DAIKIN

OPERATION MANUAL

Indoor unit for air to water heat pump system and options

For installation WITH restricted power supply condition

=6 kW

EKHBHE008BA3V3
EKHBXE008BA3V3

CONTENTS

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

The English text is the original instruction. Other languages are translations of the original instructions.

This 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 should be supervised to ensure that they do not play with the appliance.

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

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.

General information

Thank you for purchasing this indoor unit.

The unit is the indoor part of the air to water ERHQ or ERLQ heat pumps. These units are designed for wall mounted indoor installation. The units can be combined with Daikin fan coil units, floor heating applications, low temperature radiators, Daikin domestic water heating applications and Daikin solar kit for domestic hot water applications.

Heating/cooling units and heating only units

The 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.

Indoor unit model	Backup heater capacity	Backup heater nominal voltage
EKHB*E008BA3V3	3 kW	1x 230 V

Domestic hot water tank (option)

An optional EKHW* 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 three sizes: 150, 200 and 300 litre.

Solar kit for domestic hot water tank (option)

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

Remote thermostat kit (option)

An optional room thermostat EKRTW, EKRTWA, or EKRTR can be connected to the indoor unit. Refer to the operation manual of the room thermostat for more information.

Safety considerations

The precautions listed here are divided into the following two types. Both cover very important topics, so be sure to follow them carefully.

Meanings of **DANGER**, **WARNING**, **CAUTION** and **NOTE** symbols.

DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTE

Indicates situations that may result in equipment or property-damage accidents only.

Danger

- Do not touch water pipes during and immediately after operation as the pipes may be hot. Your hand may suffer burns. To avoid injury, give the piping time to return to normal temperature or be sure to wear proper gloves.
- Do not touch any switch with wet fingers. Touching a switch with wet fingers can cause electrical shock.

Warning

- Never directly touch any accidental leaking refrigerant. This could result in severe wounds caused by frostbite.
- Do not touch the refrigerant pipes during and immediately after operation as the refrigerant pipes may be hot or cold, depending on the condition of the refrigerant flowing through the refrigerant piping, compressor, and other refrigerant cycle parts. Your hands may suffer burns or frostbite if you touch the refrigerant pipes. To avoid injury, give the pipes time to return to normal temperature or, if you must touch them, be sure to wear proper gloves.

Operating the unit

Introduction

The 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 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 13.
- It is advised to install the 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 hot 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.
  - Make sure the domestic water heating by booster heater only start 1 to 2 hours before you expect domestic hot water usage.
    In case you only need a lot of domestic hot water in the evening or in the morning, only allow domestic water heating by booster heater during early morning and early evening. Also keep hours with low electricity cost tariffs in mind.
    To do this, program both the domestic water heating and booster heating schedule timer. Refer to Programming in chapter "Programming and consulting the schedule timer" on page 8.
  - If the domestic hot water is not used for two weeks or more, a quantity of hydrogen gas which is highly flammable may accumulate in the domestic hot water tank. To dissipate this gas safely, it is recommended that a hot tap be turned on for several minutes at a sink, basin, or bath, but not at a dishwasher, clothes washer or other appliance. During this procedure there must be no smoking, open flame or any electrical appliance operating nearby. If hydrogen is discharged through the tap, it will probably make a sound as of air escaping.

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 out 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.

CAUTION

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 heating/cooling and a heating only installation.

Both installations are available in multiple versions which vary in capacity, electrical supply and installed equipment (with an optional domestic hot water tank with a booster heater).

- 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 6) (*),
  - domestic water heating (refer to page 6) (*).
- Selection of features:
  - quiet mode (refer to page 6),
  - weather dependent control (refer to page 7).
- Temperature set point adjustment (refer to page 6).

(*) 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 13) this allows a power supply shut down of 2 hours without user intervention.

