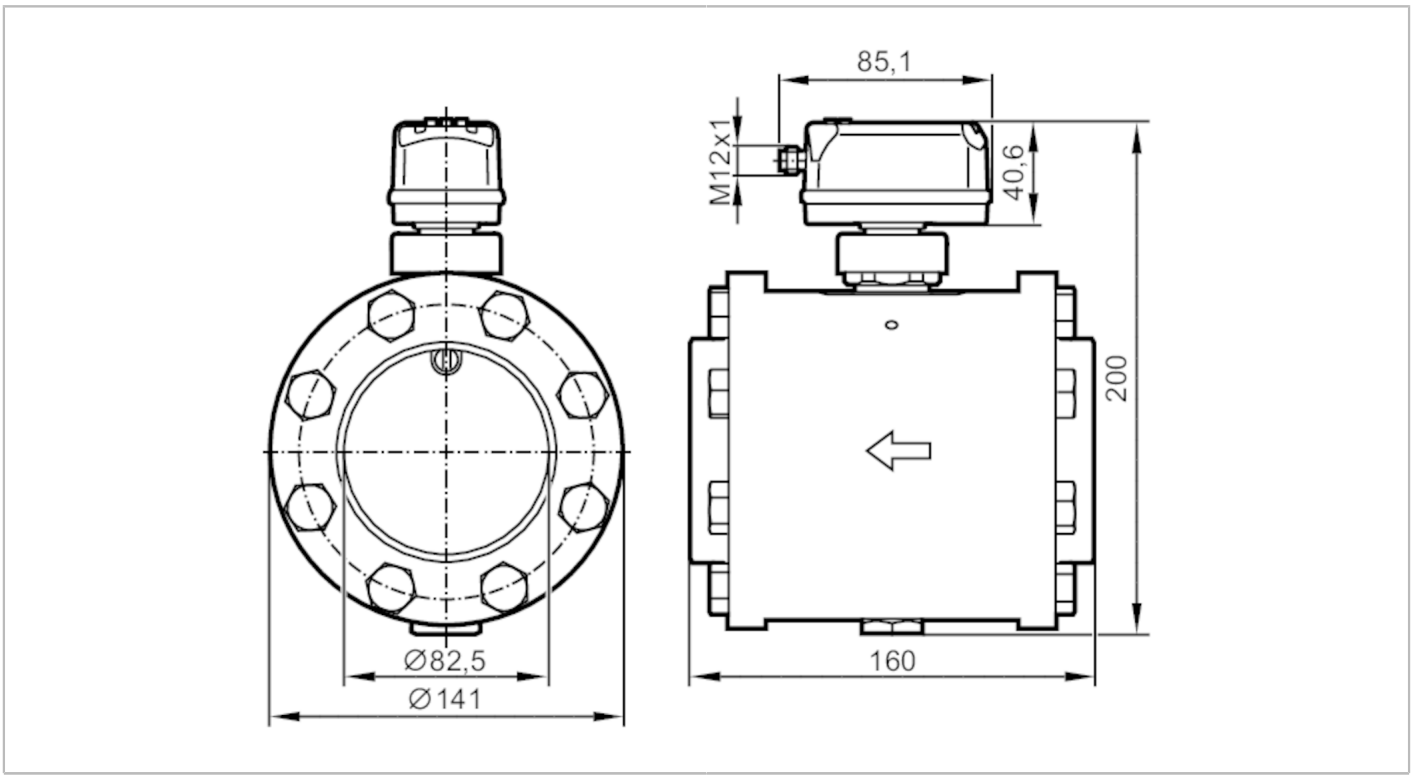
SDG450

Compressed air meter

SDG3"/METRIS PB DN80



Product characteristics			
Number of inputs and outputs		Number of digital outputs: 2; Number of analog outputs: 1	
Measuring range		0.6...143.9 m/s	12...2769 m³/h
Process connection		flange DN80 according to:DIN EN 10220	
Application			
Application		for industrial applications	
Media		compressed air	
Medium temperature	[°C]	-10...60	
Min. bursting pressure	[bar]	64	
Min. bursting pressure	[MPa]	6.4	
Pressure rating	[bar]	16	
Pressure rating	[MPa]	1.6	
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	

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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		0.6...143.9 m/s	12...2769 m³/h
Display range		1.2...172.7 m/s	24...3323 m³/h
In steps of		0.1 m/s	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	
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
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

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Accuracy / deviations		
Accuracy (in the measuring range)		class 141: ± (3 % MW + 0,3 % MEW); class 344: ± (6 % MW + 0,6 % MEW) ; air quality to ISO 8573-1:2010; reference conditions: inlet pipe length >= 135 cm outlet pipe length >= 19 cm; reference temperature: 18..26 °C; standard volume flow 12...1539 m³/h; (standard volume flow DIN_ISO_2533 15 °C , 1013,25 mbar, 0 % r.H.)
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
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 / 1539
Operating conditions		
Ambient temperature	[°C]	0...60
Storage temperature	[°C]	-20...85
Max. relative air humidity	[%]	90
Protection		IP 65; IP 67

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Tests / approvals			
EMC		DIN EN 60947-5-9	
Vibration resistance		DIN EN 68000-2-6	5 g (10...2000 Hz)
MTTF	[years]	167	
Pressure equipment directive		Modul A; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data			
Weight	[g]	11760	
Material		PBT+PC-GF30; PPS GF40; stainless steel (1.4301 / 304); stainless steel (1.4305 / 303); stainless steel (1.4404 / 316L); FKM	
Materials (wetted parts)		stainless steel (1.4301 / 304); stainless steel (1.4404 / 316L); FKM; ceramics glass passivated; PPS GF40; Al2O3 (ceramics); acrylate; Pipe section: steel galvanized	
Process connection		flange DN80 according to:DIN EN 10220	
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	
		D = inside pipe diameter	
		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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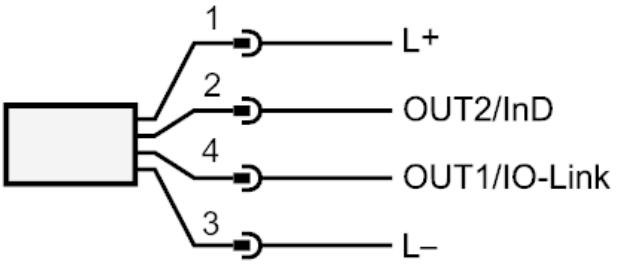
Connection



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