

Operating instructions for AC- / DC- compact fans and cooling solutions

Thank you for choosing a product from our portfolio.

Please read the following information carefully before starting-up the device and pay attention to possible installation instructions in your manual.

This Safety Datasheet / operating instruction contains general information regarding potential hazards which may occur when operating the respective product. Safety instructions must be followed at all times.

Manufacturer:

EKL AG
Nadlerstr. 8-10
88299 Leutkirch im Allgäu
Germany

Website: www.ekl-ag.de

Personal protective equipment

To avoid the risk of cuts, injuries caused by parts falling down and hearing damage the following personal protective equipment must be used:

- Protective gloves
- Protective foot wear
- Earplugs

To avoid the damage of electronic parts we strongly recommend to wear ESD-protective gear during assembly.

Usage according to the intended purpose

The product is intended to be installed in stationary constructions and in machines in the industrial and private sector. The device may only be operated electrically when fully installed.

The usage of the device is prohibited until it is determined, that the present product and the application in which the device is installed meet the protection and applicable requirements.

The application manufacturer / user is responsible for the end product and must ensure adequate safety precautions.

Constructional related exclusions

Due to the type of construction the usage in the following application areas is not intended and may cause hazards and damage to the equipment. The use of the product in these areas of application requires an individual evaluation and approval by the manufacturer of the end product in which the device is installed:

- Special requirements regarding reliability
- Air- and spacecrafts
- Railway-and motor vehicles
- Vessels
- In potentially explosive areas (EX-protection area)
- When operating near flammable substances or components
- When used as a safety related component or when taking over safety related functions

Qualifications of personnel

Only trained and qualified electricians are allowed to install, test run and work on the product.

In addition the electrician must be familiar with the following regulations:

- Machine Directive 2006/42/EC
- EX Low Voltage directive 2014/35/EC
- EMC Directive 2014/30/EC

Standards and guidelines

- A product does not fall under the Low Voltage Directive 2014/35/EC if the rated operating voltage is not within a voltage range between 50 and 1000 volts for AC und between 75 and 1500 volts for DC.
- The Machinery Directive MSR is applicable as the product is an „incomplete machine“ according to Article 2, Paragraph g), MSR 2006/42/EC.

Electrical and Electromagnetic Safety

- Check the electric equipment of the drive system regularly.
- Only use approved cables and plug connections.
- Immediately remove loose connections and broken cables.
- Take appropriate measures to avoid interfering impermissible emission of electromagnetic fields.
- Take appropriate measures against high-frequency EMC radiation.
- Ensure EMC compability in the end device / mounting condition.
- Use controlling and regulating devices to influence electromagnetic radiation.

Mechanical safety

- Only carry out work when the system / machine is not running.
- Provide sufficient cooling.
- Protective devices shall only be removed in order to perform repairs or installation work on the drive system and the application.

Safety

1. Electrical Safety

Danger to life due to possible hazard of electric shock!

Installation and maintenance work at applied voltage can cause severe physical injury or even death.

Switch off the electric power supply before commencing any work and secure it from being switched on again. Connect the device only to circuits that can be switched off using an allpole disconnecting switch.

2. Electrical Safety only DC- compact fans

Risk of damage to the product caused by excessively high voltages!

The products operate in low voltage range. Overly high voltages may cause damage. Only use PELV circuits according to IEC 60204-1 for the power supply.

(Protective Extra-Low Voltage, PELV)

3. Electromagnetic radiation

Danger to life caused by electromagnetic radiation!

The product is installed in applications that use electrical and electromagnetic components, which may affect cardiac pacemakers, metallic implants or hearing aids and can cause severe physical injury.

- Individuals who have a cardiac pacemaker, metallic implant or a hearing aid must not be in close proximity to the product.
- EMC compability of the entire system must be ensured.

4. Mechanical safety

Risk of injury caused by rotating fans!

- Rotating fans, impellers and motors may cause cuts or other injuries.
- Ensure sufficient protection against accidental contacts.
- Keep away from danger zone.
- Do not wear any loose clothing or jewellery while working on moving parts. Long hair must be covered by a hair net.
- Only carry out work when the system / machine is at a standstill.

Operation

Risk of burns caused by high temperatures on housing parts!

Hot housing parts may cause burns. Ensure sufficient protection against accidental contacts.

Maintenance / Repairs

The electronics are maintenance free during their entire life cycle.

Repairs may only be carried out by qualified electricians.

Cleaning

Damages or malfunctions may occur when cleaning the device caused by:

- Use of water or other liquids.
- Use of cleaning detergents containing acid, alkali and solvents.
- Use of sharp edged or pointed objects.

Transportation / Storage

- Transport in its original packaging only.
- Goods must be secured during transport.
- Vibration levels, temperature and climate ranges must not be exceeded throughout transport.
- The originally packed product must be safely stored in a dry and clean environment.
- The product must not be stored longer than 1 year.
- Maintain the permissible ambient temperature range.

Disposal

When disposing the product, please comply with all relevant requirements and regulations applicable in your country.

Liability and Warranty

EKL AG does not accept liability or warranty for incidents caused by:

- Non-compliance with this safety data sheet
- Incorrect handling or use of the device.
- Improper handling
- Improper storage
- Unsecured transport
- Changes / modifications on the product

In addition to these safety instructions the applicable rules and regulations of the respective country must be followed.