K4E400-RO09-05

AC centrifugal module - RadiCal

backward curved, single inlet

with support plate

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Nominal data

Type	**K4E400-RO09-05**
Motor	**M4E094-HA**

Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Type of data definition		ml	ml
Valid for approval / standard		CE	CE
Speed (rpm)	min^{-1}	1340	1430
Power input	W	470	650
Current draw	A	2.33	3.0
Motor capacitor	µF	9	9
Capacitor voltage	VDB	400	400
Capacitor standard		S0 (CE)	S0 (CE)
Min. back pressure	Pa	0	0
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	65	45
Starting current	A	5.9	

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}	%	48.6	48.2
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		62.4	62
05 Variable speed drive		No	

09 Power input P_e	kW	0.48
09 Air flow q_v	m^3/h	2810
09 Pressure increase p_{fs}	Pa	306
10 Speed (rpm) n	min^{-1}	1390
11 Specific ratio*		1.00

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

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

LU-141329

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Technical features

Mass	14.5 kg
Size	400 mm
Surface of rotor	Coated in black
Material of impeller	PP plastic
Material of distancing profiles	Aluminium
Material of inlet nozzle	Aluminium sheet
Material of guard grille	Steel, galvanised
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity (F)/environmental protection class (H)	F2-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) brought out, basic insulation
Cable exit	Variable
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 60034-1 (2010); CE

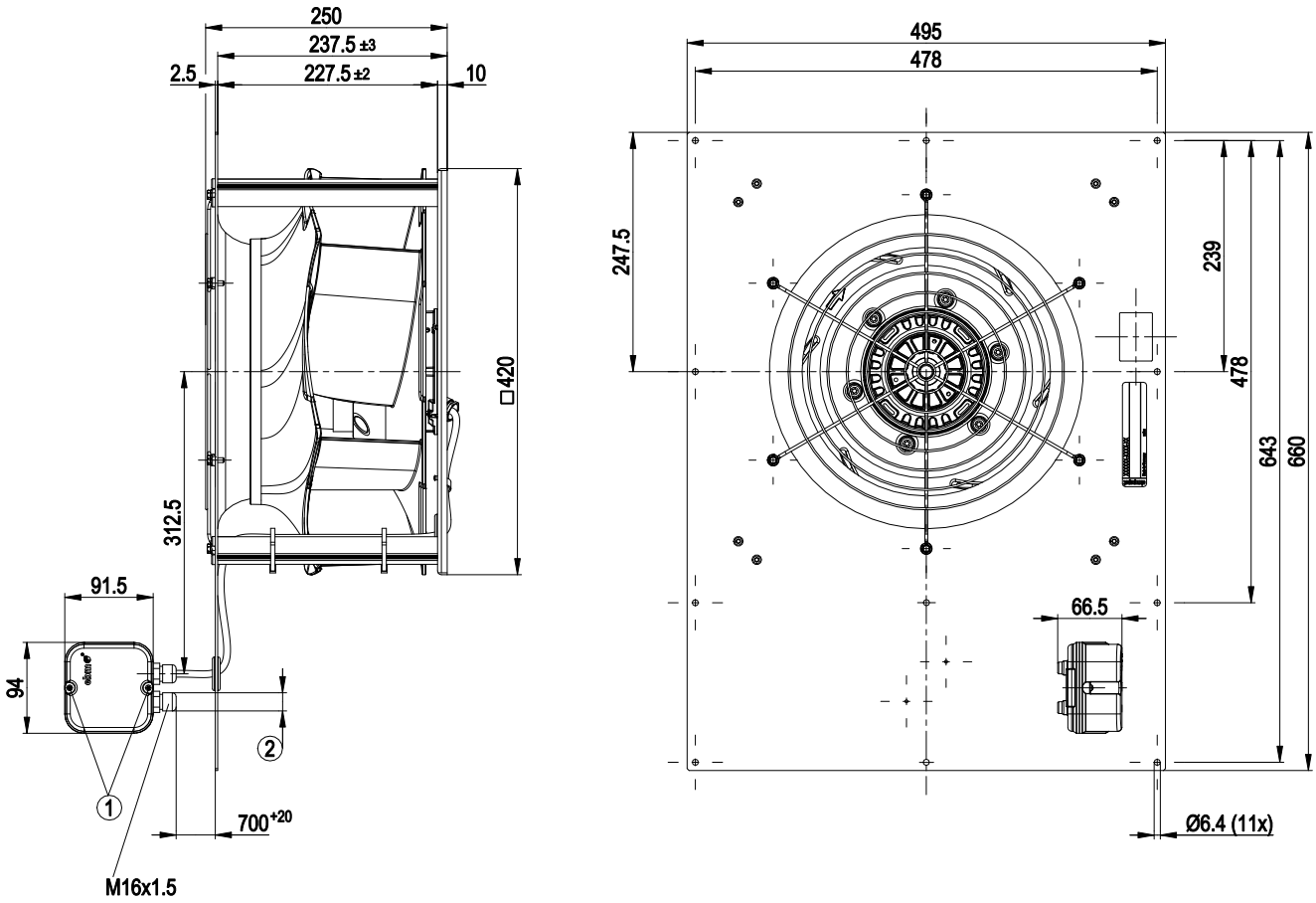
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Product drawing



1	Tightening torque 0.5±0.1 Nm
2	Cable gland, cable diameter max. 7.5 mm, tightening torque 1.3±0.2 Nm

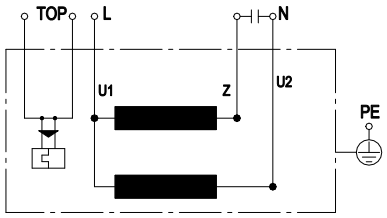
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Connection screen



