

# DATA SHEET



## Ceramic absolut pressure sensors 0391 0005-\*

### Description



### Characteristic features

- Application range of 1 to 50 bar
- For measurement of absolute pressure
- Temperature compensated
- Rugged, media-resistant model
- Monolithic ceramic technology
- Easy to install
- Water and oil resistant
- With connection leads

### 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
Measuring range	1...50 bar, 6 Typen
Linearity / Hysteresis / Reproducibility	$< \pm 0,4 \% \text{ Full Scale (FS)}$
Zero point-Offset	$-0,2...+0,2 \text{ mV} / \text{V}$
Accuracy	$< \pm 0,4 \% \text{ FS}$
Application temperature range	$-40...105 \text{ }^\circ\text{C}$
Temperature error Gain 0...85 °C	$\leq \pm 0,03 \% \text{ FS} / \text{K}$
Resistance value	$10 \text{ k}\Omega \pm 20 \%$
Bridge supply voltage	$\leq 30 \text{ VDC}$
Dimensions	$\text{Ø}18 \pm 0,1 \text{ x see table}$
Connection	Flat cable, RM 1.27 x 40 mm length

### Features

The pressure sensors of series DS-KE-D-A are ceramic measuring cells in thick film technology for measurement absolute pressure in liquids and gases.

As opposed to the ceramic relative pressure sensors DS-KE-D-R the back of the DS-KE-D-A sensors is evacuated and sealed. The sensors measure against vacuum.

In addition to being easily cleaned it is another advantage of the absolute pressure sensors that the output signal is independent of the ambient pressure.

Because the material is a ceramic ( $\text{Al}_2\text{O}_3$ ), the sensor has an outstanding stability against aggressive and corrosive media.

The delivery spectrum covers the entire pressure range of 1...50 bar FS with 6 variants for different measuring ranges.

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.

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.

Typical areas of application are in the field of pneumatics, hydraulics and in industrial applications.

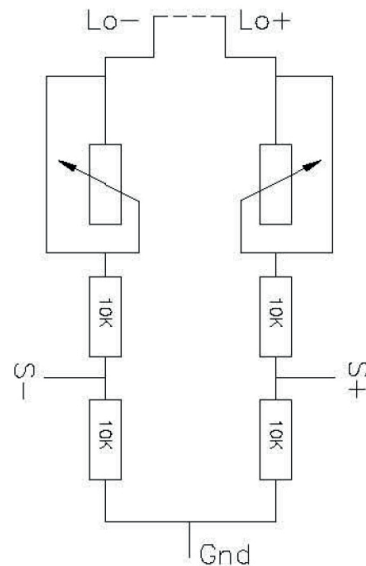
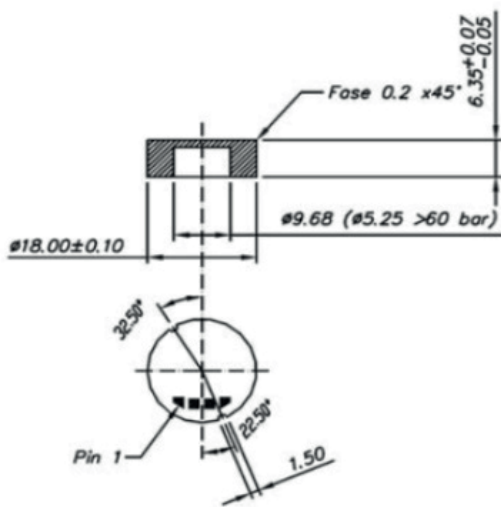
In general the B+B pressure sensors are medium resistant. However we recommend to prove the media compatibility with critical mediums such as electroplating applications (iron trichloride) or oils with undefined additives .

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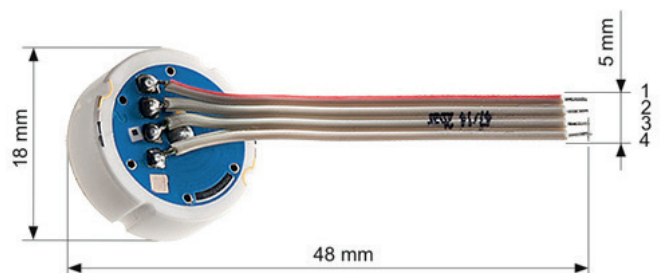
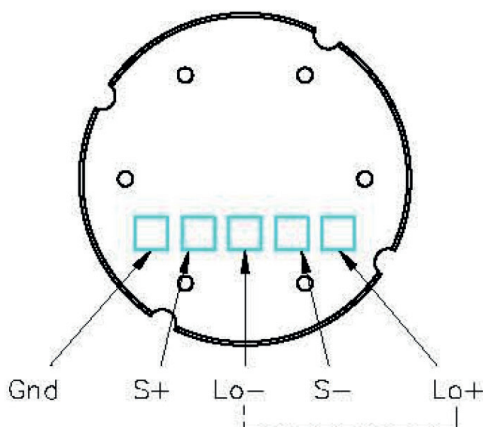


Measuring range	Bursting pressure	Output signal mV/V	Height in mm	Ordering No.	Ordering No. online shop
1 bar abs	4 bar	2,2...3,5	6,45	DS-KE-D-A1B	SHOP 0391 0005-02
2 bar abs	5 bar	2,0...4,0	6,50	DS-KE-D-A2B	SHOP 0391 0005-04
5 bar abs	12 bar	2,4...4,5	6,55	DS-KE-D-A5B	SHOP 0391 0005-06
10 bar abs	25 bar	3,6...6,0	6,60	DS-KE-D-A10B	SHOP 0391 0005-01
20 bar abs	50 bar	2,4...4,0	6,80	DS-KE-D-A20B	SHOP 0391 0005-03
50 bar abs	120 bar	3,8...6,0	6,95	DS-KE-D-A50B	SHOP 0391 0005-05



Pin Nr.	Function
1	-Uout
2	+Ub
3	+Uout
4	-Ub

Electrical connection



For further information visit our website please:  
[www.bb-sensors.com](http://www.bb-sensors.com)