

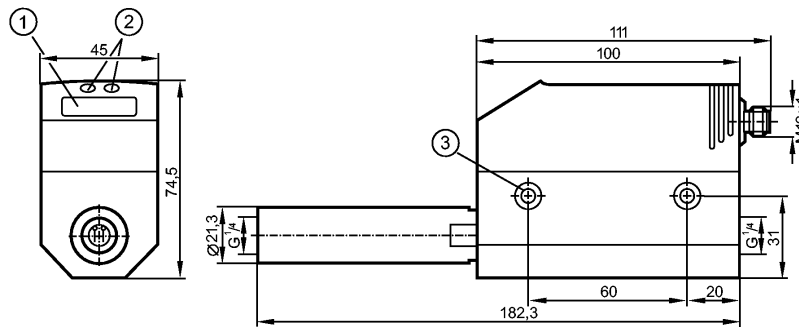


SD5000

SDR14DGXFPKG/US-100



Flow sensors



- 1: 4-digit alphanumeric display
- 2: Programming buttons
- 3: hole for M5 fixing screw



Product characteristics

Compressed air meter
Quick disconnect
Process connection: G ¼ (DN8)
Function programmable
2 outputs
OUT1: flow monitoring (binary), quantity meter (pulse), preset counter (binary)
OUT2: flow or temperature monitoring (analogue or binary)
flow monitoring
Display range
0...18 Nm ³ /h
Measuring range
0.06...15 Nm ³ /h
Temperature monitoring
Display range
-12...72 °C

Application

Application	Compressed air Air quality(ISO 8573-1): Class 141 (measuring error: see below, value A) Class 344 (measuring error: see below, value B)
Pressure rating [bar]	16
Medium temperature [°C]	0...60

Electrical data

Electrical design	DC PNP
Operating voltage [V]	18...30 DC ¹⁾
Current consumption [mA]	< 110
Protection class	III
Reverse polarity protection	yes

Outputs

Output function	OUT1: normally open / closed programmable or pulse OUT2: normally open / closed programmable or analog (4...20 mA scaleable)
Current rating [mA]	2 x 250



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Voltage drop [V]	< 2
Short-circuit protection	yes (non-latching)
Overload protection	yes
Analog output	4...20 mA
Max. load [Ω]	< 500
Pulse output	consumed quantity meter

Measuring / setting range

Flow monitoring			
Measuring range	0.04...15.00 Nm ³ /h	0.83 (1.0)...250.0 *) NI/min	0.25 (0.3)...82.9 *) Nm/s
Display range	0.00...18.00 Nm ³ /h	0.0...300.0 NI/min	0.0...99.5 Nm/s
Set point, SP	0.12...15.00 Nm ³ /h	2.0...250.0 NI/min	0.7...82.9 Nm/s
Reset point, rP	0.04...14.92 Nm ³ /h	1.0...249.0 NI/min	0.3...82.5 Nm/s
Analog start point, ASP	0.00...11.26 Nm ³ /h	0.0...187.5 NI/min	0.0...62.2 Nm/s
Analog end point, AEP	3.74...15.00 Nm ³ /h	62.5...250.0 NI/min	20.7...82.9 Nm/s
in steps of	0.02 Nm ³ /h	0.5 NI/min	0.1 Nm/s
Volumetric flow quantity monitoring			
Pulse value	0.001...1000000 m ³		
in steps of	0.001 m ³		
Pulse length [s]	$\geq 0.1 / \leq 2$		
Temperature monitoring			
Measuring range [°C]	0...60		
Display range [°C]	-12...72		

Accuracy / deviations

Flow monitoring	
Accuracy (within measuring range)	A): $\pm (3\% MW + 0.3\% MEW)$ / B): $\pm (6\% MW + 0.6\% MEW)$ ***
Repeatability[% of the measured value]	± 1.5
Temperature monitoring	
Accuracy [K]	± 2 **)

Reaction times

Power-on delay time [s]	1
Flow monitoring	
Response time [s]	< 0.1 (dAP = 0)
Damping, dAP [s]	0 - 0.2 - 0.4 - 0.6 - 0.8 - 1

Software / programming

Programming options	hysteresis / window function; N.O. / N.C; current / pulse output; display can be rotated / deactivated; display unit, totalizer
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Interfaces

IO-Link Device	
Transfer type	COM2 (38.4 kBaud)
IO-Link revision	1.1
SDCI standard	IEC 61131-9 CDV
IO-Link Device ID	260 d / 00 01 04 h
Profiles	no profile
SIO mode	yes
Required master port class	A
Process data analogue	3



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Process data binary		2
Min. process cycle time	[ms]	4.1

Environment		
Ambient temperature	[°C]	0...60
Storage temperature	[°C]	-20...85
Max. relative air humidity	[%]	90
Protection		IP 65

Tests / approvals		
Pressure equipment directive		article 3, section 3 - sound engineering practice
EMC		DIN EN 61000-6-2 DIN EN 61000-6-3
Vibration resistance		DIN EN 68000-2-6: 5 g (55...2000 Hz)
MTTF	[Years]	227

Mechanical data		
Process connection		G ¼ (DN8)
Materials (wetted parts)		stainless steel (304S15); FKM; ceramics glass passivated; PEEK GF30; polyester; aluminum
Housing materials		PBT-GF 20; NBR; PC (polycarbonate); stainless steel (304S15); PTFE; brass coated; FKM; aluminum powder-coated
Weight	[kg]	1.005

Displays / operating elements		
Display	Display unit	5 x LED green (NI/min, Nm ³ /h, Nm/s, Nm ³ , °C)
	Function display	1 x LED green
	Switching status	2 x LED yellow
	Measured values	4-digit alphanumeric display
	Programming	4-digit alphanumeric display

Electrical connection		
Connection		M12 connector

Wiring

OUT1/IO-Link: 3 selection options

- switching output flow rate monitoring
- pulse output quantity meter
- signal output preset counter

OUT2/InD: 5 selection options

- switching output flow rate monitoring
- switching output temperature monitoring
- analogue output flow rate
- analogue output temperature
- input signal counter reset

Remarks	
Remarks	<p>1) to EN50178, SELV, PELV</p> <p>*) in brackets: displayed value</p> <p>**) medium flow in the limit area of the flow measurement range</p> <p>***) under conditions acc. to DIN ISO 2533 and when installed in DN8 pipes</p> <p>MW = measured value</p> <p>MEW = final value of the measuring range</p> <p>Measuring, display and setting ranges refer to standard volume flow according to DIN ISO 2533.</p> <p>For information about installation and operation please see the operating instructions.</p>



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Flow sensors

Pack quantity [piece] 1

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