

Flow switches // VK3 // Flow monitoring of liquids

For insertion installation into copper pipes



VK3



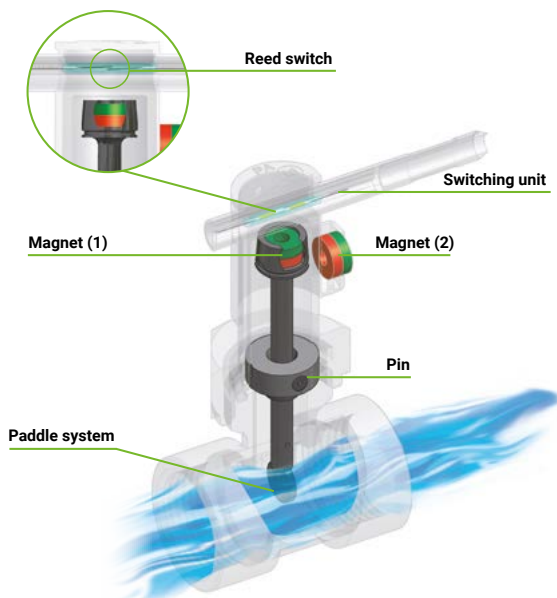
Features

- Magnetic principle without mechanical wear
→ **very durable**
- Reed switch designed for a large number of switching cycles (typically 5 million) → **very long life cycle**

- Robust paddle made of round material → **able to resist water hammers and greater flow velocities**

The switching unit makes the difference

- Reed switch and connecting cable are overmoulded instead of potted
→ **more stability, increased operational safety**
→ **improved strain relief**
→ **less sensitive to bending of the connecting cable**



SIKA switching unit



Market standard



Principle

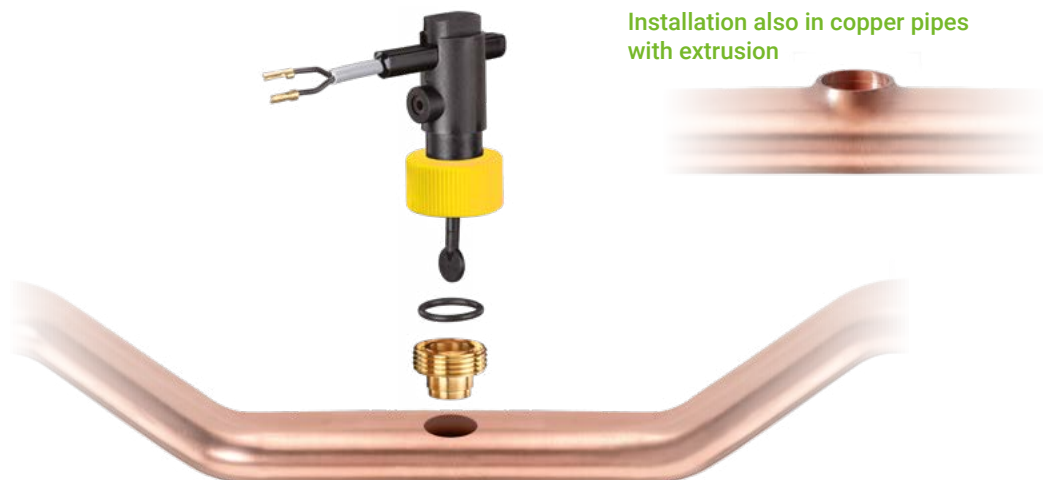
- Flow directs the paddle
- Magnet (1) actuates the reed switch
- Paddle reset through magnet force (magnet 1+2)
→ **No spring-based paddle system**

Switching function

- Contact closes with increasing flow rate
- Contact opens with decreasing flow rate

Quality

- 100% individual setpoint setting
→ **to compensate part tolerances**
- 100% test of the electric switching function
- 100% recording of test data
- Sample inspection setpoint in the water test bench
- 100% traceability via batch number
- OEM product, developed and manufactured in Germany
- Significant test reports available, e.g. for endurance test and temperature test



Installation also in copper pipes
with extrusion

For copper pipe

- Ø 22...54 mm
- Bore hole, 15mm Ø, with or without extrusion

Colour coding for copper pipe diameter



Insertion installation in 4 steps

1. Solder in the solder adapter
2. Insert the O-ring
3. Insert and align the flow switch
4. Tighten the union nut

Scope of delivery

- Flow switch (❶)
- O-ring (❷)
- Soldering adapter (❸)



Adaptations for serial customers

- You provide us with your pipeline or installation section
- We qualify the flow switch and the installation under original conditions
- We carry out optimisations, e.g. for hydraulically difficult conditions (influence of pipe bend, pump, heat exchanger)
- We set the desired set point and the switching function
- You receive a test report
- For the electrical connection, we comply with your wishes regarding cable and plug.

Technical drawing // Article numbers

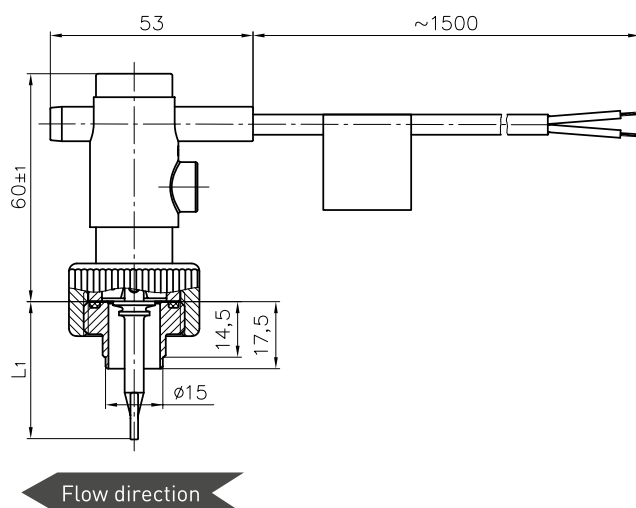
Technical data	
Switching function	Contact → closes at increasing flow → opens at decreasing flow
Pressure rating	PN 10
Temperature ranges	
Medium	-25...100 °C
Ambient	-25...70 °C
Electrical data	
Electrical connection	1.5 m PVC jacket cable
Switching current	Max. 1 A
Switching voltage	Max. 230 VAC, 48 VDC
Rating	Max. 26 VA, 20 W
Degree of protection EN 60529	IP65
Protection class EN 60730-1	Class II
Approvals	
  Bauart geprüft Sicherheit Regelmäßige Produktions- überwachung www.tuv.com ID 1111219366	

