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> ebm-papst K3G250-AV29-B4 Centrifugal EC Fan Instruction Manual

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1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the ebm-papst K3G250-AV29-B4 Centrifugal EC Fan. Please read this manual thoroughly before attempting to install or operate the unit. Retain this manual for future reference.

2. SAFETY INFORMATION

Warning: Improper installation, operation, or maintenance can lead to serious injury or damage to the equipment. Always follow local electrical codes and safety regulations.

- Ensure the power supply is disconnected before any installation, maintenance, or repair work.
- Only qualified personnel should perform electrical connections and installation.
- Do not operate the fan if any part is damaged or if the protective guards are removed.
- Avoid contact with moving parts during operation.
- Ensure proper grounding of the unit.
- The fan is designed for specific ambient temperatures; operating outside this range (-25 / +40°C) may cause damage or malfunction.

3. PRODUCT OVERVIEW

The ebm-papst K3G250-AV29-B4 is a high-performance centrifugal EC fan designed for ventilation and heat dissipation applications. It features an M3G084-FA motor and is constructed with aluminum for durability. The fan is equipped with 7 blades and offers a high degree of protection (IP54).



Figure 1: ebm-papst K3G250-AV29-B4 Centrifugal EC Fan. This image shows the black, square-shaped centrifugal fan unit with its central intake opening and mounting holes. The fan is designed for industrial ventilation and cooling applications.

4. SPECIFICATIONS

Parameter	Value
Model	K3G250-AV29-B4
Brand	ebm-papst
Type	Centrifugal Fan
Motor	M3G084-FA
Nominal Voltage	230VAC
Nominal Voltage Range	200...277VAC
Phase	1~

Parameter	Value
Frequency	50/60Hz
Speed	3450RPM (min-1)
Power Consumption	750W
Current Draw	3.3A
Min. / Max. Ambient Temperature	-25 / +40°C
Weight	10.1KG (22.27 Pounds)
Size	250mm
Number of Blades	7
Degree of Protection	IP54
Insulation Class	B
Motor Bearing	Ball bearing
Material	Aluminum

5. SETUP AND INSTALLATION

The ebm-papst K3G250-AV29-B4 fan requires careful installation to ensure optimal performance and safety. It is recommended that installation be performed by a qualified technician.

5.1 Unpacking

- Carefully remove the fan from its packaging.
- Inspect the unit for any signs of damage during transit. Do not install a damaged unit.
- Verify that all components listed in the packing slip are present.

5.2 Mounting

- Mount the fan securely using appropriate fasteners to a stable surface or ductwork.
- Ensure there is adequate clearance around the fan for proper airflow and maintenance access.
- Avoid mounting in locations subject to excessive vibration or direct exposure to harsh elements beyond its IP54 rating.

5.3 Electrical Connection

- Ensure the main power supply is OFF before making any electrical connections.
- Connect the fan to a 230VAC, 50/60Hz single-phase power supply within the nominal voltage range of 200-277VAC.
- Follow the wiring diagram provided with the unit (if applicable) or consult a qualified electrician.
- Ensure all connections are secure and properly insulated.
- Properly ground the fan unit to prevent electrical hazards.

6. OPERATING INSTRUCTIONS

Once installed and electrically connected, the fan is ready for operation.

- **Initial Start-up:** After ensuring all safety precautions are met, switch on the power supply to the fan.
- **Monitoring:** During initial operation, observe the fan for any unusual noises, vibrations, or signs of malfunction.
- **Continuous Operation:** The fan is designed for continuous operation within its specified parameters.
- **Shut-down:** To turn off the fan, disconnect the power supply.

7. MAINTENANCE

Regular maintenance ensures the longevity and efficient operation of your ebm-papst K3G250-AV29-B4 fan. Always disconnect power before performing any maintenance.

7.1 Cleaning

- Periodically inspect the fan blades and housing for dust, dirt, or debris accumulation.
- Clean the fan using a soft brush or compressed air. Avoid using harsh chemicals or abrasive materials.
- Ensure the fan is completely dry before reconnecting power.

7.2 Inspections

- Check electrical connections for tightness and signs of wear or corrosion.
- Inspect the mounting hardware to ensure the fan remains securely fastened.
- Listen for any unusual noises during operation that might indicate bearing wear or imbalance.

7.3 Bearing Lubrication

The motor features ball bearings, which are typically sealed and maintenance-free for their operational lifespan. Refer to the motor's specific documentation for any lubrication requirements, if applicable.

8. TROUBLESHOOTING

This section outlines common issues and potential solutions. For problems not listed here, contact technical support.

Problem	Possible Cause	Solution
Fan does not start	No power supply Incorrect wiring Motor fault	Check power connection and circuit breaker Verify wiring against diagram Contact technical support
Excessive noise or vibration	Loose mounting Debris on blades Bearing wear Imbalance	Tighten mounting bolts Clean blades (power off) Contact technical support for bearing inspection Contact technical support
Reduced airflow	Blocked intake/exhaust Dirty blades Motor running slow	Clear obstructions Clean blades (power off) Check power supply voltage; contact technical support
Overheating	Insufficient ventilation Motor overload High ambient temperature	Ensure proper airflow around motor Verify fan is not operating against excessive back pressure Ensure ambient temperature is within specified range

9. WARRANTY AND SUPPORT

For warranty information, please refer to the documentation provided at the time of purchase or contact your supplier. All

units are fully tested to ensure quality and reliability.

For technical assistance, spare parts, or service inquiries, please contact your authorized ebm-papst distributor or the vendor from whom the product was purchased. When contacting support, please have your model number (K3G250-AV29-B4) and serial number (if applicable) ready.