A4D500-AY14-01

AC axial fan

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	**A4D500-AY14-01**
Motor	**M4D094-HA**

Phase		3~	3~
Nominal voltage	VAC	400	400
Connection		Δ	Y
Frequency	Hz	50	50
Type of data definition		ml	ml
Valid for approval / standard		CE	CE
Speed	min^{-1}	1295	900
Power input	W	730	450
Current draw	A	1.35	0.8
Max. back pressure	Pa	170	85
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	55	55
Starting current	A	3.9	1.3

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}	%	32.4	28.3	32.3
Efficiency grade N		40.1	36	40
Power input P_e	kW	0.61		
Air flow q_v	m^3/h	6005		
Pressure increase p_{fs}	Pa	120		
Speed n	min^{-1}	1335		

Data definition with optimum efficiency. LU-70417
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

Mass	7.8 kg
Size	500 mm
Surface of rotor	Coated in black
Material of terminal box	ABS plastic
Material of blades	Aluminium sheet
Number of blades	5
Blade angle	-5°
Direction of air flow	"V"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
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
Motor protection	Thermal overload protector (TOP) brought out
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60034-1 (2010); CE

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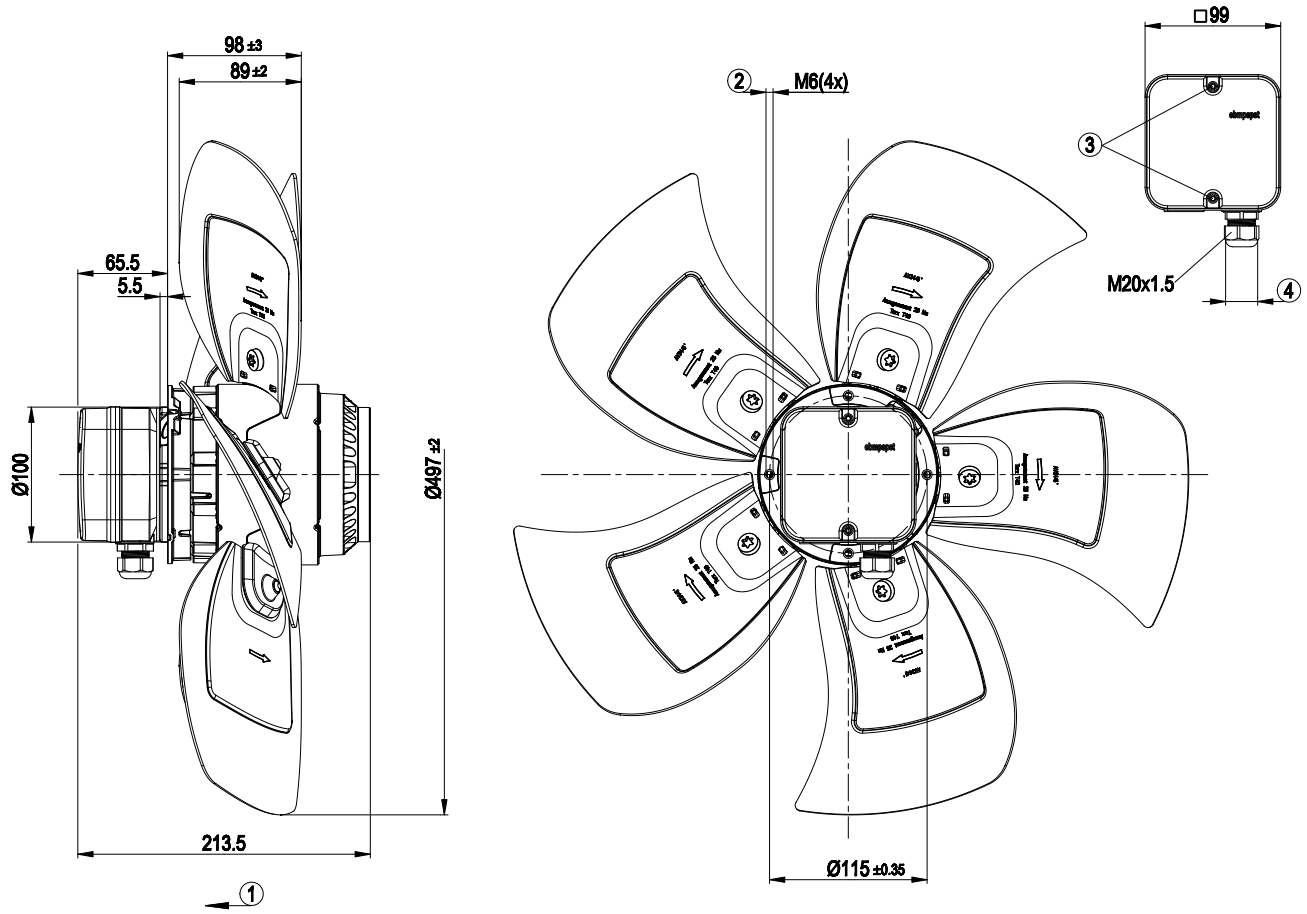
Product drawing



