

Product Data Sheet 9650

ebmpapst

The engineer's choice



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1 General

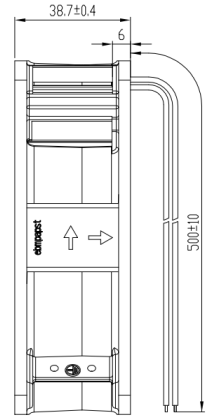
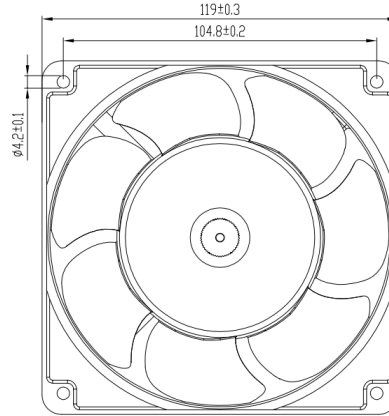
Fan type	AC axial fan
Rotational direction looking at rotor	Counter clockwise
Airflow direction	Air exhaust over struts
Bearing system	sleeve bearing
Mounting position	shaft horizontal
Nominal voltage	230V/50Hz
Nominal speed and range	2600rpm \pm 10%
Air flow	148m ³ /h at free air flow
Input power	16W
Current	85mA
Noise	45 dB(A) at free air flow
IP class	IP20
Environment	Temperature -10~55°C Relative humidity 0%-95%

2 Mechanics**2.1 General**

Width	119,0mm	
Height	119,0mm	
Depth	38,7mm	
Housing material	Metal	
Impeller material	Plastic No surface treatment for salt fog resistance	
Max. torque when mounted across both mounting flanges Screw size	wire outlet corner: 150 Ncm remaining corners: 200 Ncm ISO 4762 - M4 degreased, without an additional brace and without washer	

2.2 Connections

Electrical connection	Wires	UL3266 125°C 300V
Length of lead wire	500 mm	
Tolerance	+/- 10 mm	
Wire gauge (AWG)	20	
Insulation diameter	1,6mm	
Contact	-	



3 Operation Data

3.1 Electrical Operating Data

Measurement conditions: Measured with a double chamber outlet rig acc. to DIN EN ISO 5801.
 Normal air density = 1,2 kg/m³; Temperature 23°C +/- 3°C;
 In the intake and outlet area should not be any solid obstruction within 0,5 m.

$\Delta p = 0$: corresp. to free air flow (see section 3.4)
 I: corresp. to RMS current

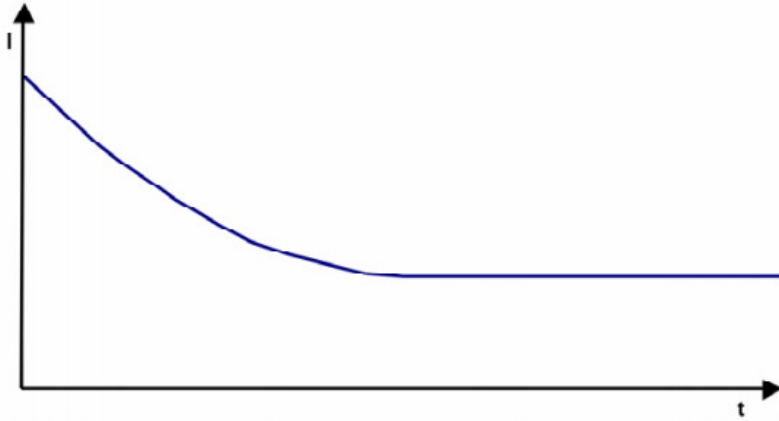
Features	Condition	Symbol	Values
Frequency	$\Delta p = 0$	f	50 Hz
Nominal voltage Tolerance	$\Delta p = 0$	U_N	230V +6,0% -10,0%
Power consumption Tolerance	$\Delta p = 0$	P	16,0 W +6,0% -10,0%
Speed Tolerance	$\Delta p = 0$	N	2.600 1/min +10,0% -10,0%

3.2 Operating Data -Electrical Interface –Output

Tacho type	None
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3.3 Electrical Features

Locked rotor protection	Impedance
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3.4 Aerodynamic

