




Thermoswitch socket



TS10

DESCRIPTION OF CONTROLS



- Fce** = selection of functions (AUTO, MANU, CL:O, PROG, PA:r, OF:F)
-  = selection of temperatures (comfort, economic)
-  = confirmation (**ENTER**), information about actual temperatur (**tE:A**), present time (**CL:O**), sum of operating hours (**SU:MA**) and day (**dE:n**)
-  = setting of temperature, time, functions

Utilization examples:

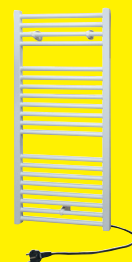
electrical
heating
plates



directheating
bodies



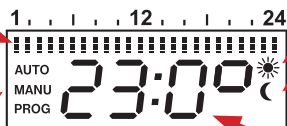
electrical
tubular
radiators



DISPLAY DESCRIPTION

indication of set time
and temperature
program

indication of
operating mode or
selected function



indication of temp.
comfort
economy

indication of
required
temperature

OPERATING INSTRUCTIONS

After connection in 230V-socket is TS10 immediately ready for use and can be programmed according following instructions.

If sign **do:bl** is flashing on the display, the back-up battery is not fully charged and it is necessary let the TS10 in 230V-socket to charge for minimal 2 days (full charge take about 4 days). After charging it is possible to remove TS10 from socket without losing the actual time and you can provide the programming outside the 230V-socket. (Maximal backup time is 50 hours).

do:bl

! ATTENTION! If we disconnect TS10 from the network 230V, the TS10 comes to stand-by mode and only actual time will be shown on display (the colon symbol will not be flashing) and the buttons will be functionless. The activation of the buttons you can make by pressing the button.

If the TS10 is not in 230V-socket the showed temperature is 2 °C lower than real actual temperature.

1. FUNCTIONS OF TS10

After pushing the **Fce** button you can select following functions by pushing / buttons.

1. **AUTO** : thermo-switch socket works according to program as set.
2. **MANU** : serves for manual setting of temperature (the selection by or by / buttons), the temperature should be constant up to next change of mode.
3. **CLO** : setting of present day and time.
4. **PAR** : setting of parameters (constants).
5. **PROG** : programming mode.
6. **OFF** : in this mode is TS10 permanently switched-off (antifreeze is 3°C activ).

Note: If you do not push any button in 2 minutes, TS10 returns into set mode. Longer pushing of / buttons speeds up their functions.

2. PROCEED DURING PROGRAMMING

Before the programming itself, it is necessary to set present day, time and parameters (constants), namely in following way.

Setting of current day and time - "CL:O" function

Press the **Fce** button, by pressing **=/+** select **CL:O** (CLOCK) function and confirm by **↵**. Indication of hours flashes on the display, use **=/+** buttons to set required data and confirm by **↵** button. Use the same method for minutes and day (**d:1** represents Monday, **d:2** Tuesday etc. and **d:7** Sunday). After the completion of setting, press **Fce** button to return.

CL:O

13:54

d: 1

Setting of parameters (constants) - "PA:r"

- press the **Fce** button, by pressing **=/+** select **PA:r** (PARAMETERS) and confirm by **↵** button.
- PA:r2** shows on the display

PA:r

PA:r2 economic temperature (factory setting 17°C) (

- PA:r2** is showed on the display
- confirm by **↵** and by pressing **=/+** buttons set economic temperature, again confirm by pressing **↵** button.

PA:r2

17:0°

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 **↵** button.

PA:r3*

23:0°*

PA:r 4 Function Open window (factory setting as inactive ---)

- PA:r4** shows on the display
- this function is from factory set as inactive (---). For activation it is necessary to set the temperature drop (0.2°C bis 5°C) with using of **=/+** buttons.
- Confirm by pressing **↵** button

PA:r4

0.2°

Function „OPEN WINDOW DETECTION“

when the temperature drops by preset value within 4 minutes, the thermostat switch off the heating to save the energy. It will be alternately displayed sign „OPEN“ and information about required temperature. This mode is terminated when the temperature rise again, or after change of required temperature or after 30 minutes.

The next „open window“ mode can occur only after 10 minutes.

Note: Function „open window“ can run after 10 minutes after first connection to 230V socket.

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PA:r9 Firmware version

- **PA:r9** shows on the display
- Firmware version for information only
- press button **Fce** button to return.

Programming function “PROG”

- press **Fce** and by buttons select **PROG** (PROGRAMMING) function and confirm by pressing button.
- 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	



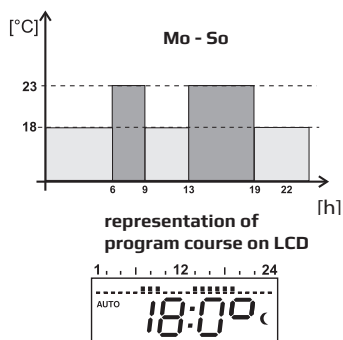
- confirm by button, the sign **1:U1** shows on display for setting up of the first time interval.
- by buttons set the time of first change (min.step of 30 min).
- assign comfort or economic temperature to the setting time by repeated pressing of button.
- confirm by , display automatically shows symbol **1:U2** the second time interval in the first day.
- use the same procedure for the setting of further time intervals (max. 4).
- leave the programming regime by pressing **Fce** and by select the **AUTO** function and TS10 starts to work according to the program set.

Status indication of TS10:

AUTO (or MANU) is shown = connected device is switched on
AUTO (or MANU) flashes = connected device is switched off

EXAMPLE definition of weekly program

1. Set C on 18°C (PA:r2)
2. Set M on 23°C (PA:r3)
3. Select programming of whole week **d1:7** (Prog)
4. **17:U1** assign time **6:00** and temperature M
5. **17:U2** assign time **9:00** and temperature C
6. **17:U3** assign time **13:00** and temperature M
7. **17:U4** assign time **19:00** and temperature C
8. Leave the programming mode by pressing button and select AUTO mode.



EXAMPLE keeping of constant temperature

1. Press **Fce** button and choose with $\text{M}/\text{+}$ function MANU and confirm $\text{M}/\text{+}$.
2. By $\text{M}/\text{+}$ buttons set the required temperature e.g. 5 °C.
3. This temperature will be kept till the further manual temperature change.

3. ANOTHER FUNCTIONS

Short-term change of temperature in AUTO mode:

By simple pressing of $\text{M}/\text{+}$ 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.

Antifreeze protection:

If the room temperature is lower than 3 °C, TS10 switch on automatic the connected device. As soon as the temperature rise the TS10 comes back to the preset mode.

Function " OFF " :

Press **Fce** and by $\text{M}/\text{+}$ button select OF:F function and confirm by $\text{M}/\text{+}$. In this way, TS10 is permanently switched off. In this mode, symbol OF:F and antifreeze temperature 3°C are showed alternatively on the display. For deactivation of this function press **Fce** button and select different mode with using of $\text{M}/\text{+}$ button.
Note: in OFF mode is maintained the antifreeze temperature 3°C!

OF:F

Child lock:

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

Press **Fce** button, then simultaneously press ***C** and **-** now the keyboard is blocked.

Message LO:C (LOCK) is shortly displayed on the display. The function can be cancelled, e.g. the keyboard unblocked by simultaneous pressing of ***C** and **+**.

The image shows a rectangular digital display with a black background and white characters. The text "LO:C" is displayed in a simple, sans-serif font.

Installation:

1. Connect TS10 in 230V/50 Hz socket.
2. Program it according to instructions.
3. Connect the heating body you want to control.

Error messages:

If following error message is shown on the display, contact immediately the manufacturer (it is dealing with a failure of temperature sensor)

The image shows a rectangular digital display with a black background and white characters. The text "Er:r0" is displayed in a simple, sans-serif font.

(ERROR)

! RESET - restoring the default settings

- Press the **Fce** button, by pressing **- / +** select function **PA:r** and confirm by **↵** button.
- By pressing **- / +** buttons select **PA:r9** confirm by **↵**.
- Simultaneously press ***CP** and **-** buttons, it will restore the factory settings!

Note: Use only when necessary, all saved changes will be deleted!



Thermo-switch socket TS10

TS10 is a digitally switched socket for automatic regulation of electrical heating systems (direct heating bodies, towel driers, infrared heatings) in family houses, flats, offices. Up to four time intervals with two temperature levels can be set for each day.

Further advantages:

- different temperature program for each day
- the possibility to set 2 temperature levels (☀, ☾)
- simple control and programming
- possibility to make a short-term change in program temperature
- permanent switching off of the appliance (OFF)
- open window detection
- well-arranged display
- back-up battery NiMH 2,4 V, for more than 50 operating hours

Technical parameters	
Power supply	230 V / 50 Hz
Number of temp. changes	4 temperature changes for each day
Hysteresis	0,5 °C
Minimal programming time	30 minutes
Range of possible temp.	3°C to 40°C
Step of temperature setting	by 0.5°C
Minimal step of indication	0,5°C
Measurement accuracy	± 1 °C
Protection	IP20
Back-up battery	NiMH 2.4 V/ > 50 hours
Output	relay, max. 16 A
Working temperature	0 to 40 °C

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



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