

# AC axial fan

sickle-shaped blades (S series)  
with guard grille for short nozzle



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## Nominal data

Type	S4E400-AP02-03		
Motor	M4E074-EI		
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	1700
Power consumption	W	160	240
Current draw	A	0.73	1.06
Capacitor	µF	6	6
Capacitor voltage	VDB	400	400
Max. back pressure	Pa	110	75
Max. back pressure	inH <sub>2</sub> O	0.44	0.3
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	40	40
Starting current	A	2.0	1.9

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 $\eta_{es}$	%	31.9	29.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		42.6	40
05 Variable speed drive		No	

Data obtained at optimum efficiency level.

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

09 Power consumption $P_e$	kW	0.2
09 Air flow $q_v$	m <sup>3</sup> /h	2675
09 Pressure increase $p_{fs}$	Pa	90
10 Speed (rpm) n	min <sup>-1</sup>	1390
11 Specific ratio*		1.00

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

LU-30924



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sickle-shaped blades (S series)  
with guard grille for short nozzle

## Technical description

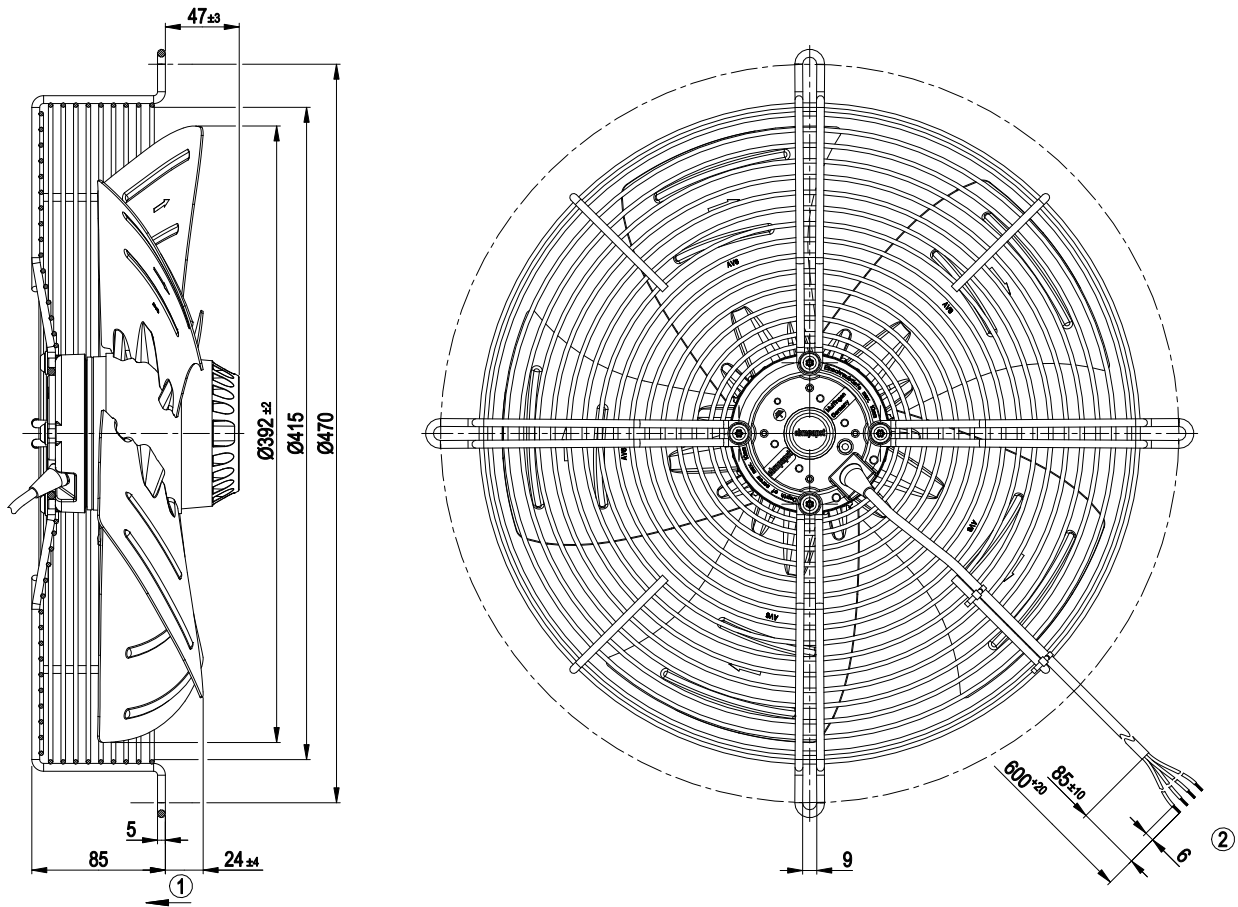
<b>Weight</b>	5.9 kg
<b>Fan size</b>	400 mm
<b>Rotor surface</b>	Painted black
<b>Blade material</b>	Sheet steel, painted black
<b>Guard grille material</b>	Steel, coated with black plastic (RAL 9005)
<b>Number of blades</b>	5
<b>Airflow direction</b>	"V"
<b>Direction of rotation</b>	Counterclockwise, viewed toward rotor
<b>Degree of protection</b>	IP44; installation- and position-dependent as per EN 60034-5
<b>Insulation class</b>	"B"
<b>Moisture (F) / Environmental (H) protection class</b>	H0+
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+ 80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	- 40 °C
<b>Installation position</b>	Shaft horizontal or rotor on bottom; rotor on top on request
<b>Condensation drainage holes</b>	On rotor side
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)</b>	< 0.75 mA
<b>Motor protection</b>	Thermal overload protector (TOP) internally connected
<b>With cable</b>	Variable
<b>Protection class</b>	I (with customer connection of protective earth)
<b>Conformity with standards</b>	EN 60335-1; CE
<b>Approval</b>	CCC; EAC



