AC axial fan - HyBlade®

sickled blades (S series)

A4D400-AM06-03 ebmpapst Datasheet
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County court Stuttgart · HRA 590344

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ErP2013 EXCEEDS THE NORM

Nominal data

Type	**A4D400-AM06-03**
Motor	**M4D094-EA**

Phase		3~	3~	3~	3~	3~	3~	3~
Nominal voltage	VAC	230	230	277	400	400	460	480
Connection		Δ	Δ	Δ	Y	Y	Y	Y
Frequency	Hz	50	60	60	50	60	60	60
Type of data definition		ml	ml	ml	ml	ml	ml	ml
Valid for approval / standard		CE	CE	CE	CE	CE	CE	CE
Speed	min^{-1}	1320	1410	1520	1320	1410	1500	1520
Power input	W	300	430	470	300	430	460	470
Current draw	A	0.97	1.22	1.16	0.56	0.70	0.68	0.67
Max. back pressure	Pa	100	110	130	100	110	120	130
Min. ambient temperature	°C	-40	-40	-40	-40	-40	-40	-40
Max. ambient temperature	°C	65	50	50	65	50	50	50
Starting current	A	2.95	2.8		1.7	1.62		

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}		28	26.2	30.2
Efficiency grade N		37.8	36	40
Power input P_e	kW	0.28		
Air flow q_v	m^3/h	3205		
Pressure increase p_{fs}	Pa	89		
Speed n	min^{-1}	1330		

Data established at point of optimum efficiency

ebmpapst

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Technical features

Mass	4.7 kg
Size	400 mm
Surface of rotor	Coated in black
Material of blades	PP-GF40 plastic
Number of blades	5
Direction of air flow	"V"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 54; Depending on installation and position as per EN 60034-5
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
Motor protection	Thermal overload protector (TOP) brought out
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60034; CE
Approval	UL 1004-1; CSA C22.2 Nr.100

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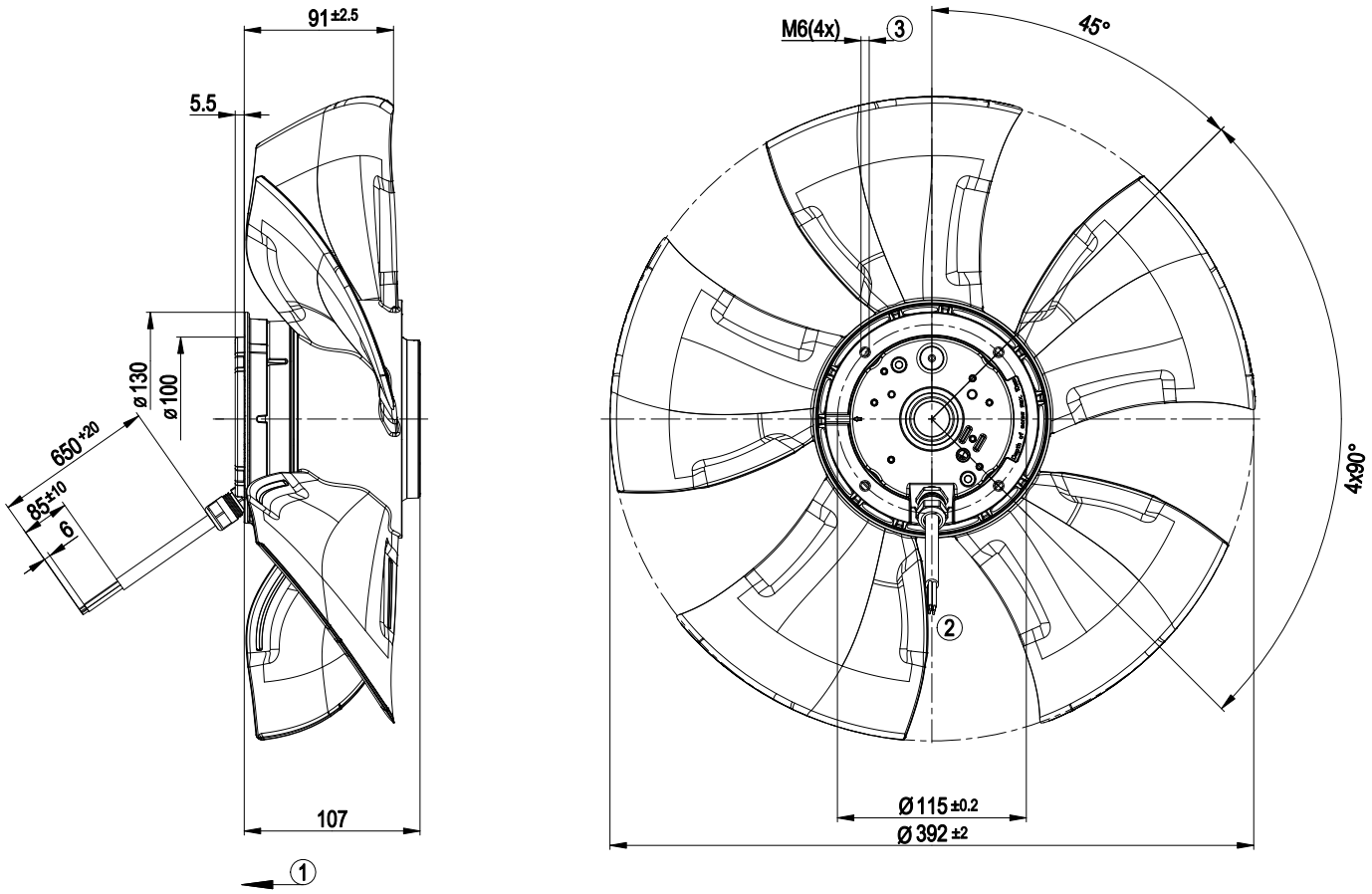
Product drawing



1	Direction of air flow "V"
2	Connection line Dipotherm 9G 0.75mm², 9x brass lead tips crimped
3	Depth of screw max. 10mm

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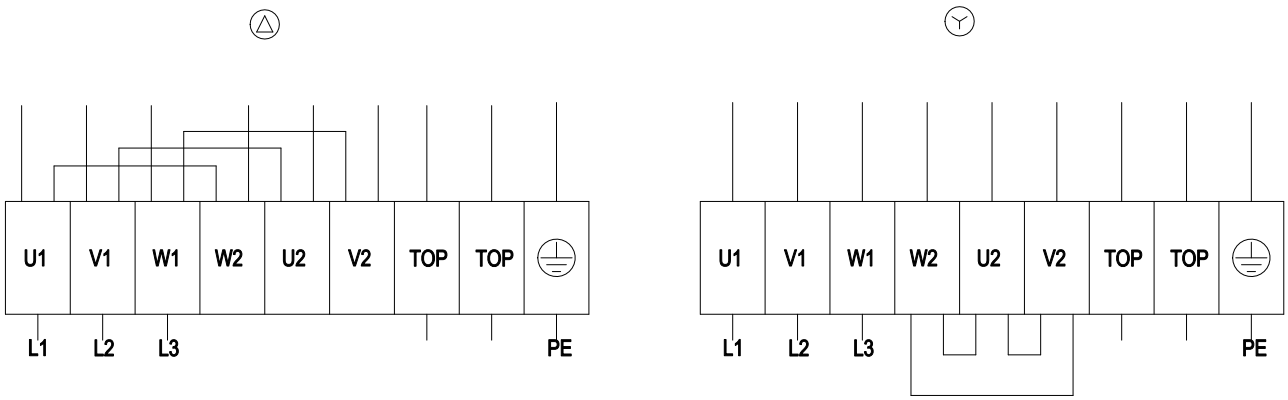
Connection screen



