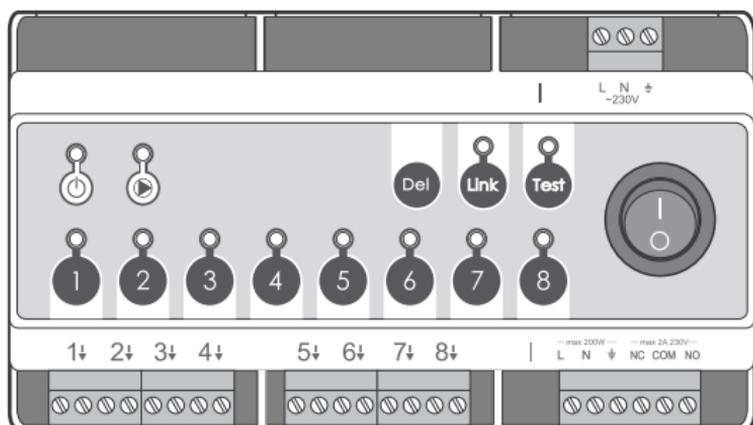


# AURATON

## RTH 8D PRO

User manual



[www.auraton.pl](http://www.auraton.pl)



# AURATON RTH 8D PRO

An intelligent wireless controller  
covering 8 heating zones

**AURATON RTH 8D PRO** is a controller intended for cooperation with heads, a central-heating pump, and a heating device. Individual heating zones are controlled using AURATON wireless thermostats (*e.g. AURATON 200R, AURATON 2025R, AURATON 2030R, AURATON 3021R*).

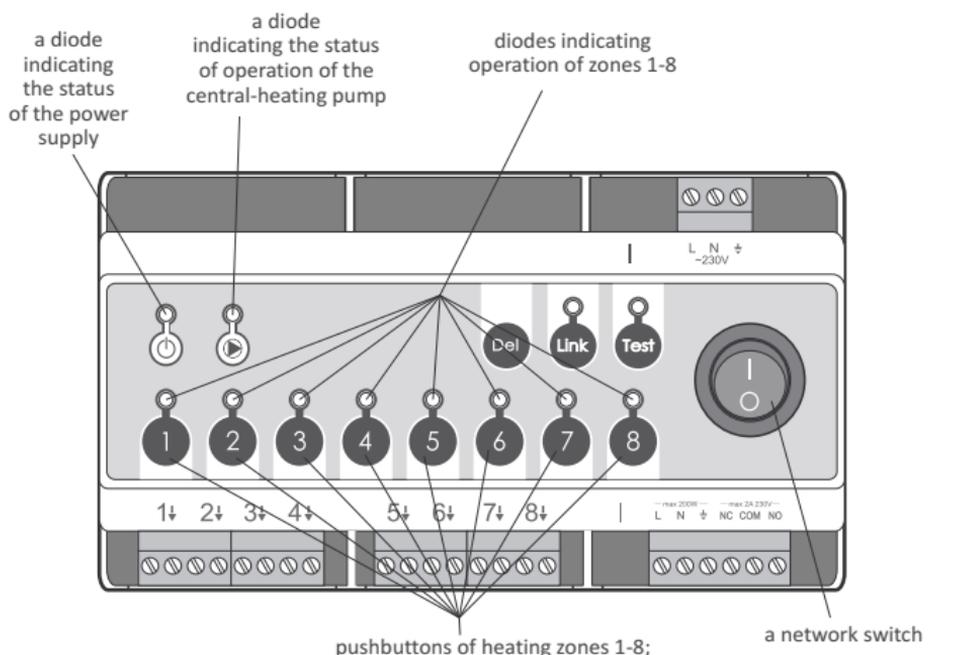
**NOTE:** The controller is intended for installation on a DIN rail in a cabinet.

