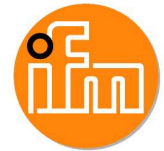
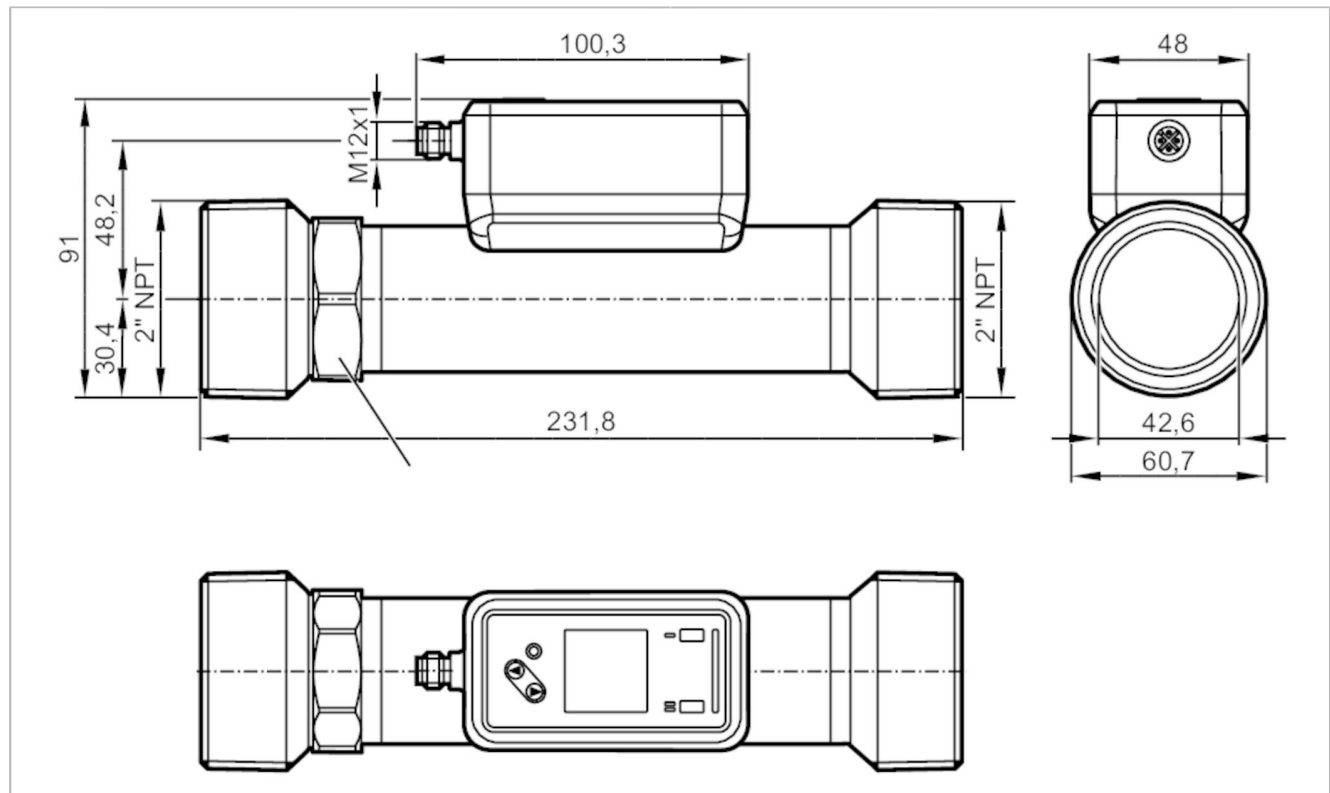


SU2621



Ultrasonic flow meter

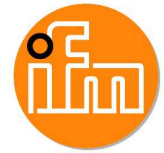
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ACS IO-Link KTW/W270 Reg31

