BPT22
WIRELESS ROOM THERMOSTAT
with socket receiver

BPT22 is an ideal solution in places where installation of the thermostat-boiler wiring is too expensive or totally impossible. It is intended for automatic control of heating systems in family houses and dwelling units with their own boiler (gas, electric). The big, backlit display on the transmitter enables control of the thermostat even in the dark. Moreover, it offers intuitive navigation in the selected language (CZ/PL/EN/DE). The receiver is equipped with a code self-learning system and the E-EPROM memory which saves the code stored even in the event of voltage failure. BPT22 works with two-way communication at the frequency of 433.92 MHz. The assembly may reach the range of up to 35 m (in built-up area).

Receiver – into the socket

- Receiver mains supply of 230 V/ 50 Hz
- Receiver with the **CODE SELF-LEARNING** system and E-EPROM memory (saving the code even at voltage failure)
- Two-wire connection to the boiler (potential-free contact)
- **Indicator LED signalling the states**
  - mains supply indication
  - transmission/ reception of signals
  - failure state
  - relay switched

2W

TWO-WAY COMMUNICATION
- guarantees reliability of signal transmission and enables acquiring of return information

- freely portable
- modern design
- stand for stable setting at the optimum location

Transmitter

- Big, well-arranged and backlit display
- Intuitive navigation in the selected language (CZ/PL/EN/DE)
- Preset weekly program
- 6 temperature changes per every day
- Programming by 10 minutes and 0.5 °C
- Programming by days or Mon-Fri, Sat-Sun and Mon-Sun
- HYSTERESIS selection from 0.1 °C to 6 °C
- Possibility of short-term temperature change
- Manual mode (MANU)
- Permanent shutdown (OFF)
- Holiday mode
- Anti-freeze temperature (3 °C)
- Function for testing the correct connection (TEST)
- Automatic SUMMER/WINTER time change
- Supply by means of alkaline batteries 2 x 1.5 V/AA

ELEKTROBOCK CZ
MADE IN CZECH REPUBLIC

RECEIVER CONTROL ELEMENTS

Indicating LEDs:

GREEN LIT - correct mains connection

ORANGE LIT - relay 1 closed

YELLOW FLASHING - signal transmission or reception

RED FLASHING - empty E-EPROM memory

RED LIT - FAILURE (if no signal from the transmitter is received within approx. 6 hours, it switches to the "2-min-ON / 8-min-OFF" mode)

YELLOW+RED FLASHING ALTERNATELY - code learning mode

YELLOW+RED FLASHING SIMULTANEOUSLY - code has been learned

YELLOW+RED LIT SIMULTANEOUSLY - memory clearing mode

Switching functions:
AUT - working according to the program
ZAP - switched on permanently VYP - switched off permanently

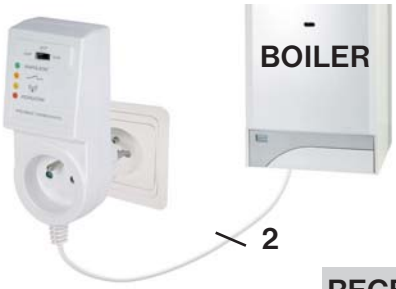
FUNCTION BUTTON
- SHORT PRESS
(for approx. 1,5 s)
CODE LEARNING mode
- LONG PRESS
(for approx. 5 s)
RESET (memory clearing)

power supply 230 V/50 Hz

through-way socket for connection of another device

boiler output (potential-free switching contact)

Wiring diagram:



RECEIVER INSTALLATION

- Switch off the main circuit breaker.
- Connect the receiver to the boiler according to the wiring diagram (use the boiler terminals intended for the room thermostat 2 conductors!).
- Connect the receiver to the mains 230 V / 50 Hz.
- Switch on the main circuit breaker; **the green diode lights up** on the receiver; the receiver is ready for operation.

Install the receiver (in internal rooms) as far from big metal objects as possible (at least 0.5 m) and far from power lines owing to interference of the signal received! It is recommended that the device is installed by a person with adequate qualification in electrical engineering!

CODE LEARNING

The BPT22 assembly is configured and ready to use – to put the receiver and transmitter in operation, just use the TEST function (see page 5)!
If the receiver memory has, however, been cleared – the red diode is flashing – proceed as follows:

1) Press the receiver's "**FUNCTION BUTTON**" for about 1.5 sec; **the yellow and red LEDs start flashing alternately**; and the receiver is awaiting the code ("learning mode").
2) Press twice the "**MENU**", button on the receiver (after inserting batteries, see page 3), choose the CONST mode by turning the" " button, and move on to TEST by pressing the " " button several times. Turn the " " button, the signal will be sent to the receiver. The wireless transmission sign " " appears shortly on the transmitter; and after establishing connection, the RFM message is displayed permanently.
3) The code receipt in the receiver is indicated by **simultaneous flashing of the yellow and red LEDs**; thus the code has been learnt. After the code receipt, the output relay is switched several times to verify correct function of BPT22.

TRANSMITTER DESCRIPTION

Fig.1

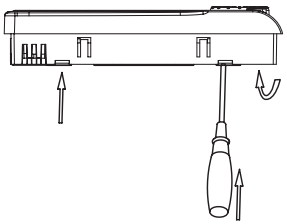


Fig.2

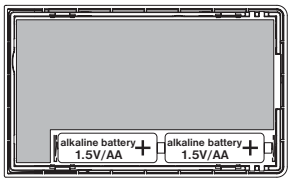
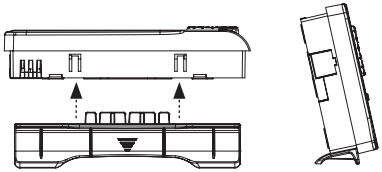
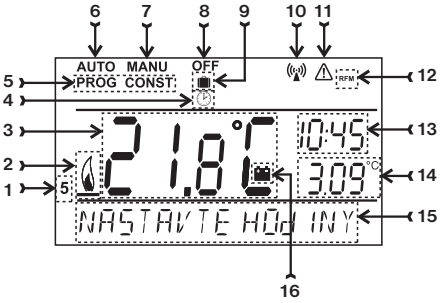


Fig.3



DISPLAY DESCRIPTION



1, Current day (in the Prog mode, selection of the number of days to be programmed)
2, Heating on indication
3, Current room temp.
4, CLOC mode indication (current day and time setting)
5, Program (PROG) and constant (CONST) setting modes (page 5)
6, Automatic mode (page 4)
7, Manual mode (page 4)
8, Permanent switch-off (page 4)
9, Holiday mode (page 4)
10, Signal transmission indication
11, Signal transmission ERROR
12, Wireless mode indication
13, Current time
14, Current date / required temperature
15, Status line, dynamically changing according to the running process
16, Low battery indication

TRANSMITTER INSTALLATION

The transmitter must be installed as far from interference sources (TV, PC, etc.) as possible; it must not be placed on a metal base. Pay attention to the thermal characteristics of the given place at installation.

- Lift off the back cover of the transmitter acc. to Fig. 1.
- Remove the protective paper from the batteries; the transmitter will be fully operational (batteries are included in the BPT22 packaging).
- Snap back the back cover.
- The transmitter is freely portable and can be located, for instance, on the table. We recommend you to use the delivered table stand (installation acc. to Fig. 3).
- If installed on the wall, no power lines must run around the thermostat!

BATTERY REPLACEMENT

As soon as the " " sign appears on the display, you must replace the batteries.

1) Remove the control part from the bottom cover of the device (Fig. 1).
2) Replace the batteries. Heed the correct polarity indicated in the battery compartment (Fig. 2). After you remove the batteries, the thermostat keeps all settings in the memory for only about 20 s. Always use alkaline pencil-type batteries **2 x 1,5 V type AA**!
   After replacing the batteries, perform the TEST (see page 5)!

Recommendation: Check the batteries before every heating season!

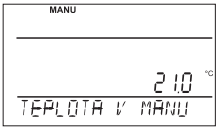
Dispose of old batteries in conformity with regulations on hazardous waste handling!

QUICK CHANGE OF REQUIRED TEMPERATURE

Press twice the "⏎" button; the required temperature starts flashing on the display. Change the required temperature by turning the " ✎ " button and press the " ⏎ " button.

In the AUTO mode, the change will last until the next program change.

In the MANU mode, the change is permanent.



MODE SELECTION AND SETTING TRANSMITTER PARAMETERS

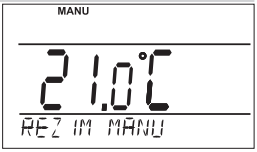
Pressing first any button, you activate the display backlit. By another short press of the "**MENU**" button, you open the main menu in which you can choose operating modes.

AUTO (default weekly program setting, see page 6)

The thermostat works according to the weekly program settings (this program can be changed; for detailed description, see PROG).
Press twice the "**MENU**"button, choose the **AUTO** mode by turning the " ✎ " button, and press the " ⏎ " button to confirm.

MANU (default temperature setting of 21°C)

The thermostat works according to the temperature setting until the next manual change.
Press twice the "**MENU**" button, choose the **MANU** mode by turning the " ✎ " button, and press the " ⏎ " button to confirm.



OFF (the anti-freeze temperature of 3 °C is kept – cannot be changed)

The thermostat is switched off until the next manual change of the mode.
Press twice the "**MENU**" button, choose the **OFF** mode by turning the " ✎ " button, and press the " ⏎ " button to confirm.

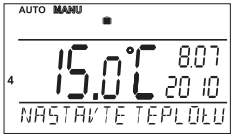
HOLIDAY

The thermostat maintains the preset temperature until the preset date. After expiry of the preset period, it automatically returns to the AUTO/ MANU mode last selected before the holiday.

Press twice the "**MENU**"button, choose the 🧳 mode by turning the " ✎ " button, and press the " ⏎ " button to confirm.

Step by step, set the temperature which the thermostat should keep during the holiday and the date of return from the holiday. Change the values by turning the " ✎ " button and confirm each change by pressing the " ⏎ " button. After making the settings, press the " Esc " button to return to the basic screen.

Note: The holiday mode can be cancelled any time by selecting another AUTO or MANU mode.



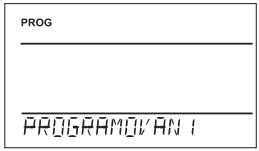
CLOCK SETTING

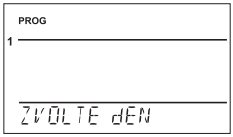
Setting the correct time and date.
Press twice the "**MENU**" button, choose the **CLOCK** mode by turning the " ✎ " button, and press the " ⏎ " button to confirm.
Change the time by turning the " ✎ " button and confirm each change by pressing the " ⏎ " button (the parameter modified is always flashing; pressing the " Esc " button, you return to the menu.

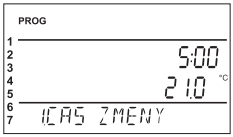
PROG (PROGRAMMING)

Setting the weekly program with up to 6 changes per day.
Press twice the "**MENU**" button, choose the **PROG** mode by turning the " " button, and press the" " button to confirm. The number of days to be programmed is blinking on the display; choose one of the options by turning the " " button (you can program day-by-day or 1-5 = Mon-Fri, 6-7 = Sat-Sun or 1-7 =Mon-Sun) and press the " " button to confirm. The **1st change time** starts flashing; set the time by turning the " " button and press the " " button to confirm. Set the temperature for this time by turning the " " button and press again the " " button to confirm. The **2nd change time** appears on the display. Proceed in the same way as with the first change setting. In this way, you can set up to **6 temperature changes per day**. To return to the menu, press the " " ".button.

After changing the preset program, check whether all the changes made conform to your requirements!
It is not necessary to apply all six changes in one day!

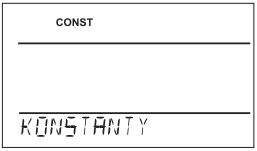






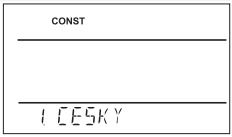
CONST (CONSTANTS)

Setting the control parameters.
Press twice the "**MENU**" button, choose the **CONST** mode by turning the " " button, and press the " " button to confirm.



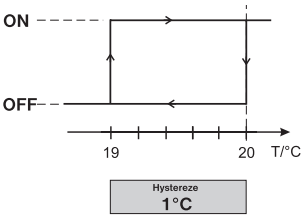
1 CESKY (Czech language set by default)

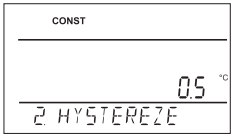
Language selection (CZ/PL/EN/DE).
Choose the language by turning the " " button and press the " " button to confirm.



2 HYSTERESIS (0.5°C set by default)

The hysteresis can be set **from 0,1 to 6°C**.
Example: If the hysteresis is 1 °C and the required temperature 20 °C, the thermostat switches off at 20 °C and on again at 19 °C.
Set the value by turning he " " button and press the " " button to confirm.

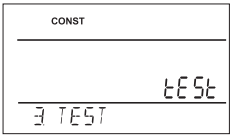




3 TEST

We recommend you to use the test when you first use the thermostat, after connecting the receiver, to verify correct connection and signal quality!

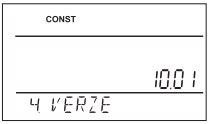
After you turn the " " button, the test starts and the output relay is switched on/off several times (the display shows the ON/OFF message). Pressing the " " button, you can view the next constant; to return to the main menu, press the " " button.



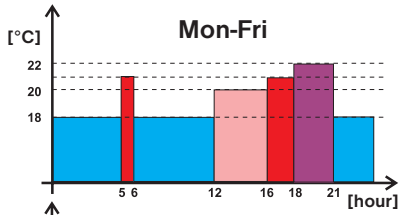
4 VERSION (restoring the default settings)

Firmware version, informative parameter only.

If you press the " " button long (for about 3 s), the RESET message appears shortly on the LCD and the thermostat returns to the default settings!



Preset weekly program:



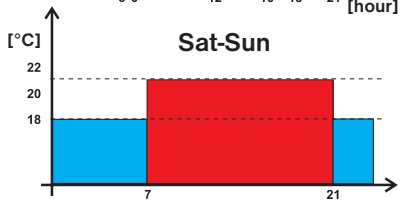


Table for recording your program:

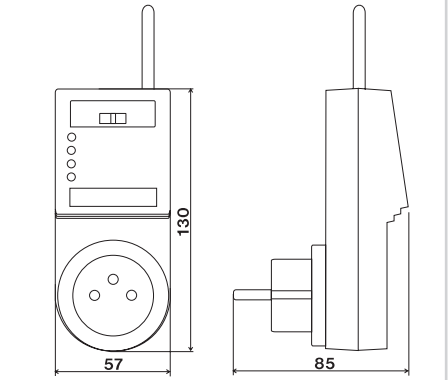
prog. / dny	1	2	3	4	5	6
Mon						
Tue						
Wed						
Thu						
Fri						
Sat						
Sun						

TECHNICAL PARAMETERS

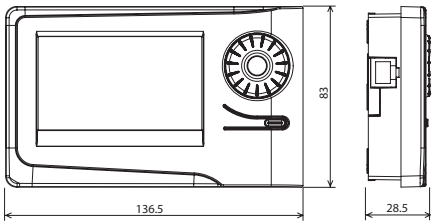
Receiver	
Power supply	230 V/ 50 Hz
Communication type	two-way
Frequency	433,92 MHz
Range	300 m (free area) 35 m (built-up area)
Sensitivity	< -102 dBm
Output	relay, max. 8 A
Protection	IP20
Working temp.	0°C to +40°C

Transmitter	
Power supply	2 x1,5V, alkal. batteries
Communication type	two-way
HF power	< 10 mW
Frequency	433,92 MHz
Hysteresis	0.1 to 6°C
Adjustable temp. range	+5°C to 39°C
Temperature setting	po 0.5°C
Measurement accuracy	± 0,5°C
Protection	IP20
Battery life	heating season
Working temp.	0°C to +40°C

Dimensions – receiver:



Dimensions – transmitter:



DECLARATION OF CONFORMITY

We, ELEKTROBOCK CZ s.r.o., herewith declare that the product BPT22 conforms to the basic requirements and other corresponding provisions of the Directive 1999/5/EC.
Issued: 01/09/2010 on www.elbock.cz

CERTIFICATE OF GUARANTEE

(guarantee period for the product amounts to 2 years)

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

8 594012 224339

In case of guarantee or post-guarantee service, send the thermostat to the manufacturer's address.

LEAD FREE
in compliance with RoHS

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PAP

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