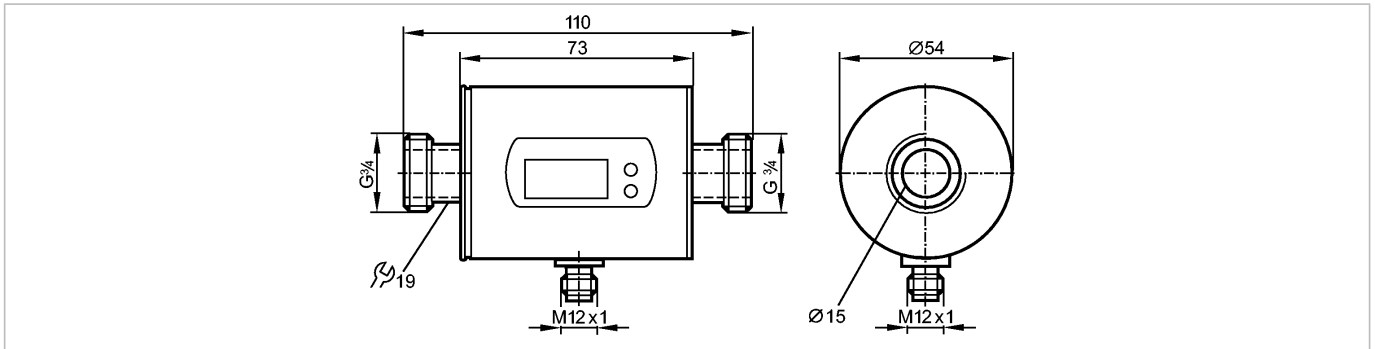


SM7000

SMR34GGXFRKG/US-100

Flow sensors



Made in Germany

Product characteristics

Magnetic-inductive flow meter
Connector
Process connection: G $\frac{3}{4}$ flat seal
Function programmable
Totaliser 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
connection to pipe by means of an adapter
Measuring range
0.2...50 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 PNP/NPN
Operating voltage [V]	19...30 DC ¹⁾
Current consumption [mA]	120
Insulation resistance [MΩ]	> 100 (500 V DC)
Protection class	III
Reverse polarity protection	yes

Outputs

Output function	OUT1: normally open / closed programmable or pulse OUT2: normally open / closed programmable or analogue (4...20 mA / 0...10 V, scaleable)
Current rating [mA]	2 x 200
Voltage drop [V]	< 2
Short-circuit protection	pulsed
Overload protection	yes
Analogue output	4...20 mA; 0...10 V
Max. load [Ω]	500
Min. load [Ω]	2000
Pulse output	flow rate meter

SM7000

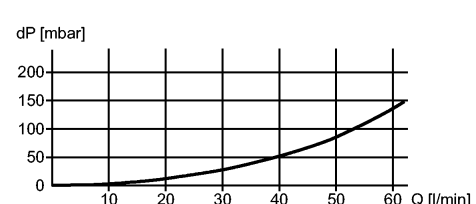
SMR34GGXFRKG/US-100

Flow sensors

Measuring / setting range

Flow monitoring		
Measuring range	0.2...50.0 l/min	0.01...3.00 m ³ /h
Display range	-60...60 l/min	-3.6...3.6 m ³ /h
Resolution	0.1 l/min	0.001 m ³ /h
Set point, SP	0.5...50.0 l/min	0.027...3.000 m ³ /h
Reset point, rP	0.2...49.8 l/min	0.012...2.985 m ³ /h
Analogue start point, ASP	0.0...40.0 l/min	0.000...2.400 m ³ /h
Analogue end point, AEP	10.0...50.0 l/min	0.600...3.000 m ³ /h
in steps of	0.1 l/min	0.001 m ³ /h
Volumetric flow quantity monitoring		
Pulse value	0.01 l...50 000 m ³	
Pulse length [s]	0.005...2	
Temperature monitoring		
Measuring range [°C]	-20...80	
Resolution [°C]	0.2	
Set point, SP [°C]	-19.2...80.0	
Reset point, rP [°C]	-19.6...79.6	
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	± (2% MW + 0.5% MEW)	
Repeatability	± 0.2% MEW	
Pressure loss (dP) / flow rate (Q)		
Temperature monitoring		
Accuracy [K]	± 2.5 (Q > 5 l/min)	

Reaction times

Power-on delay time [s]	5	
Flow monitoring		
Start-up delay [s]	0...50	
Response time [s]	< 0.150 (dAP = 0)	
Damping, dAP [s]	0.0...5.0	
Temperature monitoring		
Response time [s]	T09 = 30 (Q > 5 l/min)	

Software / programming

Programming options	hysteresis / window function; N.O. / N.C; output polarity; current / voltage / pulse output; start-up delay; display can be deactivated; display unit
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Environment

SM7000

SMR34GGXFRKG/US-100

Flow sensors

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]	151

Mechanical data

Process connection	G $\frac{3}{4}$ 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 (Makrolon); EPDM/X (Santoprene)
Weight	[kg] 0.576

Displays / operating elements

Display	Display unit 6 x LED green (l/min, m ³ /h, l, m ³ , 10 ³ , °C) Switching status 2 x LED yellow Measured values 4-digit alphanumeric display Programming 4-digit alphanumeric display
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Electrical connection

Connection	M12 connector; Gold-plated contacts
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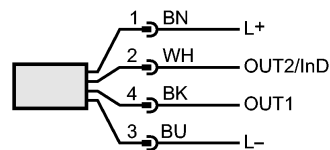
Wiring

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



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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