Thermotouch 4.3dC

Dual Control Thermostat

Installation & User Guide

Thermogroup

That little bit extra…

thermotouch

INTELLIGENT HEATING CONTROLS

Contents

Compatibility

Thermotouch 4.3dC is compatible with almost all electric Underfloor Heating (UFH) systems available.

Thermotouch can replace your existing Underfloor Heating thermostat and is compatible with many of the most popular thermostat brands' floor sensor probes including those rated at:

- Ther $10k\Omega$ @ 25°C (Default Thermotouch Sensor)
- Tep $6.8k\Omega$ @ 25°C
- Ens $10k\Omega$ @ 25°C
- OJ $12k\Omega$ @ 25°C
- Devi $15k\Omega$ @ 25°C
- Eber $33k\Omega$ @ 25°C

Replacing an existing thermostat?
Contact the manufacturer's technical department and ask for the rating of the floor sensor at 25°C.

What's in the box?

Check you've got everything:
- Thermotouch 4.3dC thermostat
- Floor sensor probe (2m)
- Floor sensor conduit (3m)
- Fixing screws
- Installation and user guide

You will also need:
- Electrical screwdriver
- Standard electrical plate
- Electric testing meter

Before you start

Thermotouch 4.3dC should be:
- Installed at least 1.2m from the floor
- On an interior wall
- In an area outside any wet zones (IP30)
- Installed on a RCD protected circuit
- Away from drafts or heat influences
- Installed so that the floor sensor probe can be laid in a clear, temperature representative area of the floor
- Set to floor sensing mode wherever possible
- In an open area of the room
- Installed by a qualified electrician in accordance with local electrical regulations
- Installed with an inrush limiting device when using a DC transformer on the 5Amp relay

Installing Thermotouch

1. Switch off mains power

You will be installing Thermotouch as part of a high voltage mains electrical circuit. To ensure your safety and to protect the thermostat, switch off the mains power before you start the installation.

CAUTION
High Voltage Cables

Installing Thermotouch

2. Choose a location

At this stage it its likely that a RCD protected electric Underfloor Heating system has been installed and an electrical plate is already in place.

The Underfloor Heating cold tail should be pulled up through the electrical plate, and the sensor probe installed (in the conduit provided) within the wall cavity or pre chased channel in a solid wall.

The Thermostat can be mounted in a landscape or portrait position. Please note the default screen orientation is landscape so if mounting in portrait this will need to be changed in the settings once the unit has been powered up.

Installing Thermotouch

3. Maximum distances

Thermotouch can be installed up to 50m away from the Underfloor Heating system it is controlling, provided that the floor sensor is used to control the temperature.

Underfloor Heating cold tails and floor sensor probes can be extended up to 50m.

Installing Thermotouch

4. Wiring diagram

Connect Thermotouch to the Underfloor Heating (UFH) cold tail, Heated Towel Rail (or another additional appliance), power supply and floor temperature sensor.

The floor temperature sensor is not polarity sensitive. If using a DC transformer when installing a low voltage appliance to the 5A relay an inrush limiting device must be installed

9	8	7	6	5	4	3	2	1

1 — UFH Live (16A)
2 — UFH Neutral (16A)
3 — Heated Towel Rail Neutral (5A)
4 — 230V AC Supply Neutral
5 — 230V AC Supply Live
6 — Heated Towel Rail Live (5A)
7 — Common Earth (Ground)
9 8 — Sensor connections
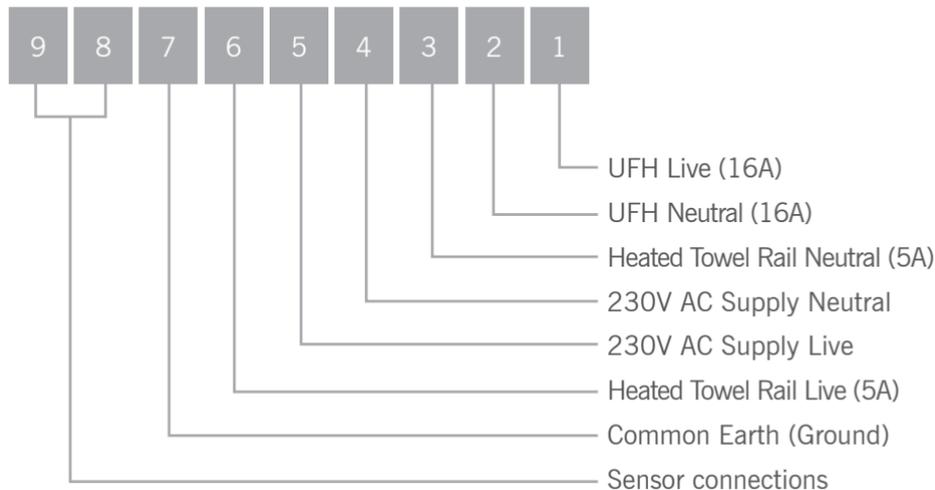
Installing Thermotouch

5. Fix to the wall

Insert a small flat screwdriver in the groove on the underside to lever the face plate away from the back plate.

Carefully disconnect the ribbon cable and align the Thermotouch with the mounting positions on the pre installed electrical plate.

Fix in place with the screws provided. Now connect the ribbon cable and clip the face plate back into position.

User interface
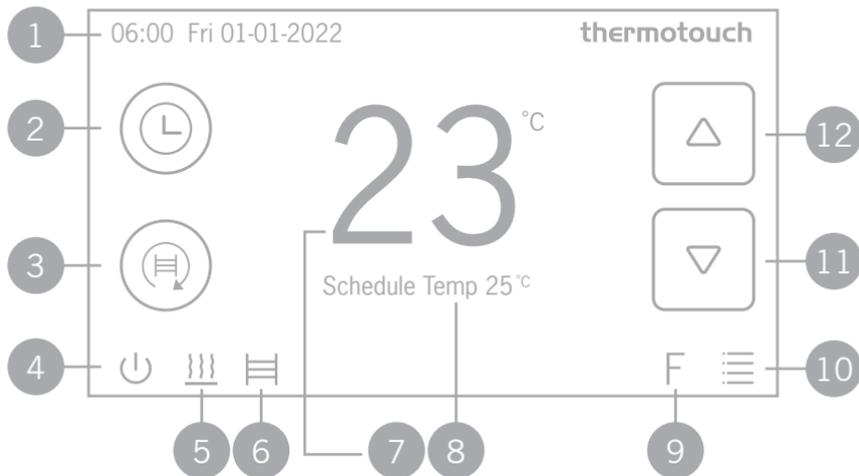
1. Time & Date
2. Underfloor Heating mode
3. Heated Towel Rail mode
4. Power button
5. UFH 'ON' icon
6. Appliance 'ON' icon

7. Measured temperature
8. Target temperature
9. Sensor mode icon
10. Menu button
11. Down arrow
12. Up arrow

Settings

Time & Date
Set the current date and time.
See page 16 for further details.

Heating schedule
Set the automatic schedule for your Underfloor
Heating and a Heated Towel Rail.
See page 17 for further details.

Display settings
Change the backlight timer as well as the
minimum brightness. Select the home screen
wallpaper from 8 different colours and set the
screen orientation to portrait or landscape.

Settings

Pre set temperatures
Pre set comfort, eco and holiday temperatures.
See page 14 & 15 for further details.

Sensor mode
Select either floor, ambient or ambient with
floor limit sensor modes. For best results it is
recommended to use either the floor sensor or
the ambient temperature.

Advanced settings
Floor and ambient temp calibration, sensor
calibration, switch rail and UFH controls on and
off, change the language, factory reset, set your
temperature limits. For further details of each of
the advanced settings see page 25.

Heating Modes

Thermotouch 4.3dC has several preset heating modes that can be adjusted in the settings menu.

Schedule
Thermotouch will adjust your Underfloor Heating according to your pre set heating schedule. You can manually override the schedule using the up and down arrows to select a different temperature. Thermotouch will maintain the boost temperature until the next scheduled heating event.

Manual
You can manually select any temperature and must make all temperature changes yourself.

Holiday
Maintains a low frost protection temperature, usually between 5 - 10°C, while you are away. Your heating system is off, but will switch on automatically if the temperature gets too cold. Please note this puts the entire controller into holiday mode which means that the towel rail will be off as well.

Heating Modes

Eco
Maintains a low temperature, usually between 15-20°C, to save money on energy bills while keeping the chill off your floor.

Comfort
Maintains a higher temperature, usually between 20-28°C, that will keep you warm on a cold day!

Both of these modes can be set to stay on forever ∞ until you change it, for a 1, 2 or 4 hour boost, or until the next heating schedule event.

Set the Time and Date

When you first switch Thermotouch on, you will need to set the current time and date.

You can do this by pressing Menu ☰ and then Date & Time 🗓.

Use the arrows to select the right date and time and then press confirm ⊘ to save.
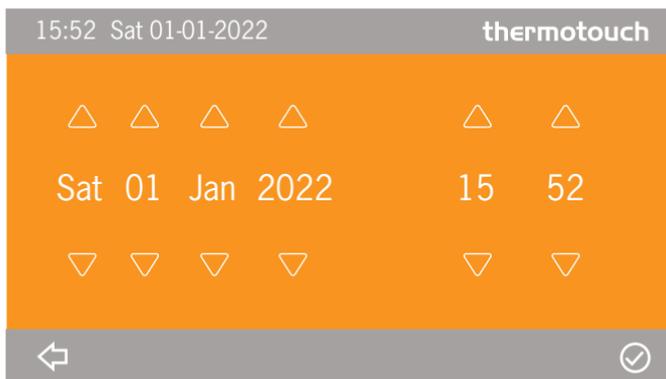
Heating Schedule

Setting up a schedule ensures energy efficiency and convenience by automatically changing the temperature of your Underfloor Heating system.

There are 6 heating events for every day. Most people treat them as 3 on/off cycles.

All 7 days are programmed independently.

If you don't want to use all the heating events you can skip events by setting it to the same temperature as the previous event. Please note you will need to still ensure that all the times are consecutive and that the times do not run over midnight.

Start setting up your underfloor heating schedule on page 18.

Heating Schedule

1. Press menu ☰

2. Press schedule ◔

3. Press UFH schedule ⟨⟨⟨

4. Press Monday

5. The first heating event for the day is already selected.

6. Set the time you want your heating to come on in the morning and the temperature you want your floor to heat up to, using the up and down arrows.

06:00 Sat 01-01-2022			thermotouch

Event 1 — ● 06:30 21.0
Event 2 — ○ 08:00 18.0
Event 3 — ○ 12:00 21.0
Event 4 — ○ 14:00 18.0
Event 5 — ○ 18:00 21.0
Event 6 — ○ 22:30 16.0

Monday

06   30   21.0 °C — Time & Temp

Back — ⟵   ⟨⟨⟨   ⊘ — Confirm

7. Use the arrows on the left hand side of the screen (next to all the event times) to select the second heating event.

8. Now use the arrows to set your 'OFF' time and the Eco temperature. This is a low temperature that means your heating is effectively off. We recommend setting the eco temperature between 15-20°C.

9. Repeat steps 6 - 8 for heating events 3 & 4. If you don't want your heating on in the middle of the day, set events 3 & 4 to the low Eco (or off) temperature.

10. Repeat steps 6 - 8 for heating events 5 & 6. If you don't want your heating on in the evening set events 5 & 6 to the low Eco (or off) temperature. Please note however all times still need to be consecutive to ensure that the program runs correctly.

11. Press confirm ⊘ to save your settings.

Heating Schedule

12. Now you need to set the heating schedule for the rest of the week. Press back ⇦ and then select Tuesday.

13. Repeat steps 5 - 11 to set the on/off times and temperatures for Tuesday. Press confirm ⊘ to save your settings.

14. Press back ⇦ , select the next day and repeat the steps to set a heating schedule for all days of the week.

    Press confirm ⊘ to save your settings and press back ⇦ to go back to the menu and home screen.

Heating Schedule

The copy function is to copy the times from the Underfloor Heating schedule across to the Heated Towel Rail schedule. This does not copy from one day to the next. Each day does need to be programmed individually.

