

SA4114



Flow sensor

SAEXXXB50KG/US-100



- L 100 mm
1 LEDs Display unit
I, II not used
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 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: $\leq 40 \text{ mm}^2/\text{s}$ (104 °F) high-viscosity oils with viscosity: $> 40 \text{ mm}^2/\text{s}$ (104 °F)
Medium temperature [°F]	-4...212
Pressure rating	50 bar 5 MPa

Electrical data

Operating voltage [V]	18...30 DC
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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
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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	[°F] -4...212
Resolution	[°F] 0.5
Analogue start point	[°F] -4...169
Analogue end point	[°F] 39...212
In steps of	[°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
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Greatest sensitivity	[ft/s]	6...328
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

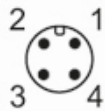
Display	Display unit	6 x LED, green (% , fps, gpm, cfm, °F, 10 ³)
	measured values	alphanumeric display, red/green 4-digit

Remarks

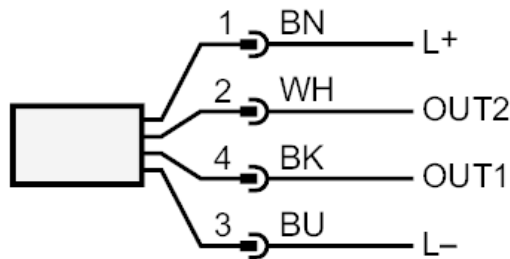
Remarks	MW = measured value
	MEW = Final value of the measuring range
Pack quantity	1 pcs.

Electrical connection

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



Connection



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