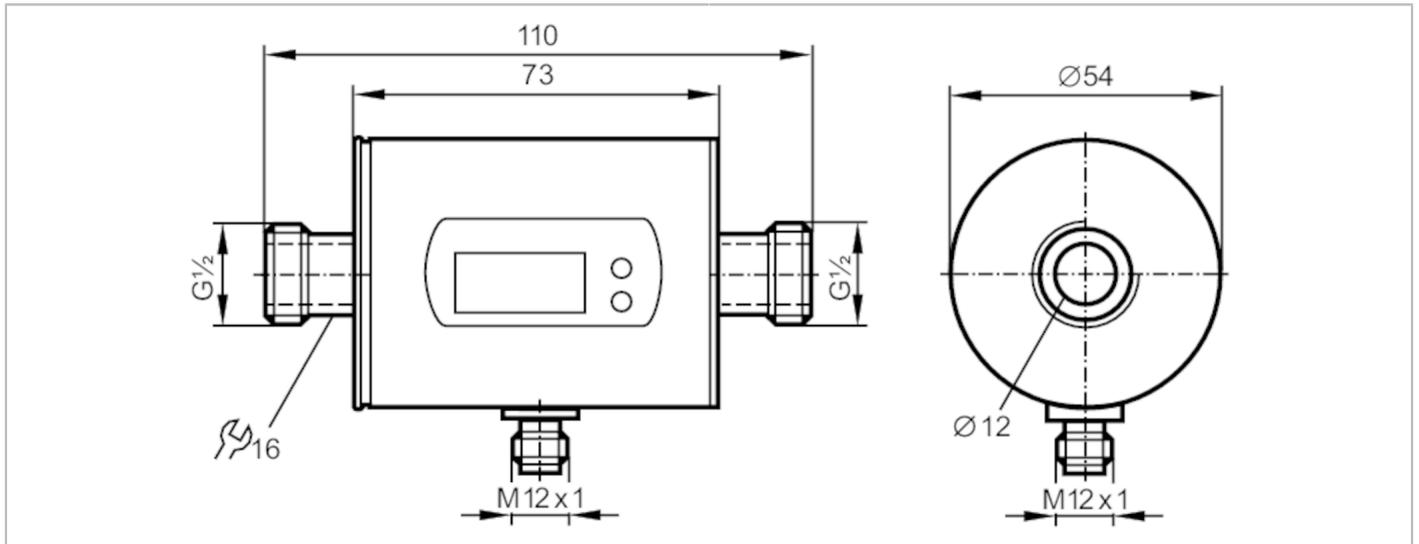


SM6100



Magnetic-inductive flow meter

SMR12GGXFRKG/US-100



ACS CE cUL^{us} LISTED IO-Link

Made in Germany

Application

Application	totaliser function
Installation	connection to pipe by means of an adapter
Media	conductive liquids
Medien	conductivity: $\geq 20 \mu\text{S/cm}$ viscosity: $< 70 \text{ mm}^2/\text{s}$ (40 °C)
Medium temperature [°C]	-10...70
Pressure rating [bar]	16

Electrical data

Operating voltage [V]	19...30 DC; (according to EN 50178 SELV/PELV)
Current consumption [mA]	120
Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	5

Inputs

Inputs	counter reset
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Outputs		
Total number of outputs	2	
Output signal	switching signal; analogue signal; pulse signal; (configurable)	
Number of digital outputs	2	
Output function	normally open / normally closed; (parameterisable)	
Max. voltage drop switching output DC [V]	2	
Permanent current rating of switching output DC [mA]	200; (per output)	
Number of analogue outputs	1	
Analogue current output [mA]	4...20; (scalable)	
Max. load [Ω]	500	
Analogue voltage output [V]	0...10; (scalable)	
Min. load resistance [Ω]	2000	
Pulse output	flow rate meter	
Electrical design	PNP/NPN	
Short-circuit protection	yes	
Type of short-circuit protection	pulsed	
Overload protection	yes	
Measuring/setting range		
Measuring range	0.1...25 l/min	0.005...1.5 m ³ /h
Display range	-30...30 l/min	-1.8...1.8 m ³ /h
Resolution	0.05 l/min	0.005 m ³ /h
Set point SP	0.25...25 l/min	0.015...1.5 m ³ /h
Reset point rP	0.1...24.9 l/min	0.005...1.495 m ³ /h
Analogue start point ASP	0...20 l/min	0...1.2 m ³ /h
Analogue end point AEP	5...25 l/min	0.3...1.5 m ³ /h
In steps of	0.05 l/min	0.005 m ³ /h
volumetric flow quantity monitoring		
Pulse value	0.00001...30 000 m ³	
Pulse length [s]	0,01...2	
Temperature monitoring		
Measuring range [°C]	-20...80	
Resolution [°C]	0.2	
Set point SP [°C]	-19.2...80	
Reset point rP [°C]	-19.6...79.6	
Analogue start point [°C]	-20...60	
Analogue end point [°C]	0...80	
In steps of [°C]	0.2	
Accuracy / deviations		
Flow monitoring		
Accuracy (in the measuring range)	$\pm (2 \% MW + 0,5 \% MEW)$	
Repeatability	$\pm 0,2\% MEW$	

