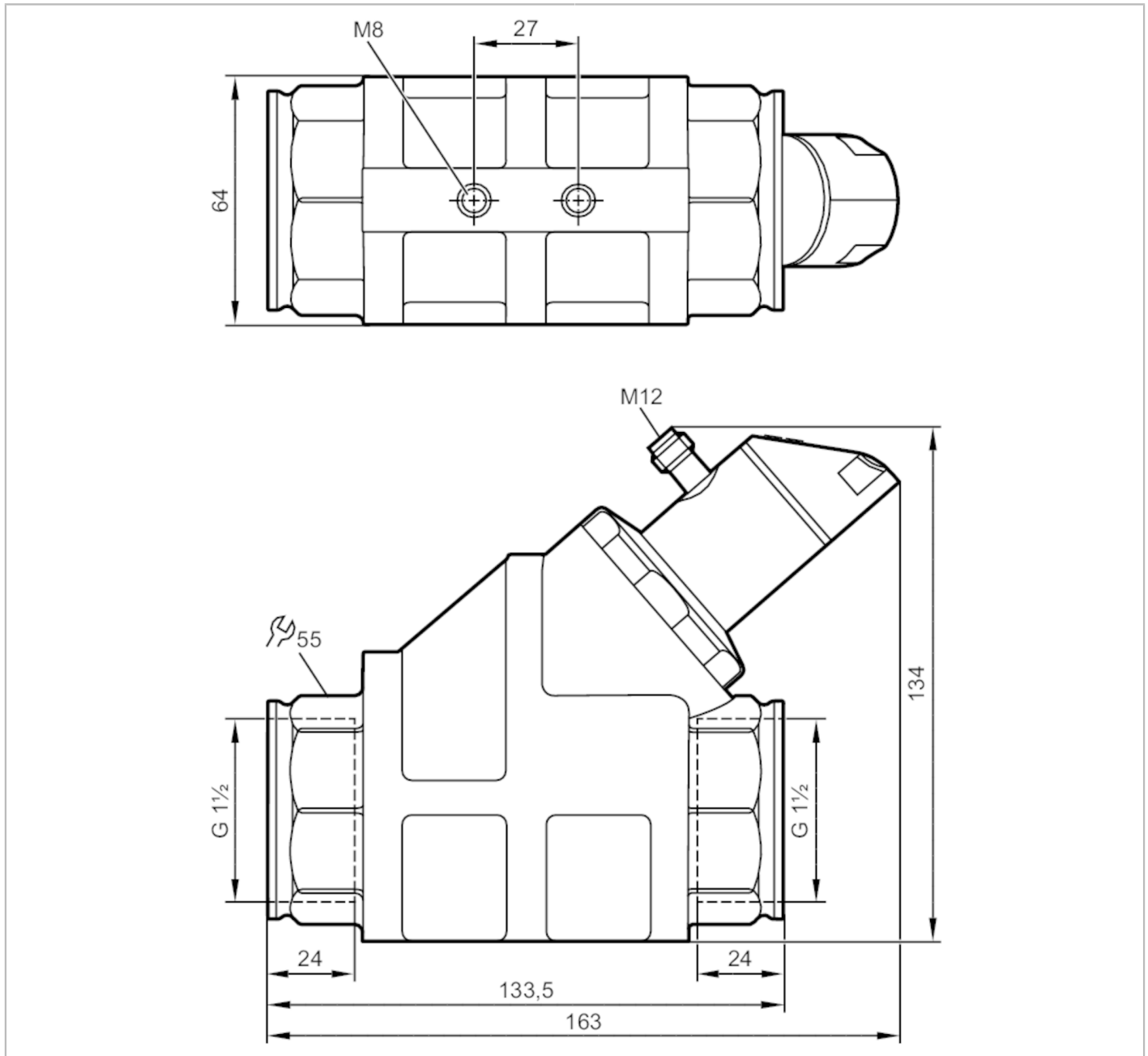


SB5256



Flow meter with fast response and display

SBG32KM0FRKG



| Product characteristics | | | | |
|-------------------------|--|---------------|---------------|-----------------|
| Measuring range | 2...100 l/min | 0.12...6 m³/h | 32...1586 gph | 0.55...26.4 gpm |
| Process connection | threaded connection G 1 1/2 Internal thread | | | |
| Application | | | | |
| System | gold-plated contacts | | | |
| Media | Liquids; oils (viscosity 150 mm²/s at 40 °C) | | | |
| Medium temperature | [°C] | -10...100 | | |
| Pressure rating | [bar] | 63 | | |
| Pressure rating | [Mpa] | 6.3 | | |
| Note on pressure rating | at medium temperature >70°C: 50 bar / 5 MPa | | | |

