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SPT92 Differential Pressure Transmitter with Local Display

Features

- Full stainless steel construction, compact size, easy installation
- Using piezoresistive differential pressure sensor, 316L isolated diaphragm
- Temperature compensation and aging, stable performance
- LCD display



Introduction

SPT92 uses piezoresistive differential pressure sensor as sensing element. Silicon oil is filled in between die and two diaphragms, when measured differential pressure is added on two diaphragm, the pressure could be transferred onto die through silicon oil. Sensor die connects with amplifier circuit through wires, using semi-conductor's piezoresistive effect, transforming differential pressure signal into electric signal. The whole product is used for differential pressure measurement of petroleum, chemi-industry, power station and hydrology, etc.

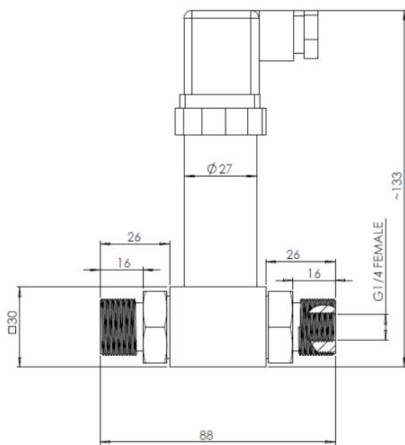
Specification

		Min.	Typ.	Max.	Unit
Accuracy			0.005	0.005	%FS
			0.005	0.005	
Zero Thermal error	0～1bar		0.75	1.25	±%FS, @25℃
	2～35bar		0.5	0.75	
FS Thermal error	0～1bar		0.75	1.25	
	2～35bar		0.005	0.75	
Stability	≤2bar	0.005			%FS/year
	≤35bar	0.002			
Static pressure effect		0.0005			±%FS, each 1bar
Compensation temp.		0～50			℃
Operation temp.		-10～80			
Storage temp.		-40～120			
Power supply		2-wire 15～28VDC 3-wire 15～28VDC			
Output signal		4～20mA. 0～5V. RS485			
Electric connection		plug connection or Φ7.2mm 7-pin cable			
Response time（10%～90%）		≤1ms			
Insulation resistor		100MΩ, 50VDC			
Shock effect		≤1% at 3gRMS, 30～2000Hz			
Impact		≤1% at 100g, 10ms			
Lifetime		1×10 ⁸ pressure cycles			
Media		liquid or gas which is compatible with construction material			

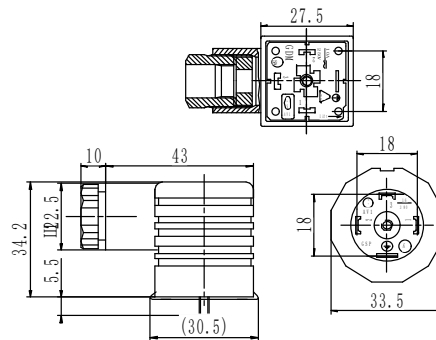
Construction Material

Housing	stainless steel 1Cr18Ni9Ti
Diaphragm	stainless steel 316L
O-ring	Viton
Pressure port	G1/4 female
Filled liquid	silicon oil

Outline Construction (Unit: mm)



DIN connector type outline



Connector details

Electric Connection

Plug Connection

Pin	2-wire	3-wire
1	(+V)	(+V)
2	(+OUT)	(+OUT)
3	Null	(GND)

Cable Connection

Wire color	2-wire	3-wire
Red	(+V)	(+V)
Green	(+OUT)	(+OUT)
Yellow	Null	(GND)

Order Guide

SPT92		Differential Pressure Transmitter with Local Display									
		Range	0~0.1...35bar								
		X[0~X] bar	Code	Pressure range bar	Overpressure bar		Code	Pressure Range bar	Overpressure bar		
					+	-			+	-	
			0A	0~0.35	0.7	0.35	09	0~0.007	0.014	0.007	
			02	0~0.7	1.5	0.7	10	0~0.01	0.02	0.01	
			03	0~1	2	1	12	0~0.02	0.04	0.01	
			07	0~2	4	2	13	0~0.035	0.07	0.01	
			08	0~3.5	7	3.5					
		Code	Output signal								
		E	4~20mADC								
		C	LCD display								
					Code	Construction material					
						Diaphragm		Pressure port		Housing	
						22	SS 316L		SS		Alluminum
						Code	Others				
						C4	G1/4 female				
		SPT92	[0~10]bar	EC	22	C4	the whole spec				

Note:

1. We suggest to install tri-valve between the measured point and transmitter to protect the media adding on transmitter's positive and negative cavities slowly;
2. We suggest to make two pressure ports horizontally to reduce installation direction effect;
3. Please pay attention that the static pressure should be less than 20Mpa, transmitter positive and negative cavity should be in the rating pressure range;
4. If the user has special requirement, please feel free to contact our company.