



Ultrasonic flow rate sensor in robust inline design.



Suitable for water, oil and glycol solutions.

- For volumetric flow quantities up to 200 l/min.
- Measurement of non-conductive water also possible.
- Binary, analogue and pulse outputs for signal processing.
- Flow rate, totalising and medium temperature indication.
- Different process connections possible using adapters.



High-grade stainless steel pipe length

IP 67

LED display

Measuring principle

The ultrasonic flow rate sensor of type SU operates according to the transit time difference principle.

Two sound transducers are positioned in a defined pipe length. These sound transducers alternately emit sound pulses. The pulse trains emitted with the flow in the pipe length are transported faster to the receiver by the flowing medium. This transit time difference results in the current volumetric flow quantity.

High functionality

In addition to simple flow rate monitoring the SU also monitors the temperature of the medium. It is displayed on the unit and provided for signal processing. The system is particularly suited for monitoring cooling circuits.






Ultrasonic flow rate measurement in a water circuit for quantity monitoring.

fluid sensors and diagnostic systems

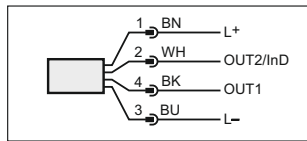
position sensors and object recognition

bus, identification and control systems

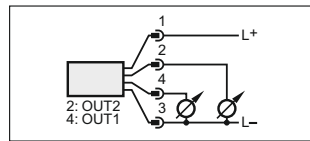
Robust aluminium housing
4-digit alphanumeric display for the units of measurement l/min, m³/h and °C

Measuring range Flow [l/min]	Pulse value	Response time Flow [s]	Accuracy Flow	Process connection	Order no.
M12 connectors · output function 2 x  /  or analogue (4...20 mA / 0...10 V) · DC PNP/NPN					
0...50	0.1 l...10 000 m ³	< 0.250 (dAP = 0)	< ± (3 % MV + 0.2 % VMR)* / < ± (5 % MV + 0.5 % VMR)**	G 3/4	SU7000
0...100	0.1 l...10 000 m ³	< 0.250 (dAP = 0)	< ± (3 % MV + 0.2 % VMR)* / < ± (5 % MV + 0.5 % VMR)**	G 1	SU8000
0...200	0.1 l...100 000 m ³	< 0.250 (dAP = 0)	< ± (3 % MV + 0.2 % VMR)* / < ± (8 % MV + 0.5 % VMR)**	G 1 1/4	SU9000
M12 connectors · output function 2 x analogue (4...20 mA, scalable) · DC					
0...200	–	< 0.250 (dAP = 0)	< ± (3 % MV + 0.2 % VMR)* / < ± (8 % MV + 0.5 % VMR)**	G 1 1/4	SU9004
M12 connectors · output function 2 x  · DC PNP					
0...50	–	< 0.250 (dAP = 0)	< ± (3 % MV + 0.2 % VMR)* / < ± (5 % MV + 0.5 % VMR)**	G 3/4	SU7200
0...100	–	< 0.250 (dAP = 0)	< ± (3 % MV + 0.2 % VMR)* / < ± (5 % MV + 0.5 % VMR)**	G 1	SU8200

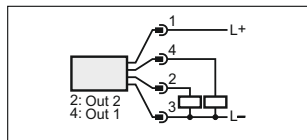
Wiring diagram



SU7000, SU8000, SU9000



SU9004



SU7200, SU8200

Accessories




Type	Description	Order no.
	Adapter, G 3/4 - R 1/2, pack quantity 2 pcs., high-grade stainless steel	E40178
	Adapter, G 1 - R 1/2, pack quantity 2 pcs., high-grade stainless steel	E40179
	Adapter, G 1 - R 3/4, pack quantity 2 pcs., high-grade stainless steel	E40180
	Adapter, G 1 1/4 - R 1, pack quantity 2 pcs., high-grade stainless steel	E40205

* for water,
** for glycol (35 %) and oil (viscosity: 68 mm²/s at 40 °C)

Further technical data

Type SU	
Operating voltage [V]	19...30 DC
Measuring range temperature [°C]	-10...80
Short-circuit protection, pulsed	•
Reverse polarity / overload protection	• / •
Protection	IP 67, III
Pressure resistance [bar]	16
Housing material	housing: AlMgSi0,5 anodised; seal: Viton; plug housing: Optalloy-plated brass PA 6.6; cover film: polyamide
Sensor material	high-grade stainless steel (316 L); PPR (Hostalen); Viton; PES (Ultrason 2010); Centellen 200

Connectors and splitter boxes

Type	Description	Order no.
	M12 socket, 2 m black, PUR cable	EVC004
	M12 socket, 5 m black, PUR cable	EVC005
	M12 socket, 10 m black, PUR cable	EVC006

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