OPERATION MANUAL

Indoor unit for air to water heat pump system and options

For installation WITH restricted power supply condition

=6 kW

EKHBHE008AA3V3
EKHBXE008AA3V3

CONTENTS

READ THIS MANUAL ATTENTIVELY BEFORE STARTING UP THE UNIT. DO NOT THROW IT AWAY. KEEP IT IN YOUR FILES FOR FUTURE REFERENCE.

Before operating the unit, make sure the installation has been carried out correctly by a professional Daikin dealer.

If you feel unsure about operation, contact your Daikin dealer for advice and information.

INTRODUCTION

Thank you for purchasing this altherma by DAIKIN indoor unit.

This manual

This manual describes how to start up and switch off the unit, set parameters and configure the schedule timer by means of the controller, maintain the unit and solve operational problems.

For "Checks before initial start-up" and "Initial start-up" procedures refer to the installation manual of this unit.

This unit

The altherma by DAIKIN indoor unit is the indoor part of the reversible air to water Daikin ERHQ heat pumps. These units are designed for wall mounted indoor installation and used for both heating and cooling applications. The units can be combined with Daikin fan coil units, floor heating, low temperature radiators, the Daikin domestic hot water tanks and the solar option kit.

The altherma by DAIKIN indoor unit range consists of two main versions: a heating/cooling (EKHBX) version and a heating only (EKHBH) version.

Both versions are delivered with an integrated backup heater. The backup heater only serves as a backup in case of malfunctioning of the outdoor unit or when the unit is operating out of its operation range. If the unit is operating out of its operation range, the compressor will stop and the backup heater will function.

NOTE An EKHBH/XE008**AA**3V3 indoor unit can only be connected to an ERHQ00*__AD__ series outdoor unit.

Options

Domestic hot water tank option

An optional EKHWS domestic hot water tank with integrated 3 kW electrical booster heater can be connected to the indoor unit. The domestic hot water tank is available in different sizes. For more information about the domestic hot water tank, refer to the installation manual of the domestic hot water tank.

Solar kit for domestic hot water tank option

For information concerning the EKSOLHW solar kit, refer to the installation manual of that kit.

Remote alarm kit option

For information concerning the EKRP1HB remote alarm, refer to the installation manual of that kit.

OPERATING THE UNIT

INTRODUCTION

The altherma by DAIKIN heat pump system is designed to provide you a comfortable indoor climate for many years at low energy consumption.

To get the most comfort with the lowest energy consumption out of your system, it is very important to observe the items listed below.

Defining possible schedule timer actions for each day and filling out the form at the very end of this manual can help you minimize the energy consumption. Ask your installer for support if required.

- Make sure the altherma by DAIKIN heat pump system works at the lowest possible hot water temperature required to heat your house.

  To optimize this, make sure the weather dependent set point is used and configured to match the installation environment. Refer to "Field settings" on page 11.
- It is advised to install a room thermostat connected to the indoor unit. This will prevent excessive space heating and will stop the outdoor unit and the indoor circulation pump when the room temperature is above the thermostat set point.
- Next recommendations only apply to installations with an optional domestic hot water tank.

  Make sure the domestic water is only heated up to the domestic hot water temperature you require.
  Start with a low domestic hot water temperature set point (e.g. 45°C), and only increase if you feel that the domestic hot water supply temperature is not sufficient.

Simultaneous operation of compressor, backup heater and booster heater is **NOT possible**. Read attentively following warnings to understand the unit operation.

Emergency backup heater operation always has priority over compressor or booster heater operation.

Emergency backup heater operation occurs because of:

- User request to heat up water to the space heating loops. The temperature of this water is too low and is out of the operation range (during initial start-up for example). Refer to "Initial start-up at low outdoor ambient temperatures" and "Re-start at low outdoor ambient temperatures" in the installation manual.
- During heating operation the water temperature becomes too low and drops ot of the operation range. Refer to "Checking the water volume and expansion vessel pre-pressure" in the installation manual to minimize the backup heater operation.
- Malfunction of the heat pump unit.

If during backup heater operation the heating load is higher than the heater capacity, the water temperature can not increase. In this case refer to "Re-start at low outdoor ambient temperatures" in the installation manual.

Balance between space heating/cooling demand and domestic hot water demand

- Only if the unit is correctly sized then at some point during space cooling/heating operation the unit will reach the requested setpoint. When this occurs, domestic water heating by compressor becomes possible.

  To ensure domestic hot water production, the schedule timers must be used to disable space heating/cooling. Refer to the extra addendum of the operation manual on how to program the schedule timers.
- Booster heater operation is only possible when the compressor of the heatpump is not operating. The compressor operates because of space cooling/heating demand or because of domestic water heating.

  To ensure domestic hot water production, the schedule timers must be used to disable space heating/cooling. Refer to the extra addendum of the operation manual on how to program the schedule timers.
- If using a room thermostat, domestic water heating by compressor or by booster heater is **NOT** possible as long as the room thermostat demands cooling or heating.

  In this case de-activate the room thermostat demand by its schedule timer.

  Refer to the manual of the room thermostat for a detailed explanation how to de-activate space cooling/heating by schedule timer, or refer to the separate addendum for an example of the Daikin room thermostat schedule timer programming.

OPERATING THE DIGITAL CONTROLLER

Operating the EKHB* unit comes down to operating the digital controller.

Never let the digital controller get wet. This may cause an electric shock or fire.

Never press the buttons of the digital controller with a hard, pointed object. This may damage the digital controller.

Never inspect or service the digital controller yourself, ask a qualified service person to do this.

Features and functions

The digital controller is a state of the art controller that offers full control over your installation. It can control a cooling/heating and a heating only installation.

Both installations are available in multiple versions which vary in capacity, electrical supply and installed equipment (backup heater in the indoor unit or a domestic hot water tank with a booster heater).

NOTE

- Descriptions in this manual that apply to a specific installation or that depend on the installed equipment, are marked with an asterisk (*).
- Some functions described in this manual may not be available or should not be available. Ask your installer or your local dealer for more information on permission levels.

Basic controller functions

The basic controller functions are:

- Turning the unit ON/OFF.
- Operation mode change-over:
  - space heating (refer to page 5),
  - space cooling (refer to page 5) (*),
  - domestic water heating (refer to page 5) (*).
- Selection of features:
  - quiet mode (refer to page 5),
  - weather dependent control (refer to page 6).
- Temperature set point adjustment (refer to page 5).

NOTE (*) The functions 'space cooling' and 'domestic water heating' can only be selected when the corresponding equipment is installed.

The digital controller supports a power cut off of maximum 2 hours. When autorestart is enabled (see "Field settings" on page 11) this allows a power supply shut down of 2 hours without user intervention (e.g. heat pump tariff application).

Clock function

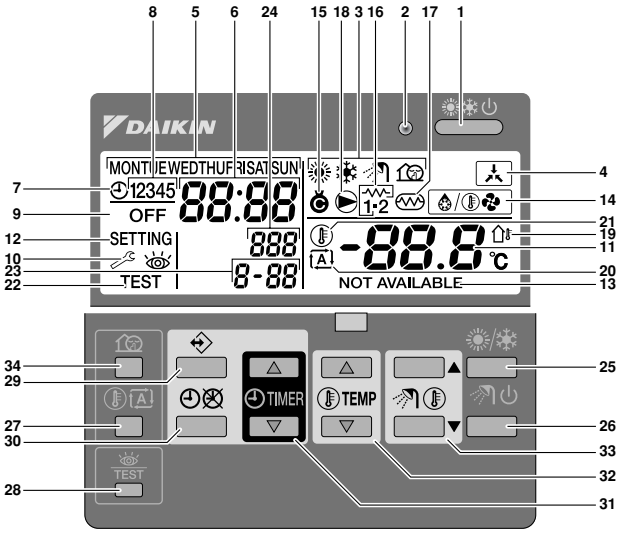
The clock functions are:

- 24 hour real time clock.
- Day of the week indicator.

Schedule timer function

The schedule timer function allows the user to schedule the operation of the installation according to a daily or a weekly program.

