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Search

Homepage » Products » Process sensors » Flow sensors / flow meters » Vortex flowmeters, Type SV » **SV8050**

- Reliable detection of flow and medium temperature
- Precise linearized analog output
- Suitable for water and water-based media
- For installation in pipes
- High precision of flow and temperature monitoring

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4/30/2021

SV8050 - Vortex flow meter - ifm electronic

-1+

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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 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 [°C]	-40...100	
Min. bursting pressure [bar]	25	
Min. bursting pressure [MPa]	2.5	
Pressure rating [bar]	12	
Pressure rating [Mpa]	1.2	

... 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

Inputs / outputs

Number of inputs and outputs	Number of analog outputs: 1
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Outputs

Total number of outputs	1
Output signal	analog signal
Number of analog outputs	1
Analog current output [mA]	4...20; (water: $Q [l/min] = 9,375 \times (I - 4 \text{ mA})$; water-glycol: $Q [l/min] = 9,375 \times (I - 4 \text{ mA})$ - Qo see Figure 2)
Max. load [Ω]	< $(U_b - 8 \text{ V}) / 20 \text{ mA}$; $U_b = 24 \text{ V}$: 800

Measuring/setting range

Measuring range	9...150 l/min	0.283...4.709 m/s
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Temperature monitoring

Internal heating temperature probe	1 K/mW
Measuring range [°C]	-40...100

Accuracy / deviations

Flow monitoring

Accuracy (in the measuring range)	$Q < 50 \% \text{ MEW}$: < 1 % MEW / $Q > 50 \% \text{ MEW}$: < 2 % MEW; (water)
Repeatability	0,2; (% of the final value)

Temperature monitoring

Accuracy [K]	$\pm 0,3 \pm 0,005 \times T$
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Reaction times

Flow monitoring

Response time [s]	0.5
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Operating conditions

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

Tests / approvals

CPA approval

model number	002VO
accuracy class	-
maximum allowable error	$\pm 3\%$ FS
Q (min)	0,54 m ³ /h
Q (t)	1,8 m ³ /h
Q (max)	9 m ³ /h

Shock resistance

DIN EN 60068-2-27	30 g (11 ms)
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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

Material

PA 6T

Materials (wetted parts)

ETFE; PA 6T; FKM

Tightening torque [Nm]

15

Process connection

threaded connection G 1 1/4 DN25

Remarks

Remarks

MW = Measured value

MEW = Final value of the measuring range

Pack quantity

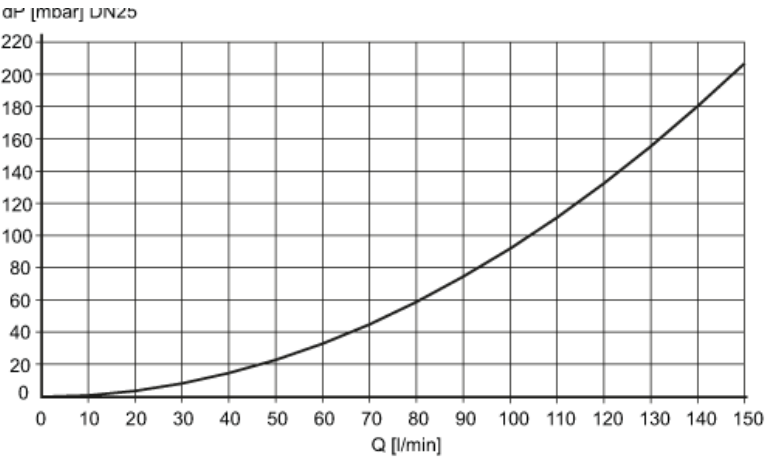
1 pcs.

Electrical connection

Connection

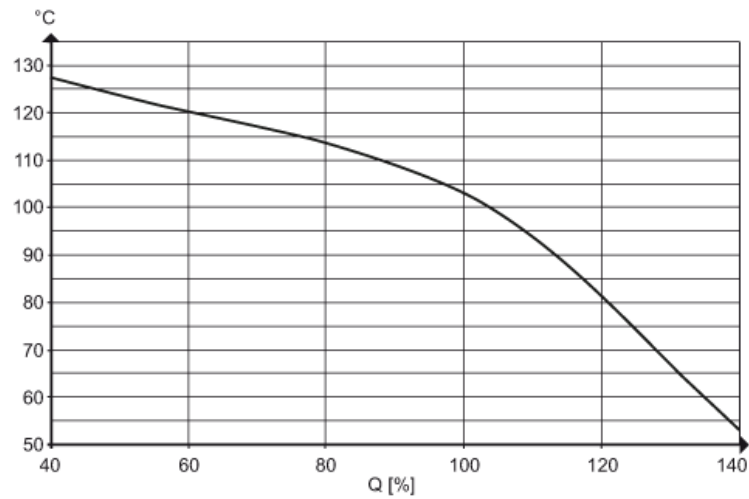
Connector: 1 x M12; Contacts: gold-plated

