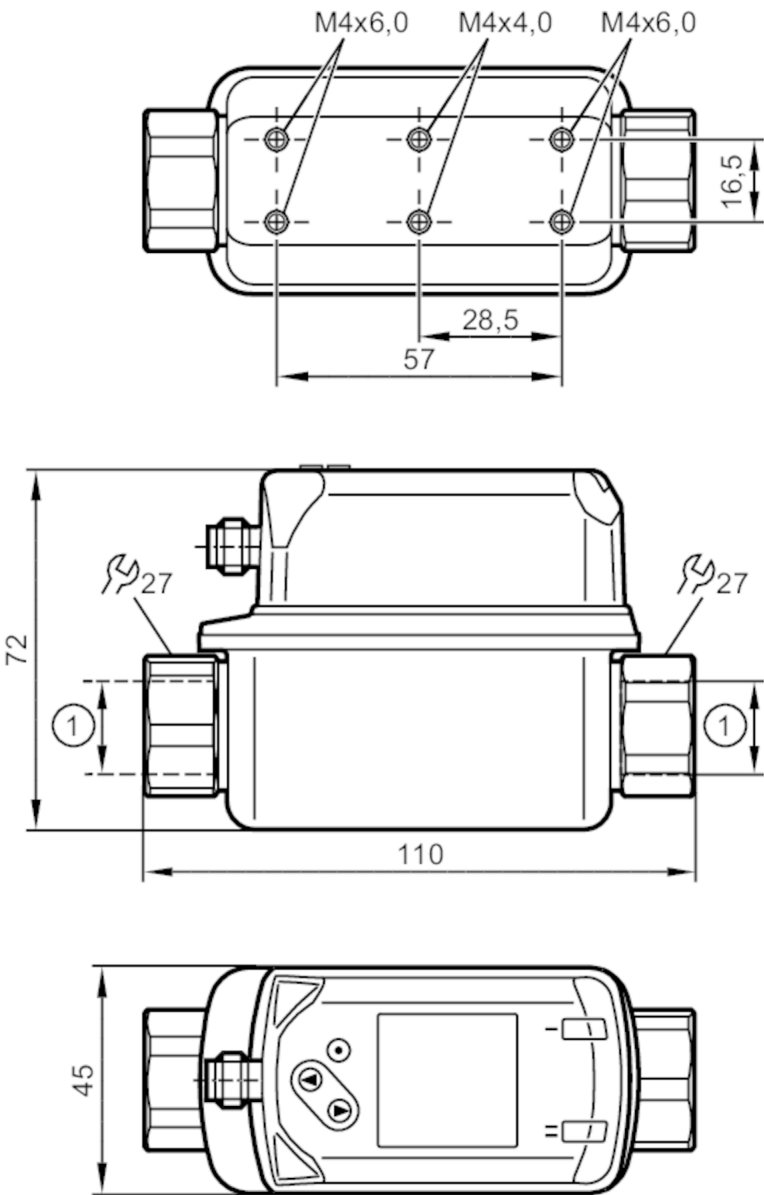


SV4500



SV vortex flowmeters with display for water based media

SVK12XXXIRKG/US-100



1 Rc 1/2
DN 8



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2	
Measuring range	1...20 l/min	0.06...1.2 m³/h
Process connection	threaded connection Rc 1/2 Internal thread DN8	

Application

System	gold-plated contacts
Application	for industrial applications
Media	water; glycol solutions; Coolants
Medium temperature [°C]	-10...90



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Pressure rating	12 bar	1.2 MPa
Note on pressure rating	up to 40 °C	
Electrical data		
Operating voltage	[V]	18...30 DC
Current consumption	[mA]	< 30
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[s]	< 3
Measuring principle		Vortex
Inputs / outputs		
Number of inputs and outputs	Number of digital outputs: 2	
Outputs		
Total number of outputs	2	
Output signal	switching signal; frequency signal; IO-Link; (configurable)	
Electrical design	PNP/NPN	
Number of digital outputs	2	
Output function	normally open / closed; (configurable)	
Max. voltage drop switching output DC	[V]	2.5
Permanent current rating of switching output DC	[mA]	100
Short-circuit protection		yes
Overload protection		yes
Measuring/setting range		
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...1.2 m³/h
Reset point rP	1...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
In steps of	[°C]	0.5
Frequency start point, FSP	[°C]	-10...70
Frequency end point, FEP	[°C]	10...90
Frequency at the end point FRP	[Hz]	100...1000



