S4E420-BU01-05

AC axial fan

sickle-shaped blades (S series)

with guard grille for full nozzle

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Nominal data

Type	**S4E420-BU01-05**
Motor	**M4E094-EA**

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}	1300	1430
Power consumption	W	280	370
Current draw	A	1.22	1.61
Capacitor	µF	7	7
Capacitor voltage	VDB	400	400
Max. back pressure	Pa	115	75
Max. back pressure	inH2O	0.46	0.3
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	70	65
Starting current	A	1.9	1.85

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}	%	30.1	30
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		40.1	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.26
09 Air flow q_v	m^3/h	3200
09 Pressure increase p_{fs}	Pa	89
10 Speed (rpm) n	min^{-1}	1325
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-67766

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Technical description

Weight	6.3 kg
Fan size	420 mm
Rotor surface	Painted black
Impeller material	PP plastic
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Airflow direction	"A"
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F4-1
Ambient temperature note	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at temperatures below -25°C (e.g. refrigeration applications) we recommend our 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	Via terminal box, capacitor integrated and connected
Motor protection	Thermal overload protector (TOP) internally connected
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

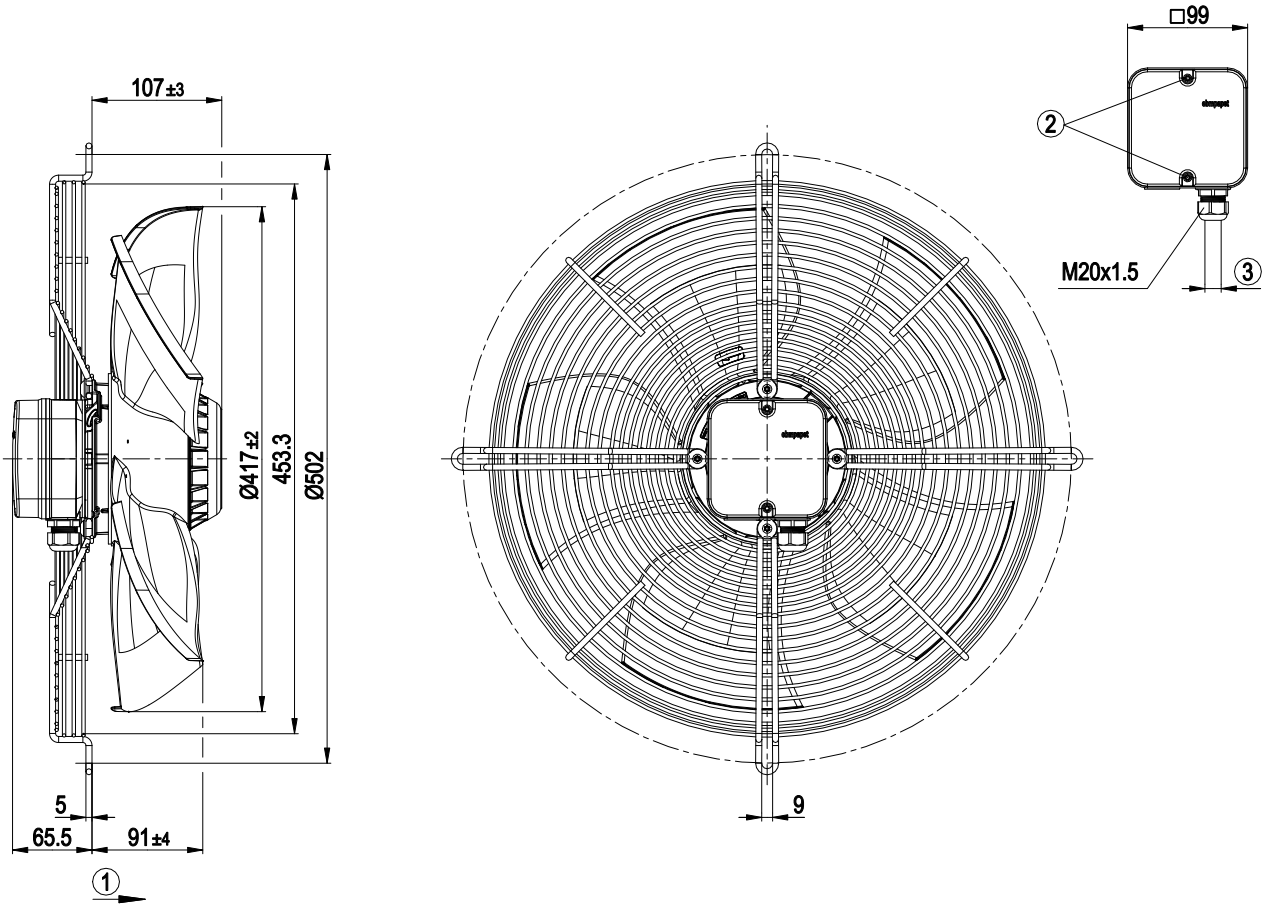
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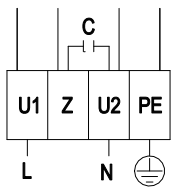
with guard grille for full nozzle

