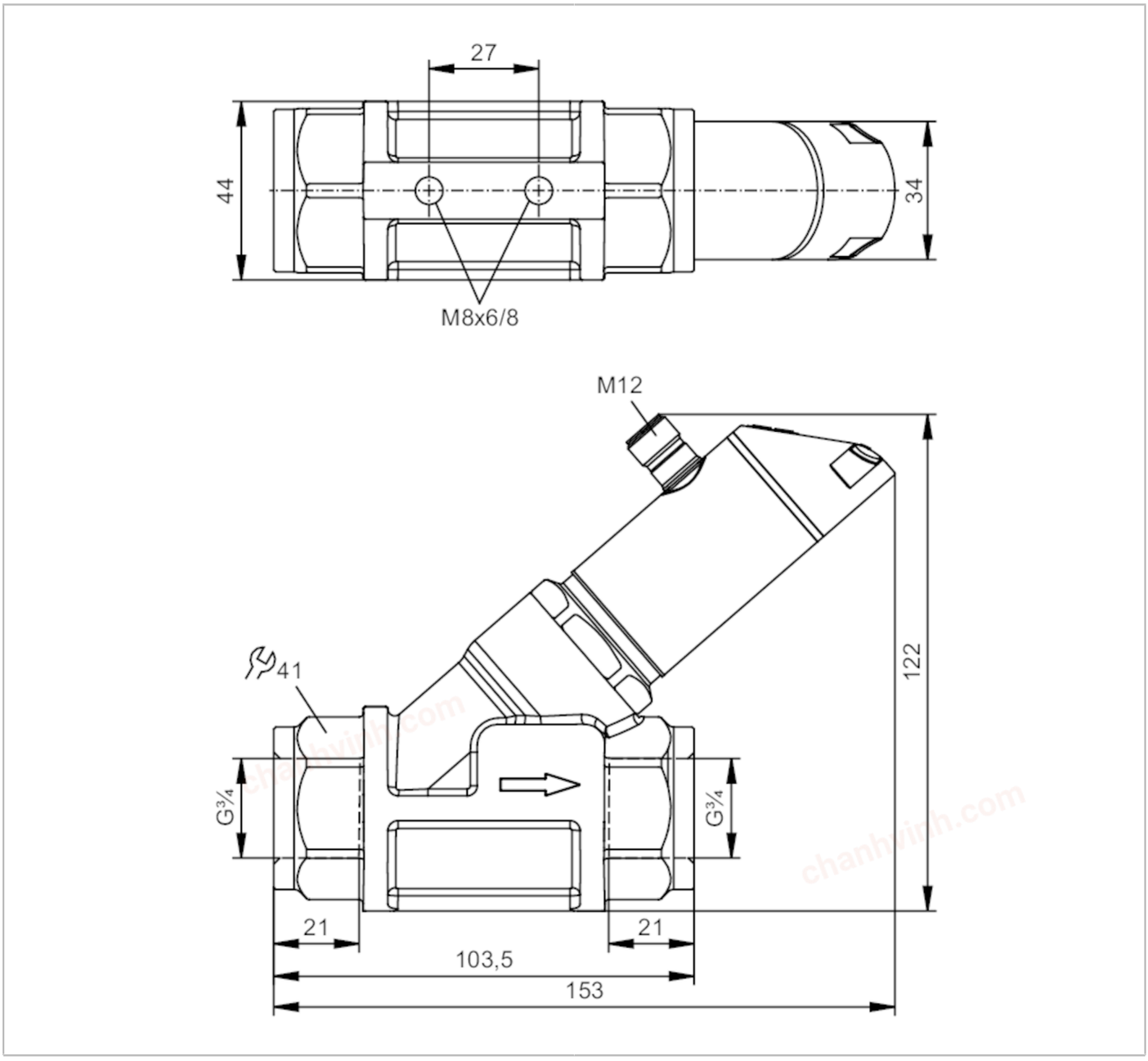
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Flow meter with integrated backflow prevention and display

SBG34IF0FRKG

Please note the changed housing design!



CE CRN cULus LISTED IO-Link

Product characteristics		
Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1	
Measuring range	2...100 l/min	0.12...6 m³/h
Process connection	threaded connection G 3/4	

Application	
Special feature	Gold-plated contacts
Application	for industrial applications
Media	Liquids; water; glycol solutions; coolants

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Note on media		oil 1 with viscosity: 10 mm²/s (40 °C) oil 2 with viscosity: 46 mm²/s (40 °C)
Medium temperature	[°C]	-10...100
Pressure rating	[bar]	25
Pressure rating	[Mpa]	2.5
MAWP (for applications according to CRN)	[bar]	25

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

Inputs / outputs

Number of inputs and outputs		Number of digital outputs: 2; Number of analogue outputs: 1

Outputs

Total number of outputs		2
Output signal		switching signal; analogue signal; frequency signal; IO-Link; (configurable)
Number of digital outputs		2
Output function		normally open / normally closed; (parameterisable)
Max. voltage drop switching output DC	[V]	2
Permanent current rating of switching output DC	[mA]	150; (per output 2 x 200 (...60 °C); 2 x 250 (...40 °C))
Switching cycles (mechanical)		10 million
Number of analogue outputs		1
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	2...100 l/min	0.12...6 m³/h
Display range	0...120 l/min	0...7.2 m³/h
Resolution	0.5 l/min	0.05 m³/h
Set point SP	1...100 l/min	0.05...6 m³/h
Reset point rP	0...99 l/min	0...5.95 m³/h
Frequency end point, FEP	6.5...100 l/min	0.4...6 m³/h
In steps of	0.5 l/min	0.05 m³/h

