



MRC² WiFi

Smart WiFi thermostat for electric underfloor heating

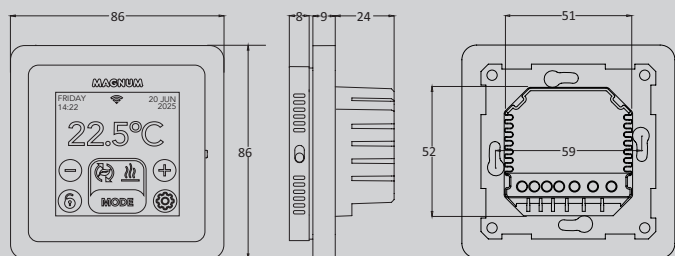


1. Introduction

Study this manual carefully and keep it with the guarantee papers. Connection should be carried out by a recognised installer in accordance with local regulations. Before mounting or dismantling the thermostat and display, always switch off the electricity in the meter cupboard. This thermostat can be mounted in a single flush-mounting box 50 mm deep, according to standard DIN formats.

2. Technical data

Voltage	230V - 50/60 Hz
Max. Load	max. 16 Amp. / 230V
Temp. range	+5/+40°C
Cover	IP21
Colour	Polar white (RAL 9010) or Graphite black (RAL 9011)
Sensor	incl. floor sensor and built-in air sensor
Warranty	2-year manufacturer's warranty
Approvals	CE
Manufacturer	MAGNUM Heating Group B.V. Netherlands

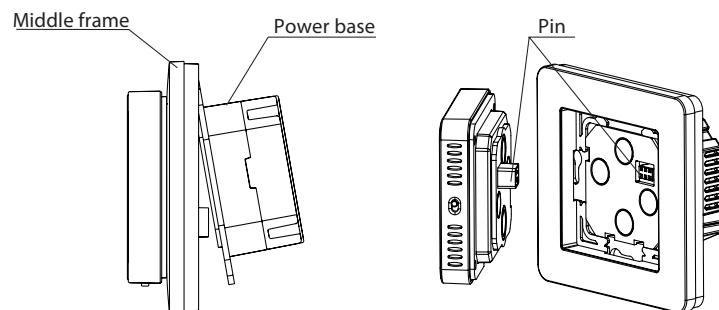


3. Assembly/Dismantling

WARNING: Always interrupt the power connection before installation or dismantling.

Dismantling: holding the cover frame with one hand, pull the connection unit out slightly with the other hand.

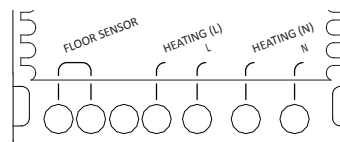
Installation: Align the pin connector, press gently. The display housing is magnetically attached to the connection unit.



4. Connection instructions



This product must be protected with a 16A circuit breaker in the meter cupboard!



FLOOR SENSOR *	Floor sensor connection
HEATING L *	Connection wire heating cable
L	Power supply (Phase)
HEATING N *	Connection wire heating cable
N	Power supply (Neutral)
	* Order does not matter.

EARTH: Connect the earth of the heating cable and the earth of the power supply outside the thermostat using the terminal block provided.

Bring the thermostat into place, mount it on the flush-mounting box with 2 screws. Fit the cover frame and attach the display.

5. Start-up menu

Make sure the on/off switch on the right side of the thermostat is in the correct position. After connecting to the mains, the start-up menu appears to guide you through the basic settings.

Points of interest:

- **Floor finish:** With "WOOD", the floor temperature is limited to 28°C.
- **Type of floor sensor:** Select 12K (supplied as standard)
- **Setting up WiFi:** see point 8

6. Operation of the thermostat



The menu structure is as follows:

Mode selection:

- MODE
 - Auto mode
 - Eco mode
 - Manual mode
 - Holiday mode
 - Frost protection mode
 - Slow start

Key lock:

- 6 Long press to lock or unlock.

Settings:

- Settings
 - Program (section 6.4)
 - Date and time
 - Language
 - Comfort temperature
 - Consumption (section 6.3)
 - Setting up WiFi (item 8)
 - Screen settings
 - Colour theme
 - Brightness
 - Screen saver
 - Night screen
 - Presence sensor (7)
 - Information
 - Manual

6.1 Advanced settings

CAUTION: Settings in this menu should only be changed in consultation with the supplier to avoid unwanted results.



