

Flow Monitor

DKM-1



OVERVIEW

Operation

- Float measuring principle

Application

- Mechanical engineering
- Central lubrication
- Circulation lubrication
- Transformers

Features

- Universal orientation
- High reliability
- High switch accuracy
- Viscosity compensated
- Infinitely variable switch point adjustment by operator
- EX-version according to ATEX directive available
- UL Recognized version available
- High pressure resistance
- Threaded connection, special thread on request

Installation information

- The operating instructions for DKM-1 Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

■ OPERATING DATA

Operating pressure max.	100 bar (brass lead-free)
	300 bar (stainless steel)
Pressure drop	0,02 – 0,4 bar
Viscosity range	30 cSt to 600 cSt
Temperature max.	120 °C
	160 °C (stainless steel) optional
Measuring accuracy	±10 % of full scale

Changed operating data apply to the device in explosion-proof design according to ATEX directive. Refer to the Operating Instructions for DKM-1 Module ATEX.

For UL Recognized devices, changed operating data apply. Refer to the Operating Instructions for DKM-1 Module BASICS.

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■ MEASURING RANGES

Type	Switch range for Oil, density 0,9 kg/dm ³ ⁽¹⁾		
	l/min	gph	gpm
DKM-1/2	0,5 – 1,5	8 – 24	
DKM-1/4	1 – 4	16 – 63	
DKM-1/8	2 – 8	32 – 127	
DKM-1/10	3 – 10	48 – 160	
DKM-1/15	5 – 15	80 – 240	
DKM-1/24	8 – 24	125 – 380	
DKM-1/30	10 – 30	160 – 480	
DKM-1/45	15 – 45	240 – 710	
DKM-1/60	20 – 60	320 – 950	
DKM-1/90	30 – 90		8 – 24
DKM-1/110	35 – 110		9,5 – 29

⁽¹⁾ The specified measuring- /switch ranges are valid for oils having a density of 0.9 kg/dm³ and a kinematic viscosity of 30 to 600 cSt, vertical installation of the device and flow direction from bottom to top.

Other installation positions or deviation from the operating densities and operating viscosities will increase the measurement error specified in the data sheet. Excessive operating viscosities will influence or may prevent function of the device.

Upon request, special scales for deviating media, different operating conditions and installation positions (only for devices which can be installed in any position) are available.

The specified switch values are switch-off points, i.e. switch values by decreasing flow.

Other measuring- /switch ranges are available upon request.

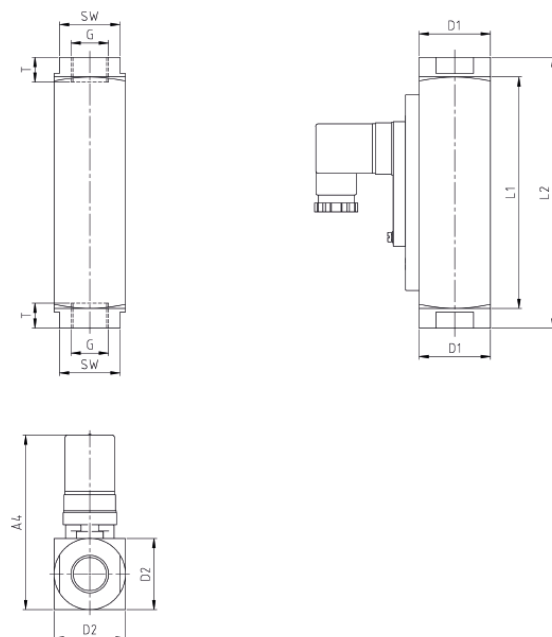
■ MATERIALS

Brass version, wetted parts	
Spring:	1.4571
Gaskets:	FKM (optional NBR, EPDM) ⁽²⁾
Magnets:	Hard ferrite
Device body:	Brass, nickel-plated
all other wetted parts:	Brass

Stainless steel version, wetted parts	
Spring:	1.4571
Gaskets:	FKM (optional NBR, EPDM) ⁽²⁾
Magnets:	Hard ferrite
Device body:	1.4571
all other wetted parts:	1.4571

⁽²⁾ Other gasket materials on request

■ TECHNICAL DRAWING



■ SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx. [g]
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	
DKM-1/2 DKM-1/4	1/4"	8	34	130	152	10	40	40	–	–	–	~98	1500
	1/2"	15	34	130	152	14	40	40	–	–	–	~98	1425
	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1340
	1"	25	40	130	130	18,5	40	40	–	–	–	~98	1160
DKM-1/8													
DKM-1/10	1/2"	15	34	130	152	14	40	40	–	–	–	~98	1425
DKM-1/15	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1340
DKM-1/24	1"	25	40	130	130	18,5	40	40	–	–	–	~98	1160
DKM-1/30													
DKM-1/45	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1340
DKM-1/60	1"	25	40	130	130	18,5	40	40	–	–	–	~98	1160
DKM-1/90													
DKM-1/110	1"	25	40	130	130	18,5	40	40	–	–	–	~98	1160

ELECTRICAL DATA

Change over (COC)	250V · 1,5A · 50VA ⁽³⁾
Normally open (NOC)	250V · 3A · 100VA
Change over M12x1 (-20 °C – 85 °C)	250V · 1,5A · 50VA ⁽³⁾
Normally open M12x1 (-20 °C – 85 °C)	250V · 3A · 100VA
Change over PLC	250V · 1A · 60VA

EX-version in compliance with ATEX directive

ATEX II 2 G Ex mb IIC T6 Gb & ATEX II 2 D Ex tb IIIC T80 °C Db	
ATEX II 2 G Ex mb IIC T5 Gb & ATEX II 2 D Ex tb IIIC T100 °C Db	
Change over	250V · 1A · 30VA ⁽³⁾
Normally open	250V · 2A · 60VA

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA ⁽³⁾
Normally open	250V · 3A · 100VA

⁽³⁾ Minimum load 3VA

ELECTRICAL CONNECTION

- Connector in compliance with EN 175301-803, Form A (DIN 43650, Form A)
- Connector M12x1
- Cable (1 m)

EX-version in compliance with ATEX directive

- Cable (2 m)

UL Recognized switch contacts

- Connector in compliance with EN 175301-803, Form A
- Cable (1 m)

Ingress Protection

IP65: Connector in compliance with EN 175301-803, Form A
IP67: Cable or connector M12x1

Output signal

The contact opens / changes when the flow decreases below the set point.

Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM

