

DATA SHEET



Relative pressure sensor (Stainless steel) DS-ED-D-R

Description



Features

- Pressure range from 0 to 100 bar
- Measurement of relative pressure
- Thick-film stainless steel technology
- Suitable for vacuum
- High burst pressure
- Zero point / Temperature Compensated
- Robust, media-resistant design
- Easy to install
- Water and oil resistant
- With connecting cable

Areas of application

- Industrial trucks
- Hydraulics
- Refrigeration technology
- Braking systems

Technische Daten

Ceramic pressure sensor	
Type of measurement	Pressure measuring cell in thick-film technology
Measuring range	0...100 bar (See product range)
Output voltage range	mV / V1,5...3,5
Linearity / hysteresis / reproducibility	< ±0,5...1,5 % FS
Stability	< ±0,5 % FS
Rated temperature range	-40...105 °C
Operating temperature range	-40...105 °C (Cable)
Storage temperature range	-50...105 °C
Temperature error / Gain No signal TK-0 (0...85 °C)	< ±0,05 % FS / K
Output span-TK-S (0 ... 85 °C)	< ±0,03 % FS / K
Bridge resistance	10 kΩ ± 20 %
Supply voltage	≤ 30 V DC
Insulation resistance	>100 MΩ
Dimensions	Ø18 ±0,1 x 6,35 mm
Connection	Ribbon cable, 1.27mm x 40 mm Length

Product information

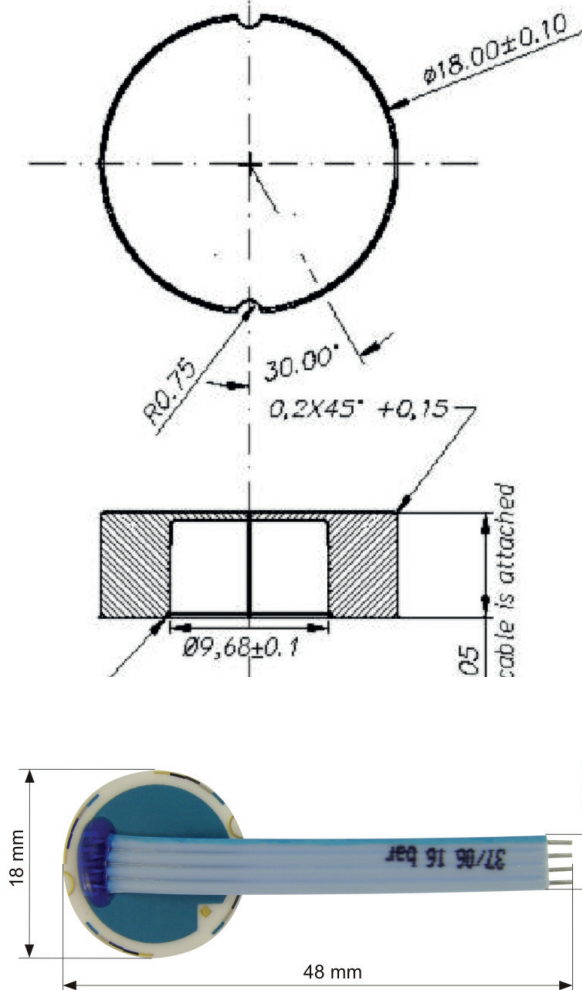
The pressure sensors of the series DS-ED-R are cells with thick film on stainless steel for measuring static and dynamic relative pressure in liquids or gases. The thick-film-on-steel technology in combination with the monolithic sensor technology allows the measurement range by a factor of 5 to pass before the membrane bursts. The measured medium is only touched by the stainless steel material (1.4404), resulting in excellent resistance towards aggressive and corrosive media. Therefore, the sensors are particularly suitable for applications in the field of hydraulics, refrigeration technology and for other demanding industrial applications. The delivery range covers 5 graded measuring variants in a pressure range from 0 to 100 bar. The outer dimensions of all the types are the same, so that they will fit into the same mechanical housing. The sensor itself is designed as a Wheatstone full bridge, and provides a heavy dependent differential voltage. The sensor is zero-point and temperature compensated, and can also be reduced so that it will work in most applications. Because of the circuit complexity and simple signal amplification, it also works directly with an instrument amplifier or ASIC. Furthermore, the sensor comes with an electronic circuit board which is purified and uncalibrated. The sensor is available with voltage output 0...10 V or current output 4...20 mA. The development of custom electronics and OEM components is also possible for larger quantities.

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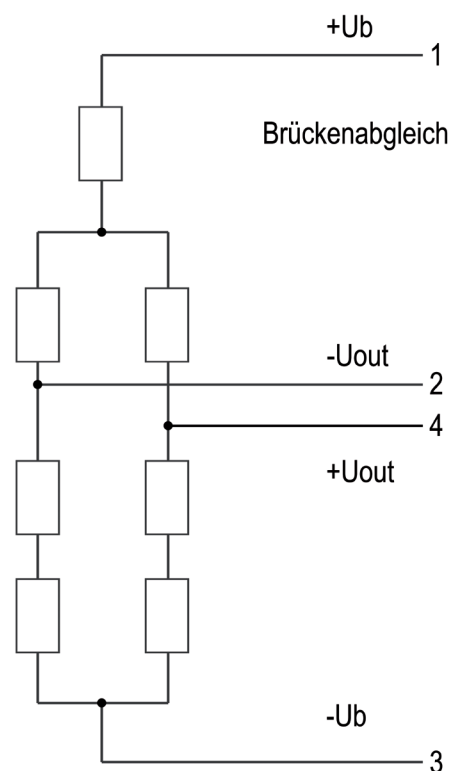
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Dimensional Drawing



Pin assignment

Pin No.	Function
1	Brückenabgleich
2	-Uout
3	-Ub
4	Uout



Options

The standard models are supplied with 4-core flat cable, RM 1,27 mm. The standard temperature measuring range is right from $-40 \dots 105 \text{ }^\circ\text{C}$. Extended temperature ranges up to $150 \text{ }^\circ\text{C}$ are also available for special applications. 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!

Order numbers

Measuring range	Bursting pressure	Art.- No.
0...10 bar	>50 bar	DS-ED-D-R10B
0...25 bar	>125 bar	DS-ED-D-R25B
0...40 bar	>200 bar	DS-ED-D-R40B
0...60 bar	>300 bar	DS-ED-D-R60B
0...100 bar	>500 bar	DS-ED-D-R100B

For further information, please visit our website:
www.bb-sensors.com