

SA4314



Flow sensor

SAEXXXB50KG/US-100



- L 200 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		$\varnothing$ 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	[bar]	50
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
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	[Ω]	350
Short-circuit protection		yes
Type of short-circuit protection		pulsed
Overload protection		yes
Measuring/setting range		
Probe length L	[mm]	200
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...9.85
Greatest sensitivity	[ft/s]	0.15...9.85
Liquid media - relative operating mode		
Setting range	[ft/s]	0...19.5
Greatest sensitivity	[ft/s]	0.15...9.85
Gases - operating mode "absolute"		
Setting range	[ft/s]	0...328
Greatest sensitivity	[ft/s]	6...328



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Gases - operating mode "relative"		
Setting range	[ft/s]	0...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]	310.5
Materials		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 (% , fps, gpm, cfm, °F, 10 ³)
	measured values	alphanumeric display, red/green 4-digit

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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