S4E500-AZ09-02

AC axial fan

sickle-shaped blades (S series)

with guard grille for short nozzle

S4E500-AZ09-02 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**S4E500-AZ09-02**	
Motor	**M4E094-HA**	
Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50
Method of obtaining data		ml
Valid for approval/standard		CE
Speed (rpm)	min^{-1}	1310
Power consumption	W	590
Current draw	A	2.9
Capacitor	µF	10
Capacitor voltage	VDB	400
Max. back pressure	Pa	150
Max. back pressure	inH2O	0.6
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	60
Starting current	A	5.9

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 η_{es}	%	32	32
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		40	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.54
09 Air flow q_v	m^3/h	4810
09 Pressure increase p_{fs}	Pa	128
10 Speed (rpm) n	min^{-1}	1335
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-70845

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Technical description

Weight	11.6 kg
Fan size	500 mm
Rotor surface	Painted black
Terminal box material	ABS plastic, black
Blade material	Sheet aluminum
Guard grille material	Steel, phosphated and coated with black plastic (RAL 9005)
Number of blades	5
Blade pitch	-10°
Airflow direction	"A"
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Via terminal box, capacitor integrated and connected
Motor protection	Thermal overload protector (TOP) with basic insulation
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2010); CE

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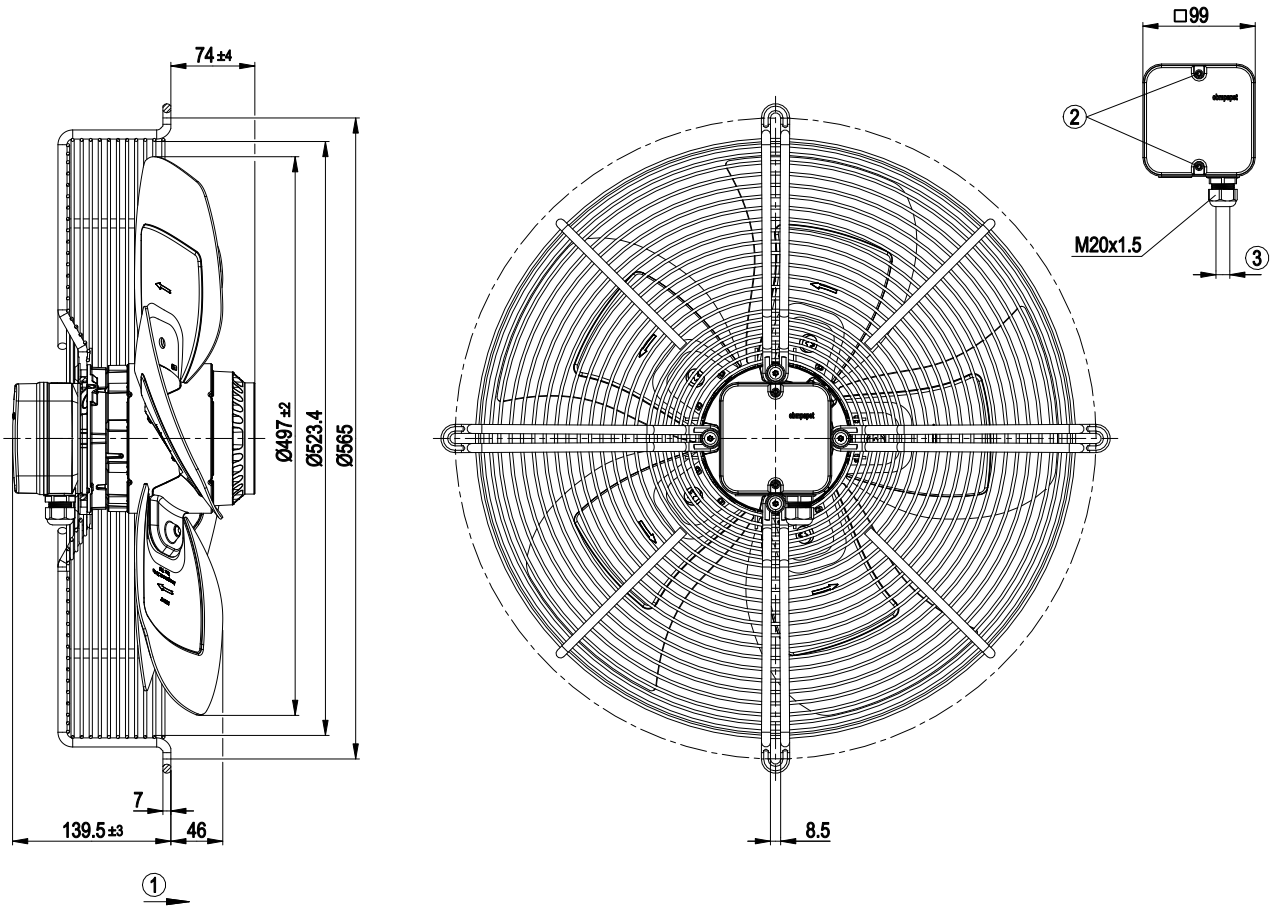
Product drawing



