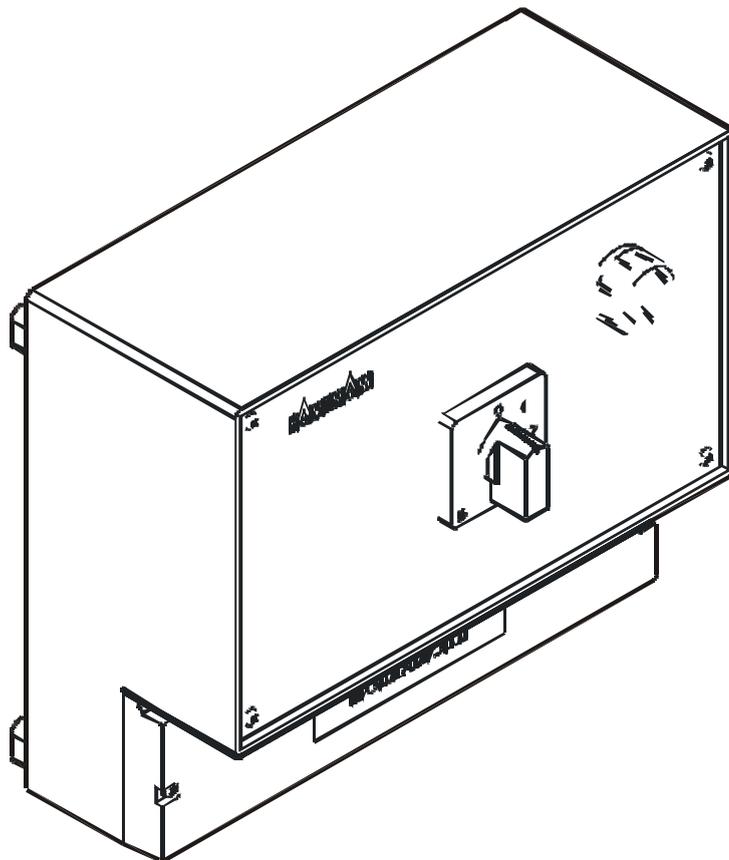


2-Stage, 3-phase controller

Type 30051/1500051



Installation instructions

Retain for future use

KAMPMANN
Systems for heating, cooling, ventilation

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1. Correct and proper use



The Kampmann stage switch type 30051/1500051 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 heaters or damage to other units or systems.

The Kampmann stage switch type 30051/1500051 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. During installation, the unit should not be allowed to become damp. The units should not be used for any purpose other than those described above. Damage resulting from improper use is the sole responsibility of the user. Correct and proper use is also understood as meaning the implementation of the installation, commissioning and service instructions in this manual.

The installation of this product requires some technical knowledge of heating, cooling, ventilating and electrical engineering. Whilst not explicitly specified, this implies some technical qualification in one of the above fields. Damage resulting from incorrect installation is the sole responsibility of the user.

The following air heaters can be controlled using stage switch type 30051/1500051:

- Airblock, Kompakt 3000, TOP 4000 and Resistent 8000 models (type numbers ending in 36 or 38)
- Roof extract fans with 2-stage, 3-phase motors (type numbers ending in 36)

Scope of this manual

- Installation
- Electric wiring
- 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 and standard engineering practice



2. Safety information

General

The unit has been designed and manufactured in accordance with state of the art engineering and recognised safety directives. This manual should be referred to for correct and proper installation and operation of the unit.

The installation of this product requires some technical knowledge of heating, cooling, ventilating and electrical engineering. Whilst not explicitly specified, this implies some technical qualifications in one of the above fields. Damage resulting from incorrect installation is the sole responsibility of the user.

Those persons installing this product should have relevant knowledge of:

- Safety regulations and accident prevention
- Knowledge of general engineering standard practice i.e. electrical directives
- DIN- and EN-standards

Safe and correct installation



- Before starting work, switch mains power off.
- Prevent the power from being switched on before work is finished!
- Wait for fans to stop!
- Use only solid lifting platforms and ladders!

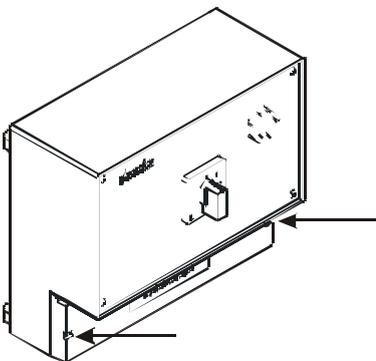
Adjustments to unit

Do not carry out any adjustments to the unit without discussion with the manufacturer as this could impair the safety and operation of the unit.

