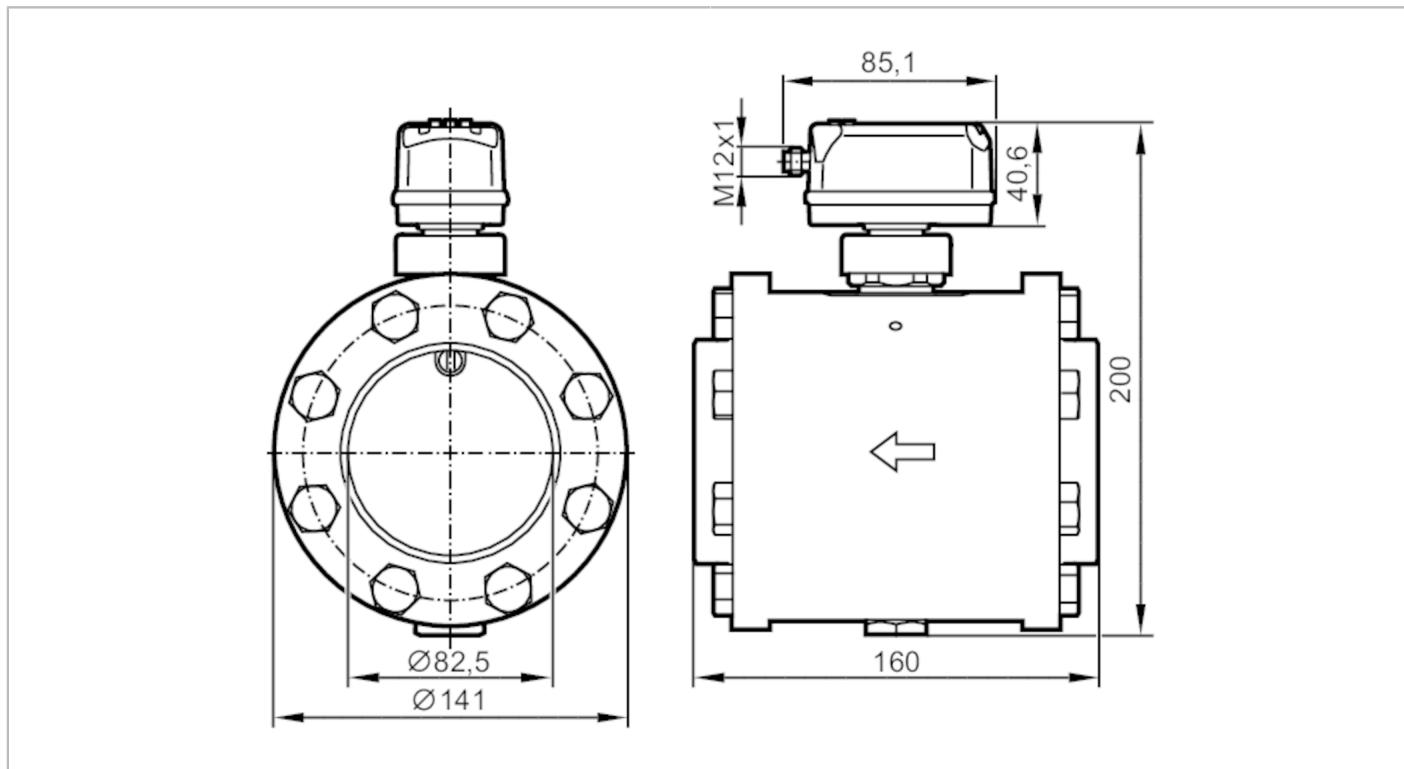


SDG450

Compressed air meter

SDG3"/METRIS PB DN80



CE IO-Link UK
CA

Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analogue 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 analogue outputs: 1	

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	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	
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 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
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

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Accuracy / deviations

Accuracy (in the measuring range)	class 141: $\pm (3\% \text{ MW} + 0,3\% \text{ MEW})$; class 344: $\pm (6\% \text{ MW} + 0,6\% \text{ MEW})$; air quality to ISO 8573-1:2010; reference conditions: inlet pipe length $\geq 135 \text{ cm}$ outlet pipe length $\geq 19 \text{ cm}$; 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.)
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Pressure monitoring

Repeatability [% of the final value]	$\pm 0,2$
Characteristics deviation [% of the final value]	$< \pm 0,5$; (BFSL = Best Fit Straight Line)
Greatest TEMPCO of the span [% MEW / 10 K]	$\pm 0,3$
Greatest TEMPCO of the zero point [% MEW / 10 K]	$\pm 0,1$

Temperature monitoring

Accuracy [K]	$\pm 0,5$; (medium flow in the limit area of the flow measurement range)
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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

Software / programming

Parameter setting options	hysteresis / window; normally open / normally closed; current/pulse output; display can be rotated and switched off; Display unit; totaliser
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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	<table><thead><tr><th>Type of operation</th><th>DeviceID</th></tr></thead><tbody><tr><td>default</td><td>1539</td></tr></tbody></table>	Type of operation	DeviceID	default	1539
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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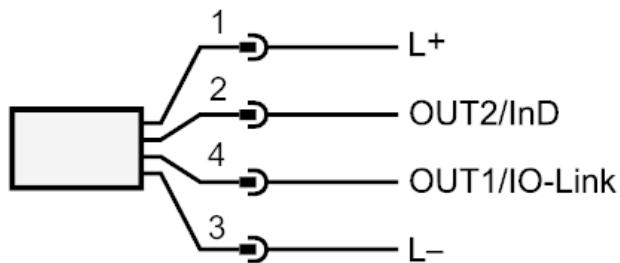
Tests / approvals		
EMC		DIN EN 60947-5-9
Vibration resistance		DIN EN 68000-2-6
MTTF [years]		5 g (10...2000 Hz)
Pressure Equipment Directive		167
		Modul A; can be used for group 2 fluids; group 1 fluids on request
Mechanical data		
Weight [g]		11760
Materials		PBT+PC-GF30; PPS GF40; stainless steel (304/1.4301); stainless steel (303/1.4305); stainless steel (316L/1.4404); FKM
Materials (wetted parts)		stainless steel (304/1.4301); stainless steel (316L/1.4404); FKM; ceramics glass passivated; PPS GF40; Al2O3 (ceramics); acrylate; pipe section: steel galvanised
Process connection		flange DN80 according to:DIN EN 10220
Displays / operating elements		
Display		colour 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 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		



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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