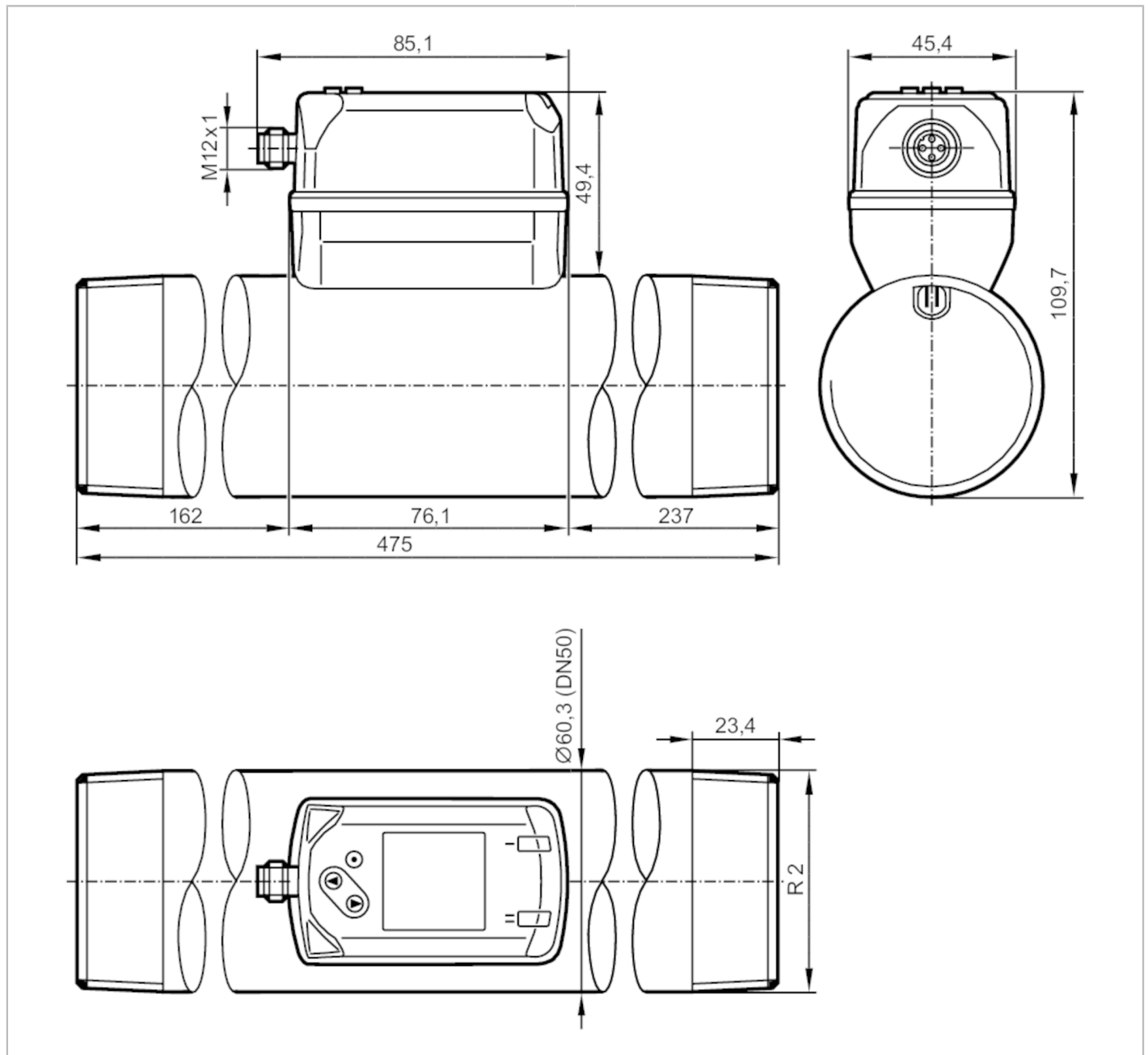


SD2500



Compressed air meter

SDR21DGXFRKG/US-100



Product characteristics			
Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1		
Measuring range	40...11670 l/min	0.3...84 m/s	2.5...700 m ³ /h
Process connection	threaded connection R 2 DN50		
Application			
Application	for industrial applications		
Media	compressed air		
Medium temperature [°C]	-10...60		
Min. bursting pressure [bar]	64		
Pressure rating [bar]	16		

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Electrical data				
Operating voltage	[V]	18...30 DC; (according to EN 50178 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		40...11670 l/min	0.3...84 m/s	2.5...700 m ³ /h
Display range		0...14000 l/min	0...100.8 m/s	0...840 m ³ /h
Resolution		10 l/min	0.1 m/s	0.5 m ³ /h
Set point SP		100...11660 l/min	0.7...84 m/s	5.9...699.7 m ³ /h
Reset point rP		40...11600 l/min	0.3...83.6 m/s	2.5...696.3 m ³ /h
Analogue start point ASP		0...9330 l/min	0...67.2 m/s	0...560 m ³ /h
Analogue end point AEP		2330...11670 l/min	16.8...84 m/s	140...700 m ³ /h
Low flow cut-off LFC		30...120 l/min	0.2...0.8 m/s	2...7 m ³ /h
In steps of		1 l/min	0.1 m/s	0.1 m ³ /h

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Pressure monitoring		
Measuring range	[bar]	-1...16
Display range	[bar]	-1...20
Resolution	[bar]	0.05
Set point SP	[bar]	-0.92...16
Reset point rP	[bar]	-1...15.92
Analogue start point	[bar]	-1...12.8
Analogue end point	[bar]	2.2...16
In steps of	[bar]	0.01
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]	0.002...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
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 23 °C
Repeatability		0,8 % MW + 0,2 % 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]	± 0,15
Greatest TEMPCO of the zero point	[% MEW / 10 K]	± 0,25
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 for the switching output dAP	[s]	0...5

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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	
IO-Link device ID	870 d / 00 03 66 h	
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	
Operating conditions		
Ambient temperature [°C]	0...60	
Storage temperature [°C]	-20...85	
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	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]	2678.7	
Materials	PBT+PC-GF30; PPS GF40; stainless steel (1.4301 / 304); stainless steel (1.4305 / 303); steel (1.5523) galvanised; 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 R 2 DN50	
Displays / operating elements		
Display	colour display 1,44", 128 x 128 pixels	
	2 x LED, yellow	

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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.
Pack quantity	1 pcs.
For information about installation and operation please see the operating instructions.	

Electrical connection

Connector: 1 x M12

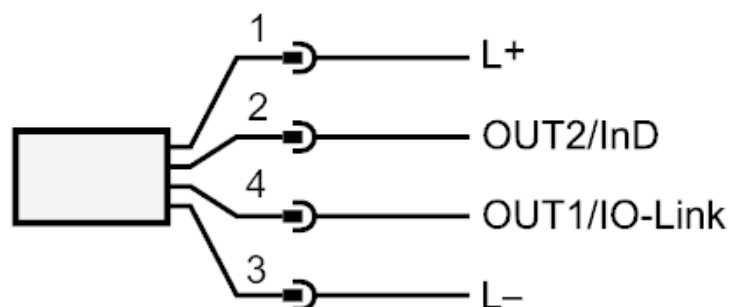




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Connection



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