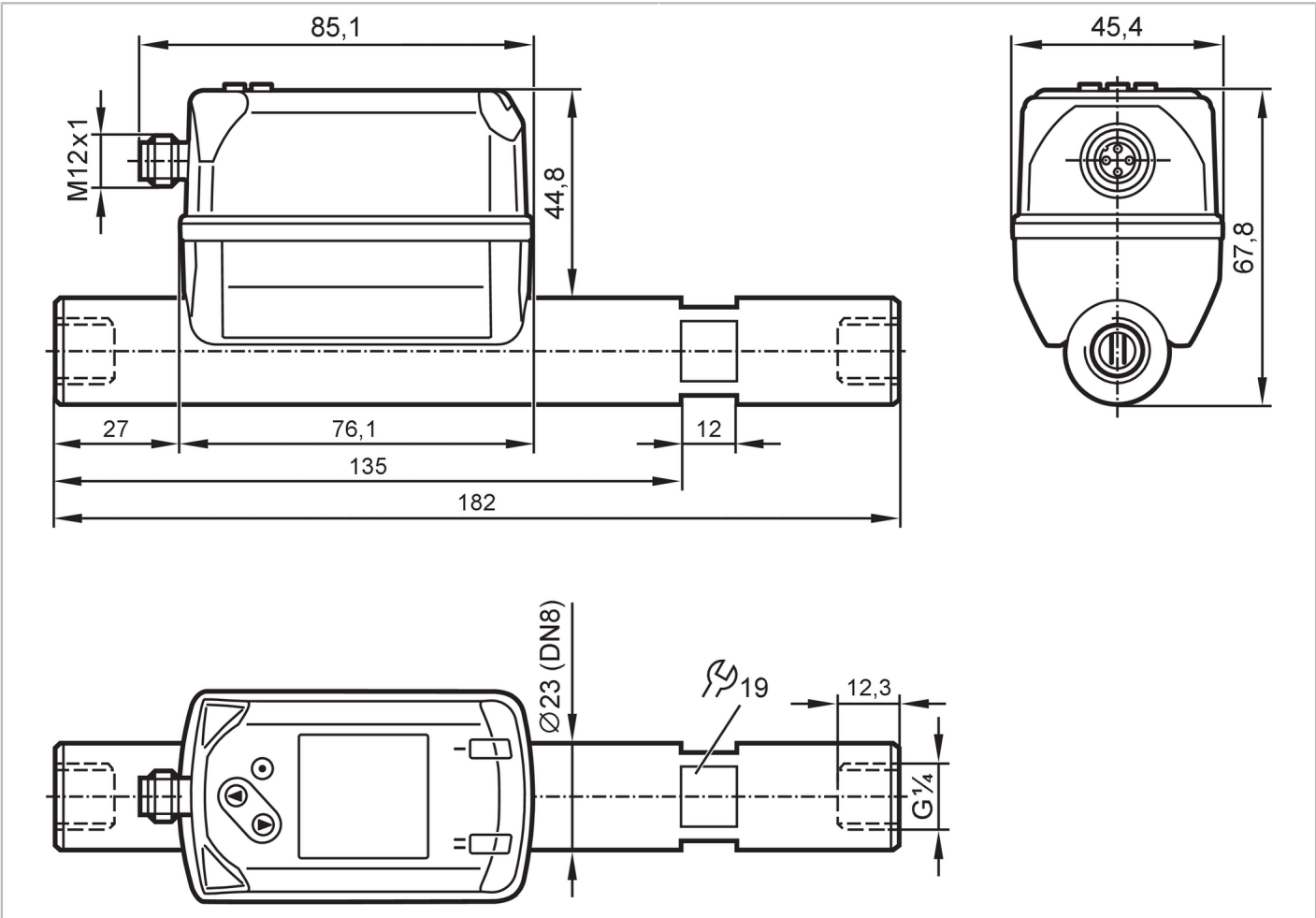


SD5600



Industrial gas counter

SDR14DGXFRKG/US-100



CRN



DNV
DNV.COM/AF

IO-Link



UK
CA

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 m³/h
Process connection	threaded connection G 1/4 Internal thread DN8		

Application

Application	for industrial applications	
Media	Argon (Ar); carbon dioxide (CO2); nitrogen (N2); 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
Display range		0...300 l/min	0...99.5 m/s
Resolution		0.2 l/min	0.1 m/s
Set point SP		2.2...249.9 l/min	0.7...82.9 m/s
Reset point rP		0.9...248.7 l/min	0.3...82.5 m/s
Analog start point ASP		0...200 l/min	0...66.3 m/s
Analog end point AEP		50...250 l/min	16.6...82.9 m/s
Low flow cut-off LFC		0.3...2.7 l/min	0.1...0.9 m/s
In steps of		0.1 l/min	0.1 m/s
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
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
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
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
	[% of the final value]	
Characteristics deviation		< ± 0,5; (BFSL = Best Fit Straight Line)
	[% of the final value]	
Greatest TEMPCO of the span		± 0,3
	[% MEW / 10 K]	
Greatest TEMPCO of the zero point		± 0,1
	[% MEW / 10 K]	
Temperature monitoring		
Accuracy	[K]	± 0,5; (medium flow in the limit area of the flow measurement range)
Reaction 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 / closed; current/pulse output; display can be rotated and switched off; Display unit; totalizer
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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Required master port class	A	
Process data analog	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	
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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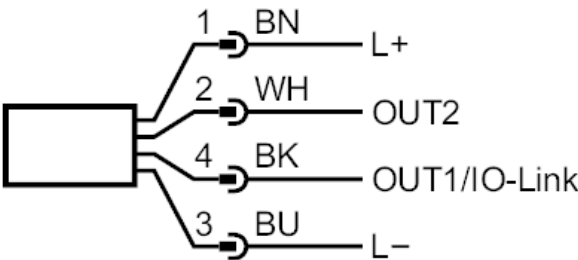
SDR14DGXFRKG/US-100

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