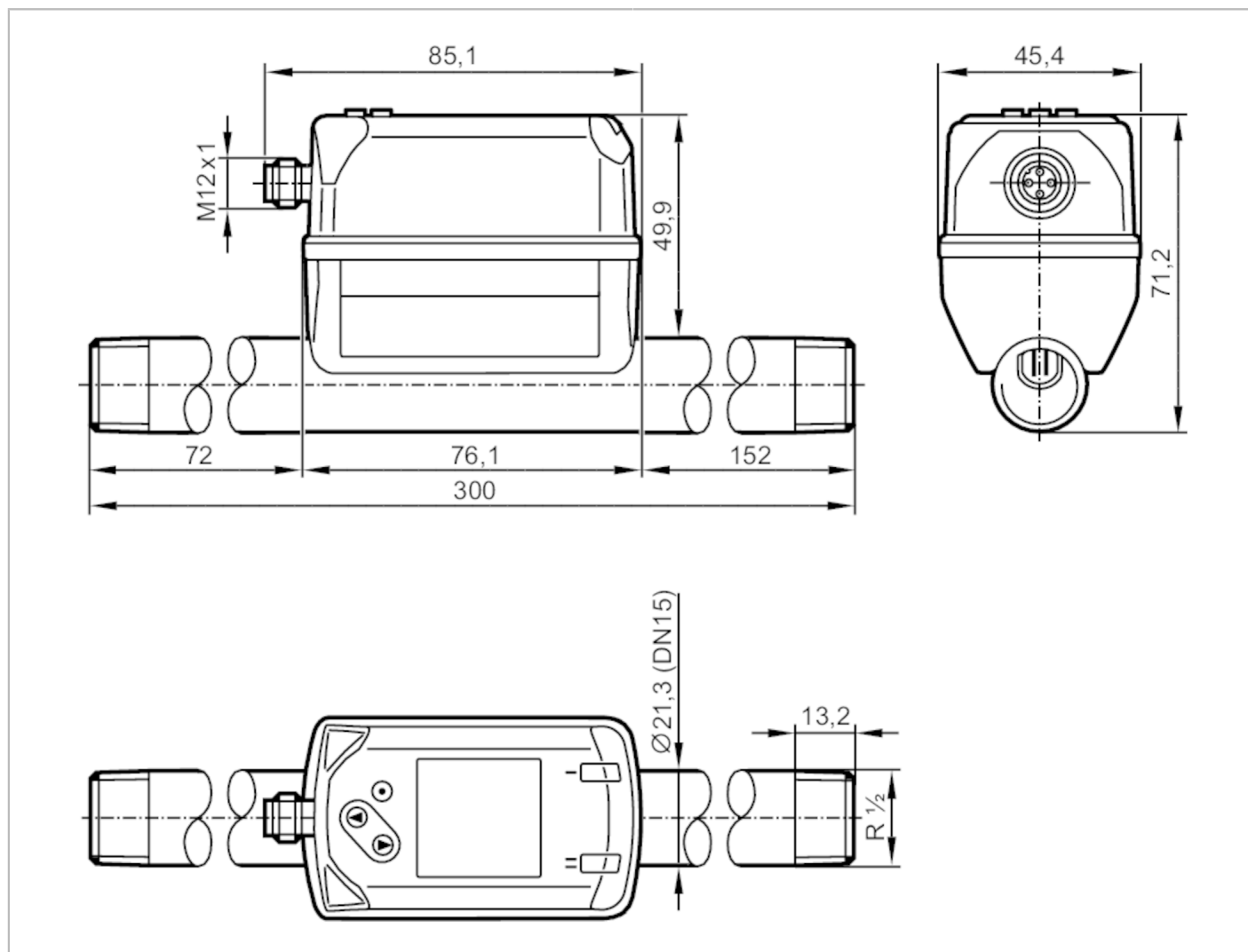


SD6800



Industrial gas counter

SDR12DGXFRKG/US-100



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1		
Measuring range	1.5...166.5 l/min	0.1...13.3 m/s	0.1...10 m³/h
Process connection	threaded connection R 1/2 external thread DN15		

Application

Application	for industrial applications	
Media	helium	
Medium temperature [°C]	-10...60	
Min. bursting pressure [bar]	64	
Pressure rating	16 bar	1.6 MPa
MAWP (for applications according to CRN) [bar]	9.7	

Electrical data

Operating voltage [V]	18...30 DC; (to SELV/PELV)	
Current consumption [mA]	< 80	
Protection class	III	

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Reverse polarity protection	yes		
Power-on delay time [s]	1		
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	1.5...166.5 l/min	0.1...13.3 m/s	0.1...10 m³/h
Display range	1.5...200 l/min	0.1...16 m/s	0.1...12 m³/h
Resolution	1 l/min	0.1 m/s	0.05 m³/h
Set point SP	2.7...166.7 l/min	0.2...13.3 m/s	0.16...10 m³/h
Reset point rP	1.8...165.8 l/min	0.1...13.2 m/s	0.11...9.95 m³/h
Analog start point ASP	0...133.3 l/min	0...10.6 m/s	0...8 m³/h
Analog end point AEP	33.4...166.7 l/min	2.7...13.3 m/s	2...10 m³/h
Low flow cut-off LFC	1.3...1.7 l/min	0.1 m/s	0.08...0.1 m³/h
In steps of	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	

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Pulse value	0.001...10000000 m³	0.05...353146667.2 scf
In steps of	0.0001 m³	0.005 scf
Pulse length [s]	0.002...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	0,8 % MW + 0,2 % MEW	

Pressure monitoring		
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]	± 0,15	
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)	

Reaction 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 / 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	Digital Measuring Sensor (0x800A), Identification and Diagnosis (0x4000)	

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SIO mode	yes				
Required master port class	A				
Process data analog	8				
Process data binary	2				
Min. process cycle time [ms]	7.2				
Supported DeviceIDs	<table> <tr> <th>Type of operation</th><th>DeviceID</th></tr> <tr> <td>default</td><td>1302</td></tr> </table>	Type of operation	DeviceID	default	1302
Type of operation	DeviceID				
default	1302				

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)	0,1 m³/h (He)
	Q (t)	-
	Q (max)	10 m³/h (He)
Vibration resistance	DIN EN 68000-2-6	5 g (10...2000 Hz)
MTTF [years]		180
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]	715.7
Housing	rectangular
Dimensions [mm]	300 x 45.4 x 71.2
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)	stainless steel (1.4301 / 304); stainless steel (1.4305 / 303); FKM; ceramics glass passivated; PPS GF40; Al2O3 (ceramics); acrylate
Process connection	threaded connection R 1/2 external thread DN15

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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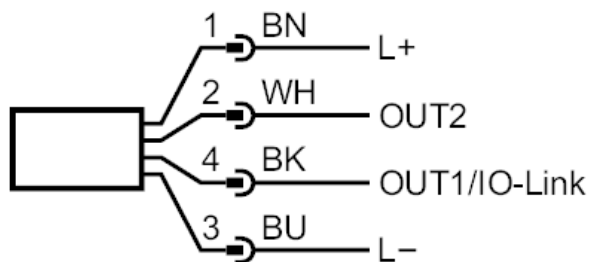
SDR12DGXFRKG/US-100

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
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 |