

SD0523



Compressed air meter

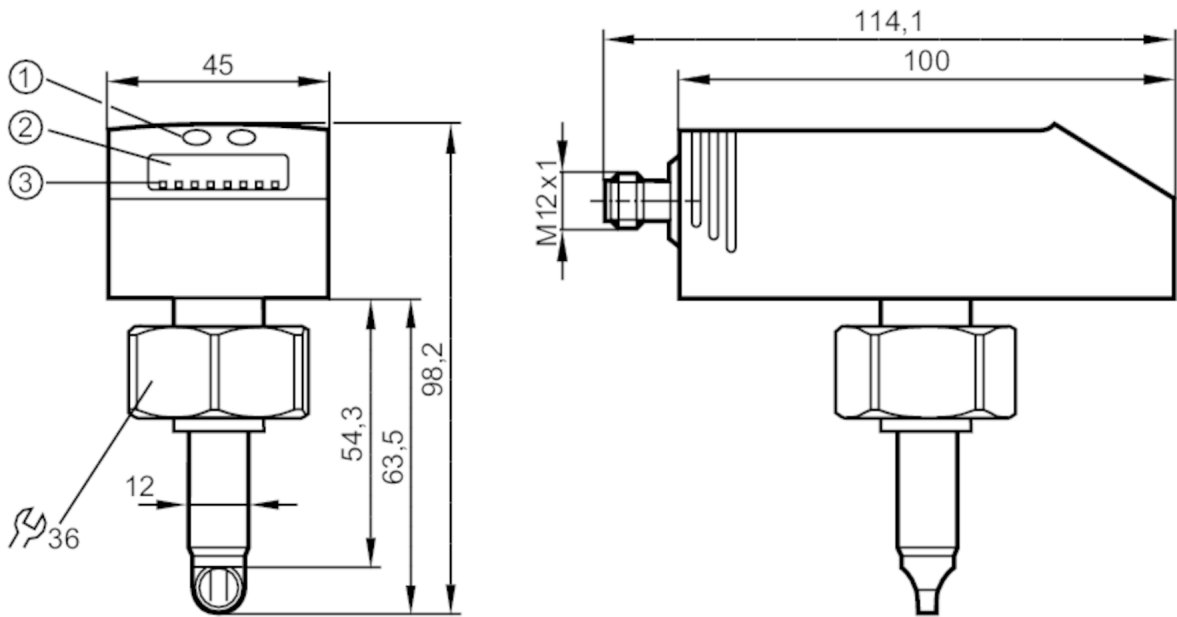
SDD11DGXFPKG/US-100

Article to be discontinued

Discontinuation date: 12/31/2024

Alternative articles: SD1540

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



- 1 Programming buttons
- 2 alphanumeric display 4-digit
- 3 status LEDs



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1		
Measuring range	0.5...143.9 m/s	8...2110 m³/h	0.12...35.18 m³/min
Process connection	threaded connection G 1 Internal thread		

Application

Installation	Adjustable to inside pipe diameters; (38...254 mm)	
Media	compressed air	
Medium temperature [°C]	0...60	
Pressure rating [bar]	16	
Pressure rating [MPa]	1.6	
Pressure rating [psi]	232	
MAWP (for applications according to CRN) [bar]	16	

Electrical data

Operating voltage [V]	18...30 DC; (to SELV/PELV)
Current consumption [mA]	< 110
Protection class	III
Reverse polarity protection	yes



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Power-on delay time	[s]	1	
Inputs / outputs			
Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1		
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	Measuring/setting range; Flow monitoring; The values apply at: Ø 72 mm		
Measuring range	0.5...143.9 m/s	8...2110 m³/h	0.12...35.18 m³/min
Display range	0...172.7 m/s	0...2532 m³/h	0...42.22 m³/min
Resolution	0.1 m/s	2 m³/h	0.02 m³/min
Set point SP	1.2...143.9 m/s	18...2110 m³/h	0.28...35.18 m³/min
Reset point rP	0.5...143.2 m/s	6...2100 m³/h	0.12...35 m³/min
Analog start point ASP	0...107.9 m/s	0...1582 m³/h	0...26.38 m³/min
Analog end point AEP	36...143.9 m/s	528...2110 m³/h	8.8...35.18 m³/min
In steps of	0.1 m/s	2 m³/h	0.02 m³/min
Volumetric flow quantity monitoring			
Pulse value	1...1000 x 10³		
In steps of	1 Nm³		
Pulse length	[s]	0,7...2 (D = 72 mm)	
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]	0.2...59.8	
Analog start point	[°C]	0...45	
Analog end point	[°C]	15...60	
In steps of	[°C]	0.2	



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Accuracy / deviations		
Flow monitoring		
Repeatability [% of the measured value]	± 1,5	
Accuracy (in the measuring range)	± (6 % MW + 0,6 % MEW); (D = 72mm, T = 22 °C; standard volume flow: 50...850 Nm³/h)	
Temperature monitoring		
Accuracy [K]	± 2,5 (Q > 2 Nm³/h)	
Reaction 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	
Temperature monitoring		
Dynamic response T05 / T09 [s]	30 (Q > 2 Nm³/h)	
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	
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	
SIO mode	yes	
Required master port class	A	
Process data analog	3	
Process data binary	2	
Min. process cycle time [ms]	5	
Supported DeviceIDs	Type of operation	DeviceID
	default	381
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 60947-5-9	
	DIN EN 61000-6-3	
Vibration resistance	DIN EN 60068-2-6	5 g (55...2000 Hz)
MTTF [years]	213	
Mechanical data		
Weight [g]	539.5	

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Material	PBT-GF20; PC; stainless steel (1.4301 / 304); FKM
Materials (wetted parts)	stainless steel (1.4401 / 316); stainless steel (1.4301 / 304); ceramics glass passivated; PEEK; polyester; FKM
Process connection	threaded connection G 1 Internal thread

Displays / operating elements

Display	Display unit	4 x LED, green (Nm³/min, Nm³/h, Nm³, °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

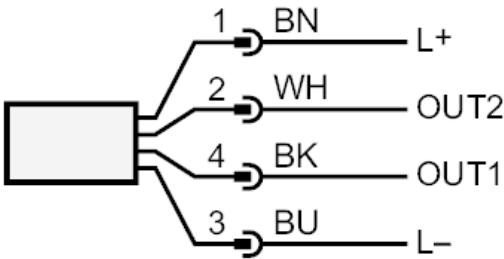
Remarks	Measuring, display and setting ranges refer to standard volume flow according to DIN ISO 2533. D = inside pipe diameter
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A



Connection



OUT1: Flow monitoring / quantity meter / Preset counter
IO-Link
OUT2: Flow monitoring / Temperature monitoring
Input counter reset
Colors to DIN EN 60947-5-2
Core colors :
BK = black
BN = brown
BU = blue
WH = white



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Diagrams and graphs

final value of the measuring range
referred to the internal pipe diameter

