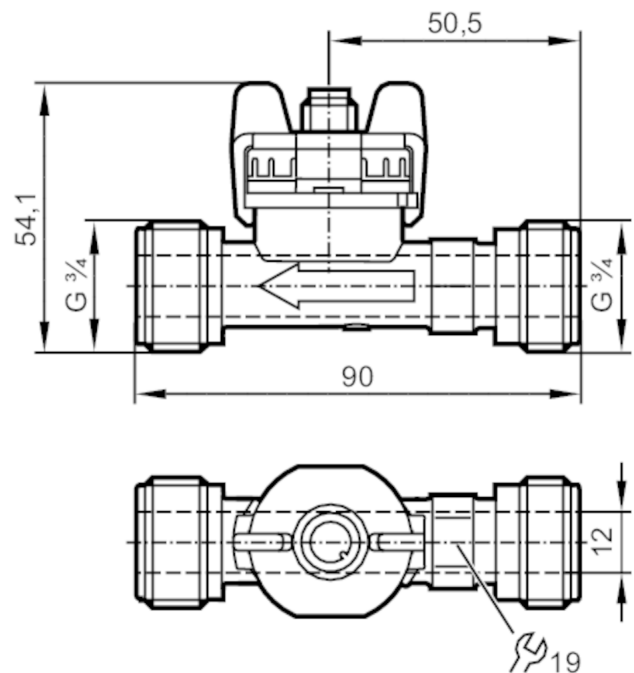


# SV5050



## Vortex flow meter

SVM34XXXD0KG/US-100



| Product characteristics      |                                           |                   |
|------------------------------|-------------------------------------------|-------------------|
| Number of inputs and outputs | Number of analogue outputs: 1             |                   |
| Measuring range              | 1.8...32 l/min                            | 0.265...4.716 m/s |
| Process connection           | threaded connection G 3/4 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                        | 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               |
| Note 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 analogue outputs: 1             |                   |



## Vortex flow meter

SVM34XXXD0KG/US-100

| Outputs                            |                                                                                                             |                               |
|------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------------------|
| Total number of outputs            | 1                                                                                                           |                               |
| Output signal                      | analogue signal                                                                                             |                               |
| Number of analogue outputs         | 1                                                                                                           |                               |
| Analogue current output [mA]       | 4...20; (water: Q [l/min] = 2,0 x (I - 4 mA); water-glycol: Q [l/min] = 2,0 x (I - 4 mA) - Qo see Figure 2) |                               |
| Max. load [Ω]                      | < (Ub - 8 V) / 20 mA; Ub = 24 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]               | -40...100                                                                                                   |                               |
| Accuracy / deviations              |                                                                                                             |                               |
| Flow monitoring                    |                                                                                                             |                               |
| Accuracy (in the measuring range)  | Q < 50 % MEW: < 1 % MEW / Q > 50 % MEW: < 2 % MW; (water)                                                   |                               |
| Repeatability                      | 0,2; (% of the final value)                                                                                 |                               |
| Temperature monitoring             |                                                                                                             |                               |
| Accuracy [K]                       | ± 0,3 ± 0,005 x T                                                                                           |                               |
| Response times                     |                                                                                                             |                               |
| Flow monitoring                    |                                                                                                             |                               |
| Response time [s]                  | 0.5                                                                                                         |                               |
| Operating conditions               |                                                                                                             |                               |
| Ambient temperature [°C]           | -15...85                                                                                                    |                               |
| Storage temperature [°C]           | -30...85                                                                                                    |                               |
| Protection                         | IP 65                                                                                                       |                               |
| Cavitation                         | P(absolute) discharge / P(difference) > 5.5 to avoid cavitation                                             |                               |
| Tests / approvals                  |                                                                                                             |                               |
| EMC                                | EN 61326-2-3                                                                                                |                               |
| 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 [ANN]                         | 380                                                                                                         |                               |
| Pressure Equipment Directive       | Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request                       |                               |
| Mechanical data                    |                                                                                                             |                               |
| Weight [g]                         | 87.8                                                                                                        |                               |
| Materials                          | PA 6T                                                                                                       |                               |
| Materials (wetted parts)           | ETFE; PA 6T; FKM                                                                                            |                               |
| Tightening torque [Nm]             | 12                                                                                                          |                               |
| Process connection                 | threaded connection G 3/4 DN10                                                                              |                               |
| Remarks                            |                                                                                                             |                               |
| Remarks                            | MW = measured value                                                                                         |                               |
|                                    | MEW = Final value of the measuring range                                                                    |                               |

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## Vortex flow meter

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Pack quantity

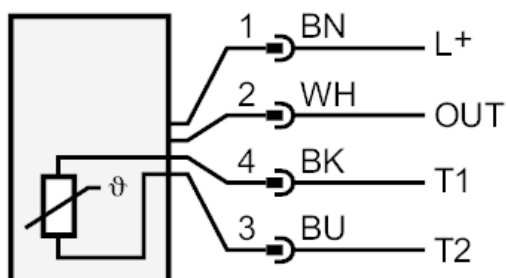
1 pcs.

