



FEATURES

- -40-125°C Operating Temperature
- Compact Size
- Accuracy $\pm .5\%$ FS
- Analog output (voltage, current, millivolt)
- 1000-15,000 psi pressure ranges
- Absolute or Sealed Gauge
- Media – Liquid, Air, & Gas

DESCRIPTION

The PPT56 is a Compact Analog High Pressure Transducer manufactured for a high operating temperature range for the most challenging of applications. This silicon pressure transducer was designed for demanding industrial and commercial applications. The stainless steel (316L) media isolated port design allows for pressure measurement of liquid or gas media.

The PPT56 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 two piece design is simple and proves valuable for OEM customers. Please contact us for Custom design availability.

APPLICATIONS

- Mil/Aero
- Industrial Automation
- HVAC
- Automotive Engine
- Compressor
- Medical Equipment

Maximum Environmental Ratings

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

Proof pressure..... 2x full scale pressure (15kpsi Max)
 Burst pressure 3x full scale pressure (15kpsi Max)

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.

Stability

The silicon MEMS pressure sensor has a Pyrex base and is mounted to a ceramic base and sealed into the SS housing. Flexible die attach materials help reduce the mechanical stress which results in greater stability over time and temperature.

Additional stability is gained from factory stabilization of all sensors.

Pressure port

1/8" -18NPT and 1/4"-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

The wetted surfaces are composed of stainless steel, vitron, pyrex, or Brass.

Pressure ranges

Standard pressure ranges are 100, 300, 500, 1000, and 1500 psi in absolute, sealed gauge, and gauge versions. Custom pressure ranges are available for OEM customers.



Automated Oil/Gas Valves



Medical Equipment

PPT56 Analog Output 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	1,000		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 at zero pressure. 2) Defined as best straight line 3) Measured from 0°C to 70°C.

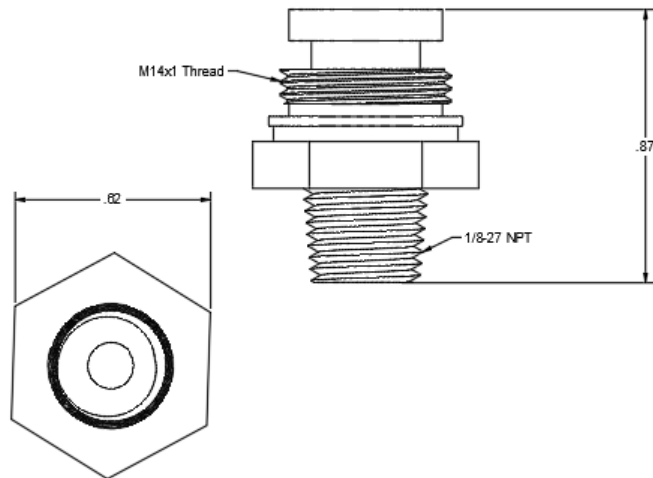
Electrical Pin Configuration (Digital [SPI, I2C])



Yellow - SCL/SCLK
Green - SDA/MISO
White- INT/SS
Red- V+In
Black GND

Fig. 2

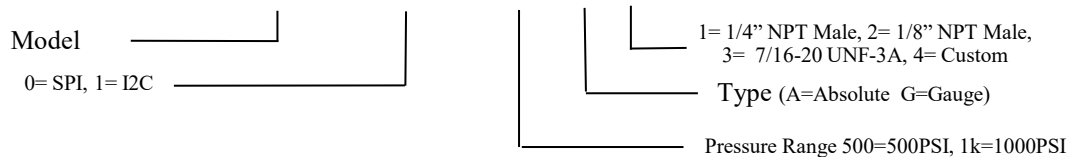
Mechanical Dimensions (inches)



Part Number Configuration

Phoenix Sensors Nomenclature								
Model	Output	Pressure Range	Pressure Type	Port	Power Supply	Environmental Rating	Electrical Connection	Cable Length
PPT56	0 = 0.5-4.5V	1000 = 1000 PSI		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	15,000 = 15,000 PSI		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				

PPT56 - 0 - 500 A 1



Standard Part Numbers

Model	Pressure Range PSI	Type	Max Over Pressure
PPT560-1KA1	1000	Abs/Gage	3000
PPT560-3KA1	3000	Abs/Gage	9000
PPT560-5KA1	5000	Abs/Gage	10000

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