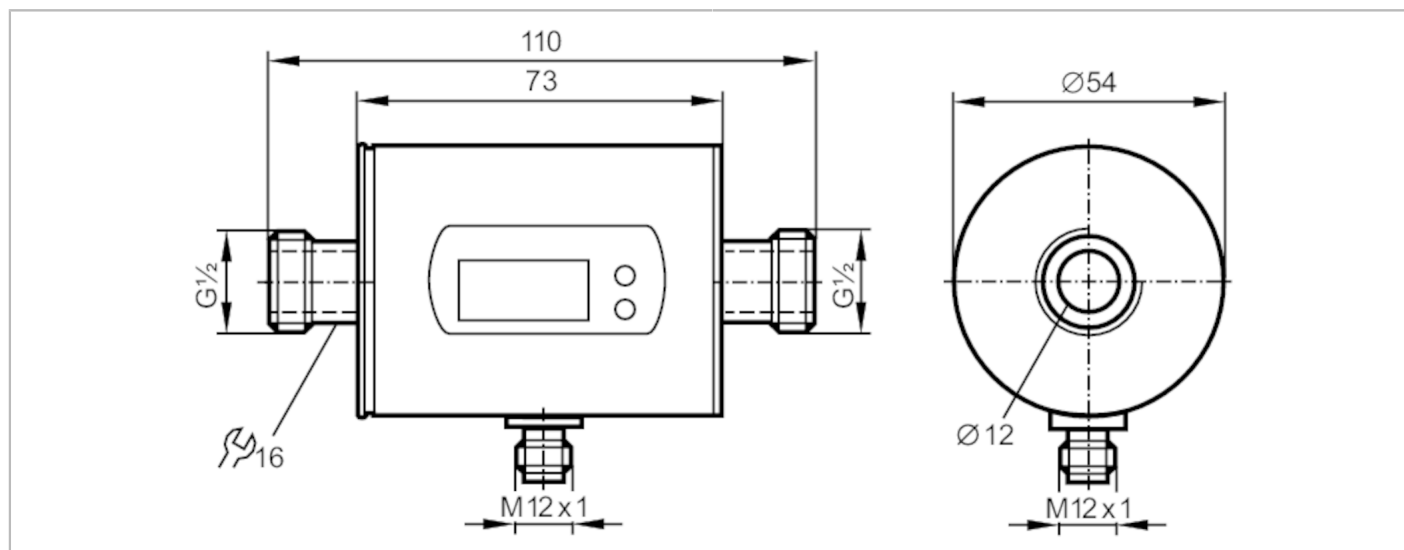


# SM6000



## Magnetic-inductive flow meter

SMR12GGXFRKG/US-100



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

# SM6000



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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 [ $\Omega$ ]	500	
Analogue voltage output [V]	0...10; (scalable)	
Min. load resistance [ $\Omega$ ]	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 <sup>3</sup> /h
Display range	-30...30 l/min	-1.8...1.8 m <sup>3</sup> /h
Resolution	0.05 l/min	0.005 m <sup>3</sup> /h
Set point SP	0.25...25 l/min	0.015...1.5 m <sup>3</sup> /h
Reset point rP	0.1...24.9 l/min	0.005...1.495 m <sup>3</sup> /h
Analogue start point ASP	0...20 l/min	0...1.2 m <sup>3</sup> /h
Analogue end point AEP	5...25 l/min	0.3...1.5 m <sup>3</sup> /h
In steps of	0.05 l/min	0.005 m <sup>3</sup> /h
volumetric flow quantity monitoring		
Pulse value	0.00001...30 000 m <sup>3</sup>	
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	$\pm 0,2\% MEW$	

# SM6000



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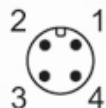
Temperature monitoring		
Accuracy	[K]	± 2,5 (Q > 1 l/min)
Response times		
Flow monitoring		
Response time	[s]	0.15; (dAP = 0)
Delay time programmable dS, dr	[s]	0...50
Damping for the switching output dAP	[s]	0...5
Temperature monitoring		
Dynamic response T05 / T09	[s]	T09 = 20 (Q > 1 l/min)
Software / 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	
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]	162
Pressure Equipment Directive	article 3, paragraph (3) - Sound Engineering Practice	
Mechanical data		
Weight	[g]	537.6
Materials	stainless steel (1.4404 / 316L); PBT-GF20; PC; FKM; TPE	
Materials (wetted parts)	stainless steel (1.4404 / 316L); PEEK; FKM	
Process connection	threaded connection G 1/2 flat seal	
Displays / operating elements		
Display	Display unit	6 x LED, green (l/min, m <sup>3</sup> /h, l, m <sup>3</sup> , 10 <sup>3</sup> , °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		

# SM6000

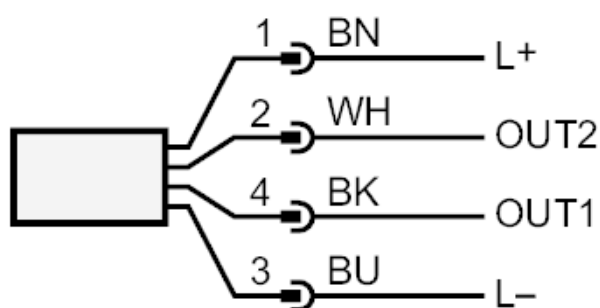


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### Connection



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

# SM6000

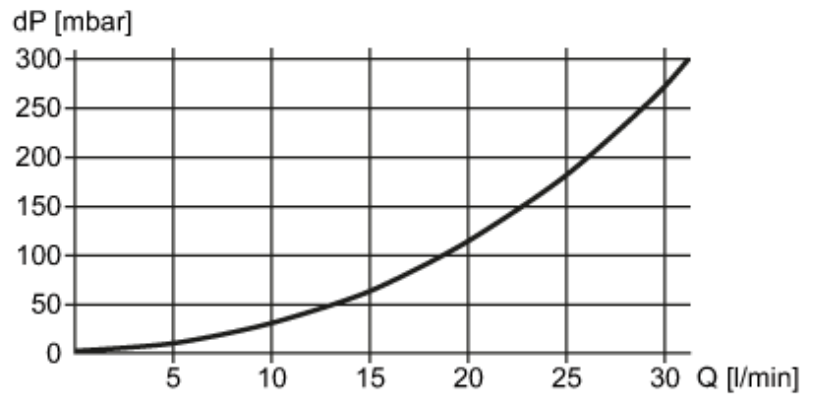


## Magnetic-inductive flow meter

SMR12GGXFRKG/US-100

### diagrams and graphs

Pressure loss



dP Pressure loss

Q volumetric flow quantity