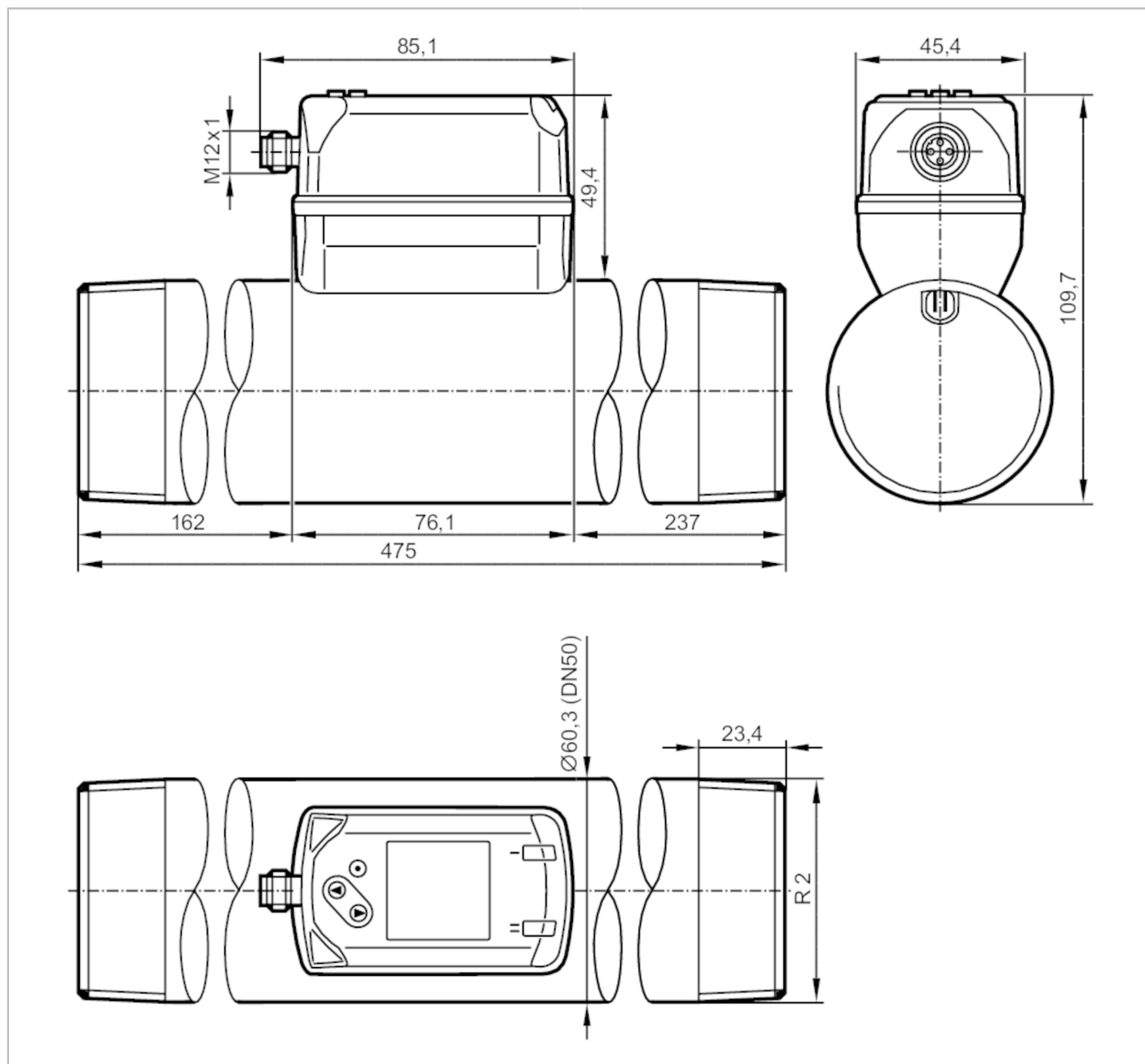


SD2500



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 m³/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		
Min. bursting pressure [MPa]	6.4		

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Pressure rating	[bar]	16
Pressure rating	[MPa]	1.6
MAWP (for applications according to CRN)	[bar]	9.5

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
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Inputs

Inputs	counter reset
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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 m³/h
Display range	0...14000 l/min	0...100.8 m/s	0...840 m³/h
Resolution	10 l/min	0.1 m/s	0.5 m³/h
Set point SP	100...11660 l/min	0.7...84 m/s	5.9...699.7 m³/h
Reset point rP	40...11600 l/min	0.3...83.6 m/s	2.5...696.3 m³/h
Analogue start point ASP	0...9330 l/min	0...67.2 m/s	0...560 m³/h
Analogue end point AEP	2330...11670 l/min	16.8...84 m/s	140...700 m³/h
Low flow cut-off LFC	30...120 l/min	0.2...0.8 m/s	2...7 m³/h
In steps of	1 l/min	0.1 m/s	0.1 m³/h

Pressure monitoring

Measuring range	[bar]	-1...16
Display range	[bar]	-1...20
Resolution	[bar]	0.05
Set point SP	[bar]	-0.92...16

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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		± (0,4 % MW + 0,1 % MEW)
Pressure monitoring		
Repeatability		± 0,2
	[% of the final value]	
Characteristics deviation		< ± 0,5; (BFSL = Best Fit Straight Line)
	[% of the final value]	
Greatest TEMPCO of the span		± 0,3
	[% MEW / 10 K]	
Greatest TEMPCO of the zero point		± 0,1
	[% MEW / 10 K]	
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

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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 default	DeviceID 870
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	
CPA approval	model number	001TG
	accuracy class	-
	maximum allowable error	± 2,5 % FS
	Q (min)	0,05 m³/h
	Q (t)	-
Vibration resistance	Q (max)	700 m³/h
	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	
Mechanical data		
Weight [g]	2650.5	
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 R 2 DN50	
Displays / operating elements		
Display	colour display 1,44", 128 x 128 pixels	
	2 x LED, yellow	

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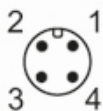
Compressed air meter

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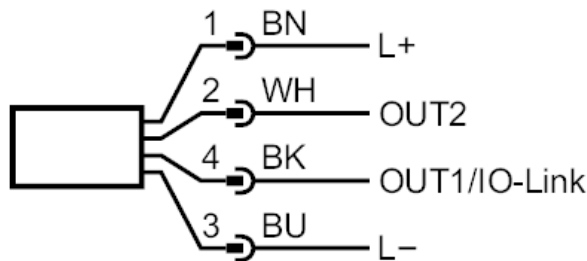
Remarks	
Remarks	MW = measured value MEW = Final value of the measuring range Measuring, display and setting ranges refer to the standard volume flow according to DIN ISO 2533. For information about installation and operation please see the operating instructions.
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A



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