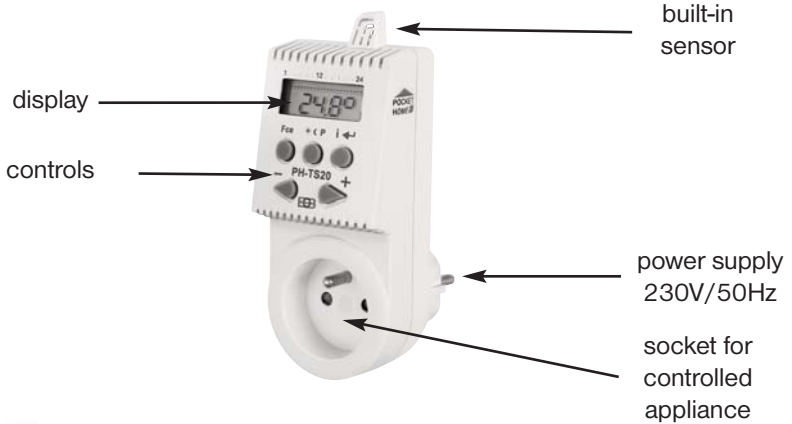


WIRELESS THERMO-SWITCH SOCKET

- _____ ■ Temperature regulation for electrical heating systems
- _____ ■ Component of PocketHome® system
- _____ ■ Two-way radio communication on 433.92 MHz
- _____ ■ It switches on/off connected appliance according to required temperature
- _____ ■ Current temperature measuring with built-in sensor
- _____ ■ Central unit PH-CJ37 acts as a superior component
- _____ ■ Power supply 230 V/50 Hz
- _____ ■ NEW FEATURES:
 - SUMMER MODE FOR SWITCHING THE AIR-CONDITIONER ON/OFF

DESCRIPTION OF CONTROLS



Fce = selection of functions
(AUTO, MANU, CL:O, PROG, PA:r, OF:F, UA:dr)

*** C P** = selection of temperatures
(comfort, economy, party)

i ← = confirmation (ENTER), information on required temperature (PO:t), current time/temperature (CL:O/tE:P), sum of operating hours (SU:MA) and day (dE:n)

-/+ = setting of temperature, time, functions browsing

DISPLAY DESCRIPTION

indication of set time and temperature program (displayed only in autonomous mode)

indication of temperatures
comfort
economy
party

indication of operational mode or selected function



indication of time/temperature

1. FIRST CONNECTION

- connect PH-TS20 to distribution network 230 V/ 50Hz until the symbol **dObI** disappears from the display (it warns that it is necessary to charge the back-up battery)
- when charged, activate according to below given procedure
- the appliance to be regulated is to be connected by simple insertion to PH-TS20 socket
- to be installed in areas with relative humidity lower than approx. 95%



- !** *If the display shows no data, it is necessary to connect PH-TS20 to 230V/50 Hz socket and let it charge for approximately 12 hours. When the back-up battery is fully charged, the display is active and no message dObI should be present, only then the socket may be programmed!*
- If the PH-TS20 is not connected to the socket, it shows temperature which is by 1.5°C lower than real temperature!*

2. TIME SETTING - CL:O FUNCTION current time and day

It is not necessary to set the time as it is synchronized automatically with central unit PH-CJ37!

Current time is sent to all sockets at each time change (central unit displays TS).

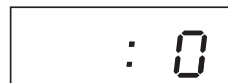
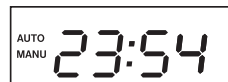
It applies also to the connection of PH-CJ37 to PC!



3. SOCKET ACTIVATION - ESTABLISHING THE COMMUNICATION WITH CENTRAL UNIT

Before the socket can be activated, it is necessary to set and prepare central unit according to instructions for PH-CJ37! (poss. also SW for PC)

- press **Fce** , by means of **-/+** select function for socket activation **UA:dr** and confirm by **i←**
- unique factory number* shows on display
- press " **Test** " on central unit in **ACTIV** mode for given socket (see the manual for PH-CJ37)
- address **Pa:r8** is assigned automatically
- within 1 minute, the socket is activated in PocketHome® system and is preferentially controlled from central unit PH-CJ37 (AUTO+MANU items are shown on the display simultaneously and also current time/temperature).

***unique number**: Each central unit has its unique, factory set number, which prevents mutual interference of PocketHome® systems!

4. SOCKET DEACTIVATION

When the socket is activated in the system within **UA:dr** mode (see p.3), each socket is gradually assigned with address from **1 to 255**. This address cannot be changed, but the socket can be deactivated from PocketHome® system.

- press **Fce** , by means of pressing **-/+** the function for parameters setting **PA:r** and confirm by pressing **i←**
- by means of **-/+** select parameter **PA:r8** and again confirm by **i←**
- by means of **-/+** it is possible to deactivate the socket, when option **--:-** is selected (instead of address, e.g. A:1).



! **The addresses are assigned successively from 1 to 255 in the order of activation of sockets in PocketHome® system!**

! SOCKET RESET - RESTORATION OF FACTORY SETTINGS

Deletion of defined programs and assigned address:

- press **Fce** , by means of presisng **-/+** select **PAr** function and confirm by pressing **i←**
- by means of **-/+** select **PA:r9**, confirm by pressing **i←**
- press ***:CP** and **-** ,simultaneously and factory setting is reset!

Note: use only when necessary, all saved changes will be deleted and factory setting will be reset!

Indication of condition of the in PocketHome® system

condition**	description
SWITCHED ON	AUTO and MANU displayed simultaneously on the display
SWITCHED OFF	AUTO and MANU flash simultaneously on the display

Message **dO:bl** is displayed:

- when back-up battery voltage drops below 2.8 V
- in the course of back-up battery charging, voltage in the range from 1.8 V to 3.6 V.



Short-term change of temperature in PocketHome® system

When a socket is activated in the system, it is possible to make a short-term change of temperature by means of **-/+** button on the socket! This temperature will be kept up to further change of temperature as defined by the program stored at central unit PH-CJ37.

****condition:** defines condition of the appliance connected to the socket!

PUTTING INTO OPERATION FOR AUTONOMOUS MODE

PH-TS20 is able to function also in autonomous (independent) mode.

In this mode, it works according to program that is defined and stored by user in procedure described below.

This setting is useful for such cases, when a failure occurs in the communication within PocketHome® system and the socket receives no signal in the course of 24 hours.

If no program is stored in the socket, it changes automatically to last selected mode (factory setting: AUTO-23°C).

PRINCIPAL FUNCTIONS

After pressing **Fce** button it is possible to select following functions by means of pressing **-/+** buttons:

AUTO : the socket works according to defined program.

MANU : it serves for manual setting of temperature (selected by **C•P** or by **-/+** buttons), the temperature will be constant up to the next change of mode.

CLO : setting of current day and time.

PROG : programming mode.

PAr : setting of parameters (constants).

OFF : in this mode, the socket is permanently switched-off.




UAdr : mode for socket activation in PocketHome® system.

Note: If no button is pressed in 2 minutes, the socket returns to its basic mode. Longer pressing of **-/+** buttons speeds up their functions.

PA:r1 display options




- press **Fce**, by means of pressing **-/+** select **PAr** (*PARAMETERS*) function and confirm by pressing **i↵**
- **PA:r1** is showed on the display
- confirm by pressing **i↵** and by means of **-/+** buttons it is possible to select an option for display content in basic mode:
 - t** displaying of current room temperature
 - C** displaying of current time
- the selection is again confirmed by pressing **i↵**.

PA:r2 economy temperature (factory setting 17°C) ☾

- PA:r2 is showed on the display
- confirm by  and by pressing  buttons set economy temperature, again confirm by pressing .






PA:r3 comfort temperature (factory setting 23°C) ☀

- PA:r3 is showed on the display
- confirm by  and by pressing  buttons set comfort temperature, again confirm by pressing .






PA:r4 party temperature (factory setting 25°C) P

- PA:r4 is showed on the display
- confirm by  and by pressing  buttons set party temperature, again confirm by pressing .






PA:r5 HYSTERESIS (factory setting 0,5°C)

- PA:r5 is showed on the display
- confirm by  and by pressing  buttons set hysteresis in the range from 0.1°C to 2°C, again confirm by pressing .




HYSTERESIS = temperature difference for switching on/off the appliance (connected to PH-TS20).

PA:r6 summer mode = switching on/off the air-conditioner (COOLING)


- PA:r6 is showed on the display, press 
- can be selected in summer, when we need to switch connected air-conditioner on at defined temperature.
In this mode, the hysteresis will act in inverse way than in the mode for heating (if PA:r5=0.5 and required temperature is 23°C, the socket switches on at the temperature of 23.5°C).
- by pressing  select mode, then press  button.



PA:r8 socket address

- PA:r8 is showed on the display
- this parameter is set automatically in the PocketHome® system (see p.2).
If independent function is required, the socket has to be deactivated!
- press  or **Fce** to return to function selection.

PA:r9 number of firmware version/ reset of factory settings (see p.4)

- PA:r9 is showed on the display
- this parameter is only of informative character a shows the number of firmware version
- press  or **Fce** to return to function selection.

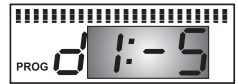
PROG FUNCTION program defining

- press **Fce** and by **-/+** button select **PROG** function (PROGRAMMING) confirm by pressing **i←**
- by pressing **-/+** select the day, which should be programmed according to following table:

d:1 Monday	d:5 Friday	d1:5 Monday to Friday
d:2 Tuesday	d:6 Saturday	d6:7 Saturday to Sunday
d:3 Wednesday	d:7 Sunday	d1:7 whole week
d:4 Thursday		

TABLE: SELECTION OF DAY TO BE PROGRAMMED

- when the day is selected, press **i←** and symbol **1:U1** is displayed, so that you can set the first time interval
- by pressing **-/+** set the time of the first change (min. step: 10min.)
- by repeated pressing of **☀/☾/P** assign required temperature to this time
- again confirm by pressing **i←** and the display automatically shows symbol **1:U2** for the second time interval in the first day.
- this procedure should be repeated until all time intervals (max.6) are set and afterwards leave the programming mode by pressing **Fce**.
- select **AUTO** function and the socket starts to function according to defined program.

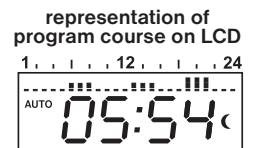
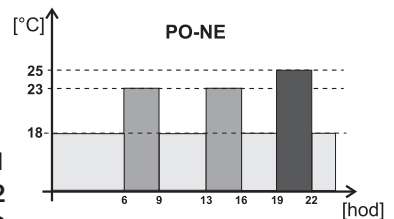


Indication of socket condition in autonomous mode:

symbol **AUTO**(or **MANU**) on the display **IS ALIGHT** = connected appliance is **SWITCHED ON**
 symbol **AUTO**(or **MANU**) on the display **FLASHES** = connected appliance is **SWITCHED OFF**

EXAMPLE definition of weekly program

- 1, Set **☾** for 18°C (PA:r2)
- 2, Set **☀** for 23°C (PA:r3)
- 3, Set **P** for 25°C (PA:r4)
- 4, Select programming of whole week **d1:7** (Prog)
- 5, Assign the time of 6:00 and **☀** temperature to **17:U1**
- 6, Assign the time of 9:00 and **☾** temperature to **17:U2**
- 7, Assign the time of 13:00 and **☀** temperature to **17:U3**
- 8, Assign the time of 16:00 and **☾** temperature to **17:U4**
- 9, Assign the time of 19:00 and **P** temperature to **17:U5**
- 10, Assign the time of 22:00 and **☾** temperature to **17:U6**
- 11, Leave the programming mode by pressing **Fce** and select **AUTO** func.



FURTHER FUNCTIONS OF THE SOCKET

Short-term change of temperature in AUTO mode

By pressing **-/+** buttons in **AUTO** mode it is possible to make a short-term change of required temperature. The socket will maintain this temperature up to next temperature change as defined in the program (this function can be used also in PocketHome® system see p. 4).

OFF FUNCTION permanent switching off

Press **Fce**, by means of **-/+** select **OF:F** function and confirm by pressing **i←**. In this way, the socket is permanently switched off. In this mode, symbol **OF:F** and data on current temperature/time are showed alternatively on the display. To cancel this function, press **Fce** button and select different mode with using of **-/+** buttons.



Child lock

It serves for keyboard blocking, as a protection against unauthorized handling.

Press **Fce** button, then simultaneously press ***CP** and **-**

now the keyboard is blocked (*the buttons are inoperative*). Message **LOC (LOCK)** is shortly displayed on the display. The function can be cancelled, e.g. the keyboard unblocked by simultaneous pressing of ***CP** a **+** buttons (*the buttons are again operative*).



TABLE FOR YOUR RECORDS

interval days	1	2	3	4	5	6
Mon						
Tue						
Wed						
Thu						
Fri						
Sat						
Sun						

SET TEMPERATURE/TIME

UTILIZATION OF PH-TS20 SOCKET



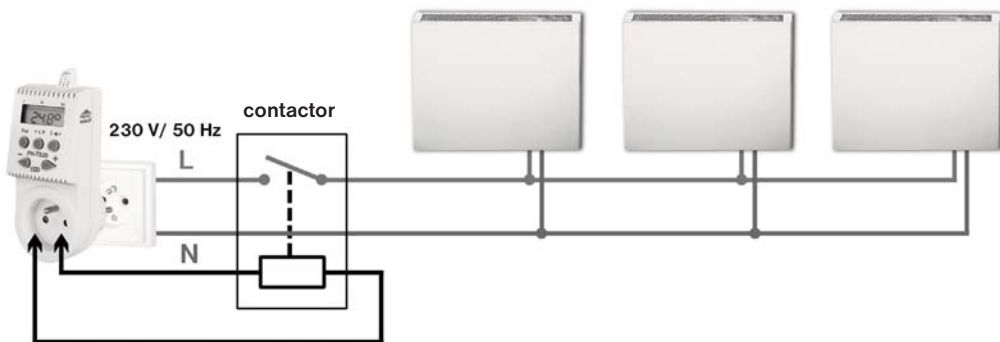
IT CONTROLS CONNECTED APPLIANCE ACCORDING TO DEFINED TEMPERATURE PROGRAM. AS SOON AS THE TEMPERATURE DROPS UNDER REQUIRED TEMPERATURE, THE PH-TS20 SWITCHES THE APPLIANCE ON.

SUITABLE FOR DIRECT CONTROL OF FOLLOWING APPLIANCES:

- ELECTRICAL TUBULAR RADIATORS
- ELECTRICAL HEATING PLATES
- DIRECT-HEATING BODIES
- VENTILATORS
- AIR-CONDITIONERS

WITH CENTRAL UNIT PH-CJ37 IT IS POSSIBLE TO MONITOR CURRENT TEMPERATURE AND CONDITION OF CONNECTED APPLIANCE AND TO SEND REQUIRED CHANGES OF TEMPERATURE PROGRAM.

SIMPLIFIED SCHEME OF UTILIZATION OF PH-TS20 FOR THE CONTROL OF SEVERAL DIRECT HEATING BODIES WITHIN PocketHome® SYSTEM



PH-TS20 is wireless thermally switched socket for automatic regulation of electrical heating and cooling systems (direct heating bodies, towel driers, fires, air-conditioners, ventilators) in family houses and offices. Its benefits include the possibility to set HYSTERESIS and the presence of back-up battery which keeps the parameters set also in the case of power failure.

TECHNICAL PARAMETERS

Power	230 V/ 50 Hz
Communication type	two-way
Frequency	433,92 MHz
Range	300 m (in open area), 35 m (in built-up area)
Number of temperature changes	6 changes of temperature for each day
Hysteresis	0,1°C to 2°C with steps of 0,1°C
Minimal programmable time	10 minutes
Range of possible temperatures	3 to 40°C
Temperature setting	step of 0,5°C
Minimal step of indication	0,1°C
Measurement accuracy	±0,5°C
Back-up battery	NiMh 3.6 V, > 100 hours
Protection	IP20
Output	relay, max.16 A
Operating temperature	0 to 40°C

ES DECLARATION OF COMPLIANCE

We, ELEKTROBOCK CZ s.r.o., herewith declare that the PH-TS20 product is in compliance with principal requirements and further respective stipulations of the directive 1999/5/ES.

Issued: 1.09.2007

www.elbock.cz

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

WARRANTY CERTIFICATE (a 2-year warranty is granted for the product)	
Product number:	Date of sale:
Checked by:	Shop stamp:



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