### Electrical connection

Connector: 1 x M12; coding: A; Contacts: 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

# SV5050

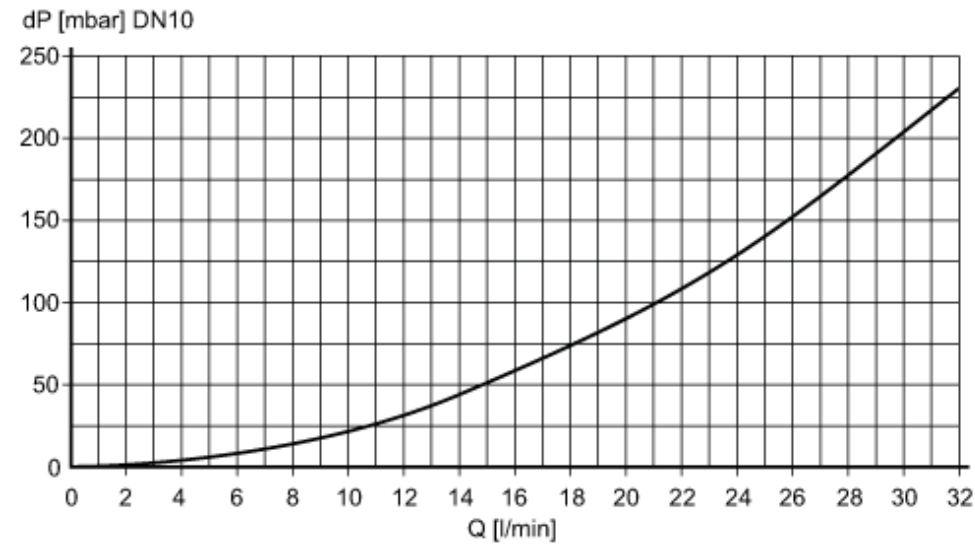


## Vortex flow meter

SVM34XXD0KG/US-100

### Diagrams and graphs

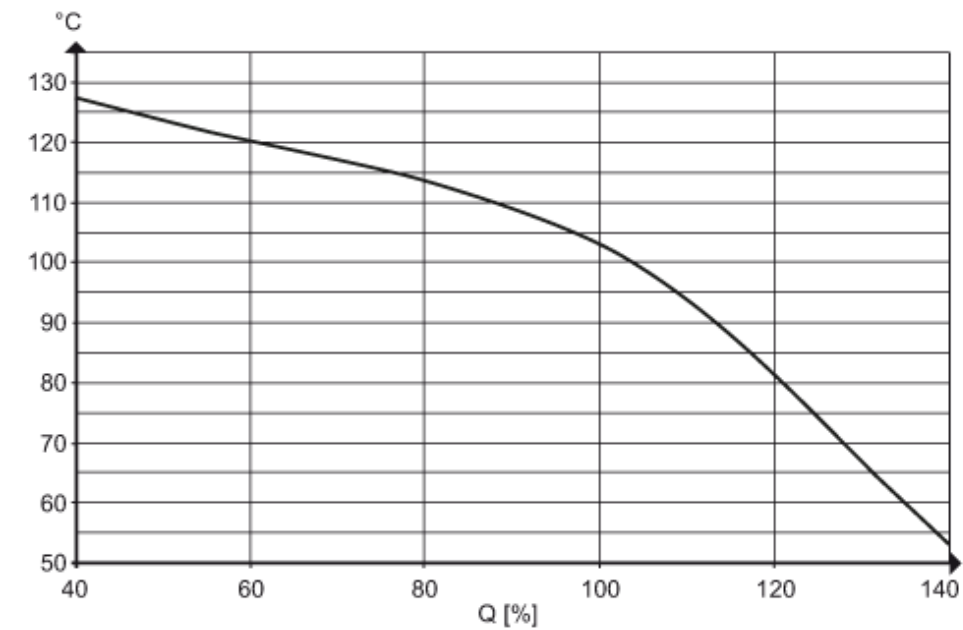
Pressure loss



dP Pressure loss

Q volumetric flow quantity

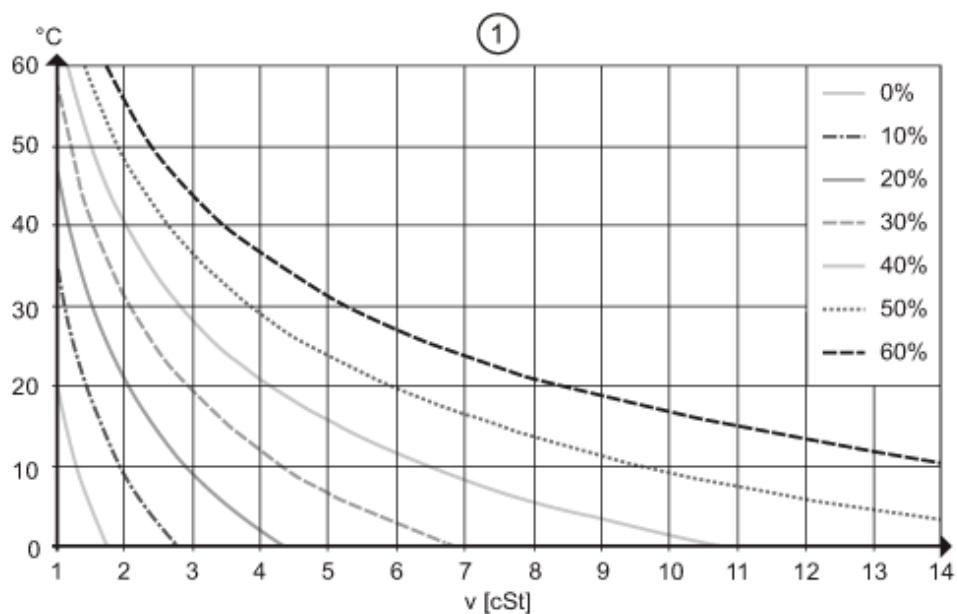
min. life 10 years referred to flow  
and high medium temperatures



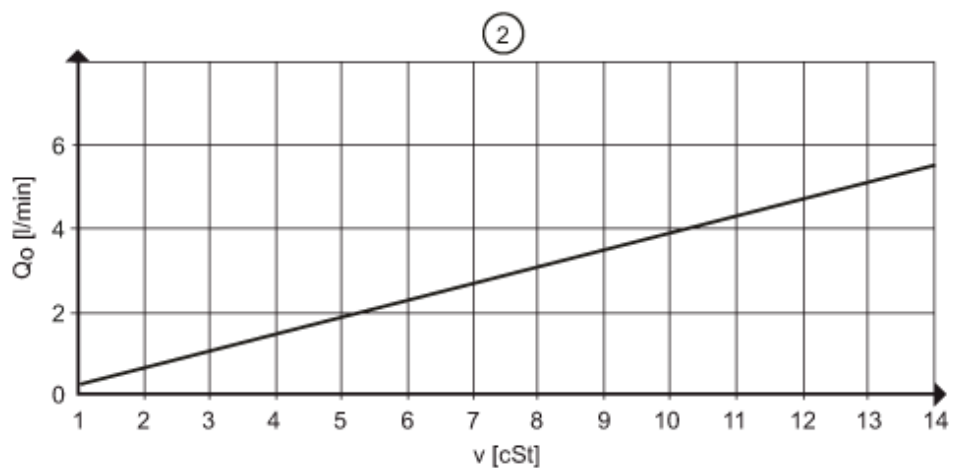