## Operation

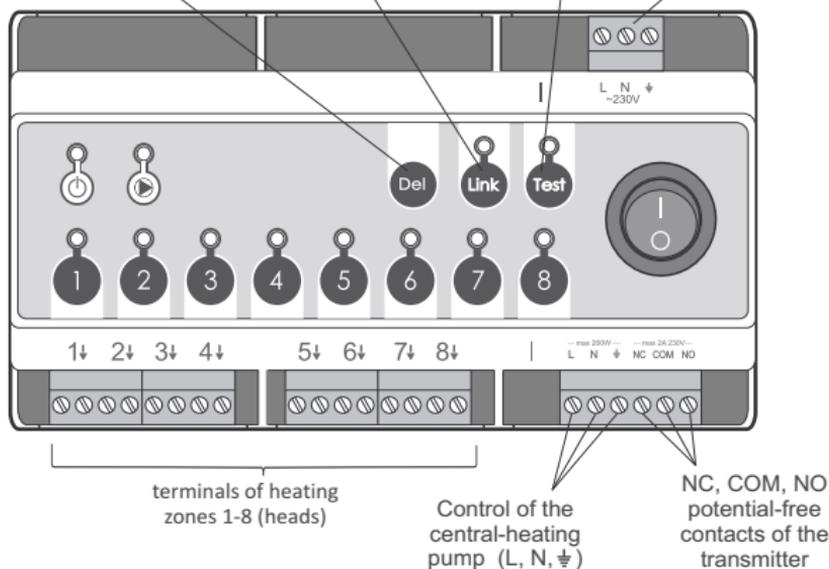
**AURATON RTH 8D PRO** works in the same way as 8 separate heating zone channels and additionally may perform the following functions:

- control of a central-heating circulation pump;
- control of a central-heating furnace via a transmitter with potential-free contacts;
- connecting to other AURATON RTH 8D PRO and AURATON 8000 devices (up to 10 devices in the system) in order to synchronize the control of the central-heating pump and a central-heating furnace and to test the strength of the LMS signal from wireless AURATON devices.

## Description of the device, the push buttons, and the indicator lights

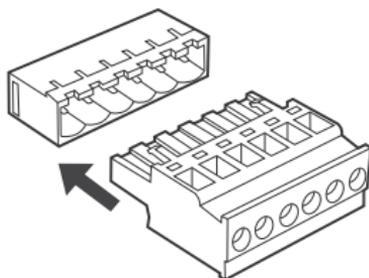


a button (**Del**) to log out LMS devices or to restore the factory settings  
 a button (**Link**) with a light indicating mutual synchronization of RTH 8D PRO devices  
 a button (**Test**) with a light indicating the operation mode of the tester function  
 L, N, ⚡ power supply connection 230V 50Hz



**NOTE:**

In order to facilitate installation, the terminals are fitted with extendable clamps. Before cable connections are made, they can be disconnected from the controllers.

**NOTE:**

Connections may be made only when the power supply is cut off.

## Indication of operation of the controller

The controller indicates its operating status with LED diodes.

- **A diode indicating the status of the power supply (red):**

The power supply diode is off	The controller is off
The power supply diode is on	The controller is in normal operation mode

- **A diode indicating the status of operation of the central-heating pump (green):**

The diode is off	No control of the central-heating pump
The diode is blinking	Waiting for the pump to be switched on (a 3-minute delay)
The diode is on	The central-heating pump is on

- **Diodes indicating operation of heating zones**

The diode is off	The heating is off
The diode is on	The heating is on
The diode is blinking (every 0.5 s)	The zone is in the matching mode
The diode blinks quickly	The zone is in the sign-out mode

• **LINK indicator diode:**

The diode is off	No pairing with another RTH 8D PRO
The diode is 10% on	The controller is paired with another RTH 8D PRO (controller in the LOCAL mode)
The diode is 100% on	The controller is paired with another RTH 8D PRO (controller in the GLOBAL mode)

## Controlling the central-heating pump and the transmitter (a single RTH 8D PRO)

The central-heating pump or the furnace is switched on when heating is switched on in any of the heating zones - a diode that indicates operation of the central-heating pump is then switched on.

The central-heating pump or the transmitter is switched off when none of the heating zones is active - the diode indicating operation of the central-heating pumps will be switched off.

In order to improve the operation of the heating system, the RTH 8D PRO controller is equipped with a system for temporary activation of the central-heating pump.

When heating is switched on, first the heads are switched on and then, three minutes later, the central-heater pump and the transmitter are activated. In the time before the pump and the transmitter are activated, the pump diode blinks. After that time, the pump and the transmitter are switched on and the diode is lit.

Such operation of the controller is intended to manage the heating system reasonably and not to allow excessive load on the central-heating pump, which could result in its premature wear.

## Information and notes

- For each zone, an additional thermostat and/or LMS thermometer can be logged in. The thermostat, through an independent channel, transmits two parameters to the AURATON RTH 8D PRO:
  - the current temperature,
  - the set temperature.
- If, after an additional thermostat is logged in, an AURATON T-2 thermometer is logged in, the actual temperature will be taken from the AURATON T-2 thermometer and only the set temperature will continue to be taken from the thermostat. This makes it possible to control temperature in a room other than the one where the thermostat is located.

