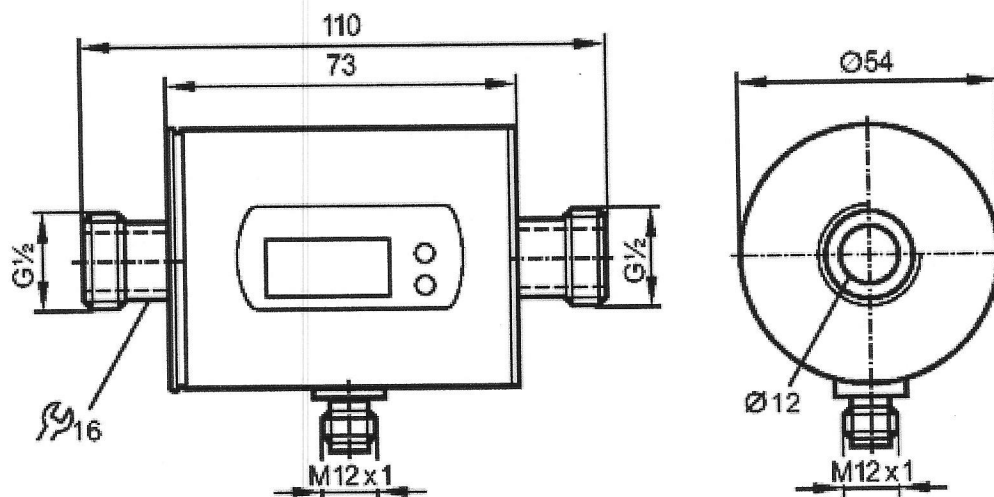


SM6004
SMR12GGX50KG/US-100
Flow sensors

Product characteristics

Magnetic-inductive flow meter

Quick disconnect

Process connection: G1/2 flat seal

connection to pipe by means of an adapter

2 outputs

OUT1 = analogue signal temperature

OUT2 = analogue signal flow

Measuring range

0.1...25 l/min

Application

Application	Conductive liquids (conductivity: $\geq 20 \mu\text{S/cm}$ / viscosity: $< 70 \text{ cSt}$ at 104°F)
Pressure rating [bar]	16
Medium temperature [$^\circ\text{C}$]	-10...70

Electrical data

Electrical design	DC
Operating voltage [V]	20...30 DC ¹⁾
Current consumption [mA]	120 (24 V)
Insulation resistance [$\text{M}\Omega$]	> 100 (500 V DC)
Protection class	III
Reverse polarity protection	yes

Outputs

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

Measuring / setting range

Flow monitoring

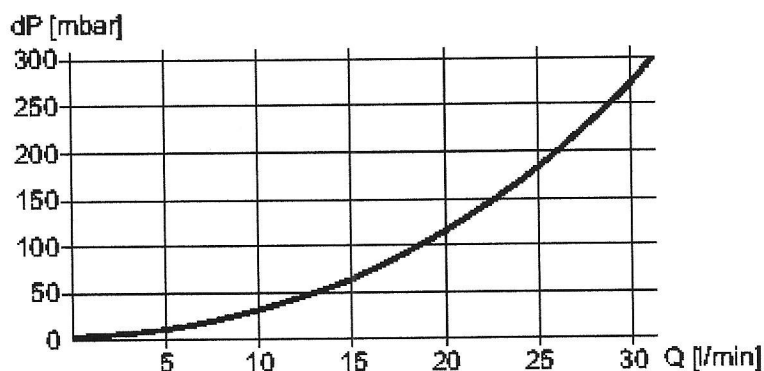
Measuring range	0.1...25.00 l/min	0.03...6.60 gpm
Display range	-30...30 l/min	-7.92...7.92 gpm
Resolution	0.05 l/min	0.01 gpm
Analog start point, ASP	0.00...20.00 l/min	0.00...5.28 gpm
Analog end point, AEP	5.00...25.00 l/min	1.32...6.60 gpm
in steps of	0.05 l/min	0.01 gpm

Temperature monitoring

Measuring range [°C]	-20...80
Resolution [°C]	0.2
Analog start point, ASP [°C]	-20.0...60.0
Analog 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]	$\pm 2.5 (Q > 1 \text{ l/min})$
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Reaction times

Power-on delay time [s]	5
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Flow monitoring

Response time [s]	$< 0.150 (dAP = 0)$
Damping, dAP [s]	0.0...3.0

Temperature monitoring

Response time [s]	T09 = 20 (Q > 1 l/min)
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Environment

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

Tests / approvals

Pressure equipment directive	article 3, section 3 - sound engineering practice	
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	G½ flat seal
Materials (wetted parts)	stainless steel 316L / 1.4404; PEEK (polyether ether ketone); FKM
Housing materials	stainless steel 316L / 1.4404; PBT-GF 20; PC; FKM; TPE
Weight [kg]	0.516

Displays / operating elements

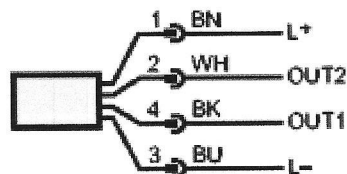
Display	Display unit	6 x LED green (l/min, m³/h, gpm, gph, °C, °F)
	Measured values	4-digit alphanumeric display
	Programming	4-digit alphanumeric display

Electrical connection

Connection	M12 connector; gold-plated contacts
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Wiring

Core colors
BK black
BN brown
BU blue
WH white



Colours to DIN EN 60947-5-2

OUT1: analogue output temperature
OUT2: analogue output flow rate

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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Certificates

cULus-Approval	96 kb	PDF
EU declaration of conformity	407 kb	PDF
MTTFd certificate	28 kb	PDF

EPLAN file

EPlan	66 kb	EDZ
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Classification

eCl@ss 4.1	27-27-13-01
eCl@ss 5.1	27-27-31-01
eCl@ss 6.1	27-27-31-01
eCl@ss 7.1	27-27-31-01
eCl@ss 8.0	27-27-31-01
ETIM 4.0	EC002580
UNSPSC 6.0315u	41112501

Multimedia

Applications:

Flow monitoring cooling system

Summary specs for project & estimate bids

[Download RTF Version](#)

Magnetic-inductive flow meter, DC, connection to pipe by means of an adapter, 2 outputs, OUT1 = analogue signal temperature, OUT2 = analogue signal flow, Measuring range, 0.1...25 l/min, Quick disconnect, 4-digit alphanumeric display

Application:	Conductive liquids, (conductivity: $\geq 20 \mu\text{S/cm}$ / viscosity: $< 70 \text{ cSt}$ at 104°F)
Operating voltage:	20...30 V DC
Electrical design:	DC
Output function:	2 x analog (4...20 mA scalable)
Process connection:	G ½ flat seal
Flow monitoring:	
Measuring range:	0.1...25.00 l/min; 0.03...6.60 gpm
Temperature monitoring:	
Measuring range:	-20...80 [°C]
Pressure rating:	16 [bar]
Connection:	M12 connector
Housing materials:	stainless steel 316L / 1.4404; PBT-GF 20; PC; FKM; TPE
Materials (wetted parts):	stainless steel 316L / 1.4404; PEEK (polyether ether ketone); FKM
Medium temperature:	-10...70 °C
Ambient temperature:	-10...60 °C
Protection:	IP 67
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
Accessories (to be ordered separately):	Socket, Mounting accessories
Brand:	ifm electronic gmbh or equivalent