Senseca Germany GmbH
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Flow switch HR2VK1

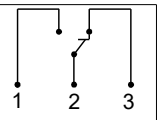
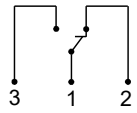
- **Optimized for use with oil**
- **Viscosity stabilised**
- **Solid construction**

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

Switch	reed switch	
Nominal width	DN 32 / 40 / 50	
Process connection	female thread G $1^1/_4$..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 mm²/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	*Brass construction*: CW614N nickelled, CW614N, 1.4305, 1.4310, hard ferrite	*Stainless steel construction: 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.	

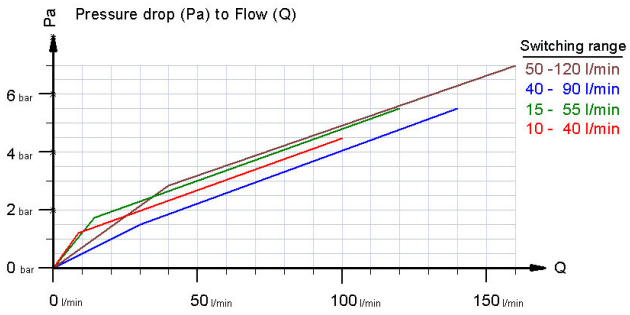
Ranges

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 mm²/s	**Display range** l/min oil 30-330 mm²/s	**$Q_{max.}$** Recommended 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:



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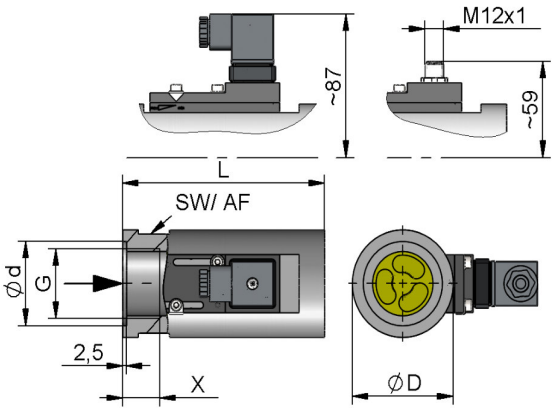
Product Information

HR2VK1-032..050

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

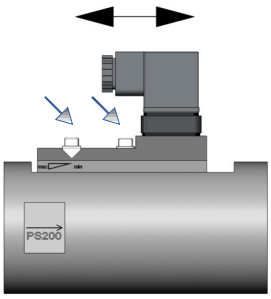
Handling and Operation

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. **G** 4. 5. 6.

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 1¼
	040	DN 40 - G 1½
	050	DN 50 - G 2
3.	**Process connection**	
	G	female thread
4.	**Connection material**	
	M	brass
	K	stainless steel
5.	**Switching range H_2O 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 Ex -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.