PPT86 Series

- mV or V Output (high level output available to 175C)
- -40-200°C Operating Temperature
- +-0.2% Linearity FS
- 150 -15k psi pressure ranges
- Gauge
- Media – Harsh Liquid, Air, & Gas
- Compact Size

DESCRIPTION

The PPT86 is a pressure transducer manufactured for a high operating temperature range for the most challenging of applications. This thin film-based transducer was designed for industrial, Oil/Gas, Aerospace, and commercial applications. The stainless-steel design and high temperature analog component selection allows the sensor to be used in high temperature and high-pressure applications.

The PPT86 series utilizes thin film sensors manufactured to Phoenix Sensors precise specifications in a single piece of 316SS housing to ensure long term stability and accuracy (.20% Linearity).

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

APPLICATIONS

- Mil/Aero
- Industrial Automation
- HVAC
- Automotive Engine
- Oil/Gas
- Hydraulic

Maximum Environmental Ratings

Operating Temperature ……..... -40°C to 200°C
Storage Temperature Range ……..-50°C to 130°C

Proof pressure ……..……... 3x full scale pressure (or 20kPSI)
Burst pressure ……..……... 5x full scale pressure (or 20kPSI)

PPT86 Operational Characteristics

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

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS
Excitation Voltage	V_{EX}	4.75	5.0	12	V
Excitation Current	I_{EX}		1.5	2.0	mA
Input Impedance		3	5	6	kΩ
Output Impedance		3.5	5	6	kΩ
Hysteresis			.05	.08	%FS
Zero Pressure Output (note 1)	V_{OS}			+- 12	mV
Linearity (note 2)		-0.2		0.2	%FS
Repeatability			+-.05		%FS
Full Scale Output (10V Input)		45	55	65	mV
Temperature Error (Span/Offset @ 35C)			.75	1	%FS
Overpressure (note 4)				20	KPSI
Operating Temperature		-40		200	C

Notes:
1) Measured with Supply Voltage at 5V. Output is ratiometric. 2) Defined as best straight line 3) Measured from 0°C to 85°C 4) 1.5X Operating Pressure (Maximum of 20KPSI)

Application Information

Package

The one-piece 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. 1M output cable. Other cable lengths available at request for OEM customers.

Stability

The thin film-based pressure sensor element is precision welded to a 316L SS 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

1/8" -18NPT, ¼"-20 NPT, and 7/16-20UNF threads are standard SS fittings. We also offer a 9/16-18 AN metal seal fitting. Other port fittings such as metric sizes, and ¼" 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.

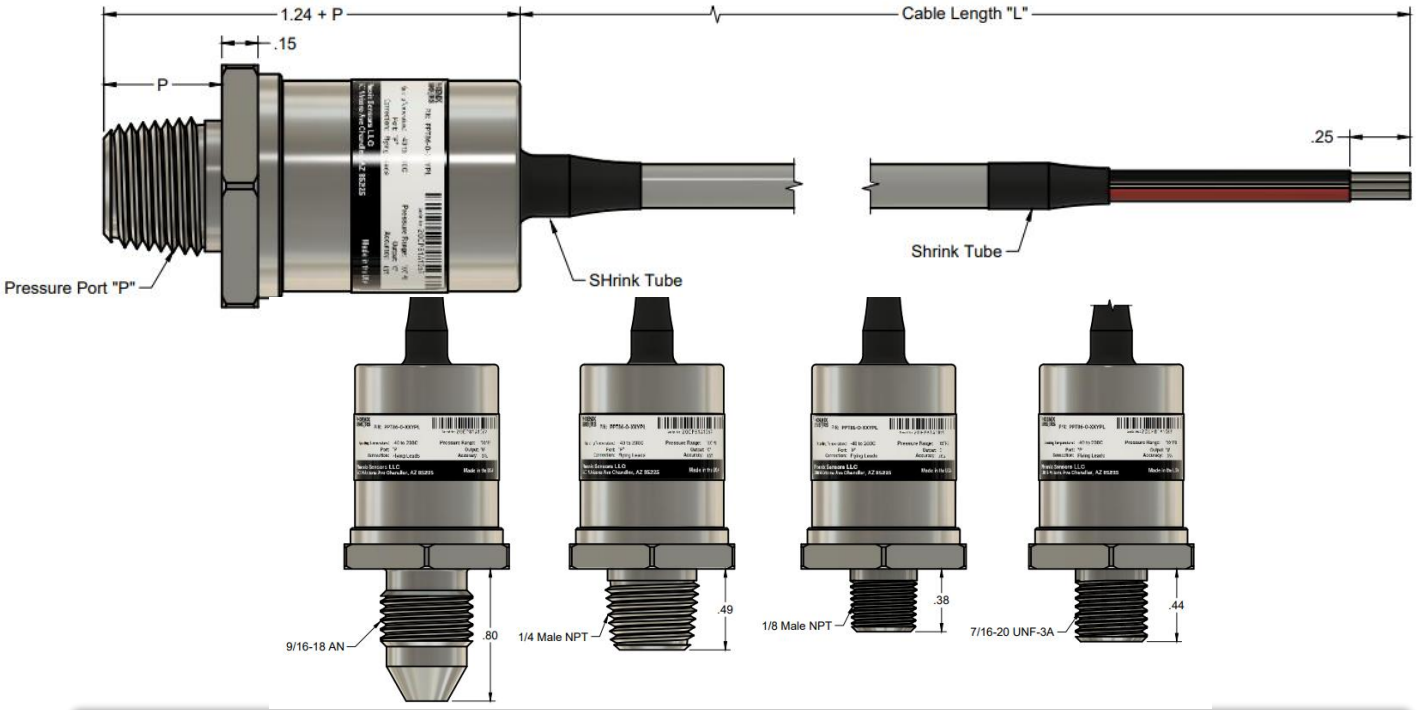
Wetted parts

When checking media capability, the wetted surface is composed of only stainless steel (316).

Pressure ranges

Standard pressure ranges are 500, 1000, 3000, 5000, 10,000 and 15,000 psi in gauge. Custom pressure ranges are available for OEM customers.

Mechanical Dimensions (inches)



Part Number Configuration

PPT86-0 - 3K G 1 1-1

Model

0=0-100mV, 1= .5-4.5V

Pressure Range 3k=3000PSI, 500=500PSI

Type (G=Gauge)

Port: 1= 1/4" NPT Male, 2= 1/8" NPT Male, 3= 7/16-20 UNF-3A, 4= Custom, 5= 9/16-18 AN

Electrical Connection 0=Flying Leads, 1=M12 Connector

Cable Length 1=1M , 3= 3M, 5=5M

Standard Part Numbers

Model	Pressure Range PSI	Type	Max Over Pressure
PPT86-0-1KG1	1000	Gauge	3000
PPT86-0-3KG1	3000	Gauge	9000
PPT86-0-5KG1	5000	Gauge	10000

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