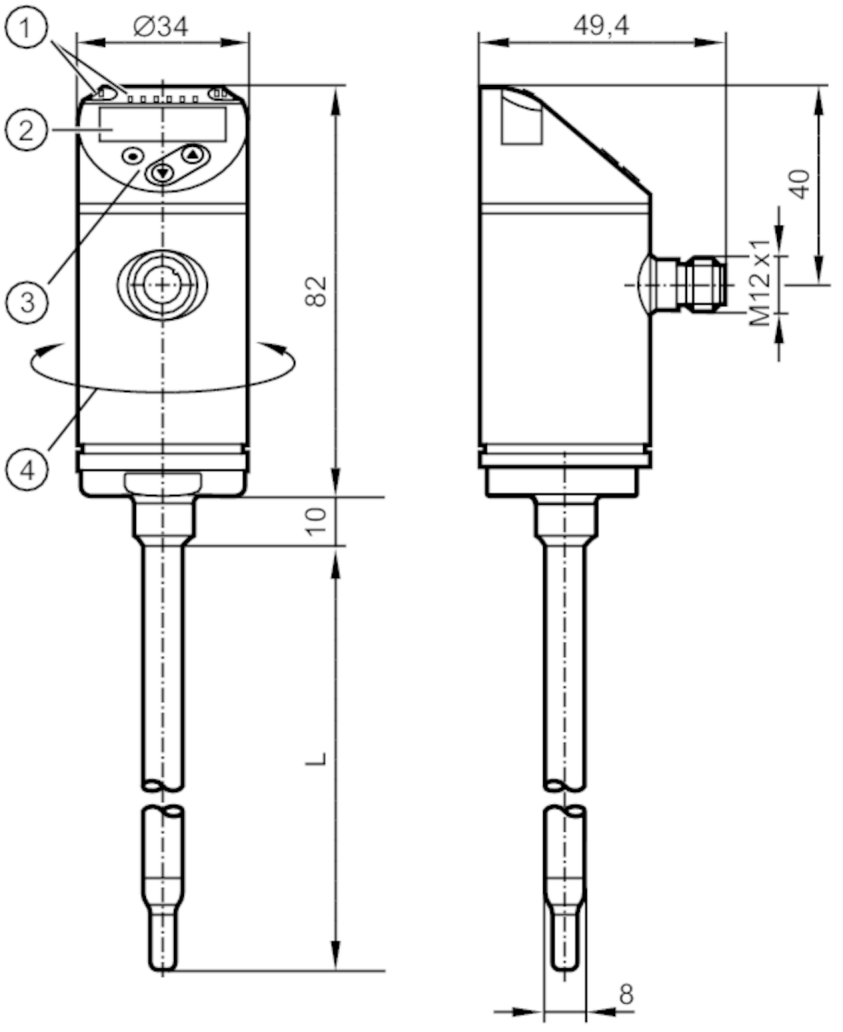
SA4320

Flow sensor

SAEXXXXBFRKG/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 analog outputs: 1
Process connection		Ø 8 mm
Application		
System		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 analog outputs: 1
Outputs		
Total number of outputs		2
Output signal		switching signal; analog signal; frequency signal; IO-Link; (configurable)
Electrical design		PNP/NPN
Number of digital outputs		2
Output function		normally open / closed; (configurable)
Max. voltage drop switching output DC	[V]	2.5
Permanent current rating of switching output DC	[mA]	250
Number of analog outputs		1
Analog current output	[mA]	4...20; (scalable)
Max. load	[Ω]	350
Short-circuit protection		yes
Type of short-circuit protection		yes (non-latching)
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
Analog start point ASP	[m/s]	0...24
Analog 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)	
Reaction 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 / closed; switching logic; current/ frequency output; medium selection; Damping; Teach function; display can be rotated and switched off; standard unit of measurement; process value color	
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 class		A	
Process data analog		2	
Process data binary		2	
Min. process cycle time	[ms]	3	
Supported DeviceIDs		**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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MTTF	[years]	131	
UL approval		UL approval number	I017
		File number UL	E174189

Mechanical data

Weight	[g]	343.8	
Material		stainless steel (1.4404 / 316L); PBT-GF20; PBT-GF30	
Materials (wetted parts)		stainless steel (1.4404 / 316L)	
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

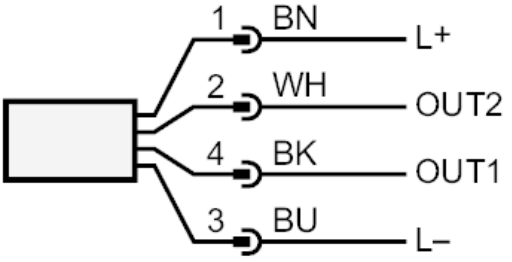


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Connection



	Colors 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
-	analog output Volumetric flow quantity monitoring
-	analog output Temperature monitoring
-	Frequency output Volumetric flow quantity monitoring
-	Frequency output Temperature monitoring
-	Input External Teach
	Core colors :
BK =	black
BN =	brown
BU =	blue
WH =	white