

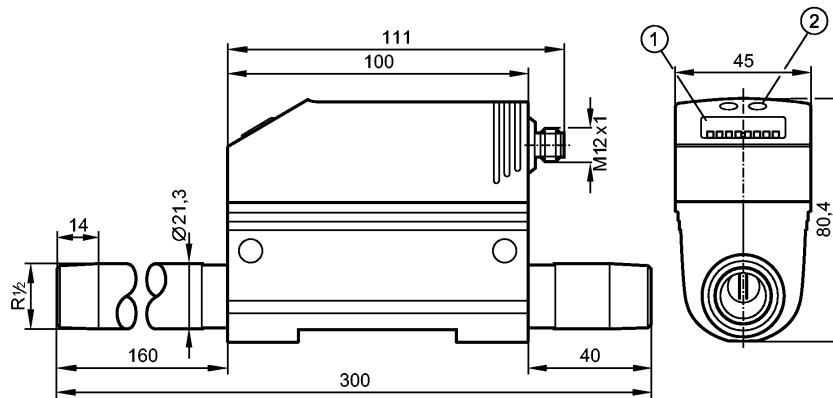


# SD6000

SDR12DGXFPKG/US-100



Flow sensors



- 1: 4-digit alphanumeric display
- 2: Programming buttons



## Product characteristics

Compressed air meter
Quick disconnect
Process connection: R $\frac{1}{2}$ (DN15)
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
0.0...90 Nm <sup>3</sup> /h
Measuring range
0.2...75 Nm <sup>3</sup> /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
MAWP (for applications according to CRN) [bar]	16
Medium temperature [°C]	0...60

## Electrical data

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

## Outputs



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

## Measuring / setting range

Flow monitoring			
Measuring range	0.2...75.0 Nm <sup>3</sup> /h	10...1250 NI/min	0.3...103.6 Nm/s
Display range	0.0...90.0 Nm <sup>3</sup> /h	0...1500 NI/min	0.0...124.3 Nm/s
Set point, SP	0.6...75.0 Nm <sup>3</sup> /h	10...1250 NI/min	0.8...103.6 Nm/s
Reset point, rP	0.2...74.6 Nm <sup>3</sup> /h	4...1244 NI/min	0.3...103.1 Nm/s
Analog start point, ASP	0.0...56.3 Nm <sup>3</sup> /h	0...938 NI/min	0.0...77.7 Nm/s
Analog end point, AEP	18.7...75.0 Nm <sup>3</sup> /h	312...1250 NI/min	25.9...103.6 Nm/s
in steps of	0.1 Nm <sup>3</sup> /h	1 NI/min	0.1 Nm/s
Volumetric flow quantity monitoring			
Pulse value	0.001...1000000 m <sup>3</sup>		
in steps of	0.001 m <sup>3</sup>		
Pulse length [s]	$\geq 0.02 / \leq 2$		
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]	$\pm 1.5$
Temperature monitoring	
Accuracy [K]	$\pm 2$ **)

## 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	262 d / 00 01 06 h
Profiles	no profile



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SIO mode	yes
Required master port class	A
Process data analogue	3
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

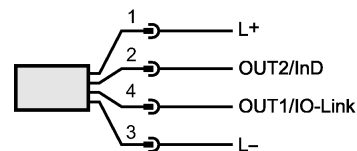
Mechanical data	
Process connection	R $\frac{1}{2}$ (DN15)
Materials (wetted parts)	stainless steel (304S15); FKM; ceramics glass passivated; PEEK GF30; polyester; aluminum
Housing materials	PBT-GF 20; NBR; PC (polycarbonate); stainless steel (304S15); PTFE; brass coated; FKM; aluminum powder-coated
Tightening torque [Nm]	50
Weight [kg]	0.961

Displays / operating elements	
Display	Display unit 5 x LED green (NI/min, Nm <sup>3</sup> /h, Nm/s, Nm <sup>3</sup> , °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>***) medium flow in the limit area of the flow measurement range</p> <p>***) under conditions acc. to DIN ISO 2533 and when installed in DN15 pipes</p> <p>MW = measured value</p> <p>MEW = final value of the measuring range</p>
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**Flow sensors**

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	[piece]	1
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