

## EUROSTER 4020TXC6

Wireless, daily room thermostat, constituting a part of the Euroster C6RX heating control system.



**MANUFACTURER: P.H.P.U. AS, Chumiętki 4, 63-840 Krobia, Poland**

In order to take full advantage of thermostat capabilities please read this installation and operation manual carefully.

This manual is intended for the 01.08.2022 version of the thermostat.

### 1. THERMOSTAT APPLICATION

EUROSTER **4020CXT6** is a wireless, daily thermostat designed for cooperation with the **EUROSTER C6RX** floor heating control module. Wireless communication eliminates the necessity to lay cables between the thermostat and control module and ensures user-friendly operation.

The thermostat features a function to lower the preset temperature for the night. The preset temperature is modifiable within the range of 5 °C...35 °C. The thermostat is programmable in daily operating cycles.

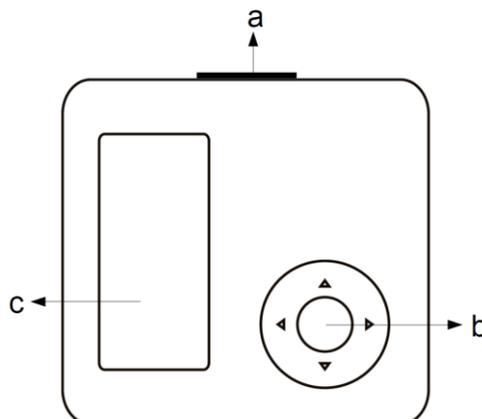
### 2. BASIC THERMOSTAT FUNCTIONS

- User-friendly thermostat enabling easy control of temperature in living and utility rooms
- Bidirectional communication ensures high operational reliability and resistance to interference
- Function enabling a temporary decrease of the set temperature
- Legible, backlit LCD
- Thermostat interlock with a selectable 3-digit code
- Operation in one of the three following operation modes:
  - ✓ Room temperature control mode
  - ✓ Floor temperature control mode
  - ✓ Temperature control with floor temperature limitation mode
- Simultaneous display of current and preset temperature value
- Hysteresis setting between 0.2°C and 10°C or PWM adjustment
- Temperature setting and read-out accuracy of 0.1 °C
- Possibility to switch the thermostat off after the heating season
- Discharged batteries indication
- Temperature reading correction
- Surface mounting

### 3. THERMOSTAT VISIBLE ELEMENTS

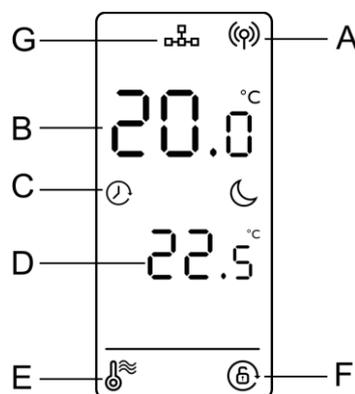
#### BODY

- a. Thermostat on/off switch
- b. Thermostat control knob
- c. Display



#### DISPLAY

- A. Radio communication symbol
- B. Current temperature
- C. Active function enabling a temporary decrease of the set temperature
- D. Preset temperature
- E. Active heating symbol
- F. Active thermostat interlock symbol
- G. Vacation mode activated by Master (E4040TXC6) thermostat



### 4. INSTALLATION

#### 4.1. Safety rules

##### CAUTION!

- **Prior to the commencement of any installation works read this manual carefully! Incorrect installation and improper use may lead to serious hazards to users or other persons and result in property damage!**
- **Do not install the device in rooms of increased humidity, substantial dustiness or with the presence of caustic or flammable vapors, protect it against water and other liquids!**
- **Do not install any set showing signs of mechanical damage!**
- **The thermostat is not a safety component of the heating system. Additional protection devices must be used in the heating systems prone to the risk of damage due to failure of the control systems!**
- **Do not misuse the thermostat!**
- **The device is not intended for use by children!**
- **Failure to meet the safety and maintenance rules results in loss of warranty!**

#### 4.2. Proper place of installation

No cables are connected to the thermostat, thus it can be placed anywhere. In order to ensure the fully efficient operation of the thermostat, please make sure that the following recommendations regarding the location of the thermostat are observed:

- Locate the thermostat at a height of approximately 1.5 m above the floor
- Avoid places exposed to intense sunlight, situated near heating or cooling devices, directly by doors, windows and other similar locations, where the temperature measurement could be easily disturbed by external conditions.
- Avoid places with poor air circulation, e.g. behind furniture.

- Avoid moist places due to the negative effect of moisture on the service life of the device.

