

A4E420-AU01-05 ebmpapst Datasheet

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Nominal data

Type	A4E420-AU01-05		
Motor	M4E094-EA		
Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Method of obtaining data		ml	ml
Valid for approval/standard		CE	CE
Speed (rpm)	min ⁻¹	1300	1430
Power consumption	W	280	370
Current draw	A	1.22	1.61
Capacitor	µF	7	7
Capacitor voltage	VDB	400	400
Capacitor standard		S0 (CE)	S0 (CE)
Max. back pressure	Pa	115	75
Max. back pressure	in. wg	0.46	0.3
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	65	65
Starting current	A	1.9	1.8

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 (EN 17166)

		Actual	Req. 2015			
01 Overall efficiency η_{es}	%	30.7	29.9	09 Power consumption P_e	kW	0.25
02 Measurement category		A		09 Air flow q_v	m ³ /h	3170
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	89
04 Efficiency grade N		40.8	40	10 Speed (rpm) n	min ⁻¹	1320
05 Variable speed drive		No		11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

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

LU-200731

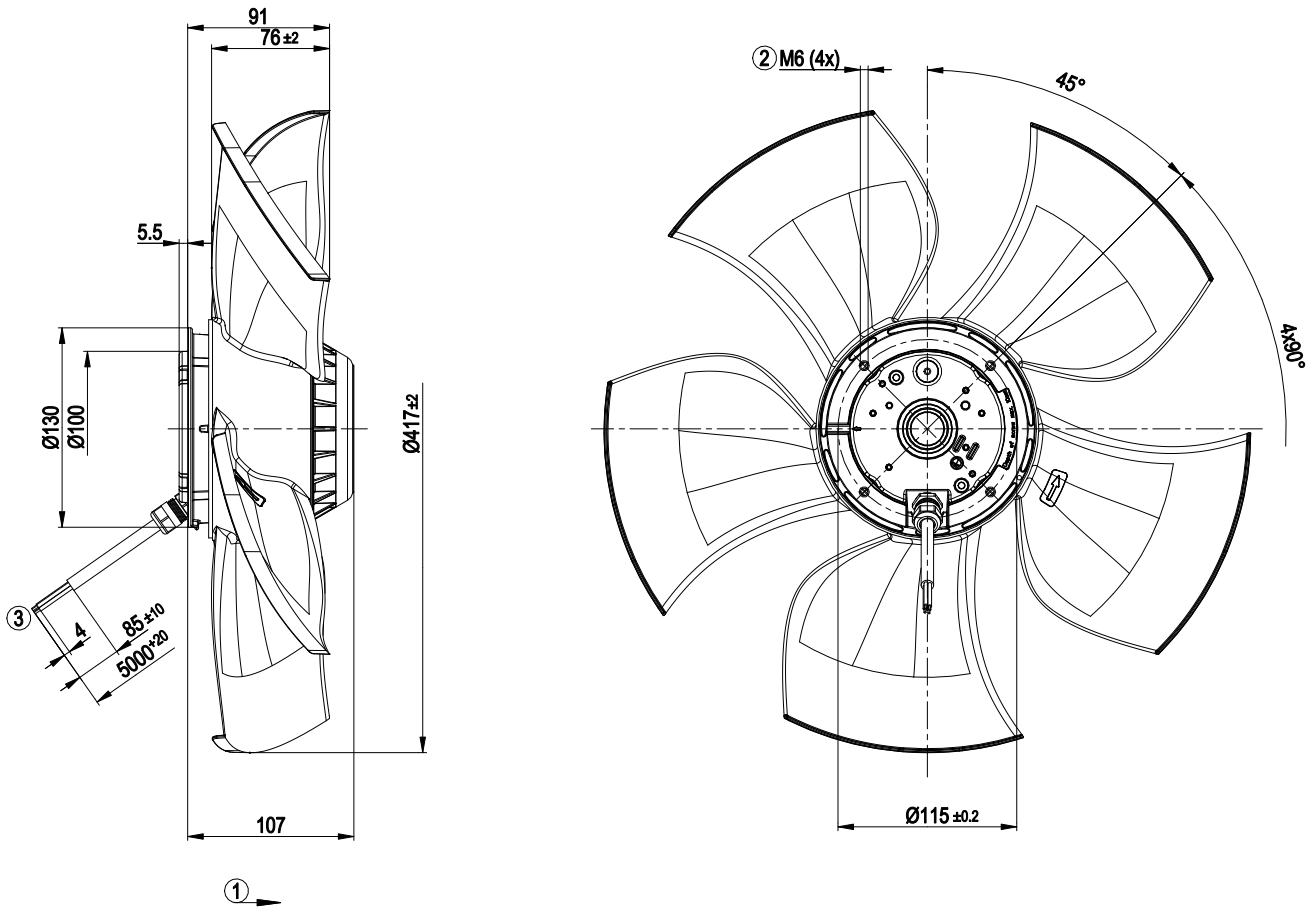
The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).
The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst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



Technical description

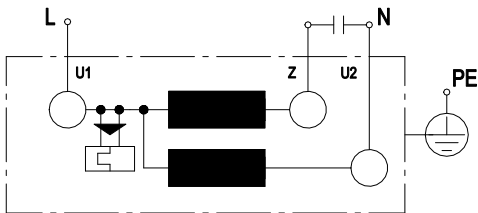
Weight	4.9 kg
Size	420 mm
Motor size	94
Rotor surface	Painted black
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Number of blades	5
Airflow direction	A
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
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 with low-temperature lubricant
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Motor capacitor according to EN 60252-1 in safety protection class	S0
Conformity with standards	EN 60034-1 (2010); UKCA; CE
Approval	CCC; EAC

