

SD8100



Flow rate meter for gases

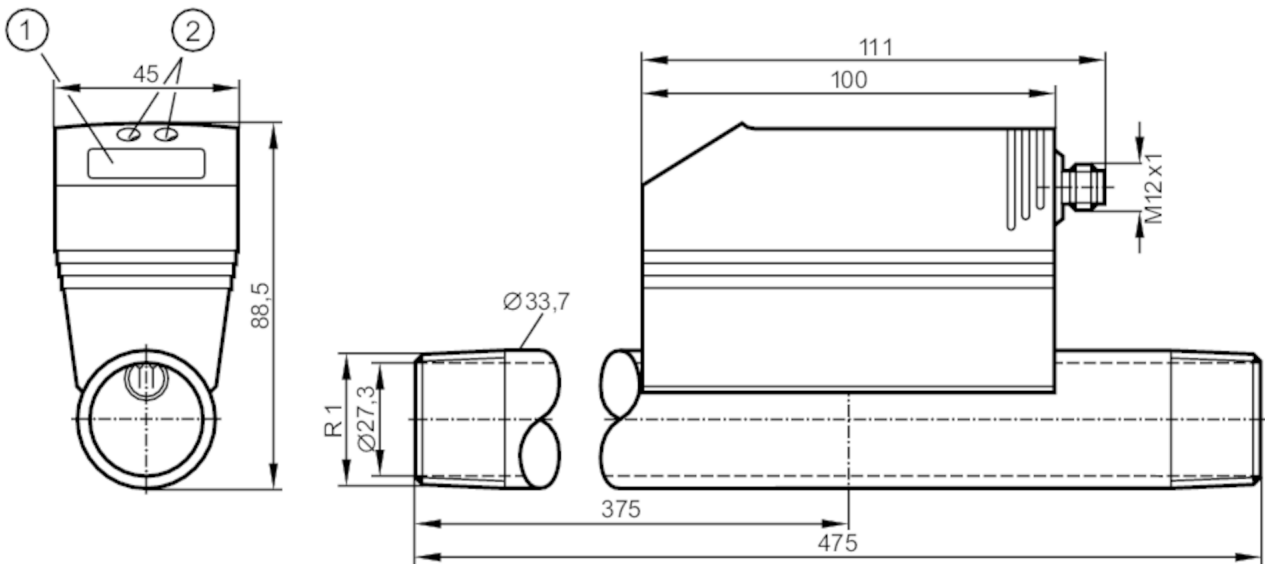
SDR11DGXFPKG/US-100

phase-out article

Discontinuation date: 12/31/2024

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 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 (CO ₂); nitrogen (N ₂)	
Medium temperature	[°C]	0...60
Pressure rating	[bar]	16
Pressure rating	[MPa]	1.6

Electrical data

Operating voltage	[V]	18...30 DC
Current consumption	[mA]	< 100
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 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



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In steps of		0.001...1000 Nm³
Pulse length	[s]	0,004...2
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: Process Data Variable; Device Identification, 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	<table> <tr> <th>Type of operation</th><th>DeviceID</th></tr> <tr> <td>default</td><td>443</td></tr> </table>	Type of operation	DeviceID	default	443
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Operating conditions	
Ambient temperature [°C]	0...60
Storage temperature [°C]	-20...85
Max. relative air humidity [%]	90
Protection	IP 65

Tests / approvals																					
EMC	<table> <tr> <td>DIN EN 61000-6-2</td><td></td></tr> <tr> <td>DIN EN 61000-6-3</td><td></td></tr> </table>	DIN EN 61000-6-2		DIN EN 61000-6-3																	
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CPA approval	<table> <tr> <td>model number</td><td>003TG</td></tr> <tr> <td>accuracy class</td><td>-</td></tr> <tr> <td>maximum allowable error</td><td>± 7 % FS</td></tr> <tr> <td>Q (min)</td><td>0,8 m³/h (N2)</td></tr> <tr> <td></td><td>0,8 m³/h (CO2)</td></tr> <tr> <td></td><td>1,2 m³/h (Ar)</td></tr> <tr> <td>Q (t)</td><td>-</td></tr> <tr> <td>Q (max)</td><td>225 m³/h (N2)</td></tr> <tr> <td></td><td>223,6 m³/h (CO2)</td></tr> <tr> <td></td><td>366,6 m³/h (Ar)</td></tr> </table>	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)
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	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
Materials	PBT-GF20; NBR; PC; stainless steel (1.4301 / 304); PTFE; brass coated; FKM; aluminium powder-coated
Materials (wetted parts)	stainless steel (1.4301 / 304); FKM; ceramics glass passivated; PEEK-GF30; polyester; aluminium
Process connection	threaded connection R 1 DN25

Displays / operating elements											
Display	<table> <tr> <td>Display unit</td><td>4 x LED, green (NI/min, Nm³/h, Nm³, °C)</td></tr> <tr> <td>function display</td><td>1 x LED, yellow</td></tr> <tr> <td>switching status</td><td>2 x LED, yellow</td></tr> <tr> <td>measured values</td><td>alphanumeric display, 4-digit</td></tr> <tr> <td>programming</td><td>alphanumeric display, 4-digit</td></tr> </table>	Display unit	4 x LED, green (NI/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
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Display unit	NI/min; Nm³/h; Nm³; °C										

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.

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Pack quantity

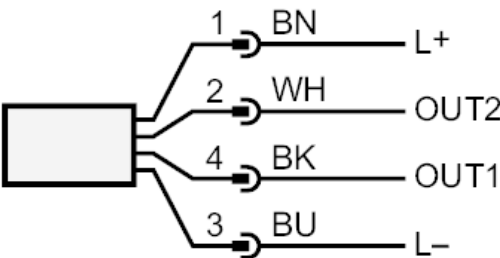
1 pcs.

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