



### DESCRIPTION

The PPT90 differential pressure transducer is designed for industrial applications with a variety of media (gas, air, & liquid). This media isolated piezoresistive pressure transducer was designed for demanding industrial and commercial applications and has superior long term stability. The design conforms to GB3836.4 for Explosion Proof applications.

The PPT90 series utilizes MEMS piezo-resistive sensors packaged inside a 316SS housing which has superior long term stability and accuracy (.15% Linearity).

The PPT90 has a response time of ~1ms for fast response applications. Please contact us for Custom design availability.

### APPLICATIONS

- Mil/Aero
- Industrial Automation
- Oil/Gas
- Catalytic Converter
- Compressor
- Filter clogging measurement

### Measuring Ranges

Order Code	05	10	15	30	50	100	150	300	450
Units	PSI								
Pressure Range	5	10	15	30	50	100	150	300	450
Overpressure High Side	10	25	30	60	100	200	300	600	900
Overpressure Low Side	5	10	15	30	50	100	150	300	450
Max Static Pressure	2000								

## PPT90 Operational Characteristics

$V_+ = 10V$ ,  $V_- = 0V$ , Temperature = 25°C

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS
Excitation Voltage	$V_{EX}$	15	24	28	V
Output	mA	4		20	mA
Linearity (Note 2)			.15	0.2	%FS
Repeatability		-.05		.05	%FS
Temperature Compensation			0~50		C
Operation Temperature			-10~100		C
Full Scale Thermal Error			.75	1	%FS
Response Time	$t_R$		.5	1	ms

Notes: 1) Measured at zero pressure. 2) Defined as best straight line 3) Measured from -20°C to 85°C. 4) Beta ~3,900.

## Application Information

### Package

The port and diaphragm are made of stainless steel (SS316L), which allows for harsh media such as hydraulic oils, inks, etc. Automotive grade vibration proof design for engine mount.

### Stability

The silicon MEMS oil-filled pressure sensor exhibit low thermal hysteresis and excellent long term stability. The rigid 316 Stainless steel housing isolates the sensor from mechanical stress during the mounting of the sensor.

Additional stability is gained from factory stabilization of all sensors.

### Pressure port

G1/4" female is the standard SS port fitting. Other port fittings such as 1/4"NPT Male, 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.

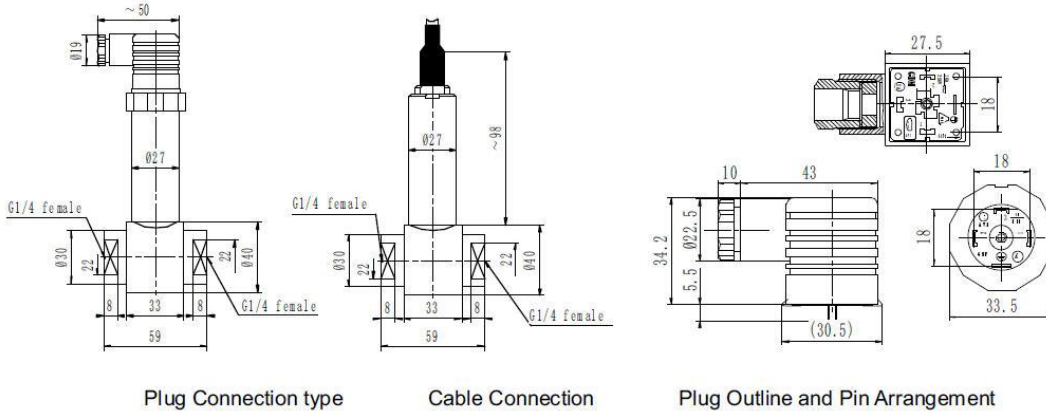
### Wetted parts

The wetted surfaces are composed of stainless steel, vitron, and/or Tantalum.

### Pressure ranges

Standard differential pressure ranges are 5, 10, 15, 30, 50, 100, and 200 psi. Custom pressure ranges are available for OEM customers.

## Mechanical Dimensions (inches) Electrical Connections



Plug Connection type

Cable Connection

Plug Outline and Pin Arrangement

### Electrical Connections

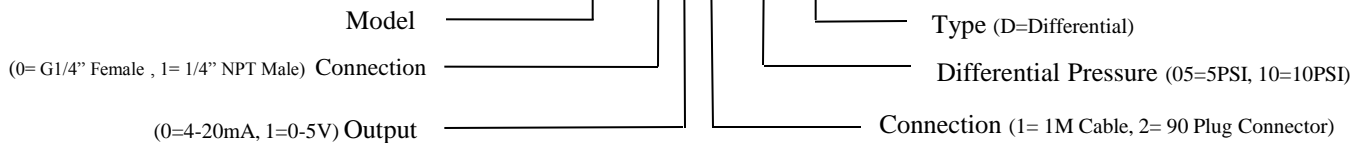
Plug Connection

Cable Connection

Pin	2-wire	3-wire	Wire Color	2-wire	3-wire
1	V+	V+	Red	V+	V+
2	0V+/Out	Out	Black	0V/Out	GND
3	N/A	GND	White	N/A	Out+

### Part Number Configuration

## PPT9001-05D



### Standard Part Numbers

Model	Pressure Range PSI	Type	Max Over Press (HS-high side)
APT9100-05D	05	Diff	15 HS
APT9100-10D	10	Diff	30 HS
APT9100-15D	15	Diff	45 HS

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

#### Notice:

Phoenix Sensors LLC reserves the right to make changes to the product contained in this publication. Phoenix Sensors LLC assumes no responsibility for the use of any circuits described herein, conveys no license under any patent or other right, and makes no representation that the circuits are free of patent infringement. While the information in this publication has been checked, no responsibility, however, is assumed for inaccuracies.

Phoenix Sensors LLC does not recommend the use of any of its products in life support applications where the failure or malfunction of the product can reasonably be expected to cause failure of a life-support system or to significantly affect its safety or effectiveness. Products are not authorized for use in such applications.