

SU7010



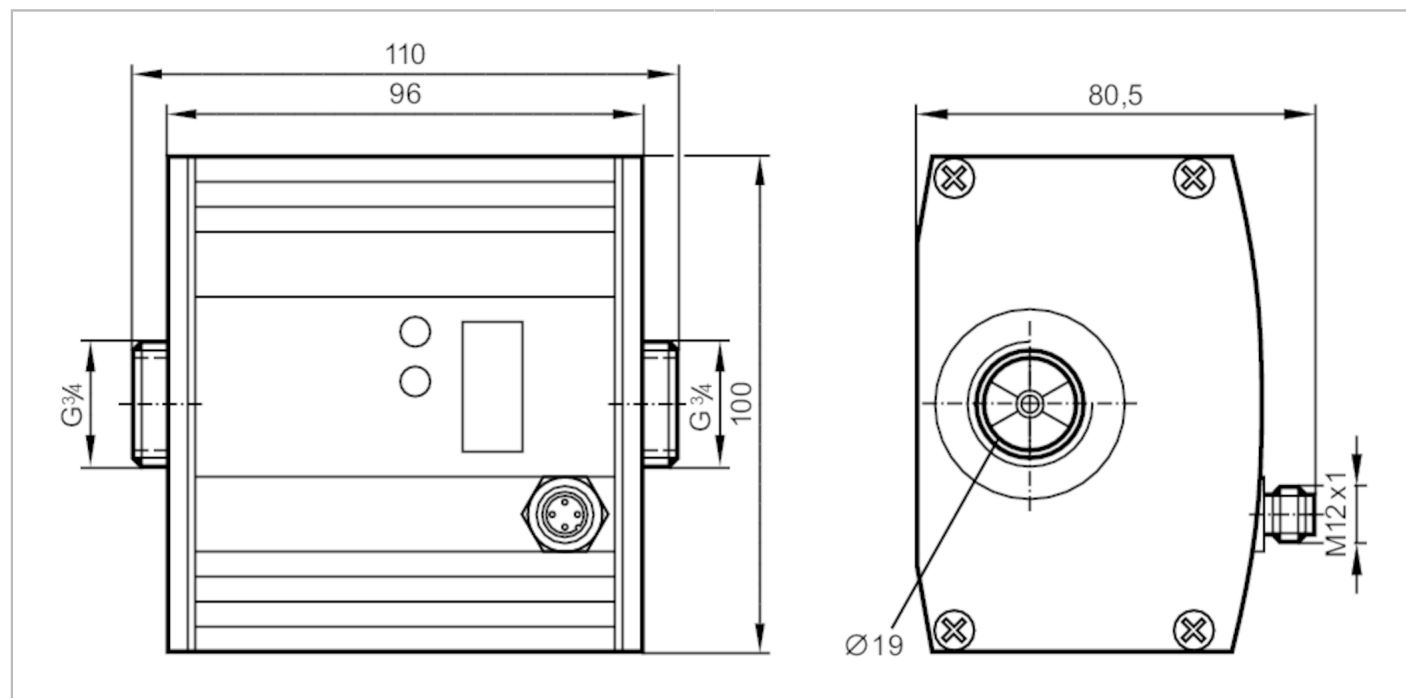
Ultrasonic flow meter

SUR34HGBFRKG/W/US-100-IPF

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Alternative articles: SU7000

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 analogue outputs: 1	
Measuring range	0...50 l/min	0...3 m ³ /h
Process connection	threaded connection G 3/4 flat seal	

Application

Special feature	Gold-plated contacts	
Application	totaliser function	
Installation	connection to pipe by means of an adapter	
Media	Liquids; water; glycol solutions; oils	
Medium temperature	[°C]	-10...80
Pressure rating	[bar]	16

Electrical data

Operating voltage	[V]	19...30 DC; (to SELV/PELV)
Current consumption	[mA]	100
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[s]	10

Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1
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Inputs		
Inputs	counter reset	
Outputs		
Total number of outputs	2	
Output signal	switching signal; analogue signal; pulse 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]	250; (per output)	
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...50 l/min	0...3 m³/h
Display range	0...60 l/min	0...3.6 m³/h
Resolution	0.1 l/min	0.005 m³/h
Set point SP	0.1...50 l/min	0.005...3 m³/h
Reset point rP	0...49.9 l/min	0...2.995 m³/h
Analogue start point ASP	0...40 l/min	0...2.4 m³/h
Analogue end point AEP	10...50 l/min	0.6...3 m³/h
Max. flow rate	60 l/min	3.6 m³/h
In steps of	0.1 l/min	0.005 m³/h
Volumetric flow quantity monitoring		
Pulse value	0.1 l...10000 m³	
Pulse length [s]	0,05...2	
Temperature monitoring		
Measuring range [°C]	-10...80	
Resolution [°C]	0.2	
Set point SP [°C]	-9.8...80	
Reset point rP [°C]	-10...79.8	
Analogue start point [°C]	-10...62	
Analogue end point [°C]	8...80	
In steps of [°C]	0.2	



