heatmiser®

Model: **DT-ETS**

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? What is a Room Thermostat?

A room thermostat simply switches the heating system on and off as necessary.

It works by sensing the air temperature, switching on the heating when the air temperature falls below the thermostat setting, and switching it off once this set temperature has been reached.

Setting a room thermostat to a higher temperature will not make the room heat up any faster. How quickly the room heats up, depends on the design & size of the heating system.

Similarly reducing the temperature setting does not affect how quickly the room cools down. Setting a room thermostat to a lower temperature will result in the room being controlled at a lower temperature, and saves energy.

The way to set and use your room thermostat is to find the lowest temperature settings that you are comfortable with, and then leave it alone to do its job.

The best way to do this is to set the room thermostat to a low temperature – say 18°C , and then turn it up by 1°C each day until you are comfortable with the temperature. You won't have to adjust the thermostat further.

Any adjustment above this setting will waste energy and cost you more money.

Room thermostats need a free flow of air to sense the temperature, so they must not be covered by curtains or blocked by furniture. Nearby electric fires, televisions, wall or table lamps may also prevent the thermostat from working properly.

This model DT-ETS thermostat has been specifically designed to operate with electric underfloor heating systems.

Model DT-ETS is also equipped with different temperature sensor options to control the electric underfloor heating system. The thermostat's built in sensor measures the air temperature at the thermostat position within the room and uses measured values to control the electric underfloor heating system. Alternatively, optional remote air and floor sensors can be connected with DT-ETS and remote temperature measurements can be used instead to control the electric underfloor heating system. The thermostat enables easy switching between sensor modes providing a remote air sensor is connected.

Please read the instructions fully to understand all of the features of this DT-ETS thermostat.

🔧 Installation Procedure

✓ **Do**
Mount the thermostat at eye level.
Read the instructions fully so you get the best from our product.

✗ **Don't**
Do not install near to a direct heat source as this will affect functionality.
Do not push hard on the LCD screen as this may cause irreparable damage.

This Touchscreen Series thermostat is designed to be flush mounted and requires a back box of 35mm (minimum depth) to be sunk into the wall prior to installation.

Step 1
Carefully separate the front half of the thermostat from the back plate by placing a small flat head terminal driver into the slots on the bottom face of the thermostat.

Step 2
Place the thermostat front somewhere safe.
Terminate the thermostat as shown in the diagrams on pages 19-20 of this booklet.

Step 3
Screw the thermostat back plate securely into the back box.

