K2D250-RB16-09

AC centrifugal module - RadiCal

backward-curved, single-intake

with housing

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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**K2D250-RB16-09**
Motor	**M2D068-GA**

Phase		3~	3~	3~	3~	3~	3~	3~	3~
Nominal voltage	VAC	380	380	400	400	440	440	460	480
Wiring		Y	Y	Y	Y	Y	Y	Y	Y
Frequency	Hz	50	60	50	60	50	60	60	60
Method of obtaining data		ml	ml	ml	ml	ml	ml	ml	ml
Valid for approval/standard		CE	CE	CE	CE	CE	CE	CE	CE
Speed (rpm)	min^{-1}	2700	2950	2750	3050	2750	3100	3150	3200
Power consumption	W	215	330	225	350	230	360	365	370
Current draw	A	0.38	0.53	0.38	0.55	0.4	0.5	0.5	0.5
Min. back pressure	Pa	0	0	0	0	0	0	0	0
Min. back pressure	in. wg	0	0	0	0	0	0	0	0
Min. ambient temperature	°C	-25	-25	-25	-25	-25	-25	-25	-25
Max. ambient temperature	°C	80	60	80	60	80	60	60	60
Starting current	A	1.6	1.5	1.7	1.6	1.8	1.7	1.75	2

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to Commission Regulation (EU) 327/2011 (prEN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	46.7	44.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		64.2	62
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.21
09 Air flow q_v	m^3/h	910
09 Pressure increase p_{fs}	Pa	404
10 Speed (rpm) n	min^{-1}	2750
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

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

LU-194709

The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).
The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst evaluation loses its validity/the conformity must be confirmed again.

The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2 (2a) (motors completely integrated into a product).

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Technical description

Weight	4.4 kg
Size	250 mm
Motor size	68
Rotor surface	Painted black
Impeller material	PA plastic
Housing material	PA plastic
Flowgrid material	PA plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent as per EN 60034-5
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1+
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal switch auto reset, lead out, with basic insulation
With cable	Lateral
Protection class assignment	I; If a protective earth is connected by the customer This component for installation may have several local protection classes. This information relates to this component's basic design. The final protection class is based on the component's intended installation and connection.
Conformity with standards	EN 60034-1; EN 60204-1; EN 60335-1; CE
Approval	CSA C22.2 No. 100; UL 1004-1

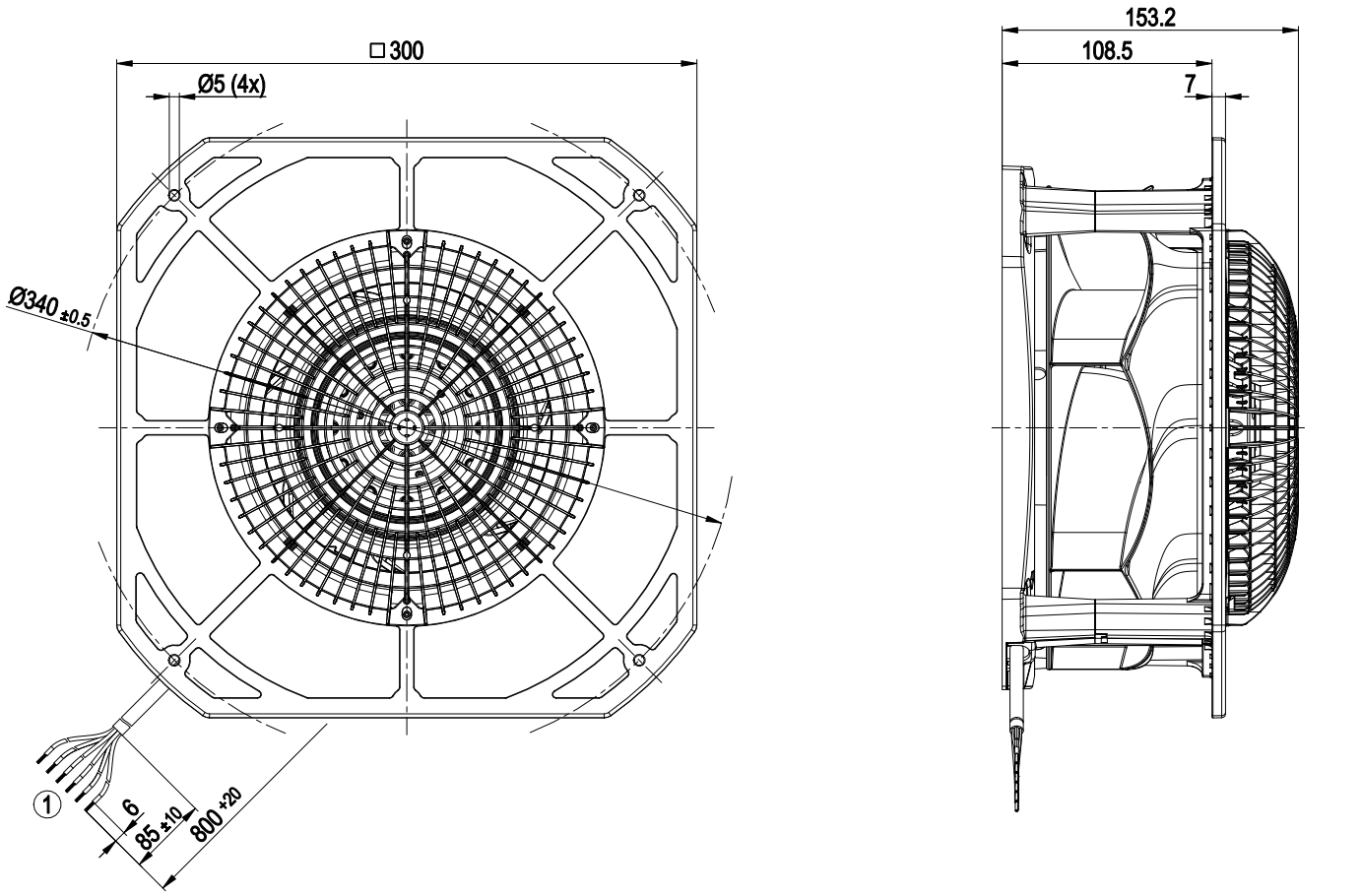
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Product drawing



