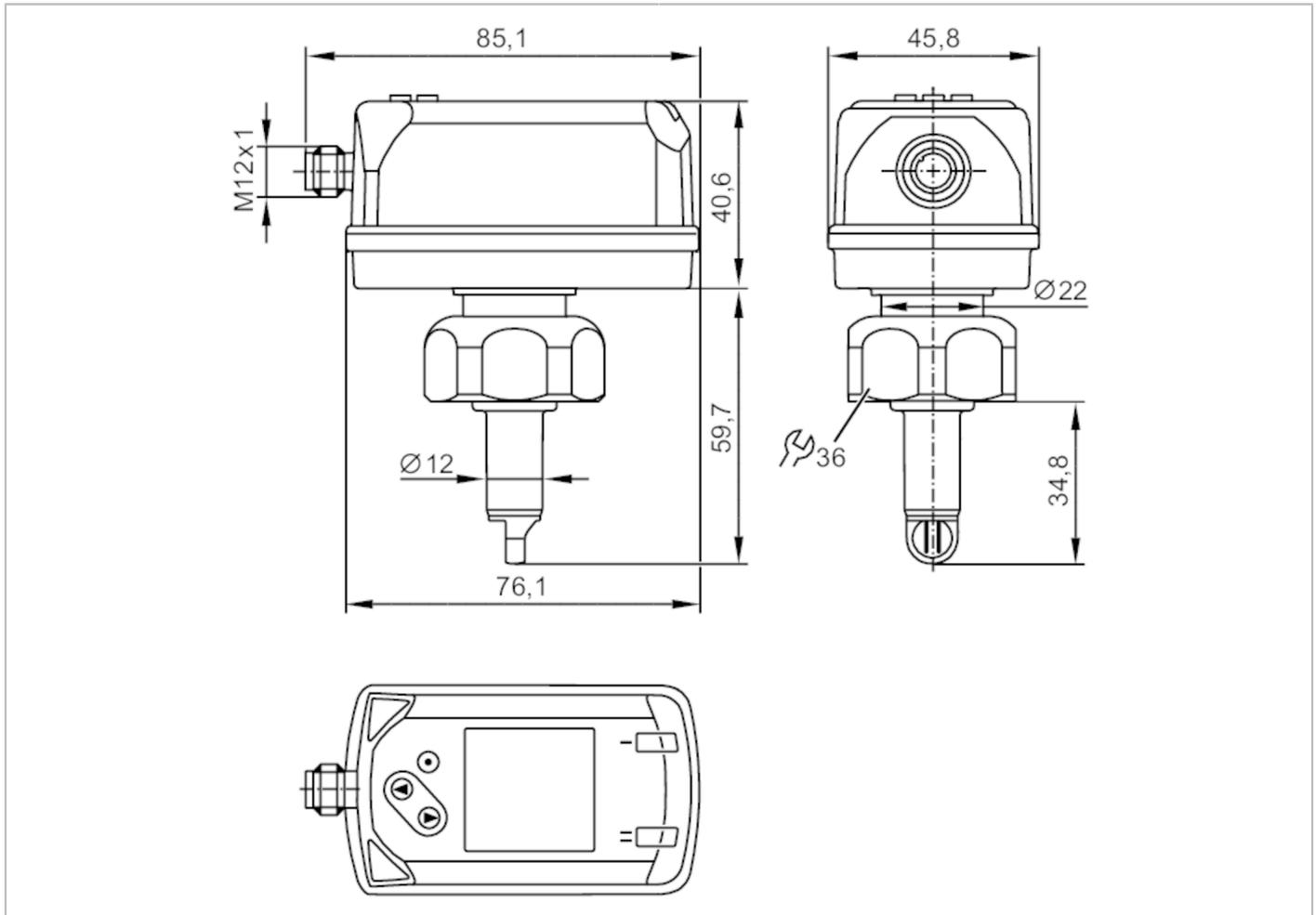


SD1540



Compressed air meter

SDD11DGXFRKG/US-100



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1		
Measuring range	0.6...143.9 m/s	0.3...26260 m³/h	0.005...437.6 m³/min
Process connection	threaded connection G 1 internal thread		

Application

Application	for industrial applications		
Installation	Adjustable to inside pipe diameters; (14...254 mm)		
Media	compressed air		
Medium temperature [°C]	-10...60		
Min. bursting pressure	64 bar	6.4 MPa	
Pressure rating	16 bar	1.6 MPa	
MAWP (for applications according to CRN) [bar]	10		

Electrical data

Operating voltage [V]	18...30 DC; (to SELV/PELV)		
Current consumption [mA]	< 80		
Protection class	III		
Reverse polarity protection	yes		

SD1540



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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
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Inputs

Inputs	counter reset
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Outputs

Output signal	switching signal; analogue signal; pulse signal; IO-Link; (configurable)
Electrical design	PNP/NPN
Number of digital outputs	2
Output function	normally open / normally closed; (parameterisable)
Max. voltage drop switching output DC	[V] 2.5
Permanent current rating of switching output DC	[mA] 150; (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	0.6...143.9 m/s	0.3...26260 m³/h	0.005...437.6 m³/min
Display range	0...172.7 m/s	0...31520 m³/h	0...525.2 m³/min
Resolution	0.1 m/s	0.05 m³/h	0.01 m³/min
Set point SP	1.4...143.9 m/s	0.8...26260 m³/h	0.013...437.6 m³/min
Reset point rP	0.7...143.2 m/s	0.4...26140 m³/h	0.007...435.6 m³/min
Analogue start point ASP	0...115.1 m/s	0...21000 m³/h	0...350 m³/min
Analogue end point AEP	28.8...143.9 m/s	422...26260 m³/h	7.04...437.6 m³/min
Low flow cut-off LFC	0.2...1.4 m/s	0.1...260 m³/h	0.002...4.4 m³/min
In steps of	0.1 m/s	0.01 m³/h	0.001 m³/min

Pressure monitoring

Measuring range	[bar]	-1...16
Display range	[bar]	-1...20
Resolution	[bar]	0.05
Set point SP	[bar]	-0.92...16
Reset point rP	[bar]	-1...15.92
Analogue start point	[bar]	-1...12.8
Analogue end point	[bar]	2.2...16
In steps of	[bar]	0.01

Volumetric flow quantity monitoring

Measuring range	0...1000000000 m³	0...35314666721 scf
Display range	0...1000000000 m³	0...35314666721 scf
Set point SP	0.01...100000000 m³	0.35...3531466672.1 scf
Pulse value	0.01...100000000 m³	0.35...3531466672.1 scf

SD1540



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SDD11DGXFRKG/US-100

In steps of	0.001 m ³	0.05 scf
Pulse length [s]	0.001...2	
Temperature monitoring		
Measuring range	-10...60 °C	14...140 °F
Display range	-24...74 °C	-11.2...165.2 °F
Resolution	0.2 °C	0.5 °F
Set point SP	-9.7...60 °C	14.6...140 °F
Reset point rP	-10...59.7 °C	14...139.4 °F
Analogue start point	-10...46 °C	14...114.8 °F
Analogue end point	4...60 °C	39.2...140 °F
In steps of	0.1 °C	0.1 °F
Accuracy / deviations		
Temperature coefficient [1/K]	± 0,07 % MW	
Accuracy (in the measuring range)	± (6 % MW + 0,6 % MEW); (reference conditions: diA = 73 mm; inlet pipe length ≥ 3 m; outlet pipe length ≥ 0,5 m; reference temperature: 20...25 °C; standard volume flow: 50...850 Nm ³ /h)	
Repeatability	± 1,5 % MW	
Pressure monitoring		
Repeatability [% of the final value]	± 0,2	
Characteristics deviation [% of the final value]	< ± 0,5; (BFSL = Best Fit Straight Line)	
Greatest TEMPCO of the span [% MEW / 10 K]	± 0,3	
Greatest TEMPCO of the zero point [% MEW / 10 K]	± 0,1	
Temperature monitoring		
Accuracy [K]	± 0,5; (medium flow in the limit area of the flow measurement range)	
Response times		
Response time [s]	0.1; (dAP = 0)	
Damping process value dAP [s]	0...5	
Pressure monitoring		
Response time [s]	0.05	
Temperature monitoring		
Dynamic response T05 / T09 [s]	T09 = 0,5	
Software / programming		
Parameter setting options	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	Digital Measuring Sensor (0x800A), Identification and Diagnosis (0x4000)	

SD1540



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SDD11DGXFRKG/US-100

SIO mode	yes	
Required master port type	A	
Process data analogue	8	
Process data binary	2	
Min. process cycle time [ms]	7.2	
Supported DeviceIDs	Type of operation default	DeviceID 872

Operating conditions		
Ambient temperature [°C]		0...60
Storage temperature [°C]		-20...85
Max. relative air humidity [%]		90
Protection		IP 65; IP 67

Tests / approvals		
EMC	DIN EN 60947-5-9	
CPA approval	model number	-
	accuracy class	-
	maximum allowable error	± 7 % FS
	Q (min)	0,3 m³/h
	Q (t)	-
	Q (max)	26260 m³/h
Vibration resistance	DIN EN 68000-2-6	5 g (10...2000 Hz)
MTTF [years]		167
UL approval	UL Approval no.	I013
	File number UL	E174189

Mechanical data		
Weight [g]		408.3
Housing		rectangular
Dimensions [mm]		85.1 x 45.8 x 100.3
Materials		PBT+PC-GF30; PPS GF40; stainless steel (304/1.4301); stainless steel (303/1.4305); stainless steel (316L/1.4404); FKM
Materials (wetted parts)		stainless steel (304/1.4301); stainless steel (316L/1.4404); FKM; ceramics glass passivated; PPS GF40; Al2O3 (ceramics); acrylate
Process connection		threaded connection G 1 internal thread

Displays / operating elements		
Display		colour display 1,44", 128 x 128 pixels 2 x LED, yellow

Remarks		
Remarks		MW = measured value MEW = Final value of the measuring range D = inside pipe diameter 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.

SD1540



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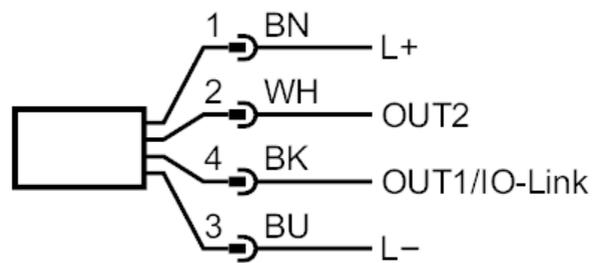
SDD11DGXFRKG/US-100

Electrical connection

Connector: 1 x M12; coding: A



Connection



OUT1/IO-Link: switching output flow
switching output temperature
switching output pressure
Pulse output quantity meter

OUT2/InD: signal output Preset counter
switching output flow
switching output temperature
switching output pressure
analogue output flow
analogue output temperature
analogue output pressure
signal output Preset counter
Pulse output quantity meter
input counter reset