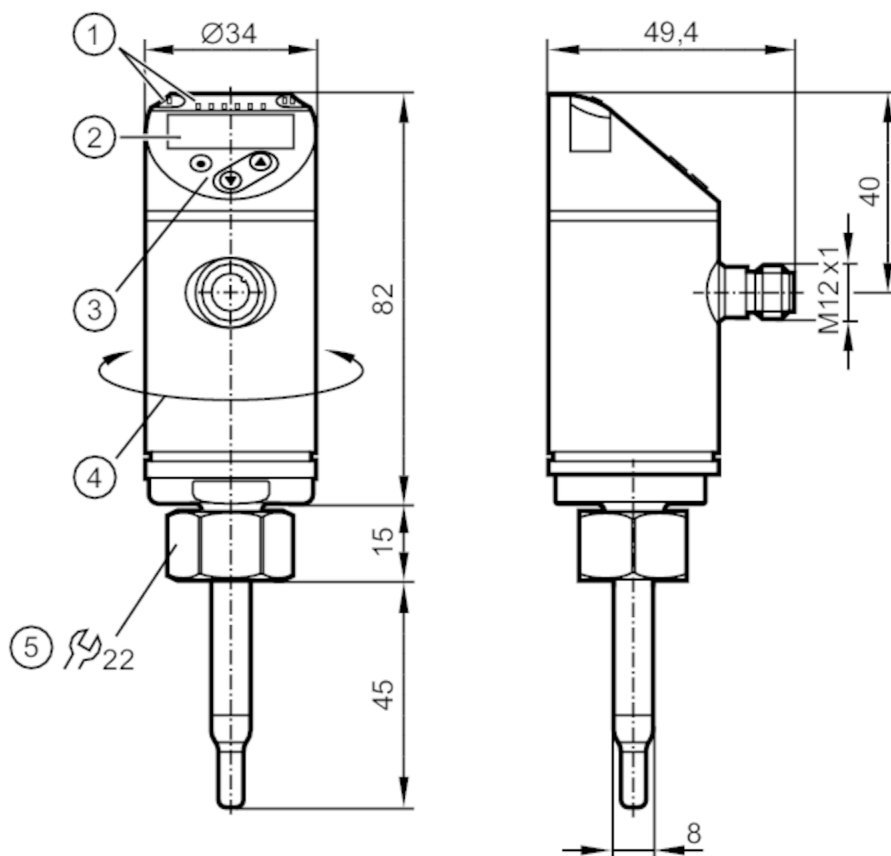


SA5004



Flow sensor

SAD10XDB50KG/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°



Application

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 [bar]	100
MAWP (for applications according to CRN) [bar]	100

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

Inputs / outputs

Number of inputs and outputs	Number of analogue outputs: 2
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Flow sensor

SAD10XDB50KG/US-100

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]		45
Operating mode		relative; absolutely liquid; absolutely gaseous
Note on setting range		Operating mode: relative
Liquids		
Measuring range [m/s]		0.04...3
Setting range [m/s]		0...6
Gases		
Measuring range [m/s]		2...100
Setting range [m/s]		0...200
Temperature monitoring		
Measuring range [$^{\circ}\text{C}$]		-20...90
Resolution [$^{\circ}\text{C}$]		0.2
Analogue start point [$^{\circ}\text{C}$]		-20...76
Analogue end point [$^{\circ}\text{C}$]		4...100
In steps of [$^{\circ}\text{C}$]		0.2
Accuracy / deviations		
Flow monitoring		
Temperature drift [cm/s x 1/K]		0,003 m/s x 1/K (< 20 $^{\circ}\text{C}$; > 70 $^{\circ}\text{C}$)
Temperature gradient [K/min]		100
Accuracy (in the measuring range)		$\pm (7 \% \text{ MW} + 2 \% \text{ MEW})$; (for relative mode in the measuring range with:; water: 20...70 $^{\circ}\text{C}$; 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)
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)

SA5004



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SAD10XDB50KG/US-100

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 [°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 no.

I004

Mechanical data

Weight [g]

276

Materials

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 M18 x 1,5 internal thread

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.

Electrical connection

Connector: 1 x M12; Contacts: gold-plated



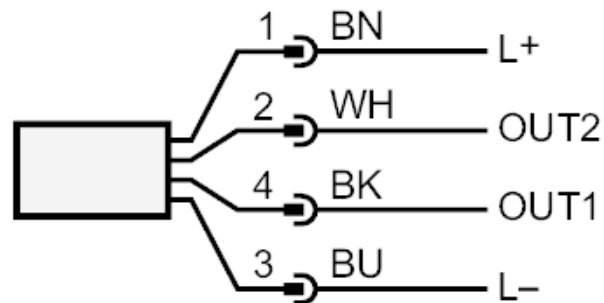
SA5004



Flow sensor

SAD10XDB50KG/US-100

Connection



colours to DIN EN 60947-5-2

OUT1: analogue output Temperature monitoring

OUT2: analogue output volumetric flow quantity monitoring

Core colours :

BK = black

BN = brown

BU = blue

WH = white