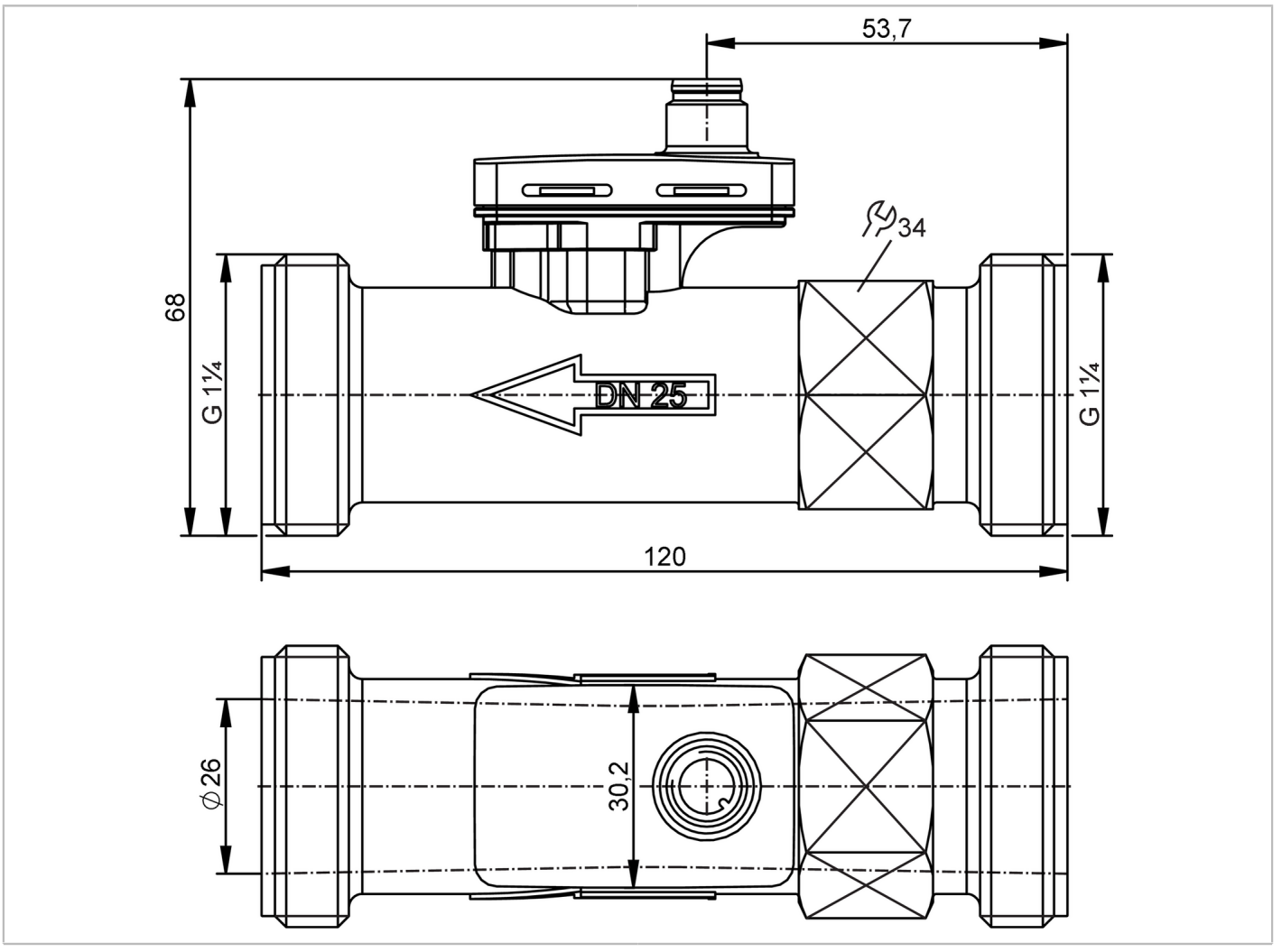
SV8151

Vortex flow meter

SVR54XGXD0KG/US



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			
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		10 bar	1 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 analog outputs: 1	
Outputs			
Total number of outputs		1	
Output signal		analog signal	
Number of analog outputs		1	
Analog current output	[mA]	4...20	
Max. load	[Ω]	< (Ub - 8 V) / 20 mA; Ub = 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]	-15...125	
Accuracy / deviations			
Flow monitoring			
Accuracy (in the measuring range)		water	
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	
Reaction times			
Flow monitoring			
Response time	[s]	0.38; (T09)	
Temperature monitoring			
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)

