MD2 Wifi enabled wired thermostat

The Herschel iQ MD2 is a 16 amp thermostat enabling up to 3.6 kW of Herschel Heaters to be connected through a single, easy to use control. MD2 is wired directly to the mains circuit powering the heaters. Built-in wifi enables control via the internet using the SmartLife App.

MD2 is easy to operate and incorporates Herschel's open window technology to save energy. MD2 has a keypad locking feature to prevent unauthorised tampering with the settings and it can be programmed to control zones up to 45°C, making it suitable for commercial use and for specialist high temperature applications such as hot yoga studios.

MD2 features Manual, Eco and 7 day programming modes with 4 periods per day. The MD2 will operate your Herschel heater(s) by turning them ON if the room temperature is lower than the desired temperature and will turn them OFF once the desired temperature is reached or exceeded.

Please read these instructions carefully. MD2 operates stand-alone, but can be paired to the SmartLife App if internet operation is required.

Key features

• Mains operated

• Easy to use large LCD display

• Wall installation

• 7 x 1 day programmable, 4 periods per day

• Manual, Eco and 7 Day Programme modes

• Open window function

• 5°C - 45°C / 41°F - 113°F operation

• Keypad Lock

• Wireless 2.4GHz wifi

• CE, Rohs, RED approved

• 24 month warranty

The MD2 will require a single gang 46mm deep pattress box for recessing into a wall, with access to the mains circuit powering the heaters. Position far enough away from the Herschel infrared heaters to allow it to sense an average room temperature.

Technical Information:

Frequency	Wifi 2.4 Ghz
Power Supply	110 - 230VAC, 50/60Hz
Set Point Range	5~45℃
Ambient	0~50℃
Relative Humidity	85%
Backlight	White
Sensor	NTC 10K 3950ohms at 25℃
Accuracy	± 0.5℃ (step control by +0.5℃)
Protection Class	IP30
Housing	ABS to UL94-5 fire retardant plastic

Certifications:

UK CA   CE   RoHS COMPLIANT   EMC RED   LOT20 COMPLIANT

EN60950 Information Equipment Safety

EMC ETSI EN301 489

Radio ETSI EN300220

EMC EN61000-6-3: 2007 + A1: 2011 EMC EN61000-3-2:2014

EMC EN61000-3-3: 2013

EMC EN61000-6-1:2007

ISO 9001: 2008 Compliant Manufacture   EN60730-2-9:2010 with EN60730-1:2011

(Safety of Automatic Electrical Controls)

RoHS 2011/65/EC

REACH 1907/2006/EC

Compliance

Hereby, Herschel Infrared Ltd declares that the radio equipment type MD2 Wireless Thermostat is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address:

https://www.herschel-infrared-technology-center.com/compliance/

Safety

Use in accordance with the EU and national regulations. For indoor use only. Keep your device completely dry. This product must be installed by a competent person and in accordance with all the EU and national regulations.

⚠ Always isolate the AC mains supply before installing or working on any components that require 230V AC 50 Hz mains.

This appliance is rated IP30 and must be installed outside of the splash zones in bathrooms.
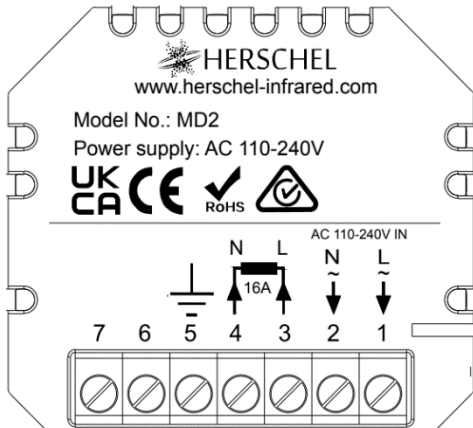
Dimensions (mm)
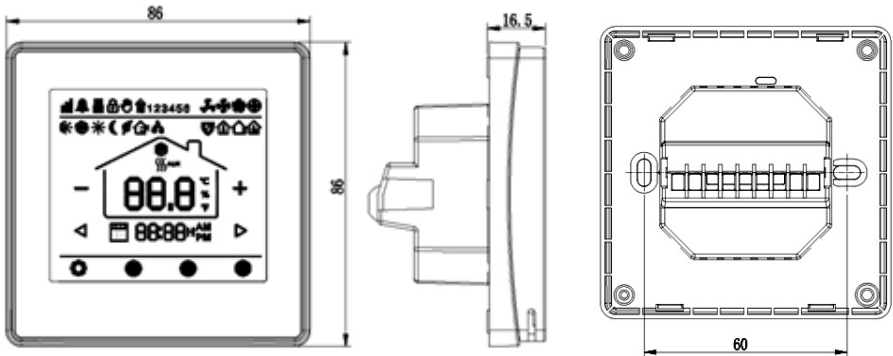
The MD2 is 86mm x 86mm and the front display is 16.5mm thick. A single gang pattress box 46mm deep is required for mounting, and mounting holes are 60mm apart.

