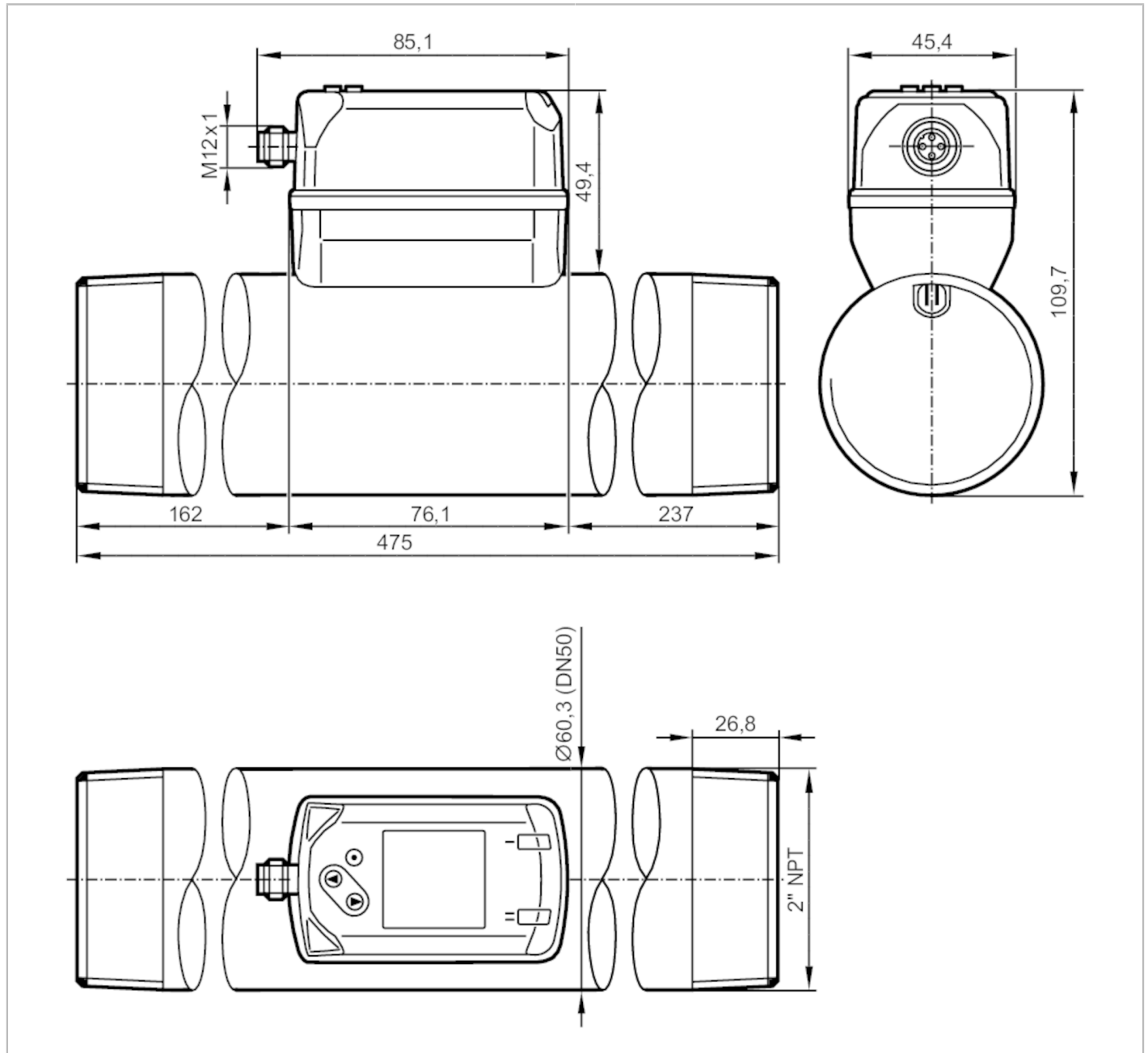


# SD2501



## Compressed air meter

SDN21DGXFRKG/US-100



Product characteristics	
Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1
Process connection	threaded connection 2" NPT DN50
Pressure monitoring	
Measuring range	[psi] -15...232

# SD2501



## Compressed air meter

SDN21DGXFRKG/US-100

Application			
Application	for industrial applications		
Media	compressed air		
Medium temperature	[°C]	-10...60	
Min. bursting pressure	[psi]	928	
Pressure rating	[psi]	232	
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	80...24720 scfh	1.5...412 scfm	1...275.6 ft/s
Display range	0...29660 scfh	0...494.5 scfm	0...330.8 ft/s
Resolution	20 scfh	0.5 scfm	0.2 ft/s
Set point SP	210...24710 scfh	3.5...411.8 scfm	2.4...275.5 ft/s
Reset point rP	90...24590 scfh	1.5...409.8 scfm	1...274.1 ft/s
Analog start point ASP	0...19780 scfh	0...329.6 scfm	0...220.5 ft/s
Analog end point AEP	4940...24720 scfh	82.4...412 scfm	55.1...275.6 ft/s
Low flow cut-off LFC	70...250 scfh	1.2...4.1 scfm	0.8...2.8 ft/s
In steps of	1 scfh	0.1 scfm	0.1 ft/s

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## Compressed air meter

SDN21DGXFRKG/US-100

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 <sup>3</sup> 0...353146667.2 scf
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]	0.002...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)
Damping process value dAP	[s]	0...5

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## Compressed air meter

SDN21DGXFRKG/US-100

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	<table border="1"><thead><tr><th>Type of operation</th><th>DeviceID</th></tr></thead><tbody><tr><td>default</td><td>871</td></tr></tbody></table>	Type of operation	DeviceID	default	871
Type of operation	DeviceID				
default	871				
Operating conditions					
Ambient temperature [°F]	32...140				
Storage temperature [°F]	-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]	183				
UL approval	<table border="1"><thead><tr><th>UL approval number</th><th>I012</th></tr></thead><tbody><tr><td>File number UL</td><td>E174189</td></tr></tbody></table>	UL approval number	I012	File number UL	E174189
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]	2681.5				
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 2" NPT DN50				
Displays / operating elements					
Display	<table border="1"><tbody><tr><td>Color display 1,44", 128 x 128 pixels</td></tr><tr><td>2 x LED, yellow</td></tr></tbody></table>	Color display 1,44", 128 x 128 pixels	2 x LED, yellow		
Color display 1,44", 128 x 128 pixels					
2 x LED, yellow					

# SD2501



## Compressed air meter

SDN21DGXFRKG/US-100

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



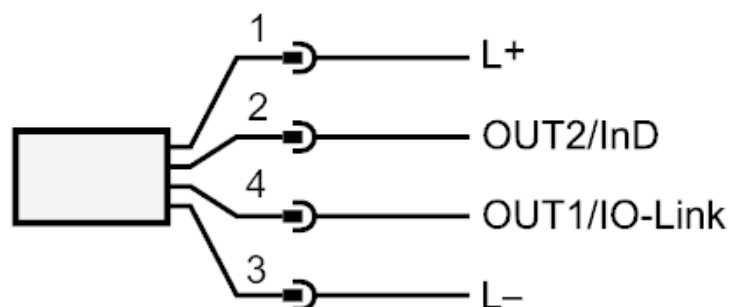
# SD2501



## Compressed air meter

SDN21DGXFRKG/US-100

### 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