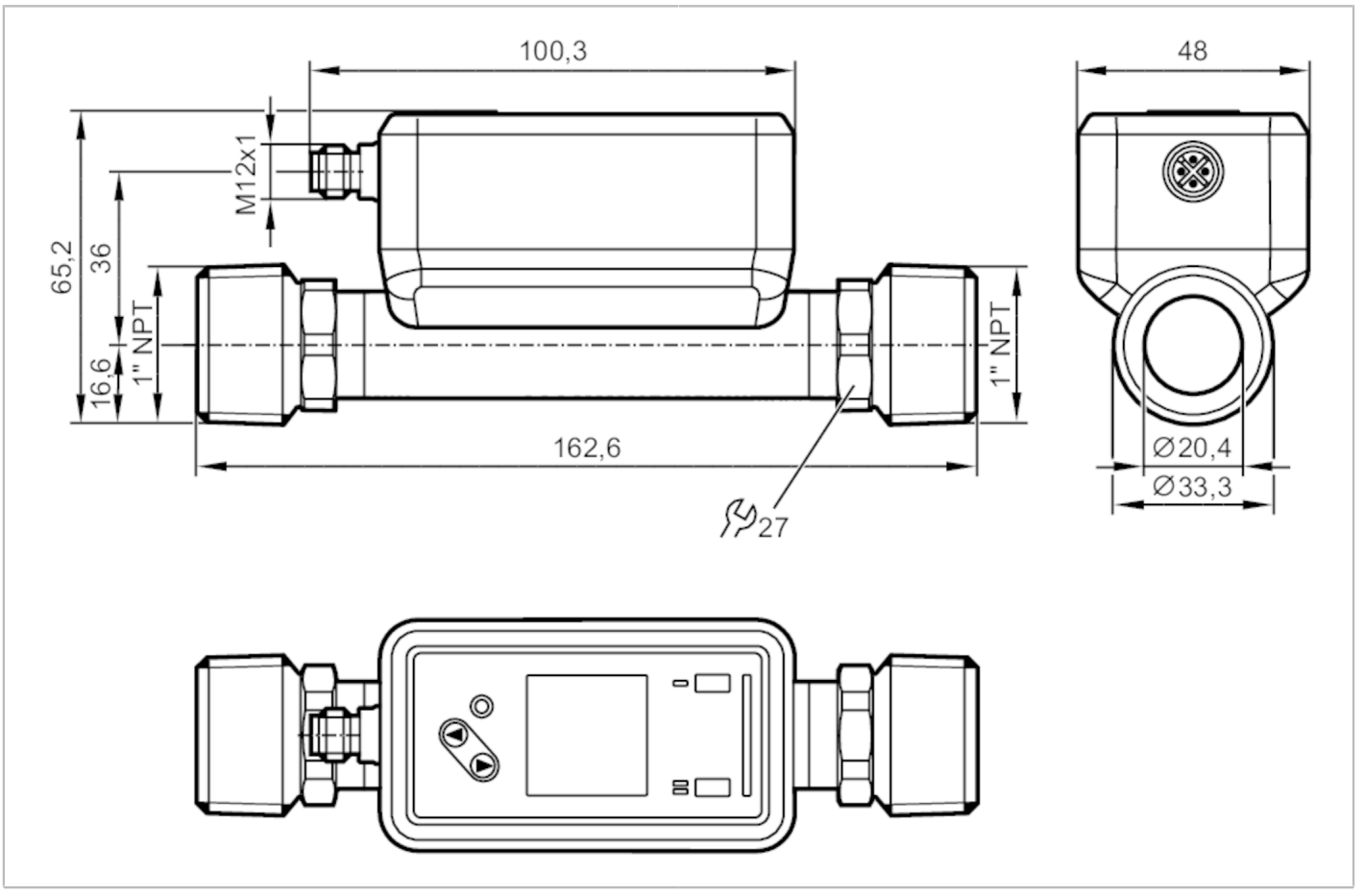
SU8621

Ultrasonic flow meter

SUN11XFBFRKG/US



ACS IO-Link KTW/W270 Reg31

Product characteristics			
Process connection		1" NPT DN25 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	[°C]	-20...100	
Medium temperature	[°F]	-4...212	
Min. bursting pressure		150 bar	15 MPa
Pressure rating		100 bar	10 Mpa
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	

