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

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<tbody>
<tr>
<td>M12 connector, gold-plated contacts · Electrical design DC PNP/NPN</td>
<td>0...25</td>
<td>0.05 l...30 000 m³</td>
<td>&lt; 0.150 (dAP = 0)</td>
<td>± (2 % MV + 0.5 % VMR)</td>
<td>2 x 200</td>
</tr>
<tr>
<td>M12 connector, gold-plated contacts · Electrical design DC PNP/4...20 mA</td>
<td>0...25</td>
<td>–</td>
<td>&lt; 0.150</td>
<td>± (2 % MV + 0.5 % VMR)</td>
<td>–</td>
</tr>
</tbody>
</table>

Further technical data

- 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
- Output function SM6050: OUT2 normally open / normally closed programmable or analogue (4...20 mA / 0...10 V, scaleable)
- 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 (316L12); PBT-GF 20; PC; EPDMX (Santoprene)
- Sensor material: stainless steel (316L16); PEEK (polyether-etherketone); FKM

Wiring diagram

Accessories

- Type: Adapter G 1/2 - G 3/4
- Description: Process connection 3/4 flat seal
- Order no.: E40189

- Type: Adapter G 1/2 - R 1/2
- Description: Process connection R 1/2
- Order no.: E40199

- Type: Grounding clamp G 1/2
- Order no.: E40196

For further technical data please go to: www.ifm.com