

# STAINLESS STEEL STANDARD PRESSURE SENSOR SPS 3003



The SPS 3003 series of stainless steel pressure sensors with integrated pressure connector provides reliable operation in applications with aggressive media. There is no need for a seal between the sensor measuring cell and pressure connection. The high overload capacity and very high burst pressure rating are additional advantages of this sensor. In the case of an error or undefined peaks in pressure, the medium remains in the system.



## TECHNICAL SPECIFICATIONS

<b>Supply voltage</b>	3 – 30 VDC
<b>Impedance</b>	10 kOhm ± 30 %
<b>FS output (Span)</b>	Min. 1.8 / typ. 2.5 / max. 3.5 mV/V
<b>Offset</b>	0 ± 0.5 mV/V
<b>Therm. offset shift</b>	Typ. 0 ± 0.03 / max. 0 ± 0.05 % FS/K (25 – 85° C)
<b>Therm. span shift</b>	Typ. 0 – -0.02 % FS/K (0 – 70° C) max. 0 – -0.05 % FS/K (0 – 70° C)

<b>Insulating resistor</b>	>100 MOhm at 500 VDC, RT, 70 % rH
<b>Body material</b>	Stainless steel
<b>Operating temperature</b>	-40 – +125° C
<b>Storage temperature</b>	-40 – +125° C

Mechanical and electrical characteristics are customisable. Specifications are subject to change without notice.

PRESSURE RANGE [BAR]	LONG THERM STABILITY *	LINEARITY / HYSTERESIS (TYP./MAX.) [% FS] **	BURST PRESSURE [BAR]	OVER-PRESSURE [BAR] ***	VACUUM CAPABILITY [BAR]
40	± 0.35	± 0.25 / 0.6	≥ 10 x P <sub>nom</sub>	≤ 60	-1
100	± 0.3	± 0.2 / 0.5	≥ 10 x P <sub>nom</sub>	≤ 150	-1
200	± 0.3	± 0.2 / 0.5	≥ 10 x P <sub>nom</sub>	≤ 300	-1
300	± 0.25	± 0.2 / 0.5	≥ 10 x P <sub>nom</sub>	≤ 450	-1
400	± 0.25	± 0.2 / 0.5	≥ 10 x P <sub>nom</sub>	≤ 600	-1
600	± 0.25	± 0.3 / 0.5	≥ 10 x P <sub>nom</sub>	≤ 900	-1
1,000	± 0.25	± 0.3 / 0.5	≥ 10 x P <sub>nom</sub>	≤ 1,350	-1

\* 1,000 hours at 125° C | 50 million pressure cycles at 125° C, 10 – 90 % FS at 2.5 Hz | 50 thermal cycles +125° C / -20° C, 2 K/min.

\*\* For independent linearity 10 points are measured and compared to an ideal straight line. | For all measurements, DUT's are mounted in Metallux standard Housing according to "mounting proposal SPS 1000".

