COMPUTHERM Q5RF (TX)

Multi-zone wireless (radio-frequency) digital room thermostat

Operating Instructions

You can watch the most important aspects of the usage of this thermostat on our video presentation at www.quantrax.hu.

GENERAL DESCRIPTION OF THE THERMOSTAT

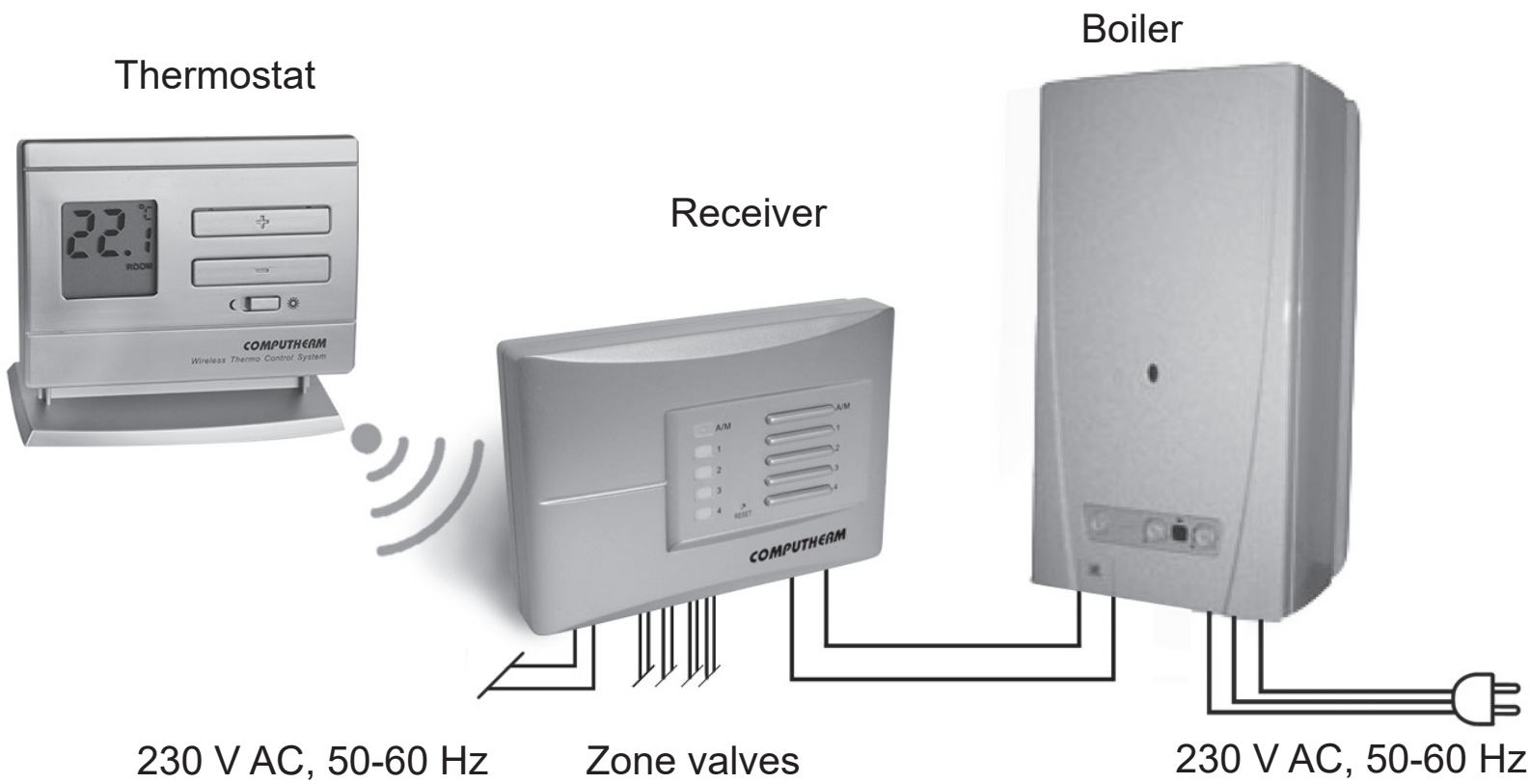
The ***COMPUTHERM Q5RF (TX)*** type switched-mode room thermostat is suitable to regulate the overwhelming majority of boilers and air conditioners available in Hungary. It can be used together with the ***COMPUTHERM Q5RF*** or ***Q8RF*** multi-zone thermostats to complement the two thermostats in the basic package, to increase the number of zones regulated and to control the ***COMPUTHERM Q1RX*** wireless (radio-frequency) thermostat-controlled socket.

