

# AC axial fan

sickle-shaped blades (S series), single-intake  
with guard grille for full nozzle

S4E250-BI02-72 ebmpapst Datasheet

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## Nominal data

<b>Type</b>	<b>S4E250-BI02-72</b>		
<b>Motor</b>	<b>M4E068-BF</b>		
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>	1400	1630
Power consumption	W	42	45
Current draw	A	0.19	0.20
Capacitor	µF	1.5	1.5
Capacitor voltage	VDB	400	400
Capacitor standard		S0 (CE)	
Max. back pressure	Pa	35	45
Max. back pressure	in. wg	0.14	0.18
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	40	60
Starting current	A	0.33	0.32

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



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## Technical description

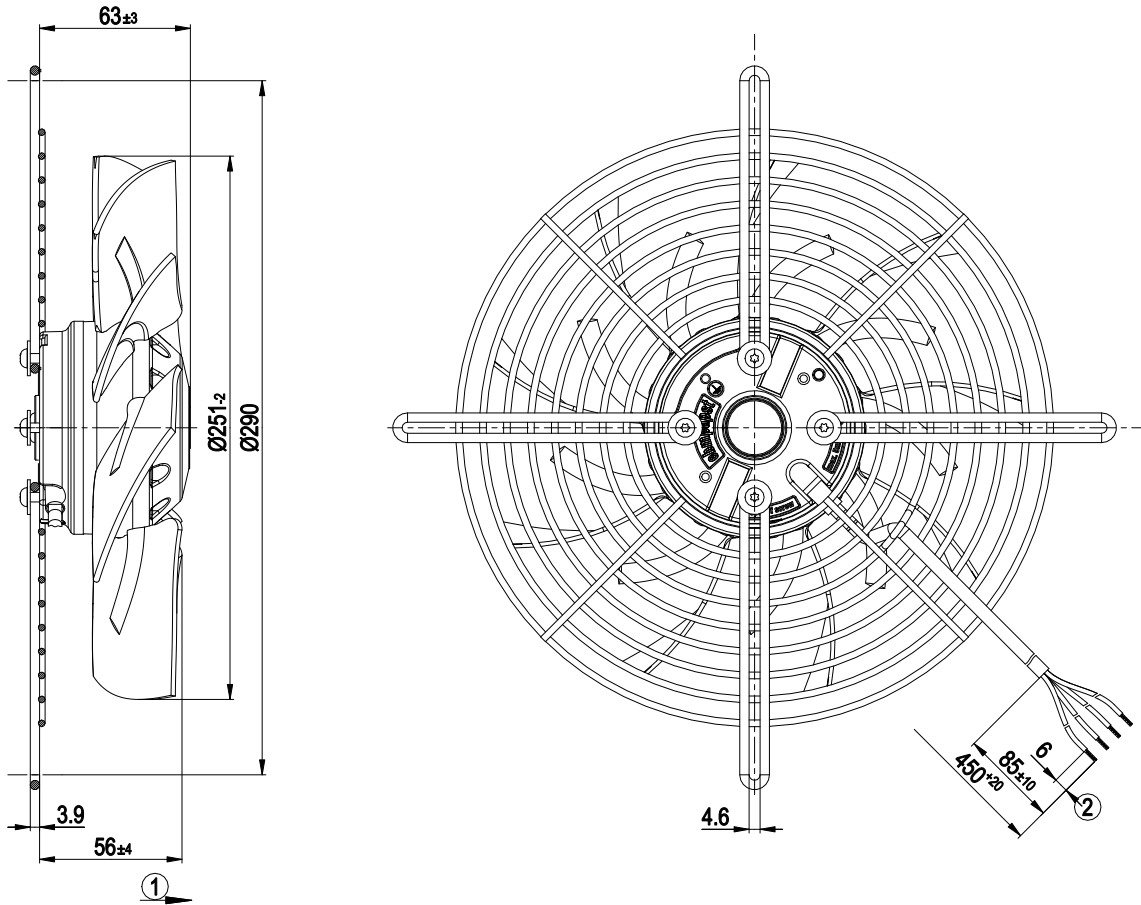
<b>Weight</b>	1.9 kg
<b>Fan size</b>	250 mm
<b>Rotor surface</b>	Painted black
<b>Blade material</b>	Sheet steel, painted black
<b>Guard grille material</b>	Steel, phosphated and coated with black plastic (RAL 9005)
<b>Number of blades</b>	9
<b>Airflow direction</b>	"A"
<b>Direction of rotation</b>	Counterclockwise, 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 - dry environment
<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>	CSA C22.2 No. 100; UL 1004-1



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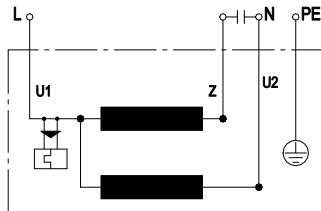
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## Product drawing



