SS114 series flush diaphragm pressure transducers for high temperature

Features

- High accuracy and reliability
- Stainless steel 316L wetted parts
- 1.0mA, 1.5mA constant current supply
- 5VDC, 10VDC constant voltage supply
- 0-70°C temperature compensation range
- Isolated construction, able to test various media
- G1/2", NPT1/2", M20 various pressure connection
- Absolute, vented gauge and sealed gauge pressure
- Maximum media temperature up to 240°C by cooling fins

Descriptions

SS114 series flush diaphragm pressure transducer with cooling extensions integrated is designed for the high temperature applications, with 3 pcs of cooling fins the working temperature can up to 150°C, 6 pcs is up to 200°C and the maximum 8 pcs can up to 240°C.

SS114 serie is designed by piezoresistive sensor technology for where a flush face is required for easier cleaning, the silicon chip is protected by 316L stainless steel housing and silicone oil filled in the isolated housing, is able to test various media. Typically for using in food, process and industrial applications where the media is either viscous, or is otherwise liable to block the port of a conventional pressure transducer with a recessed diaphragm or pressure port.

Pressure ranges (typical)

Vented gauge (defining atmospheric pressure as zero) (Unit: bar)

Range	2.5	4.0	6.0	10	16	25

Absolute (defining absolute vacuum as zero) (Unit: bar)

Range	2.5	4.0	6.0	10	16	25
	40	60	100	160	250	400
	600					

Sealed gauge (defining standard atmospheric pressure as zero) (Unit: bar)

Range	10	16	25	40	60	100
	160	250	400	600		

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Technical data

Performance (EN 60770)

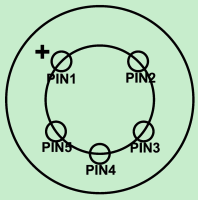
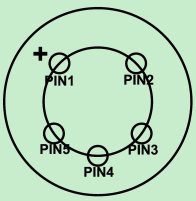
Power supply	1.5 mADC (typical)	5 VDC (optional)	10 VDC (optional)
Zero output	0 ± 2 mV ①		
Span output	100 ± 20 mV ①		
Accuracy	0.25% F.S. ①		
Overload range	2.0 × F.S. (≤ 250 bar)		
	1.5 × F.S. (> 250 bar), 1.2 × F.S. (1000bar)		
Compensated temp range	0 → 70 °C		
Operating temp range	-20 → 150 °C (typical)	More options see page 3	
Storage temp range	-40 → 125 °C		
Zero thermal error	≤ 0.02% F.S./°C		
Sensitivity thermal error	≤ 0.02% F.S./°C		
Stability	≤ 0.2% F.S./Year		
Input impedance	2.3 → 4 KΩ		
Insulation resistance	> 100 MΩ at 250 V		
Vibration	20g / (20 to 5000 Hz)		
Endurance	> 100 x 10^6 F.S. cycles		

①: The zero output, span output and accuracy may different if the supply power, measuring range and pressure type is different, please contact us if you need more details.

Mechanical characteristics

Diaphragm	Stainless steel 316L	More options see Page 3
Wetted parts	Stainless steel 316L	
Cooling extensions	Stainless steel 304	
Filling liquid	Silicone oil	
O-ring	All stainless steel welding structure, no O-ring sealing used inside	
Electrical connection	10 cm silicone sheathed wires, Kovar pins	
Pressure connection	1/2” BSP, 1/2” NPT, M20 x 1.5	More options see Page 3

Electrical connections

wires		5Pins connection mode 1		5Pins connection mode 2	
Color	Function		PIN1: Supply +		PIN1: Supply +
Red	Supply +		PIN2: Output -		PIN2: Output +
Black	Supply -		PIN3: Supply -		PIN3: Supply -
White	Output +		PIN4: Supply - ②		PIN4: Supply - ②
Blue	Output -		PIN5: Output +		PIN5: Output -

②: PIN4 is not used for 4Pins connection

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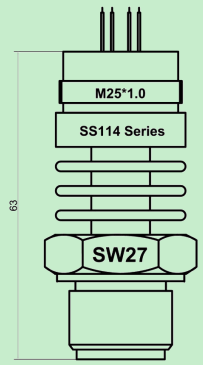
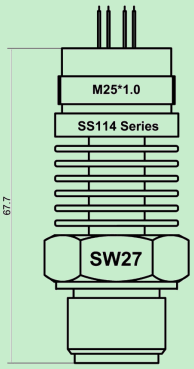
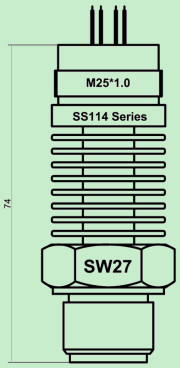
Dimensions (Unit: mm)

3pcs of cooling extensions	6pcs of cooling extensions	8pcs of cooling extensions
		

Part number chart (How to order)

PART NUMBER REQUIRED: SS114.T03.PL.01.A.01 (EXAMPLE)

0	Medium working temperature	T03
	T03(150 °C, 3pcs of cooling fins) T06(200 °C, 6pcs of cooling fins) T08(240 °C, 8pcs of cooling fins) 0Z(Other temperature is on request)	
1	Pressure range(bar)	PL
	PH(0...2) PI(0...2.5) PJ(0...4) PK(0...6) PL(0...10) PM(0...16) PN(0...25) PO(0...40) PP(0...60) PQ(0...100) PR(0...160) PS(0...200) PT(0...250) PU(0...300) PV(0...350) PW(0...400) PX(0...500) PY(0...600) PZ(0...1000) CB(-1...1.5) CC(-1...3) CD(-1...5) CE(-1...9) CF(-1...15) CG(-1...24) 1Z(Other pressure range or unit is on request)	
2	Pressure type	01
	01(Vented gauge) 02(Absolute) 03(Sealed gauge)	
3	Electrical connection ③	A
	A(4Wires) B(5Wires) C(4Pins mode 1) D(4Pins mode 2) E(5Pins mode 1) F(5Pins mode 2)	
4	Pressure connection	01
	01(1/2" NPT male) 02(1" NPT male) 03(3/4" NPT male) 04(G 1/2" male) 05(G 1" male) 06(G 3/4" male) 07(PT 1/2" male) 08(PT 1" male) 09(PT 3/4" male) 16(M20 x 1.5 male) 4Z(Other pressure connection is on request)	
5	Power supply	A
	A(1.5mADC) B(2mADC) C(5VDC) D(10VDC) 5Z(Other supply is on request)	

③: 4Wires and 4Pins connection: the zero signal is set by SENDO SENSOR before leave factory.
③: 5Wires and 5Pins connection: the zero signal can be set by clients.
③: Pins mode1 and mode2: please see the details in the Electrical connection in page 2.

NON- REQUIRED: SS114.T03.PL.01.A.01 - V4E (EXAMPLE)

1	Material of diaphragm	V4E
	V4D(Titanium) V4E(Tantalum) V4F(Hastelloy-C)	

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Contact us

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*Specifications subject to change without notice, the latest date sheet please contact: sales@sendo-sensor.com