## Vortex flow meter

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determination of the kinematic viscosity ( $\nu$ ) of glycol-water mixtures depending on the temperature



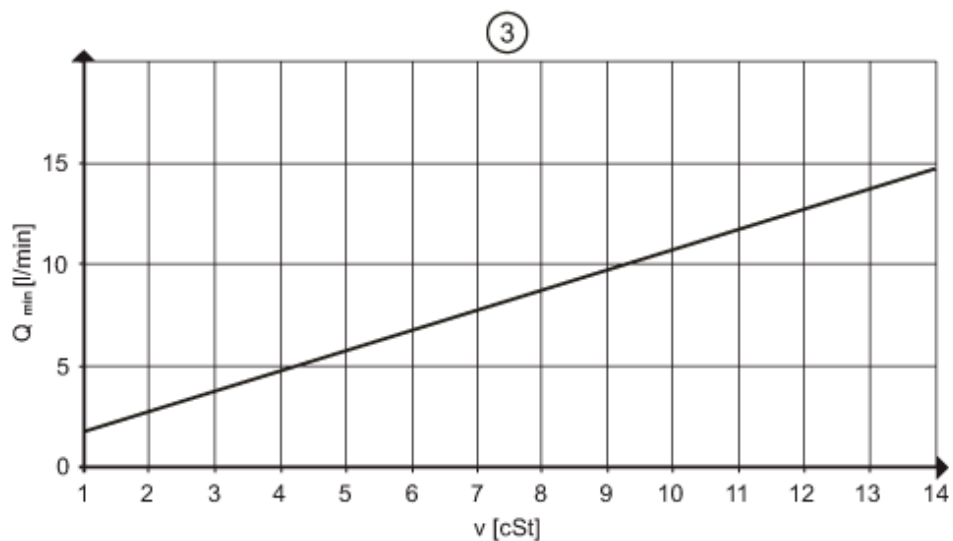
determination of the compensation value  $Q_0$  for glycol-water mixtures



$\nu < 4$  cSt measuring accuracy 3% MEW

$4 < \nu < 14$  cSt measuring accuracy 4% MEW

response threshold  $Q_{\min}$  depending on the kinematic viscosity



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## Vortex flow meter

SVM34XXD0KG/US-100

pressure rating (bar)

