

PKS-BSNC SERIES PRESSURE TRANSMITTER



Features

- ◆ Multiple output signals available;
- ◆ Anti-interference and anti-surge protection;
- ◆ High precision, good reliability, imported chip;
- ◆ 316L stainless steel isolation diaphragm & integrated design;

Product overview

PKS-BSNC series pressure transmitter is a pressure measurement product designed and produced by our company with high precision and high stability. The product uses silicon piezoresistive sensors with stainless steel isolation diaphragms and dedicated digital circuits. Through signal amplification, linear compensation, anti-interference, surge protection and other signal processing, the integrated product can output standard industrial signals.

Application

- ◆ Petroleum & Chemical Industry
- ◆ Constant Pressure Water Supply
- ◆ Measurement & Control Technology
- ◆ Hydraulic & Pneumatic Fields

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Measurement Range

Gauge Pressure								
bar	Range	0...0.05	0...0.1	0...0.25	0...0.4	0...1	0...1.6	0...2.5
	Overload pressure	0.2	0.2	0.5	1.0	2.0	4.0	5.0
	Range	0...4.0	0...6.0	0...10.0	0...16.0	0...25.0	0...40.0	0...60.0
	Overload pressure	10.0	12.0	20.0	40.0	50.0	100.0	120.0
	Range	0...100	0...160	0...250	0...400	0...600	1000	
	Overload pressure	200	400	500	1000	1200	1500	
Absolute pressure								
bar	Range	0...0.1	0...0.25	0...0.4	0...0.6	0...1.0	0...1.6	0...2.5
	Overload pressure	1.0	2.5	1.0	1.2	2.0	4.0	5.0
	Range	0...4.0	0...6.0	0...10.0	0...16	0...25		
	Overload pressure	10.0	12.0	20.0	40.0	50.0		
Vacuum pressure								
bar	Range	-1...0	-1...1	-1...1.6	-1...2.5	-1...4	-1...6	-1...10
	Overload pressure	-1.0	2.0	4.0	5.0	10.0	12.0	20.0
	Range	-1...16	-1...25	0...-1.0				
	Overload pressure	40.0	50.0	-1.0				

Output signal

Current (2-wire)	4...20mA
Voltage (3-wire)	DC 0...10V ; DC 0...5V; DC 1...5V
	DC 0.5...4.5V
Ratio-Voltage (3-wire)	DC 0.5...4.5V
Digital Output	4...20mA+Hart
	4...20mA+RS485
	RS485 ; I2C

Load (Ω)

Current (2-wire) : $\leq (\text{Power Supply Voltage}-8V) / 0.02A$

Voltage (3-wire) : $> \text{Output signal max.} / 1mA$

Ratio-Voltage (3-wire) : $> 10K$

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Supply Voltage

Output Signal	Source	
	Standard	Optional
4...20mA	DC 8...30V	
DC 0...10V	DC 14...30V	
DC 0...5V	DC 8...30V	DC 3...5V
DC 1...5V	DC 8...30V	DC 3...5V
DC 0.5...4.5V	DC 8...30V	DC 3...5V
DC 0.5...4.5V (Ratio-Voltage)	DC 5V±10%	
4...20mA+Hart	DC 12...30V	
4...20mA+RS485	DC 8...30V	
RS485	DC 8...30V	DC 3...5V
I2C	DC 3...5V	

Total current consumption

Current (2-wire): Signal current, 25mA max.

Voltage (3-wire): 2.5mA

Proportional voltage (3-wire): 2.5mA

RS485: 10uA-10mA

Product Accuracy

Normal temperature accuracy	Standard	Optional
Conform to JJG 860, JJ G882 standards.		
Range \geq 1bar	0.5%FS	0.25%FS;0.1%FS
Range \geq 0.25bar	0.5%FS	0.25%FS
Range \geq 0.1bar	1%FS	0.5% FS

Temperature Range

		Standard	Optional
Operating Temperature		-20°C ~ 85°C	-40°C ~ 125°C
Compensated temperature	Range \leq 1bar	0°C ~ 50°C	
	Range $>$ 1bar	0°C ~ 70°C	-10°C ~ 80°C
Storage temperature		-40°C ~ 125°C	

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Temperature Drift

		Standard	Optional
Temp.effect on offset	Range≤1bar	±0.05%FS/°C	±0.02%FS/°C
	Range> 1bar	±0.03%FS/°C	±0.02%FS/°C
Temp.effect on span	Range≤1bar	±0.05%FS/°C	±0.02%FS/°C
	Range> 1bar	±0.03%FS/°C	±0.02%FS/°C

Long-term stability

≤0.2%FS/year@0.5%FS

Response time

	Range	Standard	Optional
Boot time		100ms	10ms
Response time		10ms	1ms
Stabilization time	Range> 1bar	15s	
	Range≤1bar	1min	

