

Flow sensors

SD2000

SDR21DGXFPKG/US

Compressed air meter

Plug and socket

Process connection: R2 (DN50)

Function programmable

2 outputs

OUT1 = flow monitoring (binary), flow rate meter (pulse), preset meter (binary)

OUT2 = flow monitoring (analogue or binary)

Monitoring range

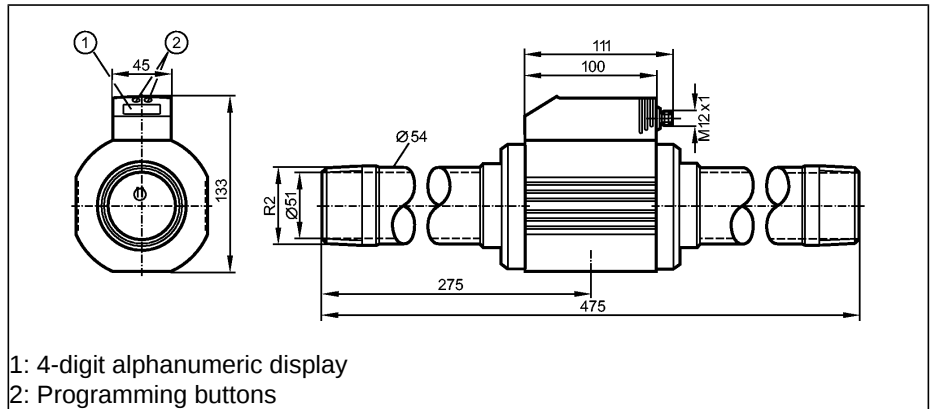
0...840 Nm³/h

Measuring range

2.3 (3)...700 Nm³/h *)

Temperature indication

0...60 °C



1: 4-digit alphanumeric display

2: Programming buttons



Application

Electrical design

Output

Compressed air

Air quality(DIN 8573-1):

Class 141 (measuring error: see below, value A)

Class 344 (measuring error: see below, value B)

DC PNP

OUT1: normally open / closed programmable or pulse

OUT2: normally open / closed programmable or analogue (4...20 mA scaleable)

Operating voltage [V]	19...30 DC 1)	
Current rating [mA]	2 x 250	
Short-circuit protection	pulsed	
Reverse polarity protection	yes	
Overload protection	yes	
Voltage drop [V]	< 2	
Current consumption [mA]	< 100	
Power-on delay time [s]	0.5	
Analogue output	4...20 mA (< 500 Ω)	
Pulse output	consumed quantity meter	
Pulse value / setting in steps of [m ³]	0.010...4 000 000 / 0.001...1000	
Pulse length [s]	min. 0.043 / max. 2	
Programming options	hysteresis / window function; NO / NC; current / pulse output; display can be rotated / deactivated; display unit	
Flow monitoring		
Display range	0...840 Nm ³ /h	0.00...14.00 Nm ³ /min
Measuring range	2.3 (3)...700 *) Nm ³ /h	0.039 (0.04)...11.67 *) Nm ³ /min
Setting range		
Set point, SP	6...700 Nm ³ /h	0.11...11.67 Nm ³ /min
Reset point, rP	3...696 Nm ³ /h	0.05...11.61 Nm ³ /min
Analogue start point, ASP	0...525 Nm ³ /h	0.00...8.75 Nm ³ /min
Analogue end point, AEP	175...700 Nm ³ /h	2.92...11.67 Nm ³ /min
in steps of	1 Nm ³ /h	0.01 Nm ³ /min
Damping, dAP [s]	0 - 0.2 - 0.4 - 0.6 - 0.8 - 1	
Response time [s]	< 0.1 (dAP = 0)	
Accuracy [% of the final value]	A): ± (3% MW + 0.3% MEW) / B): ± (6% MW + 0.6% MEW)	
Measuring dynamics	1:300	
Temperature monitoring		
Display range	0.0...60.0	
Measuring range [°C]	0.0...60.0	
Accuracy [°C]	± 2 **)	

SD2000

Max. relative air humidity [%]	90
Ambient temperature [°C]	0...60
Medium temperature [°C]	0...60
Storage temperature [°C]	-20...85
Protection	IP 65, III
Pressure rating [bar]	16
Vibration resistance	DIN IEC 68-2-6:5 g (55...2000 Hz)
EMC	EN 61000-4-2 ESD: 4 kV CD / 8 kV AD
	EN 61000-4-3 HF radiated: 10 V/m
	EN 61000-4-4 Burst: 2 kV
	EN 61000-4-6 HF conducted: 10 V
Housing materials	PBT-GF 20; PC (APEC); Makrolon; stainless steel (304S15); Viton
Materials (wetted parts)	stainless steel (316S16); stainless steel (304S15); ceramics; glass passivated; PEEK (polyether ether ketone); polyester; Viton; aluminium; anodised
Display	Display unit 4 LED green (Nm ³ /min, Nm ³ /h, Nm ³ , °C) Function display 1 LED yellow Switching status 2 LED yellow Measured values 4-digit alphanumeric display Programming 4-digit alphanumeric display
Connection	M12 connector
Remarks	<p>1) to EN50178, SELV, PELV; referring to UL: "limited voltage" with overcurrent protection in accordance with UL508</p> <p>*) in brackets: displayed value</p> <p>***) medium flow in the limit area of the flow measurement range</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>

Wiring

Programming of the output function

-----OUT1-----

- Switching output

Hno = hysteresis / normally open

Hnc = hysteresis / normally closed

Fno = window function / normally

open

Fnc = window function / normally

closed

- ImP = pulse output for flow rate

meter / signal output

for preset meter

-----OUT2-----

- Switching output

Hno = hysteresis / normally open

Hnc = hysteresis / normally closed

Fno = window function / normally

open

Fnc = window function / normally

closed

- Analogue output

I = current output (4...20 mA)

