A8D910-AE01-01

AC axial fan - HyBlade

sickled blades (S series)

A8D910-AE01-01 ebmpapst Datasheet
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County court Stuttgart · HRA 590344

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Nominal data

Type	**A8D910-AE01-01**
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	515	775	545
Power input	W	910	560	1450	800
Current draw	A	2.27	1.16	2.7	1.45
Max. back pressure	Pa	90	54	125	62
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	80	80	55	55
Starting current	A	6.1	2.0	6.54	2.2

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data in accordance with ecodesign regulation EU 327/2011 (prEN 17166)

		Actual	Request 2015
01 Overall efficiency η_{es}	%	34.8	33.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		41.5	40
05 Variable speed drive		No	

09 Power input P_e	kW	0.88
09 Air flow q_v	m^3/h	13940
09 Pressure increase p_{fs}	Pa	80
10 Speed (rpm) n	min^{-1}	670
11 Specific ratio*		1.00

Data definition with optimum efficiency.

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

LU-160563

The indicated efficiency values for obtaining conformity with the Ecodesign Directive EU 327/2011 were achieved with defined air conduction components (e.g. inlet nozzles).
The dimensions are to be requested from ebm-papst. If other air guide geometries are used on the installation side, the ebm-papst evaluation loses its validity/conformity must be confirmed again.

The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2(2a) (motors completely integrated into a product).

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Technical features

Mass	24.1 kg
Size	910 mm
Motor size	138
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	-5°
Direction of air flow	V
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP54
Insulation class	"F"
Humidity (F) / environmental protection class (H)	H2
Note ambient temperature	Occasional start-up between -40 °C and -25 °C is permissible. For continuous operation at ambient temperatures below -25 °C (e.g. refrigeration applications), a fan version with special low-temperature bearings must be used.
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Any
Condensation drainage 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 connection	Terminal box
Motor protection	Thermal overload protector (TOP) brought out, basic insulation
Cable exit	Axial
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60034-1 (2010)
Standard conformity	UKCA
Product conforming to standard	CE
Approval	VDE; EAC

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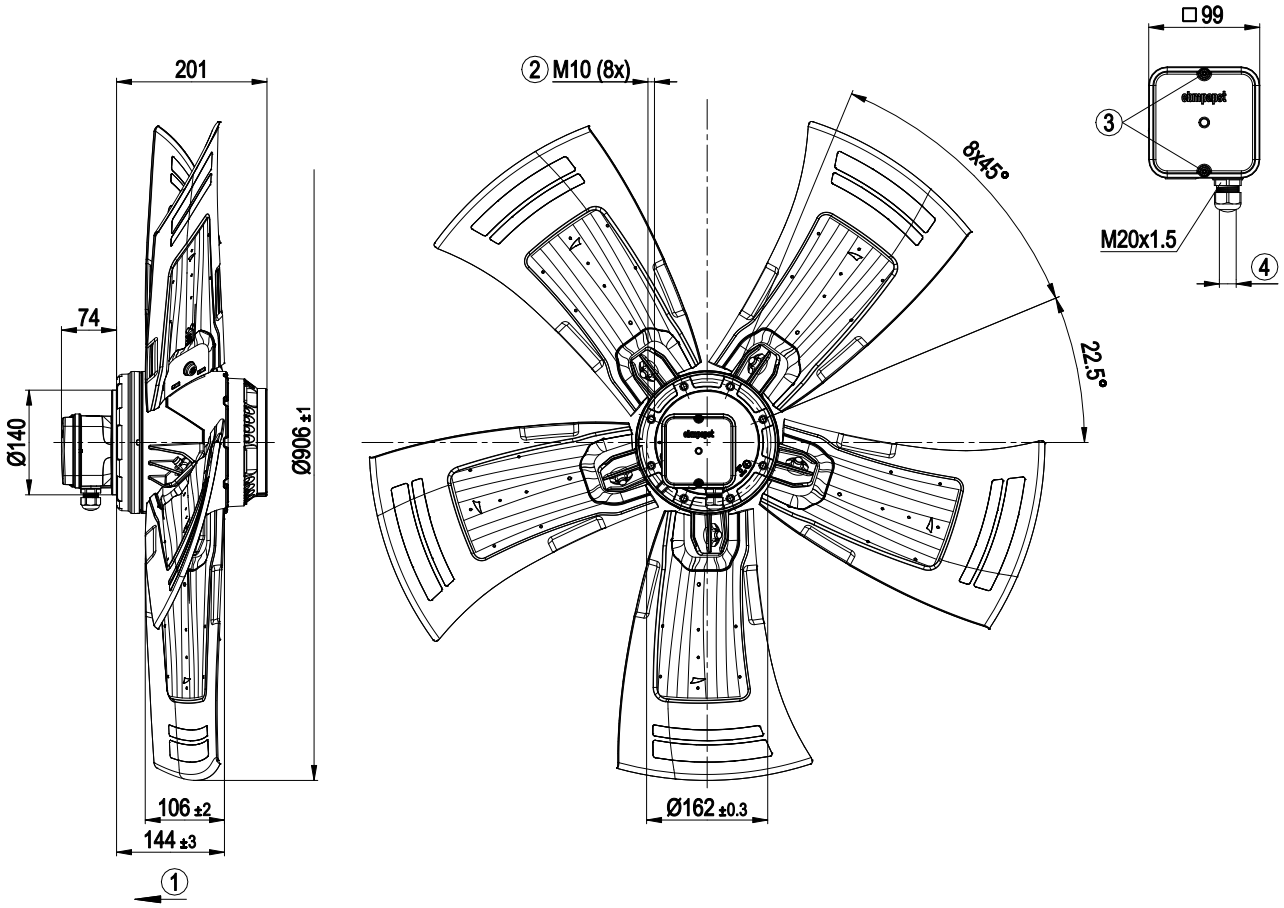
Product drawing



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

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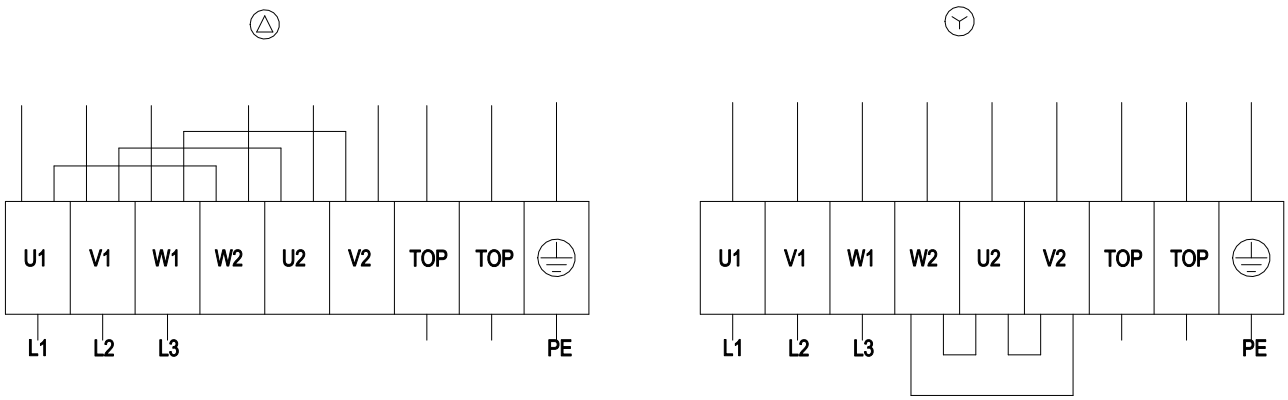
Connection screen



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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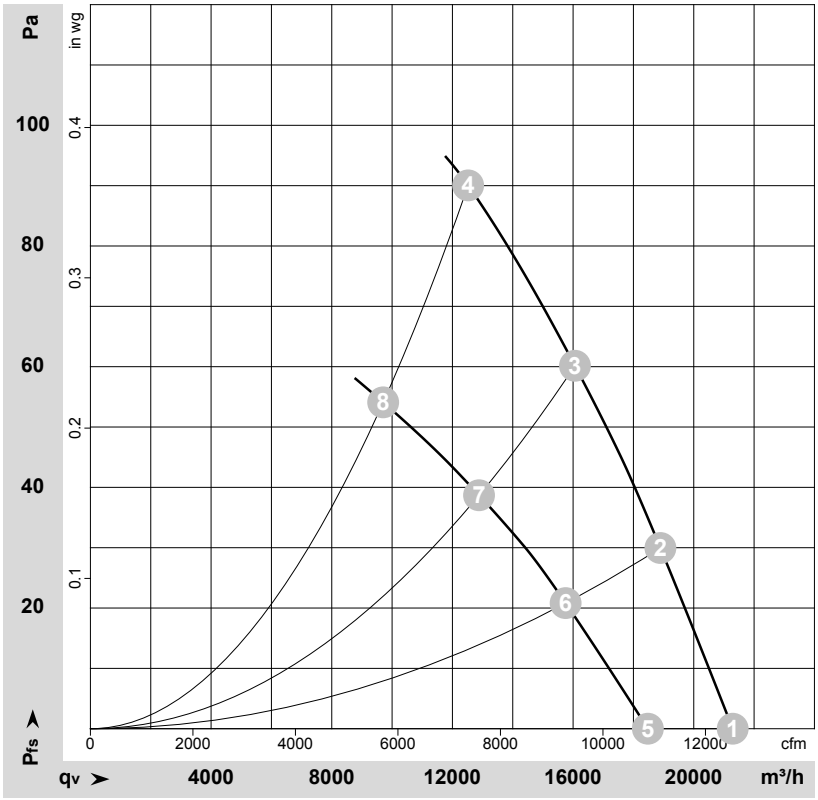
Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-160563-1
Measurement: LU-161729-1

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	in. wg
1	Δ	400	50	705	617	2.06	64	71	71	21290	0	12530	0.00
2	Δ	400	50	690	730	2.16	62	69	69	18895	30	11120	0.12
3	Δ	400	50	680	825	2.25	60	68	67	16060	60	9455	0.24
4	Δ	400	50	670	910	2.27	64	71	72	12520	90	7370	0.36
5	Y	400	50	600	428	0.93	60	67	66	18480	0	10875	0.00
6	Y	400	50	560	481	1.04	57	64	63	15755	21	9270	0.08
7	Y	400	50	525	519	1.12	54	61	61	12880	39	7580	0.16
8	Y	400	50	515	560	1.16	56	63	63	9705	54	5710	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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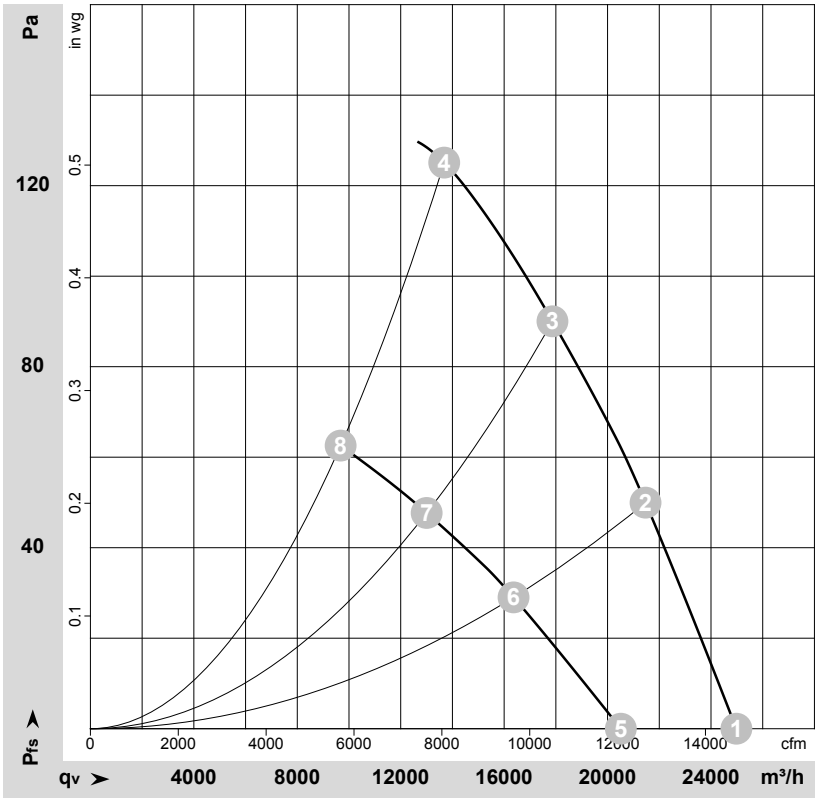
Charts: Air flow 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-160671-1
Measurement: LU-161733-1

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	in. wg
1	Δ	480	60	825	978	2.24	67	75	75	24980	0	14705	0.00
2	Δ	480	60	805	1183	2.48	65	72	72	21470	50	12635	0.20
3	Δ	480	60	785	1334	2.66	64	72	71	17870	90	10515	0.36
4	Δ	480	60	775	1450	2.70	70	77	78	13685	125	8055	0.50
5	Y	480	60	660	639	1.16	62	69	69	20515	0	12075	0.00
6	Y	480	60	590	704	1.29	57	64	64	16365	30	9630	0.12
7	Y	480	60	550	734	1.35	55	63	62	13005	48	7655	0.19
8	Y	480	60	545	800	1.45	58	65	66	9675	63	5695	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