A6D500-AJ05-05

PROFROID INDUSTRIES DIV. CARRI

AC axial fan - HyBlade®

sickled blades (S series)

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**A6D500-AJ05-05**
Motor	**M6D110-EF**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	480	480
Connection		Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60
Type of data definition		ml	ml	ml	ml
Valid for approval / standard		CE	CE	CE	CE
Speed	min^{-1}	920	785	1090	880
Power input	W	260	190	410	290
Current draw	A	0.63	0.32	0.72	0.41
Max. back pressure	Pa	70	50	95	62
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	80	80	80	80
Starting current	A	2.2	0.73	2.4	0.8

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 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	29.9	25.9	29.9
Efficiency grade N		40	36	40
Power input P_e	kW	0.25		
Air flow q_v	m^3/h	4105		
Pressure increase p_{fs}	Pa	64		
Speed n	min^{-1}	925		

Data definition with optimum efficiency. LU-140967
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

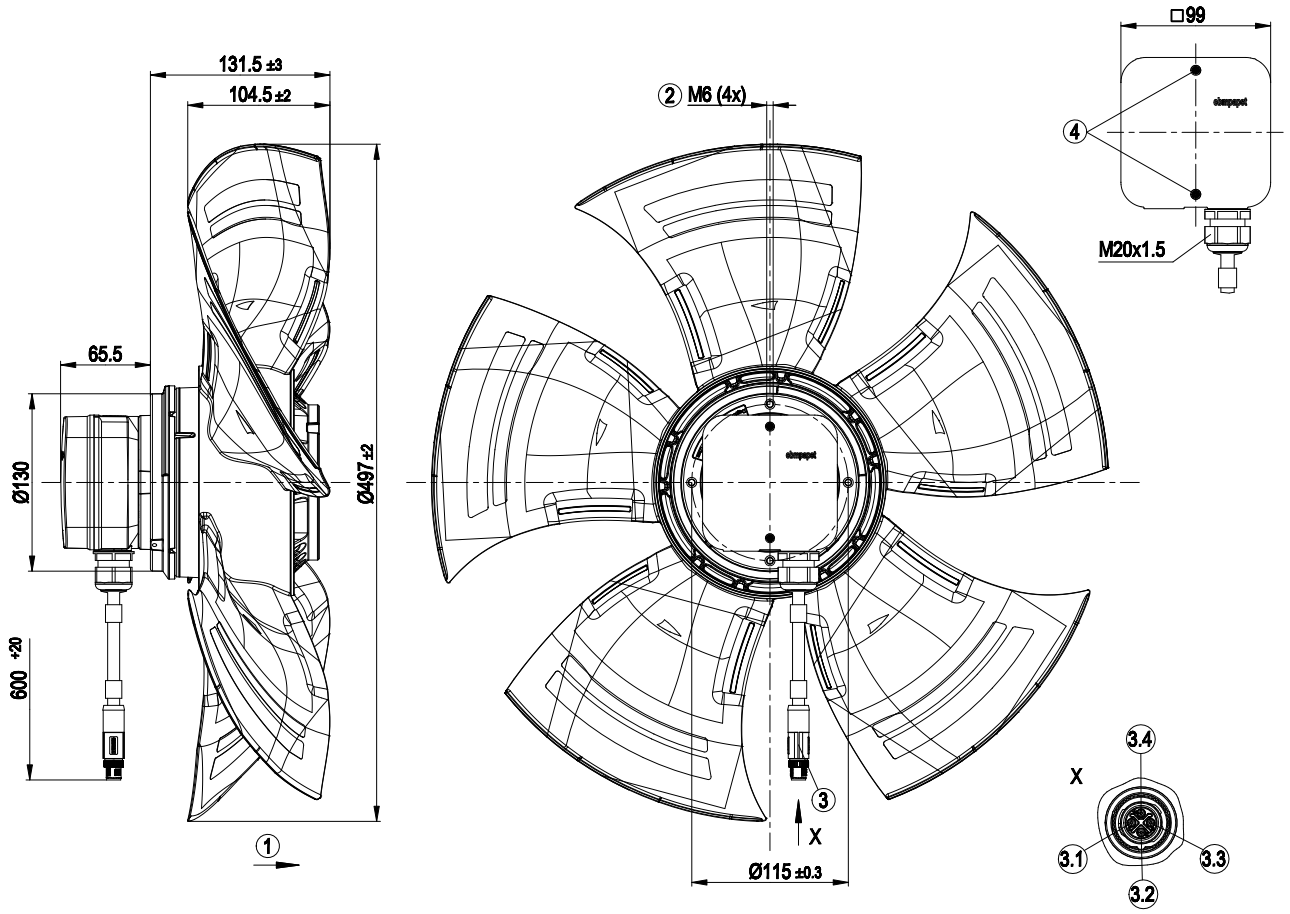
Mass	7.5 kg
Size	500 mm
Surface of rotor	Coated in black
Material of terminal box	PP plastic
Material of blades	Press-fitted sheet steel blank, sprayed with PP plastic
Number of blades	5
Direction of air flow	"A"
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F4-1
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; With plug
Motor protection	Thermal overload protector (TOP) brought out
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	EAC; VDE

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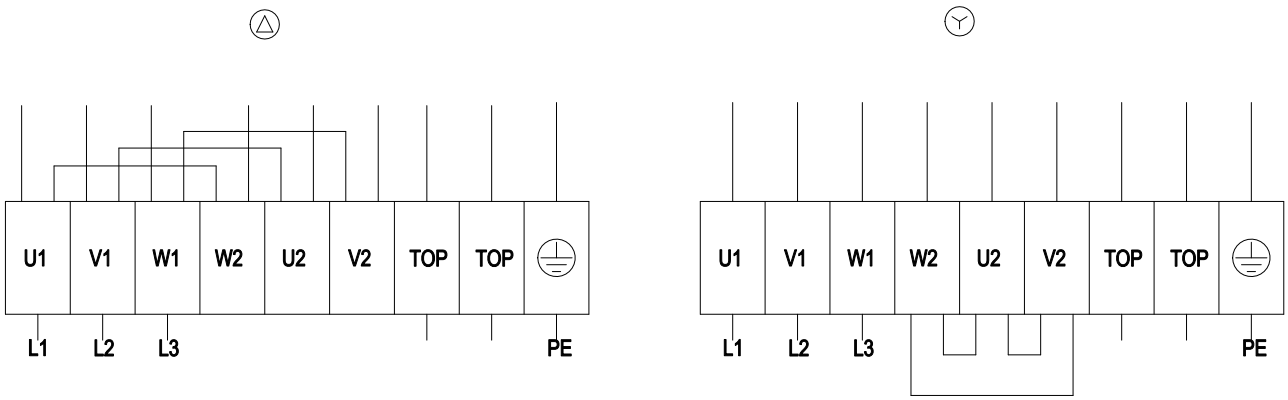
Product drawing



1	Direction of air flow "A"
2	Thread reach max. 12 mm
3	Connection line PUR 4x 1.5 mm², with connector M12 Phoenix, 4-pole (s-coded)
3.1	L1
3.2	L2
3.3	L3
3.4	PE
4	Tightening torque 1.5±0.2 Nm

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Connection screen



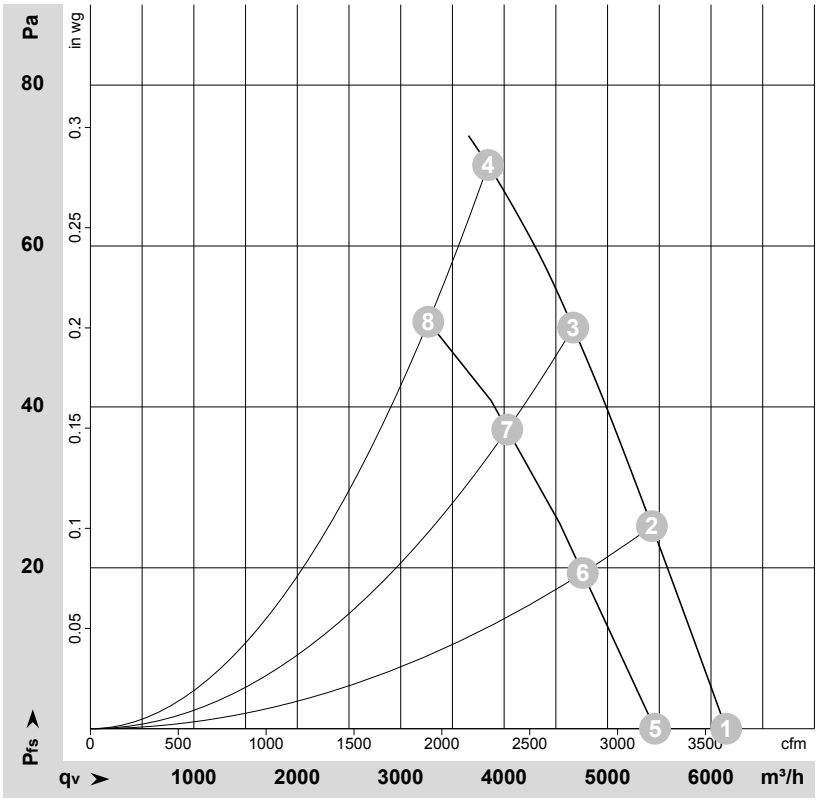
Δ	Delta connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2 x grey
PE	green/yellow				