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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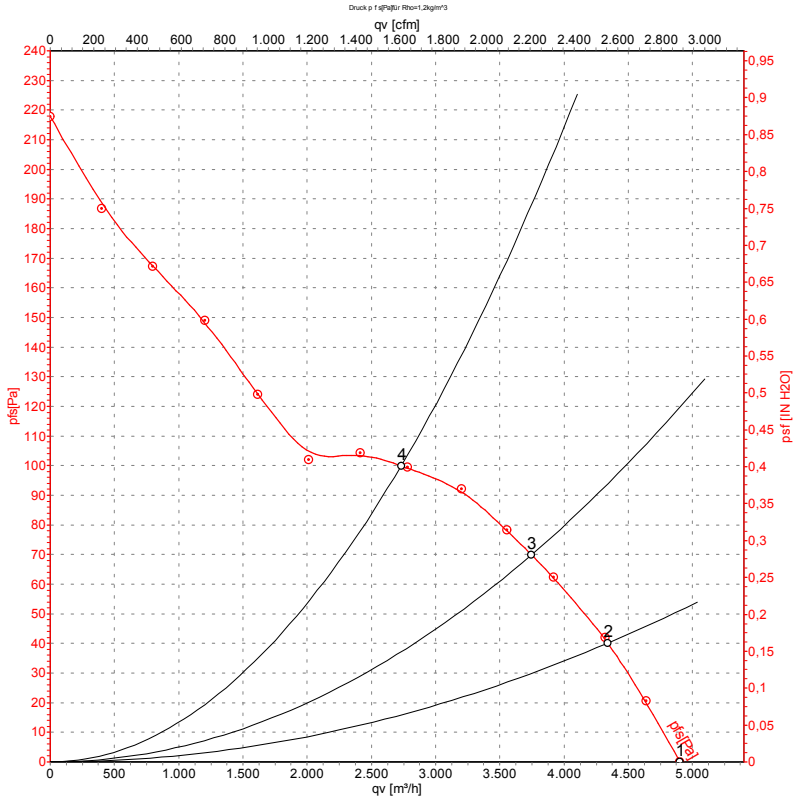
Charts: Air flow 50 Hz



Measurement: LU-108985

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}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	Y. AUS	400	50	1360	244	0.49	67	74	4900	0
2	Y. AUS	400	50	1345	264	0.51	65	72	4340	40
3	Y. AUS	400	50	1335	274	0.52	62	70	3745	70
4	Y. AUS	400	50	1320	300	0.56	60	68	2730	100

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
qv = Air flow · p_{fs} = Pressure increase

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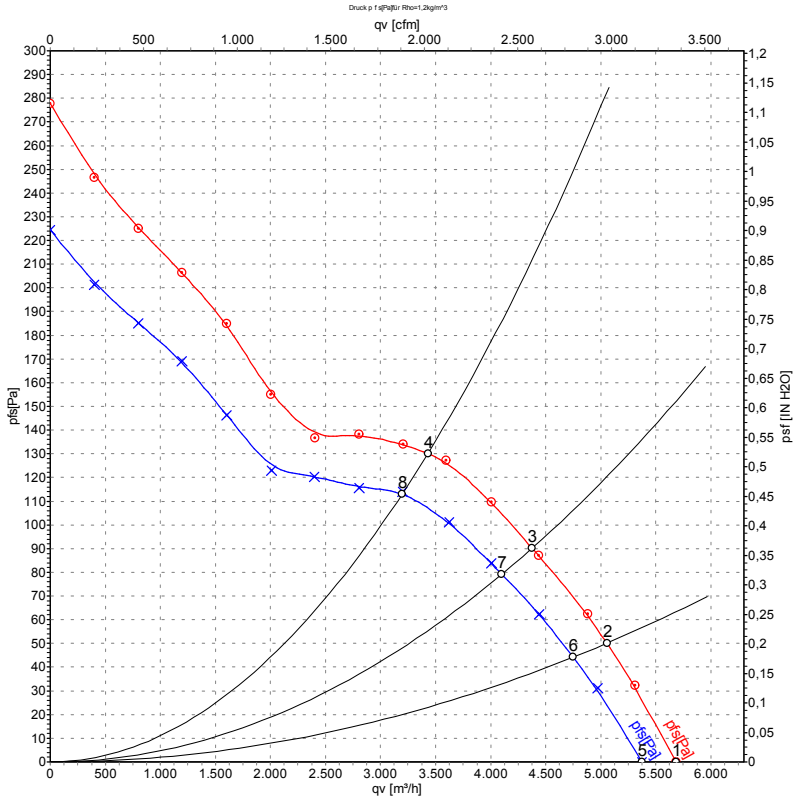
Charts: Air flow 60 Hz



Measurement: LU-108987
Measurement: LU-108986

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}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	Y. AUS	480	60	1580	395	0.58	71	78	5685	0
2	Y. AUS	480	60	1560	420	0.61	69	76	5055	50
3	Y. AUS	480	60	1545	438	0.63	66	73	4375	90
4	Y. AUS	480	60	1520	470	0.67	64	72	3430	130
5	Y. AUS	400	60	1500	357	0.59			5375	0
6	Y. AUS	400	60	1465	383	0.64			4750	44
7	Y. AUS	400	60	1445	397	0.66			4100	79
8	Y. AUS	400	60	1410	430	0.70			3195	114

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
qv = Air flow · p_{fs} = Pressure increase