

SA4104



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°

ACS CRN EC 1935/2004 FCM KTW/W270 Reg31

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	[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		
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	[°C]	-20...100
Resolution	[°C]	0.2
Analogue start point	[°C]	-20...76
Analogue end point	[°C]	4...100
In steps of	[°C]	0.2
Accuracy / deviations		
Flow monitoring		
Temperature drift	[cm/s x 1/K]	0,003 m/s x 1/K (< 20 °C; > 70 °C)
Temperature gradient	[K/min]	100
Accuracy		± (7 % MW + 2 % MEW); (for relative mode in the range of maximum sensitivity under the following conditions:; water: 20...70 °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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Temperature monitoring		
Temperature drift		$\pm 0,005 \text{ K/}^{\circ}\text{C}$
Accuracy	[K]	$\pm 0,3 / \pm 1$; (water; flow velocity: 0,3...3 m/s / air; flow velocity: > 10 m/s)
Response times		
Flow monitoring		
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: 0,3...3 m/s)
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	[$^{\circ}\text{C}$]	-40...80
Storage temperature	[$^{\circ}\text{C}$]	-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)
MTTF	[years]	180
UL approval		UL approval no. I018
		File number UL E174189
Mechanical data		
Weight	[g]	260.5
Housing		cylindrical
Dimensions	[mm]	$\varnothing 8 / L = 192$
Materials		stainless steel (316L/1.4404); PBT-GF20; PBT-GF30
Materials (wetted parts)		stainless steel (316L/1.4404)
Process connection		clamp adapter $\varnothing 8 \text{ mm}$
Displays / operating elements		
Display	Display unit	6 x LED, green (% , m/s, l/min, m ³ /h, $^{\circ}\text{C}$, 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.

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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