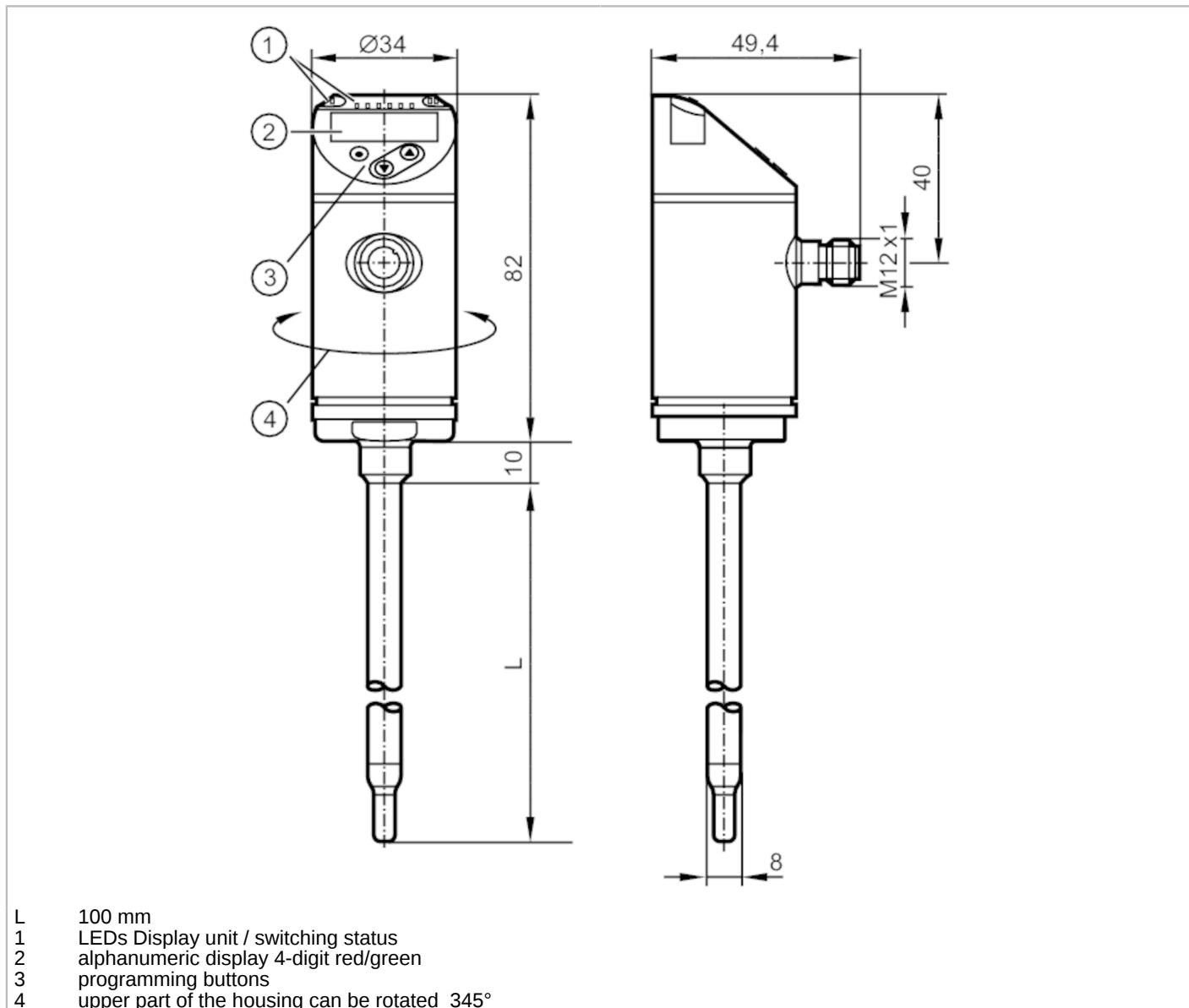


Flow sensor

SAEXXXBFRKG/US-100



- L 100 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	Ø 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

SA4120



Flow sensor

SAEXXXXBFRKG/US-100

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]	100
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 DevicIDs	<table border="1"> <thead> <tr> <th>Type of operation</th> <th>DevicID</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	DevicID	Factory setting / ModE = (REL)	1237	ModE = (ABS)	1238
Type of operation	DevicID							
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	5 g (10...2000 Hz)						

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Flow sensor

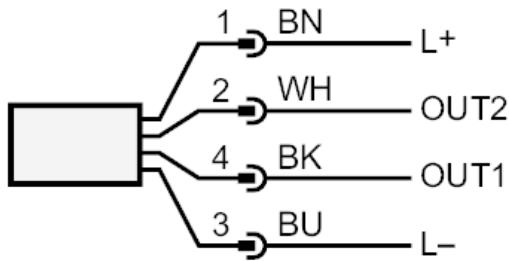
SAEXXXXBFRKG/US-100

MTTF	[years]	131
UL approval	UL Approval no.	I017
	File number UL	E174189
Mechanical data		
Weight	[g]	295.05
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		
		

Flow sensor

SAEXXXXBFRKG/US-100

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