# AC axial fan

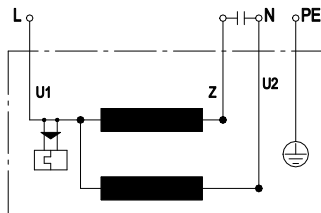
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## Product drawing



- |   |                                                       |
|---|-------------------------------------------------------|
| 1 | Direction of air flow "V"                             |
| 2 | Cable PVC 4G 0.5 mm <sup>2</sup> , 4x crimped splices |

## Connection diagram



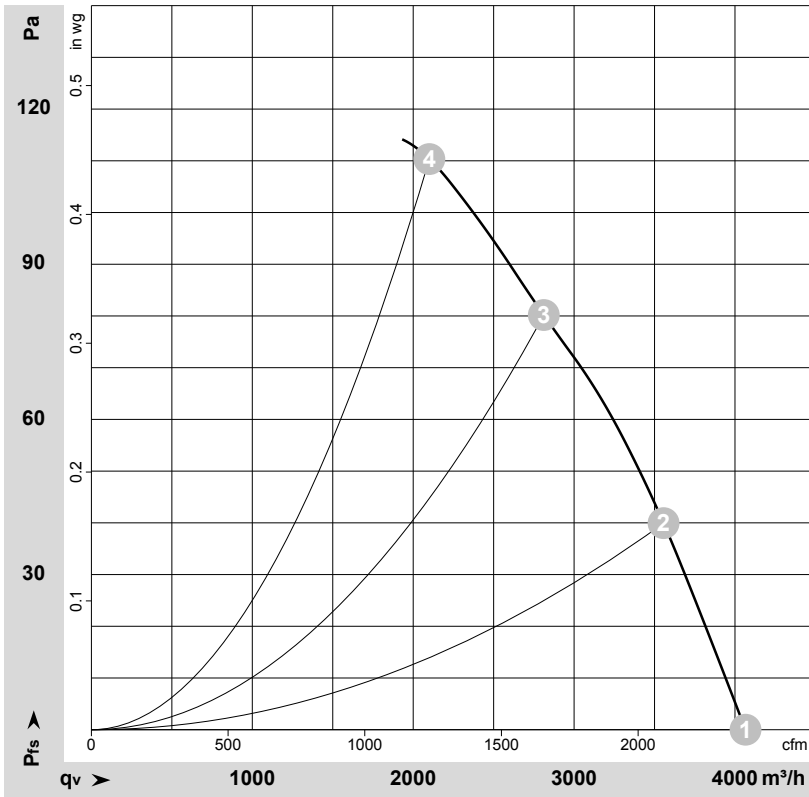
U1	blue	Z	brown	U2	black
PE	green/yellow				



