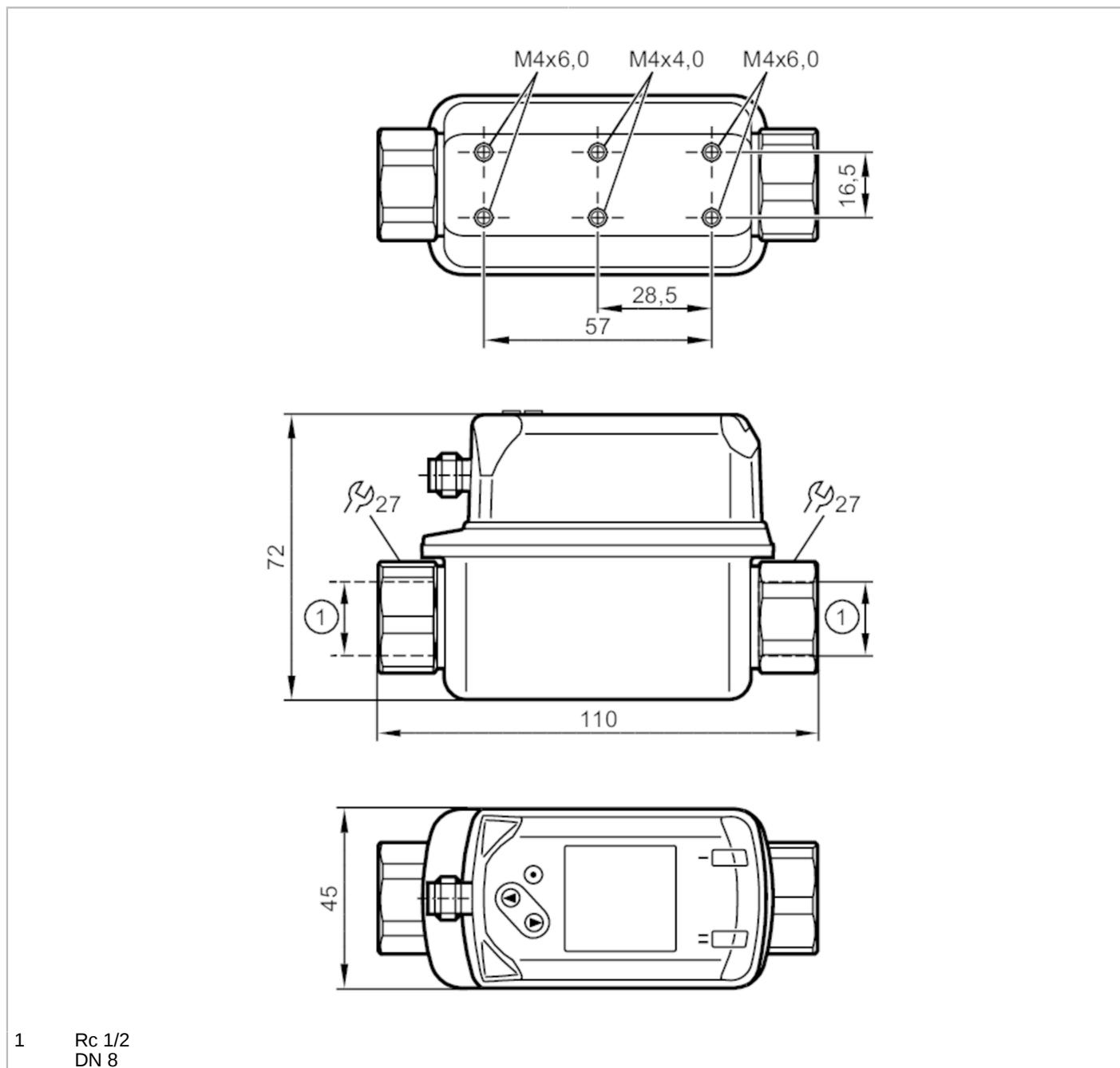


SV4500



Vortex flow meter with display

SVK12XXXIRKG/US-100



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	
Special feature	Gold-plated contacts
Application	for industrial applications
Media	water; glycol solutions; coolants
Medium temperature [°C]	-10...90

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Pressure rating	[bar]	12
Pressure rating	[MPa]	1.2
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
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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 / normally closed; (parameterisable)
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

