

SD6101



Industrial gas counter

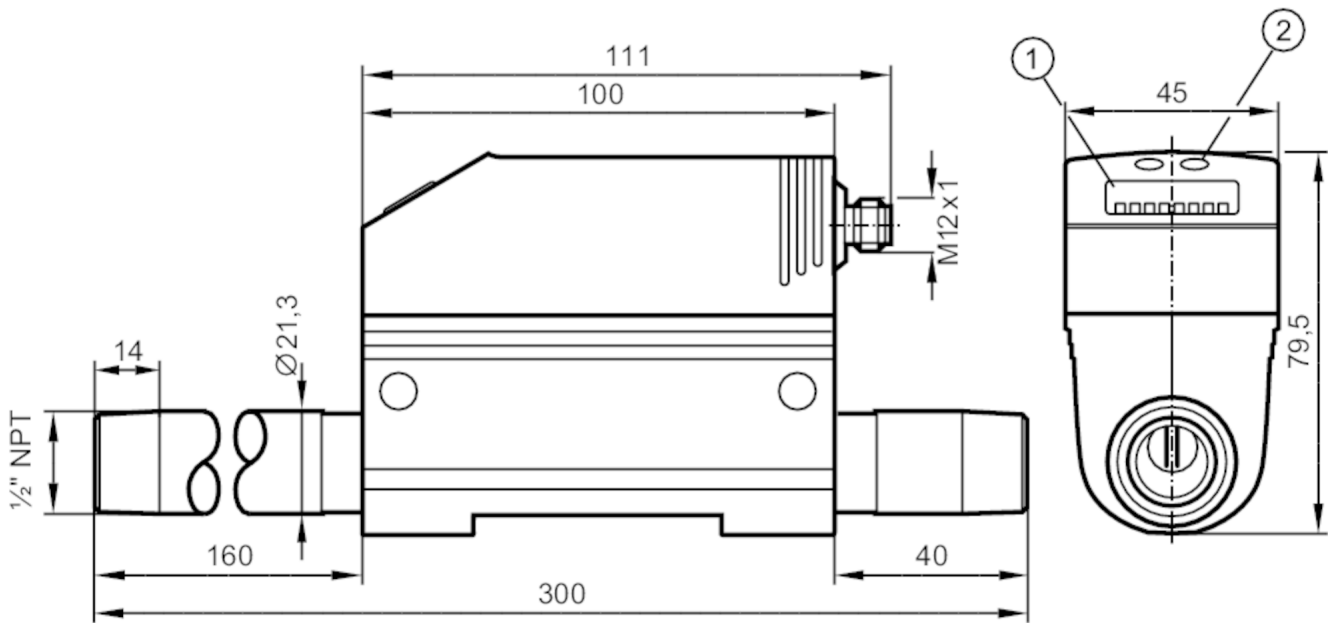
SDN12DGXFPKG/US-100

Article to be discontinued

Discontinuation date: 12/31/2024

Alternative articles: SD6601

When selecting an alternative article and accessories please note that technical data may differ!



- 1 alphanumeric display 4-digit
2 Programming buttons



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1		
Process connection	threaded connection 1/2" NPT external thread DN15		
Ar			
Measuring range	15...4310 scfh	0.2...71.8 scfm	2...552 sfs
CO2			
Measuring range	10...2640 scfh	0.15...44 scfm	1...338.5 sfs
N2			
Measuring range	10...2650 scfh	0.15...44.15 scfm	1...339.5 sfs

Application

Application	for industrial applications		
Media	Argon (Ar); carbon dioxide (CO ₂); nitrogen (N ₂)		
Medium temperature [°F]	32...140		
Pressure rating	16 bar	232 psi	1.6 MPa
MAWP (for applications according to CRN) [bar]	16		

Electrical data

Operating voltage [V]	18...30 DC; (to SELV/PELV)		
Current consumption [mA]	< 100		



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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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Outputs

Total number of outputs	2
Output signal	switching signal; analog signal; pulse signal; IO-Link; (configurable)
Electrical design	PNP
Number of digital outputs	2
Output function	normally open / closed; (configurable)
Max. voltage drop switching output DC [V]	2
Permanent current rating of switching output DC [mA]	250; (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

Low flow cut-off LFC	< 46 scfh	< 0.76 scfm	1...5.8 sfs
Measuring dynamics	1:300		

Volumetric flow quantity monitoring

Pulse value	0.040...4 000 000 scf
In steps of	0.020...1000 scf
Pulse length [s]	0,007...2

Ar			
Measuring range	15...4310 scfh	0.2...71.8 scfm	2...552 sfs
Display range	0...5170 scfh	0...86.2 scfm	0...663 sfs
Resolution	5 scfh	0.1 scfm	1 sfs
Set point SP	40...4310 scfh	0.7...71.8 scfm	5...552 sfs
Reset point rP	20...4290 scfh	0.4...71.5 scfm	3...550 sfs
Analog start point ASP	0...3445 scfh	0...57.4 scfm	0...442 sfs
Analog end point AEP	860...4310 scfh	14.4...71.8 scfm	110...552 sfs
In steps of	5 scfh	0.1 scfm	1 sfs