When only using some of the on/off periods (i.e. only having the floor heating on once or twice a day) all the times need to be consecutive and the times cannot be over midnight.

Please note:
When the Thermostat is in portrait mode the heating times go down the two columns not from left to right.

Appliance Controls

You can control another appliance, such as an electric Heated Towel Rail from the home screen.

On
The appliance will stay on until you turn it off again.

Schedule
The appliance will switch on and off according to the appliance heating schedule.

Appliance Boost
Switches the appliance on for 1 hour, 2 hours or 4 hours and then reverts back to the appliance heating schedule.

Appliance Schedule

The appliance relay is completely separate to the Underfloor Heating relay which allows you to have two completely separate schedules and allowing one to be on without the other.

However, if you want the towel rail on at the same times as your Underfloor Heating. You can copy your Underfloor Heating schedule, to the appliance (such as an electric Heated Towel Rail or mirror demister) that is connected to your Thermostat. When you have finished setting your Underfloor Heating schedule press Copy, press OK and then press confirm to save your settings ⊘ .

This will copy all of the on/off times from your UFH schedule to the appliance schedule. However you will still need to set 'ON' or 'OFF' for each time.

Appliance Schedule

Alternatively, to setup an separate schedule for the appliance relay follow the below steps:

1. Press menu ≡

2. Press schedule ⏱

3. Press HTR schedule ≣

4. As per the UFH schedule, use the arrows to adjust the times of your schedule and select 'ON' and 'OFF' for each time selected. Please note all times need to be consecutive even if these periods are set to 'OFF'.

5. Repeat for each day of the week

6. Press ⊘ to save

Advanced Settings

To access the settings press Menu, then the green Settings icon.

In this menu you can set up and control all of the more advanced settings for your Thermotouch Thermostat.

Description	Range	Default
High Temp. Protection	20°C - 40°C	27°C
Low Temp. Protection	5°C - 15°C	5°C
Max. Set Temp.	5°C - 40°C	30°C
Floor Temp. Calibration	-10°C - 10°C	0°C
Ambient Temp. Calibration	-10°C - 10°C	0°C
Sensor Calibration	See page 3	Ther
Rail Control	ON, OFF	ON
UFH Control	ON, OFF	ON
Language	English, French, German	English (En)
Restore	NO, YES	NO
Adaptive Start	ON, OFF	OFF
Window Detect	ON, OFF	OFF
Detect Time	2 - 30 minutes	15 mins
Drop Temp.	2, 3, 4°C	2°C
Delay Time	10 - 60 minutes	30 mins

Energy Saving Features

Adaptive Start
With the Adaptive Start feature enabled, Thermotouch will measure how long it takes for your individual floor to heat up and ensure the target temperature is achieved at the set time.

So if you set your heating schedule to 24°C at 07:00, the floor will be at 24°C at 07:00. No need to set the heating to come on early!

Thermotouch starts learning from the first time you enable the heating schedule. It turns on an hour early to start with and gradually optimises the heat up time over 7 days.

Open Window Detector
When the Open Window Detection feature is enabled, Thermotouch can detect sudden drops in temperature and will switch off your heating to eliminate wasted energy.

Thermotouch will come back on after 30 minutes, provided the temperature has stabilised.

> **You can activate and adjust these features in the advanced settings menu. See Page 25**

Factory Reset

To do a factory reset on the unit navigate to the menu screen and select the green advanced settings box.

Use the arrows to move to page 3 of the settings.

Use the smaller arrows next to Restore to change from 'NO' to 'Yes'.

Press the tick button in the bottom right hand corner of the screen.

The unit will take a couple of seconds to switch off and reset to factory settings. Do not touch the screen while it is performing the reset. This will totally erase the heating program and any adjusted settings. Please note that the current date and time that has been set will not be erased.

Locking Keypad

Locking The Entire Keypad
To lock the entire keypad navigate to the main home screen and press and hold the time in the top left hand corner for approx. 4 seconds until a padlock symbol appears in the bottom right hand corner next to the A/F.

To unlock the keypad press and hold on the time again until the padlock symbol disappears.