### NOTE:

**The order of the login in configuration with the thermostat and the thermometer is important.** The thermostat must always be logged in first, and the T-2 thermometer should be logged in afterwards. When the thermostat is logged in again, the T-2 thermometer is deleted from the specific channel.

- If only the T-2 thermometer is logged in in a given heating zone, the AURATON RTH 8D PRO controller maintains the factory-set temperature of 20 °C in the room where the thermometer is installed.
- If the connection between the RTH 8D PRO and the thermostat of a given zone is broken, the RHD 8D PRO switches to the AUTO24 automatic operation mode in that zone. AURATON RTH 8D PRO then implements the saved heating cycles from the last 24 hours.

**NOTE:** The manufacturer suggests logging in at least 1 AURATON thermostat with a clock (e.g. AURATON 2030 R, AURATON 2025 R, or AURATON 3021 R), so as to make the AUTO24 function more precise.

- The AURATON RTH 8D PRO is switched on and off using the network switch.

## Login of wireless devices in a zone

In order to log in a wireless AURATON thermostat (or the T-2 thermometer) in a zone:

1. Push the button of the specific zone and hold it for 3 seconds, wait for a single sound signal, and then release the button. When the zone switches to the login mode, this is indicated by blinking of the indication diode of the zone (in 0.5 s intervals).
2. After one zone is switched to the login mode, also other zones can be switched to the login mode by pressing their buttons. This makes it possible to simultaneously log in the same thermostat and/or thermometer in more than one zone. By briefly pushing the button of the zone that was in the login mode, one can switch off the login mode of that zone (*if the login mode is switched off for all zones, the RTH 8D PRO controller switches to the normal operation mode*).

**NOTE:** The login mode is automatically switched off 60 s after the last zone is switched to the login mode, after the LMS device has been logged in correctly, or after the **DEL** button has been pushed in briefly.

3. In order to log in an LMS wireless device in a zone (or several zones), one must switch on the login mode in the required zones and then start the login in the LMS wireless device by pressing the login button for more than 5 s. (A detailed description of the login procedure for wireless AURATON devices can be found in the user instructions of the respective devices).
4. Correct login of an LMS device is confirmed with one 1-second sound signal. After a wireless device has been logged in, the RTH 8D PRO controller switches to the normal operation mode.

The login must be performed properly for all the required zones.

**NOTE:** One must keep in mind that after the login of a new thermostat in a zone, all the devices that have been logged in in that zone will be "forgotten." If a thermostat is logged in in a zone and then an AURATON T-2 thermometer is logged in, then the zone will remember both the thermostat and the thermometer. The set temperature is taken from the thermostat and the current temperature - from the thermometer. Only one thermostat and/or thermometer can be logged in in a single zone.

## Logout of a device from a zone

### Logout of an LMS device from a single channel:

1. If the zone in which the device is logged in is known, press the button of that zone and hold it for more than 5 s. After 3 s, a single login sound signal can be heard - do not release the button. After 2 more seconds, a double sound signal can be heard and the zone automatically switches to the logout mode (fast blinking of the indicator diode).
2. Press the login button in the wireless LMS device to be logged out from the zone (*see the user instruction for the device*). After 3 short sound signals, the LMS device is logged out and the controller switches to the normal operation mode.

### Logout of an LMS device from a one or more channels:

1. Press the **DEL** button for more than 5 s. After two sound signals, all zones in which any wireless LMS devices have been logged in switch to the logout mode. The diodes of all zones in which wireless devices have been logged in start blinking.
2. Press the login button in the LMS device (*see the user instruction of the device*) to be logged out of the zone(s). The RTH 8D PRO controller automatically finds the zone(s) in which the LMS device has been logged in and logs it out of all the zones that are in the logout mode. If the diode starts blinking quickly in a given zone, this means that all LMS devices have been properly logged out from that zone.
3. If, after the device has been logged out, the diode of any of the zones continues to blink fast, this means that the controller is waiting for logout of other LMS devices.

**NOTE:** The logout mode in a given mode is automatically switched off 60 seconds after the last zone is switched to the logout mode, after all devices assigned to the specific zone have been logged out, or after the **DEL** button has been pressed briefly.