(Long press)

- Heating system
- Temp. unit
- Temp. step
- Calibration
- Intelligence
- Deviation
- Lowering temperature
- Open window function
- Factory reset

6.2 Explanation of modes and symbols



Auto mode

The thermostat follows the set programme. See section 6.4 for setting the programme.



Eco mode

Operates based on Auto mode and switches on presence sensor. If no human activity is detected, the thermostat will actively switch off the heating to achieve maximum energy savings. If human activity is detected, the thermostat will switch back on.



Manual mode

Thermostat is operated manually.



Holiday mode

Thermostat is in reduction mode and follows the programme again after the number of days displayed.



Frost protection mode

Thermostat keeps temperature at minus 7 degrees.



Slow start mode (for newly installed floors)

The temperature rises gradually for 20 days to prevent cracks in the floor. If this function is activated in the start-up menu, the key lock remains active for 20 days. The display shows the number of days remaining. After 20 days, the key lock is lifted and the thermostat can be connected to WiFi. **WARNING: Do not interrupt this mode!**



Auto mode is manually interrupted

Follows the set programme again at the next switching moment.



Eco mode is manually interrupted

Follows the set programme again at the next switching moment.



Heating

System is heating up.



Open window detection

Sudden temperature drop detected. Temporarily switches off the thermostat to prevent unnecessary heating.



Days remaining

For Slow start mode and Vacation mode

6.3 Consumption

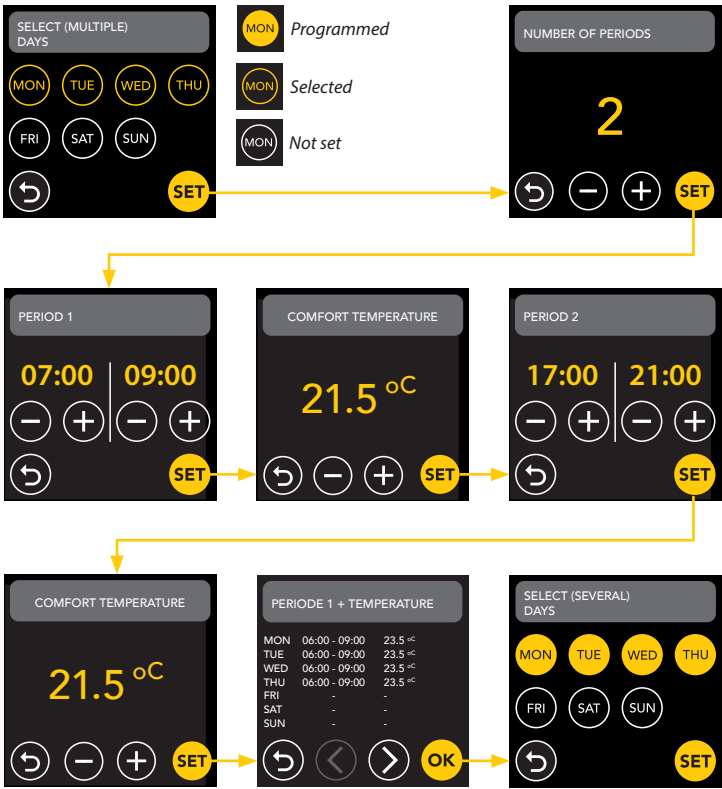
The average consumption of the underfloor heating can be read as a percentage. The thermostat must be on for at least 1 month. To calculate the average consumption per day, you can use the following calculation: % x installed power x 24.

Example:

Installed power is 300 watts and consumption is 20%:
 $20\% \times 300 \text{ watts} = 60 \text{ watts average consumption per hour.}$
 $60\text{W} \times 24 \text{ hours} = 1,440 \text{ Watts average consumption per day.}$

6.4 Program

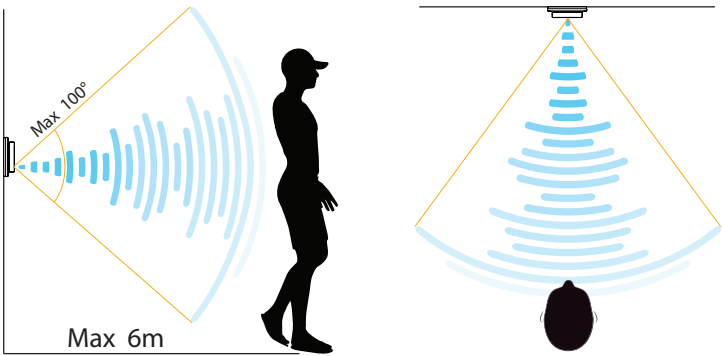
- > Select "PROGRAM"
- > Overview current schedule "OK"
- > Override current schedule "OK"



Repeat this process for the remaining days. After entry and confirmation, the thermostat will follow this programme in Auto mode or Eco mode.

7. Presence sensor

The presence sensor detects the presence of people and can help assess whether the underfloor heating should be heated, reducing unnecessary heating. In ECO mode, the sensor is on by default and helps regulate the indoor temperature.



ATTENTION:
Due to the limited detection range of the presence sensor, install the thermostat in a position that allows it to register the presence of people. As distance and angle increase, the radar signal will weaken, affecting accuracy.

7.1 Sensor settings

- NOBODY DETECTED**
When no one is detected, the thermostat will switch off the heating with the specified delay. Default value is 3 min.
- SOMEONE DETECTED**
To avoid wasting energy by staying short if someone is detected, it is necessary to delay the heating for a certain time. The default value is 15 seconds.
- DETECTION ZONE AREA**
Set the detection range of the sensor according to the size of the room to reduce the chance of accidental activation. The default value is 4-6m.

8. Connecting to WIFI (2.4Ghz)

If you also want to control the thermostat via your smartphone, you need to connect it to your home network. For this, you need to download the app. After this, the thermostat can also be accessed via your mobile network.



Scan the QR code with your smartphone or search for MAGNUM MRC in the Apple App Store or Google Play Store. Download the app and then create an account.

8.1 Standard method

- STEP 1:(Thermostat)**
> SET WIFI > DEFAULT MODE.
The WiFi symbol flashes rapidly.
- STEP 2: (Smartphone)**
 - Open the app
 - Select "Add device"
 - Select the thermostat from the menu
 - Press "connect".
 - Choose the right WiFi network (2.4 Ghz WiFi networks only!)
 - Enter and confirm password

The thermostat will now connect to the WiFi network. This takes a maximum of 1 minute.

8.2 Alternative method (Access Point)

- If the above method does not work, Access Point is an alternative way (2.4 Ghz WiFi networks only!):
- STEP 1: (Smartphone)**
Turn on Bluetooth.
- STEP 2: (Thermostat)**
> SET UP WIFI > AP MODE.
The thermostat now creates a hotspot.
- STEP 3: (Smartphone)**
Now connect to this hotspot via your smartphone or tablet's Wi-Fi settings. The thermostat will then connect to your home network itself.

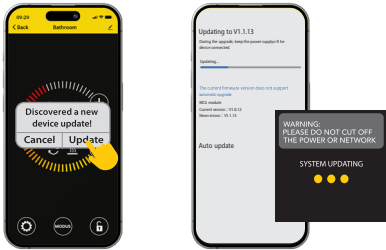
9. Voice assistants

- 9.1 Google Assistant & Amazon Alexa**
Through a Google or Amazon-supported speaker, you can raise or lower the temperature of your thermostat or ask what the current temperature is. This can be done for any thermostat added in the App. Connecting to Google Assistant or Amazon Alexa is explained in the App. In the App, go to your "Profile", choose "More Services" in the menu and follow the steps.
You will also be asked to install a service skill:
Google skill: MAGNUM thermostat
Amazon skill: MAGNUM MRC
- 9.2 Siri Shortcuts**
This thermostat can also be automated with Siri Shortcuts (commands). For example, you can use your location or a self-selected voice command to indicate that the thermostat should be set to a certain temperature, to activate frost-free mode if the outside temperature is low (local) or to activate holiday mode if you are away from home for a few days.

1. Select "Scene" in the main menu of the MAGNUM Heat App.
2. Press the + in the top right corner to add a command.
3. Choose a "condition" and follow the further steps.

10. Software updates

This product supports OTA (over-the-air) software updates remotely. The thermostat must be connected to a stable WiFi network.
Critical software updates automatically appear in the app when they are available.



Non-important software updates are not displayed. To check whether a new software update is available: Click on the pencil icon in the upper-right corner of the app and scroll down to "Device update".



- FOCAL POINTS:**
- Ensure a network connection during the software update. If the network is interrupted, the update may fail.
 - After a major update is cancelled manually, APP controls will not be available.
 - During the update process, the thermostat is not available.
 - The whole process can take up to 10 minutes.
 - After the update, some parameters originally set by the user may be reset.

EU DECLARATION OF CONFORMITY
MAGNUM Heating Group B.V. hereby declares that the radio equipment type MRC complies with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address:
<https://www.magnumheatinggroup.com/privacy-statement>