Vibration resistance

10g (IEC 60068-2-6 standard, under resonance conditions)

Shock resistance

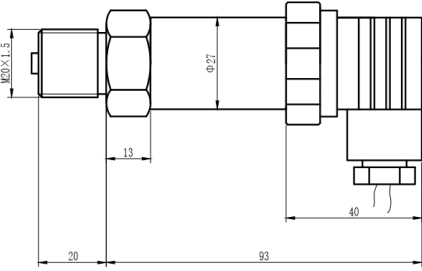
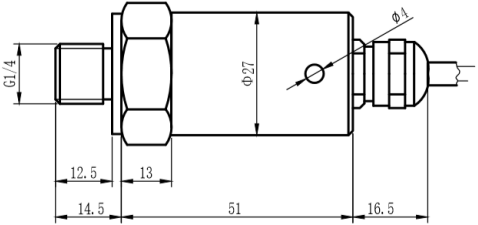
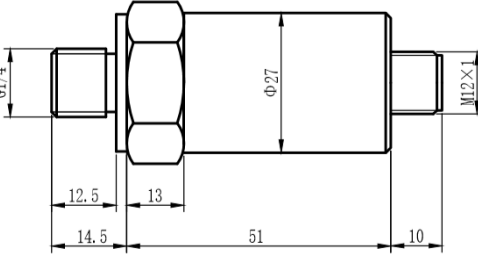
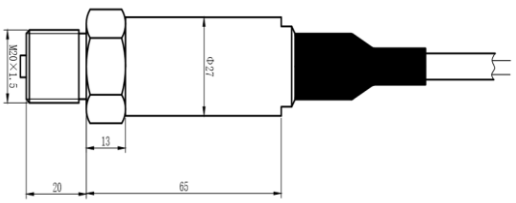
500g (IEC 60068-2-27 standard, mechanical shock)

Lifetime

10 million pressure cycles

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Outline drawing

Model	specification/Protection class	
PKS-BSNC-101	Hirschmann plug/IP65	
PKS-BSNC-102	Cable outlet /IP66	
PKS-BSNC-103	M12 aviation plug/IP66	
PKS-BSNC-104	IP68 Direct cable /IP68	

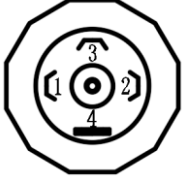
Process connection and housing material

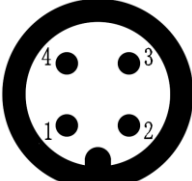
	Standard	Optional
Diaphragm material	316L	Tantalum; C-276
Connector material	304SS	316L; C-276
Housing	304SS	316L

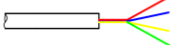
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Material		
Metric	M20*1.5	M14*1.5; M24*1.5; Other
Inch	G1/2	G1/4; PT1/2; PT1/4; NPT1/2; NPT/4; Other

Electrical Connection

Hirschmann socket		2-wire	3-wire	4-wire
	V+	1	1	1
	V-	2	2	2
	S+ (RS485A)		3	3
	(RS485B)			4

M12 Aviation Socket		2-wire	3-wire	4-wire
	V+	1	1	1
	V-	2	2	2
	S+ (RS485A)		3	3
	(RS485B)			4

Direct cable		2-wire	3-wire	4-wire
	V+	red	red	red
	V-Non-vented cable	black	black	black
	V-Ventilation cable	green	green	green
	S+ (RS485A)		yellow	yellow
	(RS485B)			blue

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Ordering Info

Model/Specification/Accuracy/Temperature Range/Other Selection Guide

PKS-BSNC	pressure transmitter								
	101	Hirschmann profile							
	102	Waterproof socket profile							
	103	M12 socket profile							
	104	Level cable outlet profile							
		S1	4-20mA						
		S2	0.5-4.5V						
		S3	0-5V						
		S4	0-10V						
		S5	IIC						
		S6	RS485						
			U1	8-30VDC					
			U2	5VDC					
			U3	3.3VDC					
				30	304SS				
				31	316L				
				32	TC4				
				33	PTFE				
				34	PVDF				
					C1	M20*1.5			
					C2	G1/2			
					C3	G1/4			
					C4	1/2NPT			
					C5	1/4NPT			
					C6	1/2PT			
					C7	1/4PT			
						X---			
								Range	unit
PKS-BSNC	101	S1	U1	30	C1	X001PU	/	[0-1]	MPa

Product Model: PKS-BSNC

Parameter Description: PKS-BSNC Series Pressure Transmitter;

Shape: Hirschmann with cable; Range: 0-1MPa; Output: 4-20mA; Power supply: 8-30VDC; Housing material: 304SS; Process connection:

M20*1.5; Cable length: 1m PU cable

