

2-Stage, 3-phase controller **1.96**

with room thermostat connection
Type 30049



Installation instructions

Please keep safe for future use!
Read these instructions carefully prior to starting commissioning!

KAMPMAN
Genau mein Klima.

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Zeichenerklärung:



Caution! Danger!

The non-observance of this instruction can lead to severe damage to people or property.



Danger of electrocution!

The non-observance of this instruction can lead to severe damage to people or property through electrocution.

Read these instructions carefully prior to starting any assembly and installation work!

All tradespersons involved in the installation, commissioning and operation of this equipment are duty-bound to pass this manual onto any tradespersons currently or subsequently working on this equipment, including the end user. Retain this manual until final decommissioning of the equipment!

Amendments to the content or style of this manual can be made without prior notice!

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Carefully read these instructions in full prior to installing the 2-stage, 3-phase controller!

1. Correct and proper use

The Kampmann 2-stage, 3-phase controller Type 30049 has been manufactured in accordance with state of the art engineering and recognised safety directives. However, incorrect installation and commissioning of the unit or its improper use can cause fatal injury, damage to the unit or damage to other units or systems.

The Kampmann 2-stage, 3-phase controller Type 30049 should only be used internally in industrial premises, storage warehouses and office and retail space. It should not be used outside, in damp areas, in areas where there is a serious risk of explosion or where there is an aggressive atmosphere. The unit must be protected against moisture during installation. If in doubt, the use must firstly be agreed with the manufacturer. Any other or exceeding use is deemed as being undesignated. The unit operator is liable for any resulting damage. Correct and proper use is also deemed to include compliance with the information on assembly and installation described in this manual.

The assembly and installation of this product requires specialist knowledge of heating, cooling, ventilation and electrical engineering. This knowledge, generally learned in vocational training, is not described separately. Any damage caused by inexperienced installation must be borne by the operator.

The 2-stage, 3-phase controller Type 30049 can be used with all Kampmann recirculating air unit heaters and roof extract fans which have a 2-stage, 3-phase motor (Y/ Δ windings) with thermal overload contacts for motor protection::

- TOP, Ultra, TIP, Resistent unit heaters (type numbers ending in 36 or 38)
- Diafort roof extract fans

Scope of this manual

- Electrical installation
- Commissioning and operation

Directives

- Accident prevention directives VBG, VBG4, VBG9a
- DIN VDE 0100, DIN VDE 0105
- EN 60730 (part 1)
- Local electricity company directives and standards (TABs) and standard engineering practice

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2. Safety Advice

This 2-stage, 3-phase controller has been developed and produced in accordance with the state of the art and current statutory standards and guidelines. Observe the contents of these instructions to ensure that the unit is installed and works properly.

The installation of this product requires special skills in the fields of heating, cooling, ventilation and in electrical engineering. These skills are usually taught during vocational training in the indicated professions and are not described separately here. Any damage caused by inexperienced installation must be borne by the operator.

On account of his professional education, the fitter of this device should, among other things, also have sufficient knowledge of:

- the safety and accident prevention regulations
- the guidelines and the recognised rules of technology, such as VDE directives
- DIN and EN standards

How to work in a safety-conscious manner



- **Warning!** Non-observance of the guidelines and these instructions may lead to malfunctions and to severe damage to people or property. There is danger of lethal injury in case of incorrect wiring (change of the wires)! **Disconnect all equipment you need to work on from the power supply.**
- Make sure that this equipment cannot be turned on again by unauthorised persons! Wait until the fan comes to a standstill!
- For installation, only use stable lifting platforms and scaffolding!

Modifications on the device

Do not carry out any modifications, reconstructions or installation work on the device without prior harmonisation with the manufacturer as this may impair the safety and operation! Modifications on the device may cancel the guarantee!

Do not undertake any work on the unit that is not described in this manual. On-site systems and cabling must be suitable for connection to the intended system!

Incorrectly connected products may become damaged! The manufacturer will not be liable for injuries and material damage caused when the device has been wrongly connected and/or incorrectly used!

