



# MIC<sub>2</sub>

## USER MANUAL

### ● Installation

1. Check if the power is off. Remove the display frame by pushing a non sharp instrument (for example the point of a ballpoint pen) carefully in the square hole underneath the thermostat.

#### 2. Connection schedule:

L/N lead : Connect the power cord using the terminal block.

L1/N1 lead : Use a terminal block to connect the load line(Max 16A).

S1/COM/ : Connect the floor sensor.

Pilot : Connect the pilot to L when the pilot wire function needs to be enabled.

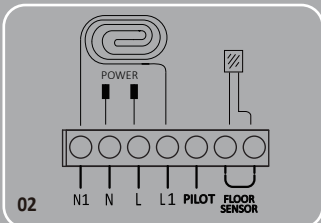
**WARNINGS:** 1. Disconnect the main power supply before wiring.

Installation needs to be done by a qualified electrician in accordance with all current wiring and building regulations. 2. Electric floor heating cable/mat must be in accordance with the supply voltage. The terminals are designed to handle a cross-section of wire measuring 12-22AWG.

3. The display frame and the cover frame can be removed. Position the thermostat and install onto the back box (not supplied). Place the display frame back into position by pushing it softly.



01



02



04



03



05

**Note:**  
According to user preference, the circular and square outer frame can be replaced.

### ● Technical specification

|                    |                             |
|--------------------|-----------------------------|
| Supply voltage:    | 85-265 VAC 50/60 Hz         |
| Load:              | max. 16 A (resistive load)  |
| Setpoint range:    | +5 to +40°C / +41 to +104°F |
| Temperature range: | +5 to +45°C / +41 to +113°F |
| Cover:             | IP21                        |
| Approvals:         | CE/UKCA                     |
| Floor sensor type: | NTC B=3740 12k              |

### ● Operation and LED

→ Keys operation:

Middle buttons: ▼▲

Adjustment up and down (± or ↕)

To scroll through settings



Left button: M

Push right button in main screen to go straight to Menu settings (2.4)

Confirming a choice

Select an option (↗)

Right button: ⏏

Push left button in main screen to go straight to Mode functions (2.3)

To get back to last screen or main screen (← or X)

Always go back to the main screen after making changes.

Explanation of LED colours / signals :

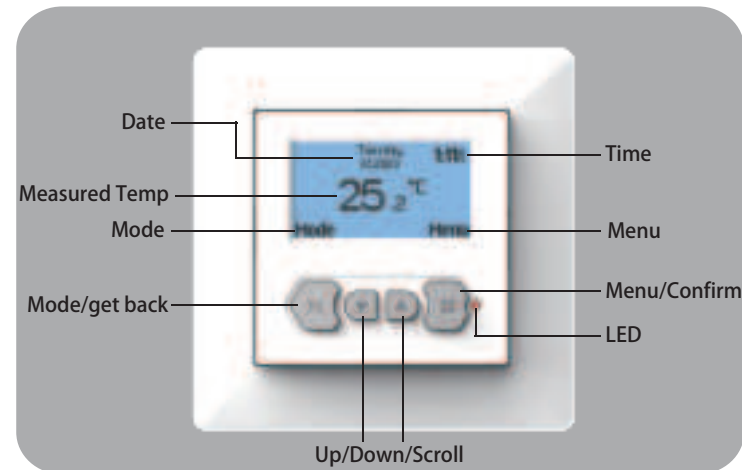
Red:

**Heating**

Green:

**System operation (standard or Costum)**

Red light flashing on and off: **Sensor fault**



### ● Start up wizard

#### 1 Language

-make your language choice. This is the first question in the start up menu.

#### 2 Units

- Clock; choose 12 or 24 hour clock time (am/pm) .  
- Temperature; choose °C or °F scale .

#### 3 Date

-year; program the current year.  
-month; program the current month.  
-day number; program the current day.

#### 4 Time

-program time; program the actual clock time

#### 5 Intelligence

-This function enables the thermostat to calculate when it needs to switch on so that the required temperature is reached at the set time.

#### 6 Heating system

-Floor heating or different heating system. If you choose a different heating system the question will be whether the system needs to function on the internal room sensor or external sensor.

#### 7 Surface material

-If you choose floor heating. Wood or other. If you choose other, the question is asked if there is a floor sensor installed

#### 8 Temp.to control

-Floor or room sensor. If you choose floor heating, we advise you to control the floor temperature by using the floor sensor.

#### 9 Summary

-Containing the current settings.

#### 10 Temperature

-Program the comfort temperature of your choice for a heating period. Standard temperature for a "different heating system is programmed at 21 degree Celsius and 23 degree Celcius for a floor heating system.

#### 11 Overview wizard

-Containing the selected heating periods according the standard program.

#### 12 Slow heating

-It is possible to choose this option (Ref Mode selection point 7 slow start up).

### ● Mode selection

#### 1. Automatic mode:

According to the weekly program, the thermostat automatically adjusts the set temperature operation.

## 2.Temporary temperature:

To temporarily override the temperature in the automatic program. The override will operate until the next automatic event.

## 3.Manual mode:

The thermostat runs continuously according to the set temperature.

## 4.OFF:

Manually turn off all functions of the thermostat. When you want to reactivate the thermostat, just select the mode you want.

