



# Positive Displacement Flow Sensor

## Series VZ...AL-S

**SIKA**<sup>®</sup>  
founded 1901  
Dr. Siebert & Kühn GmbH & Co. KG



# SIKA Positive Displacement Flow Sensor, Series VZ...AL-S

## Affordable – Quality – Precision

### SIKA VZ...AL can be used for:

- Flow rate measurements
- Consumption measurements
- Dosing applications

The SIKA gear wheel flow sensors are high-precision measuring sensors for measuring volumetric flow. As they work using positive displacement, they are designed for measuring viscous, lubricating fluids such as oils. The flow sensor is not suitable for measuring water.

By using certain materials such as anodised aluminium, we have succeeded in developing an excellently priced series of devices which use the tried-and-tested gear wheel process, and which are ideal for all standard applications.

### Functional description

The flowing medium causes the precision gear wheels to rotate proportional to the flow rate.

A non-contact pick-up measures the wheel rotation. As every tooth produces a pulse, the sensor's resolution is extremely high and even minimum volumes can be measured.

The frequency produced is proportional to the rate of flow.

The VZ 0,2 AL-S has a 2 channel output signal with a 90° phase shift. For standard applications the read out of one channel is sufficient. In case the flow direction should be determined, both channels must be read.

### Technical data

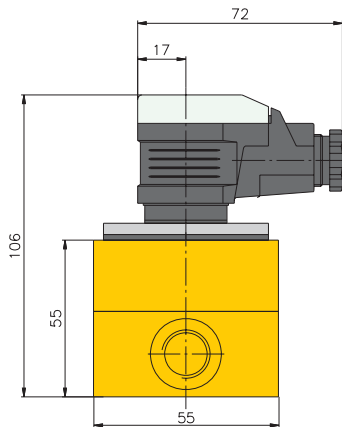
Size / Type	VZ 0,04 AL-S	VZ 0,2 AL-S	VZ 2 AL-S	VZ 5 AL-S
Measuring range	0,02...4 l/min	0,16...16 l/min	1...65 l/min	1...200 l/min
Viscosity of the medium	20...4000 mm <sup>2</sup> /s (20...4000 cSt)	1...3000 mm <sup>2</sup> /s (1...3000 cSt)	20...4000 mm <sup>2</sup> /s (20...4000 cSt)	20...4000 mm <sup>2</sup> /s (20...4000 cSt)
Measuring accuracy	±2 % of reading	±1 % of reading	±2,5 % of reading	±1 % of reading
Max. pressure rating	200 bar	160 bar	160 bar	80 bar
Max. pressure peaks	240 bar	200 bar	200 bar	100 bar
Max. temperature of medium	+80°C			
Thread connection	G <sup>1</sup> / <sub>4</sub>	G <sup>3</sup> / <sub>8</sub>	G <sup>3</sup> / <sub>4</sub>	G1
Weight	0,5 kg	0,7 kg	1,9 kg	6 kg
Volume per pulse	0,04 cm <sup>3</sup>	0,245 cm <sup>3</sup>	2 cm <sup>3</sup>	5,222 cm <sup>3</sup>
Number of output channels	1	2	1	1
Output signal	Square wave pulse signal PNP, pulse duty ratio 1:1 ±15 % 25 000 pulse/liter 0,04 ml/pulse	Square wave pulse signal PNP, pulse duty ratio 1:1 ±15 % 4 082 pulse/liter 0,245 ml/pulse	Square wave pulse signal PNP, pulse duty ratio 1:1 ±15 % 500 pulse/liter 2 ml/pulse	Square wave pulse signal PNP, pulse duty ratio 1:1 ±15 % 191,5 pulse/liter 5,2 ml/pulse
Indication	Cable socket with one LED for pulse signal	Cable socket with two LED for pulse signal (two channels)	Cable socket with one LED for pulse signal	Cable socket with one LED for pulse signal
Electrical connection	Plug connector similar DIN 43650, Form A, incl. cable socket			
Power supply	12...30 V DC reverse polarity protection			
Output current	0,6 W short circuit proofed	0,9 W short circuit proofed	0,6 W short circuit proofed	0,6 W short circuit proofed
Protection class	IP 65 (DIN 40050)			

## Materials

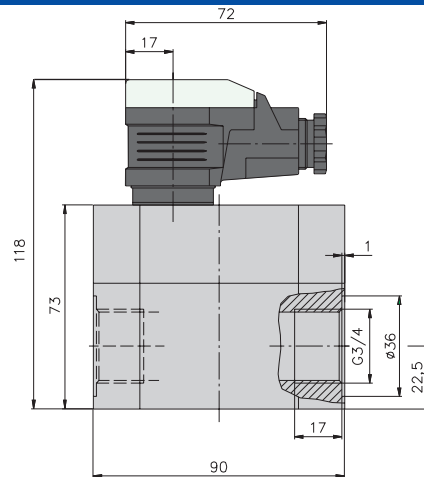
	VZ 0,04 AL-S	VZ 0,2 AL-S	VZ 2 AL-S	VZ 5 AL-S
Housing	Aluminium AlMgSi F30 (hard coated)	Aluminium (gold-color anodised)	Aluminium AlMgSi F30 (hard coated)	Aluminium AlMgSi F30 (hard coated)
Gear wheels	Stainless steel 1.4462	Steel 16 MnCr5 hardened	Steel 1.7139	Steel 1.7139
Bearing	Ball bearing	Ball bearing (stainless steel)	Sleeve bearing (P10)	Ball bearing
Seals	Viton			

## Dimensions\*

### VZ 0,2 AL-S

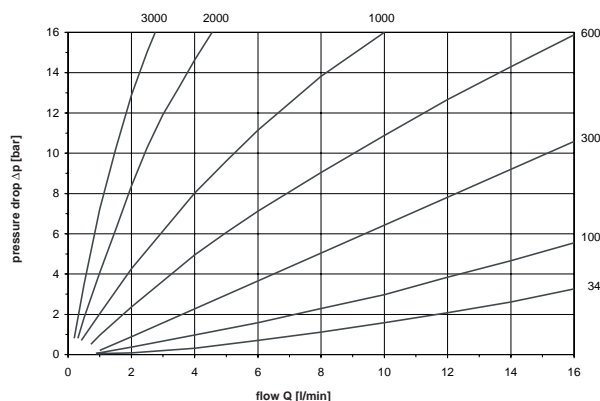


### VZ 2 AL-S

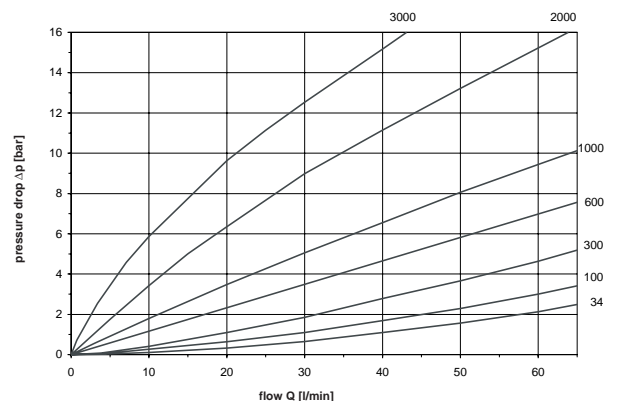


## Pressure drop\*

### VZ 0,2 AL-S



### VZ 2 AL-S



## Order code

Order number:	VZ	XX	0ALV31I00S
Size / type	VZ 0,04 AL-S	N4	
	VZ 0,2 AL-S	02	
	VZ 2 AL-S	20	
	VZ 5 AL-S	50	

\* Publication of dimensions and pressure drop of VZ 0,04 AL-S and VZ 5 AL-S to a later moment

# Our Production and Sales Range



Flow Sensors without moving Parts



Axial Turbine Flow Sensor



Flow Switches



Pressure Gauges and Pressure Sensors



Industrial Thermometers



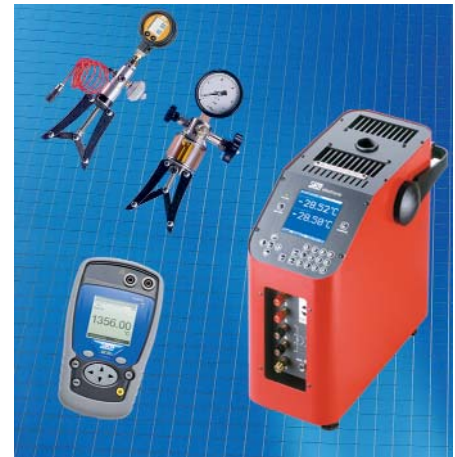
Electronic Digital Thermometer, Dial Thermometer



Measuring Instruments



Temperature Sensors



Calibrators, DKD-Laboratory

## Your able partner for measurement and control

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founded 1901  
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...measurement...control...calibration

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Subject to technical modification