Because there is a wireless (radio-frequency) connection between the ***COMPUTHERM Q5RF (TX)***thermostat and the receiver unit of the ***COMPUTHERM Q5RF/Q8RF*** thermostat and/or the ***COMPUTHERM Q1RX*** socket, no cable is required between the thermostat and the receiver and/or the socket. (You can find detailed information and recommended usage of the ***COMPUTHERM Q1RX*** socket and ***COMPUTHERM Q5RF/Q8RF*** thermostats on our website: **www.quantrax.hu**)

Temperature can be measured and set more precisely as compared to simple, conventional thermostats. In heating mode, in accordance with the selected switching sensitivity, the thermostat switches the boiler or any other appliances on and off below and above

the adjusted temperature, respectively, and contributes to reduce energy costs while maintaining comfort. In cooling mode it switches exactly the opposite way.

To increase the lifetime of the batteries, the thermostat will not transmit signals continuously. Instead it will repeatedly transmit the actual signal every 8 minutes. Therefore, the regulation of the heating or cooling will continue even after a blackout.



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).

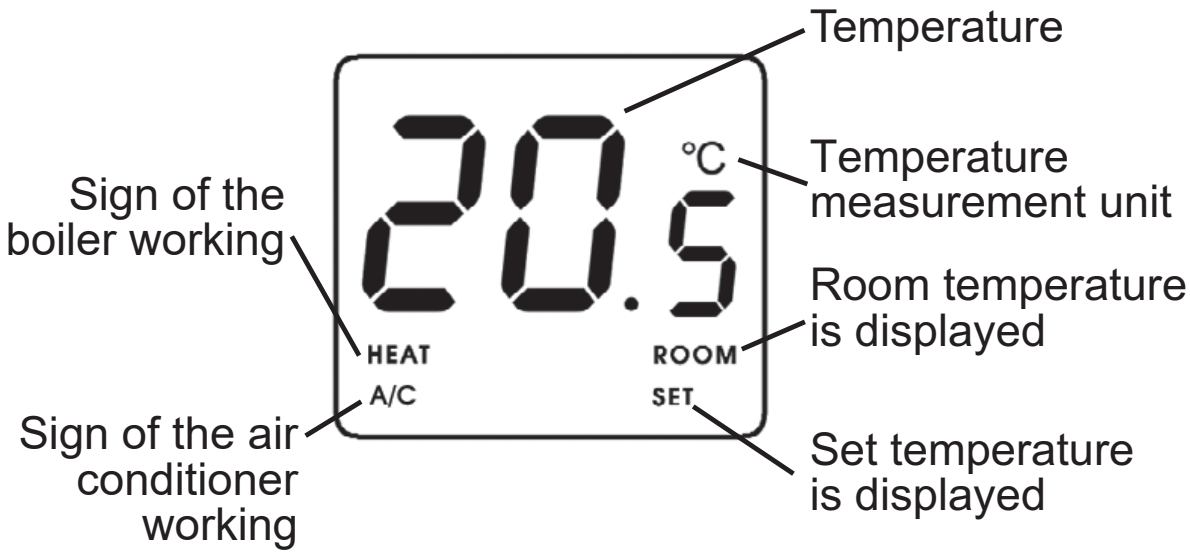
The effective range of the transmitter incorporated in the thermostat is approximately 50 m in open terrain. This distance may become considerably shorter within a building, especially when a metal structure, reinforced concrete or adobe wall stands in the way of radio waves.

The switching sensitivity of the thermostat can be set to ±0.1 °C or ±0.2 °C (default setting). This means the difference between the adjusted temperature and the actual temperature measured during the switching process.

In case of the ±0.2°C switching sensitivity and heating mode for example, if the set temperature is 20 °C, then the device switches the boiler on at 19.8 °C or below, and switches it off at 20.2 °C or above. Please

refer to *Section 3.2* for the modification of the factory default switching sensitivity of ±0.2 °C.

The information shown on the liquid crystal display of the thermostat includes the following:



1. LOCATION OF THE DEVICE

The thermostat of the **COMPUTHERM Q5RF (TX)** type device can be freely moved in your residence. 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 1.5 m above floor level. It can be placed on its own stand or can be mounted on a wall.

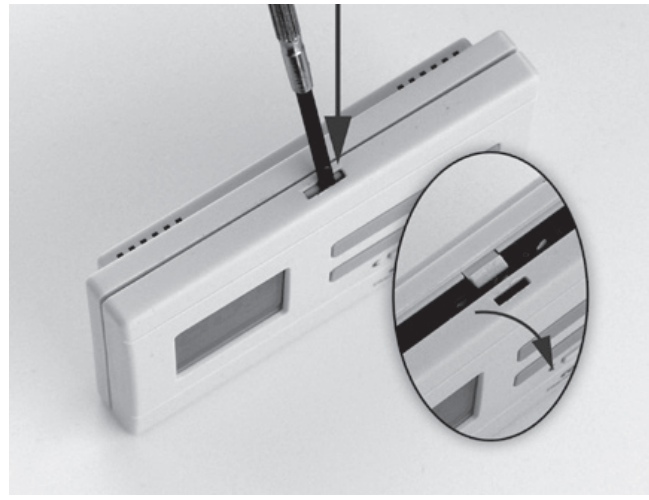
IMPORTANT WARNING! *If the radiator valves in your flat are equipped with a thermostatic head, adjust it to maximum temperature or replace the thermostatic head of the radiator valve with a manual control knob in the room where the room thermostat is to be located, otherwise the thermostatic head may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

2. PUTTING THE THERMOSTAT INTO OPERATION

The device must be installed and connected by a qualified professional.

Warning! *Modifying the socket can cause electric shock or product failure.*

To put the thermostat into operation, 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. 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.

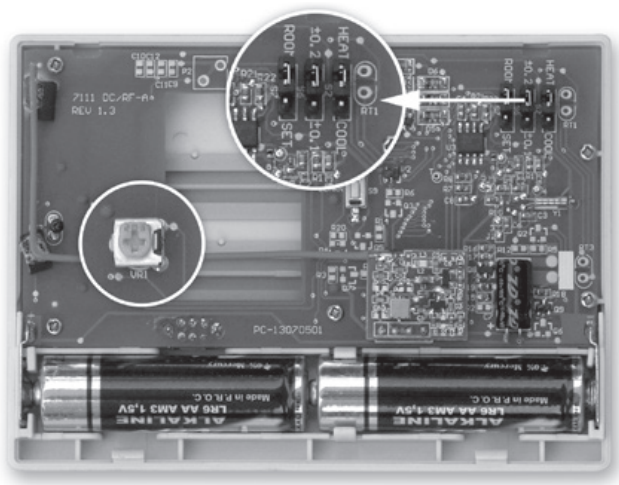


Warning! **Alkaline batteries may only be used** for this appliance. Carbon-zinc batteries known as durable or long life batteries and chargeable accumulators are not suitable for the operation of this appliance. Icon bA appearing on the display to indicate low battery voltage warns reliably that the batteries should be replaced only when **alkaline batteries** are used.

