

Flow sensors

SM6000

SMR12GGXFRKG/US
Magnetic-inductive flow sensor
Plug and socket
Process connection: G½ flat seal

Function programmable
Totalizer function
2 outputs

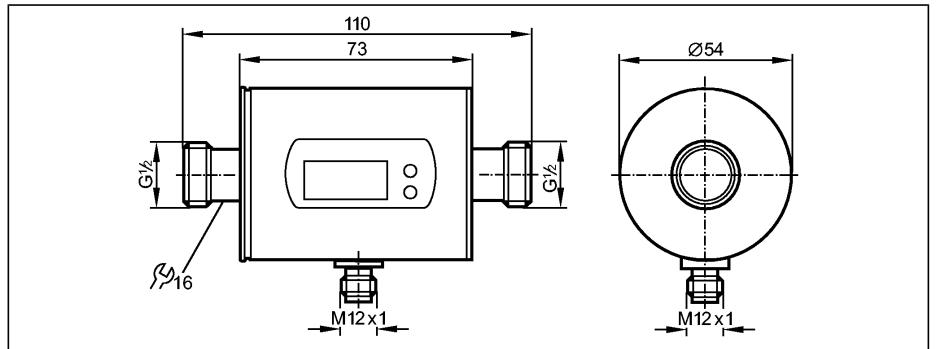
OUT1 = flow monitoring (binary), flow rate meter (pulse), preset meter (binary)

OUT2 = flow monitoring or temperature monitoring (analogue or binary)

Input for counter reset
Measuring range

0...25 l/min
-20...80°C

connection to pipe by means of an adapter



Application
Electrical design
Output

Conductive liquids
(conductivity: >= 20 µS/cm / viscosity: < 70 mm²/s at 40 °C)
DC PNP/NPN
OUT1: normally open / closed programmable or pulse
OUT2: normally open / closed programmable or analogue (4...20 mA / 0...10 V, scaleable)

Operating voltage	[V]
Current rating	[mA]
Short-circuit protection	
Reverse polarity protection	
Overload protection	
Voltage drop	[V]
Current consumption	[mA]
Power-on delay time	[s]
Analogue output	
Pulse output	
Pulse value	
Pulse length [s]	
Programming options	

19...30 DC 1)
2 x 200
pulsed
yes
yes
< 2
120
5
4...20 mA (max. 500 Ω) / 0...10 V (min. 2000 Ω)
flow rate meter
0.05 l...30 000 m³
min. 0.05 / max. 2
hysteresis / window function; N.O. / N.C; output polarity; current / voltage / pulse output; start-up delay; display can be deactivated; display unit

Flow monitoring

Setting range

Damping, dAP	[s]
Response time	[s]
Start-up delay	[s]
Accuracy	
Repeatability	
Pressure loss [mbar]	

-30...30 l/min	-1.8...1.8 m³/h
0...25 l/min	0...1.5 m³/h
0.05 l/min	0.005 m³/h
0.25...25.00 l/min	0.015...1.500 m³/h
0.10...24.90 l/min	0.005...1.495 m³/h
0.00...20.00 l/min	0.000...1.200 m³/h
5.00...25.00 l/min	0.300...1.500 m³/h
0.05 l/min	0.005 m³/h
0.0...5.0	
< 0.150 (dAP = 0)	
0...50	
± (2% MW + 0.5% MEW)	
± 0.2% MEW	
180 (25 l/min)	

SM6000

Temperature monitoring

Measuring range	[°C]	-20...80
Resolution	[°C]	0.2
Setting range		
Set point, SP	[°C]	-19.8...80.0
Reset point, rP	[°C]	-20.0...79.8
Analogue start point, ASP	[°C]	-20.0...60.0
Analogue end point, AEP	[°C]	0.0...80.0
in steps of	[°C]	0.2
Response time	[s]	T09 = 30 (Q > 1 l/min)
Accuracy	[°C]	± 2.5 (Q > 1 l/min)
Ambient temperature	[°C]	-10...60
Medium temperature	[°C]	-10...70
Storage temperature	[°C]	-25...80
Protection		IP 67, III
Insulation resistance	[MΩ]	> 100 (500 V DC)
Pressure rating	[bar]	16
Shock resistance		DIN IEC 68-2-6:20 g (10...2000 Hz)
Vibration resistance		DIN IEC 68-2-6:5 g (10...2000 Hz)
EMC		EN 61000-4-2 ESD: 4 kV CD / 8 kV AD EN 61000-4-3 HF radiated: 10 V/m EN 61000-4-4 Burst: 2 kV EN 61000-4-5 Surge: 0.5 kV EN 61000-4-6 HF conducted: 10 V
Housing materials		stainless steel (316S12); PBT-GF 20; PC (Makrolon); EPDM/X (Santoprene)
Materials (wetted parts)		stainless steel (316S12); PEEK (polyether ether ketone); FKM
Display		Display unit 6 LED green (l/min, m³/h, l, m³, 10³, °C) Switching status 2 LED yellow Measured values 4-digit alphanumeric display Programming 4-digit alphanumeric display
Connection		M12 connector; gold-plated contacts
Remarks		1) to EN50178, SELV, PELV MW = measured value MEW = final value of the measuring range

Wiring

OUT1: 3 selection options

- switching output volumetric flow monitoring
- pulse output volumetric flow
- switching output preset counter

OUT2/InD: 5 selection options

- switching output volumetric flow monitoring
- switching output temperature monitoring
- analogue output volumetric flow
- analogue output temperature
- input for an external reset signal

