

AC axial fan

sickled blades (S series)

with guard grille for short nozzle

S4E500-AZ09-09 ebmpapst Datasheet

sales@fansco.com

www.fansco.com



Nominal data

Type	S4E500-AZ09-09		
Motor	M4E094-HA		
Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Type of data definition		ml	ml
Valid for approval / standard		CE	CE
Speed	min ⁻¹	1310	1400
Power input	W	590	740
Current draw	A	2.9	3.45
Motor capacitor	μF	10	10
Capacitor voltage	VDB	400	400
Max. back pressure	Pa	150	120
Max. ambient temperature	°C	60	45
Starting current	A	5.9	5.2

ml = max. load · me = max. efficiency · fa = running at free air · cs = customer specs · cu = customer unit
Subject to alterations

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	No
Specific ratio*	1.00

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		32	28	32
Efficiency grade N		40	36	40
Power input P_e	kW	0.54		
Air flow q_v	m ³ /h	4810		
Pressure increase p_{fs}	Pa	128		
Speed n	min ⁻¹	1335		

Data established at point of optimum efficiency



AC axial fan

sickled blades (S series)
with guard grille for short nozzle

Technical features

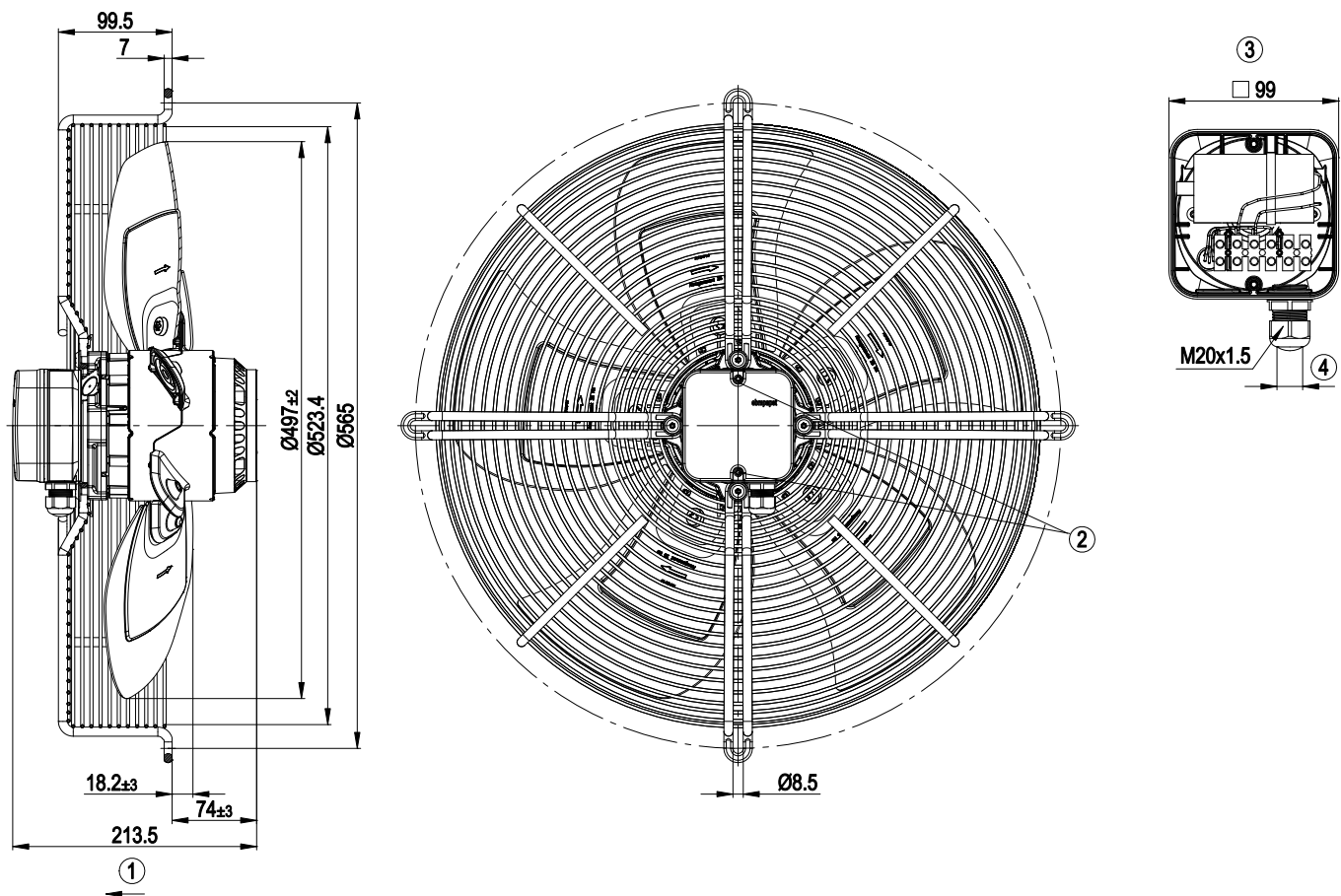
Mass	11.48 kg
Size	500 mm
Surface of rotor	Coated in black
Material of terminal box	ABS plastic, black
Material of blades	Aluminium sheet, coated in black
Material of guard grille	Steel, phosphated and coated in black plastic
Number of blades	5
Blade angle	-10
Direction of air flow	"V"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F5
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	Via terminal box, integrated capacitor connected via terminal box
Motor protection	Thermal overload protector (TOP) wired internally
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	CE