Clock function

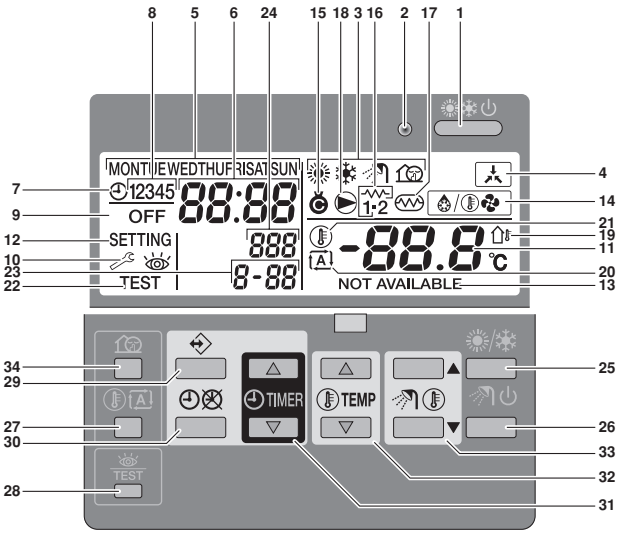
The clock functions are:

- 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. HEATING/COOLING 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).

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 heating or space cooling operation. The LED blinks if a malfunction occurs. When the LED is OFF, space heating or space cooling 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 the room thermostat (optional) 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 (heating/cooling).

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

When the benefit kWh power rate signal is sent, the centralised control indication will flash to indicate that benefit kWh power rate is active.

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 space heating/cooling 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 malfunction of the outdoor unit.

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.

23. FIELD SET CODE *8-88*

This code represents the code from the field set list. Refer to the "Field settings table" on page 16.

24. ERROR CODE *888*

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

25. SPACE HEATING/COOLING BUTTON

This button allows manual switching between heating or cooling 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.

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 13), 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 13.

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 13), 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 13), 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.

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 8.

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 6) or weather dependent (refer to "Selecting weather dependent set point operation (only in heating mode)" on page 7).

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 heat pump 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.

- The space cooling temperature set point can only be set manually (refer to "Manual operation" on page 6).
- Switching between space heating and space cooling operation can only be done by pressing the ☀/❄ button or by the 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 heat up the domestic hot water tank by heat pump when the space heating/space cooling operation has reached its temperature set point or heat pump domestic water heating has a higher demand request than space side (depends on dipswitch setting).

- Refer to the warning mentioned in "Introduction" on page 2 concerning domestic water heating.
- The domestic hot water water temperature set point can only be set manually (refer to "Manual operation" on page 6).
- Any domestic water heating operation is impossible when the domestic hot water tank is not installed.
- When the 🚿 icon is blinking, the domestic hot water is heating up by the solar kit option and not by the 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 sound 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 7).

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 heating (☀) and space cooling (❄)

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

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 13). 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 13).
- Temperature range for cooling: 5°C to 22°C

CAUTION

The actual operation range depends on the values set on field setting [9].

These values shall be determined based on the application.

In heating mode (☀), the water temperature set point can also be weather dependent (icon 🅰 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 ❄☀⏻ button.

The operation LED ○ lights up.

When the unit is connected to an external room thermostat, buttons ☀/❄ and ❄☀⏻ 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 heating or space cooling).

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 78°C

3 Press the button to deactivate domestic water heating ().
Icon disappears from the display.

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 13), 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 6). 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.

- 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 5.
- Manually adjust the clock for summertime and wintertime. Refer to "Setting the clock" on page 5.
- A power failure exceeding 2 hours 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 5 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 8.

What can the schedule timer do?

The schedule timer allows the programming of:

1. Space heating and space cooling (refer to "Programming space heating or space cooling" on page 9)
   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 heating and space cooling is overruled by the external room thermostat.

2. Quiet mode (refer to "Programming quiet mode, booster heating or domestic water heating" on page 10)
   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 10)
   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 10)
   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 heating to space cooling 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 10.

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 4.
- 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 heating/cooling 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 set point), 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 (heating or cooling) and the fact that each programmed action implies a heating set point and a cooling set point, the following situations may occur:

