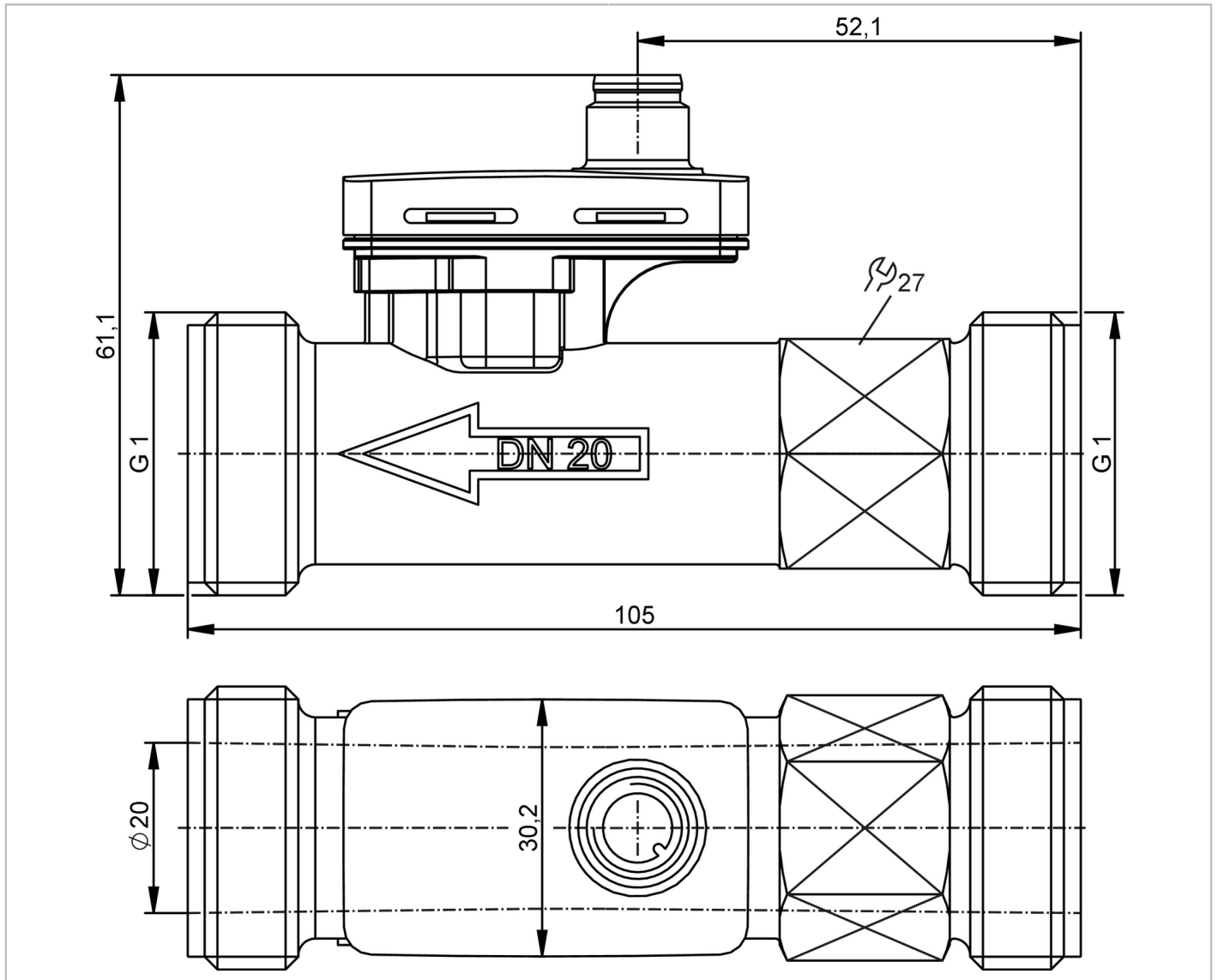


# SV7051



## Vortex flow meter

SVR11XGXD0KG/US



### Product characteristics

Number of inputs and outputs	Number of analog outputs: 1	
Measuring range	5...85 l/min	0.265...4.509 m/s
Process connection	threaded connection G 1 external thread DN20	

