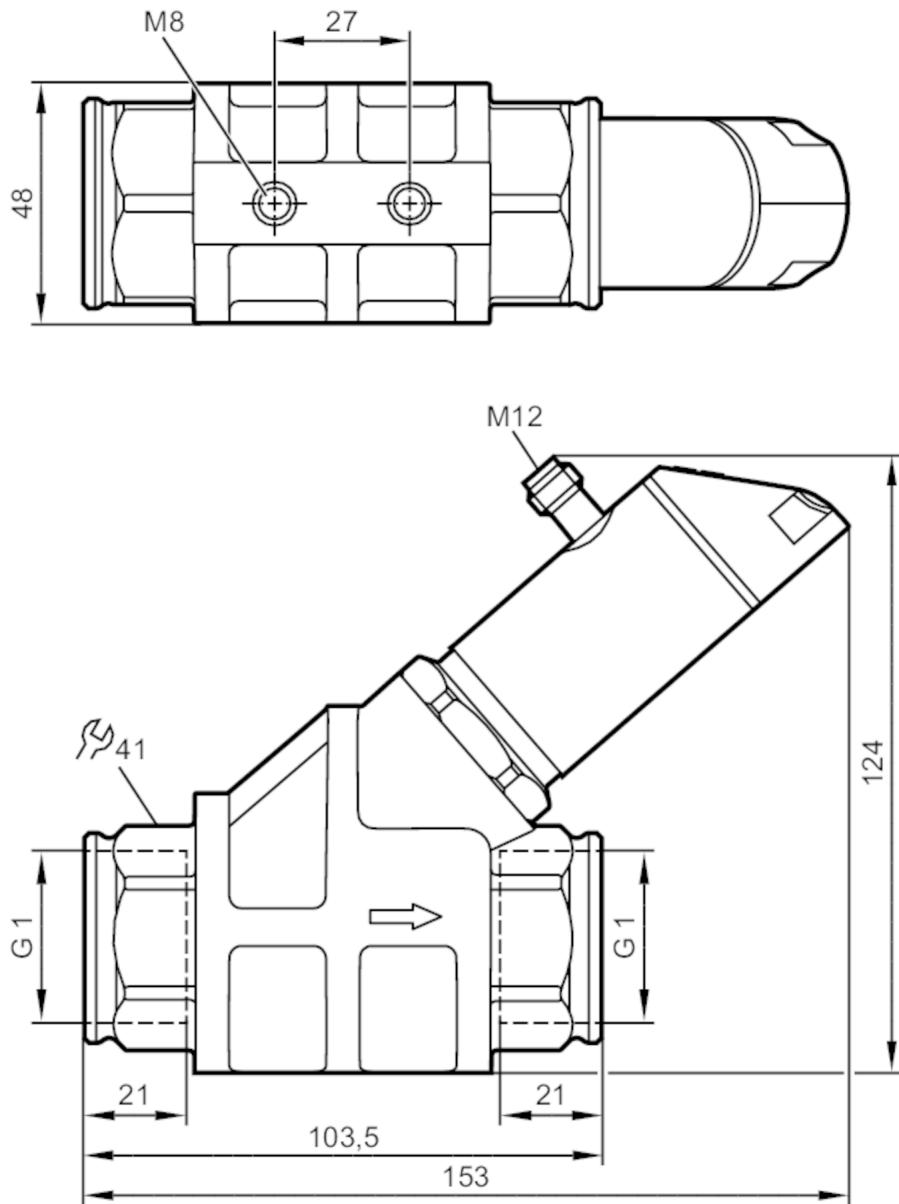


SB5242



Flow meter with integrated backflow prevention and display

SBG11KL0FRKG



CE CRN cUL us LISTED IO-Link

Product characteristics

Measuring range	0.6...15 l/min	0.036...0.9 m³/h	9.6...237.8 gph	0.16...3.965 gpm
Process connection	threaded connection G 1 internal thread			

Application

Special feature	Gold-plated contacts		
Media	Liquids; oils (viscosity 150 mm²/s at 40 °C)		
Medium temperature [°C]	100	-10...100	10 MPa
Pressure rating	at medium temperature >70°C: 80 bar / 8 MPa		
Note on pressure rating			

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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; analogue signal; frequency signal; IO-Link	
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		0.6...15 l/min	0.036...0.9 m³/h	9.6...237.8 gph
Display range		0...18 l/min	0...1.08 m³/h	0...4.755 gpm
Resolution		0.01 l/min	0.001 m³/h	0.1 gph
Set point SP		0.1...15 l/min	0.006...0.9 m³/h	1.6...237.8 gph
Reset point rP		0...14.9 l/min	0...0.894 m³/h	0...236.2 gph
Frequency end point, FEP		1...15 l/min	0.06...0.9 m³/h	0.265...3.965 gpm
In steps of		0.01 l/min	0.001 m³/h	0.005 gpm
Frequency at the end point FRP	[Hz]			10...10000
In steps of	[Hz]			10
Measuring dynamics				1:50
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
Accuracy / deviations				
Flow monitoring				
Accuracy (in the measuring range)			± 5 % MEW; (Q > 1 l/min; 20...70 °C Medium temperature)	
Repeatability				± 1 % MEW

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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 process value 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
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
Supported DeviceIDs	Type of operation	DeviceID
	default	1043
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
Tests / approvals		
EMC		DIN EN 61000-6-2
		DIN EN 61000-6-3
Shock resistance		DIN EN 60068-2-27
Vibration resistance		DIN EN 60068-2-6
MTTF	[years]	145
UL approval		UL Approval no.
Pressure Equipment Directive		1006
		Sound engineering practice

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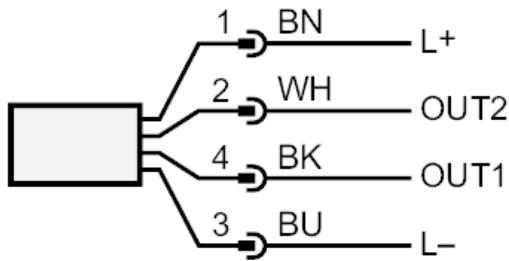
Mechanical data				
Weight	[g]	1581		
Materials	stainless steel (316L/1.4404); PBT+PC-GF30; PBT-GF20; PC; brass chemically nickel-plated			
Materials (wetted parts)	stainless steel (316 / 1.4401); stainless steel (316L/1.4404); brass (2.0371); brass chemically nickel-plated; PPS; O-ring: FKM			
Process 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: 150 mm ² /s, 40 °C 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				



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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 |

Diagrams and graphs

