

AC centrifugal fan - RadiCal

backward curved, single inlet

R6E450-RG05-06 ebmpapst Datasheet
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Nominal data

Type	R6E450-RG05-06	
Motor	M6E110-EF	
Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50
Type of data definition		ml
Valid for approval / standard		CE
Speed (rpm)	min ⁻¹	880
Power input	W	240
Current draw	A	1.04
Motor capacitor	µF	6
Capacitor voltage	VDB	400
Capacitor standard		S0 (CE)
Min. back pressure	Pa	0
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	70
Starting current	A	1.04

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

	Actual	Request 2015
01 Overall efficiency η_{es}	% 44.8	44.8
02 Measurement category	A	
03 Efficiency category	Static	
04 Efficiency grade N	62	62
05 Variable speed drive	No	

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

09 Power input P_e	kW	0.23
09 Air flow q_v	m³/h	2450
09 Pressure increase p_{fs}	Pa	158
10 Speed (rpm) n	min ⁻¹	885
11 Specific ratio*		1.00

* Specific ratio = $1 + p_{fs} / 100\,000\text{ Pa}$

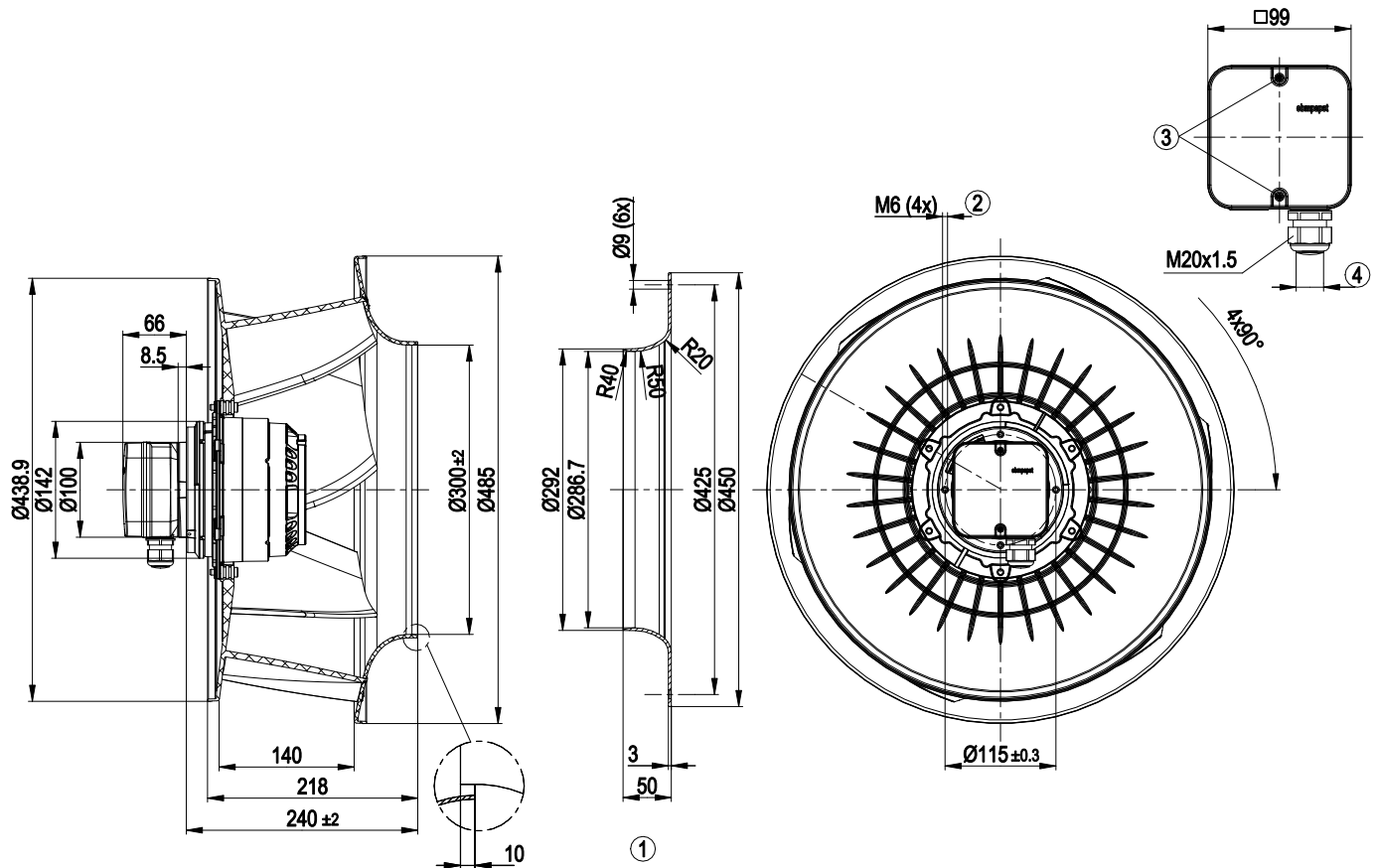
LU-168809



Technical features

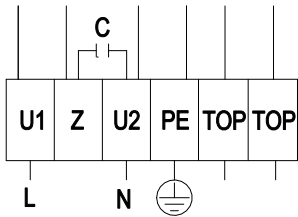
Mass	9.36 kg
Size	450 mm
Surface of rotor	Cast in aluminium
Material of impeller	PA plastic
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity (F)/environmental protection class (H)	F3-1
Max. permissible ambient motor temp. (transp./ 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)	<= 3.5 mA