Frequency at the end point FRP	[Hz]	10...10000
Measuring dynamics		1:50

Temperature monitoring

Measuring range	[°C]	-10...100
Display range	[°C]	-32...122

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Resolution	[°C]	1
Set point SP	[°C]	-9...100
Reset point rP	[°C]	-10...99
In steps of	[°C]	1
Frequency start point, FSP	[°C]	-10...78
Frequency end point, FEP	[°C]	12...100
Frequency at the end point FRP	[Hz]	10...10000

Accuracy / deviations

Flow monitoring		
Accuracy (in the measuring range)		± (4 % MW + 1 % MEW); (Q > 2 l/min; medium and operating temperature: +22 °C ± 4K)
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 process value dAP	[s]	0...5
Damping for the analogue output dAA	[s]	0...5
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; medium selection; damping for the switching output / analogue output; display can be rotated and switched off; standard unit of measurement; process value colour

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	
SIO mode		yes	
Required master port type		A	
Process data analogue		2	
Process data binary		2	
Min. process cycle time	[ms]	5	
Supported DeviceIDs		Type of operation	DeviceID
		Default	563

Operating conditions

Ambient temperature	[°C]	0...60
Note on ambient temperature		medium temperature < 80 °C
		medium temperature < 100 °C: 0...40 °C

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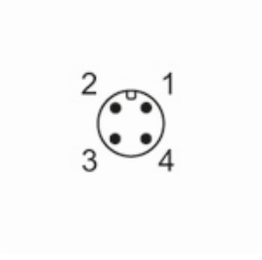
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Storage temperature [°C]	-15...80		
Protection	IP 65; IP 67		
Tests / approvals			
EMC	DIN EN 61000-6-2		
	DIN EN 61000-6-3		
Shock resistance	DIN EN 60068-2-27	20 g (11 ms)	
Vibration resistance	DIN EN 60068-2-6	5 g (10...2000 Hz)	
MTTF [years]	145		
UL approval	UL Approval no.	I006	
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request		
Mechanical data			
Weight [g]	1488.75		
Materials	stainless steel (1.4404 / 316L); PBT+PC-GF30; PBT-GF20; PC; brass chemically nickel-plated		
Materials (wetted parts)	stainless steel (316 / 1.4401); stainless steel (1.4404 / 316L); brass (2.0371); brass chemically nickel-plated; PPS; O-ring: FKM		
Process connection	threaded connection G 3/4		
Displays / operating elements			
Display	Display unit	3 x LED, green	
	switching status	2 x LED, yellow	
	measured values	alphanumeric display, red/green 4-digit	
	programming	alphanumeric display, 4-digit	
Remarks			
Remarks	Recommendation: use a 200-micron filter.		
	All data refer to water (20 °C).		
	MW = measured value		
	MEW = Final value of the measuring range		
Notes	Please note the changed housing design!		
Pack quantity	1 pcs.		

Electrical connection

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



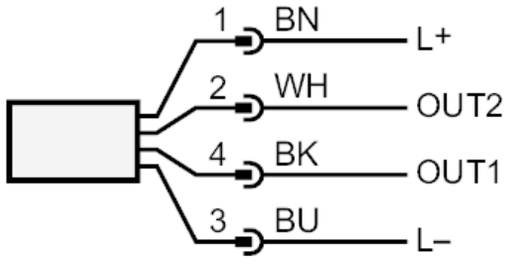
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Connection



OUT1:
- switching output volumetric flow quantity monitoring
- switching output Temperature monitoring
- frequency output volumetric flow quantity monitoring
- frequency output Temperature monitoring
- IO-Link

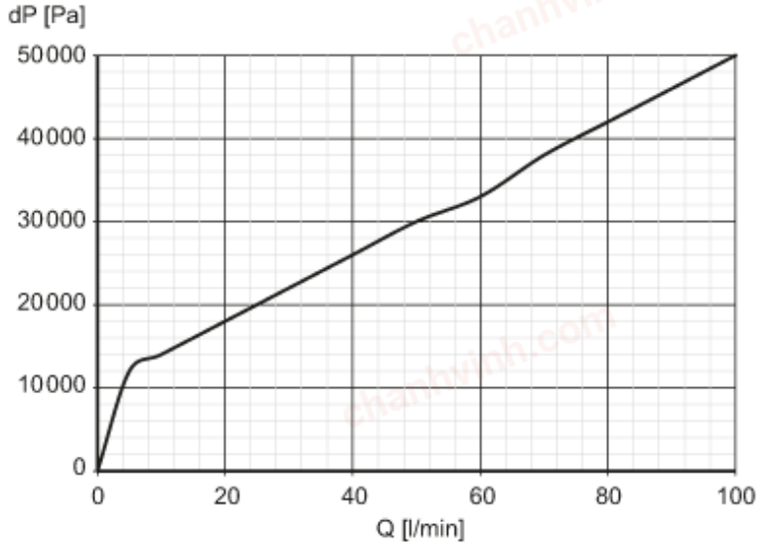
OUT2:
- switching output volumetric flow quantity monitoring
- switching output Temperature monitoring
- analogue output volumetric flow quantity monitoring
- analogue output Temperature monitoring

colours to DIN EN 60947-5-2
Core colours :

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

Diagrams and graphs

Pressure loss



dP Pressure loss

Q volumetric flow quantity