S6E630-AO01-01

AC axial fan - HyBlade

sickle-shaped blades (S series)

with guard grille for short nozzle

S6E630-AO01-01 ebmpapst Datasheet
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Amtsgericht (court of registration) Stuttgart · HRA 590344

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Nominal data

Type	**S6E630-AO01-01**
Motor	**M6E110-GF**

Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Method of obtaining data		ml	ml
Valid for approval/standard		CE	CE
Speed (rpm)	min^{-1}	900	920
Power consumption	W	480	690
Current draw	A	2.12	3.02
Capacitor	µF	12	12
Capacitor voltage	VDB	450	450
Max. back pressure	Pa	100	110
Max. back pressure	in. wg	0.4	0.44
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	65	40
Starting current	A	4.6	4.1

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

Data according to Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	33.9	31.6
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		42.3	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.47
09 Air flow q_v	m^3/h	6215
09 Pressure increase p_{fs}	Pa	96
10 Speed (rpm) n	min^{-1}	905
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

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Technical description

Weight	17.7 kg
Size	630 mm
Motor size	110
Rotor surface	Cast in aluminum
Terminal box material	PP plastic
Blade material	Sheet aluminum insert, sprayed with PP plastic
Guard grille material	Steel, phosphated and coated with black plastic
Number of blades	5
Blade pitch	-10°
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
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	Terminal box; Via terminal box, capacitor integrated and connected
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Axial
Protection class	I (with customer connection of protective earth)
Motor capacitor according to EN 60252-1 in safety protection class	S0
Conformity with standards	EN 60034-1 (2010); CE
Approval	CSA C22.2 No. 100; EAC; UL 1004-1; VDE

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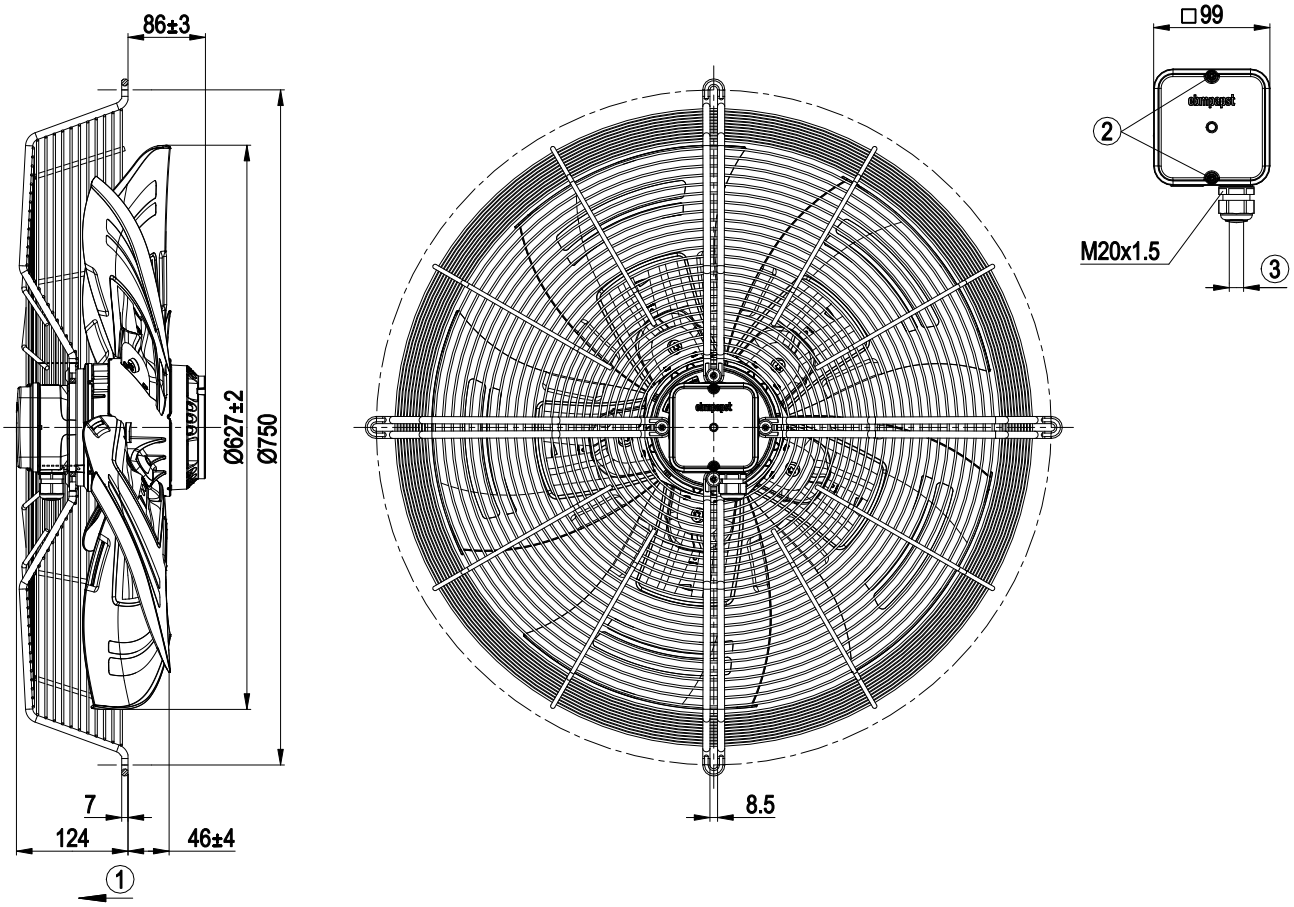
Product drawing



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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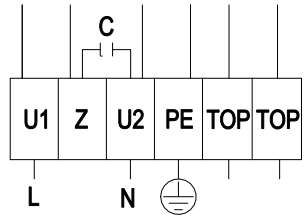
Connection diagram



L	= U1 = blue	Z	brown	N	= U2 = black
PE	green/yellow	TOP	gray		

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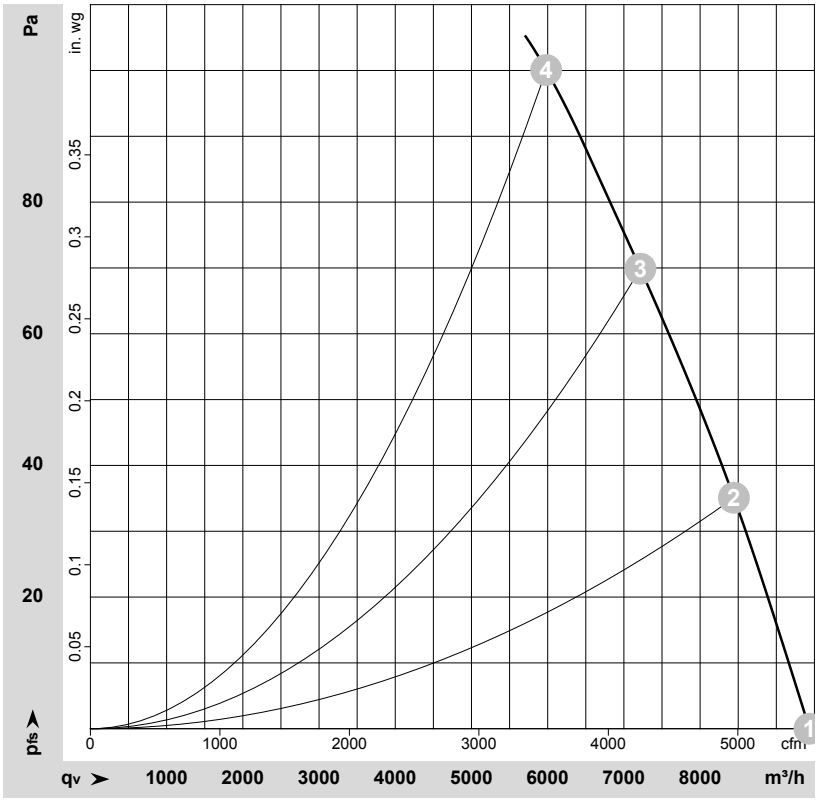
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-107068-1

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}	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	1~	230	50	950	347	1.54	64	70	69	9435	0	5555	0.00
2	1~	230	50	935	397	1.75	61	67	66	8445	35	4970	0.14
3	1~	230	50	915	448	1.97	59	66	65	7215	70	4245	0.28
4	1~	230	50	900	480	2.12	62	68	67	5980	100	3520	0.40

Wired = Wiring · U = Voltage · 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 · q_V = Air flow · p_{fs} = Pressure increase

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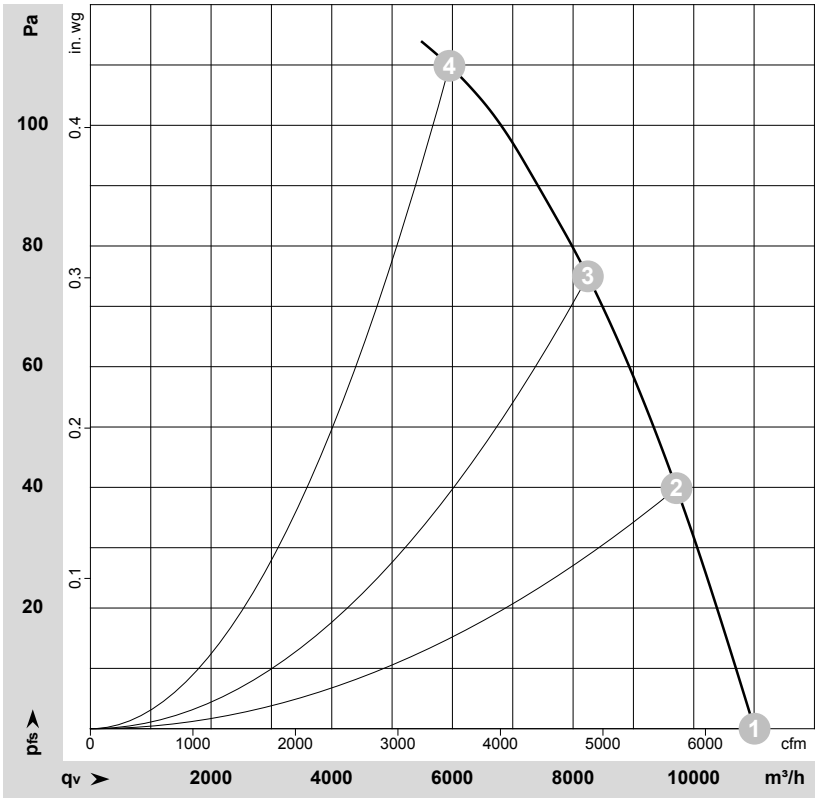
Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-107072-1

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}	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	1~	230	60	1100	542	2.39	70	76	75	11010	0	6480	0.00
2	1~	230	60	1060	595	2.59	66	72	71	9715	40	5715	0.16
3	1~	230	60	1010	645	2.80	62	68	67	8245	75	4855	0.30
4	1~	230	60	920	690	3.02	63	69	69	5950	110	3505	0.44

Wired = Wiring · U = Voltage · 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 · q_V = Air flow · p_{fs} = Pressure increase