A6D800-AI09-05

Emerson

AC axial fan - HyBlade®

sickled blades (S series)

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**A6D800-AI09-05**
Motor	**M6D138-HF**

Phase		3~	3~
Nominal voltage	VAC	400	460
Connection		Δ	Δ
Frequency	Hz	50	60
Type of data definition		ml	ml
Valid for approval / standard		CE	CE
Speed	min^{-1}	865	995
Power input	W	1030	1510
Current draw	A	2.07	2.54
Max. back pressure	Pa	135	145
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	65	60
Starting current	A	6.3	6.5

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}	%	35.8	29.6	33.6
Efficiency grade N		42.2	36	40
Power input P_e	kW	0.96		
Air flow q_v	m^3/h	11145		
Pressure increase p_{fs}	Pa	112		
Speed n	min^{-1}	875		

Data definition with optimum efficiency. LU-138334
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

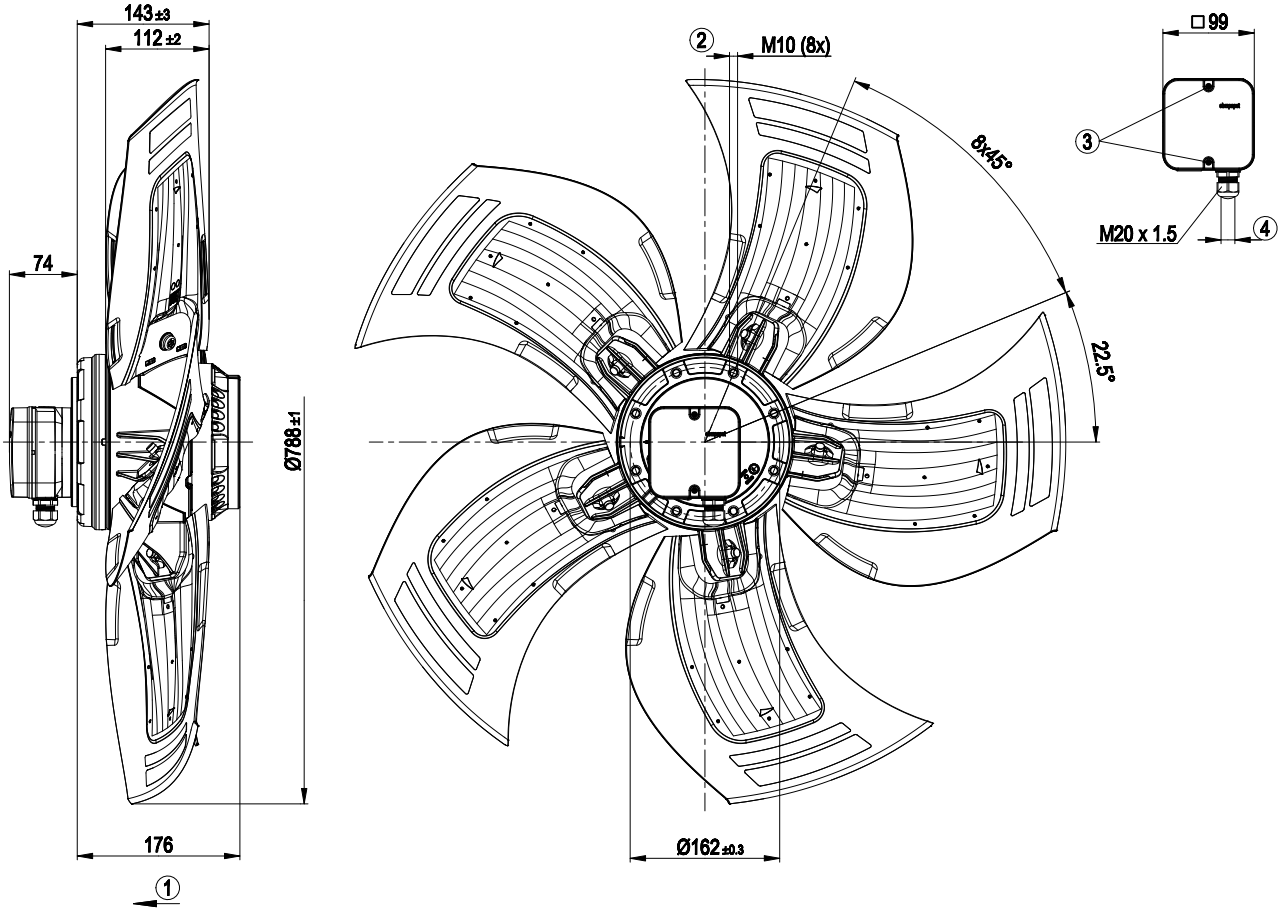
Mass	20.4 kg
Size	800 mm
Surface of rotor	Cast in aluminium
Material of terminal box	PP plastic
Material of blades	Aluminium sheet insert, sprayed with PP plastic
Number of blades	5
Blade angle	-10°
Direction of air flow	"V"
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	On rotor and stator sides
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); EN 61800-5-1; CE
Approval	EAC; UL 1004-1; CSA C22.2 Nr.100

