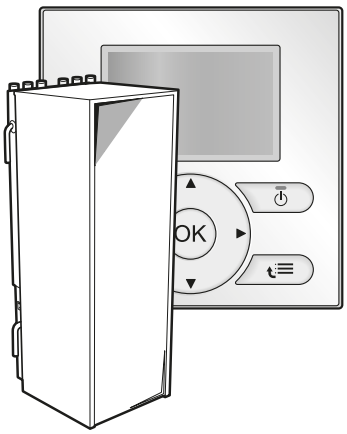
# User reference guide

## Daikin Altherma ground source heat pump




**EGSQH10S18AA9W**

User reference guide
Daikin Altherma ground source heat pump

**English**

# Table of contents



# 1 General safety precautions

## 1.1 About the documentation

- The original documentation is written in English. All other languages are translations.
- The precautions described in this document cover very important topics, follow them carefully.
- All activities described in the installation manual must be performed by an authorized installer.

### 1.1.1 Meaning of warnings and symbols

**DANGER**
Indicates a situation that results in death or serious injury.

**DANGER: RISK OF ELECTROCUTION**
Indicates a situation that could result in electrocution.

**DANGER: RISK OF BURNING**
Indicates a situation that could result in burning because of extreme hot or cold temperatures.

**WARNING**
Indicates a situation that could result in death or serious injury.

**CAUTION**
Indicates a situation that could result in minor or moderate injury.

**NOTICE**
Indicates a situation that could result in equipment or property damage.

**INFORMATION**
Indicates useful tips or additional information.

## 1.2 For the user

- If you are not sure how to operate the unit, contact your installer.
- The appliance is not intended for use by persons, including children, with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children must be supervised to ensure that they do not play with the product.

**CAUTION**
Do NOT rinse the unit. This may cause electric shocks or fire.

**NOTICE**

- Do NOT place any objects or equipment on top of the unit.
- Do NOT sit, climb or stand on the unit.

- Units are marked with the following symbol:

This means that electrical and electronic products may not be mixed with unsorted household waste. Do NOT try to dismantle the system yourself: the dismantling of the system, treatment of the refrigerant, of oil and of other parts must be done by an authorized installer and must comply with applicable legislation.
Units must be treated at a specialized treatment facility for reuse, recycling and recovery. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health. For more information, contact your installer or local authority.

- Batteries are marked with the following symbol:

This means that the batteries may not be mixed with unsorted household waste. If a chemical symbol is printed beneath the symbol, this chemical symbol means that the battery contains a heavy metal above a certain concentration.
Possible chemical symbols are: Pb: lead (>0.004%).
Waste batteries must be treated at a specialized treatment facility for reuse. By ensuring waste batteries are disposed of correctly, you will help to prevent potential negative consequences for the environment and human health.

# 2 About this document

Thank you for purchasing this product. Please:

- Read the documentation carefully before operating the user interface to ensure the best possible performance.
- Request the installer to inform you about the settings that he used to configure your system. Check if he has filled in the installer settings tables. If not, request him to do so.
- Keep the documentation for future reference.

**Target audience**

End users

**Documentation set**

This document is part of a documentation set. The complete set consists of:

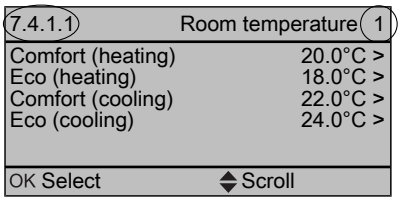
| Document | Contains… | Format |
|---|---|---|
| General safety precautions | Safety instructions that you must read before operating your system | Paper (in the box of the indoor unit) |
| Operation manual | Quick guide for basic usage | |
| User reference guide | Detailed step-by-step instructions and background information for basic and advanced usage | Digital files on http://www.daikineurope.com/support-and-manuals/product-information/. |

Latest revisions of the supplied documentation may be available on the regional Daikin website or via your installer.

**Available screens**

Depending on your system layout and installer configuration, not all screens in this document may be available on your user interface.

**Breadcrumbs**




Breadcrumbs help you to locate where you are in the menu structure of the user interface. This document also mentions these breadcrumbs.

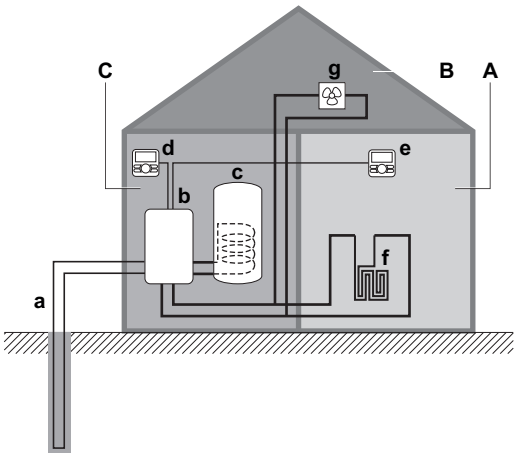
**Example:** Go to [7.4.1.1]: > User settings > Preset values > Room temperature > Comfort (heating)

# 3 About the system

Depending on the system layout, the system can:

- Heat up a space
- Produce domestic hot water (if a DHW tank is installed)

## 3.1 Components in a typical system layout




**A** Main zone. **Example:** Living room.
**B** Additional zone. **Example:** Bedroom.
**C** Technical room. **Example:** Garage.
**a** Brine loop
**b** Indoor unit heat pump
**c** Domestic hot water (DHW) tank
**d** User interface at the indoor unit
**e** User interface in the living room, used as room thermostat
**f** Underfloor heating
**g** Heat pump convectors or fan coil units

**INFORMATION**

The indoor unit and the domestic hot water tank (if installed) can be separated or integrated depending on the indoor unit type.

# 4 Operation

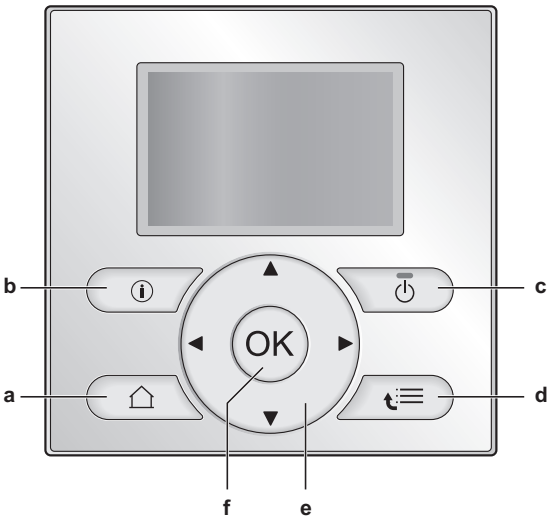
## 4.1 Overview: Operation

You can operate the system via the user interface. This part describes how to use the user interface:

| Part | Description |
|---|---|
| At a glance | ▪ Buttons<br>▪ Status icons |
| Basic usage | Information about:<br>▪ Home pages, where you can read out and change settings that are meant for daily usage<br>▪ Menu structure, where you can read out and configure settings that are NOT meant for daily usage<br>▪ ON/OFF controls |
| Space heating control | How to control space heating:<br>▪ Setting the space operation mode<br>▪ Controlling the temperature |
| Domestic hot water control | How to control domestic hot water:<br>▪ Reheat mode<br>▪ Scheduled mode<br>▪ Scheduled + reheat mode |
| Advanced usage | Information about:<br>▪ Quiet mode<br>▪ Holiday mode<br>▪ Reading out information<br>▪ Date, time, units of measurement, contrast and backlight<br>▪ User profile and home pages<br>▪ Locking and unlocking buttons and functions |
| Preset values and schedules | ▪ How to use preset values<br>▪ How to select and program schedules.<br>▪ Overview of predefined schedules |
| Menu structure | Overview of menu structure |
| Installer settings table | Overview of installer settings |

## 4.2 The user interface at a glance

### 4.2.1 Buttons




**a** HOME PAGES
- Switches between home pages (when you are on a home page).
- Goes to the default home page (when you are in the menu structure).

**b** MALFUNCTION INFORMATION
If a malfunction occurs, ⓘ is displayed on the home pages. Press to display more information about the malfunction.

**c** ON/OFF
Turns ON or OFF one of the controls (room temperature, leaving water temperature, DHW tank temperature).

**d** MENU STRUCTURE/BACK
- Opens the menu structure (when you are on a home page).
- Goes up a level (when you are navigating through the menu structure).
- Goes back 1 step (example: when you are programming a schedule in the menu structure).

**e** NAVIGATING/CHANGING SETTINGS
- Navigates the cursor on the display.
- Navigates through the menu structure.
- Changes settings.
- Selects a mode.

