5220A / 5226A

Thermotouch 7.6iG

Programmable thermostat for electric underfloor heating

Installation & User Guide

thermotouch

UNDERFLOOR 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.

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

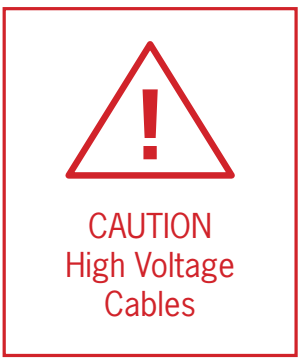
Before you start

Your thermostat 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

1. Switch off mains power

You will be installing your thermostat 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.



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.

3. Maximum distances

Your thermostat 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.

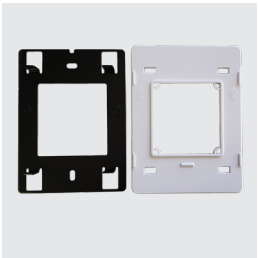
Underfloor Heating cold tails and floor sensor probes can be extended up to 50m.

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).

4. Un-clipping the mounting plate

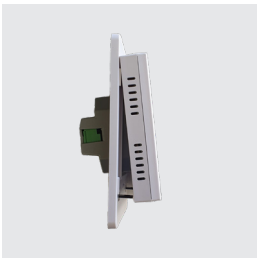
Remove the Thermostat from the box and press upwards on the main square unit.

This will release the main unit from the mounting plate.

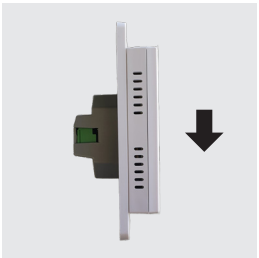


The mounting plate consists of two parts. The black plate is to be screwed to your standard electrical mounting plate installed.

Fitting unit on mounting plate



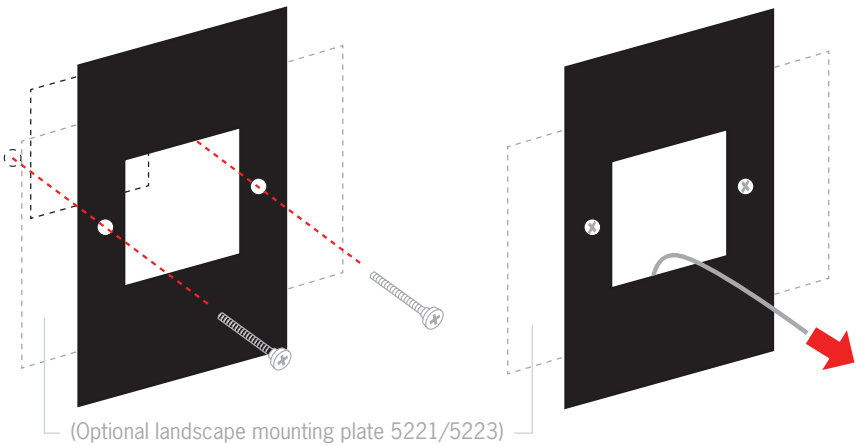
Once wired up, the main unit needs to be clipped back onto the mounting plate. Locate the thermostat onto the black steel clips of the mounting plate.



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

5. Fix mounting plate

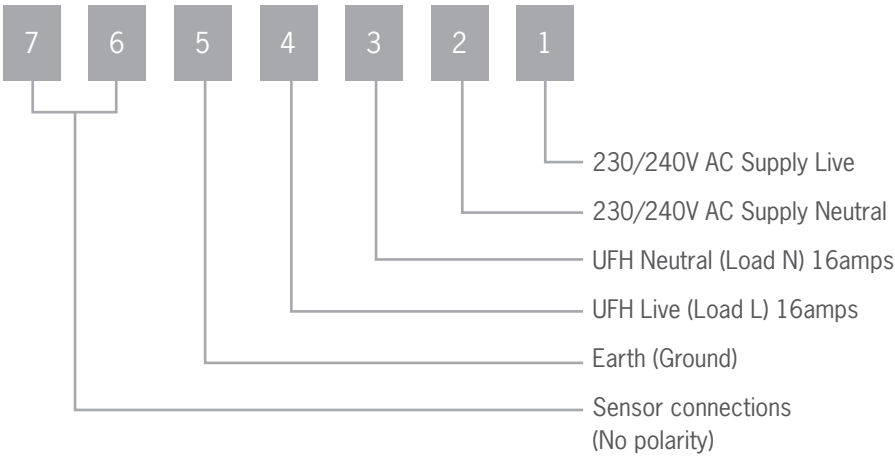
Release the mounting plate from the case and use a screwdriver to fix the mounting plate to the wall. Pull the Underfloor Heating cold tail, mains and sensor cables through and connect cables as shown in the wiring diagram on p11.



