

AC axial fan

sickle-shaped blades (S series)

with guard grille for full nozzle

S4E450-BK01-15 ebmpapst Datasheet

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Limited partnership · Headquarters Muldingen

Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Muldingen GmbH · Headquarters Muldingen

Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	S4E450-BK01-15	
Motor	M4E074-GA	
Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50
Method of obtaining data		fa
Valid for approval/standard		CE
Speed (rpm)	min ⁻¹	1400
Power consumption	W	245
Current draw	A	1.1
Capacitor	µF	8
Capacitor voltage	VDB	400
Capacitor standard		S0 (CE)
Max. back pressure	Pa	85
Max. back pressure	in. wg	0.34
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60
Starting current	A	2.8

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

		Actual	Req. 2015			
01 Overall efficiency η_{es}	%	33.1	30.5	09 Power consumption P_e	kW	0.32
02 Measurement category		A		09 Air flow q_v	m ³ /h	3820
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	100
04 Efficiency grade N		42.6	40	10 Speed (rpm) n	min ⁻¹	1315
05 Variable speed drive		No		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 = $1 + p_g / 100\,000\text{ Pa}$

LU-58270



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Technical description

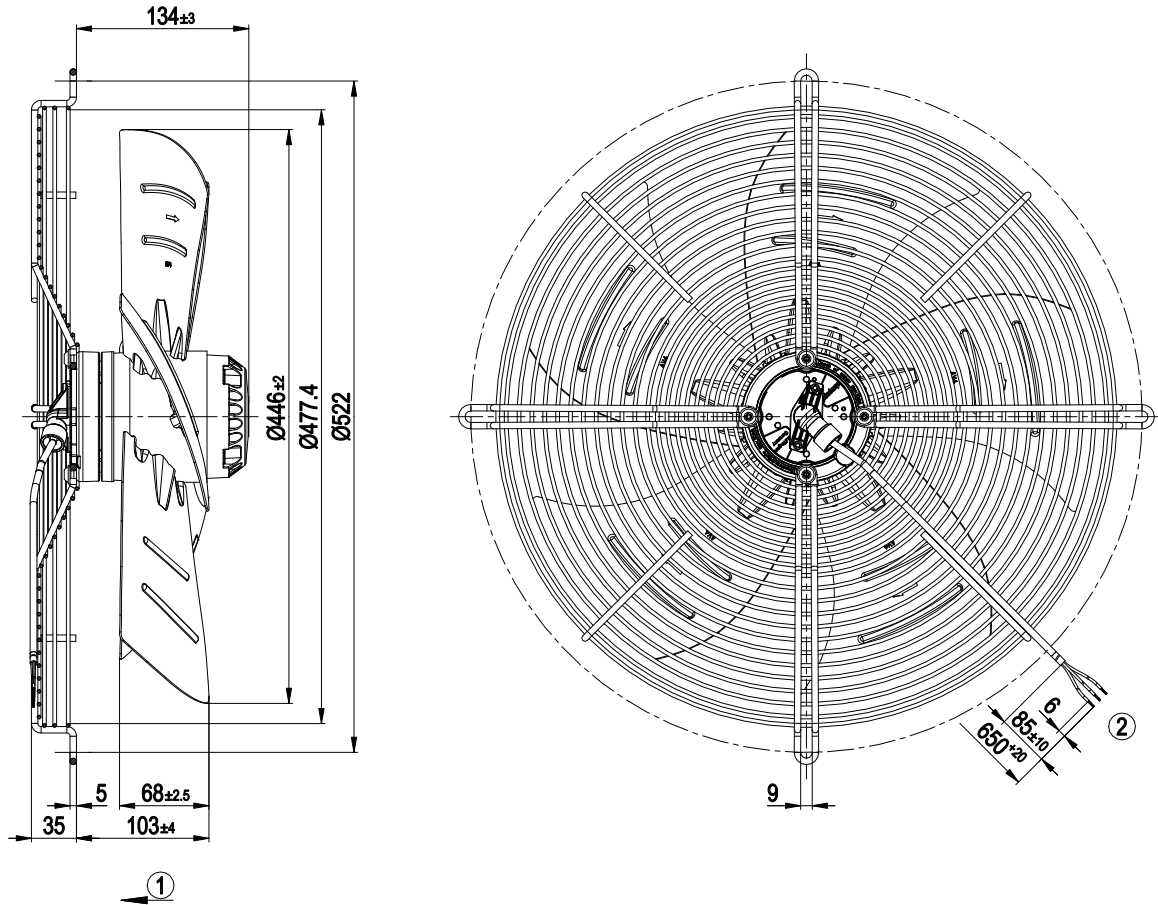
Weight	7.0 kg
Size	450 mm
Motor size	74
Rotor surface	Painted black
Blade material	Sheet steel, painted black
Guard grille material	Steel, phosphated and coated with black plastic (RAL 9005)
Number of blades	5
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent as per EN 60034-5
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2; 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)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Lateral
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE



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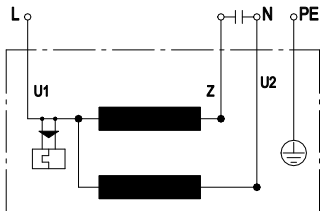
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Product drawing



1	Airflow direction "V"
2	Cable ETFE AWG20
	4x splice

Connection diagram



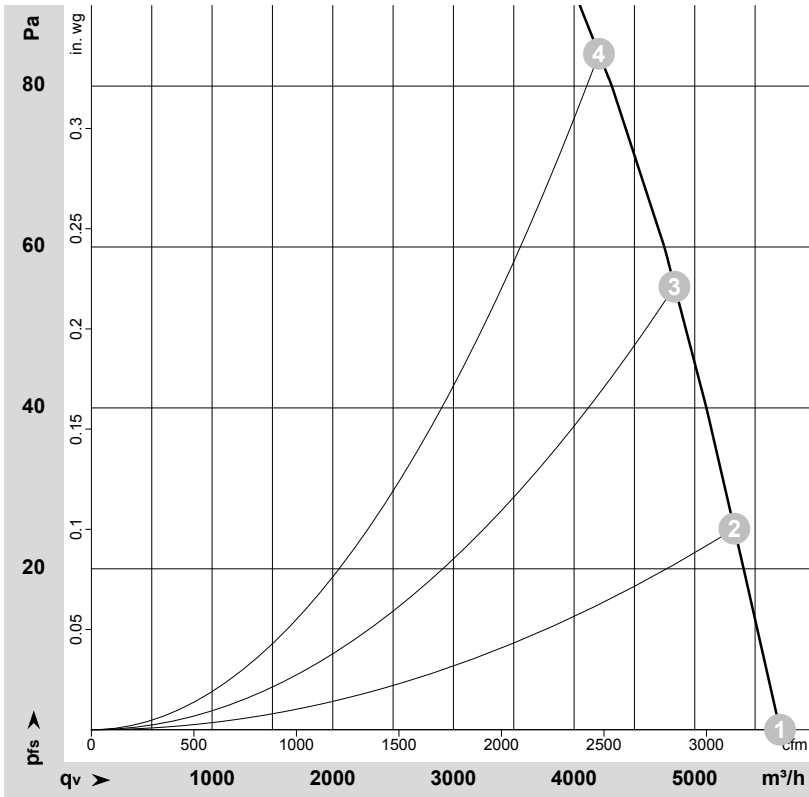
U1	blue	Z	brown	U2	black
PE	green/yellow				



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Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-58270-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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	q _v	P _{fs}	q _v	P _{fs}
		V	Hz	min ⁻¹	W	A	m ³ /h	Pa	cfm	in. wg
1	1~	230	50	1400	245	1.10	5705	0	3360	0.00
2	1~	230	50	1370	267	1.20	5330	25	3135	0.10
3	1~	230	50	1350	288	1.29	4830	55	2845	0.22
4	1~	230	50	1330	308	1.37	4205	85	2475	0.34

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_v = Air flow · P_{fs} = Pressure increase

