R4E310-AP11-16

AC centrifugal fan

backward curved, single inlet

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ErP2013 EXCEEDS THE NORM

Nominal data

Type	**R4E310-AP11-16**
Motor	**M4E074-DF**

Phase		1~	1~	1~
Nominal voltage	VAC	230	230	230
Frequency	Hz	50	60	60
Type of data definition		fa	fa	fa
Valid for approval / standard		CE	CE	UL 2111
Speed	min^{-1}	1390	1580	1580
Power input	W	115	160	175
Current draw	A	0.52	0.70	
Motor capacitor	µF	4	4	4
Capacitor voltage	VDB	400	400	400
Capacitor standard		P0 (CE)	P0 (CE)	UL
Min. back pressure	Pa	0	0	0
Min. ambient temperature	°C	-25	-25	-25
Max. ambient temperature	°C	45	30	30
Starting current	A	1.2	1.15	1.15

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}	%	38.5	38.5	42.5
Efficiency grade N		58	58	62
Power input P_e	kW	0.14		
Air flow q_v	m^3/h	1120		
Pressure increase p_{fs}	Pa	175		
Speed n	min^{-1}	1325		

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

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Technical features

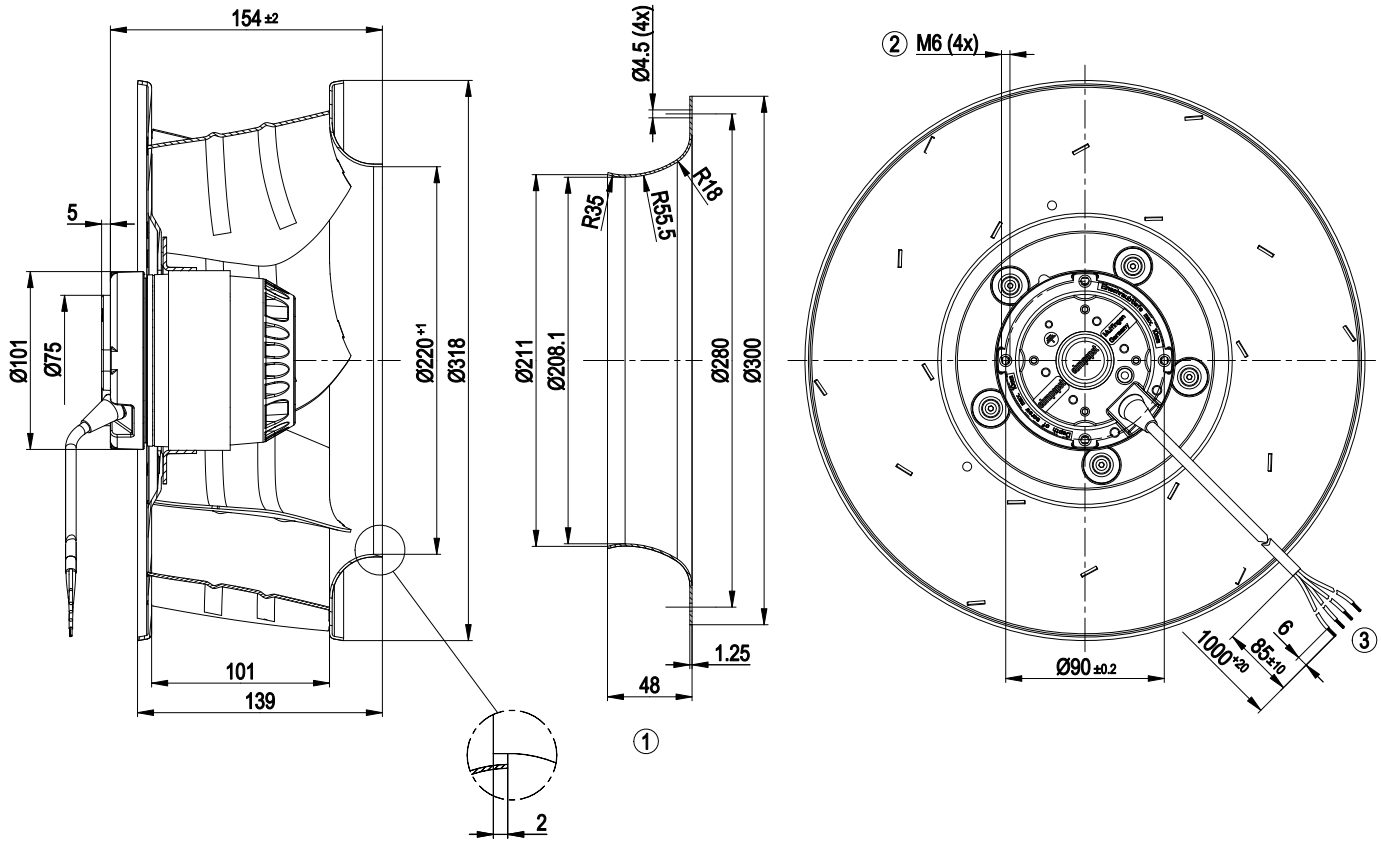
Mass	4 kg
Size	310 mm
Surface of rotor	Coated in black
Material of impeller	Aluminium sheet
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 44; Depending on installation and position as per EN 60034-5
Insulation class	"B"
Humidity class	F2-2
Max. permissible ambient 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) wired internally
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE
Approval	UL 2111; CSA C22.2 Nr.77

