

Ceramic Pressure Sensor Piezoresistive monolithic

CPS 1184 Z



Features

- ratiometric output signal (0,5 ... 4,5V)
- excellent chemical resistivity
- easy to assemble
- temperature compensated

Applications

- pneumatic
- hydraulic
- electronic pressure switches
- electronic pressure transmitters

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technology matters

General data

Sensor type	Monolithic sensor
Pressure type	Gauge pressure
Reference conditions	Temperature T_{ref} 25°C
	Supply voltage U_{ref} 5 Vdc

Electrical data

Supply voltage stabilised	$5 \pm 0,5$ Vdc
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Pressure ranges

Pressure range p_{Nom} [bar]	Overload pressure P_s (max. 1 min) [bar]	Acceptable Minimum pressure	Burst pressure p_b [bar]	Output voltage range [V]
0 ... 1,6	3		≥ 4	
0 ... 2,5	5	Vacuum	≥ 7	0,5 ... 4,5 ratiometric
0 ... 4	8		≥ 15	
0 ... 6	12		≥ 15	
0 ... 10	20		≥ 35	
0 ... 16	32		≥ 50	
0 ... 25	50		≥ 70	
0 ... 40	80		≥ 150	
0 ... 60	120		≥ 150	
0 ... 100	200		≥ 250	
0 ... 160	250		≥ 320	
0 ... 250	400		≥ 450	
0 ... 400	700		≥ 700	

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Output data

Output voltage range	0,5 ... 4,5 V *) 3 wire, ratiometric
Offset voltage	0,5 V @ $U_s = 5V$ *)
Span	4,0 V @ $U_s = 5V$ *)
Calibration error	$\pm 0,5$ % FS
Measuring error by clamping **)	$< 0,5$ % FS (typ.)
Total error **)	$p_{Nom} \leq 60$ bar ; $\leq \pm 0,4$ % FS
Sum of non-linearity, hysteresis and non-repeatability ***)	$p_{Nom} > 60$ bar ; $\leq \pm 0,8$ % FS typ. ; $\leq \pm 1,5$ % FS max.
Offset change after 1000h @ 125°C	$\leq \pm 0,3$ % FS
Temperature influence	$\leq \pm 0,02$ % FS/K
TC-Offset	$\leq -0,012$ % FS/K
TC-Span	
Current consumption	$\leq 2,5$ mA
Response time (10 ... 90%)	< 2 msec
Switch-on delay	< 250 msec
Output load resistance	1 ... 5 k Ω
Load capacitance	$< 0,05$ μ F

*) 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 the pressure medium	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 connection

Standard	Soldering pads
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Dimensions

Diameter	18 \pm 0,1 mm
Height	< 12 mm
Weight	ca. 10 g

Other dimensions
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see drawing
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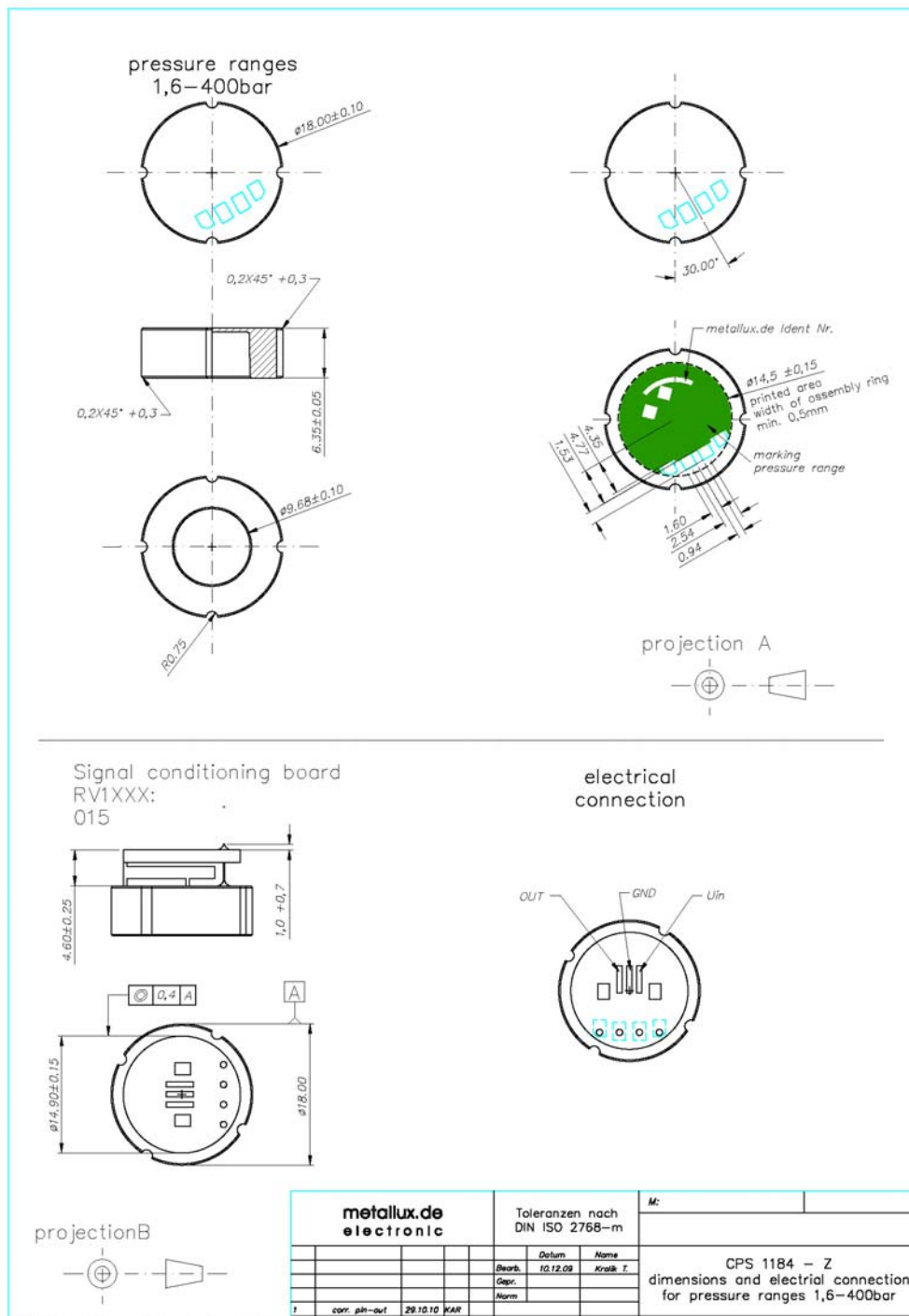
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Drawing



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How to order

Type	Pressure range	Pressure type	Electr. connection
CPS 1184 Z	2 bar	R (gauge)	Pads