Product characteristics	
Process connection	2" NPT DN50 external thread
Application	
System	gold-plated contacts
Media	ultra-pure water; water; water-based media
Note on media	water-based media: for media with >10 % additives, the repeatability is the only available value
Medium temperature	-20...100 °C
Min. bursting pressure	150 bar
Pressure rating	100 bar
Vacuum resistance [mbar]	-1000
Electrical data	
Operating voltage [V]	18...32 DC; (to SELV/PELV)
Current consumption [mA]	< 75
Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	5
Measuring principle	ultrasonic
Inputs	
Inputs	counter reset

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Ultrasonic flow meter

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Outputs				
Output signal	switching signal; pulse signal; analog signal; IO-Link; frequency signal; diagnostic signal; totalizer switching signal			
Electrical design	PNP/NPN			
Output function	normally open / closed; (configurable)			
Max. voltage drop switching output DC [V]	2			
Permanent current rating of switching output DC [mA]	100			
Switching frequency DC [Hz]	0...10000			
Analog current output [mA]	4...20			
Max. load [Ω]	500			
Pulse output	flow rate meter			
Short-circuit protection	yes			
Type of short-circuit protection	yes (non-latching)			
Overload protection	yes			
Measuring/setting range				
Measuring range	5...1000 l/min	0.3...60 m³/h	79...15850 gph	1.32...264.18 gpm
Display range	-1200...1200 l/min	-72...72 m³/h	-19020...19020 gph	-317...317 gpm
Resolution	0.1 l/min	0.001 m³/h	1 gph	0.01 gpm
Set point SP	10.5...1000 l/min	0.63...60 m³/h	166...15850 gph	2.77...264.17 gpm
Reset point rP	5.3...994.8 l/min	0.318...59.688 m³/h	84...15768 gph	1.4...262.8 gpm
Analog start point ASP	-1000...800 l/min	-60...48000 m³/h	-15850...12680 gph	-264.18...211.34 gpm
Analog end point AEP	-800...1000 l/min	-48000...60 m³/h	-12680...15850 gph	-211.34...264.17 gpm
Low flow cut-off LFC	5...50 l/min	0.3...3 m³/h	79...793 gph	1.32...13.21 gpm
Frequency end point, FEP	200.6...1000 l/min	12.037...60 m³/h	3180...15850 gph	53...264.17 gpm
Frequency at the end point FRP [Hz]	1...10000			
Volumetric flow quantity monitoring				
Pulse length [s]	0.002...2			
Pulse value	0.1...99990000 l; 0.026...26414563.515 gal			
Temperature monitoring				
Measuring range	-20...100 °C		-4...212 °F	
Display range	-44...124 °C		-47.2...255.2 °F	
Resolution [°C]	0.1			
Set point SP	-19.6...100 °C		-3.2...212 °F	
Reset point rP	-20...99.6 °C		-4...211.2 °F	
Analog start point	-20...76 °C		-4...168.8 °F	
Analog end point	4...100 °C		39.2...212 °F	
Frequency start point, FSP	-20...76 °C		4...168.8 °F	
Frequency end point, FEP	4...100 °C		39.2...212 °F	
Frequency at the end point FRP [Hz]	1...10000			

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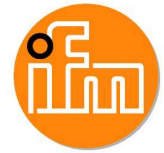


Ultrasonic flow meter

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Accuracy / deviations		
Flow monitoring		
Accuracy (in the measuring range)	$\pm (1,0 \% MW + 0,5 \% MEW)$	
Repeatability	$\pm 0,2 \% MEW$	
Temperature monitoring		
Accuracy [K]	$\pm 2,5 (Q > 5 \% MEW)$	
Temperature coefficient [% of the span / 10 K]	0,2	
Reaction times		
Flow monitoring		
Response time [s]	$< 0.25; (dAP = 0, T09)$	
Damping process value dAP [s]	0...5	
Temperature monitoring		
Dynamic response T05 / T09 [s]	5,7 / 86	
Software / programming		
Diagnostic functions	direction of flow detection; signal quality	
Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1.3	
SDCI standard	IEC 61131-9: 2013-07	
Profiles	Identification and Diagnosis (0x4000)	
Required master port class	A	
Process data analog	3	
Process data binary	2	
Min. process cycle time [ms]	9.6	
IO-Link process data (cyclical)	Function	bit length
	totalizer	32
	Flow monitoring	32
	Temperature monitoring	32
	status	4
	Output 1	1
	Output 2	1
Supported DeviceIDs	Type of operation	DeviceID
	default	1461
Operating conditions		
Ambient temperature [°C]	-20...60	
Storage temperature [°C]	-25...80	
Protection	IP 67	
Tests / approvals		
Pressure equipment directive	can be used for group 2 fluids; group 1 fluids on request	

