

A4E500-AM03-01

# AC axial fan - HyBlade

sickled blades (S series)



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## Nominal data

Type	A4E500-AM03-01		
Motor	M4E110-GF		
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 (rpm)	min <sup>-1</sup>	1300	1400
Power input	W	680	880
Current draw	A	3.0	3.88
Motor capacitor	µF	12	12
Capacitor voltage	VDB	450	450
Max. back pressure	Pa	150	100
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	65	40
Starting current	A	6.65	6.0

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit  
Subject to alterations

## Data in accordance with ecodesign regulation EU 327/2011

		Actual	Request 2015
01 Overall efficiency $\eta_{es}$	%	32.5	32.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		40	40
05 Variable speed drive		No	

Data definition with optimum efficiency.  
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

09 Power input $P_e$	kW	0.65
09 Air flow $q_v$	m <sup>3</sup> /h	5765
09 Pressure increase $p_{fs}$	Pa	129
10 Speed (rpm) n	min <sup>-1</sup>	1315
11 Specific ratio*		1.00

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

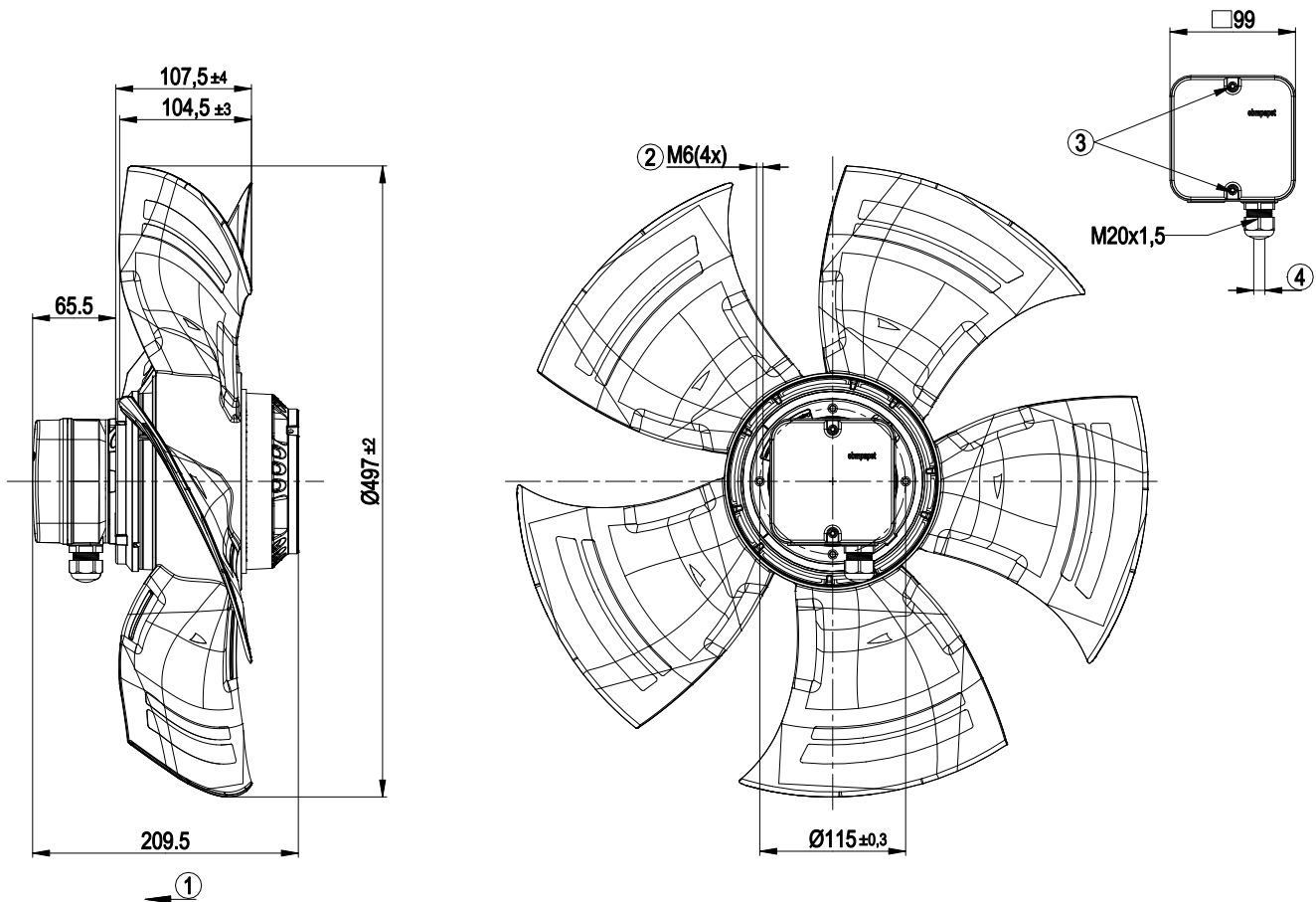
LU-107128



## Technical features

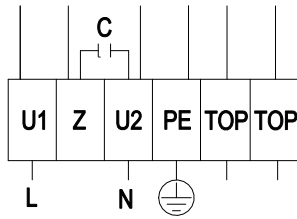
Mass	10.5 kg
Size	500 mm
Motor size	110
Surface of rotor	Coated in black
Material of terminal box	PP plastic
