

SS304 series piezoresistive pressure transmitters for heavy-duty applications

Features

- CE conformity
- 4 x F.S. high overload
- Stainless steel 316L diaphragm
- Piezoresistive pressure sensor, oil filled
- All stainless steel structure, NO O-ring inside
- Signals: 4-20mA and 0-10V, 0-5V, 0.5-4.5V output
- Pressure from 0.2 bar up to 100 bar in gauge or absolute
- Resistant to cavitation, liquid hammer and pressure peaks



GSP 311



3-pin Packard



Direct cable



DIN43650C



Plug type



LED Display

Descriptions

SS304 series piezoresistive OEM pressure transmitter is an improved version based on SS301 series, it can be integrated with pulse-snubber, provides more than 4 × f.s. high overload, has a great advantage for using in hydraulic applications with severe medium influences like cavitation, liquid hammer or pressure peaks and offers a reliable pressure measurement, even under harsh environmental conditions.

The flexible program of the piezoresistive pressure transmitter covers all kinds of analog signal including 4-20mA current output or 0-10V, 0-5V voltage output signal; absolute, vented gauge and sealed gauge pressure type; 0-0.2 to 0-100 bar measuring ranges and a wide range of pressure and electrical connections.

Technical data

Performance (EN 60770)

Accuracy @ 25 °C	± 1.0% 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: 100 bar See more details in page 5 (part number chart)
Overload pressure	4.0 × F.S.
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

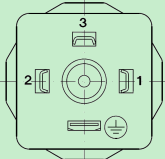
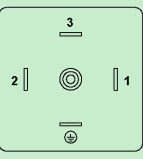
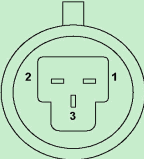
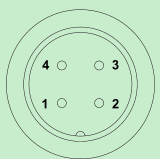
Medium temp range	-40 → +100 °C
Ambient temp range	-20 → +80 °C (depending on electrical connection)
Compensated temp range	0 → +70 °C
EMC - Emission	EN 61000-6-3
EMC - Immunity	EN 61000-6-1
Insulation resistance	> 100 MΩ at 250 V

Mechanical characteristics

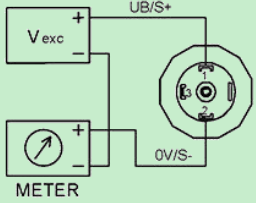
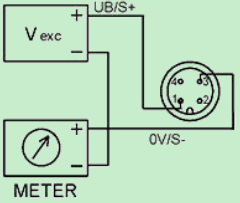
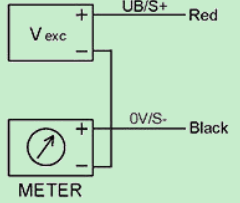
Materials	Diaphragm	Stainless steel 316L (typical)	More options see page 5
	Housing	Stainless steel 304 (typical)	Stainless steel 316L (optional)
	Pressure connection	Stainless steel 304 (typical)	Stainless steel 316L (optional)
	Electrical connection	Depending on the connection type	
	O-ring	Not used, 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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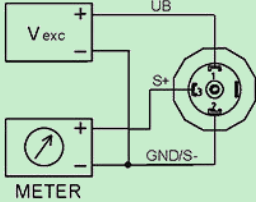
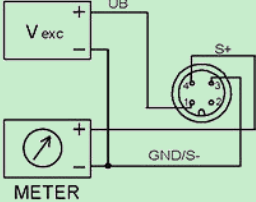
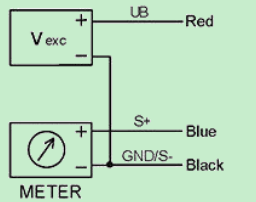
Electrical connector type

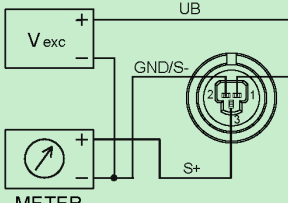
DIN43650A	DIN43650C	3-pin Packard	M12 × 1
			

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

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Part number chart (How to order)

PART NUMBER REQUIRED: **SS304.PL.01.A.04.A.01 (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) 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)	
6	Cable length	06
	01(1m) 02(2m) 03(3m) 04(4m) 05(5m) 06(None) 6Z(Other length is on request)	

NON- REQUIRED: **SS304.PL.01.A.04.A.01 - 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)	

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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



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.