

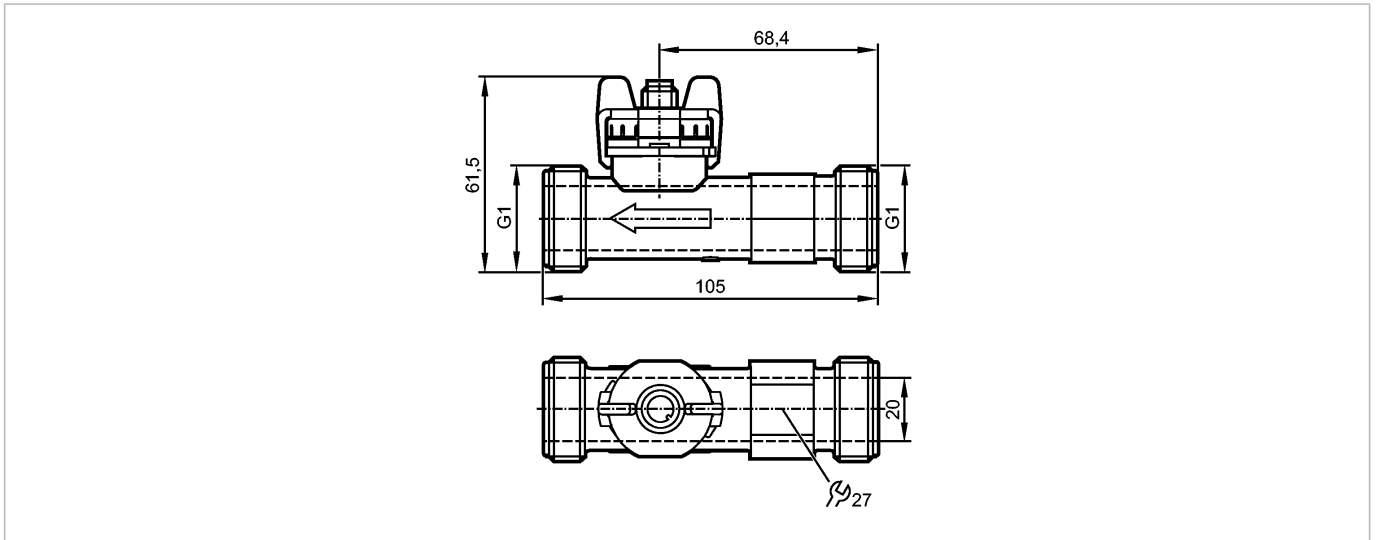


SV7150

SVM11XXXD0KG/US-100



Flow sensors



Product characteristics

Vortex flow meter

DN 20

Quick disconnect

Process connection: G1

connection to pipe by means of an adapter

flow monitoring

Measuring range

5...85 l/min

Temperature monitoring

Measuring range

-40...100 °C

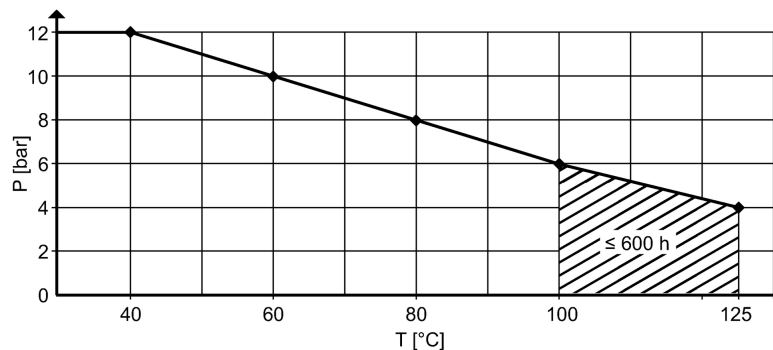
Measuring element: 1 x Pt 1000, to DIN EN 60751, class B

Application

Application

Water, water-based media

Pressure rating [bar]



Pressure rating [bar]

12; (up to 40 °C)

Medium temperature [°C]

-40...100

Electrical data

Electrical design

DC

Operating voltage [V]

8...33

Insulation resistance [MΩ]

> 100 (500 V DC)

