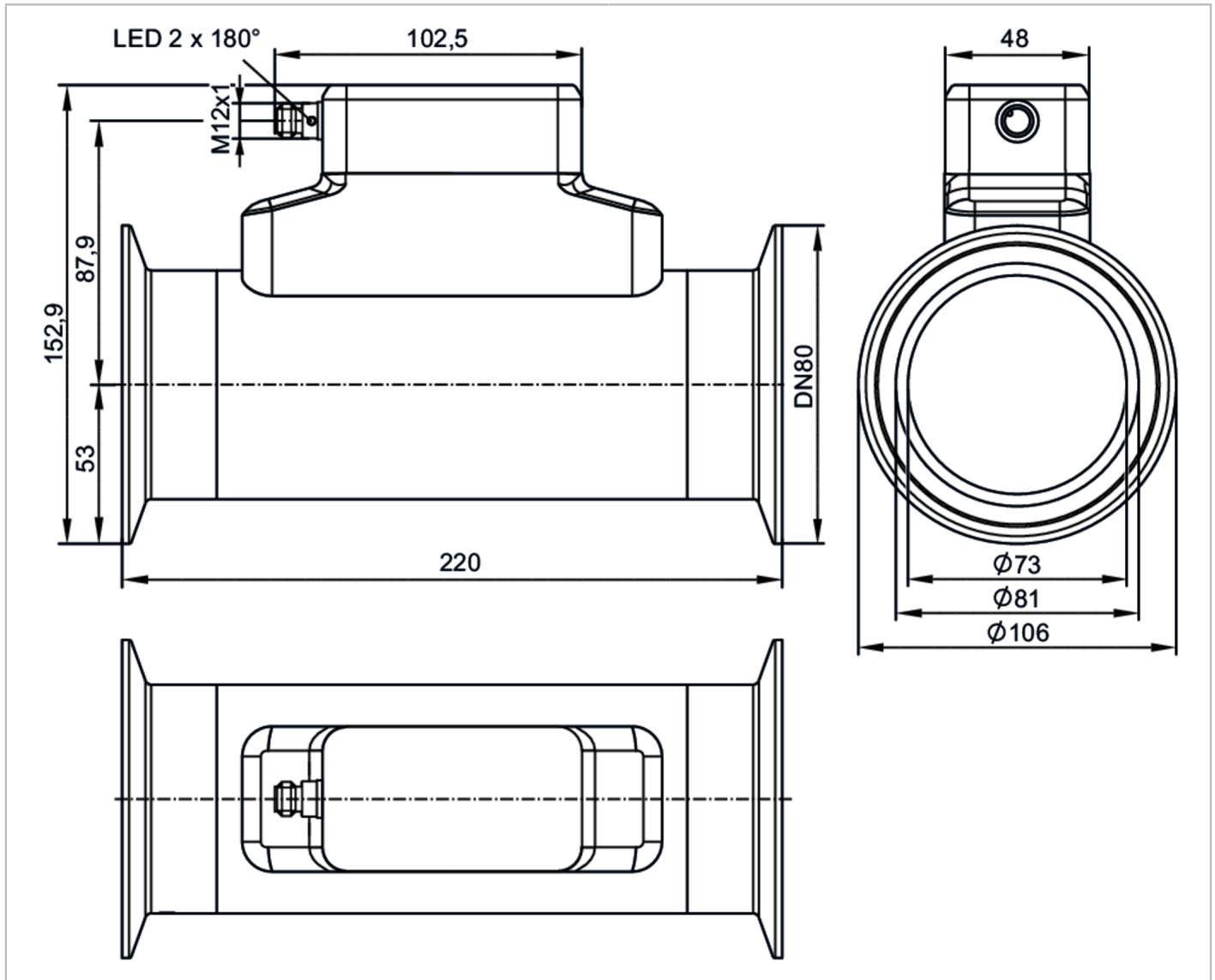


SUH620



Ultrasonic flow meter

SUC80XJBFRKG/US



ACS



EC 1935/2004

FCM



KTW/W270 Reg31

Product characteristics

Measuring range	25...3600 l/min	1.5...216 m ³ /h	400...57061 gph	6.6...951 gpm
Nominal diameter	DN80 (3")			
Process connection	Clamp DN80 DIN 32676 series A			

