



# **FLEXBONE® HEAT**

## **Touch thermostat**

### **Interactive**

### **User Manual**

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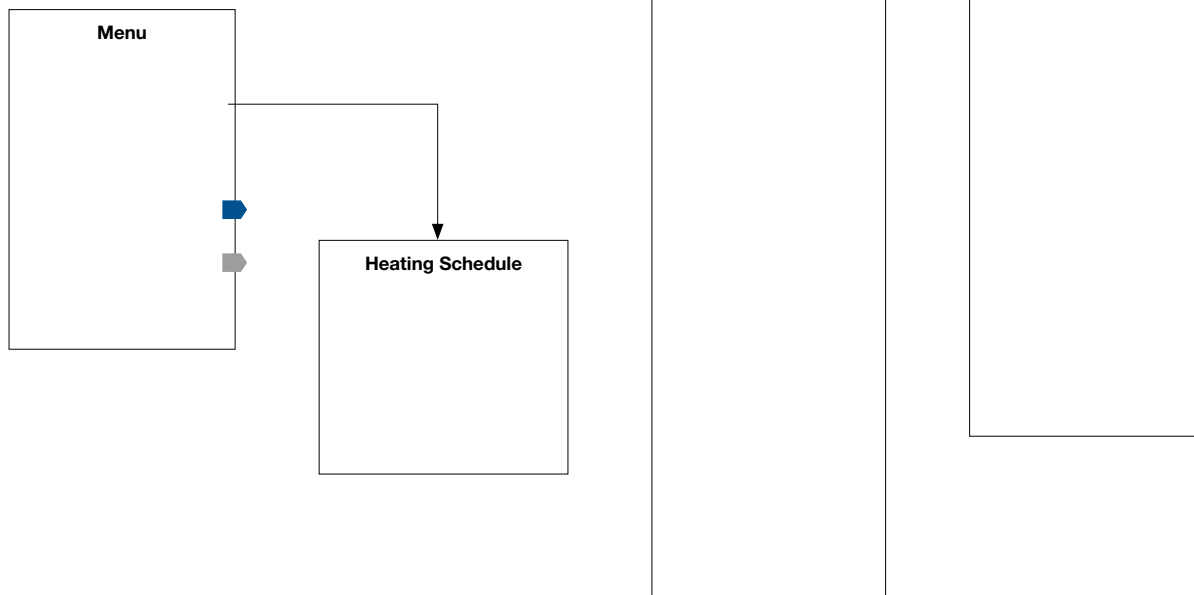


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## 2. Menu Overview



### Menu Structure



# 3. Introduction



Congratulations on the purchase of your new touch thermostat. We hope that you will enjoy the ease of use offered by the touchscreen and the intuitively designed user interface. You can program the thermostat in any way you would like with the options provided under Heating Schedule and User Settings.

The thermostat will switch your underfloor heating system on at predetermined times each day of the week. You can set individual temperatures for up to six separate events for each day of the week. Lowering the temperature when your home is unoccupied will reduce your energy costs without reducing comfort.

The thermostat comes with a preset heating schedule that is suitable for most homes. Unless you change the settings, the thermostat will operate according to this preset heating schedule.

The thermostat features an adaptive function that automatically changes the heating start times to ensure that the required temperature has been reached at the beginning of any specific event. After a few days, the adaptive function will have learned how much earlier the heating must be switched on.

The resistive touchscreen only requires a soft tap with your fingertip to register the touch. In this manual, the touch areas on the screen will be referred to as buttons.



## 4. General Operation



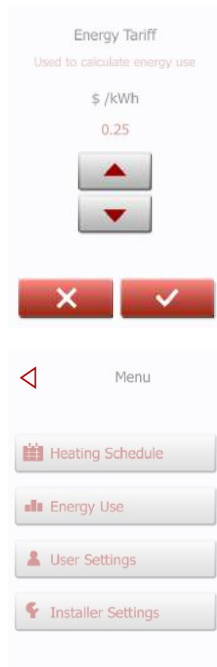
The thermostat has two physical buttons. A ground fault circuit interrupter (GFCI) test button is located on top of the thermostat, and a power/reset button is located on the right side of the thermostat.

The GFCI should be tested monthly (all settings, including time and date, will be remembered).

The thermostat is an intuitively operated touch thermostat in which the touchscreen is used to navigate through the menus and to change the settings.

The function of the buttons and icons on the home screen can be seen below.

# 4.1.Navigation Buttons



## Accept/Back/Cancel/Arrow Up/Arrow Down/Arrow Left/Arrow Right

Whenever you change a parameter setting, you must tap the “Accept” button for the thermostat to acknowledge the change.

“Accept” is shown on the screen as “√”.

“Back” is shown on the screen as a button marked with a hollow arrow pointing to the left.

In the various menus and submenus, you will find the “**Back**” button in the upper left corner of the touchscreen.

Tap the “Back” button to return to the previous menu.

“Cancel” is shown on the screen as a button marked “**X**”.

Although “Cancel” has the same effect as “Back”, it also results in all the unsaved settings being discarded.

As soon as you leave a home screen and enter one of the menus, either a “Back” button or a “Cancel” button will be shown.

