

SS307 series ceramic pressure transmitters

Features

- Corrosion resistance
- High accuracy and high stability
- Wide choice of measuring ranges
- Solid ceramic sensitive diaphragm
- Low cost, extreme extensive application range
- A wide range of pressure and electrical connections
- Thermally compensated, wide-range operating temperature



Descriptions

SS307 series low cost ceramic pressure sensor is designed based on the ceramic cell(Al_2O_3 96%) and works following the piezoresistive principle. The signal conditioning electronics are directly assembled on one side of ceramic diaphragm where the wheatstone bridge is screen printed, offer 4-20mA current output or voltage signal, the housing is made from stainless steel with a choice of internal O ring seals to select to ensure the product is suitable for a wide range of applications.

SS307 series has the excellent chemical immunity because of the ceramic material, is suitable for nearly all most media. Typical applications: pressure calibration, compressors, dispensers, refrigerator, locomotive braking systems, hydraulic and pneumatic system equipment, Industrial process measurement and control, etc.

Technical data

Performance (EN 60770)

| | |
|-------------------------|--|
| Accuracy | $\pm 1\% \text{ F.S. @ } 25^\circ\text{C}$ |
| | $\pm 3\% \text{ F.S. @ } -20 \text{ to } 100^\circ\text{C}$ |
| Response time | $< 4 \text{ ms}$ |
| Pressure range | Minimum range: 1 bar Maximum range: 600 bar See more details in page 5 (part number chart) |
| Overload pressure | $2.0 \times \text{F.S. } (\leq 200 \text{ bar})$ |
| | $1.5 \times \text{F.S. } (> 200 \text{ bar})$ and burst 600 bar |
| Pressure type | vented gauge |
| Long term stability | $\leq 0.2\% \text{ F.S./Year}$ |
| Temperature coefficient | $\pm 0.03\% \text{ F.S./}^\circ\text{C}$ |

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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

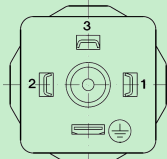
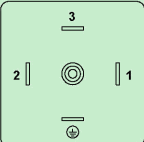
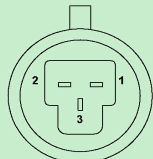
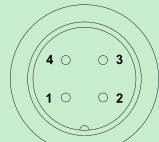
| | |
|------------------------|---|
| Medium temp range | -20 → +100 °C |
| Ambient temp range | -20 → +80 °C (depending on electrical connection) |
| Compensated temp range | 0 → +70 °C |
| EMC - Emission | EN 61000-6-3 |
| EMC - Immunity | EN 61000-6-1 |
| Insulation resistance | > 100 MΩ at 250 V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

Mechanical characteristics

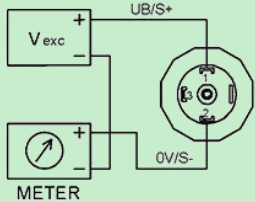
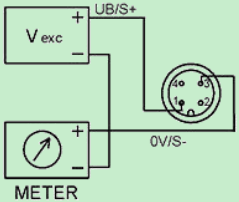
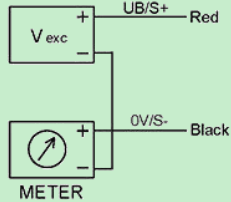
| | | | | |
|-----------------------|---|----------------------------------|--|---|
| Materials | Diaphragm | Ceramic cell (Al2O3 96%) | | |
| | Housing | Stainless steel 304 (typical) | | Stainless steel 316L (optional) |
| | Pressure connection | Stainless steel 304 (typical) | | Stainless steel 316L (optional) |
| | 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) | | | |

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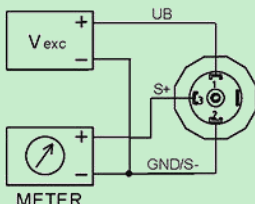
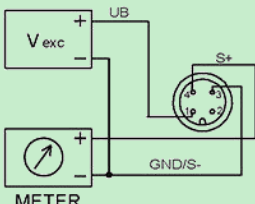
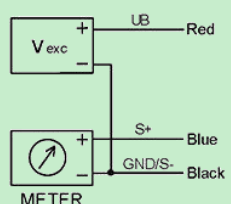
Electrical connector type

| DIN43650A | DIN43650C | 3-pin Packard | M12 × 1 |
|---|---|--|---|
|  |  |  |  |

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

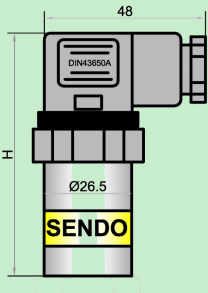
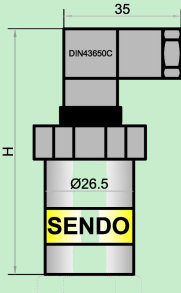
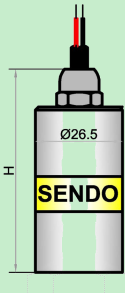
| DIN43650 | M12 × 1 | Cable outlet |
|---|---|---|
| Pin 1: + supply Pin 2: + output | Pin 1: + supply Pin 3: + output | Red: + supply Black: + output |
|  |  |  |

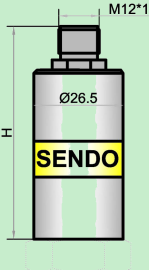
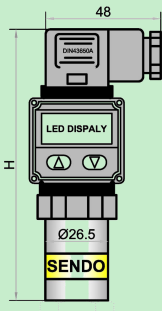
Electrical connections for 0-10V, 0-5V, 0.5-4.5V voltage output signal (3 wire)

| 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 |
|  |  |  |

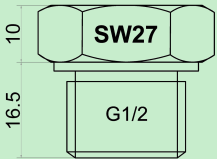
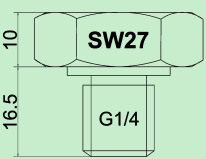
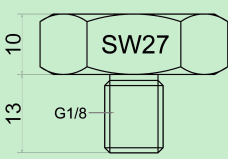
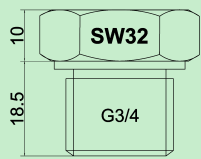
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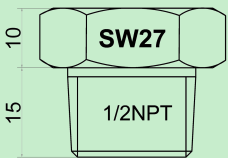
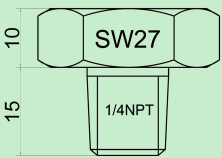
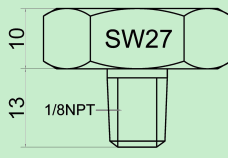
Dimensions for electrical connections and housing (Unit: mm)

| 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 |
|--|--|---|-----------------|
|  |  |  | |

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Part number chart (How to order)

PART NUMBER REQUIRED: **SS307.PL.01.A.04.F (EXAMPLE)**

| | | |
|---|--|----|
| 1 | Pressure range(bar) | PL |
| | 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) | |
| 2 | Pressure type | 01 |
| | 01(Gauge) | |
| 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 | Cable length | F |
| | A(1m) B(2m) C(3m) D(4m) E(5m) F(None) 5Z(Other length is on request) | |

Contact us

| | | | |
|-------------------------|--|-----------------------------|--|
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*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.