S4E450-BK01-15

AC axial fan

sickle-shaped blades (S series)

with guard grille for full nozzle

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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
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		42.6	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.32
09 Air flow q_v	m^3/h	3820
09 Pressure increase p_{fs}	Pa	100
10 Speed (rpm) n	min^{-1}	1315
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-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

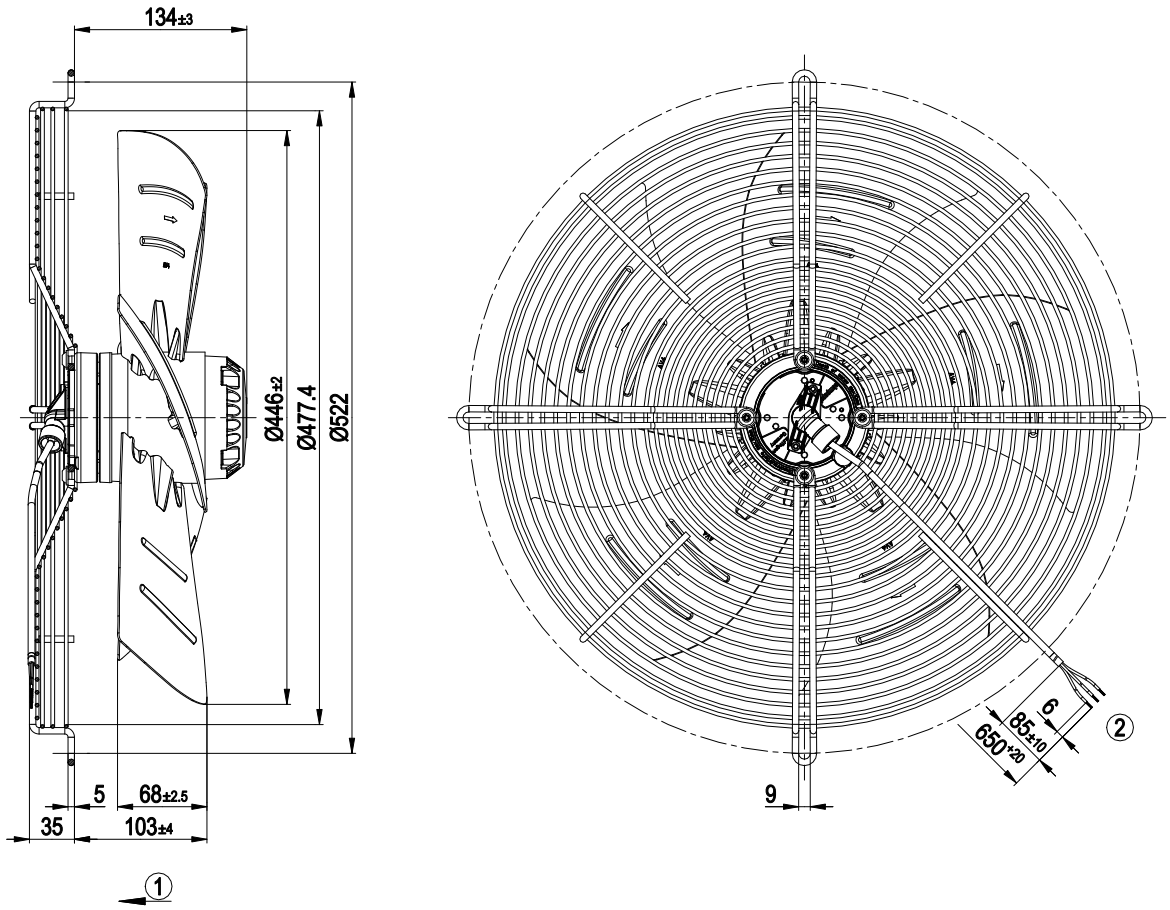
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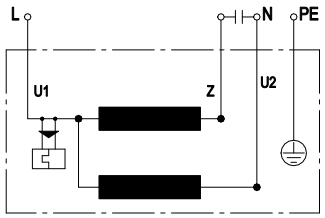
with guard grille for full nozzle

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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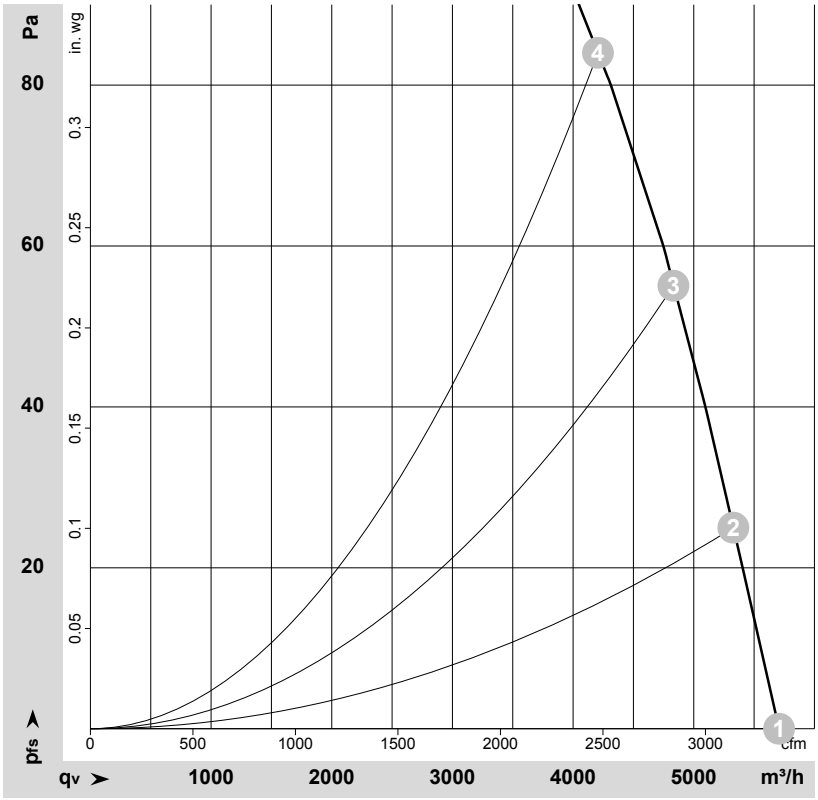
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-58270-1

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	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

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