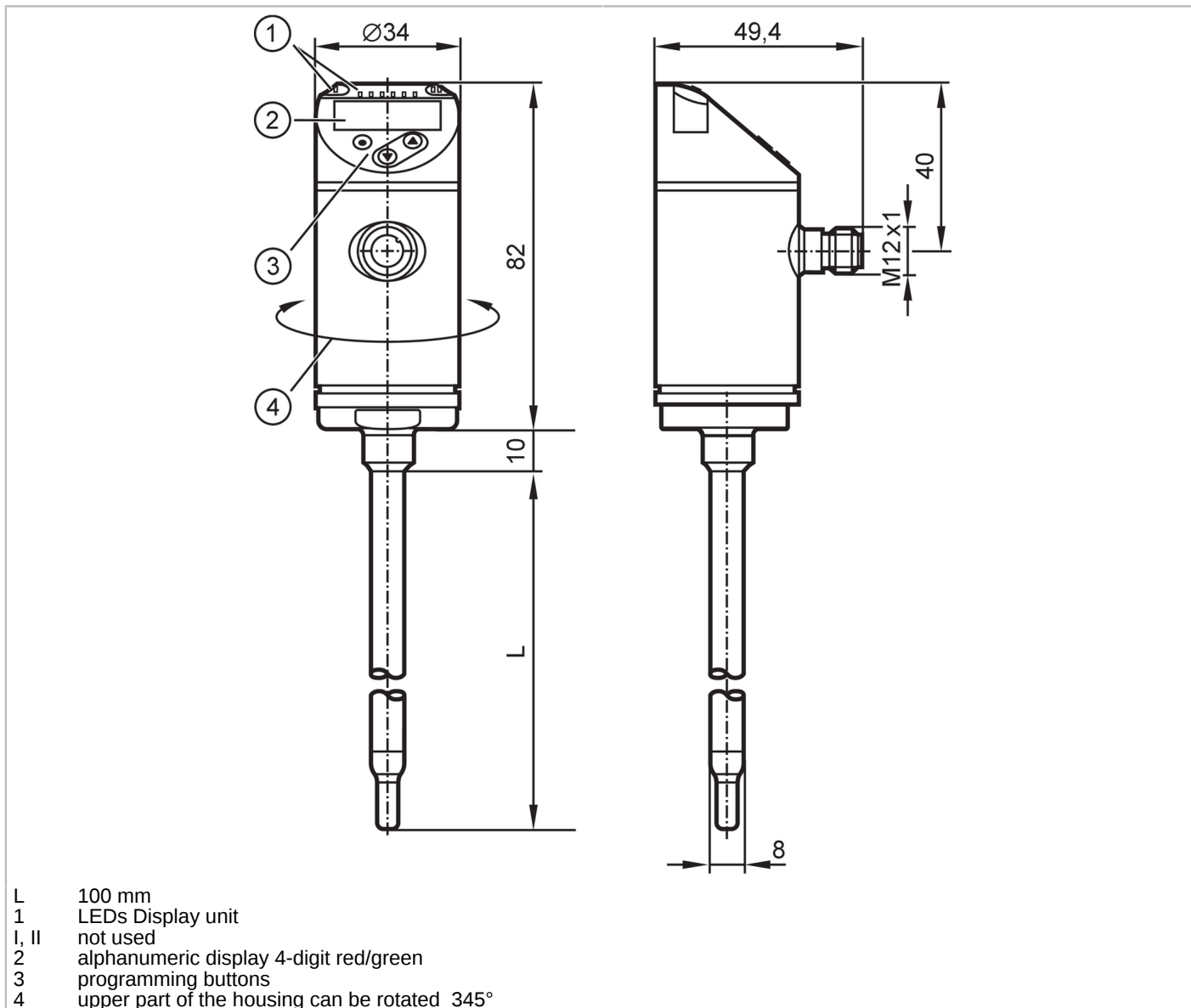


SA4114



Flow sensor

SAEXXXB50KG/US-100



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: ≤ 40 mm ² /s (104 °F) high-viscosity oils with viscosity: > 40 mm ² /s (104 °F)
Medium temperature [°F]	-4...212
Pressure rating	50 bar 5 MPa
Electrical data	
Operating voltage [V]	18...30 DC
Current consumption [mA]	< 100

