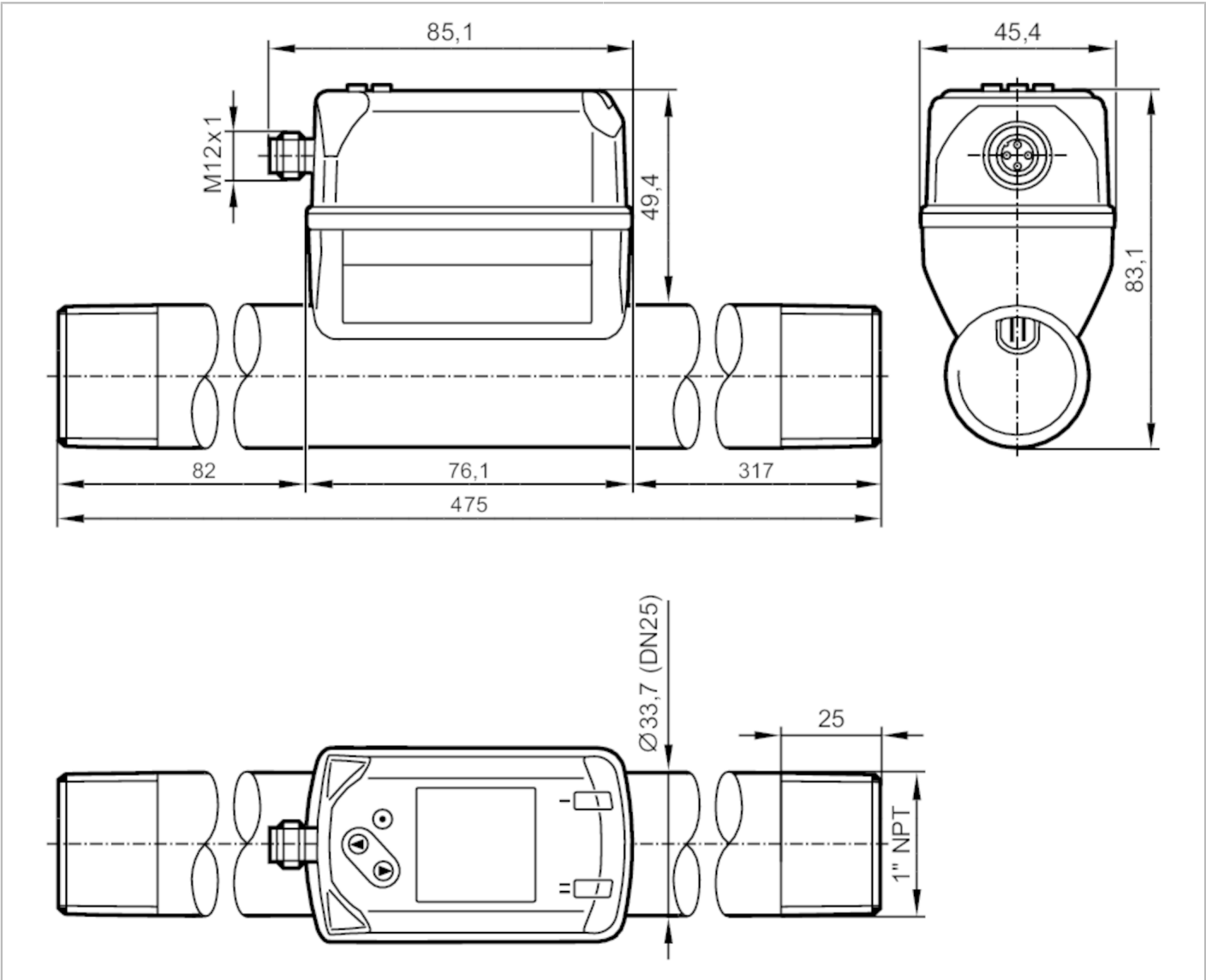


SD8501



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	[scfh]	25...7945
Measuring range	[scfm]	0.4...132.4
Measuring range	[ft/s]	1.2...340.2
Process connection		threaded connection 1" NPT DN25
Application		
Application		for industrial applications
Media		compressed air
Medium temperature	[°C]	-10...60
Min. bursting pressure	[psi]	928
Pressure rating	[psi]	232
MAWP (for applications according to CRN)	[bar]	10.5



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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	[scfh]	25...7945
Measuring range	[scfm]	0.4...132.4
Measuring range	[ft/s]	1.2...340.2
Display range	[scfh]	0...9535
Display range	[scfm]	0...158.9
Display range	[ft/s]	0...408.2
Resolution	[scfh]	5
Resolution	[scfm]	0.1
Resolution	[ft/s]	0.2
Set point SP	[scfh]	69...7943
Set point SP	[scfm]	1.1...132.4
Set point SP	[ft/s]	3...340.1
Reset point rP	[scfh]	30...7904
Reset point rP	[scfm]	0.5...131.7
Reset point rP	[ft/s]	1.3...338.4
Analogue start point ASP	[scfh]	0...6357



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Analogue start point ASP	[scfm]	0...105.9
Analogue start point ASP	[ft/s]	0...272.2
Analogue end point AEP	[scfh]	1589...7946
Analogue end point AEP	[scfm]	26.5...132.4
Analogue end point AEP	[ft/s]	68...340.2
Low flow cut-off LFC	[scfh]	9...85
Low flow cut-off LFC	[scfm]	0.2...1.4
Low flow cut-off LFC	[ft/s]	0.4...3.6
In steps of	[scfh]	1
In steps of	[scfm]	0.1
In steps of	[ft/s]	0.1
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 ³	0...353146667.2 scf
Display range	0...100000000 m ³	0...353146667.2 scf
Set point SP	0.001...10000000 m ³	0.05...353146667.2 scf
Pulse value	0.001...10000000 m ³	0.05...353146667.2 scf
In steps of	0.0001 m ³	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
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)		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		± 0,2
	[% of the final value]	
Characteristics deviation		< ± 0,5; (BFSL = Best Fit Straight Line)



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[% of the final value]		
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)	
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	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	

SD8501



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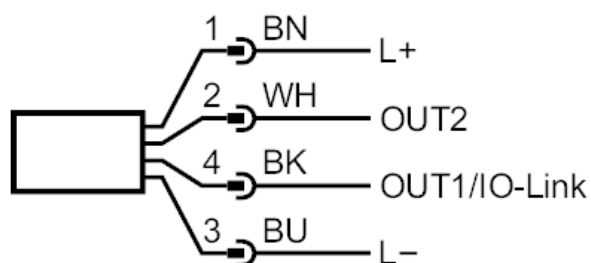
Mechanical data		
Weight	[g]	1581
Materials	PBT+PC-GF30; PPS GF40; stainless steel (304/1.4301); stainless steel (303/1.4305); steel (1.5523) galvanised; 2.0401 (brass / CW614N); FKM	
Materials (wetted parts)	stainless steel (304/1.4301); stainless steel (303/1.4305); FKM; ceramics glass passivated; PPS GF40; Al2O3 (ceramics); acrylate	
Process connection	threaded connection 1" NPT 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.	
Electrical connection		
Connector: 1 x M12; coding: A		
		



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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