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*Danfoss*



# **TP4000 Range**

## Electronic Programmable Room Thermostat

Danfoss Heating

**User Guide**

# TP4000 Range

*Electronic programmable room thermostat*



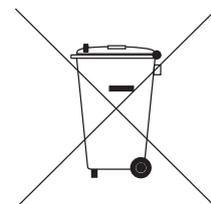
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Certification Mark

This product complies with the following EC Directives:  
Electro-Magnetic Compatibility Directive.  
(EMC) (2004/108/EC)  
Low Voltage Directive.  
(LVD) (2006/95/EC)

CE



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# User Instructions

## TP4000 Range

### *Electronic Programmable Room Thermostat*

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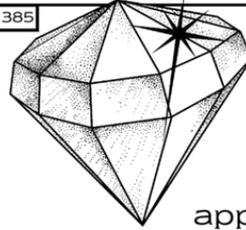
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### **What is a programmable room thermostat?**

... an explanation for householders

A programmable room thermostat is both a programmer and a room thermostat. A programmer allows you to set 'On' and 'Off' time periods to suit your own lifestyle. A room thermostat 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.

So, a programmable room thermostat lets you choose what times you want the heating to be on, and what temperature it should reach while it is on. It will allow you to select different temperatures in your home at different times of the day (and days of the week) to meet your particular needs.

Turning a programmable 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 programmable room thermostat to a lower setting will result in the room being controlled at a lower temperature, and saves energy.

The way to set and use your programmable room thermostat is to find the lowest temperature settings that you are comfortable with at the different times you have chosen, and then leave it alone to do its job. The best way to do this is to set low temperatures first, say 18°C, and then turn them up by one degree each day until you are comfortable with the temperatures. You won't have to adjust the thermostat further. Any adjustments above these settings will waste energy and cost you more money.

If your heating system is a boiler with radiators, there will usually be only one programmable 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.

The time on the programmer must be correct. Some types have to be adjusted in spring and autumn at the changes between Greenwich Mean Time and British Summer Time. You may be able to temporarily adjust the heating programme, for example, 'Override', 'Advance' or 'Boost'. These are explained in the manufacturer's instructions.

Programmable 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.

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## 1.0 Basics

### 1.1 Your programmable room thermostat

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The TP4000 allows you to programme up to 6 times and temperatures at which your heating will come on and go off each day.

It features several user overrides including frost protection, thermostat mode and time or temperature display.

### 1.2 Preset Programmes

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Your TP4000 comes ready programmed with a set of operating times and temperatures which often suit most people.

Event	Time	Temp °C
1	06:30	20
2	08:30	15
3	11:30	20
4	13:30	15
5	16:30	21
6	22:30	15

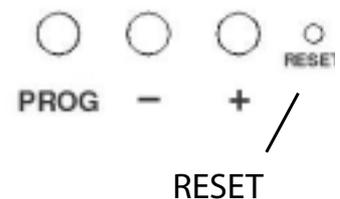
If you want to change any of these settings you can do so by following the instructions on page 8.

First, follow the steps on page 7 to set the correct time and date.

### 1.3 Before you start

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Open the flap on the front of the programmer and press the **RESET** button with a non-metallic object until the display goes blank. This will ensure that the factory programmes are set and that the micro-computer in the product is operating correctly.



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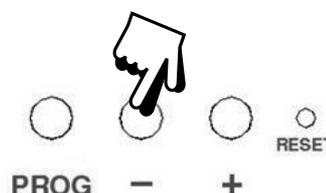
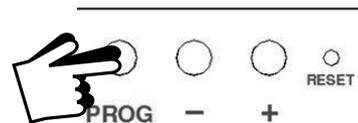
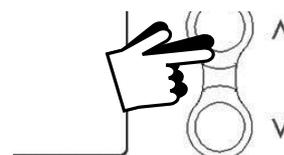
## 1.4 Setting the Clock

*Note: clock is displayed in 24 hour mode.*

Press **PROG** and **Λ** until the time on the display flashes.

Use **+** or **-** to adjust the TIME (press and hold to change in 10 min increments).

Press **PROG** to enter the TIME.



## 1.5 Running your programme

If you are happy to use the preset programmes on page 6, you don't need to do anything else.



Your unit is now in RUN mode.

## 2.0 Advanced

### 2.1 Before you change the preset programmes

#### **Please Note**

The unit must be programmed in sequence. Event times cannot be programmed out of sequence.

