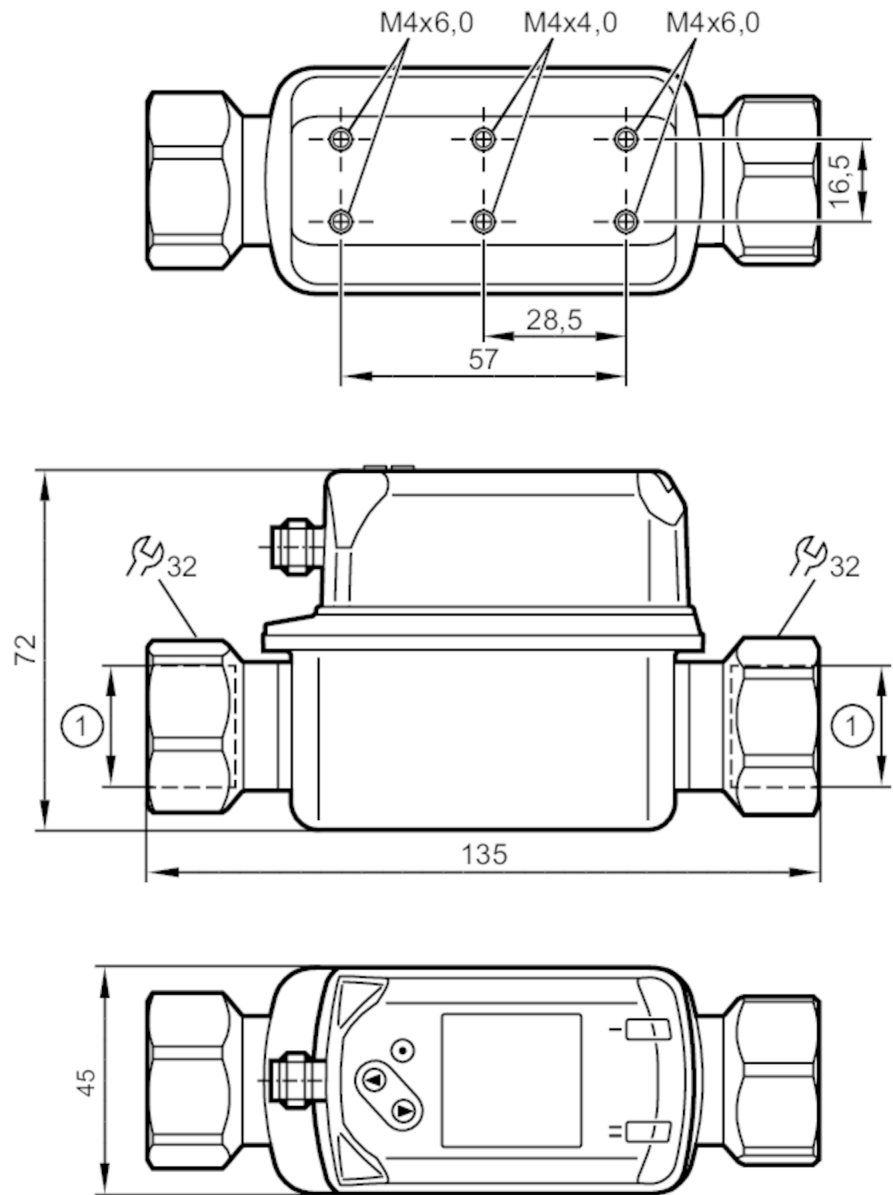


# SV7500



## Vortex flow meter with display

SVK34XXXIRKG/US-100



1 Rc 3/4  
DN 20



### Product characteristics

|                              |                                                 |              |
|------------------------------|-------------------------------------------------|--------------|
| Number of inputs and outputs | Number of digital outputs: 2                    |              |
| Measuring range              | 5...100 l/min                                   | 0.3...6 m³/h |
| Process connection           | threaded connection Rc 3/4 internal thread DN20 |              |

### Application

|                         |                                   |
|-------------------------|-----------------------------------|
| Special feature         | Gold-plated contacts              |
| Application             | for industrial applications       |
| Media                   | water; glycol solutions; coolants |
| Medium temperature [°C] | -10...90                          |



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|                         |       |             |
|-------------------------|-------|-------------|
| Pressure rating         | [bar] | 12          |
| Pressure rating         | [MPa] | 1.2         |
| 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             |

## Inputs / outputs

|                              |                              |
|------------------------------|------------------------------|
| Number of inputs and outputs | Number of digital outputs: 2 |
|------------------------------|------------------------------|

