A8D990-A211-05

AC axial fan - HyBlade

sickled blades (S series)

A8D990-A211-05 ebmpapst Datasheet
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Nominal data

Type	**A8D990-A211-05**
Motor	**M8D138-LA**

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 (rpm)	min^{-1}	670	530	770	550
Power input	W	960	610	1580	870
Current draw	A	2.28	1.19	2.77	1.47
Max. back pressure	Pa	90	55	130	62
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	80	80	50	50
Starting current	A	6.55	1.97	7.15	3.71

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

		Actual	Request 2015
01 Overall efficiency η_{es}	%	36.9	33.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		43.4	40
05 Variable speed drive		No	

09 Power input P_e	kW	0.93
09 Air flow q_v	m^3/h	15525
09 Pressure increase p_{fs}	Pa	81
10 Speed (rpm) n	min^{-1}	675
11 Specific ratio*		1.00

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

* Specific ratio = 1 + p_{fs} / 100 000 Pa

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Technical features

Mass	26 kg
Size	990 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	-8°
Direction of air flow	"V"
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity (F)/environmental protection class (H)	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, basic insulation
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60034-1 (2010); EN 61800-5-1; CE
Approval	VDE; EAC

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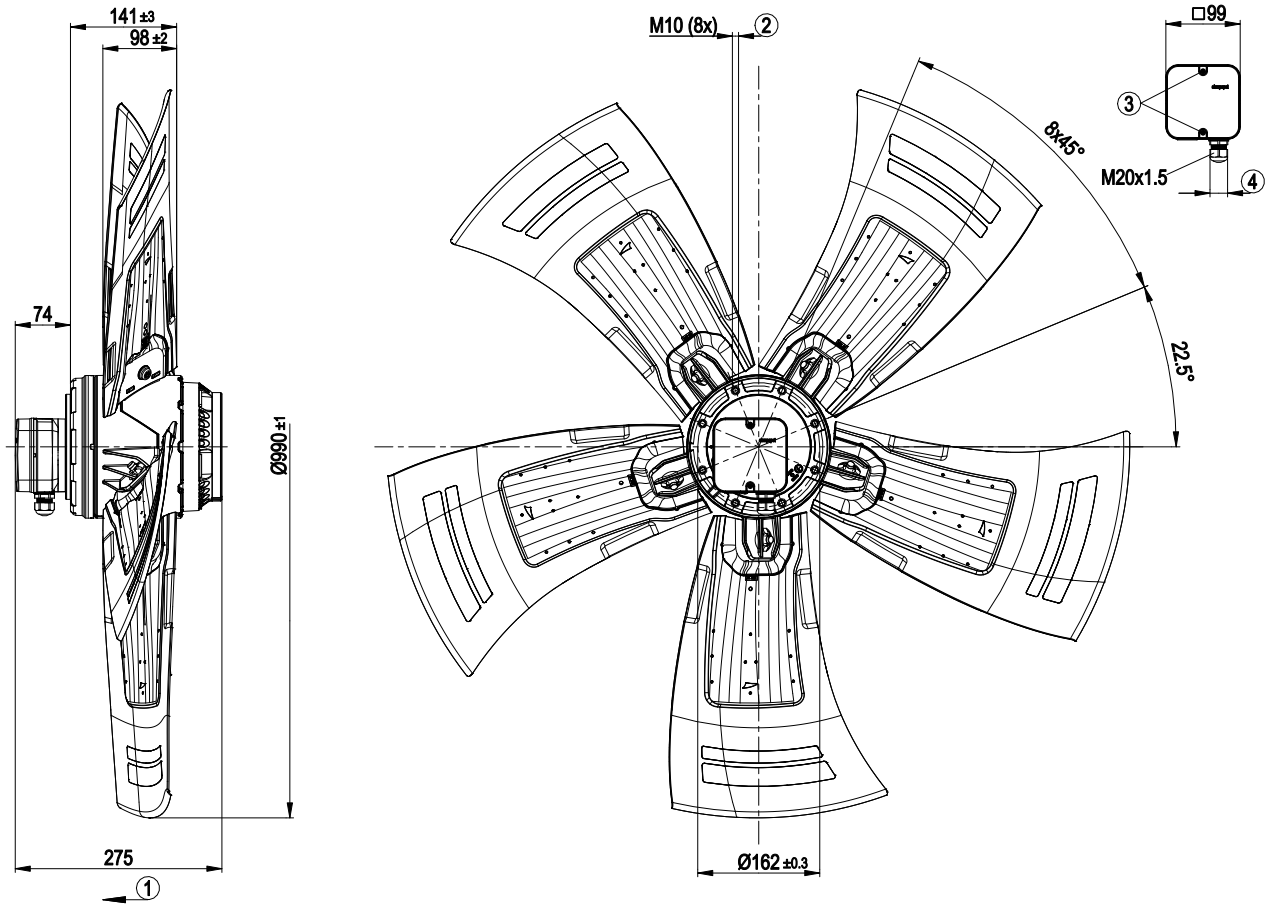
Product drawing



1	Direction of air flow "V"
2	Thread reach max. 18 mm
3	Tightening torque 0.8±0.15 Nm
4	Cable diameter: min. 7 mm, max. 14 mm, tightening torque 2±0.3 Nm

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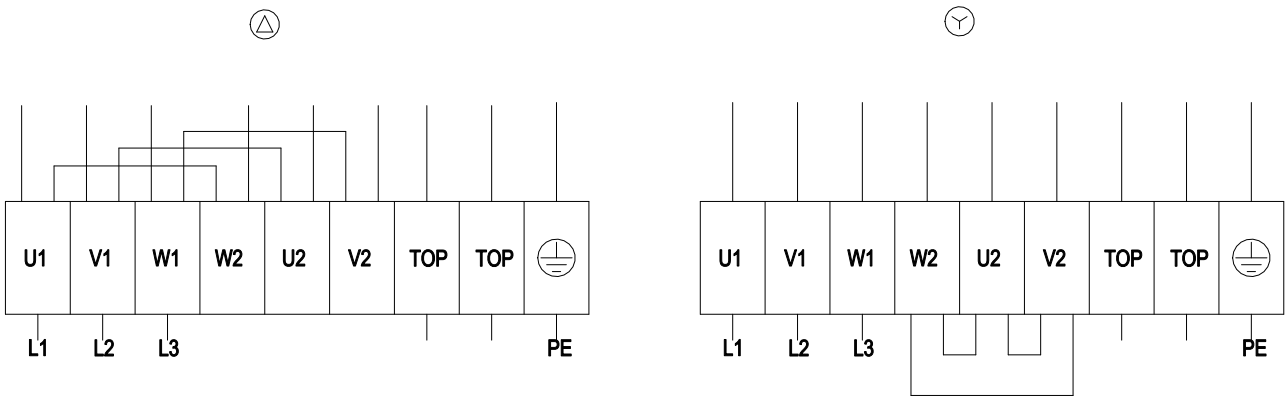
Connection screen



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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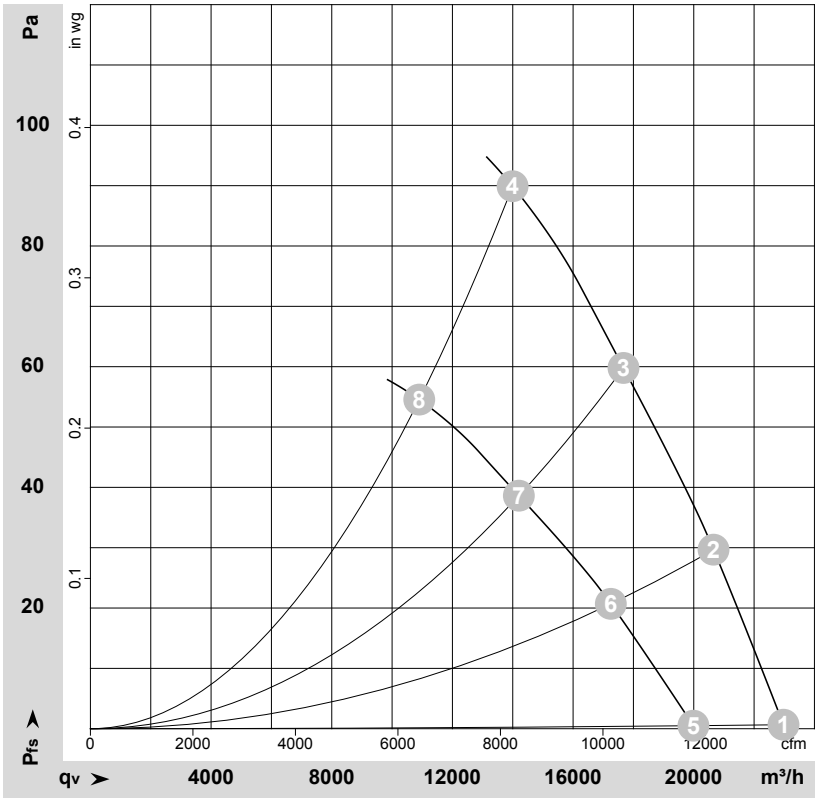
Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-165728-1

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}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	Δ	400	50	705	648	2.03	70	77	77	22975	0	13525	0.00
2	Δ	400	50	695	762	2.11	67	75	74	20655	30	12155	0.12
3	Δ	400	50	680	875	2.21	66	74	73	17670	60	10400	0.24
4	Δ	400	50	670	960	2.28	72	79	80	13995	90	8235	0.36
5	Y	400	50	615	460	0.94	66	74	73	19990	0	11765	0.00
6	Y	400	50	575	530	1.04	63	70	69	17250	21	10155	0.08
7	Y	400	50	545	580	1.15	60	68	67	14200	39	8360	0.16
8	Y	400	50	530	610	1.19	66	73	74	10900	55	6415	0.22

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · 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 · q_V = Air flow · p_{fs} = Pressure increase

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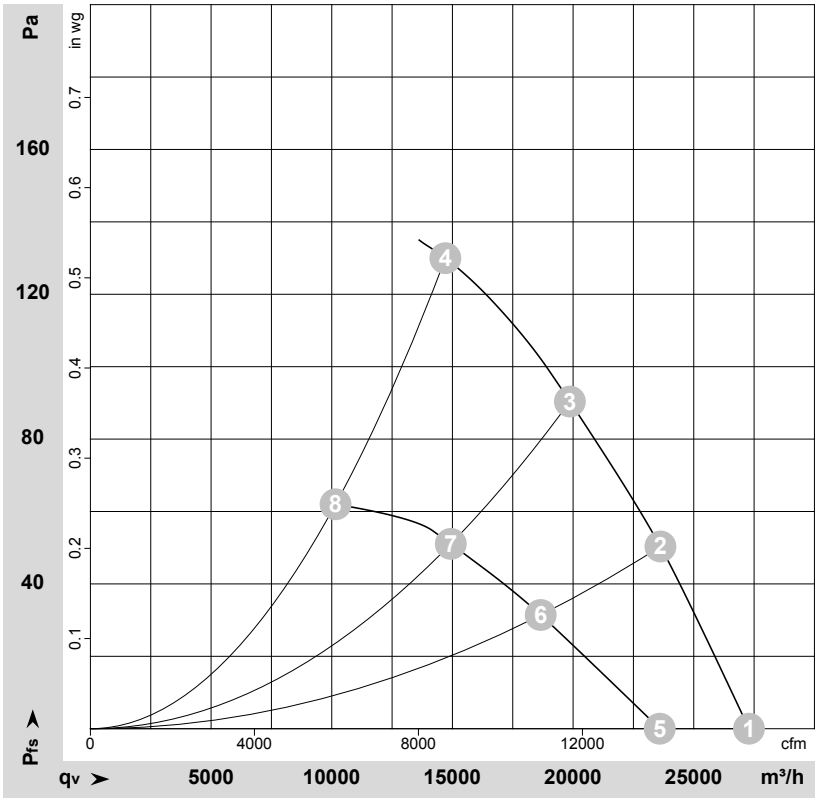
Charts: Air flow 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-165817-1
Measurement: LU-166001-1

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}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	Δ	480	60	830	1015	2.23	74	82	82	27290	0	16060	0.00
2	Δ	480	60	810	1245	2.43	71	79	79	23620	50	13900	0.20
3	Δ	480	60	790	1428	2.63	70	78	77	19870	90	11695	0.36
4	Δ	480	60	770	1580	2.77	79	86	87	14705	130	8655	0.52
5	Y	480	60	695	701	1.17	70	77	77	23590	0	13885	0.00
6	Y	480	60	620	803	1.34	64	71	71	18660	31	10980	0.12
7	Y	480	60	570	855	1.44	62	69	68	14935	51	8790	0.20
8	Y	480	60	550	870	1.47	69	76	77	10155	62	5980	0.25

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · 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 · q_V = Air flow · p_{fs} = Pressure increase