

SD2000



Compressed air meter

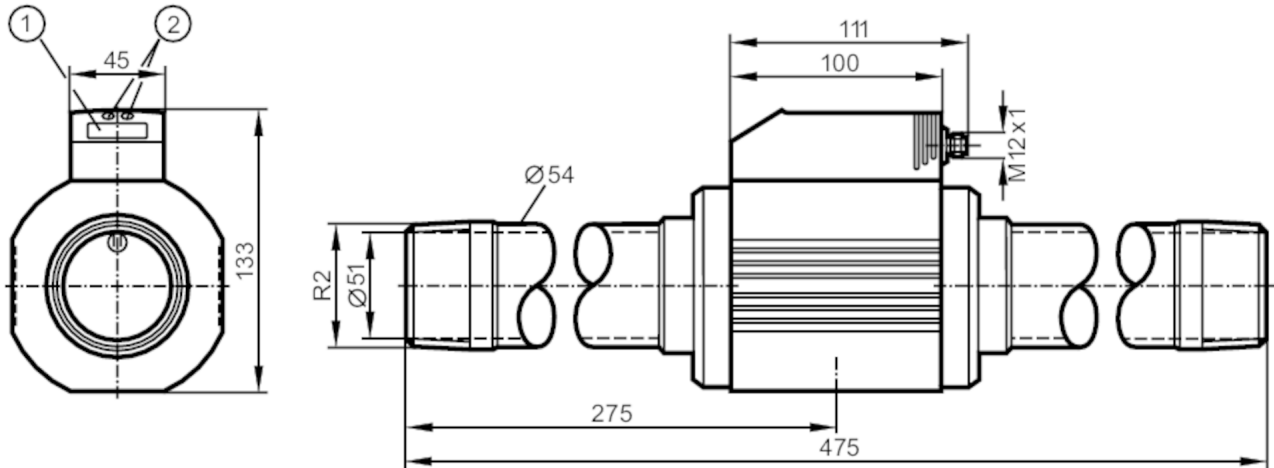
SDR21DGXFPKG/US-100

Article to be discontinued

Discontinuation date: 12/31/2024

Alternative articles: SD2500

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 analog outputs: 1		
Measuring range	0.3...95.2 m/s	3...700 m³/h	0.04...11.66 m³/min
Process connection	threaded connection R 2 DN50		

Application

Application	for industrial applications
Media	compressed air
Note on media	air quality ISO 8573-1
	class 141
	class 344
Medium temperature [°C]	0...60
Pressure rating [bar]	16
Pressure rating [MPa]	1.6

Electrical data

Operating voltage [V]	18...30 DC; (to SELV/PELV)
Current consumption [mA]	< 110
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
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Outputs			
Total number of outputs	2		
Output signal	switching signal; analog signal; pulse signal; IO-Link; (configurable)		
Electrical design	PNP		
Number of digital outputs	2		
Output function	normally open / closed; (configurable)		
Max. voltage drop switching output DC [V]	2		
Permanent current rating of switching output DC [mA]	250; (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	0.3...95.2 m/s	3...700 m ³ /h	0.04...11.66 m ³ /min
Display range	0...114.2 m/s	0...840 m ³ /h	0...13.99 m ³ /min
Set point SP	0.7...95.2 m/s	5...700 m ³ /h	0.09...11.66 m ³ /min
Reset point rP	0.3...94.8 m/s	2...697 m ³ /h	0.04...11.61 m ³ /min
Analog start point ASP	0...71.4 m/s	0...525 m ³ /h	0...8.75 m ³ /min
Analog end point AEP	23.8...95.2 m/s	175...700 m ³ /h	2.91...11.66 m ³ /min
In steps of	0.1 m/s	1 m ³ /h	0.01 m ³ /min
Volumetric flow quantity monitoring			
Pulse value	0.010...4000000 m ³		
In steps of	0.010 m ³		
Pulse length [s]	0,021...2		
Temperature monitoring			
Measuring range [°C]	0...60		
Display range [°C]	-12...72		
Accuracy / deviations			
Flow monitoring			
Repeatability [% of the measured value]	± 1,5		
Accuracy (in the measuring range)	± (3 % MW + 0,3 % MEW) / ± (6 % MW + 0,6 % MEW); (class 141 /; class 344; conditions: installation to DIN ISO 2533; installation in pipes: DN50)		
Temperature monitoring			
Accuracy [K]	± 2; (medium flow in the limit area of the flow measurement range)		
Reaction times			
Flow monitoring			
Response time [s]	0.1; (dAP = 0)		

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Damping process value dAP in steps [s]	0 - 0,2 - 0,4 - 0,6 - 0,8 - 1
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Software / programming

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

Communication interface	IO-Link				
Transmission type	COM2 (38,4 kBaud)				
IO-Link revision	1.1				
SDCI standard	IEC 61131-9 CDV				
Profiles	no profile				
SIO mode	yes				
Required master port class	A				
Process data analog	3				
Process data binary	2				
Min. process cycle time [ms]	4.1				
Supported DeviceIDs	<table><thead><tr><th>Type of operation</th><th>DeviceID</th></tr></thead><tbody><tr><td>default</td><td>270</td></tr></tbody></table>	Type of operation	DeviceID	default	270
Type of operation	DeviceID				
default	270				

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	002TG
	accuracy class	-
	maximum allowable error	± 4 % FS
	Q (min)	3 m³/h
	Q (t)	-
Vibration resistance	Q (max)	700 m³/h
	DIN EN 68000-2-6	5 g (55...2000 Hz)
MTTF [years]		227
Pressure equipment directive	sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

Mechanical data

Weight [g]	4313
Material	PBT-GF20; NBR; PC; stainless steel (1.4301 / 304); PTFE; brass coated; FKM; aluminum powder-coated
Materials (wetted parts)	stainless steel (1.4301 / 304); ; FKM; ceramics; glass passivated; PEEK GF30; polyester; aluminum
Process connection	threaded connection R 2 DN50

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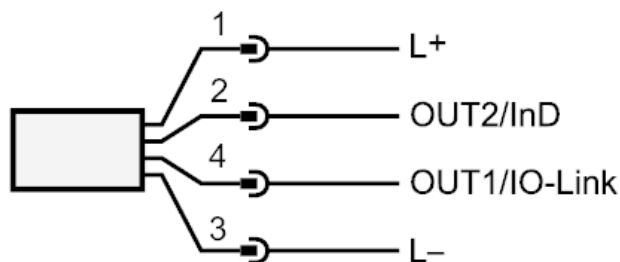
Displays / operating elements		
Display	Display unit	5 x LED, green (Nm ³ /min, Nm ³ /h, Nm/s, Nm ³ , °C)
	Function display	1 x LED, green
	Switching status	2 x LED, yellow
	Measured values	alphanumeric display, 4-digit
	Programming	alphanumeric display, 4-digit
Remarks		
Remarks	MW = Measured value	
	MEW = Final value of the measuring range	
	Measuring, display and setting ranges refer to standard volume flow according to DIN ISO 2533.	
	For information about installation and operation please see the operating instructions.	
Pack quantity	1 pcs.	

Electrical connection

Connector: 1 x M12; coding: A



Connection



- OUT1/IO-Link: Switching output Volumetric flow quantity monitoring
Pulse output quantity meter
signal output Preset counter
- OUT2/InD: Switching output Volumetric flow quantity monitoring / Temperature monitoring
analog output Volumetric flow quantity monitoring / Temperature monitoring
Input counter reset