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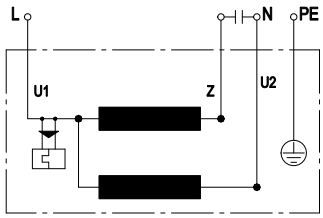
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Product drawing



1	Accessory part: inlet nozzle 31050-2-4013, not included in scope of delivery. Short nozzle 31051-2-4013 on request.
2	Depth of screw max. 10 mm
3	Connection line PFA AWG20, 4x lead tips crimped

Connection screen



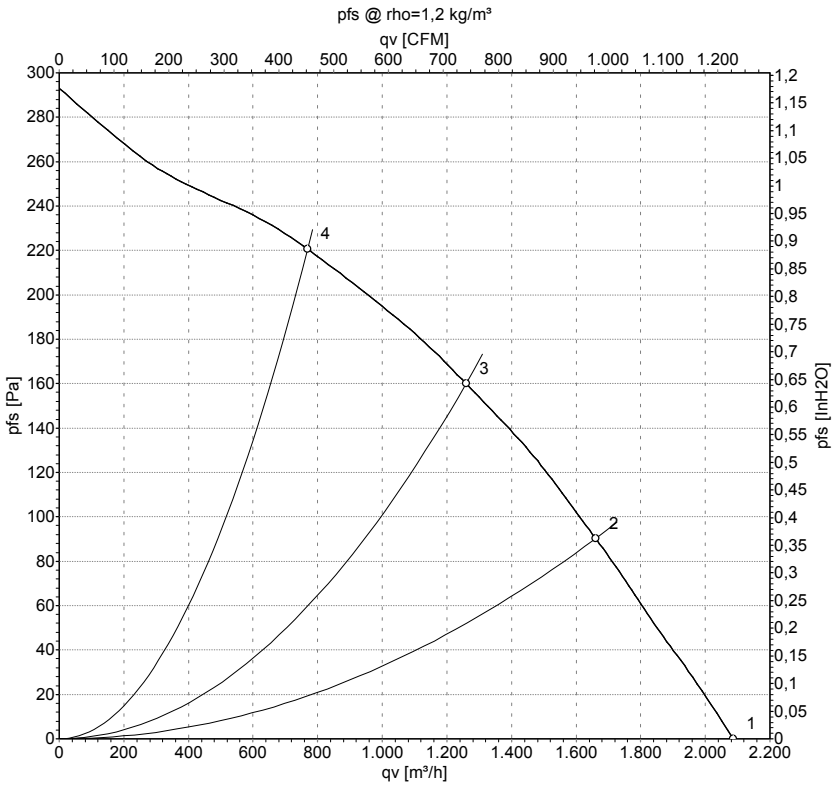
U1	blue	Z	brown	U2	black
PE	green/yellow				

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Charts: Air flow 50 Hz



Measurement: LU-53848

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	1390	115	0.52	2085	0
2	230	50	1350	135	0.60	1660	90
3	230	50	1325	145	0.64	1260	160
4	230	50	1350	135	0.60	770	220

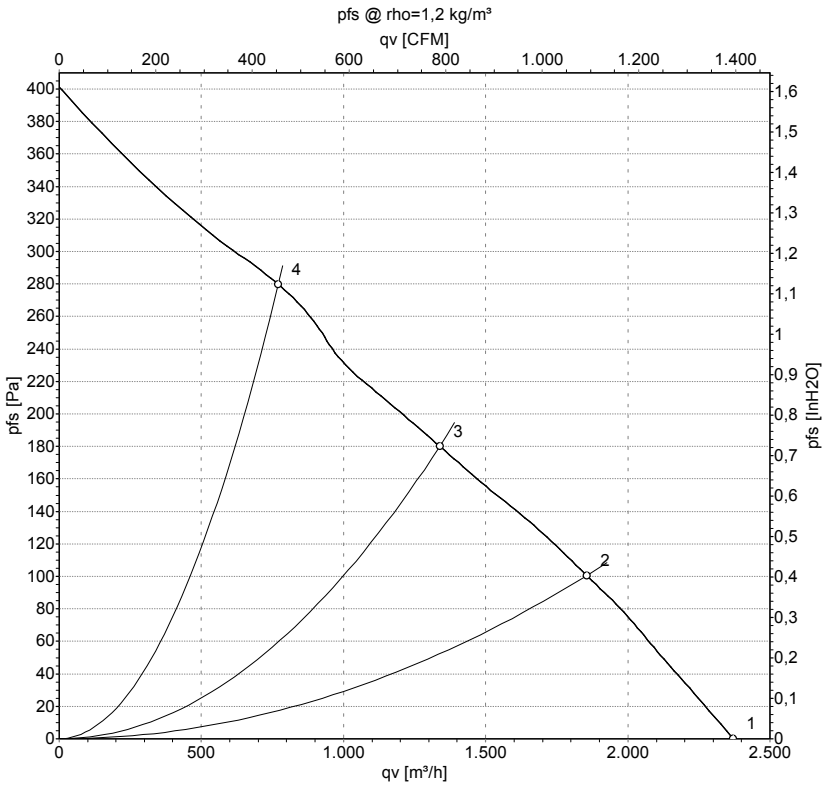
U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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Charts: Air flow 60 Hz



Measurement: LU-53849

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	60	1580	160	0.70	2370	0
2	230	60	1480	186	0.81	1855	100
3	230	60	1395	201	0.87	1340	180
4	230	60	1495	183	0.79	770	280

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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