Incorrect wiring of the unit or adjustments to the unit may result in damage to the unit! Damage caused by incorrect wiring or improper installation or operation is the sole responsibility of the user!

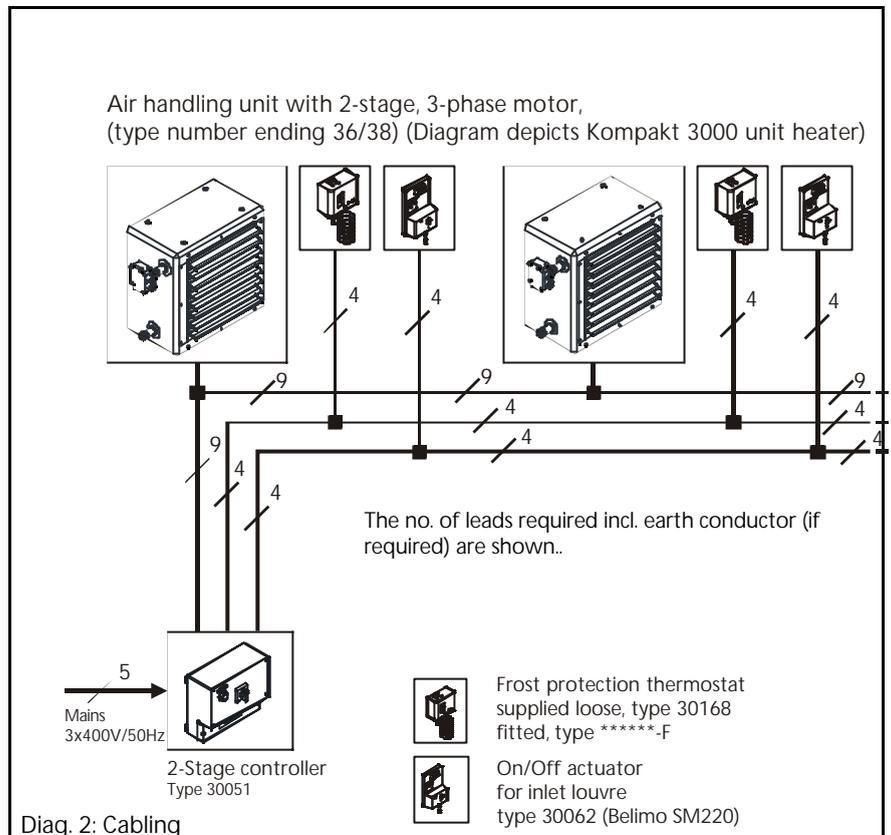
3. Installation

- When deciding on the location of the control, the protection of the unit should be taken into account (see page 4: Technical data).
- Fit only to a flat surface (wall-mounting)
- Remove the junction box cover for access to the lower fixings.
- The dimensions of the fixings are given on the rear of the housing.



Diag. 1: Fixings

3.1 Cablings



! The cabling in parts of the system is different if a frost protection switch is used. Refer to separate literature on frost protection switches!

3.2 Fuses

The appropriate fuse mechanisms should be selected and fitted on site. The fuses must be fitted according to the total power uptake of all connected units and maximum power loading of the controller (see technical data).

3.3 Technical data

Nominal voltage	[V]	3 x 400
Max. switching capacity	[kW]	4
Max. amperage	[A]	10
Permissible ambient temperature	[°C]	0 - 40
Protection	- - -	IP 40
Dimensions W x H x D	[mm]	257 x 215 x 108





3.5 Wiring

Important safety information

The wiring of this product requires some knowledge of electrical engineering. Whilst not explicitly specified, this implies some technical qualification in this field.

Before starting work on the controller of units the following safety advice should be followed:

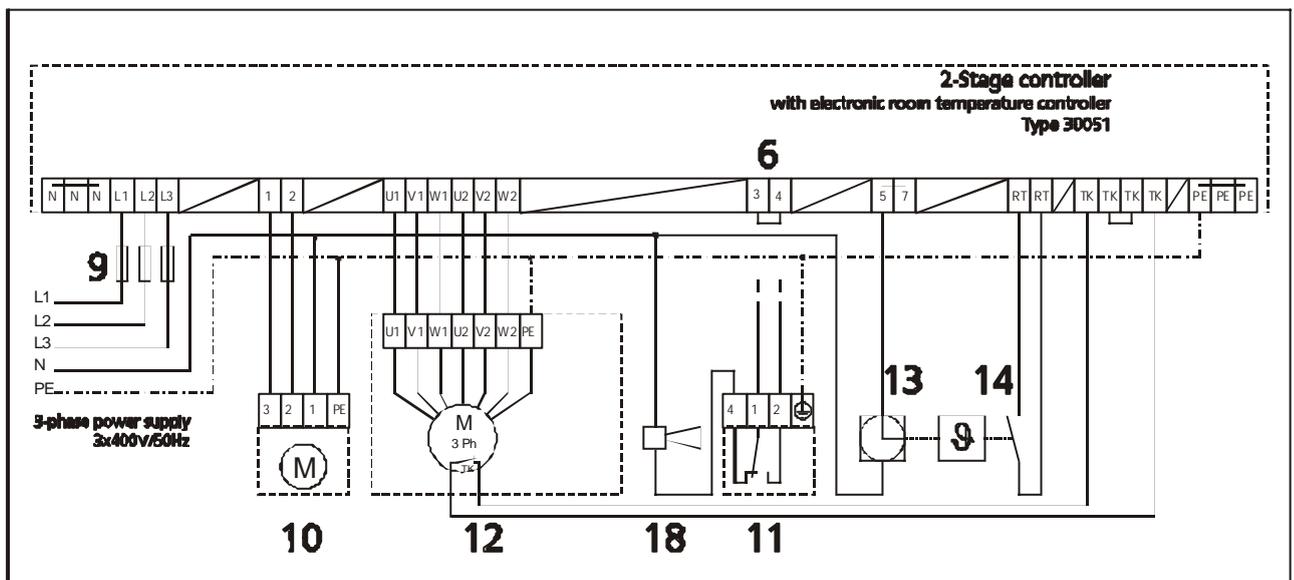
- Switch mains power off and prevent it from being switched on again before the work is completed.
- Connect wiring in accordance with enclosed wiring diagrams.
- Connect wiring in accordance with relevant National Electrical Standards and EN-guidelines as well as Technical Directives laid down by regional energy supply companies.
- Connect only to fixed cables.



Incorrect wiring can damage the unit! Personal injury or material damage caused by incorrect wiring and/or improper operation of the unit is the sole responsibility of the user!

Wiring diagram

Remove cover and connect up in accordance with the wiring diagram below.



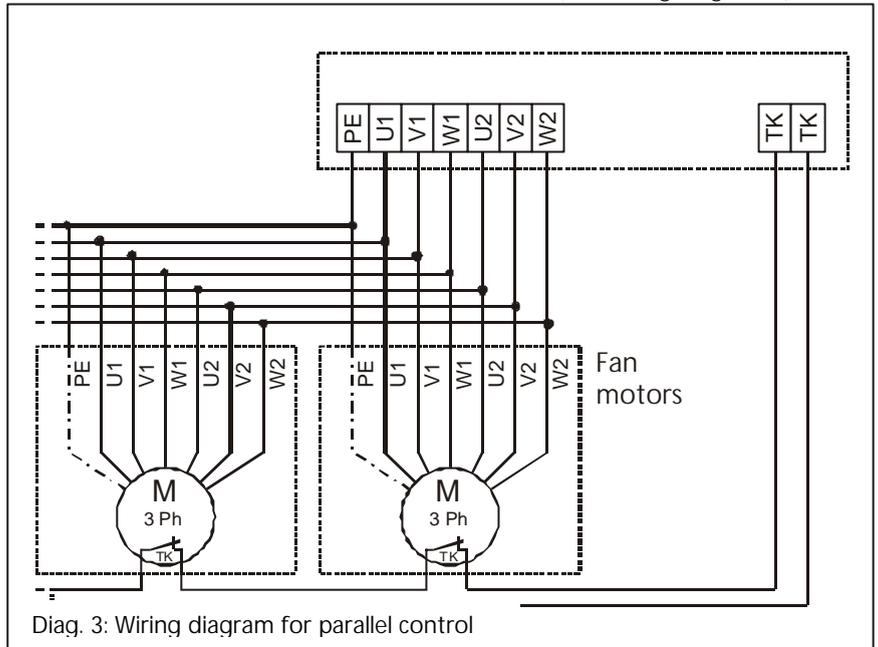
- 6 Terminals 2-stage controller; type 30051
- 9 Fuse (by others)
- 10 Servo-motor on/off 230V/50Hz
- 11 Frost protection thermostat
- 12 Fan with 2-stage, 3-phase motor 3x400V/50Hz
- 13 Time switch (optional)
- 14 Room temperature control, thermostat (optional)
- 18 Frost warming, on site (if fitted)



3.6 Parallel control of several heaters

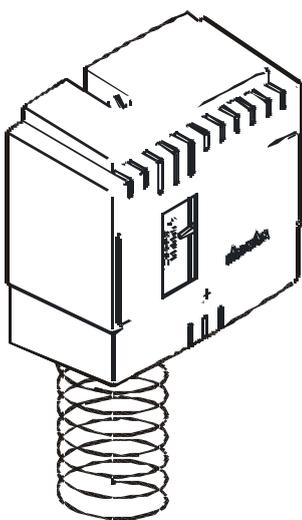
More than one heater can be controlled by one switch by following these steps:

- Only units ending in the same numbers should be controlled together. The power uptake of different models can vary.
- The maximum power loading of the controller should not be exceeded (see page 4: Technical data).
- All motor windings should be controlled in parallel (see wiring diagram 3).
- All thermal cutouts should be switched in series (see wiring diagram 3).

