

# Model MC6



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# ◆ Introduction

## What is a Programmable Thermostat?

A programmable room thermostat is a device that combines the functions of both a room thermostat and timed heating controller into a single unit. The programmable thermostat is used to switch the heating system in your home on and off as needed. It works by controlling the temperature according to a series of programmed temperature settings that take effect at different times of your choosing. The thermostat then works by sensing the air temperature and therefore switching on the heating when the air temperature falls below the thermostat setting, and switching it off once this set temperature has been reached.

It will allow you to select different temperatures in your home at

different times of the day (and days of the week) to meet your particular needs.

Adjusting a room thermostat to a higher setting will not make the room heat up more quickly. How quickly the room heats up depends on the design of the heating system and heat-loss of the building. For example, the size of boiler and radiators. Neither does the setting affect how quickly the room cools down. Turning a programmable room thermostat to a lower setting results in the room being controlled at a lower temperature, and saves energy.

The way to set and use your programmable room thermostat is to find the lowest temperature settings that you are comfortable with at the different times you have chosen and then leave it alone to do its job. The best way to do this is to set a lower

temperature first, for example 18°C, and then adjust the temperature gradually up or down by one degree each day until you are comfortable with the temperature. The higher a temperature setting required will result in more energy and fuel cost.

If your heating system uses radiators, there will usually be only one programmable room thermostat on each floor to control the house. But you can still have different temperatures in individual rooms by installation of thermostatic radiator valves (TRVs) on individual radiators. If you don't have TRVs, you should choose a temperature that is reasonable for each floor or the whole house. If you do have TRVs, you can choose a slightly higher temperature setting to make sure that even the coldest room is comfortable, then prevent any overheating in other rooms by adjusting the TRVs.



All types of thermostats need a free flow of air to sense the best temperature, so they must not be placed in a cupboard or covered by curtains or blocked by furniture. Radiant heat by the sun, shining directly onto the thermostat through a window and heat from nearby electric fires, televisions, wall or table lamps may prevent the thermostat from reading the correct average temperature in the room properly. It cannot be stressed enough on how important the correct positioning of a thermostat will allow for a more efficient heating system. A central open position within the house is usually the best place.



## Mode Select

MC6 can either be used as a Thermostat or a Time-clock.


Thermostat Mode (Fully Programmable Mode) – Allows Time & Temperature Settings to be made. This allows the thermostat to be programmed for a specific temperature during a specific time.

Time-clock Mode – Allows for Time ONLY setting to switch ON or OFF as desired. This Mode ignores any temperature requirement.

To change between Thermostat and Time-clock Modes:

Follow these steps (Use your finger as the screen is Touch Sensitive)

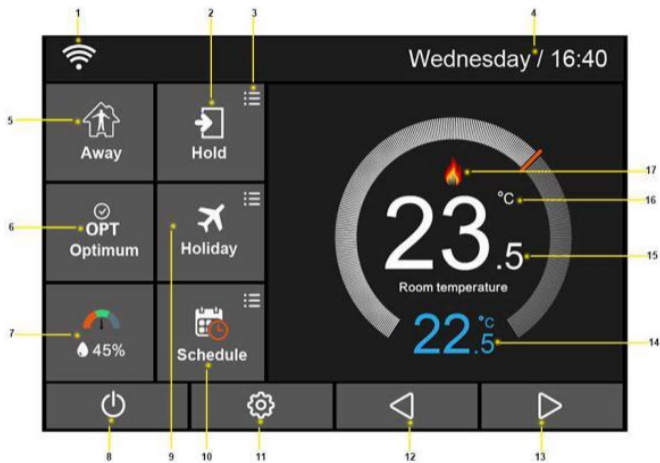
★ Press the icon  and enter Feature Settings.

★ Use the icon  to turn page to 4. Find 'Work Mode' Selection, click it and enter Selection Interface.

★ Select 'Heating Mode' or 'Timer Mode' the thermostat will re-set and enter the desired Mode.

# 1 Mode 1-Thermostat





## ◆LCD Display

1. Wi-Fi indicator- Displayed when connected to a Wi-Fi

Network

2. Hold: Temperature Hold.

3. Adjusting the optional settings.

4. Day Indicator & Clock

5. Away: Means the MC6-Timer is maintaining a lower temperature to give frost protection.

6. OPT (Optimum): Displayed ON/OFF of the 'Optimum Start'
7. Air Humidity:
8. Power ON/OFF
9. Holiday: Displayed when thermostat is in holiday mode.
10. Schedule: Programmable Operation.
11. Setup Button
- 12 & 13 Adjusting the Setting Temperature or turning a page.
14. Set-point Temperature display
15. Actual Room Temperature display

16. Temperature reading is in Degrees °C or °F Display

17. Display shows “Heating” flame symbol (A flame on screen means heating is ON. If there is no flame symbol, the heating is OFF)



## ◆ Operation of Main Display





Hold


*The Temperature hold function allows you to manually override the current operating program and set a different temperature for a desired period.*

★ Press the 'Hold' and enter the setting interface.

