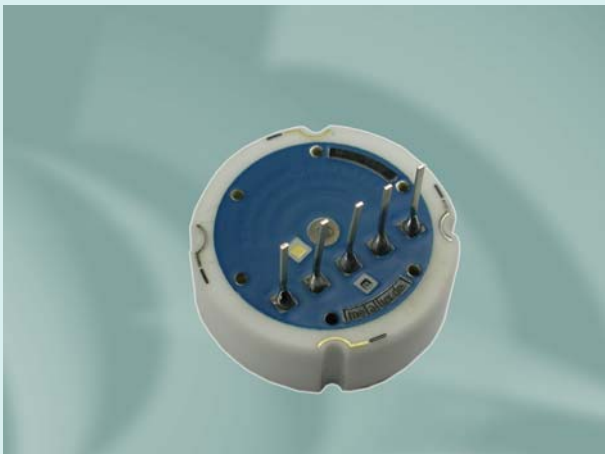


Ceramic Pressure Sensor with flush mounted membrane

CPS 2184



Features

- excellent chemical resistance
- robust design
- temperature compensated
- easy to assemble
- easy to clean

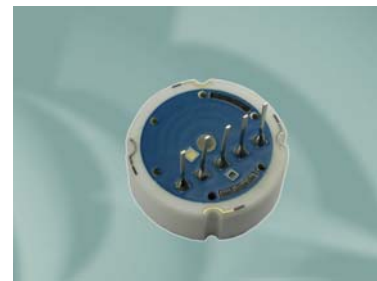
Applications

- brake systems
- forklift trucks
- pneumatic
- hydraulic
- electronic pressure switches
- electronic pressure transmitters
- food industry
- pharma division

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Ceramic Pressure Sensor with flush mounted membrane

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General data

Sensor type	Pressure sensor with flush mounted membrane
Pressure type	0,5 ... 50 bar: gauge, absolute and sealed gauge pressure 100 ... 600 bar: sealed gauge
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

Pressure ranges

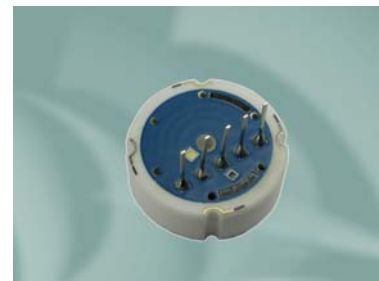
Pressure range p_{Nenn} [bar]	Overload pressure P_s (max. 1 min) [bar]	Burst pressure p_B [bar]	Output voltage range [mV/V]	Acceptable minimum pressure [bar]	Sensor thickness [mm]
0,5 *)	1	2	1,5 ... 2,4	- 0,15	6,13
1	2	4	2,2 ... 3,5	- 0,20	6,20
2	4	5	2,0 ... 4,0	- 0,40	6,25
5	10	12	2,4 ... 4,5	- 0,80	6,30
10	20	25	3,6 ... 6,0	Vacuum	6,35
20	40	50	2,4 ... 4,0		6,55
50	100	120	3,8 ... 6,0		6,70
100 **)	200	250	3,0 ... 4,8		6,70
200 **)	400	500	2,5 ... 4,0		7,05
400 **)	600	650	3,0 ... 4,6		7,35
600 **)	800	880	3,0 ... 4,6		7,55

*) only gauge pressure

***) only sealed gauge pressure

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Output data

Output voltage range	See pressure ranges
Offset range	- 0,2 ... 0 mV/V *)
Total error **)	$\leq \pm 0,4 \% \text{ FS}$
Sum of non-linearity, hysteresis and non-repeatability ***)	$\leq \pm 0,25 \% \text{ FS}$
Offset change after 1000h @ 125°C	$\leq \pm 0,25 \% \text{ FS}$
Influence of ambient temperature on offset TC-Offset (0 ... 85°C)	$\leq \pm 0,02 \% \text{ FS/K relativ}$ $\leq \pm 0,03 \% \text{ FS/K absolut und sealed gauge}$
Influence of ambient temperature on span TC-Span (0 ... 85°C)	$\leq - 0,013 \% \text{ FS/K}$

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

**) depending on housing geometry and assembly conditions

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

Environmental conditions

Nominal temperature range	- 40 ... 125°C *)
Working temperature range	- 40 ... 125°C *)
Storage temperature range	- 50 ... 125°C *)
Material of parts in contact with pressure media	Al ₂ O ₃ - 96 %**)

*) sensor without cable

**) Aluminium oxide shows highest chemical resistivity against liquid and gaseous media. It is recommended, especially in the case of new and not tested applications, to do own tests.

