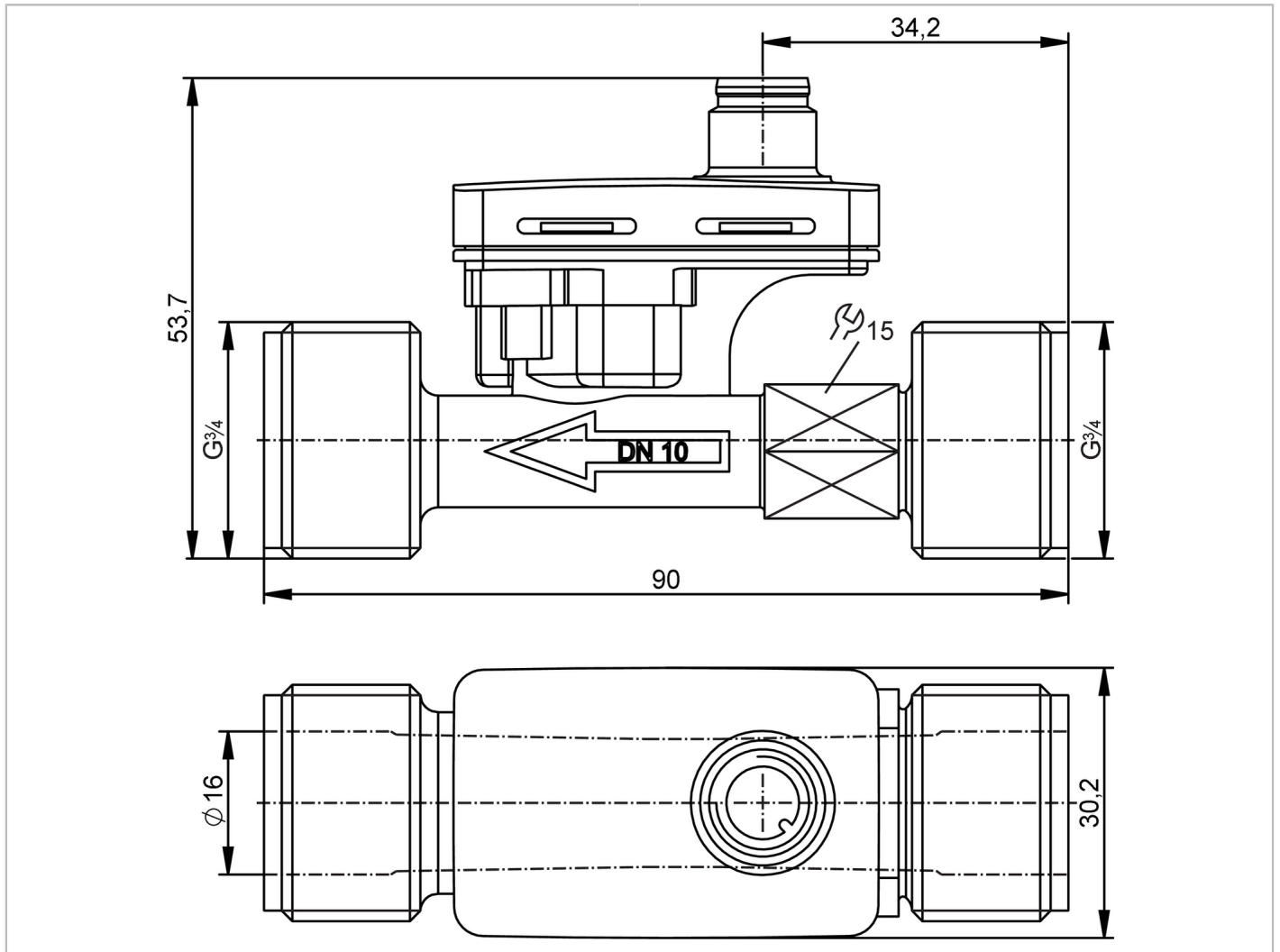


SV5051



Vortex flow meter

SVR34XGXD0KG/US



Product characteristics

Number of inputs and outputs	Number of analog outputs: 1	
Measuring range	1.8...32 l/min	0.265...4.716 m/s
Process connection	threaded connection G 3/4 external thread DN10	

