

SS301 series piezoresistive pressure transmitters for gas and liquid

Features

- CE conformity
- Reverse polarity protection
- Stainless steel 316L diaphragm
- Piezoresistive pressure sensor, oil filled
- All stainless steel structure, NO O-ring inside
- Output signals: 4-20mA and 0.5-4.5V, 0-5V, 0-10V
- A wide range of pressure and electrical connections



GSP 311



3-pin Packard



Direct cable



DIN43650C



Plug type



LED Display

Descriptions

SS301 series piezoresistive pressure sensors take the advantage of piezoresistive technology, 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. A high performance piezoresistive pressure transducer is laser welded with the housing, no O-ring, no potential leak problems, high measurement accuracy is provided through extensive transducer characterization.

SS301 series offer the pressure range of minimum 20kpa and maximum 40mpa (0.2bar to 400bar) for OEM applications. Numerous options and variants are available, fully adapted to the customer requirements. Typical application in industrial measurement and environment control.

Technical data

Performance (EN 60770)

Accuracy @ 25 °C	± 0.5% F.S. (incl. non-linearity, hysteresis and repeatability)
Non-linearity BFSL (conformity)	± 0.3% F.S.
Hysteresis and repeatability	± 0.1% F.S.
Response time	< 4 ms
Pressure range	Minimum range: 0.2 bar Maximum range: 400 bar See more details in page 5 (part number chart)
Overload pressure	2.0 × F.S. (≤ 200 bar) 1.5 × F.S. (> 200 bar) and burst 400 bar
Pressure type	vented gauge, sealed gauge, absolute
Long term stability	≤ 0.2% F.S./Year
Temperature coefficient	± 0.03% F.S./°C

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Electrical specifications

Output signal	4-20mA	0-10V	0-5V/0.5-4.5V	0.5-4.5V	10%-90%
Supply voltage	9-30Vdc	12-30Vdc	9-30Vdc	5Vdc	5V ratio-metric
Polarity protected	yes	yes	yes	yes	yes
Short-circuit protected	yes	yes	yes	yes	yes
Zero and span adjustment	No	No	No	No	No
Surge protection	yes	yes	yes	yes	yes

Environmental conditions

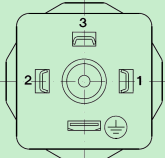
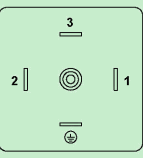
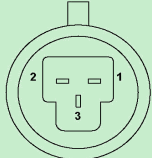
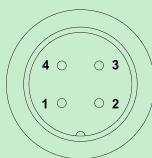
Medium temp range	-40 → +100 °C
Ambient temp range	-20 → +80 °C (depending on electrical connection)
Compensated temp range	0 → +70 °C
EMC - Emission	EN 61000-6-3
EMC - Immunity	EN 61000-6-1
Insulation resistance	>100 MΩ at 250 V

Mechanical characteristics

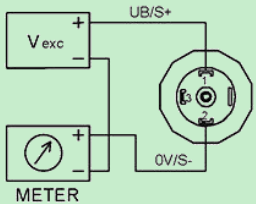
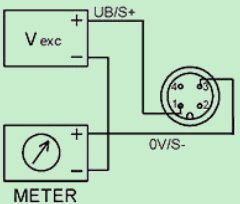
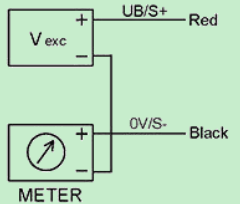
Materials	Diaphragm	Stainless steel 316L (typical)	More options see page 5
	Housing	Stainless steel 304 (typical)	Stainless steel 316L (optional)
	Pressure connection	Stainless steel 304 (typical)	Stainless steel 316L (optional)
	Electrical connection	Depending on the connection type	
	O-ring	Not used, all stainless steel welding structure	
Pressure connection	1/4" BSP, 1/4" NPT, 9/16-18 UNF, M14 x 1.5		More options see page 5
Electrical connection	DIN43650A, DIN43650C, Cable outlet, M12 × 1, LED Display, 3-pin Packard		
Weight	150-300g (depending on pressure connection and electrical connection)		
Sealing rating	IP 65 (fulfilled together with mating connector)		

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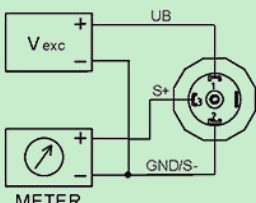
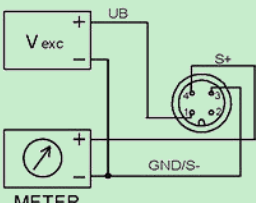
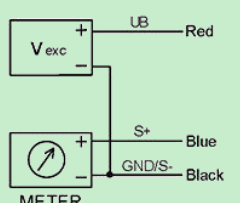
Electrical connector type

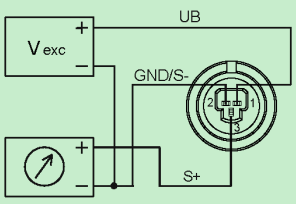
DIN43650A	DIN43650C	3-pin Packard	M12 × 1
			

Electrical connections for 4-20mA current output signal (2 wire)

DIN43650	M12 × 1	Cable outlet
Pin 1: + supply Pin 2: + output	Pin 1: + supply Pin 3: + output	Red: + supply Black: + output
		