After the batteries have been inserted, the display flashes the measured room temperature. (If this information fails to appear on the display, press the „**RESET**" button located on the main panel of the thermostat.

3. BASIC SETTINGS

After removing the rear panel of the device, the following factory default settings can be modified by relocating the jumpers (black plugs) and/or changing the position of the orange-colored potentiometer located on the main panel.



3.1 Selecting the Displayed Temperature

The temperature(s) to be shown on the display can be selected and set by the left jumper.

With factory default settings the jumper is located on the central and uppermost pins, in which case the display shows the currently measured room temperature value, while the notice “**ROOM**” appears in the bottom right corner of the display. In this case, the adjusted temperature is visible only during the adjustment process, for approximately 7 seconds after the last button has been pushed. By relocating the plug onto the bottommost and central pins the displayed temperature can be modified so that the display alternately shows the current room temperature and the adjusted temperature for 4 seconds, respectively. In this mode, the notices “**ROOM**” and “**SET**” are alternately shown under the currently displayed temperature in the bottom right corner of the display, indicating whether the display shows the room temperature or the adjusted temperature value.

3.2 Selecting the Switching Sensitivity (Accuracy)

The switching sensitivity of the thermostat can be selected or adjusted by the central jumper.

With factory default settings the jumper is located on the central and uppermost pins, resulting in a switching sensitivity of ±0.2 °C. It can be modified to ±0.1 °C by relocating the jumper onto the bottommost and central pins. A smaller switching sensitivity results in steadier room temperature and therefore in higher comfort.

The heat loss of the room (building) does not depend on the switching sensitivity.

If higher comfort is needed, the switching sensitivity should be set so that it provides a steadier room temperature. On the other hand, please also take into account that the boiler should not switch on and off multiple times in an hour's time except at low outside temperatures (e.g. -10 °C), since the frequent on and off switches of the boiler reduce its efficiency and hence increases the gas consumption. We recommend using the ±0.1 °C switching sensitivity for heating systems with high thermal inertia (e.g. underfloor heating), and the ±0.2 °C switching sensitivity (factory default setting) for heating systems with low thermal inertia (e.g. flat panel radiators).

3.3 Switching between the Heating and Cooling Mode

The heating or the cooling mode of the thermostat can be selected by the right jumper.

With factory default settings the jumper is located on the central and uppermost pins, which selects the heating mode. By relocating the jumper onto the bottommost and central pins, the cooling mode can be selected. **The output** terminals No. **1** (NO) and No. **2** (COM) of the receiver unit **are closed**

below the set temperature in heating mode, and they are closed above the set temperature in cooling mode (taking the switching sensitivity into account). The closed state of the output terminals No. **1** (NO) and No. **2** (COM) are indicated by the notice „**HEAT**" (heating) or „**A/C**" (cooling) in the bottom left corner of the display, according to the selected mode.

3.4. Calibration of the thermometer of the thermostat

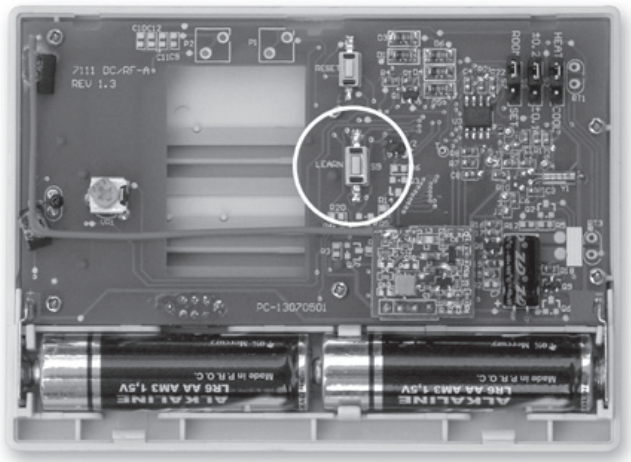
You can calibrate the thermometer of the appliance (to correct measured temperature). To this end all you have to do is change the position of the orange-colored potentiometer by a Phillips screwdriver. When you adjust the potentiometer clockwise then the displayed temperature will be higher than that measured initially, and when you adjust it anticlockwise the displayed temperature will be lower than that. The displayed temperature can be adjusted within a range of approx. 3 °C.

Correction of the displayed temperature takes place a few seconds after the adjustment.

ATTENTION! *If the modification of the basic settings was done after inserting the batteries and the modifications did not take effect, please press the "**RESET**" button located on the main panel of the thermostat.*

3.5 Synchronising the Thermostat and the Receiver Unit

In order to have a safe, reliable and trouble-free wireless (radio-frequency) connection, both the thermostat and the receiver unit have their own safety codes. After installing the receiver unit, the two units should be synchronised by pressing the "**LEARN**" button located above the battery compartment, on the main panel of the thermostat. Therefore do not replace the rear panel of the thermostat onto the front panel before synchronisation. The process of synchronisation is described in *Section 7*.

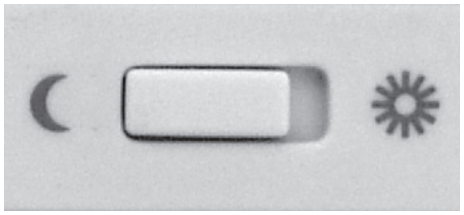


4. SETTING THE DESIRED TEMPERATURE

After putting the thermostat into operation and adjusting the basic settings the thermostat is ready for operation and the adjustment of the temperature can be started.

Below the temperature adjustment buttons (+ and −) a switch is located. For both the economy (☾) and the comfort (☼)

positions of the switch a different temperature can be set between 5 °C and 40 °C, in steps of 0.5 °C.



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. As opposed to common belief, keeping a flat warn requires more energy than heating it up. (When using a stove, more gas is needed to keep a pan of water boiling than to just keep it warm.)

The factory default temperature is 18 °C for the economy (☾) position and 20 °C for the comfort (☼) position. These default temperatures can be changed as follows:

- Move the switch according to the temperature you would like to change (economy (☾) or comfort (☼)).
- Press the + or − button, after which the notice "**ROOM**" disappears, the notice "**SET**" (adjusted value) appears in the bottom right corner of the display. Meanwhile, the temperature value shown on the display switches from room temperature to the default temperature (18.0 °C/20.0 °C) or to the last set temperature (this temperature is blinking on the display). By pressing the buttons repeatedly or

continuously (the change in values is accelerated), the desired temperature to be maintained at the place where the thermostat has been installed can be set in steps of 0.5 °C.

- Approximately 7 seconds after setting the room temperature to be maintained, the device automatically switches to normal mode. The notice "**SET**" disappears from the bottom right corner of the display, and once again the current room temperature and the notice "**ROOM**" are displayed.
- The previously set temperature can be freely changed any time using the and buttons. Always the last set temperatures are in effect.

5. OPERATION OF THE INSTALLED THERMOSTAT

After setting the economy and comfort temperatures, the temperature needed at the moment can be selected using the switch.

5.1 Economy Mode (☾) (left hand position of the switch)

In the left hand position of the switch, the thermostat provides the set economy temperature (e.g. night temperature) to be maintained at the place where the thermostat has been installed. According to

the change in room temperature and temperature setting, the thermostat controls (switches on or off) the boiler or any other equipment connected to it. When activated, the normally open contact pairs, i.e. No. **1** (NO) and No. **2** (COM), of the relay of the thermostat clamp shut, and, as a consequence, the appliance connected to the thermostat is switched on. The appearance of the notice "**HEAT**" (heating) or „**A/C**" (cooling) in the bottom left corner of the display indicates that the device is activated, according to the heating or cooling mode, respectively.

