COMPUTHERM Q7 RF

Programmable, wireless (radio-frequency) digital
room thermostat

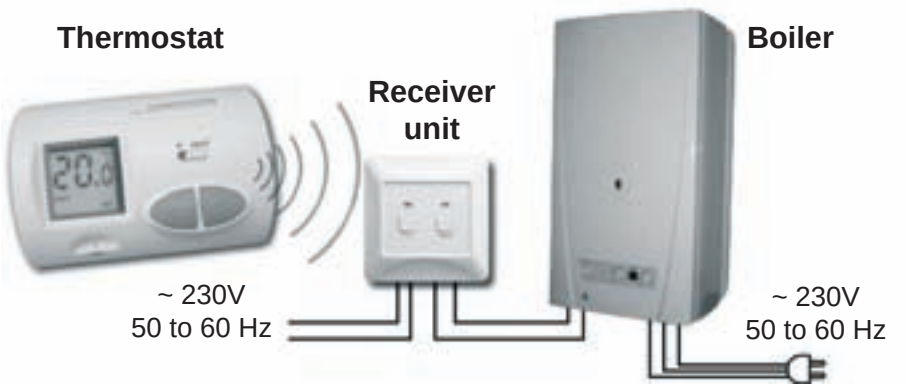
Operating Instructions

GENERAL DESCRIPTION OF THE THERMOSTAT

The ***COMPUTHERM Q7 RF*** type switched-mode room thermostat is suitable to regulate the overwhelming majority of boilers available in Hungary. It can easily be connected to any gas boiler or air conditioning device that has a double wire connector for a room thermostat, regardless of whether it has a 24 V or 230 V control circuit.

The device can be programmed according to customer-specific requirements so that the heating/cooling system heats/cools your residence or office to the required temperature at the dates and times specified by you, to reduce energy costs while maintaining comfort. Separate independent daily temperature programs can be prepared for each day of the week. Six switching times (which can be set at 10-minute intervals) can be selected at your discretion every day, and separate temperatures (which can be adjusted in 0.5°C increments) can be selected for each switching time.

The device consists of two units. One of them is the portable control unit (thermostat), while the other unit is the receiver that controls the boiler. Because there is a wireless (radio-frequency) connection between the two units, no cable is required between the thermostat and the boiler. The two units have been tuned in the factory so that they operate at the same frequency.



To increase the lifetime of the batteries, the thermostat will not transmit signals continuously. It will only send signals to the receiver whenever it should perform a switch.

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
- 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)

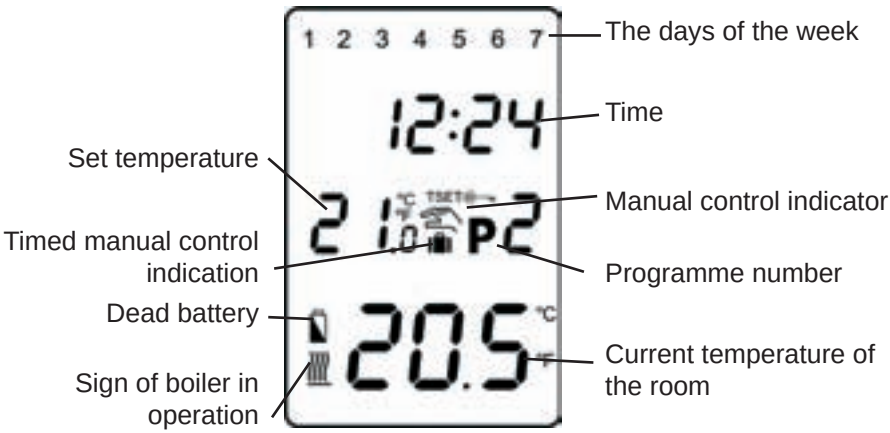
The effective range of the transmitter incorporated in the thermostat is approximately 50 m in open terrain. This distance may become considerably shorter within a building, especially when a metal structure or a reinforced concrete wall stands in the way of radio waves.

The switching sensitivity of the thermostat can be selected: ±0.2°C (factory default setting, recommended for radiator-based heating systems) or +0/-0.2°C (this setting is recommended for underfloor heating). This figure means the temperature difference between the reference value and the actual temperature measured during the switching process. For example, if the factory default setting is 20°C on the thermostat then the device switches on the boiler at 19.8°C or below this level and switches it off at 20.2°C or above. (Please refer to Section 2.3 for the modification of the factory default switching sensitivity of ±0.2°C)

The thermostat is equipped with a pump protection function, which, to prevent the pump from sticking, switches on the boiler for a one minute period at 12:00 p.m. every day if the pump has not been switched on in a programmed manner for more than 24 hours (e.g. outside the heating season). See the activation of the pump protection function in Section 2.4.