## 5.Anti-frost mode:

Range is set from 41°F to 59°F(5°C -15°C) in this mode. This mode is used when you want to keep your room at a lower temperature when you are on vacation.

## 6.Timer:

Use this mode when you are on holidays etc.The thermostat will be off for the chosen period. After this period, the thermostat will return to the standard or the custom time settings.

## 7.Slow heating:

To be used for new floors only. The thermostat will slowly raise the temperature of the floor over a 20 day period. After this period the thermostat automatically starts the standard or the custom time programme. If you need to stop or restart the slow start up mode, press the left button.



## Menu selection

### 1.Temperature settings:

You can change the programmed temperature (comfort or set back ).  
**Attention: In the case of floor heating, it is not necessary to program the setback temperature.The setback temperature is controlled by the thermostat automatically.**

### 2.Programming:

The comfort temperature and times can be changed in this menu.  
**Standard program:**

|          | Monday–Sunday |      |
|----------|---------------|------|
| Period 1 | 06:00-09:00   | 23°C |
| Period 2 | 17:00-22:00   | 23°C |

**Custom week program:** Push the button to confirm the function ‘program’. You enter the screen with the standard settings schedule.  
Press ▼ button,'standard' appears on the display.  
Press ⌘ button,'standard' is selected.  
Press ▼ button select 'custom'. confirm this with ⌘ button.  
Press ▲ / ▼ button return to the screen of programmed times.  
Now you can confirm the symbol ↗ by pushing the right button.  
You can adjust one or two periods a day. If you want to program the same time periods on different days, use the easy copy and paste function.

### 3.Consumption:

The thermostat calculates the average time it has been switched on allowing you to monitor your energy consumption. The total switched on time is by percentage (%) shown over the last 30 and 365 days.  
**Calculate consumption:**  
30 days: 24 hours x 30 days x total installed power x % = energy consumption  
365 days: 24 hours x 365 days x total installed power x % = energy consumption  
Example:  
The thermostat gives a percentage of 26% over 30days.  
The power installed in the floor is 700 Watt.  
24 hours x 30 days = 720 hours.  
720 hours x 0.7 kW = 504 kWh  
26% of 504 kWh = 131 kWh.

### 4.Child lock:

The thermostat is locked with this function.Mode and menu settings cannot be used.To switch the child lock function on or off, push the right key and hold it for a few seconds. When the child lock is switched on, a padlock appears on the display.

### 5.Information:

Gives information about the current software and hardware version of the thermostat.

## 6.Settings:

With this function you can change settings related with the operating of the thermostat.The following options can be changed:

- **Date and time:** Thermostat will change summer and winter clock change automatically.
- **Language:** English.
- **Contrast:** Display contrast: 0-20.
- **Brightness:** Display brightness: 0-10.
- **Back light delay:** Can be adjusted from 0 till 250 seconds. (0 =always on)
- **LED info:** When it is switched on, it indicates the current heating period..
- **Temp unit:**Choose Celsius or Fahrenheit.

## 7.Advanced functions:

The thermostat provides advanced settings to suit a range of special situations which are normally set by a technician during initial installation.

- **Heating system.**
  1. Type of heating system (floor heating or other heating)
  2. Surface material: wood or other
  3. Temp.to control: floor or room

These settings can also be changed using the start up wizard.

- **Calibration.**

A correction can be made here on the temperature in the display and the measured room temperature. Consult your supplier before changing calibration setting.Setpoint range: ±5°C.

- **Intelligence.**

Switch the intelligent function on or off.  
The thermostat has a self thinking and adaptive system. This function enables the thermostat to calculate when it needs to switch on so that the required temperature is reached at the set time. (i.e. if the set time is 08:00, the thermostat will switch on earlier so that the set temperature is reached at 08:00).

- **Difference.**

Example: Set the value to 1°C.  
The difference between switch on and off period during heating time.  
The thermostat starts when the room temperature is 1°C lower than set temperature and stops when the room temperature is 1°C higher than the set temperature.

- **Pilot wire.**

Can be used to operate the thermostat through an external source.This can be a central source or a smart home system. This function can be turned on or off.

- **Sensor type.**

Gives the possibility to adjust the sensor value. This is not required in a standard situation.  
Consult your supplier before changing sensor type.

- **Open window.**

This function only works when room sensor or both sensors is selected. The thermostat with this function will shut off automatically for 15 min when the window opens, as it can detect that the room temp plummets.

- **Factory defaults.**

All parameters are restored to default value.You need to right-click and hold down for 5 seconds to perform this operation



## Explanation of text / Symbols

|  |                                                      |
|--|------------------------------------------------------|
|  | Comfort period                                       |
|  | Limited floor temperature achieved (28 °C)           |
|  | Child lock activated                                 |
|  | Electrical use for heating                           |
|  | Set back: standard set back temperature (pilot wire) |
|  | Set back: anti frost + 7 degree Celsius( pilot wire) |

**Set back mode:**  
The setback mode is when the thermostat ‘sets back’ to a lower temperature during the off time periods. This is the most economical and efficient way to achieve the best energy consumption.

**Floor temperature limiter:**  
Some floor coverings must be limited at a certain maximum temperature (for example wooden floors). When the option ‘Wooden’ is selected (in the start up wizard), the floor will not exceed 28°C.