1	Direction of air flow "A"
2	Cable PVC AWG20
	4x splice

## Connection diagram



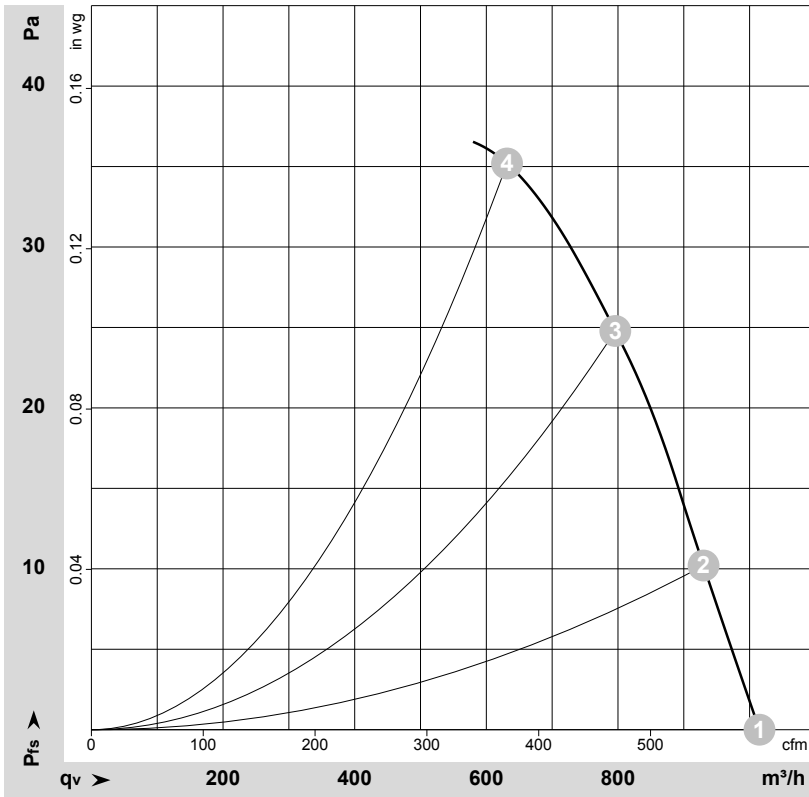
U1	blue	Z	brown	U2	black
PE	green/yellow				



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## Curves: Air performance 50 Hz



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

Measurement: LU-60036-1

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	in. wg
1	230	50	1400	42	0.19	1015	0	595	0.00
2	230	50	1395	43	0.20	930	10	545	0.04
3	230	50	1375	44	0.20	795	25	470	0.10
4	230	50	1360	45	0.20	630	35	370	0.14

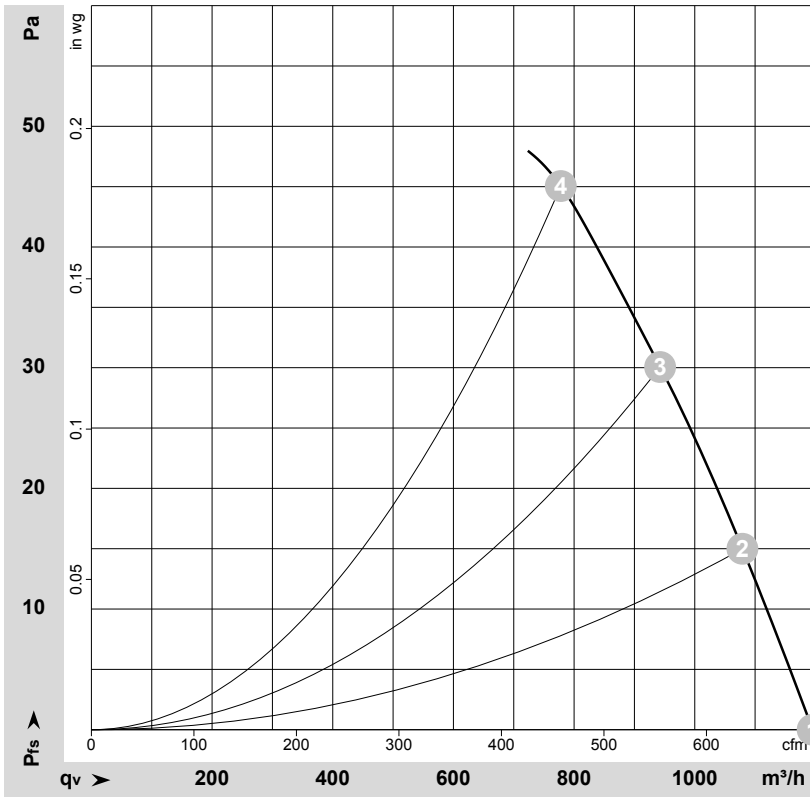
U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · q<sub>v</sub> = Air flow · P<sub>fs</sub> = Pressure increase



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## Curves: Air performance 60 Hz



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

Measurement: LU-60037-1

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	in. wg
1	230	60	1630	45	0.20	1195	0	705	0.00
2	230	60	1630	46	0.20	1080	15	635	0.06
3	230	60	1605	48	0.21	945	30	555	0.12
4	230	60	1575	49	0.21	780	45	460	0.18

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

