

# SM920020

## Flow sensors • Water consumption measurement

Flow sensor, water, magnetic-inductive, 72x68x68mm, G 1", 19-30V DC, push/pull programmable/configurable, 0/2-10V / 0/4-20mA, M12-connector 4pin, stainless steel 1.4404, pressure resistance 16bar, 0,2-50l/min



If an electrically conductive liquid moves across a magnetic field, a voltage is generated vertically to this magnetic field which is dependent on the flow velocity. This voltage is measured by electrodes located in the wall of the measuring tube. Microcontrollers evaluate this voltage, calculate the flow rate and show it on the display. An analog signal and a transistor switching output are available for further processing.

### Electrical features

Number of switching outputs	2
Display	TFT display   LED display
Type of switching function	Programmable/configurable
Type of analog output	0 - 10V   0 - 20mA   4 - 20mA   2 - 10V
Type of electrical connection	Connector M12
Type of switching output	Push-pull
Type of temperature sensor	PT1000
Rated switching current	200 mA
Setting procedure	Parameterization
Short-circuit protection	Yes
No-load current	200 mA
Number of pins	4
Relative repeat accuracy	0.2 %
Reverse polarity protection	Yes
Measurement principle	magnetic-inductive
Measuring accuracy of temperature	<±2°C (flow > 0.2m/S)
Minimum conductivity	20 µS/cm
Response time, flow t90 (alarm/pulse/frequency output)	0.1 s
Response time, flow t90 (analog output)	1 s
Response time, temperature t90 (signal output)	20 s
Operating voltage (DC)	19 - 30 V
Measuring accuracy	≤± (0.8% from measured value + 0.5% from end of measuring range)

**Mechanical features**

Type of process connection	G1 inch
Design	Cuboid
Width	72 mm
Pressure resistance	16 bar
Height	68 mm
Length	68 mm
Medium temperature	-20 - 70 °C
Degree of protection (IP)	IP67
Housing material	Stainless steel 1.4404
Sensing element material	Stainless steel 1.4404
Seal material at process connection	Plastic (FKM)
Display window material	Plastic (PMMA)
Inlet section	3 x nominal diameter
Outlet section	2 x nominal diameter
Maximum viscosity	70 mm <sup>2</sup> /s
Measuring range flow volume	0,2 - 50 l/min
Ambient temperature	-20 - 60 °C

**Other features**

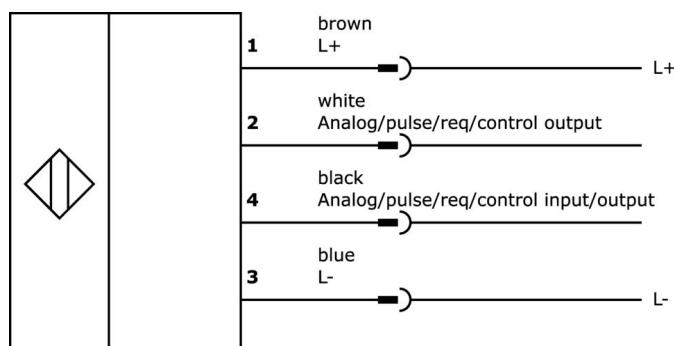
Suitable for	Conductive liquids
Reference medium / object	Water

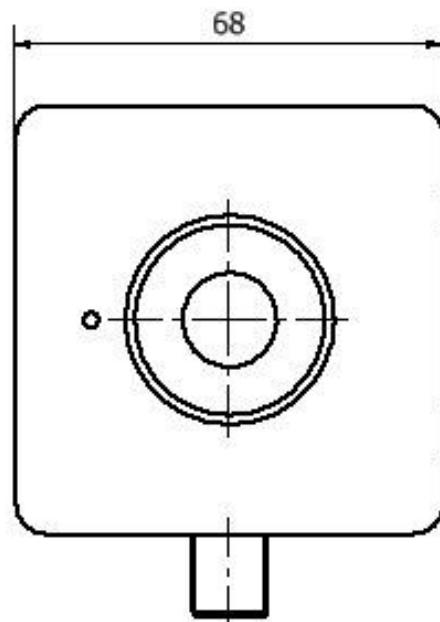
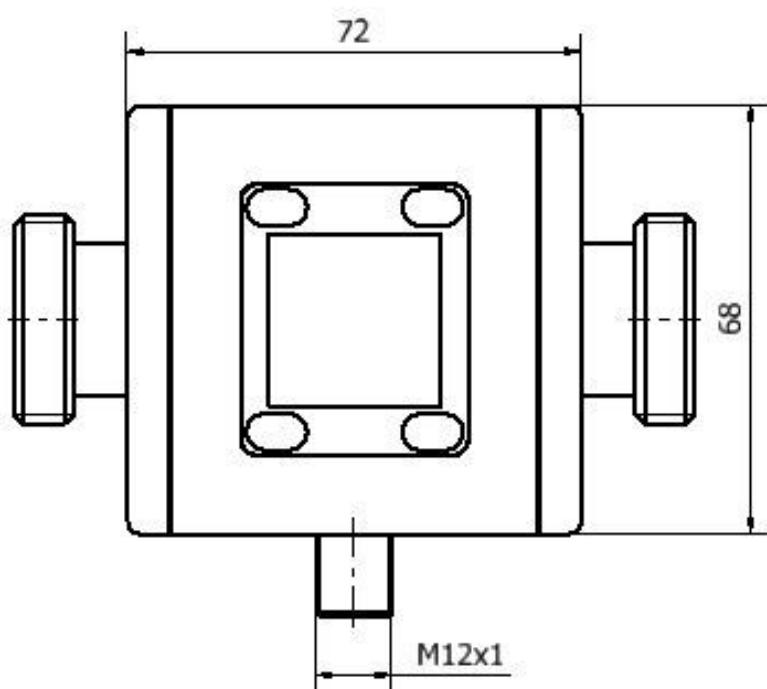
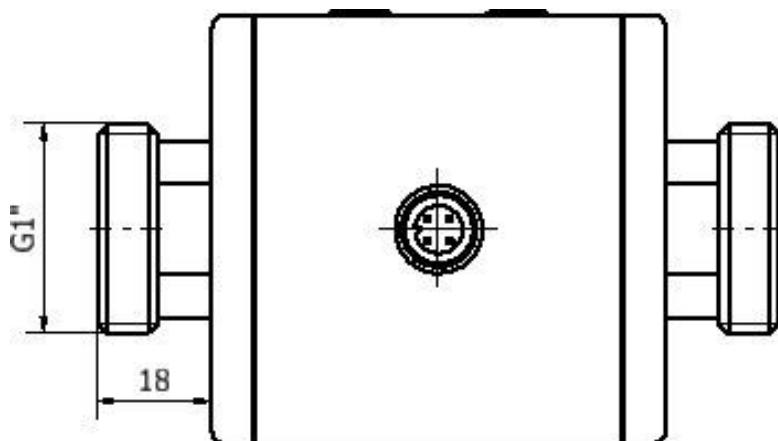
**Classification**

ETIM 8	EC002580 Flow monitoring device
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**More**

IPF Product Group	300 flow sensors
packaging dimensions	210 x 135 x 95 mm
gross weight	1253 g
Customs tariff number	90261021
WEEE number	40951076
POP-compliant	Yes
Reach-compliant	Yes
RoHS-compliant	Yes

**Connection**

**Dimensional drawing**

**Extract accessories program****AS000017**

Accessories Clamp bracket set, 124x69,5x12mm, stainless steel

**VK205321**Connection cable, 2m, M12  
Female (socket) 4pin Angular, Free conductor end, 4x0.34mm<sup>2</sup>, PUR (Polyurethane), Ø5.5mm, 250V, -25-90°C, IP67, Shielded, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicon...**VK205325**Connection cable, 2m, M12  
Female (socket) 4pin Straight, Free conductor end, 4x0.34mm<sup>2</sup>, PUR (Polyurethane), Ø5.5mm, 250V, -25-90°C, IP67, Shielded, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicon...**VK205621**Connection cable, 2m, M12  
Female (socket) 5pin Angular, Free conductor end, 5x0.34mm<sup>2</sup>, PUR (Polyurethane), Ø6mm, 60V, -25-90°C, IP67, Shielded, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone-free**VK205625**Connection cable, 2m, M12  
Female (socket) 5pin Straight, Free conductor end, 5x0.34mm<sup>2</sup>, PUR (Polyurethane), Ø6mm, 60V, -25-90°C, IP67, Shielded, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone...

You can find further accessories on our homepage

**Installation**

Mounting / installation may only be carried out by a qualified electrician!

**Disposal**WEEE number according to § 6 para. 3  
ElektroG: 40951076**Safety warnings**

**I** Before initial operation, please make sure to follow all safety instructions that may be provided in the product information.

**I** Never use these devices in applications where the safety of a person depends on their functionality.