

SS304 Series Piezoresistive Pressure Transmitters for heavy-duty applications

SS301 Series Piezoresistive Pressure Transmitters for air and water applications

- CE conformity
- Stainless steel 316L diaphragm
- Piezoresistive pressure sensor, oil filled
- 4*FS to 6*FS high overload(SS304 series)
- All stainless steel structure, NO O-ring inside
- A wide range of pressure and electrical connections
- Output signals: 4-20mA and 0-10V, 0-5 voltage output
- AK Fluids US silicon oil, good bio-compatibility, nontoxicity
- Pressure range in vented gauge, sealed gauge and absolute
- Resistant to cavitation, liquid hammer and pressure peaks(SS304 series)



Descriptions

SS304 series piezoresistive oem pressure sensors offer more than 4fs high overload, can be integrated with pulse-snubber, are designed for using in hydraulic applications with severe medium influences like cavitation, liquid hammer or pressure peaks and offer a reliable pressure measurement, even under harsh environmental conditions. The flexible program of pressure transmitters with 4-20mA or 0-10V, 0-5V voltage output signal cover, absolute, vented gauge and sealed gauge versions, measuring ranges from 0-0.2 to 0-50 bar and a wide range of pressure and electrical connections are available.

SS301 series piezoresistive pressure sensors take advantage of piezoresistive technology, and are fully media isolating with stainless steel and no internal elastomer seals. This design often makes them resistant to harsh, aggressive media and challenging environments. The sensor is mounted in a stainless steel package with a small volume of oil between the diaphragm and sensor. The pressure housing uses the oil to transmit the pressure from the diaphragm to the sensor. SS301 series offer the pressure range of minimum 20kpa and maximum 20mpa for OEM applications. High measurement accuracy is provided through extensive sensor characterization.

Technical data

Performance (EN 60770)

Accuracy @25°C (incl. non-linearity, hysteresis and repeatability)	±0.5% FS
Non-linearity BFSL (conformity)	≤ ±0.3% FS
Hysteresis and repeatability	≤ ±0.1% FS
Total error band (inside the compensated temperature range)	±0.5%
Response time	< 4 ms
Overload pressure	4 × FS (max. 200 bar)(SS304 series) 2 × FS (SS301 series)
Durability, P: 10-90% FS	>10×10 ⁶ cycles
Pressure range	0~0.2...50bar (SS304 series) 0~0.2...200bar (SS301 series)
Pressure type	vented gauge, sealed gauge, absolute
Stability	≤0.2%FS/Year
Temp coefficient	±0.03%FS/°C

SS304 Series Piezoresistive Pressure Transmitters for heavy-duty applications
SS301 Series Piezoresistive Pressure Transmitters for air and water applications

Electrical specifications

	4-20mA (Current output)	0-10V, 0-5V (Not Ratio-metric)	Ratio-metric (10-90% of Vs.)
Supply voltage [UB]	12-30V	12-30V	5 V ± 10%
Load [RL] (load connected to 0 V)	$RL \leq (UB-7.3V)/0.02 A$	---	---
Polarity protected	yes	No	No
Short-circuit protected	yes	No	No

