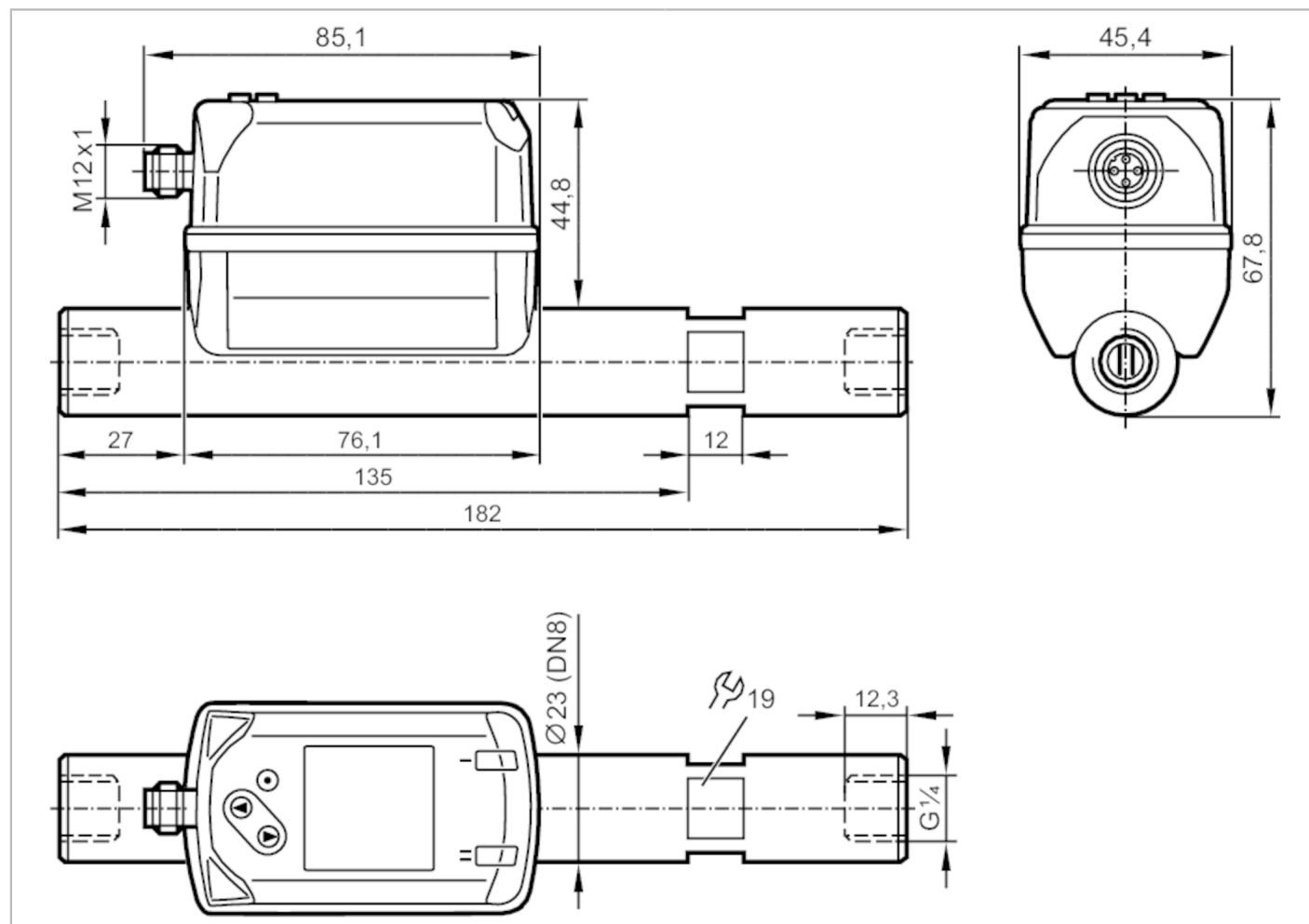


SD5800



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...83.4 l/min	0.3...27.6 m/s	0.05...5 m³/h
Process connection	threaded connection G 1/4 DN8		

Application

Application	for industrial applications		
Media	helium		
Medium temperature [°C]	-10...60		
Min. bursting pressure [bar]	64		
Pressure rating [bar]	16		
Pressure rating [MPa]	1.6		
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		



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Power-on delay time	[s]	1
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Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1
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Inputs

Inputs	counter reset
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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...83.4 l/min	0.3...27.6 m/s	0.05...5 m³/h
Display range	0...100 l/min	0...33.1 m/s	0...6 m³/h
Resolution	0.2 l/min	0.1 m/s	0.01 m³/h
Set point SP	1.3...83.3 l/min	0.4...27.6 m/s	0.08...5 m³/h
Reset point rP	0.9...82.9 l/min	0.3...27.5 m/s	0.05...4.97 m³/h
Analogue start point ASP	0...66.6 l/min	0...22.1 m/s	0...4 m³/h
Analogue end point AEP	16.7...83.3 l/min	5.5...27.6 m/s	1...5 m³/h
Low flow cut-off LFC	0.6...0.8 l/min	0.2...0.3 m/s	0.04...0.05 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



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In steps of	0.0001 m³	0.005 scf
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	0,8 % MW + 0,2 % MEW	
Pressure monitoring		
Repeatability [X16]	± 0,2	
Characteristics deviation [X16]	< ± 0,5; (BFSL = Best Fit Straight Line)	
Greatest TEMPCO of the span [% MEW / 10 K]	± 0,15	
Greatest TEMPCO of the zero point [% MEW / 10 K]	± 0,25	
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	Digital Measuring Sensor (0x800A), Identification and Diagnosis (0x4000)	
SIO mode	yes	
Required master port type	A	
Process data analogue	8	

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Process data binary		2
Min. process cycle time	[ms]	7.2
Supported DeviceIDs	Type of operation	DeviceID
	default	1301

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 (He)
	Q (t)	-
	Q (max)	5 m³/h (He)
Vibration resistance	DIN EN 68000-2-6	5 g (10...2000 Hz)
MTTF [ANN]	180	
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]	554	
Materials	PBT+PC-GF30; PPS GF40; stainless steel (1.4301 / 304); stainless steel (1.4305 / 303); steel (1.5523) galvanised; 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 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.	

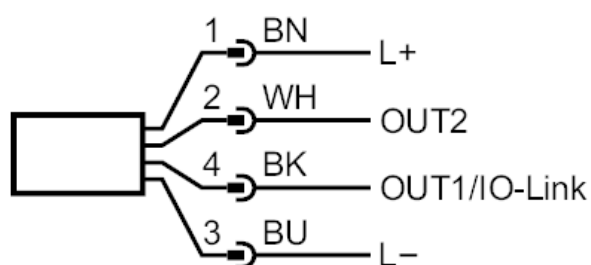


Electrical connection

Connector: 1 x M12; coding: A



Connection



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