

Flow Switch HM1K

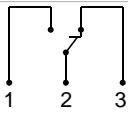
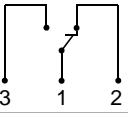
| | | |
|------------------------------|---|---|
| Materials medium-contact | Brass construction: CW614N nickelled, CW614N, 1.4310, hard ferrite, NBR | Stainless steel construction: 1.4571, 1.4404, 1.4310, hard ferrite PTFE-coated, FKM |
| Non-medium-contact materials | PA, CW614N, NBR | |
| Weight | see table "Dimensions and weights" | |
| Installation location | horizontal inwards flow; switching head on top. | |

- i High switching power
- i Compact design

Characteristics

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

Technical data

| | | |
|-----------------------|---|--------------------------------|
| Switch | microswitch | |
| Nominal width | DN 8..25 | |
| Process connection | female thread G 1/4..G 1 (further process connections available on request) | |
| Switching range | 0.1..74 l/min | for details see table "Ranges" |
| Pressure loss | 0.4..1.6 bar at Q _{max.} | |
| Q _{max.} | to 100 l/min | |
| Tolerance | ±5 % of full scale value | |
| Pressure resistance | PN 200 bar | |
| Media temperature | -20..+70 °C | |
| Ambient temperature | -20..+70 °C | |
| Media | water, oil (gases and aggressive media available on request) | |
| Wiring | changeover No. 0.371  optionally changeover No. 0.282  | |
| Switching voltage | max. 250 V AC | |
| Switching current | max. 5 A (round plug connector max. 4A) | |
| Protection class | 2 - safety insulation | |
| Ingress protection | IP 65 | |
| Electrical connection | plug DIN 43650-A / ISO 4400 optionally for round plug connector M12x1, 4-pole | |

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.

Standard type HM1K

| Switching range l/min H ₂ O | Optionally Display range l/min H ₂ O | Q _{max.} recommended | Pressure loss bar at Q _{max.} H ₂ O |
|--|---|-------------------------------|---|
| 0.1 - 0.8 | 0.1 - 1.2 | 6 | 0,4 |
| 0.5 - 4.0 | 0.5 - 6.0 | 10 | 0,5 |
| 1.0 - 8.0 | 1.0 - 12.0 | 20 | 0,6 |
| 2.0 - 16.0 | 2.0 - 23.0 | 30 | 0,4 |
| 3.0 - 26.0 | 3.0 - 34.0 | 40 | |
| 4.0 - 36.0 | 4.0 - 45.0 | 60 | 0,8 |
| 6.0 - 55.0 | 6.0 - 65.0 | 80 | 1,4 |
| 20.0 - 74.0 | 20.0 - 85.0 | 100 | 1,6 |

Special ranges are available.

Dimensions and weights

| | G | Types | SW | X | Weight kg |
|-----------------|-------|-----------|----|----|-----------|
| Brass | G 1/4 | ...-008GM | 40 | 15 | 1.4 |
| | G 3/8 | ...-010GM | | | |
| | G 1/2 | ...-015GM | | | 1.3 |
| | G 3/4 | ...-020GM | | | |
| | G 1 | ...-025GM | | | |
| Stainless steel | G 1/4 | ...-008GK | 41 | 15 | 1.2 |
| | G 3/8 | ...-010GK | | | |
| | G 1/2 | ...-015GK | | | 1.3 |
| | G 3/4 | ...-020GK | | | |
| | G 1 | ...-025GK | | | |

Ordering code

HM 1. 2. 3. G 4. 5.

| | | |
|--|-------------------------------------|---------|
| 1. Display options | | |
| - | no mechanical display | |
| O1- | with measurement display at side O1 | |
| O- | with measurement display at side O | |
| 2. Nominal width | | |
| 008 | DN 8 - G 1/4 | HM.KO1- |
| 010 | DN 10 - G 3/8 | |
| 015 | DN 15 - G 1/2 | |
| 020 | DN 20 - G 3/4 | |
| 025 | DN 25 - G 1 | |
| 3. Process connection | | |
| G | female thread | HM.KO- |
| 4. Connection material | | |
| M | brass | |
| K | stainless steel | |
| 5. HM1K - switching range H ₂ O for horizontal inwards flow | | |
| 001 | 0.1 - 0.8 l/min | |
| 004 | 0.5 - 4.0 l/min | |
| 008 | 1.0 - 8.0 l/min | |
| 016 | 2.0 - 16.0 l/min | |
| 026 | 3.0 - 26.0 l/min | |
| 036 | 4.0 - 36.0 l/min | |
| 055 | 6.0 - 55.0 l/min | |
| 074 | 20.0 - 74.0 l/min | |

Handling and operation

Note

- ì Include straight calming section of 5 x DN in inlet and outlet
- ì If the media are dirty, install a filter (use magnetic filter for ferritic components).
- ì It must be ensured that the values given for voltage, current, and power are not exceeded.
- ì When switch on, a load must be connected in series.
- ì The electrical details apply to ohmic loads. Capacitive and inductive loads must be operated using a protective circuit.

Adjustment

If it is necessary to set the switching value, the switching head can be adjusted by adjustment of a pinion. When the switching value is reached, the switching unit is fixed in place by a fastening bolt (SW 8).

Options

- ì Signal lamp red or red / green in the plug DIN 43650-A
- ì Gold contact
- ì Reinforced piston (only if made of brass)
- ì Connection for round plug connector M12x1
- ì Adjustment scale with markings in l/min
- ì Switching values for oil or gas
- ì Special values
- ì Temperature display 0..120 °C

Ordering information

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