# 12 series sanitary pressure transducers

#### **Features**

- 1" 1.5" or 2" clamp fitting
- High accuracy and reliability
- Stainless steel 316L wetted parts
- 1.0mA, 1.5mA constant current supply
- 5VDC, 10VDC constant voltage supply
- 0-70°C temperature compensation range
- Isolated construction, able to test various media
- Absolute, vented gauge and sealed gauge pressure
- Maximum media temperature up to 200°C by cooling fins



### **Descriptions**

SS112 series sanitary pressure transducer is designed by the piezoresistive technology, it is isolated structure with silicone oil filled inside, classic industrial clamp fitting pressure connection makes a crevice-free media interface. The pressure acts on the 316L stainless steel diaphragm, the silicon chip's resistance value will be changed with the pressure, and produce a mV output signal which is proportional to the applied pressure.





SS112 series sanitary pressure transducer is mainly designed with sanitary purposes such as monitoring of the food, the brewing, medicine and production processes of the dairy, is available from pressure range 0.2 bar to 60 bar. The transducer is available with 1", 1.5", 2" and 2.5" Tri-Clamp fitting, high quality stainless steel 316L wetted parts, with 3 pcs of cooling fins make the working temperature up to 150°C, and 5 pcs is 200°C, and also can be customized according to demand.

### Pressure ranges (typical)

Vented gauge (defining atmospheric pressure as zero) (Unit: bar)

Range	-1.0	-0.7	-0.35	-0.2	-0.1	0.1
	0.2	0.35	0.7	1.0	2.5	4.0
	6.0	10	16	25		

Absolute (defining absolute vacuum as zero) (Unit: bar)

Range	1.0	2.5	4.0	6.0	10	16
	25	40	60			

Sealed gauge (defining standard atmospheric pressure as zero) (Unit: bar)

Range	10	16	25	40	60	

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### **Technical data**

### Performance (EN 60770)

1.5 mADC (typical)	5 VDC (opti	onal)	10 VDC (optional)	
0 ± 2 mV ①				
100 ± 20 mV ①				
0.25% F.S. ①				
2.0 × F.S. (≤ 250 bar)				
1.5 × F.S. (> 250 bar), 1.2 × F.S. (1000bar)				
0 → 70 °C				
-20 → 100 °C (typical)		More options see page 4		
-40 → 125 °C				
≤ 0.02% F.S./°C				
≤ 0.02% F.S./°C				
≤ 0.2% F.S./Year				
$2.3 \rightarrow 4 \text{ K}\Omega$				
> 100 MΩ at 250 V				
20g / (20 to 5000 Hz)				
> 100 x 10 <sup>6</sup> F.S. cycles				
	$0 \pm 2$ mV ① $100 \pm 20$ mV ① $0.25\%$ F.S. ① $2.0 \times F.S. (\le 250 \text{ bar})$ $1.5 \times F.S. (> 250 \text{ bar}), 1.2$ $0 \rightarrow 70 ^{\circ}\text{C}$ $-20 \rightarrow 100 ^{\circ}\text{C} \text{ (typical)}$ $-40 \rightarrow 125 ^{\circ}\text{C}$ $\le 0.02\%$ F.S./°C $\le 0.02\%$ F.S./°C $\le 0.2\%$ F.S./Year $2.3 \rightarrow 4 \text{ K}\Omega$ > 100 MΩ at 250 V $20g / (20 \text{ to } 5000 \text{ Hz})$	$0 \pm 2 \text{ mV } \bigcirc$ $100 \pm 20 \text{ mV } \bigcirc$ $0.25\% \text{ F.S. } \bigcirc$ $2.0 \times \text{ F.S. } (\le 250 \text{ bar})$ $1.5 \times \text{ F.S. } (> 250 \text{ bar}), 1.2 \times \text{ F.S. } (1000 \text{ mos})$ $0 \rightarrow 70 ^{\circ}\text{C}$ $-20 \rightarrow 100 ^{\circ}\text{C } (\text{typical})$ $-40 \rightarrow 125 ^{\circ}\text{C}$ $\le 0.02\% \text{ F.S./°C}$ $\le 0.02\% \text{ F.S./°C}$ $\le 0.2\% \text{ F.S./Year}$ $2.3 \rightarrow 4 \text{ K}\Omega$ $> 100 \text{ M}\Omega \text{ at } 250 \text{ V}$ $20g / (20 \text{ to } 5000 \text{ Hz})$	$0 \pm 2 \text{ mV}$ ① $100 \pm 20 \text{ mV}$ ① $0.25\% \text{ F.S.}$ ① $2.0 \times \text{ F.S.}$ ( $\leq 250 \text{ bar}$ ) $1.5 \times \text{ F.S.}$ ( $\leq 250 \text{ bar}$ ), $1.2 \times \text{ F.S.}$ (1000bar) $0 \rightarrow 70 ^{\circ}\text{C}$ $-20 \rightarrow 100 ^{\circ}\text{C}$ (typical) More optic $-40 \rightarrow 125 ^{\circ}\text{C}$ $\leq 0.02\%  \text{F.S./°C}$ $\leq 0.02\%  \text{F.S./°C}$ $\leq 0.2\%  \text{F.S./Year}$ $2.3 \rightarrow 4  \text{K}\Omega$ > 100 MΩ at 250 V $20g / (20 \text{ to } 5000 \text{ Hz})$	

<sup>1:</sup> The zero output, span output and accuracy may different if the supply power, measuring range and pressure type is different, please contact us if you need more details.