Wiring

Wiring the MD2 should be carried out by a qualified electrician. Ensure power supply to the MD2 is turned OFF

before wiring or unwiring the MD2. Maximum load is 16A / 3.6kw at 230v.

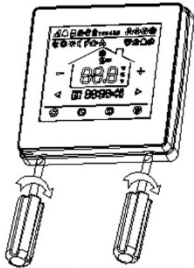The MD2 can be used to control several Herschel heaters but the maximum wattage of 3.6kw (3,680w) must not be exceeded. Do not use for any other non-Herschel heating devices. INDOOR USE ONLY.

Wire mains Live to terminal 1, Neutral to terminal 2 and Earth to terminal 5. Wire the load to heater: Live to terminal 3,   Neutral to terminal 4 and earth to terminal 5.

Installation

Open the thermostat
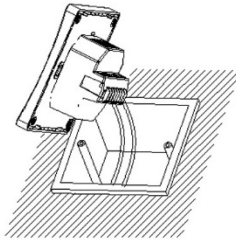
Connect the cables
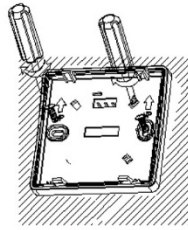
Attach rear case to patress box using screws provided

Re-attach front panel

Displays & Buttons

Manual mode

Child lock

Wifi Status

Eco mode

Current period

Internal sensor operating

Temp. setting down button

Temp. setting up button

Time setting down button

Time setting up button

Weekday

Clock

Setting button

On/Off button

Clock setting button

Mode adjust button
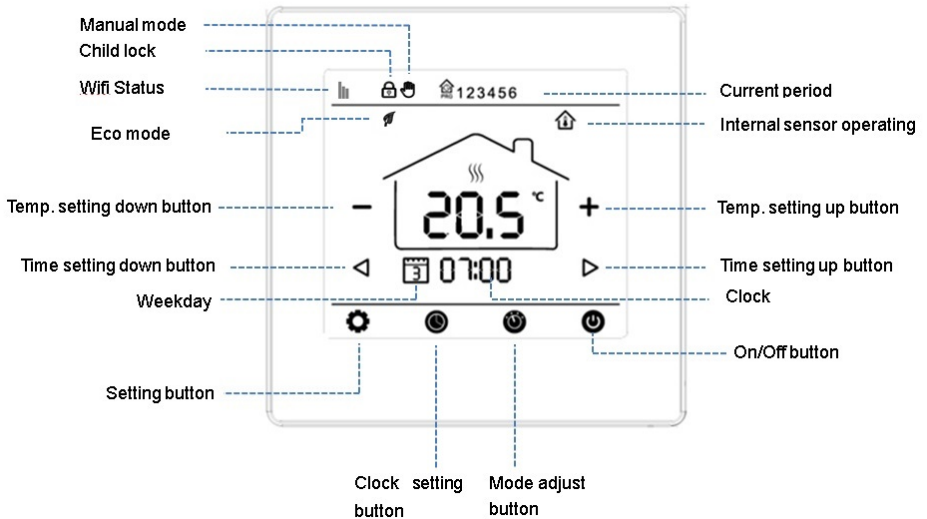
Operation using the SmartLife App

The MD2 can be used stand-alone or with the SmartLife App. Since SmartLife makes management of your MD2 so easy, we start with this first. But if you only want to use MD2 stand-alone, please go direct to the "Stand-alone Operation" section below.

Downloading & Installing the SmartLife App

After installing and opening the SmartLife App, you must register an account using an email address and password and accept the terms of use.

To add your MD2 controller

Your mobile phone or tablet must be connected to the main 2.4GHz wifi signal issued by your router. Being connected to a 5GHz signal or a network extender will cause the pairing process to fail.

- In the Smartlife App home page, add a device by pressing the + button in the top right corner.

- Select "Small Home Appliances"

- Select "Thermostats" on the list.

- Turn the MD2 on. Long press the power button   ⏻   to enter wifi connection mode.

- Long press the   ⚙   icon for 25 – 30 seconds and the wifi status symbol will begin to flash.

- In the SmartLife app, confirm the prompt: "confirm the indicator is rapidly blinking".

- Pairing is complete when the Thermostat appears in the Smartlife App and the Wifi Status symbol on the MD2 is no longer blinking (shows a solid connection). Please note it may take up to a minute for the Controller to stop flashing after it appears to have paired successfully in the Smartflife App.

- Tap the Thermostat in the app to start managing it.
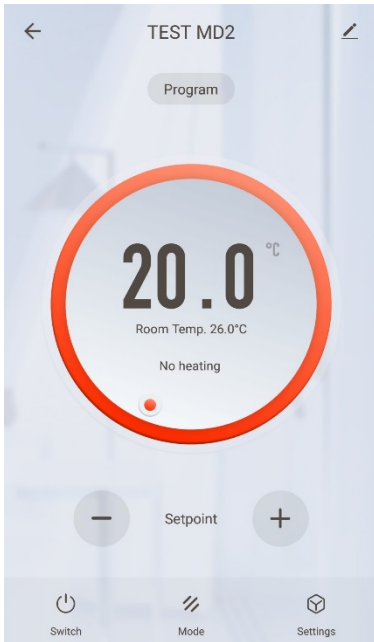
Give your thermostat a meaningful name by clicking on the pencil icon to the right of the title. This is especially important if you are adding several thermostats as it is easy to lose track of which controller is which without a meaningful name.

From the main screen of the Smartlife app, you can access management features of the MD2:

- Switch (turns On or OFF the MD2 and the heater)

- Setpoint + and - buttons override current temperature setpoint.

- Mode - Selection of Manual, Eco and Program Modes.

- Settings. These include the keypad (Child) lock & the weekly program schedule. The app shows a countdown timer available, but this is a generic provision of the app and is not a function of the MD2. It only turns the MD2 on or off.

Stand-alone Operation using MD2 keypad

Time and Day setting

- Turn MD2 on.

- Press ⏰ for 3 seconds until the minutes display flashes. Press ◁ or ▷ to change the value (each press = 1 minute).

- Press the ⏰ button again to change the hour display. Press ◁ or ▷ to change the value (each press = 1 hour). This is a 24 hour clock.

- Press the ⏰ button again to change the day. Press ◁ or ▷ to select the day (1-7 for Monday – Sunday so e.g. Friday is 5).

Mode selection & settings

The MD2 has 3 temperature modes: Manual (Constant); Eco and Program modes.

- Press ⏱ to select mode.

The Eco mode is displayed as a 🍃 symbol (top left of display). Eco Mode is a lower-than-normal temperature setting that you can apply to save energy (e.g. on holiday) or as a frost-protection setting. This setting can also be manually overridden.

Program mode is displayed as 🏠1 (the number denotes which period of the day is active). Any manual override in program mode remains in effect only until the next period.

Manual Mode is displayed as a ✋ symbol (top left of display). Manual mode allows you to set whatever temperature you require and this will be maintained until you change it or until another mode is selected.

To Set Eco Mode Temperature:

In Eco mode, press ➖ and to ➕ set the desired setpoint temperature. The temperature will flash while it is saved and then return to a steady display of current room temperature.

To select a mode at any time, press the ⏱ button and choose your required mode. The selection will override the program schedule or current temperature setpoint until another mode is selected.

Program Mode

The MD2 has a 7 x 1 day timer (Monday to Sunday) with 4 periods per day.   For example, you could choose Period 1 to be the temperature you wake-up to; Period 2 the daytime set-back temperature; Period 3 the late afternoon / early evening temperature and Period 4 the nighttime setback temperature.

Unlike conventional heating, Herschel Far infrared directly heats the room (the "Thermal Mass"). For areas in frequent use it is more economical to avoid temperatures dropping too low as the heater will need to be on for a much longer period to restore temperatures.   We recommend overnight setback temperatures of no lower than 14°C and daytime temperatures of 16°C and above. Always try to program the schedule so a room is at the temperature you want by the time you want. For example if you want it to be 21°C by 0700 am, consider starting the program at 0600 a.m.

To set the 7 days program

- Press ⏻ for 3 seconds to start the 7 x 1 day program setting. The First period of the First day is selected.

- Press ◁ or ▷ to set the time of the first period of the day's program.

- Press ✚ and ━ to select the desired temperature setpoint.

- Press ⏻ again to proceed to the next period.

- Repeat the above procedure for each period of each day.

The default settings you will receive with your MD2 are as follows:

	All Days
Period 1	0630 21℃
Period 2	0800 18℃
Period 3	18:00 21℃
Period 4	22:30 16℃

To select Program Mode press ⏻ until 🏠 is displayed as the mode.

The schedule will then operate until another mode is selected.

Temperature can always be overridden manually by pressing the ✚ and ━ buttons. The temperature will remain at this setting until the next programmed change occurs.

For example, using the above table, if it was 18:00 on a Monday, the thermostat would be set to 21°C. If you wished to increase the temperature to 22°C, press ✚ to increase temperature to 22°C. The thermostat would then retain this setting until 22:30 when the period 4 schedule would reduce the set temperature to 16°C.

Keypad Lock

The Keypad Lock function can be selected On or Off in the parameter settings (see Parameter Settings below). It is Off by default. Keypad lock is indicated by a Padlock at the top left of the display.

You can press ⚙ for 5 seconds to unlock the keypad for a temporary adjustment. The keypad will lock again once the backlight on the display switches off.

Window Open Detect

When temperatures are above 14°C if the system detects a drop of 2°C in a 15 minute period, the heating will automatically be stopped (if it is on). The letters **OP** will display instead of the temperature display.   The MD2 will return to the previous mode of operation after 60 minutes and the current room temperature will replace the letters **OP** once again. Pressing any button during the 60 minute period will exit the Open Window function and resume previous operations.

Window Open is set OFF by default when you receive the MD2. In Parameter Settings, you can enable the Window Open Detect function; change the   temperature drop detected; change the period within which the drop is detected and change the period the heater remains off. See Parameter Settings.

Parameter Settings

With the MD2 turned Off, press the location of the ⚙ button for 5 seconds to enter the parameter setting.

Each press of the ⏱ button will select the next available parameter. Pressing ✚ ━ and will change the individual parameter. ⏻ Press to save and exit.

Item	Description	Range	Default Value
01	Temp. calibration	-8°C - 8°C	0°C
02	Max Temp setpoint	5°C - 45°C	35°C
03	Min Temp setpoint	5°C - 45°C	5°C
04	Sensor select	0 Room only 1 External only 2 Room + External	0 (Room only)
05	Frost Protection Temp.	5°C - 15°C	5°C
06	Temp Calibration for external sensor	-8°C - 8°C	0°C
07	Temp detection by external sensor	Read Only	
08	Overheat protection setting	20°C - 80°C	32°C
09	Dead Zone	0 - 3°C	0°C
11	Keypad Lock	1: Lock 0: Unlock	0 (Unlock)
12	Open Window Detect	1: ON 0: OFF	0 (OFF)
13	OW Detect Time	2 – 30 mins	15 mins
14	OW drop temp	2, 3 or 4°C	2°C

15	OW Stop Time	10 – 60 mins	30 mins
17	Factory Reset	0: No 1: Yes (To reset, select 1, then turn the unit off and on again)	0
31	Temperature Unit	0: °C 1: °F	0