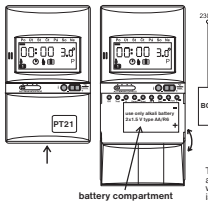
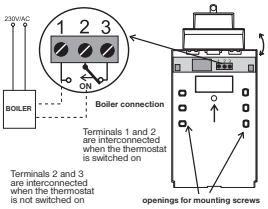
Pic.1 Pic.1a




Pic.2




## Installation of PT21:

Install the thermostat on a suitable place, where its operation would not be influenced by direct flow of hot air from the heater, by solar radiation and other disturbing influences. Also avoid the installation on outer wall.

## Procedure:

PT21 thermostat consists of two parts: the front one - the microprocessor one (**Pic.1**) and rear one - the switching one. In this way very easy and quick installation of the thermostat into installation box of KU/KP68 type is achieved and very comfortable programming directly from your armchair.

1. Open the case of PT21 in the place indicated by arrow on **Pic.1** and so divide the thermostat to two parts.
2. Grasp the rear (switching) part and fasten it into installation box (see **Pic.2**) at the height of minimally 1.5 m.
3. Unscrew the screw as indicated by arrow (**Pic.2**) and lift of the cover. Under this cover, there is the relay and terminal strip, to which the cables from boiler should be connected (**Pic.2**).
4. Grasp the front part of PT21, slide of the cover (**Pic.1a**), insert two pencil alkali batteries 2x 1.5 V and program the thermostat according to operating instructions.
5. Afterwards, snap the front part from above to the lower part of PT21 and the thermostat is ready for operation. (We recommend to use " **Test** " button for testing)

**The installation of PT21 may be performed only by a person with appropriate qualification in electrical engineering.**

Table for registration of your programs

| day \ progr. | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Mon | | | | | | |
| Tue | | | | | | |
| Wed | | | | | | |
| Thu | | | | | | |
| Fri | | | | | | |
| Sat | | | | | | |
| Sun | | | | | | |

Temperature and time set

# ROOM THERMOSTAT PT21

PT21 is a digital room thermostat for automatic regulation of heating, offering the possibility to set 6 different temperatures (5 to 40°C) for each day (minimal duration of time interval to be set is 10 minutes).

## Further advantages:

- different temperature program for each day
- setting the **HYSTERESIS** in the range from 0.1°C to 1.5°C
- simple control and programming
- possibility to make a short-term change in program temperature
- easy installation to all types of installation boxes KU/KP68
- economic mode "holiday" for maximally 99 days ( )
- low power consumption
- copying of days by a single button (**Kopi**)
- information on operating hours of the boiler (**Suma**)
- temperature regulation at steps of 0.5°C
- multifunctional display
- retention of memory contents, when the batteries are replaced sooner than after approx. 25s

## Specification PT21:

| | |
|---|---|
| Power supply | alkali batteries 2 x 1,5 V typ AA/R6 |
| Number of adjustable temp. | for each day 6 different temperatures |
| Hysteresis | 0,1; 0,2; 0,3; 0,4; 0,5; 1,0; 1,5°C |
| Minimal programming time | 10 minutes |
| Range of possible temp. | 5 to 40°C |
| Step of temperature setting | 0,5°C |
| Minimal step of indication | 0,1°C |
| Measurement accuracy | 0,5°C |
| Output | relay, max. 5A/250V AC |

**Send the thermostat for guarantee and after-guarantee service to manufacturer's address.**

**CERTIFICATE OF GUARANTEE**
(guarantee period for the product amounts to 2 years)

| | |
|---|---|
| product No.: | date of sale: |
| | stamp of shop: |
| examined by: | |

ELEKTROBOCK CZ
MADE IN CZECH REPUBLIC

ELEKTROBOCK CZ s.r.o.
Blanenská 1763
Kuřim 664 34
Tel./fax: +420 541 230 216
http:// www.elbock.cz

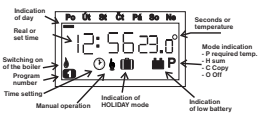
8 594012 225213

# ROOM THERMOSTAT PT21

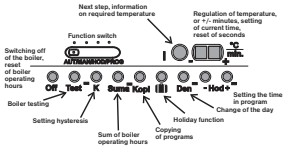
- FOR ALL TYPES OF HEATING AND AIR-CONDITIONING SYSTEMS
- ENERGY SAVING UP TO 30%

**COMFORT PROGRAMMING DIRECTLY IN YOUR CHAIR**

## Display description:




## Description of elements:




ELEKTROBOCK CZ
MADE IN CZECH REPUBLIC

# ROOM THERMOSTAT PT21

PT21 is a Czech product that offers a wide range of application for temperature regulation in households, offices or workshops. It is designed in such way, so that it meets high standard of required functions and simultaneously easy handling is maintained.

**Setting the hysteresis in the range from 0.1°C to 2°C represents a great advantage.**

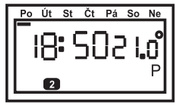
By using the digital thermostat, you can significantly save the energy necessary for heating and simultaneously to keep optimal thermal comfort. Thanks to rich programming features (up to 6 time intervals and temperatures for each day) you can define program suiting to your needs.

**For example:**

We get up at 6:00 in the morning, so we select the temperature of 19°C.
We leave the house for work at 8:00 so the temperature can be lower: 17°C.
Family members return home at 14:00, they need warmth, so we set the temperature to 20°C.
We want to watch TV in the evening and have pleasant warmth, so we set next interval for 19:00: 24°C.
We are ready to go to bed on 22:00, so the temperature of 18°C is sufficient.
It is dealing with a model of daily temperature regime using 5 time intervals.

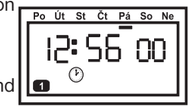
## OPERATING INSTRUCTIONS

### Switch functions: (from left side)

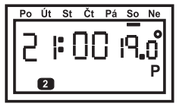



**1. AUT** : the thermostat works according to program as set in advance.


**2. MAN** : serves for manual setting of temperature, the temperature should be constant up to next change. Symbol " " is showed on the display.




**3. HOD** : setting of present day and time
When you set the switch into **HOD** position, time is shown on the display and indication of clock is blinking.
By means of "**+/-**" buttons set required data, confirm by pressing " **i** "(register).
Use the same procedure for setting the minutes, seconds and day (the day is indicated by " " symbol).




**4. PROG** : position for programming

### How to proceed during programming:

PT21 enables to set 6 temperature intervals for one day and also the **HYSTERESIS in the range from 0.1°C to 1.5°C.**

1. By successive pressing of " **Den, +/-Hod, +/-min. and +/- °C** " buttons set the day, the first time and the temperature within the program.
2. By pressing of " **i** " button you pass on the setting of the second time and temperature.
3. For further temperatures within the same day set different time and temperature by "**+/-Hod, +/-min.,+/- °C** " buttons. After setting the last temperature for one day, PT21 passes automatically to the setting for next day. Display shows " " symbol for next day.
4. After completion of the program for whole week, recheck the program again. By pressing " **i** " button we can successively verify whether the program complies with our requirements and we register it in the table contained in Operating instructions (for the case of program deletion from memory).

After switching to **AUT** position, thermostat starts to work according to defined program.

**Note:** If we do not need to use all six settings for one day, we can use a quick zeroing - by successive pressing of " **Off** " button we can zero not used time intervals.

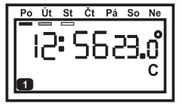
### Short-term change of temperature in AUT mode (PARTY):

By simple pressing of "**+/-°C**" button in **AUT** mode, it is possible to make a short-term change of required temperature. Symbol " **P** " is displayed.
The thermostat will maintain this temperature up to next temperature change as defined in the program. When the " **i** " button is pressed in **AUT** mode, required program temperature is displayed for a while (indicated by " **P** " on the display).

### Function of " K " button:

By pressing the " **K** " button in **PROG** mode it is possible to set **HYSTERESIS** ( 0.1; 0.2; 0.3; 0.4; 0.5; 1.0; 1.5°C) and confirm it by " **i** " button.

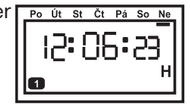
### Function of " Kopi " button:




This function facilitates programming of the thermostat.
Program from one day can be copied by simple pressing of " **Kopi** " button to subsequent day.

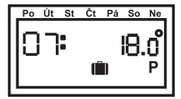
1. Day indicator has to mark the day that has to be copied to next day.
2. Press " **Kopi** " button and whole program copies itself to next day and day indicator moves. Symbol " **C** " (Copy) displays for a short time.

### Function of " Suma " button:




This is an informational button that displays the number of boiler operating hours. Symbol " **H** " is shown on the display.
These hours can be reset by pressing " **Off** " button.
(**Example:** 1206 hours 23 minutes)

### Function (holiday):




This function is very useful in the course of holidays, when the house is empty and it is not necessary to change room temperature. After pressing " " button, symbol " " is displayed. By means of " **+/-Hod and +/- °C**" buttons set the number of days and required temperature.

**Example:** On Sunday, we leave for 7-day holiday (we should return on Sunday) and we require constant temperature of 18°C. On Sunday, before we leave, we set the PT1 thermostat to mode, namely in following way:

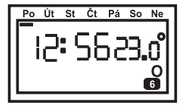
1. Select **AUT** or **MAN** by function switch.
2. By pressing " " button switch to holiday mode.
3. By pressing "**+/-Hod**" buttons set the number of days, e.g. 7, because we should return on Sunday and we want the thermostat to return to **AUT** or **MAN** mode and work according to the program as set.
4. Finally, set the temperature with using of " **+/- °C** " buttons according to season, for example 18°C in the summer.

From now on, the thermostat will maintain constant temperature of 18°C for the period of 7 days.
One day from total number of the days set is deducted at each midnight.

### Function of " Test " button:

This button serves for the testing of correct connection of thermostat and boiler. Pressing " **Test** " button causes several switching on/off of the boiler.

### Function of " Off " button:




By pressing of this button the boiler is switched off. This condition is indicated on the display by " **O** " symbol and can be cancelled by the same button or by changing the switch position. In **AUT** mode, **Off** function is cancelled by next program temperature change.

### RESET button:

On the rear side of the microprocessor part, there is a button that should be used in the case of indeterminable conditions - all saved changes will be lost.

### Replacement of batteries:

Use only alkali pencil batteries **2x1.5 V of AA/R6** type. The thermostat is able to preserve all information in its memory for time interval of approx. **25 s**. Low battery is indicated on the display by " " symbol.

**Note:** Longer pushing of all buttons speeds up their functions. Blinking of **6** indicates a free part of the program. Last change of temperature is maintained as set.