

New benchmark in thermal flow measurement



Calorimetric flow meter for liquids and gases

- Optimised for water, oils, glycol and air
- Fast response time and integrated temperature measurement
- Red/green colour change for process values
- Internal pipe diameter selectable from 15...400 mm
- The process connection can be rotated for optimum alignment



Measurement technique

The SA volumetric flow sensor operates using the calorimetric measuring principle. Two measuring elements as well as a heat source are located on the measuring tip. The physical effect that a flowing medium absorbs heat energy and conducts it away is used. The resulting temperature change is an indication of flow.

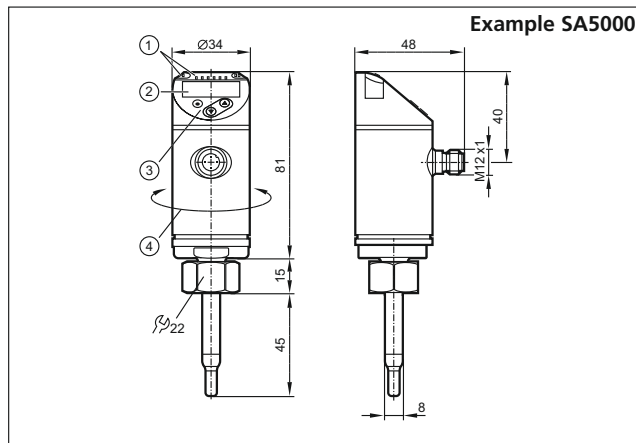
Device function

The new SA-type sensor has been designed to detect and measure flow and temperature even in large internal pipe diameters up to 400 mm. Therefore it serves different applications. Switching outputs, analogue signals and IO-Link provide various options to further process the signals. That means that the user is best-equipped for Industry 4.0.



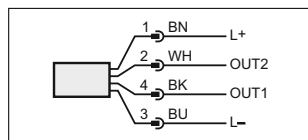
Type	Measuring range liquid / gaseous [cm/s]	Medium temperature [°C]	Pressure resistance [bar]	Response time [s]	Probe length [mm]	Order no.
M12 connector · electrical design DC PNP						
M18	5...300 / 200...10000	-20...90	100	0.5	45	SA5000
Progressive ring	5...300 / 200...10000	-20...100	50	0.5	100	SA4100
Progressive ring	5...300 / 200...10000	-20...100	50	0.5	200	SA4300

Dimensions









- 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°

Wiring



Connection technology

Type	Description	Order no.
	M12 socket, 2 m black, PUR cable	EVC001
	M12 socket, 5 m black, PUR cable	EVC002
	M12 socket, 2 m black, PVC cable	EVC004
	M12 socket, 5 m black, PVC cable	EVC005
	M12 socket, 2 m orange, PVC cable	EVT064
	M12 socket, 5 m orange, PVC cable	EVT001

Common technical data

Type SA	
Operating voltage [V]	18...30 DC
Current consumption [mA]	< 100
Current rating [mA]	250
Accuracy temperature measurement	± 1 K
Accuracy flow measurement	± (5 % MW + 2 % VMR) at reference conditions
Protection rating, protection class	IP 65 / IP 67, III
Housing materials	High grade stainless steel (1.4404/316L); PBT-GF 20; PBT-GF 30
Connection	M12 connector

Accessories

Type	Description	Order no.
	USB IO-Link master for parameter setting and analysis of units Supported communication protocols: IO-Link (4.8, 38.4 and 230 Kbits/s)	E30390
	Adapter M18x1.5 – G 1/2	E40096
	Adapter M18x1.5 – G 1/4	E40099
	Progressive ring fitting G 1/2, flat seal	E40258