Name and function of buttons and icons



1. COOLING/HEATING ON/OFF BUTTON

   The ON/OFF button starts or stops the heating or cooling function of the unit.

   When the unit is connected with an external room thermostat, this button is not operable and the icon is shown.

   Pressing the ON/OFF button consecutively too many times may cause malfunction of the system (maximum 20 times per hour).

NOTE Remark that pushing the button has no influence on the domestic water heating. Domestic water heating is only switched on or off by means of the button.

2. OPERATION LED

   The operation LED is lit during space cooling or space heating operation. The LED blinks if a malfunction occurs. When the LED is OFF, space cooling or space heating are inactive while the other operation modes can still be active.

3. OPERATION MODE ICONS

   These icons indicate the current operation mode(s): space heating, space cooling, domestic water heating or quiet mode. Within limits, different modes can be combined, e.g. space heating and domestic water heating. The corresponding mode icons will be displayed simultaneously.

   In a heating only installation, the icon will never be displayed.

   If the domestic hot water tank is not installed, the icon will never be displayed.

   If the solar option is installed and active, the icon will be blinking.

4. EXTERNAL CONTROL ICON

   This icon indicates that an external room thermostat with higher priority is controlling your installation. This external room thermostat can start and stop the space heating/cooling operation and change the operation mode (cooling/heating).

   When an external room thermostat with a higher priority is connected, the schedule timer for space cooling and space heating will not function.

5. DAY OF THE WEEK INDICATOR MONTUEWEDTHUFRISATSUN

   This indicator shows the current weekday.

   When reading or programming the schedule timer, the indicator shows the set day.

6. CLOCK DISPLAY *88:88*

   The clock display shows the current time.

   When reading or programming the schedule timer, the clock display shows the action time.

7. SCHEDULE TIMER ICON

   This icon indicates that the schedule timer is enabled.

8. ACTION ICONS 12345

   These icons indicate the programming actions for each day of the schedule timer.

9. OFF ICON **OFF**

   This icon indicates that the OFF action is selected when programming the schedule timer.

10. INSPECTION REQUIRED and

    These icons indicate that inspection is required on the installation. Consult your dealer.

11. SET TEMPERATURE DISPLAY *-88.8*

    The display shows the current set temperature of the installation.

12. SETTING SETTING

    Not used. For installation purposes only.

13. NOT AVAILABLE NOT AVAILABLE

    This icon is displayed whenever a non-installed option is addressed or a function is not available.

14. DEFROST/STARTUP MODE ICON

    This icon indicates that the defrost/startup mode is active.

15. COMPRESSOR ICON

    This icon indicates that the compressor in the outdoor unit of the installation is active.

16. BACKUP HEATER

    This icon indicates that the backup heater is operating. The backup heater provides heating capacity in case of emergencies.

17. BOOSTER HEATER ICON

This icon indicates that the booster heater is active. The booster heater provides auxiliary heating for the domestic hot water tank.

The booster heater is located in the domestic hot water tank.

The icon is not used when the domestic hot water tank is not installed.

18. PUMP ICON

This icon indicates that the circulation pump is active.

19. OUTDOOR TEMPERATURE DISPLAY

When this icon is flashing, the outdoor ambient temperature is displayed.

20. WEATHER DEPENDENT SET POINT ICON

This icon indicates that the controller will adapt the temperature set point automatically, based on the outdoor ambient temperature.

21. TEMPERATURE ICON

This icon is displayed when the water outlet temperature of the indoor unit, the outdoor ambient temperature and the domestic hot water tank temperature are shown.

The icon is also displayed when the temperature set point is set in schedule timer programming mode.

22. TEST OPERATION ICON **TEST**

This icon indicates that the unit runs in test mode. Refer to the installation manual.

23. FIELD SET CODE *8-88*

This code represents the code from the field set list. Refer to the installation manual.

24. ERROR CODE *888*

This code refers to the error code list and is for service purposes only. Refer to the installation manual.

25. SPACE HEATING/COOLING BUTTON

This button allows manual switching between cooling or heating mode (provided the unit is not a heating only unit).

When the unit is connected with an external room thermostat, this button is not operable and the icon is shown.

26. DOMESTIC WATER HEATING BUTTON

This button enables or disables heating of the domestic water.

This button is not used when the domestic hot water tank is not installed.

NOTE Remark that pushing the button has no influence on the domestic water heating. Domestic water heating is only switched on or off by means of the button.

27. WEATHER DEPENDENT SET POINT BUTTON

This button enables or disables the weather dependent set point function which is available in space heating operation only.

If the controller is set in permission level 2 or 3 (refer to "Field settings" on page 11), the weather dependent set point button will not be operable.

28. INSPECTION/TEST OPERATION BUTTON

This button is used for installation purposes and changing field settings. Refer to "Field settings" on page 11.

29. PROGRAMMING BUTTON

This multi-purpose button is used to program the controller. The function of the button depends on the actual status of the controller or on previous actions carried out by the operator.

30. SCHEDULE TIMER BUTTON

The main function of this multi-purpose button is to enable/disable the schedule timer.

The button is also used to program the controller. The function of the button depends on the actual status of the controller or on previous actions carried out by the operator.

If the controller is set in permission level 3 (refer to "Field settings" on page 11), the schedule timer button will not be operable.

31. TIME ADJUST BUTTON and

These multi-purpose buttons are used to adjust the clock, to toggle between temperatures (water outlet temperature of the indoor unit, outdoor ambient temperature and domestic hot water temperature) and in schedule timer programming mode.

32. TEMPERATURE ADJUST BUTTONS and

These multi-purpose buttons are used to adjust the current set point in normal operation mode or in schedule timer programming mode. In weather dependent set point mode the buttons are used to adjust the shift value. Finally, the buttons are also used to select the weekday while setting the clock.

33. DOMESTIC HOT WATER TEMPERATURE ADJUST BUTTONS and

These buttons are used to adjust the current set point of the domestic hot water temperature.

The buttons are not used when the domestic hot water tank is not installed.

34. QUIET MODE BUTTON

This button enables or disables quiet mode.

If the controller is set in permission level 2 or 3 (refer to "Field settings" on page 11), the quiet mode button will not be operable.

Setting up the controller

After initial installation, the user can set the clock and day of the week.

The controller is equipped with a schedule timer that enables the user to schedule operations. Setting the clock and day of the week is required to be able to use the schedule timer.

Setting the clock

1 Hold down the button for 5 seconds.

The clock read-out and the day of week indicator start flashing.

2 Use the and buttons to adjust the clock.

Each time the or button is pressed, the time will increase/decrease by 1 minute. Keeping the or button pressed will increase/decrease the time by 10 minutes.

3 Use the or button to adjust the day of the week.

Each time the or button is pressed the next or previous day is displayed.

4 Press the button to confirm the current set time and day of the week.

To leave this procedure without saving, press the button.

If no button is pressed for 5 minutes the clock and day of the week will return to their previous setting.

NOTE The clock needs to be set manually. Adjust the setting when switching from summertime to wintertime and vice versa.

Setting the schedule timer

To set the schedule timer, refer to chapter "Programming and consulting the schedule timer" on page 7.

Description of the operation modes

Space heating operation (☼)

In this mode, heating will be activated as required by the water temperature set point. The set point can be set manually (refer to "Manual operation" on page 5) or weather dependent (refer to "Selecting weather dependent set point operation (only in heating mode)" on page 6).

Startup (♨/◍/❄)

At the start of a heating operation, the pump is not started until a certain refrigerant heat exchanger temperature is reached. This guarantees correct startup of the heat pump. During startup, icon ♨/◍/❄ is displayed.

Defrost (♨/◍/❄)

In space heating operation or domestic water heating operation, freezing of the outdoor heat exchanger may occur due to low outdoor temperature. If this risk occurs, the system goes into defrost operation. It reverses the cycle and takes heat from the indoor system to prevent freezing of the outdoor system. After a maximum of 8 minutes of defrost operation, the system returns to space heating operation.

