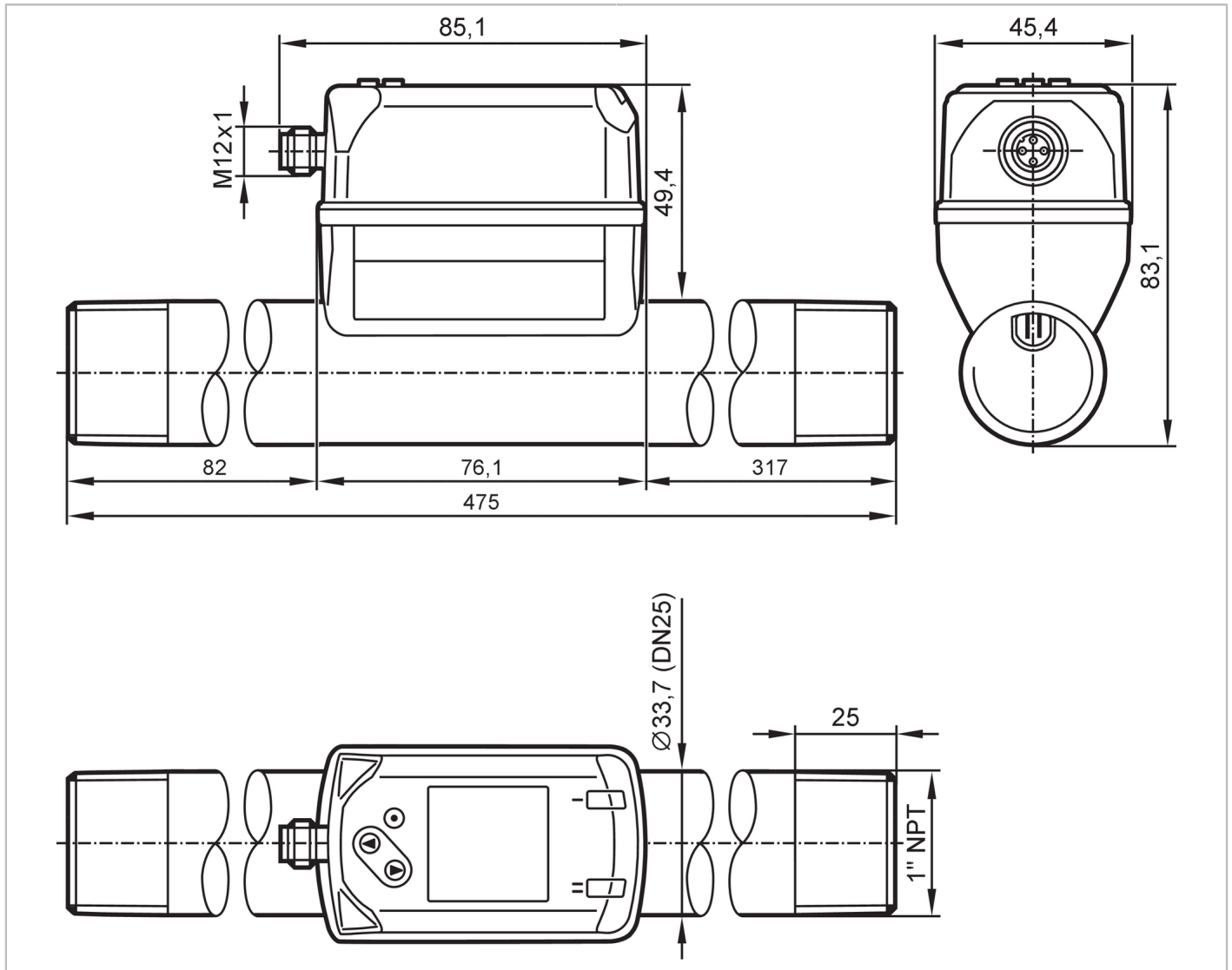


# SD8501



## Compressed air meter

SDN11DGXFRKG/US-100



Product characteristics	
Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1
Measuring range	25...7945 scfh      0.4...132.4 scfm      1.2...340.2 ft/s
Process connection	threaded connection 1" NPT external thread DN25
Application	
Application	for industrial applications
Media	compressed air
Medium temperature [°C]	-10...60
Min. burst pressure [psi]	928
Pressure rating [psi]	232
MAWP for applications according to CRN [bar]	10.5
Electrical data	
Operating voltage [V]	18...30 DC; (to SELV/PELV)
Current consumption [mA]	< 80

