R2E250-RA59-16

AC centrifugal fan - RadiCal®

backward curved, single inlet

R2E250-RA59-16 ebmpapst Datasheet

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Nominal data

Type	**R2E250-RA59-16**
Motor	**M2E068-EC**

Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50
Type of data definition		ml
Valid for approval / standard		CE
Speed	min^{-1}	2400
Power input	W	200
Current draw	A	0.88
Motor capacitor	µF	6
Capacitor voltage	VDB	400
Capacitor standard		P2 (CE)
Min. back pressure	Pa	0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	45
Starting current	A	1.5

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}		39.9	39.9	43.9
Efficiency grade N		58	58	62
Power input P_e	kW	0.19		
Air flow q_v	m^3/h	805		
Pressure increase p_{fs}	Pa	351		
Speed n	min^{-1}	2425		

Data established at point of optimum efficiency

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Technical features

Size	250 mm
Surface of rotor	Coated in black
Material of impeller	PA plastic
Number of blades	7
Direction of rotation	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
Speed steps	4
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Axial
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE

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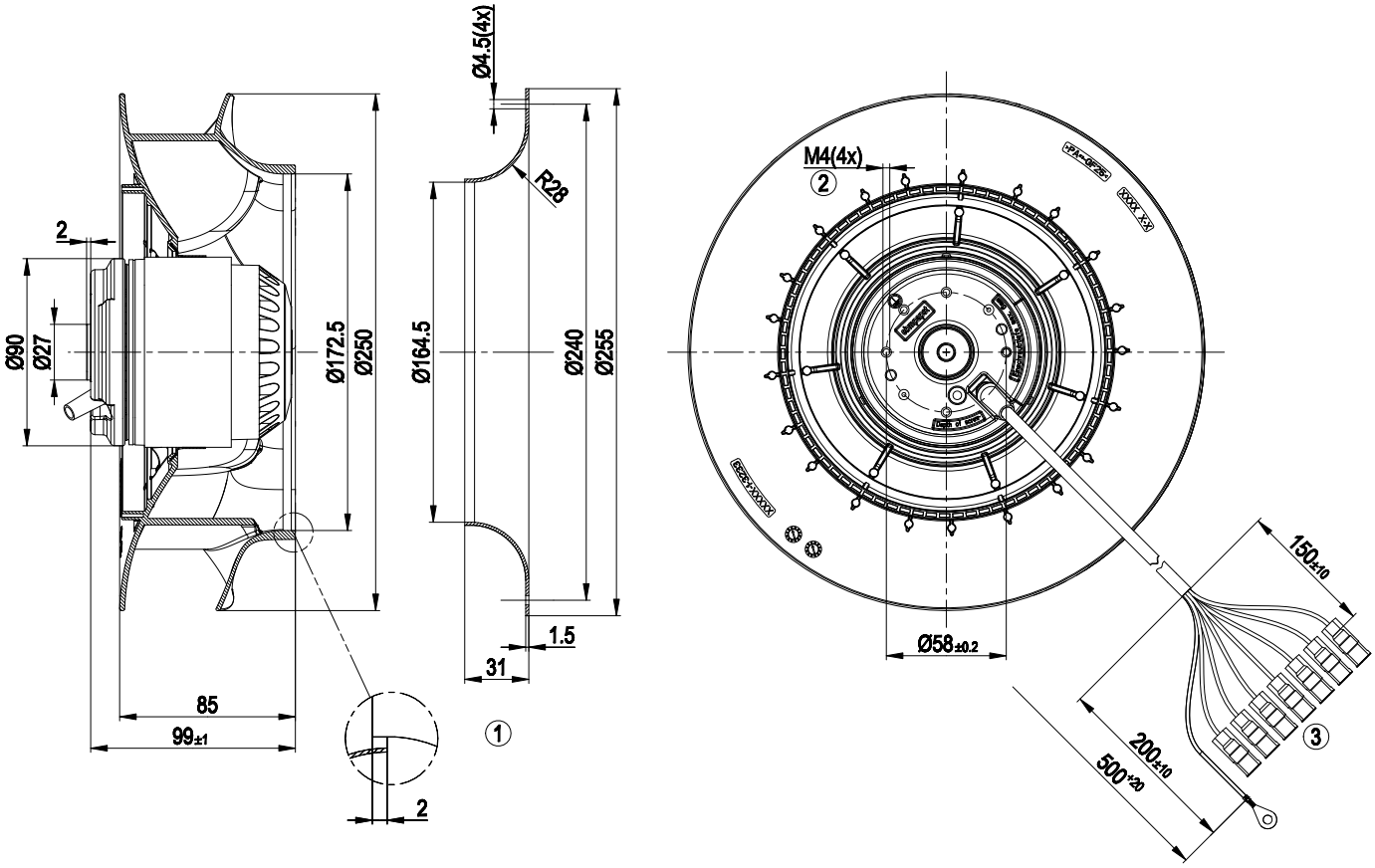
Product drawing



