

SIER ELECTRONICS CO., LTD

SPT21C2 Sputtered Thin Film Pressure Transmitter

Features

- Exceptional Long-Term Stability
- Full welded construction
- Media contact parts material: SS 17-4PH wetted parts
- Short protection and reverse polarity protection
- Multiple output, process connection optional
- Compact size



Applications

- Petroleum
- Railway Transportation
- Aerospace
- High Temperature Fuel & Engine Manufacturing
- Mechanical Manufacturing
- Hydraulic and Pneumatic Control

Introduction

The SPT21C2 integrates a sputtered thin-film pressure sensor with high-performance dedicated processing circuitry, ensuring exceptional stability and reliability. Both the sensor and electronic housing are welded to the pressure port, enhancing overall durability. Additionally, the product supports range switching and zero-point adjustment via a mobile application under no-pressure conditions, significantly simplifying user operation. The SPT21C2 is widely used in aviation, rail transportation, engineering equipment, vehicle braking systems, hydraulic systems, engine pressure monitoring, industrial process automation systems, and other fields.

Specification

Measuring Medium	Gas/Liquid
Range	0 ~ 5...2000bar
Accuracy	±0.25%FS. ±0.5%FS. ±1%FS (<10bar)
Long-term stability	≤±0.2% FS/year
Offset thermal drift	0.01%FS/°C
Span thermal drift	0.03%FS/°C
Storage temp	-40~120°C
Operation temp	-55~155°C
Product life	Designed 100M cycles
Protection class	IP65 (default) / IP67/68 (customized)
Response time	≤1ms

Ranges, Overload Pressure and Breaking Pressure

Range (bar)	5-25	40-100	160-400	600	700	1000	1200-1800	2000
Overload Pressure	2 times	2 times			1.5 times			
Breaking Pressure	40 times	20 times	10 times	≤4000 bar	≤4000 bar			

Output Signals

2-wire current	4~20mA
3-wire current	4~20mA (default)
	0~20mA
3-wire voltage	DC 0~10V
	DC 0~5V
	DC 1~5V
	DC 0.5~4.5V
	DC 0.5~2.5V
	DC 0.1~2.1V
3-wire proportional voltage	DC 0.5~4.5V
RS485	

For other output requirements, please contact us.

Power Supply

Output signals	Power supply	
	Default	Optional
4~20mA	DC 11~28V	DC 8~32V
DC 0~10V	DC 11~28V	DC 11~32V
DC 0~5V	DC 11~28V	DC 11~32V
DC 1~5V	DC 11~28V	DC 11~32V
DC 0.5~4.5V	DC 5V±0.1V	DC 8~32V
DC 0.5~2.5V	DC 5V±0.1V	DC 8~32V、DC3.3V
DC 0.1~2.1V	DC 5V±0.1V	DC 8~32V、DC3.3V
DC 0.5~4.5V (proportional output)	DC 5V±0.5V	/
RS485	DC 11~28V	DC 5V±0.1V

Load Resistance(Ω)

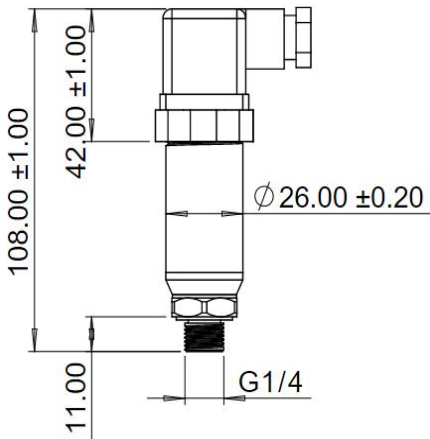
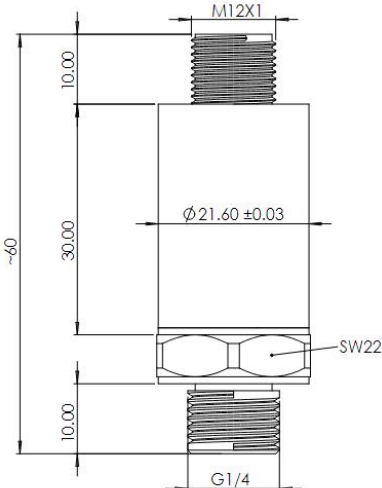
Current outout	≤ (power supply-11V) /0.02A
Voltage output	≥10k

Material

Sensitive element material	17-4PH
Housing	SS304/SS316L
Sealing gasket	NBR (default)

Outline Dimension (unit: mm)

Hirschmann 4-pole plug-in type	M12 4-pole type
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Electrical Connection

