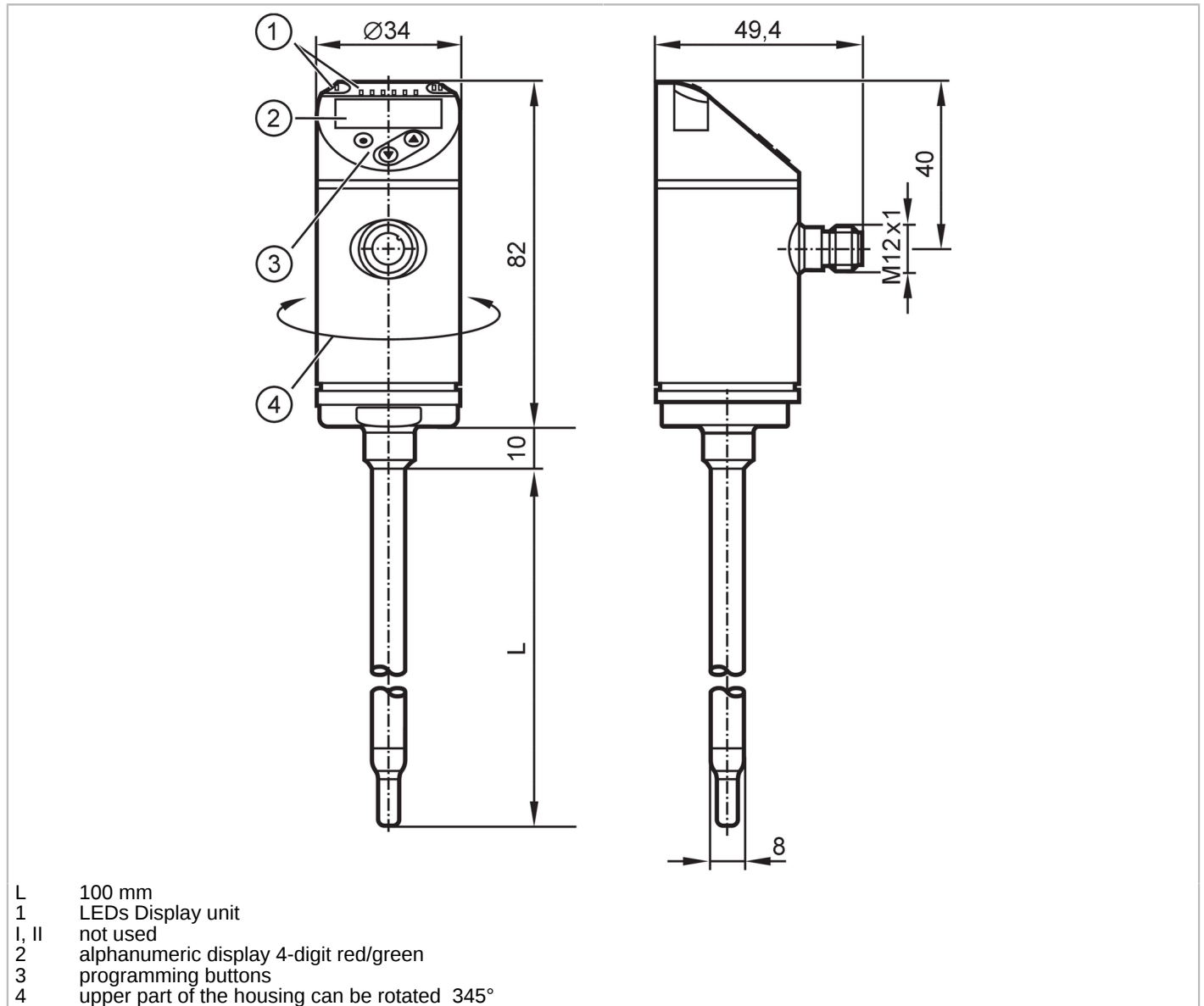


# SA4104



## Flow sensor

SAEXXXB50KG/US-100



ACS CE CRN cUL<sub>US</sub> LISTED EC 1935/2004 FCM FDA KTW/W270 Reg31 UK CA

### Product characteristics

Number of inputs and outputs	Number of analogue outputs: 2
Process connection	clamp adapter $\varnothing$ 8 mm

### Application

Special feature	Gold-plated contacts
Media	water; glycol solutions; air; oils
Note on media	low-viscosity oils with viscosity: $\leq 40 \text{ mm}^2/\text{s}$ (40 °C) high-viscosity oils with viscosity: $> 40 \text{ mm}^2/\text{s}$ (40 °C)
Medium temperature [°C]	-20...100
Pressure rating	50 bar 5 MPa
MAWP for applications according to CRN [bar]	50