6. Wiring diagram

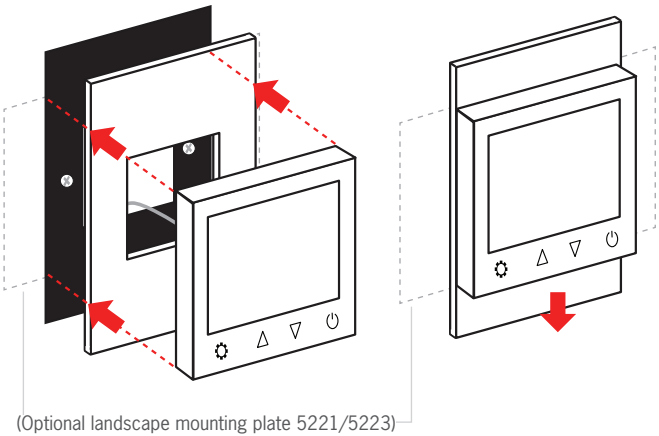
Connect the Thermostat to the Underfloor Heating (UFH) cold tail, power supply and floor temperature sensor.

The floor temperature sensor is not polarity sensitive.



7. 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.

Wait for 7 - 10 Days before you switch on

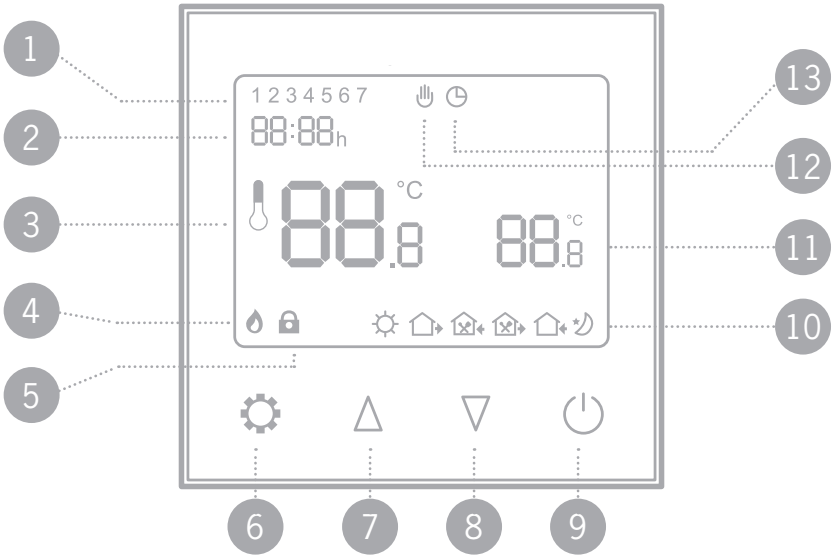
It is important that all adhesives and grouting are dry and fully cured before you switch on your Underfloor Heating.

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.

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 △ and ▽ 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.

Setting the day and time

Switch the unit off by pressing ⏻.

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

Use △ and ▽ to select the correct minute.

Press ☼ to switch to hours and use △ and ▽ to select the correct hour.

Press ☼ again to edit the day and use △ 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

Set up your 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 △ and ▽ to adjust the start time for event 1 and press ☼ to save. Now use △ and ▽ 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 △ and ▽ to select the desired time to switch to a lower temperature.
8. Press ☼ to save. Now use △ and ▽ to select the desired Eco (or “Off”) temperature between 15 - 20°C.

Event 2 Out

9. Press ☼ to advance to event 3 and use △ and ▽ to select the desired time to switch to a higher temperature.
10. Press ☼ to save. Now use △ and ▽ to select the desired Comfort (or “On”) temperature between 20 - 28°C.

Event 3 Home

*Check with your floor finish manufacturer for recommended maximum temperatures

Set up your heating schedule

11. Press ☼ to advance to event 4 and use △ and ▽ to select the desired time to switch to a lower temperature.
12. Press ☼ to save. Now use △ and ▽ to select the desired Eco (or “Off”) temperature between 15 - 20°C.


Event 4 Out

13. Press ☼ to advance to event 5 and use △ and ▽ to select the desired time to switch to a higher temperature.
14. Press ☼ to save. Now use △ and ▽ to select the desired Comfort (or “On”) temperature between 20 - 28°C.


Event 5 Home

15. Press ☼ to advance to event 6 and use △ and ▽ to select the desired time to switch to a lower temperature.
16. Press ☼ to save. Now use △ and ▽ to select the desired Eco (or “Off”) temperature between 15 - 20°C.


Event 6 Sleep

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.

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
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 △ and ▽ 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 △ and ▽ together for 7 seconds.

Factory reset

Find menu item 10 in the advanced settings.

Press △ 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	230V/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
Sensor rating	NTC 10kΩ @ 25°C
Consumption	2W
Warranty	3 years
IP rating	IP30
Width	85mm
Height	115mm
Depth	46mm (31mm 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.

*Electric floor heating systems should not be covered by insulating 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.

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

Thermogroup
PO Box 822
Leeton NSW 2705
AUSTRALIA

Phone: 1300 368 631
Technical Line: 1300 989 464

www.thermogroup.com.au
sales@thermogroup.com.au

5220A/20_IG_JUNE22

Watch the video guide on our website
www.thermogroup.com.au

Thermogroup
That little bit extra...