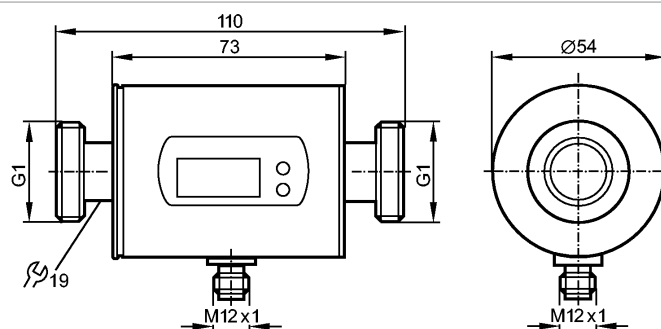


SM8004

SMR11GGX50KG/US100

Flow sensors



Made in Germany

Product characteristics

Magnetic-inductive flow meter

Connector

Process connection: G1 flat seal

connection to pipe by means of an adapter

2 outputs

OUT1 = analogue signal temperature

OUT2 = analogue signal flow

Display units:

°C / °F

l/min, m³/h, gpm, gph

Measuring range

0.2...100 l/min

-20...80°C

Application

Application	Conductive liquids (conductivity: $\geq 20 \mu\text{S/cm}$ / viscosity: $< 70 \text{ mm}^2/\text{s}$ at 40 °C)
Medium temperature [°C]	-10...70

Electrical data

Electrical design	DC
Operating voltage [V]	20...30 DC ¹⁾
Current consumption [mA]	120 (24 V)
Insulation resistance [MΩ]	> 100 (500 V DC)
Protection class	III
Reverse polarity protection	yes

Outputs

Output function	2 x analogue (4...20 mA scalable)
Overload protection	yes
Analogue output	4...20 mA, max. 22 mA
Max. load [Ω]	max. 500

Measuring / setting range

Flow monitoring		
Measuring range	0.2...100.0 l/min	0.10...26.40 gpm
Display range	-120.0...120.0 l/min	-31.70...31.70 gpm
Resolution	0.1 l/min	0.05 gpm
Analogue start point, ASP	0.0...80.0 l/min	0.00...21.10 gpm

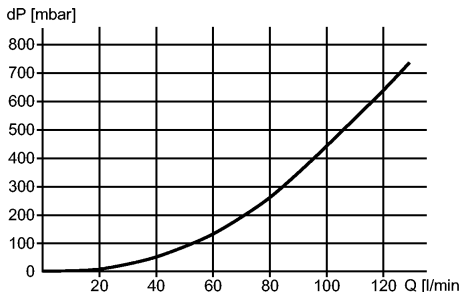
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Analogue end point, AEP	20.0...100.0 l/min	5.30...26.40 gpm
in steps of	0.1 l/min	0.05 gpm
Temperature monitoring		
Measuring range [°C]	-20...80	
Resolution [°C]	0.2	
Analogue start point, ASP [°C]	-20.0...60.0	
Analogue end point, AEP [°C]	0.0...80.0	
in steps of [°C]	0.2	

Accuracy / deviations

Flow monitoring	
Accuracy	$\pm (2\% \text{ MW} + 0.5\% \text{ MEW})$
Repeatability	$\pm 0.2\% \text{ MEW}$
Pressure loss (dP) / flow rate (Q)	

Temperature monitoring	
Accuracy [K]	$\pm 2.5 (Q > 1 \text{ l/min})$

Reaction times

Power-on delay time [s]	5
Flow monitoring	
Response time [s]	$< 0.150 (dAP = 0)$
Damping, dAP [s]	0.0...3.0
Temperature monitoring	
Response time [s]	$T_{09} = 30 (Q > 1 \text{ l/min})$

Environment

Pressure rating [bar]	16
Ambient temperature [°C]	-10...60
Storage temperature [°C]	-25...80
Protection	IP 67

Tests / approvals

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
Shock resistance	DIN IEC 68-2-27: 20 g (11 ms)
Vibration resistance	DIN IEC 68-2-6: 5 g (10...2000 Hz)
MTTF [Years]	175

Mechanical data

Process connection	G1 flat seal
Materials (wetted parts)	stainless steel 316L / 1.4404; PEEK (polyether ether ketone); FKM

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Flow sensors

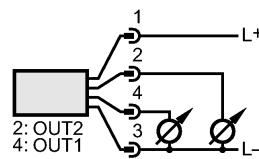
Housing materials	stainless steel 316L / 1.4404; PBT-GF 20; PC (Makrolon); EPDM/X (Santoprene)
Weight [kg]	0.616

Displays / operating elements	
Display	Display unit 6 x LED green (l/min, m³/h, gpm, gph, °C, °F) Measured values 4-digit alphanumeric display Programming 4-digit alphanumeric display

Electrical connection	
Connection	M12 connector; Gold-plated contacts

Wiring

OUT1 = analogue signal
temperature
OUT2 = analogue signal flow



Remarks

Remarks	1) to EN50178, SELV, PELV MW = measured value MEW = final value of the measuring range
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Pack quantity [piece]	1
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