

Compressed air meter

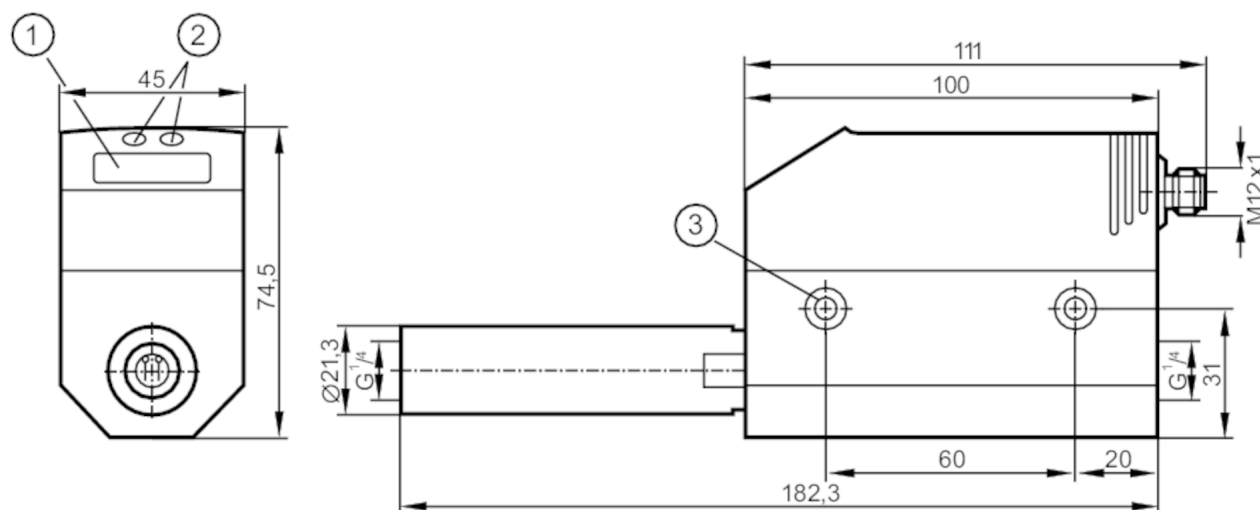
SDR14DGXFPKG/US-100

phase-out article

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 analogue 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 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 [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



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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				
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
Analogue start point ASP		0...187.5 l/min	0...62.2 m/s	0...11.26 m³/h
Analogue 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 l; 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)	



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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; Temperature monitoring; hysteresis / window; normally open / normally closed; current/pulse output; display can be rotated and switched off; Display unit; totaliser	
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 type	A	
Process data analogue	3	
Process data binary	2	
Min. process cycle time	[ms]	4.1
Supported DeviceIDs	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
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 G 1/4 DN8	

SD5000



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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

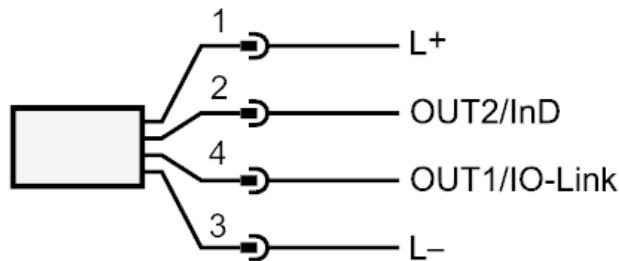
Remarks	MW = measured value
	MEW = Final value of the measuring range
	Measuring, display and setting ranges refer to the standard volume flow according to DIN ISO 2533.
	For information about installation and operation please see the operating instructions.
Pack quantity	1 pcs.

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

analogue output volumetric flow quantity monitoring / Temperature monitoring

input counter reset