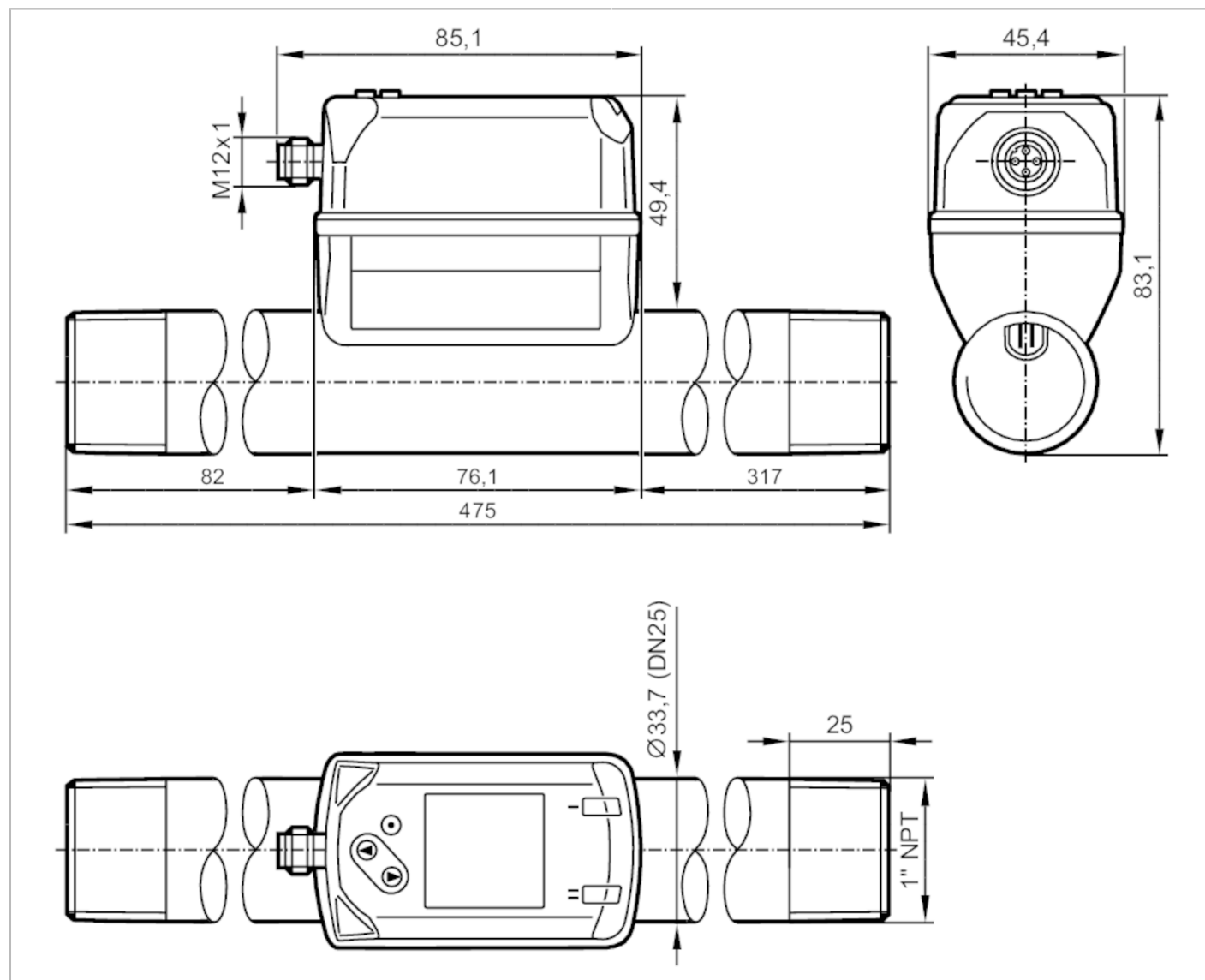


SD8601

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	25...7945 scfh	0.4...132.4 scfm	1.2...340.2 ft/s
Process connection	threaded connection 1" NPT external thread DN25		

Application

Application	for industrial applications		
Media	Argon (Ar); carbon dioxide (CO ₂); nitrogen (N ₂); compressed air		
Medium temperature [°F]	14...140		
Min. burst pressure [psi]	928		
Pressure rating [psi]	232		
MAWP (for applications according to CRN) [bar]	10.5		

Electrical data

Operating voltage [V]	18...30 DC; (to SELV/PELV)
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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
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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	[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	25...7945 scfh	0.4...132.4 scfm	1.2...340.2 ft/s
Display range	0...9535 scfh	0...158.9 scfm	0...408.2 ft/s
Resolution	5 scfh	0.1 scfm	0.2 ft/s
Set point SP	69...7943 scfh	1.1...132.4 scfm	3...340.1 ft/s
Reset point rP	30...7904 scfh	0.5...131.7 scfm	1.3...338.4 ft/s
Analog start point ASP	0...6357 scfh	0...105.9 scfm	0...272.2 ft/s
Analog end point AEP	1589...7946 scfh	26.5...132.4 scfm	68...340.2 ft/s
Low flow cut-off LFC	9...85 scfh	0.2...1.4 scfm	0.4...3.6 ft/s
In steps of	1 scfh	0.1 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



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Volumetric flow quantity monitoring		
Measuring range	0...100000000 m³	0...353146667.2 scf
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]	0.007...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 [% 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)	

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IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
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	Type of operation	DeviceID
	default	1292

Operating conditions

Ambient temperature [°F]	32...140
Storage temperature [°C]	-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]	1608.8
Housing	rectangular
Dimensions [mm]	475 x 45.4 x 83.1
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" NPT external thread 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.

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Industrial gas counter

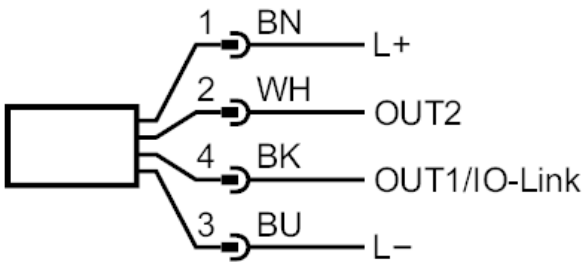
SDN11DGXFRKG/US-100

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 |