

# MD1 WIRED THERMOSTAT

The Herschel iQ MD1 is a 16 amp thermostat enabling up to 3.6 kW of Herschel Heaters to be connected through a single, easy to use control. MD1 is wired directly to the mains circuit powering the heaters. When used in conjunction with the iQ HUB, MD1 can also be controlled via the internet using the Herschel iQ app.

MD1 is easy to operate and incorporates Herschel's open window technology to save energy. MD1 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.

MD1 features 2 manual modes and 7 x 1 day programming with up to 6 programmes per day. The MD1 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. MD1 operates stand-alone, but must be paired to the iQ HUB if internet operation is required.

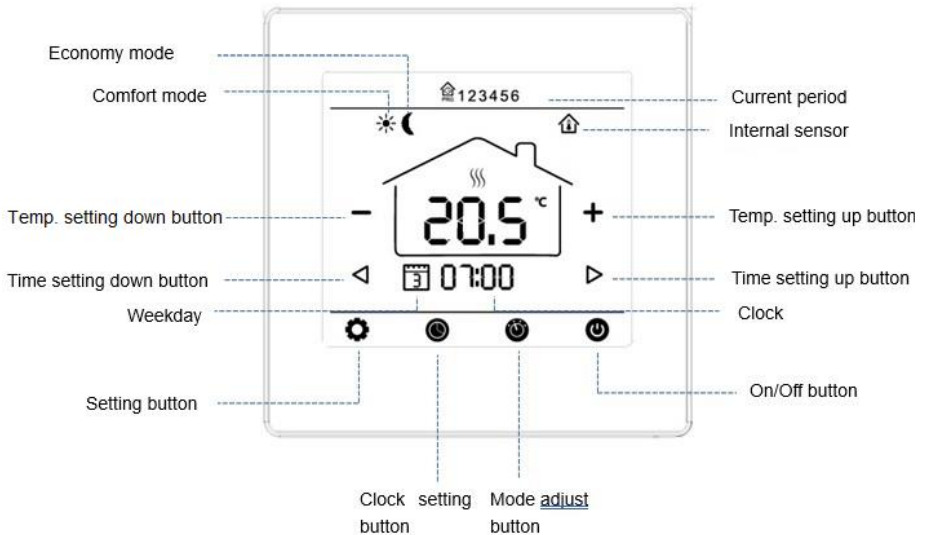


## Key features

- Mains operated
- Easy to use large LCD display
- Wall installation
- 7 x 1 day programmable, 6 periods per day
- 2 modes including Comfort and Economy
- Open window function
- 5°C - 45°C operation
- Keypad Lock
- Wireless 433Mhz
- CE, Rohs, RED approved
- 12 month warranty




The MD1 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.

## Displays & Buttons













## Operating Instructions

To pair with the Herschel iQ Internet Hub (if purchased):

- Place hub into "waiting for pairing" (see iQ Hub instructions)
- Turn Off the MD1 controller by pressing 
- Refer to the location of Mode Adjust and Setting buttons & in the diagram above for the next steps.
- Long press the Mode Adjust button  until a 4 digit code appears on the screen.
- Then press the Setting button . The code will flash. Pairing is complete when the code stops flashing.

## Time and Day setting


1. Turn MD1 on.
2. Press  for 3 seconds until the minutes display flashes. Press  or  to change the value (each press = 1 minute).
3. 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.
4. 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).


5. Press  to exit back to the main screen.


## Mode temperature settings

The MD1 has 2 temperature modes. Use these modes if the 7 day schedule is not required, or to override the schedule – for example select “Comfort” if you are at home all day, or “Energy Saving” to economise on heat.



1. Press  to select mode.


The Comfort mode is displayed as a  symbol (top left of display).

The energy-saving mode is displayed as a  symbol (top left of display).

The Program mode is displayed as  1 (the number denotes which period of the day is active).

### To Set Mode Temperature:






In Comfort or Economy modes press  and  to set the desired mode 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 MD1 has a 7 x 1 day timer (Monday to Sunday) with 6 periods per day. For example, you could choose Period 1 to be the temperature you wake-up to; Period 2 the morning set-back temperature; Period 3 the lunch-time temperature; Period 4 the afternoon setback temperature; Period 5 the evening temperature and Period 6 the overnight 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


MD1 are as follows:

	<u>All Days</u>
Period 1	0600 20°C
Period 2	0900 16°C
Period 3	12:00 16°C
Period 4	14:00 16°C
Period 5	16:00 20°C
Period 6	23:00 16°C

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 Up and Down buttons. The temperature will remain at this setting until the next programmed change occurs.