**f** OK
- Confirms a selection.
- Enters a submenu in the menu structure.
- Switches between displaying actual and desired values, or between displaying actual and offset values (if applicable) on the home pages.
- Goes to the next step (when you are programming a schedule in the menu structure).
- Enables you to activate or deactivate child lock if pressed for more than 5 seconds on a home page.
- Enables you to activate or deactivate a function lock if pressed for more than 5 seconds in the main menu of the menu structure.

**INFORMATION**

If you press or while changing settings, the changes will NOT be applied.

### 4.2.2 Status icons

| Icon | Description |
|---|---|
| | Space operation mode = Heating. |
| | Not available. |
| | Unit is operating. |
| | Desired room temperature = preset value (Comfort; daytime). |
| | Desired room temperature = preset value (Eco; nighttime). |
| | ▪ On the room temperature home page: Desired room temperature = according to the selected schedule.<br>▪ On the DHW tank temperature home page: DHW tank mode = Scheduled mode. |
| | DHW tank mode = Reheat mode. |
| | DHW tank mode = Scheduled + reheat mode. |
| | At the next scheduled action, the desired temperature will increase. |
| | At the next scheduled action, the desired temperature will NOT change. |
| | At the next scheduled action, the desired temperature will decrease. |
| | The preset value (Comfort or Eco) or scheduled value is temporarily overruled. |
| | The system will produce domestic hot water for the indicated number of persons. |
| | The DHW tank booster mode is active or ready to be activated. |
| | Quiet mode is active. |
| | Holiday mode is active or ready to be activated. |
| | Child lock mode and/or function lock mode is active. |
| | An external heat source is active. **Example:** Gas burner. |
| | The disinfection mode is active. |
| | A malfunction occured. Press to display more information about the malfunction. |
| | Weather-dependent mode is active. |
| | User permission level = Installer. |
| | Defrost/oil return mode is active. |
| | Hot start mode is active. |
| | Emergency operation is active. |

**INFORMATION**

Quiet mode is NOT applicable for this unit.

## 4.3 Basic usage

### 4.3.1 Using home pages

**About home pages**

You can use the home pages to read out and change settings that are meant for daily usage. What you can see and do on the home pages is described where applicable. Depending on your system layout, the following home pages may be possible:

- Room temperature (Room)
- Main leaving water temperature (LWT main)
- Additional leaving water temperature (LWT add)
- DHW tank temperature (Tank)

**To go to a home page**

1 Press .

**Result:** One of the home pages is displayed.

2 Press again to display the next home page (if any).

### 4.3.2 Using the menu structure

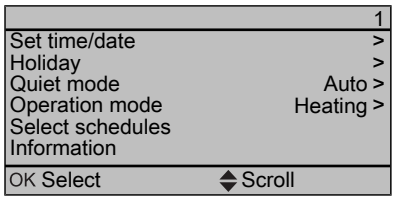
**About the menu structure**

You can use the menu structure to read out and configure settings that are NOT meant for daily usage. What you can see and do in the menu structure is described where applicable. For an overview of the menu structure, see "4.8 Menu structure: Overview" on page 18.

**To go to the menu structure**

1 From a home page, press .

**Result:** The menu structure is displayed.




**To navigate in the menu structure**

Use , , , , OK and .

### 4.3.3 Turning ON/OFF controls

**About turning ON/OFF controls**

| Before you can control… | You have to turn ON… |
|---|---|
| Room temperature | Room temperature control (Room) |
| Main (+ additional) leaving water temperature | Main (+ additional) leaving water temperature control (LWT main and LWT add)<br>Main and additional leaving water temperature control are always turned ON or OFF together. |
| DHW tank temperature | Domestic hot water control (Tank) |

| If you turn ON… | Then… |
|---|---|
| Room temperature control | Main (+ additional) leaving water temperature control is automatically turned ON. |
| Main (+ additional) leaving water temperature control | Room temperature control is NOT automatically turned ON. |

| If you turn OFF… | Then… |
|---|---|
| Room temperature control | Main (+ additional) leaving water temperature control is NOT automatically turned OFF. |
| Main (+ additional) leaving water temperature control | Room temperature control is automatically turned OFF. |

**To check if a control is turned ON or OFF**

1 Go to the home page of the control. **Example:** Room temperature home page (Room).

2 Check if the LED is ON or OFF. **Note:** If the control is turned OFF, OFF is also displayed on the screen.

**To turn ON or OFF the room temperature control**

1 Go to the room temperature home page (Room).

2 Press .

**To turn ON or OFF the leaving water temperature (main + additional) control**

1 Go to one of the following the home pages:

- Main leaving water temperature home page (LWT main)
- Additional leaving water temperature home page (LWT add)

2 Press .

**To turn ON or OFF the domestic hot water control**

1 Go to the DHW tank temperature home page (Tank).

2 Press .

## 4.4 Space heating control

### 4.4.1 About space heating control

Controlling space heating typically consists of the following stages:

1 Setting the space operation mode

2 Controlling the temperature

### 4.4.2 Setting the space operation mode

**About space operation modes**

The system can heat up a space, but NOT cool down a space. You do NOT have to tell the system which space operation mode to use.

To tell the system which space operation to use, you can do the following:

| You can… | Location |
|---|---|
| **Check** which space operation mode is **currently used**. | Home pages:<br>▪ Room temperature<br>▪ Leaving water temperature (main + additional) |
| **Set** the space operation **mode**. | Menu structure |
| **Restrict** when **automatic changeover** is possible. | |

**To check which space operation mode is currently used**

1 Go to one of the following the home pages:

- Room temperature home page (Room)
- Main leaving water temperature home page (LWT main)
- Additional leaving water temperature home page (LWT add)

2 Check the status icon:

| If you see… | Then… |
|---|---|
| | Operation mode = heating.<br>Unit is NOT heating up your space. However, the DHW tank can be heating up. |
| | Operation mode = heating.<br>Unit is heating up your space at this moment. |

### 4.4.3 Controlling the temperature

#### About controlling the temperature

Depending on the system layout and installer configuration, you use a different temperature control:

- Room thermostat control (linked or NOT linked to leaving water temperature)
- Leaving water temperature control
- External room thermostat control

**To determine which temperature control you are using (method 1)**

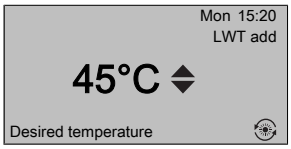
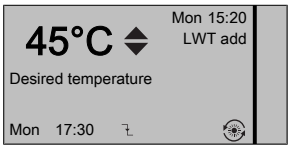
Check the installer settings table filled in by the installer.

**To determine which temperature control you are using (method 2)**

If you have 2 user interfaces, perform the following procedure on the user interface at the indoor unit.

1 Press multiple times to switch between home pages, and check if the additional leaving water temperature home page (LWT add) is available:

| If … | Then you have… |
|---|---|
| Available | A main zone and an additional zone |
| NOT available | Only a main zone |

| Typical additional leaving water temperature home page: | |
|---|---|
| **User profile = Basic** | **User profile = Detailed** |
|  |  |

2 Go to [6]: > Information.

3 Press for more than 5 seconds.

**Result:** The user permission level switches to Adv. end user. Additional information is displayed and "+" is added to the menu title.

4 Check the following:

| If… | Then the temperature control is… | |
|---|---|---|
| | Main zone | Additional zone (if any) |
| Room temperature is listed under:<br>[6.1]: ☰ > Information > Sensor information | Room thermostat control.<br>Go to next step to check if leaving water set point and room temperature set point are linked. | External room thermostat control. |
| Thermostat main A is listed under:<br>[6.5]: ☰ > Information > Actuators | External room thermostat control. | |
| Else | Leaving water temperature control. | |

5 Only for room thermostat control: Go to the main leaving water temperature home page (LWT main) and check the following:

| Is ⬍ displayed next to the set point? | Then leaving water set point and room temperature set point are… |
|---|---|
| Yes | NOT linked.<br>You can set the leaving water set point on the home page. |
| No | Linked by their preset values. You can set the preset values in the menu structure. |

## Room thermostat control

Room thermostat control means that you control the following:

- Room temperature of the main zone
- Leaving water temperature of the main zone

**Room temperature of the main zone**

To control the room temperature of the main zone, you can do the following:

| You can… | Location |
|---|---|
| **Read out** the actual and desired room **temperature**. | Room temperature home page |
| **Temporarily overrule** the room temperature **schedule**. | |
| **Change the mode** from scheduled to preset value.<br>If you do this, you also have to define (in the menu structure):<br>▪ Preset values<br>▪ Overrule period (Temperature lock) | Room temperature home page if user profile = Detailed |
| **Select** which room temperature **schedule** you want to use. | Menu structure |
| **Program schedules.** | |
| **Define preset values** that are used by the room temperature schedule, and when you change the mode from scheduled to preset value. | |

