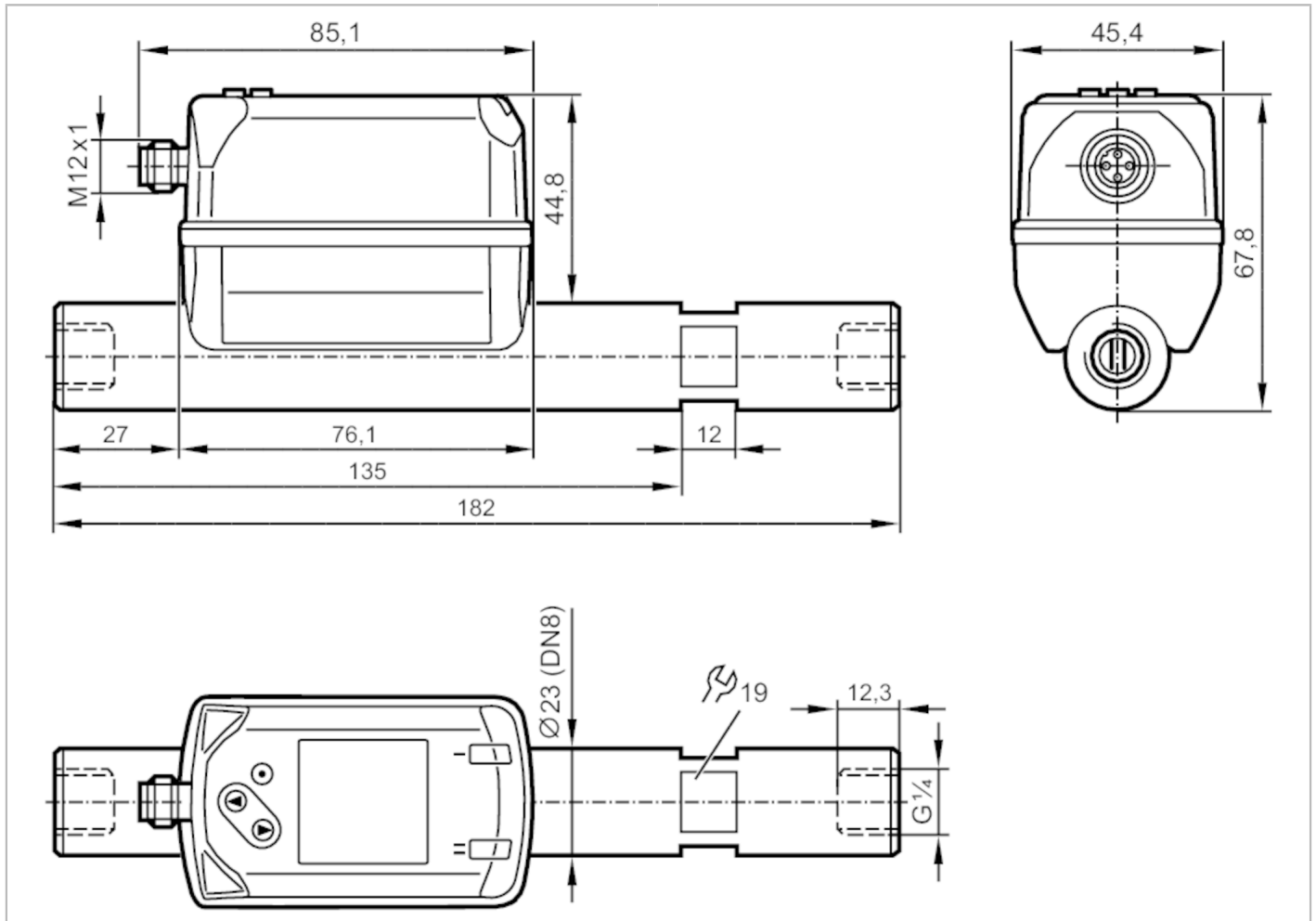


SD5600



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 m³/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. bursting 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 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
Analogue start point ASP	0...200 l/min	0...66.3 m/s	0...12 m³/h
Analogue 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		
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 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
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)
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 default	DeviceID 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
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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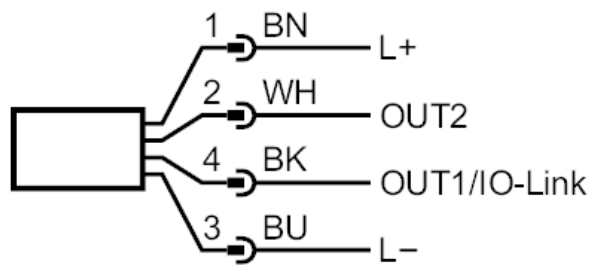
SDR14DGXFRKG/US-100

Electrical connection

Connector: 1 x M12; coding: A



Connection



OUT1/IO-Link: switching output flow
switching output temperature
switching output pressure
Pulse output quantity meter

OUT2/InD: signal output Preset counter
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