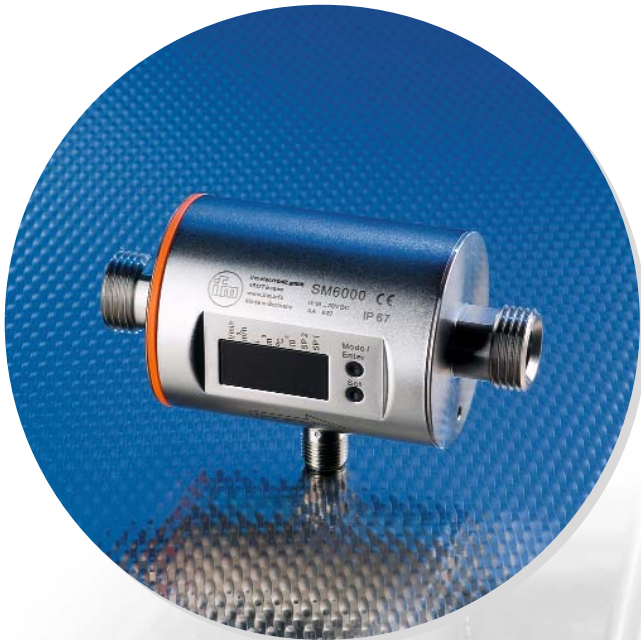




# Magnetic-inductive inline flow sensor.



With flow rate, totalising and temperature indication.

- High accuracy, repeatability and measurement dynamics.
- Suitable for conductive media from 20  $\mu\text{S/cm}$ , flow rate up to 100 l/min.
- Binary, analogue and pulse outputs for signal processing.
- Different process connections possible using adapters
- 4-digit alphanumeric LED display for representation of the units.



MID	Outputs: analogue binary pulse	Totalizer function	Broad measurement dynamics
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## Measurement technique

The flow sensor is based on Faraday's principle of induction.

The conductive medium flowing through a pipe in a magnetic field generates a voltage which is proportional to the flow velocity or flow rate.

## Device function

This voltage is detected via electrodes and converted in the evaluation electronics.

Analogue, binary and pulse outputs offer various possibilities to process the measured data. Due to the flexible programming by means of pushbuttons the flow sensor can be adapted to different conditions. The sensor is mounted via an adapter. A high protection rating and a robust compact housing distinguish the sensor in the field.



Magnetic-inductive flow sensor in water cycle for quantity monitoring.

fluid sensors  
and diagnostic  
systems

position  
sensors  
and object  
recognition

bus,  
identification  
and control systems

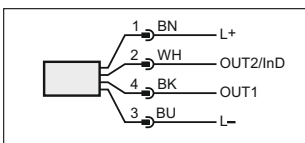


**Applications:**

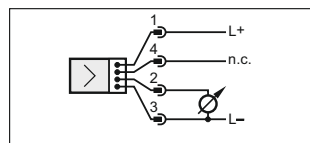
Conductive liquids (conductivity:  $\geq 20 \mu\text{S/cm}$  / viscosity:  $< 70 \text{ mm}^2/\text{s}$  at  $40 \text{ }^\circ\text{C}$ )

Measuring range flow [l/min]	Pulse value	Response time flow [s]	Accuracy flow	Process connection	Order no.
<b>M12 connector · electrical design DC PNP/NPN · with display</b>					
0...25	0.05 l...30 000 m <sup>3</sup>	< 0.150 (dAP = 0)	$\pm (2 \% \text{ MV} + 0.5 \% \text{ VMR})$	G 1/2	<b>SM6000</b>
0.2...50	0.1 l...50 000 m <sup>3</sup>	< 0.150 (dAP = 0)	$\pm (2 \% \text{ MV} + 0.5 \% \text{ VMR})$	G 3/4	<b>SM7000</b>
0.2...100	0.1 l...100 000 m <sup>3</sup>	< 0.150 (dAP = 0)	$\pm (2 \% \text{ MV} + 0.5 \% \text{ VMR})$	G 1	<b>SM8000</b>
<b>M12 connector · electrical design DC · without display</b>					
0...25	–	< 0.150 (dAP = 0)	$\pm (2 \% \text{ MV} + 0.5 \% \text{ VMR})$	G 1/2	<b>SM6050</b>

**Wiring diagram**



SM6000, SM7000, SM8000



SM6050

**Accessories**

Type	Description	Order no.
	Adapter G 1/2 - G 3/4, pack quantity 2 pcs., high-grade stainless steel	<b>E40189</b>
	Adapter G 1/2 - R 1/2, pack quantity 2 pcs., high-grade stainless steel	<b>E40199</b>
	Adapter, G 3/4 - R 1/2, pack quantity 2 pcs., high-grade stainless steel	<b>E40178</b>
	Adapter, G 1 - R 1/2, pack quantity 2 pcs., high-grade stainless steel	<b>E40179</b>
	Grounding clamp G 1/2	<b>E40196</b>
	Grounding clamp G 3/4	<b>E40197</b>
	Grounding clamp G 1	<b>E40198</b>

**Further technical data**

Type SM6000, SM6050		
Operating voltage	[V]	19...30 DC
Measuring range temperature	[°C]	-20...80
Short-circuit protection, pulsed		•
Reverse polarity / overload protection		• / •
Current rating	[mA]	2 x 200
Output function SM6000, SM7000, SM8000	OUT1	normally open / normally closed programmable or pulse
	OUT2	normally open / normally closed programmable or analogue (4...20 mA / 0...10 V, scalable)
Output function SM6050	OUT	analogue (4...20 mA)
Protection rating, protection class		IP 67, III
Operating temperature	[°C]	-10...60
Medium temperature	[°C]	-10...70
Pressure resistance	[bar]	16
Housing materials		high-grade stainless steel (316S12); PBT-GF 20; PC; EPDM/X (Santoprene) stainless steel (316S16); PEEK (polyether-etherketone); FKM
Sensor material		

**Connectors and splitter boxes**

Type	Description	Order no.
	Socket, M12, 2 m black, PUR cable	<b>EVC004</b>
	Socket, M12, 5 m black, PUR cable	<b>EVC005</b>
	Socket, M12, 10 m black, PUR cable	<b>EVC006</b>

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