If the power supply to the receiver is interrupted for any reason (e.g. power outage), the boiler also stops working. Shortly after the power outage the device resumes its operation according to the program without any intervention.

THE INFORMATION SHOWN ON THE LIQUID CRYSTAL DISPLAY OF THE THERMOSTAT INCLUDES THE FOLLOWING:



1. LOCATION OF THE DEVICE

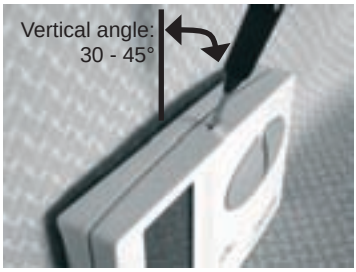
The thermostat of the ***COMPUTHERM Q7 RF*** type device can be freely moved in your residence. It is reasonable to locate it in a room used regularly or for many hours per day so that it is in the direction of natural ventilation in the room but protected from drought or extreme heat (e.g. direct sunlight, 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.

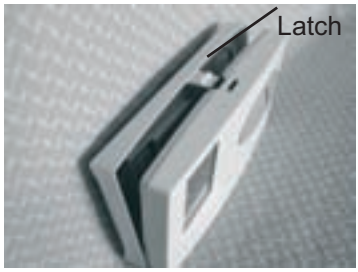
IMPORTANT WARNING! *If the radiator valves in your flat are equipped with a thermostatic head, replace the thermostatic head of the radiator valve with manual control knob or adjust it to maximum temperature in the room where the room thermostat is to be located, otherwise the thermostatic head may disturb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

2. PUTTING THE THERMOSTAT INTO OPERATION, BASIC SETTINGS

2.1 Inserting batteries

Pressing the lock on the upper side of the housing of the thermostat, remove the back cover of the thermostat as shown in the figure below.





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. After the batteries have been inserted, the display flashes the day, time and program number as well as reference and measured temperatures. (If this information fails to appear on the display, press the „**RESET**" button with a wooden or plastic stick. To press the button, do not use any electrically conductive materials or graphite pencil). After the batteries have been inserted, press the "**SET**" button. After the "**SET**" button is pressed, the display stops flashing, the thermostat goes to the main screen and the setting process can be started.

2.2 Setting current day and hour

- Press the "**DAY**" button. At this time only the serial number of the day will flash on the display of the thermostat and the hour and minute values can be seen.
- Using the large − or + button on the front panel of the device, set the serial number of the current day (Monday 1; Tuesday 2; Wednesday 3, etc.).
- Press the "**DAY**" button again. At this time the number indicating the day stops flashing and becomes visible continuously while the numbers indicating the hour will flash on the display.
- Using the large − or + button on the front panel of the device, set the hour value of the current time.
- Press the "**DAY**" button again. At this time the numbers that indicate the hour stop flashing and become visible continuously, while the numbers indicating the minute will begin flashing.
- Using the large − or + button on the front panel of the device, set the minute value of the current time.
- When you wish to modify settings, please press the "**DAY**" button again to return to the initial settings. If you wish to finish settings, acknowledge them by pressing the "**SET**" button. At this point adjusted data are recorded and the device goes back to the main screen. (After approximately 10 seconds, the settings are automatically acknowledged and the device goes back to the main screen).

2.3 Setting switching sensitivity

According to factory default settings, the switching sensitivity is ±0.2°C (the display indicates this setting with symbol "S:1") which can be modified to +0/-0.2°C (the display indicates this setting with symbol "S:2"). The required switching sensitivity can be set by pressing "**DAY**", "**COPY**" and the large − or + buttons one after the other, after going back to the main screen by pressing the "**SET**" button. Setting "**S1**" (±0.2°C switching sensitivity) or "**S2**" (+0/-0.2°C switching sensitivity) is acknowledged by pressing the "**SET**" button. (After approximately 10 seconds settings are automatically acknowledged and the device goes back to the main screen). Pressing the "**RESET**" button the switching sensitivity is reset to factory default setting, i.e. to ±0.2°C level ("**S1**").

