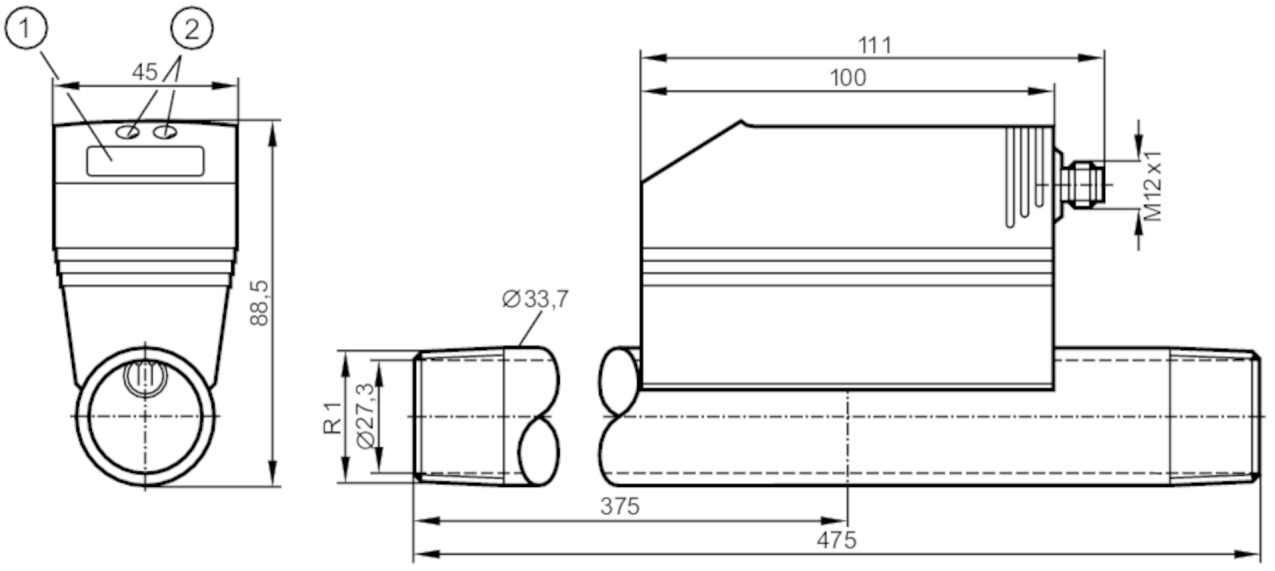
SD8100

Industrial gas counter

SDR11DGXFPKG/US-100

phase-out article

Alternative articles: SD8600
When selecting an alternative article and accessories please note that technical data may differ!



1 alphanumeric display 4-digit
2 programming buttons

Product characteristics			
Number of inputs and outputs		Number of digital outputs: 2; Number of analogue outputs: 1	
Process connection		threaded connection R 1 external thread DN25	
Ar			
Measuring range	[m³/h]	1.2...366.6	
CO2			
Measuring range	[m³/h]	0.8...223.6	
N2			
Measuring range	[m³/h]	0.8...225	
Application			
Application		for industrial applications	
Media		Argon (Ar); carbon dioxide (CO2); nitrogen (N2)	
Medium temperature	[°C]	0...60	
Pressure rating		16 bar	1.6 MPa
Electrical data			
Operating voltage	[V]	18...30 DC	
Current consumption	[mA]	< 100	
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 analogue outputs: 1
Outputs		
Total number of outputs		2
Output signal		switching signal; analogue signal; pulse signal; IO-Link; (configurable)
Electrical design		PNP
Number of digital outputs		2
Output function		normally open / normally closed; (parameterisable)
Max. voltage drop switching output DC	[V]	2
Permanent current rating of switching output DC	[mA]	250; (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		
Low flow cut-off LFC	[m³/h]	< 3.8
Ar		
Measuring range	[m³/h]	1.2...366.6
Display range	[m³/h]	0...440
Resolution	[m³/h]	0.2
Set point SP	[m³/h]	3.4...366.6
Reset point rP	[m³/h]	1.8...365
Analogue start point ASP	[m³/h]	0...293.2
Analogue end point AEP	[m³/h]	73.4...366.6
In steps of	[m³/h]	0.2
CO2		
Measuring range	[m³/h]	0.8...223.6
Display range	[m³/h]	0...268.2
Resolution	[m³/h]	0.2
Set point SP	[m³/h]	2...223.6
Reset point rP	[m³/h]	1...222.6
Analogue start point ASP	[m³/h]	0...178.8
Analogue end point AEP	[m³/h]	44.8...223.6
In steps of	[m³/h]	0.2
Volumetric flow quantity monitoring		
Pulse value		0.001...3 000 000 Nm³
In steps of		0.001...1000 Nm³
Pulse length	[s]	0,004...2