Product drawing



1	Direction of air flow "A"
2	Tightening torque 0.8 ± 0.15 Nm
4	Cable diameter min. 6 mm, max. 12 mm, tightening torque 2 ± 0.3 Nm

Connection diagram



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

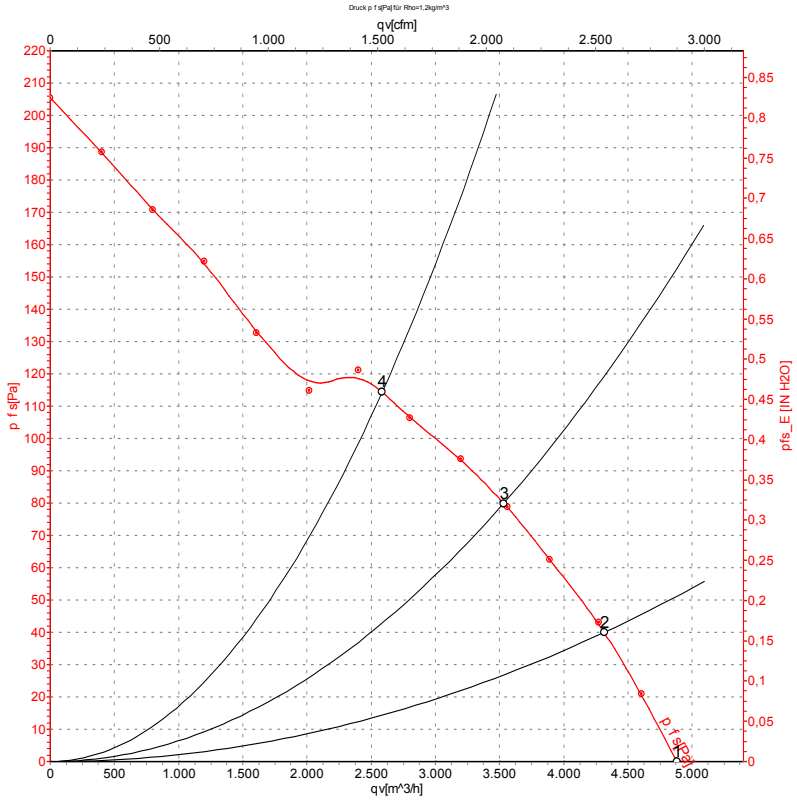
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Curves: Air performance 50 Hz



Measurement: LU-67766-1

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

	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	inH2O
1	230	50	1380	222	1.00	4880	0	2870	0.00
2	230	50	1355	240	1.07	4315	40	2540	0.16
3	230	50	1330	257	1.14	3530	80	2080	0.32
4	230	50	1300	280	1.22	2585	115	1520	0.46

U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

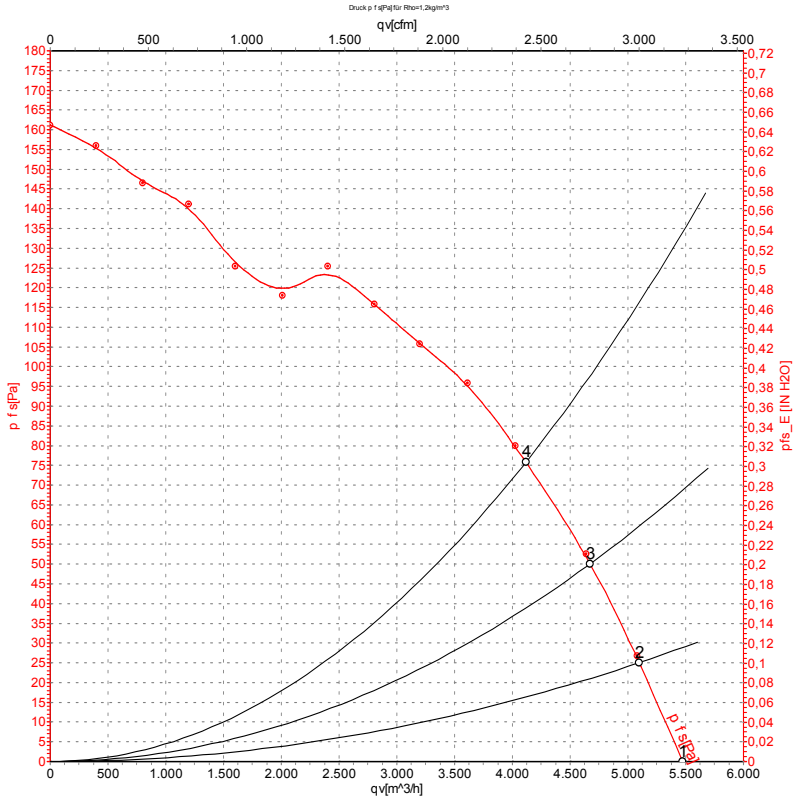
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Curves: Air performance 60 Hz



Measurement: LU-67767-1

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

	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	inH2O
1	230	60	1540	344	1.53	5470	0	3220	0.00
2	230	60	1510	353	1.56	5095	25	3000	0.10
3	230	60	1475	360	1.58	4670	50	2750	0.20
4	230	60	1430	370	1.61	4115	75	2425	0.30

U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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