

SPT430 Vacuum Gauge

Features

- Excellent long-term stability
- Easy installation, long-term stability
- Multiple output options, process connections available
- Compact and small structure



Applications

- Medical Equipment
- Aerospace
- Analytical Instruments
- Coating Industry
- Laboratory and Research

Introduction

The SPT430 Ceramic Capacitance Vacuum Gauge is a high-performance sensor designed for precise measurement of various low pressures. It utilizes a ceramic capacitor as the sensing element, detecting changes in capacitance to reflect pressure changes. This vacuum gauge features high accuracy, wide range, and long-term stability, making it widely used in scientific research, industrial production, and various applications requiring high-precision low-pressure environment measurements.

Specification

Pressure range	0 ~ 0.005... 0 ~ 0.2bar(absolute)
Over pressure	10 times FS
Accuracy	±0.5%FS、±1%FS
Long term stability	≤±0.3%FS/year
Offset thermal drift	0.1%FS/°C(≤1bar); 0.05%FS/°C(>1bar)
Span thermal drift	0.1%FS/°C(≤1bar); 0.05%FS/°C(>1bar)
Ambient temp.	-30~70°C; -10°C~60°C (Intrinsically safe explosion-proof type)
Storage temp.	-30~85°C
Medium temp.	-30~80°C
Housing protection	IP65 (plug type) / IP67/68 (cable type)

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)

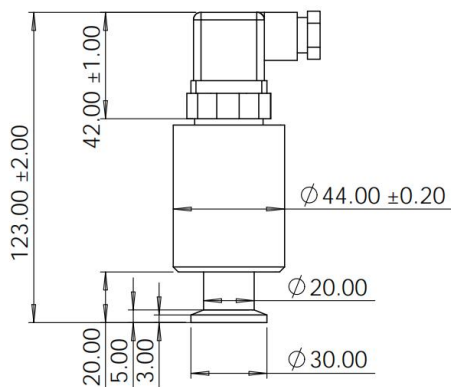
Current outout	$\leq (\text{power supply}-11\text{V}) / 0.02\text{A}$
Voltage output	$\geq 10\text{k}$

Material

Housing	SS304
Pressure interface	SS304
Diaphragm	ceramic
O-ring	fluoroelastomer
Plug Housing	plastic

Outline Dimension (unit: mm)

Hirschmann 4-pole plug-in type



Please contact us if you request anything else.

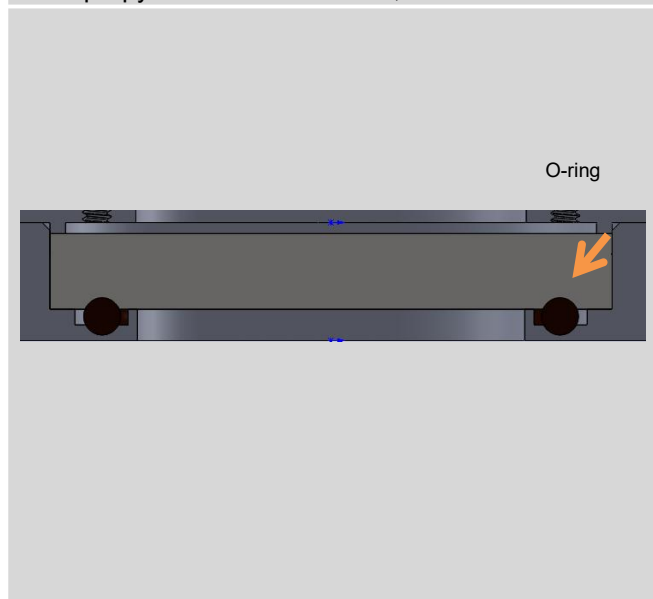
Electrical Connection

Hirschmann			
		2-wire	3-wire
	U _B	1	1
	0V	2	2
	S+	-	3

Sensor Sealing

O-ring Sealing

(O-ring material : fluorine rubber, ethylene propylene diene monomer, nitrile rubber)



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

SPT430	Vacuum gauge						
	Range	0 ~ 0.005... 0 ~ 0.2bar(absolute)					
	[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	Construction material					
		Diaphragm	Pressure port	Housing			
	22	ceramic	SS304	SS304			
	24	ceramic	SS316L	SS316L			
	Code	Accuracy					
	1	Accuracy±0.5%FS					
	2	Accuracy±1%FS (Default accuracy)					
	B1	DIN43650 connector ^①					
	B2	Cable Exit					
	B3	M12 connector ^①					
	C16	KF16 connector (for vacuum)					
	G	Gauge					
	S	Sealed gauge					
	A	Absolute					
SPT430	[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 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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