PPT71 Series

- Low Pressure
- Media Isolated –SS316
- -40-125°C Operating Temperature
- Compact Size
- +-.5% Linearity FS
- Ratio 0.5 - 4.5V
- 50-200 psi pressure ranges
- Absolute
- Media – Liquid, Air, & Gas
- IP65

RoHS

DESCRIPTION

The PPT71 is a pressure transducer manufactured for low profile OEM applications. This silicon pressure transducer was designed for industrial, medical, and commercial applications. The stainless steel design and high temperature analog component selection allows the sensor to be used in higher temperature (105C) applications and provide accurate results.

The PPT71 series utilizes MEMS piezo-resistive sensors pressurized on the passive backside of the SS housing which has superior long term stability, low manufacturing costs, and creditable (.5%) linearity.

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

APPLICATIONS

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

Maximum Environmental Ratings

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

Proof pressure ……..……... 2x full scale pressure
Burst pressure ……..……... 3x full scale pressure

PPT71 Operational Characteristics

V_+ = 5V, V_- = 0V, Temperature = 25°C					
PARAMETER	SYMBOL	Min	Typ	Max	UNITS
Supply Voltage	V_{DD}	4.5	5	5.5	V
Supply Current	I_{DD}	1.5	2	3	mA
Upper Output Voltage (Note 1)	V_{OUT}		4.5	5.2	V
Lower Output Voltage	V_{OUT}	.18	.5	.5	V
Linearity (Note 2)		-0.5		0.5	%FS
Temperature Error (Null and Span) (Note 3)		-1		+1	%FS
Response Time	t_R		1	10	ms
Total Error Band (Note 4)		-1.5		1.5	%FS
Compensated Temperature Range	C	0		50	C
Operating Temperature Range	C	-40		125	C

Notes:

1) Measured with Supply Voltage at 5V. Output is ratiometric. 2) Defined as best straight line 3) Measured from -10°C to 70°C 4) Measured over compensated temperature range -0-50C

Agency Approvals	
IEC61000-4-2	Electrostatic Discharge Immunity: 8KV Contact: 15kV Air: Class B
IEC61000-4-3	EM Field Immunity: 30V/M 1Mhz-80Mhz, 50V/M, 80Mhz-1Ghz, 1% steps, 2sec dwell, Max error +2% error
IEC61000-4-4	Electrical Transient Immunity: 1kV (Level II),5Khz Repetition, Class B, Max Error Output +-1.5%
IEC61000-4-5	Power Surge: 1KV (Level II), L-L 500V, L-E 1KV, Class B Max Error +-1.5% Span
IEC61000-4-6	Conducted Immunity: 5V/140dB, 150Khz-80Mhz, (Level III), Class B, Max Error +-2.0% over span
IEC61000-4-9	Pulse Magnetic Field Immunity: 100A/M (Level III), Class B, Max error output +-2.0% over span.
IEC55022	Emission: Class A, 40dB 30-220Mhz, 47dB 230MHz-1Ghz

Application Information

Package

The one piece body design is made of stainless steel (SS316L) and a high temperature nylon, which allows for easy manufacturability and long term stability. Automotive grade vibration proof design allows 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.

Media

The pressure port is tolerant to most media including but not limited to oil, air, gas, some corrosive media, and salt water.

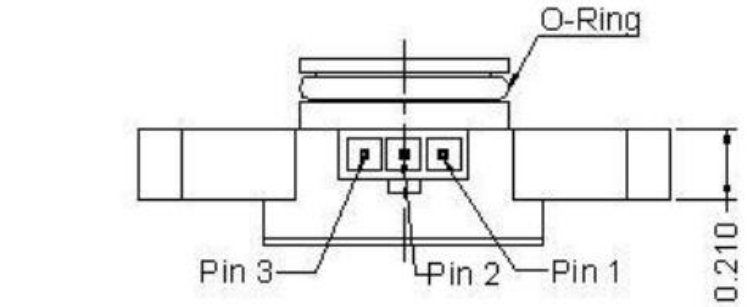
Wetted parts

When checking media capability, the wetted surface is composed of only stainless steel (316) and Viton O-ring.

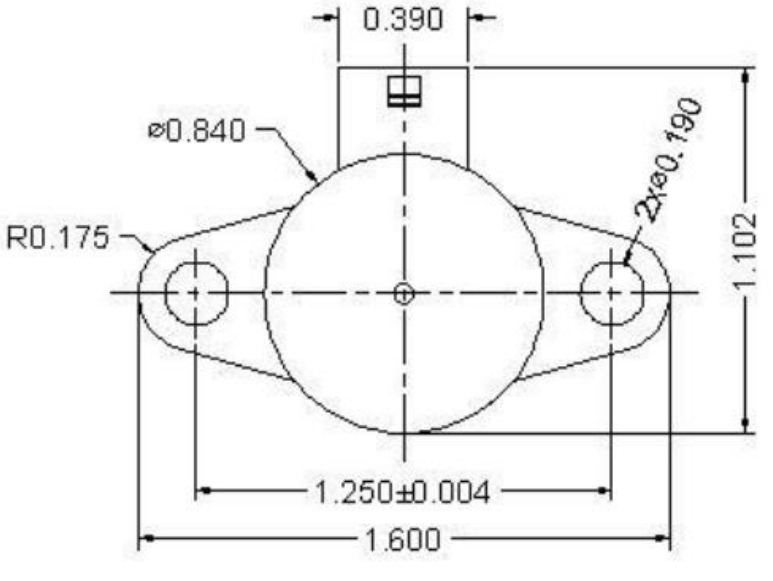
Pressure ranges

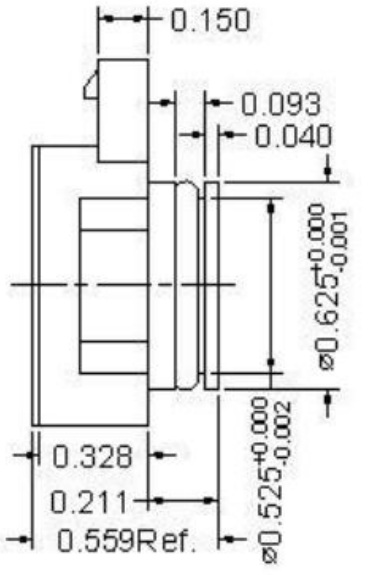
Standard pressure ranges are 75, 100, 150, and 200 psi in absolute and gage. Custom pressure ranges are available for OEM customers.

Mechanical Dimensions (mm [inches])



ELECTRICAL CONNECTIONS		
Pin No.	Function	Suggesting mated connector & terminals
1	Supply +	Molex connector #:43645-0300 Molex terminals #:43030-0003
2	Supply -	
3	Output	





Part Number Configuration

PPT71-0 - 50A

Model

0=.5-4.5V, 1=custom

Type (A=Absolute)

Pressure Range 50=50PSI, 100=100PSI

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