

**Product Information**

**MR1K-008..025GM / K**

**Flow Switch MR1K-**

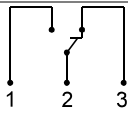
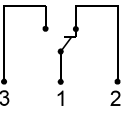


- High switching power
- Compact design

**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..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..1.4 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 optionally PN 500 bar	
<b>Media temperature</b>	-20..+120 °C optionally -20..+150 °C	
<b>Ambient temperature</b>	-20..+70 °C	
<b>Media</b>	water (oils, gases and aggressive media available on request)	
<b>Wiring</b>	changeover no. 0.213  optionally changeover no. 0.282  optionally red or red / green diode in the DIN 43650-A plug	
<b>Switching voltage</b>	max. 175 V DC / 120 V AC	
<b>Switching current</b>	max. 0.25 A DC / 0.18 A AC	
<b>Switching capacity</b>	max. 5 W / VA	
<b>Protection class</b>	2 - safety insulation	
<b>Ingress protection</b>	IP 65	
<b>Electrical connection</b>	plug DIN 43650-A / ISO 4400, optionally round plug connector M12x1, 4-pole	

<b>Materials medium-contact</b>	Brass construction: CW614N nickelled, CW614N, 1.4310, hard ferrite, NBR	Stainless steel construction: 1.4571, 1.4404, 1.4310, hard ferrite PTFE-coated, FKM
<b>Non-medium-contact materials</b>	PA, CW614N, NBR	
<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**

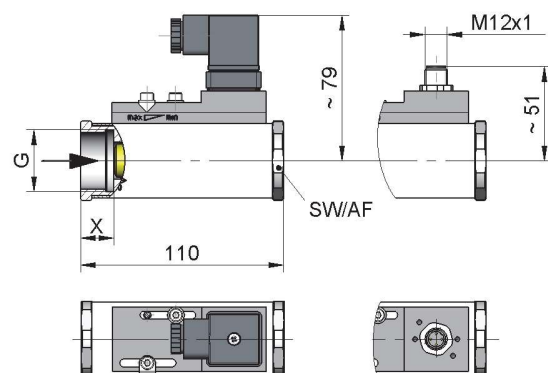
For switching ranges, the details in the table correspond to horizontal inwards flow and decreasing flow rate; for display ranges they correspond to horizontal inwards flow and increasing flow rate.

Switching range l/min H <sub>2</sub> O	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
	O / O1	J		
0.4 - 4	0.5 - 5	0.4 - 4	10	0.6
1.0 - 10	1.0 - 12	1.0 - 10	20	
2.0 - 20	2.0 - 23	2.0 - 20	30	0.4
3.0 - 30	3.0 - 34	3.0 - 30	40	
4.0 - 40	4.0 - 45	4.0 - 40	60	0.8
6.0 - 60	6.0 - 65	6.0 - 60	80	
			80	1.4

Special ranges are available.

**Dimensions and weights**

	G	Types	SW	X	Weight kg
<b>Brass</b>	G 1/4	MR1K-008GM	40	15	1.3
	G 3/8	MR1K-010GM			
	G 1/2	MR1K-015GM		18	1.2
	G 3/4	MR1K-020GM			
	G 1	MR1K-025GM			
<b>Stainless steel</b>	G 1/4	MR1K-008GK	41	15	1.2
	G 3/8	MR1K-010GK			
	G 1/2	MR1K-015GK		18	1.1
	G 3/4	MR1K-020GK			
	G 1	MR1K-025GK			



**Additional weights for options**

Additional switching head	0.09 kg	Display O	0.09 kg
Display O1	0.04 kg	Display J	0.02 kg

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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 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**

MR1K  1.  2.  3. **G** 4.  5.  6.

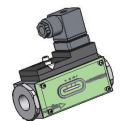
<b>1. Display options</b>	
-	no mechanical display
O1-	with measurement display at side O1
O-	with measurement display at side O
J-	with frontal measurement display J
<b>2. Nominal width</b>	
008	DN 8 - G 1/4
010	DN 10 - G 3/8
015	DN 15 - G 1/2
020	DN 20 - G 3/4
025	DN 25 - G 1
<b>3. Process connection</b>	
G	female thread
<b>4. Connection material</b>	
M	brass
K	stainless steel
<b>5. Switching range H<sub>2</sub>O for horizontal inwards flow</b>	
004	0.4 - 4 l/min
010	1.0 - 10 l/min
020	2.0 - 20 l/min
030	3.0 - 30 l/min
040	4.0 - 40 l/min
060	6.0 - 60 l/min
<b>6. Special switching head</b>	
A	switching head ATEX A- H4.1 / A- H4.2 Please order the switching head for  -use in addition.



MR1K01



MR1K0



MR1KJ



**Options**

- Signal lamp red or red / green in the plug DIN 43650-A
- Connection for round plug connector M12x1
- Reinforced piston
- Additional switching head
- High pressure model PN 500 (only if made of brass)
- Damping for gas monitoring
- SPST N.O.: 250 V DC; 1.5 A; 50 W / 265 V AC; 1.1 A; 50 VA
- Rhodium contact 250 V AC, 0.5 A, 30 VA
- Switching values for oil or gas
- Special values
- Temperature display 0..120 °C
- Shock proof with increased switch hysteresis 250 V AC; 1.5 A; 50 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).