

# FMT230D

*Electronic flush mounted  
dial setting room thermostat  
with LCD display*

## *User & Installation Instructions*



Certification Mark

*Danfoss*



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# Installation Instructions



Features	FMT230D
Temperature Range	5 - 30°C
Setting dial and LCD display	●
Chrono-proportional or On/Off control	●
Heat or cool operation	●
Output relay contact rating	10-264 Vac, 50/60 Hz, 3 (1) A
Switching action	1 SPDT Type 1B
Power supply	230 Vac $\pm$ 15%, 50/60 Hz
Maximum ambient temp	45°C
Rated Impulse Voltage	2.5kV
Ball Pressure Test	75°C
Dimensions (mm)	85 wide x 85 high x 35 deep
Pollution Situation	Degree 2



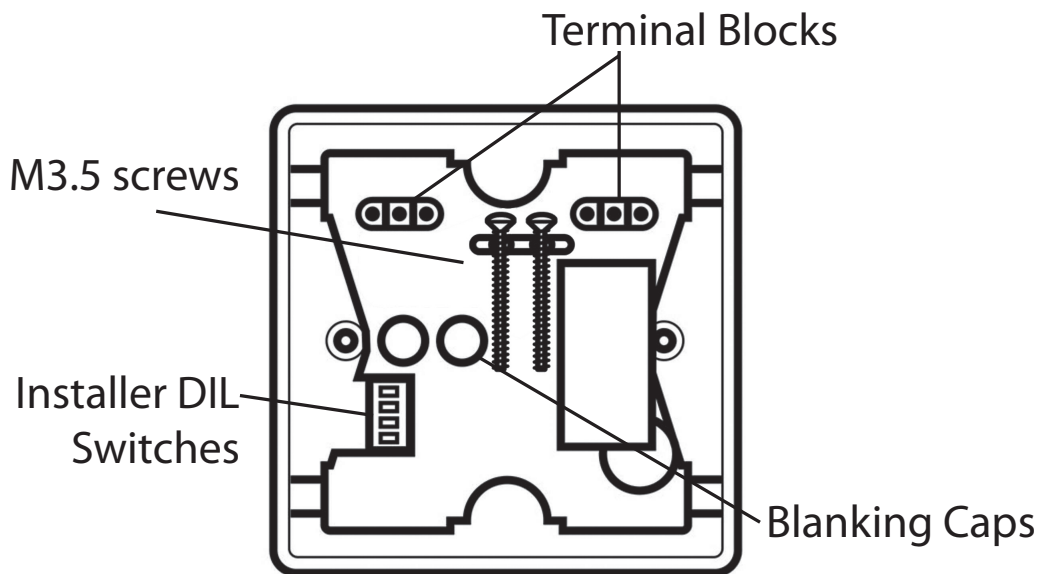
## Mounting

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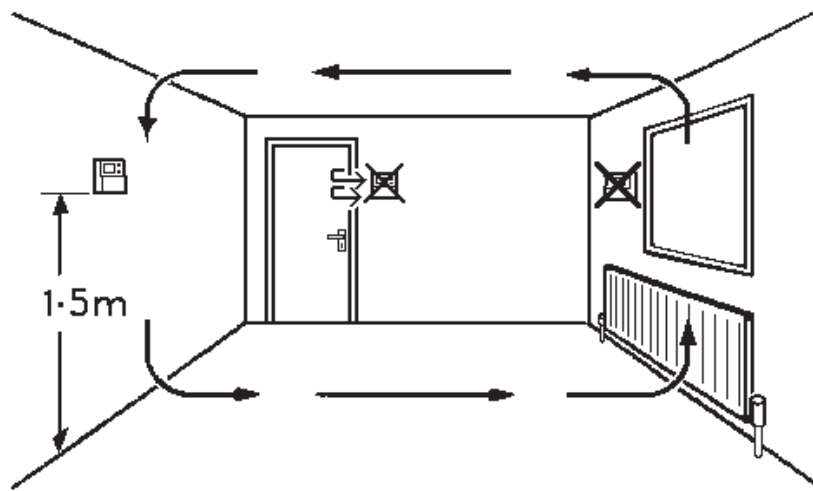
The product is designed to mount on to a standard one-gang flush mounted electrical accessory box having a minimum depth of 25mm. Fixing screws and screw blanking caps are provided with the product.

### Rear View of Thermostat

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Fix at a height of 1.5m approx from the floor, away from draughts or heat sources such as radiators, open fires or direct sunlight.



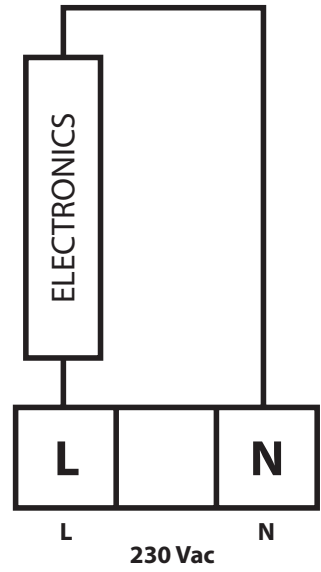
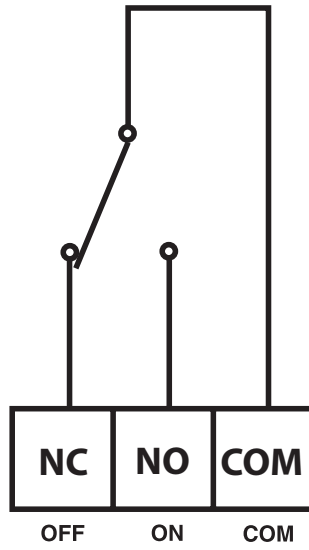
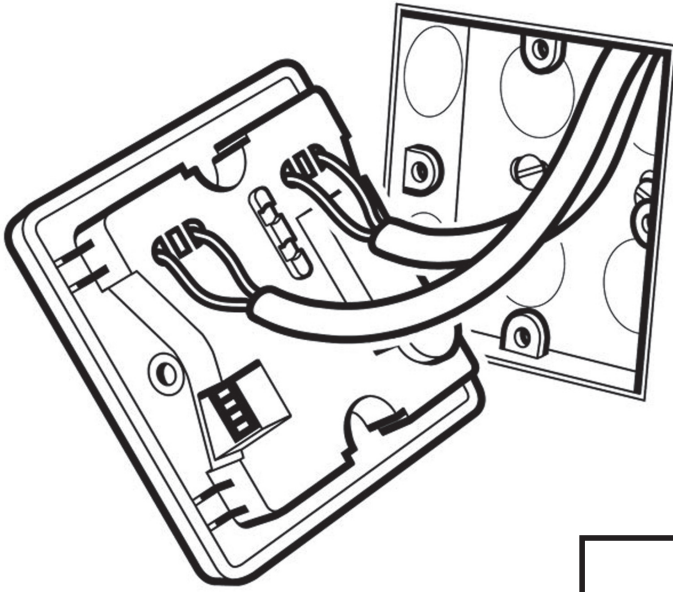
**Please Note:**

*This product should only be installed by a qualified electrician or competent heating installer and should be in accordance with the current edition of the IEEE wiring regulations.*



# Wiring

## Installation Instructions

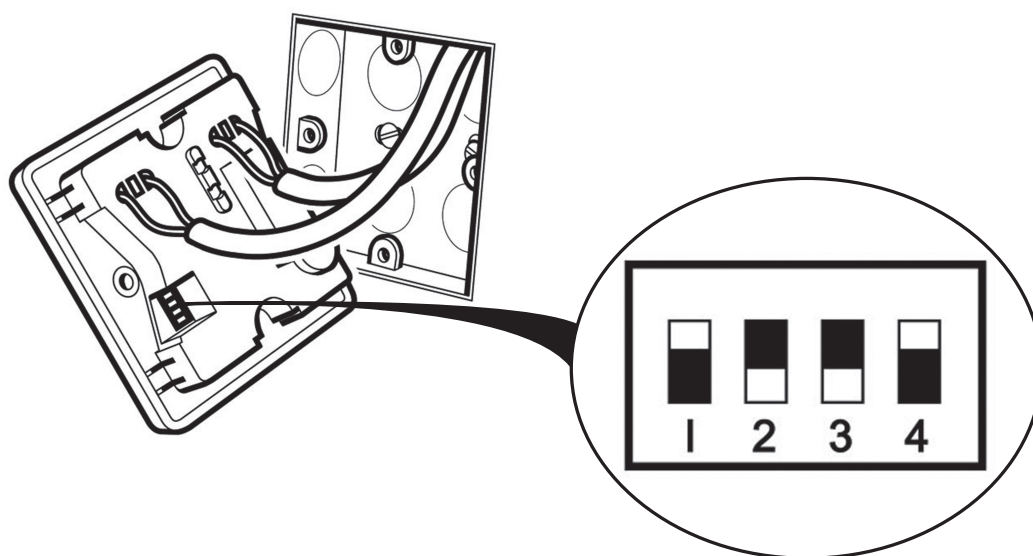


## DIL switch settings

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*Slide the DIL switches to the settings required.*



**ON/OFF** - boiler switches ON when below set temperature and OFF when above.

**CHRONO** - energy saving feature which fires the boiler at regular intervals to maintain a set temperature, achieving a constant ambient environment for the user.

- use **6 cycles** for radiator systems.
- use **3 cycles** for underfloor heating.
- use **9 or 12 cycles** for warm air central heating or fan coil units.



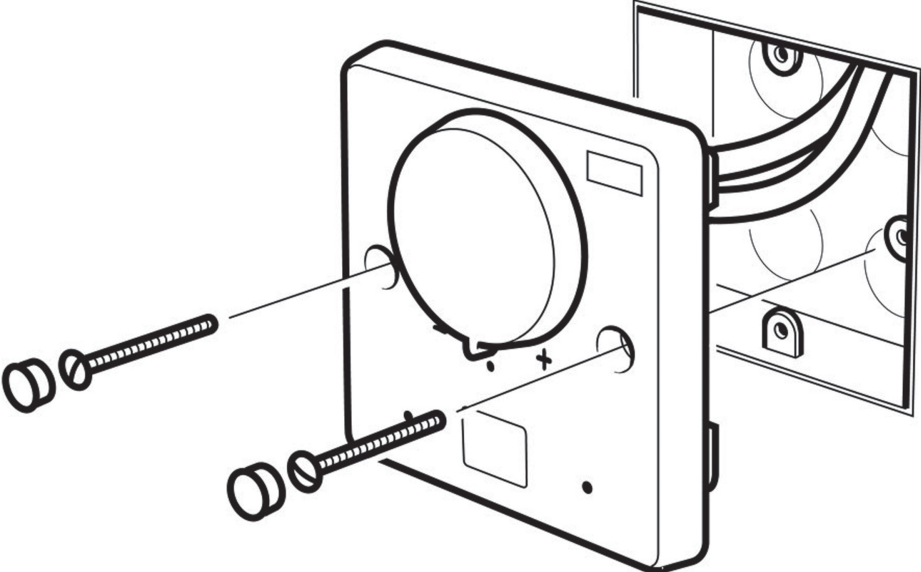
## DIL Switch Settings

1	COOL	<input type="checkbox"/>	HEAT
2	ON/OFF	<input type="checkbox"/>	CHRONO
3	6/12 CYCLES	<input type="checkbox"/>	3/9 CYCLES
4	9/12 CYCLES	<input type="checkbox"/>	3/6 CYCLES



# Mounting (continued)

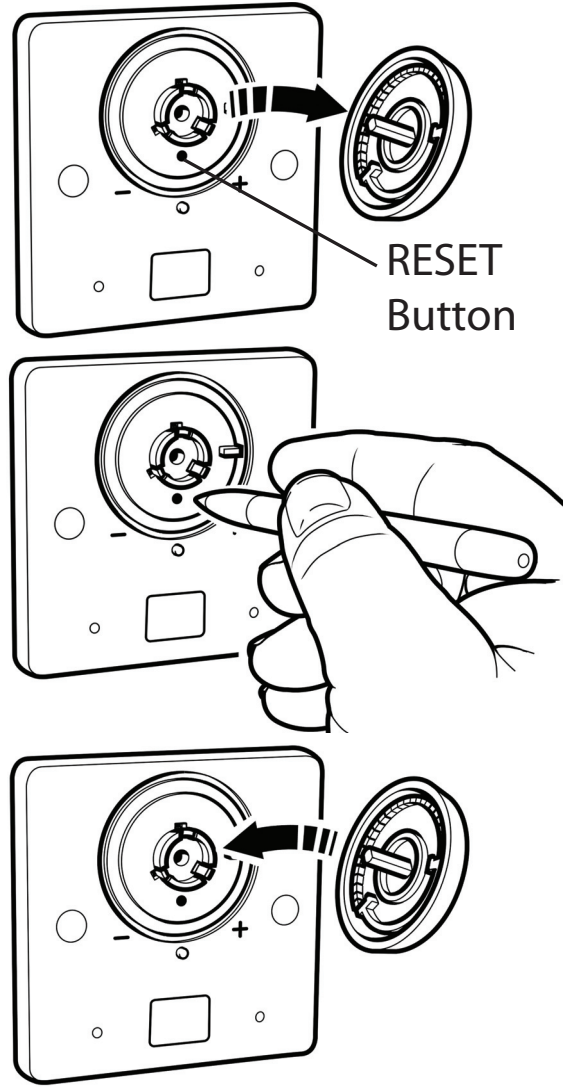
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## Resetting the unit

