

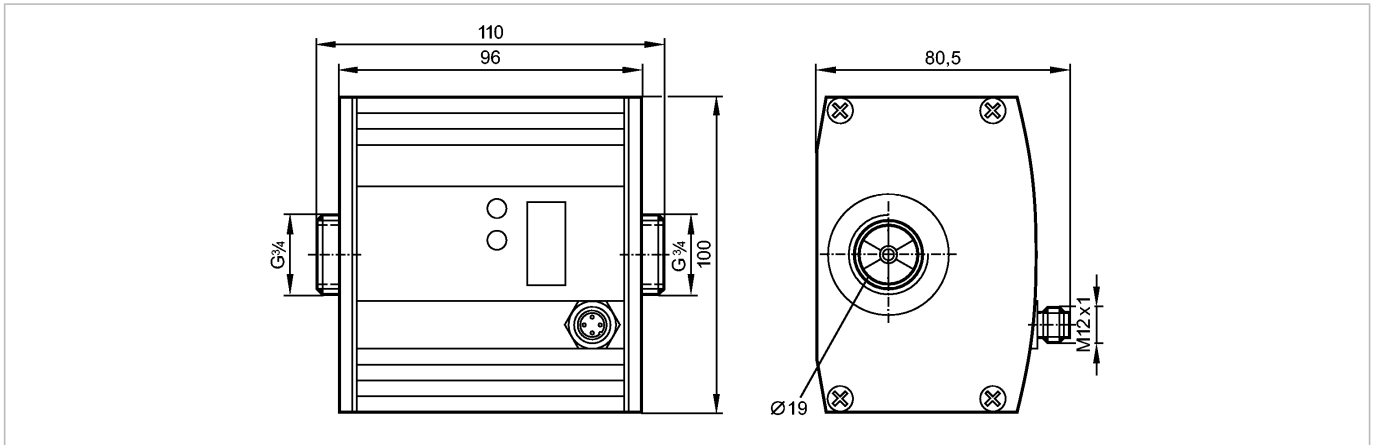


SU7000

SUR34HGBFRKGW/US-100-IPF



Flow sensors



Product characteristics

Ultrasonic flow meter

Quick disconnect

Process connection: G $\frac{3}{4}$ flat seal

Function programmable

Totalizer function

2 outputs

OUT1 = flow monitoring (binary), flow rate meter (pulse), preset meter (binary)

OUT2 = flow monitoring or temperature monitoring (analog or binary)

Input for counter reset

Measuring range

0...50 l/min

-10...80 °C

Maximum permissible flow rate

60 l/min (3.6 m 3 /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 mm 2 /s at 40°C; high-viscosity oils with viscosity 30...68 mm 2 /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 PNP/NPN
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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	[M Ω]	> 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	OUT1: normally open / closed programmable or pulse OUT2: normally open / closed programmable or analog (4...20 mA / 0...10 V, scaleable)
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Current rating	[mA]	2 x 250
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Flow sensors

Voltage drop [V]	< 2
Short-circuit protection	yes (non-latching)
Overload protection	yes
Analog output	4...20 mA; 0...10 V
Max. load [Ω]	500
Min. load [Ω]	2000
Pulse output	flow rate meter

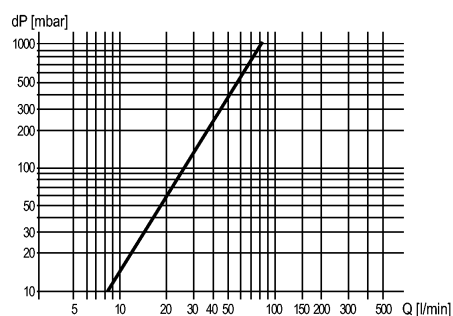
Measuring / setting range

Flow monitoring		
Measuring range	0.0...50.0 l/min	0.000...3.000 m ³ /h
Display range	0.0...60.0 l/min	0.000...3.600 m ³ /h
Resolution	0.1 l/min	0.005 m ³ /h
Set point, SP	0.1...50.0 l/min	0.005...3.000 m ³ /h
Reset point, rP	0.0...49.9 l/min	0.000...2.995 m ³ /h
Analog start point, ASP	0.0...40.0 l/min	0.000...2.400 m ³ /h
Analog end point, AEP	10.0...50.0 l/min	0.600...3.000 m ³ /h
in steps of	0.1 l/min	0.005 m ³ /h
Volumetric flow quantity monitoring		
Pulse value	0.1 l...1 000 000 m ³	
Pulse length [s]	0.05...2	
Temperature monitoring		
Measuring range [°C]	-10...80.0	
Resolution [°C]	0.2	
Set point, SP [°C]	-9.8...80.0	
Reset point, rP [°C]	-10.0...79.8	
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	$< \pm (3\% MW + 0.2\% MEW) *$ / $< \pm (5\% MW + 0.5\% MEW) **$
Repeatability	0.1 l/min; 6 l/h; 0.006 m ³ /h

Pressure loss (dP) / flow rate (Q)



Temperature monitoring	
Accuracy [K]	$\pm 3 (Q > 1 \text{ l/min})$

Reaction times

Power-on delay time [s]	10
Flow monitoring	



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Flow sensors

Start-up delay	[s]	0...50
Response time	[s]	< 0.250 (dAP = 0)
Damping, dAP	[s]	0.0...1.0
Temperature monitoring		
Response time	[s]	T09 = 70 (Q > 5 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)
MTTF	[Years]	175

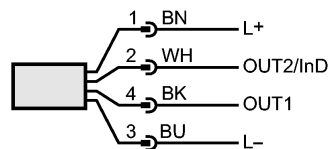
Mechanical data		
Process connection		G $\frac{3}{4}$ flat seal
Materials (wetted parts)		stainless steel 316L / 1.4404; Viton; PES; Centellen 200
Housing materials		housing: AlMgSi0.5 anodized; sealing: Viton; connector housing: brass Optalloy-plated; PA 6.6; cover film: polyamide
Weight	[kg]	1.555

Displays / operating elements		
Display		Display unit 6 x LED green (l/min, m ³ /h, l, m ³ , 10 ³ , °C) Switching status 2 x LED yellow Measured values 4-digit alphanumeric display Programming 4-digit alphanumeric display

Electrical connection		
Connection		M12 connector; gold-plated contacts

Wiring

- OUT1: 3 selection options
- switching output volumetric flow monitoring
 - pulse output volumetric flow
 - switching output preset counter
- OUT2/InD: 5 selection options
- switching output volumetric flow monitoring
 - switching output temperature monitoring
 - analog output volumetric flow
 - analog output temperature
 - input for an external reset signal



Accessories		
Accessories (included)		2 x packing washer (Centellen)
Accessories (optional)		adapter; order no. E40178 (for R $\frac{1}{2}$ pipe, high-grade stainless steel); order no. E40151 (for R $\frac{1}{2}$ pipe, brass)

Remarks



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Remarks

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

Pack quantity

[piece]

1