Terra™ WiFi Thermostat

Smart Heating. Simplified.

Warmup

Pack Contents

x1   x1   x2   x1

Contents

Safety Information

- ❏ The thermostat must be installed by a qualified electrician. It requires a permanent 110V - 240V AC, 60Hz supply. The thermostat contains a Class A GFCI with 5mA trip level and wiring must conform to local electrical code.

- ❏ Isolate the thermostat from the mains supply throughout the installation process.

- ❏ Install the thermostat in an area with good ventilation. It should not be beside a window/door, in direct sunlight or above another heat generating device (e.g. radiator or TV).

- ❏ Ensure the distance from your router to the thermostat is not excessive. This will ensure the wireless connection is not subject to range or interference issues once installed.

- ❏ Conduits are only required where it is mandated by state or provincial code. Please refer to local electrical code for compliant applications.

- ❏ The thermostat and its packaging are not toys; do not allow children to play with them. Small components and packaging present a risk of choking or suffocation.

- ❏ The thermostat is suitable for indoor use only. It must not be exposed to moisture, vibrations, mechanical loads or temperatures outside of its rated values.

- ❏ For safety and licensing reasons, unauthorised change and/or modification of the thermostat is not permitted.
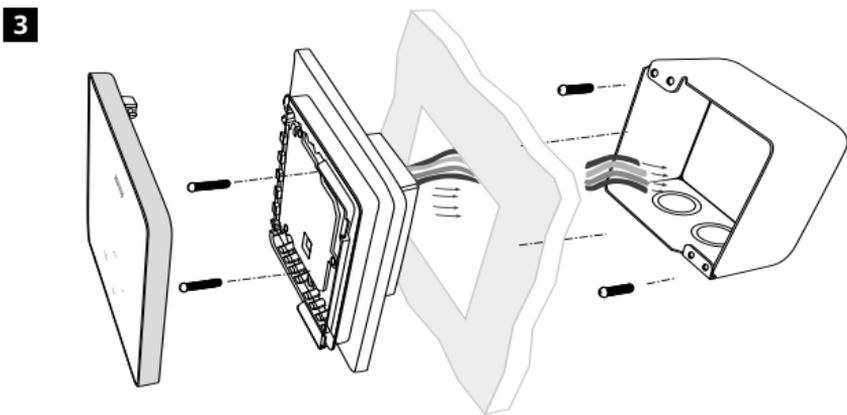
Step 1 - Installation
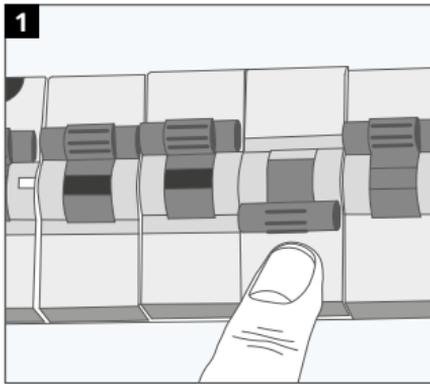
Isolate the thermostat supply from the mains supply.
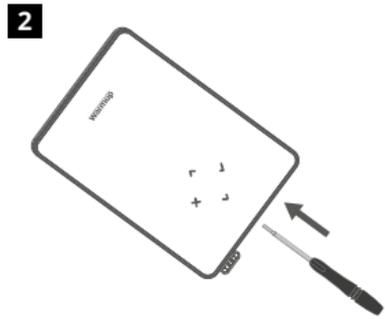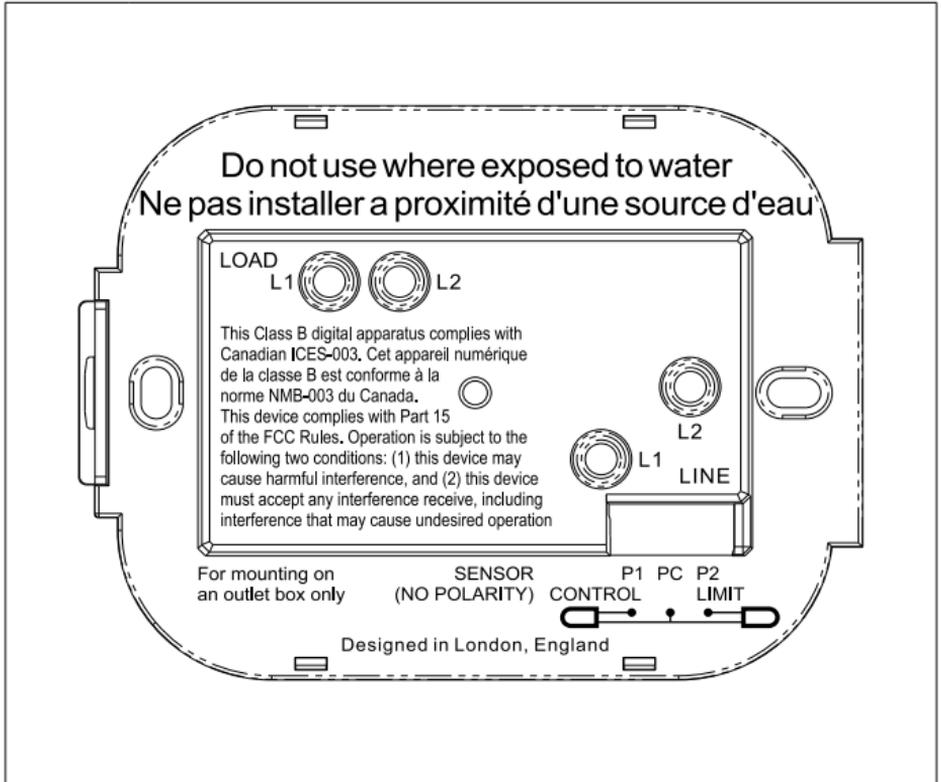

Unclip the display from the power base.

Install a 3-1/2" (89 mm) deep single gang or 2-gang box with mud ring in your preferred thermostat location. Pull wires (heater, supply and sensor) through gang box and complete terminal wiring.

WARNING!
The thermostat must be installed by a qualified electrician in accordance with National Electrical Code.

Do not use where exposed to water
Ne pas installer a proximité d'une source d'eau

LOAD L1 L2

This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may cause harmful interference, and (2) this device must accept any interference receive, including interference that may cause undesired operation

L2
L1
LINE

For mounting on an outlet box only

SENSOR (NO POLARITY)

P1 PC P2
CONTROL   LIMIT

Designed in London, England

Wiring Connections	
LOAD L1 & L2	Heater Load Max.15A (1800W - 120V, 3600W - 240V)
LINE L1	Supply Live (120 V)
LINE L2	Supply Neutral (120 V) / Supply Live (240 V)
P1 & PC	**Probe 1 -** Floor/Air Control Sensor (No Polarity) Floor or air temperature reading for scheduled control
P2 & PC	**Probe 2 -** Limit Sensor (No Polarity)
See Table 1.0 for thermostat use cases	

NOTE: The function of Probe 1, Probe 2 from Control/Limit Sensor can be swapped in settings.

Table 1.0 Thermostat Use Cases

nadian ICES-003. Cet appareil numerique
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erference that may cause undesired operation

nounting on   SENSOR   P1   PC   P2
tlet box only   (NO POLARITY)   CONTROL   LIMIT

Designed in London, England

L2
L1
LINE

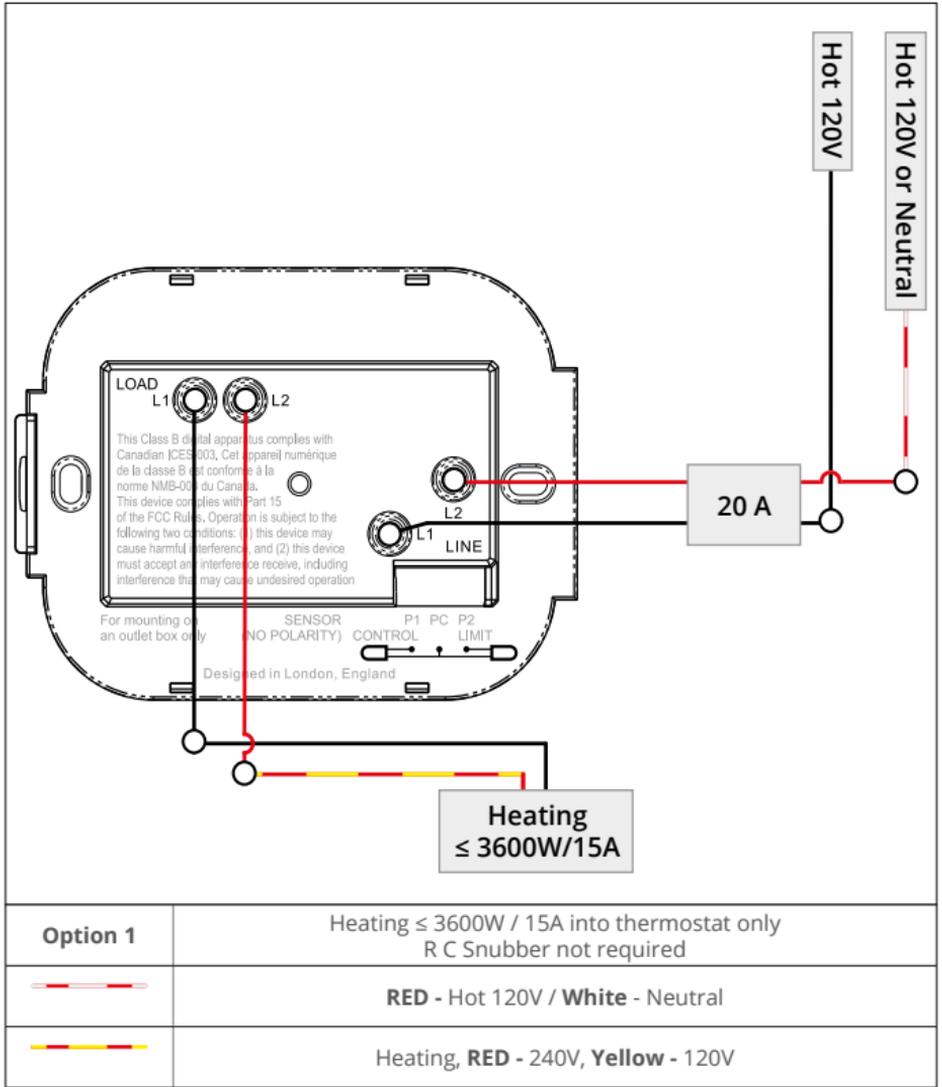| #	Use Case	Control	Limit Sensor
1	Thermostat **IN** room Air temperature schedule No floor limit	**Internal** Air Sensor	None
2*	Thermostat **IN/OUT** of room Floor temperature schedule Floor limit	**P1 & PC** Floor Sensor	None
3	Thermostat **IN** room Floor temperature schedule Air limit	**P1 & PC** Floor Sensor	**Internal** Air Sensor
4	Thermostat **OUT** of room Air temperature schedule No floor limit	**P1 & PC** Air Sensor	None
5**	Thermostat **IN** room Air temperature schedule Floor limit	**Internal** Air Sensor	**P2 & PC** Floor Limit
6	Thermostat **IN/OUT** of room Floor temperature schedule Floor limit	**P1 & PC** Floor Sensor	**P2 & PC** Floor Limit
7	Thermostat **OUT** of room Air temperature schedule Floor limit	**P1 & PC** Air Sensor	**P2 & PC** Floor Limit
8	Thermostat **IN/OUT** of room Regulator schedule No limit	**Reg.**	None
9	Thermostat **IN** room Regulator schedule Air limit	**Reg.**	**Internal** Air Sensor
10	Thermostat **IN/OUT** of room Regulator schedule No limit	**Reg.**	None
11	Thermostat **IN/OUT** of room Regulator schedule Floor limit	**Reg.**	**P2 & PC** Floor Limit
12	Thermostat **IN/OUT** of room Regulator schedule Floor limit	**Reg.**	**P2 & PC** Floor Limit

