

Product Information

Sensors and Instrumentation

Flow Switch VD-...GR




- Highly reproducible
- Precise, stepless adjustment of the switching value
- Insensitive to dirt
- Short installation length

Characteristics

The volume flow raises a piston (fitted with a magnet) out from a valve seat against a spring force. The piston actuates a hermetically separated reed switch.

Technical data

Switch	reed switch	
Nominal width	DN 8..80	
Process connection	female thread G 1/4..G 3	
Switching range	1..600 l/min	for details see table "Ranges"
Q _{max.}	to 720 l/min	
Tolerance	±5 % of full scale value	
Pressure resistance	G 1/4..G 1 - PN 25 G 1 1/4 ..G 3 - PN 16	
Medium temperature	-20..+120 °C	
Ambient temperature	-20..+70 °C	
Media	water (oils and gases available on request)	
Wiring	changeover no. 0.213 	
Switching voltage	max. 250 V AC	
Switching current	max. 1.5 A	
Switching capacity	max. 50 VA	
Protection class	2 - safety insulation	
Ingress protection	IP 44, optionally IP 65	
Connection	plug DIN 43650-A / ISO 4400	
Materials medium-contact	Rg 5 / Rg 6 nickelled, POM, 1.4310, CW614N, NBR, hard ferrite	

Non-medium-contact materials	ABS, PA
Weight	see table "Dimensions and weights"
Installation location	Standard: horizontal inwards flow; switching head not recommended underneath; other installation positions are possible; the installation position affects the switching point and range.

Ranges

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

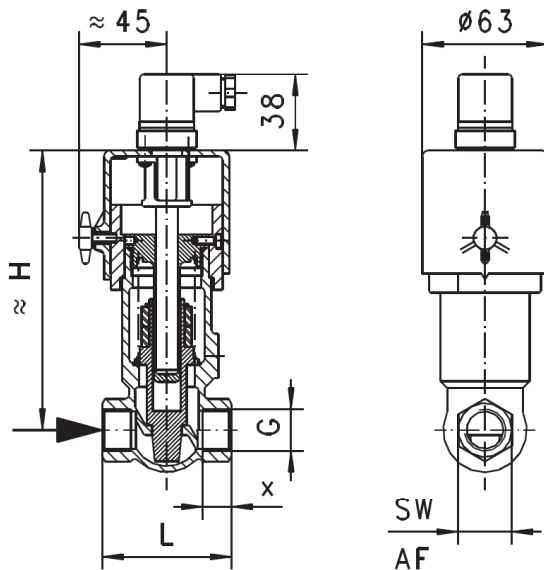
G	Nominal width	Switching range l/min H ₂ O	Q _{max.} recommended	Type
G 1/4	DN 8	1 - 10	15	VD-008GR010
G 3/8	DN 10		20	VD-010GR010
G 1/2	DN 15		30	VD-015GR010
G 3/4	DN 20	4 - 20	40	VD-020GR020
			60	VD-020GR040
G 1	DN 25	10 - 40	85	VD-025GR040
			100	VD-025GR060
G 1 1/4	DN 32	20 - 60	145	VD-032GR060
			150	VD-032GR100
G 1 1/2	DN 40	30 - 100	220	VD-040GR100
			250	VD-040GR150
G 2	DN 50	50 - 150	290	VD-050GR150
			400	VD-050GR200
G 2 1/2	DN 65	100 - 200	475	VD-065GR200
			600	VD-065GR330
G 3	DN 80	180 - 330	720	VD-080GR330
			720	VD-080GR600

Special ranges are available

Product Information

Dimensions and weights

G	Types	H	L	SW	X	Weight kg
G 1/4	VD-008GR	150	65	29	12	1.0
G 3/8	VD-010GR				14	
G 1/2	VD-015GR					
G 3/4	VD-020GR					
G 1	VD-025GR	156	80	32	16	1.1
G 1 1/4	VD-032GR				18	
G 1 1/2	VD-040GR				13	
G 2	VD-050GR				14	
G 2 1/2	VD-065GR				17	
G 3	VD-080GR				17	
					26	
		148	100	23	7.0	



Ordering code

1. 2. 3. 4. 5.
 VD - G R

1. Nominal width	
008	DN 8 - G 1/4
010	DN 10 - G 3/8
015	DN 15 - G 1/2
020	DN 20 - G 3/4
025	DN 25 - G 1
032	DN 32 - G 1 1/4
040	DN 40 - G 1 1/2
050	DN 50 - G 2
065	DN 65 - G 2 1/2
080	DN 80 - G 3
2. Process connection	
G	female thread
3. Connection material	
R	red bronze
4. Switching range H ₂ O for horizontal inwards flow	
010	1 - 10 l/min
020	4 - 20 l/min
040	10 - 40 l/min
060	20 - 60 l/min
100	30 - 100 l/min
150	50 - 150 l/min
200	100 - 200 l/min
330	180 - 330 l/min
600	300 - 600 l/min
5. Optionally for ATEX	
A	for switching head ATEX A-V1 (The switching head is ordered in addition)

Handling and operation

Note

- Include straight calming section of 5 x DN in inlet and outlet
- Include a filter if the media are dirty (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, inductive and lamp 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.



Options

- Special plugs, Tuchel / Harting
- Signal lamp red or red/green in the plug DIN 43650-A
- Other signal lamp
- Protection class IP 65
- Temperature display 0..120 °C
- Temperature monitoring 40..90 °C
- Temperature resistant up to 150 °C
- Metal cap
- Rhodium contact 250 V AC, 0.5 A, 30 VA
- Solid metal - Ms / VA
- GL certified (types VR)
- Switching ranges for oil or gas
- Special values
- Internal parts are brass or stainless steel

Ordering information

- Specify direction of flow, medium, and switching range.
- For oils. State viscosity, temperature and designation (e.g. ISO VG 68) (enquire about switching range).
- For gases, state pressure (relative or absolute), temperature and medium (e.g. air) (request switching range).