Protection class

III



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Flow sensors

Outputs

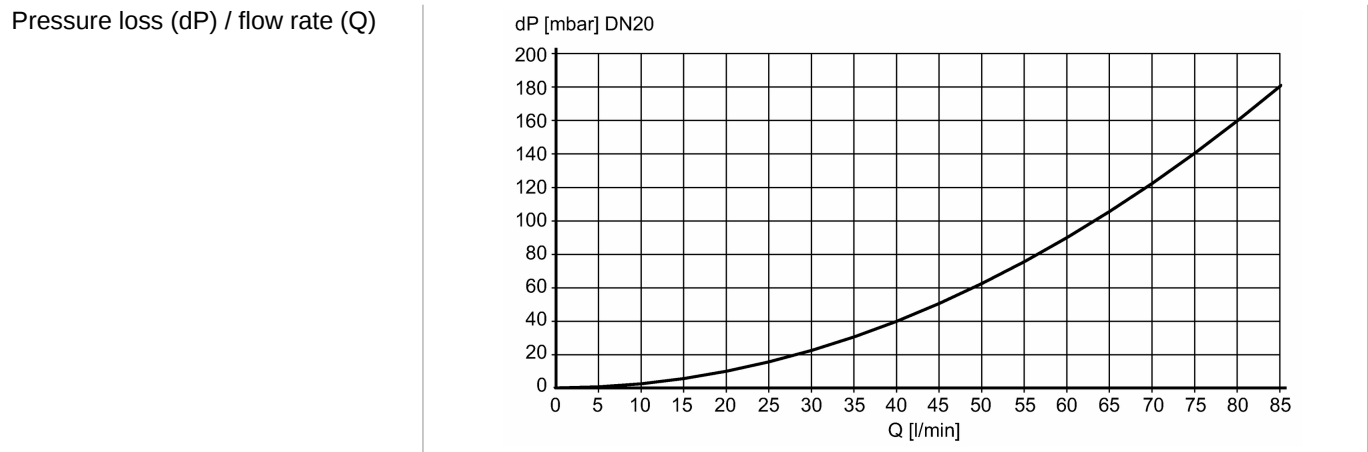
Output function	analog	
Analog output	4...20 mA	
Max. load [Ω]	$< (U_b - 8 \text{ V}) / 20 \text{ mA}$ 800 at $U_b = 24 \text{ V}$	

Measuring / setting range

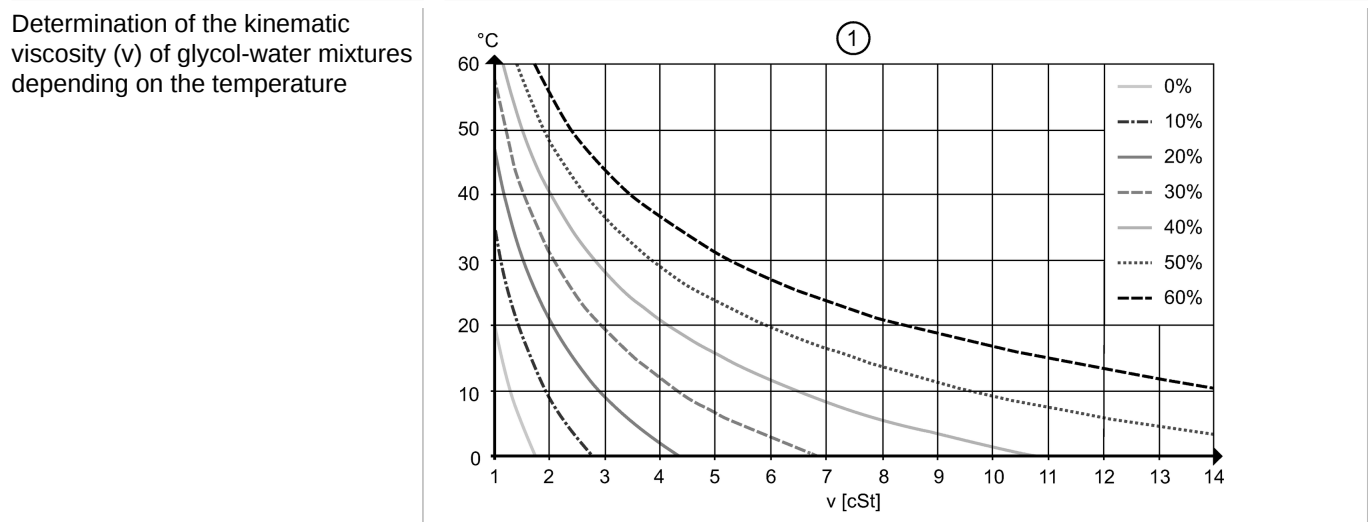
Flow monitoring		
Measuring range	5.0...85 [l/min]	0.265...4.509 [m/s]
Output curve	Water: $Q \text{ [l/min]} = 5.313 \times (I - 4 \text{ mA})$ Water-glycol: $Q \text{ [l/min]} = 5.313 \times (I - 4 \text{ mA}) - Q_0$, see figure (2)	
Temperature monitoring		
Measuring range [$^{\circ}\text{C}$]	-40...100	
Internal heating temperature probe	1 K/mW	
Cable resistance to the connector	0.8 Ω	

Accuracy / deviations

Flow monitoring		
Accuracy	$Q < 50 \% \text{ MEW (water): } < 1 \% \text{ MEW}$ $Q > 50 \% \text{ MEW (water): } < 2 \% \text{ MW}$	
Repeatability	0.2; [% of the final value]	



