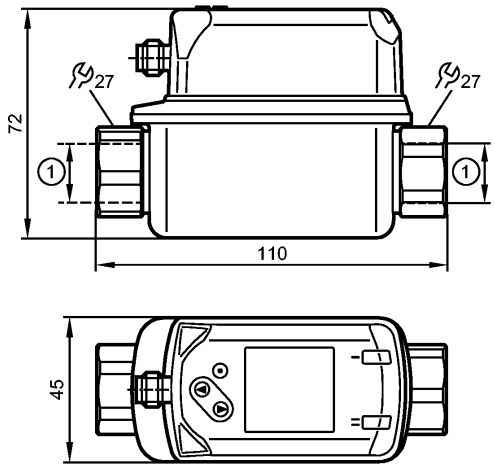
SV4500

SVK12XXXIRKG/US-100

Flow sensors



1: Rc ½
DN 8

Product characteristics

Vortex flow meter

DN 8

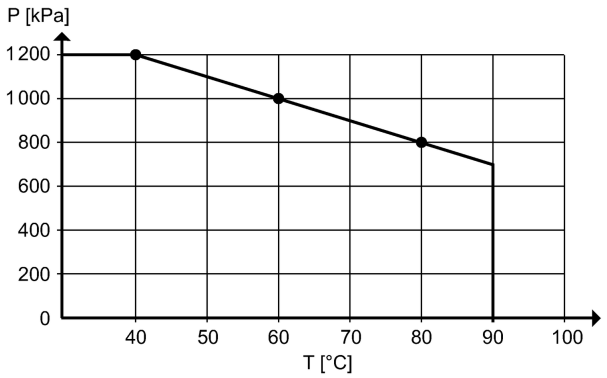
Process connection: Rc ½

Measuring range

1...20 l/min

-10...90 °C

Application

Application	Liquids of the fluid group 2 according to the Pressure Equipment Directive (PED): Water, deionised water, cooling water
Pressure rating [bar]	

Pressure rating	[bar]	12; (up to 40 °C)
Medium temperature	[°C]	-10...90

Electrical data

Electrical design		DC PNP/NPN
Operating voltage	[V]	18...30 DC
Current consumption	[mA]	< 30
Insulation resistance	[MΩ]	> 100 (500 V DC)
Protection class		III
Reverse polarity protection		yes

Outputs

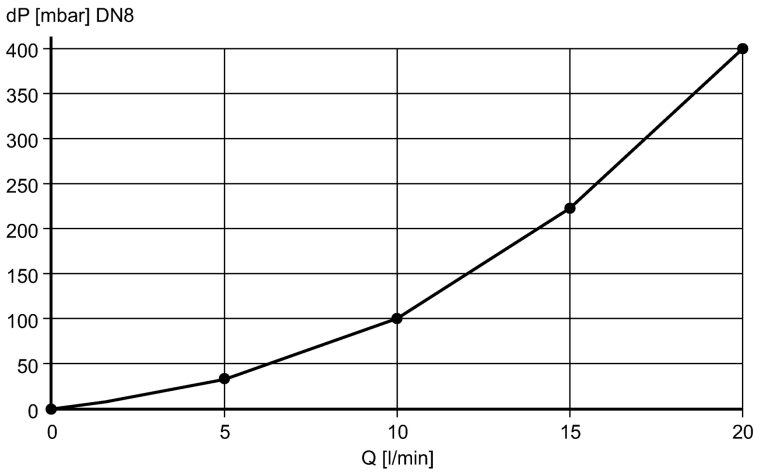
Output function	OUT1: normally open / normally closed programmable or frequency or IO-Link OUT2: normally open / normally closed programmable or frequency

Current rating	[mA]	100	
Voltage drop	[V]	2.5	
Short-circuit protection		yes	
Overload protection		yes	

Measuring / setting range

Flow monitoring			
Measuring range		1...20 [l/min]	0.06...1.2 [m³/h]
Display range		0...24 [l/min]	0...1.44 [m³/h]
Resolution		0.1 [l/min]	0.005 [m³/h]
Set point, SP		1.2...20 [l/min]	0.07...1.20 [m³/h]
Reset point, rP		1.0...19.8 [l/min]	0.06...1.19 [m³/h]
Frequency end point, FEP		4...20 [l/min]	0.24...1.2 [m³/h]
in steps of		0.1 [l/min]	0.005 [m³/h]
Frequency at the end point, FrP	[Hz]	100...1000	
Measuring dynamics		1:20	
Temperature monitoring			
Measuring range	[°C]	-10...90	
Display range	[°C]	-30...110	
Resolution	[°C]	0.5	
Set point, SP	[°C]	-9...90	
Reset point, rP	[°C]	-10...89	
Frequency start point, FSP	[°C]	-10...70	
Frequency end point, FEP	[°C]	10...90	
in steps of	[°C]	0.5	
Frequency at the end point, FrP	[Hz]	100...1000	

Accuracy / deviations

Flow monitoring		
Accuracy		± 2 % MEW
Repeatability		± 0.5 % MEW
Pressure loss (dP) / flow rate (Q)		
Temperature monitoring		
Accuracy	[K]	± 1

Reaction times

Power-on delay time	[s]	< 3
Flow monitoring		

Response time	[s]	< 1 (dAP = 0)
Damping, dAP	[s]	0...5
Temperature monitoring		
Response time	[s]	T09 = 6
Software / programming		
Programming options		hysteresis / window function; NO / NC; output polarity; frequency output; on delay, off delay; damping; display unit
Interfaces		
IO-Link Device		
Transfer type		COM2 (38.4 kBaud)
IO-Link revision		1.1
SDCI standard		IEC 61131-9
IO-Link Device ID		484 d / 00 01 E4 h
Profiles		Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis
SIO mode		yes
Required master port class		A
Process data analogue		2
Process data binary		2
Min. process cycle time	[ms]	3
Environment		
Ambient temperature	[°C]	0...60, at max. 80 °C medium temperature (0...50 °C at max. 90 °C medium temperature)
Storage temperature	[°C]	-20...80
Protection		IP 65 / IP 67
Tests / approvals		
Pressure equipment directive		sound engineering practice
EMC		DIN EN 61000-6-2 DIN EN 61000-6-3
Shock resistance		DIN EN 60068-2-27 — 5 g (11 ms)
Vibration resistance		DIN EN 60068-2-6 — with water 10...50 Hz: 1 mm with water 50...2000 Hz: 2 g
UL approval number		I001
Mechanical data		
Process connection		Rc ½
Materials (wetted parts)		stainless steel (316L / 1.4404); ETFE; PA 6T; PPS; FKM
Housing materials		stainless steel (316L / 1.4404); PC; PBT+PC-GF 30; PPS; TPE-U
Tightening torque	[Nm]	30
Weight	[kg]	0.433
Electrical connection		
Connection		M12 connector; gold-plated contacts

Wiring

SV4500

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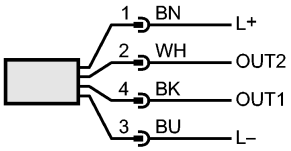
Flow sensors

Core colors	
BK	black
BN	brown
BU	blue
WH	white



OUT1: Flow monitoring
- Switching output
- Frequency output
- IO-Link

OUT2: flow monitoring and temperature monitoring
- Switching output
- Frequency output

Colours to DIN EN 60947-5-2

Remarks

Remarks	MW = measured value MEW = final value of the measuring range
Pack quantity [piece]	1