Hirschmann			
		2-wire	3-wire
	U_B	1	1
	0V	2	2
	S+	—	3

M12 plug			
		2-wire	3-wire
	U_B	1	1
	0V	2	2
	S+	—	3

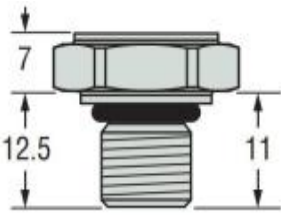
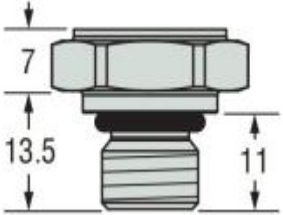
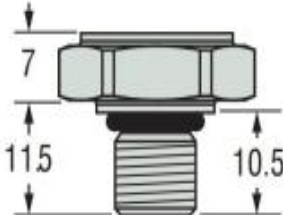
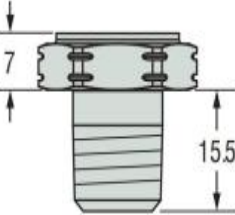
Description

U_B : Power +

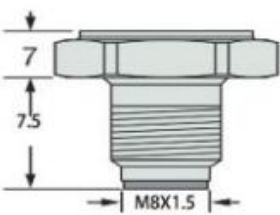
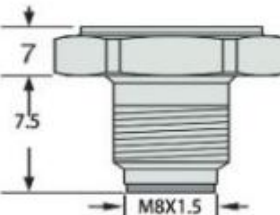
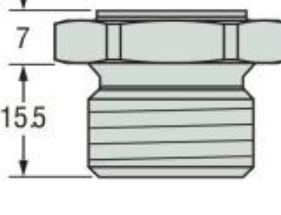
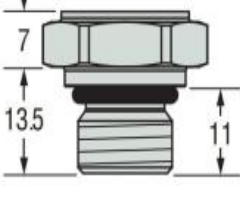
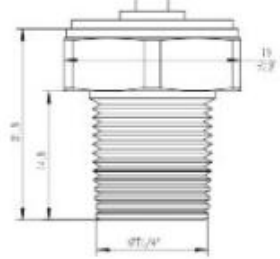
0V : Power -

S+ : Analog output

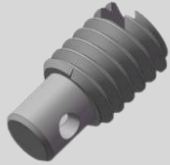
Process connection(Unit:mm)

G1/4-19	M12*1.5	G1/8	G1/4-19A
			
M8*1.25 female tread	M20*1.5	G1/2	M4*1.5

SPT21C2 Sputtered Thin Film Pressure Transmitter Datasheet

			
NPT1/4			
			

Optional accessories

Name	Shape	Description
Damper		Material : copper or stainless steel Uses : Reduce the effects of cavitation, liquid hammer and pressure peak on the sensor in air or liquid with flow rate changes.
STS01 calibrator		Power supply : 220VAC Features : 4.5-inch LCD screen, touch buttons Functions : testing, calibration, zeroing, range migration, unit conversion   Operating Instructions Operating Video
SPT-LCD display		Display : 4 + 1 / 2 digit display Input : 2-wire 4 ~ 20mA Output : 2-wire 4 ~ 20mA Optional with control function

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SPT-LED display		Display : 4 + 1 / 2 digit display Input : 2-wire 4 ~ 20mA Output : 2-wire 4 ~ 20mA Optional with control function
SD01 loop powered display		Display range -1999~9999 Input: 2-wire 4~20mA Output: 2-wire 4~20mA
M12 plug-in cable		thread M12×0.75

Order Guide

SPT21C2	Sputtered Thin Film Pressure Transmitter			
	Range	0~5...2000bar		
	[0~X]bar	X: the actual measured pressure		
		Code	Output signal	
		E	4~20mADC	
		J	0~5VDC	
		V	0~10VDC	
		V1	0.5~4.5VDC	
		Code	Accuracy	
		1	±0.25%FS	
		2	±0.5%FS	
		3	±1%FS (<10bar)	
		Code	Electrical connection	
		B1	DIN43650 connector ①	
		B2	Cable connection	
		B3	M12 plug	
		B4	DIN9.4mm connector	
		B5	Cable exit PG7 IP65	

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						Code	Others
						C2	G1/4 male
						C5	NPT1/4 male
						C7	7/16-20UNF with 37°
						C11	7/16-20UNF with 37°
						C12	M12*1.5
						C14	M14*1.5
						C15	3/8-24 UNF
						C16	1/4-18 NPTF
						XX	01,02,03,04...(cable length in meters)
SPT21C2	[0~10bar]	E	1	B1	C2	the whole spec	

Note:

1. When '1' in the selection table selects B1 / B3, if you need to lead out the cable, please note in the order ;
2. As for product accuracy, see page 2 'accuracy' ;
3. Product sealing ring material default for fluorine rubber, the minimum use temperature is -20 °C, if the product temperature is < -20 °C, need to be noted in the order temperature range ; other sealing schemes can be used on demand, such as ethylene propylene diene rubber sealing ring, the minimum use temperature is -40 °C ;
4. When ordering 5V DC/3.3V DC power products with cable connection, the cable length should be less than 10m;
5. If accessories is needed, please contact us and specify it in the order;
6. If metrology verification certificate is needed or there are other requirements, please contact us and specify it in the order.

Contact

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