### **Caution!!!**

**Having selected a place of installation check if radio communication between the thermostat and C6RX module is maintained.**

### **4.3. Insertion and replacement of batteries**

Place the batteries in the thermostat while observing their correct polarity. There are installation markings in the battery compartment. Then install (snap) the thermostat onto the base.

*CAUTION! Use only alkaline AAA batteries to power the thermostat. Do not use rechargeable batteries because their voltage is lower and their effective time is shorter.*

*It is recommended to replace batteries before each heating season.*

### **4.4. SETTING TEMPERATURE**

Use the "▼▲" buttons to set the desired temperature value. Pressing one of the buttons for the first time activates the backlight, and pressing it repeatedly lowers or raises the temperature in increments of 0.1°C. The longer the button is pressed, the faster the values change. Confirm the temperature change with the central button or wait until the set value stops flashing and is stored. The factory setting is 20°C.

## **5. FUNCTION ENABLING TEMPORARY DECREASE OF THE PRESET TEMPERATURE**

It allows you to store the lowered temperature () and its duration, and the comfort temperature () that will remain in effect for the remaining time of the day. The preset program will be executed every day of the week.

To activate the function:

- Use "▼▲" buttons to set the comfort temperature
- Confirm with the central button
- Press and hold the central button for 3 seconds
- The display shows the flashing value to be used as lowered temperature ( symbol),
- Use the "▼▲" buttons to set the desired temperature value
- Confirm with the central button
- Then use "▼▲" to set the duration of the operation with lowered temperature
- Confirm with the central button.

From this point on, the thermostat runs the program for all days of the week. For the duration of the operation with decreased temperature, the  symbol is displayed, and the  symbol is displayed for the remaining time of day.

In order to change the set temperatures without disabling the function:

- Press the right-hand "▶" button
- Press the right-hand button again – select comfort  or reduced  temperature,
- Use "▼▲" buttons to set the desired temperature value.
- Confirm with the central button.

In order to disable the function, hold down the central button for 3 seconds.

The function of temporarily lowered temperature can be set to between 1 and 23 hours.

## **6. TEMPORARY CHANGE OF TEMPERATURE**

During the thermostat operation with the temporarily lowered temperature, use "▼▲" buttons to change the temperature. However, the changed temperature value is only valid until the next change resulting from the preset lowering period. For the time of temporary operation with changed temperature  symbol is displayed.

## **7. THERMOSTAT CONFIGURATION**

Press and hold the central and right buttons for approximately 2 seconds to enter the setting mode. Configure the thermostat in the following way: choose a required parameter with "▼▲" buttons, use the central button to enable changes, and change the value using "▼▲" then confirm the modified value with the central button. The following parameters may be changed:

- **Temperature range limit – low (LO)**

This parameter allows you to limit the temperature range to be set. It limits the lower values of the range.  
The default value is 5°C.

- **Temperature range limit – high (HI)**

This parameter allows you to limit the temperature range to be set. It limits the higher values of the range.  
The default value is 35°C.

*Example*

To set a preset temperature between 18°C and 23°C, you must set the "LO" value to 18°C and the "HI" value to 23°C.

- **ECO**

ECO function if activated with Euroster C6RX module by shortening ECO input. The range is between 5°C and 35°C. Upon shortening the input, the thermostat maintains the preset temperature.

- **Hysteresis/PWM (H)**

Two operational options for the algorithm activating the heating are available: hysteresis or PWM.

In the case of hysteresis, the device is activated based only on a difference between the preset and current temperature. The parameter determines the accuracy of room temperature control. You may set the hysteresis to a value ranging from 0.2°C to 10°C, and the factory setting is 0.2°C.

Setting the value to 0.0 puts the thermostat into PWM mode.

PWM is a more advanced method to achieve the preset temperature. It is suited for systems with underfloor water heating. It is used to limit room temperature fluctuations. Unlike in on/off controls the current status of the transmitter depends not only on the current difference between the preset and measured temperature but also on past changes of temperature. PWM operates with fixed parameters:

- ✓ Minimum relay activation time of 3 minutes
- ✓ Number of cycles per hour - 4
- ✓ Operating range of the PWM algorithm of 0.7 °C.

- **Thermostat interlock (Pin)**

The thermostat features a keypad lock function. A three-digit code of your choice may be entered. In such a case it is not possible to change the settings. The interlock does not affect the thermostat operation. To activate the interlock, change from "OFF" to "On" in the menu, confirm it with the central button and then enter the code using "▲▼" buttons. Confirm each digit with the central button. Active interlock is indicated by displaying the  symbol. The interlock is activated after 10 minutes. The interlock is disabled in the same way. This function is not active by default.

