# Thermotouch 7.6iG

Programmable thermostat for Electric Underfloor Heating

Installation & User Guide

**Thermo**group

*That little bit extra...*

**thermotouch**

INTELLIGENT HEATING CONTROLS

# Contents

# Compatibility

**Sensor probes**
This thermostat is compatible with Thermogroup NTC 10kΩ @ 25°C floor sensor probes.

**Heating systems**
This thermostat is compatible with all Thermogroup electric Underfloor Heating systems.

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

If you have an existing floor probe from another thermostat that is not compatible, set your thermostat to ambient temperature sensing mode.

# What's in the box?

**Check you've got everything:**

- Programmable thermostat
- Floor sensor probe (3m)
- Floor sensor conduit (2m)
- Fixing screws
- Installation and user guide
- Mounting plate (Portrait included with thermostat,
- landscape to be purchased additionally)

**You will also need:**

- Electrical screwdriver
- Standard electrical mounting plate
- Electrical test meter

# Before you start

**Thermotouch 7.6iG should be:**

- Installed at least 1.2m from the floor
- On an internal wall
- Outside any wet zones (IP30)
- Installed on a RCD protected circuit
- Away from any hot or cold influences
- Installed so that the floor sensor probe can be laid in a clear, temperature representative area of the floor
- Installed by a qualified electrician, in line with current electrical regulations and relevant local standards

# 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.



*CAUT ION*
High Voltage
Cables

# Installing Thermotouch

**2. Pre-wiring complete**
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.

# 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.

Multiple heating cables can be connected to the thermostat in parallel. When connecting multiple heating cables ensure that the load does not exceed the load of the thermostat (16Amps).

# Installing Thermotouch

## 4. Un-clipping the mounting plate



Remove the Thermostat from the box and press upwards on the main square unit.



This will release the main unit from the mounting plate and then you will need to unclip the ribbon cable from the back of the screen.



The mounting plate consists of two parts. The black plate containing the terminal block is to be screwed to your standard electrical mounting plate installed.



Once wired up, the ribbon cable needs to be plugged back into the back of the screen and the main unit needs to be clipped back onto the mounting plate. Locate the thermostat onto the black steel clips of the mounting plate.



Slide the thermostat unit on the steel clips and push down to secure the thermostat in place.

# Installing Thermotouch

### 5. Fix mounting plate
Wire up the Underfloor Heating cold tail, mains power and sensor cables to the terminal block as per the wiring diagram on page 11. The black metal then needs to then be screwed to the electrical mounting plate.

# Installing Thermotouch

### 6. Wiring diagram
Connect the Thermostat to the Underfloor Heating (UFH) cold tail, power supply and floor temperature sensor.

The floor temperature sensor is not polarity sensitive.



| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

230/240V AC Supply Live

230/240V AC Supply Neutral

UFH Neutral (Load N) 16amps

UFH Live (Load L) 16amps

Earth (Ground)

Sensor connections
(No polarity)
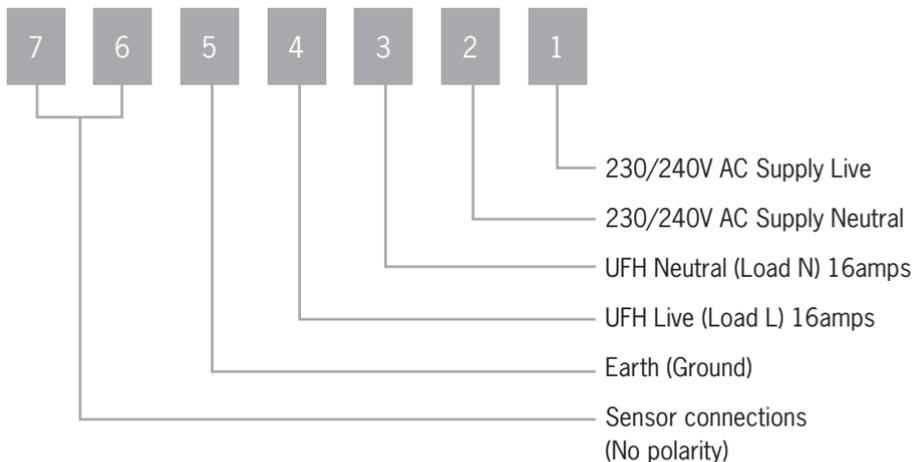
# Installing Thermotouch

## 7. Fix thermostat in place

Clip the plastic mounting plate over the steel plate and locate the thermostat onto the steel clips. Ensure the arrows on the metal plate and mounting plate are pointed upwards. Slide the thermostat unit onto the steel clips and push down to secure the thermostat in place.



