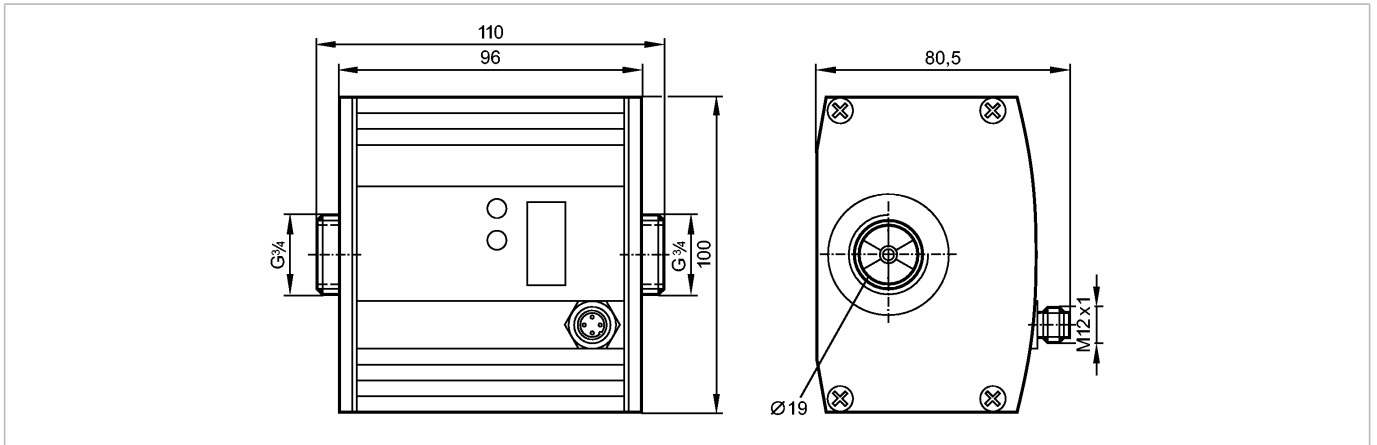


SU7001

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...13.22 gpm
14...176 °F
Maximum permissible flow rate
15.86 gpm (951 gph)
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)	
Pressure rating	[psi]	232
Medium temperature	[°F]	14...176

Electrical data

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

Outputs

Output function		OUT1: normally open / closed programmable or pulse OUT2: normally open / closed programmable or analog (4...20 mA / 0...10 V, scaleable)
Current rating	[mA]	2 x 250



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Flow sensors

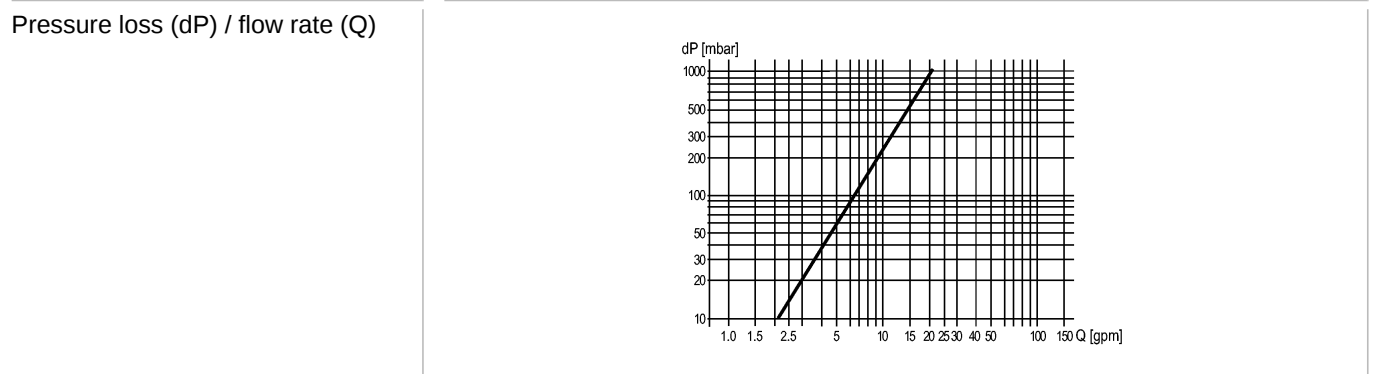
Voltage drop [V]	< 2
Short-circuit protection	yes (non-latching)
Overload protection	yes
Analog output	4...20 mA; 0...10 V
Max. load [Ω]	500
Min. load [Ω]	2000
Pulse output	flow rate meter

Measuring / setting range

Flow monitoring		
Measuring range	0.00...13.22 gpm	0...793 gph
Display range	0.00...15.86 gpm	0...951 gph
Resolution	0.02 gpm	1 gph
Set point, SP	0.02...13.22 gpm	1...793 gph
Reset point, rP	0.00...13.20 gpm	0...791 gph
Analog start point, ASP	0.00...10.62 gpm	0...637 gph
Analog end point, AEP	2.60...13.22 gpm	156...793 gph
in steps of	0.02 gpm	1 gph
Volumetric flow quantity monitoring		
Pulse value	0.02...9000 * 10 ³ gal	
in steps of	0.02 gal	
Pulse length [s]	0.6...2	
Temperature monitoring		
Measuring range [°F]	14.0...176.0	
Resolution [°F]	0.5	
Set point, SP [°F]	14.0...176.0	
Reset point, rP [°F]	14.0...176.0	
Analog start point, ASP [°F]	14.0...144.0	
Analog end point, AEP [°F]	46.0...176.0	
in steps of [°F]	0.5	

Accuracy / deviations

Flow monitoring	
Accuracy	< ± (3% MW + 0.2% MEW) * / < ± (5% MW + 0.5% MEW) **)
Repeatability	0.025 gpm; 1.5 gph



Temperature monitoring	
Accuracy [K]	± 5.4 (Q > 0.26 gpm)

Reaction times

Power-on delay time [s]	10
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SU7001

SUR34HGBFRKG/W/US-100-IPF

Flow sensors

Flow monitoring

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 > 1 gpm) *

Environment

Ambient temperature	[°F]	14...140
Storage temperature	[°F]	-13...176
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]	185

Mechanical data

Process connection	G¾ 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] 1.515

Displays / operating elements

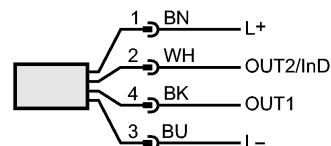
Display	Display unit 5 x LED green (gpm, gph, gal, °F, 10³) Switching status 2 x LED yellow Measured values 4-digit alphanumeric display Programming 4-digit alphanumeric display
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Electrical connection

Connection	M12 connector; gold-plated contacts
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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. E40191 (for ½" NPT pipe, high-grade stainless steel); order no. E40154 (for ½" NPT pipe, brass)

**SU7001**

SUR34HGBFRKG/W/US-100-IPF

Flow sensors**Remarks**

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