Locking the Advanced Settings
Alternatively you can lock just the advanced settings. This means that you can easily still change your program but ensures that none of the advanced settings are changed accidentally.

To do this navigate to the menu screen and press and hold the green box for approx. 3 seconds until a padlock symbol appears in the top corner of the green box. This indicates that only the advanced settings are locked.

To unlock the advanced settings you will need to be on the menu screen. Then press and hold the Thermotouch logo in the top right hand corner of the screen until the padlock on the green settings box disappears.

Troubleshooting Guide

Problem	Possible Causes	Things to Try
Very high temperature reading	Software issue	Factory reset (see page 27)
	Incompatible sensor	Use a multimeter set to 20KΩ to test the resistance of the sensor probe. If the probe does not read between 8 to 12KΩ then it is likely to be a sensor probe from a different manufacturer and will need to be replaced with a Thermogroup 10KΩ sensor probe or the settings changed.
	More than one sensor installed	Sometimes more than one floor sensor is connected to the thermostat by mistake. This results in a high resistance and incorrect temperature readings that are much higher than normal. Check that there is only 1 sensor probe connected to your thermostat.
	High temperature influence	Check whether there are any high temperature influences around the thermostat or the floor sensor probe.
		If the floor sensor is in the floor and situated near a hot water pipe it will read a high temperature.
		If the floor sensor is in an area of the floor covered by a mat or dog bed this area of the floor would read much hotter than areas of the floor not covered by insulating objects*
	Faulty floor sensor	The floor sensor probe could be damaged or faulty. If this was correctly installed in a conduit this can be replaced. Alternatively, set the thermostat to ambient sensor mode. See page 13.
	Incorrect setting	Changing some of the advanced settings can affect the temperature reading. To correct this either do a factory rest on the unit or check the advanced settings on the unit compared to the defaults listed on page 25.

*Electric floor heating systems should not be covered by insulated objects such as rugs, dog beds or furniture that prevents air flow over the floor. Covering a floor heating system in this way can cause overheating issues which can damage floor coverings and cause heating cable failure.

Need a hand? Call us on 1300 368 631

Problem	Possible Causes	Things to Try
0°C Temperature reading	No floor sensor installed	Isolate power and check that a compatible NTC10K sensor probe is connected to terminals 6 & 7. If no sensor is installed you will need to have one installed or run the system on air/ambient temperature only
	Faulty floor sensor	If there is a sensor connected then it may be faulty. Disconnect the sensor from the terminals and test the resistance using a multimeter on the 20KΩ setting. The sensor is rated at 10KΩ at 25C and fluctuates with temperature differences. Depending on the temperature the resistance reading should be somewhere between 8 - 12KΩ If the sensor is faulty it will need to be replaced.
	More than one sensor installed	Sometimes more than one floor sensor is connected to the thermostat by mistake. This results in a high resistance and incorrect temperature readings that are much higher than normal. Check that there is only 1 sensor probe connected to your thermostat.
Flashing back-light or any fault with the display or button functions	Bad connection between display and power unit	Take the front plate off of the thermostat using a flat screwdriver. Unplug the white ribbon cable and check the cable and pins for any signs of damage. If no damage is found replace the cable, click the display back into position and turn on.
Appliance Relay stuck	Incorrect (DC) transformer used	Check the type of transformer used. If a DC output transformer has been used it can cause the relay to stick. Disconnecting then reconnecting the power should release the relay however if a DC transformer has been used this will continue to happen and damage the relay so an inrush limiting device must be added to protect the relay.

Technical Data

Supply voltage	230/240V 50/60Hz
Maximum load	20A combined
UFH relay	16A (3600W)
Appliance relay	5A (1125W)
Temperature range	5 ~ 35°C
Ambient	0 ~ 50°C
Compatible sensors*	6.8KΩ, 10KΩ, 12KΩ, 15KΩ, 33KΩ
Accuracy	±0.5°C
Warranty	3 years
IP Rating	IP30
Width	129mm
Height	88mm
Depth	48mm (31mm in wall)

*All quoted sensor resistance ratings are measured at 25°C

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