★ Press the First column of 'Hold Temp', use the icon   to

set the desired Hold Temperature. (Temperature Range 5°C -35°C).

★ Press the Second/Third columns of Hour/Minute, use the icon /  to set the desired “Hold Time”

★ Press the icon  to save and return to main display, or click ‘Cancel’ to delete the setting.



***You will see the ‘HOLD’ time remaining: \*\*:\*\* indication is displayed on screen. The time will count down for the set duration and then revert to the normal program setting.***






## Holiday

*The MC6 will maintain this temperature for the duration of the holiday and will then automatically return to the program mode on your return.*

★ Press the “Holiday” and enter setting interface.

★ Press the column of Years/Month/Day, Use the icon   to set the Year/Month/Day values under Holiday Start

★ Press the column of Years/Month/Day, Use the icon   to set the Year/Month/Day values under Holiday End.

★ Press the icon  to save and return to main display. The display shows; 'Holiday until' \*\*/\*\* \*\*:\*\* OR press; 'Cancel' to delete the setting.



## Away Mode

- ◆ In 'Away Mode', The MC6 will only turn the Heating ON should the room temperature drop below the set Defrost Temperature (This is configured in the setup). If the heating is turned on in Away Mode, the Flame symbol will be displayed.
- ◆ The thermostat automatically enters the Defrost mode when 'Away Mode' is selected





## Schedule

★ Press the icon  and enter Feature Settings.

★ Find the "Schedule" option. Press it and enter setting interface.

There are four Options:

Weekday/Weekend, 7Days, 24Hours, None

※ Press the icon  in the front of **Weekday/Weekend**, and it will turn to .

※Press the icon  to save and return to main screen.

※Press the “Schedule” on the main screen.

※Press “Schedule” and enter “Edit” interface.

※On the Edit Page, “**Weekday/Weekend**” can be selected to edit.


※Press “Weekday” and enter editing interface.


※There are Four Time Periods can be selected:

***Morning/Day/Evening/Night***

(Each Time Period has  Options)


✳Morning: 

Press the First Column of “Time”, use the icon  to set desired “Hour”

Press the Second Column of “Time”, use the icon  to set desired Minute.

***For Example: The Setting Time is 04 (Hour):00 (Minute)***



Click the Third Column of “Temperature”, use the icon  to set desired Temperature.

*For Example: The Setting Temperature is 20°C*

**Repeat these steps to set all periods.**

## ◆ Optional Functions

**Program Mode:** Program Mode: MC6 thermostat provides three programming modes and also can be set to non-programmable thermostat

Weekday / Weekend (5 + 2) Programming - Allows you to edit the 4 time periods for the weekday and 4 time periods for the weekend.

7 day programming mode - can be programmed every day for 4 time periods with comfortable temperature

24 hours mode -Every day can be edited 4 time periods with comfortable temperature.

**Defrost:** This is the temperature maintained when the

thermostat is in Away Mode. The range is 7-17°C. The default is 7°C and is suitable for most applications.

**Temperature Format:** Selecting between °C and °F.

**Switch Diff:** This function allows you to increase the switching differential of the thermostat. The system defaults to 0.5 degrees, meaning that when the temperature is set to 20 degrees, the thermostat will start heating at 19.5 degrees and stop at 20 degrees. If the default value is 1 degree, start heating at 19 degrees, stop at 20 degrees.

**Out Delay:** To prevent rapid switching, an output delay can be entered. This can be set from 0-15 minutes. (The default is 00, means no delay)

## **Sensor Selection:**

You can select which sensor should be used. You can select between air temperature only, floor temperature, or both. When you enable both sensors, the floor sensor is used as a floor limiting sensor and is designed to prevent the floor from overheating.

**Floor Temp Limit:** The function is available when the floor sensor is enabled. You can set a floor temperature limit between 20-45 degrees (default is 27 degrees).

