

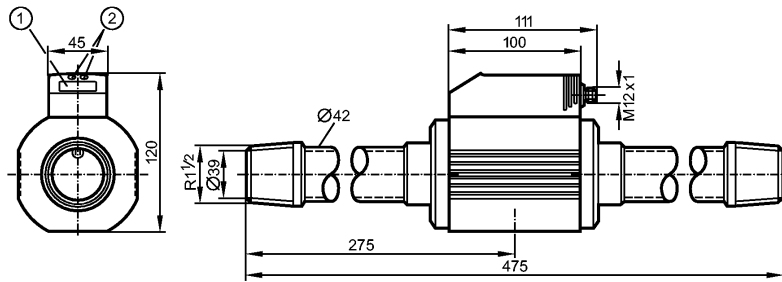


SD9000

SDR32DGXFPKG/US-100



Flow sensors



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



Product characteristics

Compressed air meter
Quick disconnect
Process connection: R1½ (DN40)
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...492 Nm³/h
Measuring range
1.3 (1.5)...410 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
Short-circuit protection	yes (non-latching)



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Overload protection	yes
Analog output	4...20 mA
Max. load [Ω]	< 500
Pulse output	consumed quantity meter

Measuring / setting range

Flow monitoring			
Measuring range	1.3 (1.5)...410 *) Nm ³ /h	20...6835 NI/min	0.3...95.3 Nm/s
Display range	0.0...492.0 Nm ³ /h	0...8200 NI/min	0.0...114.4 Nm/s
Set point, SP	3.5...410.0 Nm ³ /h	55...6835 NI/min	0.8...95.3 Nm/s
Reset point, rP	1.5...408.0 Nm ³ /h	20...6800 NI/min	0.3...94.8 Nm/s
Analog start point, ASP	0.0...307.5 Nm ³ /h	0...5125 NI/min	0.0...71.5 Nm/s
Analog end point, AEP	102.5...410.0 Nm ³ /h	1710...6835 NI/min	23.8...95.3 Nm/s
in steps of	0.5 Nm ³ /h	5 NI/min	0.1 Nm/s
Volumetric flow quantity monitoring			
Pulse value	0.005...4 000 000 m ³		
in steps of	0.001 m ³		
Pulse length [s]	≥ 0.018 / ≤ 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
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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	269 d / 00 01 0D 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

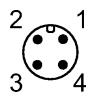
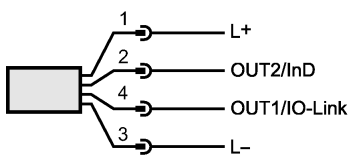


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Flow sensors

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	R1½ (DN40)
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; aluminum powder-coated
Weight [kg]	4.163
Displays / operating elements	
Display	Display unit 5 x LED green (NI/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	  <p>OUT1/IO-Link: 3 selection options</p> <ul style="list-style-type: none"> - switching output flow rate monitoring - pulse output quantity meter - signal output preset counter <p>OUT2/InD: 5 selection options</p> <ul style="list-style-type: none"> - 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 DN40 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