Options
On request
→ Special setpoints
→ Reversed switching function
→ Recognized component ETL according to UL & CSA standards

Technical data							
Type	Color union nut	For copper pipes	Paddle length L ₁ [mm]	Setpoints [l/min]* (typical value)		Max. flow rate [l/min]	Order number
				Increasing flow ON	Decreasing flow OFF		
VK320	● red	Ø 22x1	33.5	10.5	9.2	100	VK320M0P10PD11
VK325	● black	Ø 28x1	36.0	17.6	15.7	150	VK325M0P10PD11
		Ø 32x1		25.7	23.6	155	
VK332	● blue	Ø 35x1.5	44.5	20.0	17.5	160	VK332M0P10PD11
VK340	● yellow	Ø 42x1.5	47.5	28.0	25.8	300	VK340M0P10PD11
VK350	● green	Ø 54x1.5	56.5	58.3	50.2	400	VK350M2P10PD11

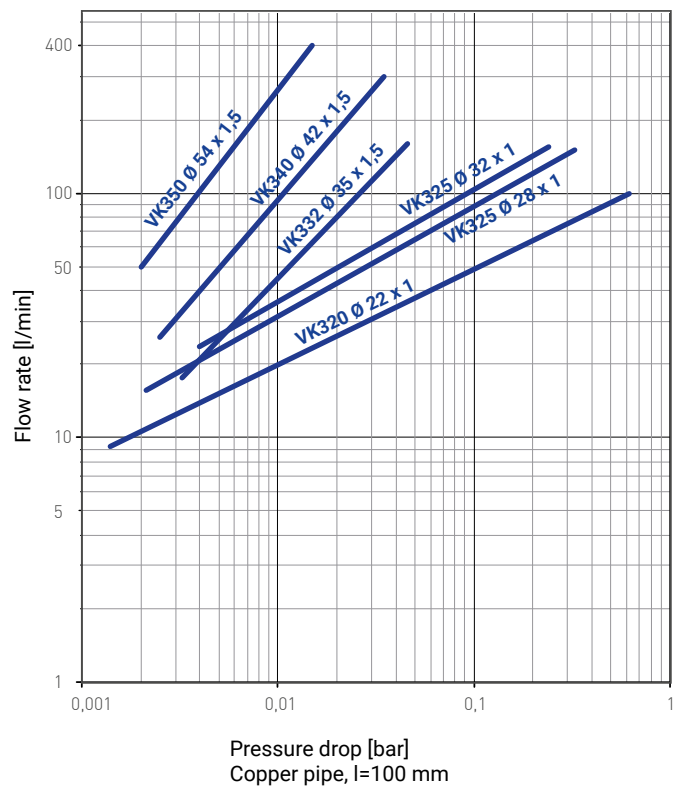
* Water, 20 °C, horizontal pipe, tolerance ±15 %

Technical drawing



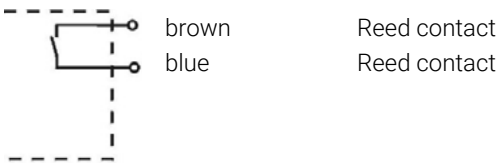
Pressure drop // Materials // Wiring

Typical pressure drop



Materials in contact with fluid	
Body	PPE+PS Noryl™ 30 % glass fibre reinforced
Paddle	PPE+PS Noryl™ 30 % glass fibre reinforced
Soldering adapter	Brass CW617N
Magnet	Hard ferrite
O-ring	NBR

Wiring



Article numbers // Service

Service - Adjustment of switching point and switching function according to customer specification and test in test bench	Order number
You provide us with your pipeline and installation section. We test it on our test bench, adjust the switching point as well as the switching function according to customer specification and create a test report. This ensures higher operational reliability of your device and makes installation in your production particularly easy, as you do not have to make any adjustments.	VSKTESTREPORT01

Flow switches // SIKA range of services

Flow switches are used for monitoring fluid media. Depending on the individual requirements, they are available for different nominal diameters and setpoint ranges.

Thanks to the modular design, product versions and options for various applications can be set up. The further temperature and pressure ranges as well as the selection of materials or diverse connection options offer a high level of flexibility.

Therefore, SIKA flow switches are used in many different areas:

- Heating technology, heat pumps
- Industrial cooling circuits
- Water technology
- Potable water applications

Flow switch variations

Process connection

Insertion installation



for copper pipe
Ø 22...54



DN 20...DN 200



Push-In



DN 50...DN 150



for copper pipe
Ø 32...88.9

Pipe tee



DN 8...DN 50



DN 8...DN 50

Electrical connection



Plug connector DIN EN 175301-803-A
with cable socket



Plug connector DIN EN 175301-803-A with
cable socket, optical display of flow and
supply voltage by 2 LEDs for switching
voltages 24...230 V AC / DC



Sensor plug M12 x 1, 4 pin,
acc. to IEC 947-5-2



Connection cable 1.5 m