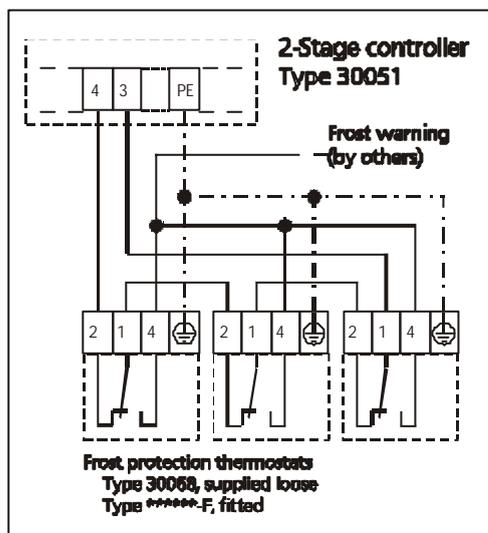


Mixed air units:

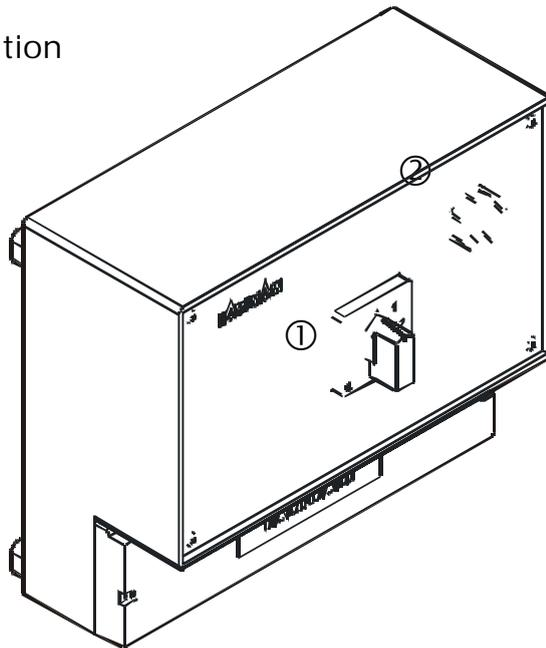
- For control of more than one frost protection thermostat, see wiring diagram 5.
- Louvre actuators can be controlled in parallel.



Diag. 4: Frost protection thermostat



4. Operation



① Fan speed selector

Off	Unit switched off
1	Stage 1 operation
2	Stage 2 operation

② Operational indicator

The indicator displays the actual operational state of the unit:

Indicator OFF and switch to "0"

- Unit switched off

Indicator OFF and switch to "1/2"

- Power off
 - Thermal cutout activated
 - Frost protection device activated

Fault override (thermal cut-out or frost protection)

A fault can be overridden by turning the selector to "0". The system will not restart if the fault has not been rectified. The indicator will remain OFF (see above).



Establish the cause of the fault! Ignoring the fault could result in immediate or subsequent damage to the system.

5. Commissioning



The following checks have to be carried out on live parts. These checks should only be carried out by qualified personnel and adherence to all relevant safety precautions.

Prior to applying power



As the system automatically restarts when the power has been switched off, the fan speed selector should be set to '0' before power is applied to the system!

Pre-commissioning checks:

- Is the wiring in accordance with the wiring diagrams?
- Is the earth conductor (PE) correctly wired?
- Are the thermal cut-outs correctly connected (in series if multiple unit heaters are controlled in one group)?
- Is the supply power (400V) connected to terminals L1, L2 and L3?

Only when all system components have been installed and connected up correctly can the system be switched on.

- Apply power.
- Set the fan speed selector to stage 1 or 2 and check that the fans operate correctly.

Checks during operation



Attention! Voltage!



- Check the individual thermal cut-outs by removing one of the wires from terminal TK/TK in the unit heater junction box.
- All motors should automatically stop running. This simulated cut-out can be overridden by switching the fan speed selector to '0'.
This check should be carried out on every air-handling unit!
- To check that the system is automatically switched on again in both fan speeds, the power should be briefly switched off.
- Check all other operating and control functions in accordance with the operating advice on page 7.