

Flow switch HR2VK1



- Optimized for use with oil
- Viscosity stabilised
- Solid construction

Characteristics

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

Technical data

| | | |
|----------------------------|--|--------------------------------|
| Switch | reed switch | |
| Nominal width | DN 32 / 40 / 50 | |
| Process connection | female thread G 1 $\frac{1}{4}$..G 2 (further process connections available on request) | |
| Switching range | 10..120 l/min | for details see table "Ranges" |
| Pressure loss | ~ 4..7 bar at Q _{max} | |
| Q_{max} | up to 160 l/min | |
| Tolerance | ±10 % of full scale value at constant viscosity | |
| Viscosity-stability | mean deviation ±7 %, max. 18 % (20-330 mm ² /s) of full scale value | |
| Pressure resistance | PS 200 bar | |
| Media temperature | -20..+120 °C | |
| Ambient temperature | -20..+70 °C | |
| Media | oil | |

| | | |
|-------------------------------------|--|--|
| Wiring | transformer No. 0.213 | |
| | optionally transformer No. 0.282 | |
| | optionally red or red/green signal lamp in the plug DIN 43650-A / ISO 4400 | |
| Switching voltage | max. 250 V AC | |
| Switching current | max. 1.5 A | |
| Switch performance | max. 50 VA | |
| Protection class | 2 - Safety insulation | |
| Ingress protection | IP 65 | |
| Electrical connection | plug DIN 43650-A / ISO 44000, optionally round plug connector M12x1, 4-pole | |
| Materials medium-contact | <i>Brass construction:</i> CW614N nickelled, CW614N, 1.4305, 1.4310, hard ferrite | <i>Stainless steel construction:</i> 1.4571, 1.4310, hard ferrite |
| Non-medium-contact materials | CW614N nickelled, PC, PA, NBR, 1.4301, CW508L nickelled, | |
| Weight | see table "Dimensions and weights" | |
| Installation location | Standard: horizontal inwards flow from the left; other installation positions are possible; the installation position affects the switching point and range. | |

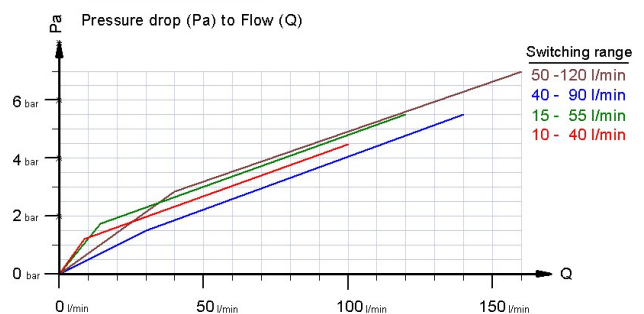
Ranges

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 oil 30-330 mm ² /s | Display range l/min oil 30-330 mm ² /s | Q _{max} . Recom- mended l/min | Pressure loss bar at Q _{max} . oil |
|---|---|---|--|
| 10 - 40 | 10 - 60 | 100 | 4 |
| 15 - 55 | 20 - 100 | 120 | 5 |
| 40 - 90 | 40 - 120 | 140 | 5 |
| 50 - 120 | 50 - 150 | 160 | 7 |

Special ranges are available.

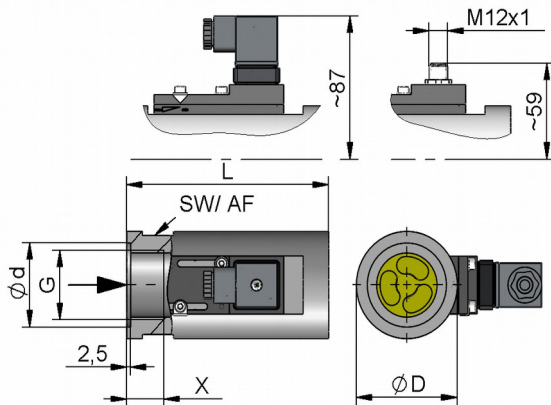
Reference Data:



... professional Instruments "MADE IN GERMANY"

Dimensions and weights

| DN | G | Types | L | ØD | SW | Ød | X | Weight kg |
|----|---------------------------------|--------------|-----|----|----|----|----|--------------|
| 32 | G 1 ¹ / ₄ | HR2VK1-032GM | 130 | 65 | 60 | 51 | 23 | 2.6 |
| 40 | G 1 ¹ / ₂ | HR2VK1-040GM | 170 | 80 | 75 | 56 | 24 | 3.2 |
| 50 | G 2 | HR2VK1-050GM | 185 | 80 | 75 | 70 | 26 | 5.3 |



additional weights for options

Display O1 / Z1 0.05 kg

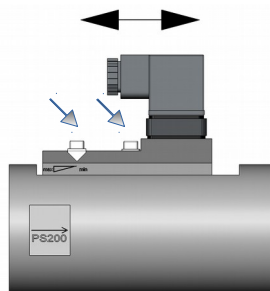
Handling and Operation

Note

- Include straight calming section of 5 x DN in inlet and outlet
- If the media are dirty, install a filter (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.
- Under unfavorable pressure conditions, e.g. with a free outlet, there is a risk of cavitation.
- 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

HR2VK1 1. 2. 3. 4. 5. 6.
 G

| | |
|--|--|
| 1. Display options | |
| - | no mechanical display |
| O1- | with measurement display at side O1 |
| Z1- | with frontal measurement display Z1 |
| 2. Nominal width | |
| 032 | DN 32 - G 1 ¹ / ₄ |
| 040 | DN 40 - G 1 ¹ / ₂ |
| 050 | DN 50 - G 2 |
| 3. Process connection | |
| G | female thread |
| 4. Connection material | |
| M | brass |
| K | stainless steel |
| 5. Switching range H₂O for horizontal inwards flow | |
| 040 | 10 - 40 l/min |
| 055 | 15 - 55 l/min |
| 090 | 40 - 90 l/min |
| 120 | 50 - 120 l/min |
| 6. Special switching head | |
| A | switching head ATEX A- H4.1 / A- H4.2 Please order the switching head for  -use in addition. |



HR2VK1O1-



HR2VK1Z1-



Options

- Special values
- Signal lamp red or red/green
- Connection for round plug connector M12x1
- Rhodium contact 250 V AC, 0.5 A, 30 VA
- Two to four switching heads

Ordering information

- Specify direction of flow, medium, and switching range.