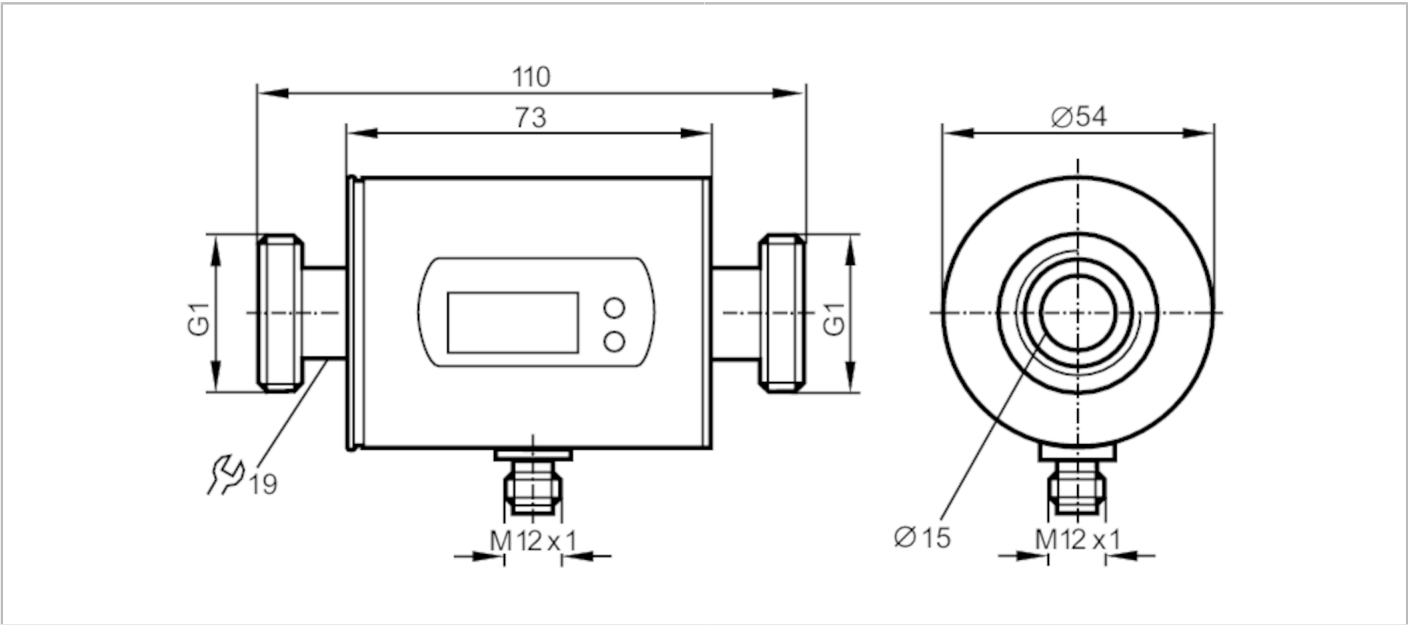


SM8001



Magnetic-inductive flow meter

SMR11GGXFRKG/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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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	0.1...26.4 gpm	6...1584 gph
Display range	-31.7...31.7 gpm	-1902...1902 gph
Resolution	0.05 gpm	2 gph
Set point SP	0.25...26.4 gpm	14...1586 gph
Reset point rP	0.1...26.25 gpm	6...1578 gph
Analogue start point ASP	0...21.2 gpm	0...1272 gph
Analogue end point AEP	5.2...26.4 gpm	312...1586 gph
In steps of	0.05 gpm	2 gph
volumetric flow quantity monitoring		
Pulse value	0.01...100 000 000 gal	
Pulse length [s]	0,0025...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	576 / 00 02 40	
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]	646.5
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 flat seal	

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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

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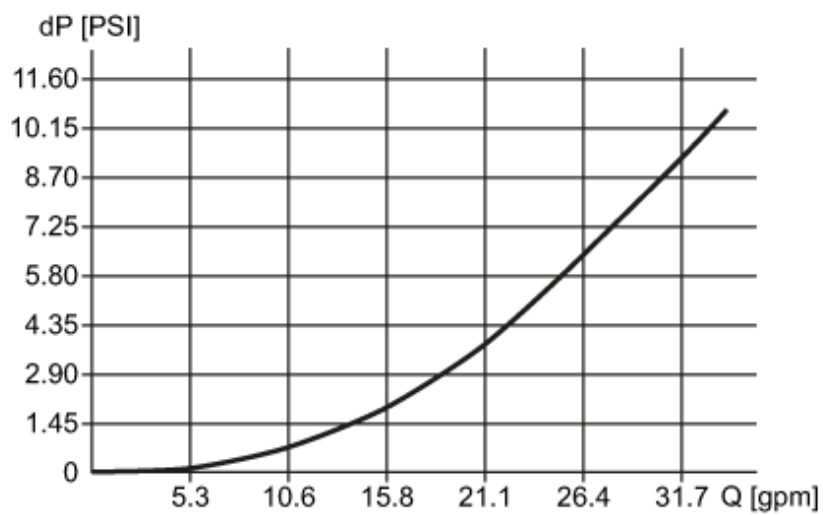
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Diagrams and graphs

Pressure loss



dP Pressure loss

Q volumetric flow quantity