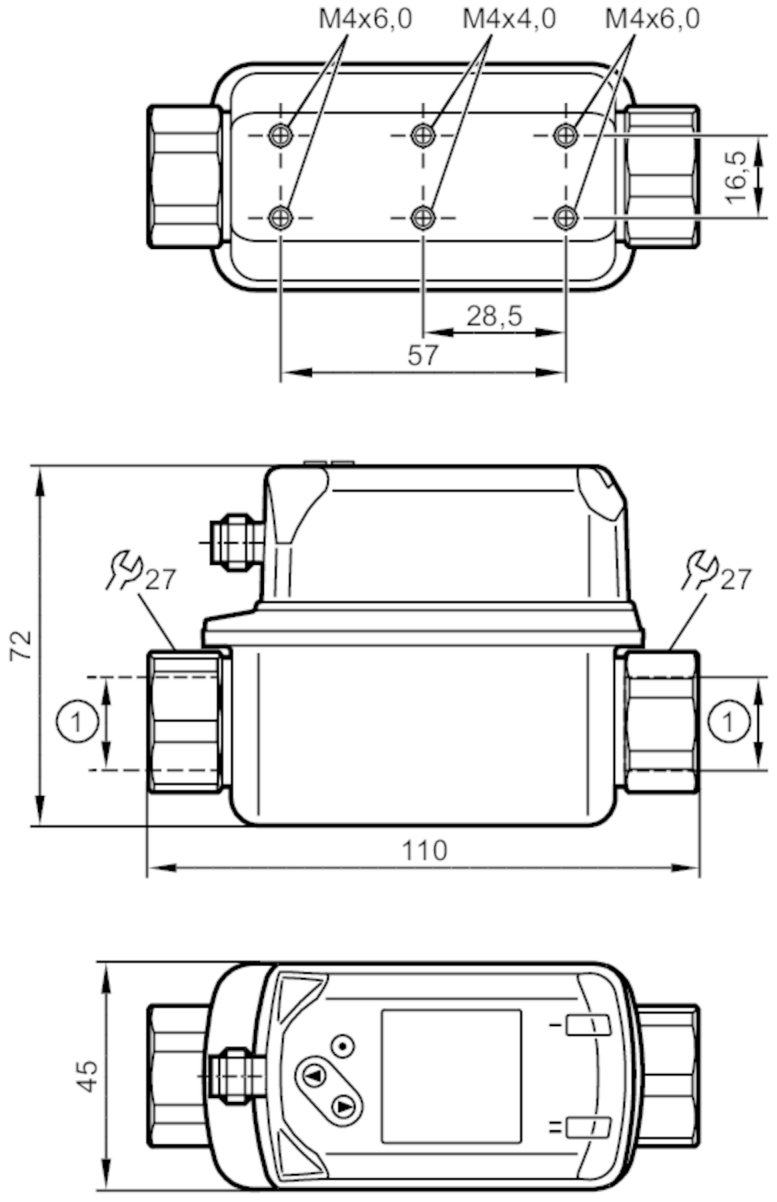
SV5500

Vortex flow meter with display

SVK12XXXIRKG/US-100



1 Rc 1/2
DN 10

Product characteristics			
Number of inputs and outputs		Number of digital outputs: 2	
Measuring range		2...40 l/min	0.12...2.4 m³/h
Process connection		threaded connection Rc 1/2 internal thread DN10	

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
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 / 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		2...40 l/min	0.12...2.4 m³/h
Display range		0...48 l/min	0...2.88 m³/h
Resolution		0.2 l/min	0.01 m³/h
Set point SP		2.4...40 l/min	0.14...2.4 m³/h
Reset point rP		2...39.6 l/min	0.12...2.38 m³/h
Frequency end point, FEP		8...40 l/min	0.48...2.4 m³/h
In steps of		0.2 l/min	0.01 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	
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	
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		**Type of operation**	**DeviceID**
		default	488
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)	0,15 m³/h
		Q (t)	0,48 m³/h
		Q (max)	2,4 m³/h
Shock resistance		DIN EN 60068-2-27	5 g (11 ms)

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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 no.	I001
Pressure Equipment Directive		Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

