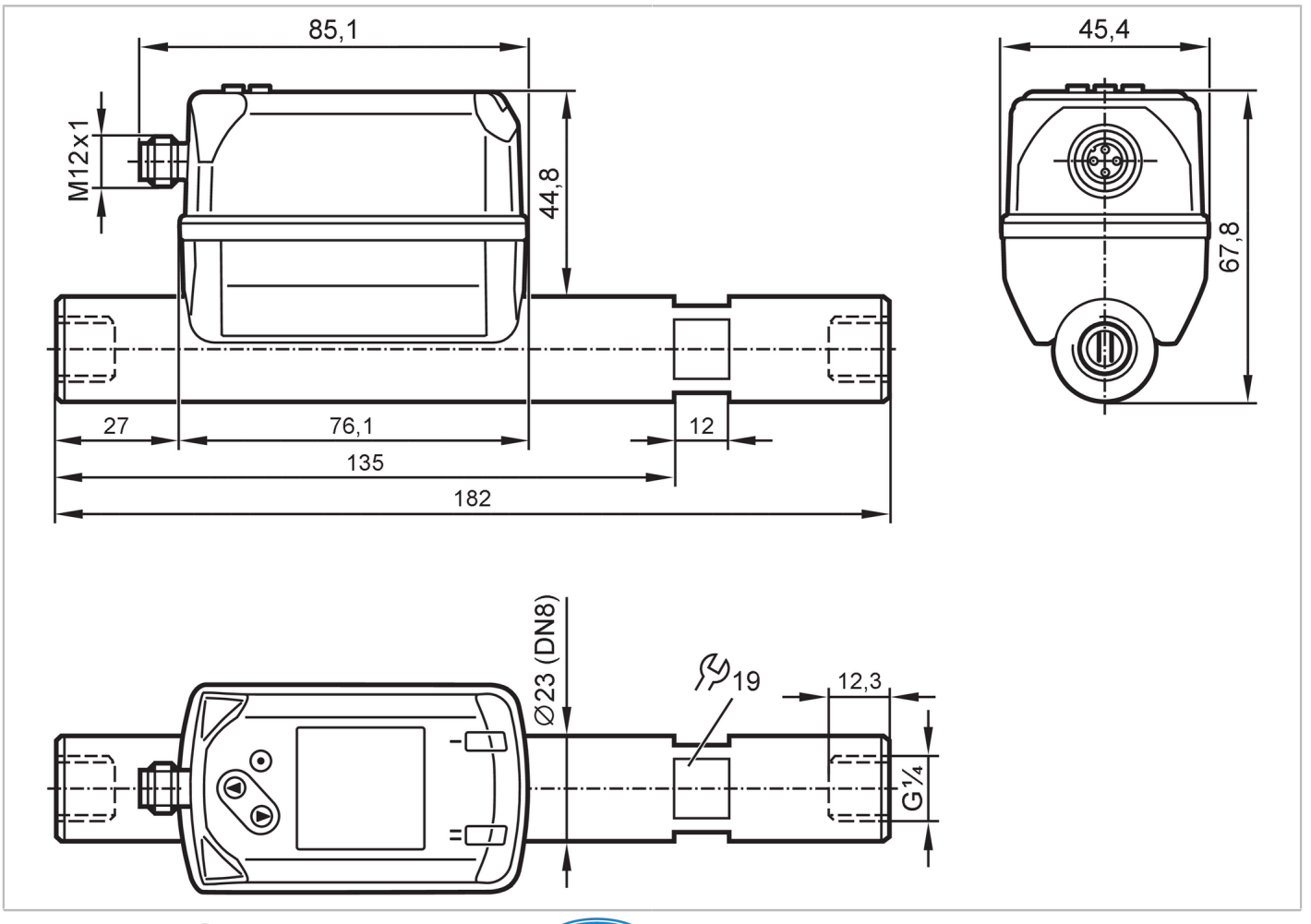
SD5500

Compressed air meter

SDR14DGXFRKG/US-100



Product characteristics			
Number of inputs and outputs		Number of digital outputs: 2; Number of analog outputs: 1	
Measuring range	0.8...250 l/min	0.3...82.9 m/s	0.05...15 m³/h
Process connection		threaded connection G 1/4 Internal thread DN8	
Application			
Application		for industrial applications	
Media		compressed air	
Medium temperature	[°C]	-10...60	
Min. burst pressure	64 bar	6.4 MPa	
Pressure rating	16 bar	1.6 MPa	
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	

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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	0.8...250 l/min	0.3...82.9 m/s	0.05...15 m³/h
Display range	0...300 l/min	0...99.5 m/s	0...18 m³/h
Resolution	0.2 l/min	0.1 m/s	0.01 m³/h
Set point SP	2.2...249.9 l/min	0.7...82.9 m/s	0.13...14.99 m³/h
Reset point rP	0.9...248.7 l/min	0.3...82.5 m/s	0.06...14.92 m³/h
Analog start point ASP	0...200 l/min	0...66.3 m/s	0...12 m³/h
Analog end point AEP	50...250 l/min	16.6...82.9 m/s	3...15 m³/h
Low flow cut-off LFC	0.3...2.7 l/min	0.1...0.9 m/s	0.02...0.16 m³/h
In steps of	0.1 l/min	0.1 m/s	0.01 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		
Reset point rP [bar]	-1...15.92		
Analog start point [bar]	-1...12.8		
Analog end point [bar]	2.2...16		
In steps of [bar]	0.01		
Volumetric flow quantity monitoring			
Measuring range	0...100000000 m³	0...353146667.2 scf	
Display range	0...100000000 m³	0...353146667.2 scf	
Set point SP	0.001...10000000 m³	0.05...353146667.2 scf	
Pulse value	0.001...10000000 m³	0.05...353146667.2 scf	
In steps of	0.0001 m³	0.005 scf	

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Pulse length	[s]	0.01...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 23 °C	
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, T09)	
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		Common - I&D	Identification and Diagnosis
		Function	Measurement data, standard resolution
SIO mode		yes	

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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	860
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)	-
		Q (max)	15 m³/h
Vibration resistance		DIN EN 68000-2-6	5 g (10...2000 Hz)
MTTF	[years]	183	
UL approval		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]	556	
Housing		rectangular	
Dimensions	[mm]	182 x 45.4 x 67.8	
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)		EN AW-6082 (aluminium); stainless steel (1.4305 / 303); FKM; ceramics glass passivated; PPS GF40; Al2O3 (ceramics); acrylate	
Process connection		threaded connection G 1/4 Internal thread DN8	
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.	

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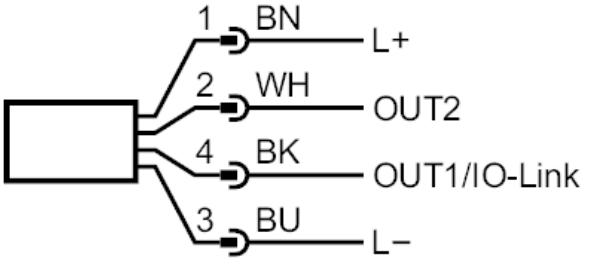
Electrical connection

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