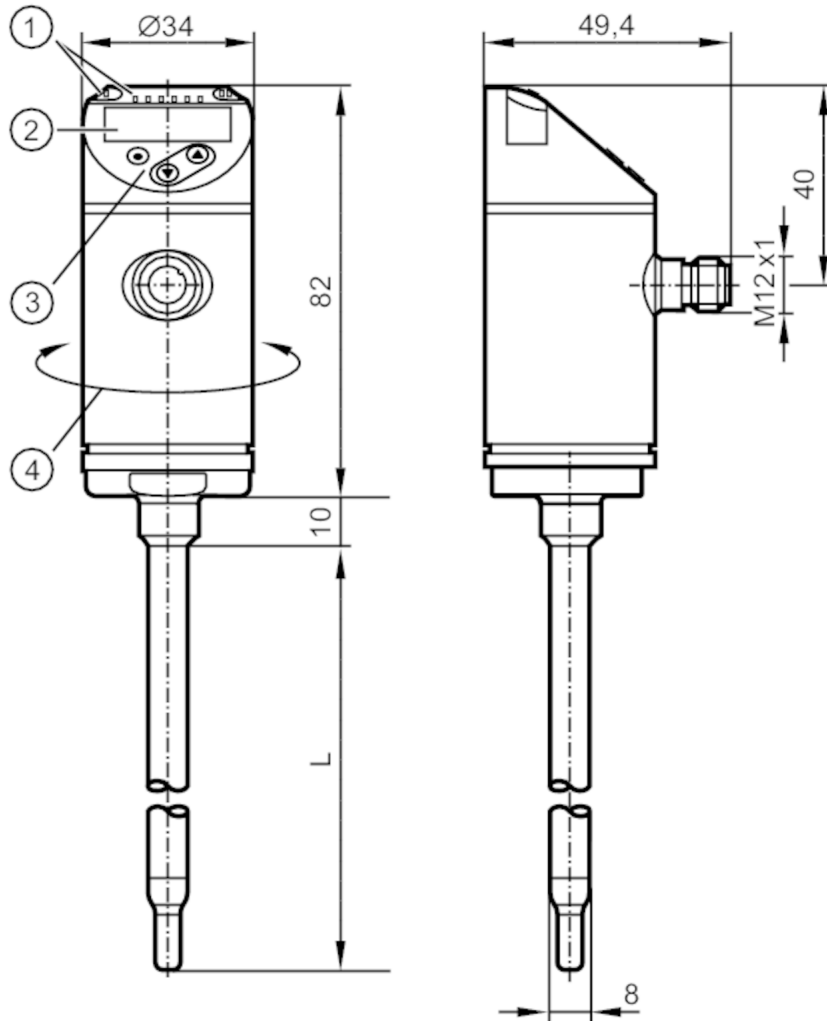


SA4320



Flow sensor

SAEXXXBFRKG/US-100



- L 200 mm
- 1 LEDs Display unit / switching status
- 2 alphanumeric display 4-digit red/green
- 3 programming buttons
- 4 upper part of the housing can be rotated 345°



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1
Process connection	$\varnothing 8$ mm

Application

Special feature	Gold-plated contacts
Installation	Recommended for pipe diameters; (15...400 mm)
Media	air
Medium temperature [°C]	-20...100
Pressure rating [bar]	50
Pressure rating [MPa]	5
MAWP (for applications according to CRN) [bar]	50

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Electrical data	
Operating voltage [V]	18...30 DC; (to SELV/PELV)
Current consumption [mA]	< 100
Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	10
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)
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]	250
Number of analogue outputs	1
Analogue current output [mA]	4...20; (scalable)
Max. load [Ω]	350
Short-circuit protection	yes
Type of short-circuit protection	pulsed
Overload protection	yes
Frequency of the output [Hz]	0...1000
Measuring/setting range	
Probe length L [mm]	200
Operating mode	relative; absolutely gaseous; (absolute: reference measurement recommended; Factory setting: relative)
Display range [m/s]	0...36
Resolution [m/s]	0.2
Set point SP [m/s]	2...30
Reset point rP [m/s]	0.6...28.6
Analogue start point ASP [m/s]	0...24
Analogue end point AEP [m/s]	6...30
Frequency end point, FEP [m/s]	6.6...30
Frequency at the end point FRP [Hz]	100...1000
Gases - operating mode "absolute"	
Setting range [m/s]	0...30
Greatest sensitivity [m/s]	0.6...30
Gases - operating mode "relative"	
Setting range [m/s]	0...60
Greatest sensitivity [m/s]	0.6...30