Electrical leads	Via terminal box, integrated capacitor connected via terminal box
Motor protection	Thermal overload protector (TOP) brought out, basic insulation
Protection class	I (if protective earth is connected by customer)
Motor capacitor according to EN 60252-1 in safety protection class	S0
Product conforming to standard	EN 61800-5-1; CE
Approval	CSA C22.2 No.100; UL 1004-1; VDE; EAC

Product drawing



1	Accessory part: Inlet nozzle 45901-2-2943 not included in scope of delivery.
2	Thread reach max. 12 mm
3	Tightening torque 1.5±0.2 Nm
4	Cable diameter: min. 6 mm, max. 12 mm, tightening torque 2±0.3 Nm

Connection screen



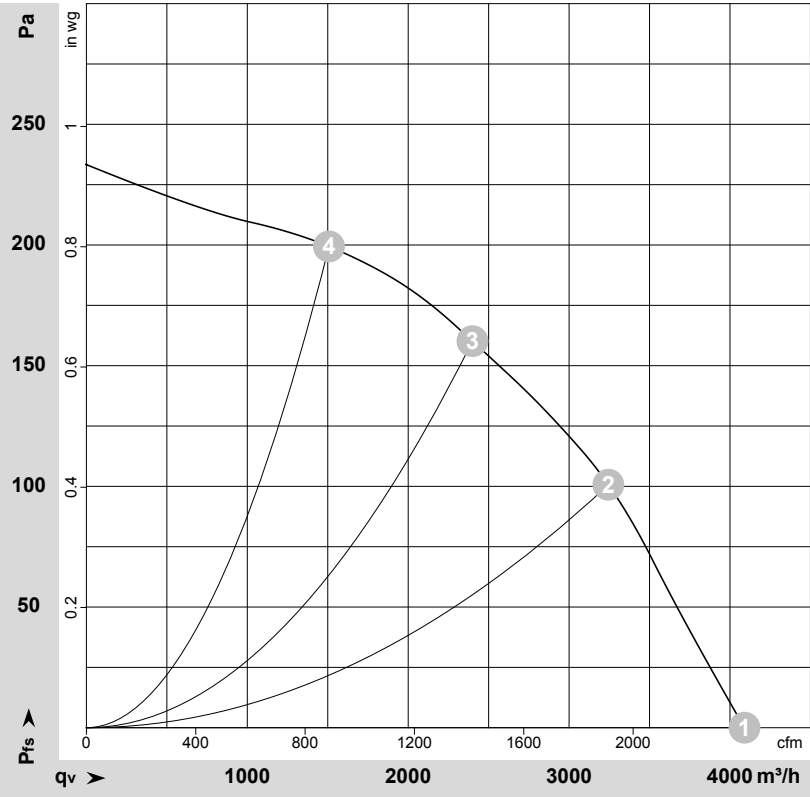
L	= U1 = blue	Z	brown	N	= U2 = black
PE	green / yellow	TOP	grey		



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Charts: Air flow 50 Hz



$\rho = 1.18 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-168809-1

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	LpA _{in}	LwA _{in}	LwA _{out}	q _v	p _{fs}	q _v	p _{fs}
	V	Hz	min ⁻¹	W	A	dB(A)	dB(A)	dB(A)	m ³ /h	Pa	cfm	inH ₂ O
1	230	50	935	187	0.82	60	68	74	4090	0	2405	0.00
2	230	50	900	229	0.99	54	64	70	3245	100	1910	0.40
3	230	50	880	240	1.04	53	62	68	2400	160	1410	0.64
4	230	50	905	223	0.96	56	65	70	1510	200	890	0.80

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · LwA_{out} = Sound power level outlet side
q_v = Air flow · p_{fs} = Pressure increase