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N2		
Measuring range	[m³/h]	0.8...225
Display range	[m³/h]	0...270
Resolution	[m³/h]	0.2
Set point SP	[m³/h]	2.2...225
Reset point rP	[m³/h]	1...224
Analogue start point ASP	[m³/h]	0...180
Analogue end point AEP	[m³/h]	45...225
In steps of	[m³/h]	0.2
Temperature monitoring		
Measuring range	[°C]	0...60
Display range	[°C]	-12...72
Resolution	[°C]	0.2
Set point SP	[°C]	0.4...60
Reset point rP	[°C]	0...59.8
Analogue start point	[°C]	0...48
Analogue end point	[°C]	12...60
In steps of	[°C]	0.2

Accuracy / deviations

Flow monitoring		
Repeatability	[% of the measured value]	± 1,5
Accuracy (in the measuring range)		± (6 % MW + 0,6 % MEW); (conditions: installation to DIN ISO 2533; installation in pipes: DN25)
Temperature monitoring		
Accuracy	[K]	± 2; (medium flow in the limit area of the flow measurement range)

Response times

Flow monitoring		
Response time	[s]	0.1; (dAP = 0)
Damping process value dAP in steps	[s]	0 - 0,2 - 0,4 - 0,6 - 0,8 - 1

Software / programming

Parameter setting options	Flow monitoring; quantity meter; Preset counter; hysteresis / window; normally open / normally closed; current/pulse output; display can be rotated and switched off; Display unit; medium selection

Interfaces

Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
Profiles	Smart Sensor - SSP 0	Generic Profiled Sensor
	Function	Device identification
	Function	Process data variable
	Function	Device diagnosis

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SIO mode		yes	
Required master port type		A	
Process data analogue		3	
Process data binary		2	
Min. process cycle time	[ms]	4.1	
Supported DeviceIDs		**Type of operation**	**DeviceID**
		default	443
Operating conditions			
Ambient temperature	[°C]	0...60	
Storage temperature	[°C]	-20...85	
Max. relative air humidity	[%]	90	
Protection		IP 65	
Tests / approvals			
EMC		DIN EN 61000-6-2	
		DIN EN 61000-6-3	
CPA approval		model number	003TG
		accuracy class	-
		maximum allowable error	± 7 % FS
		Q (min)	0,8 m³/h (N2)
			0,8 m³/h (CO2)
			1,2 m³/h (Ar)
		Q (t)	-
		Q (max)	225 m³/h (N2)
			223,6 m³/h (CO2)
			366,6 m³/h (Ar)
Vibration resistance		DIN EN 68000-2-6	5 g (55...2000 Hz)
MTTF	[years]	224	
Pressure Equipment Directive		Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data			
Weight	[g]	2029	
Dimensions	[mm]	475 x 45 x 88.5	
Materials		PBT-GF20; NBR; PC; stainless steel (304/1.4301); PTFE; brass coated; FKM; aluminium powder-coated	
Materials (wetted parts)		stainless steel (304/1.4301); FKM; ceramics glass passivated; PEEK-GF30; polyester; aluminium	
Process connection		threaded connection R 1 external thread DN25	
Displays / operating elements			
Display		Display unit	4 x LED, green (Nl/min, Nm³/h, Nm³, °C)
		function display	1 x LED, yellow
		switching status	2 x LED, yellow
		measured values	alphanumeric display, 4-digit
		programming	alphanumeric display, 4-digit
Display unit		Nl/min; Nm³/h; Nm³; °C	

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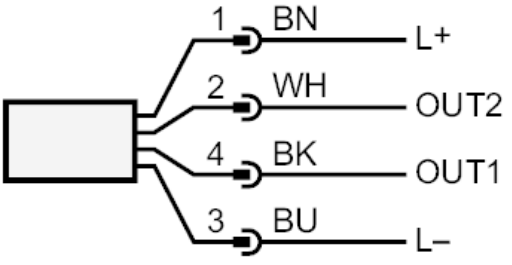
Remarks	
Remarks	MW = measured value MEW = Final value of the measuring range Measuring, display and setting ranges refer to the standard volume flow according to DIN ISO 2533.
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A

Connection



OUT1:	switching output Pulse output
OUT2:	switching output analogue output
	colours to DIN EN 60947-5-2
	Core colours :
BK =	black
BN =	brown
BU =	blue
WH =	white