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Electrical data	
Operating voltage [V]	18...30 DC
Current consumption [mA]	< 100
Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	10
Measuring principle	calorimetric
Inputs / outputs	
Number of inputs and outputs	Number of analogue outputs: 2
Outputs	
Total number of outputs	2
Output signal	analogue signal
Number of analogue outputs	2
Analogue current output [mA]	4...20; (scalable)
Max. load [ $\Omega$ ]	350
Short-circuit protection	yes
Type of short-circuit protection	pulsed
Overload protection	yes
Measuring/setting range	
Probe length L [mm]	100
Operating mode	relative; absolutely liquid; absolutely gaseous; (absolute: reference measurement recommended; Factory setting: relative)
Liquids	
Setting range [m/s]	0.04...6
Greatest sensitivity [m/s]	0.04...3
Gases	
Setting range [m/s]	2...200
Greatest sensitivity [m/s]	2...100
Temperature monitoring	
Measuring range [ $^{\circ}\text{C}$ ]	-20...100
Resolution [ $^{\circ}\text{C}$ ]	0.2
Analogue start point [ $^{\circ}\text{C}$ ]	-20...76
Analogue end point [ $^{\circ}\text{C}$ ]	4...100
In steps of [ $^{\circ}\text{C}$ ]	0.2
Accuracy / deviations	
Flow monitoring	
Temperature drift [cm/s x 1/K]	0,003 m/s x 1/K (< 20 $^{\circ}\text{C}$ ; > 70 $^{\circ}\text{C}$ )
Temperature gradient [K/min]	100
Accuracy	$\pm$ (7 % MW + 2 % MEW); (for relative mode in the range of maximum sensitivity under the following conditions:; water: 20...70 $^{\circ}\text{C}$ ; inlet length: 1.5 m; DN25 (DIN 2448); mounting position according to instructions; Accuracy can differ for other media and mounting positions.)
Repeatability	0,05 m/s; (water; flow velocity: 0,05...3 m/s)

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<b>Temperature monitoring</b>		
Temperature drift		± 0,005 K/°C
Accuracy	[K]	± 0,3 / ± 1; (water; flow velocity: 0,3...3 m/s / air; flow velocity: > 10 m/s)
<b>Response times</b>		
<b>Flow monitoring</b>		
Response time	[s]	0.5; (T09; water; glycol: 0,8 s; air: 7 s; oil: 1,8 s; each T09)
<b>Temperature monitoring</b>		
Dynamic response T05 / T09	[s]	1,5 (T09); (water; flow velocity: 0,3...3 m/s)
<b>Software / programming</b>		
Parameter setting options		medium selection; Damping; Teach function; display can be rotated and switched off; standard unit of measurement; process value colour
<b>Operating conditions</b>		
Ambient temperature	[°C]	-40...80
Storage temperature	[°C]	-40...100
Protection		IP 65; IP 67
<b>Tests / approvals</b>		
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)
MTTF	[years]	180
UL approval		UL approval no. I018 File number UL E174189
<b>Mechanical data</b>		
Weight	[g]	260.5
Housing		cylindrical
Dimensions	[mm]	Ø 8 / L = 192
Materials		stainless steel (316L/1.4404); PBT-GF20; PBT-GF30
Materials (wetted parts)		stainless steel (316L/1.4404)
Process connection		clamp adapter Ø 8 mm
<b>Displays / operating elements</b>		
Display	Display unit	6 x LED, green (% , m/s, l/min, m³/h, °C, 10³)
	measured values	alphanumeric display, red/green 4-digit
<b>Remarks</b>		
Remarks		MW = measured value MEW = Final value of the measuring range
Pack quantity		1 pcs.
<b>Electrical connection</b>		
Connector: 1 x M12; coding: A; Contacts: gold-plated		
		

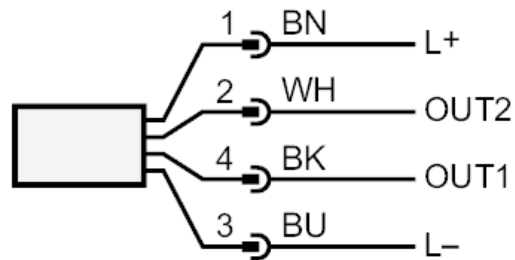
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### Connection



OUT1: analogue output Temperature monitoring  
OUT2: analogue output volumetric flow quantity monitoring  
Core colours :  
BK = black  
BN = brown  
BU = blue  
WH = white