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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
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Outputs

Total number of outputs	2
Output signal	analogue signal
Number of analogue outputs	2
Analogue current output [mA]	4...20; (scalable)
Max. load [Ω]	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

Resolution [ft/s]	0.05
Analogue start point ASP [ft/s]	0...7.95
Analogue end point AEP [ft/s]	1.9...9.85

Gases

Resolution [ft/s]	2
Analogue start point ASP [ft/s]	0...264
Analogue end point AEP [ft/s]	64...328

Temperature monitoring

Measuring range [$^{\circ}$ F]	-4...212
Resolution [$^{\circ}$ F]	0.5
Analogue start point [$^{\circ}$ F]	-4...169
Analogue end point [$^{\circ}$ F]	39...212
In steps of [$^{\circ}$ F]	0.5

Liquid media - absolute operating mode

Setting range [ft/s]	0.15...9.85
Greatest sensitivity [ft/s]	0.15...9.85

Liquid media - relative operating mode

Setting range [ft/s]	0.15...19.5
Greatest sensitivity [ft/s]	0.15...9.85

Gases - operating mode "absolute"

Setting range [ft/s]	6...328
Greatest sensitivity [ft/s]	6...328

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Gases - operating mode "relative"		
Setting range	[ft/s]	6...656
Greatest sensitivity	[ft/s]	6...328
Accuracy / deviations		
Temperature drift	[cm/s x 1/K]	0,01 fps x 1/K (< 68 °F; > 158 °F)
Temperature gradient	[K/min]	100
Absolute operating mode		
Repeatability		0,05 m/s; (water; flow velocity: 0,05...3 m/s)
Relative operating mode		
Accuracy		± (7 % MW + 2 % MEW); (for relative mode in the range of maximum sensitivity under the following conditions:; water: 68...158 °F; inlet length: 5 ft; 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)
Temperature monitoring		
Temperature drift		± 0,003 K/°F
Accuracy	[K]	± 0,3 / ± 1; (water; flow velocity: 1...9,85 fps / air; flow velocity: > 32,8 fps)
Response times		
Response time	[s]	0.5; (T09; water; glycol: 0,8 s; air: 7 s; oil: 1,8 s; each T09)
Temperature monitoring		
Dynamic response T05 / T09	[s]	1,5 (T09); (water; flow velocity: 1...9,85 fps)
Software / programming		
Parameter setting options		medium selection; Damping; Teach function; display can be rotated and switched off; standard unit of measurement; process value colour
Operating conditions		
Ambient temperature	[°F]	-40...176
Storage temperature	[°F]	-40...212
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)
MTTF	[years]	179
UL approval		UL approval no. I018 File number UL E174189
Mechanical data		
Weight	[g]	262
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

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Displays / operating elements

Display	Display unit	6 x LED, green (% , fps, gpm, cfm, °F, 10 ³)
	measured values	alphanumeric display, red/green 4-digit

Remarks

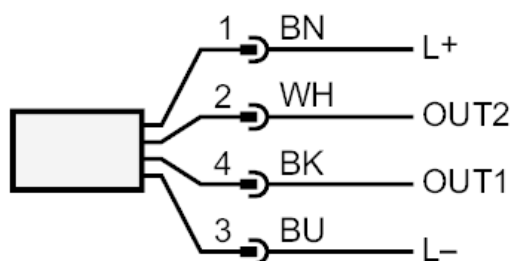
Remarks	MW = measured value
	MEW = Final value of the measuring range
Pack quantity	1 pcs.

Electrical connection

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



Connection



OUT1: colours to DIN EN 60947-5-2
analogue output Temperature monitoring
OUT2: analogue output volumetric flow quantity monitoring
Core colours :
BK = black
BN = brown
BU = blue
WH = white