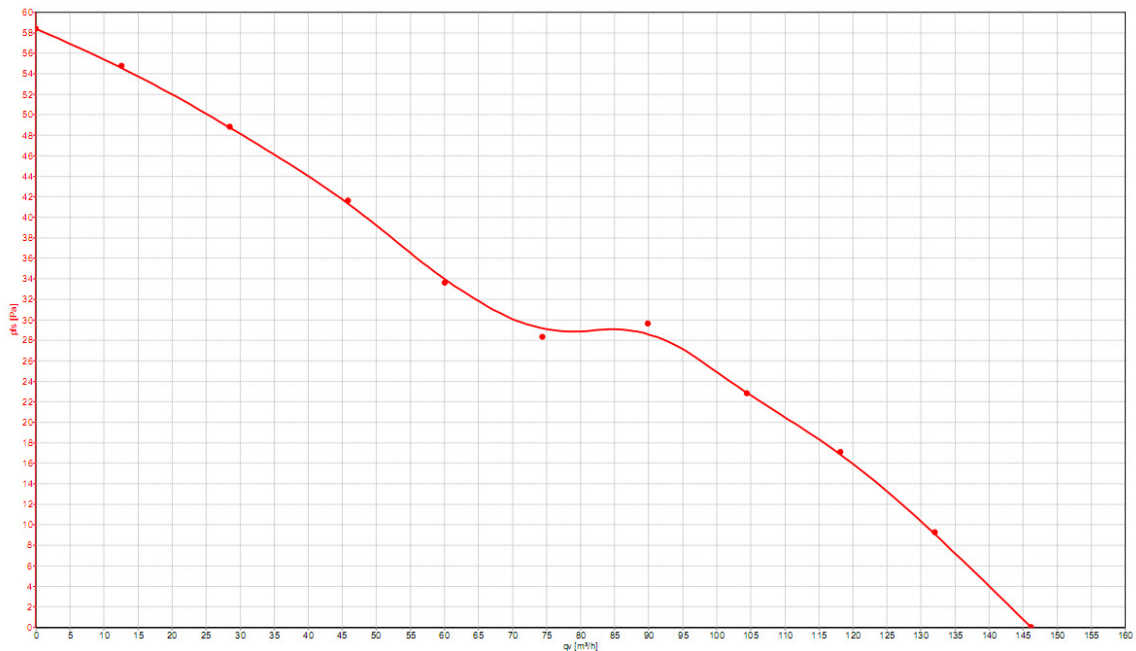
Measurement conditions: Measured with a double chamber outlet rig acc. to DIN EN ISO 5801. Normal air density = 1,2 kg/m³; Temperature 23°C +/- 3°C; In the intake and outlet area should not be any solid obstruction within 0,5 m.

Operation condition:

2600 1/min at free air flow Frequency:50 Hz

Max. free-air flow ($\Delta p = 0 / V = \text{max.}$)	148,0 m ³ /h
Max. static pressure ($\Delta p = \text{max.} / V = 0$)	58 Pa

Flow Rate



3.5 Sound Data

Measurement conditions: Sound pressure level: 1 Meter distance between microphone and the air intake. Sound power level: Acc. to DIN 45635 part 38 (ISO 10302) Measured in a semianchoic chamber with a background noise level of Lp(A) <16 dB(A) For further measurement conditions see section 3.4

Operation condition:

2600 1/min at free air flow

Frequency:50 Hz

Optimal operating point		
Sound power level at the optimal operating point	5,3 bel(A)	
Sound pressure level at free air flow, measured in rubber bands	45 dB(A)	

4 Environment

4.1 General

Min. permitted ambient temperature TU min.	-10 °C	
Max. permitted ambient temperature TU max.	55 °C	
Min. permitted storage temperature TL min.	-40 °C	
Max. permitted storage temperature TL max.	80 °C	

4.2 Climatic requirements*)

Humidity requirements	humid heat, constant; according to DIN EN 60068-2-78	
Water exposure	IPX0	
Dust requirements	IP2X	
Salt fog requirements	None	
Harmful gas requirements	None	

*) Permitted application area:

The product is intended for use in sheltered rooms with controlled temperature and controlled humidity. Directly exposure to water must be avoided.

5 Safety

5.1 Electrical Safety

Dielectric strength DIN EN 60950 (VDE 0805) and DIN EN 60335 (VDE0700) A.) Type test Measuring conditions: After 48h of storage at 95% R.H. and 25 °C. No arcing or breakdown is allowed! All connections together to ground. B.) Routine test Measuring conditions: At indoor climate. No arcing or breakdown is allowed! All connections together to ground.	1500 VAC / 1 Min. 1800 VAC / 1 Sec.
Isolation resistance Measuring conditions: After 48h of storage at 95% R.H. and 25 °C measured with U=500 VDC for 1 min.	RI > 50 MOhm

clearance / creepage distance	2,0mm / 1,8 mm
Protection class	I

5.2 Approval Tests

VDE	Yes/Aproval acc. to EN 60950 (VDE 0805) - Information technology equipment
CCC	Yes/ GB 12350 Safety Requirements for small Power Motors

6 Reliability

6.1 General

Life expectancy L10 at TU = 40 °C	37.500 h	
Life expectancy L10 at TU max.	27.500 h	

preliminary

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