5.2 Comfort Mode (☼) (right hand position of the switch)

In the right hand position of the switch, the thermostat provides the set comfort temperature (e.g. daytime temperature) to be maintained at the place where the thermostat has been installed. According to the change in room temperature and temperature setting, the thermostat controls (switches on or off) the boiler or any other equipment connected to it. When activated, the normally open contact pairs, i.e. No. **1** (NO) and No. **2** (COM), of the relay of the thermostat clamp shut, and, as a consequence, the appliance connected to the thermostat is switched on. The appearance of the notice "**HEAT**" (heating) or „**A/C**" (cooling) in the bottom left corner of the display indicates that the device is activated, according to the heating or cooling mode, respectively.

6. BATTERY REPLACEMENT

The average lifetime of the batteries is 1 year. The icon bA alternately replacing the temperature value on the display indicates low battery voltage. Replace the batteries whenever the icon bA indicating low battery voltage appears on the display (see *Section 2*). After battery replacement, the desired temperature should be adjusted again, because during the battery replacement the thermostat is reset to factory default settings.

Warning! **Alkaline batteries may only be used** for this appliance. Carbon-zinc batteries known as durable or long life batteries and chargeable accumulators are not suitable for the operation of this appliance. Icon bA appearing on the display to indicate low battery voltage warns reliably that the batteries should be replaced only when **alkaline batteries** are used.

7. USE AND SYNCHRONIZATION OF THERMOSTAT *COMPUTHERM Q5RF (TX)* AND THE RECEIVER OF *COMPUTHERM Q5RF / Q8RF* AND/OR *COMPUTHERM Q1RX* PLUG

7.1 *COMPUTHERM Q5RF (TX) - COMPUTHERM Q5RF / Q8RF*

When you wish to use thermostat ***COMPUTHERM Q5RF (TX)*** in order to extend ***COMPUTHERM Q5RF / Q8RF*** multi-zone device then carry out synchronization according to the instructions for use of thermostat ***COMPUTHERM Q5RF / Q8RF***.

7.2 *COMPUTHERM Q5RF (TX) - COMPUTHERM Q1RX*

When you want to use thermostat ***COMPUTHERM Q5RF (TX)*** with a ***COMPUTHERM Q1RX*** plug that can be controlled by a RF thermostat, carry out the synchronization of the two units in the following way:

COMPUTHERM Q1RX **plug:**

Press and hold the "**ON/OFF**" button on the front panel of the plug until the green LED starts to flash.

***COMPUTHERM Q5RF (TX)* thermostat:**

- Separate the back panel of thermostat ***COMPUTHERM Q5RF(TX)*** from the front panel by pushing the latch located on the upper side of the case.
- Press and hold buttons „**LEARN**” and „**RESET**” located inside the thermostat smultaneously.
- Release the „**RESET**” button and keep the „**LEARN**” button depressed for additional 5 seconds.
- Following this, sign **U1** appears on the display of the thermostat, indicating that the thermostat can now be synchronized with zone 1 of the receiving unit.
- If a lettering other than **U1** appears on the display of the thermostat, select zone 1 with the help of buttons + and −.
- Press and hold the „**LEARN**” button located inside the thermostat for approx. 3 seconds until the green LED on the ***COMPUTHERM Q1RX*** plug stops flashing.

After the two units have been synchronized, the thermostat controls the plug according to the temperature program having been set. When the thermostat is switched on, 230 V, 50 Hz mains voltage appears on the output socket of the plug.

7.3 Resetting synchronization method of thermostat *COMPUTHERM Q5RF*

When you wish to reset operation of thermostat ***COMPUTHERM Q5RF (TX)*** to default zone 1 then you can reset this option with the following steps:

- Press the „**RESET**” button located inside the thermostat and the − button on the front panel simultaneously.
- Release the „**RESET**” button but keep the button depressed for additional 5 seconds.
- Now the synchronization method of the thermostat is reset to default zone 1.