Application

Special feature	Gold-plated contacts			
Application	food and beverage industry			
Media	ultra-pure water; water; hydrous media			
Note on media	hydrous media: for media with >10 % additives, the repeatability is the only available value			
Medium temperature [°C]	-40...120; (< 1 h: 150)			
Min. burst pressure	40 bar	4 MPa		
Pressure rating	25 bar	2.5 MPa		
Note on pressure rating	take into account the pressure resistance of the bracket and the seal used for clamp connection			
Vacuum resistance [mbar]	-1000			

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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 / outputs					
Total number of inputs and outputs		2			
Inputs					
Inputs		OUT2		counter reset	
Outputs					
Total number of outputs		2			
Output signal		OUT1		switching signal; pulse signal; diagnostic signal; totaliser switching signal; frequency signal; IO-Link	
		OUT2		switching signal; pulse signal; diagnostic signal; totaliser switching signal; analogue signal	
Electrical design		PNP/NPN			
Pulse output		flow rate meter			
Short-circuit protection		yes			
Type of short-circuit protection		pulsed			
Overload protection		yes			
Analogue					
Number of analogue outputs		1			
Analogue current output	[mA]	4...20			
Max. load	[Ω]	500			
Digital					
Number of digital outputs		2			
Output function		normally open / normally closed; (parameterisable)			
Max. voltage drop switching output DC	[V]	2			
Permanent current rating of switching output DC	[mA]	100			
Switching frequency DC	[Hz]	0...10000			
Measuring/setting range					
Measuring range		25...3600 l/min	1.5...216 m ³ /h	400...57061 gph	6.6...951 gpm
Resolution		0.1 l/min	0.001 m ³ /h	1 gph	0.01 gpm
Note on factory setting		l/min, °C			
Set point SP		44.8...3600 l/min	2.7...216 m ³ /h	710...57061 gph	11.8...951 gpm
Reset point rP		26.1...3581.3 l/min	1.6...214.9 m ³ /h	413...56764 gph	6.9...946.1 gpm
Analogue start point ASP		-3600...2880 l/min	-216...172.8 m ³ /h	-57060...45650 gph	-951...760.8 gpm
Analogue end point AEP		-2880...3600 l/min	-172.8...216 m ³ /h	-45650...57060 gph	-760.8...951 gpm
Low flow cut-off LFC		25...180 l/min	1.5...10.8 m ³ /h	400...2850 gph	6.6...47.6 gpm

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Frequency end point, FEP	722.2...3600 l/min	43.3...216 m ³ /h	11450...57060 gph	190.8...951 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	-40...120 °C		-40...248 °F	
Resolution	0.1 °C		0.1 °F	
Set point SP	-39.4...120 °C		-39...248 °F	
Reset point rP	-40...119.4 °C		-40...247 °F	
Analogue start point	-40...88 °C		-40...190.4 °F	
Analogue end point	-8...120 °C		17.6...248 °F	
Frequency start point, FSP	-40...88 °C		-40...190.4 °F	
Frequency end point, FEP	-8...120 °C		17.6...248 °F	
Frequency at the end point FRP [Hz]	1...10000			
Accuracy / deviations				
Accuracy (in the measuring range)	only up to 100 °C; at higher temperatures, only the repeatability is within the specification.			
Flow monitoring				
Accuracy (in the measuring range)	water	± (2,0 % 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			
Response times				
Flow monitoring				
Response time [s]	< 0.5; (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	BLOB	Binary Large Object transfer		
	Common - I&D	Identification and Diagnosis		
Required master port type	A			
Process data analogue	3			
Process data binary	2			

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Min. process cycle time [ms]	9.6	
IO-Link process data (cyclical)	function	bit length
	totaliser	32
	Flow monitoring	32
	Temperature monitoring	32
	status	4
	Output 1	1
	Output 2	1
Supported DeviceIDs	Type of operation	DeviceID
	default	1856

Operating conditions		
Ambient temperature [°C]	-20...60	
Storage temperature [°C]	-25...80	
Protection	IP 69; (DIN EN 60529)	

