efector300

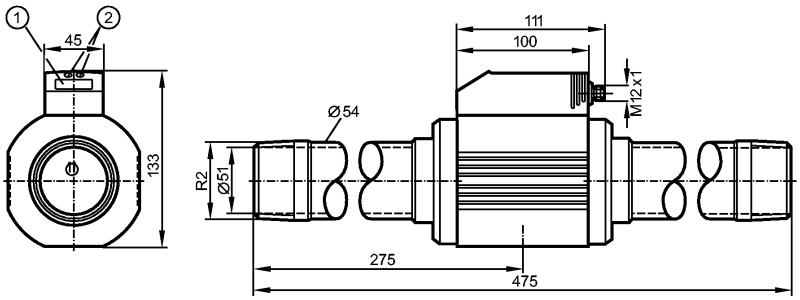
ifm electronic

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	**Compressed air Air quality(DIN 8573-1): Class 141 (measuring error: see below, value A) Class 344 (measuring error: see below, value B)**	
Electrical design	**DC PNP**	
Output	**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 [m³]	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 Nm³/h	0.00...14.00 Nm³/min
Measuring range	2.3 (3)...700 *) Nm³/h	0.039 (0.04)...11.67 *) Nm³/min
Setting range		
Set point, SP	6...700 Nm³/h	0.11...11.67 Nm³/min
Reset point, rP	3...696 Nm³/h	0.05...11.61 Nm³/min
Analogue start point, ASP	0...525 Nm³/h	0.00...8.75 Nm³/min
Analogue end point, AEP	175...700 Nm³/h	2.92...11.67 Nm³/min
in steps of	1 Nm³/h	0.01 Nm³/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 (Nm³/min, Nm³/h, Nm³, °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		[1]) to EN50178, SELV, PELV; referring to UL: “limited voltage” with overcurrent protection in accordance with UL508 *) in brackets: displayed value **) medium flow in the limit area of the flow measurement range 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.

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)