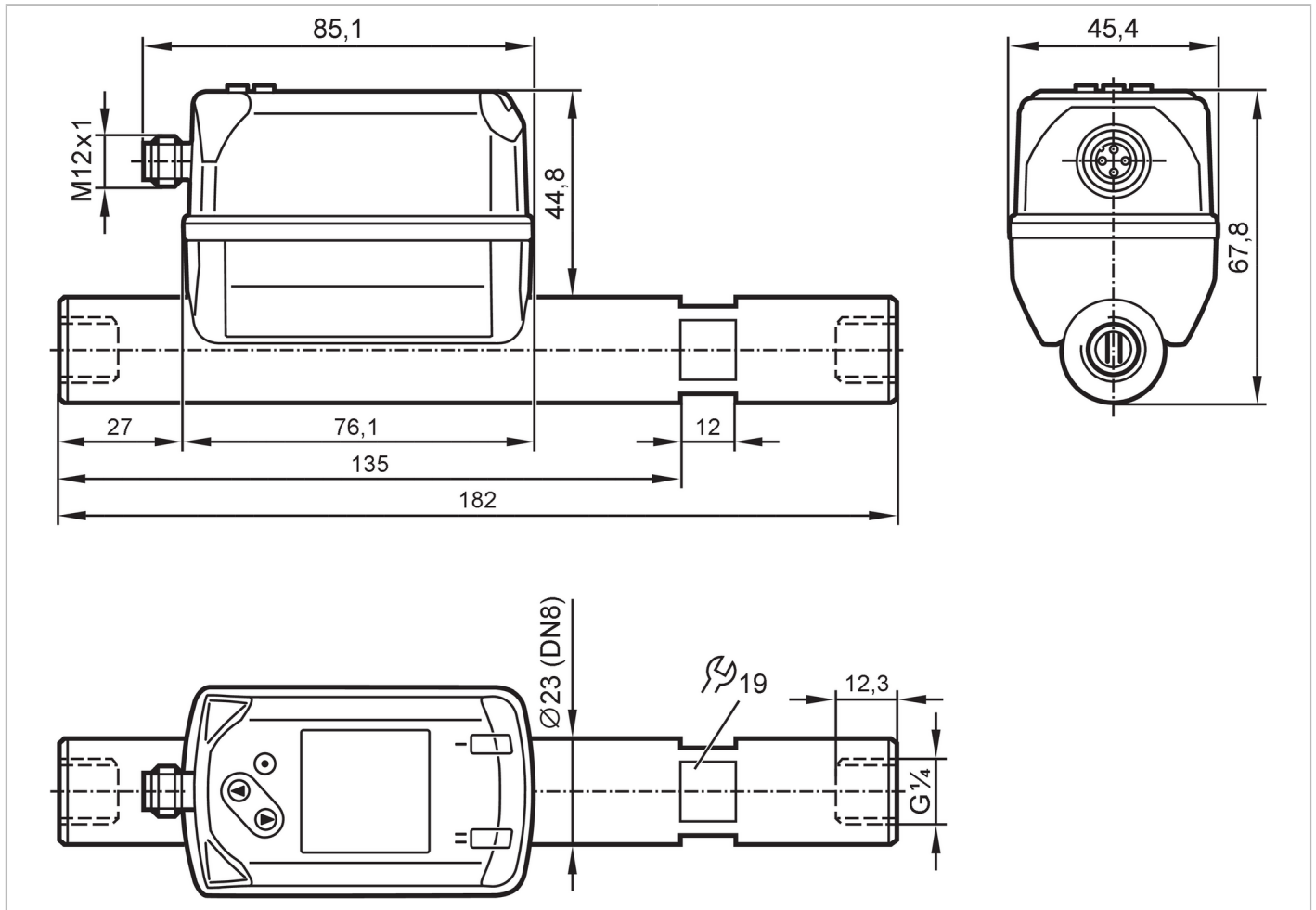


SD5600



Industrial gas counter

SDR14DGXFRKG/US-100



Product characteristics

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

Application

Application	for industrial applications		
Media	Argon (Ar); carbon dioxide (CO ₂); nitrogen (N ₂); 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		



Industrial gas counter

SDR14DGXFRKG/US-100

Inputs / outputs			
Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1		
Inputs			
Inputs	counter reset		
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	0.8...250 l/min	0.3...82.9 m/s	0.05...15 m ³ /h
Display range	0...300 l/min	0...99.5 m/s	0...18 m ³ /h
Resolution	0.2 l/min	0.1 m/s	0.01 m ³ /h
Set point SP	2.2...249.9 l/min	0.7...82.9 m/s	0.13...14.99 m ³ /h
Reset point rP	0.9...248.7 l/min	0.3...82.5 m/s	0.06...14.92 m ³ /h
Analogue start point ASP	0...200 l/min	0...66.3 m/s	0...12 m ³ /h
Analogue end point AEP	50...250 l/min	16.6...82.9 m/s	3...15 m ³ /h
Low flow cut-off LFC	0.3...2.7 l/min	0.1...0.9 m/s	0.02...0.16 m ³ /h
In steps of	0.1 l/min	0.1 m/s	0.01 m ³ /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		
Analogue start point [bar]	-1...12.8		
Analogue end point [bar]	2.2...16		
In steps of [bar]	0.01		
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	

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Pulse length	[s]	0.01...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); at medium temperature 23 °C
Repeatability		± (0,4 % MW + 0,1 % MEW)
Pressure monitoring		
Repeatability		± 0,2
Characteristics deviation		< ± 0,5; (BFSL = Best Fit Straight Line)
Greatest TEMPCO of the span		± 0,3
Greatest TEMPCO of the zero point		± 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, T09)
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	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode		yes

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SDR14DGXFRKG/US-100

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	DeviceID
	default	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)
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]		558
Housing		rectangular
Dimensions [mm]		182 x 45.4 x 67.8
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)	EN AW-6082 (aluminium); stainless steel (303/1.4305); FKM; ceramics glass passivated; PPS GF40; Al2O3 (ceramics); acrylate	
Process connection	threaded connection G 1/4 internal thread DN8	

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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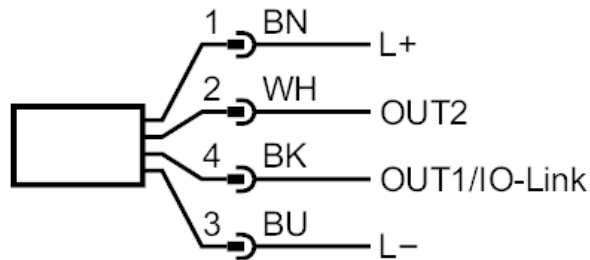
SDR14DGXFRKG/US-100

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
analogue output flow
analogue output temperature
analogue output pressure
signal output Preset counter
Pulse output quantity meter
input counter reset