- **Temperature sensor correction (C)**

It is a value added to or subtracted from the measured temperature value. It adjusts the displayed temperature within the range of +/- 5 °C. The function is convenient if the thermostat is located in a slightly warmer or cooler area of the room.

- **Selection of temperature sensor (Sen)**

This option permits the selection of a temperature sensor to cooperate with the thermostat. There are three operation modes available:

- ✓ **0** - the thermostat measures and maintains the temperature based only on internal sensor operation
- ✓ **1** - the thermostat measures and maintains the temperature based only on external (cabled) sensor operation
- ✓ **2** - the thermostat measures the temperature of both sensors; it maintains the temperature of an internal sensor, and the external sensor acts as a temperature

limit. Having selected this operation mode set the floor temperature limit value. This parameter is used to establish the maximum safe floor temperature. When the preset temperature is reached, the heating gets switched off.

- **Pairing mode (P)**

It is used to establish a radio connection between the thermostat and the Euroster C6RX module.

Each thermostat has a unique number distinguishing it from other ones. It is not possible for any thermostat not paired with the particular C6RX module to interfere with the operation of another set. The thermostat may be paired with the module again at any time. A blackout, battery replacement, as well as a complete reset of all thermostat settings, do not affect the pairing of devices in any way.

The procedure of coupling the thermostat with the module is described in detail in the EUROSTER C6RX module user manual.

- **Reset (rEs)**

When you change the value from 0 to 1 the thermostat restores factory settings.

- **Exit (ESc)**

Press the central button to make the thermostat exit the service mode.

You may also exit the menu by pressing the left "◀" button.

## 8. TEST MODE (tSt)

In the test mode, you may check the main parameters of the thermostat. In order to enter the test mode press and hold the central and left "◀" buttons for approximately 2 seconds.

The following tests are available:

- Internal sensor temperature measurement
- External sensor temperature measurement – press the central button
- Relay test – press the lower "▼" button to switch on/off the channels assigned to the thermostat in the C6RX module
- Backlight test – press the upper "▲" button repeatedly to switch the backlight on/off.

## 9. SWITCHING THE THERMOSTAT OFF

When the switch is moved, the thermostat goes into frost protection mode. The  symbol appears on the display. Frost protection ensures that the heating is turned on only to prevent the temperature from dropping below 4 °C.

## 10. ERROR INDICATION

**OP** – a sensor is missing or damaged

**SH** – short-circuit of a sensor or a damaged sensor

**Err 1** – internal error – remove and after a few minutes reinstall the batteries.

 – discharged batteries icon

**Err** and  icon – no radio communication.

## 11. NO RADIO COMMUNICATION

If the communication between the thermostat and the C6RX module is interrupted (e.g. due to discharged batteries) and such condition lasts for 60 minutes, the C6RX module switches to the anti-frost mode. A zone (or zones) to which the thermostat was assigned is switched on every 3 hours for 20 minutes, to prevent cooling down of the rooms. At the time of re-establishing communication (replacement of batteries), the module switches the system off and automatically resumes operation.

No radio communication is signalled with **Err** and  icon.

## 12. VACATION MODE

If **E4040TXC6** thermostats are cooperating with the Euroster C6RX module, and if such thermostat is stored to channel 1, then it automatically becomes a MASTER thermostat. Setting vacation on the MASTER thermostat causes switching on the vacation mode on all thermostats

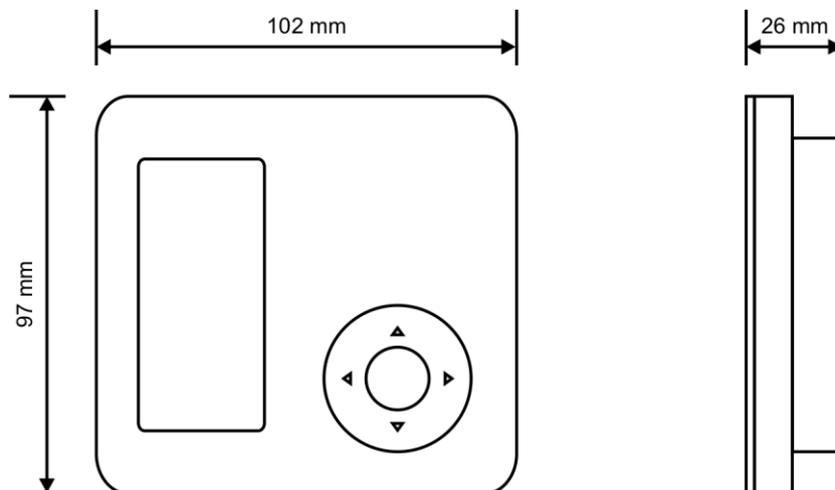
assigned to the C6RX module, including the E4020TXC6 thermostat.