#### Mechanical characteristics

Diaphragm	Stainless steel 316L	More options see Page 3	
Wetted parts	Stainless steel 316L		
Cooling extensions	Stainless steel 304		
Filling liquid	Silicone oil		
O-ring	All stainless steel welding structure, no O-ring sealing used inside		
Electrical connection	10 cm silicone sheathed wires, Kovar pins		
Pressure connection	1.5" (50.5mm), 1" (38 mm), 2" (64mm)		

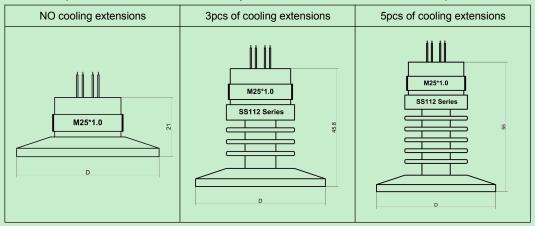
## Electrical connections

wires		5Pins connec	5Pins connection mode 1		5Pins connection mode 2	
Color	Function		PIN1: Supply +		PIN1: Supply +	
Red	Supply +	+ PIN1 PIN2	PIN2: Output -	+ D D PIN2	PIN2: Output +	
Black	Supply -		PIN3: Supply -	( PIN1 PIN2	PIN3: Supply -	
White	Output +	PIN3 PIN3	PIN4: Supply - ②	PIN3 PIN3	PIN4: Supply - ②	
Blue	Output -	PĬÑ4	PIN5: Output +	PĬN4	PIN5: Output -	

<sup>2:</sup> PIN4 is not used for 4Pins connection

# series sanitary pressure transducers

Dimensions (Unit: mm; D is for dimension of clamp size, see the details in Part number chart )



# Part number chart (How to order)

### PART NUMBER REQUIRED: SS112.PL.01.A.01.A (EXAMPLE)

	7/1/10/mbElt/1/Egolf/Eb. 00/1/E.1 E.013/E013/(E70/mill EE)					
1	Pressure range(bar)	PL				
	NA(-10) NB(-0.70) NC(-0.50) ND(-0.350) NE(-0.20) NF(-0.10) PA(00.1)					
	PB(00.2) PC(00.35) PD(00.5) PE(00.7) PF(01) PG(01.6) PH(02)					
	PI(02.5) PJ(04) PK(06) PL(010) PM(016) PN(025) PO(040)					
	PP(060) CA(-10.6) CB(-11.5) CC(-13) CD(-15) CE(-19)					
	CF(-115) CG(-124) 1Z(Other pressure range or unit is on request)					
2	Pressure type	01				
	01(Vented gauge) 02(Absolute) 03(Sealed gauge)					
3	Electrical connection ③	Α				
	A(4Wires) B(5Wires) C(4Pins mode 1) D(4Pins mode 2) E(5Pins mode 1)					
	F(5Pins mode 2)					
4	Pressure connection	01				
	01(1.5"=50.5mm clamp fitting) 02(2"=60mm clamp fitting) 03(1"=38mm clamp fitting)					
	4Z(Other connection is on request)					
5	Power supply	Α				
	A(1.5mADC) B(2mADC) C(5VDC) D(10VDC) 5Z(Other supply is on request)					

- 3: 4Wires and 4Pins connection: the zero signal is set by SENDO SENSOR before leave factory.
- 3: 5Wires and 5Pins connection: the zero signal can be set by clients.
- 3: Pins mode1 and mode2: please see the details in the Electrical connection in page 2.

### NON- REQUIRED: SS112.PL.01.A.01.A - V4E (EXAMPLE)

1	Material of diaphragm		
	V4D(Titanium) V4E(Tantalum)	V4F(Hastelloy-C)	

# SS112T series sanitary pressure transducers for high temperature

# Part number chart (How to order)

### PART NUMBER REQUIRED: SS112.T03.PL.01.A.01.A (EXAMPLE)

0	Medium working temperature	T03					
	T03(150 °C, 3pcs of cooling fins) T05(200 °C, 5pcs of cooling fins)	T03(150 °C, 3pcs of cooling fins) T05(200 °C, 5pcs of cooling fins)					
	0Z(Other temperature is on request)						
1	Pressure range(bar)	PL					
	NA(-10) NB(-0.70) NC(-0.50) ND(-0.350) PC(00.35) PD(00.5) PE(00.7)						
	PF(01) PG(01.6) PH(02) PI(02.5) PJ(04) PK(06) PL(010)						
	PM(016) PN(025) PO(040) PP(060) CA(-10.6) CB(-11.5)						
	CC(-13) CD(-15) CE(-19) CF(-115) CG(-124)						
	1Z(Other pressure range or unit is on request)						
2	Pressure type	01					
	01(Vented gauge) 02(Absolute) 03(Sealed gauge)						
3	Electrical connection ③	Α					
	A(4Wires) B(5Wires) C(4Pins mode 1) D(4Pins mode 2) E(5Pins mode 1)						
	F(5Pins mode 2)						
4	Pressure connection	01					
	01(1.5"=50.5mm clamp fitting) 02(2"=60mm clamp fitting) 03(1"=38mm clamp fitting)						
	4Z(Other connection is on request)						
5	Power supply	Α					
	A(1.5mADC) B(2mADC) C(5VDC) D(10VDC) 5Z(Other supply is on request)						

- 3: 4Wires and 4Pins connection: the zero signal is set by SENDO SENSOR before leave factory.
- 3: 5Wires and 5Pins connection: the zero signal can be set by clients.
- ③: Pins mode1 and mode2: please see the details in the Electrical connection in page 2.

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