

Product Information

Sensors and Instrumentation

**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

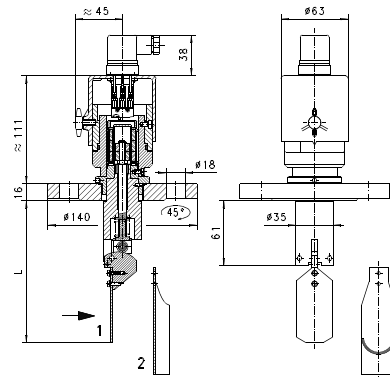
Switch	micro switch	
Nominal width	DN 40..200	
Process connection	installation flange DIN 2527 DN 32 PN 16 sealing surface as per DIN 2526 form C	
Switching range	40..3600 l/min	for details see Table "Ranges and dimensions"
Q_{max.}	up to 5400 l/min	
Tolerance	±5 % of full scale value	
Pressure resistance	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. 6 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 nickelled, 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	115	
			VM-065E.375	90	
DN 80	150 - 400	900	VM-080E.400	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	198	
	600 - 1800		VM-150E.1500	198	
DN 200	1000 - 3000	5400	VM-200E.3000	213	
	1200 - 3600		VM-200E.3600		



Attention! Flange seal not included in scope of delivery

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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

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

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 H₂O 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)								Ex

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).