

SS115 series flush diaphragm pressure transducers

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
- Piezoresistive silicon based transducer, silicone oil filled inside



Descriptions

SS115 series flush pressure transducer is designed by the piezoresistive technology with a stainless steel 316L open diaphragm, works following the principle of piezoresistive effect, the silicon chip is protected by 316L stainless steel housing and silicone oil filled in the isolated housing. The transducer covers the pressure from -1 bar to 1000 bar, typical working temperature from -20 to 100°C, is available with various kinds of flush pressure port according to requirement.

SS115 series has a ring on the diaphragm, so called semi-flush diaphragm, is commonly used in those productive processes of pressure or level measurements of dense substances which may clog a standard process connection, the flush diaphragm enable to perform an accurate cleaning of the transducer and to prevent from forming of residuals on the measuring area. Typically for using in chemical & process engineering, food industry, and pulp & paper and mining.

Pressure ranges (typical)

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

Range	-1.0	-0.7	-0.35	-0.2	-0.1	0.1
	0.2	0.35	0.7	1.0	2.5	4.0
	6.0	10	16	25		

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

Range	1.0	2.5	4.0	6.0	10	16
	25	40	60	100	160	250
	400	600	1000			

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

Range	10	16	25	40	60	100
	160	250	400	600	1000	

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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 → 100 °C		
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	
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

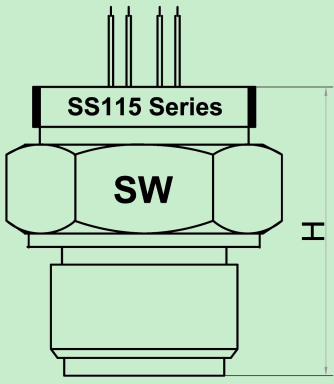
Electrical connections

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)

	thread	SW	H
	G 1/2 inch	27 mm	32.5 mm
	G 3/4 inch	32 mm	36 mm
	G 1 inch	41 mm	46 mm
	1/2 inch NPT	27 mm	32.5 mm
	3/4 inch NPT	32 mm	36 mm
	M20 x 1.5	27 mm	32.5 mm
	G 1/2 inch	27 mm	32.5 mm

Part number chart (How to order)

PART NUMBER REQUIRED: **SS115.PL.01.A.01.A (EXAMPLE)**

1	Pressure range(bar)	PL
	NA(-1...0) NB(-0.7...0) NC(-0.5...0) ND(-0.35...0) NE(-0.2...0) NF(-0.1...0) PA(0...0.1) PB(0...0.2) PC(0...0.35) PD(0...0.5) PE(0...0.7) PF(0...1) PG(0...1.6) 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) CA(-1...0.6) 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: **SS115.PL.01.A.01.A - V4E (EXAMPLE)**

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

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