

SU9004



Ultrasonic flow meter

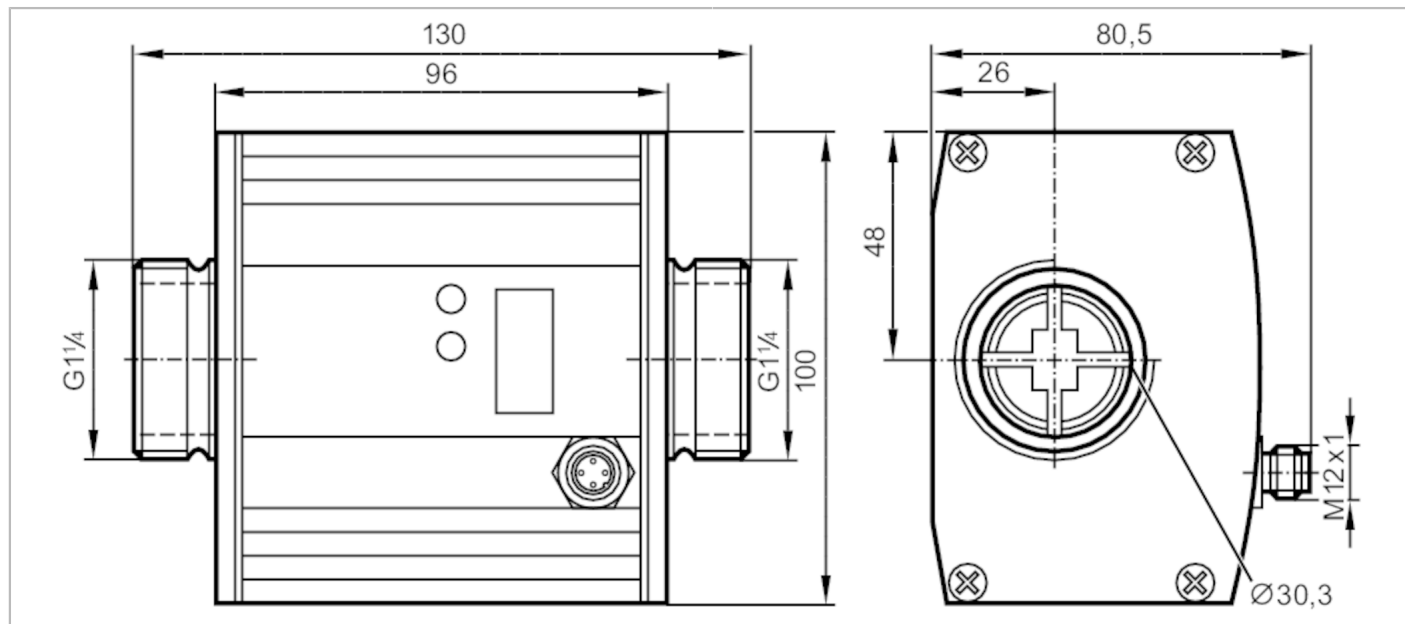
SUR54HGB50KG/W/US-100-IPF

phase-out article

Discontinuation date: 12/31/2025

Alternative articles: SU9030 + EIO104

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



Product characteristics

Number of inputs and outputs	Number of analogue outputs: 2	
Measuring range	0...200 l/min	0...52.84 gpm
Process connection	threaded connection G 1 1/4 external thread flat seal	

Application

Special feature	Gold-plated contacts	
Application	for industrial applications	
Installation	connection to pipe by means of an adapter	
Media	water; glycol solutions; coolants; oils	
Note on media	low-viscosity oils with viscosity: 7...40 mm ² /s (40 °C) high-viscosity oils with viscosity: 30...68 mm ² /s (40 °C)	
Medium temperature [°C]	-10...80	
Pressure rating	16 bar	1.6 MPa

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	
Measuring principle	ultrasonic	



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Inputs / outputs		
Number of inputs and outputs		Number of analogue outputs: 2
Outputs		
Total number of outputs		2
Output signal		analogue signal
Number of analogue outputs		2
Analogue current output [mA]		4...20; (scalable)
Max. load [Ω]		500
Short-circuit protection		yes
Type of short-circuit protection		pulsed
Overload protection		yes
Measuring/setting range		
Measuring range		0...200 l/min0...52.84 gpm
Display range		0...240 l/min0...63.42 gpm
Resolution		0.1 l/min0.02 gpm
Analogue start point ASP		0...160 l/min0...42.28 gpm
Analogue end point AEP		40...200 l/min10.28...52.84 gpm
Max. flow rate [l/min]		220
In steps of		0.1 l/min0.02 gpm
Temperature monitoring		
Measuring range [°C]		-10...80
Resolution [°C]		0.2
Analogue start point [°C]		-10...62
Analogue end point [°C]		8...80
In steps of [°C]		0.2
Accuracy / deviations		
Flow monitoring		
Accuracy (in the measuring range)		water: < ± (3 % MW + 0,2 % MEW); glycol (35 %), oil (viscosity 68 mm²/s at 40 °C): < ± (8 % MW + 0,5 % MEW)
Repeatability		1 l/min; 60 l/h; 0,05 gpm; 3 gph
Temperature monitoring		
Accuracy [K]		± 3 (Q > 20 l/min)
Response times		
Flow monitoring		
Response time [s]		0.25; (dAP = 0)
Damping process value dAP [s]		0...1
Temperature monitoring		
Dynamic response T05 / T09 [s]		T09 = 30 (Q > 20 l/min); (water)
Operating conditions		
Ambient temperature [°C]		-10...60
Storage temperature [°C]		-25...80
Protection		IP 67



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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
CPA approval	model number	001US
	accuracy class	3
	maximum allowable error	-
	Q (min)	0,3 m³/h
	Q (t)	0,84 m³/h
	Q (max)	12 m³/h
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]	203
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data		
Weight	[g]	1883
Housing		rectangular
Dimensions	[mm]	130 x 100 x 80.5
Materials	housing: AlMgSi0,5 anodised; Sealing: FKM; PA 6.6; cover film: PA	
Materials (wetted parts)	Pipe section: stainless steel (316L/1.4404); Process connection sealing: NBR reinforced fibre Flat seal; FKM; PPS	
Process connection	threaded connection G 1 1/4 external thread flat seal	
Displays / operating elements		
Display	Display unit	6 x LED, green (l/min, m³/h, gpm, gph, °C, °F)
	measured values	alphanumeric display, 4-digit
	programming	alphanumeric display, 4-digit
Display unit	l/min; m³/h; gpm; gph; °C; °F	
Accessories		
Items supplied	sealings: 2, Centellen	
Accessories (optional)	adapter for pipe: 1 x R 1, stainless steel, E40205	
	adapter for pipe: 1 x 1" NPT, stainless steel, E40206	
Remarks		
Remarks	sealing: only with supplied Centellen seals	
	MW = measured value	
	MEW = Final value of the measuring range	
Pack quantity	1 pcs.	

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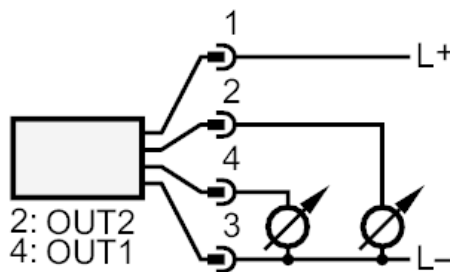
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Electrical connection

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



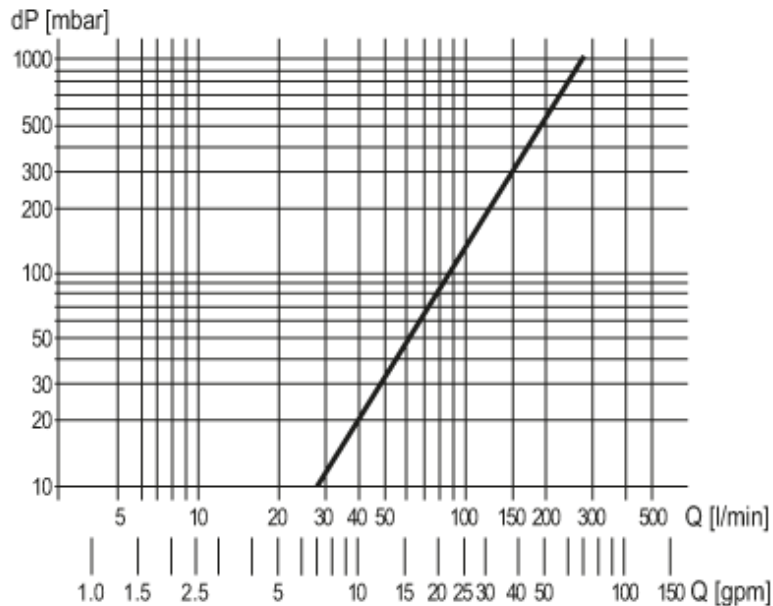
Connection



OUT1: analogue output Temperature monitoring
OUT2: analogue output volumetric flow quantity monitoring

Diagrams and graphs

Pressure loss



dP Pressure loss
Q volumetric flow quantity