

Ceramic pressure sensors 0391 0002-*

Description



Characteristic features

- Application range of 1.6 to 600 bar
- For measurement of relative pressure
- Temperature compensated
- Robust, medium resistant model
- Monolithic ceramic technology
- Simple assembly
- Water and oil resistant
- With connection leads
- OEM specific solutions

Typical areas of application

- Food technology
- Pneumatics
- High pressure
- Fuel pumps
- Gases
- Fuel cells

Technical data

Ceramic pressure sensors	
Measuring principle	Pressure measuring cell in thick film technology
Supply voltage	3...30 V DC
Impedance	10 k Ω \pm 20 %
FS output (Span)	Min. 1,5 / typ. 2,8 / max. 5,3 mV/V
Offset	0 \pm 0,2 mV/V
Therm. offset shift	Typ. 0 \pm 0,015 / max. 0 \pm 0,02 % FS/K (25-85 °C)
Therm. span shift	0...70 °C -20...0 / 70...85 °C -4...0 / 85...105 °C
Insulating resistor	> 1 G Ω bei 500 VDC, RT, 70 % rH (clamping \varnothing 16,00 mm)
Insulating voltage	> 0,5 kVDC with minimal membrane thickness, from medium to printed circuit
Body material	Al ₂ O ₃ 96%
Operating temperature	-40...+150 °C
Storage temperature	-40...+150 °C

Features

The pressure sensors are ceramic measuring cells in thick film technology for measurement of static and dynamic relative pressure in liquids and gases. Typical areas of application are in the field of pneumatics, hydraulics and in industrial applications.

Because the material is a ceramic (Al₂O₃), the sensor has an outstanding stability against aggressive and corrosive media.

The delivery spectrum covers the entire pressure range of 1.6...600 bar FS with 9 variants for different measuring ranges. The outer dimensions of all the types are maintained same so that they can be fitted in the same mechanical housing construction.

The sensor is made up in the form of a full wheatstone bridge. The output signal is a pressure dependent differential voltage, that can be directly processed further with an instrument amplifier or an ASIC.

The sensor is temperature compensated, hence in most of the applications, the circuit design efforts are reduced to only simple zero point and gain setting. A printed circuit board, matching with the sensor, is available which gives out an processed and calibrated voltage output of 0...10 V or current output of 4...20 mA.

In general the B+B pressure sensors are medium resistant. However we recommend to prove the media compatibility with critical mediums such as electroplating applications (iron trichloride) or oils with undefined additives .

Ceramic pressure sensors

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Delivery spectrum

Measuring range	Bursting pressure	Article number
0-2 (1,6-2,5) bar	≥ 5 bar	0391 0002-02
0-5 (4-6) bar	≥ 15 bar	0391 0002-03
0-10 bar	≥ 30 bar	0391 0002-04
0-20 (16-25) bar	≥ 60 bar	0391 0002-05
0-50 (40-60) bar	≥ 150 bar	0391 0002-06
0-100 bar	≥ 250 bar	0391 0002-07
0-200 (160-250) bar	≥ 450 bar	0391 0002-08
0-400 bar	≥ 700 bar	0391 0002-09
0-600 bar	≥ 900 bar	0391 0002-10

Options

The standard models are supplied with 4-core flat cable, RM 1.27 mm.

The standard temperature measuring range is right from -40...150 °C. Special calibrations of the TK at other temperature are also possible for large order quantities.

You can get further support for integration into your application - please contact us!

Accessoires

Article	Article number
Evaluation electronics for ceramic pressure sensors 10 V	DS-MOD-10V
Evaluation electronics for ceramic pressure sensors 20 mA	DS-MOD-20MA

For further information visit our website please:

www.bb-sensors.com

