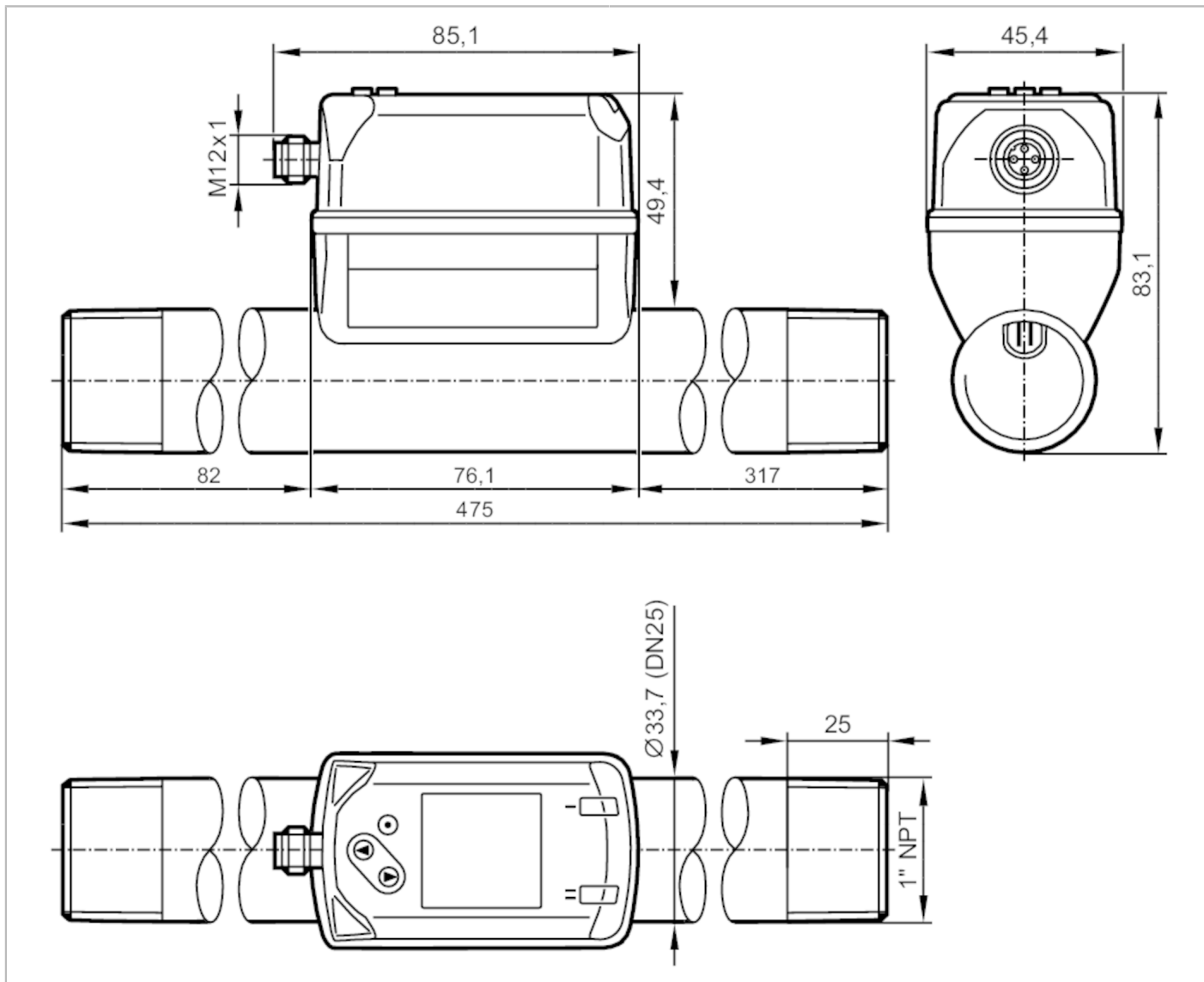


# SD8601



## Industrial gas counter

SDN11DGXFRKG/US-100



### Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1	
Measuring range [scfh]	25...7945	
Measuring range [scfm]	0.4...132.4	
Measuring range [ft/s]	1.2...340.2	
Process connection	threaded connection 1" NPT DN25	

### 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. bursting pressure [psi]	928	
Pressure rating [psi]	232	
MAWP (for applications according to CRN) [bar]	10.5	