AC axial fan

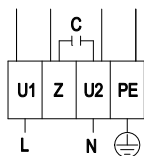
sickled blades (S series)
with guard grille for short nozzle

Product drawing



1	Direction of air flow "V"
2	Tightening torque 0.8 Nm±0.15 Nm
3	Shown without terminal box cover
4	Cable diameter min. 6 mm, max. 12 mm, tightening torque 2 Nm ±0.2 Nm

Connection screen

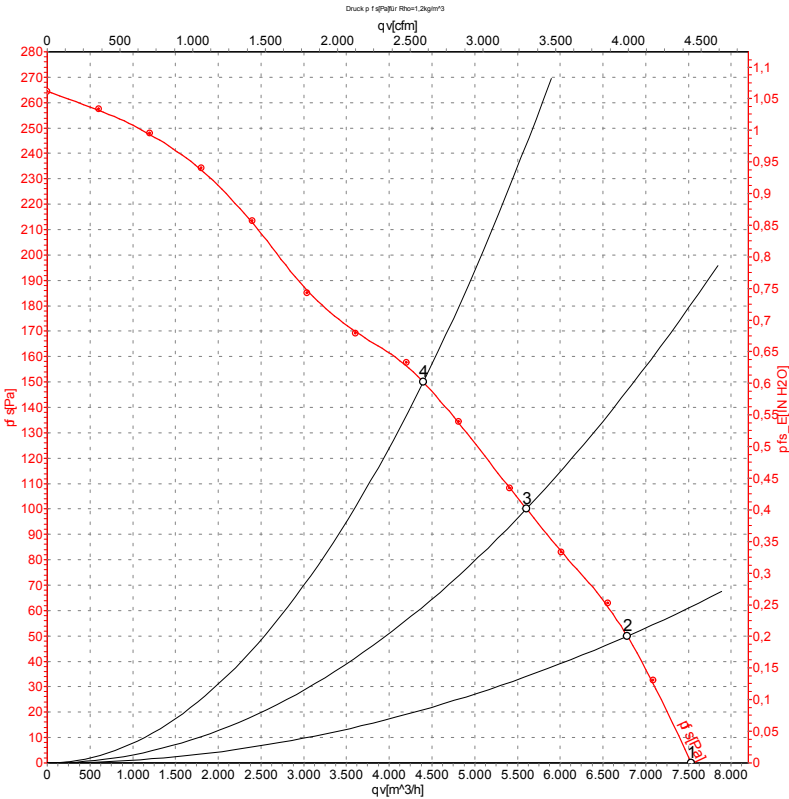


L	= U1 = blue	Z	brown	N	= U2 = black
PE	green/yellow				



AC axial fan
sickled blades (S series)
with guard grille for short nozzle

Charts: Air flow 50 Hz



Measurement: LU-70845

Air performance measured as per ISO 5801
Installation category A. For detailed
information on the measuring set-up, please
contact ebm-papst. Suction-side noise
levels: L_{WA} measured as per ISO 13347 /
L_{pA} measured with 1m distance to fan axis.
The values given are valid under the
measuring conditions mentioned above and
may vary according to the actual installation
situation. With any deviation from the
standard set-up, the specific values have to
be checked and reviewed with the unit
installed.

Measured values

	U	f	n	P _e	I	qv	p _{fs}
	V	Hz	min ⁻¹	W	A	m³/h	Pa