Space cooling operation (❄)

In this mode, cooling will be activated as required by the water temperature set point.

NOTE

- The space cooling temperature set point can only be set manually (refer to "Manual operation" on page 5).
- Switching between space heating and space cooling operation can only be done by pressing the ☼/❄ button or by an external room thermostat.
- Space cooling operation is not possible if the installation is a heating only installation.

Domestic water heating operation (🚿)

In this mode, the indoor unit will deliver hot water to the domestic hot water tank when the space heating or space cooling operation has reached its temperature set point.

NOTE

- Refer to the warning mentioned in the chapter "Introduction" on page 2 concerning domestic water heating.
- The domestic hot water temperature set point can only be set manually (refer to "Manual operation" on page 5).
- Any domestic water heating operation is impossible when the domestic hot water tank is not installed.
- When the 🚿 icon is blinking, hot water is delivered to the domestic hot water tank by the solar kit option and not by the altherma by DAIKIN indoor unit. Refer to installation manual of the EKSOLHW solar kit.

Quiet mode operation (🏠)

Quiet mode operation means that the outdoor unit works at reduced capacity so that the noise produced by the outdoor unit drops. This implies that the indoor heating and cooling capacity will also drop. Beware of this when a certain level of heating is required indoors.

Controller operations

Manual operation

In manual operation, the user manually controls the settings of the installation. The last setting remains active until the user changes it or until the schedule timer forces another setting (refer to "Schedule timer operation" on page 6).

As the controller can be used for a wide variety of installations, it is possible to select a function which is not available on your installation. In that case the message NOT AVAILABLE will appear.

Switching on and setting space cooling (❄) and heating (☼)

1 Use the ☼/❄ button to select space cooling (❄) or space heating (☼).

Icon ❄ or ☼ appears on the display as well as the corresponding water temperature set point.

2 Use the ▲ and ▼ buttons to set the desired water temperature.

- Temperature range for heating: 25°C to 55°C
  The temperature for heating can be set as low as 15°C (see "Field settings" on page 11). However, the temperature for heating should only be set lower than 25°C during commissioning of the installation. When set lower than 25°C, only the backup heater will operate.
  In order to avoid overheating, space heating is not operable when the outdoor ambient temperature rises above a certain temperature (as set through field setting [4-02], refer to "Field settings" on page 11).
- Temperature range for cooling: 5°C to 22°C

NOTE

In heating mode (☼), the water temperature set point can also be weather dependent (icon A is shown).

This means that the controller calculates the water temperature set point based on the outdoor temperature.

In this case, instead of showing the water temperature set point, the controller shows the "shift value" which can be set by the user. This shift value is the temperature difference between the temperature set point calculated by the controller and the real set point. E.g. a positive shift value means that the real temperature set point will be higher than the calculated set point.

3 Switch on the unit by pushing the ON/OFF button.

The operation LED ○ lights up.

NOTE

When the unit is connected to an external room thermostat, buttons ☼/❄ and ON/OFF are not operable and the icon is shown. In this case, the external room thermostat switches the unit on or off and determines the operation mode (space cooling or space heating).

Selection and setting of domestic water heating (🚿)

1 Use the 🚿 ⏻ button to activate domestic water heating (🚿).

Icon 🚿 appears on the display.

2 Use the 🚿▲ or 🚿▼ button to display the actual temperature set point and subsequently, to set the correct temperature.

The actual temperature set point only appears on the display after pressing one of the buttons 🚿▲ or 🚿▼. If no button is pressed for 5 seconds, the temperature set point will automatically disappear from the display again.

Temperature range for domestic water heating: 30°C to 80°C

3 Press the 🚿 ⏻ button to deactivate domestic water heating (🚿).

Icon 🚿 disappears from the display.

NOTE

Remark that pushing the button has no influence on the domestic water heating. Domestic water heating is only switched on or off by means of the button.

Selecting quiet mode operation ()

1 Use the button to activate quiet mode operation ().

Icon appears on the display.

If the controller is set in permission level 2 or 3 (refer to "Field settings" on page 11), the button will not be operable.

Selecting weather dependent set point operation (only in heating mode)

1 Press the button to select weather dependent set point operation.

Icon appears on the display as well as the shift value. The shift value is not shown in case it is 0.

2 Use the and buttons to set the shift value.

Range for the shift value: –5°C to +5°C

Displaying actual temperatures

1 Push the button for 5 seconds.

The icon and the outgoing water temperature are displayed. The icons and are flashing.

2 Use the and buttons to display:

- The outdoor temperature (icon is flashing).
- The domestic hot water tank temperature (icon is flashing).
- The outgoing water temperature (are flashing).

If no button is pressed for 5 seconds, the controller leaves the display mode.

Schedule timer operation

In schedule timer operation, the installation is controlled by the schedule timer. The actions programmed in the schedule timer will be executed automatically.

The schedule timer always follows the last command until a new command is given. This means that the user can temporarily overrule the last executed programmed command by manual operation (Refer to "Manual operation" on page 5). The schedule timer will regain control over the installation as soon as the next programmed command of the schedule timer occurs.

The schedule timer is enabled (icon displayed) or disabled (icon not displayed), by pressing the button.

NOTE

- Only use the button to enable or disable the schedule timer. The schedule timer overrules the button. The button only overrules the schedule timer until the next programmed action.
- If the auto restart function is disabled, the schedule timer will not be activated when power returns to the unit after a power supply failure. Press the button to enable the schedule timer again.
- When power returns after a power supply failure, the auto restart function reapplies the user interface settings at the time of the power supply failure.

  It is therefore recommended to leave the auto restart function enabled.

- The programmed schedule is time driven. Therefore, it is essential to set the clock and the day of the week correctly. Refer to "Setting the clock" on page 4.
- Manually adjust the clock for summertime and wintertime. Refer to "Setting the clock" on page 4.
- A power failure exceeding 1 hour will reset the clock and the day of the week. The schedule timer will continue operation, but with a disordered clock. Refer to "Setting the clock" on page 4 to adjust the clock and the day of the week.
- The actions programmed in the schedule timer will not be lost after a power failure so that reprogramming the schedule timer is not required.

To set up the SCHEDULE TIMER refer to chapter "Programming and consulting the schedule timer" on page 7.

What can the schedule timer do?

The schedule timer allows the programming of:

1. Space heating and space cooling (refer to "Programming space cooling or space heating" on page 8)

   Switch on the desired mode at a scheduled time, in combination with a set point (weather dependent or manually set). Five actions per weekday can be programmed, totalling 35 actions.

NOTE

When the unit is connected to an external room thermostat, the schedule timer for space cooling and space heating is overruled by the external room thermostat.

2. Quiet mode (refer to "Programming quiet mode, booster heating or domestic water heating" on page 9)

   Switch the mode on or off at a scheduled time. Five actions can be programmed per mode. These actions are repeated daily.

3. Booster heating (refer to "Programming quiet mode, booster heating or domestic water heating" on page 9)

   Allow or disallow booster heating at a scheduled time. Five actions can be programmed per mode. These actions are repeated daily.

4. Domestic water heating (refer to "Programming quiet mode, booster heating or domestic water heating" on page 9)

   Switch the mode on or off at a scheduled time. Five actions can be programmed per mode. These actions are repeated daily.

- The programmed actions are not stored according to their timing but according to the time of programming. This means that the action that was programmed first gets action number 1, even though it is executed after other programmed action numbers.
- When the schedule timer switches space heating or space cooling **OFF**, the controller will also be switched off. Note that this has no influence on domestic water heating.

What can the schedule timer NOT do?

The schedule timer can not change the operation mode from space cooling to space heating or vice versa.

How to interpret the programmed actions

To be able to understand the behaviour of your installation when the schedule timer is enabled, it is important to keep in mind that the "last" programmed command overruled the "preceding" programmed command and will remain active until the "next" programmed command occurs.

Example: imagine the actual time is 17:30 and actions are programmed at 13:00, 16:00 and 19:00. The "last" programmed command (16:00) overruled the "previous" programmed command (13:00) and will remain active until the "next" programmed command (19:00) occurs.

