

**Product Information**

**Sensors and Instrumentation**

# Flow Switch / Indicator VDO-...GR



- No glass parts under load from pressure or media
- Monitor and display
- 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 and a hermetically separated display ring.

**Technical data**

<b>Switch</b>	reed switch	
<b>Nominal width</b>	DN 8..80	
<b>Process connection</b>	female thread G 1/4..G 3	
<b>Switching range</b>	2..600 l/min	for details see table "Ranges"
<b>Q<sub>max.</sub></b>	to 720 l/min	
<b>Tolerance</b>	±5 % of full scale value	
<b>Pressure resistance</b>	G 1/4..G 1/2 - PN 100 bar G 3/4..G 1 - PN 25 bar G 1 1/4..G 3 - PN 16 bar	
<b>Medium temperature</b>	-20..+120 °C	
<b>Ambient temperature</b>	-20..+70 °C	
<b>Media</b>	water (oils and gases available on request)	
<b>Wiring</b>	changeover no. 0.213	
<b>Switching voltage</b>	max. 250 V AC	
<b>Switching current</b>	max. 1.5 A	
<b>Switching capacity</b>	max. 50 VA	
<b>Protection class</b>	2 - safety insulation	
<b>Ingress protection</b>	IP 44, optionally IP 65	
<b>Connection</b>	plug DIN 43650-A / ISO 4400	
<b>Materials medium-contact</b>	Rg 5 / Rg 6 nickelled, POM, 1.4310, CW614N, NBR, hard ferrite	
<b>Non-medium-contact materials</b>	ABS, PA, acrylic XT	

<b>Weight</b>	see table "Dimensions and weights"
<b>Installation location</b>	Standard: horizontal inwards flow; switching head not recommended underneath; other installation positions are possible; the installation position affects the switching point and range.

**Ranges**

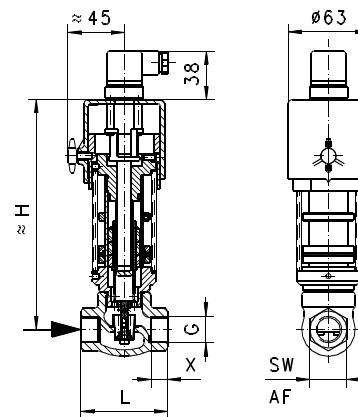
Details in the table correspond to horizontal inwards flow with decreasing flow rate.

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

Special ranges are available

**Dimensions and weights**

G	Types	H	L	SW	X	Weight kg
G 1/4	VD-008GR	183	68	29	12	1.3
G 3/8	VD-010GR					
G 1/2	VD-015GR				13	
G 3/4	VD-020GR	184	73	32	11	1.5
G 1	VD-025GR	188	87	41	12	1.7
G 1 1/4	VD-032GR	190	98	52	13	2.2
G 1 1/2	VD-040GR	195	113	59	14	2.9
G 2	VD-050GR	203	137	72	17	4.2
G 2 1/2	VD-065GR	224	160	85	26	5.8
G 3	VD-080GR		148	100	23	7.8



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**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.
- Remove the transport lock (white plastic screw in acrylic body) before starting operation. Then seal the threaded hole with the sticker (included in the shipment).

**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.



**Display**

- The display is rotatable.



**Ordering code**

VDO -  1.  2.  3.  4.  
VDO -  **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 <sub>2</sub> 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	400 - 600 l/min

**Options**

- Special plugs, Tuchel / Harting
- Signal lamp red or red / green in the plug DIN 43650-A
- Other signal lamp
- Ingress protection 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
- Housing made from stainless steel
- Flange housing made from grey iron, gun metal, cast steel, or stainless steel
- Switching ranges for oil or gas
- Special values
- Internal parts are brass or stainless steel
- Damping for gas monitoring

**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).