***Note: The Air Sensor must not be used for controlling electric underfloor heating .Only floor sensors are available or both (Remote Air & Floor Sensor) should be used.***

## **Optimum Start**

Optimum Start will calculate how much time the heated space needs, to ensure the required Temperature you have set, at the Time you have set, is achieved (assuming the heating system has been installed to meet the energy requirements of the building). For example if you require 21degC at 8am, the thermostat will calculate how much time in advance, the system needs to operate to achieve this setting. This time is calculated by the thermostat in Minutes per 1DegC Room temperature rise.

**Ambient Light Dimming:** If this function is enabled, the internal light sensor will detect when to dim the thermostat display as the ambient light levels drop. If you turn the room lights off, the display will dim so the MC6 does not light up the room.

## ◆ Optional Features Table

FEATURE	SETTING
Program Mode	Weekday/Weekend(Default)/7 Days Programming/24 Hrs/None
Defrost (Away Mode)	7°C-17°C(7°C =Default)

Temperature Format	°C/F(°C=Default)
Switch Diff	0.5°C-3°C (0.5=Default)
Out Delay	0-15Minutes(0=Default)
Sensor Selection	Built in Sensor (Default)  Remote Air Sensor  Floor Sensor Only  Built in &Floor Sensor

	Remote Air &Floor Sensor
Floor Temp Limit	20°C-47°C (28°C=Default)
Optimum Start/Rate of Change	Minutes to raise temperature by 1 °C
Ambient Light Dimming	ON/OFF




## ◆ Feature Settings





### Clock Setting

To set the clock, follow these steps.

★ Press the icon  and enter Feature Settings.

★ Press The “Clock Setting” enter Setting Interface

★ Press the column of Year/Month/Day, use the icon  to set the Year/Month/Day values.


★ Press the column of “Time”, use the icon  to set Hours/ Minute.

★Press the icon  to save and return to main screen.

## Backlight Setting

★Press the icon  and enter Feature Settings.

★Press “Backlight” Selection and enter Backlight Setting.

★Ambient Light Dimming is in  Mode: Automatically adjusts the backlight brightness.

★Ambient Light Dimming is in  Mode: Manually adjust the backlight brightness.

★Use the icon  to adjust to the desired brightness

★Press the icon  to save and return to main screen.

## Standby Screen

★Press the icon  and enter Feature Settings.

★Press “Standby Screen” and enter Setting interface.

★There are Four Selections (3Min,10Min,Just Night, Never) to control the Standby Screen Time.

★For example, setting the standby time is for 10 minutes

Press the icon  in the front of “10 Min” and it will turn to



★Press the icon  to save and return to main screen.




## Screen Lock


★Touch (Press on) the icon  and enter Feature Settings.


★Press “Screen Lock” and enter setting interface.


## Lock Pin Options

★ For example, Setting the Lock Pin is 5209

※ Press the First Column, use the icon  to set to 5

※ Press the Second Column, use the icon  to set to 2

※ Press the Third Column, use the icon  to set to 0

※ Press the Fourth Column, use the  to set to 9

★ Press the icon  to save and return to main screen.

***Note: To unlock the MC6 press .The display will show and you will need to enter the four digit pin number you set previously.***







## Temperature Format

★ Press the icon  and enter Feature Settings.

★ Find the “Temp Format” option, Press it and enter setting interface.

★ There are two Options  / 



★ Press the icon  in the front of  or  ,and it will turn to .



★Press the icon  to save and return to main screen.

## Temperature Limit

★Press the icon  and enter Feature Settings.


★Find the “Temp Limit ” option, Press it and enter setting interface.

★Press the First Column, use the icon  /  to adjust Minimum Temperature to 5-34°C

★Press the Second Column, use the icon  /  to adjust



Maximum Temperature to 6-35°C

★Press the icon  twice to save and return to main screen.



**Defrost**

**The thermostat will automatically enter the Defrost Mode when the room temperature drops below the defrost temperature.**


★Press the icon  and enter Feature Settings.

★Find the “Defrost” option, Press it and enter setting

interface.

**Temperature**   **Options.**


★Use the icon  to adjust the temperature.


★Press the icon  twice to save and return to main screen..

## **Sensor Selection**

★Press the icon  and enter Feature Settings.


★ Find the “Sensor Selection” option, Press it and entry in setting interface.

★ Press the icon  of which sensor you required.

★ Press the icon  twice to save and return to main screen



## Floor Temperature Limit

★ Press the icon  and enter Feature Settings.


★ Find the “Floor Temp Limit” option, Press it and entry in setting interface.

★ Use the icon  to set the temperature.

★ Press the icon  twice to save and return to main display.



