W4E500-KM03-21

AC axial fan

sickle-shaped blades (S series)

with integrated diffuser

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**W4E500-KM03-21**
Motor	**M4E110-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}	1300	1370
Power consumption	W	680	900
Current draw	A	3.0	4.0
Capacitor	µF	12	12
Capacitor voltage	VDB	450	450
Capacitor standard		S0 (CE)	S0 (CE)
Max. back pressure	Pa	130	100
Max. back pressure	in. wg	0.52	0.4
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	60	40
Starting current	A	6.65	6.0

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}	%	32.5	32.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		40	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.65
09 Air flow q_v	m^3/h	6490
09 Pressure increase p_{fs}	Pa	116
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-182021

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Technical description

Weight	14.1 kg
Size	500 mm
Motor size	110
Rotor surface	Painted black
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Fan housing material	PP plastic
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
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	See fitting instructions
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
Motor protection	Thermal overload protector (TOP) with basic insulation
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2010); EN 61800-5-1; CE
Approval	EAC; VDE

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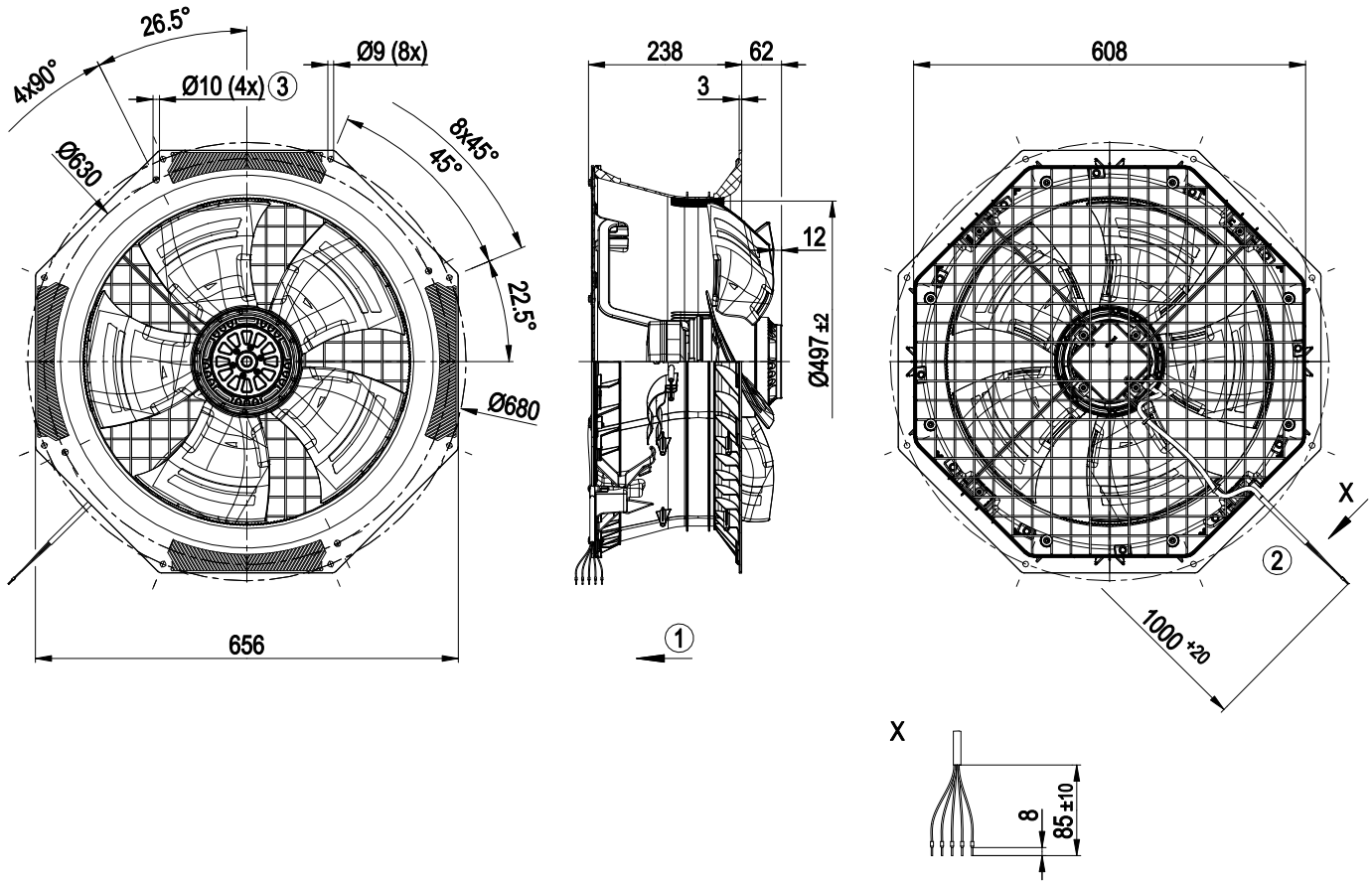
Product drawing



1	Airflow direction "V"
2	Cable silicone 5G 0.5 mm², 5x crimped ferrules
3	Mounting holes for FlowGrid

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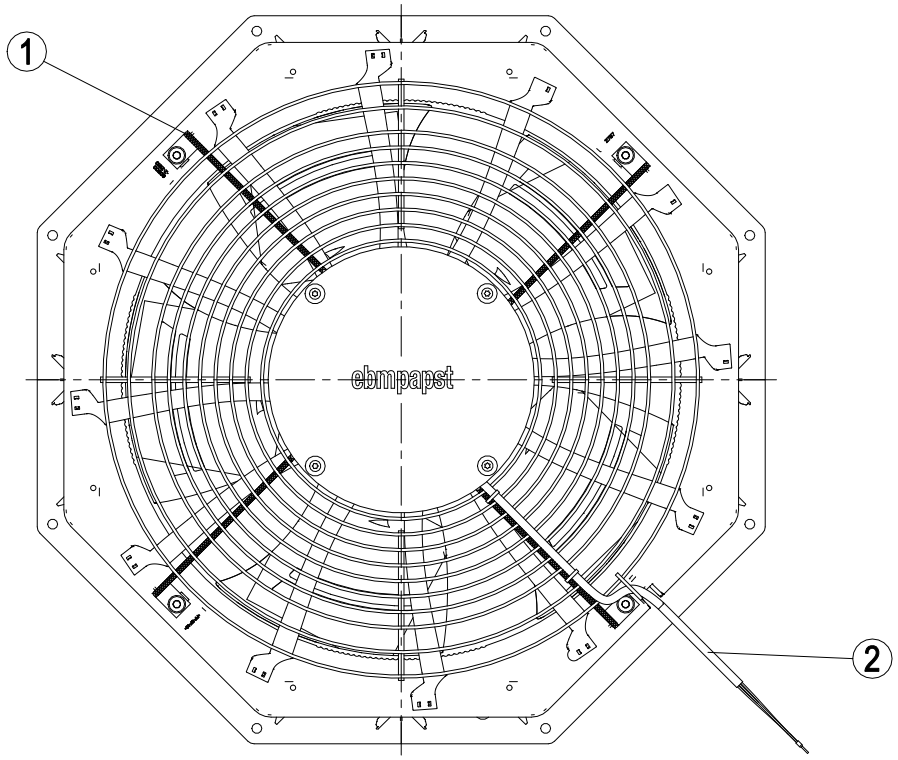
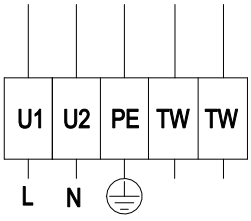


1	Installation position: Shaft horizontal (install support struts only in X-position as illustrated) or rotor on bottom
2	For horizontal shaft installation position, the cable exit must be at the bottom right.

Connection diagram



L	= U1 = blue
N	= U2 = black
PE	green/yellow
TW	Thermal overload protector gray (2x)