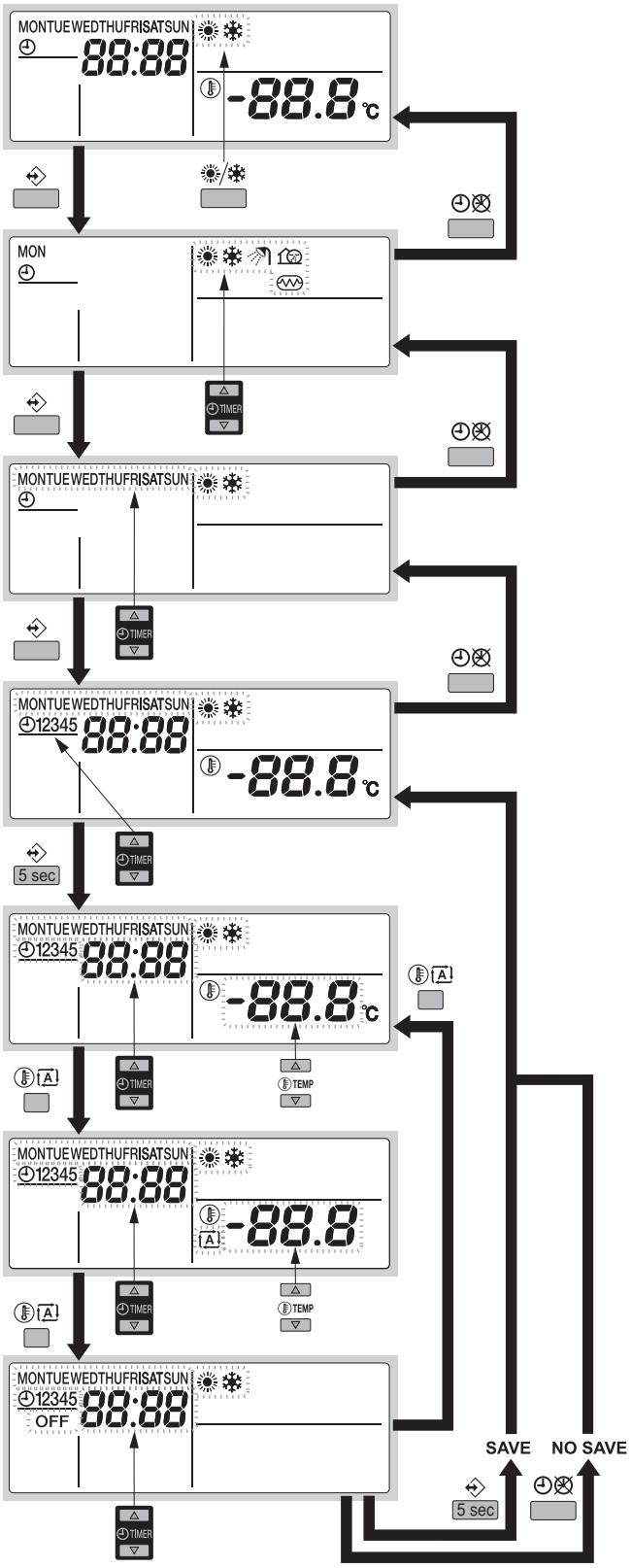
- when the schedule timer is active in heating mode, and the mode is changed manually to cooling (by means of the ☼/❄ button), the operation mode will from then on remain cooling and program actions will follow the corresponding cooling set points. Returning to heating mode needs to be carried out manually (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 set points. 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 set points for each action. If you do not program these set points, 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 heating or space cooling



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

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

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.

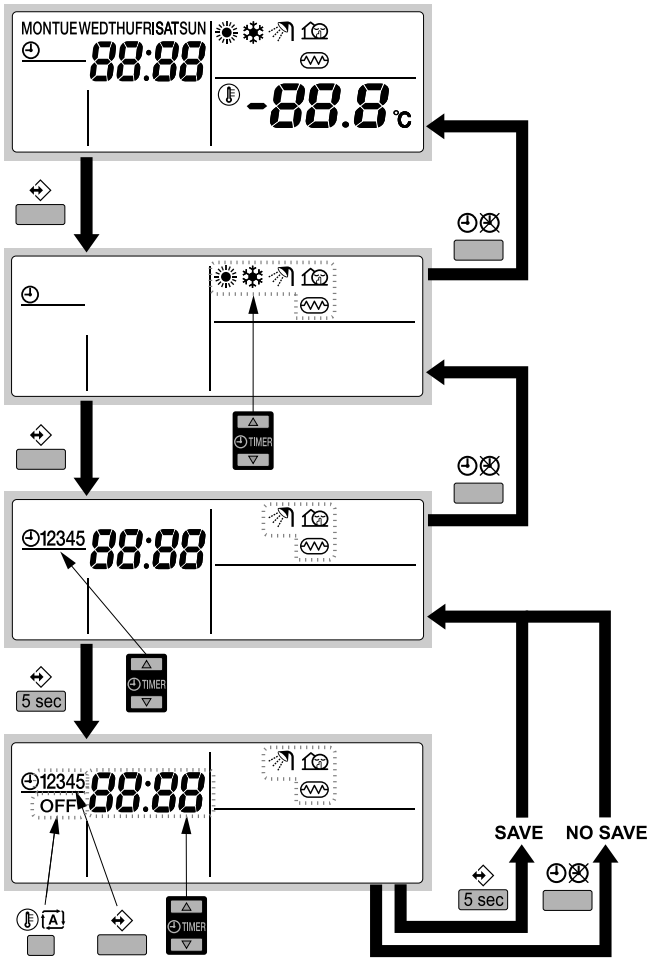
12 Press the ⇳ button for 5 seconds to store the programmed actions.