To return to the home screen, tap **Back/Cancel** once or multiple times depending on where you are in the menu structure.

“Arrow Up”, “Arrow Down”, “Arrow Left”, and “Arrow Right” are used to toggle settings and values and to navigate through the menus. The “Arrow Up” and “Arrow Down” buttons are accelerated buttons. Holding either of them will make the value change continuously.

## 5. Ground Fault Circuit Interrupter (GFCI) 1/2



### GFCI Error

Ground fault detected.  
Press the button on the  
RIGHT SIDE of the  
thermostat.

If the problem  
persists, please contact  
your installer

The thermostat has a built-in GFCI that ensures personal safety in case of ground faults.

It is important that the GFCI is tested monthly. Installation and use must be according to the national and local regulations.

### Testing the GFCI:

Press the “TEST” button.

The test is successful if the red LED on the right of the thermostat flashes once every two seconds and “GROUND FAULT” appears on the display. If this does not occur, check the installation.

Press the “Standby/Reset” button to reset the GFCI.

The red LED will stop flashing and the display returns to its normal appearance. If the test fails, repeat the test. If it continues to fail, ask an electrician to check the installation.

If, during normal operation, the GFCI trips without the “TEST” button being pressed, there could be a ground fault! To check whether it is a ground fault or nuisance tripping, press “Standby/Reset”. If this causes the red LED to stop flashing and stay off, it was nuisance tripping and the system is operating correctly. If this does not occur, there is a ground fault! In case of a ground fault, it is important to have the installation checked by a qualified electrician according to local and national regulations.



## 5. Ground Fault Circuit Interrupter (GFCI) 2/2



The red LED on the right of the thermostat can indicate four different GFCI states:

1. LED off – NORMAL state.
2. LED flashing slowly (once every two seconds) – TRIGGERED state. Try pressing the “Standby/Reset” button to reset the GFCI.
3. LED flashing quickly (five flashes per second) – ERROR state. Try switching the power off and then back on again. If the thermostat re-enters the ERROR state, either the wiring is wrong (a GN exists) or the unit is defective and must be replaced.
4. LED lit constantly – Internal microprocessor malfunction or abnormal fault in hardware! Try switching the thermostat off and then back on again. If the LED is still constantly lit, the GFCI is defective and the thermostat must be replaced.

























Note: The LED lights up briefly without flashing during every power-up.


















## 6. Icons 1/2



Icon	Meaning	Icon	Meaning	Icon	Meaning
	Menu		Energy Tariff		Adaptive Function
	Heating Schedule		Date		Open Window
	Energy Use		Time		Sensor Application
	User Settings		Daylight Savings Time		Sensor Type
	Installer Settings		Unit		Floor Protection
	Child Lock		Language		Floor Sensor Calibration
	Display Brightness		Information		Room Sensor Calibration
	Screen Saver		Support		Temperature Scale

## 6. Icons 2/2



Icon	Meaning	Icon	Meaning
	Factory Reset		Copy to
	Accept		"Adjust... for a few days" in the future is activated
	Back		Heating is activated
	Cancel		Heating is activated with adaptive mode
	Arrow Up		Note
	Arrow Down		
	Arrow Left		
	Arrow Right		

# 7. Startup Wizard

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When the system has been installed and turned on for the first time, or after you have performed a factory reset, the system will run a Startup Wizard.

The Wizard will take you through tests, which ensure that the thermostat is fully functional. After the tests, the Wizard leads you through a basic setup routine to ensure that you have the right settings.



# 7.1 Set the language



First you must set the language. The chosen language will become the default language for the thermostat. The language can be changed under **Menu/User Settings/Language**.

1. Tab the language you prefer.
2. Tab the “Arrow Right” button to continue.



## 7.2 System Test



System Test

Thermostat	Pass
Air/Room sensor	Pass
Floor sensor	Pass

< >

System Test is an automatic test of the thermostat and sensors.

If a test results in 'Fail,' Please contact your installer.

Note if the thermostat is meant to operate with a Air/Room sensor only, the floor sensor test will be shown as fail.

1. Tab the "Arrow Right" button to continue.

## 7.3 GFCI Test



1. Press the test button on the top of the thermostat.  
The test is successful if the red light in the test button lights up and a GFCI error text is shown on the display.
2. Press the power/reset button on the lower right side of the thermostat to reset the GFCI.
3. Tap the “Arrow Right” button to continue.



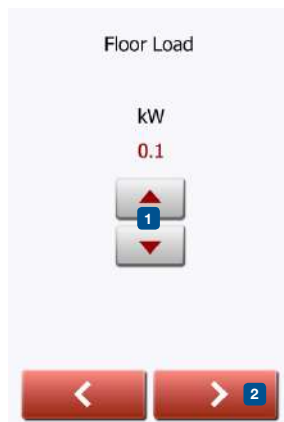
## 7.4 Set the preferred temperature unit



1. Tap the temperature unit that you prefer.
2. Tap the “Arrow Right” button to continue.

The temperature unit can be changed under **Menu/User Settings/Unit**

## 7.5 Set the floor load



1. Set the load of the underfloor heating system to be controlled by the thermostat.
2. Tap the “Arrow Right” button to continue.

