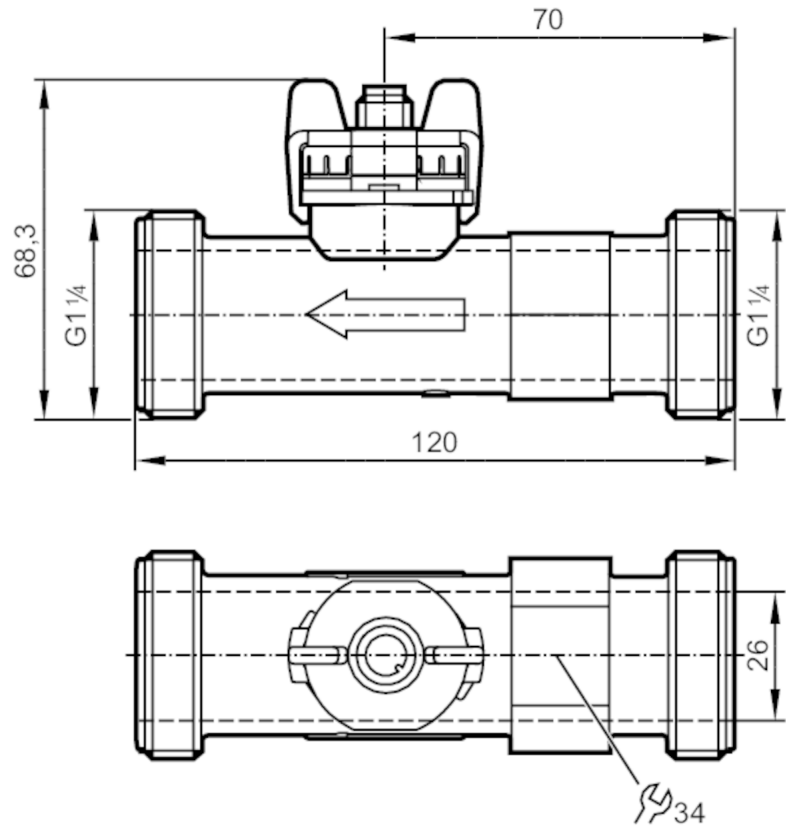


SV8050



Vortex flow meter

SVM54XXD0KG/US-100



Product characteristics		
Number of inputs and outputs	Number of analog outputs: 1	
Measuring range	9...150 l/min	0.283...4.709 m/s
Process connection	threaded connection G 1 1/4 external thread DN25	
Application		
System	gold-plated contacts	
Measuring element	1 x Pt 1000; (to DIN EN 60751, class B)	
Application	for industrial applications	
Installation	connection to pipe by means of an adapter	
Media	water; glycol solutions; Coolants	
Medium temperature	-40...100	
Min. bursting pressure	25 bar	2.5 MPa
Pressure rating	12 bar	1.2 MPa
Note on pressure rating	up to 40 °C	
Electrical data		
Operating voltage	[V]	8...33 DC
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class	III	
Power-on delay time	[s]	< 2

