

SS312 series piezoresistive pressure transmitters for industrial environment

Features

- CE conformity
- Reverse polarity protection
- Stainless steel 316L wetted parts
- Rugged construction, silicone oil filled inside
- Enhanced anti-interference and surge protection
- 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 0.5-4.5V, 0-5V, 0-10V
- A wide range of pressure and electrical connections



Descriptions

SS312 series industrial pressure transmitter is an updated version based on SS302 series, it adopts a highly-sensitive piezoresistive pressure transducer as the sensing part and assembled with a high quality signal processing ASIC, guarantees high level of accuracy, repeatability and long-term stability, gives an incredible stable signal even in high pressures or low pressures including vacuum, is well suitable for precision applications in industrial environments for pressures ranging from 0.1 to 1000 bar.

The pressure transmitter is made of SS316L wetted parts and has O-ring sealed internal structure, on the basis of the combinability of different mechanical and electronic connections, a variety of different pressure transmitters is offered, is widely used for various pressure measurement application with media compatible with stainless steel 316L and viton.

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

SS312 series piezoresistive pressure transmitters for industrial environment

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

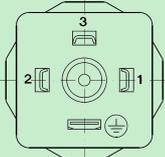
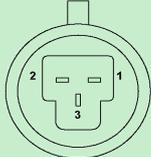
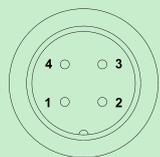
Medium temp range	-20 → +100 °C
Ambient temp range	-20 → +80 °C (depending on electrical connection)
Compensated temp range	0 → +70 °C
EMC - Emission	EN 61000-6-3
EMC - Immunity	EN 61000-6-1
Insulation resistance	> 100 MΩ at 250 V

Mechanical characteristics

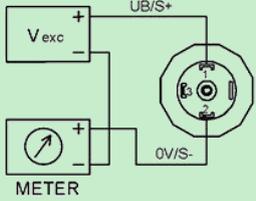
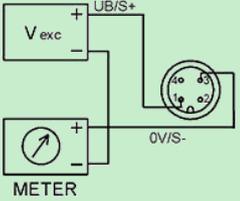
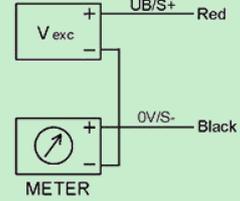
Materials	Diaphragm	Stainless steel 316L (typical)	More options see page 5
	Housing	Stainless steel 304 (typical)	Stainless steel 316L (optional)
	Pressure connection	Stainless steel 316L	
	Electrical connection	Depending on the connection type	
	O-ring	FKM / Viton (typical)	EPDM (optional)
Pressure connection	1/4" BSP, 1/4" NPT, 9/16-18 UNF, M14 x 1.5		More options see page 5
Electrical connection	DIN43650A, DIN43650C, Cable outlet, M12 × 1, LED Display		
Weight	150-300g (depending on pressure connection and electrical connection)		
Sealing rating	IP 65 (fulfilled together with mating connector)		

SS312 series piezoresistive pressure transmitters for industrial environment

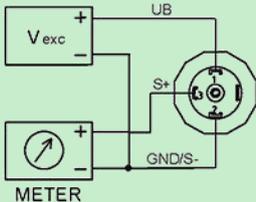
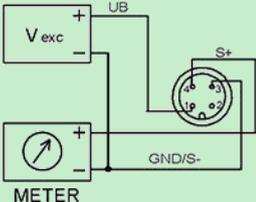
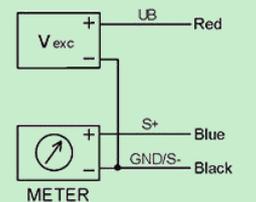
Electrical connector type

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
		

SS312 series piezoresistive pressure transmitters for industrial environment

Dimensions for electrical connections and housing (Unit: mm)

DIN43650A	DIN43650C	Cable outlet
H = 74 mm	H = 74 mm	H = 64 mm

M12 × 1	LED Display
H = 67 mm	H = 122 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

SS312 series piezoresistive pressure transmitters for industrial environment

Part number chart (How to order)

PART NUMBER REQUIRED: **SS312.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(Cable Outlet) C(M12 × 1) D(LED Display) E(DIN43650C) F(Plug type)	
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 & 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: **SS312.PL.01.A.04.A.06 - V3C**

1	Material of O-ring sealing	V2B
	V2B(EPDM)	
2	Material of housing	V3C
	V3C(Stainless steel 316L)	
3	Material of diaphragm	V4E
	V4D(Titanium) V4E(Tantalum) V4F(Hastelloy-C)	
4	Pulse snubber / Bumper (Anti cavitation, pressure spikes, or pulses)	V6H
	V6H(Assemble into the pressure hole)	

SS312 series piezoresistive pressure transmitters for industrial environment

Contact us

Company	Ningbo Sendo Electronic Technology CO., LTD	
Email	sales@sendo-sensor.com	
Email	cain.chen@sendo-sensor.com	
Factory	No 15, Yongxing 2nd Rd, Chengbei Industrial Park, Huizhou District, 245900 China	
Office	Building. 1#1108, Wante business center, Hi-Tech, 315040 China	
Website	http://www.pressuresensorsuppliers.com	http://www.sendo-sensor.com
Skype: sendosensor	WeChat: chenjie4884	WhatsApp: +8613616574884
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



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.