Step 4
Clip the front of the thermostat back onto the thermostat back plate.
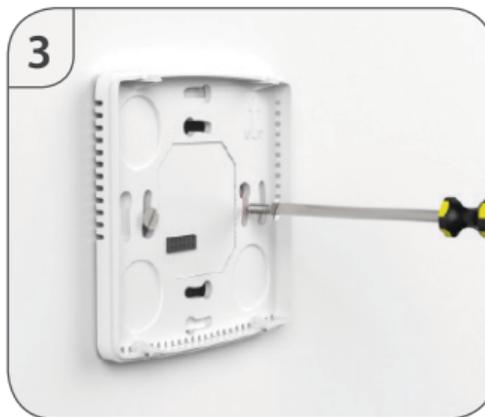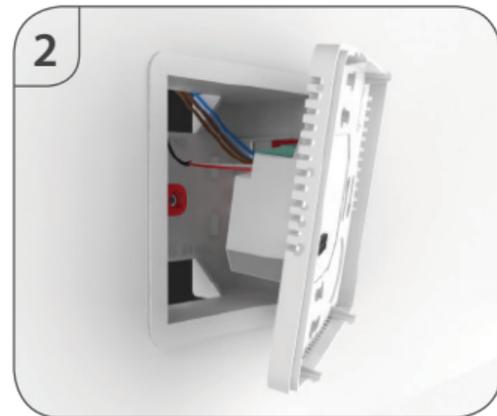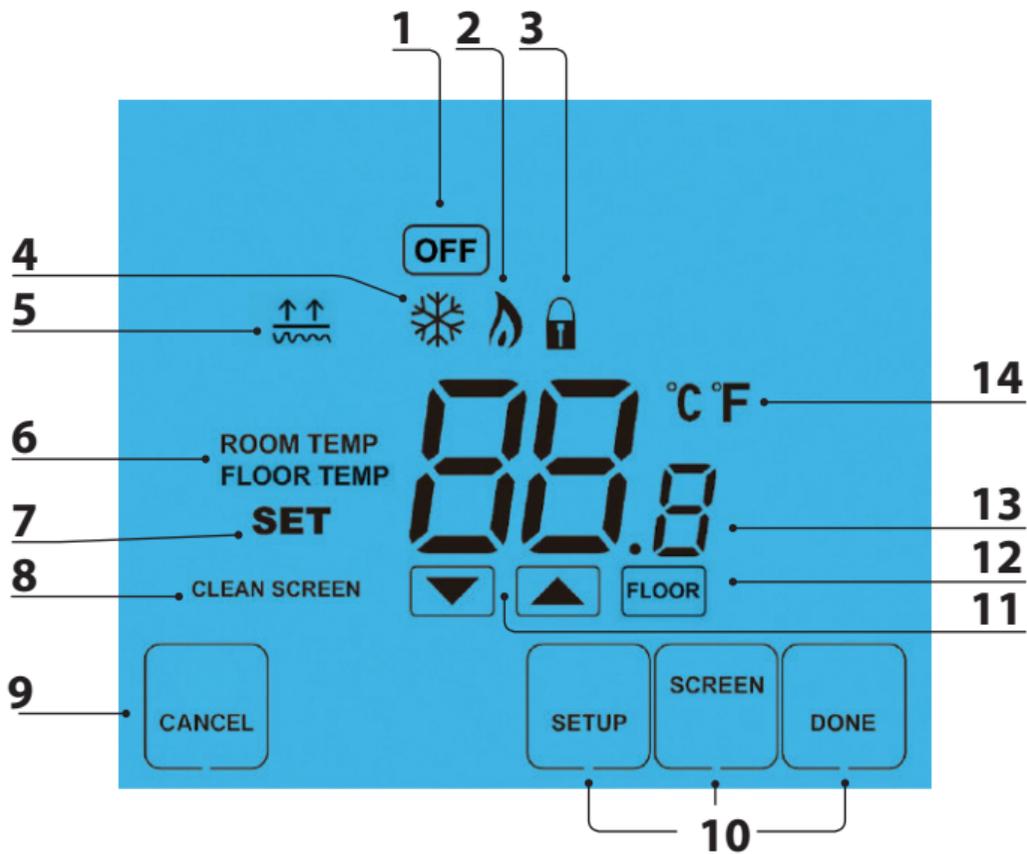
LCD Display

1. OFF Key - Single press to enable/disable frost protection or press and hold to turn off display.
2. Flame Icon - Displayed when the thermostat is calling for heat.
3. Keypad Lock Icon - Displayed when the keypad is locked.
4. Frost Icon - Displayed when the thermostat is in frost protection mode.
5. Floor Temp Achieved Icon - Displayed when the floor set point temperature is reached.
6. Room/Floor Temp - Indicates the current temperature sensor mode.
7. Set - Displayed when the target temperature is adjusted.
8. Clean Screen - Freezes screen temporarily to enable cleaning.
9. Cancel Key - Used to exit setup/program operations.
10. Setup/Programming Keys - Used to navigate setup options.
11. Up/Down Keys - Increase or decrease values shown on bottom digit group.
12. View Floor Temperature Key - Used to change display to show floor temperature.
13. Current Temp - Indicates the current sensor temperature.
14. Units of Temperature - Degrees Celsius or Fahrenheit.