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Temperature monitoring								
Measuring range	[°C]	-20...100						
Resolution	[°C]	0.2						
Accuracy / deviations								
Gases - operating mode "absolute"								
Repeatability		± (3 % MW + 0,6 % MEW)						
Gases - operating mode "relative"								
Accuracy		± (10 % MW + 2 % MEW); (reference conditions: DN50; Inside diameter 51 mm; within the range of maximum sensitivity: 20 °C / < 6 bar; Insertion depth: 15 mm; inlet pipe length: 2.5 m; standard velocity to DIN ISO 2533 at the sensor tip)						
Repeatability		± (3 % MW + 0,6 % MEW)						
Temperature monitoring								
Temperature drift		± 0,005 K/°C						
Accuracy	[K]	± 2 / + 8; (flow velocity > 20 % VMR and 20 °C: ± 2)						
Response times								
Response time	[s]	7						
Temperature monitoring								
Dynamic response T05 / T09	[s]	30 (T09); (flow velocity: ≥ 10 m/s)						
Software / programming								
Parameter setting options		hysteresis / window; normally open / normally closed; switching logic; current/frequency output; medium selection; Damping; Teach function; 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						
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		<table border="1"> <thead> <tr> <th>Type of operation</th> <th>DeviceID</th> </tr> </thead> <tbody> <tr> <td>Factory setting / ModE = (REL)</td> <td>1237</td> </tr> <tr> <td>ModE = (ABS)</td> <td>1238</td> </tr> </tbody> </table>	Type of operation	DeviceID	Factory setting / ModE = (REL)	1237	ModE = (ABS)	1238
Type of operation	DeviceID							
Factory setting / ModE = (REL)	1237							
ModE = (ABS)	1238							
Operating conditions								
Ambient temperature	[°C]	-40...80						
Storage temperature	[°C]	-40...100						
Protection		IP 65; IP 67						
Tests / approvals								
EMC		DIN EN 60947-5-9						
Shock resistance		DIN EN 60068-2-27 50 g (11 ms)						
Vibration resistance		DIN EN 60068-2-6 2 g (10...2000 Hz)						

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Flow sensor

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MTTF	[years]	131
UL approval	UL Approval no.	I017
	File number UL	E174189

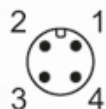
Mechanical data	
Weight	[g] 343.8
Materials	stainless steel (316L/1.4404); PBT-GF20; PBT-GF30
Materials (wetted parts)	stainless steel (316L/1.4404)
Process connection	Ø 8 mm

Displays / operating elements		
Display	Display unit	6 x LED, green (% , m/s, l/min, m³/h, °C, 10³)
	switching status	2 x LED, yellow
	measured values	alphanumeric display, red/green 4-digit

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



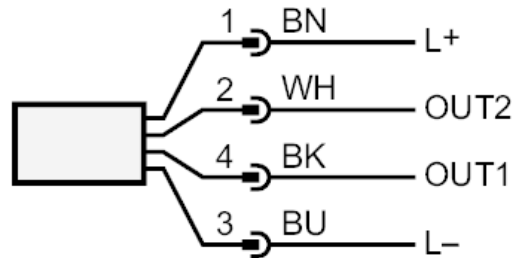
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Flow sensor

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Connection



colours to DIN EN 60947-5-2

OUT1:

- switching output volumetric flow quantity monitoring
- frequency output volumetric flow quantity monitoring
- IO-Link

OUT2:

- switching output volumetric flow quantity monitoring
- switching output Temperature monitoring
- analogue output volumetric flow quantity monitoring
- analogue output Temperature monitoring
- frequency output volumetric flow quantity monitoring
- frequency output Temperature monitoring
- input External Teach

Core colours :

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