SD8000

SDR11DGXFPKG/US-100

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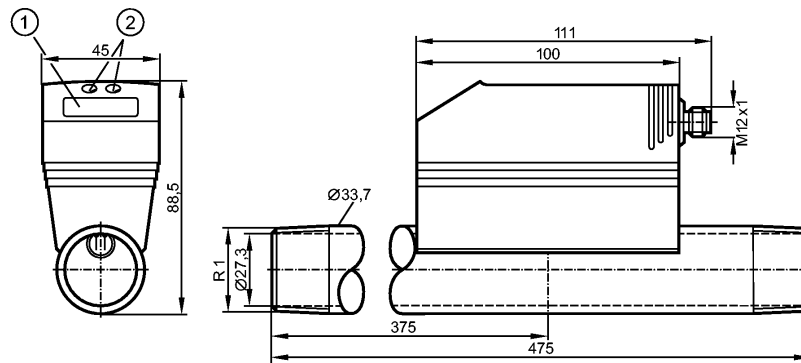
1: 4-digit alphanumeric display
2: Programming buttons

CE   c(UL)us LISTED   IO-Link

Product characteristics

Compressed air meter

Quick disconnect

Process connection: R1 (DN25)

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...270 Nm³/h

Measuring range

0.7...225.0 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
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
Voltage drop	[V]	< 2

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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		0.7...225.0 Nm³/h	12.5 (13)...3750 *) Nl/min	0.35 (0.4)...109.2 *) Nm/s
Display range		0.0...270 Nm³/h	0...4500 Nl/min	0.0...131.0 Nm/s
Set point, SP		1.8...225.0 Nm³/h	30...3750 Nl/min	0.9...109.2 Nm/s
Reset point, rP		0.7...223.9 Nm³/h	12...3732 Nl/min	0.4...108.7 Nm/s
Analog start point, ASP		0.0...168.8 Nm³/h	0...2813 Nl/min	0.0...81.9 Nm/s
Analog end point, AEP		56.2...225.0 Nm³/h	937...3750 Nl/min	27.3...109.2 Nm/s
in steps of		0.1 Nm³/h	1 Nl/min	0.1 Nm/s
Volumetric flow quantity monitoring				
Pulse value		0.003...3000000 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; N.O. / N.C; 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		267 d / 00 01 0B h
Profiles		no profile
SIO mode		yes
Required master port class		A
Process data analogue		3
Process data binary		2

Min. process cycle time	[ms]	4.1 ms

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

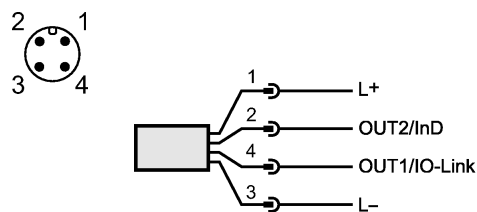| Process connection	R1 (DN25)
Materials (wetted parts)	stainless steel (304S15); FKM; ceramics glass passivated; PEEK GF30; polyester; aluminum
Housing materials	PBT-GF 20; NBR; PC (polycarbonate); stainless steel (304S15); PTFE; brass coated; FKM; aluminum powder-coated
Weight [kg]	2.065

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 *) in brackets: displayed value **) medium flow in the limit area of the flow measurement range ***) under conditions acc. to DIN ISO 2533 and when installed in DN25 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