Temperature Display

The temperature display information is driven by two different inputs; the sensor measurement and the target temperature you have set.
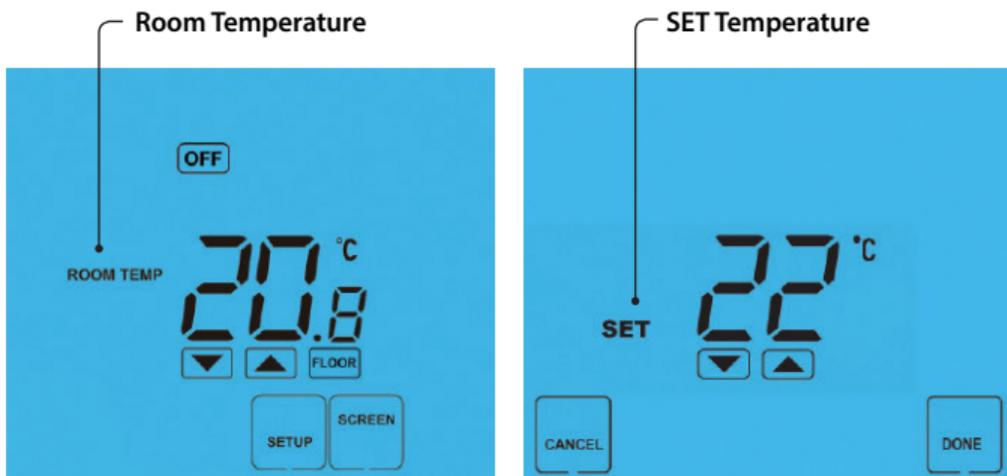
Room Temperature

This is the current room temperature.

SET Temperature

This is the temperature you are trying to achieve in your home.

When the thermostat is in air and floor sensing mode, the thermostat will display a FLOOR key. Pressing this allows you to view the current floor temperature. Pressing FLOOR again will return the thermostat to the room temperature display.

Clean Screen

Pressing SCREEN will disable all keys, providing you 15 seconds to wipe the screen clean before the keys are re-activated.

Locking the Keypad

The thermostat has a keypad lock facility.

• To activate the lock press the bottom right corner of the display and hold for 10 secs.

• When activated, you will see the Keypad Lock symbol.

• To cancel, press the bottom right corner of the display again for 10 secs.

Keypad Lock Indicator
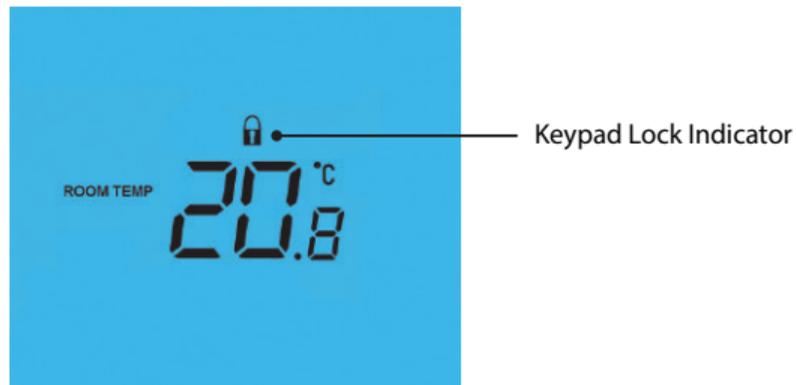
Temperature Control

The ⬇️⬆️ keys under the temperature display allow you to adjust the set temperature.

When you press either of these keys, you will see the temperature and the word SET appear on screen.

Select the desired temperature and press ⬜DONE to confirm and exit.

Set Temperature

Set Icon
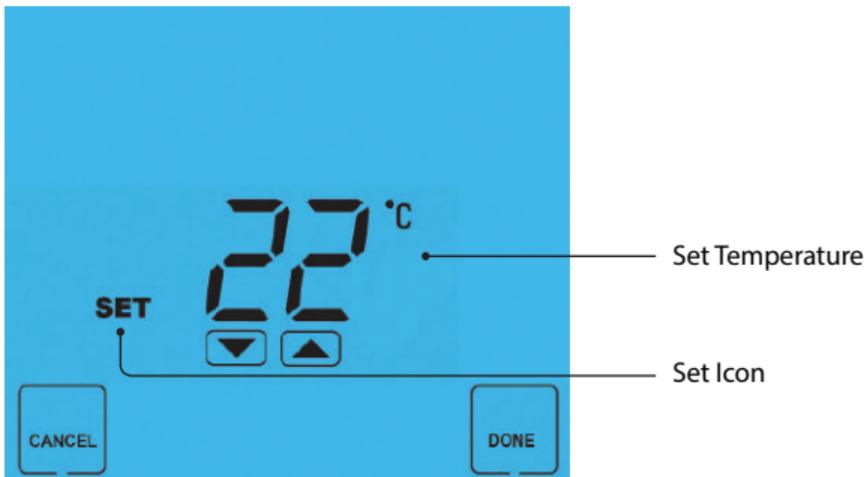
Frost Mode

Pressing the ⬜OFF key once will place the thermostat in frost protect mode.

