

User Guide

Danfoss *Icon*™ Programmable Room Thermostat, 230 V

Introduction

Danfoss *Icon*™ Programmable is a room thermostat especially designed for floor heating systems.

Danfoss *Icon*™ Programmable is very easy to use:

- Seven pre-defined and fixed heating programs makes it easy to find a schedule that suits your personal needs.
- An easy-to-use interface with icons for different modes makes it simple to override a program without changing the program settings.

Know your Danfoss *Icon*™ Programmable

Wake up the thermostat

Danfoss *Icon*™ Programmable is designed to blend in with any interior. When not in use, the display turns off and becomes virtually invisible.

When the screen is touched, the display comes to life instantly and displays the current room temperature for two seconds, then switches to **Home Screen**.

The **Heating** icon  is displayed, if the thermostat has turned on the heat.

The **Cooling** icon  is displayed, if the thermostat has turned on the cooling (only if cooling is enabled in your system).



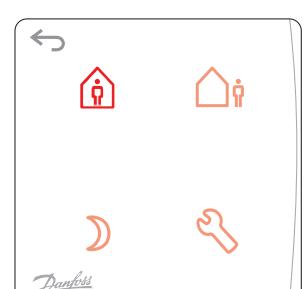
The Home Screen

On the **Home Screen** the icon for active mode is fully lit, e.g. **At Home** .

Icons for inactive modes are dimmed down, but still visible..

Activate another mode by touching the icon.

If no icon is touched, the screen will go to sleep after ten seconds.



Home Screen icons

-  **At Home:** Touch icon to set temperature for the **At Home** period (your comfort temperature).
-  **Away:** Touch icon to set temperature for the **Away** period (your economy temperature).
-  **Asleep:** Touch icon to set temperature for the **Asleep** period (your comfort temperature at night).
-  **Settings:** Touch icon to choose program and change settings.
-  Return to the previous screen/setting.

How to use Danfoss *Icon*™ Programmable

Danfoss *Icon*™ Programmable is easy and intuitive to use:

- You change value with  or .
- You scroll between menus and programs with  or .
- You confirm with . The screen is flashing shortly to indicate that the new setting is active.

Forecast feature

Danfoss *Icon*™ Programmable has an automatic Forecast feature, where the thermostat during the first two weeks adapts itself to the characteristics of the room.

It means that **Danfoss *Icon*™ Programmable** learns when to start heating up in order to reach the desired **At Home** temperature on time (re-heating times can be very different from room to room).

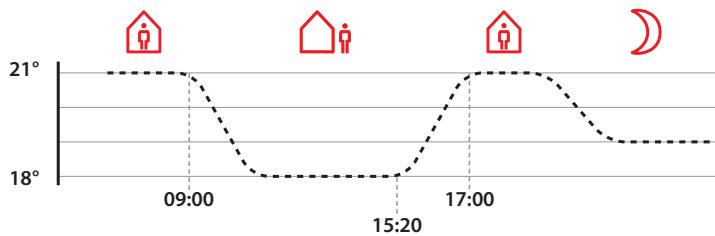
This is especially important with underfloor heating in heavy floor constructions, because the floor concrete need to be heated, and it takes time.

Example:

Program P4 is chosen.

Away temperature from 09:00 is set to 18°C.

At Home temperature from 17:00 is set to 21°C.

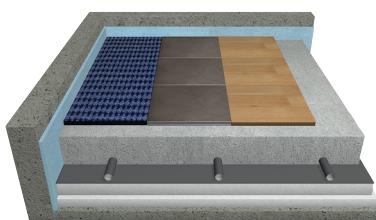


The Forecast feature has learned that heating must start up at 15:20 in order to reach the **At Home** temperature of 21°C at 17:00.

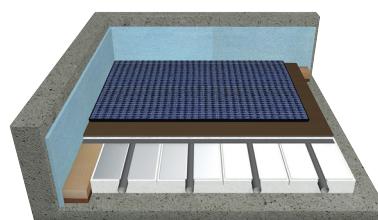
Recommendations on set-back temperatures

For a traditional heavy floor heating system with pipes embedded in concrete, Danfoss recommends **Away** and **Asleep** (set-back) temperatures a few degrees lower than the **At Home** (comfort) temperature. A larger temperature difference will be "overruled" by the Forecast feature.

With a light (dry) floor construction cooling / heating time is shorter, and you might choose a larger temperature difference.



