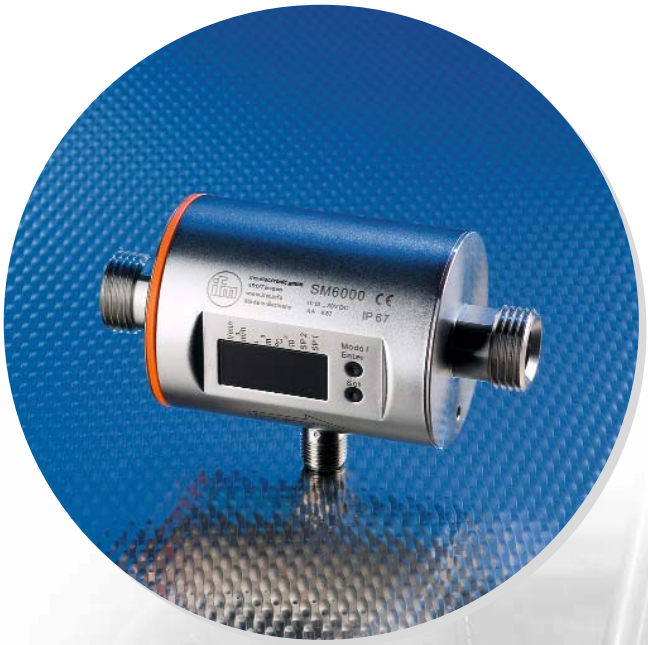
product news

ifm electronic

Fluid sensors and diagnostic systems

Magnetic-inductive inline flow sensor.



With flow rate, totalising and temperature indication.

- High accuracy, repeatability and measurement dynamics.
- Suitable for conductive media from 20 µS/cm, flow rate up to 25 l/min.
- Binary, analogue and pulse outputs for signal processing.
- R 1/2 and R 3/4 process connection via adapter.
- 4-digit alphanumeric LED display for representation of the units.

efector® mid

MID | Outputs: analogue binary pulse | Totalizer function | Broad measurement dynamics

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 housing distinguish the sensor in the field.



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

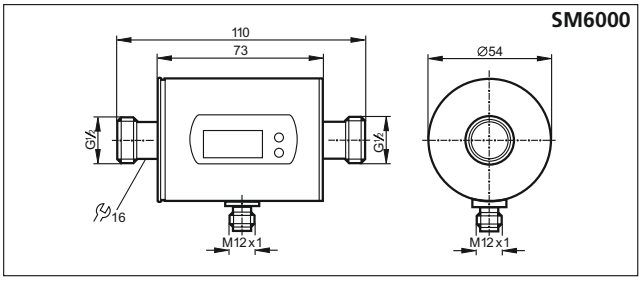
fluid sensors and diagnostic systems
position sensors and object recognition
bus, identification and control systems

Applications:
Conductive liquids (conductivity: ≥ 20 µS/cm / viscosity: < 70 mm²/s at 40 °C)

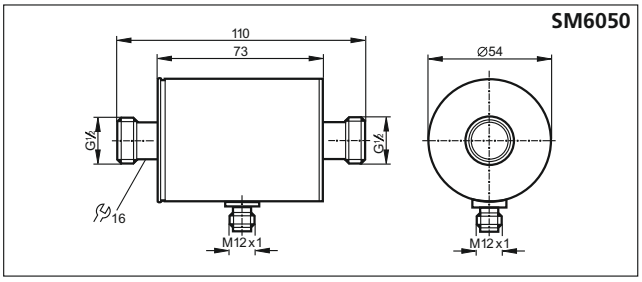
Measuring range flow [l/min]	Pulse value	Response time flow [s]	Accuracy flow	Current rating [mA]	Order no.
M12 connector, gold-plated contacts · Electrical design DC PNP/NPN					
0...25	0.05 l...30 000 m³	< 0.150 (dAP = 0)	± (2 % MV + 0.5 % VMR)	2 x 200	**SM6000**
M12 connector, gold-plated contacts · Electrical design DC PNP / 4...20 mA					
0...25	–	< 0.150	± (2 % MV + 0.5 % VMR)	–	**SM6050**

Dimensions

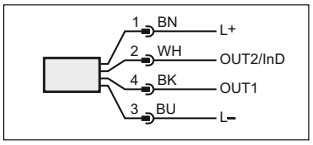
SM6000



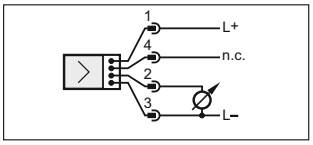
SM6050



Wiring diagram



SM6000



SM6050

Accessories

Type	Description	Order no.
	Adapter G 1/2 - G 3/4 Process connection 3/4 flat seal	**E40189**
	Adapter G 1/2 - R 1/2 Process connection R 1/2	**E40199**
	Grounding clamp G 1/2	**E40196**

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		• / •
Output function SM6000	OUT1	normally open / normally closed programmable or pulse
	OUT2	normally open / normally closed programmable or analogue (4...20 mA / 0...10 V, scaleable)
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)
Sensor material		stainless steel (316S16); PEEK (polyether-etherketone); FKM

Connectors and splitter boxes

Type	Description	Order no.
	Socket, M12, 2 m black, PUR cable	**EVC004**
	Socket, M12, 5 m black, PUR cable	**EVC005**

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