In this mode, the thermostat will display the frost icon and will only turn the heating on should the room temperature drop below the set frost temperature (see page 14).

Should the heating be turned on whilst in frost mode, the flame symbol will be displayed.

To cancel the frost protect mode, press the ⬜OFF key once.

Frost Protection Mode Enabled
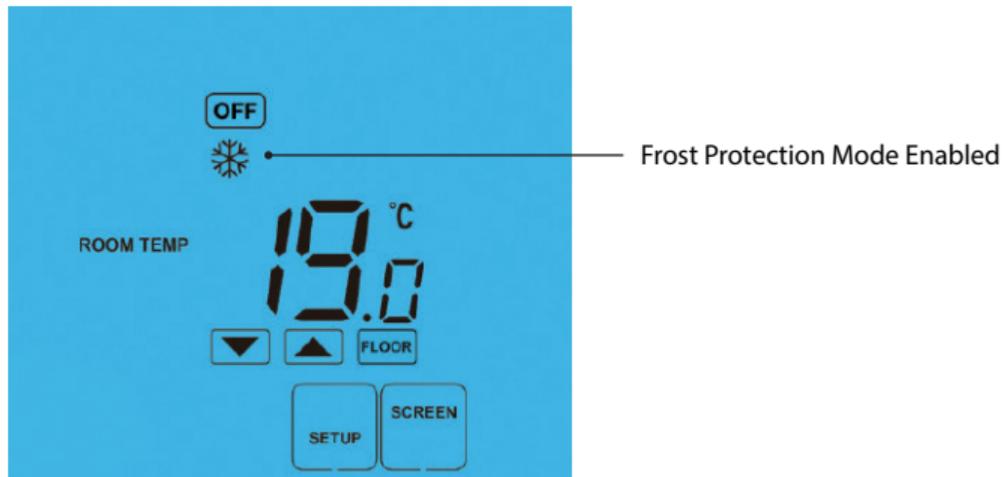
Heating On/Off

The heating is indicated ON when the flame icon is displayed.

When the flame icon is absent, there is no requirement for heating to achieve the set temperature but the thermostat remains active.

To turn the thermostat OFF completely, press and hold the OFF key .... `OFF`
The display and heating output will be turned off completely.*

To turn the thermostat back ON, press the ON key once .... `ON`

Thermostat completely OFF   Thermostat powered ON

See Feature 3 on page 14

Optional Features Explained

THE FOLLOWING SETTINGS ARE OPTIONAL AND IN MOST CASES NEED NOT BE ADJUSTED

Feature 01 – Temperature Format: This function allows you to select between °C or °F.

Feature 02 - Switching Differential: This function allows you to increase the switching differential of the thermostat. The default is 1°C which means the thermostat will switch the heating on 1°C below the set temperature and will turn it off when the set temperature is achieved. With a 2°C differential, the heating will switch on 2°C below the set temperature and will switch off when the set temperature is achieved.

Feature 03 - Frost Protect: You can set whether the thermostat will maintain the frost temperature when the thermostat display is turned off. As a default, this is enabled.

Feature 04 – Frost Protect Temperature: This is the temperature maintained when the thermostat is in frost mode. The range is 07-17°C. The default is 12°C and is suitable for most applications.

Feature 05 – Output Delay: To prevent rapid switching, an output delay can be entered. This can be set from 00 - 15 minutes. The default is 00 which means there is no delay.

Feature 06 – Communication Address: Not used on this model.

⚙️ Optional Features Continued

Feature 07 – Temperature Up/Down Limit: This function allows you to limit the use of the up and down keys. This limit is also applicable when the thermostat is locked and so allows you to give others limited control over the heating system.

Feature 08 – Sensor Selection: This thermostat offers 5 sensor modes.
00 = Built in air sensor. In this mode, the thermostat will maintain the set temperature by monitoring the built in air sensor.
Note: Built in air sensor only MUST NOT be used to control electric under-floor heating.
Floor sensor only or built in air & floor sensor together must be used.
01 = Remote air sensor. In this mode, the thermostat will maintain the set temperature by monitoring the remote air sensor.
02 = Floor sensor. In this mode, the thermostat will maintain the set temperature by monitoring the remote floor temperature.
03 = Floor sensor and built in air sensor. In this mode, the thermostat will maintain the set temperature by monitoring the built in air sensor and will also ensure the floor surface doesn't overheat by monitoring the remote floor sensor.
04 = Floor sensor and remote air sensor. In this mode, the thermostat will maintain the set temperature by monitoring the remote air sensor and will also ensure the floor surface doesn't overheat by monitoring the remote floor sensor.

Feature 09 – Floor Limit Temperature: This function allows you to set a maximum floor temperature in order to protect the floor surface from overheating. This function works for modes 02, 03 & 04 (see above).

🔧 Adjusting the Optional Settings

To adjust the optional settings, follow these steps.

- Press SETUP .... `SETUP`

Feature Number

Setting Value
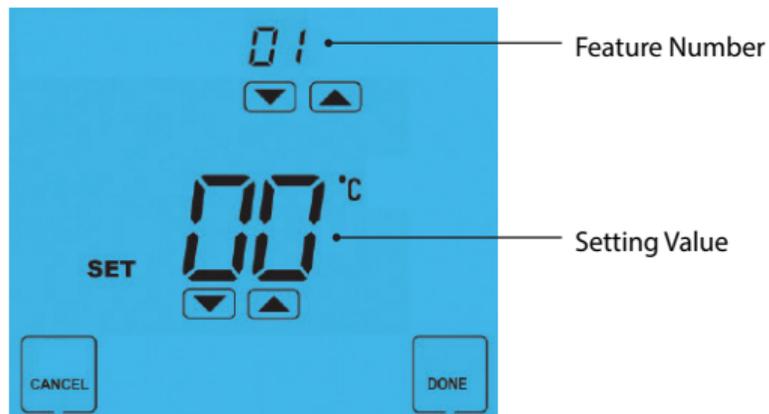
- Use the Up/Down keys at the top of the screen to select the feature number (shown on page 17) and then use the Up/Down keys in the center to adjust the setting .... ▼▲
- Press DONE to confirm settings and exit .... `DONE`

Optional Settings - Feature Table

FEATURE	DESCRIPTION	SETTING
01	Temperature Format	00 = °C 01 = °F (°C = Default)
02	Switching Differential	0.5° - 3.0°C (1.0°C = Default)
03	Frost Protect	00 = Disabled 01 = Enabled (01 = Default)
04	Frost Protection Temperature	07° - 17°C (12°C = Default)
05	Output Delay	00 - 15 Minutes (00 = Default)
06	Communications ID No.	Not used on this model
07	Up/Down Temperature Limit	00° - 10°C (00°C = Default)
08	Sensor Selection	00 = Built in Air Sensor 01 = Remote Air Sensor 02 = Floor Sensor 03 = Floor Sensor & Built in Air Sensor 04 = Floor Sensor & Remote Air Sensor
09	Floor Temperature Limit	20° - 45°C (28°C = Default)

Re-calibrating the Thermostat

If you need to re-calibrate the thermostat, follow these steps.

- Press and hold the OFF key to turn the thermostat OFF .... OFF
- Press and hold the ON key until the temperature appears on screen .... ON
- Use the Up/Down keys to configure the new temperature .... ▼ ▲
- Press DONE to confirm settings .... DONE
- Press the ON key once to turn the thermostat back ON .... ON

Factory Reset

The thermostat has a reset function to restore all settings to their factory defaults.

To perform a factory reset, follow these steps.

