

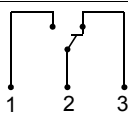
Product Information**VM-...EM / K****Flow Switch
VM-...E**

- Can be used from nominal width DN 40..200
- Precise, stepless adjustment of the switching value

Characteristics

The paddle movement of the flow switch is transmitted via a magnetic coupling to an adjustably arranged micro switch.

Technical data

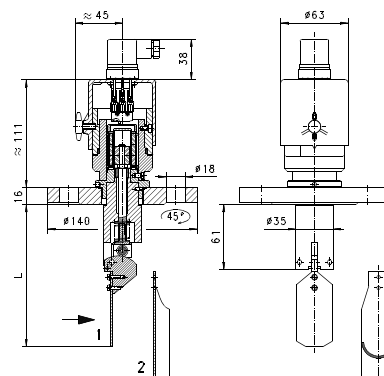
Switch	micro switch	
Nominal width	DN 40..200	
Process connection	installation flange DIN 2527 DN 32 PN 16 sealing surface as per DIN 2526 form C	
Switching range	40..3600 l/min	for details see Table "Ranges and dimensions"
Q_{max.}	up to 5400 l/min	
Tolerance	±5 % of full scale value	
Pressure resistance	PN 16 bar	
Medium temperature	-20..+90 °C, optionally -20..+200 °C, type VMX on request	
Ambient temperature	-20..+70 °C	
Media	water (oils available on request)	
Wiring	changeover no. 0.213	
Switching voltage	max. 250 V AC	
Switching current	max. 5 A	
Protection class	2 - safety insulation	
Ingress protection	IP 65	
Electrical connection	plug DIN 43650-A / ISO 4400	
Materials medium-contact	<i>Brass construction:</i> Rg 5, CW614N nickel- elled, 1.4305, 1.4301, 1.4310, 1.4571, NBR, hard ferrite	<i>Stainless steel construction:</i> 1.4305, 1.4301, 1.4310, 1.4571, FKM, hard ferrite
Non-medium-contact materials	ABS, PA	

Weight	DN 40..150 DN 200	3.0 kg 3.5 kg
Installation location	Standard: horizontal inwards flow; display downwards and inwards flow from above not recommended; other installation positions are possible; the installation position affects the switching point and display range.	

Ranges and dimensions

Details in the table correspond to horizontal inwards flow with decreasing flow rate.

DN	Switching range l/min H ₂ O	Q _{max.} recommended	Types	Paddle form	L
DN 40	40 - 150	250	VM-040E.150	1	93
DN 50	50 - 150	450	VM-050E.150		104
	100 - 300		VM-050E.300	96	
DN 65	125 - 375	550	VM-065E.300	2	115
			VM-065E.375		90
DN 80	150 - 400	900	VM-080E.400	2	118
	200 - 600		VM-080E.600		115
DN 100	250 - 750	1400	VM-100E.750	2	158
	300 - 900		VM-100E.900		122
DN 150	500 - 1500	2700	VM-150E.1500	2	198
	600 - 1800		VM-150E.1500		198
DN 200	1000 - 3000	5400	VM-200E.3000	2	213
	1200 - 3600		VM-200E.3600		213



Attention! Flange seal not included in scope of delivery

Product Information

VM-...EM / K

Handling and operation

Note

- Include straight calming section of 10 x DN in inlet and outlet
- If the media are dirty, install a filter (use magnetic filter for ferritic components).
- It must be ensured that the values given for voltage, current, and power are not exceeded.
- When switched on, a load must be connected in series.
- The electrical details apply to ohmic loads. Capacitive and inductive loads must be operated using a protective circuit.

Adjustment

To adjust the switching point, the fixing screw for the switching head must be loosened. The switching head can then be rotated. Turning to the right increases the switching point, and vice-versa. Then retighten the fixing screw.



Installation recommendation

Use a tube with standard wall thickness as per DIN 2448
The type FL installation flanges are available as an accessory.

Ordering code

VM - 1. 2. 3. 4. 5.

1. Nominal width	
040	DN 40
050	DN 50
065	DN 65
080	DN 80
100	DN 100
150	DN 150
200	DN 200
2. Process connection	
E	installation flange
3. Connection material	
M	brass
K	stainless steel
4. Switching range H ₂ O for horizontal inwards flow	
150	40 - 150 l/min
	50 - 150 l/min
300	100 - 300 l/min
375	125 - 375 l/min
450	150 - 450 l/min
600	200 - 600 l/min
750	250 - 750 l/min
900	300 - 900 l/min
1500	500 - 1500 l/min
1800	600 - 1800 l/min
3000	1000 - 3000 l/min
3600	1200 - 3600 l/min
5. Optional for ATEX	
A	for switching head ATEX A-V2 or A-V3 (The switching head is ordered in addition)

Options

- Special plugs, Tichel / Harting
- Signal lamp red or red / green in the plug DIN 43650-A
- Signal lamp, miscellaneous
- Temperature display
- Temperature monitoring
- Temperature up to 150 °C
- Metal cap
- Gold contact micro switch 125 V AC / 30 V DC, 100 mA
- Germanischer Lloyd
- Switching ranges for oil
- Special values

Ordering information

- Specify direction of flow, medium, and switching range.
- For oils, state viscosity, temperature and designation (e.g. ISO VG 68) (enquire about range).