## Daylight Saving Time



★ Press the icon  and enter Feature Settings.


★ Press “DST” and enter setting interface.

*Auto DST*   *Options*

★ There are three options:

***European Union/US & Canada/Australia & New Zealand***

★Press the icon  in the front of “EU/U&C/A&Z” and it will turn to .


★Press the icon  twice to save and return to main screen.

## System Information

★Press the icon  and enter Feature Settings.

★Press “System Information” and enter interface, it shows

Version Number: 2.0


★Press the icon  to Exit



## Reset to Factory Settings

***Warning: Reset will make you lose the current Settings and return to the factory Settings.***

★Press the icon  and enter Feature Settings.

★Press “” and enter setting interface.

★Press “Reset” to factory settings

★Press the icon  to Exit



## Installation

***Install the thermostat at a height in accordance with the local Building Regulations. All electrical work must be carried out by a suitably qualified electrician.***



Please read the instructions in order to better understand our products.

Do not install in areas close to a heat source, which will affect its function.

This MC6 thermostat is designed to be flush mounted and requires a 35mm electrical recessed flush mounted box within the wall.

### **Step 1**

Using a flat-blade screwdriver, loosen the screw from the bottom of the thermostat, and then separate the front half from the back-plate.

### **Step 2**

First place the front panel of the thermostat in a safe place.

And then follow the wiring diagram on page 52 & 63 of this manual for the required connecting terminals.

### **Step 3**

Screw the thermostat back-plate onto the electrical recessed box in the wall

### **Step 4**

Once the back-plate is secure, re-fit the thermostat front panel to the back-plate and gently tighten the bottom retaining screw.

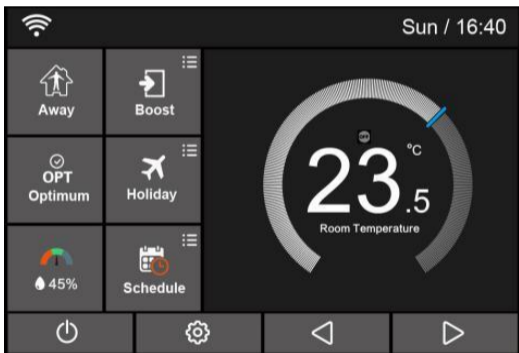
Max Switch Current: 16A

LCD screen size: 3.5 Inch

Touch: Capacitive touch

Dimension: 96 \* 86 \* 42.5 (W\*H\*D) mm

## 2 Mode 2-Time Clock





## ◆ LCD Display

1. WiFi Indicator-Displayed when connected to a WiFi network
2. Away-Displayed when Away Mode is active.
3. Boost-Adjusting the optional setting.
4. Day Indicator & Clock
5. OPT (Optimum): Displayed ON/OFF of the “Optimum Start”
6. Air Humidity:
  - 1) If humidity value less than 30%, the pointer will be in the Red area.
  - 2) If humidity value is between 30% and 60%, the pointer will be

in the Green area.

3) If humidity value is more than 60%, the pointer will be in the Grey area.

7. Power ON/OFF

8. Holiday: Displayed when Time Clock is in holiday mode.

9. Schedule: Programmable Operation.

10. Setup Button

11. Room Temperature display

12. °C or °F display



13. Timer Status-Displays the current status of the timed output.



## Boost



To boost the timed output ON follow these steps.

★ Press the “Boost” on main screen & enter setting interface.

★ Press “Hour” and use the icon  /  to set the hours



desired

★Press “Minute” and use the icon  /  to set the minutes desired.

★Press the icon  to save and return to main screen.

★Boost the remaining time will now be displayed.



## Setting the Switching Times




To program the switching times, follow these steps




★ Press the “Schedule” on main screen.




★ Press “Weekday” and enter setting interface.




**Four Time Periods can be selected to program.(Each**

**Period has**   **Options)**

★ Press “Hour” of  time and use the icon  /  to set the desired hour.

★Press “Minute”  time and use the icon / to set the desired minutes.

★Press “Hour” of  time and use the icon / to set the desired hour.

★Press “Minute”  time and use the icon / to set the desired minute.

***Repeat these steps to set all periods.***

## ◆ Optional Features Table

FEATURE	SETTING
Program Mode	Weekday/Weekend(Default)/7 Days Programming/24 Hrs/None

Out Delay	0-15Minutes(0=Default)
Ambient Light Dimming	ON/OFF

#### FCC Caution:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

#### FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment .This equipment should be installed and operated with minimum distance 20cm between the radiator& your body.