- Turn the thermostat OFF by pressing and holding the OFF key.
Press and hold the bottom left corner of the LCD for 10 seconds .... OFF
- All of the screen icons will appear for 2 seconds and then disappear.
- Press the ON key once to turn the thermostat back ON .... ON

Wiring Diagram - DT-ETS
With Remote Floor and Air Sensors for Use in Wet Areas

Maximum load 16A AC resistive

MATTING OR WIRE

Live

Neutral

Supply in 85V - 230V AC

| N | N | L | LOAD | RT2 | RT1 | - |

230VAC

Remote Probes

Air | Floor

Floor Sensor

Remote Air Sensor
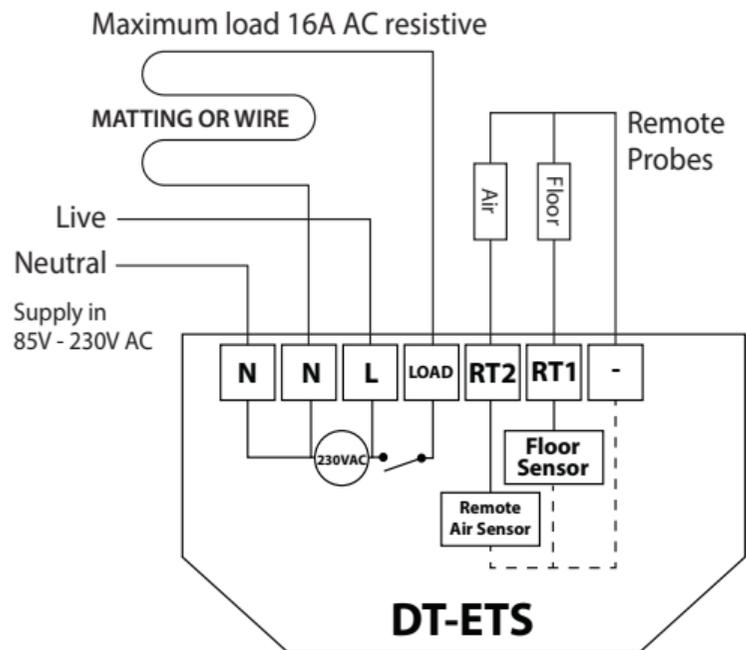
DT-ETS

The mains supply must be properly protected and fused.
DT-ETS with remote floor and air probes for use in wet areas.

Wiring Diagram - DT-ETS
With Remote Floor Probe Used for Use in Dry Areas or For Direct Floor Control

Maximum load 16A AC resistive

MATTING OR WIRE

Live

Neutral

Supply in 85V - 230V AC

| N | N | L | LOAD | RT2 | RT1 | - |

230VAC

Remote Probe

Floor

Floor Sensor

Remote Air Sensor
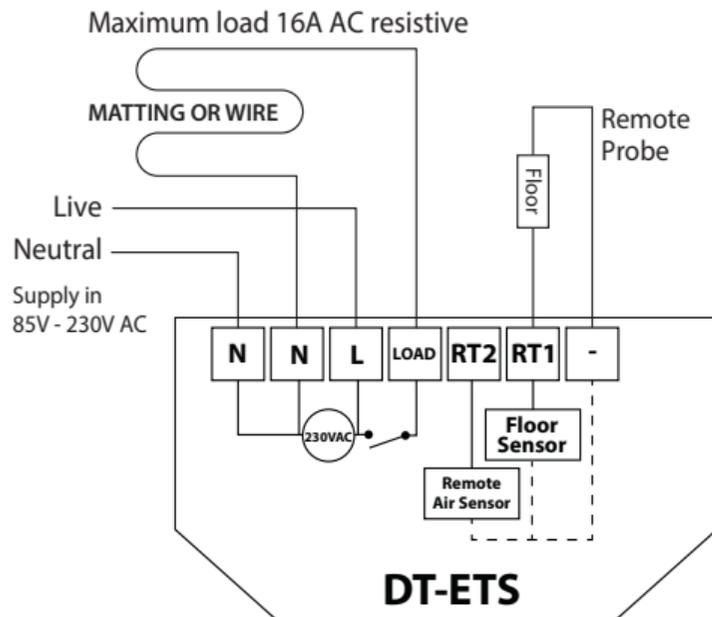
DT-ETS

The mains supply must be properly protected and fused.
DT-ETS wired with remote floor probe used for normal 'dry' zones or where direct control of the floor is needed

Error Codes

E0 = The internal sensor has developed a fault.
You should contact your thermostat retailer for assistance.

E1 = The remote floor probe has not been connected, has been wired incorrectly or the probe is faulty.

E2 = The remote air probe has not been connected, has been wired incorrectly or the probe is faulty.

Error Icon

Error Number

Notes

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PRODUCT INSTALLATION GUIDE

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