Vacation mode switched on by a Master thermostat on the E4020TXC6 thermostat is signalled with  icon.

### 13. MAINTENANCE

Do not use solvents and aggressive detergents to clean the thermostat, since they may damage the surface of the housing and the display. Clean the thermostat housing with a soft cloth.

### 14. DIMENSIONS



### 15. TECHNICAL DATA

Controlled device	Euroster C6RX control module
Supply voltage	3V (2 pieces of AAA batteries)
Maximum load	5A 230V 50 Hz
Temperature measurement range	0 °C...+99 °C
Temperature control range	+5 °C...+35 °C
Temperature control accuracy	0.1 °C
Temperature read-out accuracy	0.1 °C
Hysteresis range:	0.2 °C... 10 °C with 0.1 °C step of the change or PWM mode
Visual signalization:	backlit LCD
Operating temperature	+5 °C...+45 °C
Storage temperature: 0 °C...+50 °C	
Ingress protection rating	IP20
Colour	white/grey
Installation method	wall-mounted/stand
Thermostat weight without batteries	120 g
Frequency of operation	868 MHz
Maximum power of transmission	<25mW
Warranty period	2 years
Thermostat class	IV (PWM mode)
Thermostat contribution to the seasonal energy efficiency of room heating	2%(PWM mode)

### 16. KIT CONTENTS

- **Euroster 4020TXC6** thermostat
- thermostat stand (wall-mounted and stand-alone type)
- 2 pieces of alkaline AAA batteries
- Installation and Operation Manual with Warranty Certificate

### 17. SIMPLIFIED DECLARATION OF CONFORMITY

P.H.P.U. AS AGNIESZKA SZYMAŃSKA-KACZYŃSKA hereby represents that the type of Euroster 4020TXC6 equipment conforms to the following directives: 2014/30/EU (EMC), 2011/65/EU

(RoHS).

The complete text of the Declaration of EU conformity is available at the following Internet address: [www.euroster.pl](http://www.euroster.pl)

## 18. ELECTRONIC WASTE MANAGEMENT INFORMATION



This product is designed and manufactured from high-quality materials and components suitable for reuse.

The crossed-out wheelee bin symbol located on the product (Fig. 1) means that the product is subject to selective collection in accordance with the provisions of the Directive 2012/19/EU of the European Parliament and of the Council.

The product contains batteries, which are marked with a crossed-out wheelee bin symbol (Fig. 1). The batteries are subject to the selective collection in accordance with the provisions of the Directive 2006/66/EC of the European Parliament and of the Council.

Such marking informs that the electrical and electronic equipment as well as batteries and accumulators may not be disposed of together with other household waste after their service life has ended. The user is obliged to take the used devices and batteries or accumulators to a point of collection of waste electrical and electronic equipment and batteries and accumulators. The entities collecting such equipment, including the local collection points, shops, and municipal entities, set up an appropriate system enabling the handover of such equipment and batteries and accumulators. The proper disposal of waste equipment, batteries, and accumulators contributes to the prevention of consequences hazardous to the health of persons and nature, resulting from the possible presence of hazardous components in the equipment and batteries and inaccurate storage and processing of such equipment, batteries, and accumulators.

Households play an important role in contributing to reuse and recovery, including recycling, of waste equipment. The attitudes influencing protection of the common good of clean environment are shaped at this level. Households are also one of the larger users of small equipment and its rational management at this level impacts the recovery of recyclables. **Inaccurate disposal of this product may be penalized in accordance with national legislation.**

**WARRANTY CERTIFICATE**  
**EUROSTER 4020TXC6 thermostat**

Warranty terms:

1. The warranty is valid for 24 months from the device sale date.
2. Rights under the warranty are exercised within the territory of the Republic of Poland.
3. The claimed thermostat together with this warranty certificate must be supplied to the seller or directly to the manufacturer by postal services of Poczta Polska.
4. Warranty claims shall be processed within 14 business days upon the day when the manufacturer received the claimed device.
5. The device may be repaired exclusively by the manufacturer or by a party clearly authorized by the manufacturer.
6. Warranty becomes void in case of any mechanical damage, incorrect operation and repairs made by unauthorized persons.
7. This consumer warranty does not exclude, restrict nor suspend any right of the buyer if the product does not meet any of the sale contract terms.

.....  
Sale date

Serial number / date of Stamp  
manufacture and signature

Service:  
Phone No. (+48) 65-  
57-12-012

Business entity that issued this Warranty Certificate is:  
P.H.P.U. AS Agnieszka Szymańska-Kaczyńska, Chumiętki 4, 63-840 Krobia, Poland