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SPT83 Compact Sized Pressure Sensor

Features

- Pressure range: 0~2...1000bar
- Gauge, absolute and sealed gauge
- Constant current power supply
- Isolated construction, enable to test measure various media
- $\Phi 12.6\text{mm}$ compact size OEM pressure sensor
- Stainless steel 316L
- Wider temperature compensation range $-10^{\circ}\text{C} \sim +80^{\circ}\text{C}$



Application

- Industrial process control
- Level measurement
- Gas, liquid pressure measurement
- Pressure inspection meter
- Pressure calibrator
- Liquid pressure system and switch
- Cooling equipment and air conditioner
- Aviation and navigation inspection

Introduction

SPT83 compact sized pressure sensor is OEM pressure sensor with stainless steel isolated diaphragm, the whole product has integrated construction, high endurance, high stability and good reliability, it can be used specially for middle and high pressure measurement. The sensor using high accurate and stable pressure die, are produced on the advanced production line. Sensors are tested automatically, and compensated zero and temperature performance. With identical mounting dimension, the sensors are widely used for chemi-industry, process control, liquid pressure system and switch, etc.

Electric Performance

- Power supply: $\leq 2.0\text{mA DC}$
- Electric connection: Kovar pin or 100mm silicon rubber flexible wires
- Common mode voltage output: 50% of input (typ.)
- Input impedance: $2.5\text{k}\Omega \sim 5\text{k}\Omega$
- Output impedance: $2.5\text{k}\Omega \sim 5\text{k}\Omega$
- Response (10%~90%): $< 1\text{ms}$
- Insulated resistor: $100\text{M}\Omega$, 100VDC
- Overpressure: 2 time FS

Construction Performance

- Diaphragm: stainless steel 316L
- Housing: stainless steel 316L
- Pin: Kovar or silicon rubber flexible wires
- O-ring: NBR
- Net weight: ~8g

Environment Condition

- Position effect: deviate 90° from any orientation, zero change $\leq \pm 0.05\%FS$
- Shock: no change at 10gRMS, (20~2000) Hz
- Impact: 100g, 11ms
- Media compatibility: the liquid or gas which is compatible with stainless steel and NBR

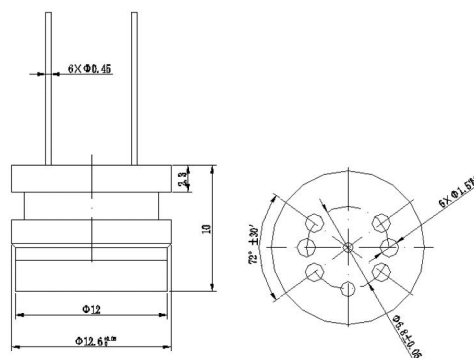
Basic Condition

- Media temperature: (25±1) °C
- Environment temperature: (25±1) °C
- Humidity: (50%±10%) RH
- Local air pressure: (86~106) kPa
- Power supply: (1.5±0.0015) mADC

Basic Specification

Specification*	Min.	Typ.	Max.	Units
Linearity **		±0.2	±0.25	%FS,BFSL
Repeatability		±0.05	±0.075	%FS
Hysteresis		±0.05	±0.075	%FS
Zero output			±2.0	mVDC
FS output	45	100		mVDC
Zero thermal error		±0.75	±1.0	%FS, @25°C
Span thermal error		±0.75	±1.0	%FS, @25°C
Compensated temp. range	10~80			°C
Working temp. range	-40~125			°C
Storage temp. range	-55~125			°C
Stability		±0.1	±0.2	%FS/year
* testing at basic condition				

Outline Construction (unit: mm)



The suggested mounting dimension is $\Phi 12.6^{+0.12}_{+0.08}$ mm.

Order Guide

SPT83		Compact Sized Pressure Sensor					
		Code		Assembling type			
		I		Φ12.6mm			
				Range code	Pressure range		Pressure type
				03	0~1bar		G.A
				07	0~2bar		G.A
				08	0~3.5bar		G.A
				09	0~7bar		G.A
				10	0~10bar		G.A
				12	0~20bar		G.A
				13	0~35bar		G.A
				14	0~70bar		A.S
				15	0~150bar		A.S
				17	0~200bar		A.S
				18	0~350bar		A.S
				19	0~700bar		A.S
				Code		Pressure type	
				G		Gauge	
				A		Absolute	
				S		Sealed gauge	
						Code	Electric connection
				1	Kovar		
				2	100mm silicon rubber flexible wires		
SPT83	I	17	S	2	the whole spec		

Order Note

1. Please pay attention to protect the diaphragm to prevent sensor from damaging;
2. Please do not pull or drag the Kovar pin or flexible leading wires.