



THE DATASHEET OF SD6601

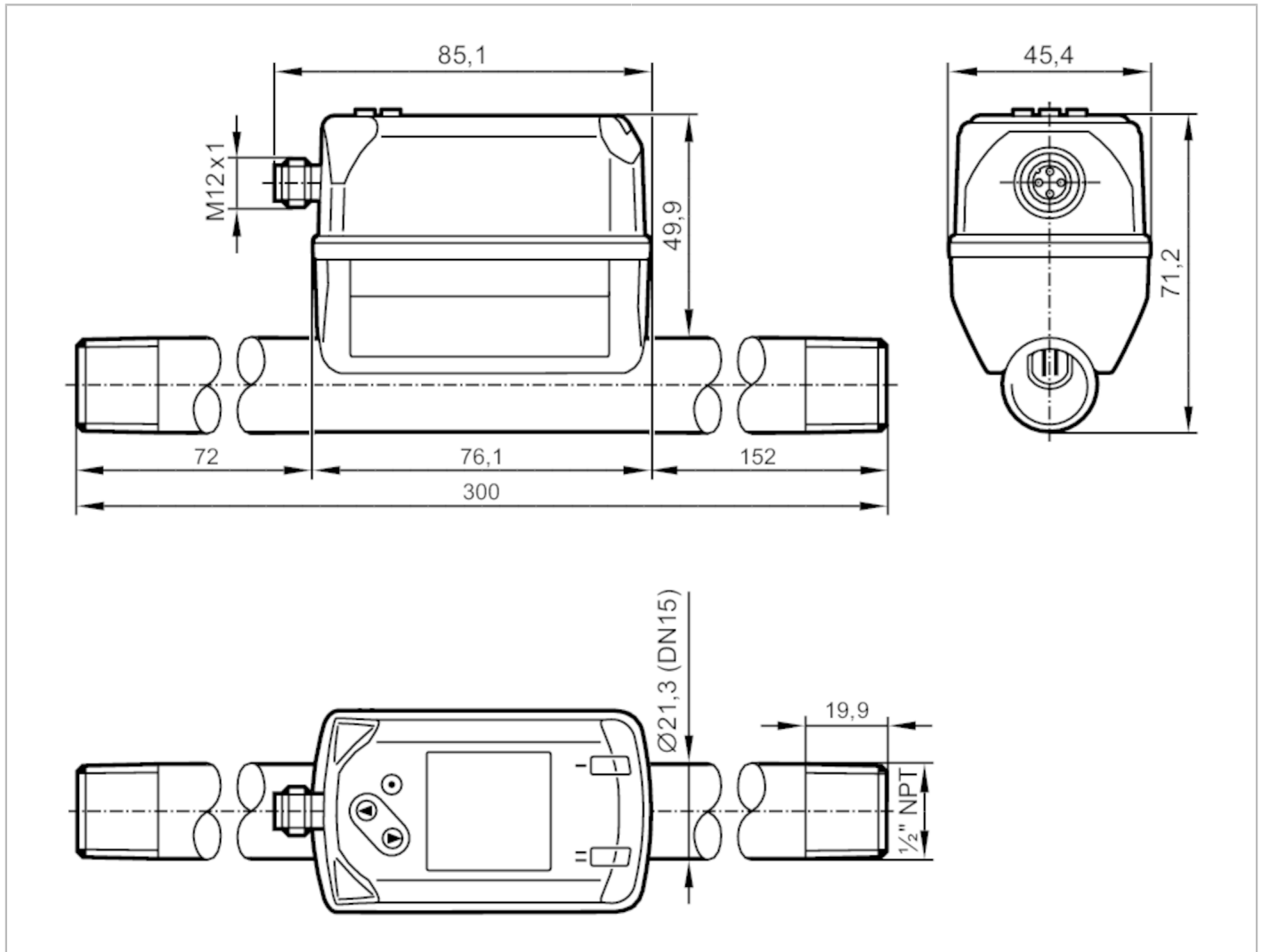


SD6601



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 [scfh]	8...2648
Measuring range [scfm]	0.15...44.15
Measuring range [ft/s]	1...327.4
Process connection	threaded connection 1/2" NPT 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)

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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 analogue outputs: 1
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Inputs

Inputs	counter reset
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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	[scfh]	8...2648
Measuring range	[scfm]	0.15...44.15
Measuring range	[ft/s]	1...327.4
Display range	[scfh]	0...3178
Display range	[scfm]	0...52.95
Display range	[ft/s]	0...393
Resolution	[scfh]	2
Resolution	[scfm]	0.05
Resolution	[ft/s]	0.2
Set point SP	[scfh]	23...2648
Set point SP	[scfm]	0.38...44.13
Set point SP	[ft/s]	2.8...327.3
Reset point rP	[scfh]	10...2635
Reset point rP	[scfm]	0.16...43.91
Reset point rP	[ft/s]	1.2...325.7
Analogue start point ASP	[scfh]	0...2119
Analogue start point ASP	[scfm]	0...35.31
Analogue start point ASP	[ft/s]	0...261.9

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Analogue end point AEP	[scfh]	530...2649
Analogue end point AEP	[scfm]	8.83...44.14
Analogue end point AEP	[ft/s]	65.5...327.4
Low flow cut-off LFC	[scfh]	3...28
Low flow cut-off LFC	[scfm]	0.05...0.47
Low flow cut-off LFC	[ft/s]	0.4...3.5
In steps of	[scfh]	1
In steps of	[scfm]	0.01
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
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
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		± 0,3

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	[% MEW / 10 K]	
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)	
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 default	DeviceID 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

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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; Al ₂ O ₃ (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.
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Electrical connection

Connector: 1 x M12; coding: A



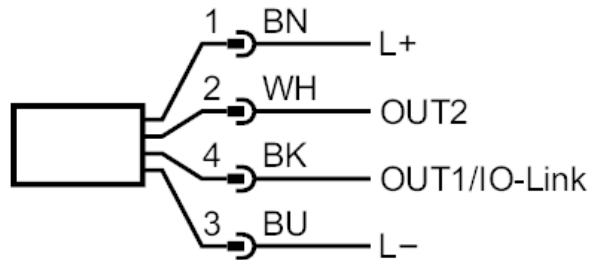
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Connection





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

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