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Temperature monitoring		
Accuracy	[K]	± 2,5 (Q > 1 l/min)
Response times		
Flow monitoring		
Response time	[s]	0.15; (dAP = 0)
Delay time programmable dS, dr	[s]	0...50
Damping for the switching output dAP	[s]	0...5
Temperature monitoring		
Dynamic response T05 / T09	[s]	T09 = 20 (Q > 1 l/min)
Software / programming		
Parameter setting options	Flow monitoring; quantity meter; Preset counter; Temperature monitoring; hysteresis / window; normally open / normally closed; switching logic; current/ voltage/pulse output; start-up delay; display can be deactivated; Display unit	
Interfaces		
Communication interface	IO-Link	
Communication interface	IO-Link	
Operating conditions		
Ambient temperature	[°C]	-10...60
Storage temperature	[°C]	-25...80
Protection	IP 67	
Tests / approvals		
EMC	DIN EN 60947-5-9	
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]	145
Pressure Equipment Directive	article 3, paragraph (3) - Sound Engineering Practice	
Mechanical data		
Weight	[g]	535
Materials	stainless steel (1.4404 / 316L); PBT-GF20; PC; FKM; TPE	
Materials (wetted parts)	stainless steel (1.4404 / 316L); PEEK; EPDM	
Process connection	threaded connection G 1/2 flat seal	
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	alphanumeric display, 4-digit
	programming	alphanumeric display, 4-digit
Remarks		
Remarks	MW = measured value MEW = Final value of the measuring range	
Pack quantity	1 pcs.	
Electrical connection		
Connector: 1 x M12; Kontakte: gold-plated		

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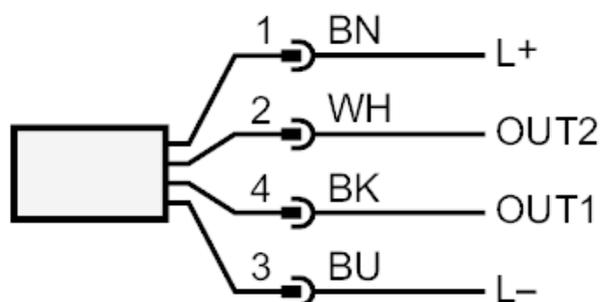


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Connection



	colours to DIN EN 60947-5-2
OUT1:	switching output volumetric flow quantity monitoring Pulse output quantity meter signal output Preset counter
OUT2:	switching output volumetric flow quantity monitoring switching output Temperature monitoring analogue output volumetric flow quantity monitoring analogue output Temperature monitoring input counter reset
	Core colours :
BK =	black
BN =	brown
BU =	blue
WH =	white

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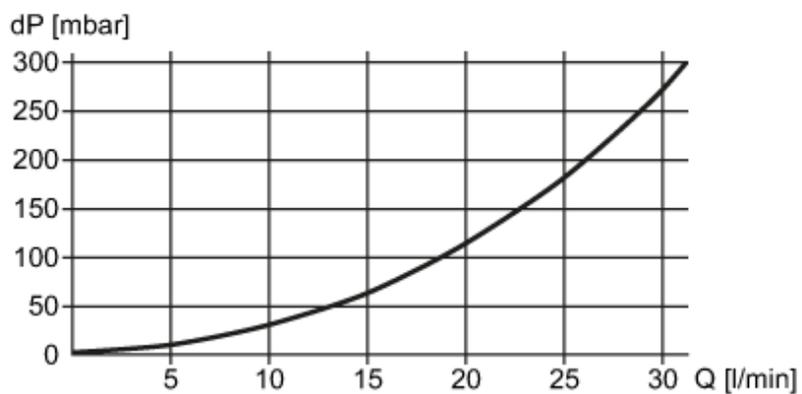


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diagrams and graphs

Pressure loss



dP Pressure loss

Q volumetric flow quantity