

# SS109 series piezoresistive pressure transducers

## Features

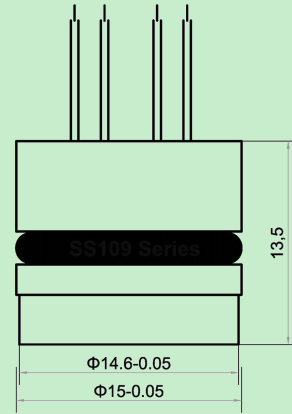
- Standard size Ø15 × 13.5mm
- High accuracy and reliability
- Stainless steel 316L housing
- Stainless steel 316L diaphragm
- 1.0mA, 1.5mA constant current supply
- 0-70°C temperature compensation range
- Isolated construction, able to test various media
- Absolute, vented gauge and sealed gauge pressure



## Descriptions

SS109 series piezoresistive capsule has the diameter 15mm and height 13.5mm, apply pressure from 2bar to 1000bar (200KPa to 100Mpa), three pressure type: vented gauge, sealed gauge, absolute is optional. Thanks to the piezoresistive technology, the typical full signal output for the measuring ranges is about 100 mV with a constant current supply of 1.5 mA.

Each piezoresistive pressure capsule is tested for pressure properties carefully, and is supplied together with an individual calibration sheet including zero and span output. Main fields of applications: pneumatics, level technology, hydraulics, avionics, etc.



## Pressure ranges (typical)

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

Range	2.0	4.0	6.0	10	16	25
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Absolute (defining absolute vacuum as zero) (Unit: bar)

Range	2.0	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)	1 mADC (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 × 10 <sup>6</sup> 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	
Housing	Stainless steel 316L	
Filling liquid	Silicone oil	
O-ring	FKM / Viton (Ø12 × 1.5 mm)	
Electrical connection	10 cm silicone sheathed wires	Kovar pins (optional)
Diameter	Ø15 mm	
Height	13.5 mm	
Weight	15 g	

### Electrical connections

wires		4-Pins / 5-Pins connection mode	
Color	Function		PIN1: Supply +
Red	Supply +		PIN2: Output -
Black	Supply -		PIN3: Supply -
White	Output +		PIN4: Supply - ②
Blue	Output -		PIN5: Output +

②: PIN4 is not used for 4-Pins connection

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## Part number chart (How to order)

PART NUMBER REQUIRED: **SS109.PL.01.A.01 (EXAMPLE)**

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) 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(4-Wires) B(5-Wires) C(4-Pins) D(5-Pins)	
4	Power supply	01
	01(1.5mADC) 02(2mADC)	

③: 4-Wires and 4-Pins connection: the zero signal is set by SENDO SENSOR before leave factory.

③: 5-Wires and 5-Pins connection: the zero signal can be set by clients.

## Contact us

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