1	Direction of air flow "V"
2	Thread reach max. 12 mm
3	Tightening torque 0.8±0.15 Nm
4	Cable diameter min. 6 mm, max. 12 mm, tightening torque 2.0±0.3 Nm

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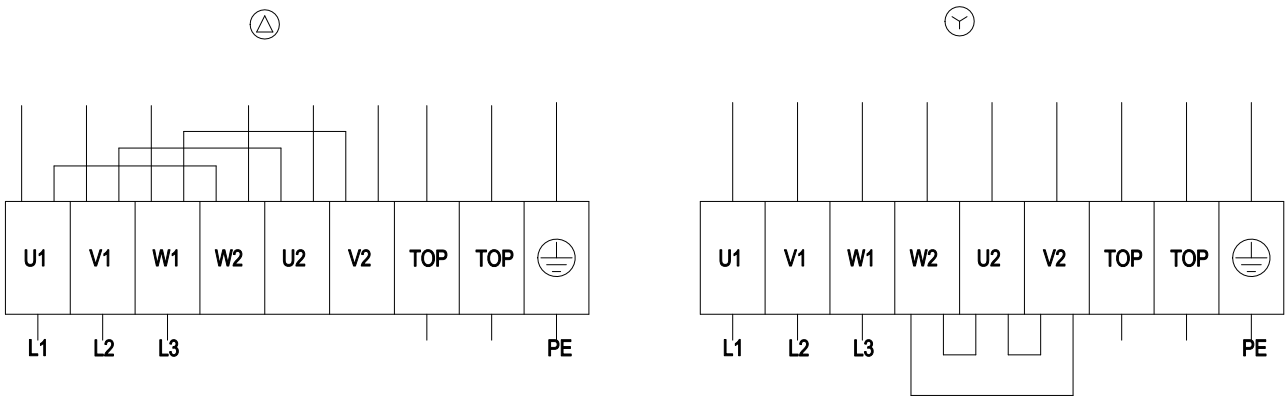
Connection screen



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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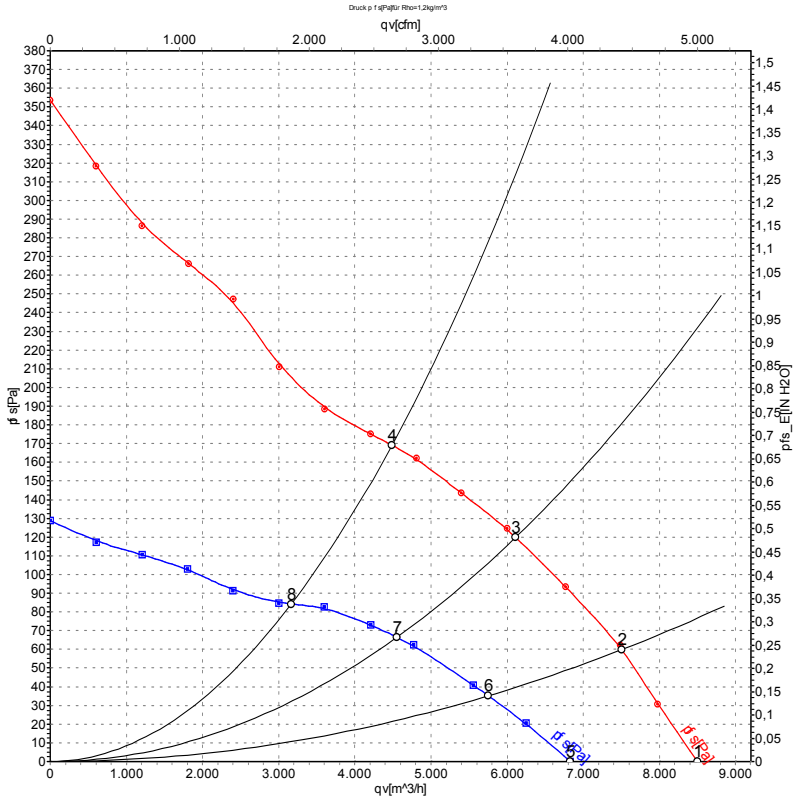
Charts: Air flow 50 Hz Δ



Measurement: LU-70417
Measurement: LU-70419

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	qv	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa
1	Δ	400	50	1380	490	1.04	8495	0
2	Δ	400	50	1360	557	1.12	7500	60
3	Δ	400	50	1340	612	1.19	6110	120
4	Δ	400	50	1295	730	1.35	4485	170
5	Y	400	50	1110	360	0.61	6830	0
6	Y	400	50	1050	393	0.67	5755	35
7	Y	400	50	995	417	0.71	4550	66
8	Y	400	50	900	450	0.80	3165	85

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

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