

# **COMPUTHERM Q32**

*digital room thermostat*



*Operating instruction*



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# 1. GENERAL DESCRIPTION OF THE THERMOSTAT

The **COMPUTHERM Q32** 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

230 V AC, 50 Hz

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 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.

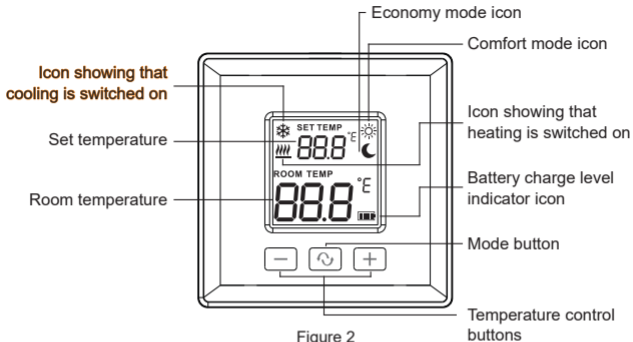


Figure 2

## 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 1.15 kW (load capacity: max. 30 V DC / 250 V AC; 5 A [1 A inductive load]).

- This device is designed for indoor use. Do not use in wet, chemically aggressive or dusty environments.
- 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. If the batteries run down and they are replaced, then the device can continue to operate without any external intervention.
- 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. LOCATION OF THE THERMOSTAT**

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). Do not use in wet, chemically aggressive or dusty environment. Its optimal location is 0.75-1.5 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.*

## **4. INSTALLATION OF THE THERMOSTAT**

**WARNING!** The device must be installed and connected by a qualified professional. Before installing, make sure that neither the thermostat nor the device to be controlled is connected to the 230 V mains voltage. Modifying the thermostat 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 3**.
- With the help of the screws provided and some tools fasten the rear panel of the device to the wall.



Figure 3

- 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 **1 (NO)**; **2 (COM)**; **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 the normally open **1 (NO)** and **2 (COM)** terminals of the relay.



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


**To avoid electric shocks, replace the inner cover removed to connect the wires after installation.**

***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 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.*

## **5. 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.

**Warning! 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.

After the batteries have been inserted, the display shows the measured room temperature and the set temperature.

## 6. OPERATION OF THE INSTALLED THERMOSTAT

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  $\pm 0.2$  °C). This means that if the thermostat is set to heating mode and 22 °C, then with a switching sensitivity of  $\pm 0.2$  °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	
rES	Restoring factory default settings	--: saving the settings and exiting the settings menu after pressing the  button. RES: restoring factory default setting after pressing the  button	--	Chapter 7.4.

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 thermostat **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  $\pm 0.1$  °C to  $\pm 1.0$  °C /  $\pm 0.2$  to  $\pm 2.0$  °F. Apart from some special cases, we propose to use  $\pm 0.1$  °C or  $\pm 0.2$  °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  $\pm 0.5$  °C. The temperature displayed by the thermostat can be modified by

maximum  $\pm 3.0\text{ }^{\circ}\text{C}$  /  $\pm 6.0\text{ }^{\circ}\text{F}$  compared to the temperature measured by the temperature sensor, in  $0.1\text{ }^{\circ}\text{C}$  /  $0.1\text{ }^{\circ}\text{F}$  increments.


#### 7.4 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. 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 your problem, please contact our qualified support team.

## 10. PRODUCT INFORMATION DATA SHEET

- Trademark: **COMPUTHERM**
- Model identifier: **Q32**
- 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](http://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.

# 11. TECHNICAL DATA

- **Temperature measurement range:** 3 to 45 °C (in 0.1 °C increments) / 37 to 100 °F (in 0.1 °F increments)
- **Adjustable temperature range:** 5 to 40 °C (in 0.5 °C increments) / 41 to 97 °F (in 0.5 °F increments)
- **Temperature measurement accuracy:**  $\pm 0.5$  °C /  $\pm 0.9$  °F
- **Temperature calibration range:**  $\pm 3$  °C (in 0.1 °C increments) /  $\pm 6$  °F (in 0.1 °F increments)
- **Optional switching sensitivity:**  $\pm 0.1$  °C -  $\pm 1.0$  °C /  $\pm 0.2$  °F -  $\pm 2.0$  °F
- **Storage temperature:** -10 °C to +40 °C
- **Switchable voltage:** max. 30 V DC / 250 V AC
- **Switchable current:** 5 A (1 A inductive load)
- **Battery voltage:** 2 x 1.5 V alkaline batteries (LR6 type; AA size)
- **Battery lifetime:** approx. 1 year
- **Protection against environmental impacts:** IP30
- **Dimensions:** 80 x 80 x 23 mm (W x H x D)
- **Weight:** 82 g
- **Temperature sensor type:** NTC 4200 K 10 k $\Omega$   $\pm 1\%$  at 25 °C



The **COMPUTHERM Q32** type thermostat complies with the requirements of directives EMC 2014/30/EU, LVD 2014/35/EU, and RoHS 2011/65/E.



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**Origin:**

designed in the EU, manufactured in China

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