See also:

- "Using the room temperature home page" on page 8
- "To set the overrule period" on page 9
- "4.7 Preset values and schedules" on page 15

**Leaving water temperature of the main zone**

To control the leaving water temperature of the main zone, you can do the following:

| You can… | Location |
|---|---|
| **Read out** the desired leaving water **temperature**. | Leaving water temperature home page (main) |
| **Adjust** the leaving water **temperature**.<br>Condition: Leaving water set point is NOT linked with the room temperature set point.<br>Only change this if the desired room temperature cannot be reached. | |
| **Define preset values.**<br>Condition: Leaving water set point is linked with the room temperature set point.<br>Only change this if the desired room temperature cannot be reached. | Menu structure |

See also:

- "Using the leaving water temperature home pages (main + additional)" on page 9
- "4.7 Preset values and schedules" on page 15

## Leaving water temperature control

Leaving water temperature control means that you only control the leaving water temperature. To control the leaving water temperature, you can do the following:

| You can… | Location |
|---|---|
| **Read out** the desired leaving water **temperature** (main + additional). | Leaving water temperature home pages (main + additional) |
| ▪ **Adjust/overrule** the leaving water **temperature** (main).<br>▪ **Adjust** the leaving water **temperature** (additional). | |
| **Select** which leaving water temperature **schedule** (main + additional) you want to use. | Menu structure |
| **Program** leaving water temperature **schedule** (main + additional). | |
| **Define preset values** that are used by the leaving water temperature schedule (main). | |

See also:

- "Using the leaving water temperature home pages (main + additional)" on page 9
- "4.7 Preset values and schedules" on page 15

## External room thermostat control

External room thermostat control means that you control the following:

- Room temperature on the external thermostat control
- Leaving water temperature on the user interface (Daikin)

To control the leaving water temperature, you can do the following:

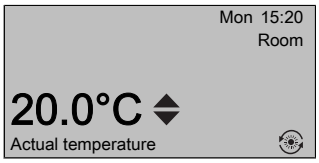
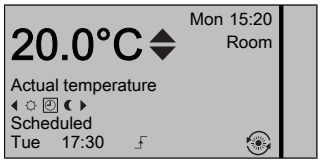
| You can… | Location |
|---|---|
| **Read out** the desired leaving water **temperature**. | Leaving water temperature home pages (main + additional) |
| **Adjust** the desired leaving water **temperature.**<br><br>Only change this if the desired room temperature cannot be reached. | |

See also: "Using the leaving water temperature home pages (main + additional)" on page 9.

## Using the room temperature home page

### Typical room temperature home pages

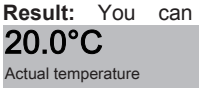
Depending on the user profile, the user interface gives you either a basic or a detailed home page. To switch between home pages, go to [7.1.3]: > User settings > Display > User profile.

| User profile = Basic | User profile = Detailed |
|---|---|
|  |  |

**To read out the actual and desired room temperature**

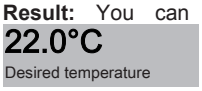
1 Go to the room temperature home page (Room).

**Result:** You can read out the actual temperature.




2 Press OK.

**Result:** You can read out the desired temperature.




**To temporarily overrule the room temperature schedule**

1 Go to the room temperature home page (Room).

2 Use ▲ or ▼ to adjust the temperature.

**To change the mode from scheduled to preset value**

**Prerequisite:** User profile = Detailed.

1 Go to the room temperature home page (Room).

2 Press ◀ or ▶ to select a preset value (☼ or ☾).

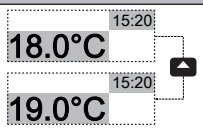
**Result:** The mode will return to Scheduled according to the overrule period.

**Example: Temporarily overruling the schedule AND changing the mode to preset value**

You have configured the following settings:

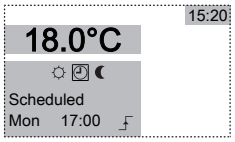
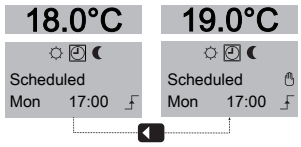
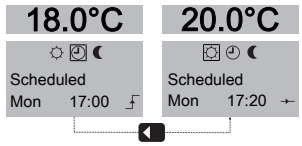
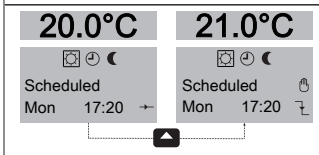
| Settings | | Description |
|---|---|---|
| Preset values | Comfort (heating) = 20°C | Desired temperature when you are at home. |
| | Eco (heating) = 18°C | Desired temperature:<br>▪ When you are away<br>▪ During the night |
| Schedule | 07:00 Comfort | You are at home.<br>Desired temperature = preset value (Comfort (heating)). |
| | 09:00 Eco | You are away.<br>Desired temperature = preset value (Eco (heating)). |
| | 17:00 Comfort | You are at home.<br>Desired temperature = preset value (Comfort (heating)). |
| | 19:00 21°C | You are at home and want it to be a little warmer.<br>Desired temperature = custom temperature. |
| | 23:00 Eco | Desired temperature = preset value (Eco (heating)). |
| Overrule period (Temperature lock) | 2 hours | If you temporarily overrule the schedule by a preset value, after 2 hours the schedule will be used again. |

If user profile = Basic, then you can **temporarily overrule** the room temperature schedule by pressing ▲ or ▼.

| Situation | Description |
|---|---|
|  | 15:20 => Scheduled temperature = preset value (Eco (heating))= 18°C.<br>You **temporarily overrule** the schedule.<br>Desired temperature = custom temperature = 19°C.<br>At the next scheduled action (17:00), the schedule will be used again. |

If user profile = Detailed, then you can:

- **Temporarily overrule** the room temperature schedule by pressing ▲ or ▼ (same as if user profile = Basic)
- **Change the mode** from scheduled to a preset value by pressing ◄ or ►

| Situation | Description |
|---|---|
|  | Room temperature **schedule** is used.<br>15:20 => Desired temperature = preset value (Eco (heating)) = 18°C.<br>The next scheduled action is at 17:00 and the desired temperature will then increase. |
|  | You **temporarily overrule** the schedule.<br>Desired temperature = custom temperature = 19°C.<br>At the next scheduled action (17:00), the schedule will be used again. |
|  | You **change the mode** from scheduled to preset value (Comfort (heating)).<br>Desired temperature = preset value (Comfort (heating)) = 20°C.<br>After 2 hours, the schedule will be used again (17:20 => 20°C). |
|  | Before you have **changed the mode** from scheduled to preset value, and now you **temporarily overrule** the preset value.<br>Desired temperature = custom temperature = 21°C.<br>After 2 hours, the schedule will be used again (17:20 => 20°C). |

**To set the overrule period**

1 Go to [7.2]: ☰ > User settings > Temperature lock.

2 Select a value and press OK:

- Permanent
- hours (2, 4, 6, 8)

**Usage example: You have a party**

If you are in the following situation:

- You are using the following room temperature schedule:
  - 17:00 preset value (Comfort) = 20°C
  - 23:00 preset value (Eco) = 18°C
- Tonight you have a party and you want to use the preset value (Comfort) until 02:00.

Then you can do the following:

1 Set the overrule period (Temperature lock) to 6 hours.

2 At 20:00, go to the room temperature home page (Room).

3 Press ◄ to select ☼.

**Result:** The preset value (Comfort) will be used until 02:00. After that, the schedule will be used again.

**Usage example: You go away for a couple of hours**

If you are in the following situation:

- You are using the following room temperature schedule:
  - 08:00 preset value (Comfort) = 20°C
  - 23:00 preset value (Eco) = 18°C
- At 14:00, you go away for 3 hours.

Then you can do the following:

1 Set the overrule period (Temperature lock) to 2 hours.

2 Go to the room temperature home page (Room).

3 Press ► to select ☾.

**Result:** For the next 2 hours, the room will NOT be heated to the scheduled 20°C, but to the preset value (Eco = 18°C). After the 2 hours, the room will heat up again to the scheduled 20°C.

Advantage:

You save energy because you do NOT heat the room unnecessary, and by the time you come home the room is warm again.

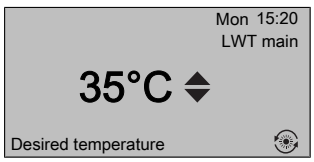
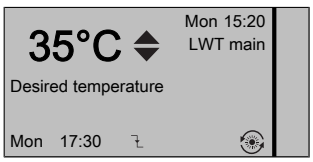
## Using the leaving water temperature home pages (main + additional)

**INFORMATION**

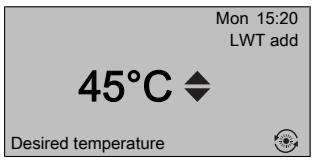
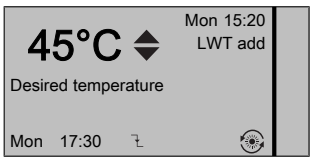
The leaving water is the water that is sent to the heat emitters. The desired leaving water temperature is set by your installer in accordance with the heat emitter type. **Example:** Underfloor heating is designed for lower leaving water temperature than radiators and heat pump convectors and/or fan coil units. You only have to adjust leaving water temperature settings in case of problems.

**Typical leaving water temperature home pages**

Main zone:

| User profile = Basic | User profile = Detailed |
|---|---|
|  |  |

Additional zone:

| User profile = Basic | User profile = Detailed |
|---|---|
|  |  |

**To read out the desired leaving water temperature (main + additional)**

Go to the leaving water temperature home page (LWT main or LWT add).

**To adjust/overrule the leaving water temperature (main)(NOT linked to room thermostat control)**

**INFORMATION**

Adjusting the leaving water temperature is permanent unless the leaving water temperature is according to a schedule. In that case the overruling is valid until the next scheduled action.

1 Go to [7.4.2]: > User settings > Preset values > LWT main.

2 Press or to adjust/overrule. **Example:** 35°C 37°C

**To adjust the leaving water temperature (additional)**

1 Go to the additional leaving water temperature home page (LWT add).

2 Press or to adjust. **Example:** 45°C 47°C

## 4.5 Domestic hot water control

### 4.5.1 About domestic hot water control

Depending on the DHW tank mode (installer setting), you use a different domestic hot water control:

- Reheat mode
- Scheduled mode
- Scheduled + reheat mode

**CAUTION**

The backup heater permission schedule is used to restrict or allow backup heater operation based on a weekly program. Advice: In order to avoid unsuccessful disinfection function, at least allow the backup heater (by the weekly program) for minimum 4 hours starting from the scheduled start-up of disinfection. If the backup heater is restricted during disinfection, this function will NOT be successful and the applicable warning AH will be generated.

**INFORMATION**

In case of error code AH and no interruption of the disinfection function occurred due to domestic hot water tapping, following actions are recommended:

- When the Domestic hot water > Type > Reheat or Reheat + sched. is selected, it is recommended to program the start-up of the disinfection function at least 4 hours later than the last expected large hot water tapping. This start-up can be set by installer settings (disinfection function).
- When the Domestic hot water > Type > Scheduled only is selected, it is recommended to program a Storage eco 3 hours before the scheduled start-up of the disinfection function to preheat the tank.

**To determine which DHW tank mode you are using (method 1)**

Check the installer settings table filled in by the installer.

**To determine which DHW tank mode you are using (method 2)**

**Prerequisite:** User profile = Detailed.

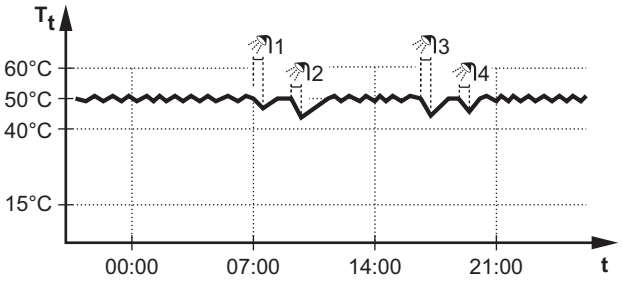
1 Go to the DHW tank temperature home page (Tank).

2 Check which icons are displayed:

| If… is displayed | Then the DHW tank mode =… |
|---|---|
| | Reheat mode |
| | Scheduled mode |
| | Scheduled + reheat mode |

### 4.5.2 Reheat mode

In reheat mode (), the DHW tank continuously heats up to the desired temperature (example: 50°C).




- $T_t$: DHW tank temperature
- t: Time

In reheat mode, you can do the following:

| You can… | Location |
|---|---|
| **Read out** the desired reheat **temperature.** | DHW tank temperature home page |
| **Adjust** the reheat **temperature.**<br><br>Condition: ⬘ is displayed on the DHW tank temperature home page. | |
| **Activate** the DHW tank **booster mode.** | |
| **(Only for field supplied domestic hot water pump for secondary return)**<br>**Program a domestic hot water pump schedule** to determine when to turn ON and OFF the pump.<br><br>When turned ON, the pump runs and makes sure hot water is instantly available at the tap. To save energy, only turn ON the pump during periods of the day when instant hot water is necessary. | Menu structure |

See also:

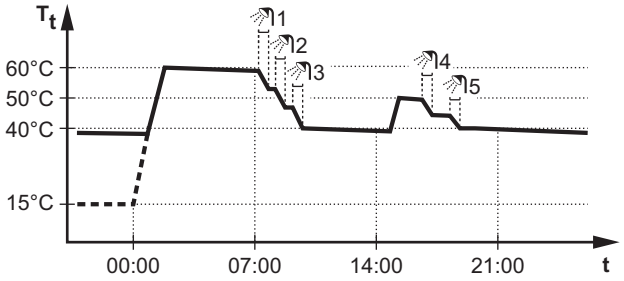
- "4.5.5 Using the DHW tank temperature home page" on page 11
- "4.5.6 Using the DHW tank booster mode" on page 12
- "4.7 Preset values and schedules" on page 15

### 4.5.3 Scheduled mode

In scheduled mode (), the DHW tank produces hot water corresponding to a schedule. The best time to allow the tank to produce hot water is at night, because:

- The space heating demand is lower
- Electricity tariffs are lower

**Example:**




- $T_t$: DHW tank temperature
- t: Time
- Initially, the DHW tank temperature is the same as the temperature of the domestic water entering the DHW tank (example: **15°C**).
- At 00:00 the DHW tank is programmed to heat up the water to a preset value (example: Storage comfort **= 60°C**).
- During the morning, you consume hot water and the DHW tank temperature decreases. As long as the DHW tank temperature stays above **40°C**, hot water is available.
- At 14:00 the DHW tank is programmed to heat up the water to a preset value (example: Storage eco = **50°C**). Hot water is available again.
- During the afternoon and evening, you consume hot water again and the DHW tank temperature decreases again.
- At 00:00 the next day, the cycle repeats.

In scheduled mode, you can do the following:

| You can… | Location |
|---|---|
| **Read out** the active or next scheduled desired **temperature.** | DHW tank temperature home page |
| **Overrule** the active or next scheduled desired **temperature**.<br><br>Condition: ⬍ is displayed on the DHW tank temperature home page. | |
| **Activate** the DHW tank **booster mode.** | |
| **Select** a DHW tank temperature **schedule**. | Menu structure |
| **Program** a DHW tank temperature **schedule**. | |
| **Define preset values** that are used by the DHW tank temperature schedule. | |
| **(Only for field supplied domestic hot water pump for secondary return)**<br>**Program a domestic hot water pump schedule** to determine when to turn ON and OFF the pump.<br><br>When turned ON, the pump runs and makes sure hot water is instantly available at the tap. To save energy, only turn ON the pump during periods of the day when instant hot water is necessary. | |

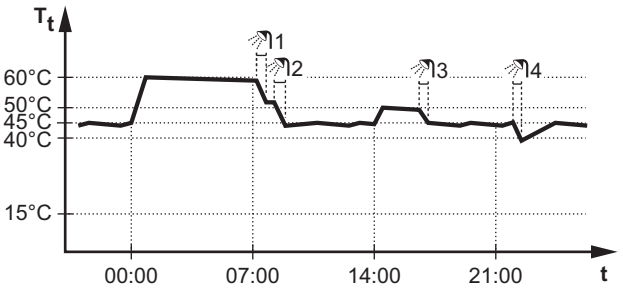
See also:

- "4.5.5 Using the DHW tank temperature home page" on page 11
- "4.5.6 Using the DHW tank booster mode" on page 12
- "4.7 Preset values and schedules" on page 15

### 4.5.4 Scheduled + reheat mode

In scheduled + reheat mode ( ), the domestic hot water control is the same as in scheduled mode. However, when the DHW tank temperature drops below a preset value (=Reheat; example: 45°C), the DHW tank heats up until it reaches this preset value. This ensures that a minimum amount of hot water is available at all times.

