

SPT21P1F G1 Flush Diaphragm Pressure Transmitter

Features

- Reliable, easy maintenance
- Compact size and light weight
- Flush Diaphragm design
- Strong corrosion resistance
- Support the use of our company 's calibrator for range conversion



Applications

- Chemical industry
- Pharmaceutical industry
- Food and Beverage Industry
- Water treatment
- Oil and gas

Introduction

The SPT21P1F G1 flush diaphragm pressure transmitter is a high-performance sensor designed for measuring liquid or gas pressure, especially for viscous, corrosive or particulate media. Its flush diaphragm design ensures stability and reliability under complex working conditions, avoiding fluid disturbance and blockage problems that may be caused by traditional recessed diaphragms. Advanced signal processing technology ensures the accuracy and real-time nature of measurement data, greatly improving the control accuracy and efficiency of industrial processes. Whether in the field of chemical industry, food processing or environmental monitoring, SPT21P1F can provide stable and reliable measurement support to help companies achieve efficient production and management.

Specification

Pressure range	-1...0~0.35...350bar
Over pressure	≤ 1.5 times FS
Pressure type	Gauge/absolute/sealed gauge optional
Accuracy	see Accuracy definition
Long term stability	≤±0.3%FS/year
Offset thermal drift	0.05%FS/°C
Span thermal drift	0.03%FS/°C
Compensated temp.	0~50°C range≤1bar; -10~70°C range>1bar
Application temp.	-30~80°C
Storage temp.	-40~120°C
Housing protection	IP65 (default) / IP67/68 (customized)

Accuracy

(Test condition: Environment temperature: $25\pm 5^{\circ}\text{C}$ Relative humidity: 45%~75%)

Pressure Type	Range	Accuracy
Gauge (G)	$0\text{bar}\sim 0.1\text{bar}<X<0.35\text{bar}$	$\pm 1\%\text{FS}$
	$0.35\text{bar}\leq X\leq 350\text{bar}$	$\pm 0.5\%\text{FS}$ (default)
	$-1\text{bar}\sim -0.35\text{bar}<X\leq 2\text{bar}$	$\pm 0.25\%\text{FS}$
	$-1\text{bar}\sim -0.35\text{bar}<X\leq 2\text{bar}\sim 350\text{bar}$	$\pm 0.5\%\text{FS}$
Absolute (A)	$0\text{bar}\sim 0.7\text{bar}<X\leq 1\text{bar}$	$\pm 1\%\text{FS}$
	$1\text{bar}<X\leq 10\text{bar}$	$\pm 0.5\%\text{FS}$
	$10\text{bar}<X\leq 350\text{bar}$	$\pm 0.25\%\text{FS}$
		$\pm 0.5\%\text{FS}$ (default)
Sealed gauge (S)	$35\text{bar}<X\leq 350\text{bar}$	$\pm 0.5\%\text{FS}$

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 $\pm$ 0.1V	DC 8~32V
DC 0.5~2.5V	DC 5V $\pm$ 0.1V	DC 8~32V、DC3.3V
DC 0.1~2.1V	DC 5V $\pm$ 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)

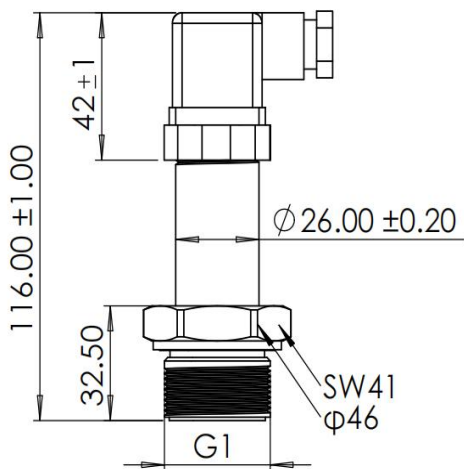
Current output	≤ (power supply-11V) /0.02A
Voltage output	≥10k

Material

Housing	SS304/SS316L
Pressure interface	SS304/SS316L/Hastelloy C/Titanium Alloy
Diaphragm	SS316L/Tantalum/Titanate
Sealing gasket	NBR (default) / Viton
Plug Housing	Glass Fiber Nylon
Cable	Polyethylene / Polyurethane / Polyvinyl Chloride / Teflon

Outline Dimension (unit: mm)

Hirschmann 4-pole plug-in type



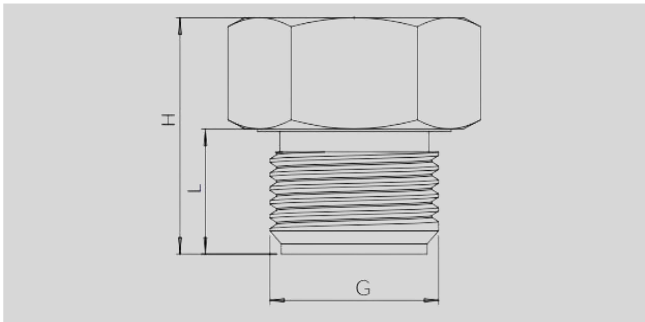
Please contact us if you request anything else.

Electrical Connection

Hirschmann			
		2-wire	3-wire
	UB	1	1
	0V	2	2
	S+	-	3

Description
 UB : Power +
 0V : Power -
 S+ : Analog output

Process connection(unit:mm)



Flush membrane			
G	H	L	SW
G _{1/2}	25.5	13.5	27
G ₁	32.5	22.5	41

Optional accessories

Name	Shape	Description
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
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 Information

SPT21P1F	flush Diaphragm Pressure Transmitter						
	Range	-10...0~0.1...40bar					
	[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				
		R	RS485				
			Construction material				
			Code	Diaphragm	Pressure port	Housing	
			22	SS316L	SS304	SS304	
			24	SS316L	SS316L	SS316L	
			26	Titanium	Titanium	Titanium	
				Code	Accuracy		
				1	Accuracy±0.25%FS		
				2	Accuracy±0.5%FS (Default accuracy)		
				3	Accuracy±1%FS		
					B1	DIN43650 connector ^①	
					B2	Cable Exit	
					B3	M12 connector ^①	
						G	Gauge
						A	Absolute
SPT21 P1F	[0~1bar]	E	22	1	B1	G	the whole spec

Ordering Notes

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 are 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

A: 2nd Floor, Building No.A2, Western sensor park, No.30 Jiangtan Xi Road, Baoji 721004, Shaanxi, China
Tel: +86 917 3652001
Fax: +86 917 3652001
Email: kenny@sierelectro.com
Web: www.sierelectro.com