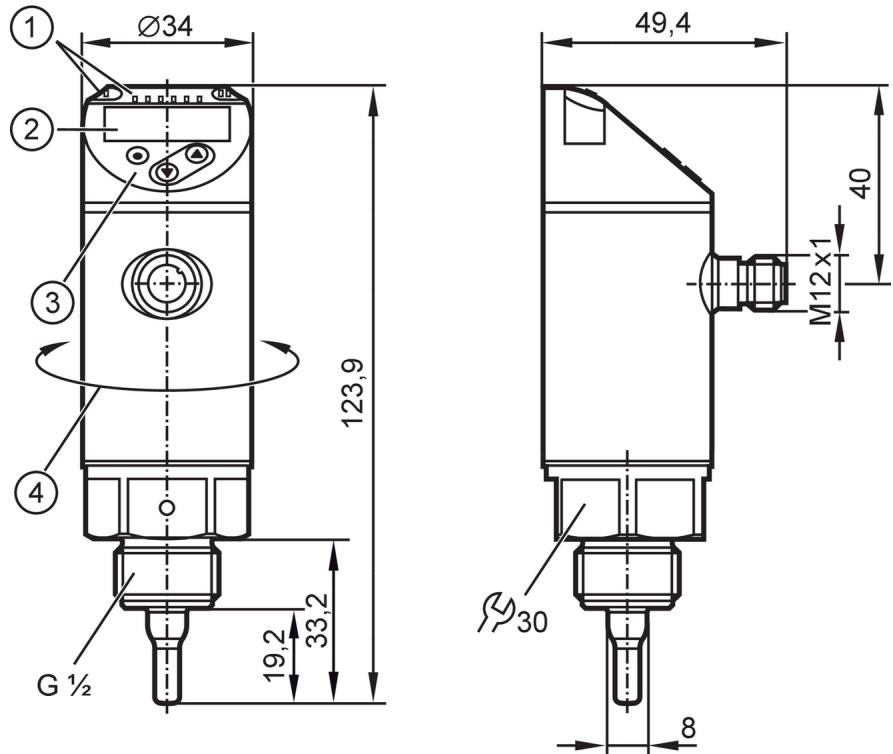


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Flow sensor

SAR12XDB50KG/US-100



- 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 analog outputs: 2
Process connection	threaded connection G 1/2 external thread

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...90
Pressure rating	100 bar 10 MPa
MAWP (for applications according to CRN) [bar]	85

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



Flow sensor

SAR12XDB50KG/US-100

Inputs / outputs	
Number of inputs and outputs	Number of analog outputs: 2
Outputs	
Total number of outputs	2
Output signal	analog signal
Number of analog outputs	2
Analog current output [mA]	4...20; (scalable)
Max. load [Ω]	350
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes
Measuring/setting range	
Probe length L [mm]	19.2
Operating mode	relative; absolutely liquid; absolutely gaseous; (absolute: reference measurement recommended; Factory setting: relative)
Temperature monitoring	
Measuring range [°C]	-20...90
Resolution [°C]	0.2
Analog start point [°C]	-20...76
Analog end point [°C]	4...100
In steps of [°C]	0.2
Liquid media - absolute operating mode	
Setting range [m/s]	0.04...3
Greatest sensitivity [m/s]	0.04...3
Liquid media - relative operating mode	
Setting range [m/s]	0.04...6
Greatest sensitivity [m/s]	0.04...3
Gases - operating mode "absolute"	
Setting range [m/s]	2...100
Greatest sensitivity [m/s]	30...100
Gases - operating mode "relative"	
Setting range [m/s]	2...200
Greatest sensitivity [m/s]	30...100
Accuracy / deviations	
Temperature drift [cm/s x 1/K]	0,003 m/s x 1/K (< 20 °C; > 70 °C)
Max. temperature gradient of [K/min] medium	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: 20...70 °C; inlet

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	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)	
Temperature monitoring		
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)
Reaction 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: 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 color	
Operating conditions		
Ambient temperature	[°C]	-40...80
Storage temperature	[°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	20 g (10...2000 Hz)
MTTF	[years]	180
UL approval	UL approval number	I004
	File number UL	E174189
Mechanical data		
Weight	[g]	296.5
Housing	tubular	
Dimensions	[mm]	Ø 34 / L = 123.9
Material	stainless steel (1.4404 / 316L); stainless steel (1.4310 / 301); PBT-GF20; PBT-GF30	
Materials (wetted parts)	stainless steel (1.4404 / 316L); Gasket: FKM	
Process connection	threaded connection G 1/2 external thread	
Probe diameter	[mm]	5
Installation length EL	[mm]	19.2
Displays / operating elements		
Display	Display unit	6 x LED, green (% , m/s, l/min, m³/h, °C, 10³)
	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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Flow sensor

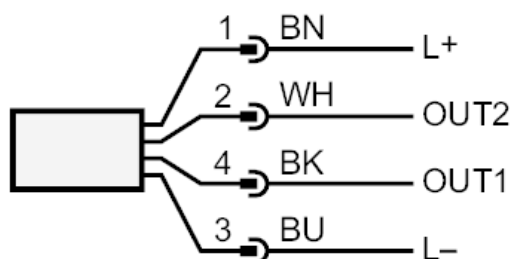
SAR12XDB50KG/US-100

Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4, gold-plated



Connection



OUT1: Colors to DIN EN 60947-5-2
analog output Temperature monitoring
OUT2: analog output Volumetric flow quantity monitoring
Core colors :
BK = black
BN = brown
BU = blue
WH = white