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	

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Electrical data		
Operating voltage	[V]	8...33 DC
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]	$< (U_b - 8 \text{ V}) / 20 \text{ mA}$; $U_b = 24 \text{ V}$: 800
Measuring/setting range		
Measuring range	1.8...32 l/min	0.265...4.716 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	$Q < 50 \% \text{ MEW}$: $< 1 \% \text{ MEW}$ / $Q > 50 \% \text{ MEW}$: $< 2 \% \text{ MEW}$
	glycol solutions (35%)	$2 > v < 6 \text{ cSt}$: $\pm 5 \% \text{ MEW}$ / $6 > v < 15 \text{ cSt}$: $\pm 10 \% \text{ MEW}$
Repeatability		0,2; (% of the final value)
Temperature monitoring		
Accuracy	[K]	$\pm 0,3 \pm 0,005 \times T$
Reaction times		
Flow monitoring		
Response time	[s]	0.34; (T09)
Temperature monitoring		
Dynamic response T05 / T09	[s]	< 10 / < 30
Operating conditions		
Ambient temperature	[°C]	-15...85
Note on ambient temperature		Medium temperature $> 0 \text{ °C}$: -40...85
Storage temperature	[°C]	-40...85
Protection		IP 65
Cavitation		$P(\text{absolute discharge}) / P(\text{difference}) > 5.5$ 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]		82.35
Housing		rectangular
Dimensions [mm]		90 x 30.2 x 53.7
Material	Housing: PPS 40% glass fiber; electronics: PC 10% glass fiber	
Materials (wetted parts)	sensor: PPSU; Pipe section: PPS 40% glass fiber; sealing: FKM	
Tightening torque [Nm]		12
Process connection	threaded connection G 3/4 external thread DN10	

Remarks

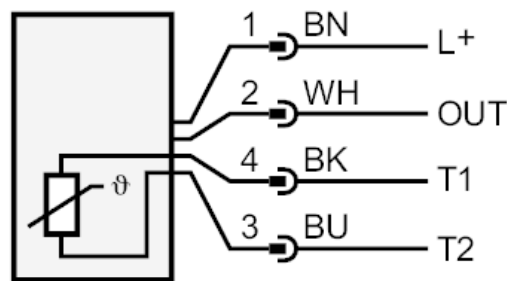
Remarks	MW = Measured value	
	MEW = Final value of the measuring range	
Pack quantity	1 pcs.	

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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Vortex flow meter

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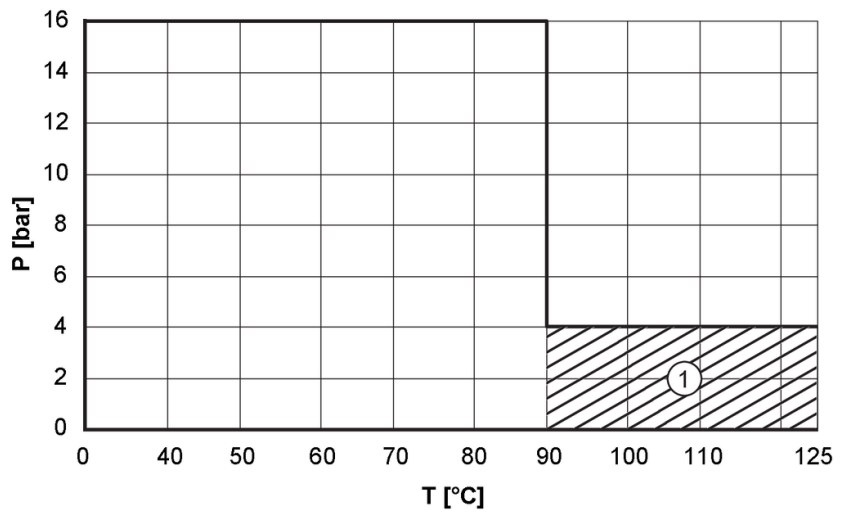
Other data

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

determination of the compensation value Q0	[l/min]	$2.0 \times (I - 4mA) - 0.6v + 0, 6$
determination of the response threshold Qmin	[l/min]	$0.8 + v$
v =	kinematische Viskosität	

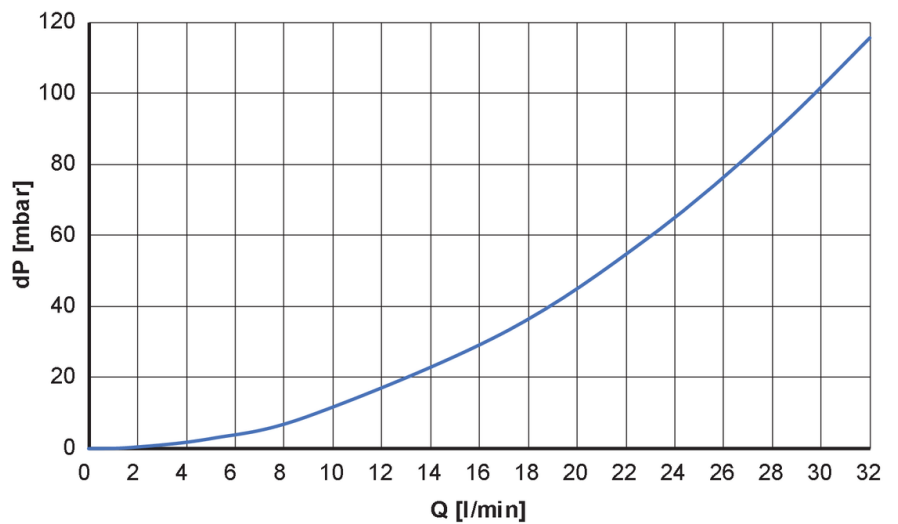
Diagrams and graphs

Pressure rating



P [bar] = pressure
T [°C] = temperature
1 = permanent

Pressure loss



dP [mbar] = Pressure loss
Q [l/min] = volumetric flow quantity