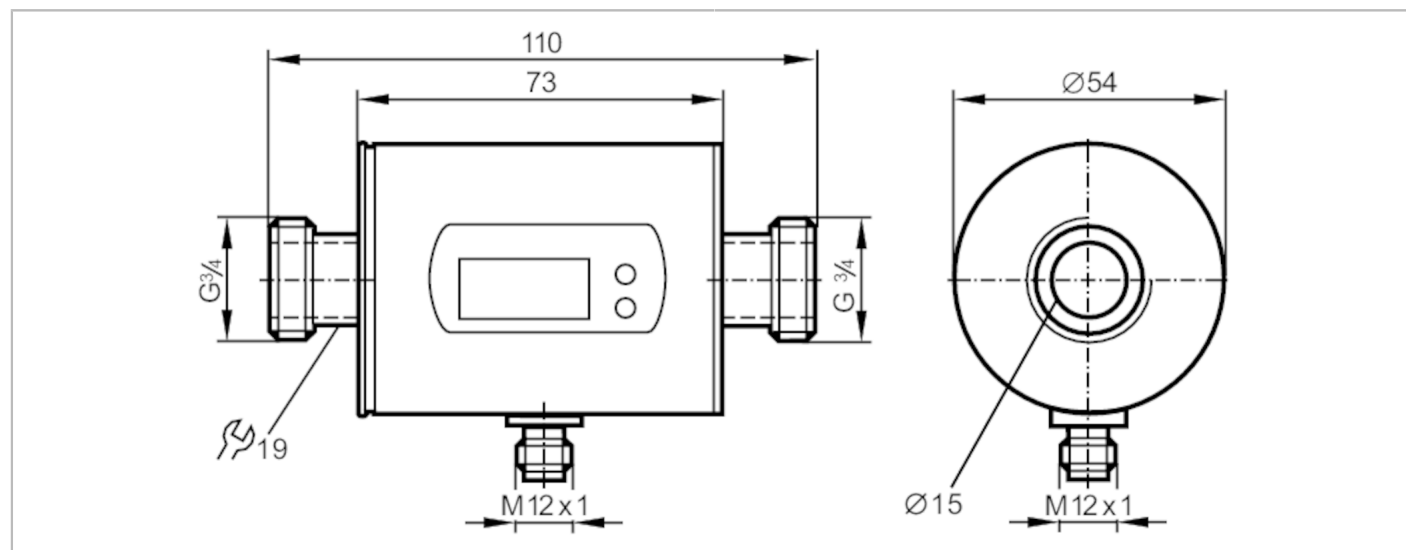


SM7001



Magnetic-inductive flow meter

SMR34GGXFRKG/US-100



Application

Application	totaliser function; for industrial applications
Installation	connection to pipe by means of an adapter
Media	conductive liquids; water; hydrous media
Medien	conductivity: $\geq 20 \mu\text{S/cm}$ viscosity: $< 70 \text{ mm}^2/\text{s}$ (40 °C)
Medium temperature [°F]	14...158
Pressure rating [bar]	16
Pressure rating [psi]	232

Electrical data

Operating voltage [V]	18...30 DC; (according to EN 50178 SELV/PELV)
Current consumption [mA]	95; (24 V)
Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	5

Inputs

Inputs	counter reset
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Magnetic-inductive flow meter

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Outputs		
Total number of outputs	2	
Output signal	switching signal; analogue signal; pulse signal; IO-Link; (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	0.06...13.2 gpm	3...792 gph
Display range	-15.84...15.84 gpm	-951...951 gph
Resolution	0.02 gpm	1 gph
Set point SP	0.12...13.2 gpm	7...792 gph
Reset point rP	0.06...13.14 gpm	3...788 gph
Analogue start point ASP	0...10.6 gpm	0...636 gph
Analogue end point AEP	2.6...13.2 gpm	156...792 gph
In steps of	0.02 gpm	1 gph
volumetric flow quantity monitoring		
Pulse value	0.01...99 990 000 gal	
Pulse length [s]	0,005...2	
Temperature monitoring		
Measuring range [°F]	-4...176	
Resolution [°F]	0.5	
Set point SP [°F]	-2.5...176	
Reset point rP [°F]	-3.5...175	
Analogue start point [°F]	-4...140.5	
Analogue end point [°F]	31.5...176	
In steps of [°F]	0.5	
Accuracy / deviations		
Flow monitoring		
Accuracy (in the measuring range)	± (0,8 % MW + 0,5 % MEW)	
Repeatability	± 0,2% MEW	

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Temperature monitoring		
Accuracy	[K]	± 4,5 (Q > 0,26 gpm)
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 > 0,26 gpm)
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	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
IO-Link device ID	573 / 00 02 3d	
Profiles	Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis	
SIO mode	yes	
Required master port type	A	
Process data analogue	3	
Process data binary	2	
Min. process cycle time	[ms]	5
Operating conditions		
Ambient temperature	[°F]	14...140
Storage temperature	[°F]	-13...176
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	Sound Engineering Practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data		
Weight	[g]	581
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 3/4 flat seal	

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Magnetic-inductive flow meter

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Displays / operating elements

Display	Display unit	6 x LED, green (gpm, gph, gal, °F, 10 ³ , 1000 x 10 ³)
	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; Contacts: gold-plated



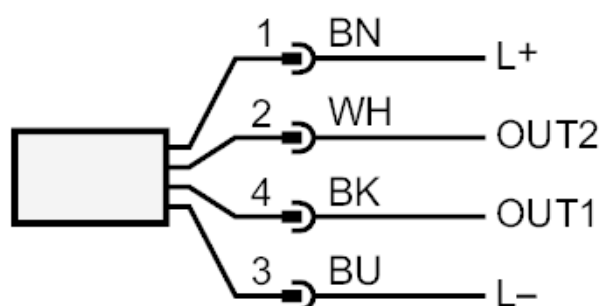
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Connection



colours to DIN EN 60947-5-2

OUT1: switching output volumetric flow quantity monitoring

Pulse output quantity meter

signal output Preset counter

IO-Link

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

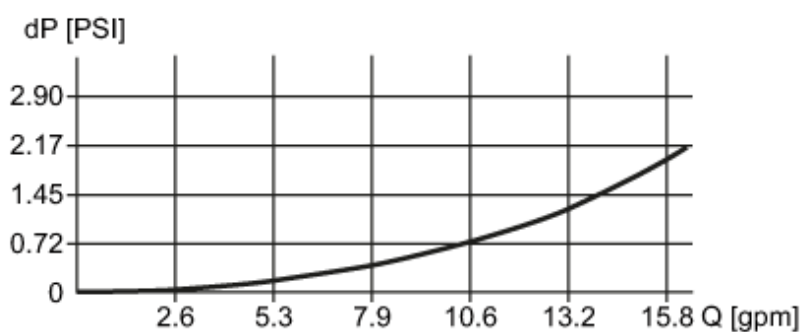
BN = brown

BU = blue

WH = white

Diagrams and graphs

Pressure loss



dP Pressure loss

Q volumetric flow quantity