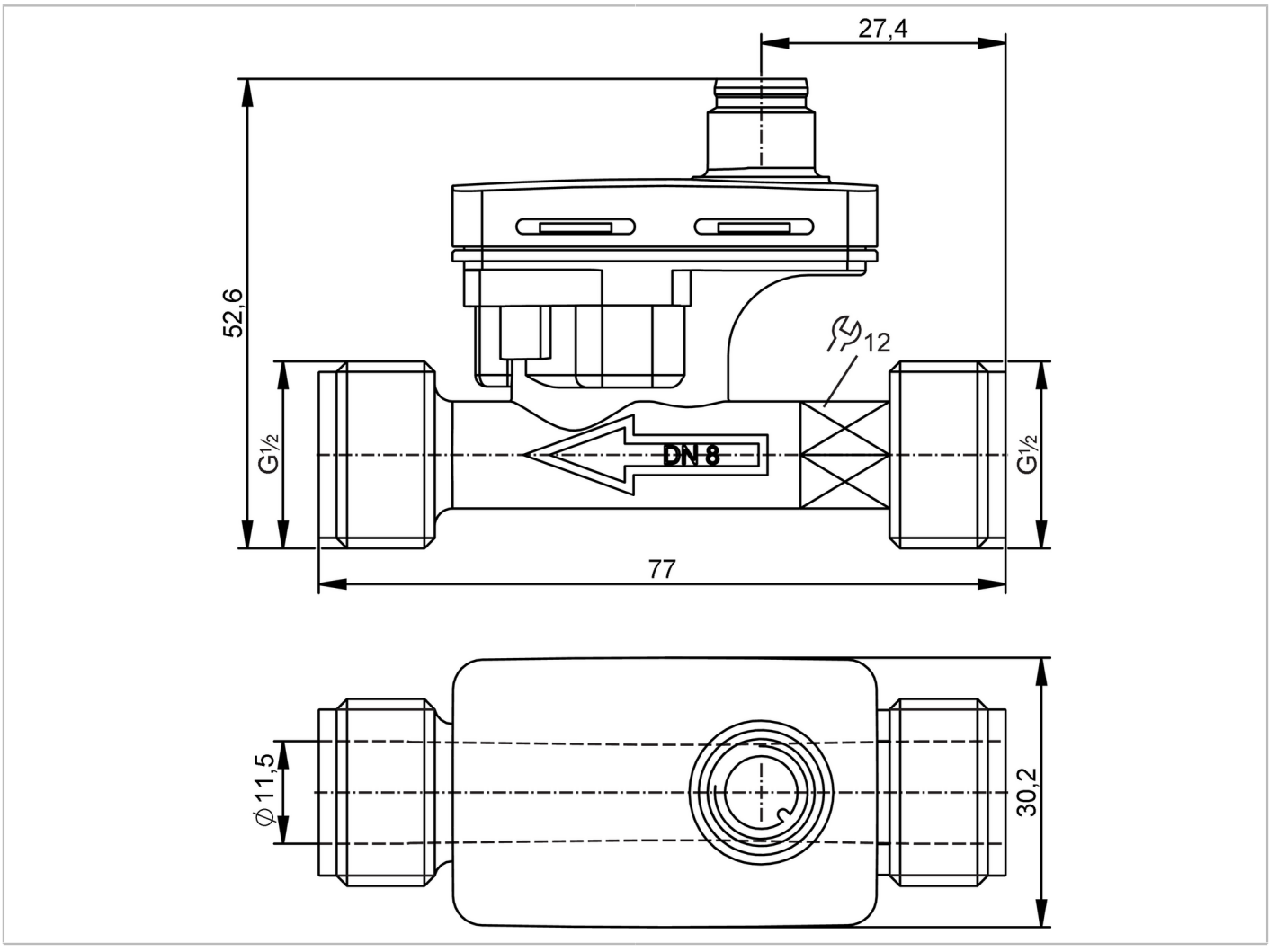
SV4051

Vortex flow meter

SVR12XGXD0KG/US



Product characteristics			
Number of inputs and outputs		Number of analogue outputs: 1	
Measuring range		0.9...15 l/min	0.133...2.21 m/s
Process connection		threaded connection G 1/2 external thread DN8	
Application			
Special feature		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		ultra-pure water; water; glycol solutions; coolants	
Medium temperature	[°C]	-15...125	
Min. burst pressure		25 bar	2.5 MPa
Note on min. burst pressure		125 °C	
Pressure rating		16 bar	1.6 MPa
Note on pressure rating		≤ 90 °C	
Electrical data			
Operating voltage	[V]	8...33 DC	

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Current consumption	[mA]	< 5	
Min. insulation resistance	[MΩ]	100; (500 V DC)	
Protection class		III	
Power-on delay time	[s]	< 2	
Measuring principle		Vortex	
Inputs / outputs			
Number of inputs and outputs		Number of analogue outputs: 1	
Outputs			
Total number of outputs		1	
Output signal		analogue signal	
Number of analogue outputs		1	
Analogue current output	[mA]	4...20	
Max. load	[Ω]	< (Ub - 8 V) / 20 mA; Ub = 24 V: 800	
Measuring/setting range			
Measuring range		0.9...15 l/min	0.133...2.21 m/s
Temperature monitoring			
Internal heating temperature probe		1 K/mW	
Measuring range	[°C]	-15...125	
Accuracy / deviations			
Flow monitoring			
Accuracy (in the measuring range)		water	Q < 50 % MEW: < 1 % MEW / Q > 50 % MEW: < 2 % MW
		glycol solutions (35%)	2 > v < 6 cSt: ± 5% MEW / 6 > v < 15 cSt: ± 10% MEW
Repeatability		0,2; (% of the final value)	
Temperature monitoring			
Accuracy	[K]	± 0,3 ± 0,005 x T	
Response times			
Flow monitoring			
Response time	[s]	0.34; (T09)	
Temperaturueberwachung			
Dynamic response T05 / T09	[s]	< 10 / < 30	
Operating conditions			
Ambient temperature	[°C]	-15...85	
Note on ambient temperature		Medium temperature > 0 °C: -40...85	
Storage temperature	[°C]	-40...85	
Protection		IP 65	
Cavitation		P(absolute) discharge / P(difference) > 5.5 to avoid cavitation	
Tests / approvals			
EMC		EN IEC 61326-1:2021	
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

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MTTF	[years]	396	
UL approval		File number UL	E364788
Pressure Equipment Directive		Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

Mechanical data

Weight	[g]	69.25
Housing		rectangular
Dimensions	[mm]	77 x 30.2 x 52.6
Materials		Housing: PPS 40% glass fibre; electronics: PC 10% glass fibre
Materials (wetted parts)		sensor: PPSU; Pipe section: PPS 40% glass fibre; Sealing: FKM
Tightening torque	[Nm]	12
Process connection		threaded connection G 1/2 external thread DN8

Remarks

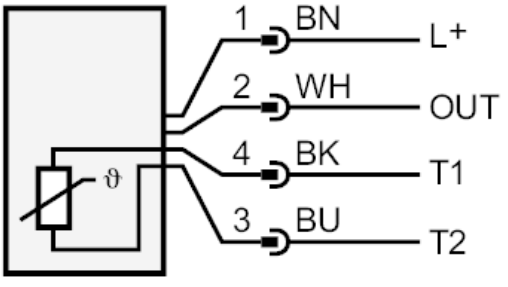
Remarks	MW = measured value
	MEW = Final value of the measuring range
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4, gold-plated



Connection



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

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Vortex flow meter

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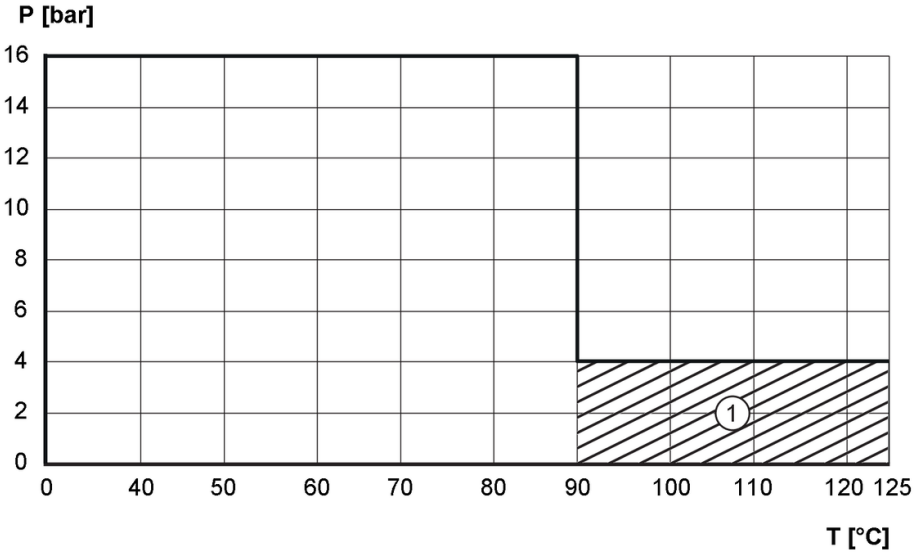
Other data

determination using the compensation value and the response threshold for glycol-water mixtures

determination of the compensation value Q0	[l/min]	0.938 x (I – 4mA) – 0.22v + 0.22
determination of the response threshold Qmin	[l/min]	- 0.1 + v
v =	kinematic viscosity	

Diagrams and graphs

Pressure rating

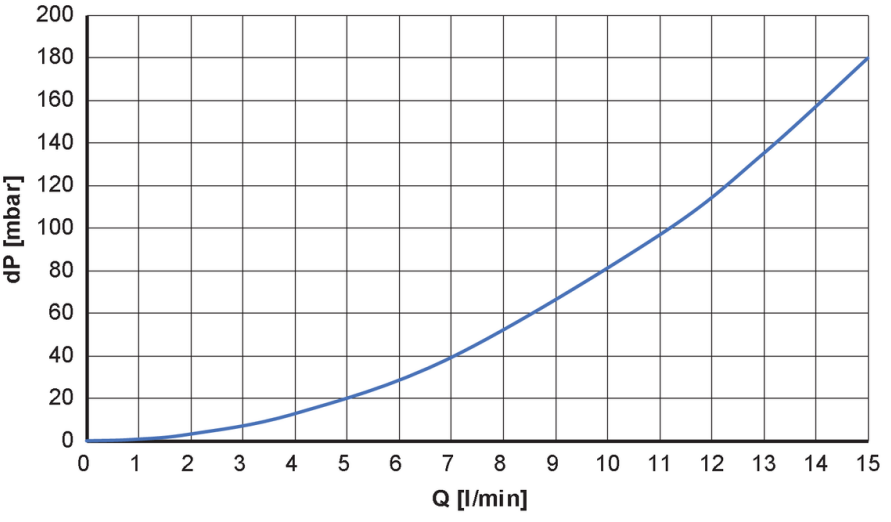


P [bar] = pressure

T [°C] = temperature

1 = permanent

Pressure loss



dP [mbar] = Pressure loss

Q [l/min] = volumetric flow quantity