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:

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 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 heating or space cooling actions

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

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

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.

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.

For installation with restricted power supply condition and optional domestic hot water tank

The following information is valid when installing the optional domestic hot water tank.

Simultaneous operation of compressor, backup heater and booster heater is NOT possible. Refer to the following warnings mentioned in the operation manual:

- Emergency backup heater operation always has priority over compressor or booster heater operation.
- Balance between space heating/cooling demand and domestic hot water demand.

To optimize the comfort balance between space heating/cooling and domestic hot water, the schedule timers must be used.

The following shows step-by-step a possible space heating/cooling and domestic hot water pattern. To ensure domestic hot water production, the schedule timers must be used to disable space heating/cooling. When space heating/cooling is disabled the heatpump will switch automatically to domestic water heating. In this case it is not required to program the domestic hot water or booster heater schedule timer.

Example pattern

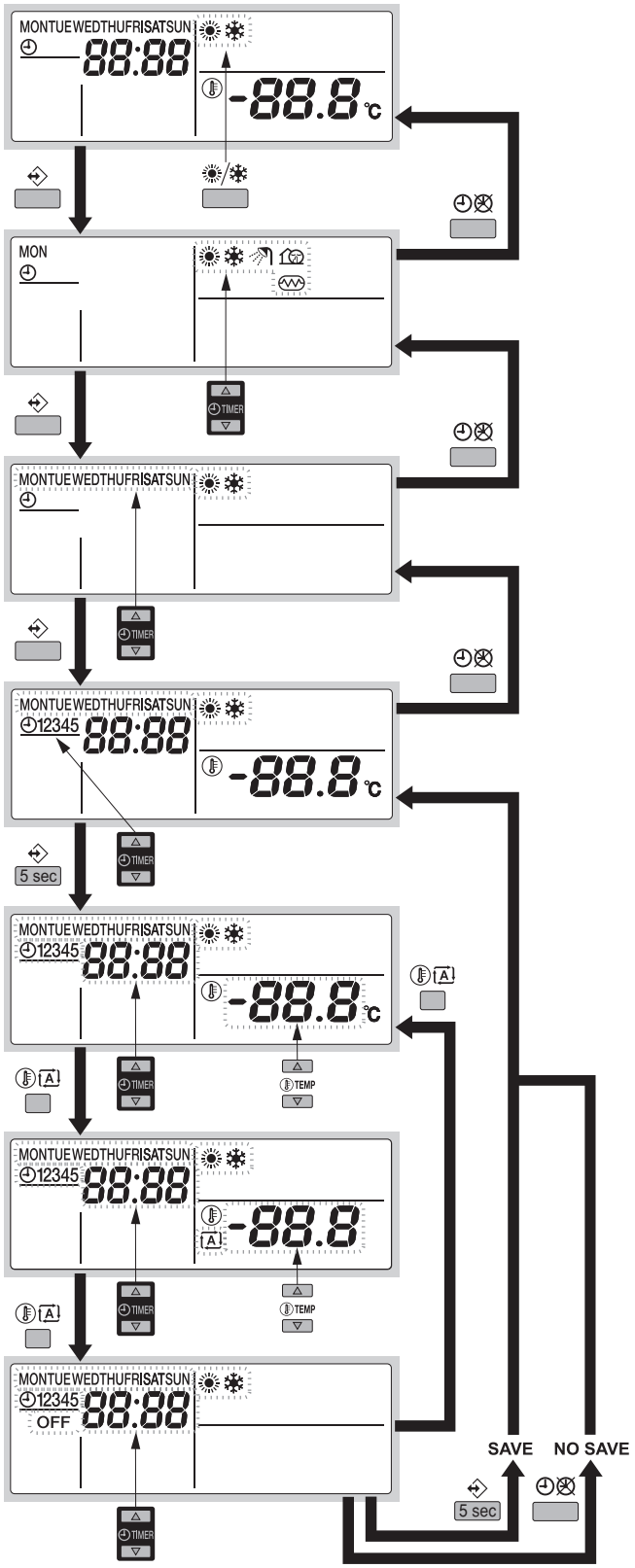
In this example, the domestic hot water tank will be heated between 2:00 and 4:00.

