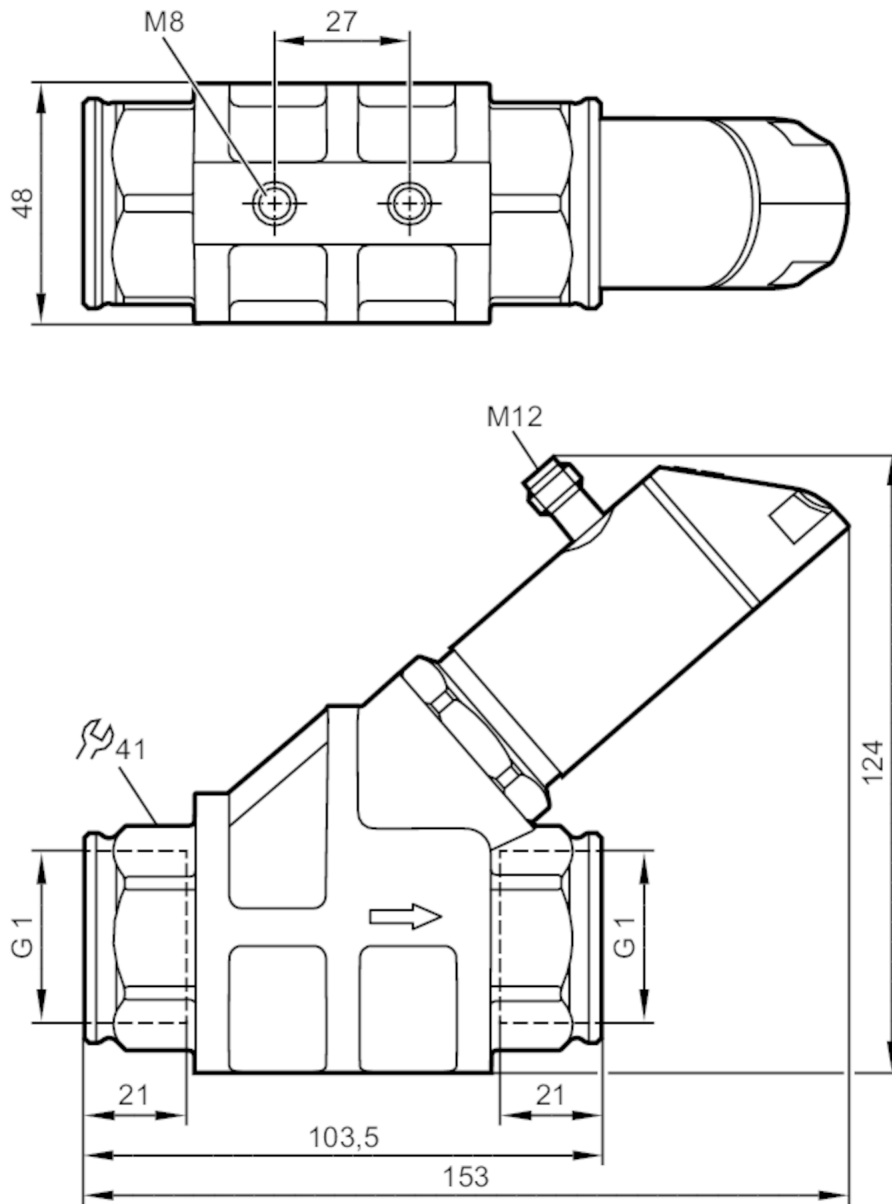


SB3244



Flow meter with integrated backflow prevention and display

SBG11KL0FRKG



| Product characteristics | | | | |
|-------------------------|---|---------------|--------------|-----------------|
| Measuring range | 1...50 l/min | 0.06...3 m³/h | 16...793 gph | 0.26...13.2 gpm |
| Process connection | threaded connection G 1 internal thread | | | |
| Application | | | | |
| Special feature | Gold-plated contacts | | | |
| Media | Liquids; oil | | | |
| Note on media | oil with viscosity: 68 mm²/s (40 °C) | | | |
| Medium temperature [°C] | -10...100 | | | |
| Pressure rating [bar] | 100 | | | |
| Note on pressure rating | at medium temperature >70°C: 80 | | | |



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| Electrical data | |
|-----------------------------|---|
| Operating voltage [V] | 18...30 DC; (according to EN 50178 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; analogue signal; frequency signal; IO-Link |
| Output function | normally open / normally closed; (parameterisable) |
| 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) |
| Analogue 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 | 1...50 l/min | 0.06...3 m³/h | 16...793 gph | 0.26...13.2 gpm |
| Display range | 0...60 l/min | 0...3.6 m³/h | 0...951 gph | 0...15.86 gpm |
| Resolution | 0.01 l/min | 0.001 m³/h | 1 gph | 0.01 gpm |
| Set point SP | 0.35...50 l/min | 0.02...3 m³/h | 5...793 gph | 0.08...13.2 gpm |
| Reset point rP | 0...49.65 l/min | 0...2.98 m³/h | 0...787 gph | 0...13.12 gpm |
| Frequency end point, FEP | 3.35...50 l/min | 0.2...3 m³/h | 53...793 gph | 0.88...13.2 gpm |
| In steps of | 0.05 l/min | 0.005 m³/h | 1 gph | 0.02 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) |
| Response times | | |
| Flow monitoring | | |
| Response time | [s] | 0.01 |
| Damping for the switching output dAP | [s] | 0...5 |
| In steps of | [s] | 0.1 |
| Damping for the analogue 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 / normally closed; switching logic; current/frequency output; damping for the switching output / analogue output; display can be rotated and switched off; standard unit of measurement; process value colour; calibration factor |
| Interfaces | | |
| Communication interface | | IO-Link |
| Transmission type | | COM2 (38,4 kBaud) |
| IO-Link revision | | 1.1 |
| SDCI standard | | IEC 61131-9 CDV |
| IO-Link device ID | | 1045 d / 0415 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] | 3.2 |
| 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 |

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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 no. | I006 |
| Pressure Equipment Directive | Sound engineering practice | |

| Mechanical data | | |
|-----------------------------|---|--|
| Weight [g] | 1583 | |
| Materials | 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 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 | Recommendation: use a 200-micron filter. | |
| | All data refer to oil with the following nominal viscosity: | |
| | 68 mm ² /s, 40 °C | |
| | MW = measured value | |
| Pack quantity | MEW = Final value of the measuring range | |
| | 1 pcs. | |

Electrical connection

Connector: 1 x M12; Contacts: gold-plated

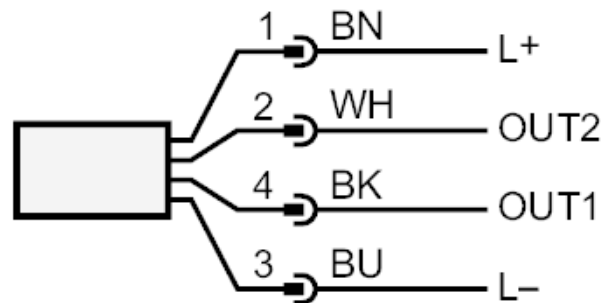




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Connection



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
- analogue output volumetric flow quantity monitoring
- analogue output Temperature monitoring

colours to DIN EN 60947-5-2

Core colours :

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

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Diagrams and graphs

