



PPT85 General Purpose Analog Pressure Transducer

PPT85 Series



FEATURES

- Analog (0.5-4.5V, 0-5V, 0-10V) or Current (4-20mA) Output
- Operating Temperature -40-125°
- +/-0.5% Accuracy
- -14.5 to 15,000 PSI
- Gauge, Absolute, Compound (Vacuum), Sealed Gauge
- Media – Harsh Liquid, Air, & Gas

DESCRIPTION

The PPT85 is a compact pressure transducer designed to perform in high-temperature environments, making it suitable for the most demanding applications. This thin-film based transducer is engineered for industrial, oil and gas, aerospace, and commercial uses. Despite its small and compact size, the PPT85 offers robust performance with a Delrin plastic housing and stainless steel 316L, 17-4PH, or 304 wetted materials. The high-temperature analog components ensure reliable operation under high-temperature and high-pressure conditions. The PPT85 series features thin film sensors crafted to Phoenix Sensors' precise specifications. Its straightforward, cost-effective, and dependable design makes it a preferred choice for OEM customers. For custom design options, please contact us.

APPLICATIONS

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

Maximum Environmental Ratings

Operating Temperature -40°C to 125°C
Storage Temperature Range -40°C to 125°C

Proof pressure 3x full scale pressure (or 15kPSI)
Burst pressure 2x full scale pressure (or 15kPSI)

PPT85 Operational Characteristics

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS
Supply (Option 1)	V _{DD}	2.7	5	5.5	VDC
Supply (Option 2)	V _{DD}	9		32	VDC
Output (Option 0)	V _{OUT}	0.5		4.5	V
Output (Option 1)	V _{OUT}	0		5	V
Output (Option 2)	V _{OUT}	4		20	mA
Output (Option 3)	V _{OUT}	0		100	mV
Output (Option 4)	V _{OUT}	0		10	V
Linearity	±%FS	-0.15		0.15	%FS
Hysteresis	±%FS	-0.05		0.05	%FS
Repeatability	±%FS	-0.05		0.05	%FS
Temperature Error	±%FS	-1	0.5	1	°C
Accuracy (Total Error Band)	±%FS	-1	0.5	1	%FS
Response Time	t _R		5		ms
Current Consumption	I		5		mA
Operating Temperature Range	°C	-40		125	°C
Compensated Temperature Range	°C	0		70	°C
Pressure Ranges	PSI	-14.5		15,000	PSI
Proof Pressure	V _{over}		1.5X		FS
Burst Pressure	V _{burst}		2X		FS
Environmental Rating	IP	IP65		IP67	IP

Notes:

1) Measured with Supply Voltage at 5V. Output is ratiometric. 2) Defined as best straight line 3) Measured over compensated temperature range -20-85°C

Package

The PPT85 uses a Delrin plastic housing with a stainless steel 316L, 17-4PH, or 304 wetted material. Electrical connections are available as Packard connector, cable with flying leads, or M12 connector. Other electrical connections are available upon request for OEM customers.

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" NPT and 1/8" NPT are standard, but other port sizes like 7/16-20 UNF, 1/4" BSPP, and 9/16-18 UNF AN 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.

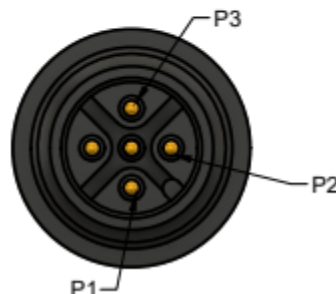
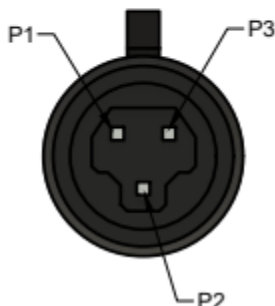
Pressure ranges

Standard pressure ranges are 50, 100, 500, 1,000, 5,000, and 15,000PSI in Gauge. Custom pressure ranges are available for OEM customers.

