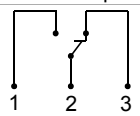
Flow Switch VD-...GR

- **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 bar G $1^1/_4$..G 3 - PN 16 bar	
Medium temperature	-20..+120 °C	
Ambient temperature	-20..+70 °C	
Media	water (oils and gases available on request)	
Wiring	changeover no. 0.213 	

Electrical data (without EX)	175 V DC, 0.25 A, 5 W / 120 V AC, 0.18 A, 5 VA
Electrical data (with EX)	250 V AC, 1.5 A, 50 VA
Electrical data (optional)	normally open contact, 250 V DC, 1.5 A, 50 W / 265 V AC, 1.1 A, 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

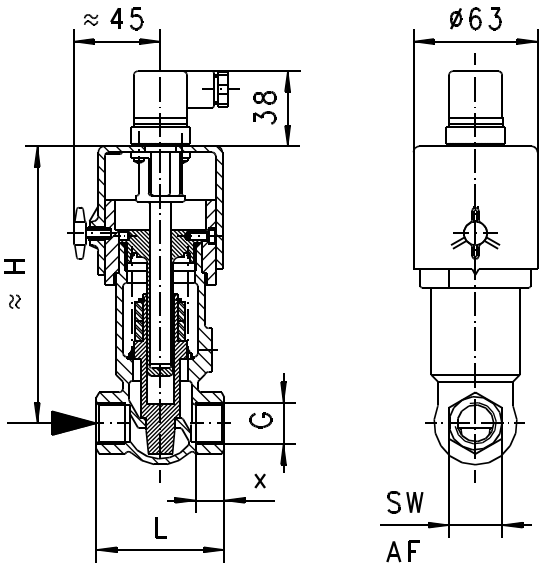
Details in the table correspond to horizontal inwards flow with decreasing flow rate.

G	Nominal width	Switching range l/min H_2O	$Q_{max.}$ recommended	Type
G $^1/_4$	DN 8	1 - 10 4 - 20	15	VD-008GR010
G $^3/_8$	DN 10		25	VD-008GR020
			20	VD-010GR010
			30	VD-010GR020
G $^1/_2$	DN 15		20	VD-015GR010
			30	VD-015GR020
G $^3/_4$	DN 20		20	VD-020GR010
			40	VD-020GR020
		10 - 40 20 - 60	60	VD-020GR040
			80	VD-020GR060
G 1	DN 25	1 - 10 4 - 20	20	VD-025GR010
			40	VD-025GR020
			60	VD-025GR040
		10 - 40 20 - 60	85	VD-025GR060
G $1^1/_4$	DN 32		90	VD-032GR040
			100	VD-032GR060
		30 - 100 50 - 150	145	VD-032GR100
			200	VD-032GR150
G $1^1/_2$	DN 40	20 - 60 30 - 100	100	VD-040GR060
			150	VD-040GR100
		50 - 150	220	VD-040GR150
G 2	DN 50		250	VD-050GR150
		100 - 200	290	VD-050GR200
G $2^1/_2$	DN 65		400	VD-065GR200
		180 - 330	475	VD-065GR330
G 3	DN 80		600	VD-080GR330
		300 - 600	720	VD-080GR600

Special ranges are available

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					
G 1/2	VD-015GR				14	
G 3/4	VD-020GR		80	32	16	1.1
G 1	VD-025GR			41	18	1.3
G 1 1/4	VD-032GR	156	98	52	13	2.1
G 1 1/2	VD-040GR		113	59	14	2.8
G 2	VD-050GR		137	72	17	4.0
G 2 1/2	VD-065GR		160	85	26	4.0
G 3	VD-080GR		148	100	23	7.0



Ordering code

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

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_2O 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)	Ex

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).