Material of blades	Press-fitted sheet steel blank, sprayed with PP plastic
Number of blades	5
Direction of air flow	V
Direction of rotation	Counter-clockwise, seen on rotor
Protection rating	IP54
Insulation class	"F"
Humidity (F) / environmental protection class (H)	H2
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
Condensation drainage 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 connection	Terminal box
Electrical leads	Via terminal box, capacitor integrated and connected
Motor protection	Thermal overload protector (TOP) brought out, basic insulation
Cable exit	Axial
Protection class	I (if protective earth is connected by customer)
Motor capacitor according to EN 60252-1 in safety protection class	S0
Product conforming to standard	EN 61800-5-1; CE
Approval	CCC; EAC; VDE; UL 1004-1; CSA C22.2 no. 100

## Product drawing



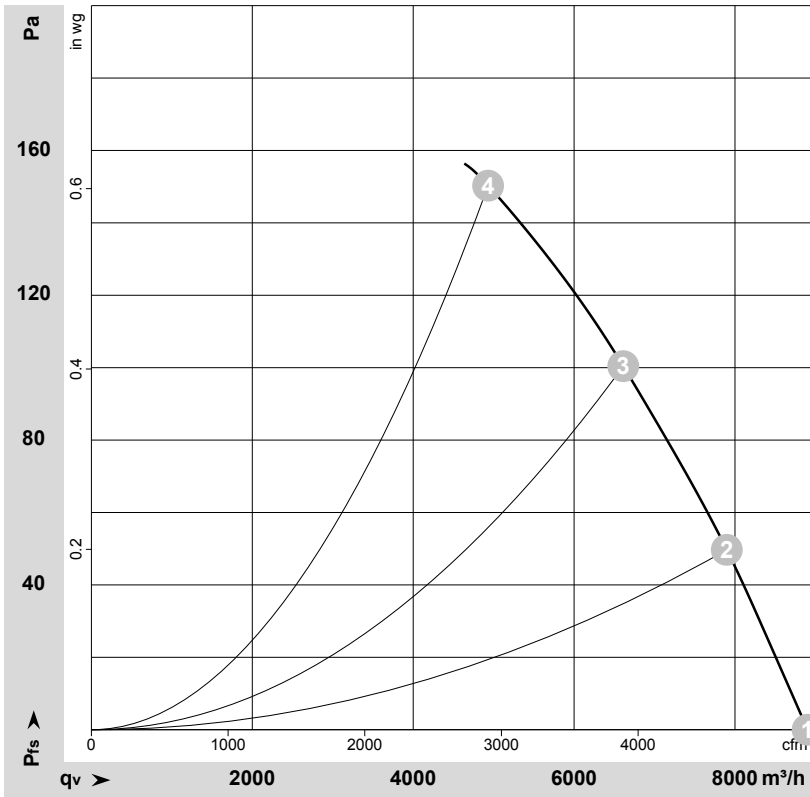
1	Direction of air flow "V"
2	Screw depth max. 12 mm
3	Tightening torque 1.5Nm±0.2
4	Cable diameter: min. 6 mm, max. 12 mm; tightening torque: 2±0.3 Nm

### Connection screen



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

## Charts: Air flow 50 Hz



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

Measurement: LU-107128-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebmpapst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA 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.