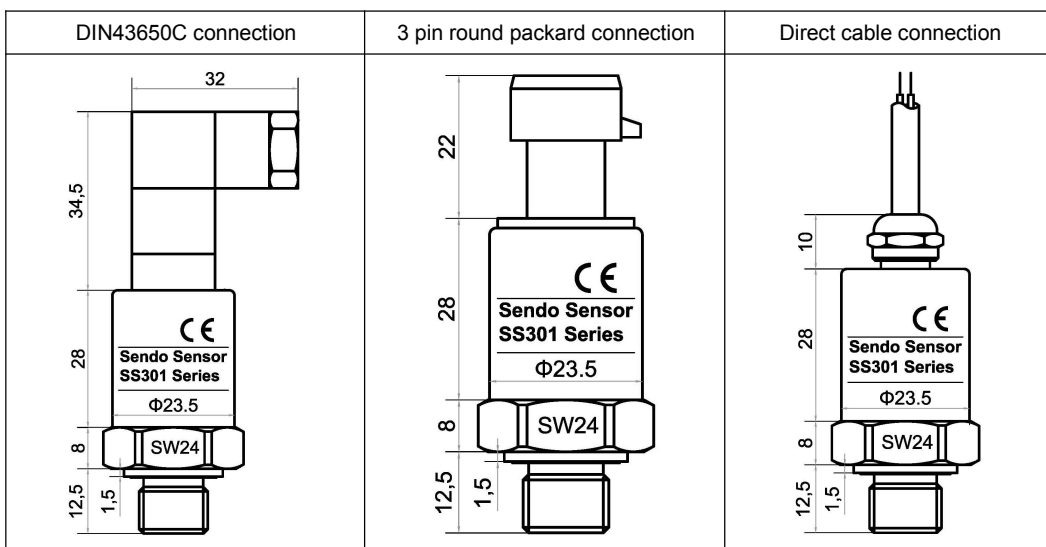
Environmental conditions

Medium temperature range	-20°C → +100°C (SS301) -40°C → +100°C (SS304)
Ambient temperature range (depending on electrical connection)	-20°C → +80°C
Compensated temperature range	-10°C → +70°C
EMC - Emission	EN 61000-6-3
EMC - Immunity	EN 61000-6-1
Insulation resistance	>100 MΩ at 500 V

Mechanical characteristics

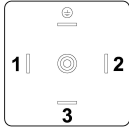
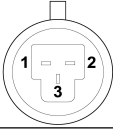
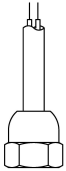
Materials	Diaphragm	Stainless steel 316L
	Enclosure	Stainless steel 304
	Electrical connections	PA66, stainless steel
Weight (depending on pressure connection and electrical connection)	0.15 - 0.3 kg	
Pressure connection	See page 4 (Ordering informations)	
Electrical connection	DIN43650C(9.4mm mini DIN) Direct cable 3 pin round packard	

Dimensions



SS304 Series Piezoresistive Pressure Transmitters for heavy-duty applications
SS301 Series Piezoresistive Pressure Transmitters for air and water applications

Electrical connections

	4-20mA (Current output 2 wire)	0-10V, 0-5V, 0.5-4.5V (Voltage output 3 wire)	IP grade & Material
DIN43650C connection 	Pin1: + supply Pin 2: + output Pin 3: Not used	Pin 1: + supply Pin 2: - supply Pin 3: + output	IP65 Material: PA66
3 pin packard connection 	Pin 1: + output Pin 2: + supply Pin 3: Not used	Pin 1: GND Pin 2: + supply Pin 3: + output	IP65 Material: PA66
Direct cable connection 	Red: + supply Green/Yellow: + output	Red: + supply Green: - supply Yellow: + output	IP65 Material: Stainless steel 304

Ordering informations

EXAMPLE: [SS304 K 01 A 04 B 01 A](#) EXAMPLE: [SS301 P 03 A 04 B 01 A](#)

1	Pressure Range(bar) A(-1~0) B(-0.35~0) C(-0.2~0) D(0~0.2) E(0~0.35) F(0~1.0) G(0~2.5) H(0~4.0) I(0~6.0) J(0~10) K(0~16) L(0~25) M(0~40) N(0~60) O(0~100) P(0~160) Q(0~200) R(Other pressure range or unit is on request)	K
2	Pressure Type 01 Gauge 02 Absolute	01
3	Electrical Connection A 9.4mm mini DIN(DIN43650C) B Direct cable C 3 pin round packard	A
4	Pressure Connection 01(1/4"NPT) 02(1/2"NPT) 03(1/8"NPT) 04(G1/4") 05(G1/2") 06(G1/8") 07(PT1/4") 08(PT1/2") 09(PT1/8") 10(Other pressure connection is on request)	04
5	Voltage Supply A 5VDC B 12~30VDC	B
6	Output Signal 01 4~20mA 02 0.5~4.5V 03 0~5V 04 0~10V 05 Other output signal is on request	01
7	Cable Length A None B 1m C 2m D 3m E 4m F 5m G 6m H Other length is on request	A

Optionals

Accuracy 0.25%FS	Material of wetted parts stainless steel 316L or Ti	
Housing filled with silicon gel	Pulse snubber	Customized dimension

SS304 Series Piezoresistive Pressure Transmitters for heavy-duty applications
SS301 Series Piezoresistive Pressure Transmitters for air and water applications

Contact us

Company Name	Ninghai Sendo Sensor Co., Ltd	
Company Address	Room 1110, Building #3, No.487, Yangmuqi Road, Gaoxing District, 315040 China	
Factory Address	Floor 5, Building 2, No.48 Jiujuan Road, Jianggan District, 310000 Hangzhou, China	
Website	www.sendo-sensor.com	
Email(sales)	sales@sendo-sensor.com	
Email(Mr Chen)	cain.chen@sendo-sensor.com	
Skype	sendosensor	
Tel: 0086-0574-27725960	Fax:0086-0574-27725970	Phone: 0086-13616574884

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