2* Recommended when thermostat is **OUT** of the heated room
5** Recommended when thermostat is **IN** the heated room

NOTE: For thermostat use cases 6 & 7 an additional sensor will be required.
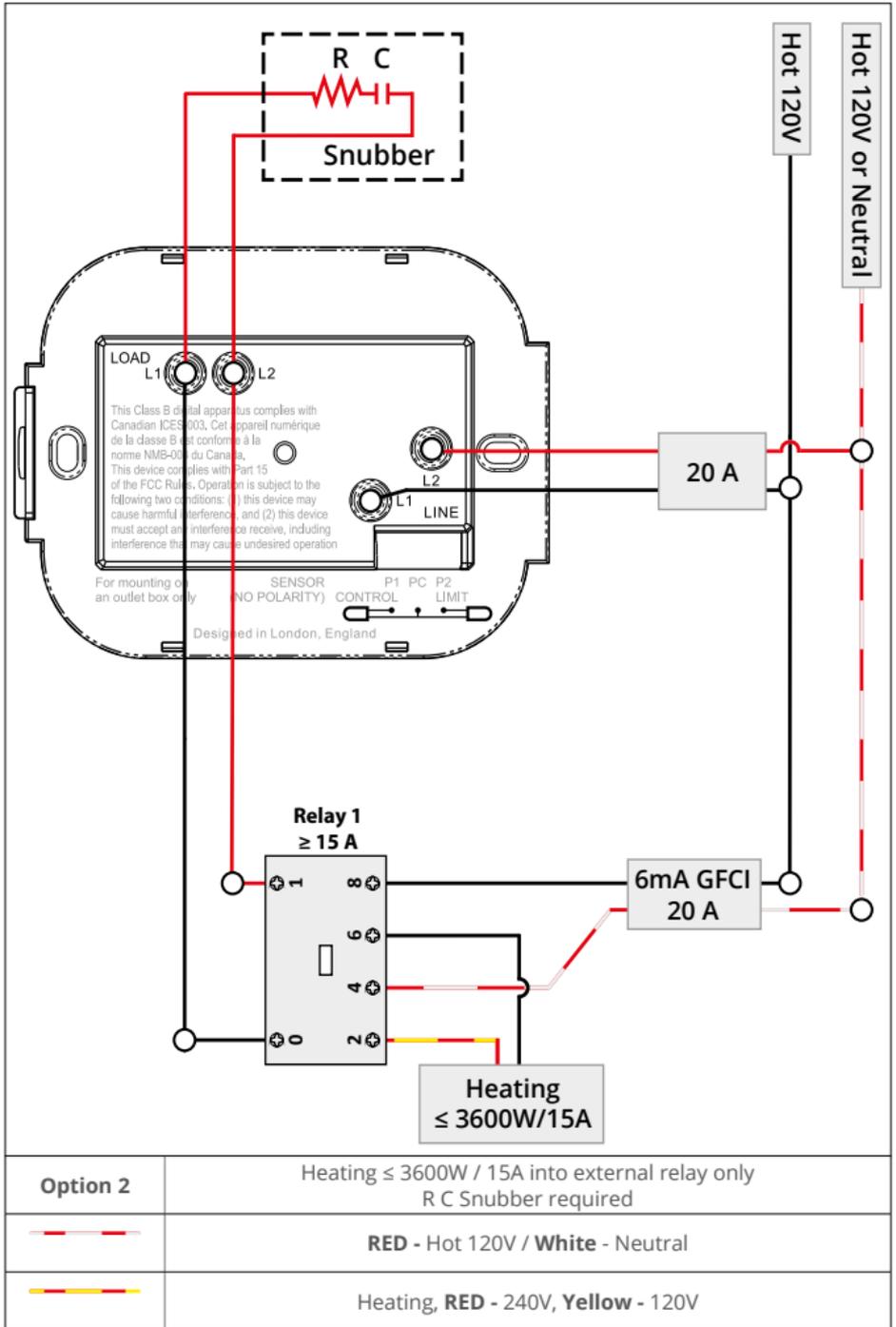
Heating loads connected to thermostat