### 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

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Note on pressure rating		≤ 90 °C
<b>Electrical data</b>		
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
<b>Inputs / outputs</b>		
Number of inputs and outputs		Number of analog outputs: 1
<b>Outputs</b>		
Total number of outputs		1
Output signal		analog signal
Number of analog outputs		1
Analog current output [mA]		4...20
Max. load [Ω]		< (U <sub>b</sub> - 8 V) / 20 mA; U <sub>b</sub> = 24 V: 800
<b>Measuring/setting range</b>		
Measuring range	5...85 l/min	0.265...4.509 m/s
<b>Temperature monitoring</b>		
Internal heating temperature probe		1 K/mW
Measuring range [°C]		-15...125
<b>Accuracy / deviations</b>		
<b>Flow monitoring</b>		
Accuracy (in the measuring range)	water	Q < 50 % MEW: < 1 % MEW / Q > 50 % MEW: < 2 % MEW
	glycol solutions (35%)	2 > v < 6 cSt: ± 5% MEW / 6 > v < 15 cSt: ± 10% MEW
Repeatability		0,2; (% of the final value)
<b>Temperature monitoring</b>		
Accuracy [K]		± 0,3 ± 0,005 x T
<b>Reaction times</b>		
<b>Flow monitoring</b>		
Response time [s]		0.37; (T09)
<b>Temperature monitoring</b>		
Dynamic response T05 / T09 [s]		< 10 / < 30
<b>Operating conditions</b>		
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
<b>Tests / approvals</b>		
EMC		EN IEC 61326-1:2021

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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]		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]		115.2
Housing		rectangular
Dimensions [mm]		105 x 30.2 x 61.1
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 1 external thread DN20	

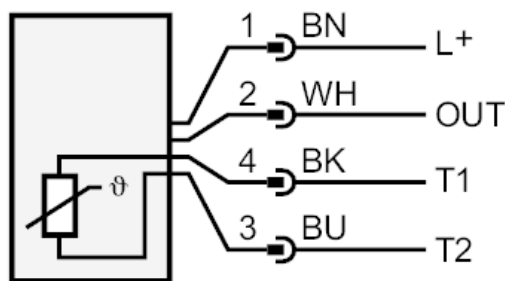
Remarks		
Remarks	MW = Measured value	
	MEW = Final value of the measuring range	
Pack quantity	1 pcs.	

### 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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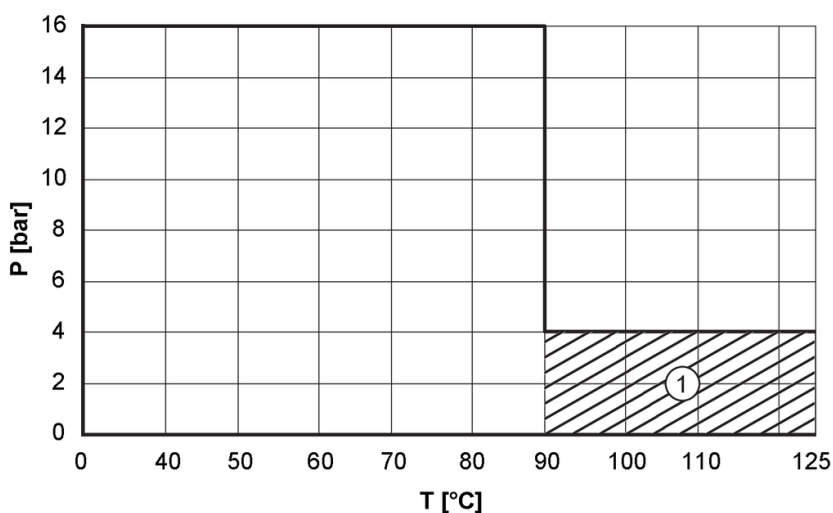
### Other data

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

determination of the compensation value Q0	[l/min]	$5.313 \times (I - 4mA) - 0.75v + 0,75$
determination of the response threshold Qmin	[l/min]	$4.0 + v$
v =	kinematische Viskosität	

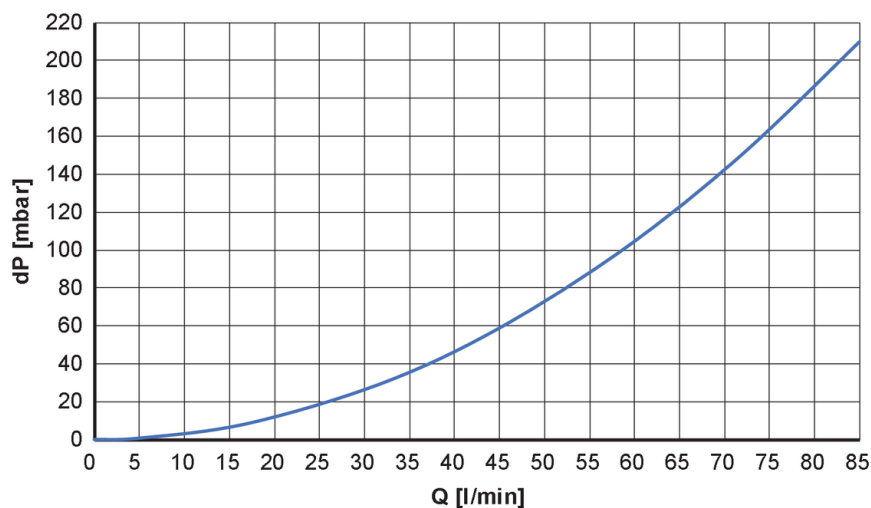
### Diagrams and graphs

Pressure rating



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

Pressure loss



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