

# Flow Indicators Flow Monitors DKG viscosity compensated

## Operation

Operating of the DKG flow monitors and indicators is based on the movement of a springloaded piston within a cylindrical tube. The fluid is forced to pass a calibrated orifice inside this float, by which a balance is created between actual flow through and the counterforce of the spring/piston combination.

A permanent magnet within the piston activates a reed switch, which can be adjusted freely and is mounted external to the flow circuit.

The movement of the float is restricted by means of an endstop to prevent it from going beyond the range of the reed switch, thus ensuring the bistable character of the flow switch.

The top edge of the float serves to indicate the flowrate on the measuring glass scale.

## Areas of application

control of flowcircuits e.g. for central lubrication circuits, transformer oil systems, etc.



**DKG flow monitors are flow and not pressure dependent.**

## Viscositycompensation

Viscositycompensation is achieved by the combination of the spring and the calibrated orifice inside the piston and guaranties high accuracy over a viscosity range of 1 to 600 cSt. [mm<sup>2</sup>/s].

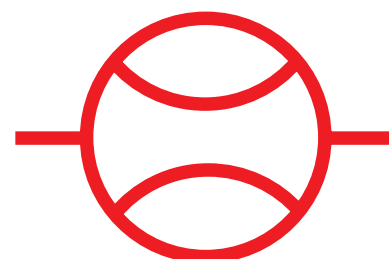
## Switch range

The switch ranges given below refer to the limits within which the switch point may infinitely be adjusted. The actual flow throughput can, depending on the flow velocity, be much greater.

## Switch hysteresis

Hysteresis is the difference in flow between the switch closing and opening again. By means of the careful choice of reed switches with particulary close differential, a typical hysteresis of 1,5 mm can be achieved with the DKG-1 and DKG-2 series.

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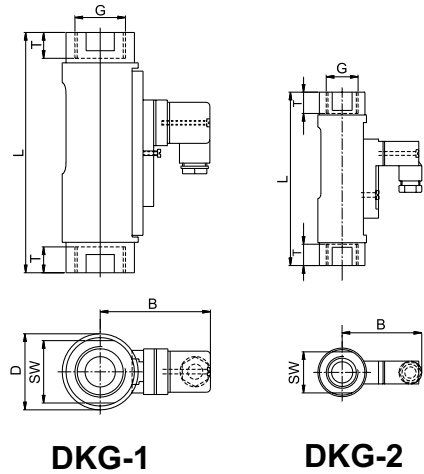
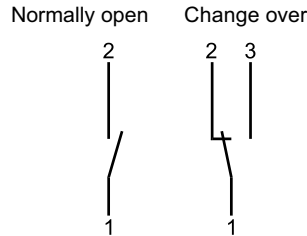
## Installation:

- The installation position is freely selectable.
- Flow direction is from low to high scale value.
- Flow straightening sections of 10x DN upstream and 5x DN downstream are strongly recommended.
- The medium should not contain any solid particles. We recommend the installation of strainers, model SFD or SFM.
- Do not install the equipment within inductive fields.

- Do not exceed the max. electrical ratings of the switch contact under no circumstances.

For installation and set-up assistance please "refer" to instruction manual.

### Connection Diagram:



## Summary of Types DKG viscosity compensated to 600 mm<sup>2</sup>/s

Type	Switch range* l/min	Overall dimensions mm							Weight approx. g
		SW	D	B	G	DN	T	L	
DKG - 2/08	0,1 - 0,8	27	32	53	1/2"	15	14	114	300
DKG - 2/1	0,2 - 1								
DKG - 2/2	0,5 - 1,7								
DKG - 2/4	1,3 - 4								
DKG - 2/8	2,5 - 8								
DKG - 1/1	0,1 - 0,8	41	50	77	1/4"	8	17	145	850
DKG - 1/2	0,5 - 1,5				1/2"			145	
DKG - 1/4	1 - 4				3/4"			139	
DKG - 1/8	2 - 8				1"			158	
DKG - 1/10	3 - 10				1/2"			145	
DKG - 1/15	5 - 15	41	50	77	3/4"	15	17	139	850
DKG - 1/24	8 - 24				1"			158	
DKG - 1/30	10 - 30				3/4"			139	
DKG - 1/45	15 - 45				1"			158	
DKG - 1/60	20 - 60				3/4"			139	
DKG - 1/90	30 - 90	41	50	77	1"	20	17	158	850
DKG - 1/30	10 - 30				3/4"			139	
DKG - 1/45	15 - 45				1"			158	
DKG - 1/60	20 - 60				3/4"			139	
DKG - 1/90	30 - 90				1"			158	

\* Other switch ranges on request

Operating Data:	DKG-1/...	DKG-2/...
Maximum pressure:	PN 10 bar	PN 16 bar
Pressure drop:	0,02 - 0,4 bar	0,02 - 0,2 bar
Maximum temperature:	120°C (optional 160°C)	
Accuracy:	10% of final value	
<b>Electrical data:</b>		
Normally open: SPST N.O.	max. 250V • 3A • 100VA	max. 230V • 3A • 60VA
Change over: SPDT	max. 250V • 1,5A • 50VA	max. 250V • 1,5A • 50VA
EEx m II T6	Change over: 250V • 1A • 30VA, Normally open: 250V • 2A • 60 VA only for DKG-1	
EEx ia IIC T6	Change over / Normally open: 45V • 1A only for DKG-1	
Protection class:	IP65 (plug connection DIN43650), IP67 (with sealed in 1m cable)	
Output signal:	The contact switches off, if minimum flow is below setpoint	
Power supply:	Not necessary (reed contacts)	
Other plug types or cable lengths on request		
<b>Materials:</b>	<b>brass</b>	<b>stainless steel</b>
Wetted parts:	brass nickel-plated	st.st. 1.4571
Glass: (wetted parts)	Duran 50	
Spring: (wetted parts)	st.st. 1.4571	
Magnets: (wetted parts)	Hartferrit	
Seals: (wetted parts)	Viton (optional Perbunan, EPDM)*	
Housing: (non wetted part)	aluminium	

\* Other seal materials on request

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