4. If all diodes stop blinking fast, the controller switches to the normal operation mode.

### Logout of an LMS device without using it:

1. Select the zone from which the device is to be logged out and press and hold the button of that zone for 5 seconds. After two sound signals, release the button (quick blinking of the diode) and, if necessary, press the button briefly to select another zone.
2. Then press the **DEL** button and hold it for 5 seconds to log the controller out from the specific zone - this is confirmed with a sound signal.

## Logout of all LMS devices (factory RESET)

After the controller has been switched off using the network switch, press and hold the **DEL** button while switching the controller back on. The factory RESET is confirmed with a long sound signal.

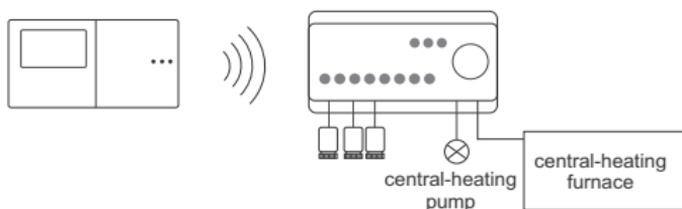
## Connecting the RTH 8D PRO controller in a single system controlling the central-heating pump and the transmitter

The AURATON RTH 8D PRO controller can work in three modes:

- a LOCAL mode in which it controls the central-heating pump and the furnace transmitter,
- a GLOBAL 1 mode in which it controls the central-heating pump and the furnace transmitter;
- a GLOBAL 2 mode in which it controls the furnace transmitter.

### I. LOCAL mode

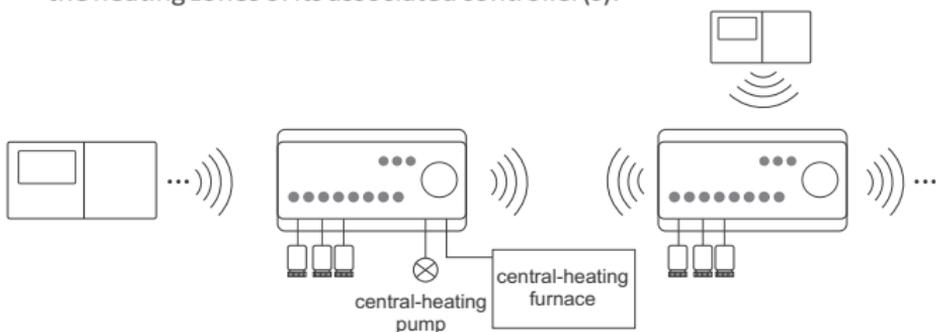
The RTH 8D PRO controller controls the central-heating pump and the furnace transmitter regardless of the status of its heating zones. In such a case, the LINK function is not used.



### II. GLOBAL 1 mode

The system uses many RTH 8D PRO controllers and one central-heating pump.

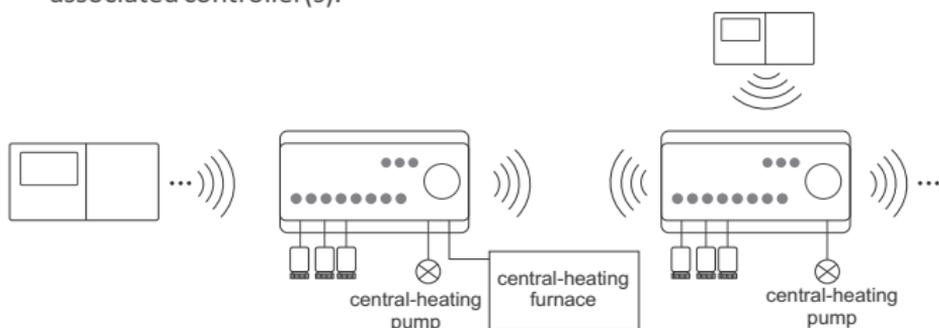
The controller controls the central-heating pump and the furnace transmitter depending on the status of its heating zones and the status of the heating zones of its associated controller(s).



### III. GLOBAL 2 mode

The system uses many RTH 8D PRO controllers and several pumps in each zone.

The controller controls the central-heating pump depending on the status of its heating zones and controls the furnace transmitter depending on the status of its heating zones and the status of the heating zones of its associated controller(s).



The mode GLOBAL 1 or GLOBAL 2 should be set in the RTH 8D PRO transmitter that controls the central-heating furnace through a potential-free transmitter.