Temperature monitoring		
Accuracy [K]	$\pm 0.3 \pm 0.005 \times T$	





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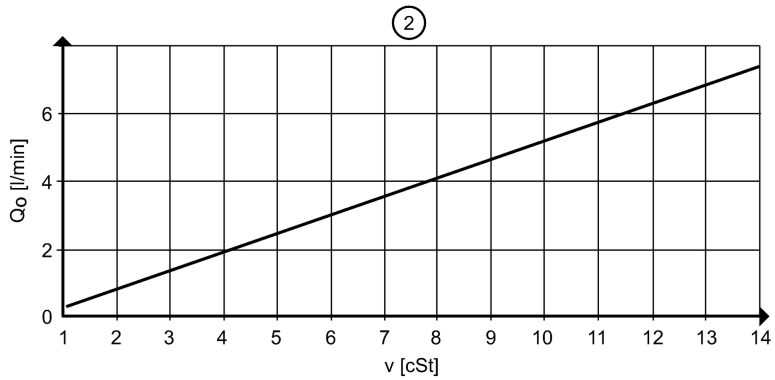
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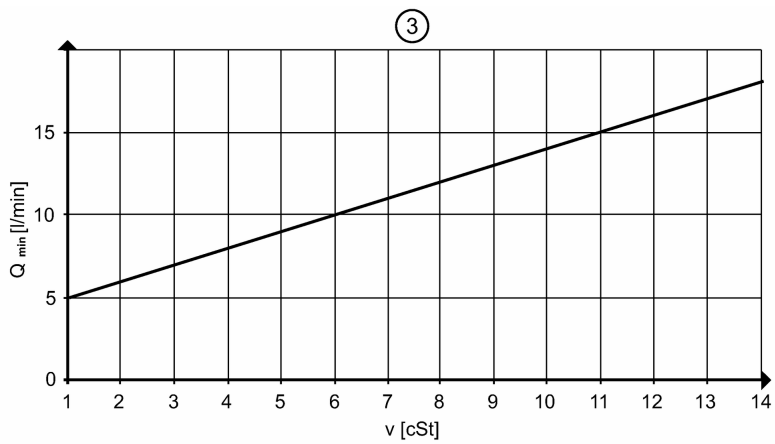
Flow sensors

Determination of the compensation value Q_0 for glycol-water mixtures

$v < 4 \text{ cSt}$: measuring accuracy of 3 % MEW
 $4 < v < 14 \text{ cSt}$: measuring accuracy of 4 % MEW



Response threshold Q_{min} depending on the kinematic viscosity



Reaction times

Power-on delay time [s]	< 2
Flow monitoring	
Response time [s]	< 0.5

Environment

Cavitation	$P(\text{absolute discharge}) / P(\text{difference}) > 5.5$ to avoid cavitation
Ambient temperature [°C]	-15...85, -30...85 at a medium temperature $> 0 \text{ °C}$
Storage temperature [°C]	-30...85
Protection	IP 65

Tests / approvals

Pressure equipment directive	article 3, section 3 - sound engineering practice
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



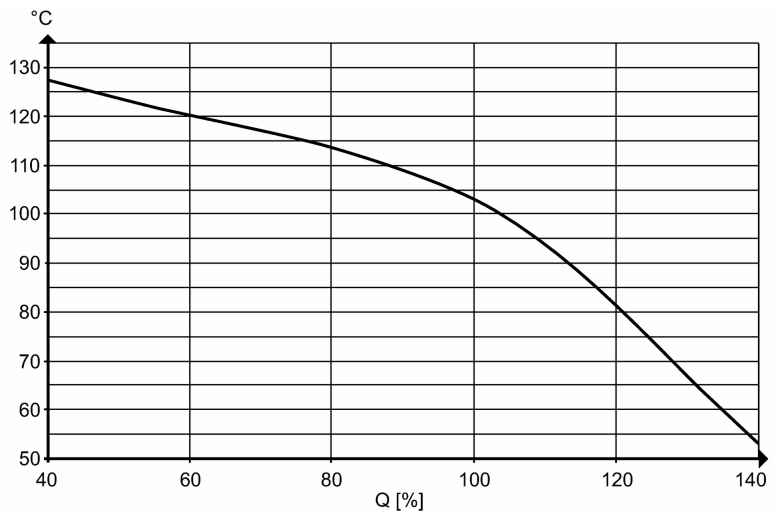
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Flow sensors

Minimum lifetime 10 years referred to flow and high medium temperatures



Mechanical data

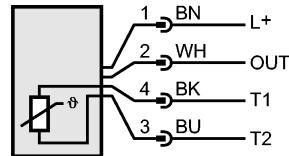
Process connection	G1
Materials (wetted parts)	ETFE; PA 6T; EPDM
Housing materials	PA 6T
Tightening torque [Nm]	12
Weight [kg]	0.176

Electrical connection

Connection	M12 connector; gold-plated contacts
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Wiring

- Core colors
- BK black
 - BN brown
 - BU blue
 - WH white



OUT: analog
 T1 / T2: Pt1000
 Colours to DIN EN 60947-5-2

Remarks

Remarks	MW = measured value MEW = final value of the measuring range
Pack quantity [piece]	1