

## Flow Switch MR



- High switching power
- Compact design

### Characteristics

Mechanical flow switch, for fluid or gaseous media, with spring-supported piston and magnetic triggering of a reed switch. Robust construction in brass or stainless steel.

### Technical data

<b>Switch</b>	reed switch	
<b>Nominal width</b>	DN 8.0.25	
<b>Process connection</b>	female thread G 1/4..G 1 (further process connections available on request)	
<b>Switching range</b>	0.4..60 l/min	for details see table "Ranges"
<b>Pressure loss</b>	0.4..1.9 bar at Q <sub>max.</sub>	
<b>Q<sub>max.</sub></b>	to 80 l/min	
<b>Tolerance</b>	±5 % of full scale value	
<b>Pressure resistance</b>	PN 200 bar (with optional display O1 G 1/4..G 3/4 PN 90)	
<b>Media temperature</b>	-20..+120 °C	
<b>Ambient temperature</b>	-20..+70 °C	
<b>Media</b>	water (oils, gases and aggressive media available on request)	
<b>Wiring</b>	transformer 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 65	
<b>Electrical connection</b>	cable 2.5 m (others cable lengths available on request)	
<b>Materials medium-contact</b>	Brass construction: CW614N nickelled, 1.4301, 1.4310, hard ferrite, NBR	Stainless steel construction: 1.4305, 1.4571, 1.4301, 1.4310, hard ferrite PTFE-coated, FKM
<b>Non-medium-contact materials</b>	PA, PVC	
<b>Weight</b>	see table "Dimensions and weights"	
<b>Installation location</b>	Standard: horizontal inwards flow from the left; other installation positions are possible; the installation position affects the switching point and range.	

### Ranges

For switching ranges, the details in the table correspond to horizontal inwards flow and decreasing flow rate; for display ranges they correspond to horizontal inwards flow and increasing flow rate.

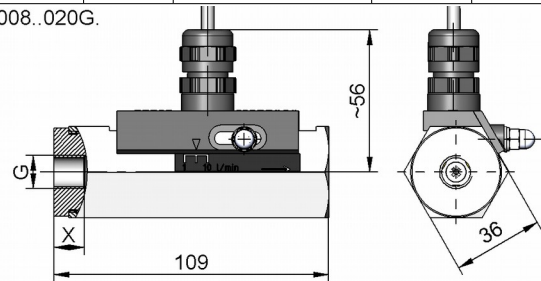
Switching range l/min H <sub>2</sub> O	Optionally Display range l/min H <sub>2</sub> O	Q <sub>max.</sub> recommended	Pressure loss bar at Q <sub>max.</sub> H <sub>2</sub> O
0.4 - 4	0.5 - 5	10	0.4
1.0 - 10	1.0 - 12	20	0.9
5.0 - 20	5.0 - 25	30	0.7
10.0 - 40	5.0 - 40	60	1.9
20.0 - 60	20.0 - 60	80	1.6

Special ranges are available.

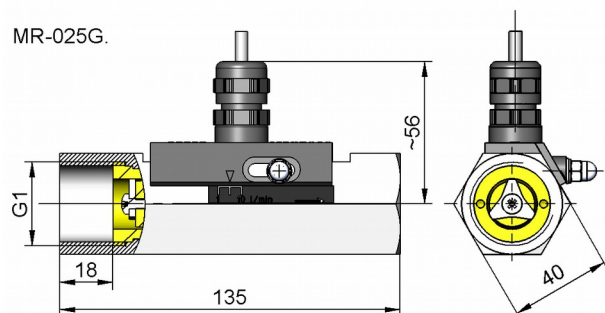
### Dimensions and weights

	G	Types	X	Weight kg
<b>Brass</b>	G 1/4	MR-008GM	12	0.9
	G 3/8	MR-010GM	18	
	G 1/2	MR-015GM		
	G 3/4	MR-020GM	18	1.2
	G 1	MR-025GM		
<b>Stainless steel</b>	G 1/4	MR-008GK	12	0.9
	G 3/8	MR-010GK	18	0.8
	G 1/2	MR-015GK		
	G 3/4	MR-020GK	18	1.1
	G 1	MR-025GK		

MR-008..020G.



MR-025G.



### additional weights for options

Display O1 / Z1      0.04 kg

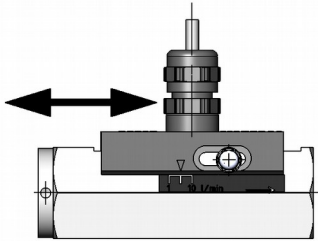
## Handling and Operation

### Note

- Install 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 switch 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

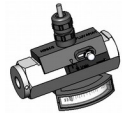
If it is necessary to set the switching value, the switching head can be adjusted lengthways. When the switching value is reached, the switching unit is fixed in place by fastening bolts.



## Ordering code

MR  1.  2.  3. **G** 4.  5.

1.	-	no mechanical display
	O1-	with measurement display at side O1
2.	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
3.	G	female thread
4.	M	
	K	stainless steel
5.	004	
	010	
	020	
	040	
	060	20.0 - 60 l/min



MRO1-

## Options

- Switching values for oil or gas
- Special values
- Connection for round plug connector M12x1
- Additional switching head
- Damping for gas monitoring
- Rhodium contact 250 V AC, 0.5 A, 30 VA

## Ordering information

- Specify direction of flow, medium, and switching range.
- For viscous media specify viscosity, temperature, and medium (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).