CO2

Measuring range	10...2640 scfh	0.15...44 scfm	1...338.5 sfs
Display range	0...3170 scfh	0...52.8 scfm	0...406 sfs
Resolution	5 scfh	0.05 scfm	0.5 sfs
Set point SP	25...2640 scfh	0.4...44 scfm	3...338.5 sfs
Reset point rP	15...2630 scfh	0.2...43.8 scfm	1.5...337 sfs
Analog start point ASP	0...2110 scfh	0...35.2 scfm	0...271 sfs

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Analog end point AEP		530...2640 scfh	8.8...44 scfm	67.5...338.5 sfs
In steps of		5 scfh	0.05 scfm	0.5 sfs
N2				
Measuring range		10...2650 scfh	0.15...44.15 scfm	1...339.5 sfs
Display range		0...3175 scfh	0...52.95 scfm	0...407.5 sfs
Resolution		5 scfh	0.05 scfm	0.5 sfs
Set point SP		25...2650 scfh	0.4...44.15 scfm	3...339.5 sfs
Reset point rP		15...2635 scfh	0.2...43.95 scfm	1.5...338 sfs
Analog start point ASP		0...2120 scfh	0...35.3 scfm	0...271.5 sfs
Analog end point AEP		530...2650 scfh	8.85...44.15 scfm	68...339.5 sfs
In steps of		5 scfh	0.05 scfm	0.5 sfs
Temperature monitoring				
Measuring range		[°F]	32...140	
Display range		[°F]	10.5...161.5	
Resolution		[°F]	0.5	
Set point SP		[°F]	32.5...140	
Reset point rP		[°F]	32...139.5	
Analog start point		[°F]	32...118.5	
Analog end point		[°F]	53.5...140	
In steps of		[°F]	0.5	
Accuracy / deviations				
Flow monitoring				
Repeatability		± 1,5		
[% of the measured value]				
Accuracy (in the measuring range)		± (6 % MW + 0,6 % MEW); (conditions: installation to DIN ISO 2533; installation in pipes: DN15)		
Temperature monitoring				
Accuracy		[K]	± 2; (medium flow in the limit area of the flow measurement range)	
Reaction times				
Flow monitoring				
Response time		[s]	0.1; (dAP = 0)	
Damping process value dAP in steps		[s]	0 - 0,2 - 0,4 - 0,6 - 0,8 - 1	
Software / programming				
Parameter setting options		Flow monitoring; quantity meter; Preset counter; hysteresis / window; normally open / closed; current/pulse output; display can be rotated and switched off; Display unit; medium selection		
Interfaces				
Communication interface		IO-Link		
Transmission type		COM2 (38,4 kBaud)		
IO-Link revision		1.1		
SDCI standard		IEC 61131-9		
Profiles		Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis		
SIO mode		yes		

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Required master port class	A	
Process data analog	3	
Process data binary	2	
Min. process cycle time [ms]	4.1	
Supported DeviceIDs	Type of operation	DeviceID
	default	266

Operating conditions		
Ambient temperature [°F]	32...140	
Storage temperature [°F]	-4...185	
Max. relative air humidity [%]	90	
Protection	IP 65	

Tests / approvals		
EMC	EN 61000-4-2 ESD	4 kV CD / 8 kV AD
	EN 61000-4-3 HF radiated	10 V/m
	EN 61000-4-4 Burst	2 kV
	EN 61000-4-6 HF conducted	10 V
Vibration resistance	DIN IEC 68-2-6	5 g (55...2000 Hz)
MTTF [years]	227	
Pressure equipment directive	sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

Mechanical data		
Weight [g]	925.5	
Housing	rectangular	
Dimensions [mm]	300 x 45 x 79.5	
Material	PBT-GF20; PC; PC; stainless steel (1.4301 / 304); FKM	
Materials (wetted parts)	stainless steel (1.4301 / 304); ceramics glass passivated; PEEK; polyester; FKM; aluminum anodized	
Process connection	threaded connection 1/2" NPT external thread DN15	

Displays / operating elements		
Display	Display unit	4 x LED, green (scfm, scfh, scf, °F)
	Function display	1 x LED, yellow
	Switching status	2 x LED, yellow
	Measured values	alphanumeric display, 4-digit
	Programming	alphanumeric display, 4-digit
Display unit	scfm; scfh; scf; °F	

Remarks		
Remarks	MW = Measured value	
	MEW = Final value of the measuring range	
	Measuring, display and setting ranges refer to standard volume flow according to DIN ISO 2533.	
Pack quantity	1 pcs.	

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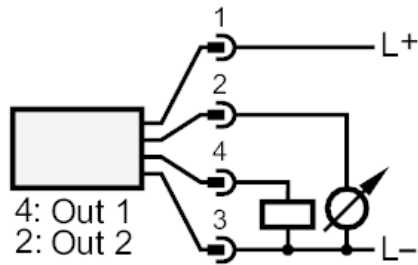
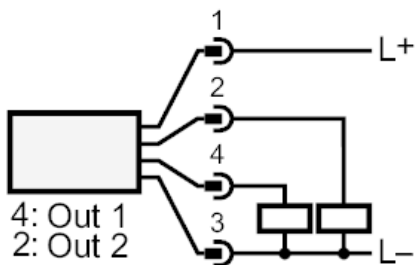
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Electrical connection

Connector: 1 x M12; coding: A



Connection



OUT1:	Switching output Pulse output quantity meter signal output Preset counter
OUT2:	Switching output analog output