

COMPUTHERM Q3

digital room thermostat



NEW
software!

Operating Instructions

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

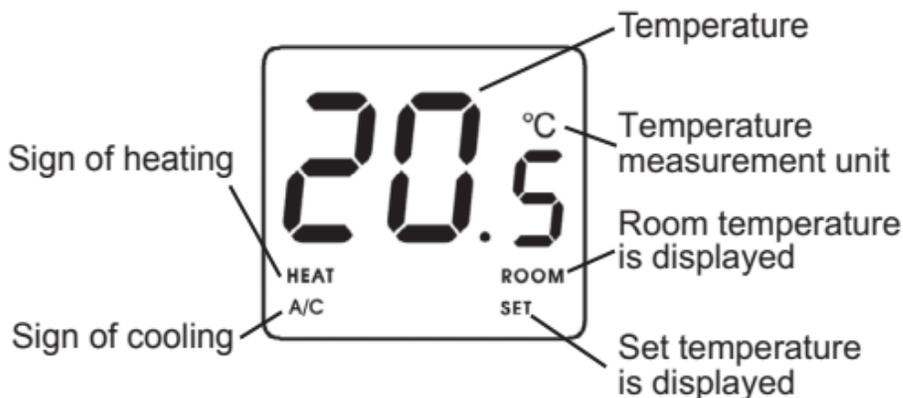
GENERAL DESCRIPTION OF THE THERMOSTAT

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 230V 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 $\pm 0.1^{\circ}\text{C}$ or $\pm 0.2^{\circ}\text{C}$ (default setting). This means the difference between the adjusted temperature and the actual temperature measured during the switching process. In case of the $\pm 0.2^{\circ}\text{C}$ switching sensitivity and heating mode for example, if the set temperature is 20°C , then the device switch-

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



es the boiler on at 19.8°C or below, and switches it off at 20.2°C or above. Please refer to Section 4.1 for the modification of the factory default switching sensitivity of $\pm 0.2^\circ\text{C}$.

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

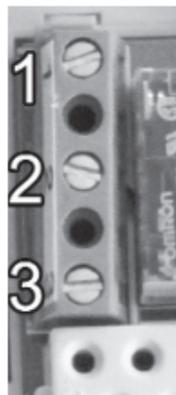
the radiator valve with a manual control knob in the room where the room thermostat is to be located, otherwise the thermostatic head may disturb the temperature control of the flat.

2. INSTALLATION OF THE THERMOSTAT

- To install the thermostat, detach the rear panel of the thermostat from the front panel by loosening the screws at the bottom of the cover 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.

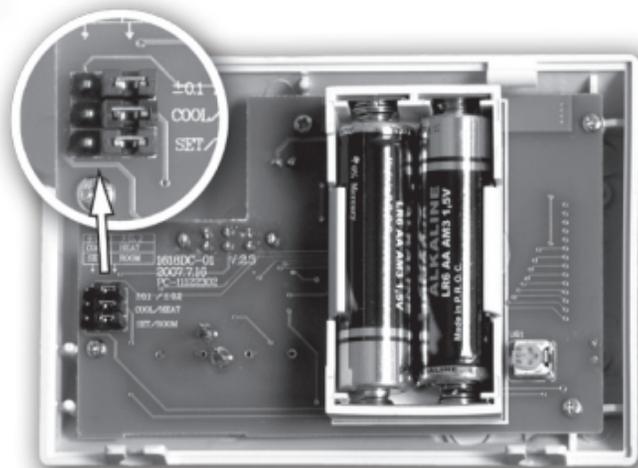
3. PUTTING THE THERMOSTAT INTO OPERATION

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 the “**RESET**” button with a wooden or plastic stick. To press the button, do not use any electrically conductive materials, e.g. graphite pencil).

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) located on the base panel.



4.1 Selecting the Switching Sensitivity (Accuracy)

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

With factory default settings the jumper is located on the central and right pins, resulting in a switching sensitivity of $\pm 0.2^{\circ}\text{C}$. It can be modified to $\pm 0.1^{\circ}\text{C}$ by relocating the jumper onto the left 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 $\pm 0.1^{\circ}\text{C}$ switching sensitivity for heating systems with high thermal inertia (e.g. underfloor heating), and the $\pm 0.2^{\circ}\text{C}$ switching sensitivity (factory default setting) for heating systems with low thermal inertia (e.g. flat panel radiators).

4.2 Switching between the Heating and Cooling Mode

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

With factory default settings the jumper is located on the central and right pins, which selects the heating mode. By relocating the jumper onto the left and central pins, the cooling mode can be selected. The output terminals **No. 1** and **No. 2** 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** and **No. 2** are indicated by the notice “**HEAT**” (heating) or “**A/C**” (cooling) in the bottom left corner of the display, according to the selected mode.

4.3 Selecting the Displayed Temperature

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

With factory default settings the jumper is located on the central and right 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 left

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.

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 with a small wooden or plastic stick to activate them. To press the button, do not use any electrically conductive materials (e.g. graphite pencil).*

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.

Above 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 35°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 warm 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 (C) (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  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.

TECHNICAL DATA

— switchable voltage:	24V AC/DC to 250V AC, 50 Hz
— switchable current:	8A (2A inductive load)
— temperature measurement range:	5 to 35°C (in 0.1°C increments)
— adjustable temperature range:	5 to 35°C (in 0.5°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 1.5V ALKALINE batteries (LR6 type; AA size)
— power consumption:	1.5mW
— battery lifetime:	approx. 1 year
— dimensions:	112 x 75 x 45mm
— weight:	154g
— temperature sensor type:	NTC 10kΩ ±1% at 25°C

The **COMPUTHERM Q3** 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. 

Importer: **QUANTRAX Kft.**

Fülemüle u. 34., Szeged, H-6726, Hungary

Tel: +36 62 424 133 • Fax: +36 62 424 672

Email: iroda@quantrax.hu

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

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