1	230	50	1395	426	2.19	7535	0
2	230	50	1370	479	2.40	6785	50
3	230	50	1350	517	2.55	5605	100
4	230	50	1310	590	2.90	4395	150

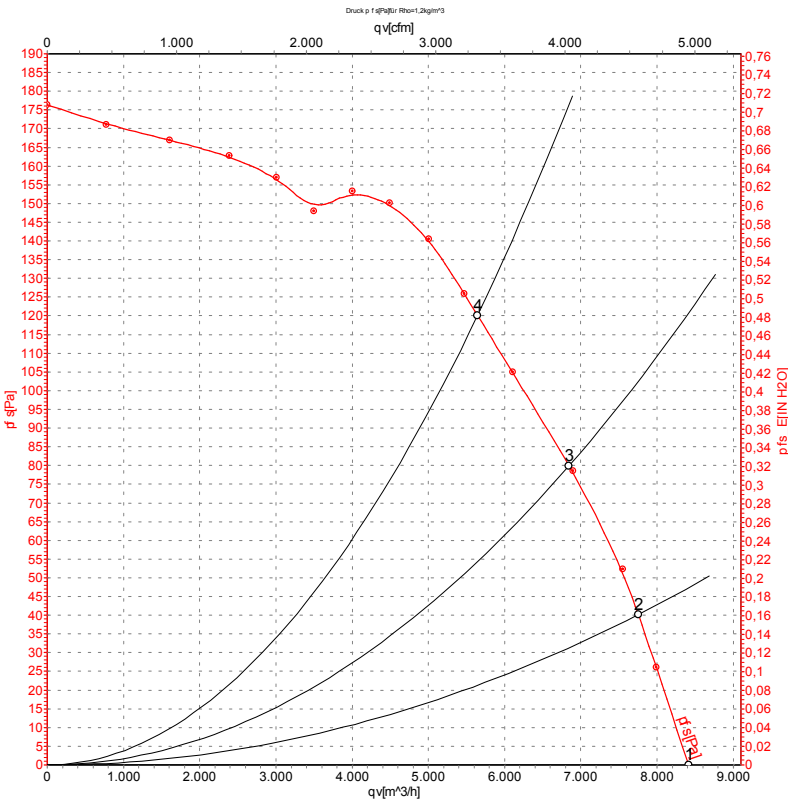
U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase



AC axial fan

sickled blades (S series)
with guard grille for short nozzle

Charts: Air flow 60 Hz



Measurement: LU-70850

Air performance measured as per ISO 5801
Installation category A. For detailed
information on the measuring set-up, please
contact ebm-papst. Suction-side noise
levels: L_{WA} measured as per ISO 13347 /
L_{pA} measured with 1m distance to fan axis.
The values given are valid under the
measuring conditions mentioned above and
may vary according to the actual installation
situation. With any deviation from the
standard set-up, the specific values have to
be checked and reviewed with the unit
installed.

Measured values

	U	f	n	P _e	I	qv	p _{fs}
	V	Hz	min ⁻¹	W	A	m³/h	Pa
1	230	60	1565	611	2.72	8415	0
2	230	60	1515	665	3.00	7755	40
3	230	60	1460	711	3.24	6845	80
4	230	60	1400	740	3.45	5645	120

U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

