

SD8100



Flow rate meter for gases

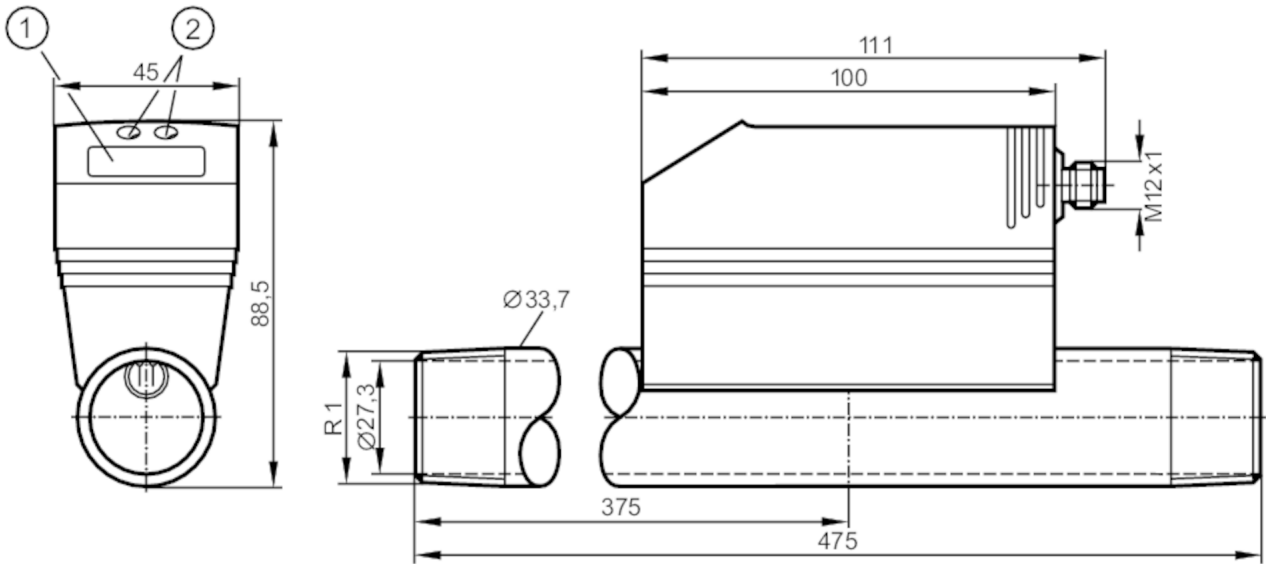
SDR11DGXFPKG/US-100

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



Flow rate meter for gases

SDR11DGXFPKG/US-100

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



Flow rate meter for gases

SDR11DGXFPKG/US-100

In steps of		0.001...1000 Nm ³
Pulse length	[s]	0,004...2
N2		
Measuring range	[m ³ /h]	0.8...225
Display range	[m ³ /h]	0...270
Resolution	[m ³ /h]	0.2
Set point SP	[m ³ /h]	2.2...225
Reset point rP	[m ³ /h]	1...224
Analogue start point ASP	[m ³ /h]	0...180
Analogue end point AEP	[m ³ /h]	45...225
In steps of	[m ³ /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	[X17]	± 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
SIO mode		yes
Required master port type		A

SD8100



Flow rate meter for gases

SDR11DGXFPKG/US-100

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 [ANN]		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	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
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.	
Pack quantity	1 pcs.	

SD8100



Flow rate meter for gases

SDR11DGXFPKG/US-100

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