**Example:**




In scheduled + reheat mode, you can do the following:

| You can… | Location |
|---|---|
| Do the same things as in scheduled mode. | — |
| **Adjust the preset value** (Reheat). | Menu structure |

See also:

- "4.5.3 Scheduled mode" on page 11
- "4.7 Preset values and schedules" on page 15

### 4.5.5 Using the DHW tank temperature home page

**Typical DHW tank temperature home pages**

Depending on the user profile, the user interface gives you either a basic or a detailed home page. Depending on an installer setting, either an actual temperature or a number of people is displayed to indicate the domestic hot water tank temperature. The examples in the illustrations below are in DHW tank mode = Scheduled.

| User profile = Basic | User profile = Detailed |
|---|---|
| Mon 15:20<br>Tank<br>60°C ⬍<br>Desired temperature | Mon 15:20<br>Tank<br>60°C ⬍<br>Storage comfort<br>Tue 00:00 |
| Mon 15:20<br>Tank<br>4 ⬍<br>Desired temperature | Mon 15:20<br>Tank<br>4 ⬍<br>Storage comfort<br>Tue 00:00 |

Depending on an installer setting, you have to define how much hot water you want differently:

| If you see… | Then you have to define… |
|---|---|
| 60°C | To which temperature the DHW tank has to heat up. |
| 4 | For how many people you need hot water. The software then automatically calculates the corresponding DHW tank temperature based on installer settings. |

**To read out and adjust the desired reheat temperature (in scheduled and reheat mode)**

1 Go to [7.4.3.3]: > User settings > Preset values > Tank temperature > Reheat.

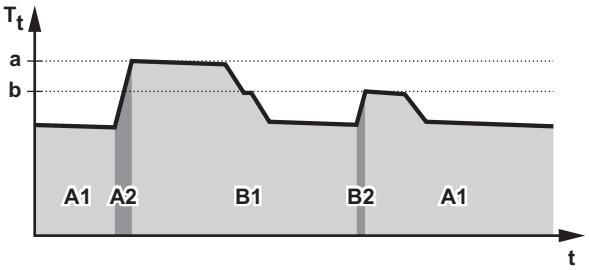
**Result:** You can read out the desired reheat temperature.

2 Press or to adjust.

**To read out and overrule the active or next scheduled desired temperature (in scheduled mode or scheduled + reheat mode)**

1 Go to the DHW tank temperature home page (Tank).

**Result:** 60°C or 4 is displayed.




| During period… | You can read out… |
|---|---|
| A1 | The next scheduled action (**a**) |
| A2 | The active action (**a**) |
| B1 | The next scheduled action (**b**) |
| B2 | The active action (**b**) |

2 Press or to overrule. **Note:** If the desired temperature is weather dependent, you cannot change it on the home page.

**Usage example: You need more hot water than scheduled**

If you are in the following situation:

- Current time = 10:30
- Next scheduled action of the DHW tank = Heat up to the preset value (Eco; example: 55°C and sufficient for 2 persons) at 14:00
- This evening you need hot water for 3 persons

Then you can do the following:

1 Go to the DHW tank temperature home page (Tank).

2 Overrule the next scheduled action by doing one of the following:

- Change from 55°C to 60°C (when defining hot water as temperature)
- Change from 2 persons to 3 persons (when defining hot water as number of persons)

Advantages:

- You will have sufficient hot water (= comfortable).
- You do NOT have to change the schedule (= easy).
- You do NOT have to activate the DHW tank booster mode (= energy saving).

### 4.5.6 Using the DHW tank booster mode

**About the DHW tank booster mode**

You can use the DHW tank booster mode to immediately start heating up the water to the preset value (Storage comfort). However, this consumes extra energy.

**To check if the DHW tank booster mode is active**

1 Go to the DHW tank temperature home page (Tank).

2 Check the following:

- In user profile = Basic: If is displayed, the DHW tank booster mode is active.
- In user profile = Detailed: If is selected, the DHW tank booster mode is active.

**To activate the DHW tank booster mode (method 1)**

1 Go to the DHW tank temperature home page (Tank).

2 Press for more than 5 seconds.

**To activate the DHW tank booster mode (method 2)**

**Prerequisite:** User profile = Detailed

1 Go to the DHW tank temperature home page (Tank).

2 Press to select .

**Usage example: You immediately need more hot water**

If you are in the following situation:

- You already consumed most of your hot water.
- You cannot wait for the next scheduled action to heat up the DHW tank.

Then you can activate the DHW tank booster mode.

Advantage: The DHW tank immediately starts heating up the water to the preset value (Storage comfort).

## 4.6 Advanced usage

### 4.6.1 Using quiet mode

**INFORMATION**

Quiet mode is NOT applicable for this unit.

### 4.6.2 Using holiday mode

**About holiday mode**

During your holiday, you can use the holiday mode to deviate from your normal schedules without having to change them. You can only use holiday mode if temperature control = room thermostat control. See also "4.4.3 Controlling the temperature" on page 6.

Using holiday mode typically consists of the following stages:

1 Configuring the holiday for one of the following situations:

| Situation | Then… |
|---|---|
| You stay at home during your holiday | You have to select a day.<br>▪ Space heating will be according to the desired room temperature of the selected day.<br>▪ Domestic hot water operation can be turned ON or OFF. If you decide to keep it turned ON, domestic hot water control will be according to the desired DHW tank temperature of the selected day. |
| You go away during your holiday | You have to configure space heating settings.<br>▪ Space heating will be according to these settings.<br>▪ Domestic hot water operation can be turned ON or OFF. If you decide to turn it OFF, disinfection mode will remain active. |

2 Activating the holiday mode.

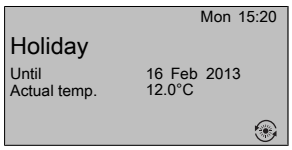
- If you do NOT activate, the configured holiday settings will NOT be used.
- If you activate:

| Period | Then… |
|---|---|
| Before and after your holiday | Your normal schedules will be used. |
| During your holiday | The configured holiday settings will be used. |

**To check if holiday mode is activated and/or running**

1 Press ⌂ to go to one of the home pages.

2 Check the following:

| If… is displayed | Then… |
|---|---|
|  | One of the following holiday modes is activated:<br>▪ Holiday mode (Away) is activated, but NOT running yet.<br>▪ Holiday mode (Home) is activated. You cannot see if the holiday mode is already running. |
|  | Holiday mode (Away) is activated and running. |

**To configure the holiday (when you stay at home)**

1 Go to [2.2]: ☰ > Holiday > Holiday mode.

2 Select Home.

3 Configure the holiday mode settings (when you stay at home).

4 Activate the holiday mode.

**Possible holiday mode settings (when you stay at home)**

| Setting | Description |
|---|---|
| From and Until | First and last day of your holiday. |
| Use day schedule | Day schedule used during your holiday.<br>**Example:** Saturday |

**To configure the holiday (when you go away)**

1 Go to [2.2]: ☰ > Holiday > Holiday mode.

2 Select Away.

3 Configure the holiday mode settings (when you go away).

4 Activate the holiday mode.

**Possible holiday mode settings (when you go away)**

| Setting | Description |
|---|---|
| From and Until | First and last day of your holiday. |
| Operation mode | Operation mode used during your holiday. |
| Heating | Set point used during your holiday when the unit is operating in heating mode. |
| DHW | Turn ON or OFF domestic hot water operation during your holiday. |

**To activate or deactivate the holiday mode**

**Prerequisite:** You have configured the holiday.

1 Go to [2.1]: ☰ > Holiday > Holiday.

2 Do one of the following:

- To activate, select Yes and press OK.
- To deactivate, select No and press OK.

**Usage example: You go away during the winter**

If you are in the following situation:

- In 2 days, you go away for 2 weeks during the winter.
- You want to save energy, but prevent your house from freezing.

Then you can do the following:

1 Configure the holiday. Go to [2]: ☰ > Holiday, and configure the following settings:

| Setting | Value |
|---|---|
| Holiday mode | Away |
| From | 2 February 2013 |
| Until | 16 February 2013 |
| Operation mode | Heating |
| Heating | 12°C |

2 Activate the holiday mode.

- Go to [2.1]: ☰ > Holiday > Holiday.
- Select Yes and press OK.

Advantage:

- Before and after your holiday, your normal schedule will be used.
- During your holiday, you save energy and prevent your house from freezing.

**Usage example: You come home during your holiday**

If you are in the following situation:

- You configured and activated the holiday mode (Away).
- During your holiday, you come home for a few hours and want to use your normal schedule.

Then you can do the following:

1 Deactivate the holiday mode.

2 When you go away again, activate the holiday mode again.

Advantage:

You do NOT have to change your schedule or holiday configuration.

### 4.6.3 Reading out information

**About reading out information**

The amount of information you can read out in the menu structure ([6]: Information) depends on your user permission level:

- End user (= default)
- Adv. end user: You can read out more information.

**To switch between user permission levels (End user and Advanced end user)**

1 Go to [6] or any of its submenus: > Information.

2 Press for more than 4 seconds.

**Result:** The user permission level switches to Adv. end user. Additional information is displayed and "+" is added to the menu title.

3 If you do NOT press any button for more than 1 hour or press again for more than 4 seconds, the user permission level switches back to End user.

**To read out information**

Go to [6]: > Information.

