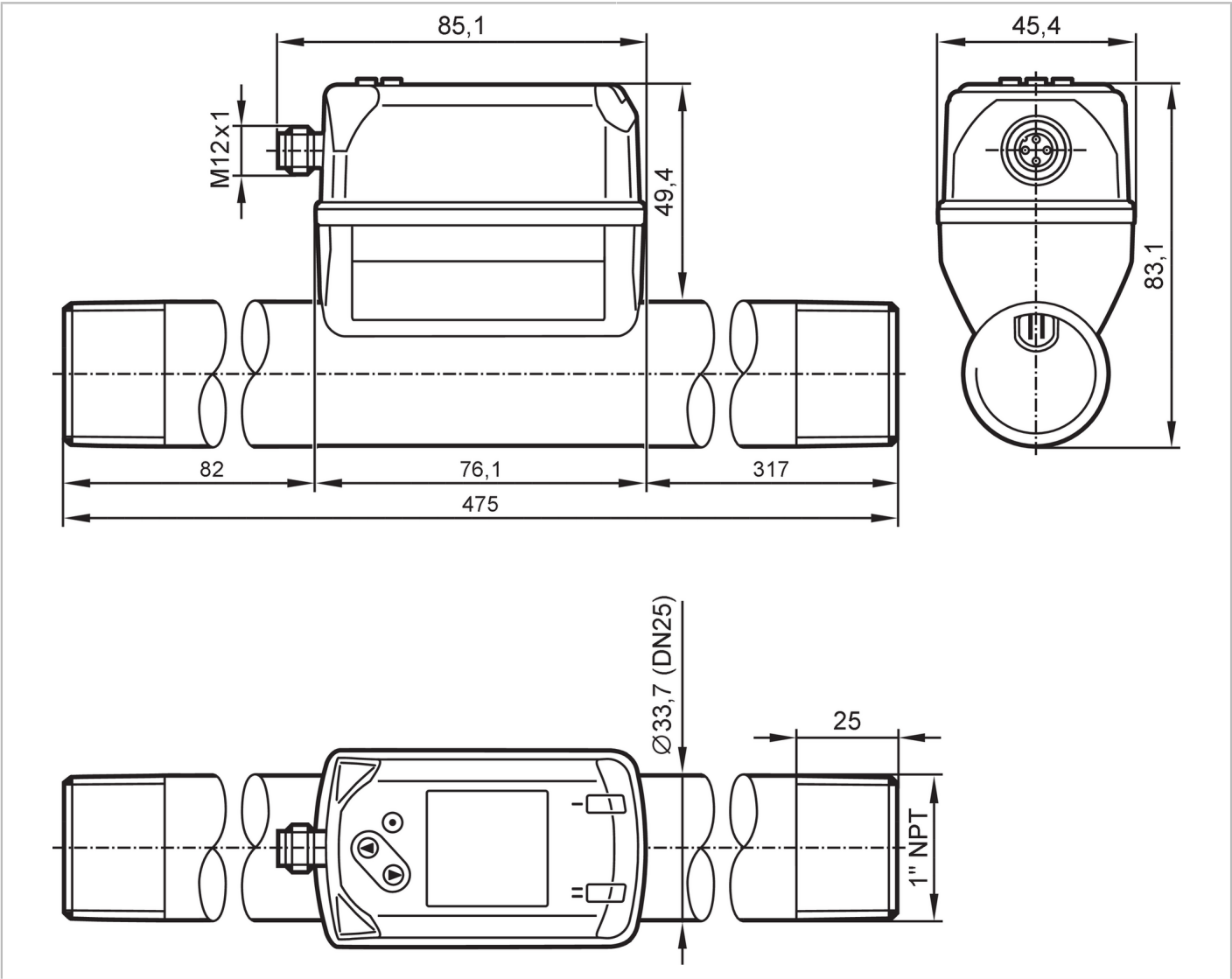


SD8501



Compressed air meter

SDN11DGXFRKG/US-100



CRN



DNV
DNV.COM/AF



IO-Link



UK
CA

Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analog 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

SD8501



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SDN11DGXFRKG/US-100

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 analog outputs: 1
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Inputs

Inputs	counter reset
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Outputs

Output signal	switching signal; analog signal; pulse signal; IO-Link; (configurable)
Electrical design	PNP/NPN
Number of digital outputs	2
Output function	normally open / closed; (configurable)
Max. voltage drop switching output DC [V]	2.5
Permanent current rating of switching output DC [mA]	150; (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	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
Analog start point ASP	0...6357 scfh	0...105.9 scfm	0...272.2 ft/s
Analog 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
Analog start point [psi]	-15...186
Analog end point [psi]	32...232
In steps of [psi]	1

Volumetric flow quantity monitoring

Measuring range	0...100000000 m³	0...353146667.2 scf
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Display range	0...100000000 m³	0...353146667.2 scf
Set point SP	0.001...10000000 m³	0.05...353146667.2 scf
Pulse value	0.001...10000000 m³	0.05...353146667.2 scf
In steps of	0.0001 m³	0.005 scf
Pulse length [s]	0.007...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
Analog start point	-10...46 °C	14...114.8 °F
Analog 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)	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)	
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)	
Reaction times		
Response time [s]	< 0.1; (dAP = 0, T09)	
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 / 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	

SD8501



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SDCI standard		IEC 61131-9 CDV	
Profiles		Common - I&D	Identification and Diagnosis
		Function	Measurement data, standard resolution
SIO mode		yes	
Required master port class		A	
Process data analog		8	
Process data binary		2	
Min. process cycle time	[ms]	7.2	
Supported DeviceIDs		Type of operation	DeviceID
		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 number	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	
Material		PBT+PC-GF30; PPS GF40; stainless steel (1.4301 / 304); stainless steel (1.4305 / 303); steel (1.5523) galvanized; 2.0401 (brass / CW614N); FKM	
Materials (wetted parts)		stainless steel (1.4301 / 304); stainless steel (1.4305 / 303); FKM; ceramics glass passivated; PPS GF40; Al2O3 (ceramics); acrylate	
Process connection		threaded connection 1" NPT external thread DN25	
Displays / operating elements			
Display			Color 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 standard volume flow according to DIN ISO 2533.	
		For information about installation and operation please see the operating instructions.	
Pack quantity		1 pcs.	

SD8501



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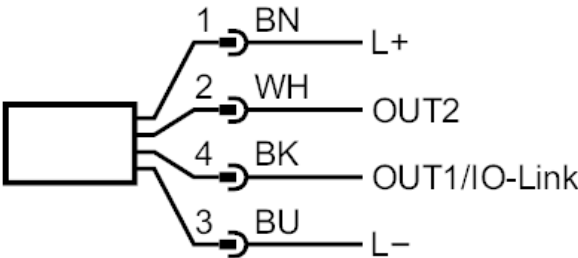
SDN11DGXFRKG/US-100

Electrical connection

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



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
analog output flow
analog output temperature
analog output pressure
signal output Preset counter
Pulse output quantity meter
Input counter reset