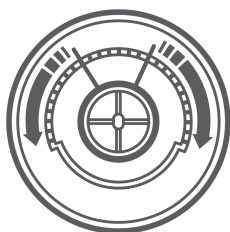
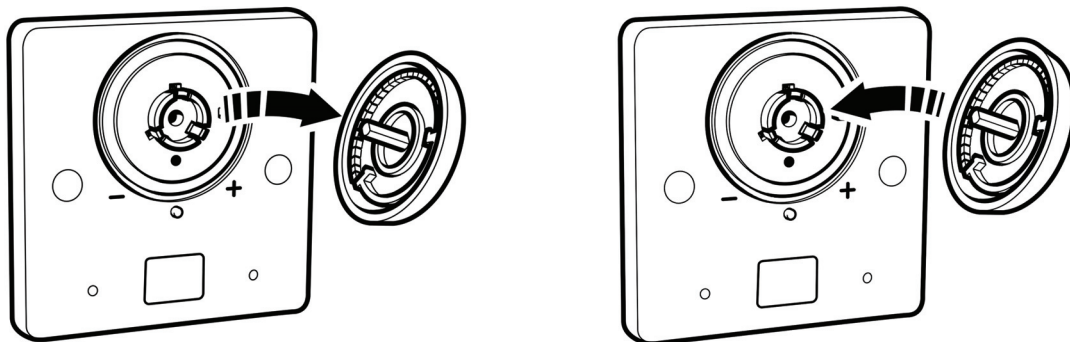
When power is first applied, remove the dial and press the **RESET** button for 2 seconds.



## Locking & Limiting \*

**Locking** - setting the thermostat at a temperature which cannot be altered by the user.

**Limiting** - allowing the user to alter the temperature within a predefined range, which is less than the full range of the product (i.e. between 18-22°).



**Note:** A tamperproof dial is available for the FMT230D. Please contact the Danfoss sales office on 0845 1217 400 to order.

\* The locking and limiting spring is supplied with the product and needs to be fitted by the installer.



## What is a room thermostat?

...an explanation for householders

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.

Turning a room thermostat to a higher setting will not make the room heat up any faster. How quickly the room heats up depends on the design of the heating system, for example, the size of boiler and radiators.

Neither does the setting affect how quickly the room cools down.

Turning a room thermostat to a lower setting will result in the room

being controlled at a lower temperature, and saves energy.

The heating system will not work if a timeswitch or programmer has switched it off.

The way to set and use your room thermostat is to find the lowest temperature setting 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 one degree 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.

If your heating system is a boiler with radiators, there will usually be only one room thermostat to control the whole house. But you can have different temperatures in individual rooms by installing thermostatic radiator valves (TRVs) on individual radiators. If you don't have TRVs, you should choose a temperature that is reasonable for the whole house. If you do have TRVs, you can choose a slightly higher setting to make sure that even the coldest room is comfortable, then prevent any overheating in other rooms by adjusting the TRVs. 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 prevent the thermostat from working properly.



## User Instructions

### Display

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The LCD displays actual room temperature until the setting dial is moved.

### LED Indicators

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Power on - Green (left hand LED).

Thermostat output on - Red (right hand LED).

### Setting the temperature

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Turn setting dial to required temperature. The selected temperature will **flash** in the LCD to signify it is showing **set temperature**.

After a short period the display stops flashing and shows **actual room temperature**.

## **Thermostat status**

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A flame symbol (🔥) will be shown whenever the thermostat is in heating mode, a snowflake symbol (❄️) will be lit when the thermostat is in cooling mode. To change mode please refer to DIL switch setting on page 8.



[www.danfoss.com/BusinessAreas/Heating](http://www.danfoss.com/BusinessAreas/Heating)

This product complies with the following EC Directives:

**Electro-Magnetic Compatibility Directive.**

**(EMC)** (2004\108\EC)

**Low Voltage Directive.**

**(LVD)** (2006\95\EC)

