



Positive Displacement Flow Sensors

Series VZ...AL-S

SIKA[®]
founded 1901
Dr. Siebert & Kühn GmbH & Co. KG



Positive Displacement Flow Sensors

Affordable - Quality - Precision!

Functional description

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. 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 even 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.

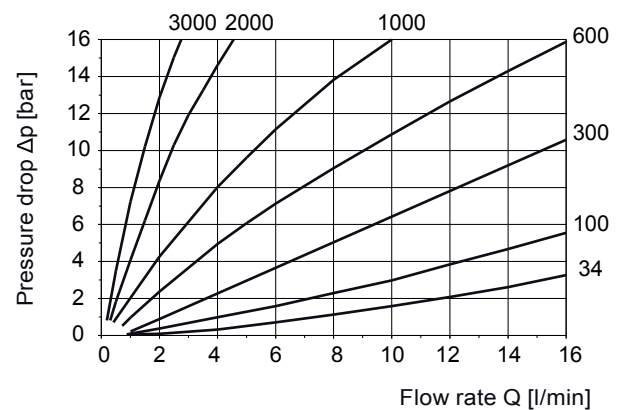
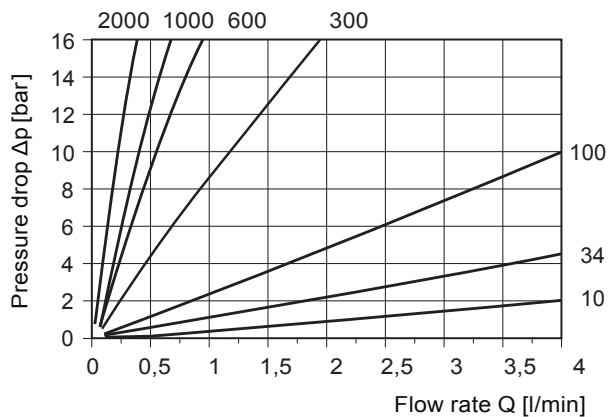
Technical data

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 medium	20...4000 mm²/s	1...3000 mm²/s	20...4000 mm²/s	20...4000 mm²/s
Measuring accuracy	±2 % of reading	±1 % of reading	±2.5 % of reading	±1 % of reading
Pressure rating	Max. 200 bar	Max. 160 bar	Max. 160 bar	Max. 80 bar
Pressure peaks	Max. 240 bar	Max. 200 bar	Max. 200 bar	Max. 100 bar
Temperature of medium	-10...80 °C			
Thread connection	¼" BSP female	⅜" BSP female	¾" BSP female	1" BSP female
Weight	0.5 kg	0.7 kg	1.9 kg	6 kg
Volume per pulse	0.04 cm³	0.245 cm³	2 cm³	5.222 cm³
Number of output channels	1	2	1	1
Output signal - signal shape - pulse rate - resolution	Square wave, pulse signal, PNP, pulse duty ratio 1:1 ±15 % 25000 pulses/litre 0.04 ml/pulse	Square wave, pulse signal, PNP, pulse duty ratio 1:1 ±15 % 4082 pulses/litre 0.245 ml/pulse	Square wave, pulse signal, PNP, pulse duty ratio 1:1 ±15 % 500 pulses/litre 2 ml/pulse	Square wave, pulse signal, PNP, pulse duty ratio 1:1 ±15 % 191.5 pulses/litre 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 EN 175301-803-A, incl. cable socket			
Power supply	12...30 VDC reverse polarity protection			
Power input	0.6 W short circuit proof	0.9 W short circuit proof	0.6 W short circuit proof	0.6 W short circuit proof
Protection class	IP 65			

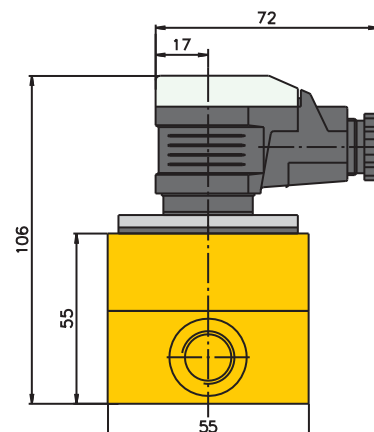
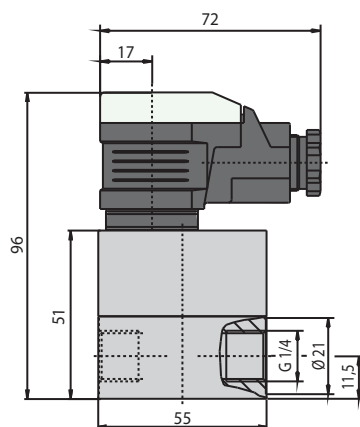
Material

	VZ 0.04 AL-S	VZ 0.2 AL-S
Housing	Aluminium AlMgSi F30 (hard coated)	Aluminium, gold-color anodised
Gear wheels	Stainless steel 1.4462	Steel 16 MnCr5, gehärtet
Bearings	Ball bearings	Ball bearings stainless steel
Seals	FKM	FKM

Pressure drop



Dimensions



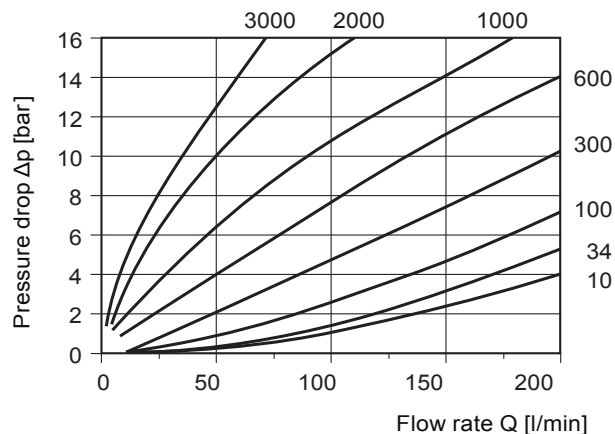
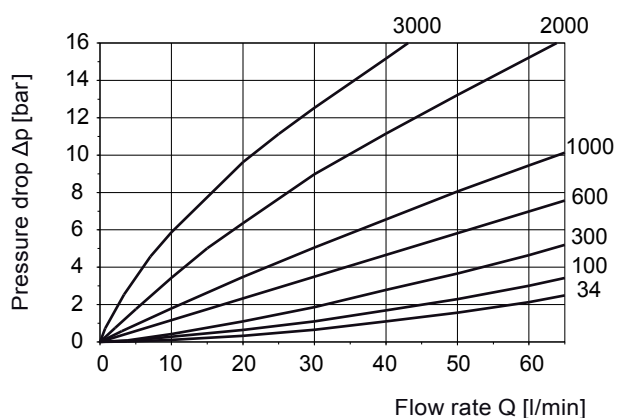
Order number