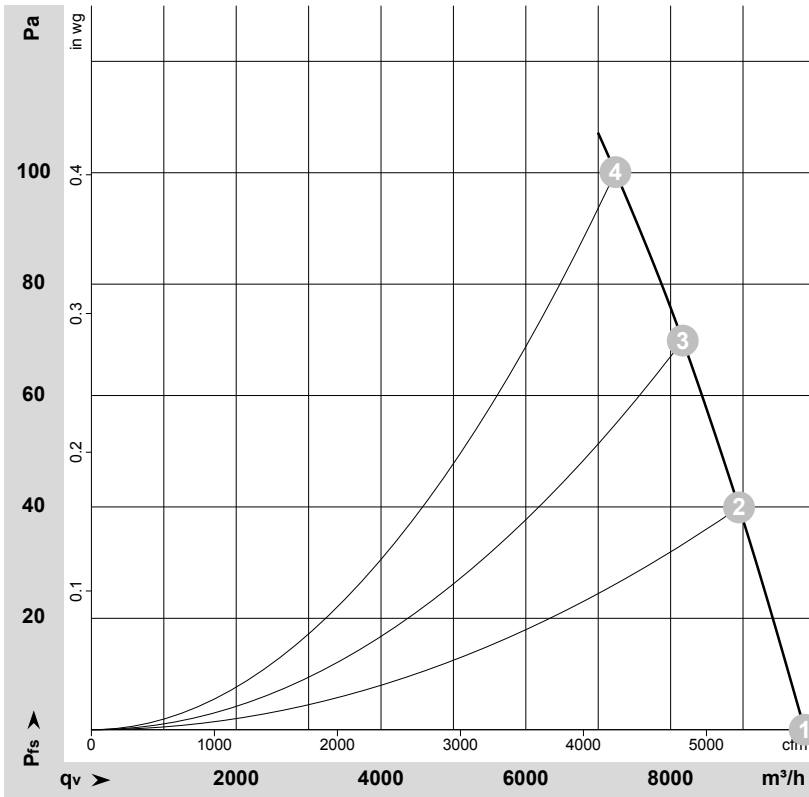
## Measured values

	U	f	n	Pe	I	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	qv	Pfs	qv	Pfs
	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	1380	513	2.25	68	75	75	8905	0	5240	0.00
2	230	50	1355	572	2.51	65	72	72	7900	50	4650	0.20
3	230	50	1330	626	2.74	63	70	70	6610	100	3890	0.40
4	230	50	1300	680	3.00	66	73	73	4930	150	2900	0.60

U = Supply voltage · f = Frequency · n = Speed (rpm) · Pe = Power input · I = Current draw · LpA<sub>in</sub> = Sound pressure level inlet side · LwA<sub>in</sub> = Sound power level inlet side · LwA<sub>out</sub> = Sound power level outlet side  
 qv = Air flow · Pfs = Pressure increase



## Charts: Air flow 60 Hz



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

Measurement: LU-107130-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebmpapst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA 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 <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	1530	793	3.45	70	77	78	9850	0	5800	0.00
2	230	60	1485	830	3.62	68	75	75	8945	40	5265	0.16
3	230	60	1445	854	3.74	66	73	73	8170	70	4810	0.28
4	230	60	1400	880	3.88	65	71	71	7240	100	4260	0.40

U = Supply voltage · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power input · I = Current draw · LpA<sub>in</sub> = Sound pressure level inlet side · LwA<sub>in</sub> = Sound power level inlet side · LwA<sub>out</sub> = Sound power level outlet side  
 q<sub>v</sub> = Air flow · P<sub>fs</sub> = Pressure increase

