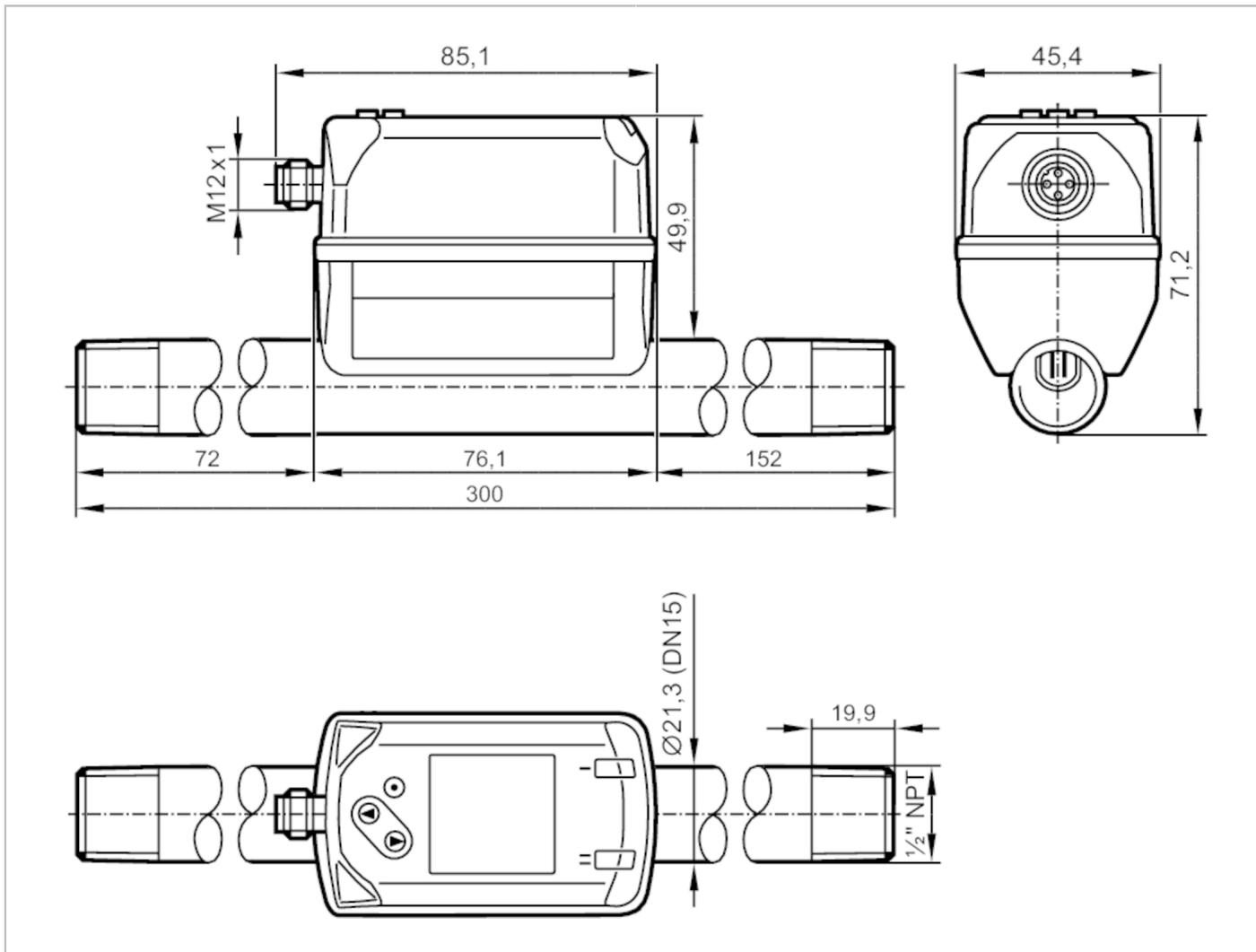


SD6601



Industrial gas counter

SDN12DGXFRKG/US-100



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1		
Measuring range	8...2648 scfh	0.15...44.15 scfm	1...327.4 ft/s
Process connection	threaded connection 1/2" NPT external thread DN15		

Application

Application	for industrial applications		
Media	Argon (Ar); carbon dioxide (CO ₂); nitrogen (N ₂); 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	
Protection class		III	

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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 m ³	0...353146667.2 scf
Display range	0...100000000 m ³	0...353146667.2 scf
Set point SP	0.001...10000000 m ³	0.05...353146667.2 scf

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Pulse value	0.001...10000000 m ³	0.05...353146667.2 scf
In steps of	0.0001 m ³	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	
Profiles	Digital Measuring Sensor (0x800A), Identification and Diagnosis (0x4000)	

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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
Housing		rectangular
Dimensions	[mm]	300 x 45.4 x 71.2
Materials		PBT+PC-GF30; PPS GF40; stainless steel (304/1.4301); stainless steel (303/1.4305); steel (1.5523) galvanised; 2.0401 (brass / CW614N); FKM
Materials (wetted parts)		stainless steel (304/1.4301); stainless steel (303/1.4305); FKM; ceramics glass passivated; PPS GF40; Al2O3 (ceramics); acrylate
Process connection		threaded connection 1/2" NPT external thread 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.

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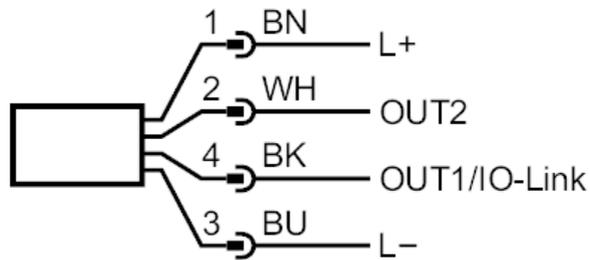
SDN12DGXFRKG/US-100

Electrical connection

Connector: 1 x M12; coding: A



Connection



OUT1/IO-Link: switching output flow
switching output temperature
switching output pressure
Pulse output quantity meter

OUT2/InD: signal output Preset counter
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