

# AC axial panel fan

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



S4E400-AP02-25 ebmpapst Datasheet FansCo

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## Nominal data

Type	S4E400-AP02-25		
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	in. wg	0.44	0.3
Min. ambient temperature	°C	-40	-40
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 Commission Regulation (EU) 327/2011 (prEN 17166)

		Actual	Req. 2015			
01 Overall efficiency $\eta_{es}$	%	32.8	29.4	09 Power consumption $P_e$	kW	0.21
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	2695
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	96
04 Efficiency grade N		43.4	40	10 Speed (rpm) n	min <sup>-1</sup>	1390
05 Variable speed drive		No		11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

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

LU-195913

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).

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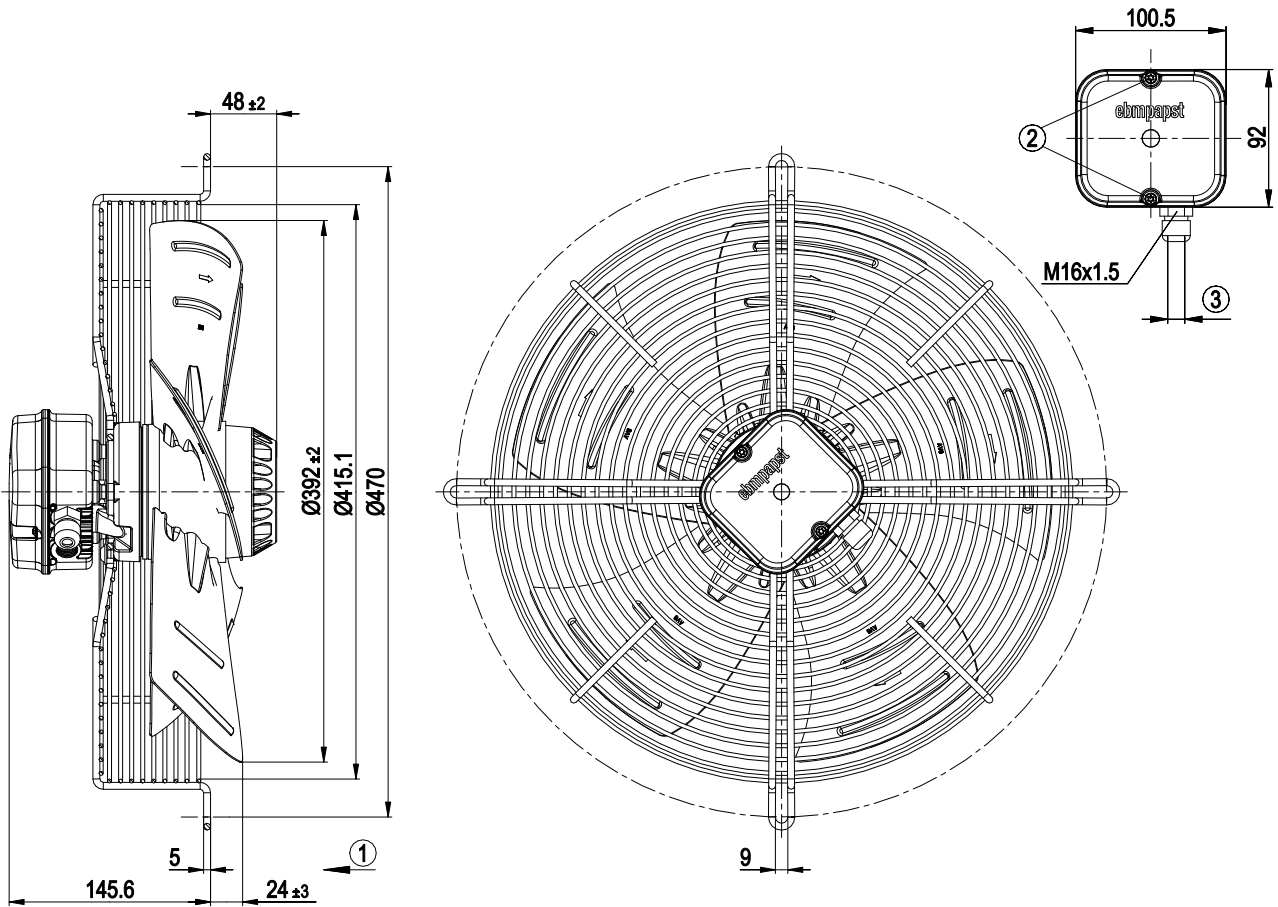
## Technical description

<b>Weight</b>	6.1 kg
<b>Size</b>	400 mm
<b>Motor size</b>	74
<b>Rotor surface</b>	Painted black
<b>Terminal box material</b>	PC/ABS plastic
<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>	"F"
<b>Moisture (F) / Environmental (H) protection class</b>	H1+
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+ 70 °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 with low-temperature lubricant
<b>Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)</b>	< 0.75 mA
<b>Electrical hookup</b>	Terminal box; Capacitor integrated and connected
<b>Motor protection</b>	Thermal switch auto reset, internally connected
<b>With cable</b>	Variable
<b>Protection class assignment</b>	I; If a protective earth is connected by the customer This component for installation may have several local protection classes. This information relates to this component's basic design. The final protection class is based on the component's intended installation and connection.
<b>Motor capacitor according to EN 60252-1 in safety protection class</b>	S0
<b>Conformity with standards</b>	EN 60335-1; CE
<b>Approval</b>	EAC

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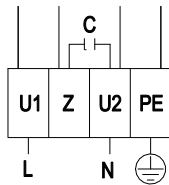
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## Product drawing



