

**Product Information**

**Flow switch  
HR2VK1**



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

**Characteristics**

Mechanical flow switch for fluid 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 32 / 40 / 50	
<b>Process connection</b>	female thread G 1 1/4..G 2 (further process connections available on request)	
<b>Switching range</b>	10..120 l/min	for details see table "Ranges"
<b>Pressure loss</b>	~ 4..7 bar at Q <sub>max</sub>	
<b>Q<sub>max</sub></b>	up to 160 l/min	
<b>Tolerance</b>	±10 % of full scale value at constant viscosity	
<b>Viscosity-stability</b>	mean deviation ±7 %, max. 18 % (30-330 mm <sup>2</sup> /s) of full scale value	
<b>Pressure resistance</b>	PS 200 bar	
<b>Media temperature</b>	-20..+120 °C	
<b>Ambient temperature</b>	-20..+70 °C	
<b>Media</b>	oil	

<b>Wiring</b>	transformer No. 0.213	
	optionally transformer No. 0.282	
	optionally red or red/green signal lamp in the plug DIN 43650-A / ISO 4400	
<b>Switching voltage</b>	max. 250 V AC	
<b>Switching current</b>	max. 1.5 A	
<b>Switch performance</b>	max. 50 VA	
<b>Protection class</b>	2 - Safety insulation	
<b>Ingress protection</b>	IP 65	
<b>Electrical connection</b>	plug DIN 43650-A / ISO 44000, optionally round plug connector M12x1, 4-pole	
<b>Materials medium-contact</b>	<i>Brass construction:</i> CW614N nickelled, CW614N, 1.4305, 1.4310, hard ferrite	<i>Stainless steel construction:</i> 1.4571, 1.4310, hard ferrite
<b>Non-medium-contact materials</b>	CW614N nickelled, PC, PA, NBR, 1.4301, CW508L nickelled,	
<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.	

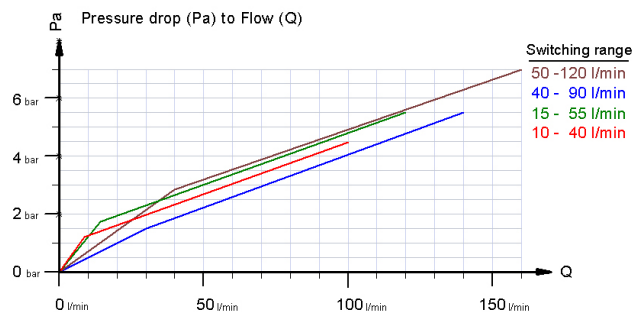
**Ranges**

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 oil 30-330 mm <sup>2</sup> /s	Display range l/min oil 30-330 mm <sup>2</sup> /s	Q <sub>max</sub> . Recom- mended l/min	Pressure loss bar at Q <sub>max</sub> . 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.

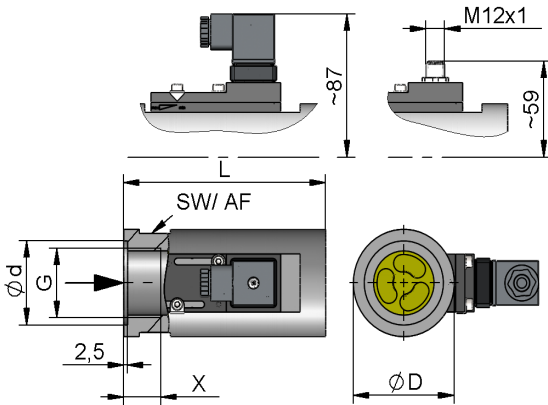
**Reference Data:**



**Product Information**

**Dimensions and weights**

DN	G	Types	L	ØD	SW	Ød	X	Weight kg
32	G 1¼	HR2VK1-032GM	130	65	60	51	23	2.6
40	G 1½	HR2VK1-040GM	170			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

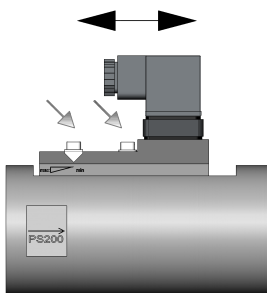
**Handling and Operation**

**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        

<b>1. Display options</b>	
-	no mechanical display
O1-	with measurement display at side O1
Z1-	with frontal measurement display Z1
<b>2. Nominal width</b>	
032	DN 32 - G 1¼
040	DN 40 - G 1½
050	DN 50 - G 2
<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>	
040	10 - 40 l/min
055	15 - 55 l/min
090	40 - 90 l/min
120	50 - 120 l/min
<b>6. Special switching head</b>	
A	switching head ATEX A- H4.1 / A-H4.2 Please order the switching head for



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.