For example, using the above table, if it was 16:00 on a Monday, the thermostat would be set to 20°C. If you wished to increase the temperature to 21°C, press  to increase temperature to 21°C. The thermostat would then retain this setting until 23:00 when the period 6 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 MD1 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.





In Parameter Settings, you can disable 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.

## Failsafe Mode

If the MD1 is paired to the iQ Hub and fails to receive any commands for more than 30 minutes, the MD1 will stay on its current settings. This feature ensures that the heater can still operate in case of loss of signal from the iQ Hub.

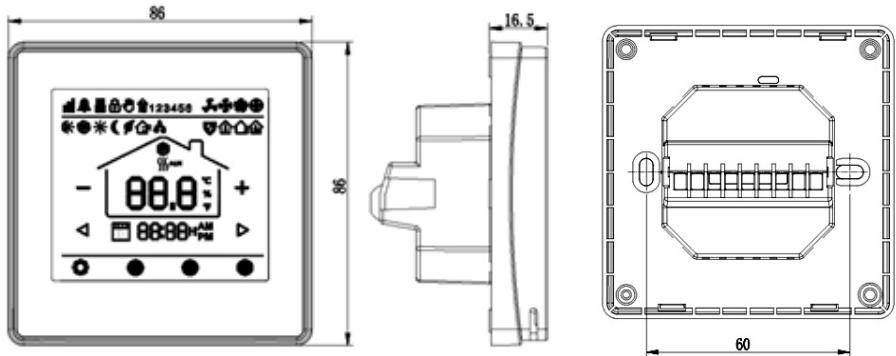
## Parameter Settings

With the MD1 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.

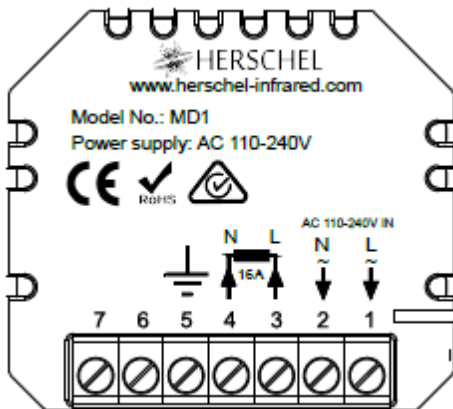
Item	Description	Range	Default Value
01	Temp. calibration	-8°C - 8°C	0°C
02	Max Temp setpoint	5°C - 45°C	35°C
03	Min Temp setpoint	5°C - 45°C	5°C
04	Sensor select	0 Room only 1 External only 2 Room + External	0 (Room only)
05	Frost Protection Temp.	5°C - 15°C	5°C
06	Temp Calibration for external sensor	-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

## Dimensions (mm)



The MD1 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

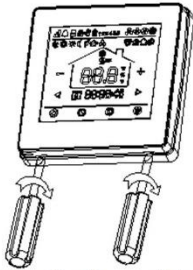


Wiring the MD1 should be carried out by a qualified electrician. Ensure power supply to the MD1 is turned OFF before wiring or unwiring the MD1. Maximum load is 16A / 3.6kw at 230v.

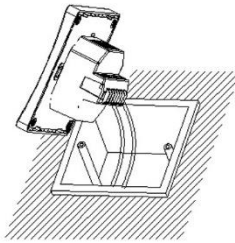
The MD1 can be used to control several Herschel heaters but the maximum wattage of 3.6kw (3,680w) must not be exceeded. Do not use for any other non-Herschel heating devices. INDOOR USE ONLY.

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

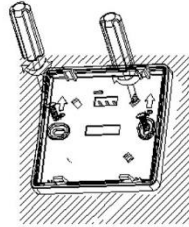
## Installation



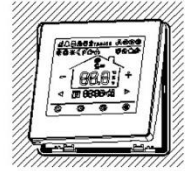
Open the thermostat



Connect the cables



Attach rear case to patch box using screws provided



Re-attach front panel

## Technical Information:

Frequency	433 MHz
Power Supply	110 - 230VAC, 50/60Hz
Set Point Range	5~45°C
Ambient	0~50°C
Relative Humidity	85%
Backlight	White
Sensor	NTC 10K, 3950ohms at 25°C
Accuracy	± 0.5°C (step control by +0.5°C)
Protection Class	IP30
Housing	ABS to UL94-5 fire retardant plastic

## Certifications:



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