

Installation instructions

7-Stage 1-phase controller

Type 30771/ Type 30775 (4A) • Type 30772/ Type 30776 (7,5 A)

Please keep safe for future use!

Read these instructions carefully prior to starting commissioning!



Kampmann. Genau mein Klima.
KAMPMANN

1.96 7-Stage 1-phase controller

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Installation instructions

Explanation of the symbols:



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.



Note

Important note! In the event of non-adherence, the trouble-free operation of the unit(s) cannot be guaranteed.

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!

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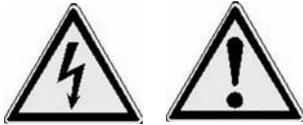
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Amendments to the content or style of this manual can be made without prior notice!



1. Safety advice

1.1 Correct and proper use

Kampmann stage switches, types 30771/ 30772/ 30775 and 30776 have been designed in compliance with the state of the art and recognised safety-related regulations. 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.

Applications

Kampmann stage switches types 30771/30772/30775 and 30776 should only be used:

- indoors (e.g. factory buildings and warehouses, offices, showrooms etc.)

Kampmann stage switches type 30771/30772/30775 and 30776 should not be used:

- in humid areas, such as swimming pools and wet rooms,
- in areas where there is a risk of explosion,
- in areas with an aggressive atmosphere,
- outdoors

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.

Specialist knowledge

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 30771/30772/ 30775 and 30776:

- Airblock,
- Unit heaters TOP, TIP und Ultra
- Roof extract fans

Scope of this manual

- Installation
- Electric wiring
- Commissioning and operation

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Directives

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

1.2 Safety information



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 installer must have undergone training to provide them with adequate knowledge of the following:

- 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!

Read this manual in full to guarantee the correct and proper installation and operation of the unit. All persons involved in the installation, commissioning and use of this unit have a duty to pass the manual on to trades working in parallel or subsequently right through to the end user or operator of the unit.

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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.

Modifications / alterations should only be carried out with written approval.

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!



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!



Picture 1

2. 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). Ensure free air circulation at the lateral ventilating slots of the unit (picture 1)
- Use all four fixing holes at the rear wall. (open front cover).

2.1 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).

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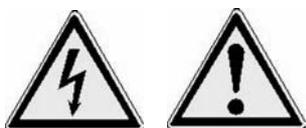
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2.2 Technical data

Unit type no.		30771 / 30775	30772 / 30776
Nominal voltage	[V]	230	230
Max. amperage	[A]	4	7,5
Permissible ambient temperature	[°C]	0-40	0-40
Protection	[/]	IP 20	IP 20
Dimensions W x H x D	[mm]	260 x 340 x 150	260 x 340 x 150

2.3 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!

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2.4 Wiring diagram

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

Terminal	Potential	Function, Connection
N	Zero conductor	fan, external time clock etc.
L1	230 V	Supply cable
1,2	230 V	Servomotor, louvre, if fitted
3,4	230 V Control voltage	Frost protection thermostat or switch; if fitted: remove bridges
7	230 V Control voltage	Frost protection switch
8,9	230 V Control voltage	Differential pressure switch, filter monitoring
U1	230 V	Fan(s) phase
5	230 V Control voltage	Feed to external time clock etc.
RT, RT	230 V Control voltage	Controller; if not fitted Connect bridges
TK, TK	230 V Control voltage	Fan thermal contacts
PE	Potential earthing	

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.

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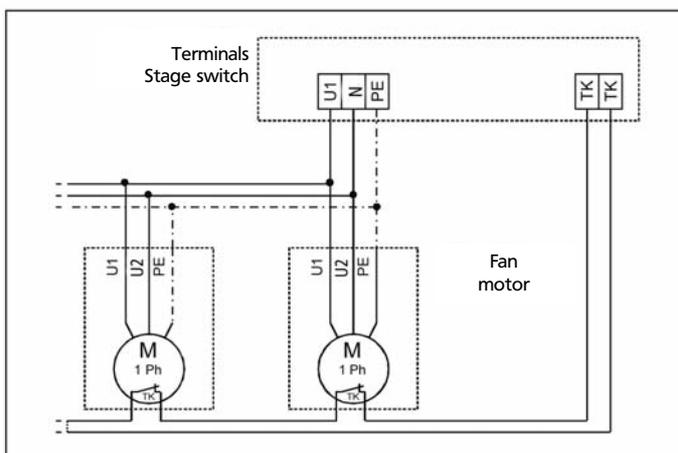
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2.5 Parallel control of several heaters

