

# SS402 series flush diaphragm pressure transmitters

## Features

- CE conformity
- Reverse polarity protection
- Stainless steel 316L wetted parts
- Silicone oil filled, rugged construction
- Wide measuring range: 0-0.1bar to 1000bar
- Output signals: 4-20mA or 0-10V, 0-5V, 0.5-4.5V
- A wide range of pressure and electrical connections

## Descriptions

SS402 series flush pressure sensor is an oil-filled silicone sensor designed by the piezoresistive technology, works following the piezoresistive effect, pressure applied by the process media is hydraulically transmitted from the flexible diaphragm, through the filled fluid between the diaphragm and the instrument, to the pressure element.

It is very rugged and robust, flush port connection with material of stainless steel 316L, has a ring on the diaphragm, offers excellent long term and stable performance throughout the complete range of pressures

spanning from 0.1 bar up to 1000 bar with amplified voltage or current outputs. SS402 series is highly configurable, with a variety of electrical termination and flush pressure port configurations, the sensor is ideal used in food process and industrial applications to measure the liquid and gas pressures, where the media is either viscous, or is otherwise liable to block the port of a conventional pressure transducer with a recessed diaphragm or pressure port.



## 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 <a href="#">page 5 (part number chart)</a>
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	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	More options see <a href="#">page 6</a>
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 <a href="#">page 5</a>
	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	1/2" BSP, 1/2" NPT, M20 x 1.5		More options see <a href="#">page 5</a>
Electrical connection	DIN43650A, DIN43650C, Cable outlet, M12 × 1, LED Display		
Weight	225-500g (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)

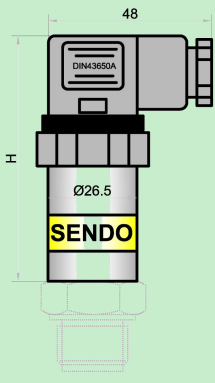
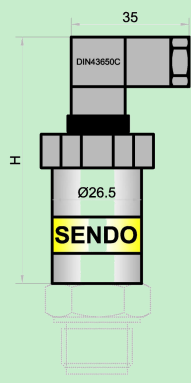
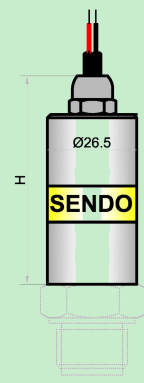
DIN43650	M12 × 1	Cable outlet
Pin 1: + supply    Pin 2: + output	Pin 1: + supply    Pin 3: + output	Red: + supply    Black: + output

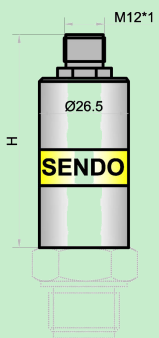
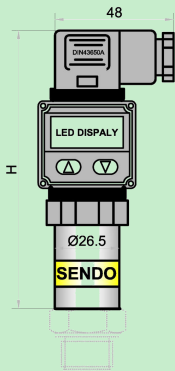
### Electrical connections for 0-10V, 0-5V, 0.5-4.5V voltage output signal (3 wire)

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

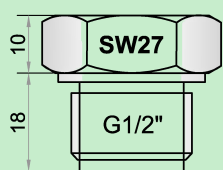
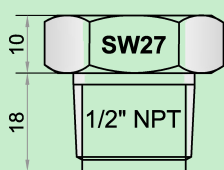
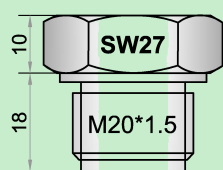
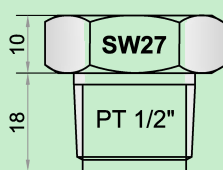
## SS402 series flush diaphragm pressure transmitters

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	1/2" NPT thread	M20 x 1.5 thread	PT 1/2" thread
			

## SS402 series flush diaphragm pressure transmitters

### Part number chart (How to order)

PART NUMBER REQUIRED: **SS402.PL.01.A.01.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	01
	01(1/2" NPT male) 02(1" NPT male) 03(3/4" NPT male) 04(G 1/2" male) 05(G 1" male) 06(G 3/4" male) 07(PT 1/2" male) 08(PT 1" male) 09(PT 3/4" 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: **SS402.PL.01.A.01.A.06 - V3C**

1	Material of housing	V3C
	V3C(Stainless steel 316L)	
2	Material of diaphragm	V4E
	V4D(Titanium) V4E(Tantalum) V4F(Hastelloy-C)	

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\*Specifications subject to change without notice, the latest date sheet please contact: sales@sendo-sensor.com

**SS402T series flush diaphragm pressure transmitters for high temperature****Part number chart (How to order)**PART NUMBER REQUIRED: **SS402.T03.PL.01.A.01.A.06 (EXAMPLE)**

0	Medium working temperature	<b>T03</b>
	T03(150 °C, 3pcs of cooling fins) T06(200 °C, 6pcs of cooling fins) T08(240 °C, 8pcs of cooling fins) 0Z(Other temperature is on request)	
1	Pressure range(bar)	<b>PL</b>
	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) 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	<b>01</b>
	01(Gauge) 02(Absolute)	
3	Electrical connection	<b>A</b>
	A(DIN43650A) B(Cable Outlet) C(M12 × 1) D(LED Display) E(DIN43650C) F(Plug type)	
4	Pressure connection	<b>01</b>
	01(G 1/2" male) 02(G 1" male) 03(G 3/4" male) 04(G 1 1/2" male) 05(M20 x 1.5 male) 4Z(Other pressure connection is on request)	
5	Signal & supply	<b>A</b>
	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	<b>06</b>
	01(1m) 02(2m) 03(3m) 04(4m) 05(5m) 06(None) 6Z(Other length is on request)	

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**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.**