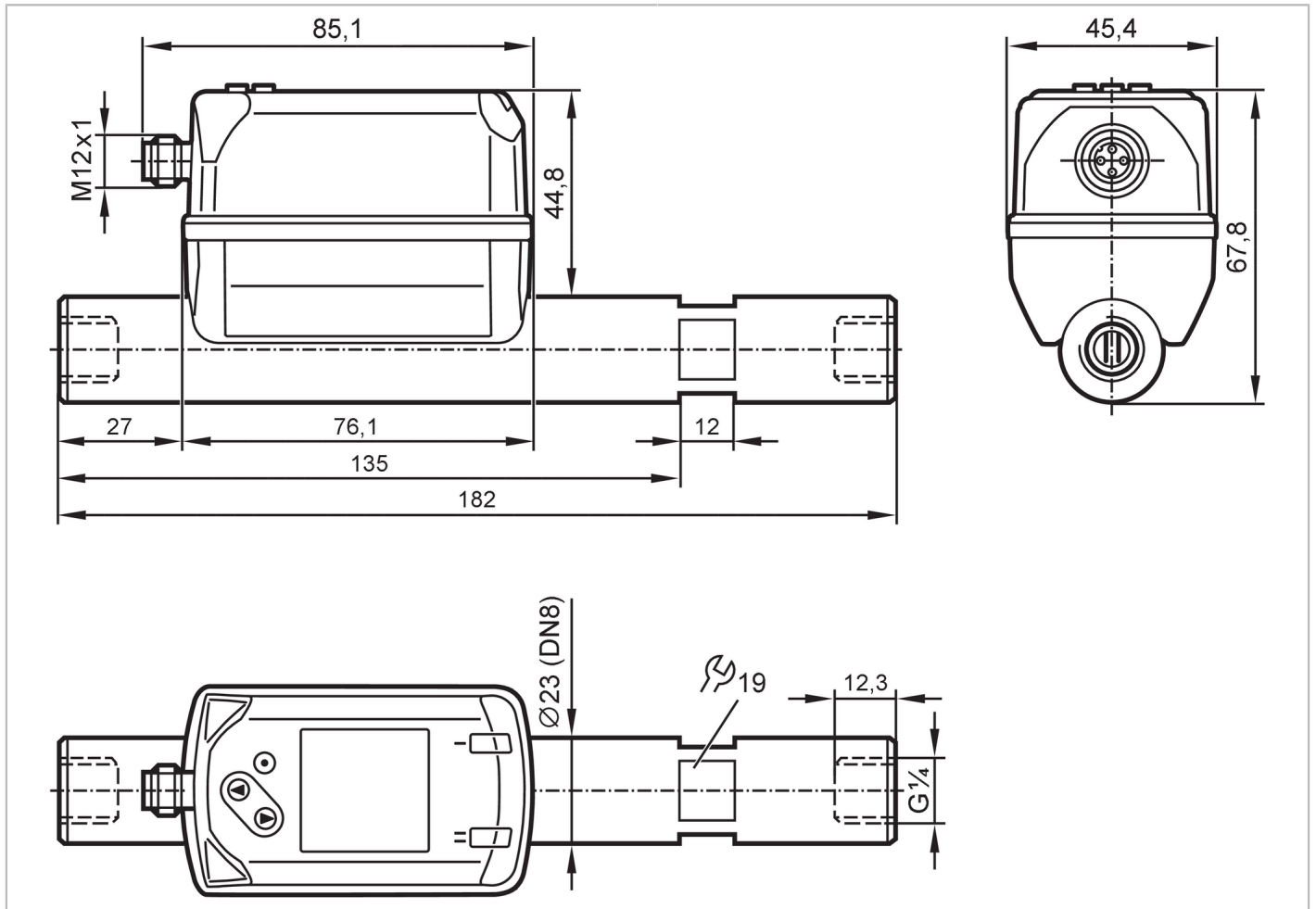


# SD5600



## Industrial gas counter

SDR14DGXFRKG/US-100



### Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1		
Measuring range	0.8...250 l/min	0.3...82.9 m/s	0.05...15 m <sup>3</sup> /h
Process connection	threaded connection G 1/4 Internal thread DN8		

