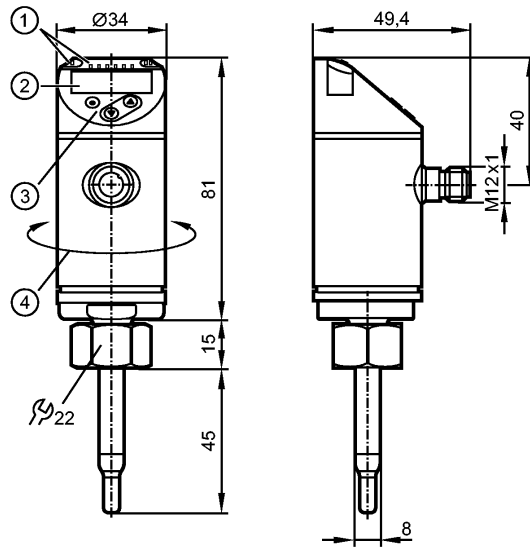


**SA5000**

SAD10XDBFRKG/US-100

Flow sensors



- 1: LEDs (display unit / switching status)
- 2: 4-digit alphanumeric display / alternating indication of red and green
- 3: Programming buttons
- 4: Upper part of the housing can be rotated by 345°



**Product characteristics**

Flow sensor	
M12 connector	
Process connection: internal thread M18 x 1.5 for adapter	
Probe length L: 45 mm	
Operating modes: relative, absolutely liquid, absolutely gaseous	
Setting range for relative mode: 0...6 m/s (liquids) and 0...200 m/s (gases)	

**Application**

Application	water, glycol solutions, air, oils (low-viscosity oils with viscosity ≤ 40 mm <sup>2</sup> /s at 40°C; high-viscosity oils with viscosity > 40 mm <sup>2</sup> /s at 40°C)
Pressure rating [bar]	100
Medium temperature [°C]	-20...90

**Electrical data**

Electrical design	DC PNP/NPN
Operating voltage [V]	18...30 DC
Current consumption [mA]	< 100
Protection class	III
Reverse polarity protection	yes

**Outputs**

Output function	OUT1: normally open / normally closed programmable or frequency or IO-Link OUT2: normally open / normally closed programmable or frequency or analogue (4...20 mA scaleable)
Current rating [mA]	250
Voltage drop [V]	< 2.5
Short-circuit protection	pulsed
Overload protection	yes
Analogue output	4...20 mA

**SA5000**

SAD10XDBFRKG/US-100

**Flow sensors**

Max. load	[Ω]	350
Frequency range [Hz]		0...1000

**Measuring / setting range**

Flow monitoring		
Measuring range	0.05...3 m/s (liquids)	2...100 m/s (gases)
–	Setting range for relative mode: 0...6 m/s (liquids) and 0...200 m/s (gases)	
Temperature monitoring		
Measuring range	[°C]	-20...90
Resolution	[°C]	0.2 [K]

**Accuracy / deviations**

Flow monitoring		
Accuracy		± (5 % MW + 2 % MEW) (value applies to water with 0.04...3 m/s flow velocity at the sensor tip; 20°C...70°C; DN25 to DIN 2448 with 1.5 m inlet length)
Temperature drift		0.003 m/s x 1/K (< 20 °C; > 70 °C)
Repeatability		0.05 m/s; Value applies to water with 0.05...3 m/s flow velocity
Max. temperature gradient of medium	[K/min]	100
Temperature monitoring		
Accuracy	[K]	± 0.3 *) ± 1 **)
Temperature drift		± 0.005 K/°C

**Reaction times**

Power-on delay time	[s]	10
Flow monitoring		
Response time	[s]	0.5 (T09) ***)
Temperature monitoring		
Response time	[s]	1.5 (T09) *)

**Software / programming**

Programming options	Hysteresis/window; NO/NC; switching logic; current / frequency output; fluid selection; damping; teach function; display can be rotated/switched off; standard unit of measurement/colour process value
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**Interfaces**

IO-Link device		
Transfer type		COM2 (38.4 kBaud)
IO-Link revision		1.1
SDCI standard		IEC 61131-9
IO-Link device ID		533 d / 00 02 15 h ****)
Profiles	Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis	
SIO mode		yes
Required master port class		A
Process data analogue		2
Process data binary		2
Min. process cycle time	[ms]	3

**Environment**

Ambient temperature	[°C]	-40...80
Storage temperature	[°C]	-40...100





**SA5000**

SAD10XDBFRKG/US-100

**Flow sensors**

Pack quantity [piece] 1