1	Direction of air flow "A"
2	Tightening torque 0.8 ± 0.15 Nm
3	Cable diameter: min. 6 mm, max. 12 mm, tightening torque 2 Nm±0.2 Nm

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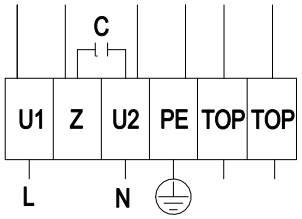
Connection diagram



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

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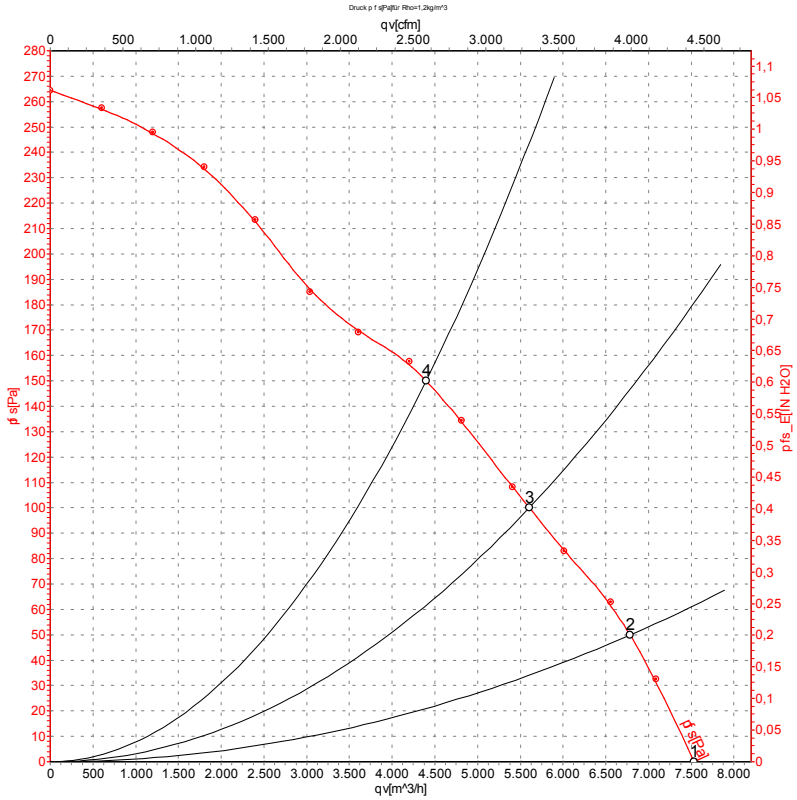
Curves: Air performance 50 Hz



Measurement: LU-70845-1

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_e	I	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	230	50	1395	426	2.19	7535	0	4435	0.00
2	230	50	1370	479	2.40	6785	50	3990	0.20
3	230	50	1350	517	2.55	5605	100	3300	0.40
4	230	50	1310	590	2.90	4395	150	2590	0.60

U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase