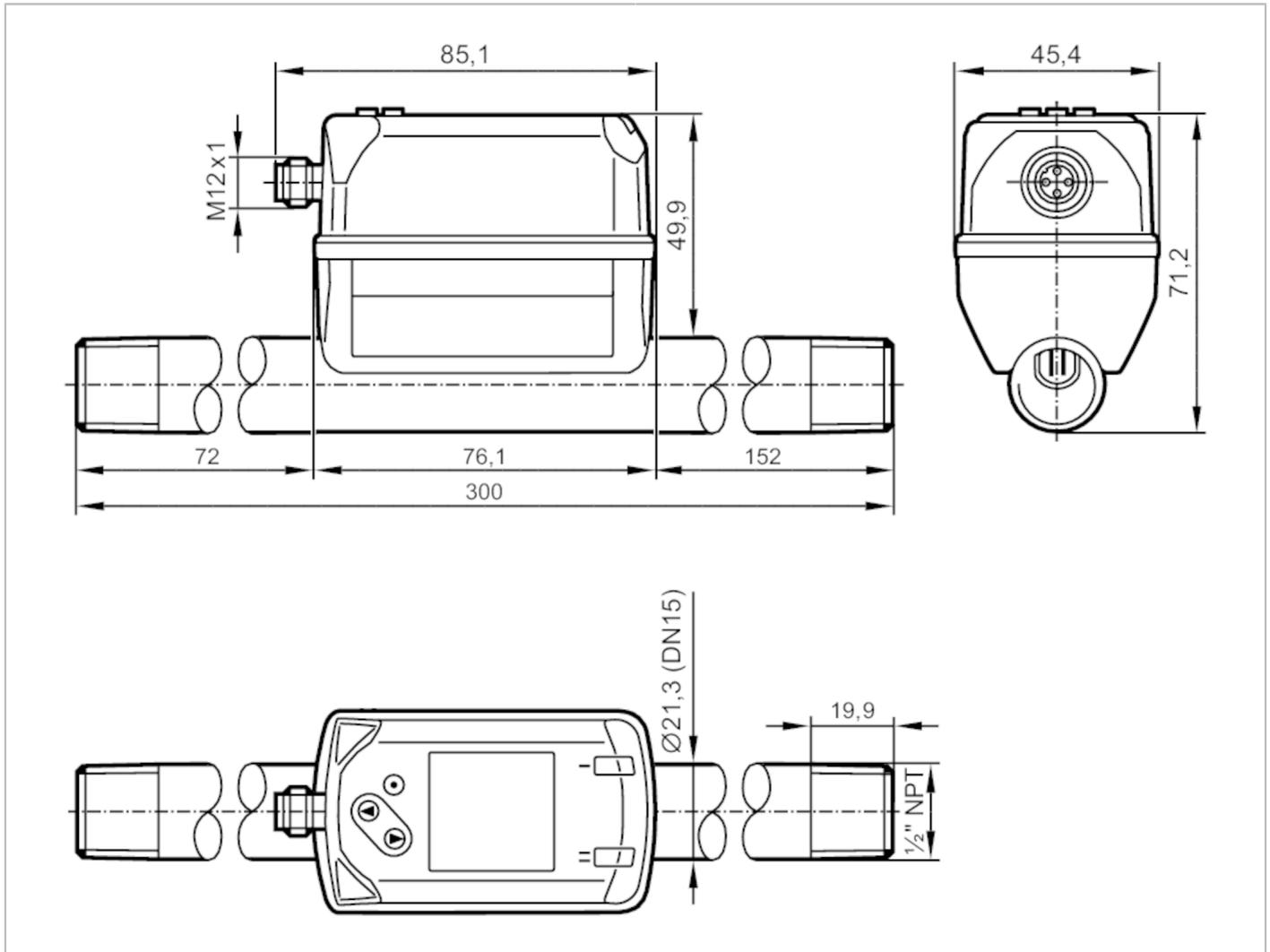


# SD6601



## Industrial gas counter

SDN12DGXFRKG/US-100



Product characteristics	
Number of inputs and outputs	Number of digital outputs: 2; Number of analog 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 <sub>2</sub> ); nitrogen (N <sub>2</sub> ); compressed air
Medium temperature [°F]	14...140
Min. burst 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 analog outputs: 1
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### Inputs

Inputs	counter reset
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### Outputs

Output signal	switching signal; analog signal; pulse signal; IO-Link; (configurable)
Electrical design	PNP/NPN
Number of digital outputs	2
Output function	normally open / closed; (configurable)
Max. voltage drop switching output DC [V]	2.5
Permanent current rating of switching output DC [mA]	150; (per output)
Number of analog outputs	1
Analog current output [mA]	4...20; (scalable)
Max. load [ $\Omega$ ]	500
Pulse output	consumed quantity meter
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
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
Analog start point ASP	0...2119 scfh	0...35.31 scfm	0...261.9 ft/s
Analog 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
Analog start point [psi]	-15...186
Analog end point [psi]	32...232
In steps of [psi]	1

### Volumetric flow quantity monitoring

Measuring range	0...100000000 m <sup>3</sup>	0...353146667.2 scf
Display range	0...100000000 m <sup>3</sup>	0...353146667.2 scf
Set point SP	0.001...10000000 m <sup>3</sup>	0.05...353146667.2 scf

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Pulse value	0.001...10000000 m <sup>3</sup>	0.05...353146667.2 scf
In steps of	0.0001 m <sup>3</sup>	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
Analog start point	-10...46 °C	14...114.8 °F
Analog 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)	

Reaction 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 / closed; current/pulse output; display can be rotated and switched off; Display unit; totalizer	

Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution

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SIO mode		yes
Required master port class		A
Process data analog		8
Process data binary		2
Min. process cycle time	[ms]	7.2
Supported DeviceIDs	<b>Type of operation</b>	<b>DeviceID</b>
	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 number	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
Material		PBT+PC-GF30; PPS GF40; stainless steel (1.4301 / 304); stainless steel (1.4305 / 303); steel (1.5523) galvanized; 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 external thread DN15

Displays / operating elements		
Display		Color 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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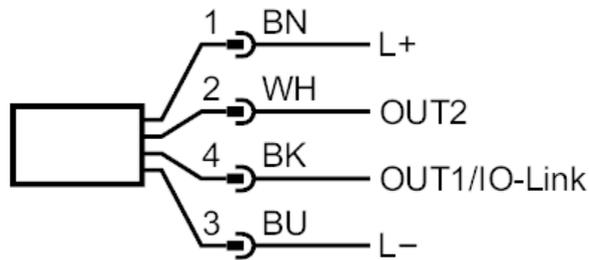
SDN12DGXFRKG/US-100

### 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
  - signal output Preset counter
- OUT2/InD:
  - Switching output flow
  - Switching output temperature
  - Switching output pressure
  - analog output flow
  - analog output temperature
  - analog output pressure
  - signal output Preset counter
  - Pulse output quantity meter
  - Input counter reset