## 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                | 5...100 l/min  | 0.3...6 m³/h    |
| Display range                  | 0...120 l/min  | 0...7.2 m³/h    |
| Resolution                     | 0.5 l/min      | 0.02 m³/h       |
| Set point SP                   | 6...100 l/min  | 0.36...6 m³/h   |
| Reset point rP                 | 5...99 l/min   | 0.3...5.94 m³/h |
| Frequency end point, FEP       | 20...100 l/min | 1.2...6 m³/h    |
| In steps of                    | 0.5 l/min      | 0.02 m³/h       |
| Frequency at the end point FRP | [Hz]           | 100...1000      |
| Measuring dynamics             |                | 1:20            |

## 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 |



## Vortex flow meter with display

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| Accuracy / deviations             |                                                                                                                                            |                    |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| Flow monitoring                   |                                                                                                                                            |                    |
| Accuracy (in the measuring range) |                                                                                                                                            | ± 2 % MEW; (water) |
| Repeatability                     |                                                                                                                                            | ± 0,5 % MEW        |
| Temperature monitoring            |                                                                                                                                            |                    |
| Accuracy                          | [K]                                                                                                                                        | ± 1                |
| Response times                    |                                                                                                                                            |                    |
| Flow monitoring                   |                                                                                                                                            |                    |
| Response time                     | [s]                                                                                                                                        | 1; (dAP = 0)       |
| Damping process value dAP         | [s]                                                                                                                                        | 0...5              |
| 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                                                                                                                                |                    |
| 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                  |
| Supported DeviceIDs               | Type of operation                                                                                                                          | DeviceID           |
|                                   | default                                                                                                                                    | 492                |
| Operating conditions              |                                                                                                                                            |                    |
| Ambient temperature               | [°C]                                                                                                                                       | 0...60             |
| Note on ambient temperature       | medium temperature < 80 °C                                                                                                                 |                    |
|                                   | 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                                                                                                                           |                    |
| CPA approval                      | model number                                                                                                                               | 001VO              |
|                                   | accuracy class                                                                                                                             | -                  |
|                                   | maximum allowable error                                                                                                                    | ± 2 % FS           |
|                                   | Q (min)                                                                                                                                    | 0,36 m³/h          |
|                                   | Q (t)                                                                                                                                      | 1,2 m³/h           |
|                                   | Q (max)                                                                                                                                    | 6 m³/h             |
| Shock resistance                  | DIN EN 60068-2-27                                                                                                                          | 5 g (11 ms)        |

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## Vortex flow meter with display

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|                              |                                                                                       |                               |
|------------------------------|---------------------------------------------------------------------------------------|-------------------------------|
| 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]               | 487.5                                                        |
| 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 3/4 internal 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: gold-plated



## Vortex flow meter with display

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### 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

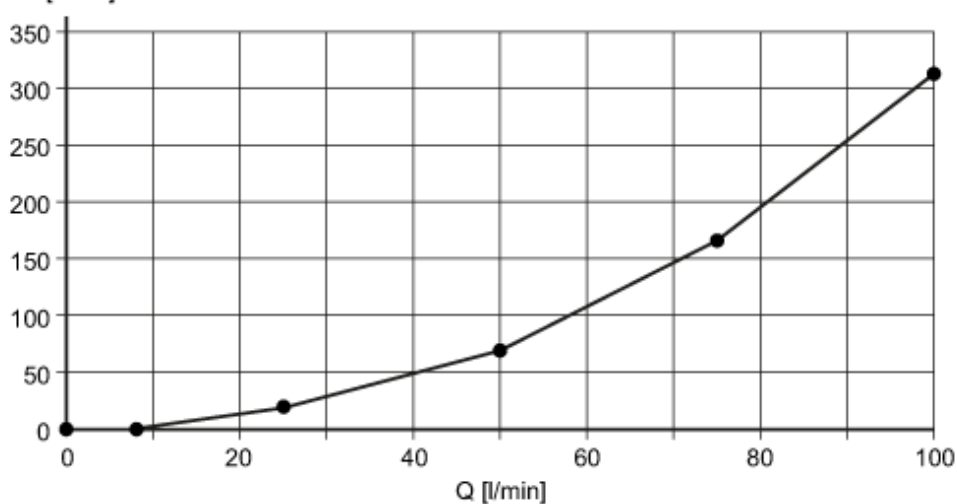
Core colours :

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

### Diagrams and graphs

#### Pressure loss

dP [mbar] DN20



dP Pressure loss

Q volumetric flow quantity

# SV7500

## Vortex flow meter with display

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pressure rating (bar)