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Accuracy / deviations		
Flow monitoring		
Accuracy (in the measuring range)	< ± (3 % MW + 0,2 % MEW) / < ± (5 % MW + 0,5 % MEW); (water; glycol: 35%; oil: viscosity 68 mm²/s at 40 °C)	
Repeatability	0,1 l/min; 6 l/h; 0,006 m³/h	
Temperature monitoring		
Accuracy	[K]	± 3 (Q > 1 l/min)
Response times		
Flow monitoring		
Response time	[s]	0.25; (dAP = 0)
Delay time programmable dS, dr	[s]	0...50
Damping process value dAP	[s]	0...5
Temperature monitoring		
Dynamic response T05 / T09	[s]	T09 = 70 (Q > 5 l/min); (water)
Software / programming		
Parameter setting options	Flow monitoring; quantity meter; Preset counter; Temperature monitoring	
Operating conditions		
Ambient temperature	[°C]	-10...60
Storage temperature	[°C]	-25...80
Protection	IP 67	
Tests / approvals		
EMC	EN 61000-4-2 ESD	4 kV CD / 8 kV AD
	EN 61000-4-3 HF radiated	10 V/m
	EN 61000-4-4 Burst	2 kV
	EN 61000-4-5 Surge	0,5 kV
	EN 61000-4-6 HF conducted	10 V
Shock resistance	DIN IEC 68-2-27	20 g (11 ms)
Vibration resistance	DIN IEC 68-2-6	5 g (10...2000 Hz)
Mechanical data		
Materials	housing: AlMgSi0,5 anodised; Sealing: FKM; PA 6.6; cover film: PA	
Materials (wetted parts)	stainless steel (316L/1.4404); FKM; PES; Centellen 200	
Process connection	threaded connection G 3/4 flat seal	
Displays / operating elements		
Display	Display unit	6 x LED, green (l/min, m³/h, l, m³, 10³, °C)
	switching status	2 x LED, yellow
	measured values	alphanumeric display, 4-digit
	programming	alphanumeric display, 4-digit
Accessories		
Items supplied	sealings: 2, Centellen	
Accessories (optional)	adapter for pipe: 1 x R1/2, stainless steel, E40178	
	adapter for pipe: 1 x R1/2, brass, E40151	

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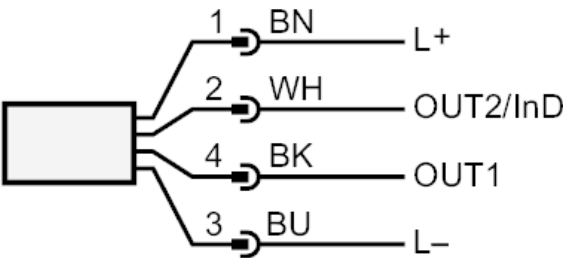
Remarks	
Remarks	MW = measured value
	MEW = Final value of the measuring range
	sealing: only with supplied Centellen seals
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Moulded body: brass, Optalloy-plated; Contacts: gold-plated



Connection



OUT1:	switching output volumetric flow quantity monitoring Pulse output quantity meter signal output Preset counter
OUT2/InD:	switching output volumetric flow quantity monitoring / Temperature monitoring analogue output volumetric flow quantity monitoring / Temperature monitoring input counter reset

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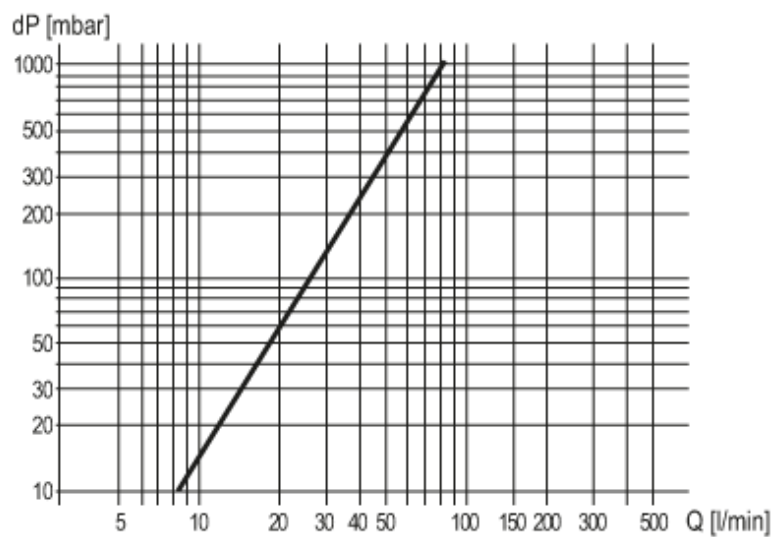
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Diagrams and graphs

Pressure loss



dP Pressure loss

Q volumetric flow quantity