**Possible read-out information**

If user permission level = End user, you can read out the following information:

| In menu… | You can read out… |
|---|---|
| [6.1] Sensor information | Room, tank or DHW, and outside temperature. |
| [6.2] Energy metering | Produced energy, consumed electricity, and consumed gas. |
| [6.3] Error handling | Error history and contact/ helpdesk number. |
| [6.4] User permission level | Current user permission level. |

If user permission level = Adv. end user, you can read out the following additional information:

| In menu… | You can read out… |
|---|---|
| [6.1] Sensor information | Room, tank or DHW, outside, and leaving water temperature. (If applicable) |
| [6.2] Energy metering | Produced energy, consumed electricity, and consumed gas. |
| [6.5] Actuators | Status/mode of each actuator. **Example:** Domestic hot water pump ON/OFF. |
| [6.6] Operation modes | Current operation mode. **Example:** Defrost/oil return mode. |
| [6.7] Running hours | Running hours of the system. |
| [6.8] Version | Version information about the system. |

### 4.6.4 Configuring date, time, units of measurement, contrast and backlight

**To configure time and date**

Go to [1]: > Set time/date.

**To configure units of measurement**

Go to [7.6]: > User settings > Unit of measurement.

**Possible units of measurement settings**

| Setting | Possible units of measurement |
|---|---|
| Decimal point | ▪ Dot<br>▪ Comma |
| Temperature | ▪ °C<br>▪ °F |
| Produced energy | ▪ kWh<br>▪ MBtu |
| Flow | ▪ l/min<br>▪ GPM |

**To configure the contrast of the user interface**

Go to [7.1.1]: > User settings > Display > Contrast.

**To configure the backlit LCD time of the user interface**

Go to [7.1.2]: > User settings > Display > Backlit LCD time.

### 4.6.5 Configuring user profile and home pages

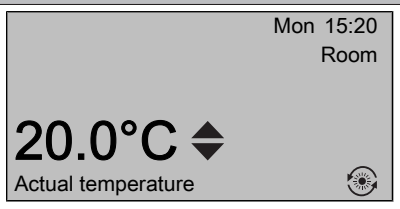
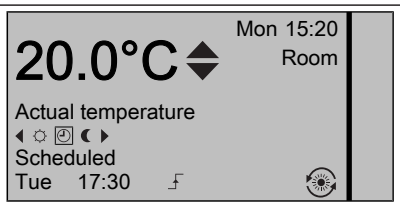
**To set a user profile**

1 Go to [7.1.3]: > User settings > Display > User profile.

2 Select a user profile and press OK.

**Possible user profiles**

If user profile = Detailed, you can see and do more on the home pages.

| User profile | Example |
|---|---|
| Basic |  |
| Detailed |  |

**To configure which home pages are made available to the end user**

1 Go to [7.1.4]: ☰ > User settings > Display > Available home pages.

**Result:** The home pages that are possible for your system layout are listed.

2 Select a home page and press OK.

3 Do one of the following:

- To display the home page, select Yes and press OK.
- To hide the home page, select No and press OK.

### 4.6.6 Locking and unlocking buttons and functions

**About locking and unlocking**

You can use the following locking modes:

- Child lock: Locks all buttons to prevent children from changing settings.
- Function lock: Locks a specific function to prevent people from changing its settings.

**Possible function locks**

**To check if locking is active**

1 Press ⌂ to go to one of the home pages.

2 If 🔒 is displayed, child lock is active.

**Note:** If you are on a home page and try to use a function that is locked, 🔒 is displayed for 1 second.

**To activate or deactivate child lock**

1 Press ⌂ to go to one of the home pages.

2 Press OK for more than 5 seconds.

**To activate or deactivate a function lock**

1 Press ☰ to go to the menu structure.

2 Press OK for more than 5 seconds.

3 Select a function and press OK.

4 Select Lock or Unlock, and press OK.

## 4.7 Preset values and schedules

### 4.7.1 Using preset values

**About preset values**

You can define preset values for multiple controls. Preset values make it easy to use the same value in many places (schedules and room temperature home page (☼ and ◖)). If you later want to change the value, you only have to do it in one place.

**To define preset values**

1 Go to [7.4]: ☰ > User settings > Preset values.

2 Select for which control you want to define a preset value. **Example:** Room temperature.

3 Select a preset value and press OK. **Example:** Comfort (heating).

4 Select a temperature and press OK.

**Possible preset values**

| Control | Preset value | Where used |
|---|---|---|
| Room temperature | Comfort | ▪ Room temperature schedules<br>▪ Room temperature home page (☼ and ◖) if user profile = Detailed |
| | Eco | |
| LWT main | Comfort | Main leaving water temperature schedules |
| | Eco | |
| Tank temperature | Storage comfort | DHW tank temperature schedule if DHW tank mode =<br>▪ Scheduled<br>▪ Scheduled + reheat |
| | Storage eco | |
| | Reheat | DHW tank temperature schedule if DHW tank mode = Scheduled + reheat |
| Quiet level | | Not applicable. |

### 4.7.2 Using and programming schedules

**About schedules**

Depending on your system layout and installer configuration, schedules (predefined and/or user-defined) for multiple controls may be available.

You can:

- Select which schedules you currently want to use.
- Program your own schedules if the predefined schedules are not satisfactory. The actions you can program are control specific.

**Possible actions per control**

| Control | Possible actions |
|---|---|
| Room temperature | Program when to heat up or cool down a space:<br>▪ Comfort (preset value)<br>▪ Eco (preset value)<br>▪ [Custom temperature] |
| Main leaving water temperature | |
| Additional leaving water temperature | Program when the additional leaving water temperature is turned ON and OFF. |
| DHW tank temperature | Program when to heat up the DHW tank. The possible actions depend on an installer setting.<br>Possible actions 1:<br>▪ Storage comfort (preset value)[(a)]<br>▪ Storage eco (preset value)[(a)]<br>▪ Storage stop[(b)] |
| Quiet mode | Not applicable. |
| **(Only for field supplied domestic hot water pump for secondary return)**<br>Domestic hot water pump | Program when the domestic hot water pump is turned ON and OFF. |

**(a)** Start heating up until the desired setpoint (Comfort/Eco) is reached.

**(b)** Stop heating, even if the desired temperature is not reached yet; example: if electric tariffs are higher during the day, you can program a stop at 06:00.

**To select which schedule you currently want to use**

1 Go to [5]: ☰ > Select schedules.

2 Select for which control you want to use a schedule. **Example:** [5.1] Room temperature.

3 Select for which operation mode you want to use a schedule. **Example:** [5.1.1] Heating.

4 Select a predefined or user-defined schedule and press OK.

**To program a schedule**

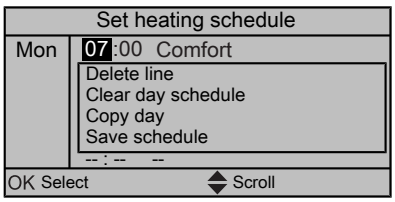
1 Go to [7.3]: ☰ > User settings > Set schedules.

2 Open an empty, predefined or user-defined schedule.

3 Change it.

4 Save it.

**Guidelines when programming**




You can:

- Delete lines from the schedule
- Clear a day schedule
- Copy from one day to others

**Usage example: You work in a 3-shift system**

If you work in a 3-shift system, you can do the following:

1 Program 3 room temperature schedules in heating mode and give them appropriate names. **Example:** EarlyShift, DayShift and LateShift

2 Select the schedule that you currently want to use.

### 4.7.3 Schedules: Example

**INFORMATION**

The procedures to program other controls are similar.

In this example:

- Room temperature schedule in heating mode
- Monday = Tuesday = Wednesday = Thursday = Friday
- Saturday = Sunday

**To program the schedule**

1 Go to [7.3.1.1]: ☰ > User settings > Set schedules > Room temp. > Set heating schedule.

2 Select Empty and press OK.

3 Program the schedule for Monday. See below for more details.

4 Copy from Monday to Tuesday, Wednesday, Thursday and Friday. See below for more details.

5 Program the schedule for Saturday.

6 Copy from Saturday to Sunday.

7 Save the schedule and give it a name. See below for more details.

**To program the schedule for Monday**

1 Use ▲ and ▼ to select Monday.

2 Press ▶ to enter the schedule for Monday.

3 Program the schedule for Monday:

- Use ◀ and ▶ to select an entry.
- Use ▲ and ▼ to change the value of an entry.

**To copy from one day to another**

1 Select the day from which you want to copy and press OK. **Example:** Monday.

2 Select Copy day and press OK.

3 Set the days you want to copy to Yes and press OK. **Example:** Tuesday = Yes, Wednesday = Yes, Thursday = Yes and Friday = Yes.

