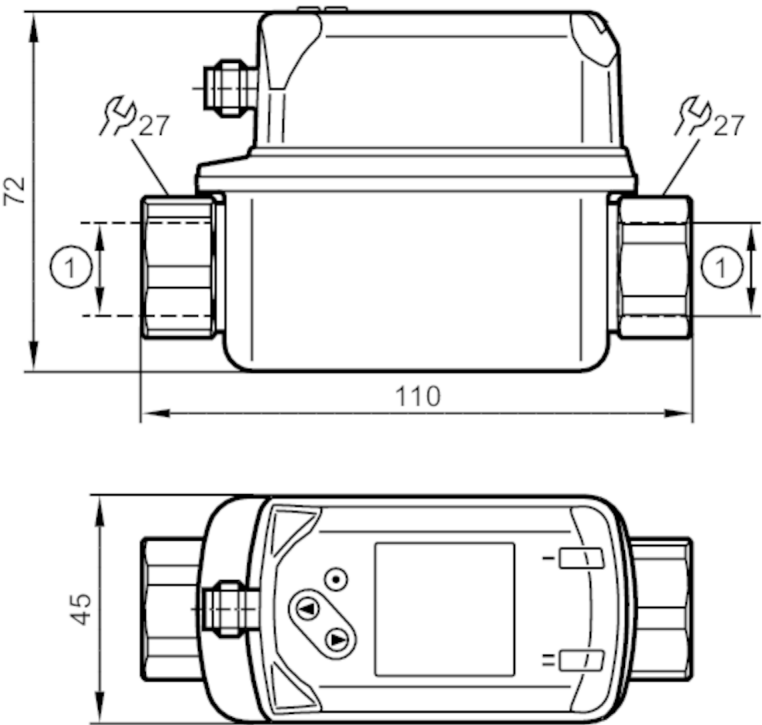


# SV4500



## Vortex flow meter with display

SVK12XXXIRKG/US-100



1 Rc 1/2  
DN 8



| Application                     |                             |
|---------------------------------|-----------------------------|
| Application                     | for industrial applications |
| Media                           | water                       |
| Medium temperature [°C]         | -10...90                    |
| Pressure rating [bar]           | 12                          |
| Note on pressure rating         | up to 40 °C                 |
| Electrical data                 |                             |
| Operating voltage [V]           | 18...30 DC                  |
| Current consumption [mA]        | < 30                        |
| Min. insulation resistance [MΩ] | 100; (500 V DC)             |
| Protection class                | III                         |
| Reverse polarity protection     | yes                         |
| Power-on delay time [s]         | < 3                         |



## Vortex flow meter with display

SVK12XXXIRKG/US-100

| Outputs                                              |                                                             |                  |
|------------------------------------------------------|-------------------------------------------------------------|------------------|
| Total number of outputs                              | 2                                                           |                  |
| Output signal                                        | switching signal; frequency signal; IO-Link; (configurable) |                  |
| Electrical design                                    | PNP/NPN                                                     |                  |
| Number of digital outputs                            | 2                                                           |                  |
| Output function                                      | normally open / normally closed; (parameterisable)          |                  |
| Max. voltage drop switching output DC [V]            | 2.5                                                         |                  |
| Permanent current rating of switching output DC [mA] | 100                                                         |                  |
| Short-circuit protection                             | yes                                                         |                  |
| Overload protection                                  | yes                                                         |                  |
| Measuring/setting range                              |                                                             |                  |
| Measuring range                                      | 1...20 l/min                                                | 0.06...1.2 m³/h  |
| Display range                                        | 0...24 l/min                                                | 0...1.44 m³/h    |
| Resolution                                           | 0.1 l/min                                                   | 0.005 m³/h       |
| Set point SP                                         | 1.2...20 l/min                                              | 0.07...1.2 m³/h  |
| Reset point rP                                       | 1...19.8 l/min                                              | 0.06...1.19 m³/h |
| Measuring dynamics                                   | 1:20                                                        |                  |
| Frequency end point, FEP                             | 4...20 l/min                                                | 0.24...1.2 m³/h  |
| Frequency at the end point FRP [Hz]                  | 100...1000                                                  |                  |
| In steps of                                          | 0.1 l/min                                                   | 0.005 m³/h       |
| Temperature monitoring                               |                                                             |                  |
| Measuring range [°C]                                 | -10...90                                                    |                  |
| Display range [°C]                                   | -30...110                                                   |                  |
| Resolution [°C]                                      | 0.5                                                         |                  |
| Set point SP [°C]                                    | -9...90                                                     |                  |
| Reset point rP [°C]                                  | -10...89                                                    |                  |
| In steps of [°C]                                     | 0.5                                                         |                  |
| Frequency start point, FSP [°C]                      | -10...70                                                    |                  |
| Frequency end point, FEP [°C]                        | 10...90                                                     |                  |
| Frequency at the end point FRP [Hz]                  | 100...1000                                                  |                  |
| Accuracy / deviations                                |                                                             |                  |
| Flow monitoring                                      |                                                             |                  |
| Accuracy (in the measuring range)                    | ± 2 % MEW                                                   |                  |
| Repeatability                                        | ± 0,5 % MEW                                                 |                  |
| Temperature monitoring                               |                                                             |                  |
| Accuracy [K]                                         | ± 1                                                         |                  |
| Response times                                       |                                                             |                  |
| Flow monitoring                                      |                                                             |                  |
| Response time [s]                                    | 1; (dAP = 0)                                                |                  |
| Damping for the switching output dAP [s]             | 0...5                                                       |                  |

# SV4500



## Vortex flow meter with display

SVK12XXXIRKG/US-100

|                                           |                                                                                                                                            |                               |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Temperature monitoring                    |                                                                                                                                            |                               |
| Dynamic response T05 / T09                | [s]                                                                                                                                        | T09 = 6                       |
| Software / programming                    |                                                                                                                                            |                               |
| Parameter setting options                 | hysteresis / window; normally open / normally closed; switching logic; frequency output; switch-on/switch-off delay; Damping; Display unit |                               |
| Interfaces                                |                                                                                                                                            |                               |
| Communication interface                   | IO-Link                                                                                                                                    |                               |
| Transmission type                         | COM2 (38,4 kBaud)                                                                                                                          |                               |
| IO-Link revision                          | 1.1                                                                                                                                        |                               |
| SDCI standard                             | IEC 61131-9                                                                                                                                |                               |
| IO-Link device ID                         | 484 d / 00 01 E4 h                                                                                                                         |                               |
| Profiles                                  | Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis                                                               |                               |
| SIO mode                                  | yes                                                                                                                                        |                               |
| Required master port type                 | A                                                                                                                                          |                               |
| Process data analogue                     | 2                                                                                                                                          |                               |
| Process data binary                       | 2                                                                                                                                          |                               |
| Min. process cycle time                   | [ms]                                                                                                                                       | 3                             |
| Operating conditions                      |                                                                                                                                            |                               |
| Ambient temperature                       | [°C]                                                                                                                                       | 0...60                        |
| Note on ambient temperature               | medium temperature < 80 °C<br>medium temperature < 90 °C: 0...50 °C                                                                        |                               |
| Storage temperature                       | [°C]                                                                                                                                       | -20...80                      |
| Protection                                | IP 65; IP 67                                                                                                                               |                               |
| Tests / approvals                         |                                                                                                                                            |                               |
| EMC                                       | DIN EN 61000-6-2                                                                                                                           |                               |
|                                           | DIN EN 61000-6-3                                                                                                                           |                               |
| Shock resistance                          | DIN EN 60068-2-27                                                                                                                          | 5 g (11 ms)                   |
| Vibration resistance                      | DIN EN 60068-2-6                                                                                                                           | with water / 10...50 Hz 1 mm  |
|                                           |                                                                                                                                            | with water / 50...2000 Hz 2 g |
| MTTF                                      | [years]                                                                                                                                    | 342                           |
| UL approval                               | UL Approval no.                                                                                                                            | I001                          |
| Pressure Equipment Directive              | Sound Engineering Practice; can be used for group 2 fluids; group 1 fluids on request                                                      |                               |
| Mechanical data                           |                                                                                                                                            |                               |
| Weight                                    | [g]                                                                                                                                        | 433.4                         |
| Materials                                 | stainless steel (1.4404 / 316L); PC; PBT+PC-GF30; PPS; TPE-U                                                                               |                               |
| Materials (wetted parts)                  | stainless steel (1.4404 / 316L); ETFE; PA 6T; PPS; FKM                                                                                     |                               |
| Tightening torque                         | [Nm]                                                                                                                                       | 30                            |
| Process connection                        | threaded connection Rc 1/2 internal thread DN8                                                                                             |                               |
| Remarks                                   |                                                                                                                                            |                               |
| Remarks                                   | MW = measured value                                                                                                                        |                               |
|                                           | MEW = Final value of the measuring range                                                                                                   |                               |
| Pack quantity                             | 1 pcs.                                                                                                                                     |                               |
| Electrical connection                     |                                                                                                                                            |                               |
| Connector: 1 x M12; Contacts: gold-plated |                                                                                                                                            |                               |