U1	blue	Z	brown	U2	black
PE	green/yellow	TOP	2x grey		

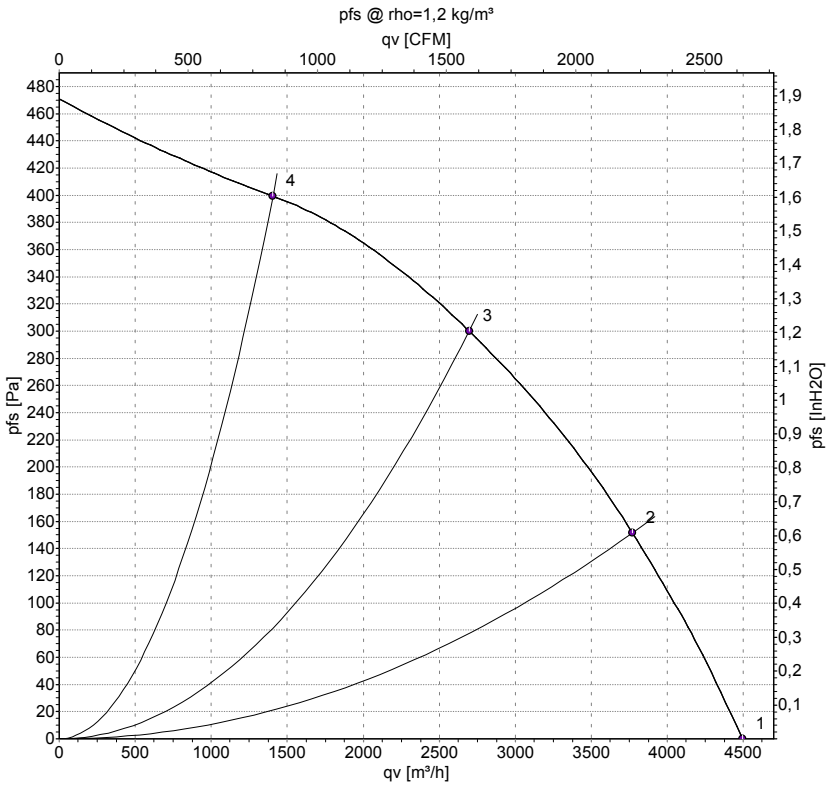
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Charts: Air flow 50 Hz



Measurement: LU-152577-1

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}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	230	50	1395	368	1.95	70	78	4495	0	2645	0.00
2	230	50	1360	436	2.21	66	74	3770	150	2220	0.60
3	230	50	1340	470	2.33	59	67	2695	300	1585	1.20
4	230	50	1375	402	2.06	60	68	1405	400	830	1.61

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 · q_V = Air flow
p_{fs} = Pressure increase

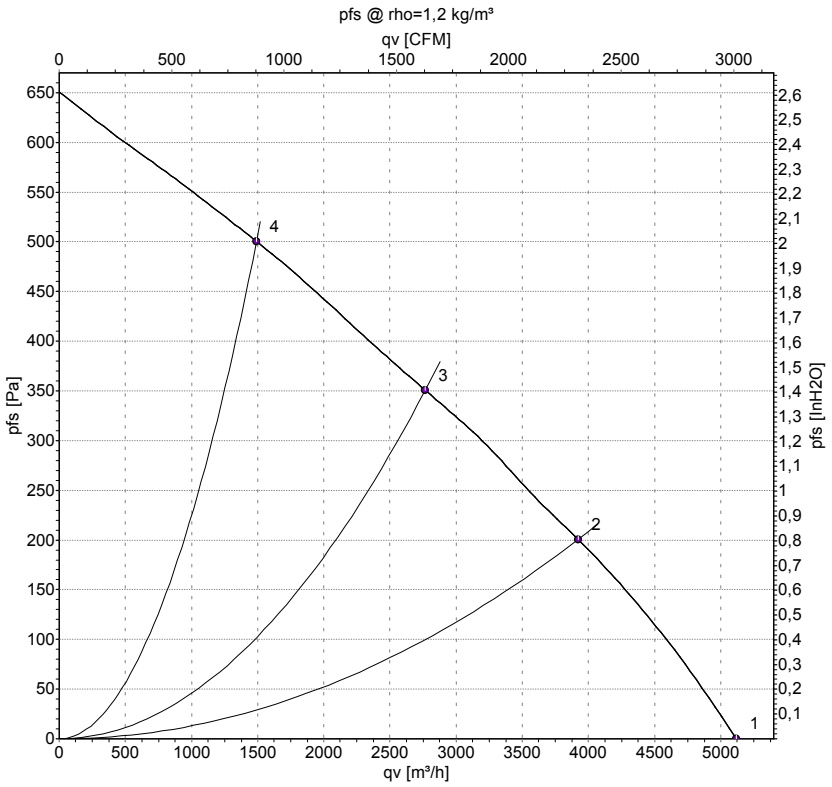
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Charts: Air flow 60 Hz



Measurement: LU-152583-1

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}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	230	60	1585	527	2.35	72	80	5120	0	3010	0.00
2	230	60	1455	634	2.94	65	72	3920	200	2310	0.80
3	230	60	1430	650	3.00	59	67	2765	350	1630	1.41
4	230	60	1540	564	2.55	65	73	1490	500	880	2.01

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 · q_V = Air flow
p_{fs} = Pressure increase

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