If the main central-heating pump is located near the furnace, then the controller should work only in the GLOBAL 1 mode.

With the RHD 8D PRO controller in the normal operation mode, press the LINK button and hold it for 3 s. A single sound signal is emitted and the LINK diode starts blinking (0.5 s intervals). Then, within 60 s, perform the same actions on the second RTH 8D PRO controller. Proper pairing is indicated with a sound signal and a 10% illumination of the LINK diode in the two or more devices.

In order for the controllers to be able to communicate with each other, one of them must be put in the GLOBAL mode (*see the chapter titled "Switching the operation mode"*).

**NOTE:** If the AURATON RTH 8D PRO controllers are to work independently, there is no need to pair them.

**NOTE:** If it is necessary to use more than two devices, then each additional device must be logged in to the controller set as the GLOBAL one.

The maximum number of controllers that can be paired in the system is 10.

## Switching the operating mode

Switching between the GLOBAL 1, GLOBAL 2, and LOCAL mode can be achieved by pressing the **LINK** button 5 times.

- Activation of the GLOBAL 1 mode is indicated by a single sound signal and a single flashing of the LINK diode.
- Activation of the GLOBAL 2 mode is indicated by a double sound signal and a double flashing of the LINK diode.
- Activation of the LOCAL mode is indicated by a triple sound signal and a triple flashing of the LINK diode.

**NOTE:** In a given set, only one RTH 8D PRO controller can be in the GLOBAL mode. After the GLOBAL mode is switched on in one controller, an attempt to switch it on in another control causes automatic switching of another controller to that mode.

If it is necessary to log out an AURATON RTH 8D PRO controller from the set, press the **LINK** button and hold it for at least 5 seconds; after a double sound signal (and quick blinking of the diode), release the button and press and hold the **DEL** button for 5 seconds. Correct logout is indicated by a triple sound signal.

**NOTE:** The controller set as the GLOBAL one should be connected to the furnace to control it. When connected to the furnace, it receives signals from the remaining controllers, which are in the LOCAL mode and send information about their demand for heat.

## A radio signal test

The AURATON RTH 8D PRO controller is equipped with a radio signal tester function. In order to activate the function:

1. Press and hold for 5 seconds the **TEST** button. Activation of the function is indicated by blinking of the TEST diode and by alternating illumination of the diodes of the heating zone.
2. Then, in order to check the level of signals sent by different LMS devices (e.g. the thermostat), press and hold the login button (*see the instruction for the device*) for 5 seconds in order to force sending the login signal.
3. If the signal has been received properly by the RTH 8D PRO controller from the thermostat (confirmed with a long sound signal), the signal level is shown using the heat zone diodes. One illuminated diode indicates that the signal level is insufficient, while all (8) illuminated diodes indicate that the signal level is excellent. During the test, each signal received from the thermostat is confirmed with a brief sound signal.

4. In order to switch off the tester function, press and hold the **TEST** button for 5 seconds.

**NOTE:** If the user does not switch off the tester function, then the controller switches it off automatically 10 minutes after any button is pressed for the last time.

Activation of the test mode does not affect the control of the heating system.

## Additional notes

- If the distance from the tested LMD device is bigger, fewer diodes will be illuminated.
- It should be assumed that if only 2 diodes are illuminated, an AURATON RPT LMS signal repeater (amplifier) should be used.
- If only one diode is illuminated, it should be assumed that an AURATON RPT repeater is required to ensure stable operation of the system.
- There may be locations where propagation of the LMS signal sent by wireless devices is very difficult. In such a case, an AURATON RPT signal repeater (amplifier) is used between a transmitter and the RTH 8D PRO controller will guarantee proper operation of the system.
- In extreme cases (large distances, metal obstacles, more floors, etc.), it may be necessary to use more than one AURATON RPT repeated to enable proper transmission of the signal.
- More information about the performance of AURATON RPT repeaters can be found at their manufacturer website at [www.auraton.pl](http://www.auraton.pl).
- The RTH 8D PRO controller has functions that enable **testing of heads** during their operation. When the heads are being connected and the device is being started, the controller checks if the heads have been connected and records this fact in its memory. If any of the heads becomes defective during operation of the controller, a double sound alarm is emitted and the diode of the specific zone starts blinking. **The check of a head is performed every 30 seconds and consists in disconnection of the head for 3 seconds and its reconnection.**

**NOTE:**

Connections may be made only when the power supply is cut off. The controller should be installed by a specialized company.

