

- Several measuring ranges up to 2500 kPa (25 bar)
- Output signal 0...10 V DC or 4...20 mA
- Highly durable in most environments

Function

The transmitter consists of a sensor housing of stainless steel and a ceramic membrane. Resistors in thick film technology are applied to the membrane. As pressure affects the membrane, it results in a change of resistance depending on the bending of the membrane, and this is then converted into a proportional output signal by means of the built-in electronics.

The construction, incorporating only one moving part and a direct signal from the membrane, offers a high level of accuracy and a short response time. The properties of the membrane also ensure good stability is maintained over time, as well as a low temperature dependency.

Component overview

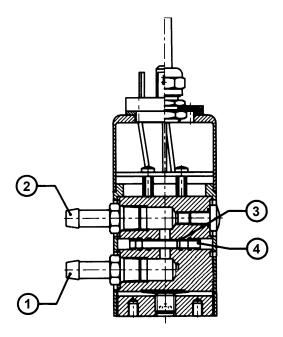
- 1. P1 Higher pressure/lower vacuum
- 2. P2 Lower pressure/higher vacuum.
- 3. O-ring seals
- 4. Ceramic membrane

DTK

Differential pressure transmitter for liquids and gases

DTK is a transmitter for measuring differential pressure in liquids and gases. The method of measurement using a ceramic membrane gives a high level of accuracy and stability over a long period.

- Can withstand overpressure of up to 6 times the measuring range (depending on model)
- Accuracy <1.25% of measuring range
- Excellent long-term stability and low temperature dependency





Models

Output signal 0...10 V DC

Model	Range	Max. overpressure	Accuracy
DTK10	010 kPa	6x	+/-1.25% fs
DTK20	020 kPa	6x	+/-1.25% fs
DTK40	040 kPa	5x	+/-1.25% fs
DTK100	0100 kPa	5x	+/-1.25% fs
DTK250	0250 kPa	4.8x	+/-1.25% fs
DTK400	0400 kPa	3x	+/-0.75% fs
DTK600	0600 kPa	2x	+/-0.40% fs
DTK1000	01000 kPa	2x	+/-0.40% fs
DTK1600	01600 kPa	2x	+/-0.40% fs

Output signal 4...20 mA

Model	Range	Max. overpressure	Accuracy
DTK10-420	010 kPa	6x	+/-1.25% fs
DTK20-420	020 kPa	6x	+/-1.25% fs
DTK40-420	040 kPa	5x	+/-1.25% fs
DTK100-420	0100 kPa	5x	+/-1.25% fs
DTK250-420	0250 kPa	4.8x	+/-1.25% fs
DTK400-420	0400 kPa	3x	+/-0.75% fs
DTK600-420	0600 kPa	2x	+/-0.40% fs
DTK1000-420	01000 kPa	2x	+/-0.40% fs
DTK1600-420	01600 kPa	2x	+/-0.40% fs

Transmitters may also be ordered with an output signal of 0...20 mA or 4...20 mA, three wire

Technical data

Supply voltage With output signal of 0...10 V: 24 VAC +/- 15% or 18...33 V DC

With output signal of 4...20 mA: 11...33 V DC (two wire)

5 mA (0...10 V), 20 mA (4...20 mA) Power consumption Load impedence With output signal of 0...10 V: > 10k ohm

With output signal of 4...20 mA: < 650 ohm (at 24 V DC)

DTK10... DTK600: 25 bar Max. system pressure DTK 1000-... DTK1600: 50 bar

(linearity and hysteresis) (model with higher accuracy available upon request)

Temperature dependence, zero point

Max. 0.12 % of measuring range / °C Temperature dependence, measured value Max. 0.038 % of measuring range / °C

Ambient- and media temperature -15...+85°C Dynamic response time < 5 ms

Pressure connections Pressure connection for 6 mm copper tube

Cable Three- or two wire cable, 1.5 m

Material: sensor housing Stainless steel membrane Ceramic material

Form of protection **IP65**

EMC emissions & immunity standards: This product conforms to the

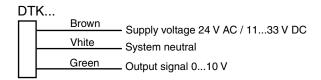
requirements of the EMC Directive 2004/108/EC through product standard

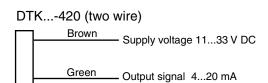
EN 61326-2-3.

RoHS: This product conforms to the Directive 2011/65/EU of the European

Parliament and of the Council.

Wiring





Dimensions