### Application

Application	for industrial applications		
Media	Argon (Ar); carbon dioxide (CO <sub>2</sub> ); nitrogen (N <sub>2</sub> ); compressed air		
Medium temperature [°C]	-10...60		
Min. burst pressure	64 bar	6.4 MPa	
Pressure rating	16 bar	1.6 MPa	
MAWP (for applications according to CRN) [bar]	9.5		

### 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		

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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	0.8...250 l/min	0.3...82.9 m/s	0.05...15 m³/h
Display range	0...300 l/min	0...99.5 m/s	0...18 m³/h
Resolution	0.2 l/min	0.1 m/s	0.01 m³/h
Set point SP	2.2...249.9 l/min	0.7...82.9 m/s	0.13...14.99 m³/h
Reset point rP	0.9...248.7 l/min	0.3...82.5 m/s	0.06...14.92 m³/h
Analog start point ASP	0...200 l/min	0...66.3 m/s	0...12 m³/h
Analog end point AEP	50...250 l/min	16.6...82.9 m/s	3...15 m³/h
Low flow cut-off LFC	0.3...2.7 l/min	0.1...0.9 m/s	0.02...0.16 m³/h
In steps of	0.1 l/min	0.1 m/s	0.01 m³/h
Pressure monitoring			
Measuring range [bar]	-1...16		
Display range [bar]	-1...20		
Resolution [bar]	0.05		
Set point SP [bar]	-0.92...16		
Reset point rP [bar]	-1...15.92		
Analog start point [bar]	-1...12.8		
Analog end point [bar]	2.2...16		
In steps of [bar]	0.01		
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	

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Pulse length	[s]	0.01...2
<b>Temperature monitoring</b>		
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
<b>Accuracy / deviations</b>		
Temperature coefficient	[1/K]	± 0,07 % MW
Accuracy (in the measuring range)		± (6 % MW + 0,6 % MEW); at medium temperature 23 °C
Repeatability		± (0,4 % MW + 0,1 % MEW)
<b>Pressure monitoring</b>		
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
<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, T09)
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	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode		yes

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## Industrial gas counter

SDR14DGXFRKG/US-100

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> default	<b>DeviceID</b> 861

Operating conditions		
Ambient temperature [°C]		0...60
Storage temperature [°C]		-20...85
Max. relative air humidity [%]		90
Protection		IP 65; IP 67

Tests / approvals		
EMC	DIN EN 60947-5-9	
CPA approval	model number	003TG
	accuracy class	-
	maximum allowable error	± 7 % FS
	Q (min)	0,05 m³/h (Air)
	Q (t)	-
Q (max)	15 m³/h (Air)	
	5 g (10...2000 Hz)	
Vibration resistance	DIN EN 68000-2-6	
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]	558	
Housing	rectangular	
Dimensions [mm]	182 x 45.4 x 67.8	
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)	EN AW-6082 (aluminium); stainless steel (1.4305 / 303); FKM; ceramics glass passivated; PPS GF40; Al2O3 (ceramics); acrylate	
Process connection	threaded connection G 1/4 Internal thread DN8	

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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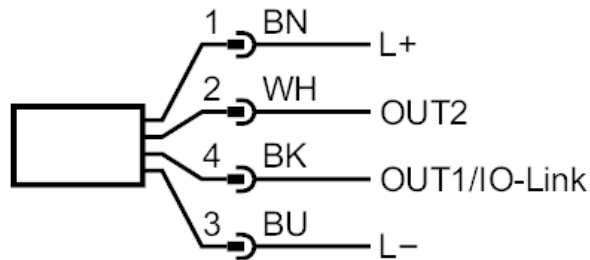
SDR14DGXFRKG/US-100

### Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4



### 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