So in order to know the actual setting, one should consult the last programmed command. It is clear that the "last" programmed command may date from the day before. Refer to "Consulting programmed actions" on page 9.

NOTE

During schedule timer operation, someone may have altered the actual settings manually (in other words, the "last" command was overruled manually). The icon ◴, indicating the schedule timer operation, may still be displayed, giving the impression that the "last" command settings are still active. The "next" programmed command will overrule the altered settings and return to the original program.

Programming and consulting the schedule timer

Getting started

Programming the schedule timer is flexible (you can add, remove or alter programmed actions whenever required) and straightforward (programming steps are limited to a minimum). However, before programming the schedule timer, remind:

- Familiarise yourself with the icons and the buttons. You will need them when programming. Refer to "Name and function of buttons and icons" on page 3.
- Fill out the form at the very end of this manual. This form can help you define the required actions for each day. Keep in mind that:
  - In the space cooling/heating program, 5 actions can be programmed per weekday. The same actions are repeated on a weekly basis.
  - In the domestic water heating, booster heater and quiet mode program, 5 actions can be programmed per mode. The same actions are repeated on a daily basis.
- Take your time to enter all data accurately.
- Try to program the actions in a chronological way: start with action 1 for the first action and end with the highest number for the last action. This is not a requirement but will simplify the interpretation of the program later.
- If 2 or more actions are programmed for the same day and at the same time, only the action with the highest action number will be executed.
- You can always alter, add or remove the programmed actions later.
- When programming heating actions (time and set point), cooling actions are added automatically at the same time but with the predefined default cooling set point. Conversely, when programming cooling actions (time and setpoint), heating actions are added automatically at the same time but with the default heating set point.

  The set points of these automatically added actions can be adjusted by programming the corresponding mode. This means that after programming heating, you should also program the corresponding cooling set points and vice versa.

Due to the fact that the schedule timer cannot switch between operation modes (cooling or heating) and the fact that each programmed action implies a cooling setpoint and a heating setpoint, the following situations may occur:

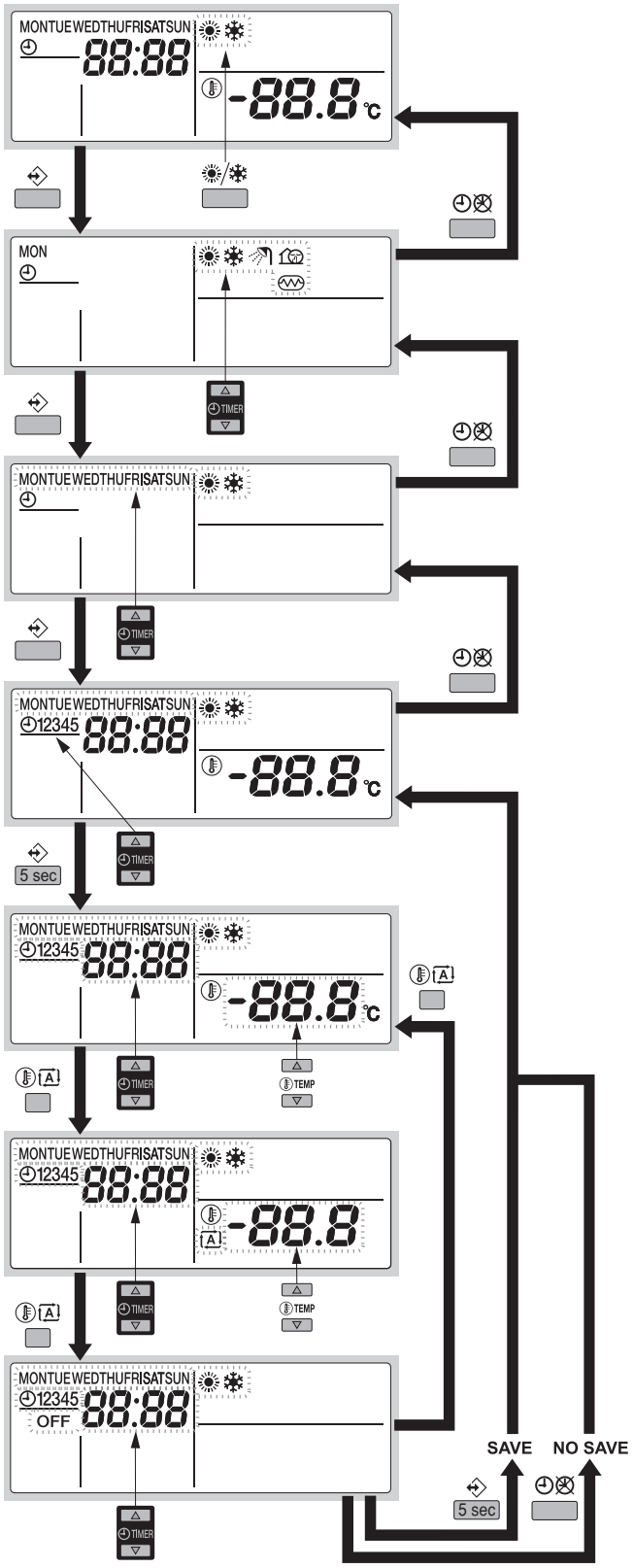
- when the schedule timer is active in heating mode, and the mode is changed manually to cooling (by means of the ☼/❄ button), the operation mode will from then on remain cooling and program actions will follow the corresponding cooling setpoints. Returning to heating mode needs to be carried out manually (by means of the ☼/❄ button).
- when the schedule timer is active in cooling mode, and the mode is changed manually to heating (by means of the ☼/❄ button), the operation mode will from then on remain heating and program actions will follow the corresponding heating setpoints. Returning to cooling mode needs to be carried out manually (by means of the ☼/❄ button).

The above proves the importance of programming both cooling and heating setpoints for each action. If you do not program these setpoints, the predefined default values will be used.

Before you start any programming, read attentively the warnings mentioned in the paragraph "Introduction" on page 2 to understand unit operation.

Programming

Programming space cooling or space heating



NOTE Programming space cooling or space heating are both done in the same way. At the start of the programming procedure space cooling or space heating is selected. After that, you have to return to the start of the programming procedure to program the other operation mode.

Programming space cooling or space heating is carried out as follows:

NOTE Returning to previous steps in the programming procedure without saving modified settings is done by pressing the ⏲⊗ button.

1 Use the ☀/❄ button to select the operation mode (cooling or heating) you want to program.

2 Press the ⇨ button.

The actual mode is blinking.

3 Press the ⇨ button to confirm the selected mode.

The actual day is blinking.

4 Select the day you would like to consult or to program by means of the ⏲▲ and ⏲▼ buttons.

The selected day is blinking.

5 Press the ⇨ button to confirm the selected day.

The first programmed action of the selected day appears.

6 Use the ⏲▲ and ⏲▼ buttons to consult the other programmed actions of that day.

This is called the readout mode. Empty program actions (e.g. 4 and 5) are not displayed.

7 Press the ⇨ button for 5 seconds to enter the programming mode.

8 Use the ⇨ button to select the action number you would like to program or to modify.

9 Use the 🌡🅰 button to select:

- **OFF**: to switch cooling or heating and the controller off.
- *-88.8*℃: set the temperature by means of the 🌡▲ and 🌡▼ buttons.
- 🅰: to select automatic temperature calculation (only in heating mode).

10 Use the ⏲▲ and ⏲▼ buttons to set the correct action time.

11 Repeat steps 8 to 10 to program the other actions of the selected day.

When all actions have been programmed, make sure that the display shows the highest action number you would like to save.