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 heating/cooling by schedule timer, or refer to the separate addendum for an example of the Daikin room thermostat schedule timer programming.

Programming space heating or space cooling



Programming space heating or space cooling 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 heating/cooling operation mode.

2 Press the ⇳ button.

The actual mode is blinking.

3 Press the ⇳ button to confirm the selected mode.

The actual day is blinking.

4 Use the ⏲▲ and ⏲▼ buttons until "MON" (monday) is blinking.

5 Press the ⇳ button to confirm the selected day.

The first programmed action of the selected day appears.

6 Press the ⇳ button for 5 seconds to enter the programming mode.

7 Use the ⇳ button to select the action number 1.

8 Use the ⏲▲ and ⏲▼ buttons to set the correct action time to 2:00.

9 Use the 🌡A button to select **OFF** as action.

10 Use the ⇳ button to select action number 2.

11 Use the ⏲▲ and ⏲▼ buttons to set the action time to 4:00.

12 Use the 🌡A buttons to select what the unit should do from 4:00 onwards.

- -88.8℃: set the tempearature by means of the 🌡▲ and 🌡▼ buttons.
- A: to select automatic temperature calculation (only in heating mode)

13 Press the ⇳ button for 5 seconds to store the programmed actions.

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

14 Repeat this sequence for all the days of the week.

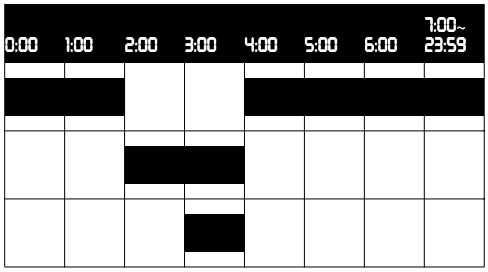
Now, the unit is programmed to stop space heating/cooling between 2:00 and 4:00. The unit will start space heating/cooling from 4:00 if this is programmed (see step 12).

NOTE Other actions can also be programmed for times during the day. See operation manual on how to program other actions.

NOTE

■ When booster heater and domestic hot water schedule timers are used, make sure they are enabled during the period that space heating/cooling is disabled.

Example pattern:

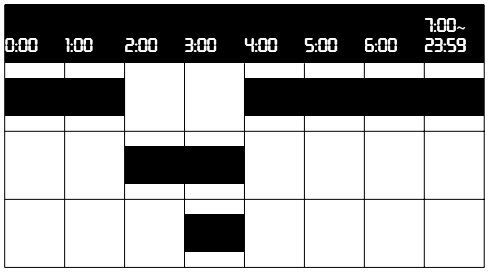


■ In case the disinfection function is required, the schedule timer for domestic water heating and booster heating must be used. If the domestic water heating and booster heater are not stopped, than this disinfection can not start.

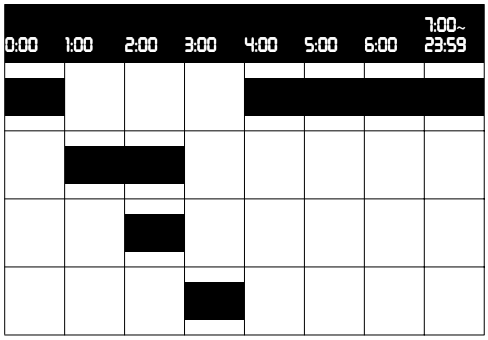
Disinfection example pattern (refer to paragraph "[2] Disinfection function" in the operation manual).

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Pattern 1	✓	✓	✓	—	✓	✓	✓
Pattern 2	—	—	—	✓	—	—	—

Pattern 1



Pattern 2



FIELD SETTINGS

NOTE

The default values mentioned in "Field settings table" on page 16 are the values from factory. The actual initial values shall be selected according to your application. These values shall be confirmed by your installer.

CAUTION

The field settings [2] depends on the relevant local and national regulations.

The field settings [9] depends on the application.

Before changing these settings, the new values shall be confirmed by the installer and/or shall be according to the local and national regulations.

