

# AC axial fan

sickle-shaped blades (S series), single-intake

Fan housing with guard grille

W4E315-CA05-51 ebmpapst Datasheet

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## Nominal data

<b>Type</b>	<b>W4E315-CA05-51</b>	
<b>Motor</b>	<b>M4E068-EC</b>	
Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	60
Method of obtaining data		fa
Valid for approval/standard		-
Speed (rpm)	min <sup>-1</sup>	1610
Power consumption	W	135
Current draw	A	0.60
Capacitor	μF	4
Capacitor voltage	VDB	400
Capacitor standard		S0 (CE)
Max. back pressure	Pa	80
Max. back pressure	inH <sub>2</sub> O	0.32
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment  
Subject to change



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## Technical description

<b>Weight</b>	4.8 kg
<b>Fan size</b>	315 mm
<b>Rotor surface</b>	Painted black
<b>Blade material</b>	Sheet steel, painted black
<b>Fan housing material</b>	Sheet steel, pre-galvanized and coated with black plastic (RAL 9005)
<b>Guard grille material</b>	Steel, coated with black plastic (RAL 9005)
<b>Number of blades</b>	5
<b>Airflow direction</b>	"V"
<b>Direction of rotation</b>	Counterclockwise, viewed toward rotor
<b>Degree of protection</b>	IP44; installation- and position-dependent as per EN 60034-5
<b>Insulation class</b>	"F"
<b>Moisture (F) / Environmental (H) protection class</b>	H0+
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+ 80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	- 40 °C
<b>Installation position</b>	Shaft horizontal or rotor on bottom; rotor on top on request
<b>Condensation drainage holes</b>	On rotor side
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)</b>	< 0.75 mA
<b>Motor protection</b>	Thermal overload protector (TOP) internally connected
<b>With cable</b>	Lateral
<b>Protection class</b>	I (with customer connection of protective earth)
<b>Conformity with standards</b>	EN 60335-1
<b>Approval</b>	CSA C22.2 No. 113; UL 507

