COMPUTHERM Q3

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

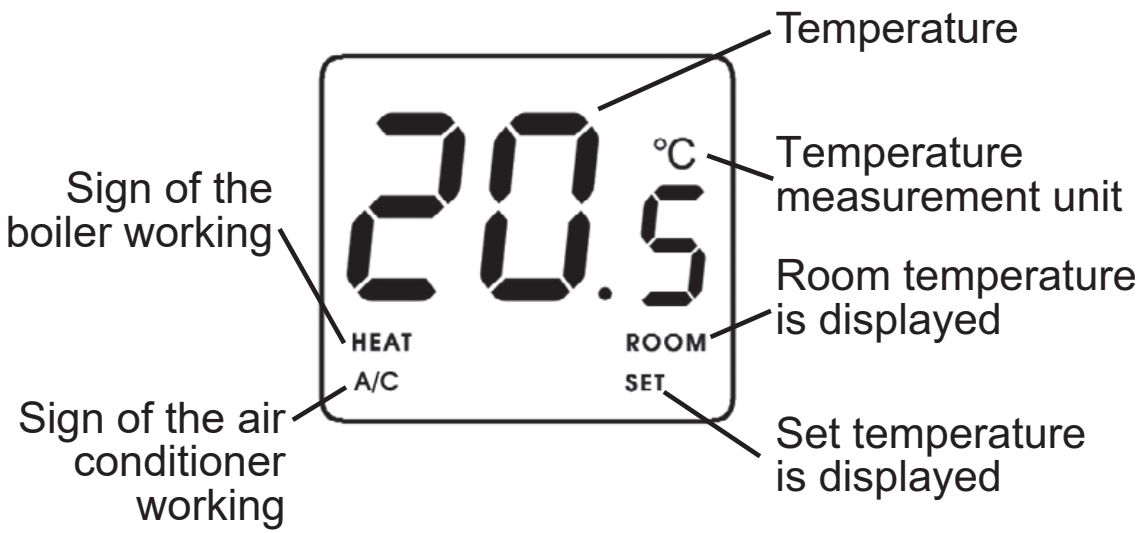
GENERAL DESCRIPTION OF THE THERMOSTAT

The **COMPUTHERM Q3** type switched-mode room thermostat is suitable to regulate the overwhelming majority of boilers and air conditioners 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 24V or 230 V control circuit.

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 the opposite way.

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

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



boiler on at 19.8 °C or below, and switches it off at 20.2 °C or above. Please refer to Section 4.2 for the modification of the factory default switching sensitivity of ±0.2 °C.

1. LOCATION OF THE DEVICE

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.

IMPORTANT WARNING!

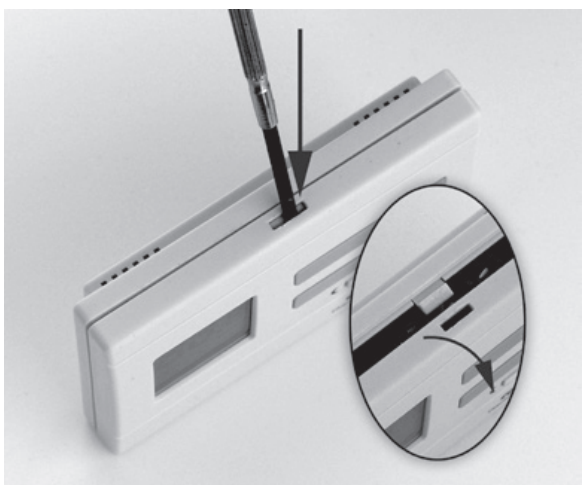
If the radiator valves in your flat are equipped with a thermostatic head, adjust it to maximum temperature or replace the thermostatic head of

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. INSTALLATION OF THE THERMOSTAT

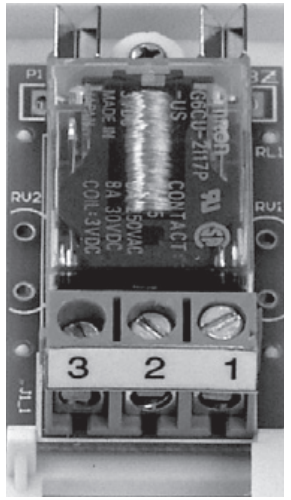
The device must be installed and connected by a qualified professional.

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



- 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.

- With the help of the screws provided and some tools fasten the rear panel of the device to the wall.



- Using a small screwdriver, remove the cover of the terminal block from the inner side of the rear panel. The thermostat controls the boiler or air conditioner through a potential-free alternating relay that has the following connection points: **No. 1** (NO); **No. 2** (COM) and **No. 3** (NC). These connection points are located under an inner cover on the inner side of the rear panel.
- Connect the two connection points of the heating or cooling equipment to be controlled to terminals **No. 1** (NO) and **No. 2** (COM), i.e. to the normally open terminals of the relay. If you would like to operate an old boiler or any other device that has no connection points for thermostats, then the **No. 1** (NO) and **No. 2** (COM)

connection points of the thermostat should be connected to the mains cable of the device, similarly as a switch would be connected.

To prevent electric shock, replace the inner cover removed for the connection of wires after the assembling process has been completed.

ATTENTION! *Always consider the loadability of the thermostat 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* ***No. 1*** *and* ***No. 2*** *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.*

3. PUTTING THE THERMOSTAT INTO OPERATION

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

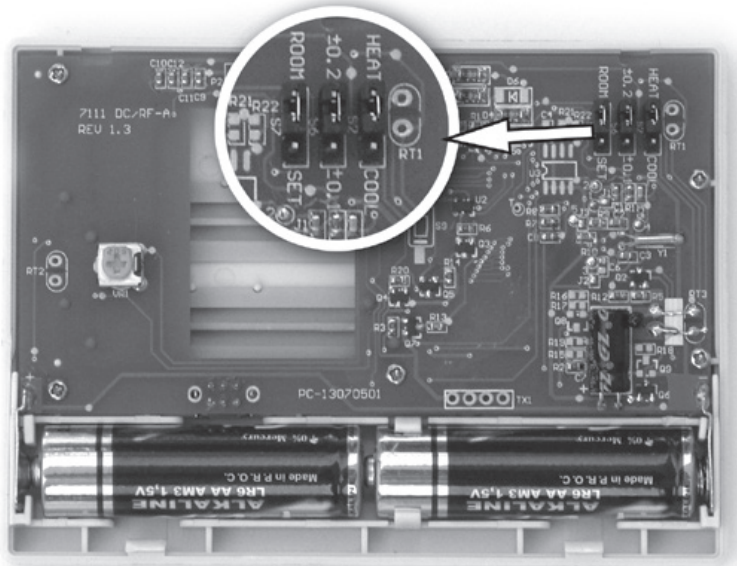
with the diagram in the battery compartment. After the batteries have been inserted, the display flashes the measured room temperature. (If this information fails to appear on the display, press “**RESET**” button located on the main panel of the thermostat.

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.

4. 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.

4.1 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 the 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.

4.2 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 the 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).

4.3 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 the 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 thermostat 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.

4.4 Calibration of the thermometer of the thermostat

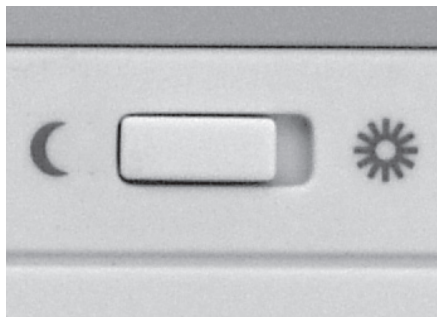
You can calibrate the thermometer of the appliance (to correct measured temperature). To this end all you have to do is change the position of the orange-colored potentiometer by a Phillips screwdriver.

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.*

5. 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.

6. OPERATION OF THE INSTALLED THERMOSTAT

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

6.1 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.

6.2 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.

7. BATTERY REPLACEMENT

The average lifetime of the batteries is 1 year. The  icon alternately replacing the temperature value on the display indicates

low battery voltage. Replace the batteries whenever the bA icon indicating low battery voltage appears on the display (see Section 3).

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.

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: **Q3**
- Temperature control class: **I. class**
- Contribution to the efficiency of seasonal space heating: **1%**

Remark:

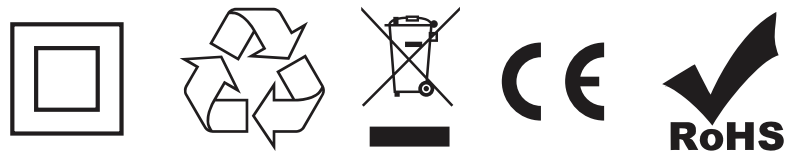
In addition to using modern temperature regulators, the following up-to-date regulation methods also contribute significantly to the improvement of the comfort provided by the heating network, the energy efficiency of the heating network and the coefficient of performance:

- 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

— switchable voltage:	24 V AC/DC to 250 V AC, 50 Hz
— switchable current:	8 A (2 A inductive load)
— 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
— 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
— protection against environmental impacts:	IP30
— dimensions:	110 x 80 x 22 mm
— weight:	95 g
— temperature sensor type:	NTC 100kΩ ±1% at 25 °C

The **COMPUTHERM Q3** type thermostat complies with the requirements of standards EMC 2014/30/EU, LVD 2014/35/EU and RoHS 2011/65/EU.



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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!