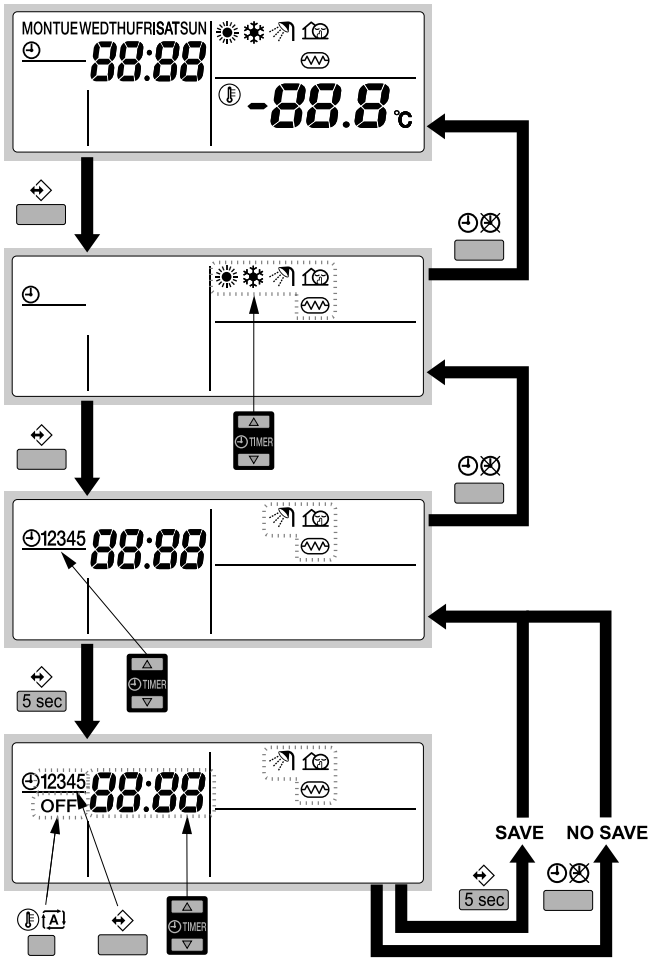
12 Press the ⇨ button for 5 seconds to store the programmed actions.

If the ⇨ button is pressed when action number 3 is displayed, actions 1, 2 and 3 are stored but 4 and 5 are deleted.

You automatically return to step 6.

By pressing the ⏲⊗ button several times, you return to previous steps in this procedure and finally return to normal operation.

Programming quiet mode, booster heating or domestic water heating



Programming domestic water heating, booster heater or quiet mode is carried out as follows:

NOTE Returning to previous steps in the programming procedure without saving modified settings is done by pressing the ⏲⊗ button.

Simultaneous operation of compressor, backup heater and booster heater is **NOT possible**.

The domestic water heating schedule timer must completely overlap the booster heater schedule timer. The booster heater can not work if the domestic water heating schedule timer is not active.

Refer to the separate addendum for an example of schedule timer programming.

Before you start any programming, read attentively the warnings mentioned in the paragraph "Introduction" on page 2 to understand unit operation and how to program schedule timers.

1 Press the ⬖ button.

The actual mode is blinking.

2 Use the ⏲▲ and ⏲▼ buttons to select the mode you want to program (quiet mode, booster heating or domestic water heating).

The selected mode is blinking.

3 Press the ⬖ button to confirm the selected mode.

The first programmed action is displayed.

4 Use the ⏲▲ and ⏲▼ buttons to consult the programmed actions.

This is called the readout mode. Empty program actions (e.g. 4 and 5) are not displayed.

5 Press the ⬖ button for 5 seconds to enter the programming mode.

6 Use the ⬖ button to select the action number you would like to program or to modify.

7 Use the ⏲▲ and ⏲▼ buttons to set the correct action time.

8 Use the 🌡A button to select or deselect **OFF** as action.

9 Repeat steps 6 to 8 to program the other actions of the selected mode.

When all actions have been programmed, make sure that the display shows the highest action number you would like to save.

10 Press the ⬖ button for 5 seconds to store the programmed actions.

If the ⬖ button is pressed when action number 3 is displayed, actions 1, 2 and 3 are stored but 4 and 5 are deleted.

You automatically return to step 4. By pressing the ⏲⊗ button several times, you return to previous steps in this procedure and finally return to normal operation.

Consulting programmed actions

Consulting space cooling or space heating actions

NOTE Consulting space cooling or space heating is done in the same way. At the start of the consulting procedure space cooling or space heating is selected. After that, you have to return to the start of the consulting procedure to consult the other operation mode.

Consulting space cooling or space heating is carried out as follows.

NOTE Returning to previous steps in this procedure is done by pressing the ⏲⊗ button.

1 Use the ☀/❄ button to select the operation mode (cooling or heating) you want to consult.

2 Press the ⬖ button.

The actual mode is blinking.

3 Press the ⬖ button to confirm the selected mode.

The actual day is blinking.

4 Select the day you would like to consult by means of the ⏲▲ and ⏲▼ buttons.

The selected day is blinking.

5 Press the ⬖ button to confirm the selected day.

The first programmed action of the selected day appears.

6 Use the ⏲▲ and ⏲▼ buttons to consult the other programmed actions of that day.

This is called the readout mode. Empty program actions (e.g. 4 and 5) are not displayed.

By pressing the ⏲⊗ button several times, you return to previous steps in this procedure and finally return to normal operation.

Consulting domestic water heating, booster heater or quiet mode

Consulting domestic water heating, booster heater or quiet mode is carried out as follows.

NOTE Returning to previous steps in this procedure is done by pressing the ⏲⊗ button.

1 Press the ⏎ button.

The actual mode is blinking.

2 Use the ⏲▲ and ⏲▼ buttons to select the mode you want to consult (quiet mode, booster heating or domestic water heating).

The selected mode is blinking.

3 Press the ⏎ button to confirm the selected mode.

The first programmed action is displayed.

4 Use the ⏲▲ and ⏲▼ buttons to consult the programmed actions.

This is called the readout mode. Empty program actions (e.g. 4 and 5) are not displayed.

By pressing the ⏲⊗ button several times, you return to previous steps in this procedure and finally return to normal operation.

Tips and tricks

Programming the next day(s)

After confirming the programmed actions of a specific day (i.e. after pressing the ⏎ button for 5 seconds), press the ⏲⊗ button once. You can now select another day by using the ⏲▲ and ⏲▼ buttons and restart consulting and programming.

Copying programmed actions to next day

In heating/cooling program it is possible to copy all programmed actions of a specific day to the next day (e.g. copy all programmed actions from "MON" to "TUE").

To copy programmed actions to the next day, proceed as follows:

1 Press the ⏎ button.

The actual mode is blinking.

2 Use the ⏲▲ and ⏲▼ buttons to select the mode you want to program.

The selected mode is blinking.

You can leave programming by pressing the ⏲⊗ button.

3 Press the ⏎ button to confirm the selected mode.

The actual day is blinking.

4 Select the day you would like to copy to the next day by means of the ⏲▲ and ⏲▼ buttons.

The selected day is blinking.

You can return to step 2 by pressing the ⏲⊗ button.

5 Press the ⏎ and ⏲⊗ buttons simultaneously for 5 seconds.

After 5 seconds the display will show the next day (e.g. "TUE" if "MON" was selected first). This indicates that the day has been copied.

You can return to step 2 by pressing the ⏲⊗ button.

Deleting one or more programmed actions

Deleting one or more programmed actions is done at the same time as storing the programmed actions.

When all actions for one day have been programmed, make sure that the display shows the highest action number you would like to save. By pressing the ⏎ button for 5 seconds, you store all actions except those with a higher action number than the one that is displayed.

E.g. when the ⏎ button is pressed when action number 3 is displayed, actions 1, 2 and 3 are stored but 4 and 5 are deleted.

Deleting a mode

1 Press the ⏎ button.

The actual mode is blinking.

2 Use the ⏲▲ and ⏲▼ buttons to select the mode you want to delete (quiet mode, booster heating or domestic water heating).

The selected mode is blinking.

3 Press the ⏎ and ⏻🅰 button simultaneously for 5 seconds to delete the selected mode.

Deleting a day of the week (cooling or heating mode)

1 Use the ☀/❄ button to select the operation mode (cooling or heating) you want to delete.

2 Press the ⏎ button.

The actual mode is blinking.

3 Press the ⏎ button to confirm the selected mode.

The actual day is blinking.

