S6D500-AJ01-03

AC axial fan - HyBlade

sickle-shaped blades (S series)

with guard grille for short nozzle

S6D500-AJ01-03 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**S6D500-AJ01-03**
Motor	**M6D110-EF**

Phase		3~	3~	3~	3~	3~	3~
Nominal voltage	VAC	230	230	277	400	400	480
Wiring		Δ	Δ	Δ	Y	Y	Y
Frequency	Hz	50	60	60	50	60	60
Method of obtaining data		ml	ml	ml	ml	ml	ml
Valid for approval/standard		CE	CE	CE	CE	CE	CE
Speed (rpm)	min^{-1}	930	1050	1095	930	1050	1095
Power consumption	W	260	380	410	260	380	410
Current draw	A	1.13	1.22	1.25	0.65	0.70	0.72
Max. back pressure	Pa	75	93	100	75	93	100
Max. back pressure	inH2O	0.3	0.37	0.4	0.3	0.37	0.4
Min. ambient temperature	°C	-40	-40	-40	-40	-40	-40
Max. ambient temperature	°C	65	65	65	65	65	65
Starting current	A	4.4	4				

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	29.9	29.9
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		40	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.25
09 Air flow q_v	m^3/h	4130
09 Pressure increase p_{fs}	Pa	65
10 Speed (rpm) n	min^{-1}	930
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

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

LU-110652

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Technical description

Weight	10.8 kg
Fan size	500 mm
Rotor surface	Painted black
Terminal box material	PC/ABS plastic
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Blade pitch	0°
Airflow direction	"V"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F4-1
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Via terminal box
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Axial
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	VDE; EAC; UL 1004-1

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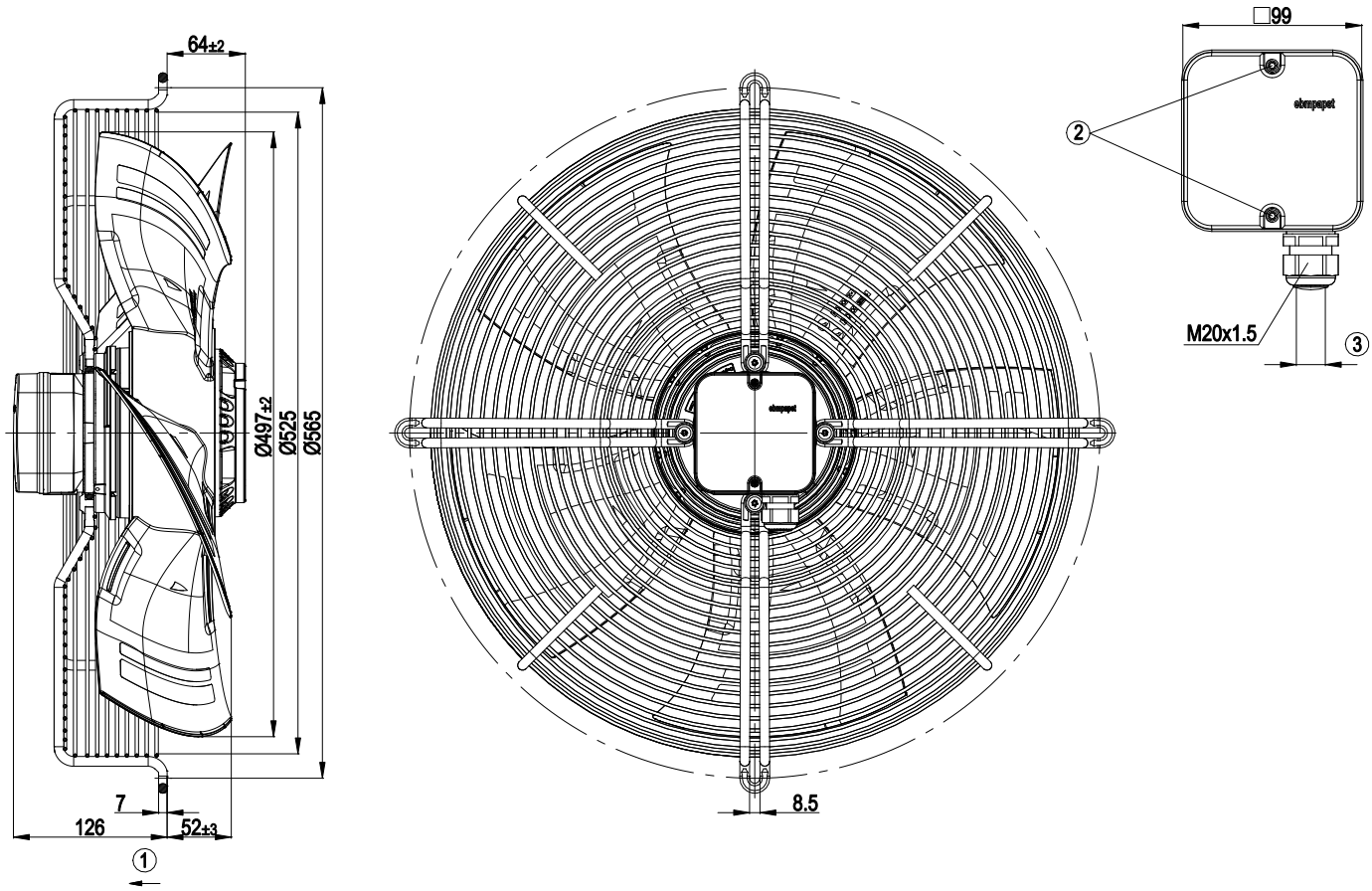
Product drawing



1	Direction of air flow "V"
2	Tightening torque 1.5 ± 0.2 Nm
3	Cable diameter min. 6 mm, max. 12 mm, tightening torque 2 ± 0.3 Nm

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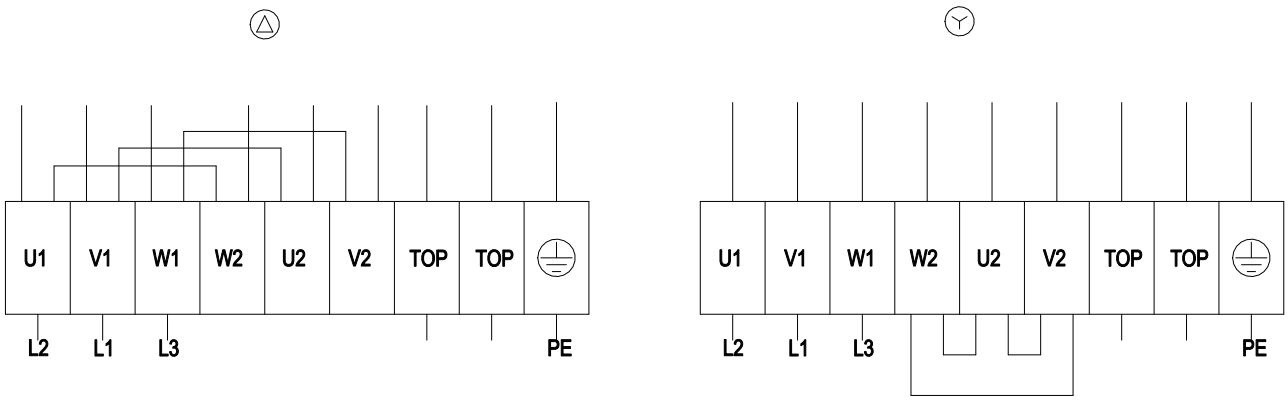
Connection diagram



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

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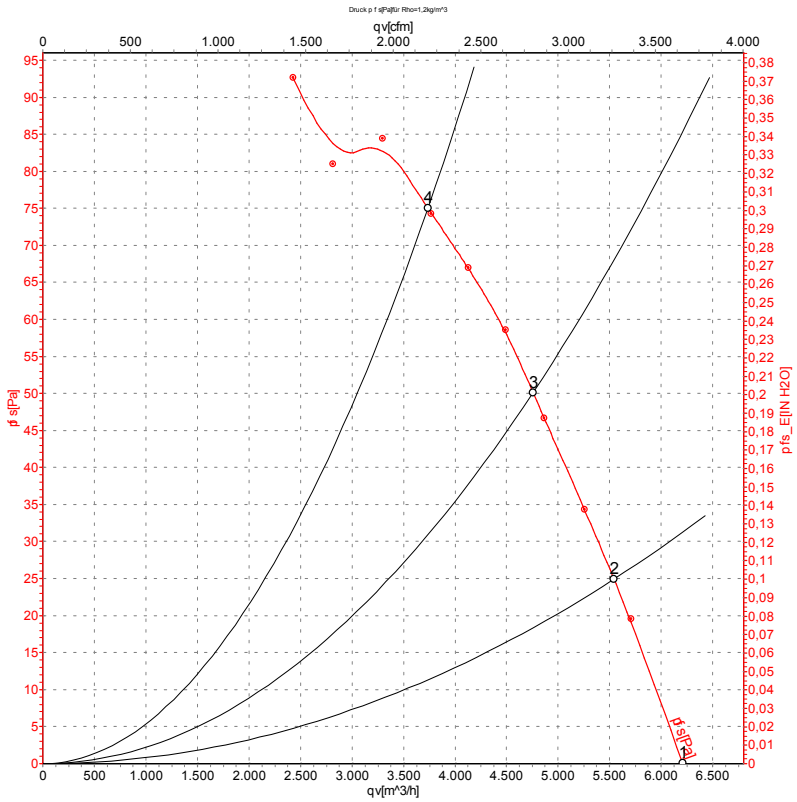
Curves: Air performance 50 Hz



Measurement: LU-110652-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	Wired	U	f	n	P_e	I	LpA_{in}	LwA_{in}	LwA_{out}	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	Y	400	50	955	197	0.61	61	67	67	6200	0	3650	0.00
2	Y	400	50	945	219	0.62	58	64	64	5540	25	3260	0.10
3	Y	400	50	935	241	0.62	55	62	62	4755	50	2800	0.20
4	Y	400	50	930	260	0.65	55	62	62	3735	75	2200	0.30

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side LwA_{out} = Sound power level outlet side · qv = Air flow · p_{fs} = Pressure increase

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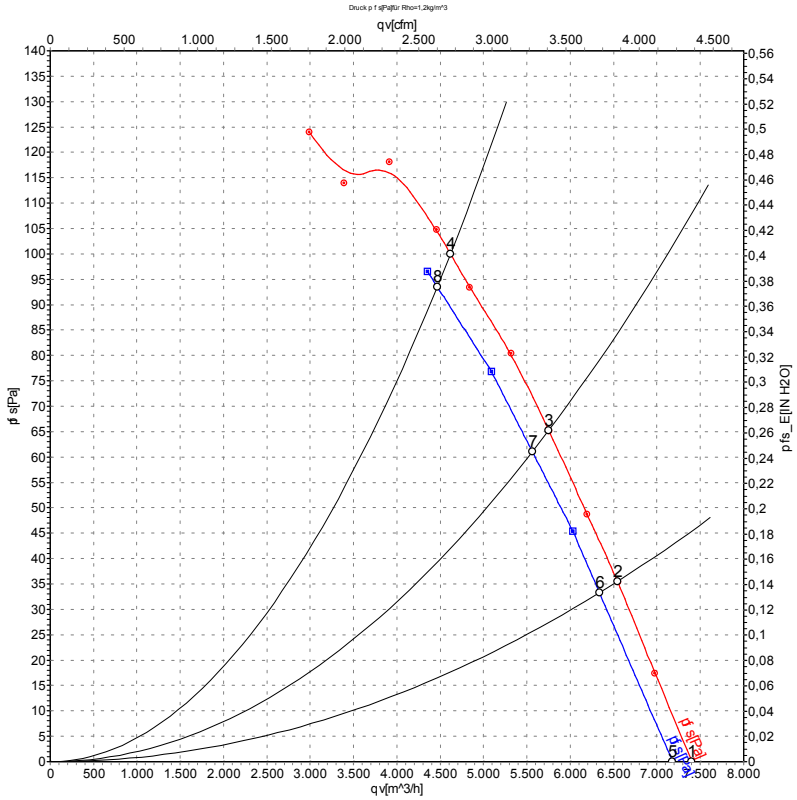
Curves: Air performance 60 Hz



Measurement: LU-110654-1
Measurement: LU-111058-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	Wired	U	f	n	P_e	I	LpA_{in}	LwA_{in}	LwA_{out}	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	Y	480	60	1130	301	0.64	64	71	71	7400	0	4355	0.00
2	Y	480	60	1120	341	0.67	61	68	68	6545	35	3850	0.14
3	Y	480	60	1110	368	0.68	59	66	66	5750	65	3385	0.26
4	Y	480	60	1095	410	0.72	59	66	66	4620	100	2720	0.40
5	Y	400	60	1105	274	0.56	63	70	70	7170	0	4220	0.00
6	Y	400	60	1085	309	0.60	60	67	67	6335	33	3730	0.13
7	Y	400	60	1075	335	0.63	58	65	65	5565	61	3275	0.24
8	Y	400	60	1050	380	0.70	58	65	65	4465	94	2630	0.38

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
LwA_{out} = Sound power level outlet side · qv = Air flow · p_{fs} = Pressure increase