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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]	395.9	
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]	147.8
Housing		rectangular
Dimensions	[mm]	120 x 41.91 x 68
Material		Housing: PPS 40% glass fiber; electronics: PC 10% glass fiber
Materials (wetted parts)		sensor: PPSU; Pipe section: PPS 40% glass fiber; sealing: EPDM
Tightening torque	[Nm]	15
Process connection		threaded connection G 1 1/4 external thread DN25

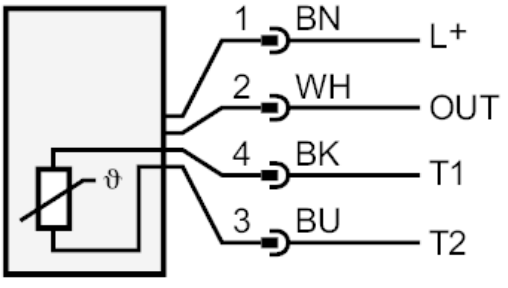
Remarks

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

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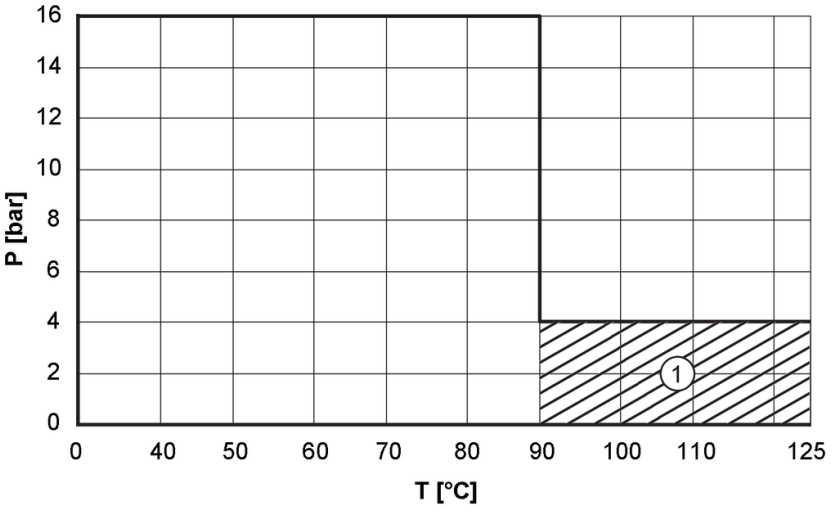
Other data

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

determination of the compensation value Q0	[l/min]	9.375 x (I – 4mA) – 1.0v + 1.0
determination of the response threshold Qmin	[l/min]	8.0 + v
v =	kinematische Viskosität	

Diagrams and graphs

Pressure rating

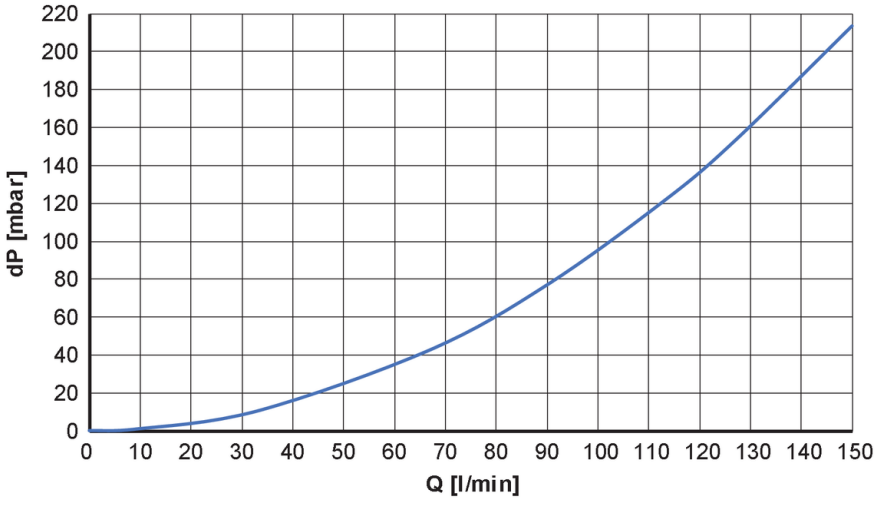


P [bar] = pressure

T [°C] = temperature

1 = permanent

Pressure loss



dP [mbar] = Pressure loss

Q [l/min] = volumetric flow quantity