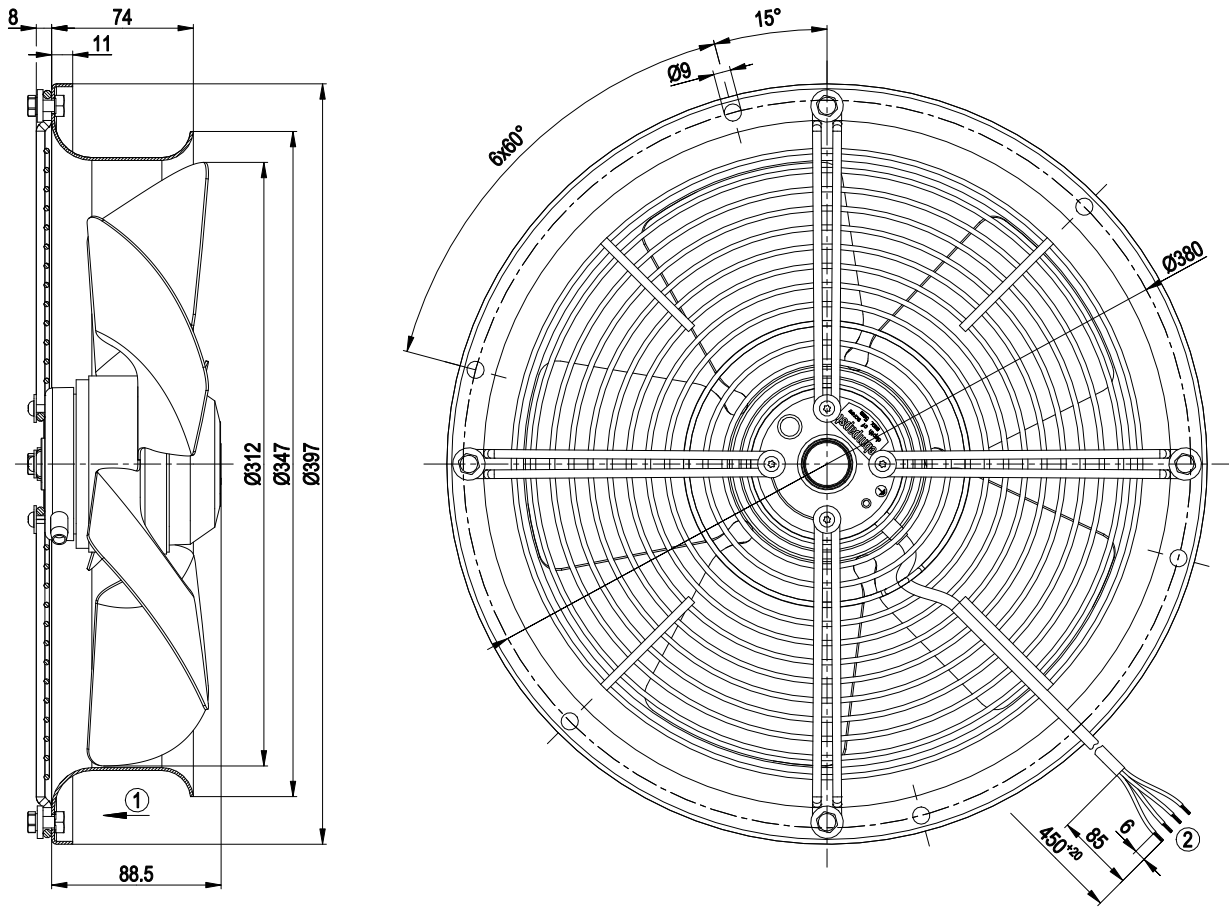


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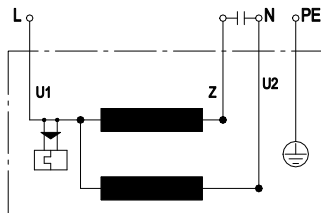
Fan housing with guard grille

## Product drawing



- |   |  |
|---|--|
| 1 | Direction of air flow "V"                                  |
| 2 | Cable silicone 4G 0.5 mm <sup>2</sup> , 4x crimped splices |

## Connection diagram



U1	blue	Z	brown	U2	black
PE	green/yellow				

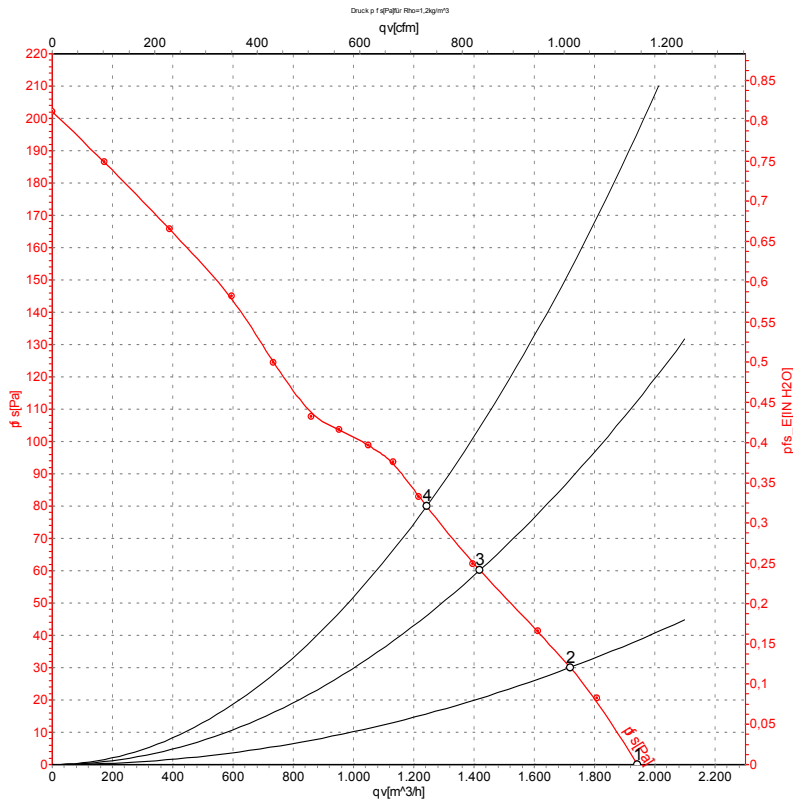


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## Curves: Air performance 50 Hz



Measurement: LU-56449-1

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 <sub>e</sub>	I	q <sub>v</sub>	P <sub>fs</sub>	q <sub>v</sub>	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa	cfm	inH <sub>2</sub> O
1	230	50	1400	120	0.53	1940	0	1140	0.00
2	230	50	1380	122	0.54	1720	30	1010	0.12
3	230	50	1370	124	0.55	1420	60	835	0.24
4	230	50	1355	130	0.57	1240	80	730	0.32

U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · q<sub>v</sub> = Air flow · P<sub>fs</sub> = Pressure increase

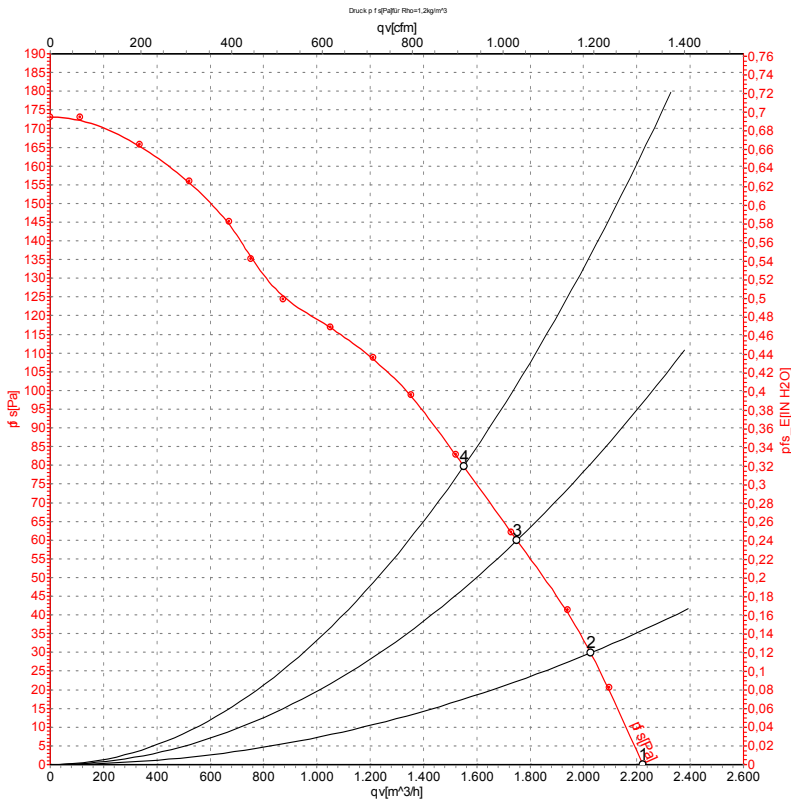


# AC axial fan

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Fan housing with guard grille

## Curves: Air performance 60 Hz



Measurement: LU-56450-1

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

	U	f	n	Pe	I	qv	ps	qv	ps
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa	cfm	inH2O
1	230	60	1610	135	0.60	2220	0	1310	0.00
2	230	60	1570	138	0.60	2025	30	1195	0.12
3	230	60	1550	142	0.62	1750	60	1030	0.24
4	230	60	1540	144	0.63	1550	80	915	0.32

U = Power supply · f = Frequency · n = Speed (rpm) · Pe = Power consumption · I = Current draw · qv = Air flow · ps = Pressure increase

