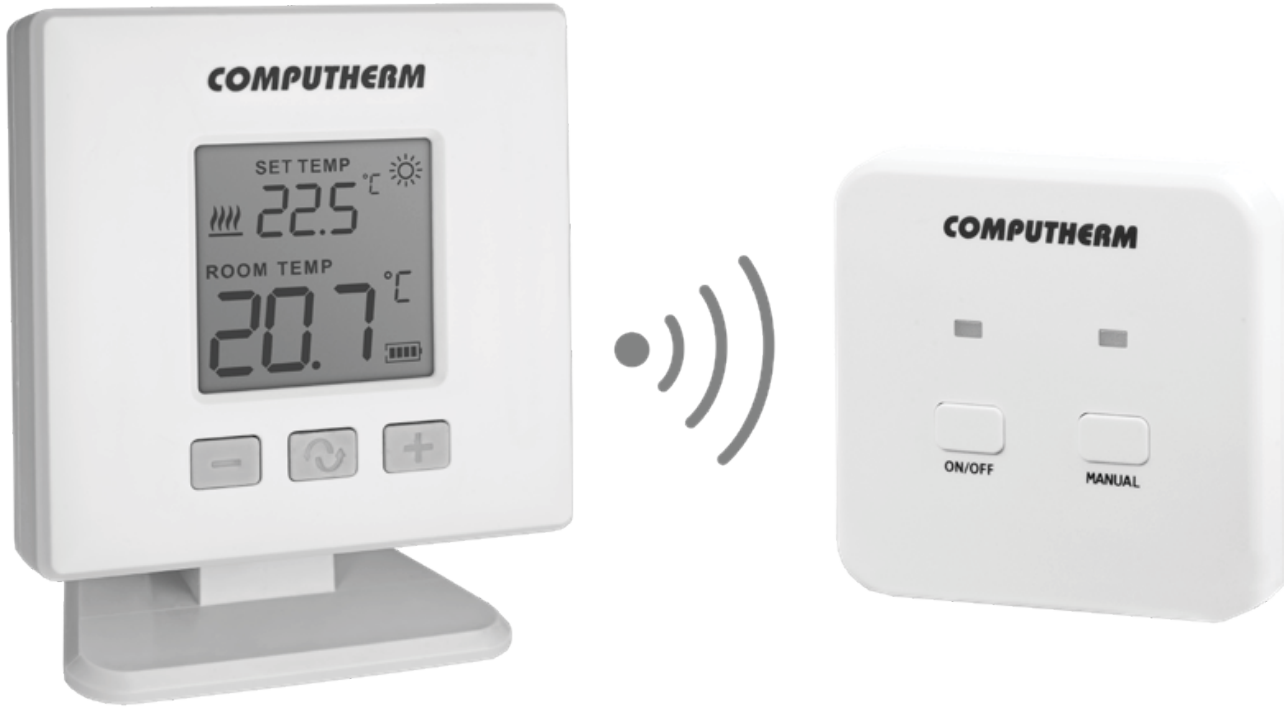
COMPUTHERM Q32RF

wireless (radio frequency) digital room thermostat



Operating Instructions

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1. GENERAL DESCRIPTION OF THE THERMOSTAT

The ***COMPUTHERM Q32RF*** type switched-mode room thermostat is suitable to regulate the overwhelming majority of boilers and air conditioners available in Hungary. It can be easily connected to any gas boiler having a two-wire thermostat connection point and to any air conditioning apparatus or electrical apparatus, regardless of whether they have a 24 V or 230 V control circuit.

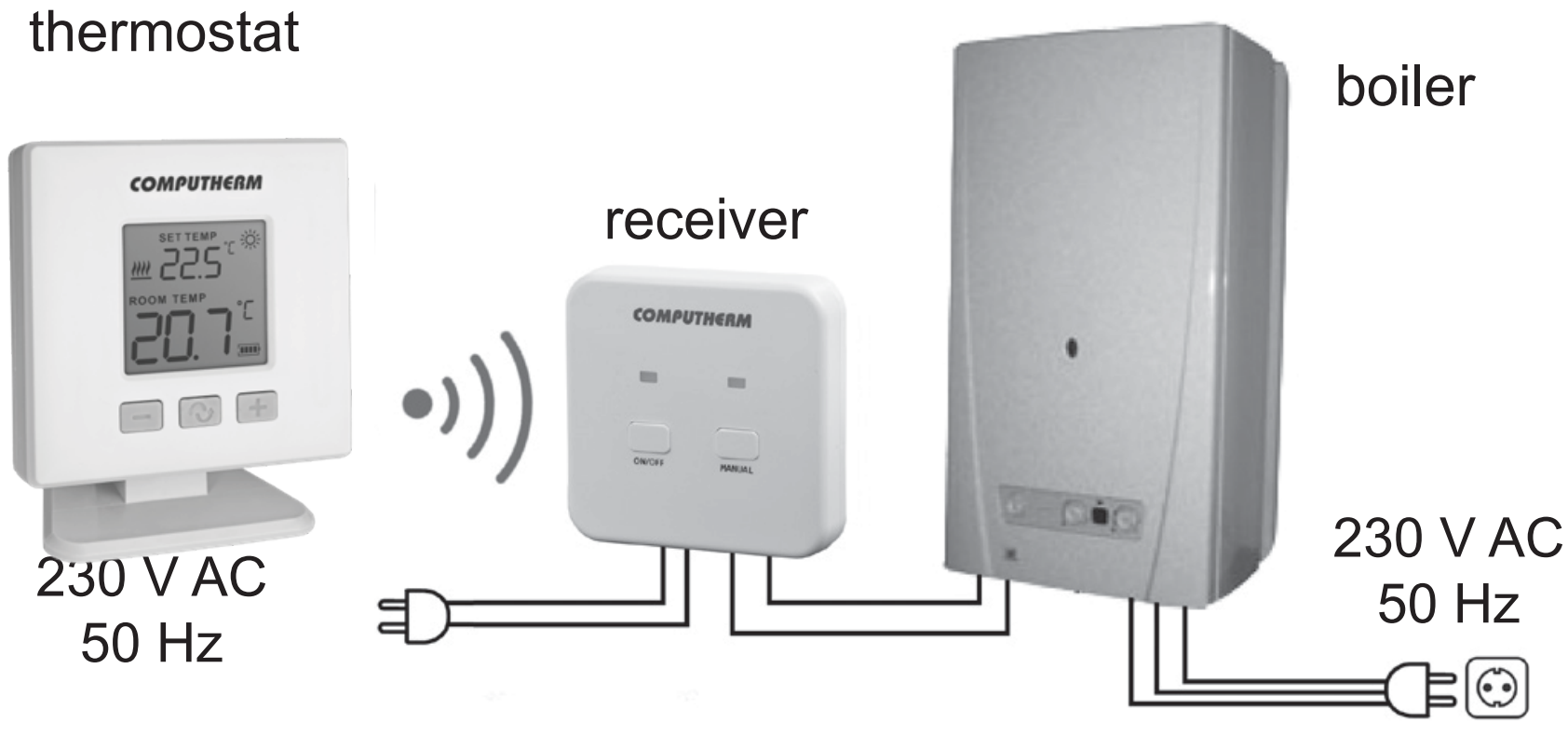

Figure 1

The device is composed of two units: a portable control unit (thermostat) and a receiver unit that controls the device to be regulated. There is a wireless (radio frequency) connection between the two units therefore there is no need to lay a cable between the thermostat and the device to be regulated. The two units are practically in synchronised state set at the factory. The thermostat and its receiver have their own safety code which guarantees secure operation of the device. For installation and connection of the receiver unit and its synchronisation with the thermostat please refer to Chapter **5.**

To extend the lifetime of batteries, the thermostat will not transmit signals continuously. Instead, it will repeat its relevant switch command every 5 minutes. Therefore, the control is ensured even after a blackout.

This wireless (radio frequency) thermostat can also be easily extended with the ***COMPUTHERM Q1RX*** socket if needed, with which the thermostat is able to control any electrical device (e.g. fan heaters, pumps, zone valves, etc.) operating on 230 V (50 Hz; max. 16 A) according to the room temperature.

(Detailed description of the ***COMPUTHERM Q1RX*** socket and usage suggestions can be found on our website **www.computherm.info)**

The **COMPUTHERM Q32RF** thermostat can be used as an extension to the **COMPUTHERM Q5RF** or **Q8RF** multi-zone devices.

The simultaneous use of several **COMPUTHERM** room thermostats and one **COMPUTHERM Q4Z** or **Q10Z** zone controller provides the possibility for the thermostats to also control a pump or a zone valve in addition to starting the heater or cooler. This way it is easy to divide a heating / cooling system into zones, thanks to which the heating / cooling of each room can be controlled separately, thus greatly increasing comfort. Furthermore, the zoning of the heating / cooling system will greatly contribute to the reduction of energy costs, as due to this only those rooms will be heated / cooled at any time where it is required.

The portability of the thermostat offers the following advantages:

- no need to lay a cable, which is especially advantageous when old buildings are being modernized,
- the optimal location of the device can be selected during operation,
- it is also advantageous when you intend to locate the thermostat in different rooms in the course of the day (e.g. in the living room during the day but in the bedroom at night).

The effective range of the transmitter incorporated in the thermostat is approximately 50 m in open terrain. This distance may become considerably shorter within a building, especially when a metal structure, reinforced concrete or adobe wall stands in the way of radio waves.

2. IMPORTANT WARNINGS AND SAFETY RECOMMENDATIONS

- Before starting to use the device, please study carefully the instructions for use and follow strictly the instructions therein.
- The thermostat is designed for business or household (non-industrial) use, it can be used to control any electrical device, the power of which does not exceed 1.38 kW (load capacity: max. 30 V DC / 250 V AC; 6 A [2 A inductive load]).
- This device is designed for indoor use. Do not use in wet, chemically aggressive or dusty environments.
- This device is a thermostat that communicates wirelessly. To avoid signal interference, keep it away from electrical equipment that may interfere with this communication.
- The manufacturer will assume no responsibility for any possible direct or indirect damages or income losses incurring during the use of the device.

- The device does not work without power, but the thermostat can remember the settings. In the event of a possible power supply failure (power cut/ battery replacement), it can continue to operate without any external intervention after the power supply is restored. If you intend to use the device in an environment where there are frequent power outages, we recommend that you regularly check the correct operation of the thermostat for safety reasons.
- **Before starting the actual control of the device connected to the thermostat, make sure that the device works perfectly and can be operated reliably even when controlled by the thermostat.**

3. INFORMATION APPEARING ON THE DISPLAY OF THE THERMOSTAT

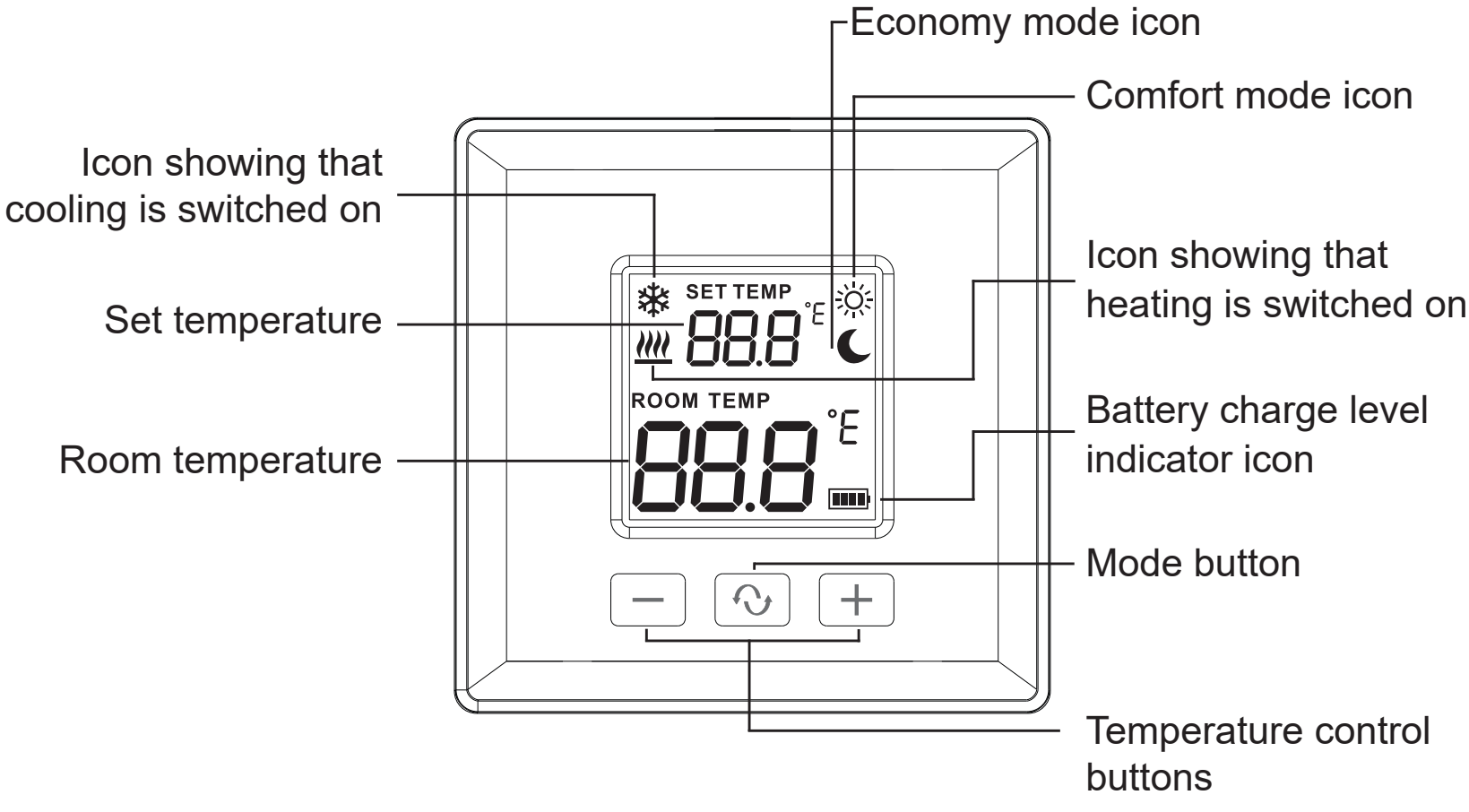

Figure 2

4. LOCATION OF THE THERMOSTAT AND RECEIVER UNIT

It is reasonable to locate it in a room used regularly or for many hours per day so that it is in the direction of natural ventilation in the room but protected from drought or extreme heat (e.g. direct sunlight, refrigerator, chimney, etc). Its optimal location is 0.75 - 1.5 m above floor level.

It is advisable to install the receiver of the **COMPUTHERM Q32RF** thermostat near the boiler, in a place protected from moisture, dust, chemicals and heat. When choosing the location of the receiver, also consider that a propagation of radio waves is prevented by heavy metal objects (e.g. boiler, buffer tank, etc.) or can be adversely affected by metal building structures. If you have it possibility, in order to ensure a interference-free radio frequency connection, we recommend that the receiver be away from the boiler and other large install it at a distance of at least 1 - 2 m from metal structures, at a height of 1.5 - 2 m. We recommend that you check the reliability of the radio frequency connection in the selected location before installing the receiver.

ATTENTION! Do not install the receiver under the boiler cover or in the immediate vicinity of hot pipes, as this may damage the device's components and endanger the wireless (radio frequency) connection. To avoid electric shock, entrust the connection of the receiver to the boiler to a specialist.

IMPORTANT WARNING! If the radiator valves in your flat are equipped with a thermostatic head, adjust it to maximum temperature or replace the thermostatic head of the radiator valve with a manual control knob in the room where the room thermostat is to be located, otherwise the thermostatic head may disturb the temperature control of the flat.

5. PUTTING THE THERMOSTAT INTO OPERATION, BASIC SETTINGS

5.1. Commissioning the thermostat

To install the thermostat, detach the rear panel of the thermostat from the front panel by pressing the lock on the upper side of the housing of the thermostat, as shown in the Figure **3.**

Figure 3

The battery compartment is in the inner side of the front panel of the housing. Insert 2 AA **alkaline** batteries (LR6 type) in accordance with the diagram in the battery compartment.

Attention! **Only high-quality alkaline batteries may be used** in the device. So called durable or long-life zinc-carbon batteries are unsuitable for the operation of the devices. The low battery icon appearing on the display warns the necessity of battery replacement reliably only when **high-quality alkaline batteries** are being used.

5.2. Connection of the receiver unit

WARNING! The device must be installed and connected by a qualified professional. Before installing, make sure that neither the thermostat or the device to be controlled is connected to the 230 V mains voltage. Modifying the thermostat can cause electric shock or product failure.

Unscrew the two screws at the bottom of the receiver unit without removing them. Following this, remove the front panel of the receiver unit then fix the back panel to the wall in the vicinity of the boiler with the screws provided.

The marks of the connections are pressed into the plastic above the connection points: **N**, **L**, **1**, **2** and **3**.

5.2.1. Connecting the controlled device to the receiver unit

The receiver unit controls the boiler or air conditioner through a potential free alternating relay whose connection points are: **1** (NO), **2** (COM) and 3 (NC). Connect the two connection points of the heating or cooling equipment to be controlled to the normally open **1** (NO) and **2** (COM) terminals of the relay, as shown on the below Figure:

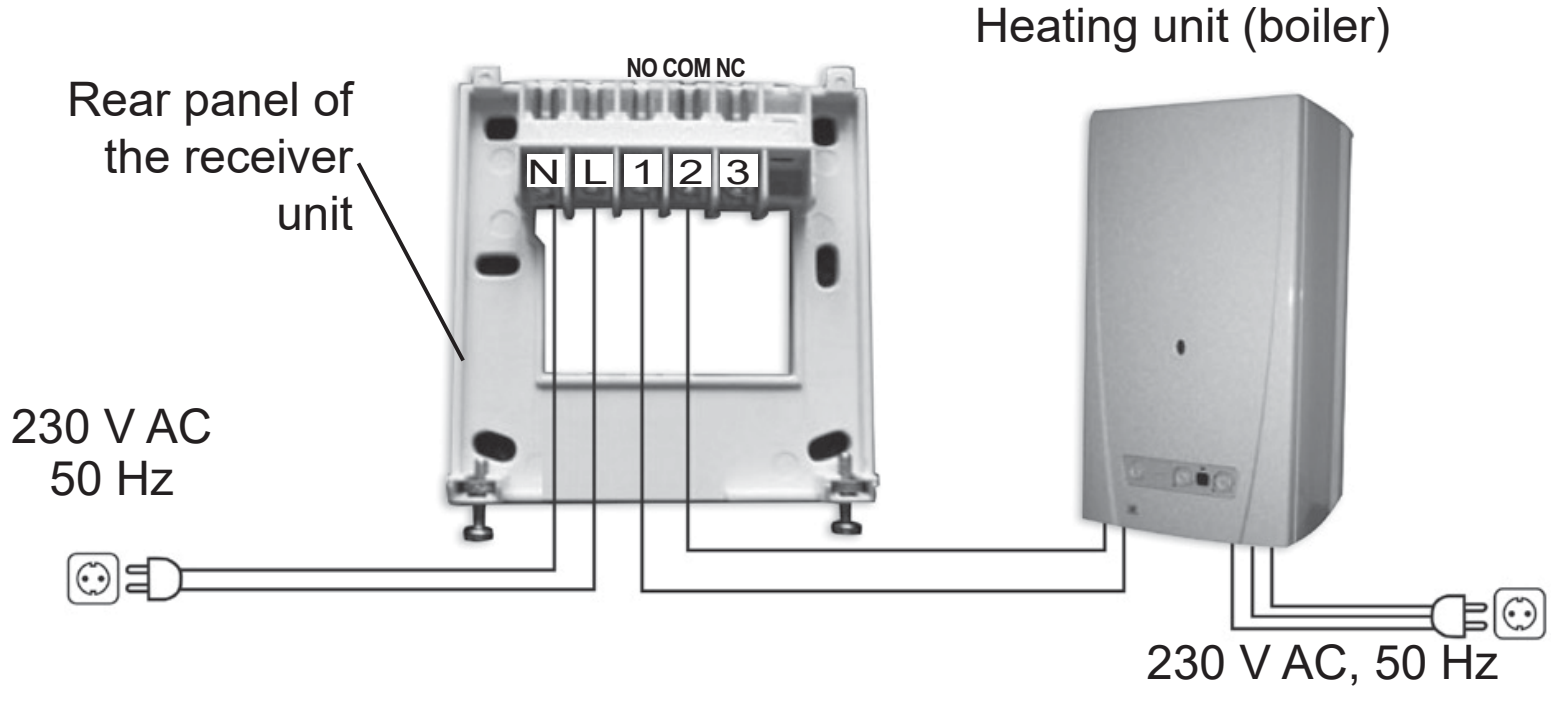

Figure 4

If you would like to operate an old boiler or any other device that has no connection points for thermostats, then the **1** (NO) and **2** (COM) connection points of the receiver unit should be connected to the mains cable of the device, similarly as a switch would be connected, as shown in the Figure below:

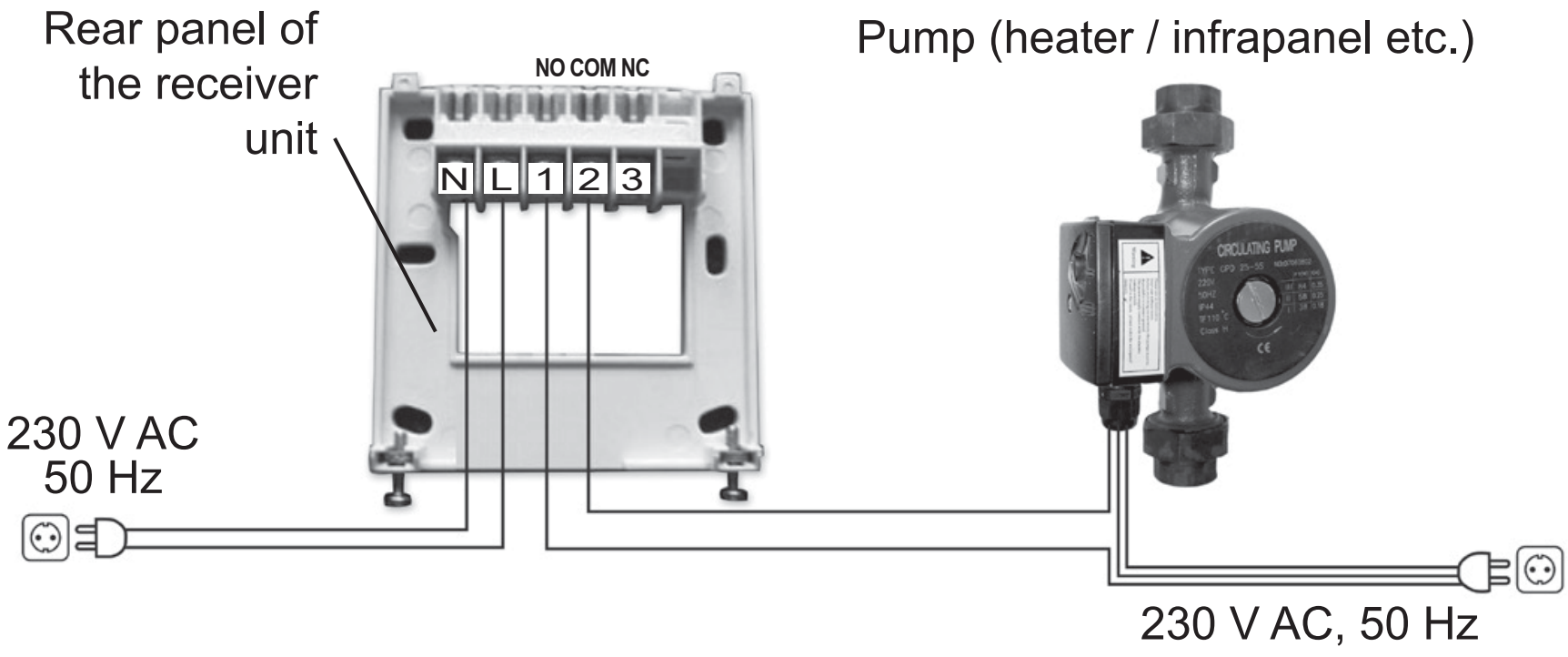

Figure 5

ATTENTION! Always consider the loadability of the receiver unit and follow the manufacturer's instructions of the heating or cooling equipment. The device must be installed and connected by a qualified professional!

The voltage appearing at terminals **1** (NO) and **2** (COM) depends only on the system being controlled, therefore the dimensions of the wire are determined by the type of the device to be controlled. The length of the wire is of no significance, the receiver unit may be installed either near the boiler or far away from it, but do not install it under the housing of the boiler.

5.2.2. Connecting the receiver unit to the mains

230 V supply voltage should be applied to the receiver unit. This ensures power supply to the receiver unit but this voltage does not appear on the output connection points (**1**, **2** and **3**). The neutral conductor and the phase line of the network should be connected to points **N** and **L** (Figure **3**; no need to check correct phase sequence). There is no need for earth connection because the product is equipped with double insulation.

5.3. Putting the receiver unit into operation

Turn the power on for the receiver unit. After a few seconds the wireless (radio frequency) system (thermostat and receiver unit) are tuned into the operating frequency. As a test, in heating mode touch the ^ button of the thermostat several times until the set temperature exceeds the room temperature by at least 0.5 °C. Following this, within a few seconds the icon showing power-on state must appear on the display of the thermostat. At the same time, on the receiver unit the red LED should switch on to indicate that the receiver unit has accepted the command of the transmitter (thermostat).

If that does not happen, the system must be tuned again. You can do it as described in Chapter **7.4.**

If the distance between the receiver and the transmitter too large due to local circumstances and this makes the wireless (radio frequency) connection uncertain, install the receiver unit closer to the location of the thermostat or use a **COMPUTHERM Q2RF** radio frequency signal repeater to extend the transmission distance.

6. OPERATION OF THE THERMOSTAT THAT HAS BEEN PUT INTO OPERATION

The thermostat controls the device connected to it (e.g. gas boiler or pump) based on the temperature measured by it and the currently set temperature, taking into account the switching sensitivity of the thermostat (factory default ±0.2 °C). This means that if the thermostat is set to heating mode and 22 °C, then with a switching sensitivity of ±0.2 °C the connection points **1** (NO) and **2** (COM) of the output relay are closed below 21.8 °C (heating is turned on) and opened at temperatures above 22.2 °C (heating is turned off). In cooling mode, the relay switches exactly the opposite way.

The closed status of the output relay terminals **1** (NO) and **2** (COM) is indicated by the  or  icon depending on the selected operating mode.

The device has two modes of operation:

6.1 Economy mode (☾)

In economy mode the thermostat provides the economical (e.g. night time) temperature corresponding to the set temperature in the vicinity of the place of installation. Using the + and - buttons these values can be modified at any time while this operating mode is used.

6.2 Comfort mode (☼)

In comfort mode the thermostat provides the comfort (e.g. daytime) temperature corresponding to the set temperature in the vicinity of the place of installation. Using the + and - buttons these values can be modified at any time while this operating mode is used.

You can switch between these modes using the ↻ button.

For energy efficiency it is recommended that the comfort temperature is only used those times, when the room or building is in use, because every 1 °C decrease of temperature saves approximately 6% energy during a heating season.

7. SETTINGS

The thermostat allows a number of setting options by which the operation of the thermostat can be tailored to your liking. You can enter the setting menu of the thermostat by pressing the ↻ button for 2 seconds. In the setting menu

you can modify the current setting with the + and - buttons and pressing the ↻ button you can move to the next setting. The currently modifiable setting is flashing on the display. The setting options are displayed in the below table:

Displayed abbreviation	Description of the setting	Setting options	Factory default setting	Detailed description
FUN	Operating mode	HEA: heating	HEA	Chapter 7.1.
		COO: cooling		
UNI	Temperature unit	°C	°C	--
		°F		
HYS	Switching sensitivity	±0.1 – ±1.0 °C	±0.2 °C	Chapter 7.2.
		±0.2 – ±2.0 °F	±0.4 °F	
CAL	Calibration of the temperature sensor	-3.0 – +3.0 °C	0.0 °C	Chapter 7.3.
		-6.0 – +6.0 °F	0.0 °F	
SYN	Synchronisation with the receiver unit(s)	--: moving to the next setting after touching the ↻ button		Chapter 7.4.
		SYN: the thermostat is synchronised with the receiver(s) set to synchronisation mode in its environment after touching the ↻ button		
rES	Restoring factory default settings	--: saving the settings and exiting the settings menu after pressing the ↻ button.	--	Chapter 7.5.
		RES: restoring factory default setting after pressing the ↻ button		

To exit the setting menu and save the settings:

- wait for 30 seconds until the display of the thermostat is reset to the default screen, or

- go through the settings with the ↻ button.

7.1 Selecting the operating mode (FUN)

You can easily switch between heating (**HEA**; factory default setting) and cooling (**COO**) modes. The connection points of the output relay of the receiver unit **1** (NO) and **2** (COM) close at temperatures below those set in the heating mode and at temperatures above those set in the cooling mode (taking the switching sensitivities into account).

7.2 Selecting switching sensitivity (HYS)

The switching sensitivity can be adjusted. By modifying this value, you can define the difference below/above the set temperature where the thermostat should switch on/off the device connected thereto. The smaller this value, the more stable is the inner temperature in the room and the comfort improves. Switching sensitivity does not affect the heat loss of the room (building).

When higher comfort level is needed, it is reasonable to select the switching sensitivity so that it ensures as stable inner temperature as possible. On the other hand, too frequent starts and stops of the controlled device should be avoided because this may reduce the efficiency and lifetime of the device.

The switching sensitivity can be set in the temperature range of ±0.1 °C to ±1.0 °C / ±0.2 to ±2.0 °F. Apart from some special cases, we propose to use ±0.1 °C or ±0.2 °C (factory default) when a heating/cooling system should be controlled.

7.3 Calibration of the temperature sensor (CAL)

The accuracy of the thermometer of the thermostat is ±0.5 °C. The temperature displayed by the thermostat can be modified by maximum ±3.0 °C / ±6.0 °F compared to the temperature measured by the temperature sensor, in 0.1 °C / 0.1 °F increments.

7.4. Synchronisation with the receiver unit(s) (SYN)

The thermostat and its receiver unit have been synchronized at the factory. When communication is not working between the two units they should be synchronized again. To do so, press and hold (for approx. 10 seconds) the "**ON/OFF**" button of the receiver unit until the green LED start to flash. Now the receiver unit is in synchronization mode. Then in the setting menu at function **SYN** choose option "**SYN**" and move on with the ↻ button. Now the thermostat and the receiver unit are synchronized and the green LED on the receiver unit stops flashing. The two units remain synchronized even after a possible power failure or battery replacement.

Attention! If you wish to synchronize several wireless **COMPUTHERM Q series** products with one thermostat at the same time or to synchro-

nize a single wireless **COMPUTHERM Q series** product with several thermostats simultaneously, for detailed information please read Chapter **9.2.**

7.5 Restoring factory default setting (rES)

This function resets all settings of the thermostat to factory default.

To restore factory default setting choose option “rES” at “rES” function in the setting menu and move on with the ↻ button.

Leaving the “rES” function in default state (--) and pressing the ↻ button afterwards, the thermostat saves the settings, exits this menu, and after returning to the home screen continues its operation according to the operating mode set beforehand.

8. BATTERY REPLACEMENT

The average life span of the batteries is 1 year. When the  icon indicating low voltage supply flashes on the display, the batteries should be replaced (see Chapter **5**). The device saves the settings even without batteries therefore there is no need to reset them.

Attention! **Only high-quality alkaline batteries may be used** in the device. So called durable or long-life zinc-carbon batteries are unsuitable for the operation of the devices. The  low battery icon appearing on the display warns the necessity of battery replacement reliably only when **high-quality alkaline batteries** are being used.

9. RECEIVER UNIT OF THE THERMOSTAT

9.1. Operation of the receiver unit, meaning of its LED signs

The receiver unit switches its potential free output in accordance with the switching signals of the wireless **Q series COMPUTHERM** room thermostat(s) which is/are synchronized with the unit.

A green and a red LEDs indicates the operating condition of the receiver unit as detailed below:

- Continuous light of the green LED indicates the manual mode. If it is not lit, the receiver unit is in automatic mode (controlled by the thermostat).
- Flashing of the green LED indicates synchronized mode.
- Continuous light of the red LED indicates that the output is on.

Chapter **4.** outlines optimal location of the receiver unit, its connection and commissioning are discussed in Chapters **5.2**. and **5.3.**, while the synchronization process and manual operating mode are described in the following sub-chapters.

9.2. Synchronizing the receiver unit(s) with one or more thermostats

The receiver unit and its thermostat were harmonized at the factory. If you find that the thermostat fails to control the receiver unit or you intend to control it with another ***COMPUTHERM Q* series** room thermostat (too), then they should be synchronized. Synchronize the thermostat as described in Chapter **7.4.**

If you intend to synchronize several wireless ***COMPUTHERM Q* series** receiver units/sockets with one thermostat then first set all receiver units to synchronization mode than perform the steps of synchronization.

If you wish to synchronize more than one thermostat with the receiver unit then repeat the previous steps with the other thermostats, too. In this case, the receiver unit remains switched on until all connected thermostats send a switch-off signal. When you reach the maximum permissible number of synchronizable products (12) then, after pressing the "**ON/OFF**" button for 10 seconds, the red and green LEDs on the product flash alternately three times. In this case, pressing the "**ON/OFF**" and "**MANUAL**" buttons for 10 seconds, the receiver unit should be set to the default position for the synchronization

of the new thermostat. Then both LEDs light up for 2 seconds, indicating that the receiver unit is reset and the synchronization of the new thermostat can commence.

Attention! If you want a given thermostat not to control the receiver unit then synchronize the thermostat with another wireless **COMPUTHERM Q series** device, perform the steps of synchronization on the thermostat alone (without receiver unit), or reset the receiver unit to factory default as described above.

9.3. Manual control of the receiver unit

Pressing the "**MANUAL**" button disconnects the thermostat(s) from the receiver unit synchronized with it/them. Then the device connected to the thermostat can only be switched on and off manually, without any temperature control. The continuous light of the green LED indicates the manual mode. Pressing the "**ON/OFF**" button switches on or off the device connected to the receiver unit. (The red LED lights when the output is on). Pressing the "**MANUAL**" button again ceases manual control and resets automatic operation (controlled by thermostat) (the green LED goes out).

10. FREQUENTLY ASKED QUESTIONS

When you think that your appliance is operating incorrectly or you encounter any problem while the appliance is being used then we recommend that you read the Frequently Asked Questions (FAQ) available on our website, where we collected the problems and questions that most frequently occur while our appliances are being used, along with the solutions thereto:

https://computherm.info/en/faq

The vast majority of the problems encountered can be solved easily by using the hints available on our website, without seeking professional help. If you have not found a solution to you problem, please contact our qualified support team.

11. PRODUCT INFORMATION DATA SHEET

- Trademark: ***COMPUTHERM***
- Model identifier: ***Q32RF***
- Temperature control class: **I. class**
- Contribution to the efficiency of seasonal space heating: **1%**

Remark:
In addition to using modern temperature regulators, the following up-to-date regulation methods also contribute significantly to the improvement of the comfort provided by the heating network, the energy efficiency of the heating network and the coefficient of performance:

- By dividing the heating network into sections or zones (e.g. by means of ***COMPUTHERM Q4Z*** or ***Q10Z*** zone controller and the associated ***COMPUTHERM*** zone valves) and with their separate regulation we can ensure that every room (zone) is heated only when it is necessary. (You can obtain information on the establishment of the heating network and apparatuses and fittings needed for division into zones in our publication titled "**Energy Savings and Comfort**" which is also available on our website **www.computherm.info**

- Using programmable thermostats you can ensure that every room (zone) is just heated according to a timetable preset in accordance with the demands.

- Using modern modular heating devices equipped with an external temperature sensor the boiler can be operated at higher efficiency.

- Using low temperature heating networks (e.g. 60/40 °C) and condensing boilers the temperature of the flue gas leaving the boiler can be reduced, and this way fuel efficiency can be improved significantly.

12. TECHNICAL DATA

Technical data of the thermostat (transmitter):

- **Temperature measurement range:** 3 to 45 °C (in 0.1 °C increments) / 37 – 100 °F (in 0.1 °F increments)
- **Adjustable temperature range:** 5 – 40 °C (in 0.5 °C increments) / 41 – 97 °F (in 0.5 °F increments)
- **Temperature measurement accuracy:** ±0.5 °C / ±0.9 °F
- **Temperature calibration range:** ±3 °C (in 0.1 °C increments) / ±6 °F (in 0.1 °F increments)
- **Optional switching sensitivity:** ±0.1 °C - ±1.0 °C / ±0.2 °F - ±2.0 °F
- **Storage temperature:** -10 °C to +40 °C
- **Battery voltage:** 2 x 1.5 V **ALKALINE** batteries (LR6 type; AA size)
- **Battery lifetime**: approx. 1 year
- **Protection against environmental impacts:** IP30
- **Operating frequency:** 868,35 MHz
- **Transmission distance:** approx. 50 m in open terrain
- **Dimensions:** 80 x 80 x 23 mm (W x H x D) (without holder)
- **Weight:** 74 g
- **Temperature sensor type:** NTC 4200 K 10 kΩ ±1% at 25 °C

Technical data of the receiver unit:

- **Power supply voltage:** 230 V AC, 50 Hz
- **Switchable voltage:** max. 30 V DC / 250 V AC
- **Switchable current:** 6 A (2 A inductive load)
- **Storage temperature:** -10 °C to +50 °C
- **Operating humidity:** 5 % to 90 % (without condensation)
- **Protection against environmental impacts:** IP30
- **Standby mode:** max. 0.5 W
- **Dimensions:** 90 x 90 x 30 mm (W x H x D)
- **Weight:** 126 g

Total weight of the device: approx. 234 g (thermostat + receiver + holder)

The **COMPUTHERM Q32RF** type thermostat complies with the requirements of directives RED 2014/53/EU and RoHS 2011/65/EU.

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Origin: designed in the EU, manufactured in China

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