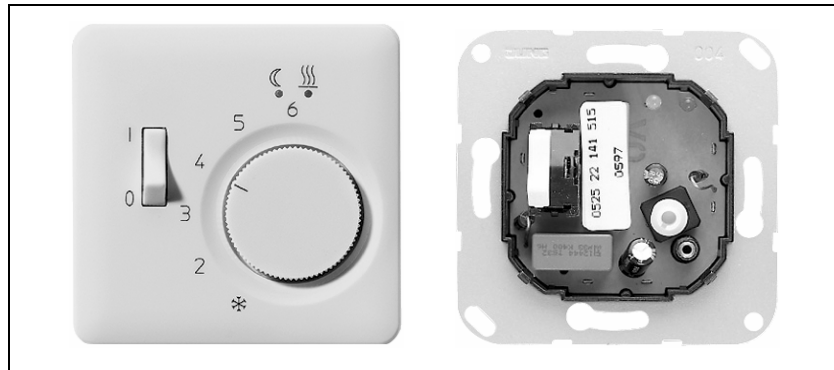


## Operating Instructions Floor heating controller



### 1. Area of application

Used in domestic electrical installations to regulate electrical floor heating systems and temperature control systems.

### 2. Function

The floor heating controller consists of two parts:

- **Control unit** for setting the required floor temperature
- **Remote sensor** in the floor for monitoring the set temperature

#### Control unit:

Using the setting knob, set the required temperature for your floor. The numbers 0 – 6 on the knob correspond to a temperature range of 10 – 50 °C.

Note the setting instructions from the manufacturer of your floor heating system.

If the temperature in the floor falls below the temperature you have set, the control unit requests heat; this state is displayed by the red LED above the setting knob. You can therefore see if your heating is using energy.

A range restriction can also be carried out in the setting knob.

The operating state of your floor heating is switched on or off with the mains switch 0 – I.

You also have the option of programming a temperature reduction via an external time switch e.g. during the night.

If you have installed this type of time switch, the temperature reduction is indicated by the green LED above the setting knob. The temperature reduction is approx. 5 °C.

Example: The temperature set by you on the control unit is 34 °C (number on dial = 4). This means that the temperature in the floor e.g. during the night can drop down to 29 °C without your heating switching itself on.

### Sensor:

The sensor is to be installed in the floor. It monitors the floor temperature set on the control unit and issues commands to switch the floor heating on and off.

### Safety instructions

**Electrical equipment may only be installed and fitted by qualified electricians while observing the current accident prevention regulations.**

**Non-observance of the safety warnings or installation instructions may damage the device, cause fire or other hazards.**

**In the event of a fault, mains potential can be present at the sensor.**

- ① The switch 0 – I on the control unit causes a singlepole disconnection of the device from the mains and interrupts the circuit to the heating resistor in the floor.
- ① When working on the load circuit, the mains voltage must be disconnected in principle.
- ① When the sensor is interrupted, the relay contact is closed. If the sensor experiences a short circuit, the relay contact is open.

## 3. Connection and installation

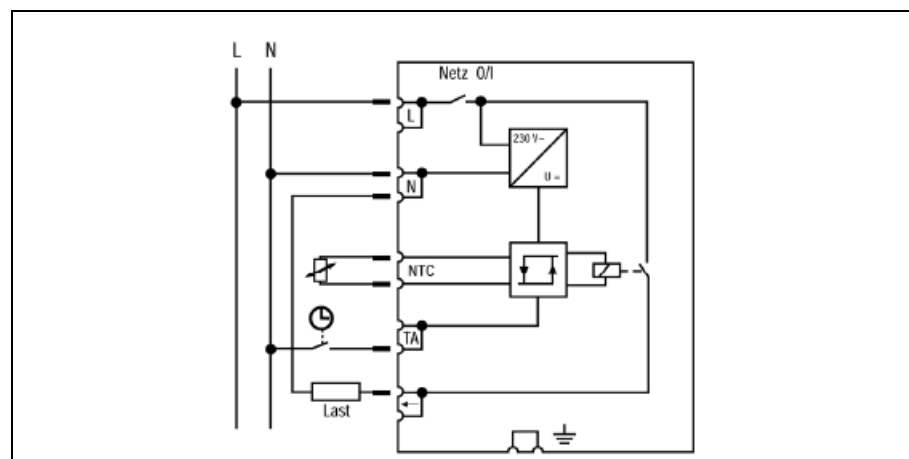
### Control unit

Mount the control unit in a switch box in accordance with DIN 49 073.

