

A4E420-AK02-09 ebmpapst Datasheet

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## Nominal data

Type	A4E420-AK02-09		
Motor	M4E074-GA		
Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Method of obtaining data		fa	fa
Valid for approval/standard		CE	CE
Speed (rpm)	min <sup>-1</sup>	1430	1680
Power consumption	W	200	285
Current draw	A	0.94	1.25
Capacitor	µF	7	7
Capacitor voltage	VDB	400	400
Max. back pressure	Pa	150	90
Max. back pressure	inH <sub>2</sub> O	0.6	0.36
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	70	50
Starting current	A	2.8	2.6

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment  
Subject to change

## Data according to ErP Directive

		Actual	Req. 2015			
01 Overall efficiency $\eta_{es}$	%	31.5	30	09 Power consumption $P_e$	kW	0.26
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	3295
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	91
04 Efficiency grade N		41.5	40	10 Speed (rpm) n	min <sup>-1</sup>	1395
05 Variable speed drive		No		11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

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

LU-28820



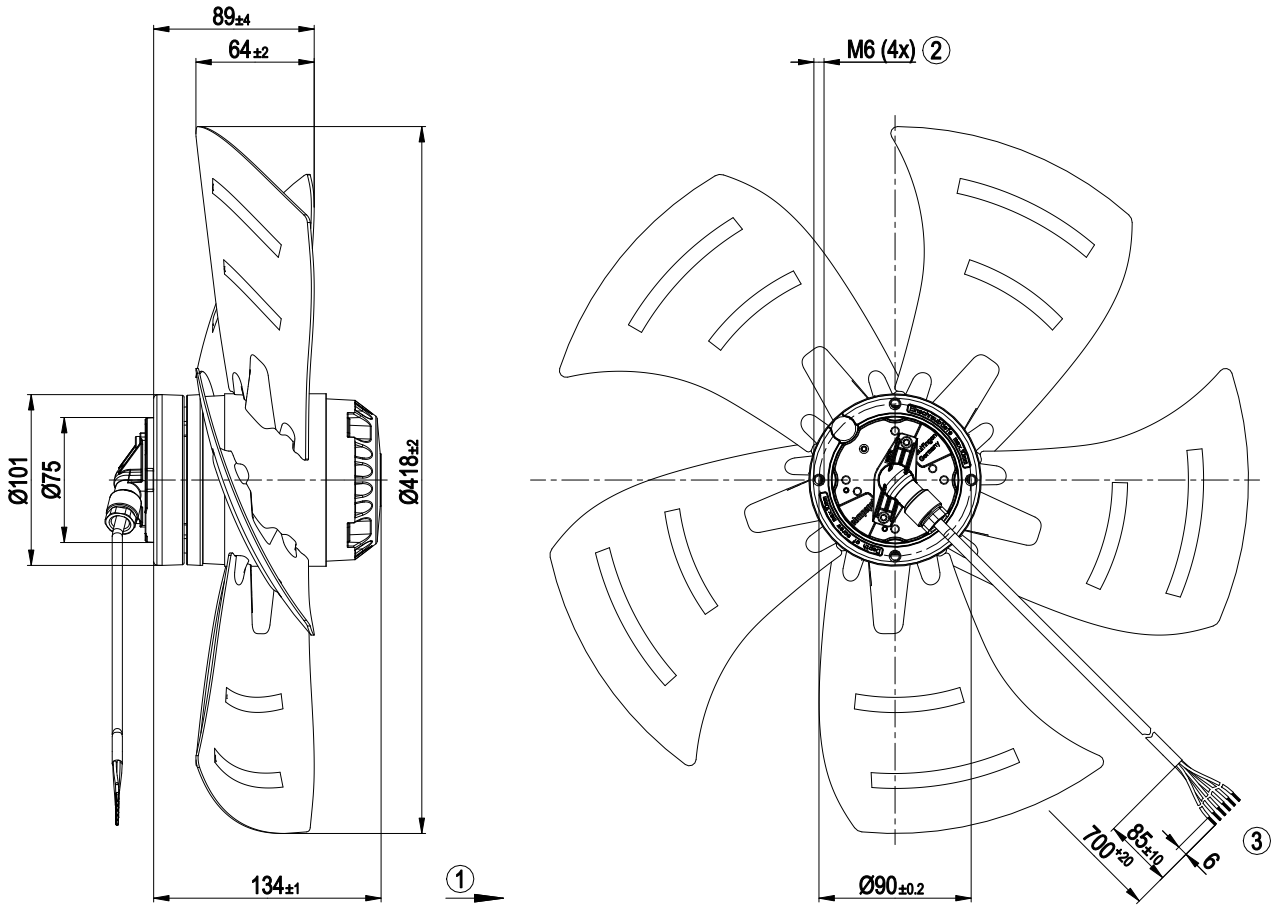
### Technical description

Weight	5 kg
Fan size	420 mm
Rotor surface	Painted black
Blade material	Sheet steel, painted black
Number of blades	5
Airflow direction	"A"
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent as per EN 60034-5
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F4-2
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
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Lateral
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE
Approval	EAC

# AC axial fan

sickle-shaped blades (S series)