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Inputs					
Inputs		counter reset			
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		1...240 l/min	0.06...14.4 m³/h	16...3804 gph	0.26...63.4 gpm
Display range		-288...288 l/min	-17.28...17.28 m³/h	-4565...4565 gph	-76.08...76.08 gpm
Resolution		0.1 l/min	0.001 m³/h	1 gph	0.02 gpm
Set point SP		2.3...240 l/min	0.139...14.4 m³/h	37...3804 gph	0.61...63.4 gpm
Reset point rP		1.1...238.8 l/min	0.064...14.325 m³/h	17...3784 gph	0.28...63.07 gpm
Analog start point ASP		-240...192 l/min	-14.4...11.522 m³/h	-3804...3044 gph	-63.4...50.73 gpm
Analog end point AEP		-191.9...240 l/min	-11.511...14.4 m³/h	-3041...3804 gph	-50.68...63.4 gpm
Low flow cut-off LFC		1...12 l/min	0.06...0.72 m³/h	16...190 gph	0.26...3.17 gpm
Frequency end point, FEP		48.1...240 l/min	2.889...14.4 m³/h	763...3804 gph	12.72...63.4 gpm
Frequency at the end point FRP	[Hz]	1...10000			
Volumetric flow quantity monitoring					
Pulse length	[s]	0.002...2			
Pulse value		0.02...99990000 gal			
Temperature monitoring					
Measuring range	[°C]	-20...100			
Display range	[°C]	-44...124			
Resolution	[°C]	0.1			
Set point SP	[°C]	-19.6...100			
Reset point rP	[°C]	-20...99.6			
Analog start point	[°C]	-20...76			
Analog end point	[°C]	4...100			
Frequency start point, FSP	[°C]	-20...76			
Frequency end point, FEP	[°C]	4...100			
Frequency at the end point FRP	[Hz]	1...10000			

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Accuracy / deviations			
Flow monitoring			
Accuracy (in the measuring range)		± (1,0 % MW + 0,5 % MEW)	
Repeatability		± 0,2 % MEW	
Temperature monitoring			
Accuracy	[K]	± 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	1463
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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Mechanical data		
Weight [g]		631.5
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		1" NPT DN25 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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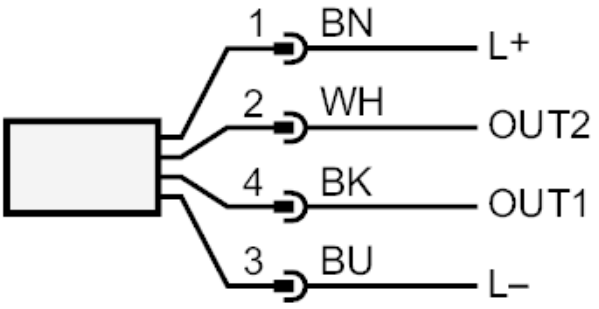
Connection



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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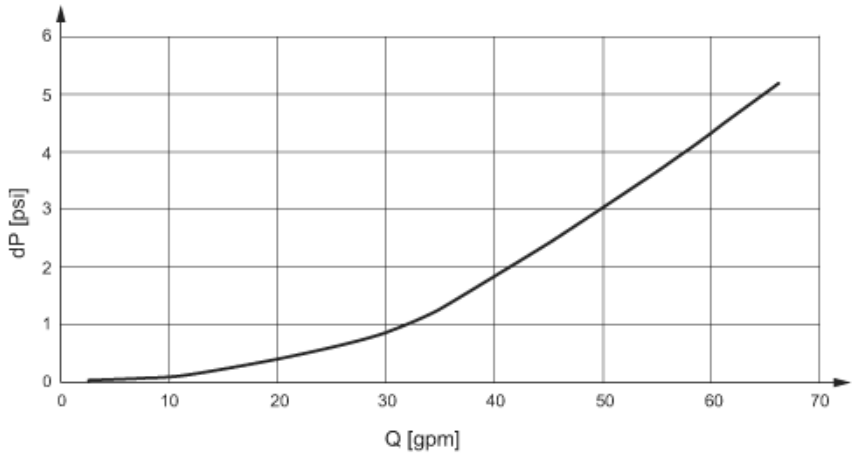
Diagrams and graphs

Note on pressure loss



derating ambient temperature