(Optional landscape mounting plate 5221/5223)
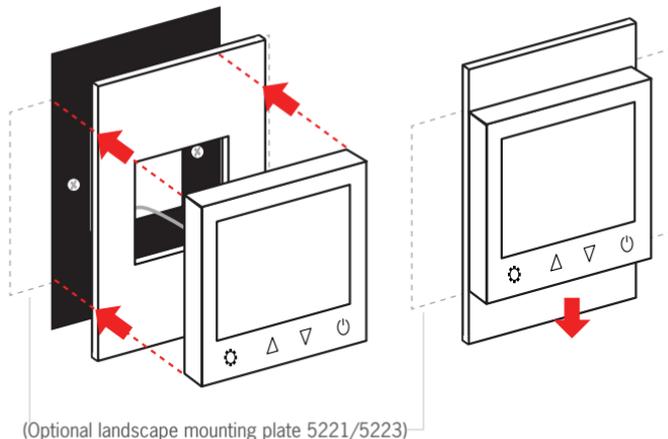
Warning - Do not force the thermostat into place as this will break the clips and result in being unable to install the unit.

# Switching on for the first time

Do not switch your Underfloor Heating on unless the entire heating cable, cold tail joint and end termination are fully encased in tile adhesive.

It is important that all adhesives and grouting are dry and fully cured before you switch on your Underfloor Heating.

Most adhesives take between 7 to 10 days to cure. Follow manufacturer guidelines.

The temperature of your Underfloor Heating should be increased gradually to avoid thermal shock in the floor. Start at 15°C and work up to your desired temperature 2-3°C per day.

Observe any maximum temperature guidelines from your floor manufacturer.

⚠️
Wait for
7 - 10 Days
before you
switch on

# User Interface
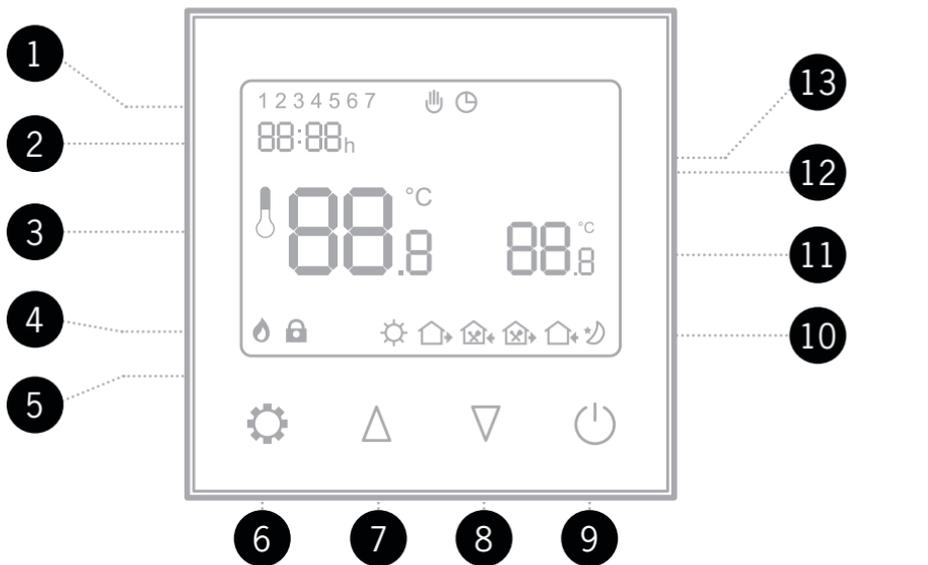


1. Day indicators
2. Time
3. Measured temperature
4. Heating on icon
5. Lock icon
6. Mode button
7. Up arrow
8. Down arrow
9. Power button
10. Event icons
11. Set temperature
12. Manual mode icon
13. Schedule mode icon

# Heating Modes

When your thermostat is on you can tap ✿ to switch between Manual and Schedule heating modes.