The ±0.2°C switching sensitivity ensured by factory default settings (the display shows symbol "S:1" for this setting) is primarily recommended for radiator-based central heating systems (e.g. where plate radiators are installed) with low thermal inertia, while the +0/-0.2°C switching sensitivity (the display shows symbol "S:2" for this setting) is recommended to control heating systems with high thermal inertia (e.g. underfloor heating).

2.4 Activation of the pump protection function

Under the factory default settings, the pump protection function is inactive. It can be activated or switched off by pressing "**DAY**", "**PROG**" and the large − or + buttons one after the other, after going back to the main screen by pressing the "**SET**" button. Setting "HP:OFF" (switched-off) or "HP:ON"

(activated) is acknowledged by pressing the "**SET**" button. (After approximately 10 seconds settings are automatically acknowledged and the device goes back to the main screen). By pressing the "**RESET**" button, the pipe protection function is reset to factory default setting ("HP:OFF").

To prevent the pump from sticking, the activated pump protection function switches on the boiler for a one minute period at 12:00 p.m. every day outside the heating season. (The pump protection function can accomplish its task only if the boiler is in working order in the summer, too. It is reasonable to set a low temperature level on the thermostat for this period, e.g. +10°C, to prevent the boiler from unnecessary start-ups when the weather turns cold temporarily).

3. PROGRAMMING THE THERMOSTAT

Programming means the setting of switching times and selection of accompanying temperature levels. The device can be programmed for a one-week period. Its operation is automatic, and it will cyclically repeat the programs that have been keyed in. Six separate switching times can be selected at your discretion for each day of the week, and a separate temperature can be set for each switching time. The temperature set for a given switch will remain valid until the time of the next switch. Accordingly, the thermostat will keep the temperature set for switching time P1 until switching time P2 is reached. After switching time P2 the temperature selected to switch P2 will be valid.

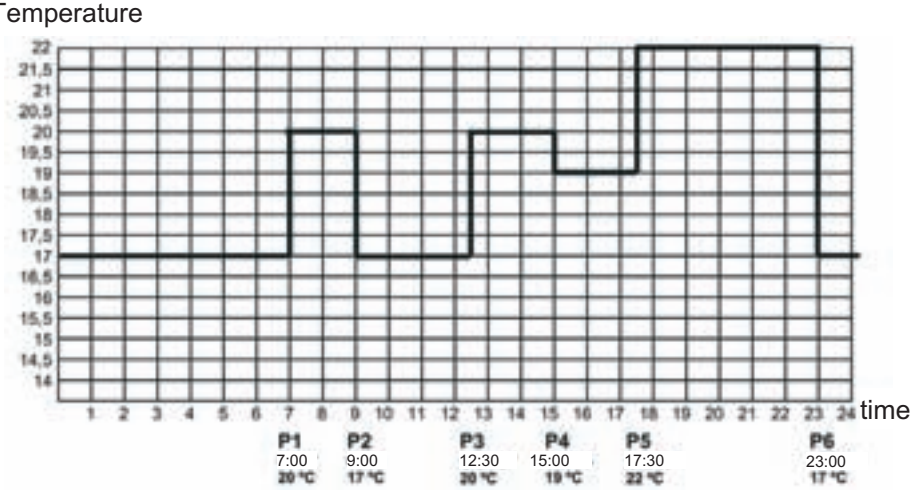
NOTE! *The software of the thermostat will only enable increasing consecutive times to be set, in accordance with the serial number (P1; P2; etc.) of the switches.*

With factory default settings the device will perform the following switches each day of the week:

P1	7:00	20°C	P4	15:00	19°C
P2	9:00	17°C	P5	17:30	22°C
P3	12:30	20°C	P6	23:00	17°C

The following diagram shows the temperature pattern according to factory default settings for 24 hours a day:

The temperature pattern, of course, can be freely modified so that a temperature curve is available for each day of the week to meet your needs in the best possible way.