SV8050



Vortex flow meter

SVM54XXD0KG/US-100

Measuring principle	Vortex	
Inputs / outputs		
Number of inputs and outputs	Number of analog outputs: 1	
Outputs		
Total number of outputs	1	
Output signal	analog signal	
Number of analog outputs	1	
Analog current output [mA]	4...20; (water: Q [l/min] = 9,375 x (I - 4 mA); water-glycol: Q [l/min] = 9,375 x (I - 4 mA) - Q ₀ see Figure 2)	
Max. load [Ω]	< (U _b - 8 V) / 20 mA; U _b = 24 V: 800	
Measuring/setting range		
Measuring range	9...150 l/min	0.283...4.709 m/s
Temperature monitoring		
Internal heating temperature probe	1 K/mW	
Measuring range [°C]	-40...100	
Accuracy / deviations		
Flow monitoring		
Accuracy (in the measuring range)	Q < 50 % MEW: < 1 % MEW / Q > 50 % MEW: < 2 % MW; (water)	
Repeatability	0,2; (% of the final value)	
Temperature monitoring		
Accuracy [K]	± 0,3 ± 0,005 x T	
Reaction times		
Flow monitoring		
Response time [s]	0.5	
Operating conditions		
Ambient temperature [°C]	-15...85	
Storage temperature [°C]	-30...85	
Protection	IP 65	
Cavitation	P(absolute) discharge / P(difference) > 5.5 to avoid cavitation	
Tests / approvals		
EMC	EN 61326-2-3	
Shock resistance	DIN EN 60068-2-27	30 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	with water / 10...61 Hz 1 mm
		with water / 61...2000 Hz 2 g
MTTF [years]	380	
Pressure equipment directive	sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data		
Weight [g]	138.5	
Housing	rectangular	
Dimensions [mm]	120 x 41.91 x 68.3	
Material	PA 6T	
Materials (wetted parts)	ETFE; PA 6T; FKM	

SV8050



Vortex flow meter

SVM54XXD0KG/US-100

Tightening torque	[Nm]	15
Process connection	threaded connection G 1 1/4 external thread DN25	

Displays / operating elements

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

Remarks

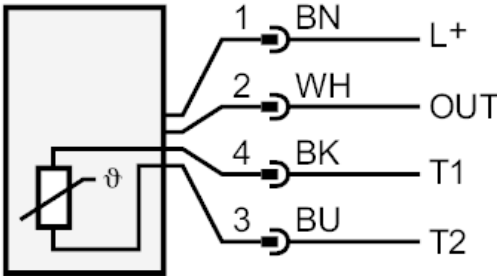
Remarks	MW = Measured value
	MEW = Final value of the measuring range
Pack quantity	1 pcs.

Electrical connection

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



Connection



OUT: analog output
T1 / T2: Pt1000
Colors to DIN EN 60947-5-2
Core colors :
BK = black
BN = brown
BU = blue
WH = white