4 Select the day you would like to delete by means of the ⏲▲ and ⏲▼ buttons.

The selected day is blinking.

5 Press the ⏎ and ⏻🅰 button simultaneously for 5 seconds to delete the selected day.

Operating the remote alarm option

The optional EKRP1HB remote alarm address card can be used to remotely monitor your system. This address card offers 2 voltage free outputs.

- Output 1 = alarm output: this output will be enabled when your unit is in error condition in case of default setting of field setting parameter [C-01].

  Refer to "[C] Solar priority mode" on page 14 for other possibilities.
- Output 2 = ON/OFF output: this output will be enabled when your unit is in ON condition.

For more details about the wiring connections of this option, refer to the wiring diagram of the unit.

FIELD SETTINGS

The indoor unit should be configured by the installer to match the installation environment (outdoor climate, installed options, etc.) and user demand. Thereto, a number of so called field settings are available. These field settings are accessible and programmable through the user interface on the indoor unit.

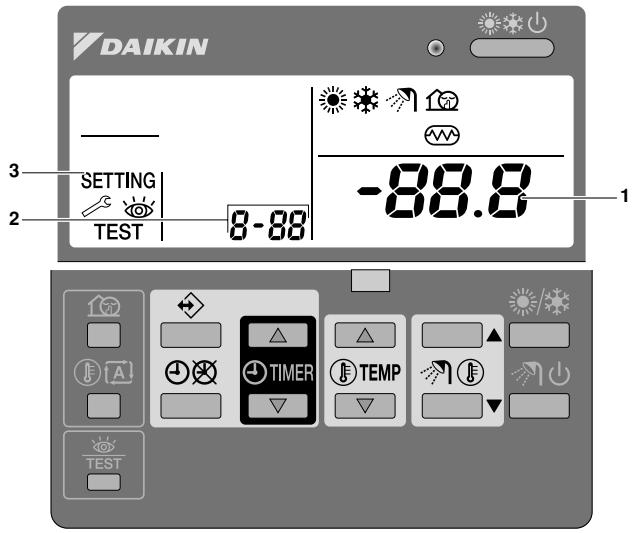
Each field setting is assigned a 3-digit number or code, for example [5-03], which is indicated on the user interface display. The first digit [5] indicates the 'first code' or field setting group. The second and third digit [03] together indicate the 'second code'.

A list of all field settings and default values is given under "Field settings table" on page 15. In this same list, we provided for 2 columns to register the date and value of altered field settings at variance with the default value.

A detailed description of each field setting is given under "Detailed description" on page 11.

Procedure

To change one or more field settings, proceed as follows.



1. Press the TEST button for a minimum of 5 seconds to enter FIELD SET MODE.
   The **SETTING** icon (3) will be displayed. The current selected field setting code is indicated *8-88* (2), with the set value displayed to the right *-88.8* (1).
2. Press the TEMP▲ button to select the appropriate field setting first code.
3. Press the TEMP▼ button to select the appropriate field setting second code.
4. Press the TIMER▲ button and TIMER▼ button to change the set value of the select field setting.
5. Save the new value by pressing the ⊗ button.
6. Repeat step 2 through 4 to change other field settings as required.
7. When finished, press the TEST button to exit FIELD SET MODE.

NOTE Changes made to a specific field setting are only stored when the ⊗ button is pressed. Navigating to a new field setting code or pressing the TEST button will discard the change made.

NOTE

- Before shipping, the set values have been set as shown under "Field settings table" on page 15.
- When exiting FIELD SET MODE, "88" may be displayed on the user interface LCD while the unit initialises itself.

Detailed description

NOTE Only field settings relevant for this model are explained.

[0] User permission level

If required, certain user interface buttons can be made unavailable for the user.

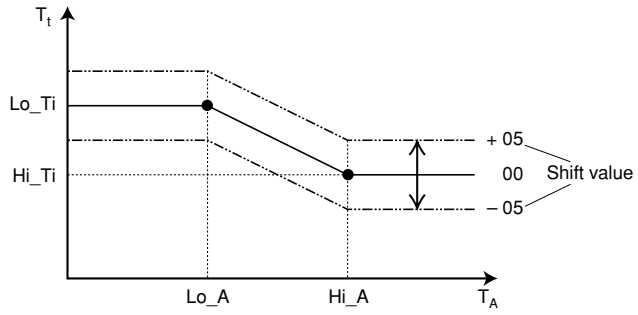
Three permission levels are defined (see the table below). Switching between level 1 and level 2/3 is done by simultaneously pressing buttons TIMER▲ and TIMER▼ immediately followed by simultaneously pressing buttons and , and keeping all 4 buttons pressed for at least 5 seconds (in normal mode). Note that no indication on the user interface is given. When level 2/3 is selected, the actual permission level — either level 2 or level 3 — is determined by the field setting [0-00].

Button		Permission level 1	2	3
Quiet mode button		operable	—	—
Weather dependent set point button		operable	—	—
Schedule timer enable/disable button		operable	operable	—
Programming button		operable	—	—
Time adjust buttons	TIMER▲ TIMER▼	operable	—	—
Inspection/test operation button	TEST	operable	—	—

[1] Weather dependent set point (heating operation only)

The weather dependent set point field settings define the parameters for the weather dependent operation of the unit. When weather dependent operation is active the water temperature is determined automatically depending on the outdoor temperature: colder outdoor temperatures will result in warmer water and vice versa. During weather dependent operation, the user has the possibility to shift up or down the target water temperature by a maximum of 5°C. See "Selecting weather dependent set point operation (only in heating mode)" on page 6 for more details on weather dependent operation.

- [1-00] Low ambient temperature (Lo_A): low outdoor temperature.
- [1-01] High ambient temperature (Hi_A): high outdoor temperature.
- [1-02] Set point at low ambient temperature (Lo_Ti): the target outgoing water temperature when the outdoor temperature equals or drops below the low ambient temperature (Lo_A).
  Note that the Lo_Ti value should be *higher* than Hi_Ti, as for colder outdoor temperatures (i.e. Lo_A) warmer water is required.
- [1-03] Set point at high ambient temperature (Hi_Ti): the target outgoing water temperature when the outdoor temperature equals or rises above the high ambient temperature (Hi_A).
  Note that the Hi_Ti value should be *lower* than Lo_Ti, as for warmer outdoor temperatures (i.e. Hi_A) less warm water suffices.



T_t	Target water temperature
T_A	Ambient (outdoor) temperature
Shift value	= Shift value

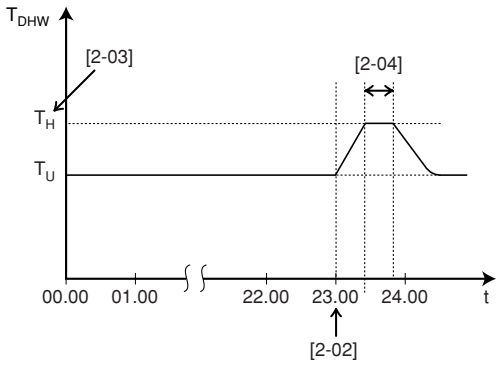
[2] Disinfection function

Applies only to installations with a domestic hot water tank.

The disinfection function disinfects the domestic hot water tank by periodically heating the domestic water to a specific temperature.

The disinfection function field settings must be configured by the installer according to national and local regulations.

- [2-00] Operation interval: day(s) of the week at which the domestic water should be heated.
- [2-01] Status: defines whether the disinfection function is turned on (1) or off (0).
- [2-02] Start time: time of the day at which the domestic water should be heated.
- [2-03] Set point: high water temperature to be reached.
- [2-04] Interval: time period defining how long the set point temperature should be maintained.



T_{DHW}	Domestic hot water temperature
T_U	User set point temperature (as set on the user interface)
T_H	High set point temperature [2-03]
t	Time

Space cooling/heating always has priority over the disinfection function.

The disinfection function is only possible when the unit is not operating for space cooling/heating.

To allow the disinfection function, the schedule timers must be used. Set the disinfection function settings so that it is combined with the domestic hot water function that is running during disabled space heating/cooling interval. It is advised to run the disinfection function for minimum 1 hour. Refer to the extra addendum of the operation manual for an example pattern.

If using a room thermostat, the disinfection function is not possible as long as the room thermostat demands cooling or heating. In this case, de-activate the room thermostat demand by its schedule timer. Refer to the manual of the room thermostat for a detailed explanation on how to de-activate space cooling/heating by schedule timer.

[3] Auto restart

When power returns after a power supply failure, the auto restart function reapplies the user interface settings at the time of the power supply failure.

NOTE It is therefore recommended to leave the auto restart function enabled.

Note that with the function disabled the schedule timer will not be activated when power returns to the unit after a power supply failure. Press the ⏲⊗ button to enable the schedule timer again.

- [3-00] Status: defines whether the auto restart function is turned **ON (0)** or **OFF (1)**.

Before changing field settings for domestic water heating, read attentively the warnings mentioned in the paragraph "Introduction" on page 2.

[4] Space heating off temperature

- [4-02] Space heating off temperature: outdoor temperature above which space heating is turned off, to avoid overheating.
- [4-03] Booster heater operation: defines whether the booster heater operation is enabled (1) or disabled (0).

NOTE If the booster heater operation is limited than the booster heater operation is only allowed during the disinfection function [2]. (Refer to "[2] Disinfection function" on page 12.)

[6] DT for domestic water heating

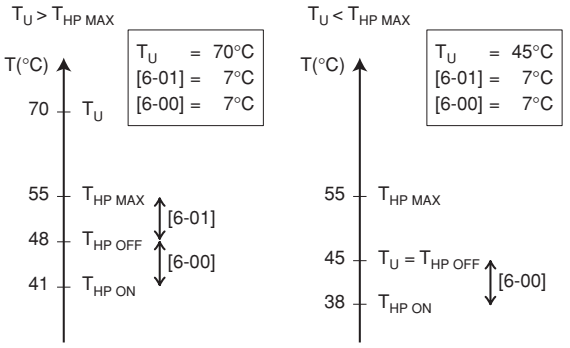
Before changing field settings for domestic water heating, read attentively the warnings mentioned in the paragraph "Introduction" on page 2.

Applies only to installations with a domestic hot water tank.

The 'DT (delta temperature) for domestic water heating' field settings determine the temperatures at which heating of the domestic water by the heat pump will be started (i.e., the heat pump ON temperature) and stopped (i.e., the heat pump OFF temperature).
When the domestic hot water temperature drops below the heat pump ON temperature ($T_{HP\ ON}$), heating of the domestic water by the heat pump will be started. As soon as the domestic hot water temperature reaches the heat pump OFF temperature ($T_{HP\ OFF}$) or the user set point temperature (T_U), heating of the domestic water by the heat pump will be stopped (by switching the 3-way valve).

The heat pump OFF temperature, and the heat pump ON temperature, and its relation with field settings [6-00] and [6-01] are explained in the illustration below.

- [6-00] Start: temperature difference determining the heat pump ON temperature ($T_{HP\ ON}$). See illustration.
- [6-01] Stop: temperature difference determining the heat pump OFF temperature ($T_{HP\ OFF}$). See illustration.



T_U	User set point temperature (as set on the user interface)
$T_{HP\ MAX}$	Maximum heat pump temperature at sensor in domestic hot water tank (55°C)
$T_{HP\ OFF}$	Heat pump OFF temperature
$T_{HP\ ON}$	Heat pump ON temperature

[7] Domestic hot water step length

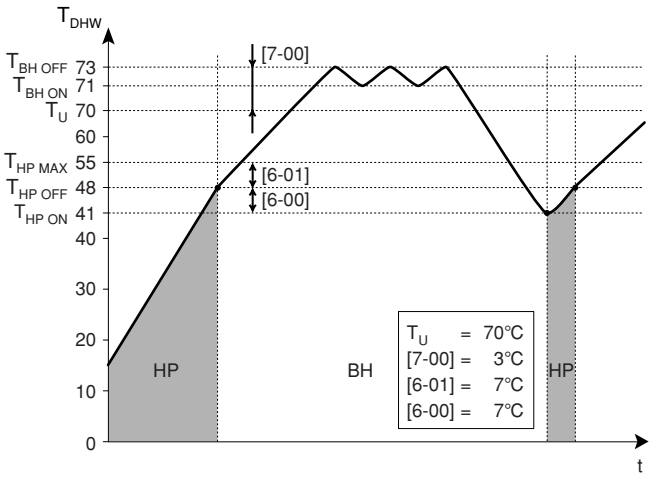
Before changing field settings for domestic water heating, read attentively the warnings mentioned in the paragraph "Introduction" on page 2.

Applies only to installations with a domestic hot water tank.

When the domestic water is heated and the domestic hot water set point temperature (as set by the user) has been reached, the booster heater will continue to heat the domestic water to a temperature a few degrees above the set point temperature, i.e. the booster heater OFF temperature. These extra degrees are specified by the domestic hot water step length field setting. Correct setting prevents the booster heater from repeatedly turning on and off (i.e. chattering) to maintain the domestic hot water set point temperature. Note: the booster heater will turn back on when the domestic hot water temperature drops 2°C (fixed value) below the booster heater OFF temperature.

NOTE If the schedule timer for booster heater is active, the booster heater will only operate if allowed by this schedule timer.

- [7-00] Domestic hot water step length: temperature difference above the domestic hot water set point temperature before the booster heater is turned off.



BH	Booster heater
HP	Heat pump. If heating up time by the heat pump takes too long, auxiliary heating by the booster heater can take place
$T_{BH\ OFF}$	Booster heater OFF temperature (T_U + [7-00])
$T_{BH\ ON}$	Booster heater ON temperature ($T_{BH\ OFF}$ – 2°C)
$T_{HP\ MAX}$	Maximum heat pump temperature at sensor in domestic hot water tank
$T_{HP\ OFF}$	Heat pump OFF temperature ($T_{HP\ MAX}$ – [6-01])
$T_{HP\ ON}$	Heat pump ON temperature ($T_{HP\ OFF}$ – [6-00])
T_{DHW}	Domestic hot water temperature
T_U	User set point temperature (as set on the user interface)
t	Time

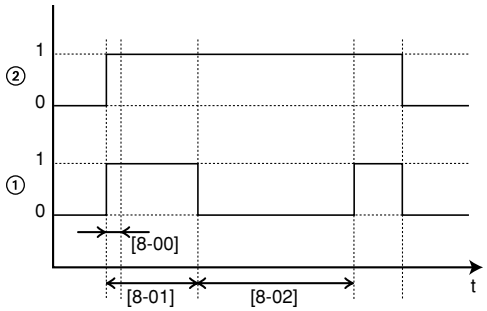
[8] Domestic water heating mode timer

Before changing field settings for domestic water heating, read attentively the warnings mentioned in the paragraph "Introduction" on page 2.

Applies only to installations with a domestic hot water tank.

The 'domestic water heating mode timer' field settings defines the minimum and maximum domestic water heating times, and minimum time between two domestic water heating cycli.

- [8-00] Minimum running time: specifies the minimum time period during which domestic water heating should be activated, even when the target domestic hot water temperature has already been reached.
- [8-01] Maximum running time: specifies the maximum time period during which domestic water heating can be activated, even when the target domestic hot water temperature has not yet been reached.
  Note that when the unit is configured to work with a room thermostat (refer to the installation manual), the maximum running timer will only be taken into account when there is a request for space cooling or space heating. When there is no request for room cooling or room heating, domestic water heating by the heat pump will continue until the 'heat pump OFF temperature' (see field settings "[6] DT for domestic water heating") is reached. When no room thermostat is installed, the timer is always taken into account.
- [8-02] Anti-recycling time: specifies the minimum required interval between two domestic water heating cycli.



1 Domestic water heating (1 = active, 0 = not active)
2 Hot water request (1 = request, 0 = no request)
t Time

[9] Cooling and heating set points

The purpose of this field setting is to prevent the user from selecting a wrong (i.e., too hot or too cold) leaving water temperature. Thereto the heating temperature set point range and the cooling temperature set point range available to the user can be configured.