## Manual mode ✋

Your thermostat will simply maintain the temperature you set manually until you ask it to do something else!

## Schedule mode ⏰

Your thermostat will follow a heating schedule that you can set up by following the instructions on page 18.

### Temperature override

When the thermostat is in Schedule mode, it is possible to manually override the temperature without adjusting the schedule or switching to manual mode.

You can adjust the temperature with the $\Delta$ and $\nabla$ arrows.

If you override the temperature while the thermostat is running the heating schedule, the new override temperature will be maintained until the next scheduled temperature change. The thermostat will then revert to the preset heating schedule.

# Heating Modes

In the advanced settings (see page 22) you can choose between 5 different schedule options. The default setting is all days programmed individually (1-7 Flashing). If you would prefer one of the other scheduling options listed below please ensure this is changed in the advanced setting prior to setting up your schedule.

1234567 Flashing - Every day different. Every day can be set with separate heating events.

1234567 - Mon-Sun the same. Every day will follow the same heating schedule.

123456 - Mon-Sat the same and Sunday on a separate schedule.

12345 - Week days (Mon-Fri) on one schedule and weekends (Sat & Sun) on a separate schedule.

No Numbers - Program off. To be used as manual only.

**What is a heating event?**
A heating event is any opportunity to change the temperature in your heating schedule.

# Setup

**Setting the day and time**
Switch the unit off by pressing ⏻.

Press and hold ✪ for 7 seconds until the time begins to flash.

Use Δ and ∇ to select the correct minute.

Press ✪ to switch to hours and use Δ and ∇ to select the correct hour.

Press ✪ again to edit the day and use Δ and ∇ to select the correct day. 1 = Monday & 7 = Sunday.

Press ⏻ to save your settings.

**Note:** The thermostat will switch off after 30 seconds of inactivity and any unsaved settings may be lost

# Heating Schedule

1. Turn the thermostat on by pressing ⏻.

2. Press ✪ to switch to 🕘 mode before you start.

3. Press ⏻ to switch the unit off.

4. Press and hold ✪ for 7 seconds to edit your schedule. If you have already set the current time press ✪ x3 to skip it.

5. Take note of the day indicators at the top of the screen and ensure that this is correct to how you want the program setup. See page 16 for further details.

6. Use $\Delta$ and $\nabla$ to adjust the start time for event 1 and press ✪ to save. Now use $\Delta$ and $\nabla$ to select the desired Comfort (or "On") temperature between 20 - 28°C depending on your floor finish*.

☼
Event 1
Wake Up

7. Press ✪ to advance to event 2 and use $\Delta$ and $\nabla$ to select the desired time to switch to a lower temperature.

8. Press ✪ to save. Now use $\Delta$ and $\nabla$ to select the desired Eco (or "Off") temperature between 15 - 20°C.

⌂➚
Event 2 Out

9. Press ✪ to advance to event 3 and use $\Delta$ and $\nabla$ to select the desired time to switch to a higher temperature.

10. Press ✪ to save. Now use $\Delta$ and $\nabla$ to select the desired Comfort (or "On") temperature between 20 - 28°C.

⌂➙
Event 3 Home

# Heating Schedule

11. Press ✿ to advance to event 4 and use Δ and ∇ to select the desired time to switch to a lower temperature.

🏠 Event 4 Out

12. Press ✿ to save. Now use Δ and ∇ to select the desired Eco (or "Off") temperature between 15 - 20°C.

13. Press ✿ to advance to event 5 and use Δ and ∇ to select the desired time to switch to a higher temperature.

🏠 Event 5 Home

14. Press ✿ to save. Now use Δ and ∇ to select the desired Comfort (or "On") temperature between 20 - 28°C.

15. Press ✿ to advance to event 6 and use Δ and ∇ to select the desired time to switch to a lower temperature.

🌙 Event 6 Sleep

16. Press ✿ to save. Now use Δ and ∇ to select the desired Eco (or "Off") temperature between 15 - 20°C.

17. If programming all days individually or weekends separate to week days press ✿ to move to the next day (indicated by the numbers at the top of the screen) and repeat steps 6-16 to setup the heating schedule. If programming all days together press ⏻ to activate your schedule and you're done!

