

# AC axial fan

sickle-shaped blades (S series)

with guard grille for full nozzle

S4S250-BH02-01 ebmpapst Datasheet

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## Nominal data

<b>Type</b>	<b>S4S250-BH02-01</b>		
<b>Motor</b>	<b>M4S068-CF</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>	1390	1600
Power consumption	W	69	63
Current draw	A	0.53	0.45
Max. back pressure	Pa	80	80
Max. back pressure	inH <sub>2</sub> O	0.32	0.32
Max. ambient temperature	°C	50	65
Starting current	A	0.85	0.7

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



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## Technical description

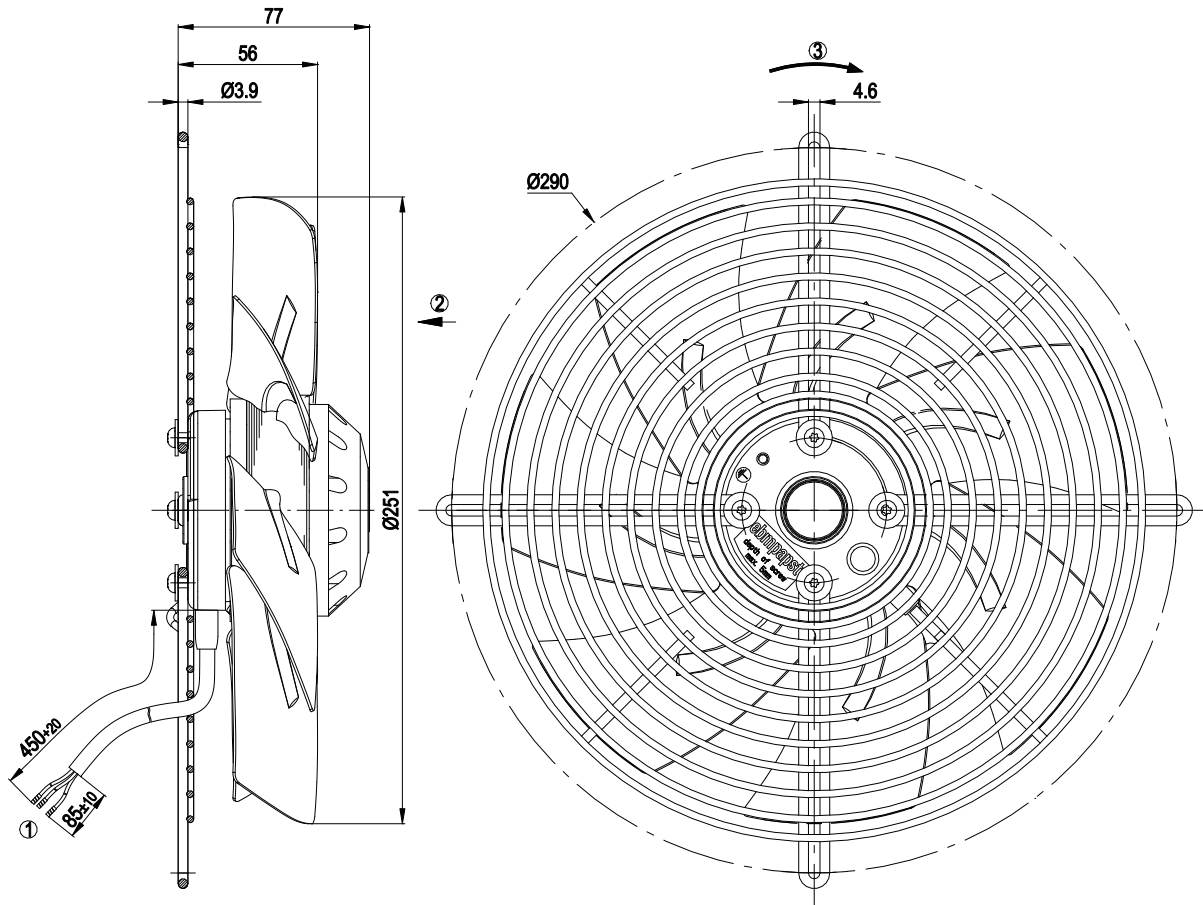
<b>Weight</b>	2.0 kg
<b>Fan size</b>	250 mm
<b>Rotor surface</b>	Painted black
<b>Blade material</b>	Sheet steel, painted black
<b>Guard grille material</b>	Steel, phosphated and coated with black plastic
<b>Number of blades</b>	7
<b>Airflow direction</b>	"V"
<b>Direction of rotation</b>	Counterclockwise, viewed toward rotor
<b>Degree of protection</b>	IP44
<b>Insulation class</b>	"B"
<b>Moisture (F) / Environmental (H) protection class</b>	F5
<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>	Lateral
<b>Protection class</b>	I (with customer connection of protective earth)
<b>Conformity with standards</b>	EN 60335-1; CE



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## Product drawing



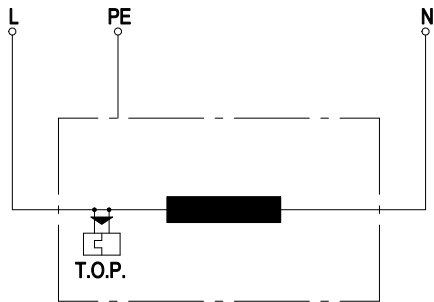
1	Cable PVC, 3 x crimped splices
2	Direction of air flow "V"
3	Direction of rotation counterclockwise, viewed toward rotor