3.1 Programming steps:

- Press the "**SET**" button to go back to the main screen.
- Press the "**SET**" button again and hold it down and press the "**PROG**" button, too. At this point the device gets into programming mode and the numbers indicating the days of the week (1 2 3 4 5 6 7) are flashing on the display.
- Select the day to be programmed or all days of the week by pressing, or pressing repeatedly, the large − or + button on the front panel of the device. If you wish to write the same program for each day of the week, it is reasonable to choose all days of the week (1 2 3 4 5 6 7) simultaneously, this way there is no need to perform separate programming of the days. If you wish to write a different program for each day, programming should be performed separately for each day of the week, selecting the days one by one. (If there are days for which you intend to create the same program, it is sufficient to create the program only once, because it can easily be applied to any other day with the help of the "**COPY**" button as described in Section 3.2).
- Press the "**PROG**" button again. At that point the next programming step should be done, i.e. the starting time of switch P1 should be set, which is indicated on the display of the device by flashing the time value to be set.
- Set the starting time of switch P1 by pressing, or pressing repeatedly, the large − or + button on the front panel of the device. (The time can be set at 10-minute intervals).
- Press the "**PROG**" button again. At this point the next programming step should be performed, i.e. the temperature of switch P1 should be set, which is indicated on the display of the device by flashing the temperature value to be set.
- Set the temperature level of switch P1 by pressing, or pressing repeatedly, the large − or + button on the front panel of the device. (The temperature can be set in 0.5°C increments).

- Press the “**PROG**” button again. At this point the next programming step should be performed, i.e. the starting time of switch P2 should be set. As in the previous steps, the time value to be set will flash on the display.
- If you do not need all the six switches every day, then you can omit the switch adjustment by pressing the “**DAY**” button while the temperature or time of the unnecessary switch is being set. The display shows this process by means of lines (- - - -), which appear on the time and temperature segments. The omitted switch can be restored or activated at any time by repeating the steps described above. (***ATTENTION!*** *After reactivating a switch that has been omitted before, inspect and correct, if required, the device so that the times of switches are consecutive, in accordance with the serial numbers of the switches!*)
- Similarly to the previous steps, with the help of “**PROG**” button and the large  and/or  buttons perform settings until the time and temperature of switch P6 is set.
- After the temperature of switch P6 has been set, by repeated pressing of the “**PROG**” button the set values can be inspected and data can be modified by repeating the steps described above.
- After you have set all values, press the “**SET**” button to acknowledge set values and to go back to the main screen. (After approximately 10 seconds the set values will be automatically acknowledged and the device will go back to the main screen).
- Set values can be freely modified at any time by repeating the programming steps.

3.2 Copying a program with the help of the “COPY” button

- Press the “**SET**” button to go back to the main screen.
- Press the “**COPY**” button for approximately 5 seconds to activate the “**COPY**” function. The notice “**COPY**” appearing in place of the hour characters and the flashing serial number 1 indicating Monday shows that conditions are ready for copying a program.
- Select the day (e.g. 2) whose program you wish to copy to another day or other days by pressing, or pressing repeatedly, the large  or  button on the front panel of the device.
- Press the “**COPY**” button to copy the program of the selected day. After copying has been finished, the flashing of the number indicating the day that has been copied stops and will become visible continuously, while the notice “**COPY**” can also be seen.
- Select the day (e.g. 3) to which you wish to copy the program of the day copied beforehand (e.g. 2) by pressing, or pressing repeatedly, the large  or  button on the front panel of the device. After selecting the number that indicates the day, press the “**COPY**” button to copy the program to the selected day.

- Following this, by pressing, or pressing repeatedly, the large  or  button on the front panel of the device, you can choose further days of the week and can copy the program of the day selected beforehand (e.g. 2) by pressing the "**COP**Y" button to these days too.
- After you have finished copying the program, press the "**SET**" button to go back to the main screen. (After approximately 10 seconds program copying that has been finished will be automatically acknowledged and the device will go back to the main screen).
- After going back to the main screen by pressing the "**SET**" button, the program of another day(s) can be freely copied by repeating the above steps.

3.3 Program inspection

- Press the "**PROG**" button. The serial number indicating the day (days), the symbol of switch P1 and the time and temperature level set for switch P1 will appear on the display. (None of the values is flashing). Repeatedly press the "**PROG**" button to check the switching values of P2, P3, etc.
- The switching values set for various days can be displayed by pressing buttons  or  and the "**PROG**" button.
- After checking the program, you can go back to the main screen by pressing the "**SET**" button. (After approximately 10 seconds, the device will automatically go back to the main screen).

3.4 Program deletion

Press the "**RESET**" button to delete all programs. Press the "**RESET**" button to reset the device to factory default settings.

4. TEMPORARY MODIFICATION OF THE TEMPERATURE CORRESPONDING TO THE PROGRAM

To simplify manual temperature modifications, with factory default settings temperatures of 18°C and 22°C are assigned to the large  button and  button, respectively. When modifying the temperature manually by pressing the or button once, the temperature will immediately jump to the factory value of the button. For example, if the current switch P3 ensures a temperature of 19°C, it can be modified to a standard temperature that ensures 22°C when needed by pressing the button only once, without having to press the button several times in increments of 0.5°C. Following this, by repeated pressing of button or , the temperature can be further increased or decreased to or from the standard room-temperature value of 22°C set in the factory in increments of 0.5°C, in accordance with current requirements.

The cost-effective and standard temperature values assigned to buttons and in the factory can be freely modified as follows:

- **To set a cost-effective temperature,** press the "**SET**" button and keep it depressed then press the button once and, following this, with the help of the and/or , set the cost-effective temperature selected by you. After the temperature has been set, press the "**SET**" button again to fix the set temperature value and to go back to the main screen. (After approximately 10 seconds the adjustment that has been finished will be automatically acknowledged and the thermostat will go back to the main screen).
- **To set a standard room-temperature,** press the "**SET**" button and keep it depressed then press the button once and, following this, with the help of the and/or set the standard temperature selected by you. After the temperature has been set, press the "**SET**" button again to fix the set temperature value and to go back to the main screen. (After approximately 10 seconds the adjustment that has been finished will be automatically acknowledged and the thermostat will go back to the main screen.)

If you wish to operate your device in a way that differs temporarily from the program that has been set (e.g. on holidays or the winter holidays), you can choose among the following options:

4.1 Temperature modification until the next program switch

Set the required temperature by pressing, or pressing repeatedly, the large or button on the front panel of the device. The device will control the boiler according to the set value until the time of the next switch specified in the program is reached. The icon appears on the display, indicating that the thermostat is operated with manual control.

The segments indicating the hour on the display alternately show the exact time and the time remaining in manual control (e.g. 1H02, that is, 1 hour 2 minutes). After this time has elapsed, the icon disappears and the device returns to the program that has been set. If you wish to return to the set program before the time of the next switch is reached, please press the "**SET**" button.

4.2 Temperature modification for 1-9 hours (party program)

Set the required temperature by pressing, or pressing repeatedly, the large or button on the front panel of the device, and then press the "**DAY**" button. On the display the icon appears, along with number 1, which indicates the duration of modification (in hours) instead of the number that indicates the programs (e.g. P3).

Adjust this time to the desired length (between 1 and 9) by repeatedly pressing the "**DAY**" button.

Following this, the device will keep the modified temperature (e.g. 24°C) for a period of time that has been set (e.g. for 3 hours) then the icon disappears after the set time has elapsed, and the device will continue to work according to the program that has been set. Press the "**SET**" button before the

time set for temperature modification has expired to interrupt the temperature modification and return the device to operating according the program.

4.3 Temperature modification for 1-99 days (holiday program)

Set the required temperature by pressing, or pressing repeatedly, the large − or + button on the front panel of the device. The manual control is indicated by the icon. Press the "**HOLD**" button and keep it depressed for at least 2 seconds. On the display the icon appears, along with d:01 that is the number of days in place of the hour. The flashing number 01 indicates that the number of days involved in temperature modification can be set. With the help of the button − or + set the number of days required (e.g.10). The display will show alternately the exact time and the number of days remaining in manual control. The icon disappears after the set time has expired, and the device will continue to work according to the program that has been set. Pressing the "**SET**" button before the time set for temperature modification has expired, the temperature modification will be interrupted and the device will return to operate according the program.

4.4 Temperature modification until the next manual interference

Set the required temperature by pressing, or pressing repeatedly, the large − or + button on the front panel of the device. The manual control is indicated by the icon. Press the "**HOLD**" button. In addition to displaying the temperature, the icon appears while the icon disappears. The set temperature value can be arbitrarily changed with the button − or + at any time without discontinuing manual control.

Pressing the "**SET**" button stops temperature modification and the device will return to operate according the program.

5. TURNING ON THE BACKGROUND LIGHT

When you press the "**LIGHT**" button, the background light of the display will turn on for 10 seconds. When you press another button while the display is illuminated, the background light will turn off only after 10 seconds have elapsed since the last button had been pushed.