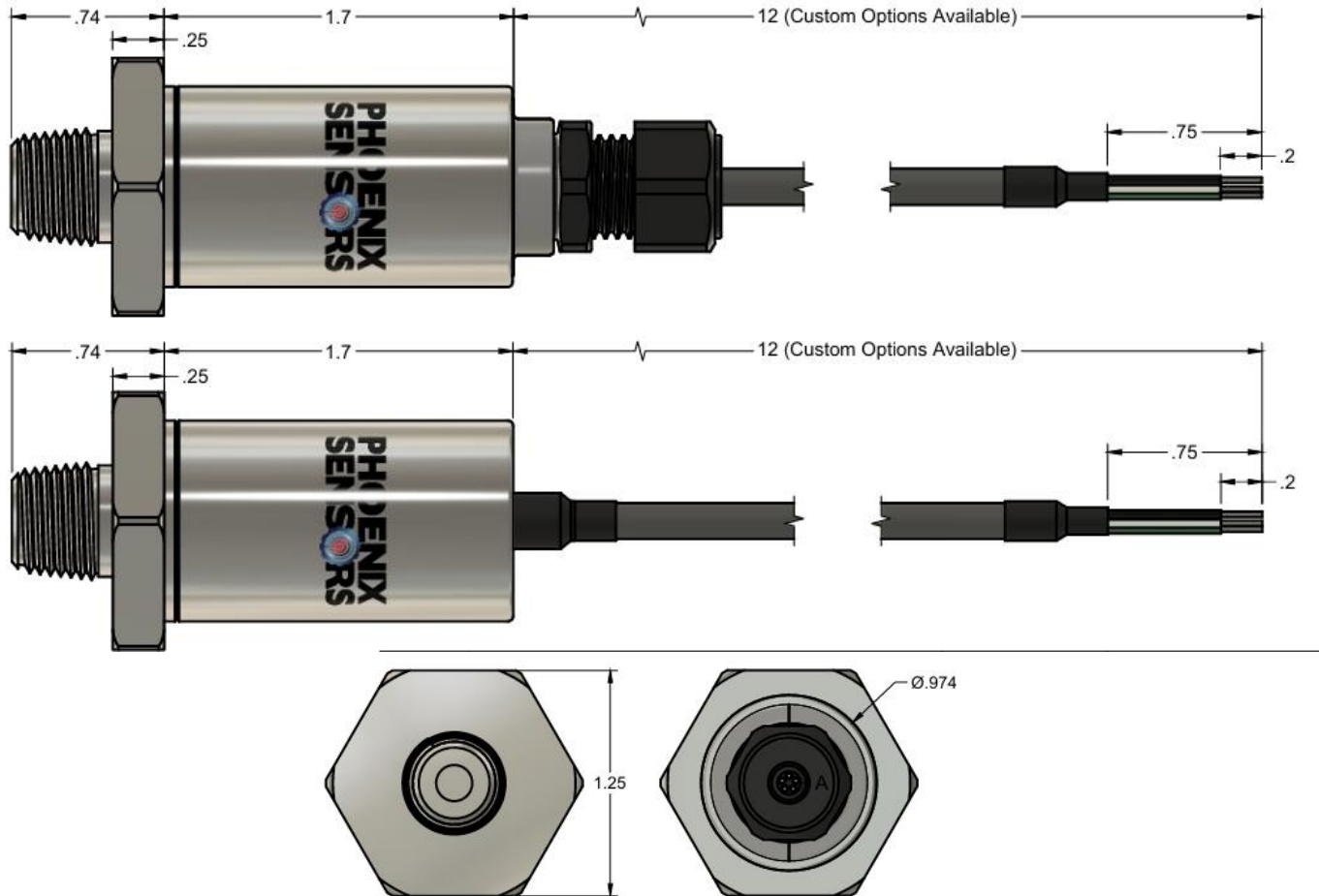
Electrical Pinout

Electrical Connections					
Packard Connector		Flying Leads		M12 Connector	
P#	Function	Color	Function	P#	Function
P1	VDD	RED	VDD	P1	VDD
P2	OUT	WHITE	OUT	P2	OUT
P3	GND	BLACK	GND	P3	GND

NOTE: FOR 4-20mA OUTPUT, P3 IS N/C



Mechanical Dimensions (inches)



Part Number Configuration

Phoenix Sensors Nomenclature								
Model	Output	Pressure Range	Pressure Type	Port	Power Supply	Environmental Rating	Electrical Connection	Cable Length
PPT85	0 = 0.5-4.5V	15 = 15 PSI	G = Gauge	1 = 1/4" NPT Male	1 = 5V	Null or S = IP65	Null = Packard Connector	1 = 1FT
	1 = 0-5V	A = Absolute	2 = 1/8" NPT Male	2 = 9-32VDC	P = IP67	Null = Flying Leads (Add Cable Length)
	2 = 4-20mA	500 = 500PSI	C = Compound (Vacuum)	3 = 7/16"-20 UNF Male				20 = 20FT
	3 = 0-100mV		S = Sealed Gauge	4 = 1/4" BSPP Male				
	4 = 0-10V			5 = 9/16"-18 UNF Male				
Example: PPT85-0-500G11 0.5-4.5V Output, 500PSI, Gauge, 1/4"NPT Male, IP65, 5V Supply, Packard Connector								

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