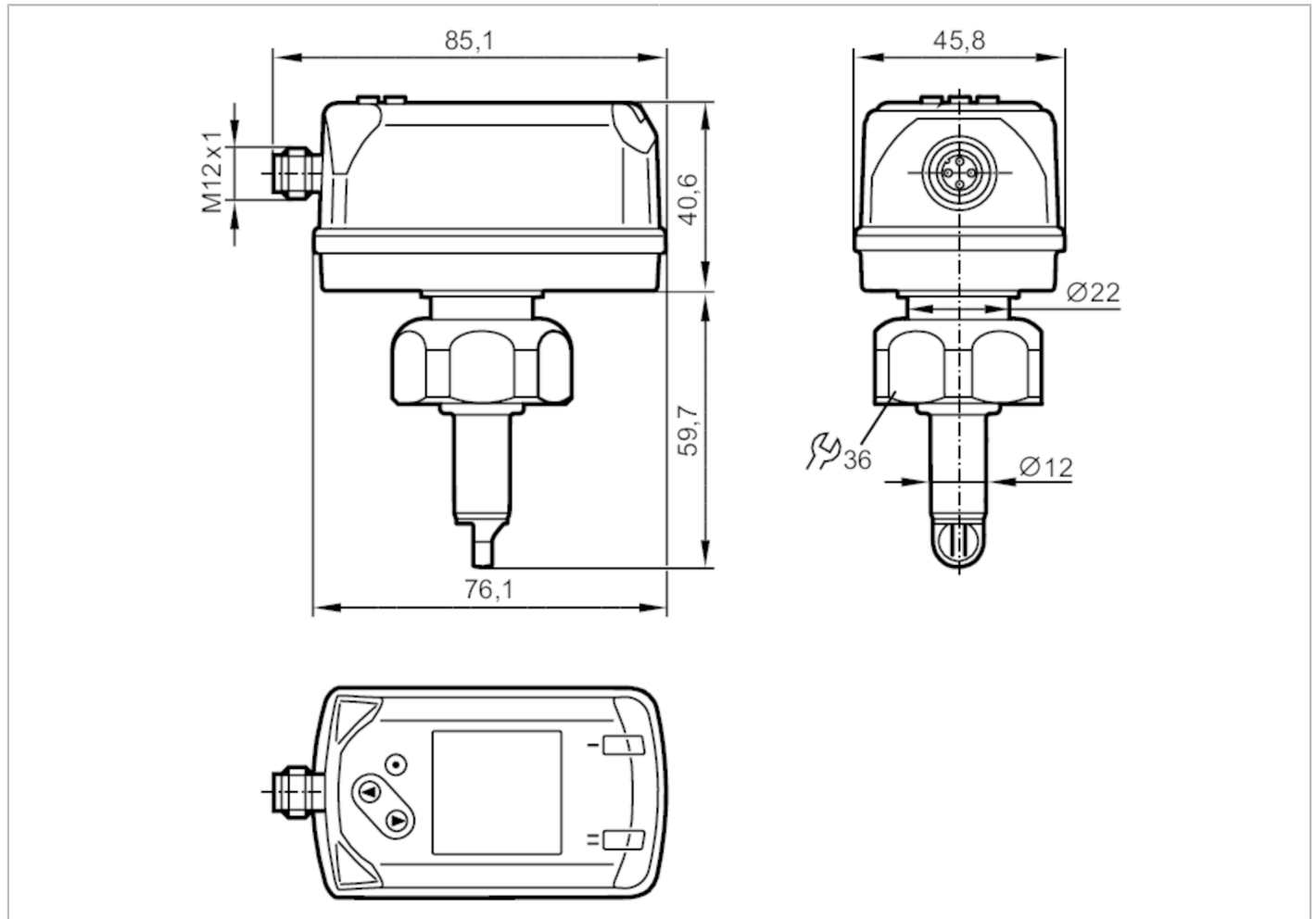


# SD1540



## Compressed air meter

SDD11DGXFRKG/US-100



Product characteristics	
Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1
Process connection	threaded connection G 1 internal thread
Pressure monitoring	
Measuring range [bar]	-1...16
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 [bar]	64
Min. bursting pressure [MPa]	6.4
Pressure rating [bar]	16
Pressure rating [Mpa]	1.6
MAWP (for applications according to CRN) [bar]	10

