

SM6621

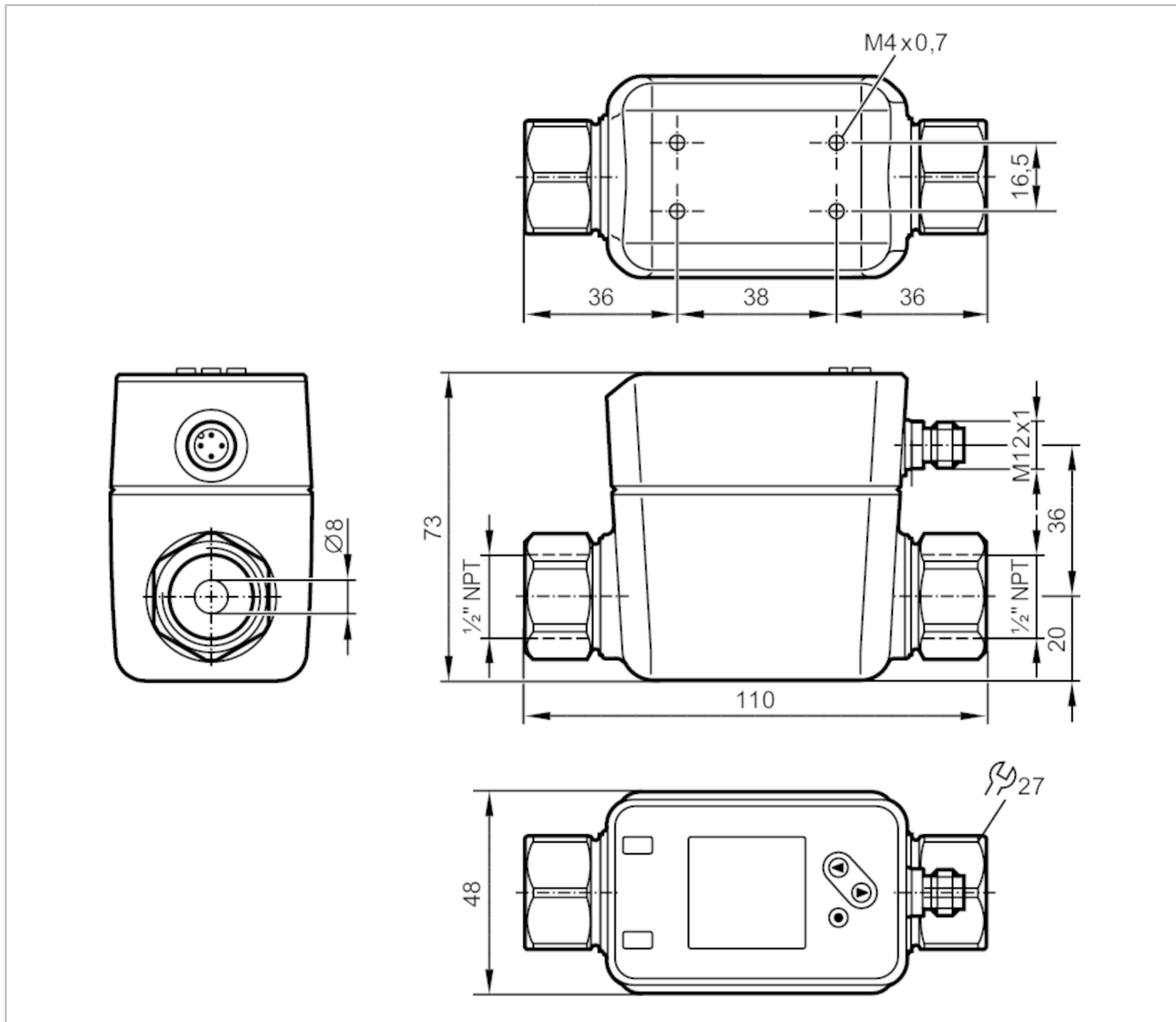


Magnetic-inductive flow meter

SMN12XGXFRKG/US-100

Alternative articles: SM6601

When selecting an alternative article and accessories please note that technical data may differ!



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1			
Measuring range	0.05...35 l/min	0.003...2.1 m ³ /h	0.6...555 gph	0.01...9.25 gpm
Process connection	threaded connection 1/2" NPT Internal thread DN15			

Application

System	gold-plated contacts
Media	Conductive liquids; water; water-based media
Note on media	conductivity: $\geq 20 \mu\text{S}/\text{cm}$ viscosity: $< 70 \text{ mm}^2/\text{s}$ (40 °C)
Medium temperature [°F]	-4...194