Mechanical data

Weight	[g]	441
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 DN10

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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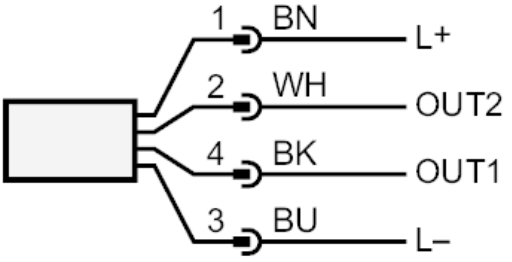
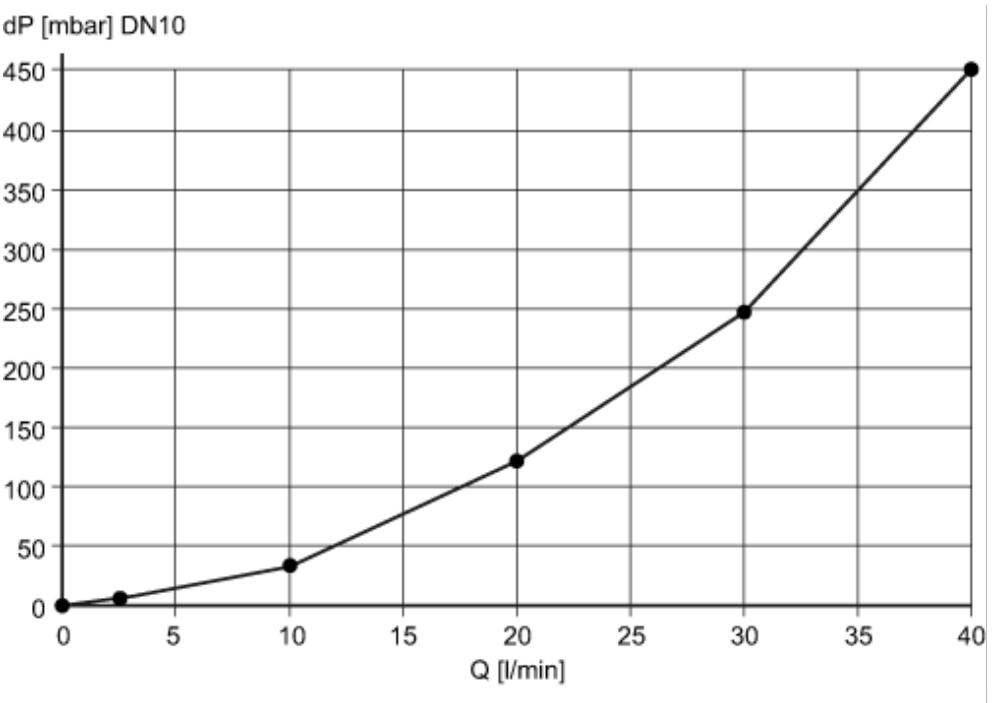
Connection



OUT1:	Flow monitoring
-	switching output
-	frequency output
-	IO-Link
OUT2:	flow monitoring and temperature monitoring
-	switching output
-	frequency output
	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

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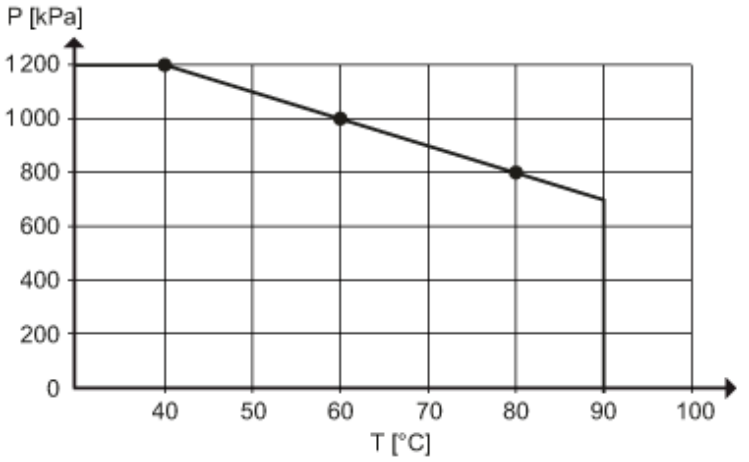
pressure rating (bar)