Diagrams and graphs

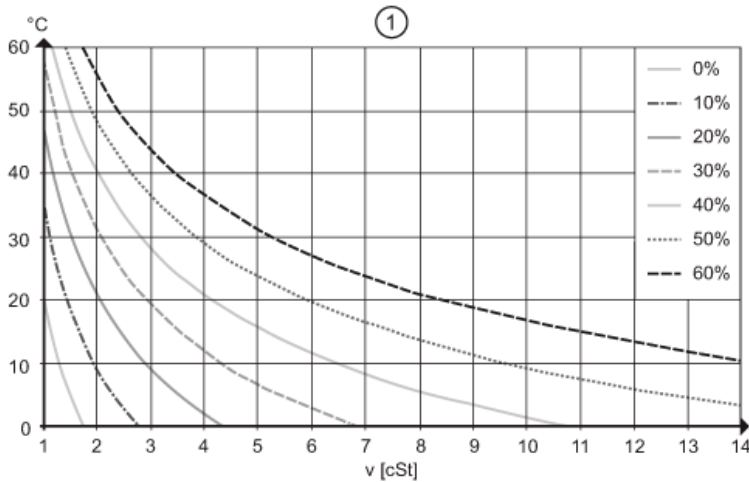


dP Pressure loss
Q volumetric flow quantity

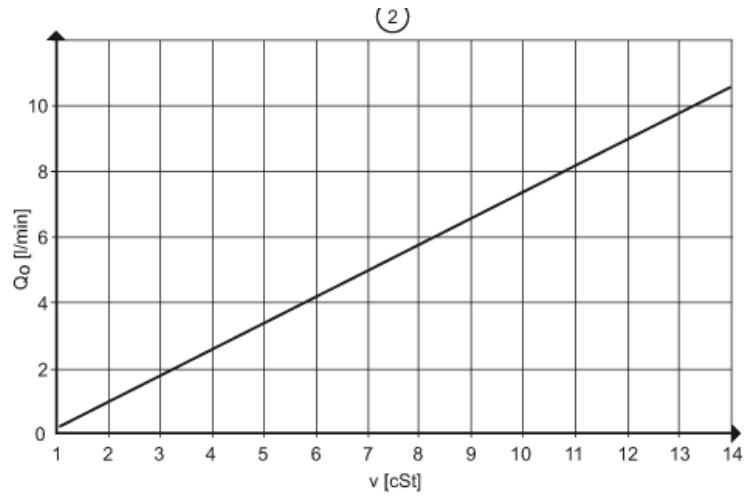
Minimum lifetime 10 years referred to flow and high medium temperatures



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



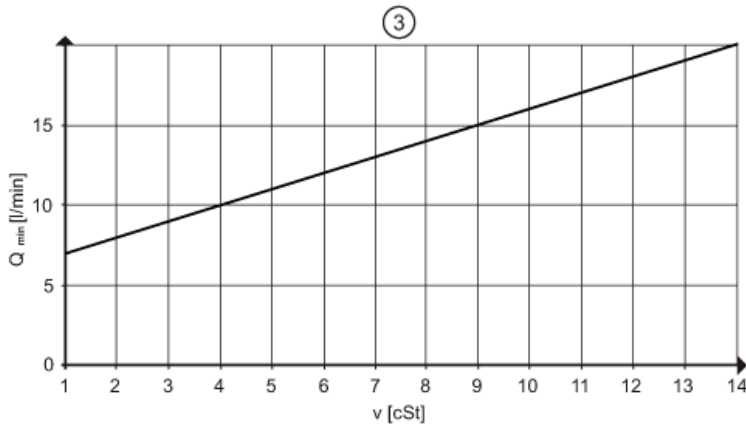
.....
value Q_0 for glycol-water mixtures



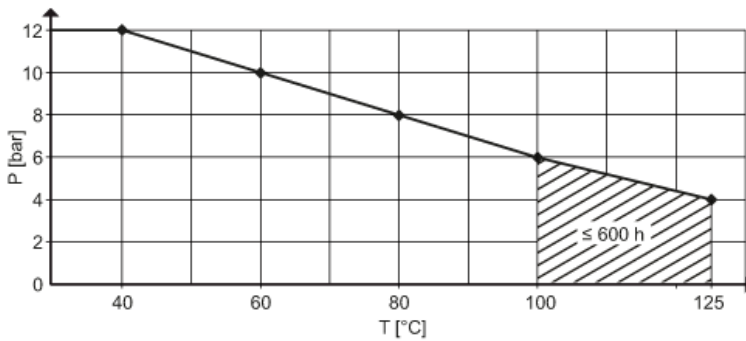
$v < 4$ cSt measuring accuracy 3% MEW

$4 < v < 14$ cSt measuring accuracy 4% MEW

Response threshold Q_{min}
depending on the kinematic viscosity



pressure rating (bar)



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