This setting can be changed later if a factory reset is performed.



## 7.6 Set the sensor type



Choose which floor sensor type is used with the thermostat.

1. Tap the sensor type installed in the floor.
2. Tap the “Arrow Right” button to continue.

If you want to use the thermostat with the room sensor only, you must complete the Setup Wizard using “Default” as the floor sensor type before going to: **Menu/Installer Settings/Sensor Application** and choosing “Room”.



## 7.7 Set the date



Date

07 Nov 2014

1

2

3

use DD-MM-YYYY

use MM-DD-YYYY

1. Tap the “Arrow” buttons to change the values.
2. Tap the preferred date format.
3. Tap the “Arrow Right” button to continue.

The date can be changed under **Menu/User Settings/Date**

## 7.8 Set the time



1. Tap the “Arrow” buttons to change the values.
2. Tap the preferred time format.
3. Tap the “Arrow Right” button to continue.

The time can be changed under **Menu/User Settings/Time**

## 7.9 Set floor protection



### Floor Protection

Ensures that temperatures are kept within range. Custom defines both min. and max. limits

1

- ☒ Tile - max. 104°
- ☐ Laminate - max. 82°
- ☐ Disabled
- ☐ Custom...



2

**Set the floor protection according to the floor type.**

1. Tap the preferred limits that are used to protect the floor.
2. Tap “√” to continue

Floor protection settings can be changed under **Menu/Installer Settings/Floor Protection**.

## 7.10 Thermostat activation



1. Tap the “√” button to activate the thermostat.

Your thermostat will start  
heating the floor



## 8. Programed Heating Schedule

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The thermostat allows you to control the temperature automatically according to a weekly schedule of your choice. The thermostat comes with a pre-programed schedule for easy and economic heating control of most homes, see 11. Factory Settings: **Preset Schedule**.

The schedule can be changed under **Menu/Heating Schedule**



# 9. Operating Modes

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9.1 Scheduled operation

9.2 Manual Operation

9.2.1 Manual Operation Adjust

9.2.1.1 For a few hours...

9.2.1.2 For a few days...

9.2.1.3 Permanently

9.3 Regulator Mode



# 9.1 Scheduled Operation



The system will operate in Scheduled Operation unless you choose to override the scheduled events with Manual Operation or the thermostat application is set to Regulator mode.

During Scheduled Operation, the temperature is controlled automatically according to the programed heating schedule – see **“Heating Schedule”**.

The function of the buttons and symbols shown on the home screen varies according to the chosen operating mode.

Scheduled Operation home screen:

1. Day and time.
2. Measured temperature.
3. Heating indicator. If visible, the underfloor heating system is currently active.
4. Tap her to access the menu.
5. Current target temperature/setpoint.
6. Tap here to increase the temperature.
7. Tap here to decrease the temperature.
8. Current thermostat operating mode.
9. Information on the next thermostat behavior change.
10. Tap here to adjust the length of time the displayed target temperature/setpoint is to remain valid.



## 9.2 Manual Operation



*Note: The temperature set manually on the home screen is a temporary setting. The manual override setting will be automatically canceled at the beginning of the next event in the Scheduled Operation.*

During Scheduled Operation, you can use the arrow buttons on the home screen to override the programed target temperature/setpoint for Scheduled Operation and to set the required temperature manually.

Use the “**Arrow Up**” or “**Arrow Down**” button to select the required temperature.

The “**Return to Schedule**” button will then appear on the home screen – you should tap this button if you want to end Manual Operation and return to Scheduled Operation.

You can also choose “**Adjust...**”.

1. Day and time.
2. Measured temperature.
3. Heating indicator. If visible, the underfloor heating system is currently active.
4. Tap her to access the menu.
5. Current target temperature/setpoint.
6. Tap here to increase the temperature.
7. Tap here to decrease the temperature.
8. Current thermostat operating mode.
9. Information on the next thermostat behavior change.
10. Tap here to adjust the length of time the displayed target temperature/setpoint is to remain valid.
11. Tap here to return to Scheduled Operation. Available only when the thermostat is operated manually.

## 9.2.1 Manual Operation Adjust



Allows you to maintain the displayed target temperature/setpoint or a Manual Override for longer than just to the next event change or for a specific time period. You can use the “**Adjust...**” options to specify the length of time the displayed target temperature/setpoint should last. When the set time period has elapsed, the thermostat will automatically revert to Scheduled Operation.

- Adjust... for a few hours
- Adjust... for a few days
- Adjust... permanently

## 9.2.1.1 Adjust... for a few hours



The “for a few hours...” option lets you determine the length of time the displayed target temperature/setpoint should remain valid. The time set defines when the thermostat will revert to Scheduled Operation. The period of time until the thermostat reverts to Scheduled Operation can be set from 15 minutes and up to 24 hours.

