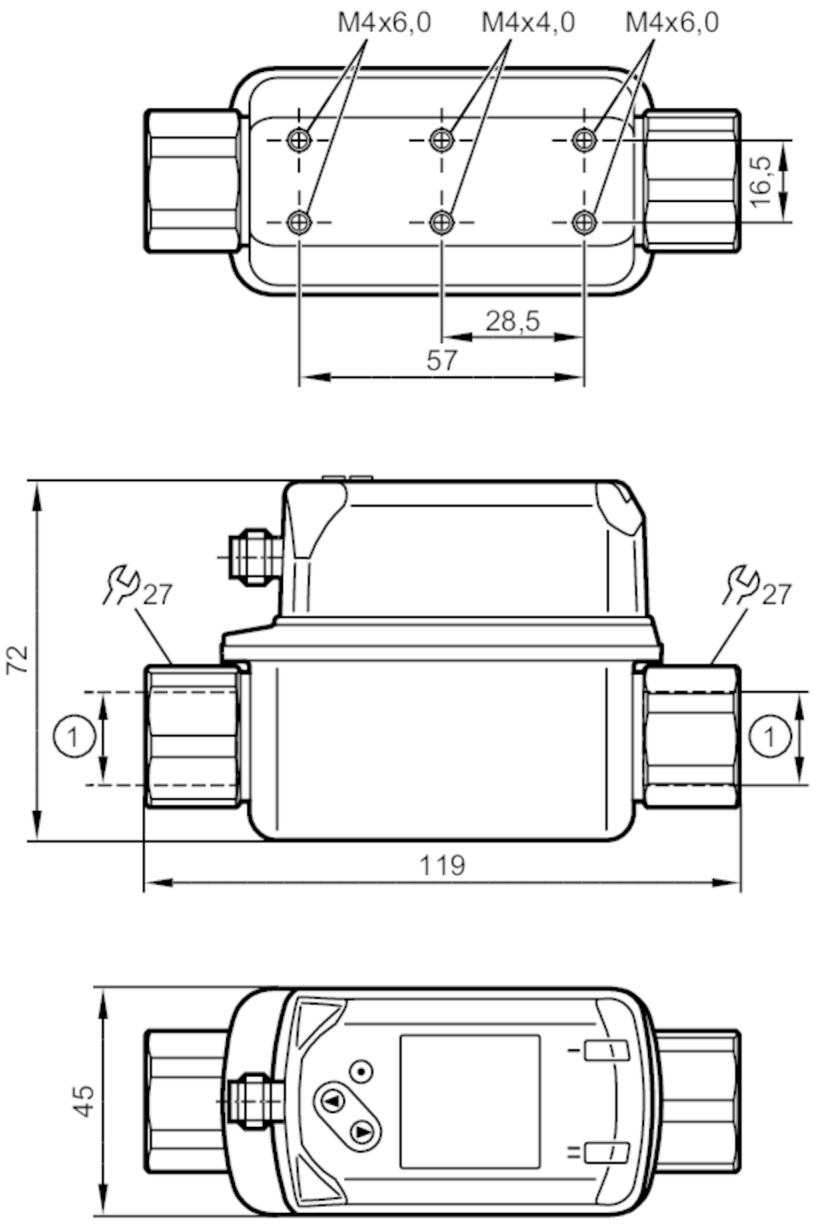
SV0527

SV vortex flowmeters with display for water based media

SVN12XXXIRKG/US



1 1/2" NPT
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 1/2" NPT Internal thread DN8	

Application			
System		gold-plated contacts	
Application		for industrial applications	
Media		water	
Medium temperature	[°C]	-10...90	
Pressure rating		12 bar	1.2 MPa
Note on pressure rating		up to 40 °C	

SV0527

SV vortex flowmeters with display for water based media

SVN12XXXIRKG/US

MAWP (for applications according to CRN)	[bar]	3.9	
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	

SV0527

SV vortex flowmeters with display for water based media

SVN12XXXIRKG/US

Accuracy / deviations			
Flow monitoring			
Accuracy (in the measuring range)		± 2 % MEW	
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 - SSP 0	Generic Profiled Sensor
		Function	Device identification
		Function	Process data variable
		Function	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	

SV0527

SV vortex flowmeters with display for water based media

SVN12XXXIRKG/US

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)
Vibration resistance		DIN EN 60068-2-6	with water / 10...50 Hz 1 mm
			with water / 50...2000 Hz 2 g
Pressure equipment directive		sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

