

SS310 series 0-20mA piezoresistive pressure transmitters

Features

- CE conformity
- Reverse polarity protection
- Stainless steel 316L diaphragm
- Zero / span adjustable by potentiometer
- Rugged construction, silicone oil filled inside
- 0-20mA 3-wire output signal
- Piezoresistive silicon pressure sensor
- Pressure ranges from 0.1 up to 1000 bar
- Isolated construction, able to test various media
- A wide range of pressure and electrical connections

Descriptions

SS310 series 0-20mA piezoresistive pressure transmitters measure of gases and liquids in industrial applications and are available wide range of pressure in 0.1 to 1000 bar relative or absolute pressure. The transmitter consists of sensor and signal processing circuit. Among, Wheatstone bridge is set on sensing interface of sensor. When increasing its pressure, Resistance of bridge arm has changed, then transfer to voltage change via signal processing circuit, and finally change it into standard 0 to 20mA DC



SS310 series are supplied with unregulated direct voltage from 15 to 36 V, each pressure transmitter is temperature compensated to assure accuracy and long term stability when exposed to severe ambient temperature variations. The various electronic and process connections required for particular operating conditions are available at short notice.

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 4 (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	0 → 20mA
Supply voltage	15 → 36Vdc

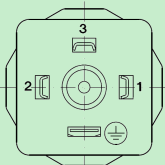
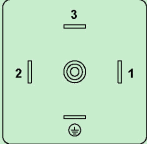
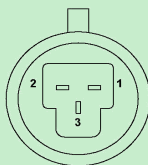
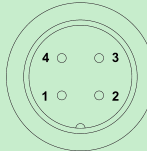
Environmental conditions

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

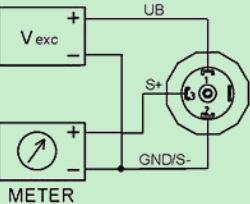
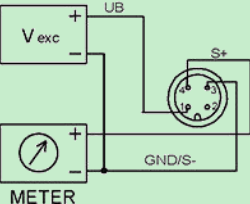
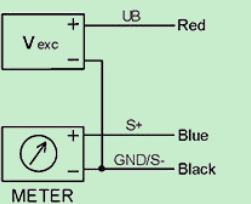
Mechanical characteristics

Materials	Diaphragm	Stainless steel 316L (typical)	More options see page 4
	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 4
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)		

Electrical connector type

DIN43650A	DIN43650C	3-pin Packard	M12 × 1
			

Connection diagrams for 0-20mA current output signal (3 wire)

DIN43650A / DIN43650C	M12 × 1	Cable outlet
Pin 1: + Input Pin 2: GND Pin 3: + Output	Pin 1: + Input Pin 3: GND Pin 4: + Output	Red: + Input Black: GND Blue: + Output
		

Please strictly follow the connection diagrams. If the input and output are reversed, it will cause serious damage to the sensor

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Dimensions for electrical connections and housing (Unit: mm)

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

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Part number chart (How to order)

PART NUMBER REQUIRED: **SS310.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	Output signal & Input power	A
	A(0-20mA & 15-36Vdc)	
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.