



Flow monitor for oil DKM-1

The flow monitors type DKM-1 operate with the float measuring principle



- Universal orientation
- High reliability
- Viscosity compensated
- High switch accuracy
- Infinitely variable switchpoint adjustment through user
- EX-version to ATEX available
- Threaded connection, special threads on request
- High pressure resistance

D-EN-DKM1-20200526



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Application

- Mechanical engineering
- Central lubrication
- Circulation lubrication
- Transformers

Installation information

The operating instructions for DKM-1 must be observed!

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

Operating Data	
Operating pressure max.	250 bar (brass version), 300 bar (stainless steel version)
Pressure drop	0,02 – 0,4 bar
Viscosity range	30 cSt to 600 cST
Temperature max.	120°C (optional 160°C)
Measuring accuracy	±10% of full scale

Material		
Wetted parts:	Brass version	Stainless steel version
Spring	1.4571	1.4571
Gaskets	FKM (optional: NBR, EPDM) ⁽³⁾	FKM (optional: NBR, EPDM) ⁽³⁾
Magnets	Hard ferrite	Hard ferrite
Housing	Brass nickel-plated	1.4571
All other wetted parts	Brass	1.4571

(3) Other gasket materials on request



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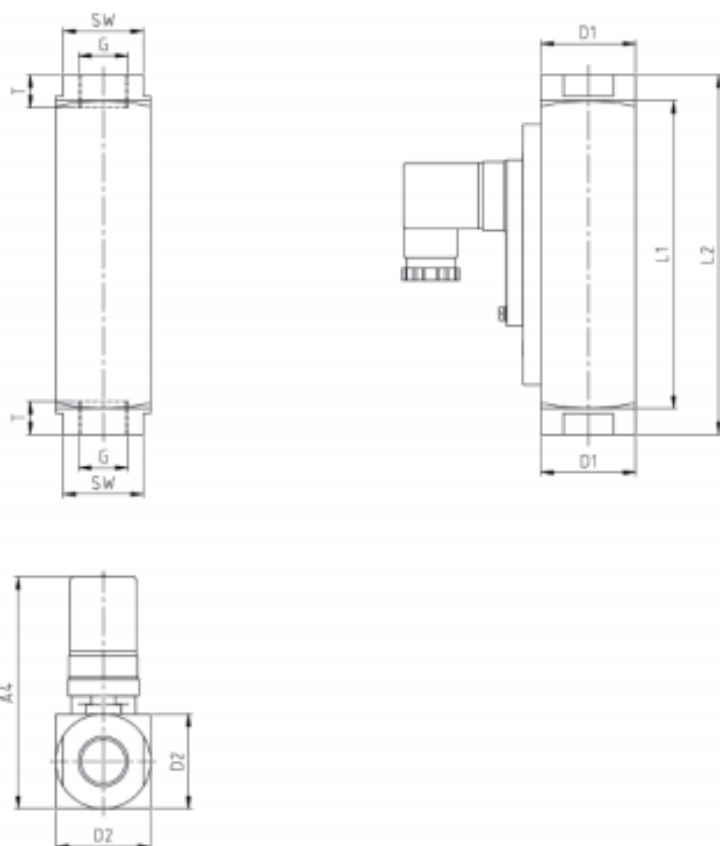
Measuring Ranges			
Type	Switch range for oil, density 0,9 kg/dm ³ (1)		
	[l/min]	[gph]	[gpm]
DKM-1/2	0,5 – 1,5	8,0 – 24,0	
DKM-1/4	1 - 4	16,0 – 63,0	
DKM-1/8	2 - 8	32,0 – 127,0	
DKM-1/10	3 - 10	48,0 – 160,0	
DKM-1/15	5 - 15	80,0 – 240,0	
DKM-1/24	8 - 24	125,0 – 380,0	
DKM-1/30	10 - 30	160,0 – 480,0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



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Technical drawing





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Summary of Types													
Type			Overall dimensions [mm]										Weight
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	approx.. [g]
DKM-1/2	1/4"	8	34	130	152	10	40	40	-	-	-	~98	1500
DKM-1/4	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	1/2"	15	34	130	152	14	44	44	-	-	-	~98	1425
DKM-1/10	3/4"	20	34	130	152	15	40	40	-	-	-	~98	1340
DKM-1/15	1"	25	40	130	130	18,5	40	40	-	-	-	~98	1160
DKM-1/30	3/4"	20	34	130	152	15	40	40	-	-	-	~98	1340
DKM-1/45	1"	25	40	130	130	18,5	40	40	-	-	-	~98	1160
DKM-1/60													
DKM-1/90	1"	25	40	130	130	18,5	40	40	-	-	-	~98	1160
DKM-1/110													



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Electrical Data	
Change over (COC)	250 V • 1,5A • 50 VA (2)
Normally open (NOC)	250 V • 3A • 100 VA
Change over M 12x1 (-20 °C – 85 °C)	250 V • 1,5A • 50 VA (2)
Normally open M 12x1 (-20 °C – 85 °C)	250 V • 3A • 100 VA
EX-version in compliance with ATEX directive	
ATEX II 2G Ex mb IIC T6 Gb & ATEX II 2 D Ex tb IIIC T80 °C Db	
ATEX II 2G Ex mb IIC T5 Gb & ATEX II 2 D Ex tb IIIC T100 °C Db	
Change over	250 V • 1A • 30 VA
Normally open	250 V • 2A • 60 VA
UL recognized switch contacts	
Change over	240 V • 1,5A • 50 VA (2)
Normally open	250 V • 3A • 100 VA
(2)Minimum load 3 VA	



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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)
Plug types
Other connector types or cable lengths on request



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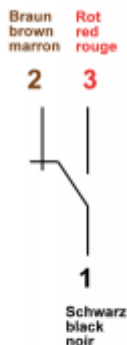
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Connection diagram

Connector in compliance with EN 175301-803 and cable

M12x1

Change over (COC)



Change over (COC)



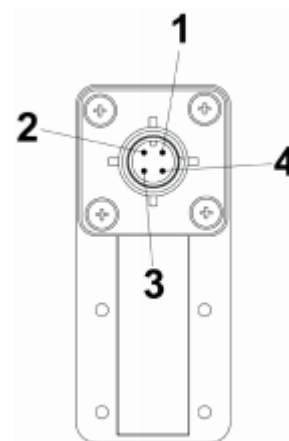
Normally open (NOC)



Normally open (NOC)



Pin-assignment



Important instructions!

Technical changes and errors reserved.

Pictures can be similar.

The operating instructions belonging to this device must be observed! Download at www.schmidt-messtechnik.com.