In order to ensure proper operation, the controller must be installed in a plastic electrical cabinet on a DIN rail instead of a metal cabinet, which blocks radio signals.

## Technical data

Place of installation:	a DIN rail enclosure
Power supply:	230V AC 50Hz
Number of independently controlled heating zones:	8
Possibility to log in a maximum of:	8 thermostats and/or thermometers
Load capacity of the 230 V head control outputs:	30 W per zone ( <i>up to 3 AURATON actuators</i> )
Load capacity of transmitter:	230V AC, 2A ( <i>potential-free contacts COM, NO, NC</i> )
Load capacity of the 230 V CH pump output:	200W
Power consumption of controller:	approx. 1.5 W
Indication of operation status:	optical and acoustic
Additional functions:	wireless LMS signal tester mode
Radio frequency:	868MHz
Operating range:	in a regular building with standard wall structures - approx. 30 m; in an open field - up to 300 m

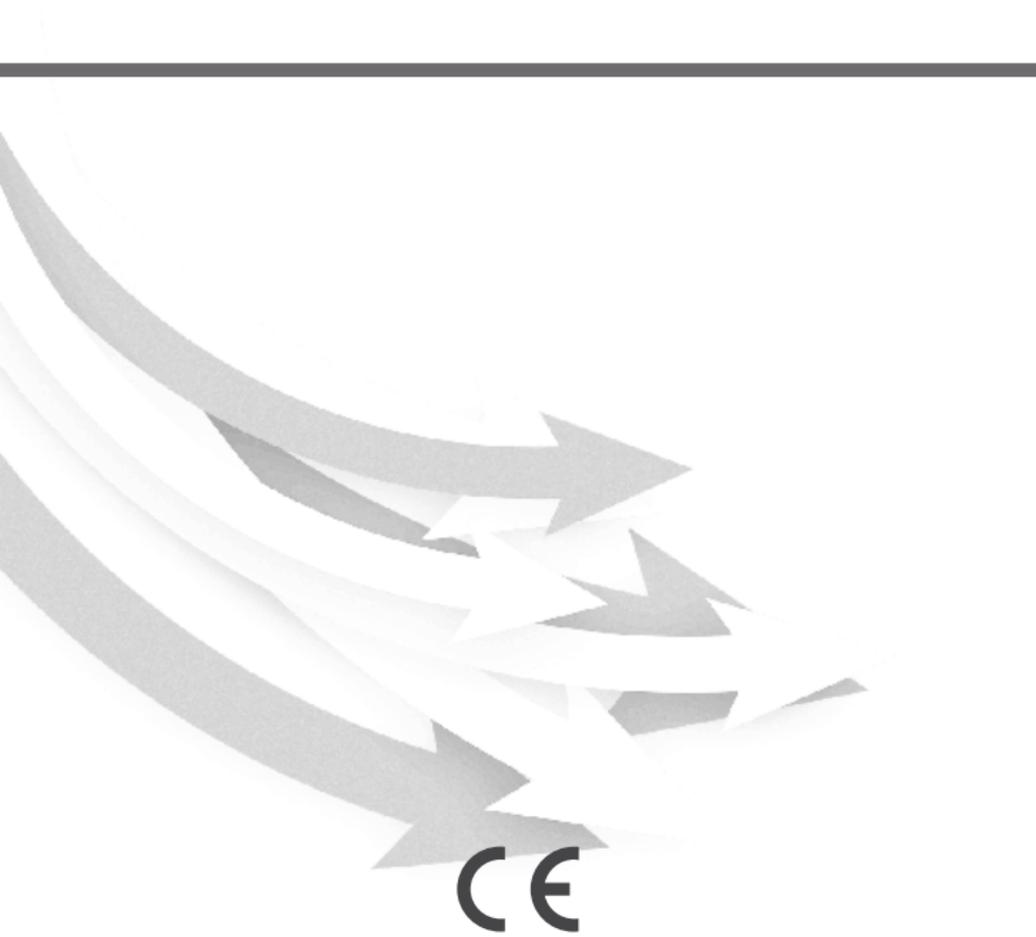
## Disposal of the device



The device is marked with a symbol of a crossed waste bin. Pursuant to European Directive 2002/96/EC and to the Act on waste electrical and electronic equipment, such mark indicates that the device, at the end of its service life, must not be disposed off together with other household waste.

**The user is required to deliver it to a waste electrical and electronic equipment collection point.**





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