1	Cable PFA AWG20 (green/yellow AWG18)
	6x splice

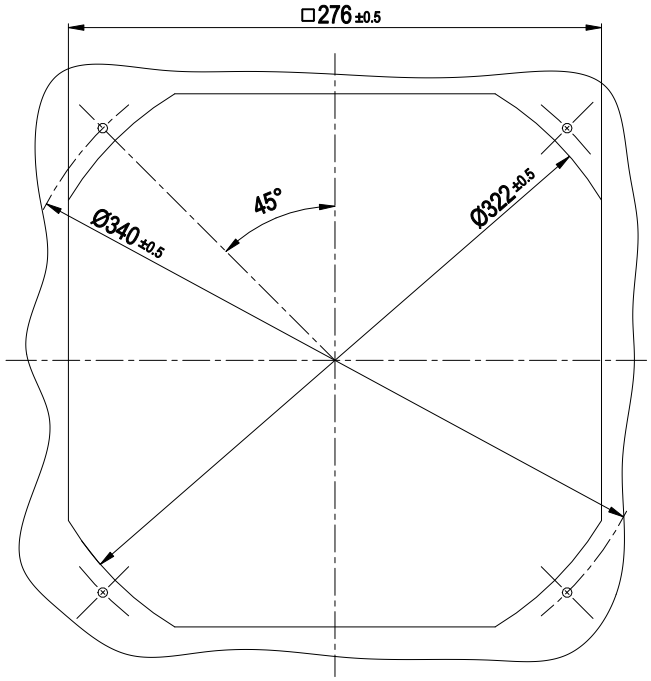
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Mounting dimensions



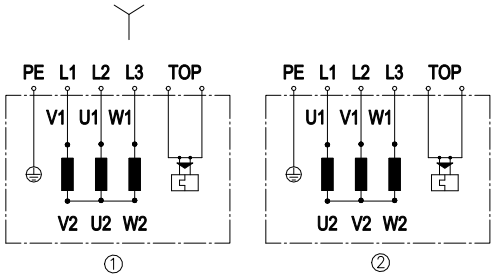
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Connection diagram



Change of rotation direction by reversing two phases

	Three-phase motor
Y	Star connection
1	Counterclockwise 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 gray