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Accuracy / deviations		
Flow monitoring		
Accuracy (in the measuring range)		± 2 % MEW; (water)
Repeatability		± 0,5 % MEW
Temperature monitoring		
Accuracy	[K]	± 1
Reaction times		
Flow monitoring		
Response time	[s]	1; (dAP = 0)
Damping process value dAP	[s]	0...5
Temperature monitoring		
Dynamic response T05 / T09	[s]	T09 = 6
Software / programming		
Parameter setting options	hysteresis / window; normally open / closed; switching logic; Frequency output; switch-on/switch-off delay; Damping; Display unit	
Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
Profiles	Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis	
SIO mode	yes	
Required master port class	A	
Process data analog	2	
Process data binary	2	
Min. process cycle time	[ms]	3
Supported DeviceIDs	Type of operation	DeviceID
	default	484
Operating conditions		
Ambient temperature	[°C]	0...60
Note on ambient temperature	medium temperature < 80 °C	
	medium temperature < 90 °C: 0...50 °C	
Storage temperature	[°C]	-20...80
Protection	IP 65; IP 67	
Tests / approvals		
EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
CPA approval	model number	001VO
	accuracy class	-
	maximum allowable error	± 2 % FS
	Q (min)	0,09 m³/h
	Q (t)	0,24 m³/h
	Q (max)	1,2 m³/h
Shock resistance	DIN EN 60068-2-27	5 g (11 ms)

SV4500



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Vibration resistance	DIN EN 60068-2-6	with water / 10...50 Hz 1 mm
		with water / 50...2000 Hz 2 g
MTTF [years]		342
UL approval	UL approval number	I001
Pressure equipment directive	sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

Mechanical data		
Weight [g]		442
Housing		rectangular
Dimensions [mm]		110 x 45 x 72
Material	stainless steel (1.4404 / 316L); PC; PBT+PC-GF30; PPS; TPE-U	
Materials (wetted parts)	stainless steel (1.4404 / 316L); ETFE; PA 6T; PPS; FKM	
Tightening torque [Nm]		30
Process connection	threaded connection Rc 1/2 Internal thread DN8	

Displays / operating elements		
Display		Color display 1,44", 128 x 128 pixels
		2 x LED, yellow

Remarks		
Remarks		MW = Measured value
		MEW = Final value of the measuring range
Pack quantity		1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



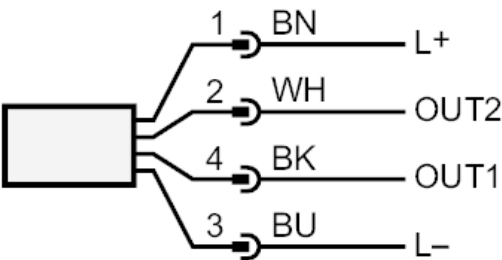
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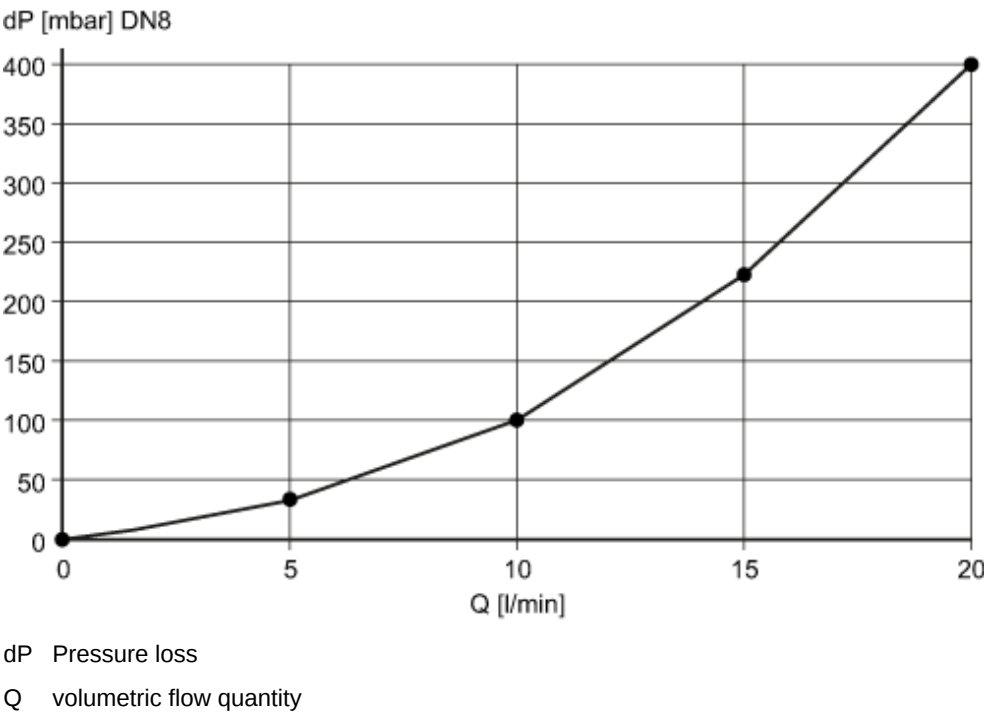
Connection



- OUT1:
- Flow monitoring
 - Switching output
 - Frequency output
 - IO-Link
- OUT2:
- flow monitoring and temperature monitoring
 - Switching output
 - Frequency output
- Colors to DIN EN 60947-5-2
- Core colors :
- BK = black
- BN = brown
- BU = blue
- WH = white

Diagrams and graphs

Pressure loss



SV4500



SV vortex flowmeters with display for water based media

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pressure rating (bar)

