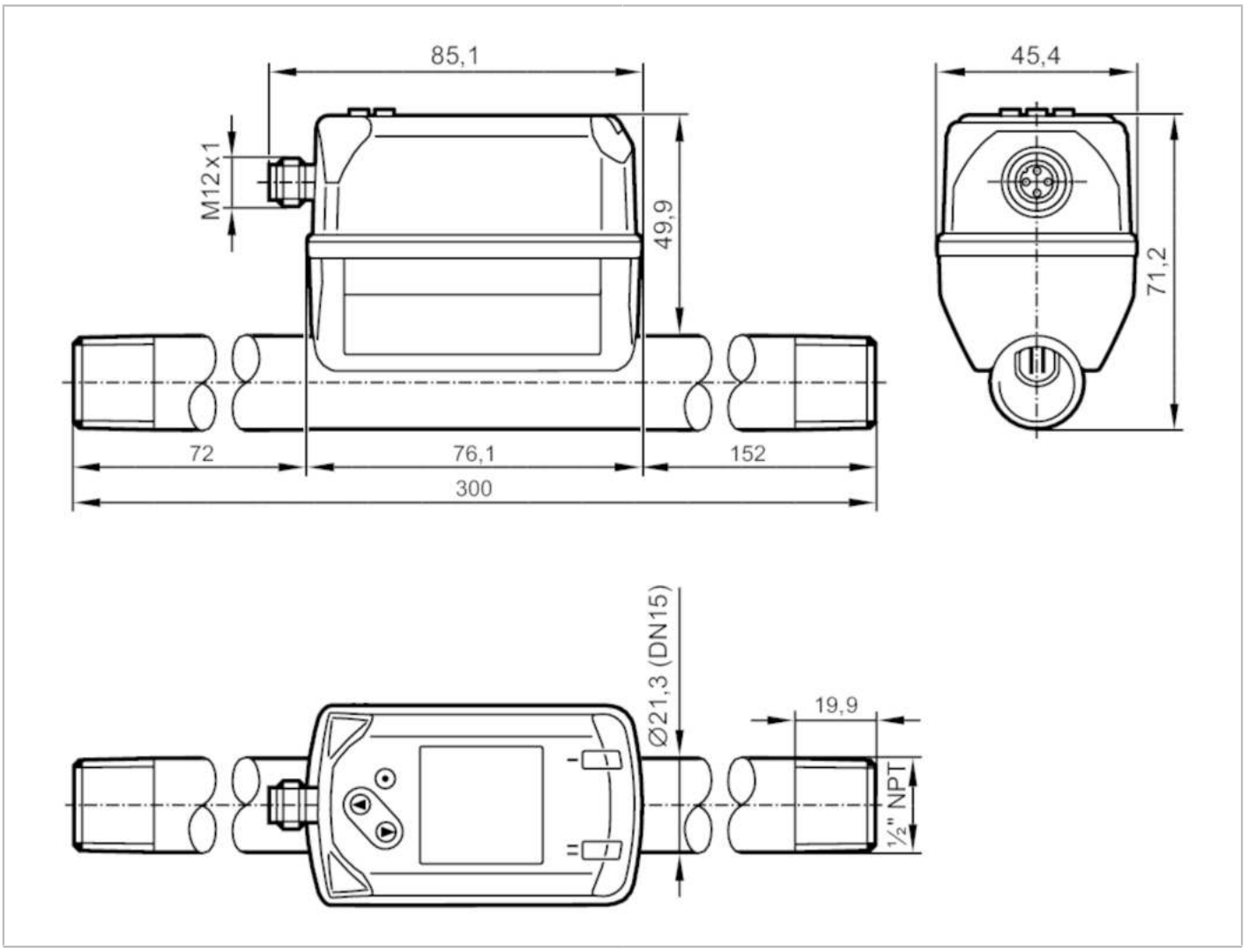
SD6601

Industrial gas counter

SDN12DGXFRKG/US-100



Product characteristics		
Number of inputs and outputs		Number of digital outputs: 2; Number of analogue outputs: 1
Process connection		threaded connection 1/2" NPT DN15
Pressure monitoring		
Measuring range	[psi]	-15...232
Application		
Application		for industrial applications
Media		Argon (Ar); carbon dioxide (CO2); nitrogen (N2); compressed air
Medium temperature	[°F]	14...140
Min. bursting pressure	[psi]	928
Pressure rating	[psi]	232
MAWP (for applications according to CRN)	[bar]	9.7
Electrical data		
Operating voltage	[V]	18...30 DC; (to SELV/PELV)
Current consumption	[mA]	< 80

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Protection class		III
Reverse polarity protection		yes
Power-on delay time	[s]	1
Inputs / outputs		
Number of inputs and outputs		Number of digital outputs: 2; Number of analogue outputs: 1
Inputs		
Inputs		counter reset
Outputs		
Output signal		switching signal; analogue signal; pulse signal; IO-Link; (configurable)
Electrical design		PNP/NPN
Number of digital outputs		2
Output function		normally open / normally closed; (parameterisable)
Max. voltage drop switching output DC	[V]	2.5
Permanent current rating of switching output DC	[mA]	150; (per output)
Number of analogue outputs		1
Analogue current output	[mA]	4...20; (scalable)
Max. load	[Ω]	500
Pulse output		consumed quantity meter
Short-circuit protection		yes
Type of short-circuit protection		pulsed
Overload protection		yes

Measuring/setting range				
Measuring range		8...2648 scfh	0.15...44.15 scfm	1...327.4 ft/s
Display range		0...3178 scfh	0...52.95 scfm	0...393 ft/s
Resolution		2 scfh	0.05 scfm	0.2 ft/s
Set point SP		23...2648 scfh	0.38...44.13 scfm	2.8...327.3 ft/s
Reset point rP		10...2635 scfh	0.16...43.91 scfm	1.2...325.7 ft/s
Analogue start point ASP		0...2119 scfh	0...35.31 scfm	0...261.9 ft/s
Analogue end point AEP		530...2649 scfh	8.83...44.14 scfm	65.5...327.4 ft/s
Low flow cut-off LFC		3...28 scfh	0.05...0.47 scfm	0.4...3.5 ft/s
In steps of		1 scfh	0.01 scfm	0.1 ft/s
Pressure monitoring				
Measuring range	[psi]	-15...232		
Display range	[psi]	-15...290		
Resolution	[psi]	1		
Set point SP	[psi]	-13...232		
Reset point rP	[psi]	-15...231		
Analogue start point	[psi]	-15...186		
Analogue end point	[psi]	32...232		
In steps of	[psi]	1		
Volumetric flow quantity monitoring				
Measuring range		0...100000000 m³	0...353146667.2 scf	