Mechanical data

Weight	[g]	486.3
Housing		rectangular
Dimensions	[mm]	119 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 1/2" NPT 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

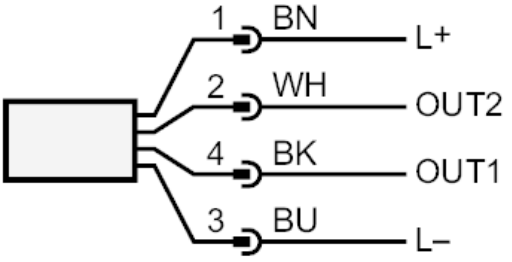
Connector: 1 x M12; coding: A; Contacts: gold-plated

SV0527

SV vortex flowmeters with display for water based media

SVN12XXXIRKG/US

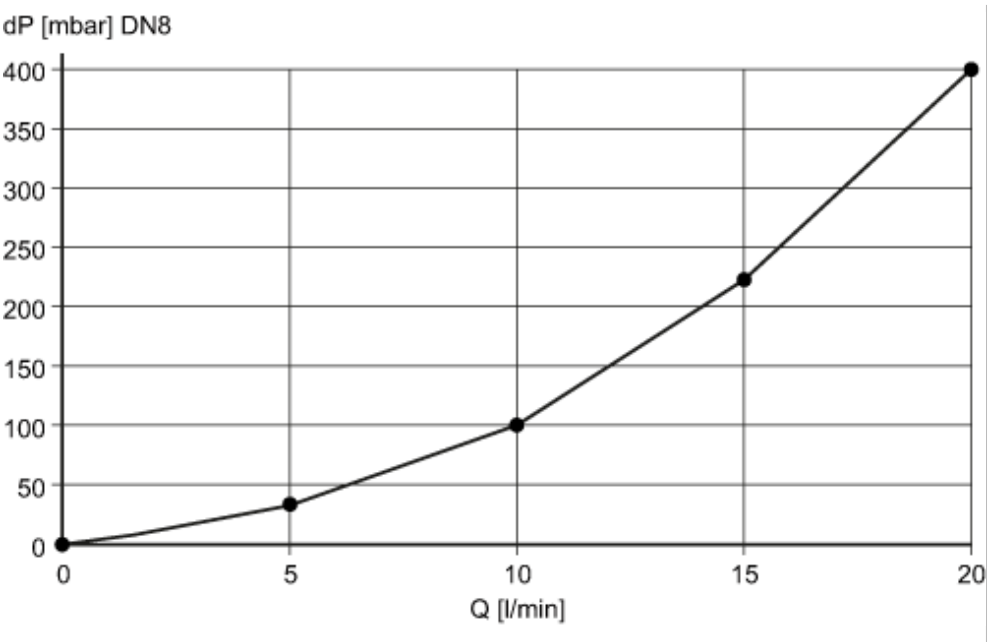
Connection



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

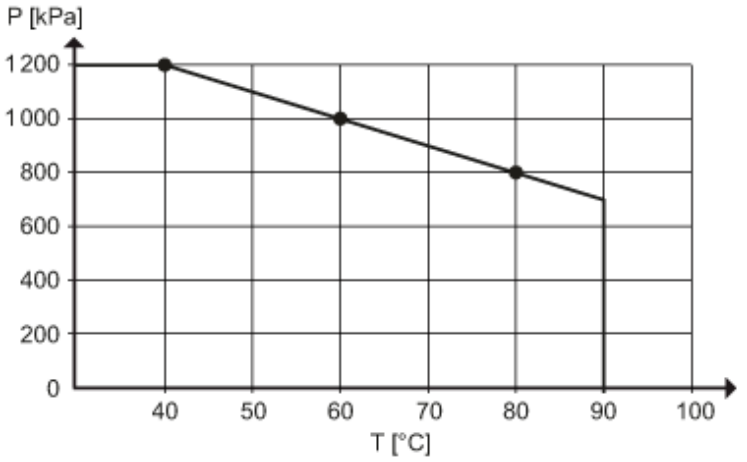


dP Pressure loss

Q volumetric flow quantity

SV0527

SV vortex flowmeters with display for water based media

SVN12XXXIRKG/US

pressure rating (bar)