7.4 Transmission distance inspection

With the help of the + and − buttons you can check whether the two units are within the transmission distance of the wireless (radio-frequency) connection. In order to do so, set the desired temperature above room temperature by more than 0.2 °C, then reduce it below room temperature by more than 0.2 °C. When detecting the ON and OFF control signals, the red LED light on the receiver unit or the green light ont he ***COMPUTHERM Q1RX***

plug switches on and off, respectively. When the receiver unit fails to receive signals sent by the thermostat, then the receiver unit is outside the transmission distance of the wireless (radio-frequency) transmitter, thus they have to be placed closer to each other.

ATTENTION! *If the two parts of the device can only be placed on the edge of the wireless (radio-frequency) range or out of it (due to the floor-plan of the house or the shading effect of its structure), to guarantee the safe wireless connection, place a* **COMPUTHERM Q2RF** *wireless repeater between the two parts.*

FREQUENTLY ASKED QUESTIONS

When you think that your appliance is operating incorrectly or encounter any problem while the appliance is being used then we recommend that you read 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:

http://www.quantrax.hu/gyik/

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 pay a visit to our qualified service.

Warning! The manufacturer does not assume responsibility for any direct or indirect damages and loss of income occurring while the appliance is being used.

PRODUCT INFORMATION DATA SHEET:

- Trademark: **COMPUTHERM**
- Model identifier: **Q5RF (TX)**
- 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** 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.quantrax.hu**).
- Using programmable thermostats you can ensure that every room (zone) is just heated according to a timetable preset in accordance with the demands.

(You can obtain information on the services provided by **COMPUTHERM** ***Q7; Q7RF*** and ***Q8RF*** programmable room thermostats on our website).

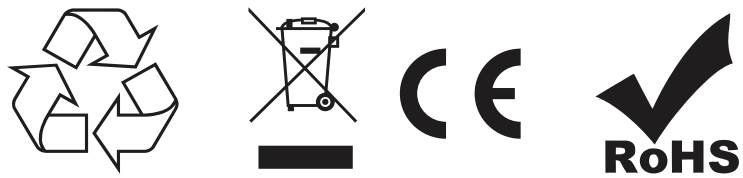
- Using modern modular heating devices equipped with an external temperature sensor the boiler can be operated at a higher efficiency.
- Using low temperature heating networks (e.g. 60/40 °C) and condensing boilers the temperature of the flue gas leaving the boiler can be reduced, and this way fuel efficiency can be improved significantly.

TECHNICAL DATA

Technical data of the thermostats (transmitters):

– adjustable temperature range:	5 to 40 °C (in 0.5 °C increments)
– temperature measurement range:	3 to 45 °C (in 0.1 °C increments)
– temperature measurement accuracy:	±0.5 °C
– temperature calibration range:	approx 3 °C
– selectable switching sensitivity:	±0.1 °C; ±0.2 °C
– storage temperature:	-10 °C to +40 °C
– battery voltage:	2 x 1.5 V **ALKALINE** batteries (LR6 type; AA size)
– power consumption:	1.5 mW
– battery lifetime:	approx. 1 year
– operating frequency:	868.35 MHz
– dimensions:	100 x 80 x 22 mm (without holder)
– protection against environmental impacts:	IP30
– weight:	80 g
– transmission distance:	approx. 50 m in open terrain
– temperature sensor type:	NTC 10 kΩ ±1% at 25 °C

The ***COMPUTHERM Q5RF (TX)*** type thermostat complies with the requirements of standards RED 2014/53/EU and RoHS 2011/65/EU.



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Web: www.quantrax.hu • www.computherm-hungary.hu

Origin: designed in the EU, made in China

Please watch our video presentation of the most important aspects of the usage of this thermostat at our websites!