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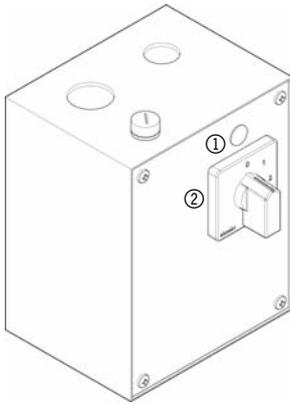


Fig. 1: 2-Stage, 3-phase controller
Type 30049

3. Operation

The signal lamp ① signals operational readiness (standby).

- Select the required speed via the speed selection switch ② „0-1-2“.

In case of a motor fault the operational readiness light goes out. The system is switched off and locked.

- To unlock after a malfunction, position the speed selection switch to „0“.

Attention! After a supply voltage failure the system will restart automatically!

4. Electrical connection

More than one heater can be controlled by one 2-stage, 3-phase controller. Several motors with the same winding type, even with different motor performance, can be connected to one controller. The number of connected motors, however, must not exceed the switching capacity of the 2-stage, 3-phase controller (see page 7, technical data).

The maximum number of units to be connected can be found in the technical catalogues. If several units are connected to one stage switch, intermediate terminal boxes may be required.

Attention! If switched in groups, all motor windings must always be controlled in parallel and all thermal contacts must be switched in series!



Fuses:

- A 3-pole, 400 V fuse is to be provided on site.

Connecting cables:

- The cross sections of the control and motor cables should be selected according to the cable length and power load, but should be at least 1.5 mm².

Connecting terminals:		
Terminal	Potential	Function, connection
N	Zero conductor	Feed, external time switch etc.
L1, L2, L3	3x 400 V	Feed
U1 - W2	400 V	Windings of the fan motor(s)
TK, TK	230 V control voltage	Connection of thermal contacts of the fan motor(s)
RT, RT	230 V control voltage	Connection of room thermostat, if not available, place a wire jumper
PE	Potential earthing	

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5. Commissioning

Pre-commissioning checks:

The following checks have to be carried out prior to commissioning:

- Have all of the equipment components been connected properly in accordance with the valid wiring diagrams?
- Has the protective earth (PE) been connected properly for all equipment components?
- Have all thermal contacts for the fan motors been connected properly? (all of the thermal contacts for a fan group been switched in series)
- Has the supply power (400 V) been provided between terminals L1, L2 and L3?

Commissioning:

Caution! The equipment may only be started up once all of the system components have been installed properly and all connections have been checked for correctness.

- Please note:

As the system automatically restarts after a power failure, the fan speed selector must be set to '0' before power is applied to the system! Otherwise the fans would start running immediately

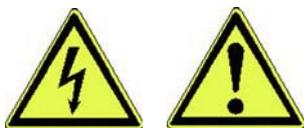
- Switch on control device (if any).
- Set the fan selector switch to the required fan stage.

If the connecting terminals RT/RT are electrically connected by the connected control unit or by a wire jumper, the fan motors will start running now.

- By disconnecting the terminals RT/RT the fan motors are switched off.

Checks during operation:

Attention! Danger of electrocution with mortal danger!



Carrying out these checks involves working on some parts of the system which are connected to the mains. The checks can only be carried out by qualified technical personnel in accordance with appropriate safety directives.

The following is to be checked during operation:

- Motor protection function of the stage switch:
 - Remove one of the wires from terminal TK/TK. The light goes out, all motors of the group come to a standstill.
- Restart after power failure in all fan stages:
 - Switch off the supply voltage briefly.
 - Check the function of the connected control devices.

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6. Technical data

Technical data	
Nominal voltage	3 x 400 V, 50 Hz
Max. rated motor current/rated motor power	10 A/ 4 kW
Control voltage	230 V, 50 Hz
Permissible ambient temperature	50 °C
Protection	IP 43
Dimensions WxHxD	127 x 160 x 100 mm

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