VZ 0.04 AL-S	VZ 0.2 AL-S
VZ004ALV31I00S	VZ020ALV31I00S

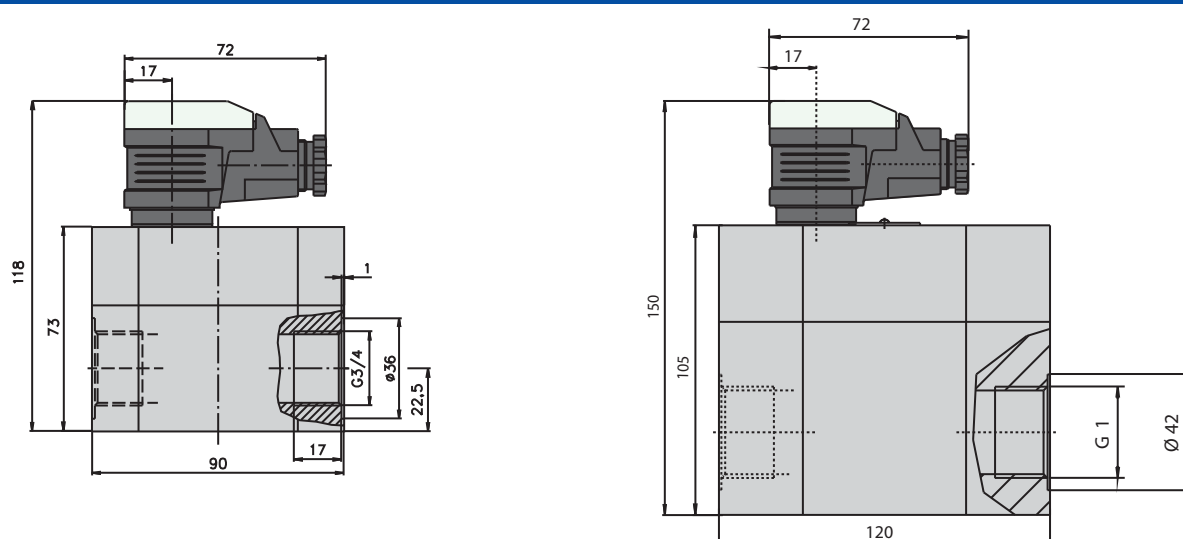
Material

	VZ 2 AL-S	VZ 5 AL-S
Housing	Aluminium AlMgSi F30 (hard coated)	Aluminium AlMgSi F30 (hard coated)
Gear wheels	Steel 1.7139	Steel 1.7139
Bearings	Sleeve bearings (P10)	Ball bearings
Seals	FKM	FKM

Pressure drop



Dimensions



Order number

VZ 2 AL-S	VZ 5 AL-S
VZ200ALV31I00S	VZ500ALV31I00S

Local Display Unit

TD 8250 - faster installation!



Functional description



The SIKA TD 8250 local display unit is simply fitted between the connector plug and the cable socket of the SIKA VZ... positive displacement flow sensor. It is programmable via two buttons which are located behind the front panel. It can be set to display either the actual flow rate or the total volume (counter function), as required. The TD 8250 is available in three different output signal versions:

- pulse output
(2-channel, depending on volume sensor)
- analogue output 0/4...20 mA
- two alarm contacts

It is also easy to retrofit onto existing flow sensors. To do this, merely remove the amplifier board from the cable socket.

Technical data	
Signal input	Pulse signal from flow sensor
Programming	via 2 buttons, data retention on power failure
Display	Four-digit LED display, red, 7.6 mm high
Supply voltage	18...28 VDC, optional 10...19 VDC
Current consumption	max. 120 mA
Ambient temperature	0...60 °C
Storage temperature	-25...85 °C
Output signals	pulse output (2-channel, depending on volume sensor) or analogue output 0/4...20 mA or 2 alarm contacts max. 24 VDC / 1 A
Housing	Aluminium, 60 x 35 x 60 (WxHxD) without plug connector
Weight	approx. 120 g
Protection class	IP 65
Electrical connection	Plug connector EN 175301-803-A, 4-pin

Order code

Order number	ED825	X	X	0
Output signals	pulse output analogue output 0/4...20 mA two alarm contacts	F A R		
Supply voltage	18...28 VDC 10...19 VDC		6 5	

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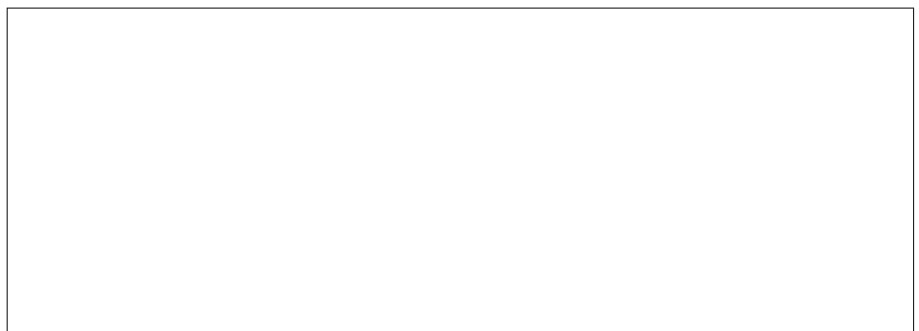
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Subject to technical modification



VZ AL-S_e/1109