



## Dial Room Thermostat 230V

Model: **CRT230HK**



Quick Guide

## INTRODUCTION

**CRT230HK** is an electronic room temperature controller which offers key advantages over conventional mechanical products. The controller is easy to operate using the conventional backlit adjusting dial and offers you unique control convenience for heating applications of all types thanks to the high quality device electronics.

## PRODUCT COMPLIANCE

This product complies with the essential requirements and other relevant provisions of the following EU Directives: EMC 2014/30/EU, LVD 2014/35/EU and RoHS 2011/65/EU.

## SAFETY INFORMATION

Use in accordance to national and EU regulations. Use the device as intended, keeping it in dry condition. Product for indoor use only. Installation must be carried out by a qualified person in accordance to national and EU regulations.

## MOUNTING

Install the **CRT230HK** dial room thermostat at roughly 1.5m above floor level. It should be mounted in a location where the thermostat is easily accessible and away from direct sunlight.



Gently remove front housing and make the wiring connections.



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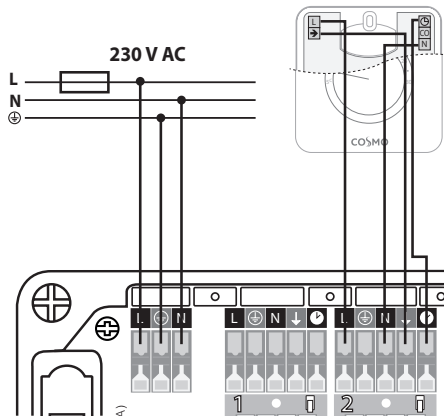


For wall mounting, mark the correct position on the wall and mount the rear case to the wall.

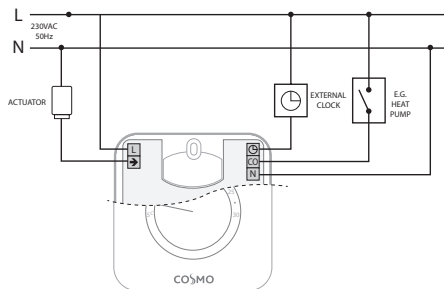
## WIRING DIAGRAM

You can wire the thermostat directly to the **CKL6230N** wiring centre or to an actuator (purchased separately).

### CKL6230N WIRING CENTRE

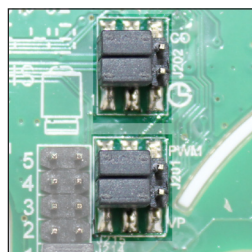


### ACTUATOR



## SWITCHES

Different features of the **CRT230HK** can be switched ON or OFF. In order to do this please follow the table below.

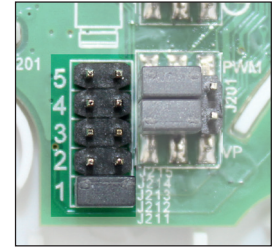


SWITCHES	FEATURE	ON	OFF
VP	Valve protection	●○○○	○○●●
PWM	Pulse-Width-Modulation	●○○○	○○●●
⌚	NSB Function (2°C or 4°C selectable)	2°C	4°C
CO	Heating/Cooling	●○○○	○○●●

## JUMPERS - SETTINGS WHEN USING THE CKL6230N WIRING CENTRE

The jumpers from 1 to 5 represent the number of actuators that you can connect to the thermostat.

After the actuators are mounted please move the jumper on the correct number (the same as the number of actuators).



Depending on the amount of actuator used, please change the jumper position accordingly to compensate the power consumption.

## THERMOSTAT FUNCTIONS

### NSB (NIGHT SETBACK) FUNCTION

NSB Mode depends on the NSB wired connection.

0V = NSB OFF  
230V = NSB ON

The NSB signal is activated every 1 second. When the signal is received the setpoint temperature will be set at  $\pm 2^{\circ}\text{C}$  or  $\pm 4^{\circ}\text{C}$ .

### HEATING AND COOLING SELECTION

The Heating/Cooling function is determined by the CO terminal connection.

CO 0V = Heat mode  
CO 230V = Cool mode

### COOLING FUNCTION

#### Cooling Enabled:

Set the jumper on ON   . The thermostat will run in normal cooling mode. That means that it will open/close the actuators when necessary. The LED will be BLUE when the cooling function is running.

#### Cooling Disabled:

Set the jumper on OFF   . The actuator will be closed and the LED will be off.

## PROTECTION FUNCTION

### HEAT CUT OFF AT HIGH/LOW TEMPERATURE

When room temperature is over  $36^{\circ}\text{C}$  or under  $4^{\circ}\text{C}$ , all heating / cooling outputs will be turned off.

### SHORT CYCLE PROTECTION

When Cooling Mode is enabled the minimum interval between Relay ON/OFF is 3 minutes.

### VALVE PROTECTION

Set the jumper on 'ON' to disable the function or on 'OFF' to enable it. Turn on the valve for 5 minutes every week to prevent any damage to the valve.

## CONTROL PATTERNS

If CO terminal is connected and the Heating Mode is ON, the PWM function will be activated.

If CO terminal is disconnected and the Cooling Mode is ON the ON / OFF control output will be activated.