1	Direction of air flow "V"
2	Tightening torque 1.5 ± 0.2 Nm
3	Cable diameter max. 7.5 mm; tightening torque 1.3±0.2 Nm

## Connection diagram

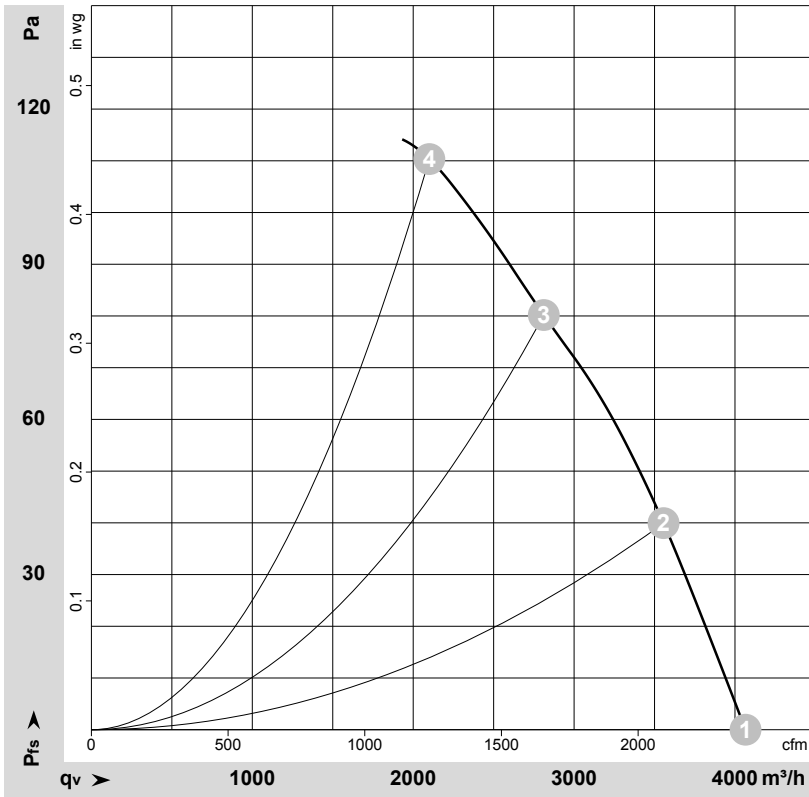


L	= U1 = blue	Z	brown	N	= U2 = black
PE	green/yellow				

# AC axial panel fan

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## Curves: Air performance 50 Hz



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

Measurement: LU-146030-1  
Date: 2012-07-19  
Housing: 18930-2-4037

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

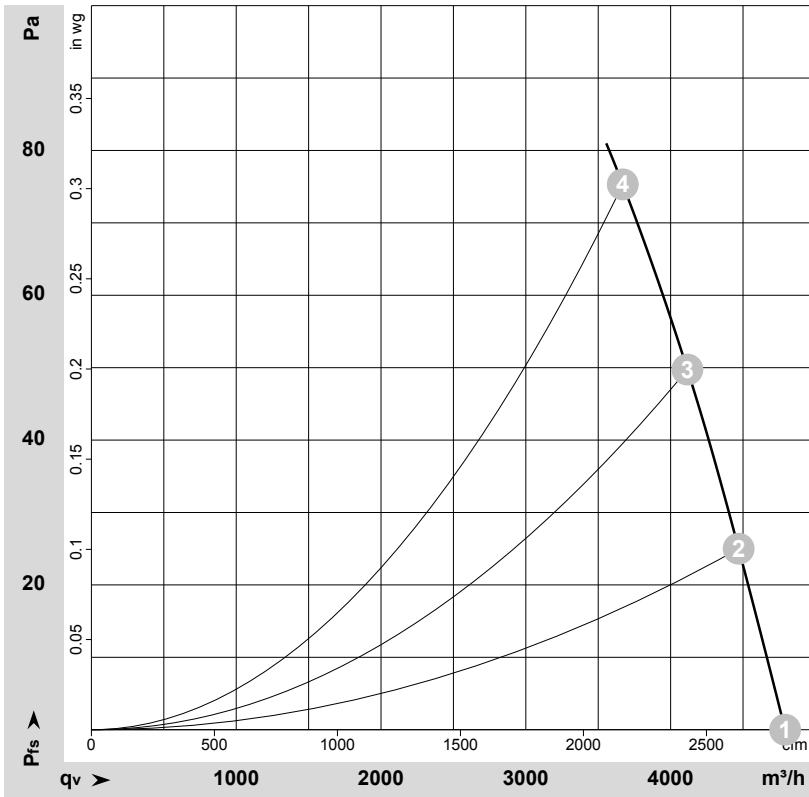
	U	f	n	P <sub>e</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	q <sub>v</sub>	P <sub>fs</sub>	q <sub>v</sub>	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	cfm	in. wg
1	230	50	1430	160	0.73	68	74	74	4065	0	2395	0.00
2	230	50	1410	189	0.84	66	72	72	3555	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 = Voltage · 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 · q<sub>v</sub> = Air flow · P<sub>fs</sub> = Pressure increase

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## Curves: Air performance 60 Hz



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

Measurement: LU-146034-1  
Date: 2012-07-19  
Housing: 18930-2-4037

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>	q <sub>v</sub>	P <sub>fs</sub>	q <sub>v</sub>	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	in. wg
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 = Voltage · 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 · q<sub>v</sub> = Air flow · P<sub>fs</sub> = Pressure increase