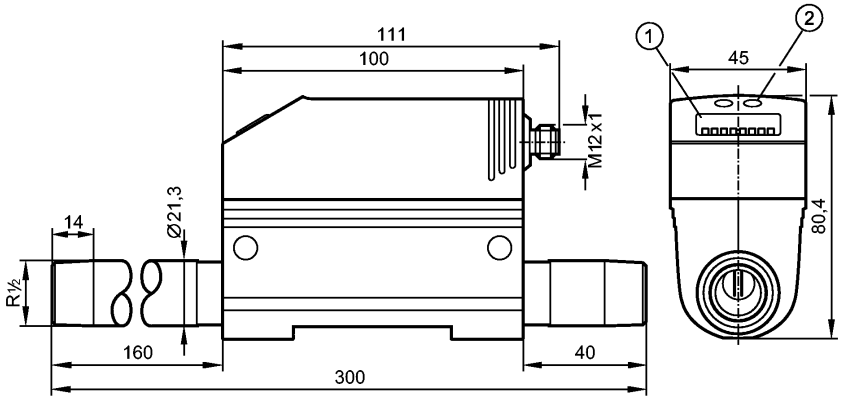
efector300

SD6000

SDR12DGXFPKG/US-100

Flow sensors



1: 4-digit alphanumeric display
2: Programming buttons

Made in Germany

CE CRN cULus LISTED IO-Link

Product characteristics
Compressed air meter
Connector
Process connection: R½ (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 Nm³/h
Measuring range
0.2...75 Nm³/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 [1])
Current consumption	[mA]	< 110
Protection class		III
Reverse polarity protection		yes

Outputs

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Flow sensors

Output function		OUT1: normally open / closed programmable or pulse OUT2: normally open / closed programmable or analogue (4...20 mA scaleable)		
Current rating	[mA]	2 x 250		
Voltage drop	[V]	< 2		
Short-circuit protection		pulsed		
Overload protection		yes		
Analogue output		4...20 mA		
Max. load	[Ω]	< 500		
Pulse output		consumed quantity meter		
Measuring / setting range				
Flow monitoring				
Measuring range		0.2...75.0 Nm³/h	10...1250 Nl/min	0.3...103.6 Nm/s
Display range		0.0...90.0 Nm³/h	0...1500 Nl/min	0.0...124.3 Nm/s
Set point, SP		0.6...75.0 Nm³/h	10...1250 Nl/min	0.8...103.6 Nm/s
Reset point, rP		0.2...74.6 Nm³/h	4...1244 Nl/min	0.3...103.1 Nm/s
Analogue start point, ASP		0.0...56.3 Nm³/h	0...938 Nl/min	0.0...77.7 Nm/s
Analogue end point, AEP		18.7...75.0 Nm³/h	312...1250 Nl/min	25.9...103.6 Nm/s
in steps of		0.1 Nm³/h	1 Nl/min	0.1 Nm/s
Volumetric flow quantity monitoring				
Pulse value		0.001...1000000 m³		
in steps of		0.001 m³		
Pulse length	[s]	≥ 0.02 / ≤ 2		
Temperature monitoring				
Measuring range	[°C]	0...60		
Display range	[°C]	-12...72		
Accuracy / deviations				
Flow monitoring				
Accuracy (within measuring range)		A): ± (3% MW + 0.3% MEW) / B): ± (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; NO / NC; current / pulse output; display can be rotated / deactivated; display unit, totalizer		
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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Flow sensors

SIO mode		yes
Required master port type		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		R½ (DN15)
Materials (wetted parts)		stainless steel (304S15); FKM; ceramics glass passivated; PEEK GF30; polyester; aluminium
Housing materials		PBT-GF 20; NBR; PC (polycarbonate); stainless steel (304S15); PTFE; Brass coated; FKM; aluminium powder-coated
Weight	[kg]	0.961

Displays / operating elements

Display	Display unit 5 x LED green (Nl/min, Nm³/h, Nm/s, Nm³, °C) Function display 1 x LED green Switching status 2 x LED yellow Measured values 4-digit alphanumeric display Programming 4-digit alphanumeric display

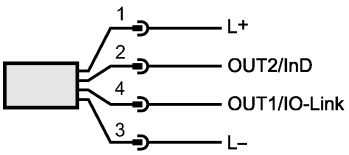
Electrical connection

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	[1]) to EN50178, SELV, PELV **) medium flow in the limit area of the flow measurement range ***) under conditions acc. to DIN ISO 2533 and when installed in DN15 pipes 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	[piece]	1