The indoor unit shall be configured by the installer to match the installation environment (outdoor climate, installed options, etc.) and user demand. However, the field settings mentioned in "Field settings table" on page 16 can be modified to customer preferences. 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.

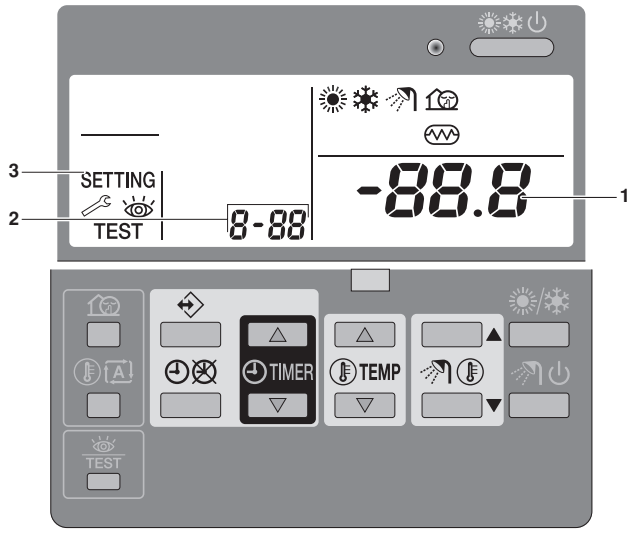
Each field setting is assigned a 3-digit number or code, for example [1-03], which is indicated on the user interface display. The first digit [1] indicates the 'first code' or field setting group. The second and third digit [03] together indicate the 'second code'.

A list of all field settings and default values is given under "Field settings table" on page 16. 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 14.

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.

- Before shipping, the set values have been set as shown under "Field settings table" on page 16.
- When exiting FIELD SET MODE, "88" may be displayed on the user interface LCD while the unit initialises itself.
- Only relevant field settings are explained.

Detailed description

[0] User permission level

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

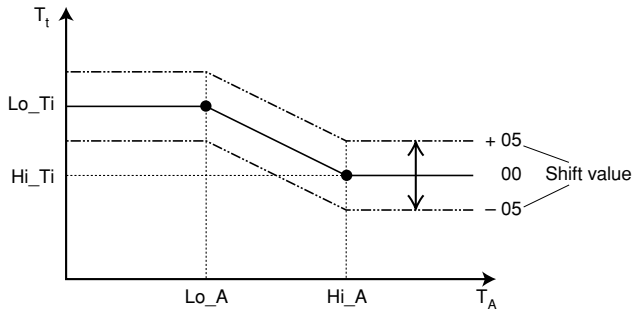
Three permission levels are defined (see the table below). Switching between level 1 and level 2/3 is done by simultaneously pressing buttons ⏲TIMER▲ and ⏲TIMER▼ immediately followed by simultaneously pressing buttons and , and keeping all 4 buttons pressed for at least 5 seconds (in normal mode). Note 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.

- [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

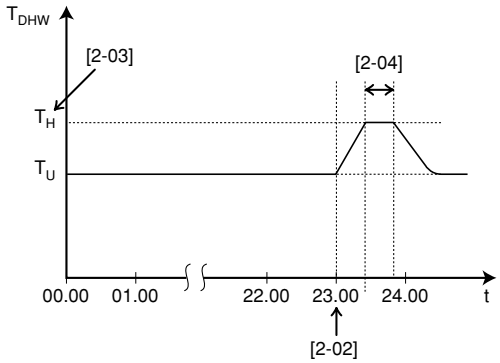
Applies only to installations with a domestic hot water tank.

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

CAUTION

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

- [2-00] Operation interval: day(s) of the week at which the domestic hot 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 hot 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

WARNING

Be aware that the domestic hot water temperature at the hot water tap will be equal to the value selected in field setting [2-03] after a disinfection operation.

If this high domestic hot water temperature can be a potential risk for human injuries, a mixing valve (field supply) shall be installed at the hot water outlet connection of the domestic hot water tank. This mixing valve shall secure that the hot water temperature at the hot water tap never rise above a set maximum value. This maximum allowable hot water temperature shall be selected according to local and national regulations.

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

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

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.

Refer to the operation manual for a detailed explanation how to program the schedule timer.

If using a room thermostat, the disinfection function is not possible as long as the room thermostat demands heating or cooling. 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 heating/cooling 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)**.

[4] Space heating off temperature

Space heating off temperature

- [4-02] