

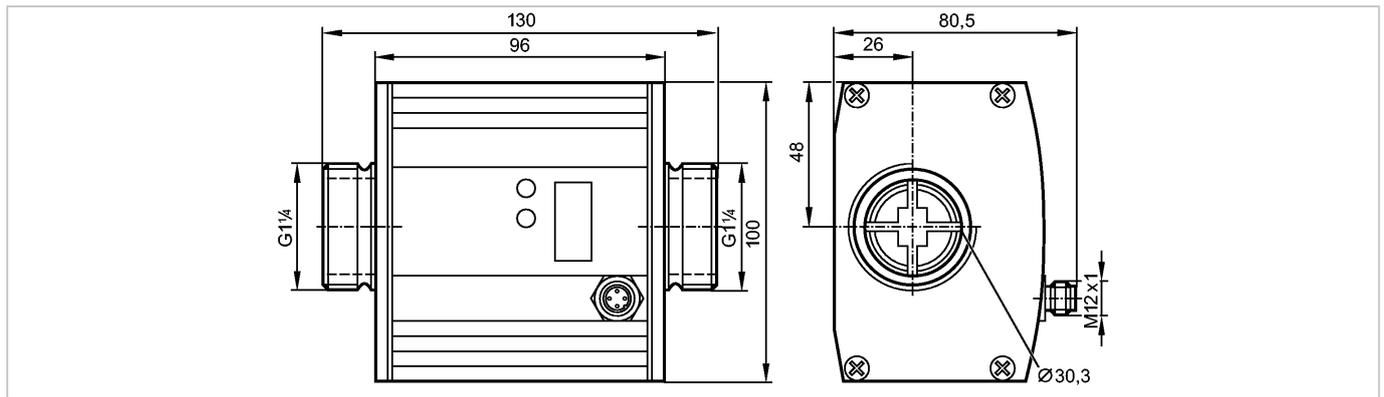


# SU9004

SUR54HGB50KG/W/US-100-IPF



Flow sensors



### Product characteristics

Ultrasonic flow meter

Quick disconnect

Process connection: G1¼ flat seal

2 outputs

OUT1 = analogue signal temperature

OUT2 = analogue signal flow

Measuring range

0...200 l/perc

-10...80 °C

Maximum permissible flow rate

220 l/min (13.2 m³/h)

connection to pipe by means of an adapter

### Application

Application	Liquids of the fluid group 2 according to the Pressure Equipment Directive (PED): water, glycol solutions, oils (low-viscosity oils with viscosity 7...40 mm²/s at 40°C; high-viscosity oils with viscosity 30...68 mm²/s at 40°C)
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Pressure rating	[bar]	16
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Medium temperature	[°C]	-10...80
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### Electrical data

Electrical design	DC
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Operating voltage	[V]	19...30 DC ¹)
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Current consumption	[mA]	100
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Insulation resistance	[MΩ]	> 100 (500 V DC)
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Protection class	III
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Reverse polarity protection	yes
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### Outputs

Output function	2 x analog (4...20 mA scalable)
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Short-circuit protection	yes (non-latching)
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Overload protection	yes
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Analog output	4...20 mA
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Max. load	[Ω]	500
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### Measuring / setting range

Flow monitoring

Measuring range	0.0...200.0 l/min
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0.00...52.84 gpm
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Display range	0.0...240.0 l/min	0.00...63.42 gpm
Resolution	0.1 l/min	0.02 gpm
Analog start point, ASP	0.0...160.0 l/min	0.00...42.28 gpm
Analog end point, AEP	40.0...200.0 l/min	10.28...52.84 gpm
in steps of	0.1 l/min	0.02 gpm
Temperature monitoring		
Measuring range	[°C]	-10...80.0
Resolution	[°C]	0.2
Analog start point, ASP	[°C]	-10.0...62.0
Analog end point, AEP	[°C]	8.0...80.0
in steps of	[°C]	0.2

### Accuracy / deviations

Flow monitoring		
Accuracy	$< \pm (3\% \text{ MW} + 0.2\% \text{ MEW})^* / < \pm (8\% \text{ MW} + 0.5\% \text{ MEW})^{**}$	
Repeatability	1 l/min; 60 l/h; 0.05 gpm; 3 gph	
Pressure loss (dP) / flow rate (Q)		

Temperature monitoring		
Accuracy	[K]	$\pm 3 (Q > 20 \text{ l/min})$

### Reaction times

Power-on delay time	[s]	10
Flow monitoring		
Response time	[s]	$< 0.250 (dAP = 0)$
Damping, dAP	[s]	0.0...1.0
Temperature monitoring		
Response time	[s]	$T09 = 30 (Q > 20 \text{ l/min})^*$

### Environment

Ambient temperature	[°C]	-10...60
Storage temperature	[°C]	-25...80
Protection		IP 67

### Tests / approvals

Pressure equipment directive	article 3, section 3 - sound engineering practice	
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)



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MTTF	[Years]	203
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### Mechanical data

Process connection	G1¼ flat seal	
Materials (wetted parts)	stainless steel 316L / 1.4404; Viton; PPS; Centellen 200	
Housing materials	housing: AlMgSi0.5 anodized; sealing: Viton; connector housing: brass Optalloy-plated; PA 6.6; cover film: polyamide	
Weight	[kg]	1.893

### Displays / operating elements

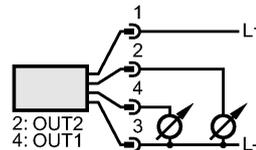
Display	Display unit	6 x LED green (l/min, m³/h, gpm, gph, °C, °F)
	Measured values	4-digit alphanumeric display
	Programming	4-digit alphanumeric display

### Electrical connection

Connection	M12 connector; gold-plated contacts
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### Wiring

OUT1 = analogue signal  
temperature  
OUT2 = analogue signal flow



### Accessories

Accessories (included)	2 x packing washer (Centellen)
Accessories (optional)	adapter; order no. E40205 (for R1 pipe, high-grade stainless steel); order no. E40206 (for 1" NPT pipe, high-grade stainless steel)

### Remarks

Remarks	<p>1) to EN50178, SELV, PELV          *) for water          **) for glycol solutions (35%) and oils (viscosity: 68 mm²/s at 40°C)          sealing: only with supplied Centellen seals          MW = measured value          MEW = final value of the measuring range</p>
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Pack quantity	[piece]	1
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