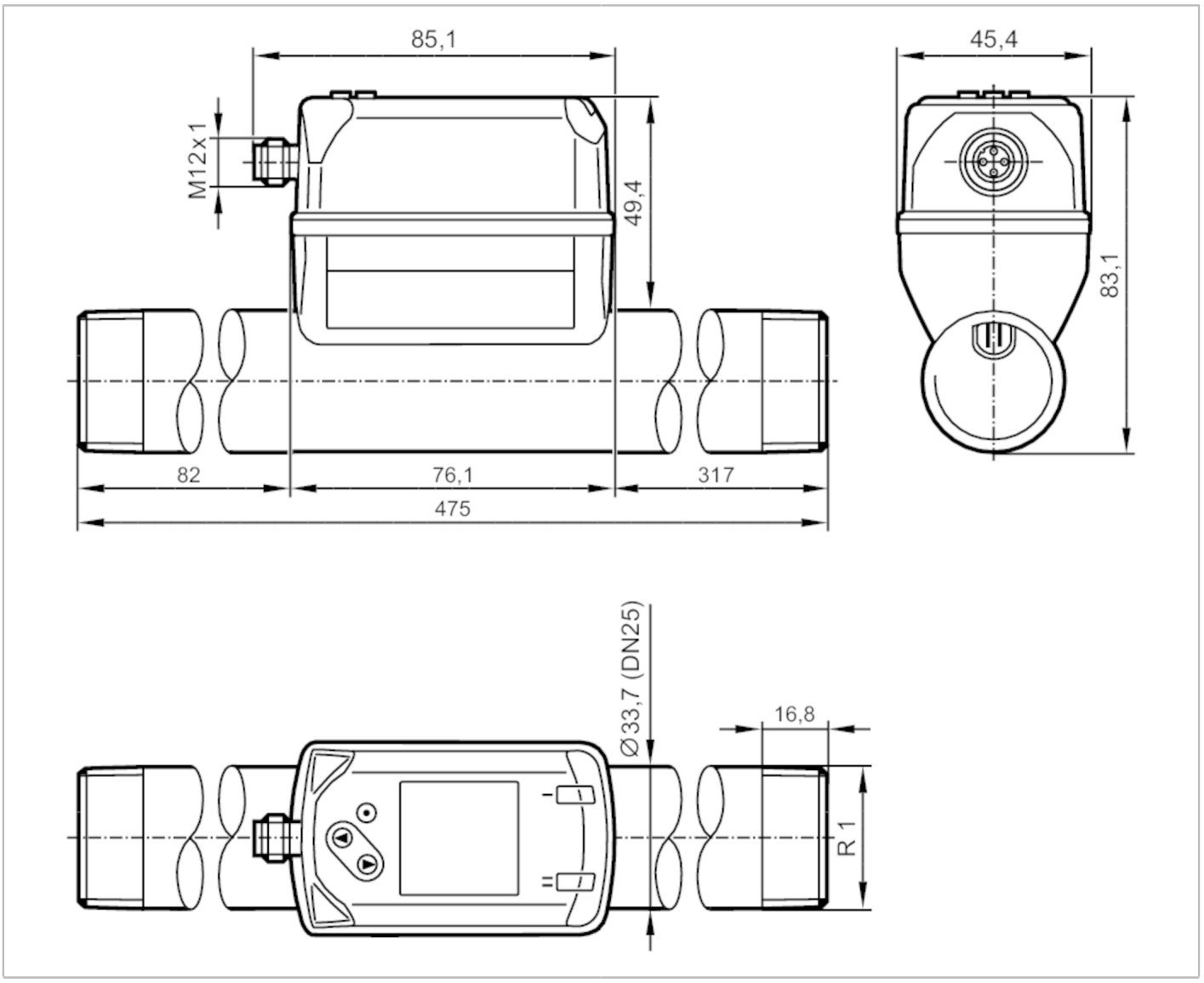
SD8600

Industrial gas counter

SDR11DGXFRKG/US-100



Product characteristics		
Number of inputs and outputs		Number of digital outputs: 2; Number of analog outputs: 1
Process connection		threaded connection R 1 DN25
Pressure monitoring		
Measuring range	[bar]	-1...16

SD8600

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Application		
Application		for industrial applications
Media		Argon (Ar); carbon dioxide (CO2); nitrogen (N2); compressed air
Medium temperature	[°C]	-10...60
Min. bursting pressure	[bar]	64
Min. bursting pressure	[MPa]	6.4
Pressure rating	[bar]	16
Pressure rating	[Mpa]	1.6
MAWP (for applications according to CRN)	[bar]	10.5
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
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

SD8600

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SDR11DGXFRKG/US-100

Measuring/setting range				
Measuring range		14...3750 l/min	0.4...103.7 m/s	0.8...225 m³/h
Display range		0...4500 l/min	0...124.4 m/s	0...270 m³/h
Resolution		2 l/min	0.1 m/s	0.1 m³/h
Set point SP		32...3749 l/min	0.9...103.7 m/s	1.9...224.9 m³/h
Reset point rP		14...3730 l/min	0.4...103.2 m/s	0.8...223.8 m³/h
Analog start point ASP		0...3000 l/min	0...83 m/s	0...180 m³/h
Analog end point AEP		750...3750 l/min	20.7...103.7 m/s	45...225 m³/h
Low flow cut-off LFC		4...40 l/min	0.1...1.1 m/s	0.3...2.4 m³/h
In steps of		1 l/min	0.1 m/s	0.1 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	
Pulse value		0.001...10000000 m³	0.05...353146667.2 scf	
In steps of		0.0001 m³	0.005 scf	
Pulse length	[s]	0.007...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	[% of the final value]	± 0,2
Characteristics deviation	[% of the final value]	< ± 0,5; (BFSL = Best Fit Straight Line)
Greatest TEMPCO of the span		± 0,3

SD8600

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	[% MEW / 10 K]	
Greatest TEMPCO of the zero point	[% MEW / 10 K]	± 0,1
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)
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		Type of operation: default; DeviceID: 868
Operating conditions		
Ambient temperature	[°C]	0...60
Storage temperature	[°C]	-20...85
Max. relative air humidity	[%]	90
Protection		IP 65; IP 67

SD8600

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Tests / approvals			
EMC		DIN EN 60947-5-9	
CPA approval		model number	003TG
		accuracy class	-
		maximum allowable error	± 7 % FS
		Q (min)	0,8 m³/h
		Q (t)	-
		Q (max)	225 m³/h
Vibration resistance		DIN EN 68000-2-6	5 g (10...2000 Hz)
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]	1609	
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 DN25	
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.	

Electrical connection

Connector: 1 x M12; coding: A

SD8600

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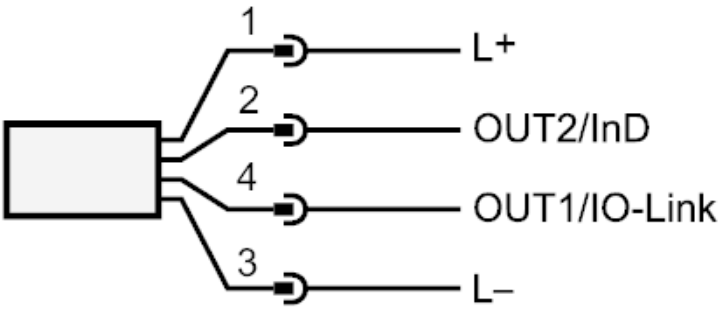
Connection



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