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Product drawing



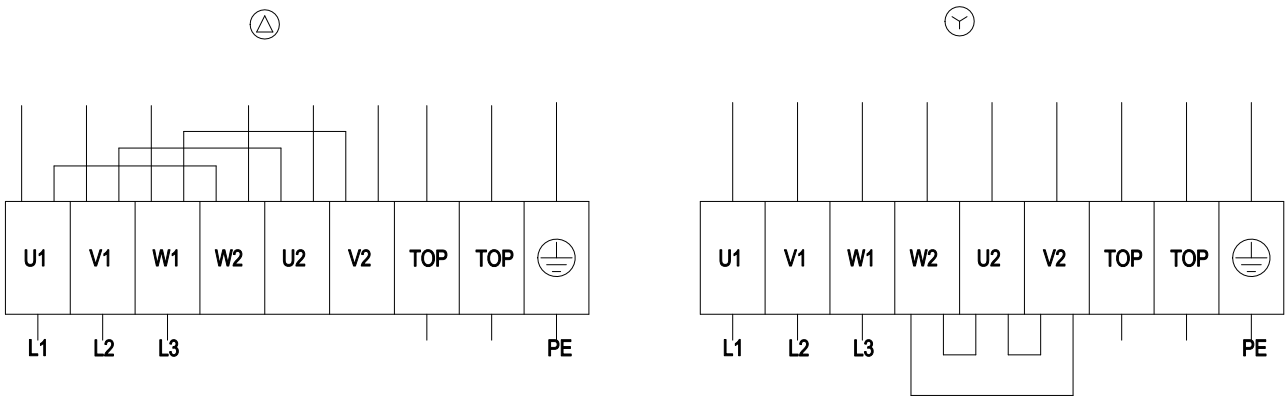
1	Direction of air flow "V"
2	Depth of screw max. 18 mm
3	Tightening torque 1.5 Nm±0.2 Nm
4	Cable diameter: min. 7 mm, max. 14 mm, tightening torque: 2±0.3 Nm

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Connection screen



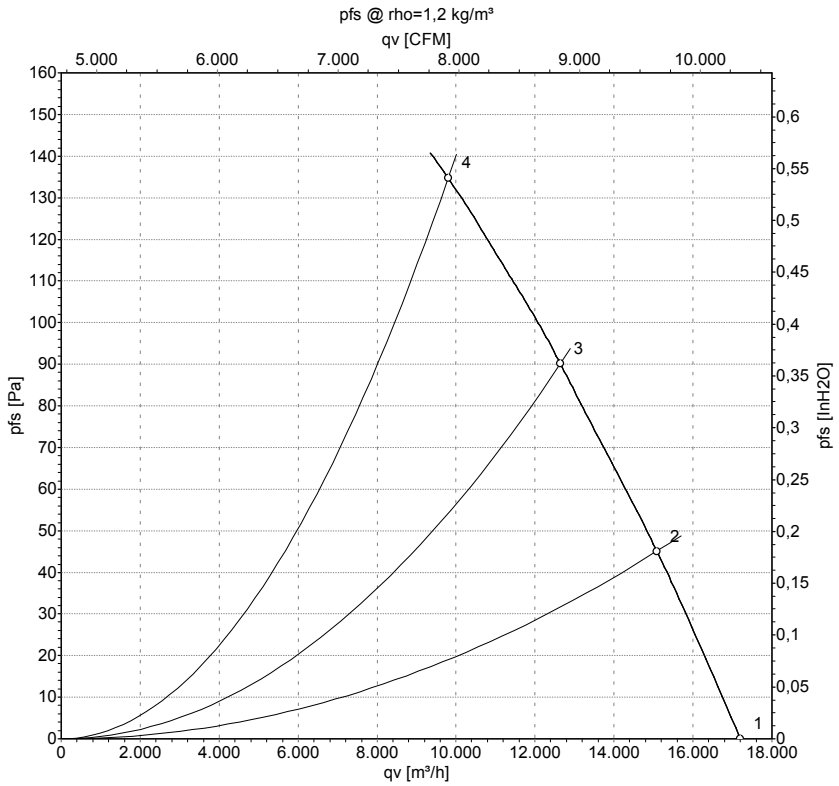
Δ	Delta connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2 x grey
PE	green/yellow				

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Charts: Air flow 50 Hz



Measurement: LU-138334

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	925	644	1.54	67	73	72	17200	0
2	Δ	400	50	905	778	1.71	64	70	69	15085	45
3	Δ	400	50	890	900	1.87	66	72	71	12640	90
4	Δ	400	50	865	1030	2.07	69	76	76	9800	135

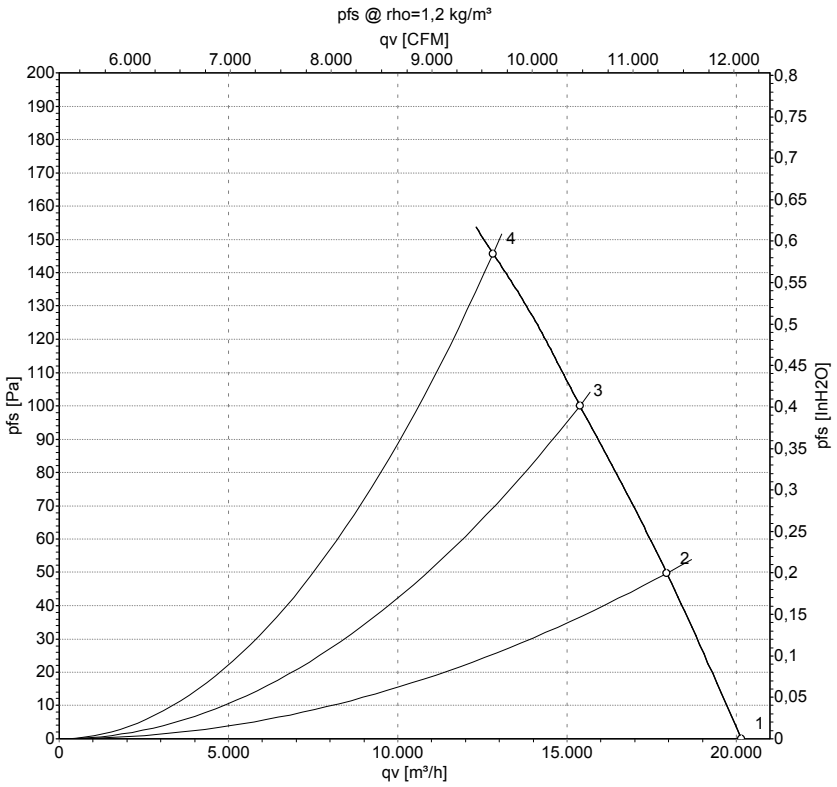
Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side
LwA_{out} = Sound power level outlet side · qv = Air flow · p_{fs} = Pressure increase

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Charts: Air flow 60 Hz



Measurement: LU-138340

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	460	60	1080	1020	1.83	70	77	77	20155	0
2	Δ	460	60	1055	1202	2.07	68	74	74	17950	50
3	Δ	460	60	1025	1372	2.31	68	75	74	15385	100
4	Δ	460	60	995	1510	2.54	70	77	76	12820	145

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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