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| Electrical data | | | | | |
|---------------------------------------|------|---|---------------|------------------|-----------------|
| Operating voltage | [V] | 18...30 DC; (to SELV/PELV) | | | |
| Current consumption | [mA] | < 50 | | | |
| Protection class | | III | | | |
| Reverse polarity protection | | yes | | | |
| Power-on delay time | [s] | < 3 | | | |
| Outputs | | | | | |
| Total number of outputs | | 2 | | | |
| Output signal | | switching signal; analog signal; frequency signal; IO-Link | | | |
| Output function | | normally open / closed; (configurable) | | | |
| Max. voltage drop switching output DC | [V] | 2 | | | |
| Max. current load per output | [mA] | 150; (200: ...60 °C; Ambient temperature; 250: ...40 °C; Ambient temperature) | | | |
| Analog current output | [mA] | 4...20 | | | |
| Max. load | [Ω] | 500 | | | |
| Short-circuit protection | | yes | | | |
| Overload protection | | yes | | | |
| Frequency of the output | [Hz] | 0...10000 | | | |
| Measuring/setting range | | | | | |
| Measuring range | | 2...100 l/min | 0.12...6 m³/h | 32...1586 gph | 0.55...26.4 gpm |
| Display range | | 0...120 l/min | 0...7.2 m³/h | 0...1902 gph | 0...31.7 gpm |
| Resolution | | 0.1 l/min | 0.01 m³/h | 1 gph | 0.01 gpm |
| Set point SP | | 0.7...100 l/min | 0.04...6 m³/h | 10...1586 gph | 0.15...26.4 gpm |
| Reset point rP | | 0...99.3 l/min | 0...5.96 m³/h | 0...1574 gph | 0...26.25 gpm |
| Frequency end point, FEP | | 6.7...100 l/min | 0.4...6 m³/h | 106...1586 gph | 1.75...26.4 gpm |
| In steps of | | 0.1 l/min | 0.01 m³/h | 2 gph | 0.05 gpm |
| Frequency at the end point FRP | [Hz] | 10...10000 | | | |
| In steps of | [Hz] | 10 | | | |
| Measuring dynamics | | 1:50 | | | |
| In steps of | | 10 Hz | | | |
| Temperature monitoring | | | | | |
| Measuring range | | -10...100 °C | | 14...212 °F | |
| Display range | | -32...122 °C | | -25.6...251.6 °F | |
| Resolution | | 0.1 °C | | 0.1 °F | |
| Set point SP | | -9.3...100 °C | | 15.2...212 °F | |
| Reset point rP | | -10...99.3 °C | | 14...210.8 °F | |
| In steps of | | 0.1 °C | | 0.2 °F | |
| Frequency start point, FSP | | -10...78 °C | | 14...172.4 °F | |
| Frequency end point, FEP | | 12...100 °C | | 53.6...212 °F | |
| Frequency at the end point FRP | [Hz] | 10...10000 | | | |