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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
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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	25...7945 scfh	0.4...132.4 scfm	1.2...340.2 ft/s
Display range	0...9535 scfh	0...158.9 scfm	0...408.2 ft/s
Resolution	5 scfh	0.1 scfm	0.2 ft/s
Set point SP	69...7943 scfh	1.1...132.4 scfm	3...340.1 ft/s
Reset point rP	30...7904 scfh	0.5...131.7 scfm	1.3...338.4 ft/s
Analogue start point ASP	0...6357 scfh	0...105.9 scfm	0...272.2 ft/s
Analogue end point AEP	1589...7946 scfh	26.5...132.4 scfm	68...340.2 ft/s
Low flow cut-off LFC	9...85 scfh	0.2...1.4 scfm	0.4...3.6 ft/s
In steps of	1 scfh	0.1 scfm	0.1 ft/s

### Pressure monitoring

Measuring range [psi]	-15...232
Display range [psi]	-15...290
Resolution [psi]	1
Set point SP [psi]	-13...232
Reset point rP [psi]	-15...231
Analogue start point [psi]	-15...186
Analogue end point [psi]	32...232
In steps of [psi]	1

### Volumetric flow quantity monitoring

Measuring range	0...100000000 m <sup>3</sup>	0...353146667.2 scf
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## Compressed air meter

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Display range	0...100000000 m <sup>3</sup>	0...353146667.2 scf
Set point SP	0.001...10000000 m <sup>3</sup>	0.05...353146667.2 scf
Pulse value	0.001...10000000 m <sup>3</sup>	0.05...353146667.2 scf
In steps of	0.0001 m <sup>3</sup>	0.005 scf
Pulse length [s]		0.007...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)		class 141: ± (2 % MW + 0,5 % MEW); class 344: ± (6 % MW + 0,6 % MEW) ; air quality to ISO 8573-1:2010; at medium temperature 73 °F
Repeatability		± (0,4 % MW + 0,1 % MEW)
<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, T09)
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
<b>Interfaces</b>		
Communication interface		IO-Link
Transmission type		COM2 (38,4 kBaud)
IO-Link revision		1.1

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## Compressed air meter

SDN11DGXFRKG/US-100

SDCI standard	IEC 61131-9 CDV	
Profiles	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
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	<b>Type of operation</b>	<b>DeviceID</b>
	default	867

Operating conditions		
Ambient temperature [°F]	32...140	
Storage temperature [°C]	-4...185	
Max. relative air humidity [%]	90	
Protection	IP 65; IP 67	

Tests / approvals		
EMC	DIN EN 60947-5-9	
Vibration resistance	DIN EN 68000-2-6	5 g (10...2000 Hz)
MTTF [years]	183	
UL approval	UL approval no.	I012
	File number UL	E174189
Pressure Equipment Directive	Sound engineering practice; can be used for stable gases fluid group 2	

Mechanical data		
Weight [g]	1581	
Housing	rectangular	
Dimensions [mm]	475 x 45.4 x 83.1	
Materials	PBT+PC-GF30; PPS GF40; stainless steel (304/1.4301); stainless steel (303/1.4305); steel (1.5523) galvanised; 2.0401 (brass / CW614N); FKM	
Materials (wetted parts)	stainless steel (304/1.4301); stainless steel (303/1.4305); FKM; ceramics glass passivated; PPS GF40; Al2O3 (ceramics); acrylate	
Process connection	threaded connection 1" NPT external thread DN25	

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	
	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.	

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## Compressed air meter

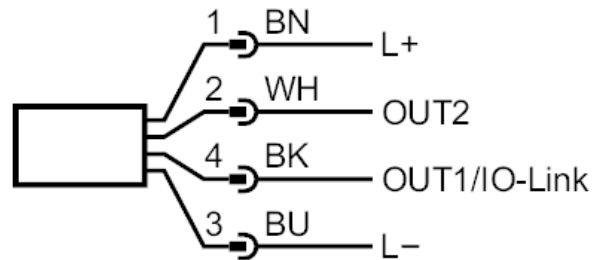
SDN11DGXFRKG/US-100

### Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4



### Connection



- |               |   |
|---------------|---|
| OUT1/IO-Link: | switching output flow<br>switching output temperature<br>switching output pressure<br>Pulse output quantity meter<br>signal output Preset counter   |
| OUT2/InD:     | switching output flow<br>switching output temperature<br>switching output pressure<br>analogue output flow<br>analogue output temperature<br>analogue output pressure<br>signal output Preset counter<br>Pulse output quantity meter<br>input counter reset |