If you want to leave a preset time as it is, simply press **PROG** to move on to the next setting.

*During programming, if no buttons are pressed for 2 minutes the unit will automatically return to RUN mode, and the programme set up to that minute will be active.*

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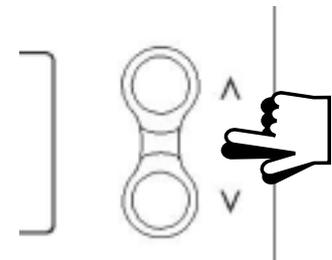
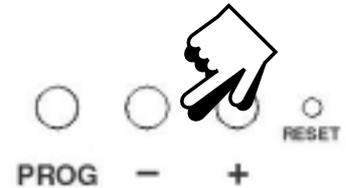
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## 2.2 Changing the preset programmes

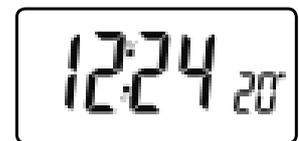
- Press **PROG** until 1st pre-set time and temperature appears in display.
- Use **+** or **-** buttons to adjust the TIME (press and hold to change in 10 min increments).
- Use **Λ** or **V** buttons to adjust the TEMPERATURE.
- Press **PROG** to move to next preset time & temperature (Event 2).
- Repeat steps b, c & d for programming Events 3, 4, 5 & 6.



Note: Press and hold **PROG** at any time will make the unit return to RUN mode.

## 2.3 Running your programme

Press **PROG** – the colon in the LCD display will start to flash. The heating will now be controlled with the programmed times and temperatures.



## 2.4 User Overrides

*Sometimes you may need to change the way you use your heating temporarily, e.g. due to unusually cold weather. The TP4000 has several user overrides, which can be selected without affecting the thermostat programming.*

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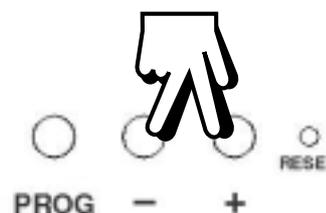
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## 2.5 Altering display to show either time or actual room temperature

- Press **+** and **-** together to change between settings.



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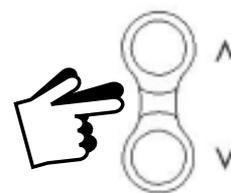
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## 2.6 To temporarily alter the current programmed temperature

- Press **Λ** or **V** until required temperature is displayed.

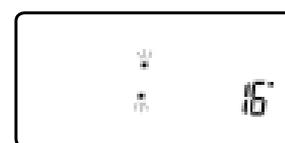
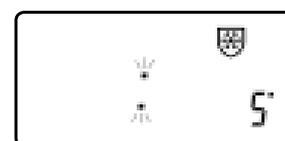


*(This override will automatically cancel at beginning of next programmed event).*

## 2.7 Frost Protection and Thermostat Mode

*A constant temperature between 5°C-30°C can be selected if desired, for example, for frost protection.*

- Press **Λ** and **V** together.
- Use **Λ** or **V** buttons to set the desired low temperature.
  - At 5°C a **snowflake** symbol appears indicating **frost protection** mode.
  - At all other temperatures the snowflake symbol is turned off.
- To return to automatic programming press **Λ** and **V** together again.



## 2.8 Toggle between 12 hour and 24 hour clock

To change time display between 12 hour and 24 hour clock. Press **Λ** and **+** together to toggle between 12 and 24 hour clock.

## 2.9 Toggle between °C and °F scaling

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To change between °C and °F scaling. Press **V** and - together to toggle between °C and °F temperature scaling.

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## 3.0 Battery Replacement

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When batteries are low a battery symbol will flash in the LCD display. You have 15 days to replace the battery before the unit switches off.



**ES**

**NL**

When changing batteries, remove old batteries and insert new ones within one minute and programming will not be lost.

**GR**

**IMPORTANT: always use high quality alkaline batteries**

**PL**

**!** *NB. If the display ever goes blank during normal operation, the batteries will need to be renewed, the unit reset and the time reprogrammed. The event times and temperatures will be retained.*

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## 4.0 Resetting the unit

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**Partial reset:** Press **RESET** (used to restart micro-computer) if display freezes for any reason. This does not reset any programme, clock or date. It is recommended that this is done at time of installation.

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**User full reset:** Press **RESET** whilst holding down **PROG** button. This resets event times and and temperatures back to the factory presets. The unit must be re-programmed. The correct time will be retained.

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