D2D133-DB04-21

AC centrifugal fan

forward curved, dual inlet

with housing (without flange)

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**D2D133-DB04-21**
Motor	**M2D068-DF**

Phase		3~	3~
Nominal voltage	VAC	400	400
Connection		Y	Y
Frequency	Hz	50	60
Type of data definition		ml	ml
Valid for approval / standard		CE	CE
Speed	min^{-1}	2050	2450
Power input	W	265	260
Current draw	A	0.42	0.41
Min. back pressure	Pa	100	250
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	55	50
Starting current	A	1	1

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	No
Specific ratio*	1.00

* Specific ratio = 1 + p_{fs} / 100 000 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	32.9	25.3	32.3
Efficiency grade N		44.6	37	44
Power input P_e	kW	0.14		
Air flow q_v	m^3/h	510		
Pressure increase p_{fs}	Pa	345		
Speed n	min^{-1}	2590		

Data definition with optimum efficiency. LU-61146
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

Mass	4.2 kg
Size	133 mm
Surface of rotor	Coated in black
Material of impeller	Sheet steel, galvanised
Housing material	Sheet steel, galvanised
Motor suspension	Motor mounted via brackets on one side
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 44; Depending on installation and position as per EN 60034-5
Insulation class	"F"
Humidity class	F1-2
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) brought out
Cable exit	Axial
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE
Approval	UL 1004-1; CSA C22.2 Nr.100

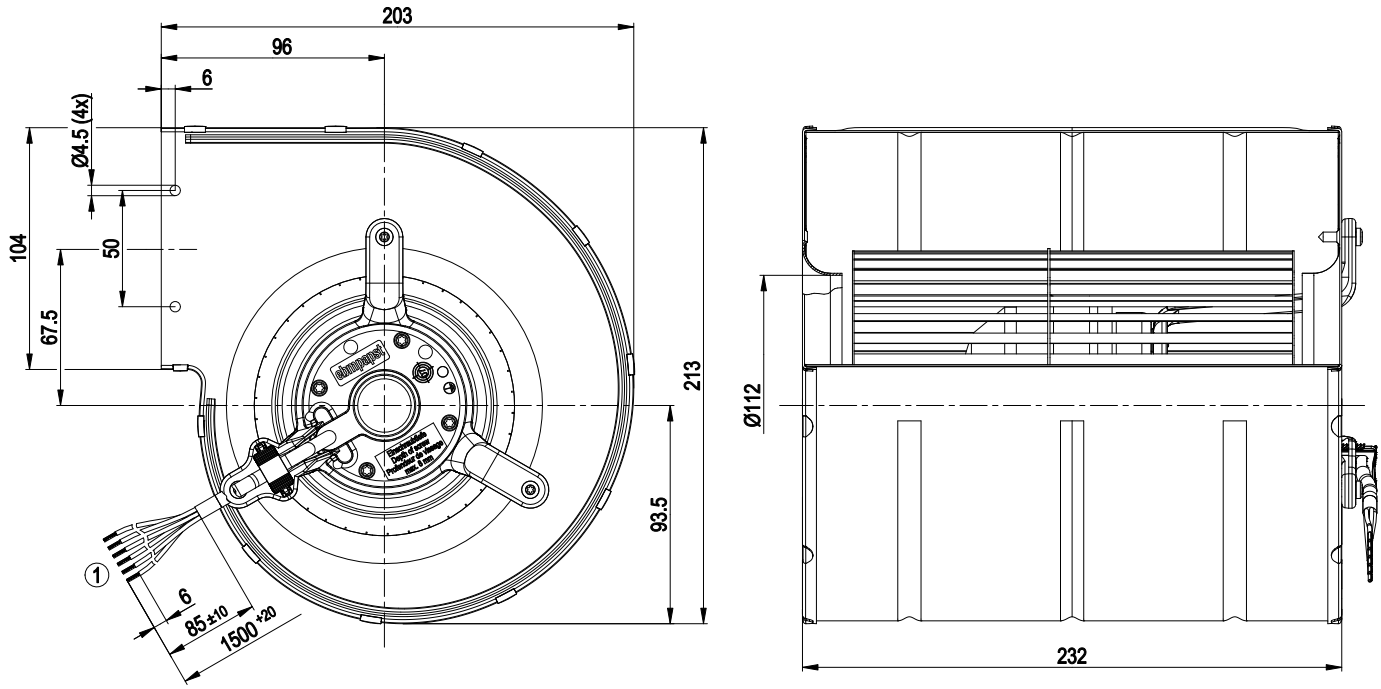
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Product drawing



1	Connection line PFA AWG20 (gn/ye AWG18), 6x brass lead tips crimped

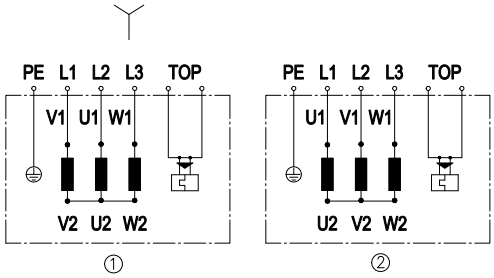
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Connection screen



Change direction of rotation by reversing two phases

	Three-phase motor
Y	Star connection
1	Anti-clockwise operation
L1	= V1 = blue
L2	= U1 = black
L3	= W1 = brown
2	Clockwise operation
L1	= U1 = black
L2	= V1 = blue
L3	= W1 = brown
PE	green/yellow
TOP	2x grey

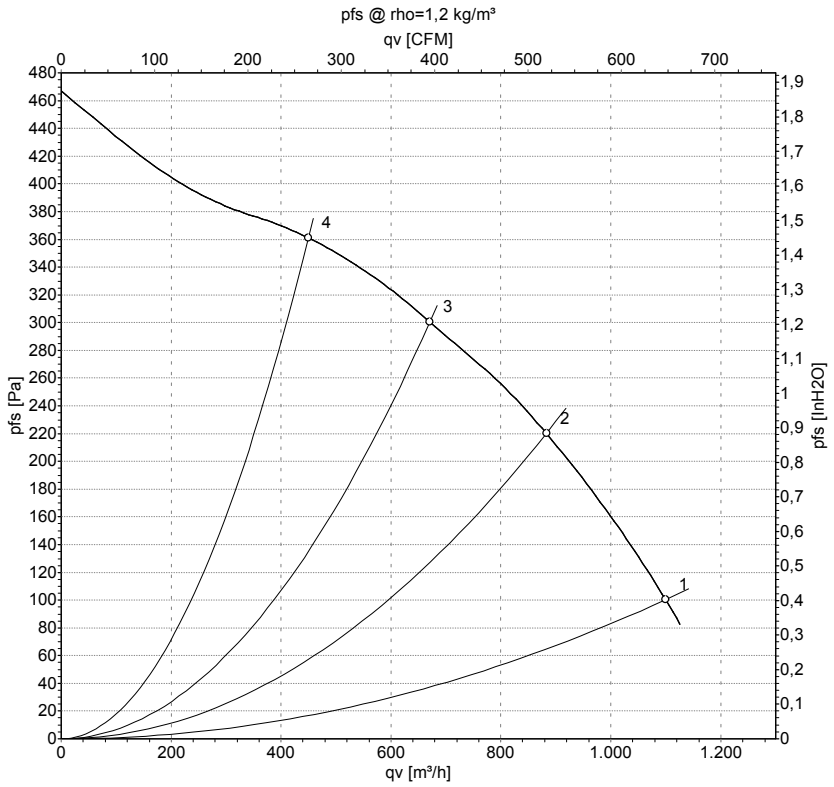
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Charts: Air flow 50 Hz



Measurement: LU-61146

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P_e	I	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	400	50	2050	265	0.42	1100	100
2	400	50	2275	226	0.37	885	220
3	400	50	2465	179	0.31	670	300
4	400	50	2615	140	0.27	450	360

U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

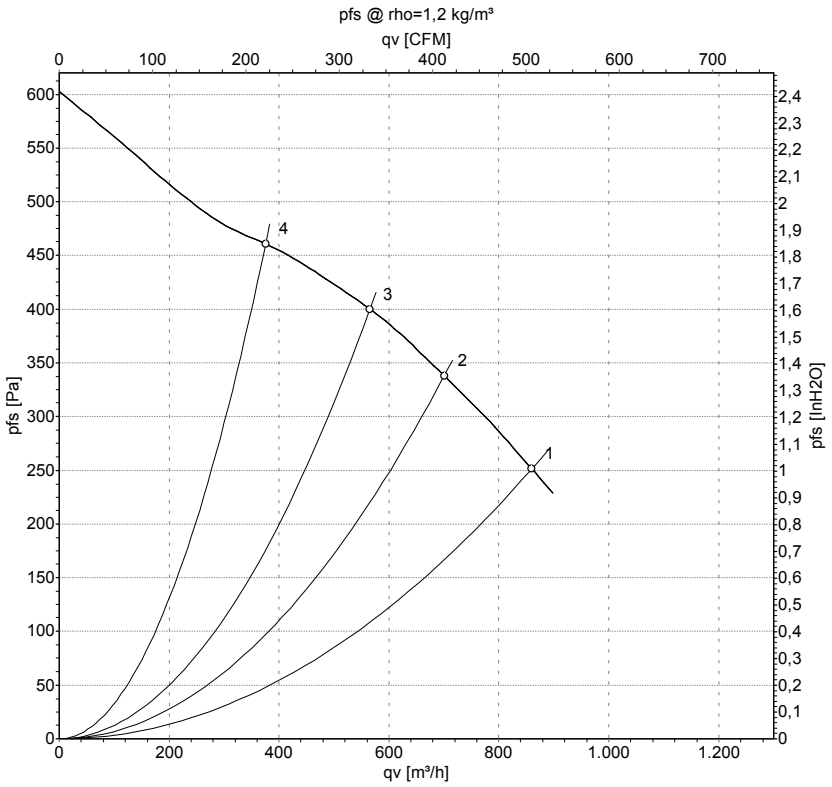
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Charts: Air flow 60 Hz



Measurement: LU-61147

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P_e	I	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	400	60	2450	260	0.41	860	250
2	400	60	2600	240	0.37	700	340
3	400	60	2770	208	0.33	565	400
4	400	60	2940	173	0.28	375	460

U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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