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Electrical data			
Operating voltage	[V]	18...30 DC; (to SELV/PELV)	
Current consumption	[mA]	< 80	
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 analogue outputs: 1	
Inputs			
Inputs		counter reset	
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
Display range		0...172.7 m/s	0...31520 m³/h
Resolution		0.1 m/s	0.05 m³/h
Set point SP		1.4...143.9 m/s	0.8...26260 m³/h
Reset point rP		0.7...143.2 m/s	0.4...26140 m³/h
Analogue start point ASP		0...115.1 m/s	0...21000 m³/h
Analogue end point AEP		28.8...143.9 m/s	422...26260 m³/h
Low flow cut-off LFC		0.2...1.4 m/s	0.1...260 m³/h
In steps of		0.1 m/s	0.01 m³/h
0.005...437.6 m³/min			
0...525.2 m³/min			
0.01 m³/min			
0.013...437.6 m³/min			
0.007...435.6 m³/min			
0...350 m³/min			
7.04...437.6 m³/min			
0.002...4.4 m³/min			
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	

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In steps of	[bar]	0.01
<b>Volumetric flow quantity monitoring</b>		
Measuring range	0...1000000000 m <sup>3</sup>	0...35314666721 scf
Display range	0...1000000000 m <sup>3</sup>	0...35314666721 scf
Set point SP	0.01...100000000 m <sup>3</sup>	0.35...3531466672.1 scf
Pulse value	0.01...100000000 m <sup>3</sup>	0.35...3531466672.1 scf
In steps of	0.001 m <sup>3</sup>	0.05 scf
Pulse length	[s]	0.001...2
<b>Temperature monitoring</b>		
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
<b>Accuracy / deviations</b>		
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 <sup>3</sup> /h)
Repeatability		± 1,5 % MW
<b>Pressure monitoring</b>		
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
<b>Temperature monitoring</b>		
Accuracy	[K]	± 0,5; (medium flow in the limit area of the flow measurement range)
<b>Response times</b>		
Response time	[s]	0.1; (dAP = 0)
Damping process value dAP	[s]	0...5
<b>Pressure monitoring</b>		
Response time	[s]	0.05
<b>Temperature monitoring</b>		
Dynamic response T05 / T09	[s]	T09 = 0,5
<b>Software / programming</b>		
Parameter setting options		hysteresis / window; normally open / normally closed; current/pulse output; display can be rotated and switched off; Display unit; totaliser

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## Compressed air meter

SDD11DGXFRKG/US-100

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)	
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	DeviceID
	Default	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]	180	
UL approval	UL Approval no.	I013
	File number UL	E174189
Mechanical data		
Weight [g]	408.3	
Materials	PBT+PC-GF30; PPS GF40; stainless steel (1.4301 / 304); stainless steel (1.4305 / 303); stainless steel (1.4404 / 316L); FKM	
Materials (wetted parts)	stainless steel (1.4301 / 304); stainless steel (1.4404 / 316L); 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	

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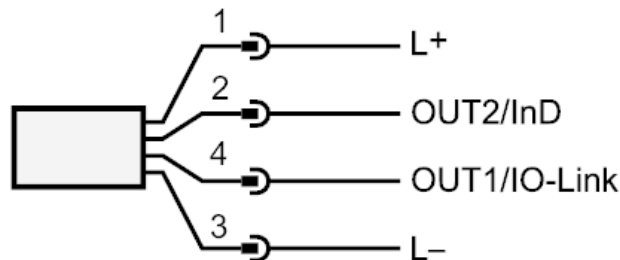
Remarks	
Remarks	MW = measured value
	MEW = Final value of the measuring range
	D = inside pipe diameter
	Measuring, display and setting ranges refer to the standard volume flow according to DIN ISO 2533.
	For information about installation and operation please see the operating instructions.
Pack quantity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

### 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
  - signal output Preset counter
- OUT2/InD:
  - 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