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Display range		0...100000000 m³	0...353146667.2 scf
Set point SP		0.001...10000000 m³	0.05...353146667.2 scf
Pulse value		0.001...10000000 m³	0.05...353146667.2 scf
In steps of		0.0001 m³	0.005 scf
Pulse length	[s]	0.002...2	
Temperature monitoring			
Measuring range		-10...60 °C	14...140 °F
Display range		-24...74 °C	-11.2...165.2 °F
Resolution		0.2 °C	0.5 °F
Set point SP		-9.7...60 °C	14.6...140 °F
Reset point rP		-10...59.7 °C	14...139.4 °F
Analogue start point		-10...46 °C	14...114.8 °F
Analogue end point		4...60 °C	39.2...140 °F
In steps of		0.1 °C	0.1 °F
Accuracy / deviations			
Temperature coefficient	[1/K]	± 0,07 % MW	
Accuracy (in the measuring range)		± (6 % MW + 0,6 % MEW)	
Repeatability		± (0,4 % MW + 0,1 % MEW)	
Pressure monitoring			
Repeatability [% of the final value]		± 0,2	
Characteristics deviation [% of the final value]		< ± 0,5; (BFSL = Best Fit Straight Line)	
Greatest TEMPCO of the span [% MEW / 10 K]		± 0,3	
Greatest TEMPCO of the zero point [% MEW / 10 K]		± 0,1	
Temperature monitoring			
Accuracy	[K]	± 0,5; (medium flow in the limit area of the flow measurement range)	
Response times			
Response time	[s]	0.1; (dAP = 0)	
Damping process value dAP	[s]	0...5	
Pressure monitoring			
Response time	[s]	0.05	
Temperature monitoring			
Dynamic response T05 / T09	[s]	T09 = 0,5	
Software / programming			
Parameter setting options		hysteresis / window; normally open / normally closed; current/pulse output; display can be rotated and switched off; Display unit; totaliser	
Interfaces			
Communication interface		IO-Link	
Transmission type		COM2 (38,4 kBaud)	
IO-Link revision		1.1	
SDCI standard		IEC 61131-9 CDV	

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Profiles		Digital Measuring Sensor (0x800A), Identification and Diagnosis (0x4000)	
SIO mode		yes	
Required master port type		A	
Process data analogue		8	
Process data binary		2	
Min. process cycle time	[ms]	7.2	
Supported DeviceIDs		Type of operation	DeviceID
		Default	865

Operating conditions

Ambient temperature	[°F]	32...140	
Storage temperature	[°F]	-4...185	
Max. relative air humidity	[%]	90	
Protection		IP 65; IP 67	

Tests / approvals

EMC		DIN EN 60947-5-9	
Vibration resistance		DIN EN 68000-2-6	5 g (10...2000 Hz)
MTTF	[years]	183	
UL approval		UL Approval no.	I012
		File number UL	E174189
Pressure Equipment Directive		Sound engineering practice; can be used for stable gases fluid group 2	

Mechanical data

Weight	[g]	742.5
Materials		PBT+PC-GF30; PPS GF40; stainless steel (1.4301 / 304); stainless steel (1.4305 / 303); steel (1.5523) galvanised; 2.0401 (brass / CW614N); FKM
Materials (wetted parts)		stainless steel (1.4301 / 304); stainless steel (1.4305 / 303); FKM; ceramics glass passivated; PPS GF40; Al2O3 (ceramics); acrylate
Process connection		threaded connection 1/2" NPT DN15

Displays / operating elements

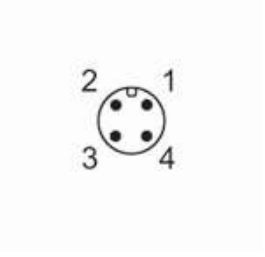
Display		colour display 1,44", 128 x 128 pixels
		2 x LED, yellow

Remarks

Remarks	MW = measured value
	MEW = Final value of the measuring range
	Standard conditions: 1013.25 mbar / 15 °C / 0 % relative humidity
	For information about installation and operation please see the operating instructions.
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A



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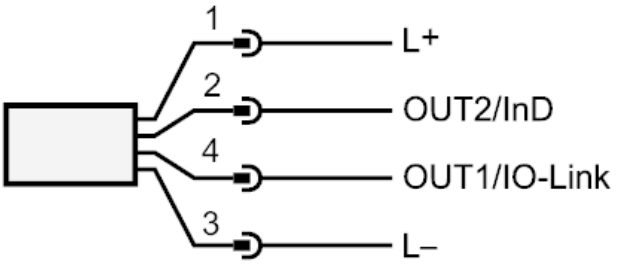
Connection



OUT1/IO-Link:	switching output flow switching output temperature switching output pressure Pulse output quantity meter signal output Preset counter
OUT2/InD:	switching output flow switching output temperature switching output pressure analogue output flow analogue output temperature analogue output pressure signal output Preset counter Pulse output quantity meter input counter reset