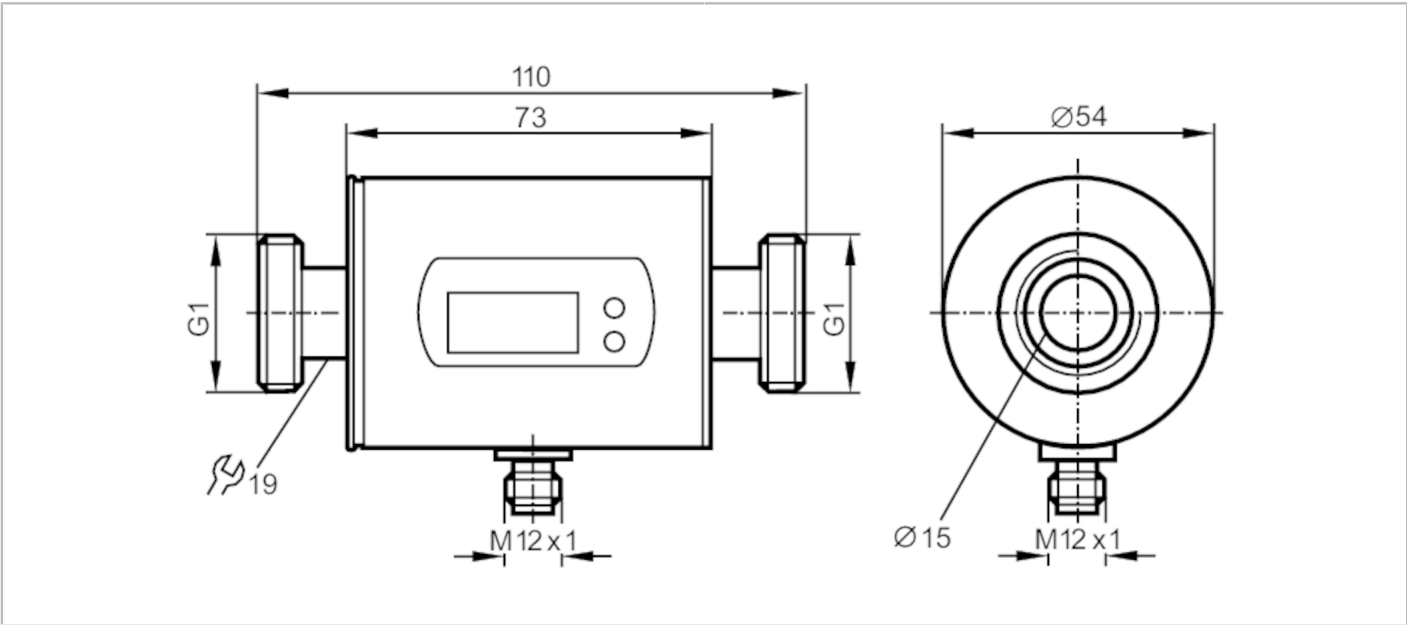


SM0505



Magnetic-inductive flow meter

SMR11GGXFRKG/US-100



Product characteristics		
Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1	
Measuring range	0.2...100 l/min	0.01...6 m³/h
Process connection	threaded connection G 1 external thread DN25 flat seal	
Application		
Special feature	Gold-plated contacts	
Application	empty pipe detection; totaliser function; for industrial applications	
Media	conductive liquids; water; hydrous media	
Note on media	conductivity: ≥ 20 µS/cm	
	viscosity: < 70 mm²/s (40 °C)	
Medium temperature	[°C]	-10...70
Pressure rating	[bar]	16
Pressure rating	[MPa]	1.6
MAWP (for applications according to CRN)	[bar]	11.2
Electrical data		
Operating voltage	[V]	18...30 DC; (to SELV/PELV)
Current consumption	[mA]	95; (24 V)
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[s]	5
Measuring principle		magnetic-inductive
Inputs / outputs		
Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1	



Magnetic-inductive flow meter

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Inputs		
Inputs	counter reset	
Outputs		
Total number of outputs	2	
Output signal	switching signal; analogue signal; pulse signal; (configurable)	
Electrical design	PNP/NPN	
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	
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	
Short-circuit protection	yes	
Type of short-circuit protection	pulsed	
Overload protection	yes	
Measuring/setting range		
Measuring range	0.2...100 l/min	0.01...6 m³/h
Display range	-120...120 l/min	-7.2...7.2 m³/h
Resolution	0.1 l/min	0.005 m³/h
Set point SP	0.7...100 l/min	0.04...6 m³/h
Reset point rP	0.2...99.5 l/min	0.01...5.97 m³/h
Analogue start point ASP	0...80 l/min	0...4.8 m³/h
Analogue end point AEP	20...100 l/min	1.2...6 m³/h
In steps of	0.1 l/min	0.005 m³/h
Volumetric flow quantity monitoring		
Pulse value	0.1 l...100 000 m³	
Pulse length [s]	0,025...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	