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Pressure rating	16 bar	1.6 MPa		
Electrical data				
Operating voltage [V]	18...30 DC; (to SELV/PELV)			
Current consumption [mA]	< 80			
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 analog outputs: 1			
Inputs				
Inputs	counter reset			
Outputs				
Total number of outputs	2			
Output signal	switching signal; analog signal; pulse signal; IO-Link; frequency signal; (configurable)			
Electrical design	PNP/NPN			
Number of digital outputs	2			
Output function	normally open / closed; (configurable)			
Max. voltage drop switching output DC [V]	2			
Permanent current rating of switching output DC [mA]	100			
Number of analog outputs	1			
Analog current output [mA]	4...20; (scalable)			
Max. load [Ω]	500			
Pulse output	flow rate meter			
Short-circuit protection	yes			
Type of short-circuit protection	yes (non-latching)			
Overload protection	yes			
Measuring/setting range				
Measuring range	0.05...35 l/min	0.003...2.1 m ³ /h	0.6...555 gph	0.01...9.25 gpm
Display range	-42...42 l/min	-2.5...2.5 m ³ /h	-666...666 gph	-11.1...11.1 gpm
Resolution	0.02 l/min	0.002 m ³ /h	0.6 gph	0.01 gpm
Set point SP	0.25...35 l/min	0.015...2.1 m ³ /h	4.2...555 gph	0.07...9.25 gpm
Reset point rP	0...34.8 l/min	0...2.08 m ³ /h	1.2...552 gph	0.02...9.2 gpm
Analog start point ASP	0...28 l/min	0...1.7 m ³ /h	0...666 gph	0...7.4 gpm
Analog end point AEP	7...35 l/min	0.42...2.1 m ³ /h	111...555 gph	1.85...9.25 gpm
Low flow cut-off LFC	0.05...1.75 l/min	0.003...0.1 m ³ /h	0.6...27.6 gph	0.01...0.46 gpm
Frequency end point, FEP	7...35 l/min	0.42...2.1 m ³ /h	111.6...555 gph	1.86...9.25 gpm
Frequency at the end point FRP [Hz]	1...10000			
Volumetric flow quantity monitoring				
Pulse length [s]	0.001...2			
Pulse value	0.001...99990000 l			

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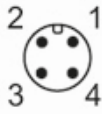
Temperature monitoring		
Measuring range	[°F]	-4...194
Display range	[°F]	-43.6...233.6
Resolution	[°F]	0.1
Set point SP	[°F]	-3.3...194
Reset point rP	[°F]	-4...193.3
Analog start point	[°F]	-4...154.4
Analog end point	[°F]	35.6...194
In steps of	[°F]	0.1
Accuracy / deviations		
Flow monitoring		
Accuracy (in the measuring range)		$\pm (0,8 \% MW + 0,2 \% MEW)$
Repeatability		$\pm 0,2 \% MEW$
Temperature monitoring		
Accuracy	[K]	$\pm 2,5 (Q > 5 \% MEW)$
Reaction times		
Flow monitoring		
Start-up delay	[s]	0...50
Response time	[s]	< 0.25; (dAP = 0, T09)
Damping process value dAP	[s]	0...5
Temperature monitoring		
Response time	[s]	15; (Q > 10 % MEW, T09)
Software / programming		
Parameter setting options	hysteresis / window; normally open / closed; switching logic; Frequency output; current/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	
Profiles	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode	yes	
Required master port class	A	
Process data analog	3	
Process data binary	2	
Min. process cycle time	[ms]	8
Supported DeviceIDs	Type of operation	DeviceID
	default	952
Operating conditions		
Ambient temperature	[°F]	-4...140
Storage temperature	[°F]	-13...176
Protection	IP 65; IP 67	

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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]		114
UL approval	UL approval number	I014
	File number UL	E174189
Pressure equipment directive	sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data		
Weight [g]	817.55	
Housing	rectangular	
Dimensions [mm]	110 x 48 x 73	
Material	stainless steel (1.4408/316); stainless steel (1.4404 / 316L); PC; PBT+PC-GF30	
Materials (wetted parts)	stainless steel (1.4404 / 316L); PEEK; carbon fiber PEEK; FKM	
Process connection	threaded connection 1/2" NPT Internal thread DN15	
Displays / operating elements		
Display	Color display 1,44", 128 x 128 pixels	
	2 x LED, yellow	
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		
		

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Connection



OUT1:	Colors to DIN EN 60947-5-2 Switching output Volumetric flow quantity monitoring Switching output Temperature monitoring Pulse output quantity meter Frequency output volumetric flow monitoring Frequency output Temperature monitoring signal output Preset counter IO-Link
OUT2:	Switching output Volumetric flow quantity monitoring Switching output Temperature monitoring analog output flow analog output temperature Input counter reset Core colors :
BK =	black
BN =	brown
BU =	blue
WH =	white

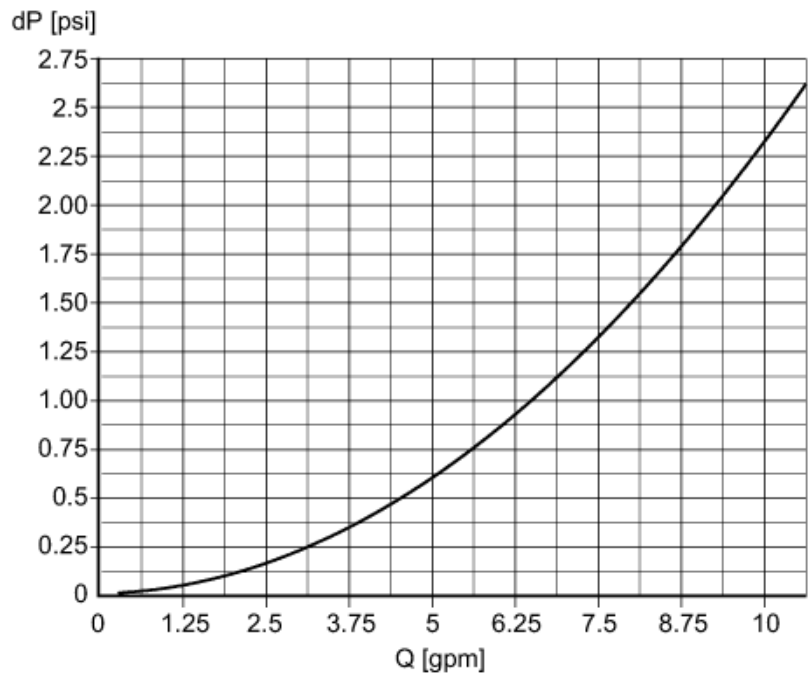
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Diagrams and graphs



Pressure loss / volumetric flow quantity