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## Connection diagram



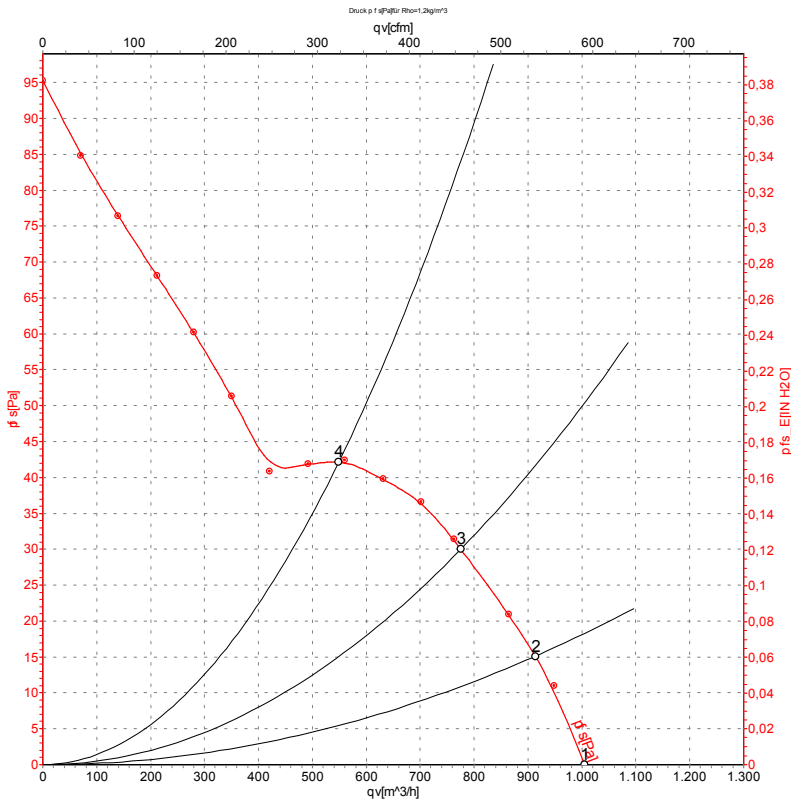
L	= blue
PE	= green/yellow
N	= black
TOP	= thermal overload protector



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## Curves: Air performance 50 Hz



Measurement: LU-59968-1

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	qv	p <sub>fs</sub>	qv	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	1390	69	0.53	1005	0	590	0.00
2	230	50	1380	71	0.53	915	15	535	0.06
3	230	50	1365	73	0.53	775	30	455	0.12
4	230	50	1360	73	0.53	550	42	325	0.17

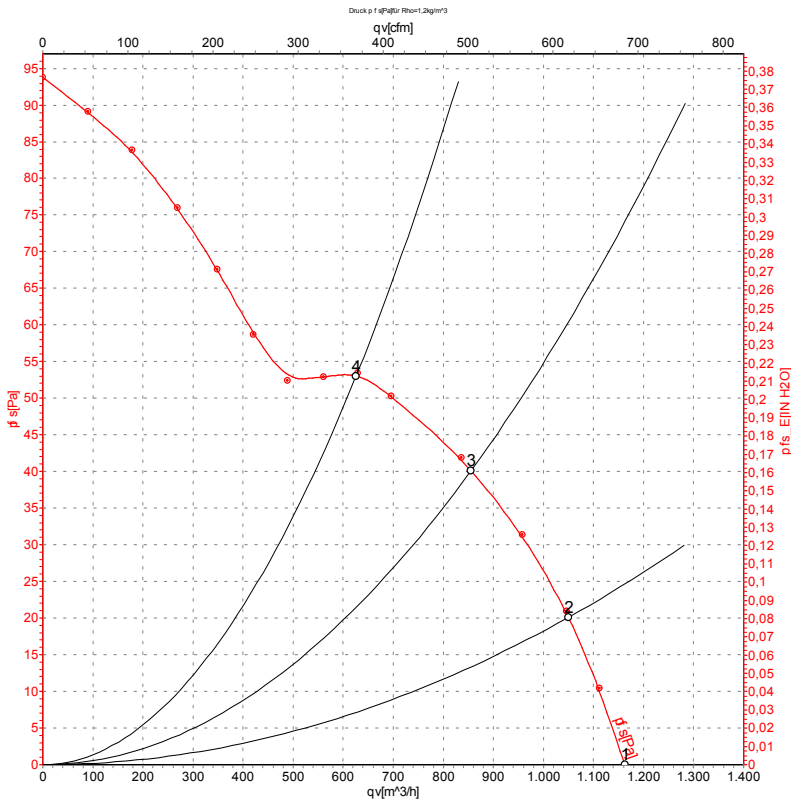
U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · qv = Air flow · p<sub>fs</sub> = Pressure increase



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## Curves: Air performance 60 Hz



Measurement: LU-59969-1

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	qv	p <sub>fs</sub>	qv	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	1600	63	0.45	1165	0	685	0.00
2	230	60	1580	65	0.45	1050	20	620	0.08
3	230	60	1545	69	0.47	855	40	505	0.16
4	230	60	1525	71	0.48	625	53	370	0.21

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