Magnetic-inductive flow meter

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Accuracy / deviations		
Flow monitoring		
Accuracy (in the measuring range)		± (2 % MW + 0,5 % MEW)
Repeatability		± 0,2% MEW
Temperature monitoring		
Accuracy	[K]	± 2,5 (Q > 5 l/min)
Response times		
Flow monitoring		
Response time	[s]	0.15; (dAP = 0)
Delay time programmable dS, dr	[s]	0...50
Damping process value dAP	[s]	0...5
Temperature monitoring		
Dynamic response T05 / T09	[s]	T09 = 30 (Q > 5 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; empty pipe detection	
Operating conditions		
Ambient temperature	[°C]	-10...60
Storage temperature	[°C]	-25...80
Protection		IP 67
Tests / approvals		
EMC	DIN EN 60947-5-9	500 V withstand voltage (V DC)
CPA approval	model number	009MI
	accuracy class	-
	maximum allowable error	± 2,5 % FS
	Q (min)	0,01 m³/h
	Q (t)	-
	Q (max)	6 m³/h
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]	130
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data		
Weight	[g]	576
Housing		cylindrical
Dimensions	[mm]	Ø 54 / L = 110
Materials	stainless steel (316L/1.4404); PBT-GF20; PC; EPDM/X	
Materials (wetted parts)	stainless steel (316L/1.4404); PEEK; EPDM/X	
Process connection	threaded connection G 1 external thread DN25 flat seal	

SM0505



Magnetic-inductive flow meter

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Displays / operating elements

Display	Display unit	6 x LED, green (l/min, m³/h, l, m³, 10³, °C)
	switching status	2 x LED, yellow
	measured values	alphanumeric display, 4-digit
	programming	alphanumeric display, 4-digit

Remarks

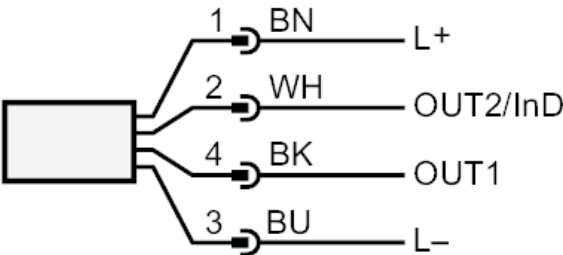
Remarks	MW = measured value
	MEW = Final value of the measuring range
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



colours to DIN EN 60947-5-2
Core colours :
BK = black
BN = brown
BU = blue
WH = white

SM0505

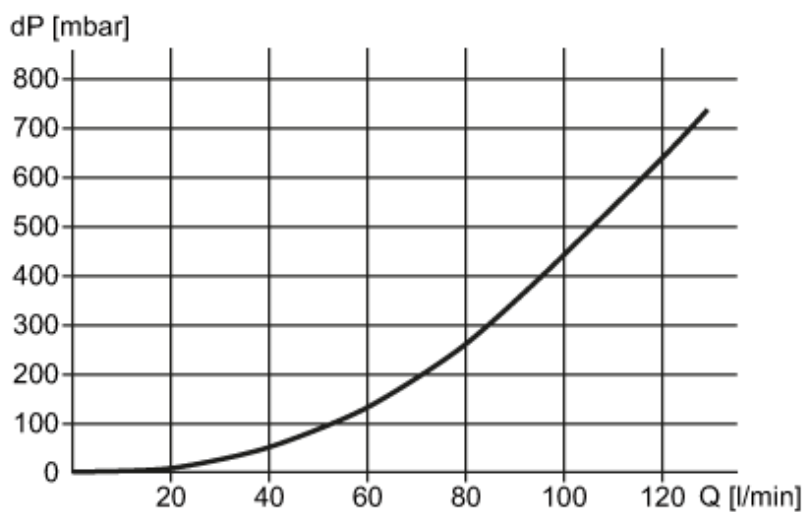


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Diagrams and graphs

Pressure loss



dP Pressure loss

Q volumetric flow quantity