You can set the:

- Hour
  - Minutes (in 15-minute intervals: 00, 15, 30, or 45)
  - AM or PM (if 24-hour time format is selected, this is not applicable)
1. On the home screen, adjust the temperature to the preferred level using the “Arrow Up” and “Arrow Down” buttons.
  2. Tap the “Adjust...” button.
  3. Then tap the “for a few hours...” button.
  4. Tap the “Arrow” buttons for the parameter that you want to change.
  5. Confirm your choice with “√” or discard it with “X”. The thermostat will automatically return to the home screen.



## 9.2.1.2 Adjust... for a few days



The “for a few days...” option lets you determine the length of time the displayed target temperature/setpoint should remain valid. The settings define the thermostat is to start using the chosen target temperature/setpoint and is to revert to Scheduled Operation. The period of time starts at midnight and includes the start date. The period of time ends at midnight and the end date is NOT included the manual override period.

1. On the home screen, adjust the temperature to the preferred level using the “**Arrow Up**” and “**Arrow Down**” buttons.
2. Tap the “**Adjust...**” button.
3. Then tap the “**for a few days...**” button.
4. Tap the “**Arrow**” buttons for any parameter that you want to change for the start date.
5. Confirm your choice with “**Arrow Right**” or discard it with “**X**”.
6. If confirmed, the end date must be set by tapping the “**Arrow**” buttons for any parameter that you want to change.
7. Confirm your choice with “**√**” or discard it with “**Arrow Left**”.  
The thermostat will automatically return to the home screen.
8. If “for a few days...” is enabled for a period of time in the future, a clock is displayed on the home screen. The “for a few days...” option can be disabled by or rescheduled by repeating steps 1 to 7.
9. Tap the ON/OFF button to activate/deactivate the function.
10. Confirm your choice with “**√**” or discard it with “**X**”.



## 9.2.1.3 Adjust... permanently



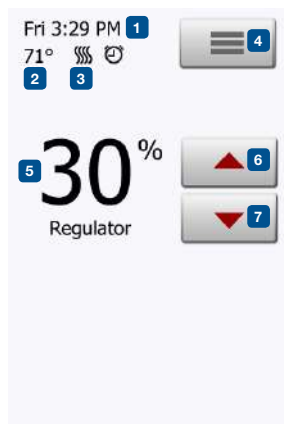
The “permanently” option allows you to maintain the displayed target temperature/ setpoint indefinitely, until you manually change the settings.

1. On the home screen, adjust the temperature to the preferred level using the “Arrow Up” and “Arrow Down” buttons.
2. Tap the “Adjust...” button.
3. Then tap the “permanently” button.

The thermostat will automatically return to the home screen.



## 9.3 Regulator Mode



In this mode, the thermostat operates as a regulator and no sensors are used. The setting is a percentage of the full load in steps of 10%.





Note that Floor Protection is not active when using the thermostat as a regulator. Regulator mode is activated under **Menu/Installer Settings/Sensor Application/Regulator**

**Note: Regulator mode is not available with software version 1012N100.**

1. Day and time.
2. Measured temperature (if available).
3. Heating indicator. If visible, the underfloor heating system is currently active.
4. Tap here to access the menu.
5. Current target percentage of full load/setpoint.
6. Tap here to increase percentage of full load/setpoint.
7. Tap here to decrease percentage of full load/setpoint.

# 10. Thermostat Setup Menu



-  Heating Schedule
-  Energy Use
-  User Settings
-  Installer Settings

# 10.1 Heating Schedule 1/2



The heating schedule allows you to control the temperature automatically according to a programmed schedule of your choice. The thermostat comes with a pre-programmed heating schedule for easy and economic heating control, see 11. Factory Settings: **Preset Schedule**.

1. Tap the **"Menu"** button on the home screen.
2. Then tap the **"Heating Schedule"** button to access the various schedule options.

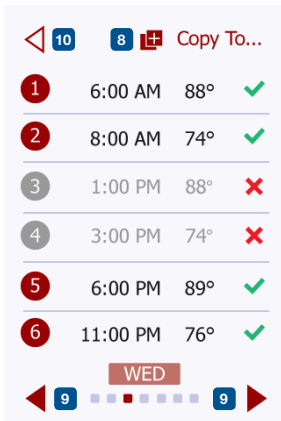
This screen consists of a list of six events and four buttons. Each event is numbered, and the start time, target temperature/setpoint, and activity status are displayed. **"Back"**, **"Copy to..."**, **"Arrow Left"**, and **"Arrow Right"** buttons are located in the corners of the screen. The day for which the event applies is displayed at the bottom of the screen.

Grayed out events marked with a red "X" are not currently in use.

3. To change the start time, temperature, and activity status for a specific event, tap on the event to the right of the number.
4. To change the start time for the event, tap the **"Arrow Up"** and **"Arrow Down"** buttons.
5. To change the temperature for the event, tap the **"Arrow Up"** and **"Arrow Down"** buttons.
6. To toggle between the event being active or inactive, tap the **"The event is active"** or **"The event is inactive"** button. The text shown on the button reflects the current activity status of the event. Note! Event 1 is always active.
7. Confirm your choice with **"√"** or discard it with **"X"**.



# 10.1 Heating Schedule 2/2



Event	Time	Temperature	Status
1	6:00 AM	88°	✓
2	8:00 AM	74°	✓
3	1:00 PM	88°	✗
4	3:00 PM	74°	✗
5	6:00 PM	89°	✓
6	11:00 PM	76°	✓

The thermostat will automatically return to **“Heating Schedule”**.

8. Once the event settings for this day are as wanted, you can, if you wish, use the same settings for other days by tapping the **“Copy to”** button in the top right corner of the screen. This will allow you to copy the event settings to other days specified by you.
9. If you want to set other days differently, tap the **“Arrow Left”** or **“Arrow Right”** button to toggle between weekdays.  
You can then set the schedule for the other days by repeating steps 3 through 8.
10. Once you have finished setting the schedules, tap the **“Back”** button to return to the Thermostat Setup Menu.



# 10.2 Energy Use



The “Energy Use” button allows you to read out energy usage data for your underfloor heating system.

1. Tap the “**Menu**” button on the home screen.
2. Then tap the “**Energy Use**” button to access the readouts.

You can choose between four different readouts:












- Last 24 hours: A graph of usage during each hour of the past day will be displayed. The graph shows minutes per hour.
  - Last 7 days: A graph of usage during each day of the past seven days will be displayed. The graph shows hours per day.
  - Last 12 months: A graph of usage during each month of the past year will be displayed.  
The graph shows hours per month.
  - Energy Use Data An overview of the electricity consumption (kWh) and heating costs for the time periods specified above. (Note: price per kWh must be set under **Menu/User Settings/Energy Tariff**).
3. You can toggle between the readouts using the “**Arrow Right**” or “**Arrow Left**” button.
  4. Tap the “**Back Arrow**” button to return to the menu.
  5. Tap on “Edit Energy Tariff...” to change the energy tariff, see 11.3.4 Energy Tariff.

## 10.3. User Settings



Under User Settings, you can change the settings of the following items.

Note: if an item is grayed out, it is not available due to other settings.

-  Child Lock
-  Display Brightness
-  Screen Saver
-  Energy Tariff
-  Date
-  Time
-  Daylight Savings Time
-  Unit
-  Language
-  Information
-  Support

## 10.3.1 Child Lock 1/2



The child lock prevents children and others from tampering with the thermostat and changing any of its settings.

1. Tap the **“Menu”** button on the home screen.
  2. Then tap the **“User Settings”** button to access the various user settings.
  3. Tap the **“Child Lock”** button.
  4. Tap the **“OFF/ON”** button to the setting that you prefer.
  5. Confirm your choice with **“√”** or discard it with **“X”**.
- The thermostat will automatically return to **“User Settings”**.

The child lock is activated together with the screen saver if the thermostat has not been operated for a few minutes – it takes 15 seconds to dim the display and a further two minutes before the screen saver starts.

Before you can operate the thermostat again, you must unlock the child lock in the following way.

From the idle home screen:

- a) Tap the screen to activate it. Three circles containing dots will be displayed on the screen.
- b) Draw an **“L”** on the screen in a single stroke without lifting your finger from the screen. Start by touching the dot in the circle in the upper left corner, then slide your finger downwards to the dot in the circle in the lower left corner, and continue sliding your finger to the dot in the circle in the lower right corner, forming an **“L”**. If done correctly, the home screen will appear.

## 10.3.1 Child Lock 2/2



Please note that the child lock will be reactivated when the thermostat returns to screen saver mode – unless it is deactivated under

**Menu/User Settings/Child Lock.**

**Note: Child Lock is not available with software version 1012N100**



## 10.3.2 Display Brightness



This option allows you to change the brightness of the display.

1. Tap the **“Menu”** button on the home screen.
2. Then tap the **“User Settings”** button to access the various user settings.
3. Tap the **“Display Brightness”** button.
4. Select one of the five levels of brightness using the **“Arrow Up”** or **“Arrow Down”** button.
5. Confirm your choice with **“√”** or discard it with **“X”**.

The thermostat will automatically return to **“User Settings”**.



## 10.3.3 Screen Saver



This option allows you to select the information to be shown on the screen when it is idle.

- Large: temperature. Small: date and time.
  - Large: time. Small: temperature and date.
  - Screen Off. This setting minimizes energy consumption.
1. Tap the **“Menu”** button on the home screen.
  2. Then tap the **“User Settings”** button to access the various user settings.
  3. Tap the **“Screen Saver”** button.
  4. Tap the information that you want to be shown in screen saver mode.
    - Temperature shown in large format. Time and date shown in small format. (See example)
    - Time shown in large format. Temperature and date shown in small format. (See example)
    - Screen Off.
  5. Confirm your choice with **“√”** or discard it with **“X”**.

The thermostat will automatically return to **“User Settings”**.



## 10.3.4 Energy Tariff



This option allows you to enter the various data used to calculate energy use.

The “Energy Use” function uses this information to calculate electricity consumption and the cost of heating for a given period of time.

1. Tap the “**Menu**” button on the home screen.
2. Then, tap the “**User Settings**” button to access the various user settings.
3. Tap the “**Energy Tariff**” button.
4. Tap the “**Arrow Up**” or “**Arrow Down**” button to set the price that you pay per kWh.
5. Confirm your choice with “√” or discard it with “**X**”.