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## Curves: Air performance 50 Hz



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

Measurement: LU-146030-1

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	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	qv	P <sub>fs</sub>	qv	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	CFM	inH <sub>2</sub> O
1	230	50	1430	160	0.73	68	74	74	4065	0	2395	0.00
2	230	50	1410	189	0.84	66	72	72	3555	40	2095	0.16
3	230	50	1390	207	0.92	65	72	72	2810	80	1655	0.32
4	230	50	1370	225	0.99	64	71	71	2100	110	1235	0.44

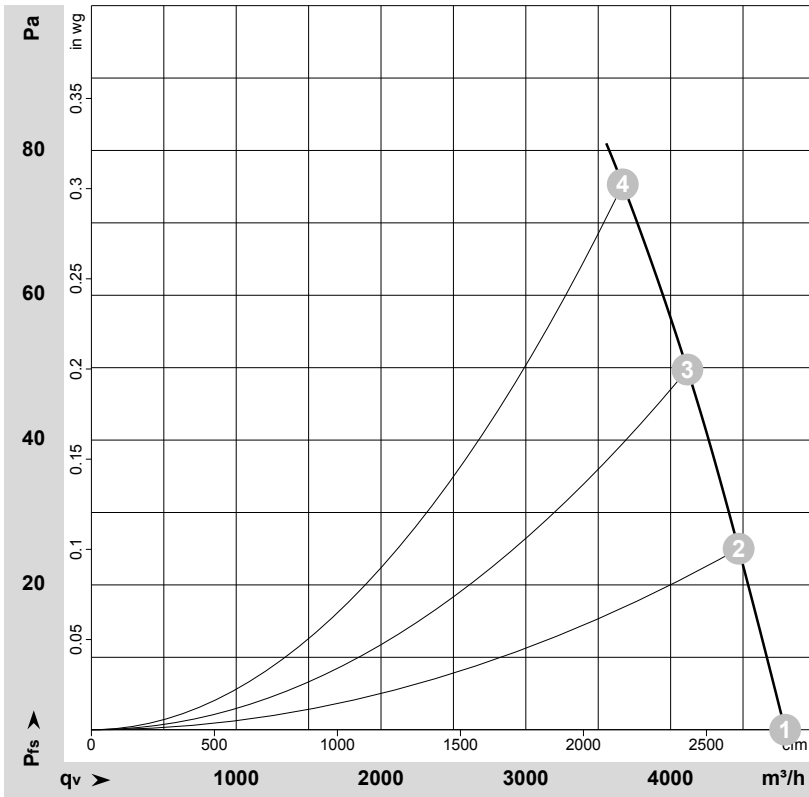
U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
LwA<sub>out</sub> = Sound power level outlet side · qv = Air flow · P<sub>fs</sub> = Pressure increase



# AC axial fan

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## Curves: Air performance 60 Hz



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

Measurement: LU-146034-1

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	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	qv	P <sub>fs</sub>	qv	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	CFM	inH <sub>2</sub> O
1	230	60	1700	240	1.06	71	78	77	4790	0	2820	0.00
2	230	60	1645	262	1.16	71	77	77	4470	25	2630	0.10
3	230	60	1620	275	1.21	69	75	75	4115	50	2425	0.20
4	230	60	1580	295	1.29	67	74	74	3670	75	2160	0.30

U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
LwA<sub>out</sub> = Sound power level outlet side · qv = Air flow · P<sub>fs</sub> = Pressure increase