Tests / approvals		
EMC	DIN 61326-1:2021	
Shock resistance	DIN IEC 68-2-27	20 g (11ms)
Vibration resistance	DIN IEC 68-2-6	20 g (10...2000Hz)
MTTF [years]	136	
UL approval	UL approval no.	I038
	File number UL	E174189
Pressure Equipment Directive	can be used for group 2 fluids; group 1 fluids on request	

Mechanical data		
Weight [g]	1975.15	
Housing	rectangular	
Inlet pipe length	15 x DN	
Outlet pipe length	3 x DN	
Dimensions [mm]	220 x 106 x 152.9	
Materials	housing: stainless steel (316L/1.4404); connector: PEI, FKM	
Materials (wetted parts)	Pipe section: stainless steel (316L/1.4435); Process connection: stainless steel (316L/1.4404)	
Nominal diameter	DN80 (3")	
Process connection	Clamp DN80 DIN 32676 series A	
Process connection suitable for pipe standard	DN80 / Ø 85 mm x 2 mm; (DIN 11866 series A); (DIN EN 10357 series A)	
Surface characteristics Ra/Rz of the wetted parts	Ra < 0.4 µm (16 µin); Rz = 4 µm (157 µin)	

Displays / operating elements		
Display	operating status	1 x LED, green

Accessories		
Items supplied	package insert	

Remarks		
Remarks	MW = measured value	
	MEW = Final value of the measuring range	
	pulse and totaliser signal are only available for one of the two outputs	
	the specified surface characteristics Ra/Rz of the wetted surfaces do not apply to the weld seam.	

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Pack quantity

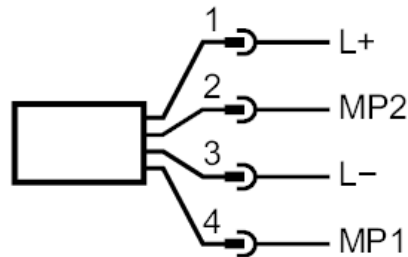
1 pcs.

Electrical connection - plug

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



Connection



1 (L+)	L+	
2 (OUT2)	MP2	DO2, AO, DI
3 (L-)	L-	
4 (OUT1)	MP1	DO1, FO, IO-Link

AO: analogue output; DI: digital input; DO: digital output; FO: frequency output; MP: multi-function connection

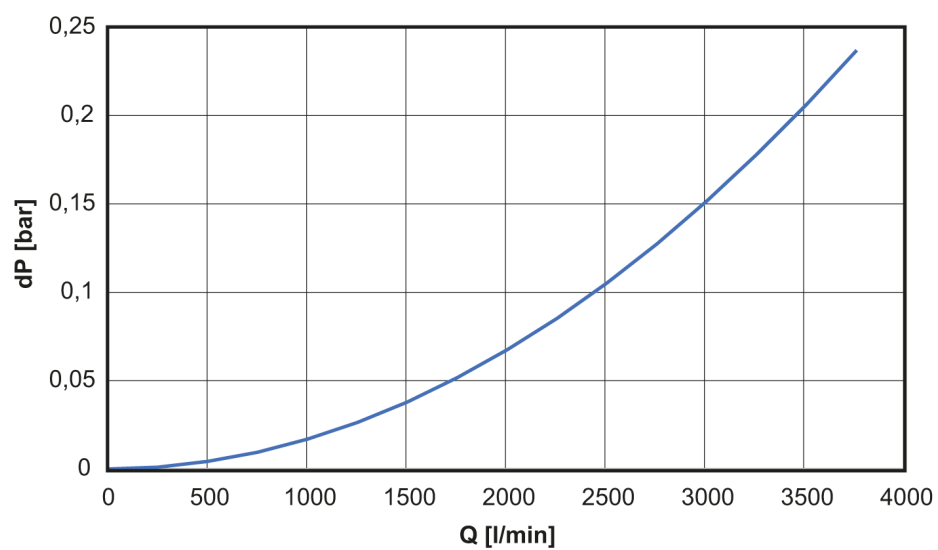
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Diagrams and graphs



dP [bar] Pressure loss
Q [l/min] volumetric flow quantity