**To save the schedule**

1 Press OK, select Save schedule and press OK.

2 Select User defined 1, User defined 2 or User defined 3 and press OK.

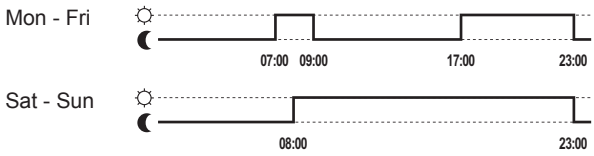
3 Change the name and press OK. (Only applicable for room temperature schedules). **Example:** MyWeekSchedule

### 4.7.4 Predefined schedules: Room temperature + leaving water temperature (main)

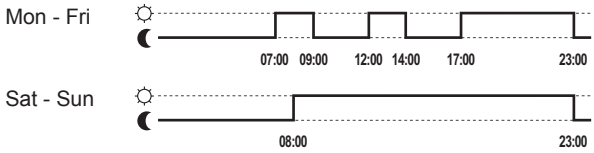
☼: Desired temperature = Preset value (Comfort)

◖: Desired temperature = Preset value (Eco)

**Predefined 1**




**Predefined 2**



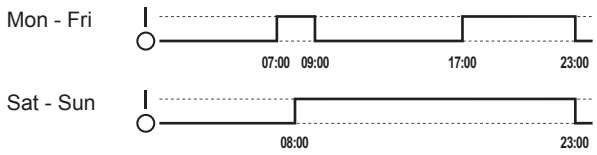

**Predefined 3**

### 4.7.5 Predefined schedules: Leaving water temperature (additional)

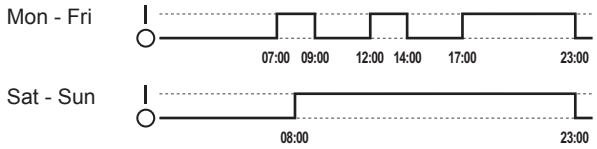
|: Additional zone = On

○: Additional zone = OFF

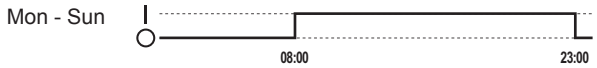
**Predefined 1**




**Predefined 2**




**Predefined 3**




### 4.7.6 Predefined schedules: DHW tank temperature

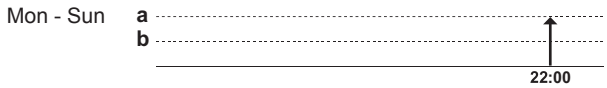
**a**

: Start production of domestic hot water. Desired DHW tank temperature = Preset value (Storage comfort)

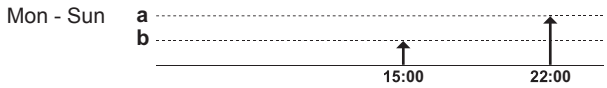
**b**

: Start production of domestic hot water. Desired DHW tank temperature = Preset value (Storage eco)

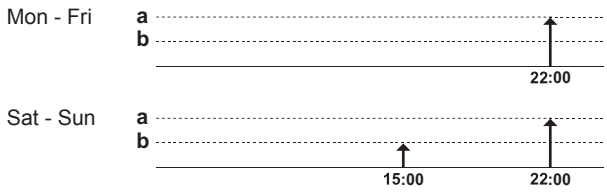
**Predefined 1**



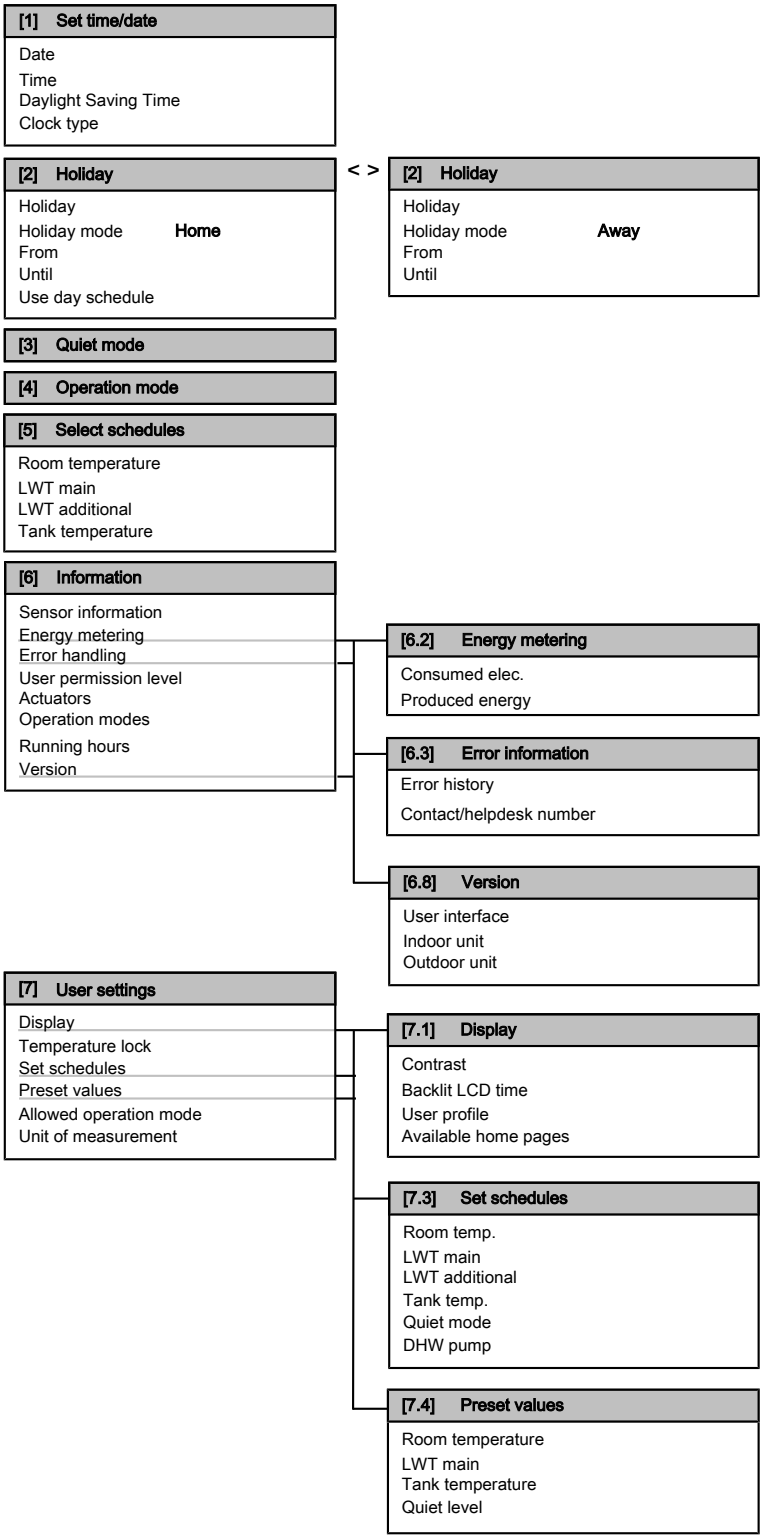

**Predefined 2**




**Predefined 3**



## 4.8 Menu structure: Overview




**INFORMATION**

Energy metering functionality is NOT applicable and/or NOT valid for this unit if it is calculated by the unit. If optional external meters are used, energy metering display is valid.

**INFORMATION**

Quiet mode and quiet level is NOT applicable for this unit.

**INFORMATION**

- Indoor unit relates to indoor unit PCB which controls the hydraulic part of the ground source heat pump.
- Outdoor unit relates to outdoor unit PCB which controls the compressor module of the ground source heat pump.

## 4.9 Installer settings: Tables to be filled in by installer

### 4.9.1 Quick wizard

| Setting | Default | Fill in… |
|---|---|---|
| **Backup heater configuration (only for unified backup heater) [A.2.1.5]** | | |
| BUH type | 4 (3PN,(1/2)) | |
| **Preferential kWh rate power supply [A.2.1.6]** | | |
| Preferential kWh rate | 0 (No) | |
| **Space heating settings [A.2.1]** | | |
| Unit control method | 0 (LWT control) | |
| User interface location | 1 (In room) | |
| Number of LWT zones | 0 (1 LWT zone) | |
| Pump operation mode | 1 (Sample) | |
| **Domestic hot water settings [A.2.2]** | | |
| DHW pump | 0 (No) | |
| **Thermostats [A.2.2]** | | |
| Contact type main | 1 (Thermo ON/OFF) | |
| Contact type add. | 1 (Thermo ON/OFF) | |
| External sensor | 0 (No) | |
| **Digital I/O PCB [A.2.2.6]** | | |
| Ext. backup heat src | 0 (No) | |
| Alarm output | 0 (Normally open) | |
| **Demand PCB [A.2.2.7]** | | |
| Demand PCB | 0 (No) | |
| **Energy metering [A.2.2]** | | |
| External kWh meter 1 | 0 (No) | |
| External kWh meter 2 | 0 (No) | |
| **Capacities (energy metering) [A.2.3]** | | |
| BUH: step 1 | 3 kW | |
| BUH: step 2 | 3 kW | |
| **Auto emergency [A.5.1.2]** | | |
| Auto emergency operation | Manual | |

**INFORMATION**

Auto emergency: By default, backup heater operation during emergency operation is NOT allowed. This means that when a heat pump failure occurs the user needs to manually confirm that backup heater may operate during emergency. If the house is unattended for longer periods, we recommend that setting [A.5.1.2] Auto emergency operation shall be set to Automatic.