Electrical connections

Soldering pads	Pitch 2,54 mm
Pins	Pitch 2,54 ; length 12 mm **)
Silicon wire	50,8 mm **)
Nomex Flexprint	50,8 mm **)
PVC flat ribbon	50,8 mm **)

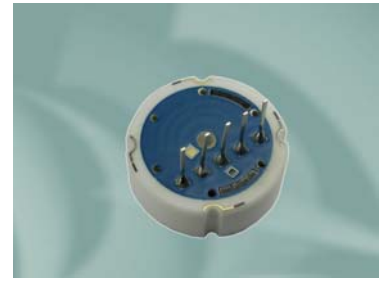
**) other material or length on request, min. order quantity 150 pcs

Dimensions

Diameter	18 ± 0,1 mm
Height	see pressure range
Weight	ca. 5 g
Other dimensions	see drawings

Ceramic Pressure Sensor with flush mounted membrane

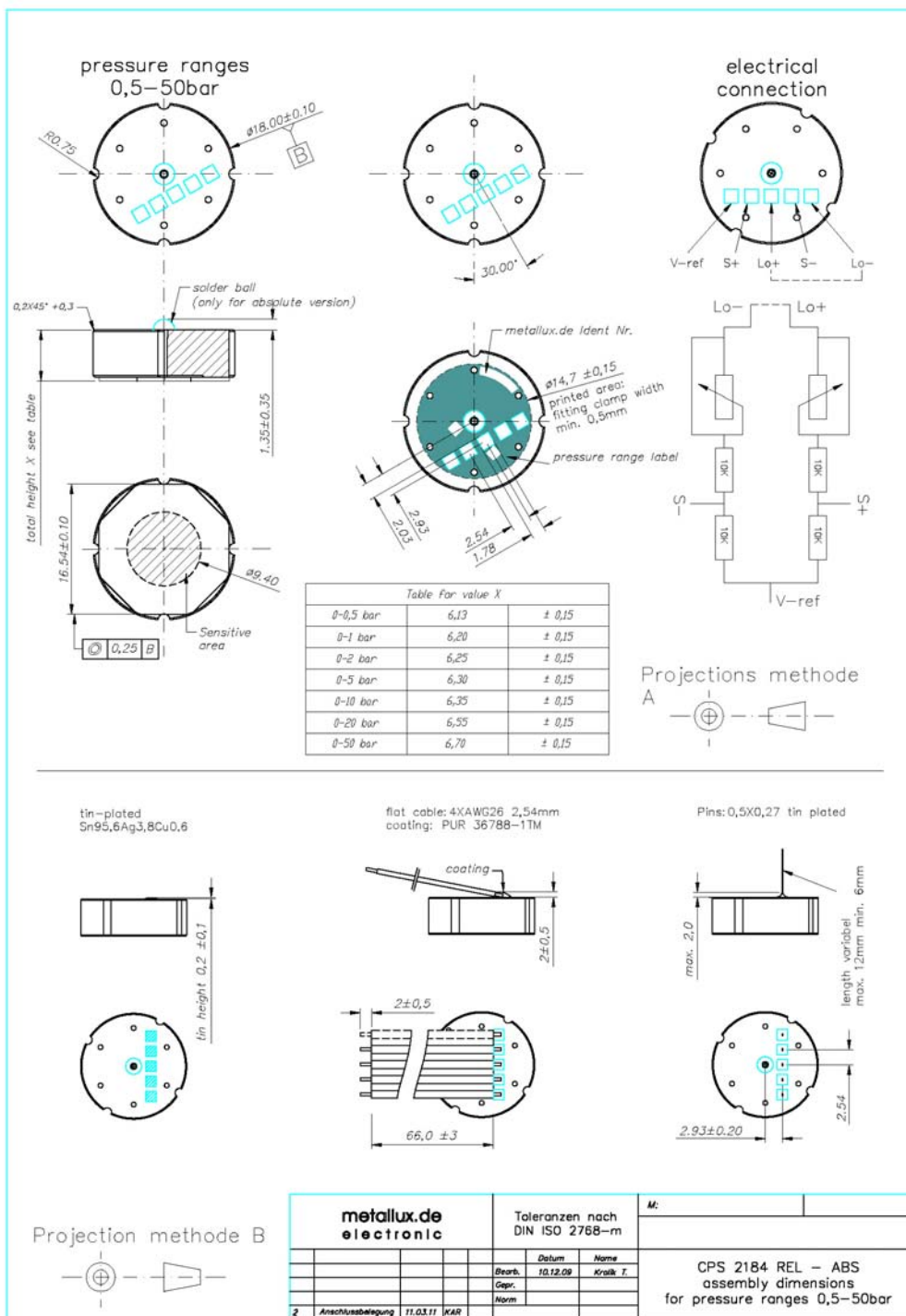
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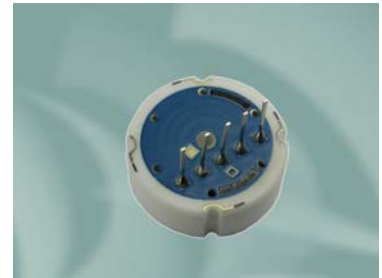
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Dimensions and electrical connections



Ceramic Pressure Sensor with flush mounted membrane

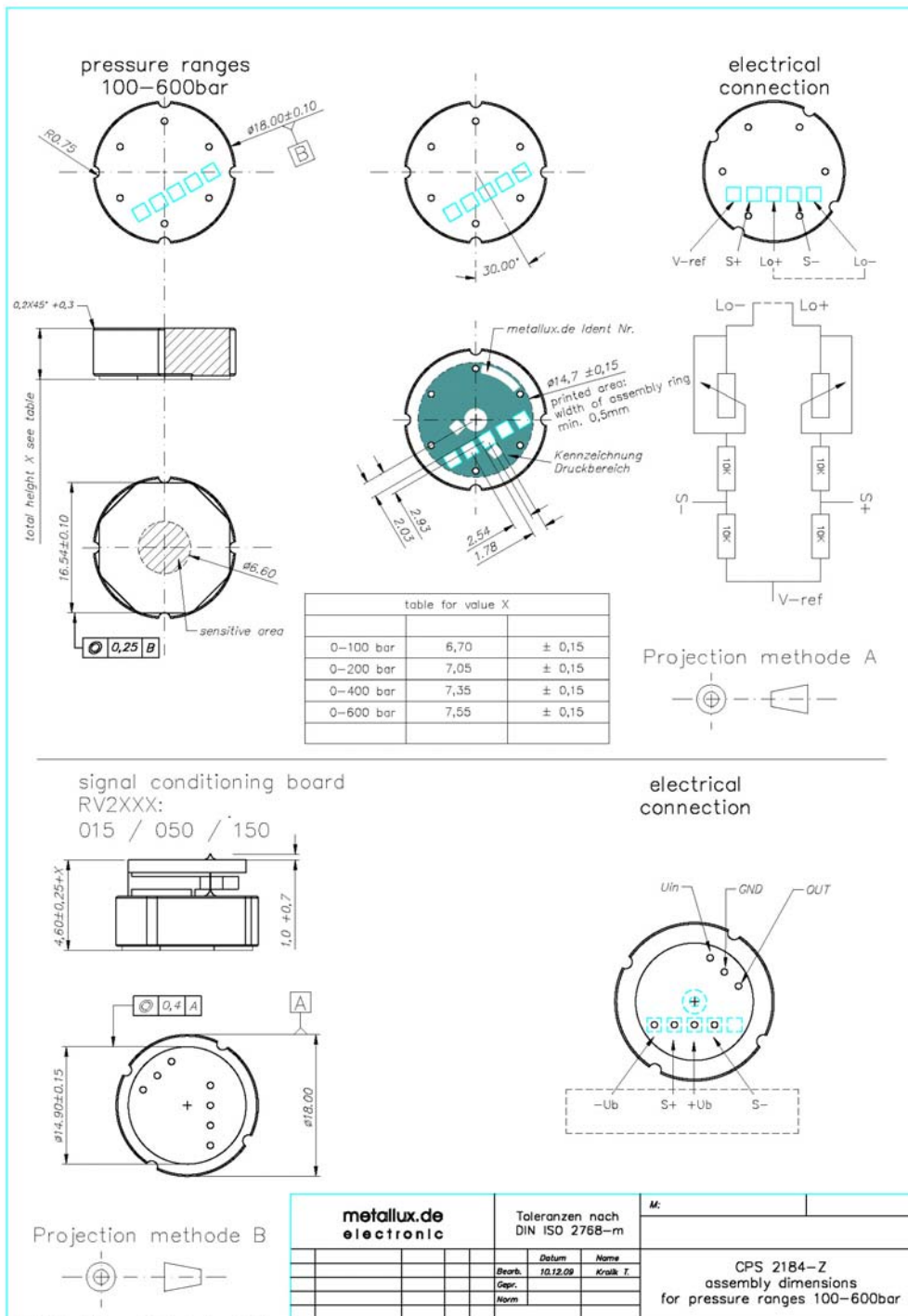
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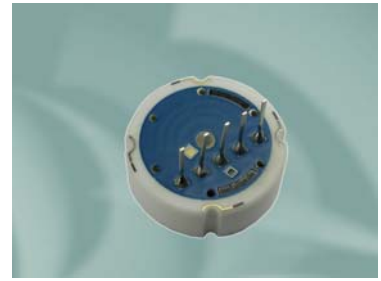
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Dimensions and electrical connections



Ceramic Pressure Sensor with flush mounted membrane

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How to order

Type	Pressure range	Pressure type	Electr. connection
CPS 2184	2 bar	A (absolute) R (gauge) S (sealed gauge)	Pins