Product drawing



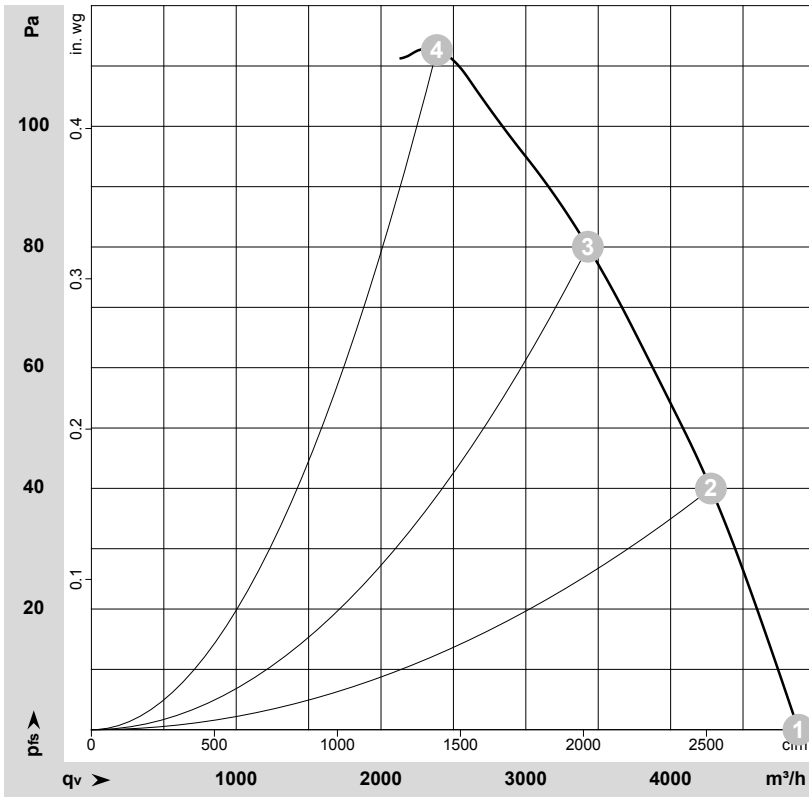
1	Direction of air flow "A"
2	Max. clearance for screw 10 mm
3	Cable silicone 4G 0.5 mm ² , 4x crimped splices

Connection diagram



U1	blue	Z	brwn	U2	black
PE	green/yellow				

Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-67766-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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.

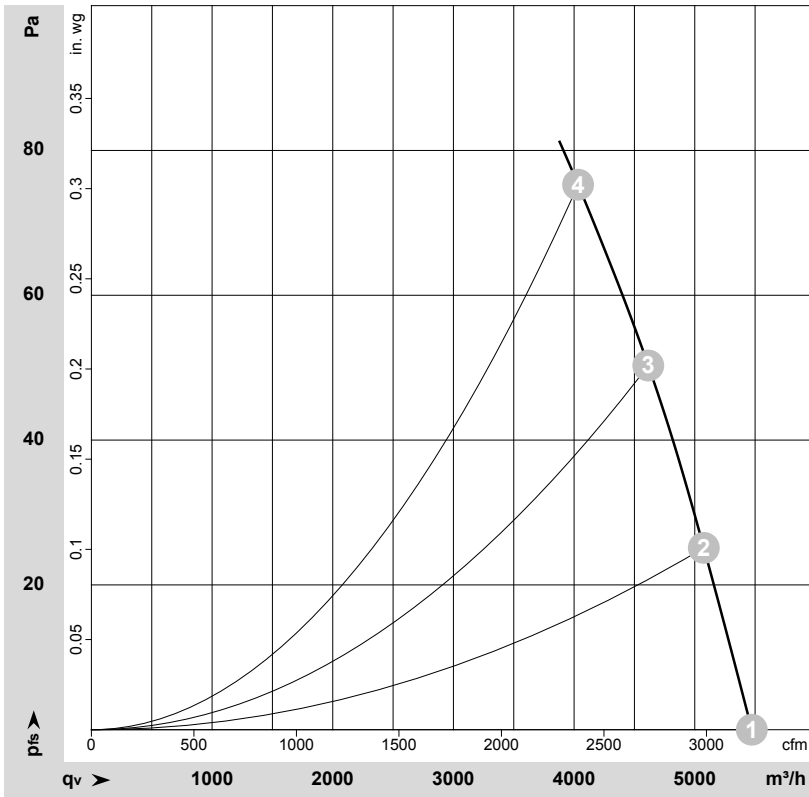
Measured values

	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	1~	230	50	1380	222	1.00	4885	0	2875	0.00
2	1~	230	50	1355	241	1.07	4280	40	2520	0.16
3	1~	230	50	1330	259	1.14	3430	80	2020	0.32
4	1~	230	50	1300	280	1.22	2385	115	1405	0.46

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



Curves: Air performance 60 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-67767-1

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	1~	230	60	1540	344	1.53	5475	0	3220	0.00
2	1~	230	60	1505	353	1.56	5075	25	2985	0.10
3	1~	230	60	1470	361	1.59	4615	50	2715	0.20
4	1~	230	60	1430	370	1.61	4035	75	2375	0.30

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