6. CHANGING THE BATTERY

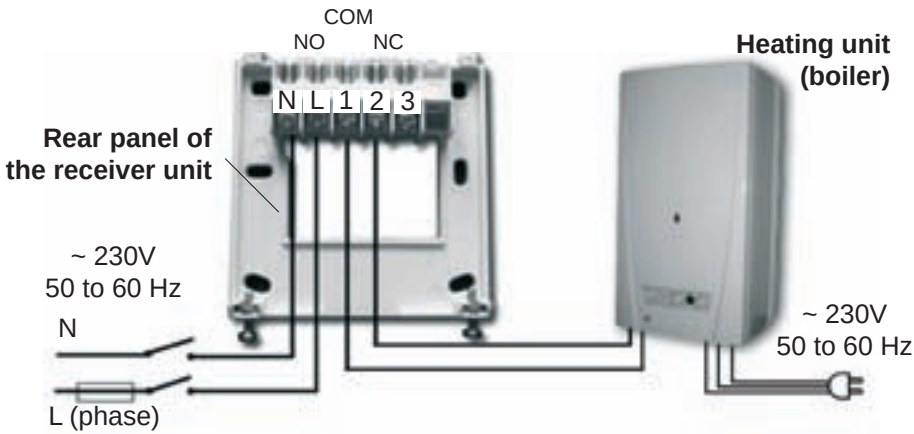
The average lifetime of the batteries is 1 year, but frequent use of the background light may shorten this time considerably. If the icon indicating low supply voltage appears on the display, the batteries should be replaced (see Section 2). The exact time should be set again after the batteries have been replaced, but the device saves the program that have been loaded even without batteries therefore there is no need to reprogram them. On the other hand, pressing the "**RESET**" button deletes the program loaded and makes the device restore factory default settings.

7. THE RECEIVER UNIT

7.1 Installation and connection of the receiver unit

The receiver unit should be mounted on the wall in a place protected against moisture in the vicinity of the boiler. ***ATTENTION:*** *Do not install the receiver unit under the housing of the boiler because it may shield radio signals and compromise wireless (radio-frequency) connection. To avoid electric shock, entrust a specialist with connecting the receiver unit to the boiler*.

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. Remove the protective carton from the contacts to ensure perfect contact. The marks of the connections are pressed into plastic above the sensors: **N, L, 1, 2** and **3**.



230 V mains voltage should be supplied to the receiver unit. We recommend using a fixed cable instead of a fork type connection for mains connection to avoid any unintentional de-energization of the device. We propose to connect the neutral wire of the network to point **N**, while the phase conductor to point **L**. We propose to interpose a switch so that the receiver unit can be de-energized if required.

The receiver unit controls the boiler through a potential-free alternating relay whose connection points are: **1** (NO); **2** (COM); **3** (NC). The connection wires of the boiler should be connected to terminals **1** (NO) and **2** (COM) to control a heating equipment, while the connection wires of the cooling equipment should be connected to terminals **2** (COM) and **3** (NC) to control a cooling unit.

ATTENTION! The instructions of the manufacturer of the heating (cooling) equipment should always be followed!

The voltage appearing on terminals 1, 2 or 3 depends only on the system to be controlled, therefore the dimension of the wire to be used is 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.

If the distance between the transmitter and receiver units is too large due to local circumstances and it makes the wireless (radio-frequency) connection unreliable, install the receiver unit nearer to the place of thermostat.

7.2 Putting the receiver unit into operation

Turn on the power supply to the receiver unit. After a few seconds have elapsed, the wireless (radio-frequency) system (thermostat and receiver unit) tunes itself to the specified frequency. On trial press the  button of the thermostat several times, until the set temperature is 2-3°C higher than the temperature of the room. Following this, the  icon indicating that the heating is turned on should appear on the display of the thermostat within a few seconds.

At the same time, the red LED light on the receiver unit should switch on to indicate that the receiver unit has received the command of the transmitter (thermostat).

If it does not happen, the system should be retuned. For this purpose press the "**M/A**" button of the receiver unit and keep it depressed (for approximately 10 seconds) until the green LED starts flashing. First press the "**SET**" button of the thermostat and keep it depressed then press the "**DAY**" button of the thermostat and keep it depressed (for approximately 10 seconds) until the green LED stops flashing and goes out, so that the receiver unit "learns" the safety code of the transmitter (thermostat).

The safety code will not be lost even during a power outage, the system memorizes it automatically.