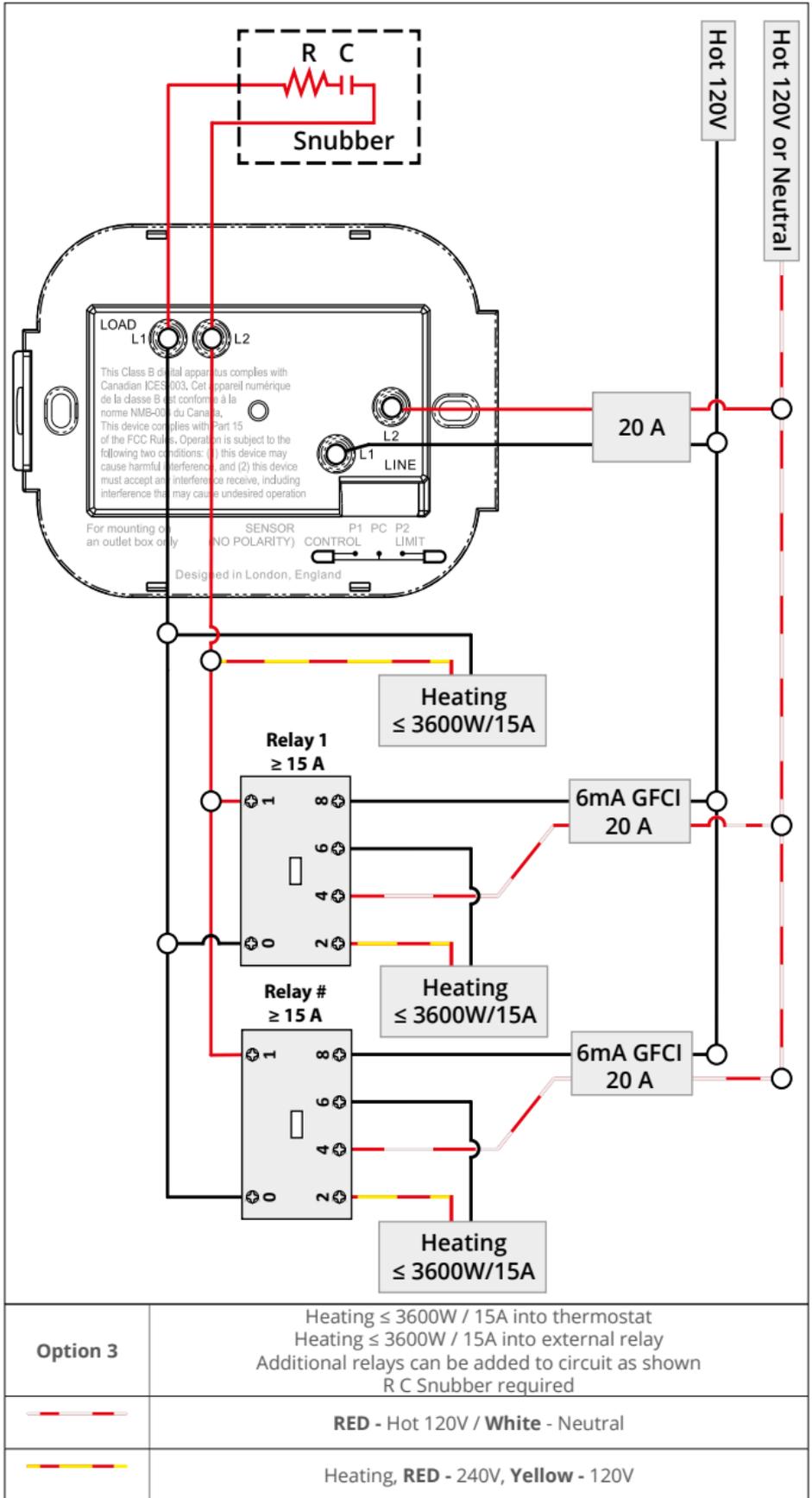| Option 1	Heating ≤ 3600W / 15A into thermostat only R C Snubber not required
	RED - Hot 120V / **White** - Neutral
	Heating, **RED -** 240V, **Yellow -** 120V

Heater earth connections should be connected to earth in line with NEC, CEC code.

