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SPT80P Flush Diaphragm Pressure Sensor G1/2 Thread

Features

- Pressure range: 0 ~ 0.1...350bar
- Gauge, Absolute and Sealed gauge
- Constant current or Constant voltage power supply for option
- Isolated construction to measure various fluid media
- Thread connection pressure: 0 ~ 0.1...350bar
- Hygienic structure optional ($R_a < 0.4\mu\text{m}$)
- Negative pressure measurement is available, the lowest to around -1bar



Application

- Industrial process control
- Level measurement
- Gas, Liquid pressure measurement
- Pressure meter
- Pressure calibrator
- Liquid pressure system and Switch
- Refrigeration equipment and Air conditioner
- CIP or SIP online cleaning or sterilization system

Introduction

SPT80P Flush Diaphragm Pressure Sensor G1/2 Thread is a pressure sensing element through male thread and clamp connection. It has pressure port G1/2 male, sealed by FKM or silicon O-ring. The isolated diaphragm is welded in front of thread port, the range is 0 ~ 0.1...350bar(thread connection). It is suitable for pressure detection in food, medicine, health and other industries and occasions where the measuring medium may be fouled. We can use gauge type of general, assembled and flush diaphragm type SPT80P to measure pressure below air pressure, the min. pressure can be around -1bar.

Electric Specification

- Power supply: $\leq 2.0\text{mADC}$
- Electric connection: $\Phi 0.5\text{mm}$ gold-plated Kovar pin or 100mm flexible silicone rubber wires
- Common mode voltage output: 50% input (typ.)
- Input impedance: $2.5\text{k}\Omega \sim 8\text{k}\Omega$
- Output impedance: $3.5\text{k}\Omega \sim 6\text{k}\Omega$
- Response (10%~90%): $< 1\text{ms}$
- Insulation resistor: $100\text{M}\Omega @ 100\text{VDC}$
- Overpressure: 2 times FS

Construction

- Diaphragm: stainless steel 316L with gold plated
- Housing: stainless steel 316L
- Pin: Kovar
- O-ring:FKM
- Net weight: ~50g

Environment Condition

- Shock: No change at 10gRMS,(20~2000)Hz
- Impact: 100g, 11ms
- Media compatibility: The gas or liquid which is compatible with construction material and FKM.

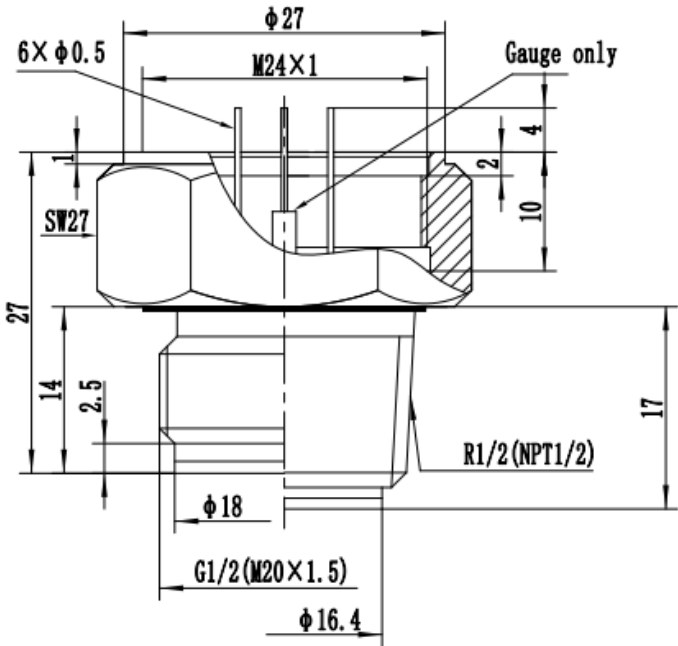
Basic Condition

- Media temperature: (25±1)°C
- Environment temperature: (25±1)°C
- Shock: 0.1g (1m/s²) Max
- Humidity: (50±10)%RH
- Local air pressure: (0.86 ~ 1.06)bar
- Power supply: (1.5±0.0015)mADC

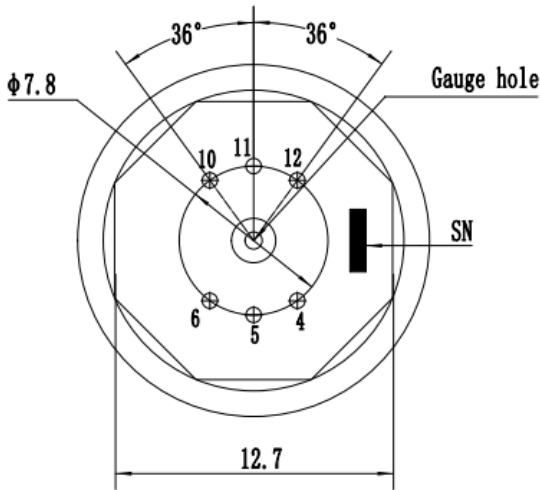
Basic Specification

Specification*	Min.	Typ.	Max.	Units
Linearity**		±0.15	±0.25	%FS,BFSL
Repeatability		±0.05	±0.075	%FS
Hysteresis		±1.0	±0.075	%FS
Zero output		±1.0	±2.0	mVDC
Output/Span**	70			mVDC
Zero thermal error***		±0.75	±1.0	%FS,@25°C
Span thermal error		±0.75	±1.0	%FS,@25°C
Compensated temp. range	0 ~ 50			°C
Working temp. range	-40 ~ 125			°C
Storage temp. range	-55 ~ 125			°C
Stability error		±0.2	±0.3	%FS/year
* Testing at basic condition,G: Gauge; A: Absolute; S: Sealed gauge ** Output/Span=full scale output - zero point 350mbar G, FS output ≥60mV 700mbar A, 0.1bar A, 700mbar GY, 1.0bar GY, FS output ≥45mV 2.0bar A, 3.5bar A, 2bar GY, 3.5bar GY, FS output ≥60mV				

Outline Construction (Unit: mm)



Electric Connection



Pin	Definition	Wire color
4	+OUT	Red
5	+IN	Black
6	-IN	White
10	-OUT	Blue

SPT80P Flush Diaphragm Pressure Sensor G1/2 Thread Datasheet

Order Guide

SPT80P		Flush Diaphragm Pressure Sensor G1/2 Thread						
		Code	Range	Ref.	Code	Range	Ref.	
		0A	0bar~0.35bar	G.A	12	0bar~20bar	G.A	
		02	0bar~0.70bar	G.A	13	0bar~35bar	G.A.S	
		03	0bar~1bar	G.A	14	0bar~70bar	S.A	
		07	0bar~2bar	G.A	15	0bar~100bar	S.A	
		08	0bar~3.5bar	G.A	17	0bar~200bar	S.A	
		09	0bar~7bar	G.A	18	0bar~350bar	S.A	
		10	0bar~10bar	G.A				
		Code	Pressure type					
		G	Gauge					
		A	Absolute					
		S	Sealed gauge					
		Code*	Pressure connection					
		O or null	O ring					
		PC3	Flush film,G1/2 External thread				Top: M24×1 Internal thread(end face seal)	
		Code	Compensation					
		L	Laser trimming					
		M	Outer compensated resistor(providing resistor value)					
		Code	Electrical connection					
		1	Kovar pin(default)					
2	100mm silicon rubber flexible wires							
Code	Special measurement							
Y	Gauge sensor to measurevacuum(-1bar~0bar)							
O or null	normal type							
W	NEObee M20							
SPT80P	08	G	PC3	L	2	Y	W	The whole spec