

SD5000



Compressed air meter

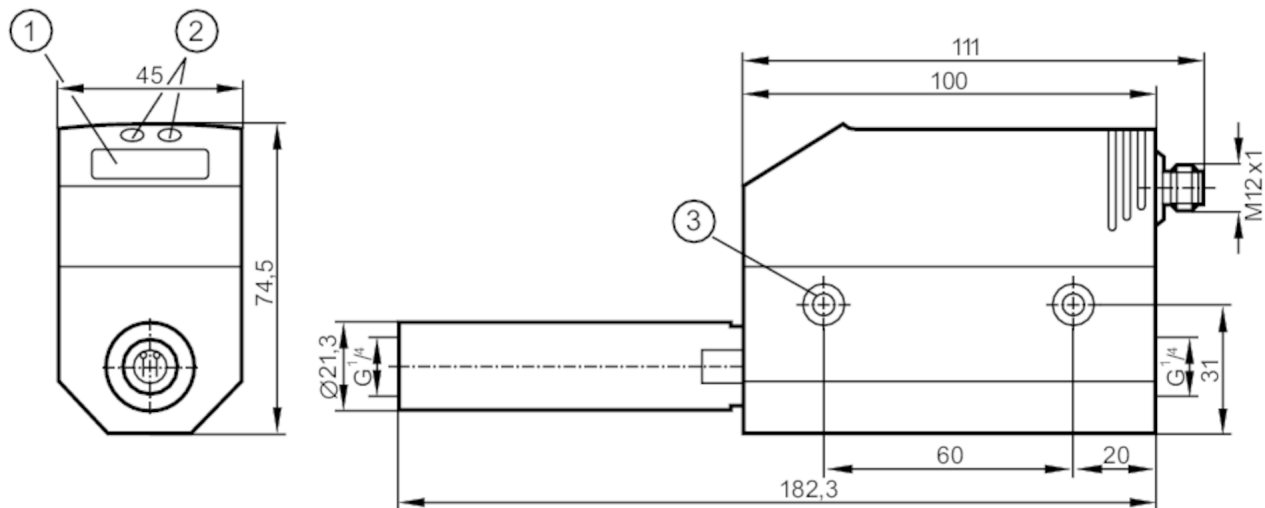
SDR14DGXFPKG/US-100

Article to be discontinued

Discontinuation date: 12/31/2024

Alternative articles: SD5500

When selecting an alternative article and accessories please note that technical data may differ!



- 1 alphanumeric display 4-digit
- 2 Programming buttons
- 3 hole for fixing screw M5



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1		
Measuring range	1...250 l/min	0.3...82.9 m/s	0.04...15 m³/h
Process connection	threaded connection G 1/4 Internal thread DN8		

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	16 bar	1.6 MPa	

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	1...250 l/min	0.3...82.9 m/s	0.04...15 m³/h
Display range	0...300 l/min	0...99.5 m/s	0...18 m³/h
Set point SP	2...250 l/min	0.7...82.9 m/s	0.12...15 m³/h
Reset point rP	1...249 l/min	0.3...82.5 m/s	0.04...14.92 m³/h
Analog start point ASP	0...187.5 l/min	0...62.2 m/s	0...11.26 m³/h
Analog end point AEP	62.5...250 l/min	20.7...82.9 m/s	3.74...15 m³/h
In steps of	0.5 l/min	0.1 m/s	0.02 m³/h
Volumetric flow quantity monitoring			
Pulse value	0.001...1000000 m³		
In steps of	0.001 m³		
Pulse length [s]	0,1...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: DN8)		
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><tr><th>Type of operation</th><th>DeviceID</th></tr><tr><td>default</td><td>260</td></tr></table>	Type of operation	DeviceID	default	260
Type of operation	DeviceID				
default	260				

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)	0,04 m³/h
	Q (t)	-
	Q (max)	15 m³/h
Vibration resistance	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] 974
Housing	rectangular
Dimensions	[mm] 182.3 x 45 x 74.5
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 G 1/4 Internal thread DN8

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Displays / operating elements

Display	Display unit	5 x LED, green (NI/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

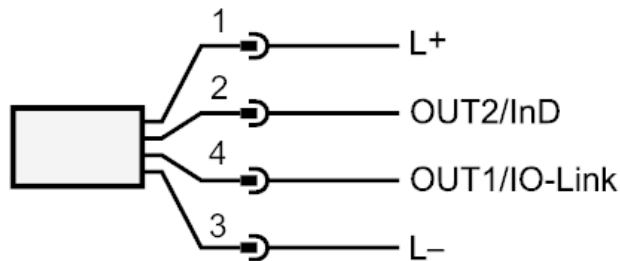
Remarks	MW = Measured value
	MEW = Final value of the measuring range
	Measuring, display and setting ranges refer to standard volume flow according to DIN ISO 2533.
	For information about installation and operation please see the operating instructions.
Pack quantity	1 pcs.

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