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Ultrasonic flow meter

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Mechanical data	
Weight [g]	1384.5
Type of mounting	inlet pipe length 5xDN; outlet pipe length 1xDN
Material	housing: stainless steel (1.4404 / 316L); Display: PFA; sealing Display: FKM; connector: POKAN
Materials (wetted parts)	Pipe section: stainless steel (1.4404 / 316L); Process connection sealing: Centellen Gasket
Process connection	2" NPT DN50 external thread
Surface characteristics Ra/Rz of the wetted parts	1.25

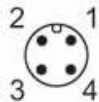
Displays / operating elements		
Display		Color display 1,44", 128 x 128 pixels
	Switching function	2 x LED, yellow
	diagnosis	1 x LED, three-color

Accessories	
Items supplied	Gasket 2, Centellen package insert

Remarks	
Remarks	MW = Measured value
	MEW = Final value of the measuring range
	pulse and totalizer signal are only available for one of the two outputs the accuracy indications are adhered to over the entire application area
Pack quantity	1 pcs.

Electrical connection

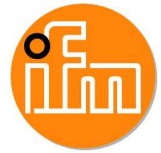
Connector: 1 x M12; coding: A; Contacts: gold-plated



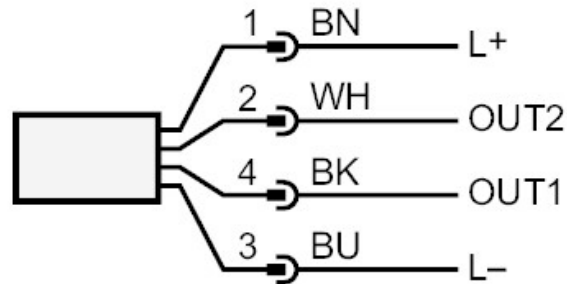
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Ultrasonic flow meter

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Connection



OUT1/IO-Link: Switching output Volumetric flow quantity monitoring
Switching output Temperature monitoring
Pulse output quantity meter
Frequency output Volumetric flow quantity monitoring
Frequency output Temperature monitoring
signal output Preset counter

OUT2/InD: Switching output Volumetric flow quantity monitoring
Switching output Temperature monitoring
Pulse output quantity meter
analog output flow
analog output temperature
signal output Preset counter
Input counter reset

Colors to DIN EN
60947-5-2

Core colors BK= black
BN= brown
BU= blue
WH= white

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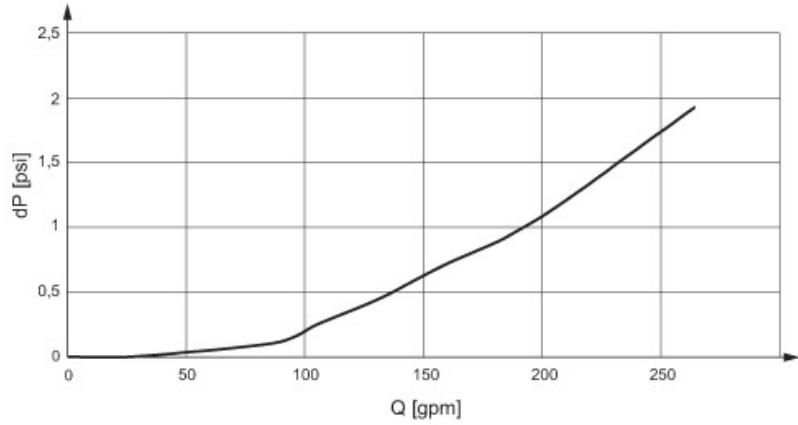
Ultrasonic flow meter

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Diagrams and graphs

Note on pressure loss



derating ambient temperature