**Don't want to use all of the available heating events?** You can skip events by setting the same temperature as the previous event

Please note all times (even if these are 'off' times) need to be consecutive and the times cannot run over midnight.

# Energy Saving Features

**You can activate and adjust these features in the advanced settings menu. See page 21 - 23.**

**Adaptive Start**
With the Adaptive Start feature enabled, your thermostat 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!

Your thermostat 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, your thermostat can detect sudden drops in temperature and will switch off your heating to eliminate wasted energy.

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

# Advanced Settings

**Adjusting the advanced settings**
To access the settings, switch the unit off by pressing ⏻.

Press and hold ✿ and ⏻ together for 7 seconds.

Press ✿ to cycle between settings.

Use △ and ▽ to adjust the settings.

Press ⏻ to save your settings and turn the unit back on.

# Advanced Settings

| Menu | Description | Range | Default |
|------|-------------|-------|---------|
| 01. | Temperature calibration | -8°C ~ 8°C | 0°C |
| 02. | Maximum set point | 5°C ~ 80°C | 28°C |
| 03. | Minimum set point | 5°C ~ 80°C | 5°C |
| 04. | Sensor mode | IN (Ambient), OUT (Floor), ALL (Ambient with floor limit) | OUT |
| 05. | Frost protection | 5°C ~ 15°C or Off | 5°C |
| 06. | Floor temperature display | (ALL sensor mode only) | |
| 07. | Temperature limit | 10°C ~ 80°C (For ALL mode only) | 35°C |
| 08. | Heating schedule setting | 1234567 Flashing (7 days programmed independently 1234567 (7 days the same) 123456 (6 days the same +1) 12345 (5 days the same + 2) No numbers - Program off | 1234567 Flashing 7 days programmed independently |
| 09. | Status after power failure | LA: On as before, OF: Off | LA |

# Advanced Settings

| Menu | Description | Range | Default |
|------|-------------|-------|---------|
| 09 | Status after power failure | LA: On as before, OF: Off | LA |
| 10 | Factory reset | Re (yes) | |
| 11 | Backlight timer | 10secs - 300secs (5mins) | 20s |
| 12 | Backlight brightness level | 1 (min), 2, 3, 4 (max) | 4 |
| 13 | Adaptive Start | 1 (On), 0 (Off) | 0 (Off) |
| 14 | Open Window Detection (OWD) | 1 (On), 0 (Off) | 0 (Off) |
| 15 | OWD Off Time | 2 - 30 minutes | 15 mins |
| 16 | OWD Temperature Drop Limit | 2, 3 or 4°C | 2°C |
| 17 | OWD Heating on again after | 10 - 60 minutes | 30 mins |
| 18 | Software version | | |

# Factory Reset & Key Lock

**Locking the keys**
To lock the keypad press and hold $\Delta$ and $\nabla$ together for 7 seconds.

The 🔒 icon will appear when the keypad is locked. None of the keys will function.

To unlock the keypad press and hold $\Delta$ and $\nabla$ together for 7 seconds.

**Factory reset**
Find menu item 10 in the advanced settings.

Press $\Delta$ and then press ⏻.

The thermostat will switch off and reset to factory settings. 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.

# Technical Data

| | |
|---|---|
| Supply voltage | 230/240V 50/60Hz |
| Maximum load | 16A |
| Backup storage | EEPROM (approx. 1 year backup) |
| Temperature range | 5 ~ 80°C (0.5°C increments) |
| Accuracy | ±0.5°C |
| Consumption | 2W |
| Sensor rating NTC | 10kΩ @ 25°C |
| Warranty | 3 years |
| IP Rating | IP20 |
| Width | 85mm |
| Height | 115mm |
| Depth | 54mm(32mm in wall) |

# Troubleshooting Guide

| Problem | Possible Causes | Things to Try |
|---|---|---|
| Very high temperature reading | Software issue | Factory reset (see p24) |
| | 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. |
| | 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 22. |
| | Incorrect Settings | 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 units compared to the defaults listed on page 22. |

# Troubleshooting Guide

| Problem | Possible Causes | Things to Try |
|---------|-----------------|---------------|
| "Er" error message | 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 or the thermostat set to ambient. See page 22. |

**Need a hand? Call us on 1300 368 631**

# Service and Support

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