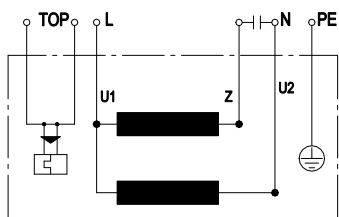
Product drawing



1	Direction of air flow "A"
2	Max. clearance for screw 10 mm
3	Cable ETFE AWG20, 6x crimped splices

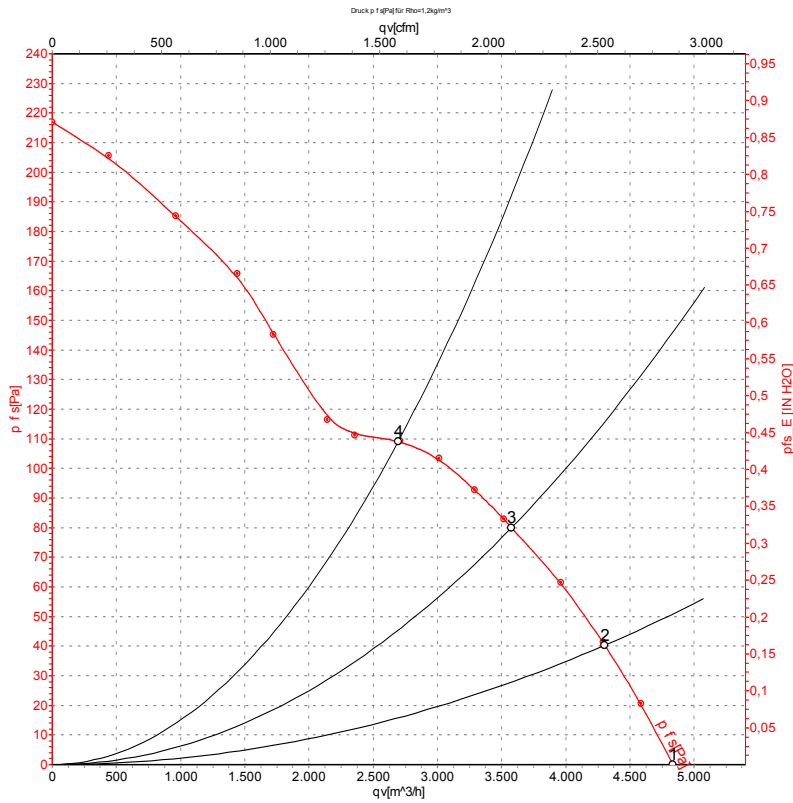


## Connection diagram



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

## Curves: Air performance 50 Hz



Measurement: LU-28820-1

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.

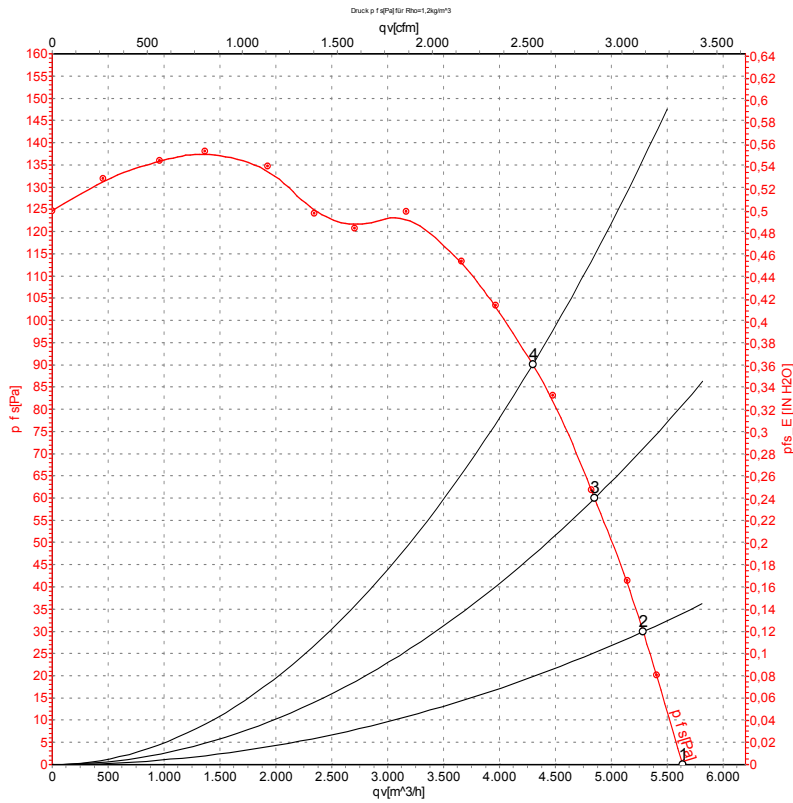
## Measured values

	U	f	n	P <sub>e</sub>	I	q <sub>v</sub>	P <sub>fs</sub>	q <sub>v</sub>	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa	cfm	inH <sub>2</sub> O
1	230	50	1430	200	0.94	4835	0	2845	0.00
2	230	50	1420	225	1.03	4305	40	2535	0.16
3	230	50	1400	252	1.14	3580	80	2105	0.32
4	230	50	1380	277	1.24	2695	110	1585	0.44

U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · q<sub>v</sub> = Air flow · P<sub>fs</sub> = Pressure increase



## Curves: Air performance 60 Hz



Measurement: LU-28821-1

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

	U	f	n	P <sub>e</sub>	I	q <sub>V</sub>	P <sub>fs</sub>	q <sub>V</sub>	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa	cfm	inH <sub>2</sub> O
1	230	60	1680	285	1.25	5635	0	3320	0.00
2	230	60	1660	304	1.33	5285	30	3110	0.12
3	230	60	1625	330	1.45	4850	60	2855	0.24
4	230	60	1590	356	1.55	4295	90	2530	0.36

U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · q<sub>V</sub> = Air flow · P<sub>fs</sub> = Pressure increase