Heavy floor heating construction



Light floor heating construction

How to use the modes

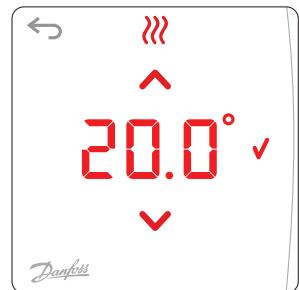
At Home mode

Touch  to activate the *At Home* mode.
 Touch  again to show the desired *At Home* temperature.
 Default temperature is 21° C.
 Change the desired temperature by touching  or 
 Confirm your settings by touching .



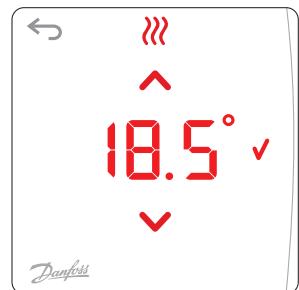
Away mode

Touch  to activate the *Away* mode.
 Touch  again to show the desired *Away* temperature.
 Default temperature is 17° C.
 Change the *desired* temperature by touching  or 
 Confirm your settings by touching .



Asleep mode

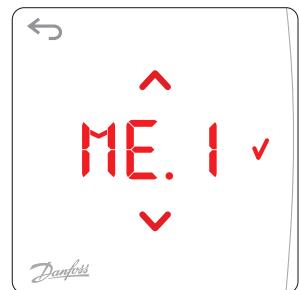
Touch  to activate the *Asleep* mode.
 Touch  again to show the desired *Asleep* temperature.
 Default temperature is 19° C.
 Change the desired temperature by touching  or 
 Confirm your settings by touching .



Settings mode

Touch  to open the *Settings* menu.
 Toggle between *Settings* menus by touching  or 
 Confirm your choice by touching .

Note! *Settings* are usually made by the installer, and you will normally not have any need for changing the settings.



Reset to default factory settings

Press  and  simultaneously for at least 3 seconds to reset Danfoss *Icon*™ Programmable to the default factory settings.

The display toggles between  and 
 Confirm by touching .

User menus**ME. 1 Choose program**

Select between the weekly programs **P.0** to **P.6** with **▲** or **▼**.

Confirm your choice with **✓**.

Note! See overview of pre-defined and fixed heating programs on page 5 & 6.

ME.2 Temperature limitation

Limitation of the temperature range between 5 and 35° C.

Set **highest** and **lowest** temperature with **▲** or **▼**.

Confirm each setting with **✓**.

ME.3 Setting time and date

Set the clock (for correct function of Daylight Saving Time and the weekly programs).

Set **Year YY**, **Month MM**, **Day dd**, **Hour HH** and **Minute MM** with **▲** or **▼**.

Confirm each setting with **✓**.

ME.4 Daylight Saving time

Choose between Automatic Shift **AUT** or Shift Off **OFF** with **▲** or **▼**.

Confirm your choice with **✓**.

ME.5 Software version

Identification of the software version in the **Danfoss *Icon™* Programmable** thermostat.

Menu 6 to 9 are only relevant for the installer (access by pressing  for at least 3 seconds)

ME.6 Set actuator type

Choose between **Normally Closed NC** or **Normally Open NO** with **▲** or **▼**.

Confirm with **✓**.

ME.7 Set heat emission characteristics of the floor

Choose **Fast FA S**, **Medium ME d** or **Slow SL D** heat emission characteristics with **▲** or **▼**.

Confirm with **✓**.

User menus with floor sensor

Menu 8 and 9 are only visible on the display, if a floor sensor is connected.

ME.8 Temperature control with Floor sensor

Choose between temperature control with only **Floor sensor FL** or a **Combination of Floor and Internal sensor CI** with **▲** or **▼**.

Confirm with **✓**.

CI: Controls the temperature based on air temperature in the room, but within the floor temperature range set in Menu 9.

FL: Controls the temperature based on a fixed floor temperature, which is set for each of the modes *At Home* , *Away*  and *Asleep* .

Menu 9 is only visible on the display, if CI is chosen in Menu 8.

ME.9 Limitation of the floor temperature

Set highest and lowest floor temperature between 18 and 45°C with **▲** or **▼**.

Confirm each setting with **✓**.

How to choose a Program

Touch  to open the *Settings* menu. **ME. 1** is displayed.