Heating loads connected to Relay-25

Option 2	Heating ≤ 3600W / 15A into external relay only R C Snubber required
	RED - Hot 120V / **White** - Neutral
	Heating, **RED -** 240V, **Yellow -** 120V

i Heater earth connections should be connected to earth in line with NEC, CEC code.

Heating loads connected to thermostat and Relay-25

Option 3	Heating ≤ 3600W / 15A into thermostat Heating ≤ 3600W / 15A into external relay Additional relays can be added to circuit as shown R C Snubber required
▬ ▬ ▬	**RED -** Hot 120V / **White** - Neutral
▬ ▬ ▬	Heating, **RED -** 240V, **Yellow -** 120V

ℹ️ Heater earth connections should be connected to earth in line with NEC, CEC code.

Step 3 - Thermostat Mounting

1

Insert fixing screws through mounting holes of the power base and tighten.

2

Re-attach the front housing until a "click" is heard. You can now power up the thermostat.

3

System type	Input wattage	Input efficiency	Thermostat application (1-12). See table 1.0	WiFi Setup Open MyHeating app. Scan QR Code

1,500W
eUFH

2,000W
hUFH

30,000W
Conventional

1,500W
eUFH + relay

Follow the on screen icons to set up your system.

✓	Accept
✗	Back/Cancel
∧ ∨	Up/Down Change value/setting

1

**'MyHeating'
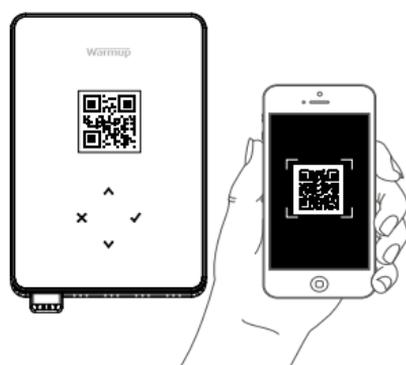by Warmup**

Available on the
App Store

ANDROID APP ON
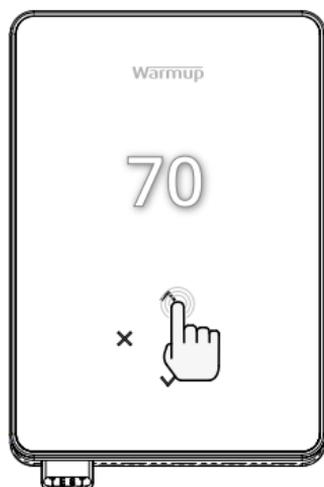**Google** play

Download the MyHeating App.

2

Open the MyHeating App and scan the QR Code on the thermostat screen protector or on reverse of the display. Follow the instructions in the App to complete setup.

✓	Next/Accept
✗	Back/Cancel
∧ ∨	Up/Down Change value/setting

How to quickly change the temperature

Press ∧ / ∨ to change your target temperature.

If in program mode this will set a temporary override until your next heating period. See "How to set a temporary override".

If in manual mode this will set a fixed target temperature. See "How to set into Manual Mode"

Once the target temperature is set above current floor/air temperature the heating indicator (●) will appear in the top right hand corner.

How to quickly change mode

Mode select allows you to quickly change from manual mode, program mode or simply switch the heating off.
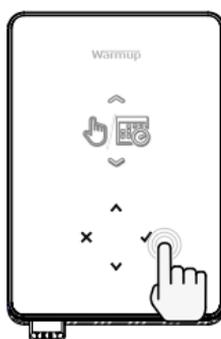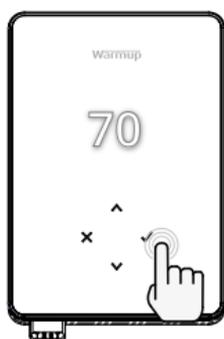
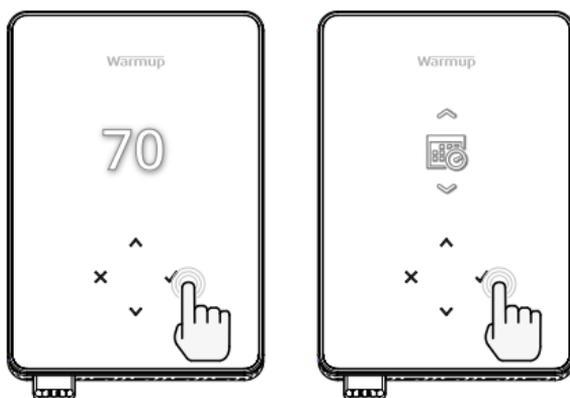|	
🖑	Manual Mode
📅🕐	Program Mode
⏻	Heating OFF

11

How to set a program

Setting a program allows you to set comfort temperatures at set times throughout the day. Days can programmed individually, all days the same or weekdays as a block and weekends as a block, the choice is yours.

