

SS305 series piezoresistive pressure transmitters for severe industrial environments

Features

- CE conformity
- 6 × F.S. high overload
- Stainless steel 316L wetted parts
- All stainless steel integrated structure
- Piezoresistive pressure sensor, oil filled
- Output signals: 4-20mA and voltage output
- Enhanced anti-interference and surge protection
- Pressure from 0.1bar up to 60 bar in gauge or absolute
- Resistant to cavitation, liquid hammer and pressure peaks



Descriptions

SS305 series isolated industrial pressure transmitter is a portfolio of highly configurable pressure sensors that use piezoresistive sensing technology, meets the high overload protection demand and is suitable for almost all types of severe industrial applications. It is an improved pressure transmitter based on SS302 series, all stainless steel integrated structure, a special designed pressure transducer is laser welded with the housing, no elastic component is used in side, no O-ring, no leaking problems.

SS305 series is fully calibrated and compensated for offset, sensitivity, temperature effects and non-linearity, is a precise pressure measurement solution that optimizes system performance at a competitive cost, numerous standard or custom connectors, ports, pressure ranges and types, and output signal options. With the special designed transducer and signal conditioning circuit, the transmitter offer more than 4 f.s. high overload, this feature makes the sensor is perfect for the hydraulic applications especially for the water treatment market.

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: 0.1 bar Maximum range: 60 bar See more details in page 5 (part number chart)
Overload pressure	6.0 × 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

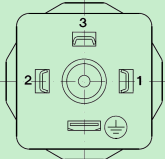
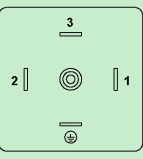
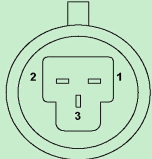
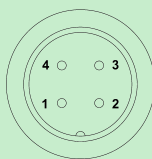
Medium temp range	-40 → +100 °C
Ambient temp range	-20 → +80 °C (depending on electrical connection)
Compensated temp range	0 → +70 °C
EMC - Emission	EN 61000-6-3
EMC - Immunity	EN 61000-6-1
Insulation resistance	> 100 MΩ at 250 V

Mechanical characteristics

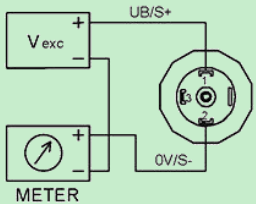
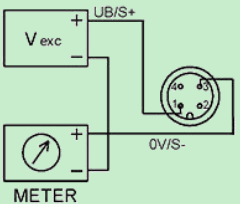
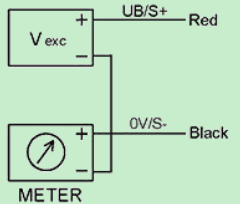
Materials	Diaphragm	Stainless steel 316L (typical)	More options see page 5
	Housing	Stainless steel 304 (typical)	Stainless steel 316L (optional)
	Pressure connection	Stainless steel 316L	
	Electrical connection	Depending on the connection type	
	O-ring	Not used, all stainless steel welding structure	
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		
Weight	150-300g (depending on pressure connection and electrical connection)		
Sealing rating	IP 65 (fulfilled together with mating connector)		

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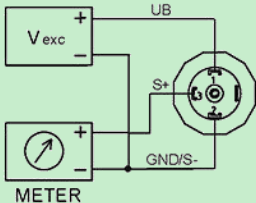
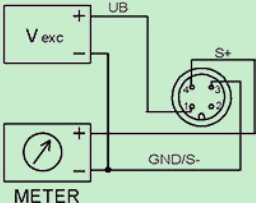
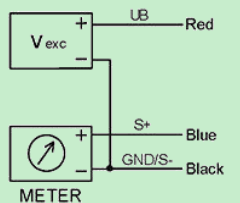
Electrical connector type

DIN43650A	DIN43650C	3-pin Packard	M12 × 1
			

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

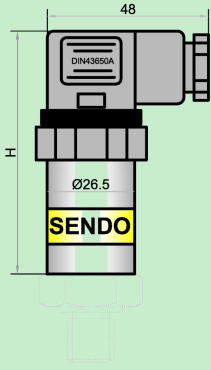
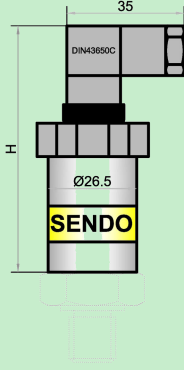
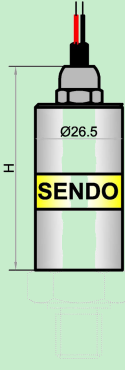
DIN43650	M12 × 1	Cable outlet
Pin 1: + supply Pin 2: + output	Pin 1: + supply Pin 3: + output	Red: + supply Black: + output
		

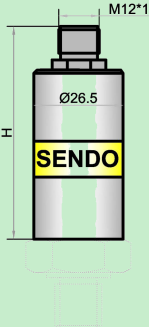
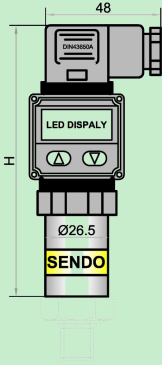
Electrical connections for 0-10V, 0-5V, 0.5-4.5V voltage output signal (3 wire)

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
		

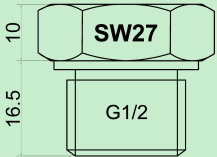
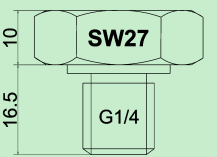
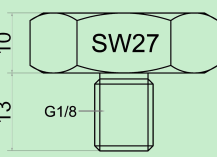
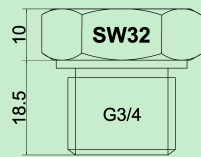
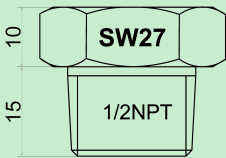
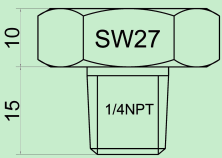
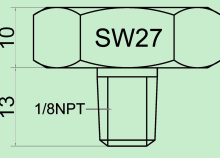
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Dimensions for electrical connections and housing (Unit: mm)

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
			

SS305 series piezoresistive pressure transmitters for severe industrial environments**Part number chart (How to order)**PART NUMBER REQUIRED: **SS305.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) 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) 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: **SS305.PL.01.A.04.A.06 - V3C**

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

SS305 series piezoresistive pressure transmitters for severe industrial environments**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.