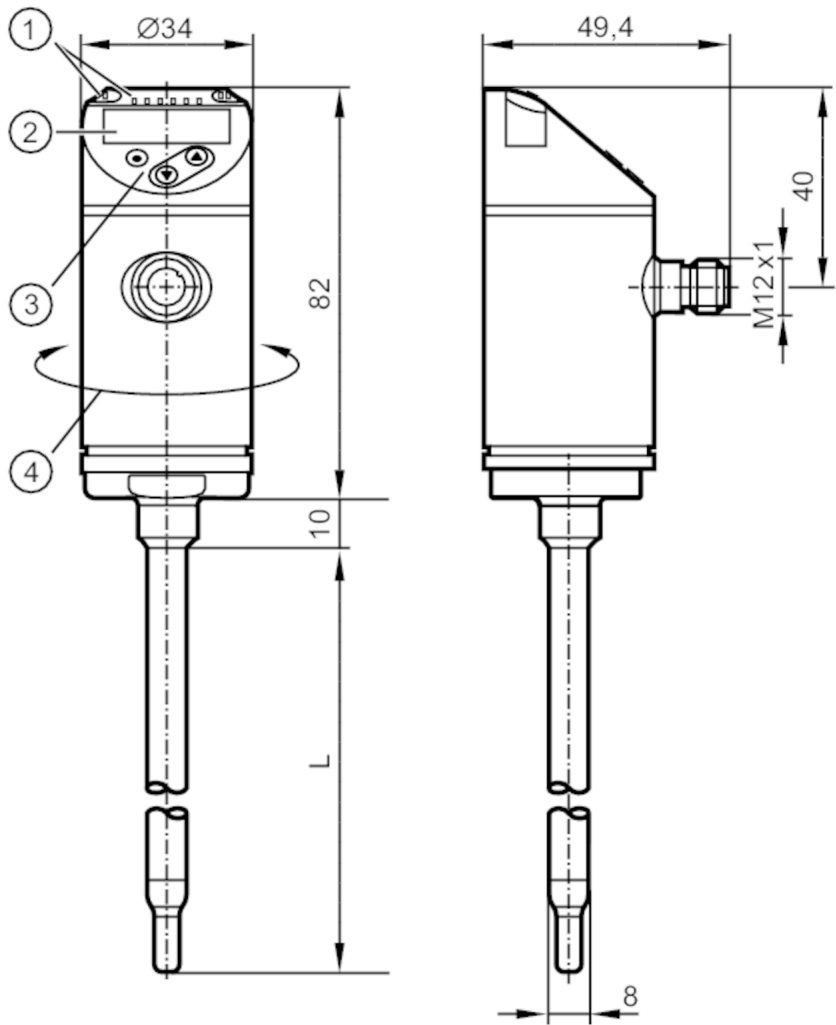




Flow sensor

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°

ACS CRN EC 1935/2004 FCM KTW/W270 Reg31

| 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: $\leq 40 \text{ mm}^2/\text{s}$ (40 °C) |
|                                                | high-viscosity oils with viscosity: $> 40 \text{ mm}^2/\text{s}$ (40 °C)   |
| Medium temperature [°C]                        | -20...100                                                                  |
| Pressure rating [bar]                          | 50                                                                         |
| Pressure rating [MPa]                          | 5                                                                          |
| MAWP (for applications according to CRN) [bar] | 50                                                                         |

# SA4304



## Flow sensor

SAEXXXB50KG/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]         | 200                                                                                                                       |
| Operating mode                         |              | relative; absolutely liquid; absolutely gaseous; (absolute: reference measurement recommended; Factory setting: relative) |
| 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                                                                                                                       |
| 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]        | 0...100                                                                                                                   |
| Greatest sensitivity                   | [m/s]        | 30...100                                                                                                                  |
| Gases - operating mode "relative"      |              |                                                                                                                           |
| Setting range                          | [m/s]        | 0...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)                                                                                        |
| Temperature gradient                   | [K/min]      | 100                                                                                                                       |



## Flow sensor

SAEXXXB50KG/US-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 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) |
| 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: 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                                                                                                                                                                                                                                                                | 50 g (11 ms)                                                                    |
| Vibration resistance          | DIN EN 60068-2-6                                                                                                                                                                                                                                                                 | 2 g (10...2000 Hz)                                                              |
| MTTF                          | [ANN]                                                                                                                                                                                                                                                                            | 180                                                                             |
| UL approval                   | UL Approval no.                                                                                                                                                                                                                                                                  | I018                                                                            |
|                               | File number UL                                                                                                                                                                                                                                                                   | E174189                                                                         |
| Mechanical data               |                                                                                                                                                                                                                                                                                  |                                                                                 |
| Weight                        | [g]                                                                                                                                                                                                                                                                              | 312.5                                                                           |
| 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 (% , 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

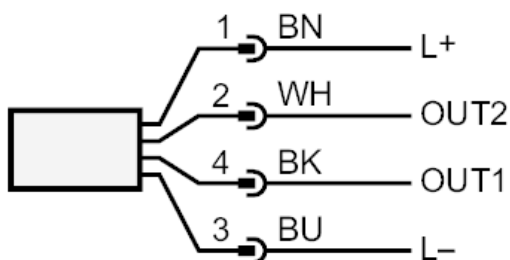
SAEXXXB50KG/US-100

### 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