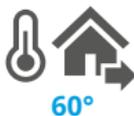|	
	Edit Program
	To select the days you wish to program press ∧ / ∨. A bar will appear below the day of the week. Press ✓ to move to the next day.
	Press ✓ to set a program.
	Set the start time, followed by target temperature and finally the end time for that period. Press ✓ to accept.
	To add/remove heating period, Press ✓ to on the plus/minus. Up to 5 periods can be set.
	Scroll to the tick and Press ✓ to confirm your program.
	Setback temperature
	Set setback temperature. The setback temperature is a lower energy efficient temperature when outside of a heating period.

How to set into Manual Mode

Setting into manual mode allows you to set a fixed target temperature for the thermostat to achieve. The thermostat will continue to maintain this temperature until another operating mode or temperature is selected.
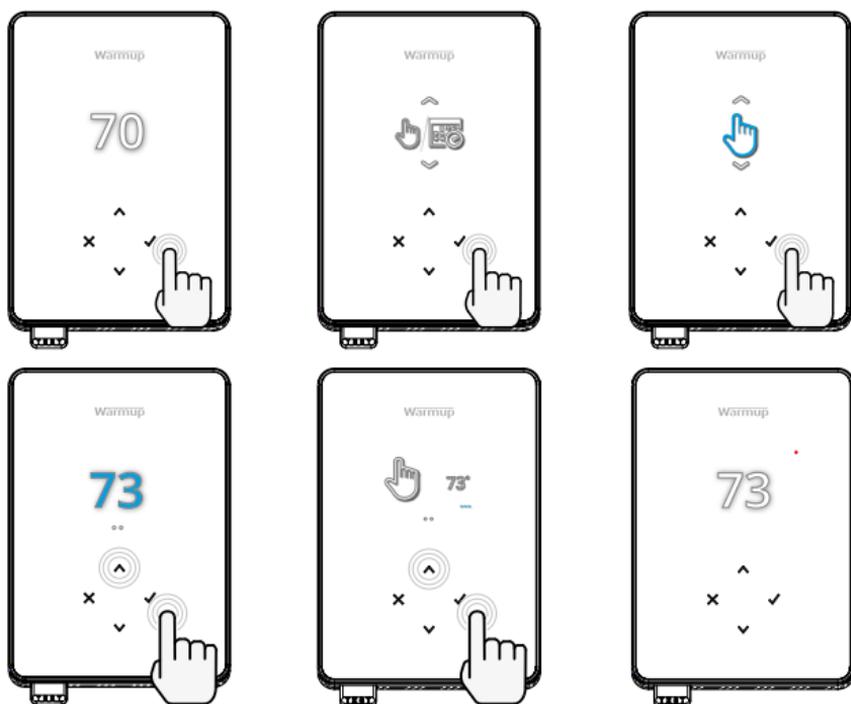
---	Sets the target temperature indefinitely.
⏱	Set the duration of the manual mode.

How to set a Temporary Override

Setting a temporary override allows you to set a target temperature which will override your current heating program until your next heating period or for a set duration.

📅⏱	Sets the override until next scheduled heating period.
⏱	Sets the duration of the override.

Energy Monitor

How Energy Monitor works

The thermostat learns how you use your system and how your house reacts to heating and weather. Using the MyHeating App, energy monitoring will show the amount of energy consumed over a certain time period. This will be calculated through system power multiplied by efficiency and run time.

You will need to enter the power of your system, and in some cases, the efficiency. If you do not know these, speak to your installer or system manufacturer.

SmartGeo
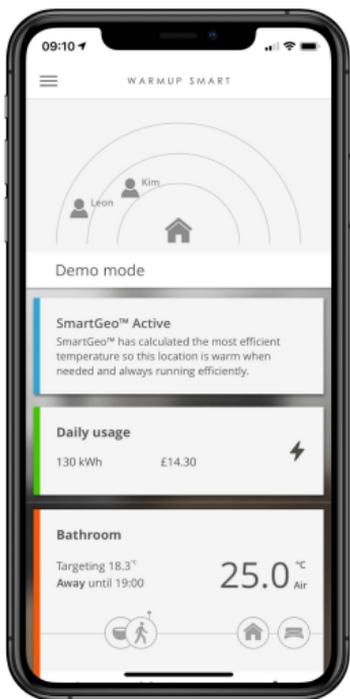
How SmartGeo works

SmartGeo is a unique technology developed by Warmup and built into the MyHeating App that uses an advanced algorithm to understand the most efficient heat settings for your home.

Working automatically; it learns your routines and location through background communication with your smartphone and lowers temperatures when you are away, only rising them up to your ideal comfort temperature in time for your arrival home.

Smartgeo will operate when the thermostat is in the program or manual run modes. It is turned off by default. Use the MyHeating App to switch SmartGeo on.