The thermostat will automatically return to “**User Settings**”.





## 10.3.5 Date



This option allows you to change the date, which is shown in some screen savers and is used for functions such as “Daylight Saving Time”.

1. Tap the “**Menu**” button on the home screen.
2. Then tap the “**User Settings**” button to access the various user settings.
3. Tap the “**Date**” button.
4. Tap the “**Arrow Up**” or “**Arrow Down**” button to set the date, month, and year.
5. Tap the date format that you prefer.
  - Use DD-MM-YYYY
  - Use MM-DD-YYYY
6. Confirm your settings with “**✓**” or discard them with “**X**”.

The thermostat will automatically return to “**User Settings**”.



## 10.3.6 Time



1

This option allows you to change the time, which is used by the clock to control heating schedule events during Scheduled Operation.

1. Tap the **“Menu”** button on the home screen.
2. Then tap the **“User Settings”** button to access the various user settings.
3. Tap the **“Time”** button.
4. Tap the **“Arrow Up”** or **“Arrow Down”** button to set the hours, minutes, and AM/PM.
5. Tap the time format that you prefer.
  - Use 24 hours
  - Use 12 hours (AM/PM)
6. Confirm your settings with **“√”** or discard them with **“X”**.

The thermostat will automatically return to **“User Settings”**.



## 10.3.7 Daylight Savings Time



When enabled, the “Daylight Savings Time” function will automatically adjust the thermostat clock to daylight saving time.

1. Tap the “**Menu**” button on the home screen.
2. Then tap the “**User Settings**” button to access the various user settings.
3. Tap the “**Arrow Right**” button to access the second page of User Settings.
4. Tap the “**Daylight Savings Time**” button.
5. Tap the “**OFF/ON**” button to the setting that you prefer.
6. Confirm the setting with “**✓**” or discard it with “**X**”.

The thermostat will automatically return to “**User Settings**”.



## 10.3.8 Unit



1. Tap the **"Menu"** button on the home screen.
2. Tap the **"Arrow Right"** button to access the second page of User Settings.
3. Tap the **"Unit"** button.
4. Tap the unit that you prefer:
  - Celsius
  - Fahrenheit
5. Confirm your choice with **"√"** or discard it with **"X"**.

The thermostat will automatically return to **"User Settings"**.



## 10.3.9 Language



This option allows you to change the language used on the screen.

1. Tap the **“Menu”** button on the home screen.
2. Then tap the **“User Settings”** button to access the various user settings.
3. Tap the **“Arrow Right”** button to access the second page of User Settings.
4. Tap the **“Language”** button.
5. Tap the language that you prefer:
  - English
  - French
  - Spanish
6. Confirm your choice with **“√”** or discard it with **“X”**.

The thermostat will automatically return to **“User Settings”**.



## 10.3.10 Information



This option provides a readout containing service information:

1. Tap the **“Menu”** button on the home screen.
2. Then tap the **“User Settings”** button to access the various user settings.
3. Tap the **“Arrow Right”** button to access the second page of User Settings.
4. Tap the **“Information”** button.
5. To obtain detailed information, you can scan the QR Code with a suitable device with Internet access. Software supporting QR Code scanning (e.g. an app) is required. Scanning the QR Code provides data which is valid at the precise time of scanning.
6. If **“View as text”** is selected, the data relevant for support personnel and others is displayed.
7. Tap the **“Back”** button, several times if necessary, to return to **“User Settings”**.

*QR Code is a registered trademark of DENSO WAVE INCORPORATED.*



## 10.3.11 Support



This option provides information on obtaining support for the thermostat. Please consult the “**Troubleshooting**” section of this manual before calling for support. If troubleshooting does not help, you should contact your installer.

1. Tap the “Menu” button on the home screen.
2. Then tap the “User Settings” button to access the various user settings.
3. Tap the “Arrow Right” button to access the second page of User Settings.
4. Tap the “Support” button.
5. Tap the “Back” button to return to “User Settings”.











# 10.4 Installer Settings



Under Installer Settings, you can change the settings of the following items.

Note: if an item is grayed out, it is not available due to other settings.

-  Adaptive Function
-  Open Window
-  Sensor Application
-  Sensor Type
-  Floor Sensor Calibration
-  Room Sensor Calibration
-  Floor Protection
-  Factory Reset



## 10.4.1 Adaptive Function



With this feature enabled, the room will already have reached the target/setpoint temperature at the beginning of a scheduled event.

After just a few days, the adaptive function will have automatically calculated how much earlier the heating must be turned on to achieve this.

Select **“OFF”** if you simply want the heating to start at the beginning of an event.

1. Tap the **“Menu”** button on the home screen.
2. Then tap the **“Installer Settings”** button to access the various installer settings.
3. Tap the **“Adaptive Function”** button.
4. Tap the **“OFF/ON”** button to the setting that you prefer.
5. Confirm your choice with **“√”** or discard it with **“X”**.

The thermostat will automatically return to “Installer Settings”.

## 10.4.2 Open Window



This option allows you to enable the “Open Window” function.

The thermostat can detect an open window by registering a rapid drop in temperature.