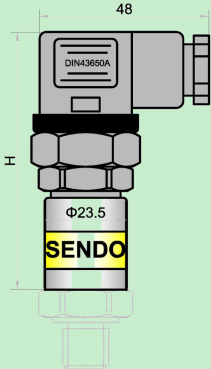
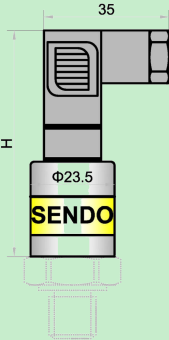
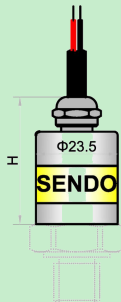
Electrical connections for 0-10V, 0-5V, 0.5-4.5V voltage output signal (3 wire)

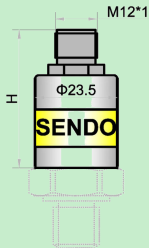
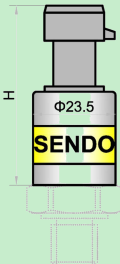
DIN43650	M12 × 1	Cable outlet
Pin 1: + supply Pin 2: GND Pin 3: + output	Pin 1: + supply Pin 3: GND Pin 4: + output	Red: + supply Black: GND Blue: + output
		

3-pin Packard		
Pin 1: + supply Pin 2: GND Pin 3: + output		
		

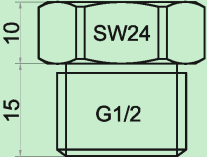
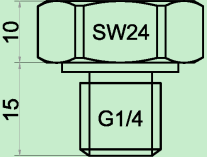
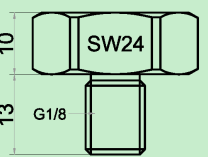
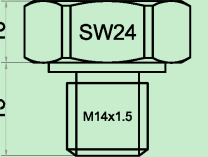
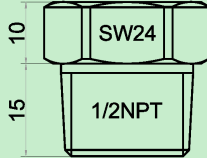
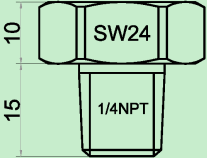
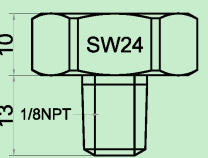
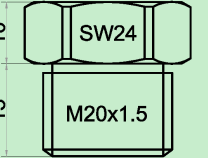
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Dimensions for electrical connections and housing (Unit: mm)

DIN43650A	DIN43650C	Cable outlet
		
H = 79 mm	H = 65 mm	H = 38 mm

M12 × 1	Packard	
		
H = 43 mm	H = 53 mm	

Dimensions for pressure connections (Unit: mm)

G 1/2" thread	G 1/4" thread	G 1/8" thread	M14 x 1.5 thread
			
1/2" NPT thread	1/4" NPT thread	1/8" NPT thread	M20 x 1.5 thread
			

SS301 series piezoresistive pressure transmitters for gas and liquid**Part number chart (How to order)**PART NUMBER REQUIRED: **SS301.PL.01.A.04.B.06 (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) 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) 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(Gauge) 02(Absolute)	
3	Electrical connection	A
	A(DIN43650A) B(Cable Outlet) C(M12 × 1) D(LED Display) E(DIN43650C) F(Plug type) G(3-pin round Packard)	
4	Pressure connection	04
	01(1/4" NPT male) 02(1/2" NPT male) 03(1/8" NPT male) 04(G 1/4" male) 05(G 1/2" male) 06(G 1/8" male) 07(PT 1/4" male) 08(PT 1/2" male) 09(PT 1/8" male) 10(9/16-18 UNF male) 11(7/16-20 UNF male) 12(1/2-20 UNF male) 13(3/8-24 UNF male) 14(M10 x 1.25 male) 15(M14 x 1.5 male) 16(M20 x 1.5 male) 17(1/8" NPT female) 18(1/4" NPT female) 19(1/2" NPT female) 20(9/16-18 UNF female) 21(7/16-20 UNF female) 4Z(Other pressure connection is on request)	
5	Signal & supply	A
	A(4-20mA & 9-30Vdc) B(0-10V & 12-30Vdc) C(0-5V & 9-30Vdc) D(0.5-4.5V & 9-30Vdc) E(0.5-4.5V & 5Vdc) F(0.5-4.5V & 5Vdc ratiometric) G(1-5V & 12-30Vdc)	
6	Cable length	06
	01(1m) 02(2m) 03(3m) 04(4m) 05(5m) 06(None) 6Z(Other length is on request)	

NON- REQUIRED: **SS301.PL.01.A.04.B.06 - V5G**

1	Material of housing	V3C
	V3C(Stainless steel 316L)	
2	Material of diaphragm	V4E
	V4D(Titanium) V4E(Tantalum) V4F(Hastelloy-C)	
3	Material of wetted parts (metal parts, not include the diaphragm)	V5G
	V5G(Stainless steel 316L)	
4	Pulse snubber / Bumper (Anti cavitation, pressure spikes, or pulses)	V6H
	V6H(Assemble into the pressure hole)	

SS301 series piezoresistive pressure transmitters for gas and liquid**Contact us**

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



WARNING: DO NOT USE THIS PRODUCT AS SAFETY OR EMERGENCY STOP DEVICE OR IN ANY OTHER APPLICATION WHERE FAILURE OF THE PRODUCT COULD RESULT IN PERSONAL INJURY OR EVEN DEATH.