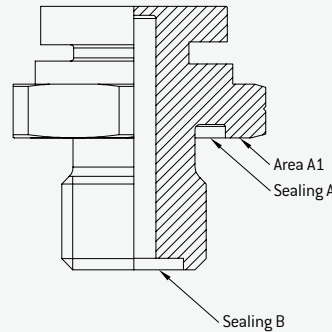
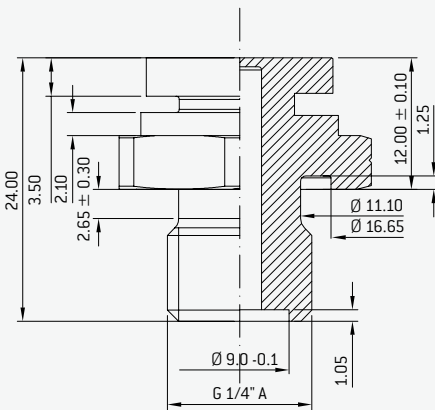
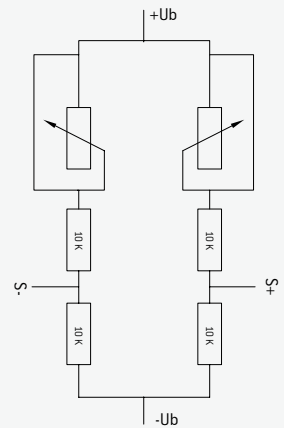
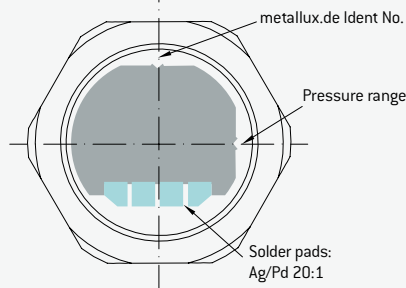
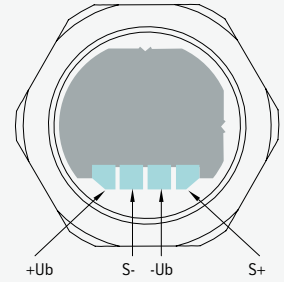
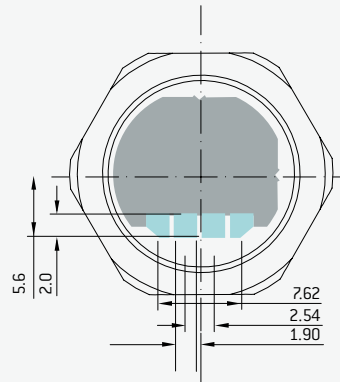
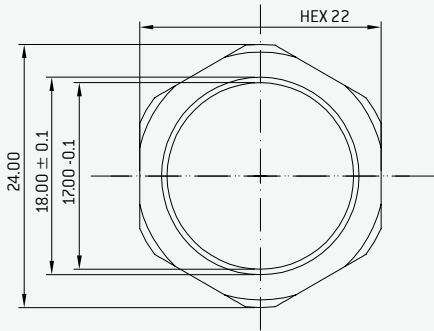
\*\*\* Over-Pressure indicates the maximum (short time < 1 sec.) operating pressure within no irreversible damage to the printed circuit are expected.

## SAMPLE ORDER

Type	Pressure range [bar]	Electrical connection (acc. to drawing)
SPS 3003	100 bar	Solder pads

Other dimensions and electrical specifications on request.

DIMENSIONAL DRAWINGS / CONNECTOR SCHEMATIC / ELECTRICAL CONNECTORS



**Mounting procedure:**

Sealing version A:

- O-ring: Ø 11.5 x 2.5 (NBR)
- Tightening torque < 34 Nm
- Foreseeable offset displacement when surface A1 lies on the receptor approx 1 – 4 % FS.

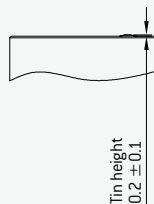
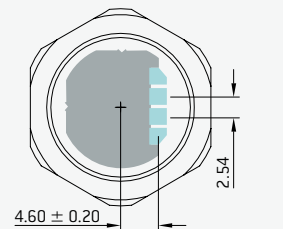
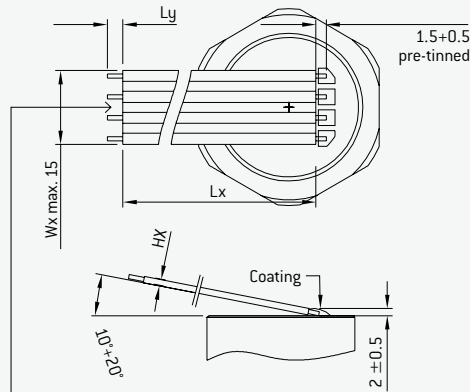
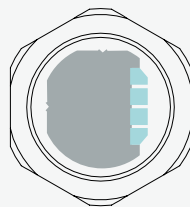
Sealing Version B:

- O-ring: Ø 6 x 1.5 (NBR)
- Tightening torque < 20 Nm
- No offset displacement

Standard:  
Tin plated: Sn95.6; Ag3.8; Cu0.6

Type of connection:  
flat cable

Type of connection:  
Pins 0.5 x 0.27mm



Specific connectors on request

