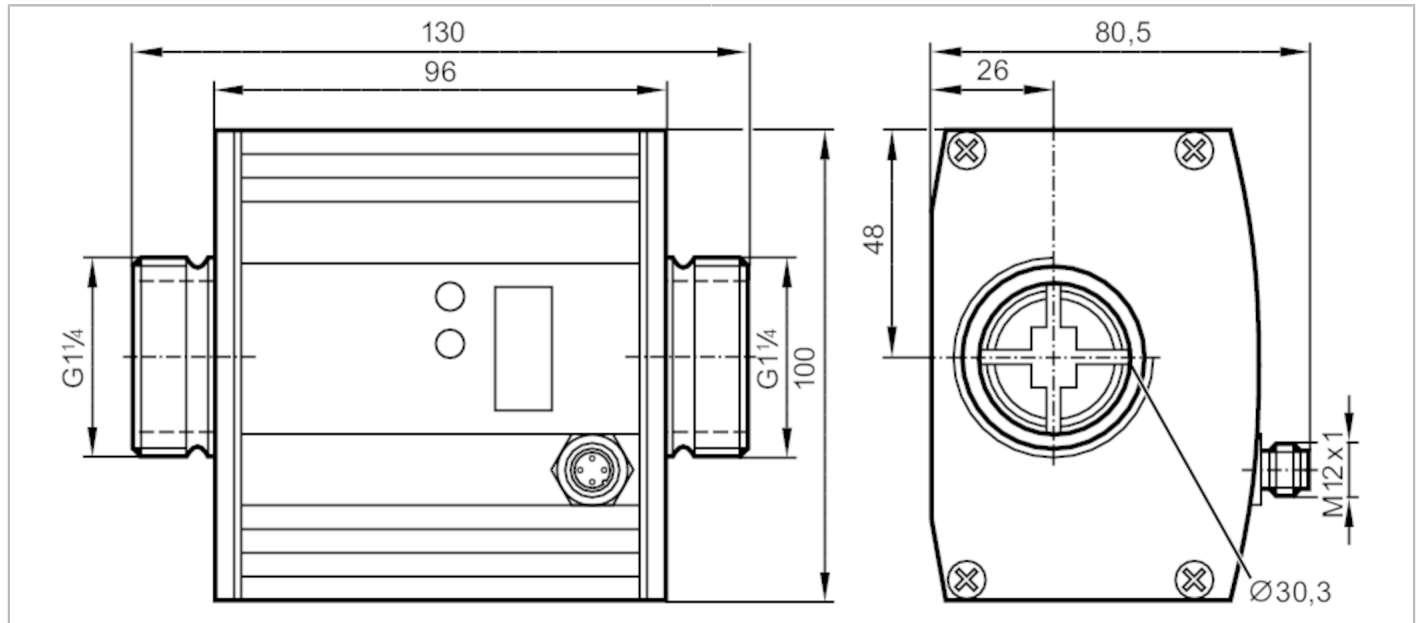


SU9004



Ultrasonic flow meter

SUR54HGB50KG/W/US-100-IPF



Application	
Application	for industrial applications
Installation	connection to pipe by means of an adapter
Media	water; glycol solutions; coolants; oil
Medien	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	[bar] 16
Electrical data	
Operating voltage	[V] 19...30 DC; (according to EN 50178 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
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

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Measuring/setting range		
Measuring range	0...52.84 gpm	0...200 l/min
Display range	0...63.42 gpm	0...240 l/min
Resolution	0.02 gpm	0.1 l/min
Analogue start point ASP	0...42.28 gpm	0...160 l/min
Analogue end point AEP	10.28...52.84 gpm	40...200 l/min
Max. flow rate [l/min]	220	
Max. flow rate [m³/h]	13.2	
In steps of	0.02 gpm	0.1 l/min
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)	$< \pm (3 \% MW + 0,2 \% MEW) / < \pm (8 \% MW + 0,5 \% MEW);$ (water; glycol: 35%; oil: viscosity 68 mm²/s at 40 °C)	
Repeatability	1 l/min; 60 l/h; 0,05 gpm; 3 gph	
Temperature monitoring		
Accuracy [K]	$\pm 3 (Q > 20 \text{ l/min})$	
Response times		
Flow monitoring		
Response time [s]	0.25; (dAP = 0)	
Damping for the switching output 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	
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)
MTTF [years]	203	
Pressure Equipment Directive	Sound Engineering Practice; can be used for group 2 fluids; group 1 fluids on request	

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Mechanical data	
Weight [g]	1892.6
Materials	housing: AlMgSi0,5 anodised; Sealing: FKM; connector housing: brass Optalloy-plated; PA 6.6; cover film: PA
Materials (wetted parts)	stainless steel (1.4404 / 316L); FKM; PPS; Centellen 200
Process connection	threaded connection G 1 1/4 flat seal

Displays / operating elements		
Display	Display unit	6 x LED, green (l/min, m ³ /h, gpm, gph, °C, °F)
	measured values	alphanumeric display, 4-digit
	programming	alphanumeric display, 4-digit
Display unit	l/min; m ³ /h; gpm; gph; °C; °F	

Accessories	
Accessories (supplied)	sealings: 2, Centellen
Accessories (optional)	adapter for pipe: 1 x R1, 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.

Electrical connection

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



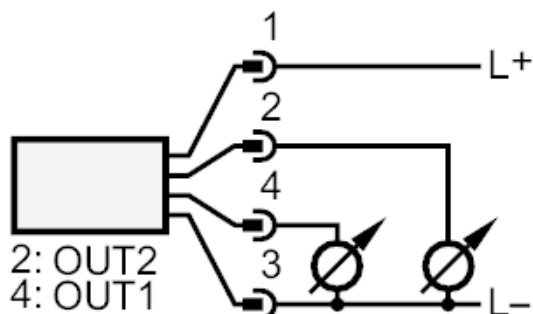
SU9004



Ultrasonic flow meter

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Connection

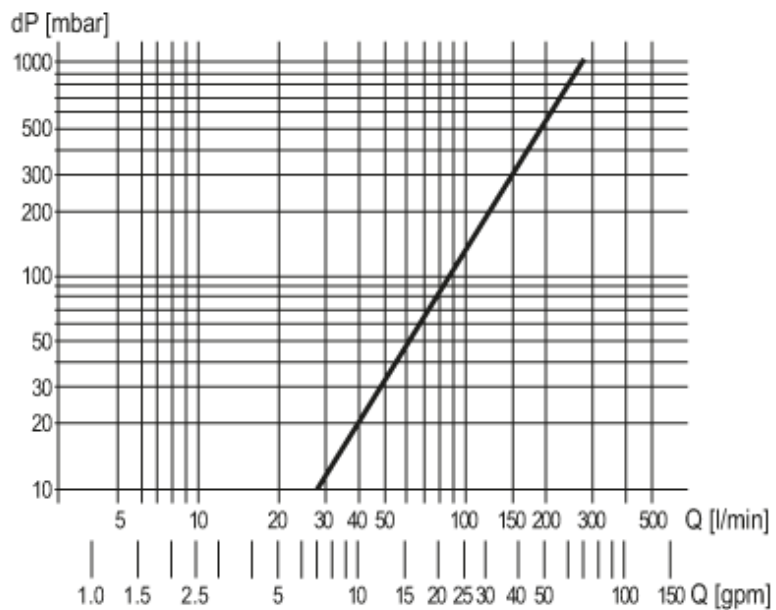


OUT1: analogue output Temperature monitoring

OUT2: analogue output volumetric flow quantity monitoring

Diagrams and graphs

Pressure loss



dP Pressure loss

Q volumetric flow quantity