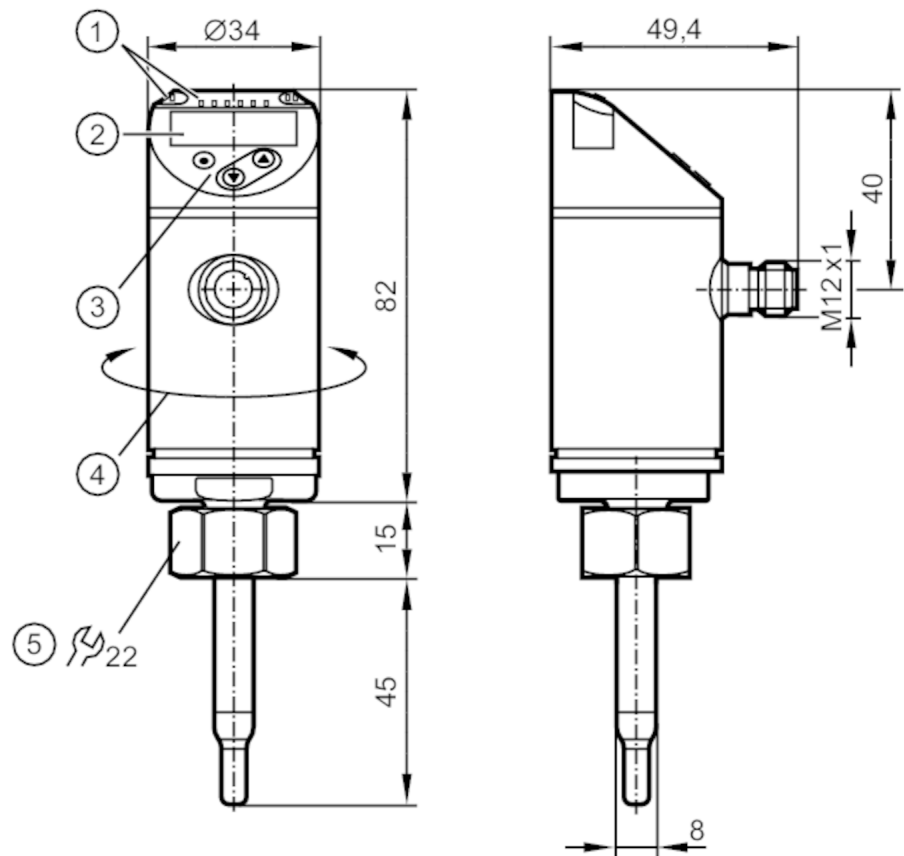


SA5014



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°



Product characteristics		
Number of inputs and outputs	Number of analogue outputs: 2	
Process connection	threaded connection M18 x 1,5 internal thread	
Application		
Special feature	Gold-plated contacts	
Media	water; glycol solutions; air; oils	
Note on media	low-viscosity oils with viscosity: ≤ 40 mm²/s (104 °F)	
	high-viscosity oils with viscosity: > 40 mm²/s (104 °F)	
Medium temperature	[°F]	-4...194
Pressure rating	100 bar	10 MPa
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



Flow sensor

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Measuring principle	calorimetric
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]	45
Operating mode	relative; absolutely liquid; absolutely gaseous; (absolute: reference measurement recommended; Factory setting: relative)
Liquids	
Resolution [ft/s]	0.05
Analogue start point ASP [ft/s]	0...7.95
Analogue end point AEP [ft/s]	1.9...9.85
Gases	
Resolution [ft/s]	2
Analogue start point ASP [ft/s]	0...264
Analogue end point AEP [ft/s]	64...328
Temperature monitoring	
Measuring range [°F]	-4...194
Resolution [°F]	0.5
Analogue start point [°F]	-4...169
Analogue end point [°F]	39...212
In steps of [°F]	0.5
Liquid media - absolute operating mode	
Setting range [ft/s]	0.15...9.85
Greatest sensitivity [ft/s]	0.15...9.85
Liquid media - relative operating mode	
Setting range [ft/s]	0.15...19.5
Greatest sensitivity [ft/s]	0.15...9.85
Gases - operating mode "absolute"	
Setting range [ft/s]	98...328
Greatest sensitivity [ft/s]	6...328
Gases - operating mode "relative"	
Setting range [ft/s]	98...328
Greatest sensitivity [ft/s]	6...328



Flow sensor

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Accuracy / deviations		
Temperature drift	[cm/s x 1/K]	0,01 fps x 1/K (< 68 °F; > 158 °F)
Temperature gradient	[K/min]	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: 68...158 °F; inlet length: 5 ft; 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		± 0,003 K/°F
Accuracy	[K]	± 0,3 / ± 1; (water; flow velocity: 1...9,85 fps / air; flow velocity: > 32,8 fps)
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	[°F]	-40...176
Storage temperature	[°F]	-40...212
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]	179
UL approval	UL Approval no.	I004
	File number UL	E174189
Mechanical data		
Weight	[g]	278
Housing		cylindrical
Dimensions	[mm]	Ø 34 / L = 142
Materials		stainless steel (316L/1.4404); stainless steel (301/1.4310); PBT-GF20; PBT-GF30
Materials (wetted parts)		stainless steel (316L/1.4404); Gasket: FKM
Process connection		threaded connection M18 x 1,5 internal thread
Probe diameter	[mm]	8
Installation length EL	[mm]	45
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

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Remarks	
Remarks	MW = measured value
	MEW = Final value of the measuring range
Pack quantity	1 pcs.

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