# SV4500

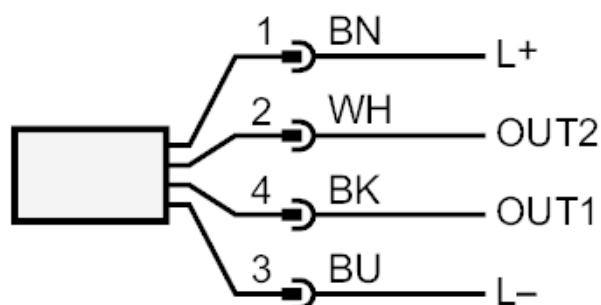


## Vortex flow meter with display

SVK12XXXIRKG/US-100



### Connection



OUT1:

- Flow monitoring
- switching output
- frequency output
- IO-Link

OUT2:

- flow monitoring and temperature monitoring
- switching output
- frequency output

colours to DIN EN 60947-5-2

Core colours :

BK = black  
BN = brown  
BU = blue  
WH = white



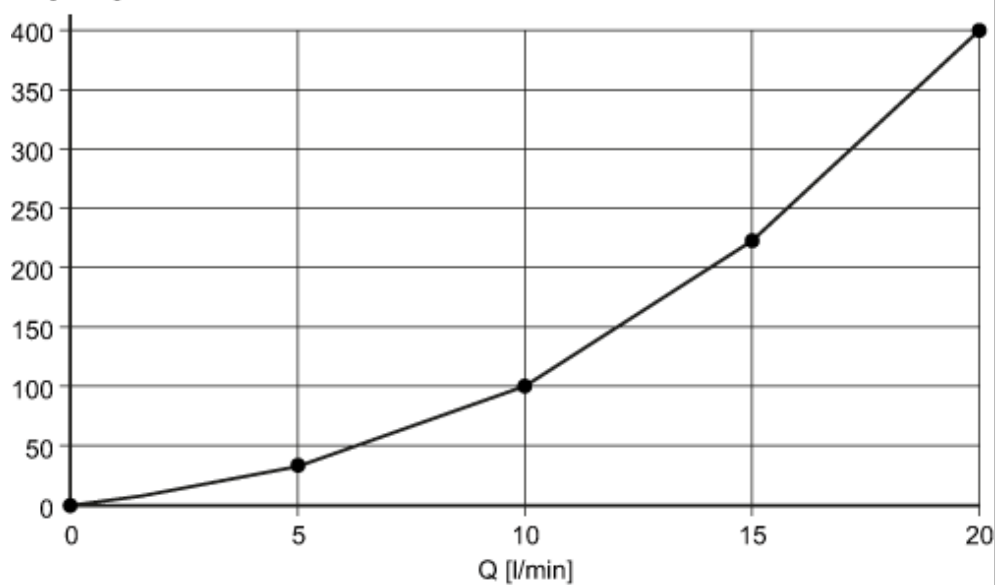
## Vortex flow meter with display

SVK12XXXIRKG/US-100

### Diagrams and graphs

Pressure loss

dP [mbar] DN8



dP Pressure loss

Q volumetric flow quantity

pressure rating (bar)

P [kPa]

