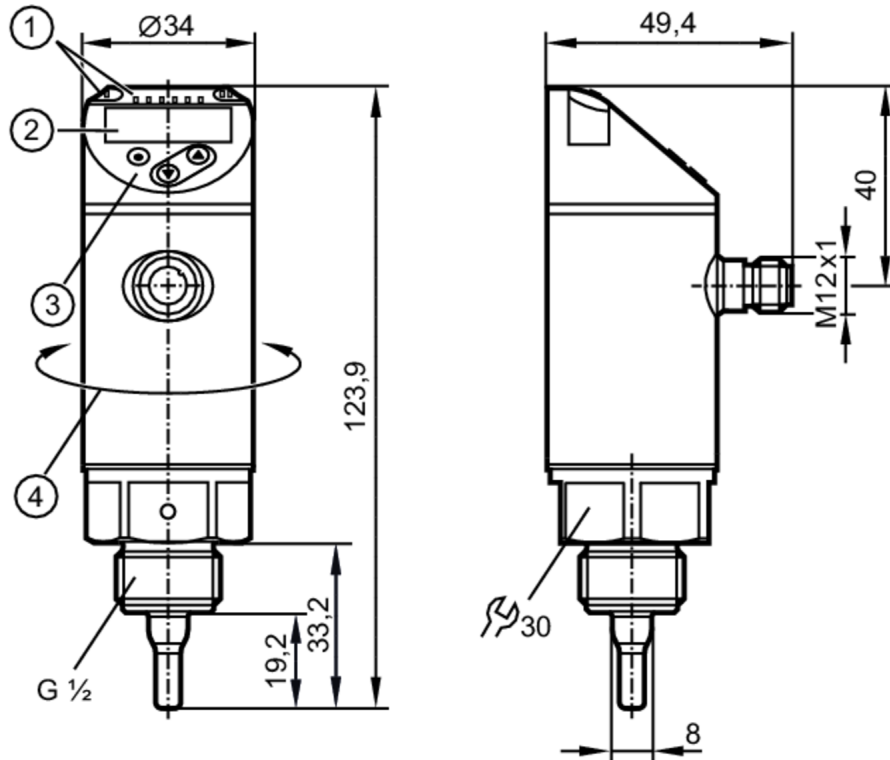


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Flow sensor

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 analogue outputs: 2 |
| Process connection | | threaded connection G 1/2 |
| Liquids | | |
| Measuring range | [m/s] | 0.04...3 |
| Gases | | |
| Measuring range | [m/s] | 2...100 |

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 | [bar] | 100 |
| MAWP (for applications according to CRN) | [bar] | 85 |

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Flow sensor

SAR12XDB50KG/US-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 |
| 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] | 19.2 |
| 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 | [°C] | -20...90 |
| 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); (Für Relativmodus im Bereich der größten Empfindlichkeit mit.; 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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Flow sensor

SAR12XDB50KG/US-100

| | | |
|-------------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------|
| 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) |
| 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 | [°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 |
| Vibration resistance | | DIN EN 60068-2-6 |
| MTTF | [years] | 180 |
| UL approval | UL Approval no. | I004 |
| | File number UL | E174189 |
| Mechanical data | | |
| Weight | [g] | 296.5 |
| 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 G 1/2 |
| Displays / operating elements | | |
| Display | Display unit | 6 x LED, green (% , m/s, l/min, m ³ /h, °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. |
| Electrical connection | | |
| Connector: 1 x M12; Contacts: gold-plated | | |
| | | |

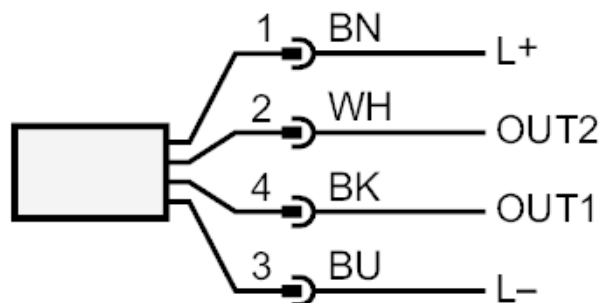
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Flow sensor

SAR12XDB50KG/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