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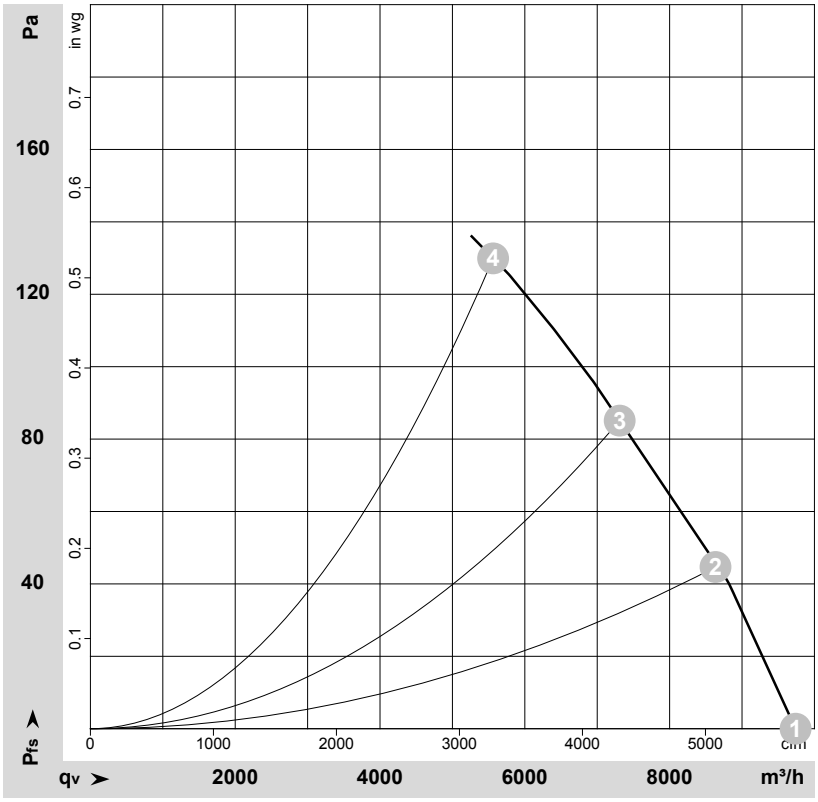
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-181960-1

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	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	230	50	1385	501	2.20	68	75	77	9740	0	5735	0.00
2	230	50	1360	564	2.47	66	73	75	8635	45	5080	0.18
3	230	50	1330	624	2.74	64	72	74	7310	85	4305	0.34
4	230	50	1300	680	3.00	65	73	75	5560	130	3275	0.52

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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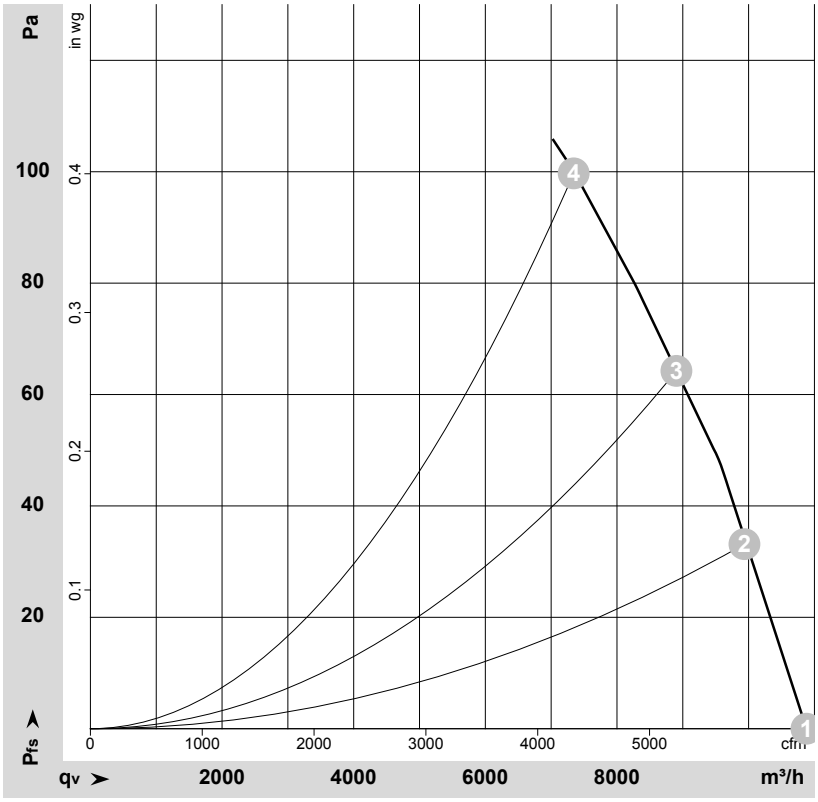
Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-182017-1

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	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	230	60	1550	774	3.38	70	78	79	10880	0	6405	0.00
2	230	60	1500	815	3.57	68	76	77	9935	35	5850	0.14
3	230	60	1450	850	3.74	67	74	76	8905	65	5240	0.26
4	230	60	1370	900	4.00	65	73	74	7340	100	4320	0.40

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