With the function enabled, the thermostat shuts off the heating for 30 minutes if an open window is detected.

1. Tap the “**Menu**” button on the home screen.
2. Then tap the “**Installer Settings**” button to access the various installer settings.
3. Tap the “**Open Window**” button.
4. Tap the “**OFF/ON**” button to the setting that you prefer.
5. Confirm your choice with “**✓**” or discard it with “**X**”.  
The thermostat will automatically return to “**Installer Settings**”.
6. If an open window is detected by the thermostat, the “**Open Window**” screen will appear, the function can be canceled by tapping “**Cancel**”.

**Note: Open Window is not available with software version 1012N100**

## 10.4.3 Sensor Application 1/2



This option allows you to choose which sensor is used to control the heating system.

- **Floor:** With this setting, the floor sensor controls the heating system.
- **Room/Floor Protection:** With this setting, the room sensor controls the heating system while the floor sensor limits heating according to the temperature limits set under Menu/Installer Settings/Floor Protection.
- **Room:** With this setting, the room sensor built into the thermostat controls the heating system.  
Note! Floor Protection is not active while using the Sensor Application “Room”.  
Note that certain options in your menus will be greyed out and inaccessible as they are only applicable with the floor sensor.
- **Regulator:** With this setting, the thermostat operates as a regulator and no sensors are used. The setting is a percentage of the full load in steps of 10%.  
Note that Floor Protection is not active when using the thermostat as a regulator.

Floor limit temperatures are set under **Menu/Installer Settings/Floor Protection**. Note that changes made under “Sensor Application” do not influence the “Floor Protection” settings.



## 10.4.3 Sensor Application 2/2



Maximum temperature depends on the floor type and temperature unit.

1. Tap the **“Menu”** button on the home screen.
2. Then tap the **“Installer Settings”** button to access the various installer settings.
3. Tap the **“Sensor Application”** button.
4. Tap the application that you want to use.
  - Floor
  - Room/Floor Protection
  - Room
  - Regulator
5. Confirm your choice with **“√”** or discard it with **“X”**.

The thermostat will automatically return to **“Installer Settings”**.

Note that when changing Sensor Application, certain options in your menu might be greyed out and inaccessible as they are not applicable with current settings.



## 10.4.4 Sensor Type 1/2



This option allows you to choose the type of floor sensor used with the thermostat. You can thus choose to use an existing sensor with the thermostat, e.g. in renovation projects.

Choose the sensor actually used from the list. The sensor supplied with the thermostat is an OJ sensor listed as: **“Factory”**.

- Default 10 k $\Omega$  (this is the sensor supplied with the thermostat)
  - Sensor 12 k $\Omega$
  - Custom
1. Tap the **“Menu”** button on the home screen.
  2. Then tap the **“Installer Settings”** button to access the various installer settings.
  3. Tap the **“Sensor Type”** button.
  4. Tap the type of floor sensor actually used.
    - Default 10 k $\Omega$  (this is the sensor supplied with the thermostat)
    - Sensor 12 k $\Omega$  (OJ sensor)
    - Custom
  5. Confirm your choice with **“√”** or discard it with **“X”**.
  6. If **“Custom”** is chosen, you must provide resistance values for the sensor concerned at four given temperatures. Ask the supplier of your sensor for these values.  
Tap the **“Arrow Up”** or **“Arrow Down”** to set the resistance for the various temperatures.



## 10.4.4 Sensor Type 2/2



7. Use the “**Arrow Right**” or “**Arrow Left**” button to toggle through the temperatures for which resistance must be set.  
Then, repeat steps 6-7 until all four resistance values have been set.
8. When all four values are set, tap the “**Arrow Right**” button.
9. A warning screen will be displayed. Tap “**✓**” to confirm the use of an alternative sensor.

The thermostat will automatically return to “**Installer Settings**”.



## 10.4.5 Floor Sensor Calibration



This option allows you to calibrate the floor sensor.

You can calibrate the sensor if the temperature reading differs from the actual floor temperature.

Note that changes to floor sensor characteristics may damage certain floors.

You can calibrate the sensor with  $\pm 17^{\circ}\text{F}$  or  $\pm 10^{\circ}\text{C}$  in steps of  $1^{\circ}\text{F}$  or  $0.5^{\circ}\text{C}$  in the following way:

1. Tap the **“Menu”** button on the home screen.
2. Then tap the **“Installer Settings”** button to access the various installer settings.
3. Tap the **“Floor Sensor Calibration”** button.
4. Use the **“Arrow Up”** or **“Arrow Down”** button to set the floor temperature actually measured.
5. Confirm that you want to calibrate the sensor with **“√”** or cancel with **“X”**. If the temperature is confirmed with **“√”**, a confirmation screen will be displayed briefly.

The thermostat will automatically return to **“Installer Settings”**.



## 10.4.6 Room Sensor Calibration



This option allows you to calibrate the room sensor.

You can calibrate the sensor if the temperature reading differs from the actual room temperature.

Note that changes in room sensor characteristics may damage certain floors.

