

Stainless Steel Pressure Sensor with integrated pressure port

SPS 3003



Features

- Thick film on stainless steel
- integrated pressure port (without weld seam)
- offset/temperature compensated
- excellent chemical resistivity
- high burst pressure

Applications

- brake systems
- industrial trucks
- hydraulic
- refrigeration engineering
- pressure transmitters
- pressure switches

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General data

Sensor type	Monolithic sensor
Pressure type	Gauge pressure
Reference conditions	Temperature T_{ref} 25°C
	Supply voltage U_{ref} 10 V _{DC}

Electrical data

Supply voltage stabilised	≤ 30 V _{DC}
I_{max}	4 mA
Bridge resistance	10 ± 20 % kΩ
Isolation resistance	> 100 MΩ

Pressure ranges

Pressure range p_{Nom} [bar]	Overload pressure P_s (max. 1min) [bar]	Burst pressure p_b [bar]	Output voltage range [mV/V]	Acceptable min. pressure [bar]
0 ... 10	20	≥ 50	1,5 ... 3,5	
0 ... 25	50	≥ 125	1,5 ... 3,5	vacuum
0 ... 40	80	≥ 200	1,5 ... 3,5	
0 ... 60	120	≥ 300	1,5 ... 3,5	
0 ... 100	200	≥ 500	1,5 ... 3,5	
0 ... 160	320	≥ 650	1,5 ... 3,5	
0 ... 250	500	≥ 750	1,5 ... 3,5	
0 ... 400	800	≥ 1200	1,5 ... 3,5	
0 ... 600	1200	≥ 1800	1,5 ... 3,5	
0 ... 1000	2000	≥ 2500	1,5 ... 3,5	

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Output data

Output voltage range	1,5 ... 4,0 mV/V
Offset range	- 0,5 ... 0 *) mV/V
Total error	$\leq \pm 0,4$ % FS typ.
Sum of non-linearity, hysteresis and non-repeatability **)	$\leq \pm 1,5$ % FS max.
Offset change	
after 1000h @ 125°C	$\leq \pm 0,4$ % FS
after 2,5 mio pressure cycles 10 - 90 %	$\leq \pm 0,2$ % FS
Influence of ambient temperature on offset TC-zero (0 ... 85°C)	$\leq \pm 0,03$ % FS/K
Influence of ambient temperature on span TC-span (0 ... 85°C)	$\leq +/- 0,03$ % FS/°C typ. $\leq +/- 0,05$ % FS/°C max.

*) other data on request, minimum order quantity 150 pieces

**) terminal based according to DIN 16086:2006...01

Environmental conditions

Nominal temperature range	- 40 ... 125°C *)
Working temperature range	- 40 ... 150°C *)
Storage temperature range	- 40 ... 150°C *)
Material of parts in contact with the pressure medium	Stainless steel

*) pressure sensor without cable

Electrical connection

Soldering pads **)	Pitch 2,54mm
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**) other materials or length on request, minimum order quantity 500 pieces

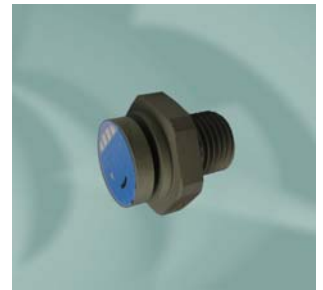
Dimensions

Diameter	see drawing
Height	24 ± 0,1 mm
Weight	35 g
Thread	G 1/4" ***)
Wrench size	HEX 22
Other dimensions	See drawing

***) other thread sizes on request, minimum order quantity 150 pieces

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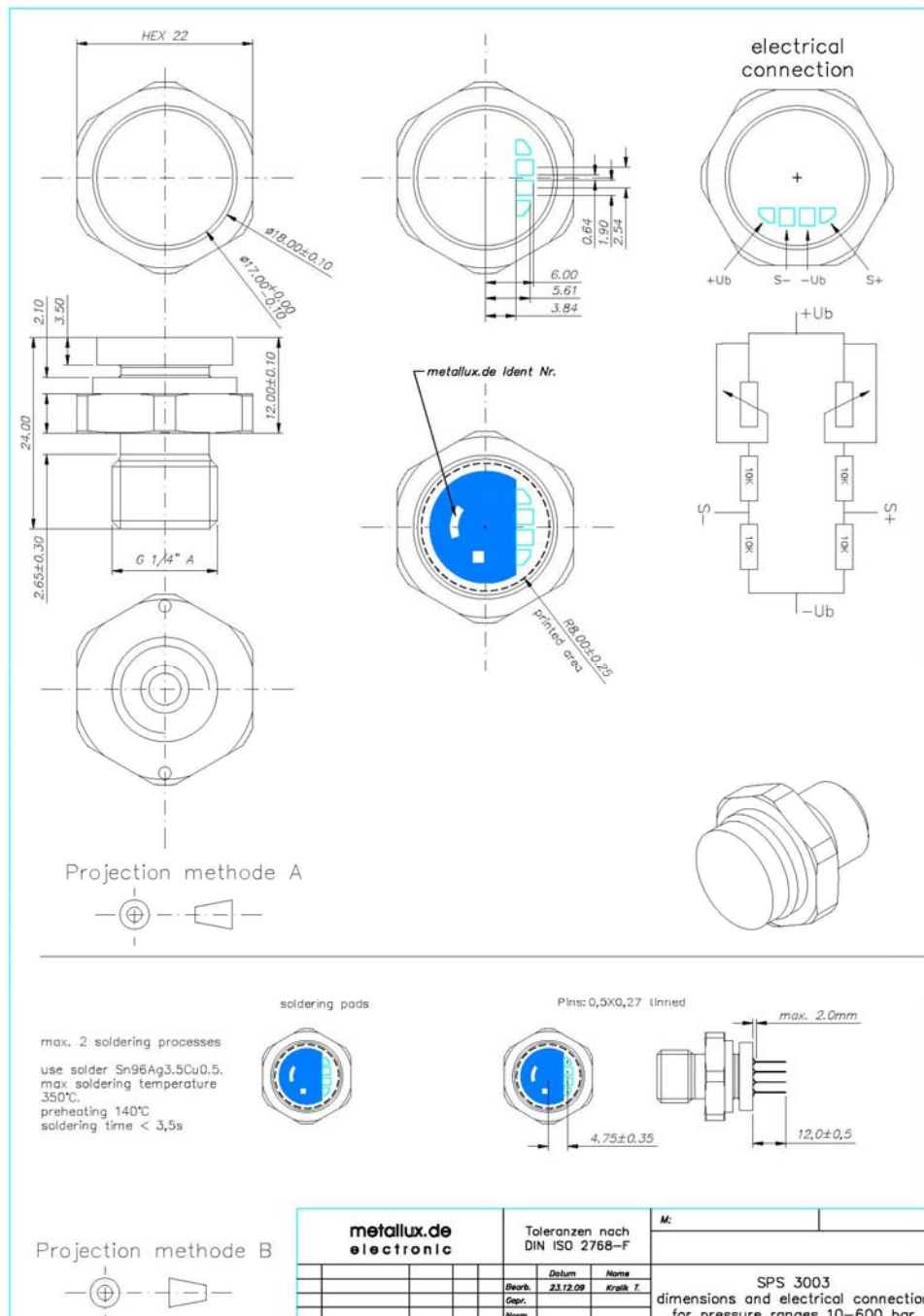
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Dimensions



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How to order

Type	Pressure range	Electr. connection
SPS 3003	100 bar	Soldering pads