**Notice! The device must always be mounted with its supporting frame on top of the wallpaper!**

- Carry out the electrical connection according to the wiring diagram (Fig. (1)). Solid conductor cross-section: 1 to 2.5 mm<sup>2</sup> No PE conductor required. PE conductor is only used for looping through. Protection class II can be achieved through appropriate installation measures.

Abb.1



Symbols used in the wiring diagram

L : L conductor

N : N conductor

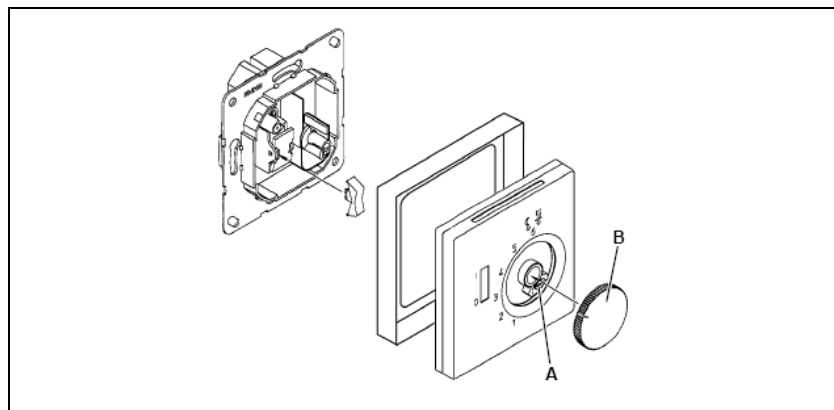
TA : Connection for clock signal for temperature reduction

← : Load connection

NTC : Connection for remote sensor

- Mount the control unit with the screws supplied.
- Place the center plate together with the frame on the flush insert. The center plate must snap in place in the top left of the housing base.
- Tighten the screw (A in Fig. (2)).
- Clip on the setting knob (B).

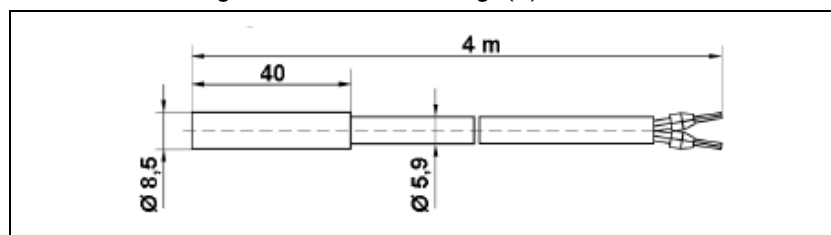
Abb.2



#### 4. Sensor

The sensor must be laid in a conduit. It is thereby protected against damp and can easily be replaced in the event of a repair.

Dimension drawing of remote sensor: Fig. (3).



#### 5. Restricting the temperature setting range

The controller is set ex works to the maximum setting range of ☼ to 6. There are 2 adjustment rings (Fig. (4)) in the setting knob which have a setting range of 5 to 30 °C. When restricting the range, we ask you to carry out the setting according to the diagram (Fig. (5)):