You can calibrate the sensor with  $\pm 17^{\circ}\text{F}$  or  $\pm 10^{\circ}\text{C}$  in steps of  $1^{\circ}\text{F}$  or  $0.5^{\circ}\text{C}$  in the following way:

1. Tap the “**Menu**” button on the home screen.
2. Then tap the “**Installer Settings**” button to access the various installer settings.
3. Tap the “**Room Sensor Calibration**” button.
4. Use the “**Arrow Up**” or “**Arrow Down**” button to set the room temperature actually measured.
5. Confirm that you want to calibrate the sensor with “**√**” or cancel with “**X**”.  
If the temperature is confirmed with “**√**”, a confirmation screen will be displayed briefly.

The thermostat will automatically return to “**Installer Settings**”.





## 10.4.7 Floor Protection 1/2



This option ensures that the floor temperatures are kept within range.

There are four different settings:

- Tile – the maximum floor temperature is set to 104°F/40°C
- Laminate – the maximum floor temperature it set to 82°F/28°C  
Note the warming of the floor will not exceed 1,67° Fahrenheit equal to 0.93° Celsius within 10 minutes in Laminate.  
If you want your floor to heat faster, Custom can be used.
- Disabled – the floor is not protected against excessive heating
- Custom – you can define the minimum and maximum temperatures that the floor is permitted to reach.

The maximum temperature limit protects wooden floors from excessive heat.

The minimum temperature limit prevents the floor from becoming uncomfortably cold when heating is not needed, e.g. in a bathroom with tiles.

The minimum temperature limit can also be used as frost protection.

Note that the minimum temperature function will increase energy consumption.

Although it is still possible to set the target temperature/setpoint to a value higher than the floor protection limit, the floor temperature will be prevented from reaching a temperature higher than that defined here if the system has been installed according to the Quick Guide.

## 10.4.7 Floor Protection 2/2



1. Tap the **“Menu”** button on the home screen.
2. Then tap the **“Installer Settings”** button to access the various installer settings.
3. Tap the **“Arrow Right”** button to access the second page of Installer Settings.
4. Tap the **“Floor Protection”** button.
5. Choose the floor protection which is relevant for your floor.  
If Tile, Laminate, or Disabled is selected, proceed to step 8.
6. If Custom is chosen, you must define minimum and maximum temperatures for the floor.
7. Use the **“Arrow Up”** or **“Arrow Down”** buttons to set the minimum and maximum temperatures.
8. Confirm your choice with **“√”** or discard it with **“X”**.

The thermostat will automatically return to **“Installer Settings”**.

NOTE: If the maximum floor temperature is set too high, temperature sensitive floor types may be permanently damaged.

For precise information, please ask your flooring supplier.



## 10.4.8 Factory Reset



This option allows you to restore the thermostat to factory settings.

Note! This action cannot be undone, and all of your personal settings will be lost.

1. Tap the **“Menu”** button on the home screen.
2. Then tap the **“Installer Settings”** button to access the various installer settings.
3. Tap the **“Arrow Right”** button to access the second page of Installer Settings.
4. Tap the **“Factory Reset”** button.
5. Tap **“Back”** if you want to maintain your settings and return to “Installer Settings”.
6. Tap **“Reset Thermostat”** if you want to restore the factory settings.  
A confirmation screen will be displayed.

The thermostat will then be reset and the **“Startup Wizard”** will appear on the screen.

Note! All personal settings will be lost.



# 11. Factory Settings



## Preset schedule

Monday-Friday				
Event	Start time	Laminate floor	Tile floor	Activated
1	06:00 AM	82°F / 28°C	88°F / 31°C	√
2	09:00 AM	74°F / 23.5°C	74°F / 23.5°C	√
3	12:00 PM	82°F / 28°C	88°F / 31°C	x
4	01:00 PM	74°F / 23.5°C	74°F / 23.5°C	x
5	05:00 PM	82°F / 28°C	88°F / 31°C	√
6	11:00 PM	74°F / 23.5°C	74°F / 23.5°C	√
Saturday-Sunday				
Event	Start time	Laminate floor	Tile floor	Activated
1	08.00 AM	82°F / 28°C	88°F / 31°C	√
2	11:00 PM	74°F / 23.5°C	74°F / 23.5°C	√



# 12. Troubleshooting 1/2

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## Error messages

If a fault or error occurs, the thermostat will display one of the following error messages:

- E0: Internal failure. The thermostat is defective. Contact your installer. The thermostat must be replaced.
- E1: Internal sensor defective or short-circuited. Contact your installer. The thermostat must be replaced.
- E2: External wired floor sensor disconnected, defective, or short-circuited. Contact your installer for reconnection or replacement.
- E5: Internal overheating. Contact your installer in order to have the installation inspected.  
Note! If any of the above mentioned errors occur, the heating is shut off.
- Three circles containing dots are shown on the screen; the thermostat cannot be operated.  
The thermostat is in “Child Lock” mode. See the section titled “**Child Lock**” in this manual for instructions on how to unlock it.



## 12. Troubleshooting 2/2

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- The Floor is heating, but does so slower than expected.
  - The protection might be set to “Laminate” which prevents a fast heating of the floor.
  - The heat element might not be sufficient to heat the floor.





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