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Electrical data		
Operating voltage	[V]	18...30 DC; (to SELV/PELV)
Current consumption	[mA]	< 80
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 analog outputs: 1
Inputs		
Inputs		counter reset
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	[Ω]	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	[scfh]	25...7945
Measuring range	[scfm]	0.4...132.4
Measuring range	[ft/s]	1.2...340.2
Display range	[scfh]	0...9535
Display range	[scfm]	0...158.9
Display range	[ft/s]	0...408.2
Resolution	[scfh]	5
Resolution	[scfm]	0.1
Resolution	[ft/s]	0.2
Set point SP	[scfh]	69...7943
Set point SP	[scfm]	1.1...132.4
Set point SP	[ft/s]	3...340.1
Reset point rP	[scfh]	30...7904
Reset point rP	[scfm]	0.5...131.7
Reset point rP	[ft/s]	1.3...338.4
Analog start point ASP	[scfh]	0...6357

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Analog start point ASP	[scfm]	0...105.9
Analog start point ASP	[ft/s]	0...272.2
Analog end point AEP	[scfh]	1589...7946
Analog end point AEP	[scfm]	26.5...132.4
Analog end point AEP	[ft/s]	68...340.2
Low flow cut-off LFC	[scfh]	9...85
Low flow cut-off LFC	[scfm]	0.2...1.4
Low flow cut-off LFC	[ft/s]	0.4...3.6
In steps of	[scfh]	1
In steps of	[scfm]	0.1
In steps of	[ft/s]	0.1

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
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]	0.007...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); (at medium temperature 73 °F)
Repeatability		± (0,4 % MW + 0,1 % MEW)

Pressure monitoring		
Repeatability		± 0,2
	[% of the final value]	
Characteristics deviation		< ± 0,5; (BFSL = Best Fit Straight Line)

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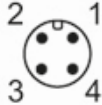
	[% of the final value]	
Greatest TEMPCO of the span	[% MEW / 10 K]	± 0,3
Greatest TEMPCO of the zero point	[% MEW / 10 K]	± 0,1
<b>Temperature monitoring</b>		
Accuracy	[K]	± 0,5; (medium flow in the limit area of the flow measurement range)
<b>Reaction times</b>		
Response time	[s]	0.1; (dAP = 0)
Damping process value dAP	[s]	0...5
<b>Pressure monitoring</b>		
Response time	[s]	0.05
<b>Temperature monitoring</b>		
Dynamic response T05 / T09	[s]	T09 = 0,5
<b>Software / programming</b>		
Parameter setting options		hysteresis / window; normally open / closed; current/pulse output; display can be rotated and switched off; Display unit; totalizer
<b>Interfaces</b>		
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)
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	1292
<b>Operating conditions</b>		
Ambient temperature	[°F]	32...140
Storage temperature	[°C]	-4...185
Max. relative air humidity	[%]	90
Protection		IP 65; IP 67
<b>Tests / approvals</b>		
EMC		DIN EN 60947-5-9
Vibration resistance		DIN EN 68000-2-6
MTTF	[years]	5 g (10...2000 Hz)
UL approval		183
	UL approval number	I012
	File number UL	E174189
Pressure equipment directive		sound engineering practice; can be used for stable gases fluid group 2

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SDN11DGXFRKG/US-100

Mechanical data	
Weight [g]	1608.8
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; Al <sub>2</sub> O <sub>3</sub> (ceramics); acrylate
Process connection	threaded connection 1" NPT DN25
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.
Electrical connection	
Connector: 1 x M12; coding: A	
	

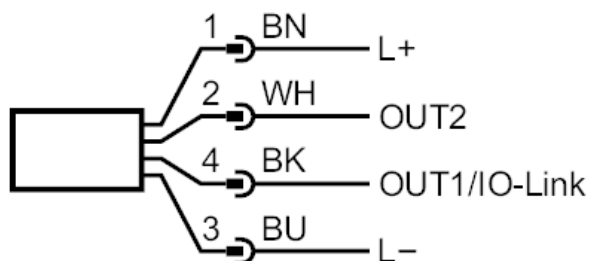
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## Industrial gas counter

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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 analog output flow analog output temperature analog output pressure signal output Preset counter Pulse output quantity meter Input counter reset