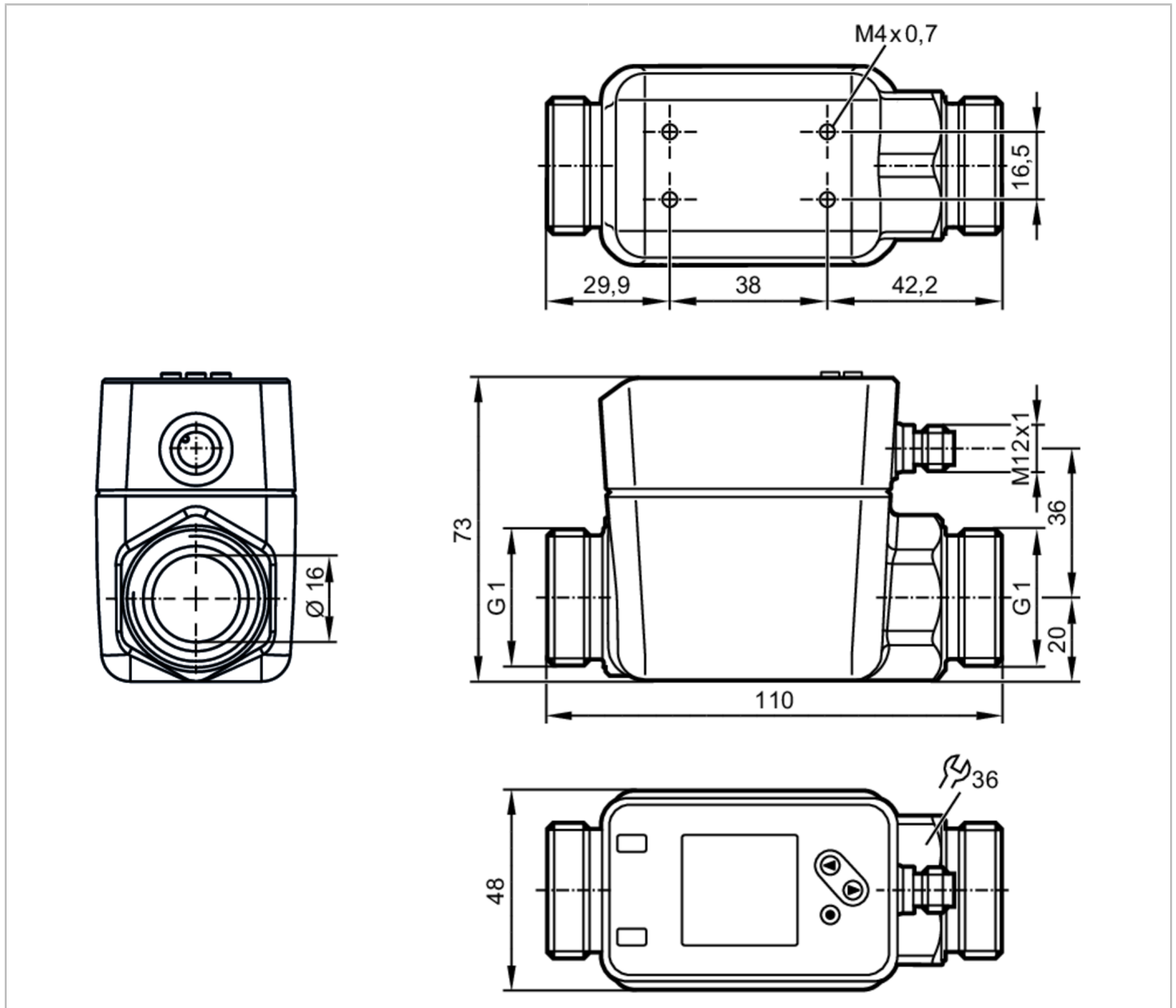


SM8030



Magnetic-inductive flow meter

SMR11XGXFRKG/US-100



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1
Measuring range [l/min]	0.2...250
Process connection	G 1 DN25 flat seal

Application

System	gold-plated contacts
Media	Conductive liquids; water; water-based media
Note on media	conductivity: $\geq 20 \mu\text{S/cm}$ viscosity: $< 70 \text{ mm}^2/\text{s}$ (40 °C)
Medium temperature [°C]	-20...90
Pressure rating [bar]	16

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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
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 [l/min]	0.2...250
Display range [l/min]	-300...300
Resolution [l/min]	0.1
Set point SP [l/min]	1.6...250
Reset point rP [l/min]	0.3...248.7
Analog start point ASP [l/min]	0...199.9
Analog end point AEP [l/min]	50.1...250
Low flow cut-off LFC [l/min]	0.2...12.5
Frequency end point, FEP [l/min]	50.1...250
Frequency at the end point FRP [Hz]	1...10000
Volumetric flow quantity monitoring	
Pulse length [s]	0.002...2
Pulse value	0.01...99990000.00 l

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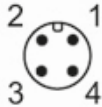
Temperature monitoring		
Measuring range	[°C]	-20...90
Display range	[°C]	-42...112
Resolution	[°C]	0.1
Set point SP	[°C]	-19.6...90
Reset point rP	[°C]	-20...89.6
Analog start point	[°C]	-20...68
Analog end point	[°C]	2...90
In steps of	[°C]	0.1
Accuracy / deviations		
Flow monitoring		
Accuracy (in 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		Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis
SIO mode		yes
Required master port class		A
Process data analog		3
Process data binary		2
Min. process cycle time	[ms]	6
Supported DeviceIDs	Type of operation	DeviceID
	default	1060
Operating conditions		
Ambient temperature	[°C]	-20...60
Storage temperature	[°C]	-25...80
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]	772.2
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; Centellen
Process connection	G 1 DN25 flat seal
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

Diagrams and graphs