### 4.9.2 Space heating control

| Setting | Default | Fill in… |
|---|---|---|
| **Leaving water temperature: Main zone [A.3.1.1]** | | |
| LWT setpoint mode | 1 (Weather dep.) | |
| Set weather-dependent heating | –20/15/60/25 | |
| **Leaving water temperature: Additional zone [A.3.1.2]** | | |
| LWT setpoint mode | 1 (Weather dep.) | |
| Set weather-dependent heating | 25/60/15/−20 | |
| **Leaving water temperature: Delta T emitter [A.3.1.3]** | | |
| Heating | 8°C | |
| **Leaving water temperature: Modulation [A.3.1.1.5]** | | |
| Modulated LWT | 0 (No) | |
| **Leaving water temperature: Emitter type [A.3.1.1.7]** | | |
| Emitter type | 0 (Quick) | |

### 4.9.3 Domestic hot water control [A.4]

| Setting | Default | Fill in… |
|---|---|---|
| Type | 1 (Reheat + sched.) | |
| Setpoint readout type | 0 (Temperature) | |
| Maximum setpoint | 60°C | |

### 4.9.4 Contact/helpdesk number [6.3.2]

| Setting | Default | Fill in… |
|---|---|---|
| Contact/helpdesk number | — | |

# 5 Energy saving tips

**Tips about room temperature**

- Make sure the desired room temperature is NEVER too high, but ALWAYS according to your actual needs. Each saved degree can save up to 6% of heating costs.
- Do NOT increase the desired room temperature to speed up space heating. The space will NOT heat up faster.
- When your system layout contains slow heat emitters (example: under floor heating), avoid large fluctuation of the desired room temperature and do NOT let the room temperature drop too low. It will take more time and energy to heat up the room again.
- Use a weekly schedule for your normal space heating needs. If necessary, you can easily deviate from the schedule:
  - For shorter periods: You can overrule the scheduled room temperature. **Example:** When you have a party, or when you are leaving for a couple of hours.
  - For longer periods: You can use the holiday mode. **Example:** When you stay at home during your holiday, or when you go away during your holiday.

**Tips about leaving water temperature**

- In heating mode, a lower desired leaving water temperature results in lower energy consumption and better performance.
- Set the desired leaving water temperature in accordance with the heat emitter type. **Example:** Underfloor heating is designed for lower leaving water temperature than radiators and heat pump convectors.

**Tips about DHW tank temperature**

- Make sure the number (available hot water for x persons) on the DHW tank temperature home page is NOT higher than your actual needs.
- Use a weekly schedule for your normal domestic hot water needs (only in scheduled mode).
  - Program to heat up the DHW tank to a preset value (Storage comfort = higher DHW tank temperature) during the night, because then space heating demand is lower and electric tariffs may be lower.
  - If heating up the DHW tank once at night is not sufficient, program to additionally heat up the DHW tank to a preset value (Storage eco = lower DHW tank temperature) during the day.
- Make sure the desired DHW tank temperature is NOT too high. **Example:** After installation, lower the DHW tank temperature daily by 1°C and check if you still have enough hot water.
- Program to turn ON the domestic hot water pump only during periods of the day when instant hot water is necessary. **Example:** In the morning and evening.

# 6 Maintenance and service

## 6.1 Overview: Maintenance and service

The installer has to perform a yearly maintenance. You can find the contact/helpdesk number via the user interface.

As end user, you have to:

- Keep the user interface clean with a soft damp cloth. Do NOT use any detergents.
- Regularly check if the water pressure indicated on the manometer is above 1 bar.

**Refrigerant**

This product contains fluorinated greenhouse gases covered by the Kyoto Protocol. Do NOT vent gases into the atmosphere.

Refrigerant type: R410A

Global warming potential value: 1975

Periodical inspections for refrigerant leaks may be required depending on the applicable legislation. Please contact your installer for more information.

## 6.2 To find the contact/helpdesk number

Go to [6.3.2]: ☰ > Information > Error handling > Contact/helpdesk number.

# 7 Troubleshooting

## 7.1 Overview: Troubleshooting

If a malfunction occurs, ⓘ is displayed on the home pages. You can press ⓘ to display more information about the malfunction.

For the symptoms listed below, you can try to solve the problem yourself. For any other problem, contact your installer. You can find the contact/helpdesk number via the user interface.

## 7.2 To check the error history

Go to [6.3.1]: ☰ > Information > Error handling > Error history.

## 7.3 Symptom: You are feeling too cold (hot) in your living room

| Possible cause | Corrective action |
|---|---|
| The desired room temperature is too low (high). | Increase (decrease) the desired room temperature.<br><br>If the problem recurs daily, do one of the following:<br>▪ Increase (decrease) the room temperature preset value.<br>▪ Adjust the room temperature schedule. |
| The desired room temperature cannot be reached. | Increase the desired leaving water temperature in accordance with the heat emitter type. |

## 7.4 Symptom: The water at the tap is too cold

| Possible cause | Corrective action |
|---|---|
| You ran out of domestic hot water because of unusual high consumption. | If you immediately need domestic hot water, activate the DHW tank booster mode. However, this consumes extra energy.<br><br>If you can wait, overrule (increase) the active or next scheduled desired temperature so that more hot water will be produced exceptionally.<br><br>If the problems recurs daily, do one of the following:<br>▪ Increase the DHW tank temperature preset value.<br>▪ Adjust the DHW tank temperature schedule. **Example:** Program to additionally heat up the DHW tank to a preset value (Storage eco = lower tank temperature) during the day. |
| The desired DHW tank temperature is too low. | |

## 7.5 Symptom: Heat pump failure

When the heat pump fails to operate the backup heater can serve as an emergency heater and either automatically or non-automatically take over the heat load. When auto emergency is activated and a heat pump failure occurs, the backup heater will automatically take over the heat load. When a heat pump failure occurs and auto emergency is not activated, the domestic hot water and space heating operations will stop and need to be recovered manually. The user interface will then ask you to confirm whether the backup heater can take over the heat load or not. When the heat pump fails, ⓘ will appear on the user interface.

| Possible cause | Corrective action |
|---|---|
| Heat pump is damaged. | ▪ Press ⓘ to view a description of the problem.<br>▪ Press ⓘ again.<br>▪ Select OK to allow the backup heater to take over the heat load.<br>▪ Call your local dealer to get the heat pump fixed. |

**INFORMATION**

When the backup heater takes over the heat load, electricity consumption will be considerably higher.

# 8 Relocation

## 8.1 Overview: Relocation

If you want to relocate parts of your system (user interface, indoor unit, outdoor unit, DHW tank…), contact your installer. You can find the contact/helpdesk number via the user interface.

# 9 Disposal

## 9.1 Overview: Disposal

If you want to dispose parts of your system (user interface, indoor unit, outdoor unit, DHW tank…), contact your installer. You can find the contact/helpdesk number via the user interface.

# 10 Glossary

**DHW = Domestic hot water**

Hot water used, in any type of building, for domestic purposes.

**LWT = Leaving water temperature**

Water temperature at the water outlet of the heat pump.

**Dealer**

Sales distributor for the product.

**Authorized installer**

Technical skilled person who is qualified to install the product.

**User**

Person who is owner of the product and/or operates the product.

**Applicable legislation**

All international, European, national and local directives, laws, regulations and/or codes that are relevant and applicable for a certain product or domain.

**Service company**

Qualified company which can perform or coordinate the required service to the product.

**Installation manual**

Instruction manual specified for a certain product or application, explaining how to install, configure and maintain it.

**Operation manual**

Instruction manual specified for a certain product or application, explaining how to operate it.

**Accessories**

Labels, manuals, information sheets and equipment that are delivered with the product and that need to be installed according to the instructions in the accompanying documentation.

**Optional equipment**

Equipment made or approved by Daikin that can be combined with the product according to the instructions in the accompanying documentation.

**Field supply**

Equipment not made by Daikin that can be combined with the product according to the instructions in the accompanying documentation.

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