AC axial fan - AxiCool

sickled blades (S series)

W4D500-KJ03-11 ebmpapst Datasheet
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Nominal data

Type	**W4D500-KJ03-11**
Motor	**M4D110-EF**

Phase		3~
Nominal voltage	VAC	400
Connection		Δ
Frequency	Hz	50
Type of data definition		ml
Valid for approval / standard		CE
Speed (rpm)	min^{-1}	1350
Power input	W	710
Current draw	A	1.4
Max. back pressure	Pa	170
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	40
Starting current	A	4.6

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data in accordance with ecodesign regulation EU 327/2011

		Actual	Request 2015
01 Overall efficiency η_{es}	%	38	32.7
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		45.3	40
05 Variable speed drive		No	

09 Power input P_e	kW	0.7
09 Air flow q_v	m^3/h	5745
09 Pressure increase p_{fs}	Pa	168
10 Speed (rpm) n	min^{-1}	1345
11 Specific ratio*		1.00

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-177629

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Technical features

Mass	13.7 kg
Size	500 mm
Surface of rotor	Coated in black
Material of blades	Press-fitted sheet steel blank, sprayed with PP plastic
Material of wall ring	PP plastic
Streamer material	PP plastic
Material of guard grille	Steel, coated in black plastic (RAL9005)
Number of blades	5
Direction of air flow	"V"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity (F)/environmental protection class (H)	H2
Note ambient temperature	If there is a risk of ice formation, the fan is only to be operated with heating tape in the wall ring. Contact ebm-papst for more details.
Max. permissible ambient motor temp. (transp./ storage)	+70 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing with anti-freezing grease
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) brought out, basic insulation
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60034-1 (2010); EN 61800-5-1; CE
Approval	VDE; EAC

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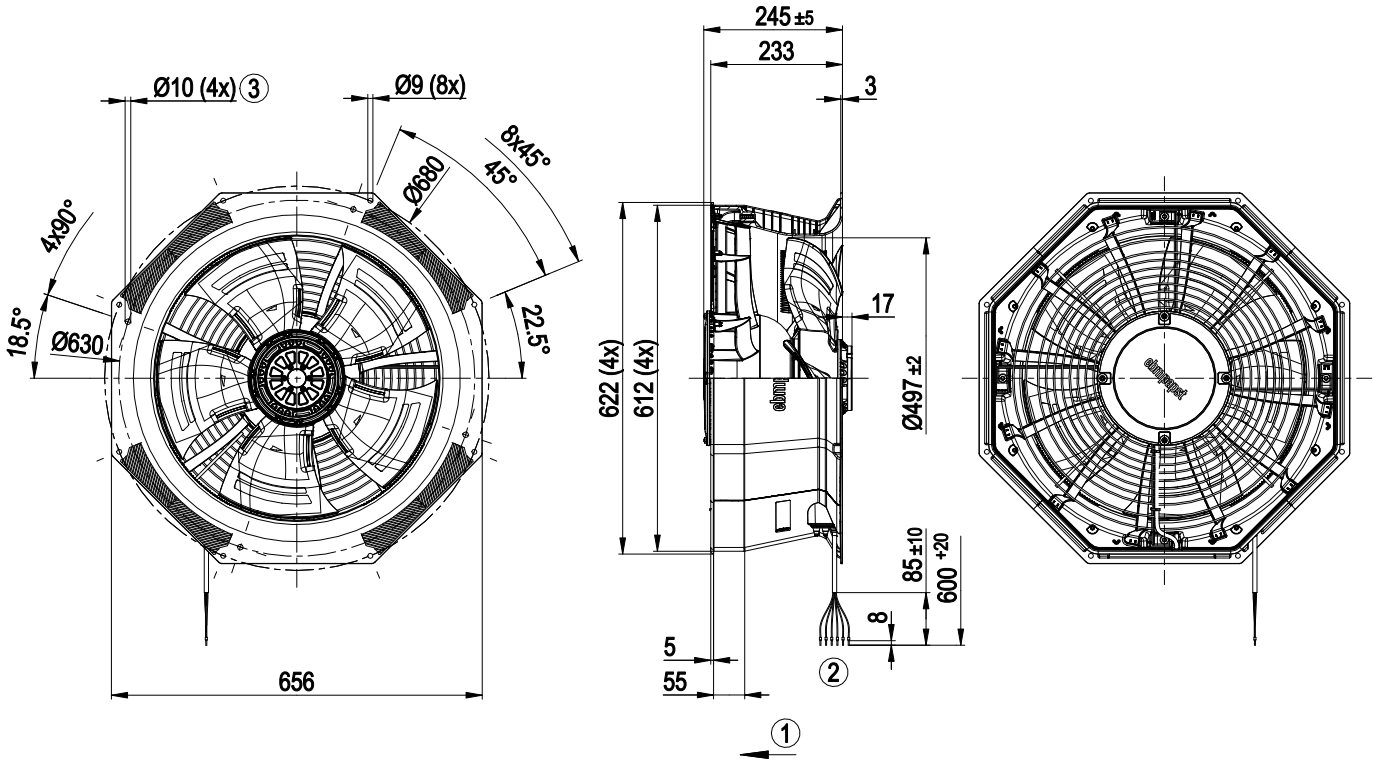
Product drawing