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| Accuracy / deviations | | | | | |
|---------------------------------------|--|-------------------|----------|---------|------|
| Flow monitoring | | | | | |
| Accuracy (in the measuring range) | ± 5 % MEW; (Q > 1 l/min; 20...70 °C Medium temperature) | | | | |
| Repeatability | ± 1 % MEW | | | | |
| Temperature monitoring | | | | | |
| Temperature drift | 0,029 °C / K | | | | |
| Accuracy [K] | 3 K (25°C; Q > 1 l/min) | | | | |
| Reaction times | | | | | |
| Flow monitoring | | | | | |
| Response time [s] | 0.01 | | | | |
| Damping process value dAP [s] | 0...5 | | | | |
| In steps of [s] | 0.1 | | | | |
| Damping for the analog output dAA [s] | 0...5 | | | | |
| In steps of [s] | 0.1 | | | | |
| Temperature monitoring | | | | | |
| Dynamic response T05 / T09 [s] | T09 = 120 (Q > 1 l/min) | | | | |
| Software / programming | | | | | |
| Parameter setting options | hysteresis / window; normally open / closed; switching logic; current/frequency output; damping for the switching output / analog output; display can be rotated and switched off; standard unit of measurement; process value color; calibration factor | | | | |
| Interfaces | | | | | |
| Communication interface | IO-Link | | | | |
| Transmission type | COM2 (38,4 kBaud) | | | | |
| IO-Link revision | 1.1 | | | | |
| SDCI standard | IEC 61131-9 CDV | | | | |
| Profiles | Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis | | | | |
| SIO mode | yes | | | | |
| Required master port class | A | | | | |
| Process data analog | 2 | | | | |
| Process data binary | 2 | | | | |
| Min. process cycle time [ms] | 3.2 | | | | |
| Supported DeviceIDs | <table border="1"> <thead> <tr> <th>Type of operation</th> <th>DeviceID</th> </tr> </thead> <tbody> <tr> <td>default</td> <td>1046</td> </tr> </tbody> </table> | Type of operation | DeviceID | default | 1046 |
| Type of operation | DeviceID | | | | |
| default | 1046 | | | | |
| Operating conditions | | | | | |
| Ambient temperature [°C] | 0...60 | | | | |
| Note on ambient temperature | medium temperature < 80 °C medium temperature < 100 °C: 0...40 °C | | | | |
| Storage temperature [°C] | -15...80 | | | | |
| Protection | IP 65; IP 67 | | | | |

SB5256



Flow meter with fast response and display

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| Tests / approvals | | |
|------------------------------|----------------------------|--------------------|
| EMC | DIN EN 61000-6-2 | |
| | DIN EN 61000-6-3 | |
| Shock resistance | DIN EN 60068-2-27 | 20 g (11 ms) |
| Vibration resistance | DIN EN 60068-2-6 | 5 g (10...2000 Hz) |
| MTTF [years] | 145 | |
| UL approval | UL approval number | I007 |
| Pressure equipment directive | sound engineering practice | |

| Mechanical data | | |
|-----------------------------|---|--|
| Weight [g] | 2811.5 | |
| Material | stainless steel (1.4404 / 316L); PBT+PC-GF30; PBT-GF20; PC; brass chemically nickel-plated | |
| Materials (wetted parts) | stainless steel (1.4401 / 316); stainless steel (1.4404 / 316L); brass (2.0371); brass chemically nickel-plated; PPS; O-ring: FKM | |
| Process connection | threaded connection G 1 1/2 Internal thread | |
| Switching cycles mechanical | 10 million | |

| Displays / operating elements | | |
|-------------------------------|------------------|--|
| Display | Display unit | 6 x LED, green |
| | Switching status | 2 x LED, yellow |
| | Measured values | alphanumeric display, red/green alternating indication 4-digit |
| | Programming | alphanumeric display, 4-digit |

| Remarks | | |
|---------------|---|--|
| Remarks | Use of 200 micron filtration is recommended. | |
| | All data refer to oil with the following nominal viscosity: | |
| | 150 cSt, 40 °C ± 3 K | |
| | MW = Measured value | |
| Pack quantity | MEW = Final value of the measuring range | |
| | 1 pcs. | |

Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated

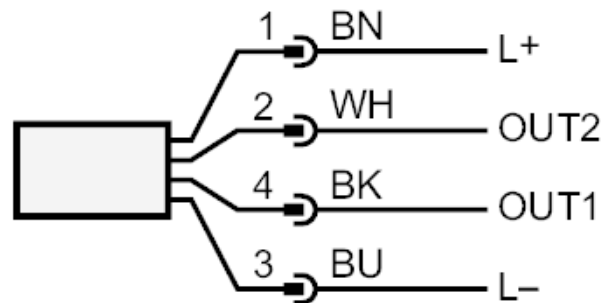




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Connection



OUT1:

- Switching output Volumetric flow quantity monitoring
- Switching output Temperature monitoring
- Frequency output Volumetric flow quantity monitoring
- Frequency output Temperature monitoring
- IO-Link

OUT2:

- Switching output Volumetric flow quantity monitoring
- Switching output Temperature monitoring
- analog output Volumetric flow quantity monitoring
- analog output Temperature monitoring

Colors to DIN EN 60947-5-2

Core colors :

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

SB5256



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Diagrams and graphs