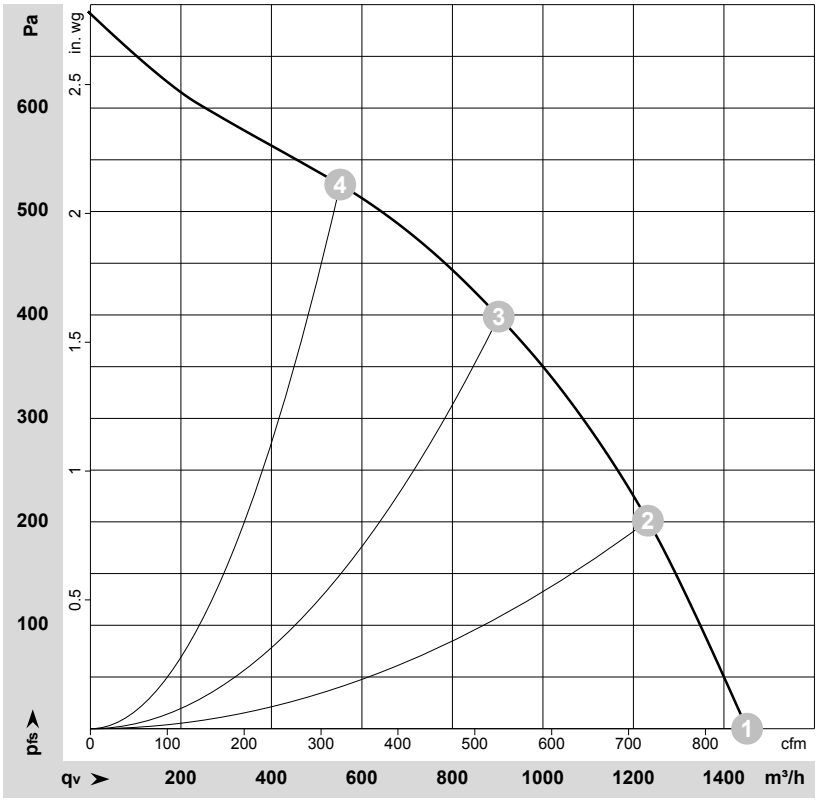
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-206982-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	Wired	U	f	n	P_e	I	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	Y	400	50	2820	172	0.32	1450	0	855	0.00
2	Y	400	50	2770	208	0.36	1230	200	725	0.80
3	Y	400	50	2750	225	0.38	900	400	530	1.61
4	Y	400	50	2780	199	0.35	550	525	325	2.11

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

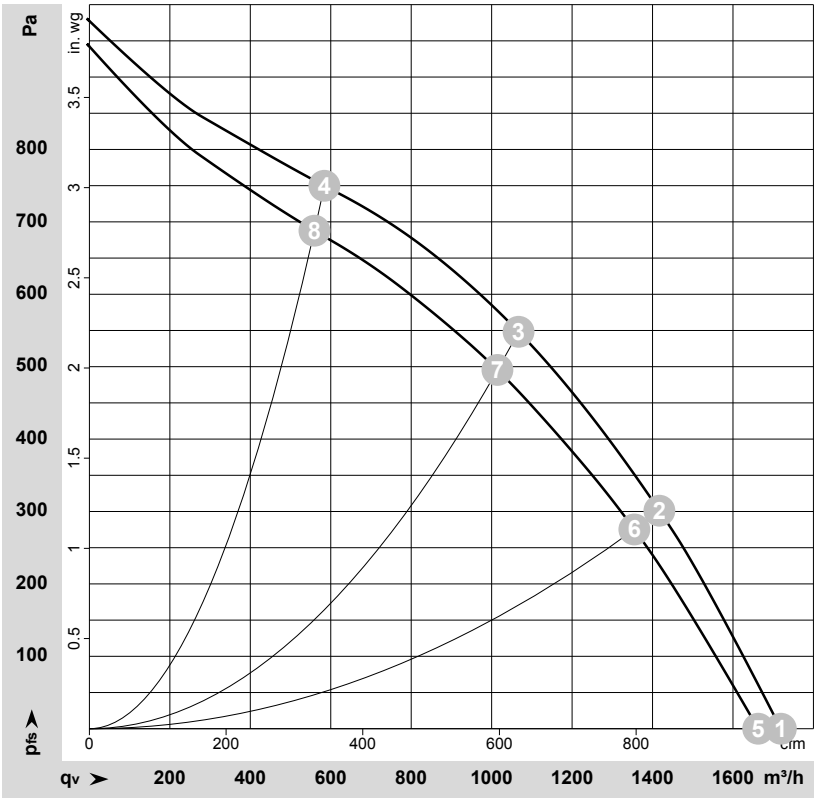
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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-209345-1
Measurement: LU-209301-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	Wired	U	f	n	P_e	I	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	Y	480	60	3320	287	0.40	1720	0	1010	0.00
2	Y	480	60	3240	353	0.47	1415	300	835	1.20
3	Y	480	60	3200	370	0.50	1065	550	630	2.21
4	Y	480	60	3280	321	0.44	585	750	345	3.01
5	Y	400	60	3210	272	0.43	1665	0	980	0.00
6	Y	400	60	3100	331	0.51	1355	276	800	1.11
7	Y	400	60	3050	350	0.55	1015	500	595	2.01
8	Y	400	60	3140	302	0.47	560	688	330	2.76

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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