ATTENTION: *Pressing the "**SET**" and "**DAY**" buttons simultaneously for 10 seconds generates a new safety code for the thermostat, and the receiver will recognize it only after a repeated tuning. With this in mind, do not keep the "**SET**" and "**DAY**" buttons of the thermostat depressed simultaneously or the "**M/A**" button of the receiver unit depressed without any reason after the two units have been tuned successfully.*

7.3 Transmission distance inspection

With the help of the "**TEST**" button you can check whether the two units are within the transmission distance of the wireless (radio-frequency) connection. To perform the test, press the "**TEST**" button for approximately 2 seconds. Following this, the thermostat will send, alternating every 5 seconds, switch-on and switch-off control signals to the receiver for 2 minutes (the  signal appears and disappears alternately on the display). The receipt of the signal is indicated by the red LED that lights up and goes out on the receiver unit. If the receiver unit fails to sense the signals sent by the thermostat, then the two units are outside the effective range of the wireless (radio-frequency) transmitter, therefore the two units should be located closer to each other.

7.4 Manual control of the receiver unit

Pressing the “**MANUAL**” button separates the thermostat from the receiver unit, and the boiler connected to the receiver unit can only be turned on and off manually, without any temperature inspection. The continuously illuminated green LED indicates “**MANUAL**” mode. Pressing the “**M/A**” button turns on or off the boiler. (The red LED is illuminated when the boiler is turned on). By pressing the “**MANUAL**” button again, the thermostat resumes normal (automatic) operation (the green LED goes out).

7.5 Avoiding external impacts

Virtually no external devices (a radio, cell phone, etc.) will exert any influence on the operation of the device. Should you experience any operating trouble, please retune the system as described in Section 7.2.

MY PROGRAM

DAY	P1		P2		P3		P4		P5		P6	
	Start time	Temp °C	Start time	Temp °C	Start time	Temp °C	Start time	Temp °C	Start time	Temp °C	Start time	Temp °C
Monday												
Tuesday												
Wednesday												
Thursday												
Friday												
Saturday												
Sunday												

TECHNICAL DATA

Technical data of the thermostat (transmitter):

— temperature measurement range:	0 to 35°C (in 0.1°C increments)
— adjustable temperature range:	7 to 35°C (in 0.5°C increments)
— temperature measurement accuracy:	±0.5°C
— selectable switching sensitivity:	±0.2°C (for radiator-based heating systems) +0/-0.2°C (for underfloor heating)
— storage temperature:	-10°C to +60°C
— power supply voltage:	2x1.5V AA alkaline batteries (LR6 type)
— power consumption:	1.3mW
— battery lifetime:	approx. 1 year
— operating frequency:	868.35MHz
— dimensions:	130 x 80 x 35mm (without holder)
— weight:	154 g
— temperature sensor type:	NTC 10Kohm ±1% at 25°C

Technical data of the receiver unit:

— power consumption:	6W
— power supply voltage:	230V AC, 50Hz
— switchable voltage:	24V AC / DC,…… 250V AC; 50Hz
— switchable current :	6A (2A inductive load)
— transmission distance:	approx. 50 m in open terrain
— weight:	150 g
Total weight of the device:	*approx. 500 g (thermostat+receiver+holder)*

A BRIEF DESCRIPTION OF PROGRAMMING

- **Setting the date and time:** with the "**DAY**" and − or + buttons
- **Programming:** press and hold down the "**SET**", while pressing the "**PROG**" button, then adjust values with the "**PROG**" and or buttons; use the "**COPY**" button to copy repeated programmes.
- **Program control:** with the "**PROG**" and − or + buttons.
- **Retuning:** with the "**M/A**", "**SET**", and "**DAY**" buttons (see Section 7.2).
- **Transmission distance control:** press the "**TEST**" button for more than 2 seconds.
- **Temporary modification of the temperature set in the program**
  - until the next switch in the program: with the − or + buttons
  - for a period ranging from 1 to 9 hours: with the − or + and "**DAY**" buttons
  - for a period ranging from 1 to 99 days: with the − or + buttons, then holding down the "**HOLD**" button for 2 seconds
  - until the next interference: with the − or + and "**HOLD**" buttons

The ***COMPUTHERM Q7 RF*** type thermostat complies with the requirements of standards EU EMC89/336/EEC; LVD 73/23/EEC; 93/68/EEC and R&TTE 1999/5/EC.

CE