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

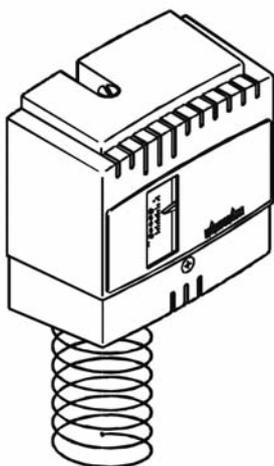
- Only units ending in the same numbers should be controlled together. The power uptake of different models can vary.
- The maximum power loading of the controller should not be exceeded (see page 6: Technical data).
- All motor windings should be controlled in parallel (see Picture 2).
- All thermal cutouts should be switched in series (see Picture 2).



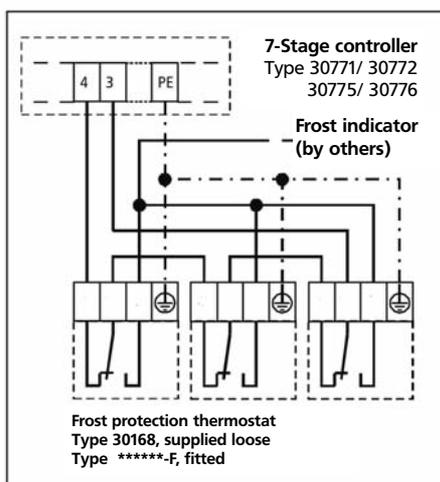
Picture 3: Wiring diagram for parallel control.

With supply air units:

- For control of more than one frost protection thermostat, see Picture 4. Louvre actuators can be controlled in parallel.

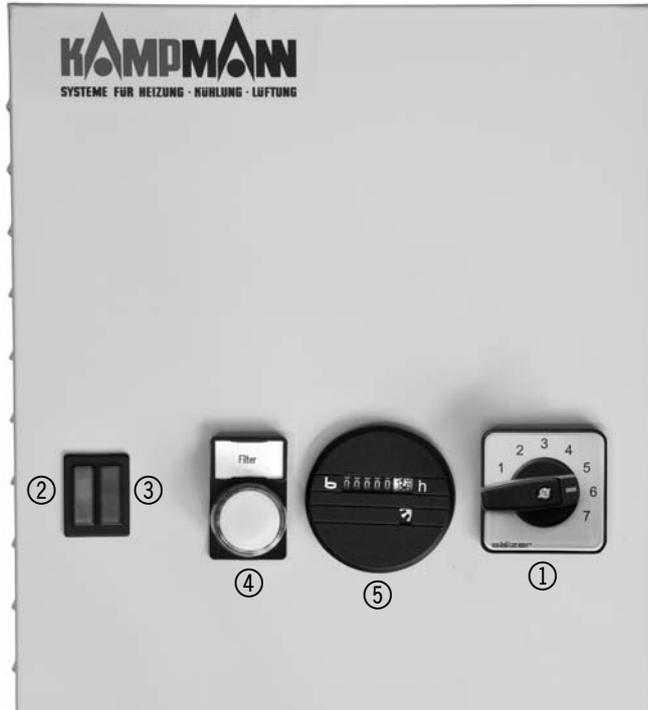


Picture 3:
Frost protection thermostat



Picture 4: Wiring diagram for frost protection thermostat

3. Operation



① Fan speed selector

OFF	Fans switched off
1-7	Operation stage 1 - 7

② Operational indicator (green)

The indicator displays the actual operational state of the unit:

OFF	not ready for operation
ON	ready for operation

③ Fault indicator (red)

The indicator displays the actual operational state of the unit:

OFF	No fault
ON	Fault

④ Filter indicator light (yellow)

only with type 30775 / 30776

The indicator light signals a relatively high level of dirt on the filter. The system remains operational. The filter should be cleaned or replaced.

OFF	Filter ok
ON	Filter dirty

⑤ Operating hour counter

only with type 30775/ 30776

The counter shows the system's operating hours.

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Fault override (thermal cut-out or frost protection)

Switch to zero to eliminate the fault. The switch cannot be reset if the fault still exists. The operating hour counter light remains off (see above).

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

4. 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!

4.1 Pre-commissioning checks

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 (230V) connected to terminals L and N?

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

- Apply power.
- Use the fan selector switch to switch on the various fan stages and check the operation of the unit.

4.2 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 9.

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