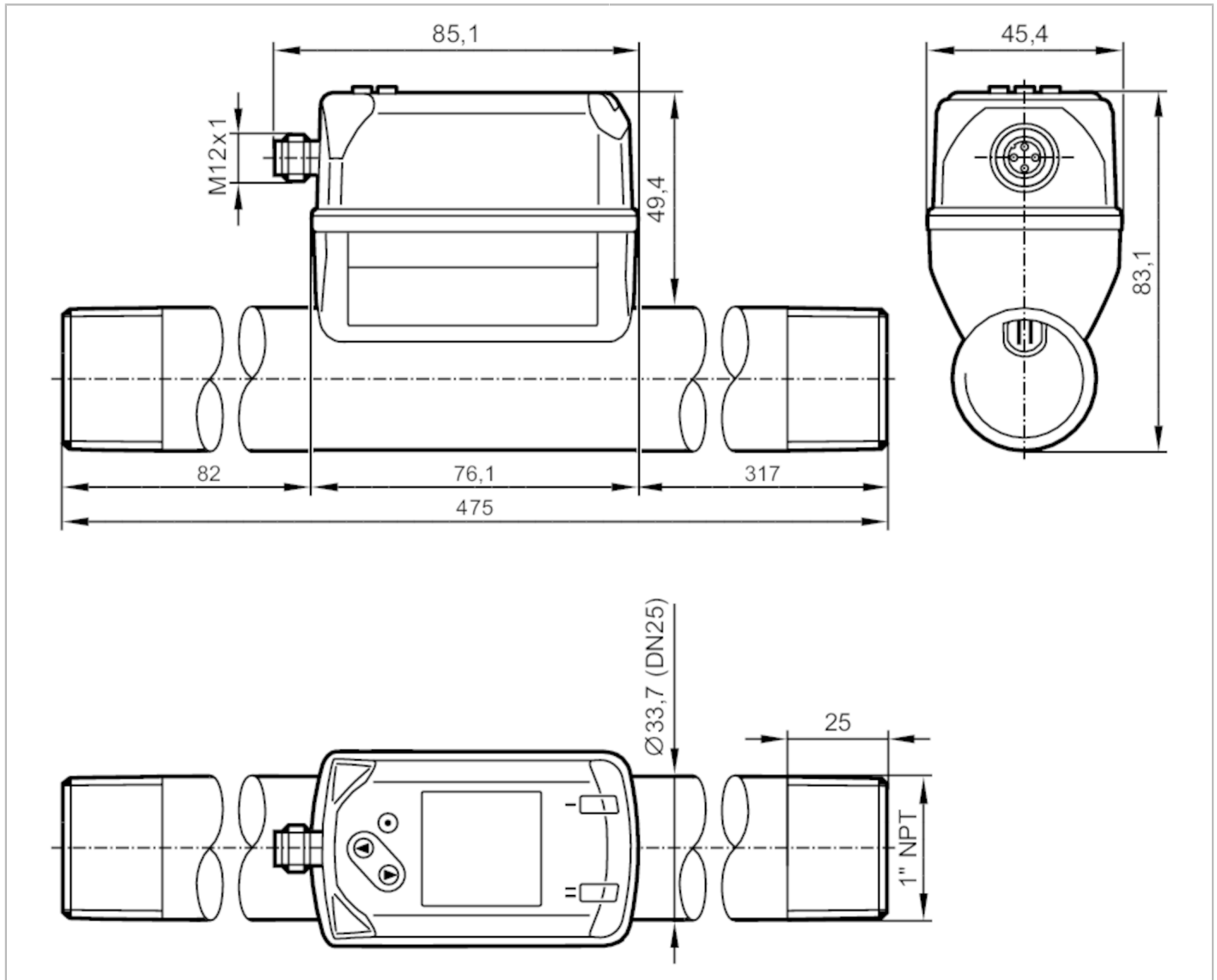


SD8501



Compressed air meter

SDN11DGXFRKG/US-100



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analog 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 analog outputs: 1
Inputs	
Inputs	counter reset
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 [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
Analog start point ASP [scfh]	0...6357

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Analog start point ASP	[scfm]	0...105.9
Analog start point ASP	[ft/s]	0...272.2
Analog end point AEP	[scfh]	1589...7946
Analog end point AEP	[scfm]	26.5...132.4
Analog 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
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 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
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		± 0,2
	[% of the final value]	
Characteristics deviation		< ± 0,5; (BFSL = Best Fit Straight Line)

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Compressed air meter

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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)
Reaction 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 / 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
SDCI standard		IEC 61131-9 CDV
Profiles		Digital Measuring Sensor (0x800A), Identification and Diagnosis (0x4000)
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
MTTF	[years]	5 g (10...2000 Hz)
UL approval		183
	UL approval number	I012
	File number UL	E174189
Pressure equipment directive		sound engineering practice; can be used for stable gases fluid group 2

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Mechanical data	
Weight [g]	1581
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 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.
Electrical connection	
Connector: 1 x M12; coding: A	
	

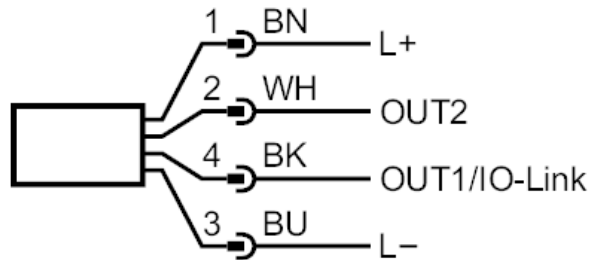
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Connection



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