

SS412 series pure flush pressure transmitters

Features

- CE conformity
- Reverse polarity protection
- Stainless steel 316L wetted parts
- Silicone oil filled, rugged construction
- Wide measuring range: 0-0.35bar to 600bar
- Output signals: 4-20mA or 0-10V, 0-5V, 0.5-4.5V
- A wide range of pressure and electrical connections



Descriptions

SS412 series flush diaphragm pressure transmitter is totally flat and designed to ensure a dead-space free sealing between the process connection and the measuring medium, so that medium will not heap up, is specifically suitable for the measurement of viscous, paste-like, adhesive media. It offers a stable performance, offset and full scale output is achieved via the latest ASIC technology, gives an accurate output signal of 4-20 mA with options for 0-5 Vdc, 0-10 Vdc, and other analog output signals throughout the complete range of pressures from 0.35 bar up to 600 bar.

SS412 series is piezoresistive silicon based transmitter with stainless steel isolated structure, pressure is coupled from a SS316 membrane that deforms with pressure via a transmission fluid (silicone oil), the modular design of the pressure transmitter allows for a wide variety of electrical connections, output signals and process connections to be specified to meet the requirements of any application.

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: 0.35 bar Maximum range: 600 bar See more details in page 5 (part number chart)
Overload pressure	2.0 × F.S. (≤ 250 bar) 1.5 × F.S. (> 250 bar)
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

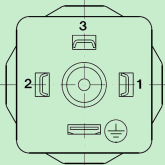
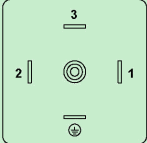
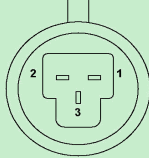
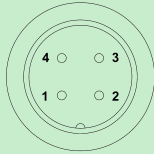
Medium temp range	-40 → +100 °C	More options see page 6
Ambient temp range	-20 → +80 °C (depending on electrical connection)	
Compensated temp range	0 → +70 °C	
EMC - Emission	EN 61000-6-3	
EMC - Immunity	EN 61000-6-1	
Insulation resistance	> 100 MΩ at 250 V	

Mechanical characteristics

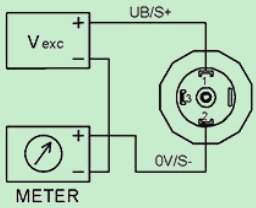
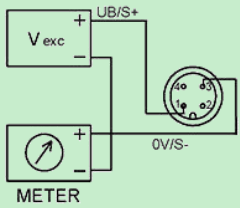
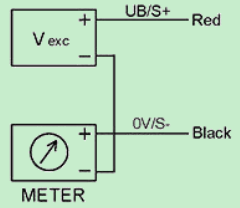
Materials	Diaphragm	Stainless steel 316L (typical)	More options see page 5
	Housing	Stainless steel 304 (typical)	Stainless steel 316L (optional)
	Pressure connection	Stainless steel 316L	
	Electrical connection	Depending on the connection type	
	O-ring	Not used, all stainless steel welding structure	
Pressure connection	1/2" BSP, 1/2" NPT, M20 x 1.5		More options see page 5
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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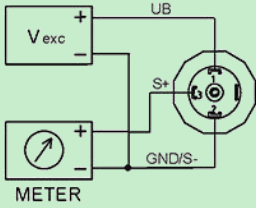
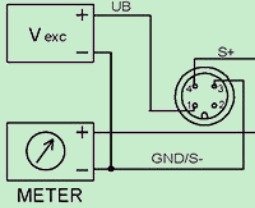
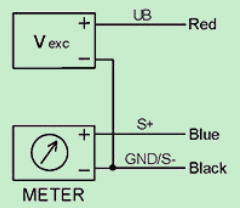
Electrical connector type

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
		

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

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Part number chart (How to order)

PART NUMBER REQUIRED: **SS412.PL.01.A.01.A.06 (EXAMPLE)**

1	Pressure range(bar) NA(-1...0) NB(-0.7...0) NC(-0.5...0) ND(-0.35...0) 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) 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)	PL
2	Pressure type 01(Gauge) 02(Absolute)	01
3	Electrical connection A(DIN43650A) B(Cable Outlet) C(M12 × 1) D(LED Display) E(DIN43650C) F(Plug type)	A
4	Pressure connection 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)	01
5	Signal & supply 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)	A
6	Cable length 01(1m) 02(2m) 03(3m) 04(4m) 05(5m) 06(None) 6Z(Other length is on request)	06

NON- REQUIRED: **SS412.PL.01.A.01.A.06 - V3C**

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

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

SS412T series pure flush pressure transmitters for high temperature

Part number chart (How to order)

PART NUMBER REQUIRED: **SS412.T03.PL.01.A.01.A.06 (EXAMPLE)**

0	Medium working temperature	T03
	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)	PL
	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	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(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	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)	

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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.