Settings
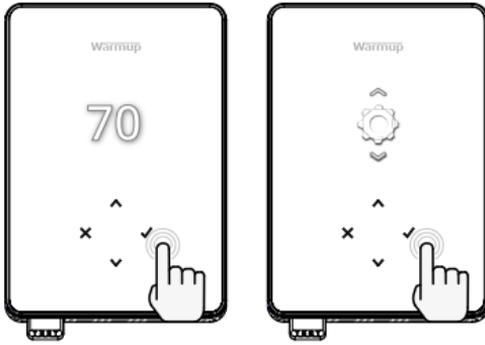
🕐	**Date and time**
6-5-2021 **13:00**	Set the current date and time. Press ✓ to begin, press ∧ / ∨ to change date/time. Press ✓ to confirm.
🌡	**Thermostat application**
🌡**1** 🛡**2**	Swaps probe usage, 1 being the Control Sensor Probe and 2 being the Limit Sensor Probe. Press ∧ / ∨ to swap probe usage. Press ✓ to confirm.
🏠**3**	See Table 1.0 Thermostat Application. Press ∧ / ∨ to change application. Press ✓ to confirm.
🌡〰**1** **10K**	Change Control Sensor Probe 1 **(5 & 6)** type. Set between 5, 10, 12, 15, 100K sensor settings.
🌡〰**2** **10K**	Change Limit Sensor Probe 2 **(6 & 7)** type. Set between 5, 10, 12, 15, 100K sensor settings.
🏠**95°**	Set Air limit
🏠**95°**	Set Floor limit
☀	**Set display brightness**
✋**4**	Set active brightness
☀**2**	Day standby brightness
🌙**2**	Night standby brightness

	Change homescreen override color
	Select the override color.
	Open window function
	The windows open detection feature is designed to switch off heating to save energy when the thermostat detects that a window or door has been opened.
	Display lock
	Switch display lock on.
0 0 0 0	Set display lock code.
	Switch display lock off.
	WiFi
	WiFi Setup
	Open MyHeating App and scan the QR code on the back of the thermostat display to complete WiFi setup.
	Factory reset
	Factory reset will erase all of your settings and restore the thermostat to factory defaults.

Notifications & Error codes

🕐	Date and time needs to be set.	⏻	Heating switched OFF
🪟	Open window function triggered.	🔒	Display locked
🌙	Temporary override enabled	2 〰	Sensor P2 (6 & 7) error
✈	Holiday mode enabled. (Configured in MyHeating App)	- - -	Sensor P1 (5 & 6) not connected / damaged or Internal air sensor fault
❄	Frost protect enabled. (Configured in MyHeating App)	📶!	WiFi not setup
⚡ GFCI	GFCI tripped	⚡⌛	Relay failure

Troubleshooting

Display is blank	**Power**	**(Electrician Required)** Electrician required to verify power is going to the thermostat and that it is correctly wired.
- - -	**Control (5 & 6) / Internal Air sensor error**	**1.** Please see Table 1.0 and ensure you have selected the correct thermostat application.
2 〰	**Limit Sensor Error (6 & 7)**	**2. (Electrician Required)** Electrician required to verify that the floor sensor has been wired correctly. If it is correctly wired the electrician will need to check the resistance of the floor sensor using a multi meter. For temperatures between 68°F - 86°F the resistance of the floor sensor should measure between 8K ohms and 12K ohms.
		If the electrician finds a fault, and the thermostat is in the room to be heated then it can be set into "Air Mode".
		To set into "Air Mode", see Table 1.0 Thermostat application.
		If "- - -" still remains when set into air mode the thermostat will have to be replaced.
Heating is coming on earlier than programmed times	**Adaptive learning (Early start) On**	Adaptive learning (Early start) will use the historic heating/cooling rates for the time of day, historic external temperatures and the forecast external temperatures, to work out the heating start time in order to reach the comfort time at the start of the comfort period. It will only work in Program Mode.
WiFi Error Symbol 📶!	**WiFi not setup**	1. Download and open the MyHeating App 2. Remove thermostat from the wall 3. Scan QR code on the back of the display 4. Place thermostat back on the wall and power-up 5. Thermostat will be in pairing mode for 1 minute. App should automatically connect to phone 6. Follow instructions in App
	WiFi disconnected	Follow the step above to try and to re-connect to the WiFi Network. If the thermostat still fails to connect, see WiFi Troubleshooting.

Clock Icon	Time and Date not set	Connect the thermostat to a WiFi network or alternatively set the time and date from the settings menu.
GFCI Icon GFCI	GFCI test button	The GFCI feature is used to detect any leakage of current from your heating system. During a ground fault the two lines of the load will be cut off. Once your thermostat is installed and connected to a power supply you can test the GFCI function by increasing the set temperature until heating is on - the heat up icon (●) will be illuminated - and pressing the "TEST" button. If your test is successful you will see the GFCI error icon and you will need to hold "X" for 3 seconds in order to restore heating operation.
	Heater error	The GFCI has tripped due to a fault in the heater. **(Electrician Required)** Electrician required to verify that the heater has been wired correctly. If correctly wired please conduct a resistance test and insulation resistance test on the heater to see if damage has occurred.
Relay icon	Relay error	The thermostat has detected that one of the relays has FAILED. Please contact Warmup

WiFi Troubleshooting

Before following the troubleshooting guide below please check the following:

1. The password is WPA2 protected.
2. The router is set to a 2.4 GHz band. (802.11 b, g, n, b/g mixed, b/g/n mixed)

NOTE: If you need to change any of the items listed above, please refer to your router manual.

```
┌─────────────────────────┐
│ Thermostat won't        │
│ connect/lost connection │
│ to WiFi Network         │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐  YES  ┌──────────────┐
│ Possible connection     ├──────►│ Device should│
│ timeout. In the         │       │ now work as  │
│ MyHeating App try to    │       │ normal       │
│ connect to the WiFi     │       └──────────────┘
│ Network again. Does the │
│ thermostat connect?     │
└─────────────────────────┘
             │ NO
             ▼
┌──────────────┐  YES  ┌─────────────────────────┐
│ Device should│◄──────┤ If you reboot/restart   │
│ now work as  │       │ the router does the     │
│ normal       │       │ thermostat connect to   │
└──────────────┘       │ the WiFi network?       │
                       └─────────────────────────┘
                                  │ NO
                                  ▼
┌──────────────┐  NO   ┌─────────────────────────┐
│ Update router│◄──────┤ Is the router updated   │
│ firmware     │       │ to the latest firmware? │
└──────────────┘       └─────────────────────────┘
                                  │ YES
                                  ▼
┌─────────────────────────────────┐  YES  ┌──────────────┐
│ Remove the display of the       ├──────►│ Device should│
│ thermostat and after 10-15      │       │ now work as  │
│ seconds reattach. Does the      │       │ normal       │
│ thermostat connect to your      │       └──────────────┘
│ WiFi Network?                   │
└─────────────────────────────────┘
                 │ NO
                 ▼
┌─────────────────────┐ YES ┌──────────────────────┐ NO ┌──────────────┐
│ If the thermostat   │◄────┤ Set up a mobile      ├───►│ Contact      │
│ connected to a      │     │ hotspot using a      │    │ Warmup with  │
│ mobile hotspot then │     │ smartphone. On a     │    │ your router  │
│ distance from the   │     │ separate device      │    │ make & model │
│ thermostat to your  │     │ login to the         │    └──────────────┘
│ router is the likely│     │ MyHeating app. Try   │
│ issue, or the signal│     │ to connect the       │
│ could be blocked. A │     │ thermostat to this   │
│ WiFi repeater/      │     │ mobile hotspot.      │
│ extender may be     │     │ Does the thermostat  │
│ required.           │     │ connect?             │
└─────────────────────┘     └──────────────────────┘
```

Technical Specifications

Model	RSW-XX-YY-ZZ
Operating Voltage	110V - 240V AC +/-15% 50Hz/60Hz
Protection Class	II ☐
Max. Load	15A resistive (120 V - 1800W, 240 V - 3600W)
GFCI	Class A GFCI with 5mA trip level
Rated impulse voltage	4000V
Automatic action	100,000
Disconnection means	1B
Pollution degree	2
Max. Ambient Temperature	40°C / 104°F (T40)
Relative Humidity	80%
IP Rating	IP30
Sensors	Floor/Air
Sensor Type	NTC10K @ 25°C
Operating Frequency	2401 - 2484MHz
Max. Radio-Frequency Power Transmitted	20dBm
Compatibility	Electric Floor Heating and Baseboard Heating
Standards	UL-60730-1 UL-60730-2-9 UL-943 CAN/CSA-E60730-1 CAN/CSA-E60730-2-9 CAN/CSA-C22.2 No. 144.1 FCC 47 CFR Part 15, ICES-003
Warranty	12 Years
Approvals	ETL Intertek

Warranty

Warmup warrants this product, to be free from defects in the workmanship or materials, under normal use and service, for a period of twelve (12) years from the date of purchase by the consumer when installed with a Warmup heater.

If at any time during the warranty period the product is determined to be defective, Warmup shall repair or replace it, at Warmup's option. If the product is defective, please either;

Return it, with a bill of sale or other dated proof of purchase, to the place from which you

purchased it, or

Contact Warmup. Warmup will determine whether the product should be returned or replaced.

The twelve (12) year warranty only applies if the product is registered with Warmup within 30 days after purchase. Registration can be completed online at www.warmup.com.

This warranty does not cover removal or re-installation costs and shall not apply if it is shown by Warmup that the defect or malfunction was caused by failure to follow the instruction manuals, incorrect installation or damage which occurred while the product was in the possession of a consumer. Warmup's sole responsibility shall be to repair or replace the product within the terms stated above. If the thermostat is installed with a non-Warmup heater a three (3) year warranty will apply. This warranty does not extend to any associated software such as apps or portals.

WARMUP SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE OF ANY KIND, INCLUDING ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING, DIRECTLY OR INDIRECTLY, FROM ANY BREACH OF ANY WARRANTY, EXPRESS OR IMPLIED, OR ANY OTHER FAILURE OF THIS PRODUCT. THIS WARRANTY IS THE ONLY EXPRESS WARRANTY WARMUP MAKES ON THIS PRODUCT. THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IS HEREBY LIMITED TO THE TWELVE-YEAR DURATION OF THIS WARRANTY.

This warranty does not affect your statutory rights.

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