	Pay attention to installation position! The struts of the guard grille must be in X-position. See Section on Connection and Start-up in the operating instructions.
1	Direction of air flow "V"
2	Connection line silicone 6G 0.5 mm², 6x crimped core-end sleeves
3	Mounting holes for FlowGrid

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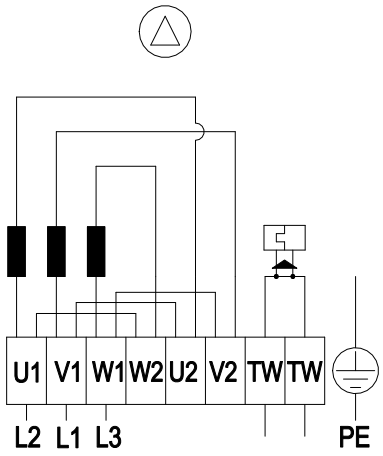
Connection screen



Three-phase motor equipped with TOP
Change in direction of rotation by reversing two phases

Δ	Delta connection
L1	blue
L2	black
L3	brown
TW	Thermal overload protector grey (2x)
PE	green/yellow

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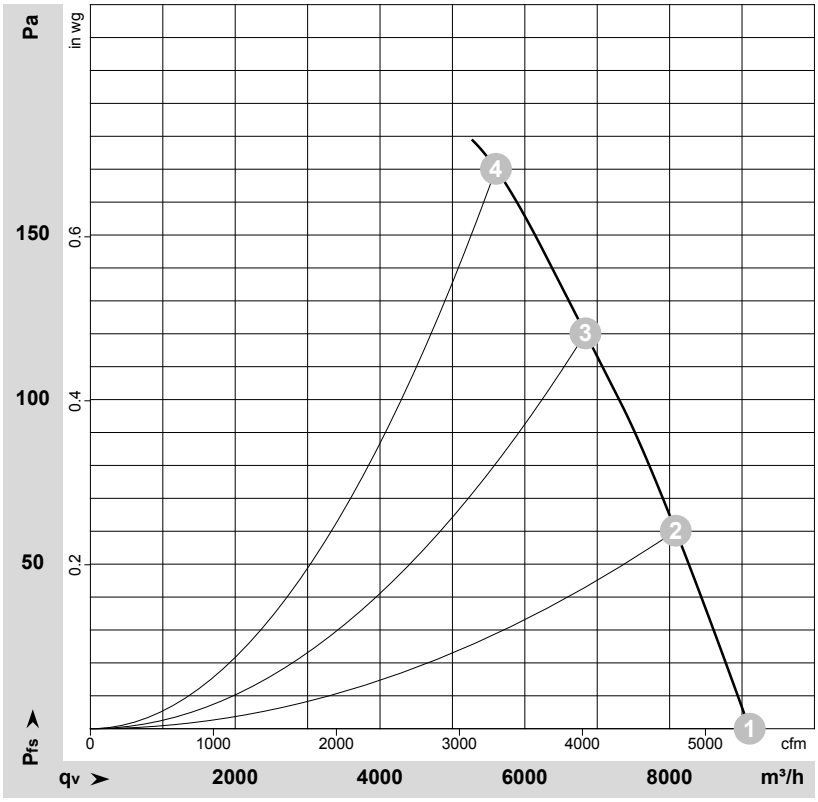
Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-177629-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	Conn.	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	inH2O
1	Δ	400	50	1395	526	1.29	71	79	80	9105	0	5360	0.00
2	Δ	400	50	1375	596	1.34	69	77	78	8085	60	4760	0.24
3	Δ	400	50	1360	655	1.40	66	75	76	6835	120	4025	0.48
4	Δ	400	50	1350	710	1.40	68	76	78	5600	170	3295	0.68

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase