

AC axial fan - HyBlade

sickled blades (S series)
with guard grille for short nozzle

S6D560-AK03-01 ebmpapst Datasheet
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Nominal data

Type	S6D560-AK03-01				
Motor	M6D110-EF				
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	895	715	1045	765
Power input	W	380	260	610	390
Current draw	A	0.81	0.45	0.98	0.57
Max. back pressure	Pa	75	48	105	57
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	65	65	65	65
Starting current	A	2.57	0.8	2.84	0.88

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}	%	30.9	30.9	09 Power input P_e	kW	0.37
02 Measurement category		A		09 Air flow q_v	m ³ /h	4600
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	88
04 Efficiency grade N		40	40	10 Speed (rpm) n	min ⁻¹	895
05 Variable speed drive		No		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 = $1 + p_{fs} / 100\,000\text{ Pa}$

LU-164286



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Technical features

Mass	13.3 kg
Size	560 mm
Surface of rotor	Cast in aluminium
Material of terminal box	PP plastic
Material of blades	Aluminium sheet insert, sprayed with PP plastic
Material of guard grille	Steel, coated in black plastic (RAL9005)
Number of blades	5
Blade angle	-5°
Direction of air flow	"V"
Direction of rotation	Counter-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	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
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 61800-5-1; CE
Approval	CCC; VDE; EAC

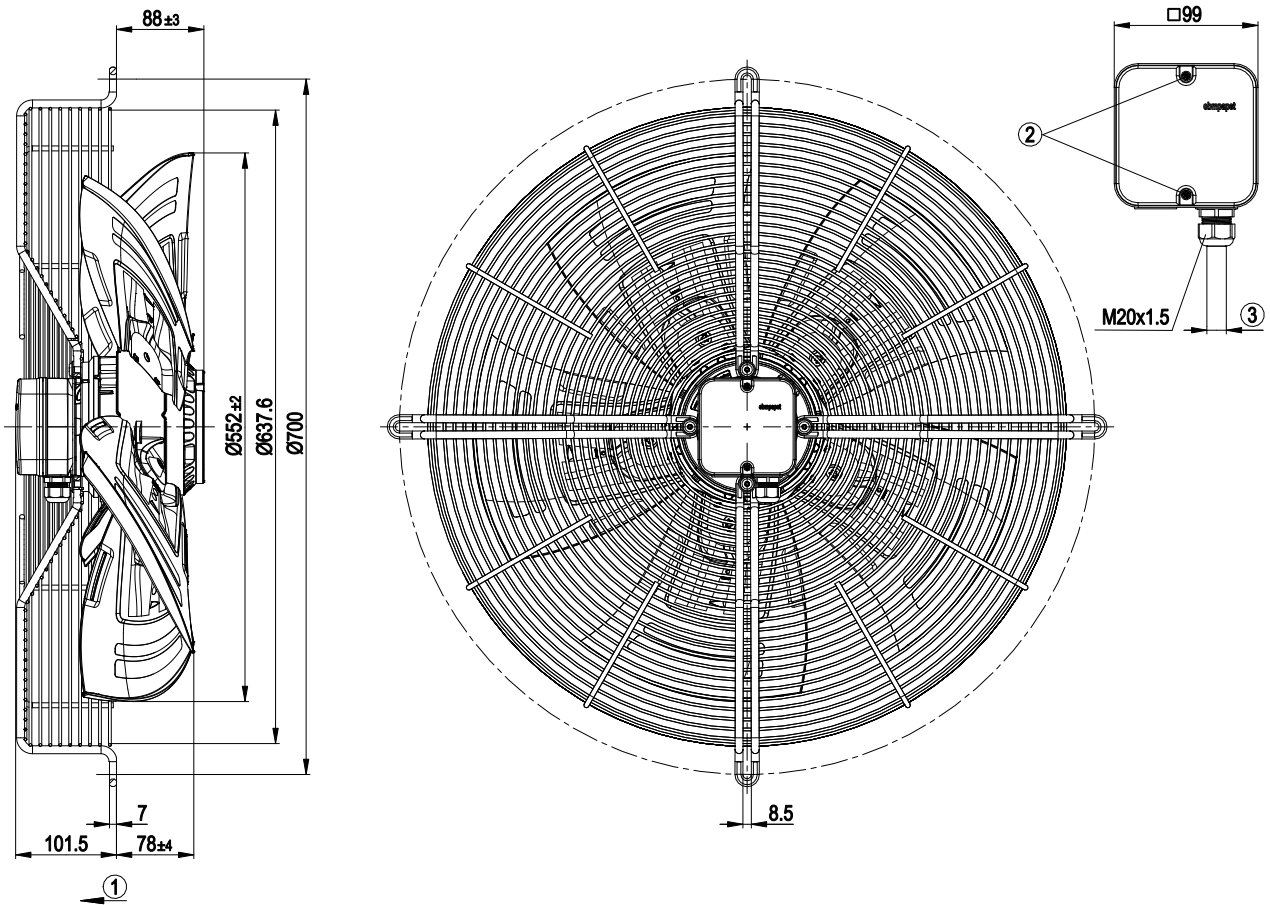


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Product drawing

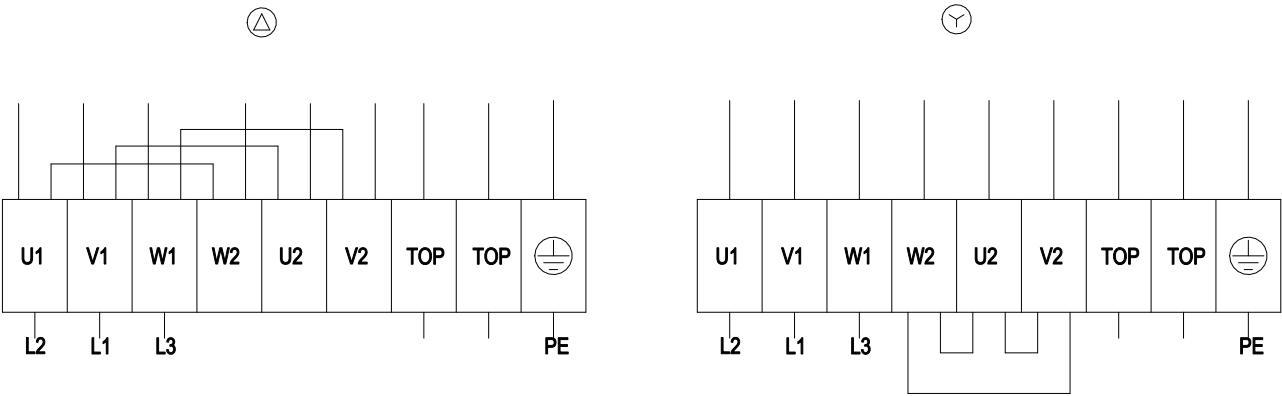


1	Direction of air flow "V"
2	Tightening torque 1.5 ± 0.2 Nm
3	Cable diameter min. 6 mm, max. 12 mm, tightening torque 2.0 ± 0.3 Nm

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Connection screen



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

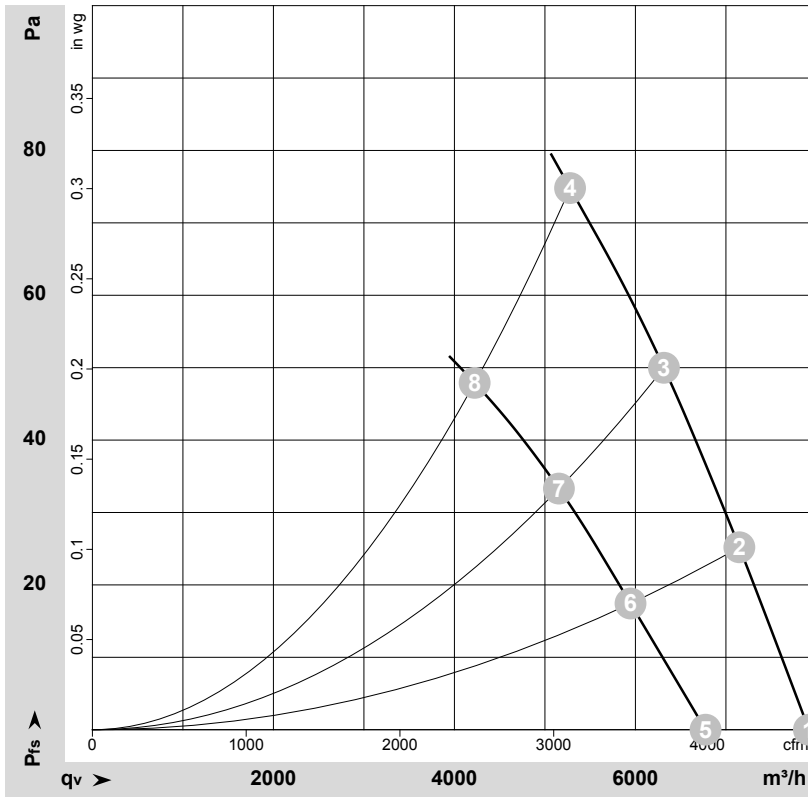


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Charts: Air flow 50 Hz



$$\rho = 1.176 \text{ kg/m}^3 \pm 2 \%$$

Measurement: LU-129189-1
Measurement: LU-129398-1

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)	m³/h	Pa	cfm	inH ₂ O
1	Δ	400	50	930	291	0.74	59	66	66	7915	0	4660	0.00
2	Δ	400	50	915	326	0.76	58	65	64	7150	25	4205	0.10
3	Δ	400	50	905	352	0.78	58	65	64	6315	50	3715	0.20
4	Δ	400	50	895	380	0.81	57	65	64	5280	75	3105	0.30
5	Y	400	50	795	211	0.37	56	62	62	6775	0	3990	0.00
6	Y	400	50	760	229	0.40	54	61	60	5945	17	3500	0.07
7	Y	400	50	735	245	0.43	53	59	58	5155	34	3035	0.14
8	Y	400	50	715	260	0.45	52	59	58	4225	48	2485	0.19

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

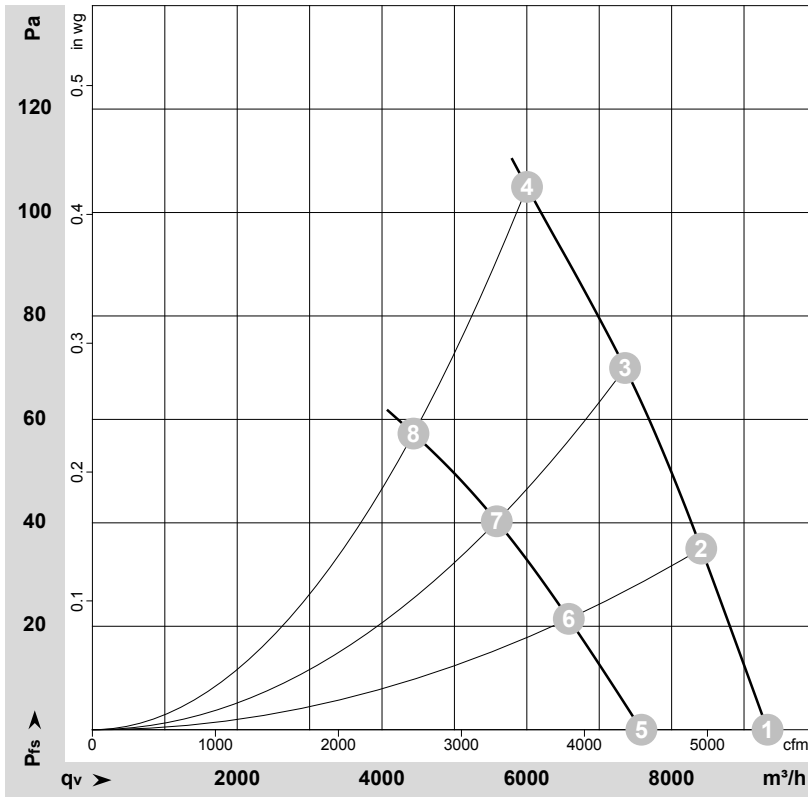


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Charts: Air flow 60 Hz



$$\rho = 1.174 \text{ kg/m}^3 \pm 2 \%$$

Measurement: LU-129197-1
Measurement: LU-129399-1

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)	m³/h	Pa	cfm	inH ₂ O
1	Δ	480	60	1100	458	0.84	63	70	70	9325	0	5490	0.00
2	Δ	480	60	1080	514	0.88	62	68	68	8410	35	4950	0.14
3	Δ	480	60	1060	565	0.93	63	70	68	7355	70	4330	0.28
4	Δ	480	60	1045	610	0.98	62	69	68	6005	105	3535	0.42
5	Y	480	60	895	330	0.48	58	65	65	7585	0	4465	0.00
6	Y	480	60	845	354	0.52	57	63	63	6580	22	3875	0.09
7	Y	480	60	800	373	0.55	55	62	61	5585	41	3285	0.16
8	Y	480	60	765	390	0.57	54	61	61	4435	58	2610	0.23

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