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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

Response 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 / normally closed; switching logic; frequency output; switch-on/switch-off delay; Damping; Display unit
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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 type	A				
Process data analogue	2				
Process data binary	2				
Min. process cycle time [ms]	3				
Supported DeviceIDs	<table><thead><tr><th>Type of operation</th><th>DeviceID</th></tr></thead><tbody><tr><td>default</td><td>484</td></tr></tbody></table>	Type of operation	DeviceID	default	484
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	

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CPA approval	model number	001VO
	accuracy class	-
	maximum allowable error	± 2 % FS
	Q (min)	0,09 m ³ /h
	Q (t)	0,24 m ³ /h
	Q (max)	1,2 m ³ /h
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
MTTF [years]		342
UL approval	UL Approval no.	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
Materials	stainless steel (316L/1.4404); PC; PBT+PC-GF30; PPS; TPE-U
Materials (wetted parts)	stainless steel (316L/1.4404); ETFE; PA 6T; PPS; FKM
Tightening torque [Nm]	30
Process connection	threaded connection Rc 1/2 internal thread DN8

Displays / operating elements

Display	colour display 1,44", 128 x 128 pixels 2 x LED, yellow
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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

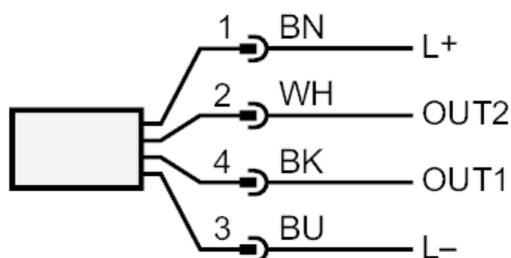




Vortex flow meter with display

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Connection



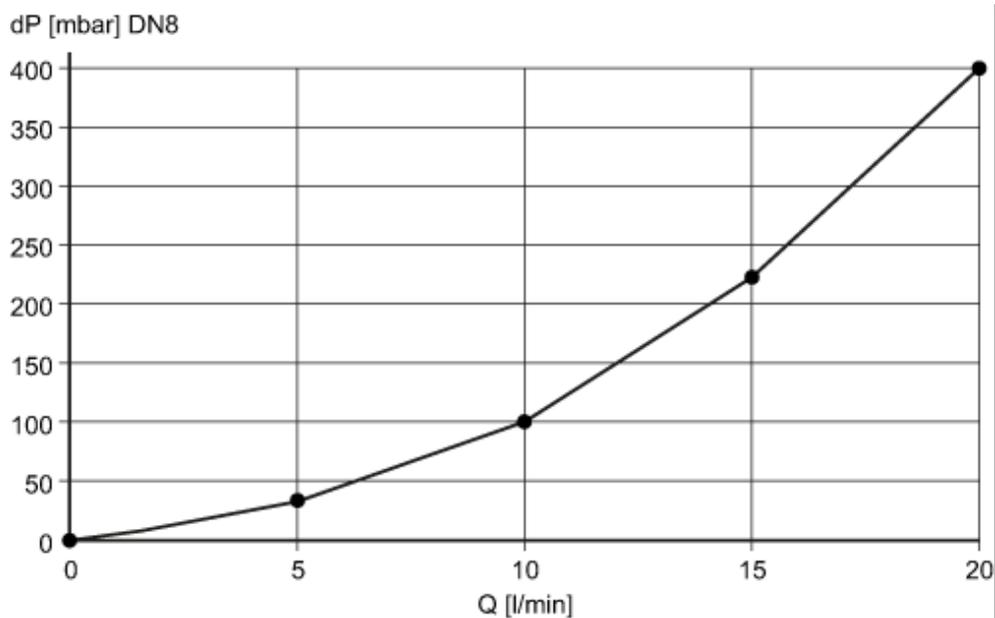
- OUT1: Flow monitoring
- switching output
- frequency output
- IO-Link
- OUT2: flow monitoring and temperature monitoring
- switching output
- frequency output
- colours to DIN EN 60947-5-2

Core colours :

- BK = black
- BN = brown
- BU = blue
- WH = white

Diagrams and graphs

Pressure loss



dP Pressure loss
Q volumetric flow quantity

SV4500



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pressure rating (bar)

