DTK

Differential pressure transmitter for liquid and gases up to 25bar

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

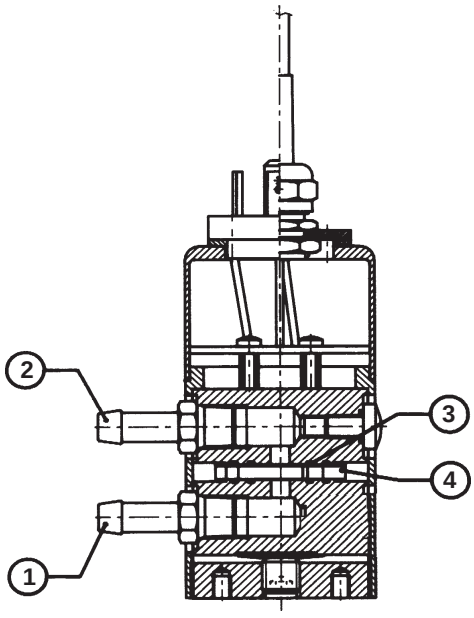
* Several measuring ranges up to 2500 kPa (25 bar)
* Output signal 0...10V DC or 4...20 mA
* Durable in the majority of environments
* Excellent long-term stability
* Accuracy 1.3% of measuring range
* Can withstand overpressure up to 5 times the measuring range

Function

The transmitter consists of a sensor hausing in stainless steel and a ceramic membrane. Resistors are applied to the membrane in thick film technology. The pressure affecting the membrane results in a change of resistance value depending on the bending of the membrane and this is transferred by means of the built-in electronics to a proportional output signal.

The construction with only one moving part and a direct signal from the membrane gives a high level of accuracy and a short response time. The properties of the membrane also ensure good stability over time and low temperature dependency.

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



Models

Output signal 0...10 V DC

Model	Range				Accuracy
DTK10	0...10	kPa	0,1	bar	+/-1,3% fs
DTK20	0...20	kPa	0,2	bar	+/-1,3% fs
DTK40	0...40	kPa	0,4	bar	+/-1,3% fs
DTK100	0...100	kPa	1	bar	+/-1,3% fs
DTK250	0...250	kPa	2,5	bar	+/-1,3% fs
DTK400	0...400	kPa	4	bar	+/-0,8% fs
DTK600	0...600	kPa	6	bar	+/-0,5% fs
DTK1000	0...1000	kPa	10	bar	+/-0,5% fs
DTK1600	0...1600	kPa	16	bar	+/-0,5% fs
DTK2500	0...2500	kPa	25	bar	+/-0,5% fs

Output signal 4...20 mA

Model	Range				Accuracy
DTK10-420	0...10	kPa	0,1	bar	+/-1,3% fs
DTK20-420	0...20	kPa	0,2	bar	+/-1,3% fs
DTK40-420	0...40	kPa	0,4	bar	+/-1,3% fs
DTK100-420	0...100	kPa	1	bar	+/-1,3% fs
DTK250-420	0...250	kPa	2,5	bar	+/-1,3% fs
DTK400-420	0...400	kPa	4	bar	+/-0,8% fs
DTK600-420	0...600	kPa	6	bar	+/-0,5% fs
DTK1000-420	0...1000	kPa	10	bar	+/-0,5% fs
DTK1600-420	0...1600	kPa	16	bar	+/-0,5% fs
DTK2500-420	0...2500	kPa	25	bar	+/-0,5% fs

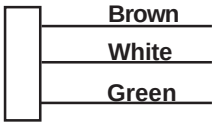
The transmitters can also be delivered with output signal 0...20 mA or 4...20 mA ,three wire.

Technical data

Supply voltage	With output signal 0...10 V : 24 VAC +/- 10% or 18...33 V DC. With output signal 4...20 mA:11...33 V DC (two wire)
Power consumption	5 mA (0...10 V), 25 mA (4...20 mA three wire), 4...20mA (two wire)
Load impedance	With output signal 0...10 V: > 10k ohm With output signal 4...20 mA:< 650 ohm (at 24 V DC)
Maximum overpressure	DTK20 to DTK250 5 x measuring range DTK400 to DTK2500 2 x measuring range
Maximum system pressure	25 bar to pressure range up to 10 bar 32 bar to pressure range 16 bar 50 bar to pressure range 25 bar
(linearity and hysteresis)	(model with higher accuracy on request)
Temperature dependence	0,1 % of measuring range / °C
Ambient temperature	-15...+80°C
Media temperature	-15...+80°C
Dynamic response time	< 5 msec
Pressure connections	Pressure connection for 6mm copper tube
Cable	Three- or two wire cable, 1.5 m
Material: sensor housing	Stainless steel
membrane	Ceramic material
Form of protection	IP65
CE	This product conforms with the requirements of European EMC standards CENELEC EN50081-1 and EN50082-1 and carry the CE-mark.

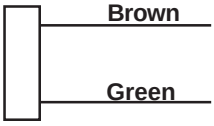
Dimension and wiring

DTK...

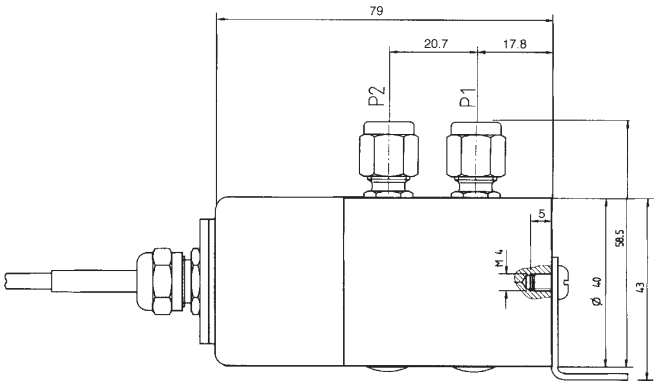


Brown — Supply voltage 24 V AC / 18...33 V DC
White — System neutral
Green — Ouput signal 0...10 V

DTK...-420 (two wire)



Brown — Supply voltage 11...33 V DC
Green — Output signal 4...20 mA



AB Regin
Box 116, SE-428 22 Kållered, Sweden
Besöksadress: Bangårdsvägen 35

Telefon: +46 31 720 02 00
Fax: +46 31 94 01 46
www.regin.se, info@regin.se

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