SV8050

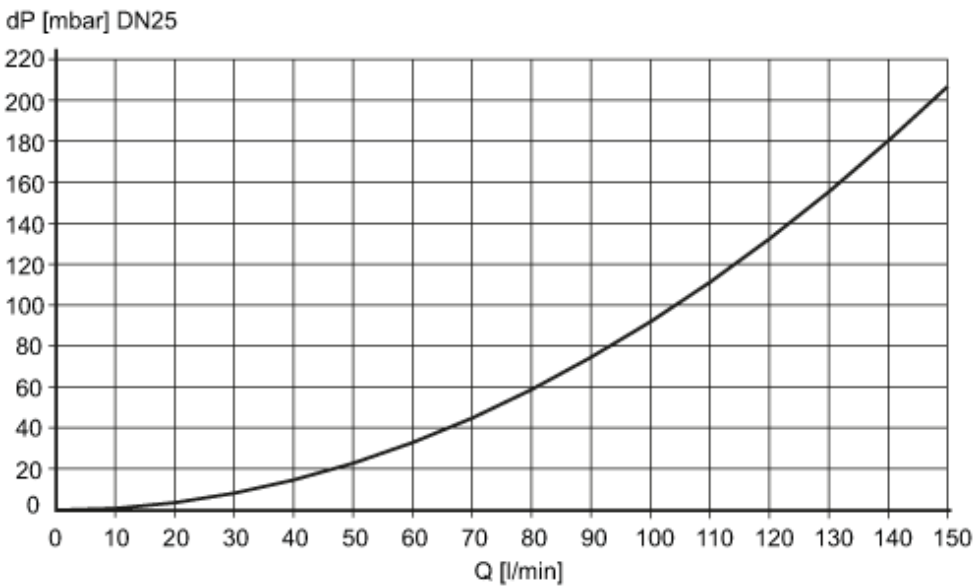


Vortex flow meter

SVM54XXD0KG/US-100

Diagrams and graphs

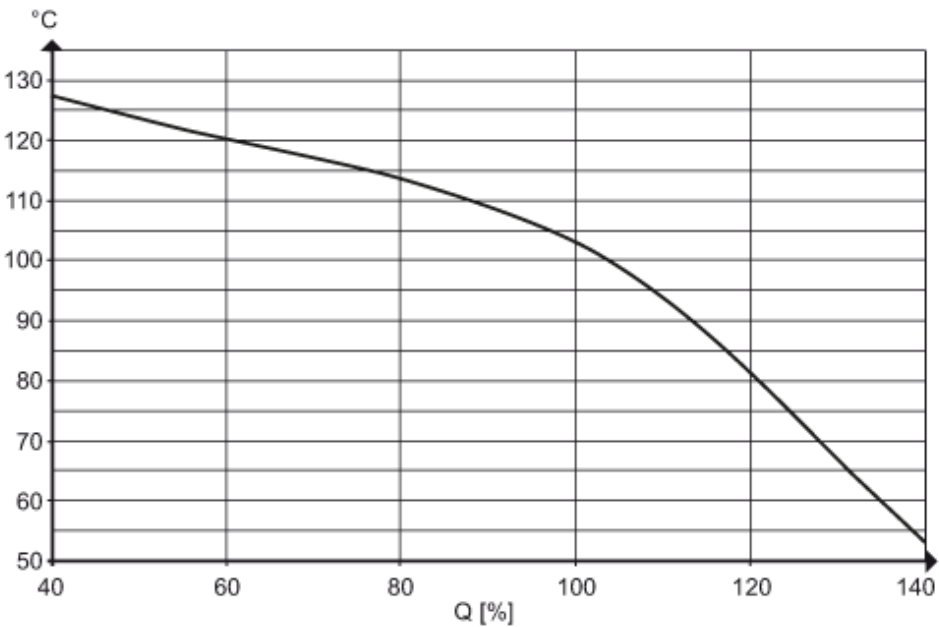
Pressure loss



dP Pressure loss

Q volumetric flow quantity

Minimum lifetime 10 years
referred to flow and high medium
temperatures

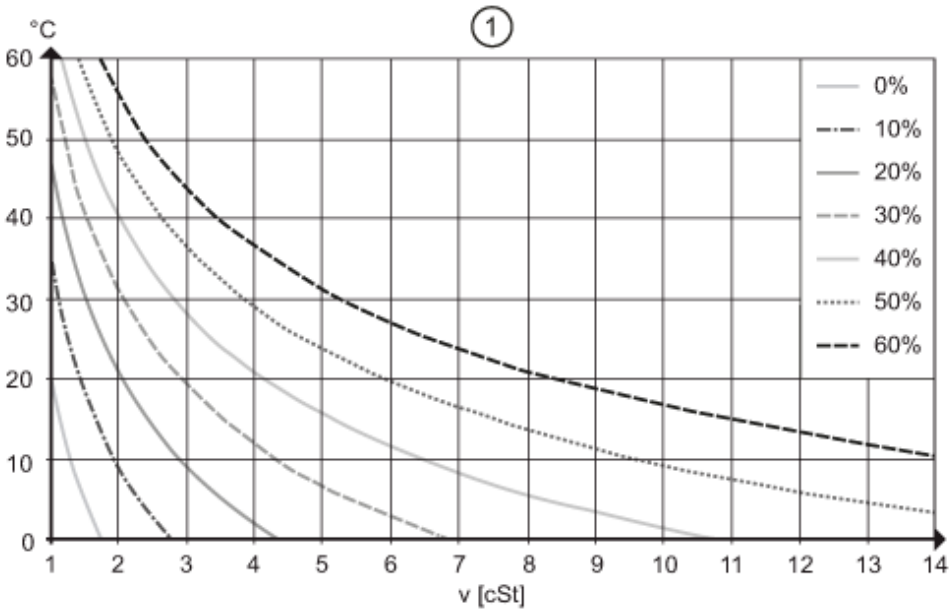




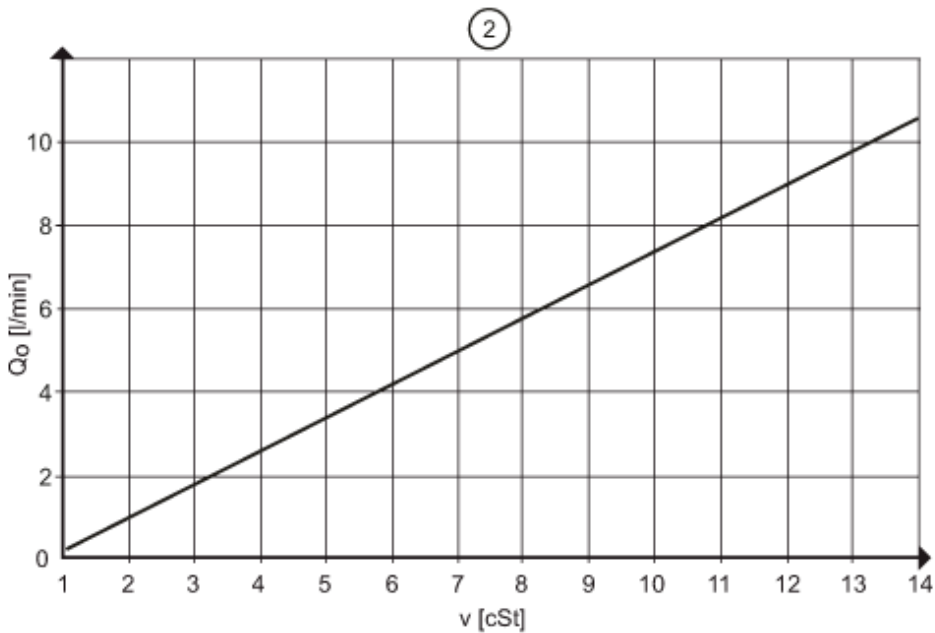
Vortex flow meter

SVM54XXD0KG/US-100

Determination of the kinematic viscosity (ν) of glycol-water mixtures depending on the temperature