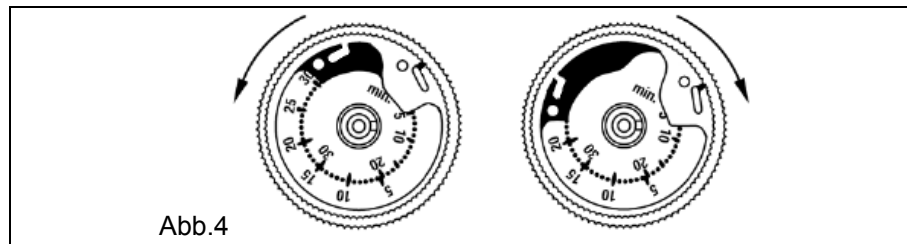


Abb.4

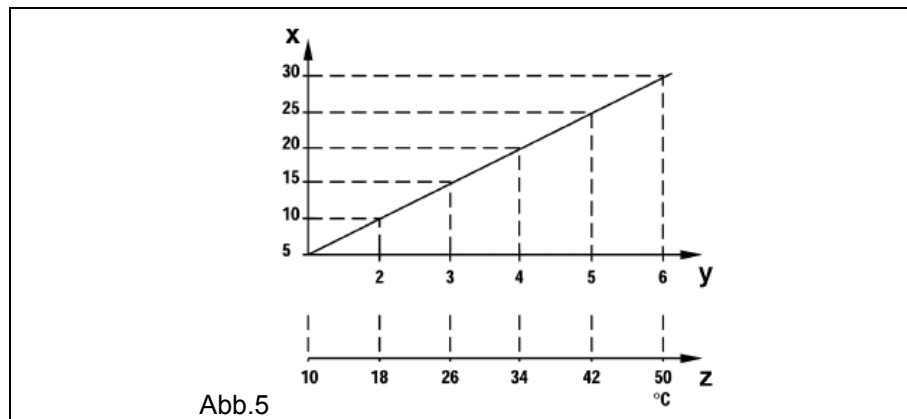


Abb.5

x = restricting the range in the setting knob

y = setting range of the controller

z = sensor temperature °C

## 6. Technical data

The controller corresponds to DIN EN 60 730 type 1 and has radio interference suppression in accordance with VDE 0875 or EN 55 014.

### 6.1. Control unit

Operating voltage	AC 230 V~ 50/60 Hz
Temperature setting range (dial)	✳...6 (= 10 ... 50 °C)
Switching current at AC 230 V ~	10 A bei $\cos \varphi = 1$
Switch	Mains „on/off“ 1pole
Switching capacity	2.3 kW
Red LED	Control unit requires heat (heating mode)
Green LED	Temperature reduction „on“
Contact (relay)	1 make contact (for heating), (non-floating)
Temperature reduction (TA)	approx. 5 K
Differential in switching temperature	approx. 1 K
Protection type of housing	

---

acc. to EN 60529	IP 30
Operating temperature	0...+40 °C
Storage temperature	-25...+70 °C

### 6.2. Remote sensor

Sensor element	NTC
Sensor cable	PVC, 2 x 0.75 mm <sup>2</sup> , 4 m
Protection type acc. to EN 60529	IP 67
Operating temperature	-20...+ 70 °C
Storage temperature	-20...+ 70 °C

Subject to change without further notice.

The sensor cable can be extended up to 50 m if required using a 2-core cable with a cross-section of 1.5 mm<sup>2</sup>, without influencing the accuracy of the controller.

When laying in cable trunking or in the vicinity of power cables, a shielded cable should be used.

### 6.3. Sensor characteristic values

Measuring device  $R_i > 1 \text{ M}\Omega$

Ratio temperature to resistance: see table in Fig (6).

The resistance values can only be measured with a disconnected sensor.

Temperature °C	Resistor kΩ
05	85,279
10	66,785
15	52,330
20	41,272
25	33,000
30	26,281
35	21,137
40	17,085
45	13,846
50	11,277

The resistance values can only be measured with a disconnected sensor.

## 7. Guarantee

Our products are under guarantee within the scope of the statutory provisions.

**Please return the unit postage paid to our central service department giving a brief description of the fault:**

**ALBRECHT JUNG GMBH & CO. KG**

**Service-Center**

Kupferstr. 17-19

D-44532 Lünen

Service-Line: 0 23 55 . 80 65 51

Telefax: 0 23 55 . 80 61 89

E-Mail: mail.vki@jung.de

**General equipment**

Service-Line: 0 23 55 . 80 65 55

Telefax: 0 23 55 . 80 62 55

E-Mail: mail.vkm@jung.de

**KNX equipment**

Service-Line: 0 23 55 . 80 65 56

Telefax: 0 23 55 . 80 62 55

E-Mail: mail.vkm@jung.de

**CE** The CE sign is a free-trade mark intended solely for state authorities and does not contain any assurance of properties.