1	Accessory part: Inlet nozzle 96359-2-4013, not included in the standard scope of delivery
2	Depth of screw max. 6 mm
3	Connection line Dipotherm 0.5mm², 7x receptacles for tabs 2.8x1 with insulating sleeve and 1x contact stud crimped

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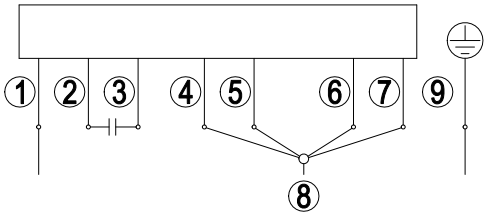
Connection screen



Note: fast speed (step IV); slow speed (step I); the switch must interrupt the circuit during the changeover.

1	= N = blue
2	brown
3	yellow
4	Step I black 1 / white
5	Step II black 2 / red
6	Step III black 3 / grey
7	Step IV black 4 / black
8	L1
9	= PE = green / yellow

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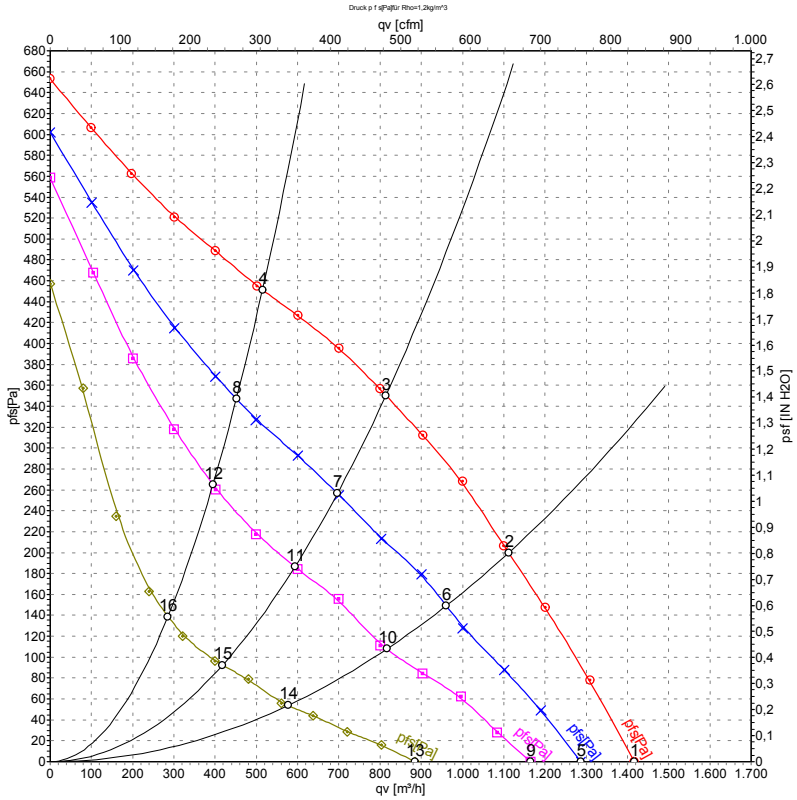
Charts: Air flow 50 Hz



Measurement: LU-132929
Measurement: LU-132930
Measurement: LU-132933
Measurement: LU-132935

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	230	50	2565	170	0.74	1415	0
2	230	50	2435	197	0.86	1110	200
3	230	50	2400	200	0.88	815	350
4	230	50	2480	187	0.81	515	450
5	230	50	2335	160	0.71	1285	0
6	230	50	2115	185	0.81	960	149
7	230	50	2080	188	0.82	695	257
8	230	50	2185	176	0.78	450	347
9	230	50	2120	159	0.71	1165	0
10	230	50	1805	182	0.80	815	107
11	230	50	1780	182	0.80	595	186
12	230	50	1910	173	0.76	395	264
13	230	50	1625	158	0.69	885	0
14	230	50	1280	168	0.73	575	53
15	230	50	1265	167	0.73	420	92
16	230	50	1390	163	0.72	285	139

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