

SIER ELECTRONICS CO., LTD

SPT21P Sanitary Pressure Transmitter-Clamp Mounting

Features

- Reliable performance, easy application
- Short protection and reverse polarity protection
- Gauge, absolute and sealed gauge optional
- Clamp mounting, for sanitary application



Applications

- Food and Beverage Industry
- Pharmaceutical Industry
- Biotechnology
- Cosmetics Industry
- Laboratory and Scientific Research

Introduction

The SPT21P Sanitary Pressure Transmitter is a pressure measurement device specifically designed for industries with stringent hygiene requirements, such as food, pharmaceuticals, and beverages. It incorporates materials and structural designs compliant with sanitary standards, ensuring no contamination of the measured medium during operation while being easy to clean and maintain. This transmitter not only delivers high-precision pressure measurement but also meets rigorous hygiene and safety regulations. It is widely applied in process operations requiring sterile environments.

Specification

Pressure range	-1...0 ~ 0.35...35bar
Over pressure	1.5 times FS
Pressure type	Gauge/absolute/sealed gauge optional
Accuracy	see Accuracy definition
Long term stability	$\leq \pm 0.3\%FS/\text{year}$
Offset thermal drift	0.1%FS/°C ($\leq 1\text{bar}$); 0.05%FS/°C ($> 1\text{bar}$)
Span thermal drift	0.1%FS/°C ($\leq 1\text{bar}$); 0.05%FS/°C ($> 1\text{bar}$)
Compensated temp.	0~50°C
Application temp.	-30~80°C
Storage temp.	-30~120°C
Housing protection	IP65
Electrical connection	DIN43650 plug/M12 connector/Cable

SPT21P Sanitary Pressure Transmitter-Clamp Mounting Datasheet

Accuracy

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

Pressure Type	Range	Accuracy
Gauge (G)	$0\text{bar}\sim 0.1\text{bar}<X<0.35\text{bar}$	$\pm 1\%\text{FS}$
	$0.35\text{bar}\leq X\leq 35\text{bar}$	$\pm 0.5\%\text{FS}$ (default)
		$\pm 0.25\%\text{FS}$
	$-1\text{bar}\sim -0.35\text{bar}<X\leq 2\text{bar}$	$\pm 0.5\%\text{FS}$
	$-1\text{bar}\sim -0.35\text{bar}<X\leq 2\text{bar}\sim 35\text{bar}$	$\pm 0.25\%\text{FS}$
Absolute (A)	$0\text{bar}\sim 0.7\text{bar}<X\leq 1\text{bar}$	$\pm 1\%\text{FS}$
	$1\text{bar}<X\leq 10\text{bar}$	$\pm 0.5\%\text{FS}$
	$10\text{bar}<X\leq 1000\text{bar}$	$\pm 0.25\%\text{FS}$
		$\pm 0.5\%\text{FS}$ (default)
Sealed gauge (S)	$35\text{bar}<X\leq 1000\text{bar}$	$\pm 0.5\%\text{FS}$

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 $\pm$ 0.5V	/
RS485	DC 11~28V	DC 5V $\pm$ 0.1V

SPT21P Sanitary Pressure Transmitter-Clamp Mounting Datasheet

Load Resistance(Ω)

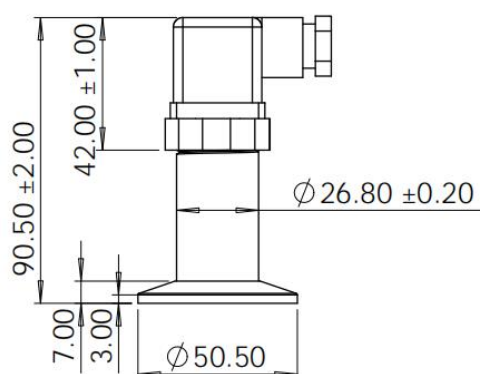
Current outout	$\leq (\text{power supply}-11\text{V}) / 0.02\text{A}$
Voltage output	$\geq 10\text{k}$

Material

Housing	SS304
Pressure port	SS304
Diaphragm	SS316L
Sealing gasket	NBR (default)
Plug Housing	Plastic

Outline Dimension (unit: mm)

Hirschmann 4-pole plug-in type



Electrical Connection

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

Description

UB : Power +

0V : Power -

S+ : Analog output

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

SPT21P Sanitary Pressure Transmitter-Clamp Mounting Datasheet

		 
	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

SPT21P	Sanitary Pressure Transmitter-Clamp Mounting		
	Range	-1...0 ~ 0.35...35bar	
	[0~X] bar	X: the actual measured pressure	
	Code	Output signal	
	E	4~20mADC	
	J	0~5VDC	

SPT21P Sanitary Pressure Transmitter-Clamp Mounting Datasheet

			V	0~10VDC			
			Code	Construction material			
				Diaphragm	Pressure port	Housing	
				22	SS316L	SS316L	SS304
				24	SS316L	SS316L	SS316L
				Code	Others		
				B1	DIN43650 connector		
				B2	Cable exit		
				B3	M12 connector		
				CX	2" clamp mounting		
				G	Gauge		
				S	Sealed gauge		
				A	Absolute		
SPT21P	[0~1bar]	E	22	B1CXG	the whole spec		

Note:

1. Please pay attention that the media should be compatible with the contacted parts;
2. If any special requirements on function or specification, please contact with us freely.

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@sielectro.com
 Web: www.sielectro.com