determination of the compensation value Q_0 for glycol-water mixtures



$\nu < 4$ cSt measuring accuracy 3% MEW
 $4 < \nu < 14$ cSt measuring accuracy 4% MEW

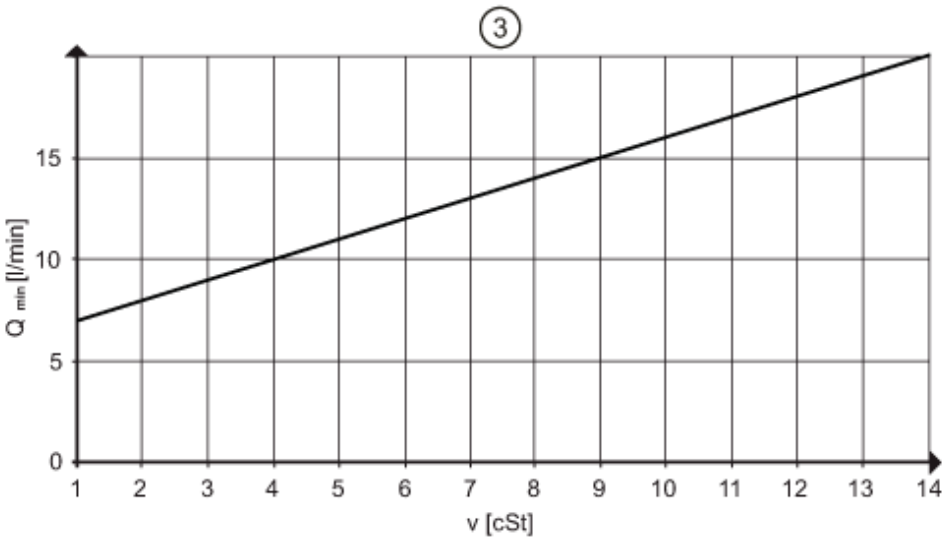
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Vortex flow meter

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Response threshold Q_{min} depending on the kinematic viscosity



pressure rating (bar)

