

SS302 series piezoresistive pressure transmitters for industrial environment

Features

- CE conformity
- Reverse polarity protection
- Stainless steel 316L diaphragm
- Zero / span adjustable by potentiometer
- Rugged construction, silicone oil filled inside
- Piezoresistive silicon pressure sensor
- Pressure ranges from 0.1 up to 1000 bar
- Isolated construction, able to test various media
- Output signals: 4-20mA and 0-10V, 0-5V, 0.5-4.5V
- A wide range of pressure and electrical connections



DIN43650A



DIN43650C



LED Display

Descriptions

SS302 series piezoresistive pressure transmitters are the basic type in Sendo Sensor, also it is the most widely used one, work following the piezoresistive principle, standard medium working temperature from -20 to 100°C. A modular concept uses the selection of off-the-shelf capsules, allowing a customized production. Numerous options and variants are available, fully adapted to the customer requirements: power supply, signal outputs, mechanical and electrical interface, ports, materials in media contact, oil filling, special feature, etc.

SS302 series adopt a high performance piezoresistive pressure transducer as the sensing part, the inner structure is O-ring sealed, 0 to 70 °C wide temperature compensation, well suitable for precision applications in industrial environments for pressures ranging from 0,1 to 1000 bar, liquids or gas.

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: 0.1 bar Maximum range: 1000 bar See more details in page 5 (part number chart)
Overload pressure	2.0 × F.S. (≤ 250 bar) 1.5 × F.S. (> 250 bar), 1.2 × F.S. (1000bar)
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
Supply voltage	12-36Vdc	15-36Vdc	10-36Vdc	5Vdc
Polarity protected	yes	yes	yes	yes
Short-circuit protected	yes	yes	yes	yes
Zero and span adjustment	yes	yes	yes	yes
Surge protection	No	No	No	No

Environmental conditions

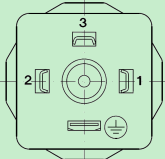
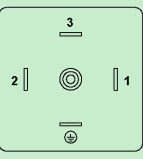
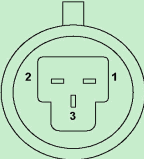
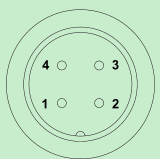
Medium temp range	-20 → +100 °C
Ambient temp range	-20 → +80 °C (depending on electrical connection)
Compensated temp range	0 → +70 °C
EMC - Emission	EN 61000-6-3
EMC - Immunity	EN 61000-6-1
Insulation resistance	>100 MΩ at 250 V

Mechanical characteristics

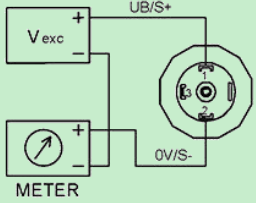
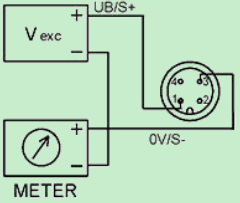
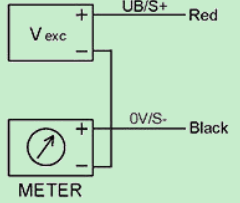
Materials	Diaphragm	Stainless steel 316L (typical)	More options see page 5
	Housing	Stainless steel 304 (typical)	Stainless steel 316L (optional)
	Pressure connection	Stainless steel 304 (typical)	Stainless steel 316L (optional)
	Electrical connection	Depending on the connection type	
	O-ring	FKM / Viton (typical)	EPDM (optional)
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, LED Display		
Weight	150-300g (depending on pressure connection and electrical connection)		
Sealing rating	IP 65 (fulfilled together with mating connector)		

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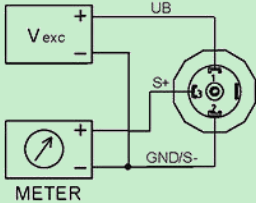
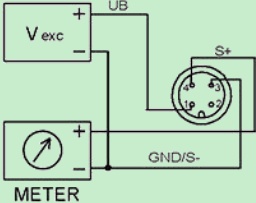
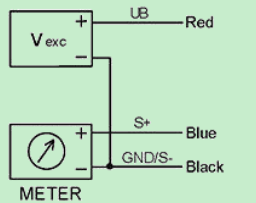
Electrical connector type

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
		

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Dimensions for electrical connections and housing (Unit: mm) For 4-20mA and 0.5-4.5V signal

DIN43650A	DIN43650C	LED Display
H = 74 mm	H = 74 mm	H = 122 mm

Dimensions for electrical connections and housing (Unit: mm) For 0-10V and 0-5V signal

DIN43650A	DIN43650C	LED Display
H = 94 mm	H = 94 mm	H = 142 mm

Dimensions for pressure connections (Unit: mm)

G 1/2" thread	G 1/4" thread	G 1/8" thread	G 3/4" thread
1/2" NPT thread	1/4" NPT thread	1/8" NPT thread	3/4" NPT thread

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Part number chart (How to order)

PART NUMBER REQUIRED: **SS302.PL.01.A.04.A.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) 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(Gauge) 02(Absolute)	
3	Electrical connection	A
	A(DIN43650A) B(LED Display) C(DIN43650C)	
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) 4Z(Other pressure connection is on request)	
5	Signal & supply	A
	A(4-20mA & 12-36Vdc) B(0-10V & 15-36Vdc) C(0-5V & 10-36Vdc) D(0.5-4.5V & 10-36Vdc) E(0.5-4.5V & 5Vdc)	
6	Cable length	06
	01(1m) 02(2m) 03(3m) 04(4m) 05(5m) 06(None) 6Z(Other length is on request)	

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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.