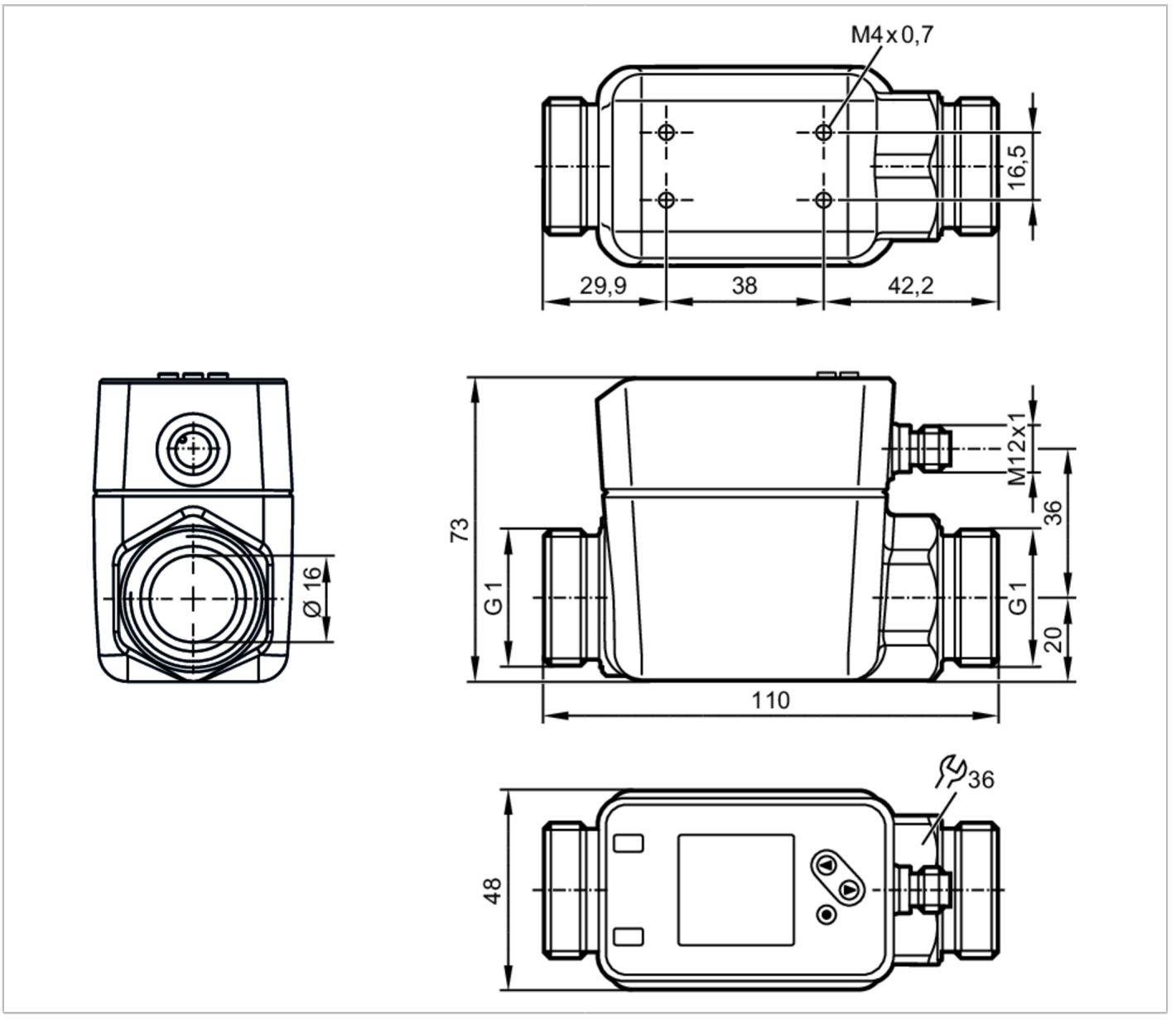
SM8130

Magnetic-inductive flow meter

SMR11XGXFRKG/US-100



Product characteristics		
Number of inputs and outputs		Number of digital outputs: 2; Number of analogue outputs: 1
Measuring range	[l/min]	0.2...250
Process connection		G 1 DN25 flat seal
Application		
Special feature		Gold-plated contacts
Media		conductive liquids; water; hydrous media
Note on media		conductivity: ≥ 20 µS/cm
		viscosity: < 70 mm²/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 analogue outputs: 1
Inputs		
Inputs		counter reset
Outputs		
Total number of outputs		2
Output signal		switching signal; analogue signal; pulse signal; IO-Link; frequency 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]	100
Number of analogue outputs		1
Analogue current output	[mA]	4...20; (scalable)
Max. load	[Ω]	500
Pulse output		flow rate meter
Short-circuit protection		yes
Type of short-circuit protection		pulsed
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
Analogue start point ASP	[l/min]	0...199.9
Analogue 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
Analogue start point	[°C]	-20...68
Analogue end point	[°C]	2...90
In steps of	[°C]	0.1
Accuracy / deviations		
Flow monitoring		
Accuracy (in the measuring range)		± (0,8 % MW + 0,2 % MEW)
Repeatability		± 0,2 % MEW
Temperature monitoring		
Accuracy	[K]	± 2,5 (Q > 5 % MEW)
Response 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 / normally 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 type		A
Process data analogue		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 no.	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]	771.5	
Materials		stainless steel (316/1.4408); stainless steel (316L/1.4404); PC; PBT+PC-GF30	
Materials (wetted parts)		stainless steel (316L/1.4404); PEEK; carbon fibre PEEK; EPDM; Centellen	
Process connection		G 1 DN25 flat seal	

Displays / operating elements			
Display			colour 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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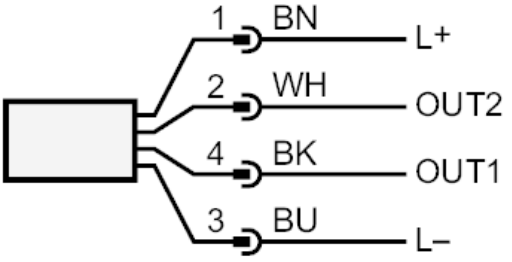
Connection



	colours to DIN EN 60947-5-2
OUT1:	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
	analogue output flow
	analogue output temperature
	input counter reset
	Core colours :
BK =	black
BN =	brown
BU =	blue
WH =	white

Diagrams and graphs