

Safety Data Sheet for AC/DC Compact Fans and Drive Systems

EN

This safety data sheet contains information regarding the potential hazards that can occur when using the product. Safety information must always be observed.

The complete technical data and the operating instructions for the AC/DC compact fans and the drive systems can be viewed and downloaded at www.ebmpapst.com.

Pictograms

The following pictogram is used in this document:



Important information regarding the product or parts of the operating instructions.

INFO

The following pictograms are used on the product and/or the packaging from ebm-papst as hazard warnings.



General warning



Warning about dangerous electric voltage



Warning about a hot surface



Warning about crushing hazard/hand injuries



Warning about rotating fan blades

Personal protective equipment

In order to prevent cuts and injuries caused by falling parts as well as hearing damage, the following personal protective equipment must be worn:



Protective gloves



Safety shoes



Hearing protection

In order to avoid damage to electronic components, the wearing of ESD (electrostatic discharge) protective equipment is expressly recommended during assembly.



ESD protective equipment

Proper use

The product is intended, when used in accordance with regulations, for installation in stationary structures and machines in the industrial sector and must only be electrically operated when installed!

- Thus, commissioning is prohibited until it has been determined that this drive system, together with the structure into which the drive is installed, corresponds with the safety requirements of the Machinery Directive.
- This product is not intended for end users! Use in a residential environment is not provided for without further testing and use of correspondingly adapted EMC protective measures.
- The electronic module is an installation product. It is only intended for use within devices and does not have any independent function. It is not intended for transfer to end customers.

- All motor electronic combinations must be qualified by the final manufacturer within its intended use and validated for overload and block safety. The application manufacturer is responsible for the final product and must ensure sufficient safety precautions.

Design-dependent exclusion

Due to the design, use is excluded with the following application areas and may lead to hazards and device damage:

- When there are special requirements placed on failsafe operation
- In aircraft and spacecraft
- In rail and road vehicles
- In ships
- In potentially explosive areas (explosion-protection area)
- When operating in the vicinity of combustible substances or components
- When using the product as a safety component and/or having the product take on safety-relevant functions

Personnel training

Only trained and qualified electricians may install the product, execute test runs, or carry out work on the product.

Furthermore, the electrician must be familiar with the following directives:

- Machinery Directive MSR [*measurement and control technology*] 2006/42/EC
- Low Voltage Directive 2006/95/EC
- EMC Directive 2004/108/EC

Standards and Directives

- The product is not subject to Low Voltage Directive 2006/95/EC, because the rated operating voltage is not within the voltage range of 75 V DC to 1500 V DC.
- The MSR Machinery Directive is applicable because the product is considered to be an "incomplete machine" according to Article 2, paragraph g), MSR 2006/42/EC.

Electric and electromagnetic safety

- Check the electric equipment of the drive system regularly.
- Only use lines and plug connections approved by ebm-papst.
- Remedy defective lines and loose connections immediately.
- Provide suitable measures for avoiding impermissible electromagnetic emitted interference.
- Provide suitable measures against high-frequency EMC radiation.
- Ensure EMC capability in the end unit/installed state.
- Use control units to impact electromagnetic radiation.

Mechanical safety

- Only carry out work on switched-off systems/machines.
- Provide for sufficient cooling.
- Only remove safety devices for repair and installation work on the drive system or on the finished machine.

Safety

1. Electrical safety



DANGER

Risk of fatal injury from electric shock!

Conducting installation and maintenance work with applied voltage can cause severe bodily injury or even death.

- ▶ Before working on the product, switch off electric voltage and ensure it cannot be unintentionally switched back on. Only connect product to electrical circuits that can be switched off using an all-pole disconnect switch.

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2. Electrical safety for DC compact fans only



CAUTION

Damage to product caused by excessively high voltages!

The products function in the low voltage range. Excessively high voltages may cause damage.

- ▶ Only use PELV (Protective Extra-Low Voltage) electrical circuits in accordance with IEC 60204-1 for the electric supply.

3. Electromagnetic radiation



DANGER

Risk of fatal injury from electromagnetic radiation!

The product is installed in structures in which electric and electromagnetic components are used. These components can impact pacemakers, metal implants, or hearing aids and cause severe bodily injuries.

- ▶ Persons having a pacemaker, metal implant, or hearing aid must not be in the vicinity of the product.
- ▶ Ensure the EMC compatibility of the entire system.

4. Mechanical safety



CAUTION

Risk of injury caused by rotating fans!

Rotating fans, ventilation wheels, or motors may cause cuts.

- ▶ Provide sufficient contact protection.
- ▶ Do not remain in the hazardous area.
- ▶ Do not wear any loose or hanging clothing or jewelry when working with moving parts.
- ▶ Protect long hair with a hairnet.
- ▶ Only carry out work on switched-off systems/machines.

Connecting and commissioning

1. Automatic startup



CAUTION

Risk of injury from automatic startup!

The product is a built-in part and does not have any electric circuit breaker. After the electric voltage is switched on, the motor with the fan wheel will run automatically.

- ▶ Only connect product to electrical circuits that can be switched off using an all-pole disconnect switch. After switching off the voltage, ensure that it cannot be unintentionally switched back on.

Operation

1. Hot surface



CAUTION

Risk of burns due to high temperatures on housing parts!

Hot housing parts may cause burns.

- ▶ Ensure sufficient contact protection.

Maintenance/Repair

The operating electronics are maintenance-free over the intended lifetime. Repairs to the product may only be carried out by electricians or ebm-papst.

Cleaning

Damage or faulty function may arise from the following when cleaning the device:

- Cleaning with a water jet or high-pressure cleaner.
- Using cleaning agents containing acids, bases, or solvents.
- Using pointy or sharp-edged objects.

Transport/Storage

- Only transport in the original packaging.
- Secure the goods for transport.
- Do not exceed the vibration values, temperature ranges, or climate zones at any point during the transport.
- Store the originally-packaged product dry and protected in a clean environment.
- Do not store the product for longer than 1 year.
- Maintain the ambient temperature range.

Disposal

Observe all of the statutory and local provisions and requirements of your respective country during disposal.

Liability and warranty

ebm-papst GmbH & Co. KG shall accept no liability or warranty for incidents based on the following:

- Failure to follow this safety data sheet.
- Faulty handling or use of the device.
- Improper handling.
- Improper storage.
- Unsecured transport.
- Use of accessories or spare parts from other manufacturers without the express and written authorization of ebm-papst GmbH & Co. KG.
- Making changes to the device without the express and written authorization of ebm-papst GmbH & Co. KG.

In addition to this safety information, the provisions valid in the respective country of use must also be observed.



INFO

Download the complete technical data as well as the operating instructions at www.ebmpapst.com or use the adjacent QR code:

