

RESENSEN

Sensoren und industrielle Regelungstechnik

Ceramic Pressure Sensor with flush mounted membrane

CPS 2152



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

General data

Sensor type	Pressure sensor with flush mounted membrane
Pressure type	0,5 ... 50 bar: gauge, absolute
Reference conditions	Temperature T_{ref} 25°C Supply voltage U_{ref} 10 VDC

Electrical data

Supply voltage stabilised	≤ 30 VDC
I_{max}	4 mA
Bridge resistance	10 ± 20 % k Ω

Pressure ranges

Pressure range p_{Nenn} [bar]	Overload pressure P_s (max. 1min) [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	vacuum	6,55
50	100	120	3,8 ... 6,0	vacuum	6,70

*) only 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)	$\leq - 0,02 \% \text{ FS/K}$

*) 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 13 mm **)

**) other electrical connection on request

Dimensions

Diameter	15 ± 0,1 mm
Height	see pressure range
Weight	ca. 5 g

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RESENDO

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How to order

Type	Pressure range	Pressure type	Electr. connection
CPS 2152	2 bar	A (absolute) R (gauge)	Pins