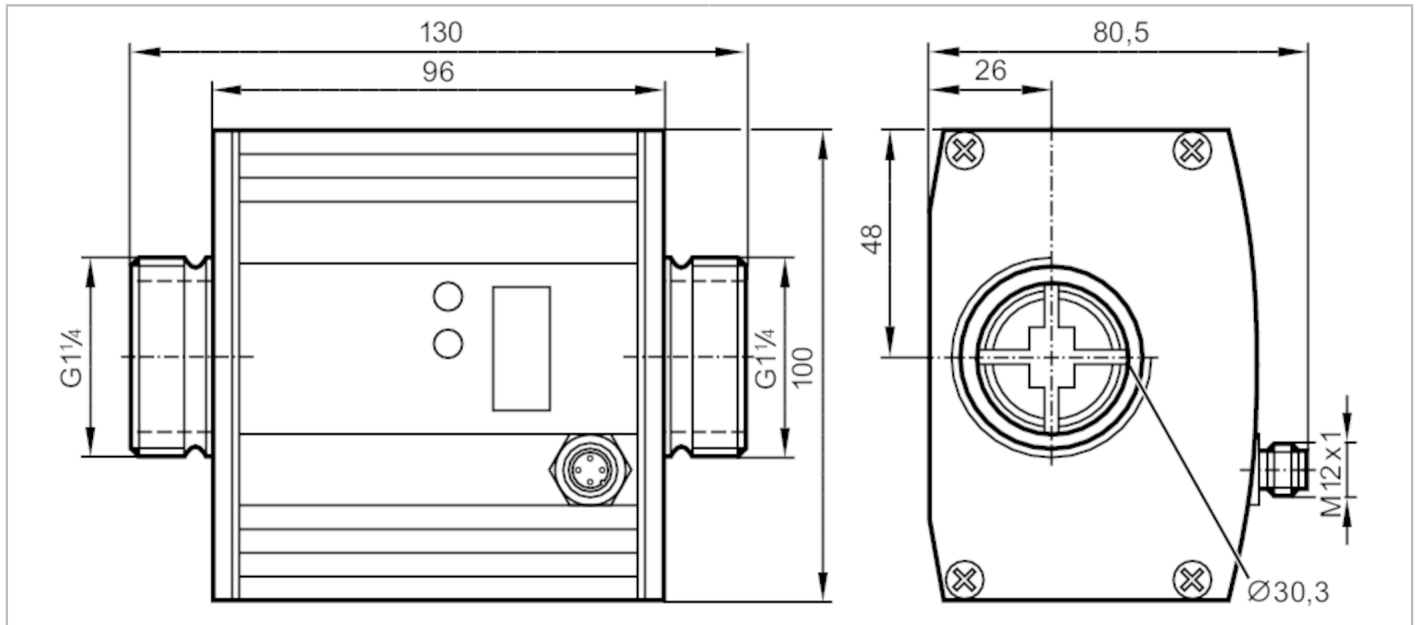


SU9004



Ultrasonic flow meter

SUR54HGB50KG/W/US-100-IPF



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 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; oil	
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	[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

Inputs / outputs

Number of inputs and outputs	Number of analogue outputs: 2
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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/min	0...52.84 gpm
Display range	0...240 l/min	0...63.42 gpm
Resolution	0.1 l/min	0.02 gpm
Analogue start point ASP	0...160 l/min	0...42.28 gpm
Analogue end point AEP	40...200 l/min	10.28...52.84 gpm
Max. flow rate [l/min]		220
In steps of	0.1 l/min	0.02 gpm
Temperature monitoring		
Measuring range [$^{\circ}\text{C}$]		-10...80
Resolution [$^{\circ}\text{C}$]		0.2
Analogue start point		-10...62
Analogue end point		8...80
In steps of [$^{\circ}\text{C}$]		0.2
Accuracy / deviations		
Flow monitoring		
Accuracy (in the measuring range)	$< \pm (3 \% \text{ MW} + 0,2 \% \text{ MEW}) / < \pm (8 \% \text{ MW} + 0,5 \% \text{ MEW});$ (water; glycol: 35%; oil: viscosity 68 mm ² /s at 40 $^{\circ}\text{C}$)	
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 [$^{\circ}\text{C}$]	-10...60	
Storage temperature [$^{\circ}\text{C}$]	-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
	Shock resistance	DIN IEC 68-2-27
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	
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, m³/h, gpm, gph, °C, °F)
	measured values	alphanumeric display, 4-digit
Display unit	programming	alphanumeric display, 4-digit
	l/min; m³/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		

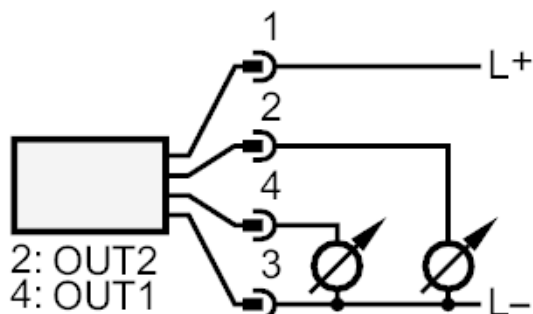
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Connection

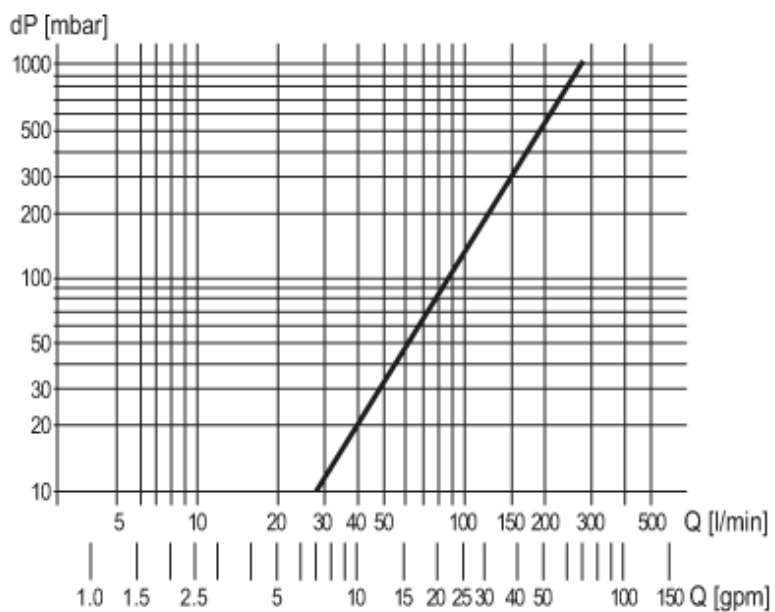


OUT1: analogue output Temperature monitoring

OUT2: analogue output volumetric flow quantity monitoring

Diagrams and graphs

Pressure loss



dP Pressure loss

Q volumetric flow quantity