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Charts: Air flow 50 Hz



ρ = 1,15 kg/m³ ± 2%

Measurement: LU-152524
Measurement: LU-167953

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: 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

	Conn.	U	f	n	P_e	I	LpA_{in}	LwA_{in}	LwA_{out}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	Δ	400	50	945	202	0.58	62	68	68	6145	0
2	Δ	400	50	940	225	0.59	59	66	65	5430	25
3	Δ	400	50	930	245	0.60	56	63	63	4670	50
4	Δ	400	50	920	260	0.63	55	62	62	3845	70
5	Y	400	50	845	148	0.26	59	66	65	5460	0
6	Y	400	50	820	163	0.28	56	63	62	4760	19
7	Y	400	50	800	175	0.30	53	60	60	4030	37
8	Y	400	50	785	190	0.32	51	58	57	3265	51

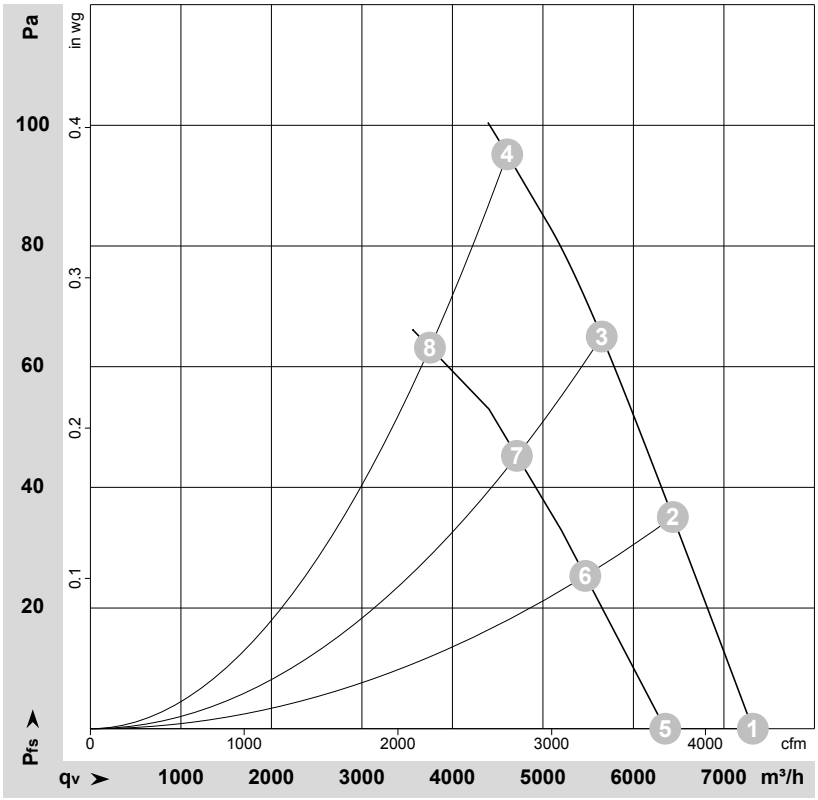
Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side
LwA_{out} = Sound power level outlet side · qv = Air flow · p_{fs} = Pressure increase

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Charts: Air flow 60 Hz



ρ = 1,15 kg/m³ ± 2%

Measurement: LU-152527
Measurement: LU-167955

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: 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

	Conn.	U	f	n	P_e	I	LpA_{in}	LwA_{in}	LwA_{out}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	Δ	480	60	1120	314	0.62	65	72	71	7320	0
2	Δ	480	60	1110	350	0.65	62	69	69	6435	35
3	Δ	480	60	1100	378	0.67	60	67	67	5650	65
4	Δ	480	60	1090	410	0.72	59	66	66	4605	95
5	Y	480	60	975	234	0.33	62	69	68	6350	0
6	Y	480	60	940	257	0.36	59	65	65	5470	25
7	Y	480	60	915	272	0.38	56	63	63	4715	45
8	Y	480	60	880	290	0.41	54	61	61	3750	63

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