

Compressed air meter

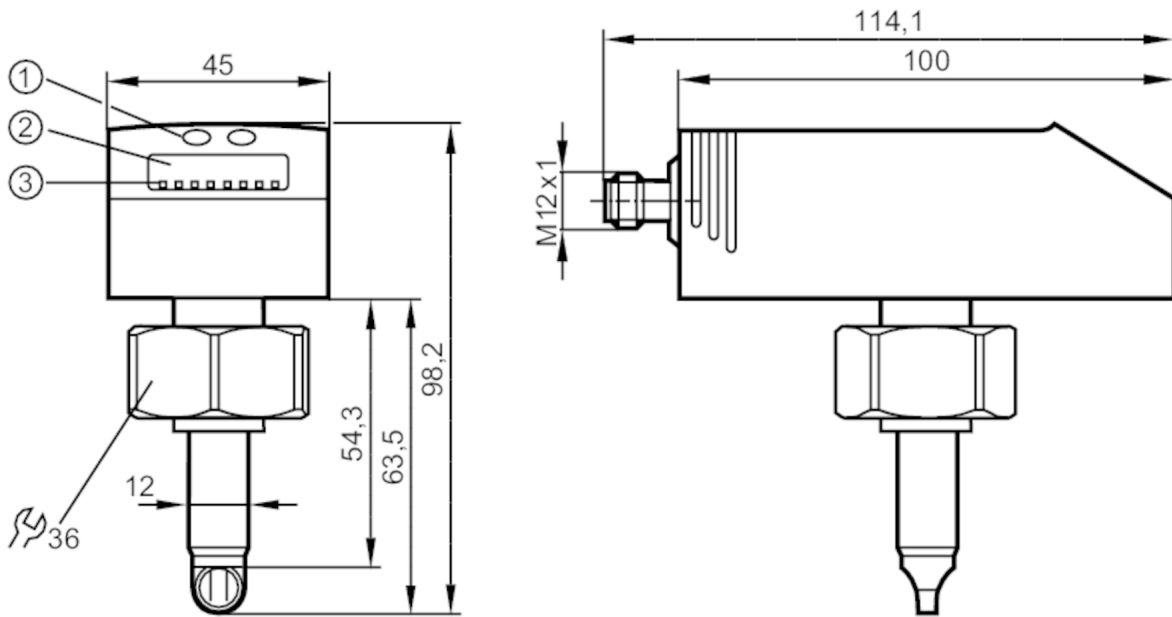
SDD11DGXFPKG/US-100

phase-out article

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 analogue outputs: 1		
Measuring range	0.5...143.9 m/s	8...2110 m ³ /h	0.12...35.18 m ³ /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



Compressed air meter

SDD11DGXFPKG/US-100

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				
Measuring range		Measuring/setting range; Flow monitoring; The values apply at: Ø 72 mm		
Measuring range		0.5...143.9 m/s	8...2110 m ³ /h	0.12...35.18 m ³ /min
Display range		0...172.7 m/s	0...2532 m ³ /h	0...42.22 m ³ /min
Resolution		0.1 m/s	2 m ³ /h	0.02 m ³ /min
Set point SP		1.2...143.9 m/s	18...2110 m ³ /h	0.28...35.18 m ³ /min
Reset point rP		0.5...143.2 m/s	6...2100 m ³ /h	0.12...35 m ³ /min
Analogue start point ASP		0...107.9 m/s	0...1582 m ³ /h	0...26.38 m ³ /min
Analogue end point AEP		36...143.9 m/s	528...2110 m ³ /h	8.8...35.18 m ³ /min
In steps of		0.1 m/s	2 m ³ /h	0.02 m ³ /min
Volumetric flow quantity monitoring				
Pulse value		1...1000 x 10 ³		
In steps of		1 Nm ³		
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		
Analogue start point	[°C]	0...45		
Analogue end point	[°C]	15...60		
In steps of	[°C]	0.2		



Compressed air meter

SDD11DGXFPKG/US-100

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)
Response times		
Flow monitoring		
Response time [s]		0.1; (dAP = 0)
Damping process value dAP in steps		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 / 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	
Profiles	Smart Sensor: Process Data Variable; Device Identification	
SIO mode	yes	
Required master port type	A	
Process data analogue	3	
Process data binary	2	
Min. process cycle time [ms]	5	
Supported DeviceIDs	Type of operation default	DeviceID 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	

SD0523



Compressed air meter

SDD11DGXFPKG/US-100

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

Displays / operating elements

Display	Display unit	4 x LED, green (Nm ³ /min, Nm ³ /h, 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

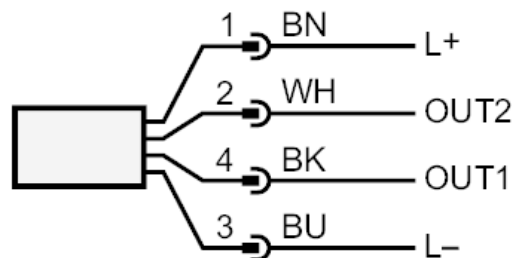
Remarks	Measuring, display and setting ranges refer to the standard volume flow according to DIN ISO 2533. D = inside pipe diameter
Pack quantity	1 pcs.

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
colours to DIN EN 60947-5-2
Core colours :

BK = black
BN = brown
BU = blue
WH = white

SD0523



Compressed air meter

SDD11DGXFPKG/US-100

Diagrams and graphs

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