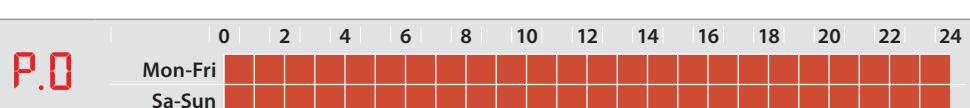
ME. 1 is the *Programs* menu. Open the menu by touching **✓**.

Toggle between the programs with **▲** or **▼**.

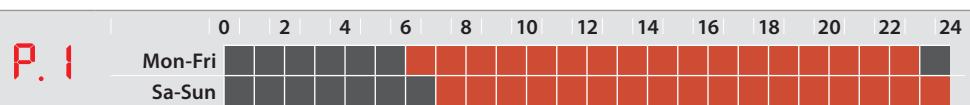
Confirm your choice with **✓**.

Note! Desired temperatures are set by accessing each of the three modes via the Home Screen.

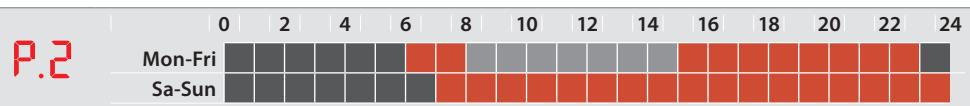
Program overview



Default program. No automatic schedule, last chosen temperature remains active until settings are changed manually.



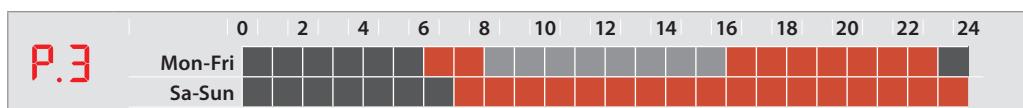
Example: Residents At Home during the day, with Asleep temperature set-back in the night.



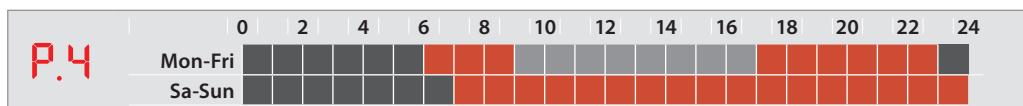
Example: Residents Away from 8 to 15, with Asleep temperature set-back in the night.

... more programs 

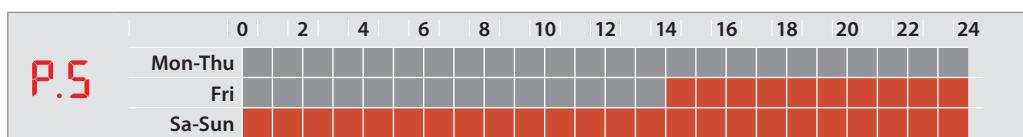
Program overview



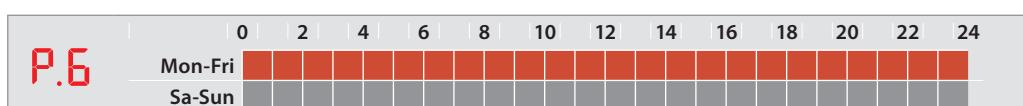
Example: Residents **Away** from 8 to 16, with **Asleep** temperature set-back in the night.



Example: Residents **Away** from 9 to 17, with **Asleep** temperature set-back in the night.



Example: Program for weekend cottages. Residents **Away** Monday to Friday afternoon and **At Home** during the week-end.



Example: Program for shops and offices.

Overriding a program

You can temporarily override a program by touching an icon on the **Home Screen**. The new temperature will be active until next scheduled program change.

Example: You come home during an **Away** period and touch the **At Home** icon to raise the room temperature to the **At Home** level.

Alarm

If a connected floor sensor becomes defective, an alarm is indicated by **●** flashing on the display for 1 second every 20 seconds.

Touch the screen and the display toggles between **Err** and **SEN**.

Confirm with **✓**.

Normal operation (setting of temperature, etc.) is now possible with the room sensor only. The alarm is still on, indicated by **●** flashing.

Contact your installer and let him cancel the alarm by:

1. Re-connecting the floor sensor. If the flashing **●** disappears the error is corrected.
2. Exchange the floor sensor. If the flashing **●** disappears the error is corrected.
3. Disconnect the floor sensor and reset **Danfoss Icon™ Programmable** to default factory settings. The alarm is now off, but the thermostat works without floor sensor.

Danfoss A/S

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