- In case of a floor heating application, it is important to limit the maximum leaving water temperature at heating operation according to the specifications of the floor heating installation.
- In case of a floor cooling application, it is important to limit the minimum leaving water temperature at cooling operation to 16°C to prevent condensation on the floor.

- [9-00] Heating set point upper limit: maximum leaving water temperature for heating operation.
- [9-01] Heating set point lower limit: minimum leaving water temperature for heating operation.
- [9-02] Cooling set point upper limit: maximum leaving water temperature for cooling operation.
- [9-03] Cooling set point lower limit: minimum leaving water temperature for cooling operation.
- [9-04] Overshoot setting: defines how much the water temperature may rise above the setpoint before the compressor stops. This function is only applicable in heating mode.

[C] Solar priority mode

- [C-00] For information concerning the EKSOLHW solar kit, refer to the installation manual of that kit.
- [C-01] Defines the logic of the alarm output on the EKRP1HB remote alarm input/output PCB.

  If [C-01]=0, the alarm output will be powered when an alarm occurs (default).

  If [C-01]=1, the alarm output will not be powered when an alarm occurs. This field setting allows for distinction between detection of an alarm and detection of a power failure to the unit.

[C-01]	Alarm	No alarm	No power supply to unit
0 (default)	Closed output	Open output	Open output
1	Open output	Closed output	Open output

[D] Restricted power supply condition mode

[D-02] is set to 1 by default: The restricted power supply condition mode is enabled. **Do not change this value.**

[E] Unit information readout

- [E-00] Readout of the software version (example: 23)
- [E-01] Readout of the EEPROM version (example: 23)
- [E-02] Readout of the unit model identification (example: 11)
- [E-03] Readout of the liquid refrigerant temperature
- [E-04] Readout of the inlet water temperature

NOTE [E-03] and [E-04] readouts are not permanently refreshed. Temperature readouts are updated after looping through the field setting first codes again only.

First code	Second code	Setting name	Installer setting at variance with default value				Default value	Range	Step	Unit
			Date	Value	Date	Value				
0	**User permission level**									
	00	User permission level					3	2/3	—	—
1	**Weather dependent set point**									
	00	Low ambient temperature (Lo_A)					–10	–20~5	1	°C
	01	High ambient temperature (Hi_A)					15	10~20	1	°C
	02	Set point at low ambient temperature (Lo_TI)					40	25~55	1	°C
	03	Set point at high ambient temperature (Hi_TI)					25	25~55	1	°C
2	**Disinfection function**									
	00	Operation interval					Fri	Mon~Sun, All	—	—
	01	Status					1 (ON)	0/1	—	—
	02	Start time					23:00	0:00~23:00	1:00	hour
	03	Set point					70	40~80	5	°C
	04	Interval					10	5~60	5	min
3	**Auto restart**									
	00	Status					0 (ON)	0/1	—	—
4	**Space heating off temperature**									
	00	Not applicable. Do not change the default value!					1	—	—	—
	01	Not applicable. Do not change the default value!					0	—	—	—
	02	Space heating off temperature					25	14~25	1	°C
	03	Booster heater delay time					1	0/1	—	—
5	**Space heating priority temperature**									
	00	Not applicable. Do not change the default value!					1	—	—	—
	01	Not applicable. Do not change the default value!					0	—	—	—
	02	Not applicable. Do not change the default value!					0	—	—	—
	03	Not applicable. Do not change the default value!					0	—	—	—
	04	Not applicable. Do not change the default value!					10	—	—	—
6	**DT for domestic water heating**									
	00	Start					5	1~20	1	°C
	01	Stop					2	2~10	1	°C
7	**Domestic hot water step length**									
	00	Domestic hot water step length					3	0~4	1	°C
8	**Domestic water heating mode timer**									
	00	Minimum running time					5	0~20	1	min
	01	Maximum running time					30	5~95	5	min
	02	Anti-recycling time					3	0~10	0.5	hour
	03	Not applicable. Do not change the default value!					20	—	—	—
9	**Cooling and heating set point ranges**									
	00	Heating set point upper limit					55	37~55	1	°C
	01	Heating set point lower limit					25	15~37	1	°C
	02	Cooling set point upper limit					22	18~22	1	°C
	03	Cooling set point lower limit					5	5~18	1	°C
	04	Overshoot setting					2	1~4	1	°C
C	**Solar priority mode**									
	00	Solar priority mode setting					0	0/1	1	—
	01	Output logic of the EKRP1HB remote alarm input/output PCB					0	0/1	—	—
D	**Restricted power supply condition mode**									
	00	Not applicable. Do not change the default value!					0	—	—	—
	01	Not applicable. Do not change the default value!					0	—	—	—
	02	Not applicable. Do not change the default value!					1	—	—	—

First code	Second code	Setting name	Installer setting at variance with default value				Default value	Range	Step	Unit
			Date	Value	Date	Value				
E	**Unit information readout**									
	00	Software version					Read only	—	—	—
	01	EEPROM version					Read only	—	—	—
	02	Unit model identification					Read only	—	—	—
	03	Liquid refrigerant temperature					Read only	—	—	°C
	04	Inlet water temperature					Read only	—	—	°C

MAINTENANCE

Important information regarding the refrigerant used

This product contains fluorinated greenhouse gases covered by the Kyoto Protocol.

Refrigerant type: R410A
GWP(1) value: 1975

(1) GWP = global warming potential

Periodical inspections for refrigerant leaks may be required depending on European or local legislation. Please contact your local dealer for more information.

Maintenance activities

In order to ensure optimal availability of the unit, a number of checks and inspections on the unit and the field wiring have to be carried out at regular intervals, preferably yearly. This maintenance should be carried out by your local Daikin technician.

Besides keeping the remote controller clean by means of a soft damp cloth, no maintenance is required by the operator.

Standstill

- During longer periods of standstill, e.g. during summer with a heating only application, it is very important NOT TO SWITCH OFF THE POWER SUPPLY towards the unit.

  Switching off the power supply stops the automatic repetitive movement of the motor in order to prevent it from getting jammed.
- When the unit is turned off for some days during winter, then this should be considered as a start-up at low ambient temperature. Refer to the chapter "Start-up at low outdoor ambient temperatures" in the installation manual to ensure that the unit operates within its operation range as soon as possible.

TROUBLESHOOTING

The guidelines below might help to solve your problem. If you cannot solve the problem, consult your installer.

- No readings on the remote controller (blank display)

  Check if the mains power is still connected to your installation.
- One of the error codes appears

  Consult your local dealer.
- The schedule timer does work but the programmed actions are executed at the wrong time (e.g. 1 hour too late or too early)

  Check if the clock and the day of the week are set correctly, correct if necessary.

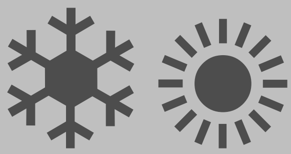
DISPOSAL REQUIREMENTS

Dismantling of the unit, treatment of the refrigerant, of oil and of other parts must be done in accordance with relevant local and national legislation.

Your product is marked with this symbol. This means that electrical and electronic products shall 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 other parts must be done by a qualified installer in accordance with relevant local and national legislation.

Units must be treated at a specialized treatment facility for re-use, recycling and recovery. By ensuring this product is disposed off correctly, you will help to prevent potential negative consequences for the environment and human health. Please contact the installer or local authority for more information.



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2	:			❑
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4	:			❑
5	:			❑
TUE				
1	:			❑
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4	:			❑
5	:			❑
WED				
1	:			❑
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4	:			❑
5	:			❑
THU				
1	:			❑
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FRI				
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5	:			❑
SAT				
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4	:			❑
5	:			❑
SUN				
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5	:	❑	❑

	[hh:mm]	ON [✓]	OFF [✓]
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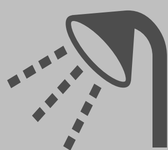

	[hh:mm]	ON [✓]	OFF [✓]
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5	:	❑	❑

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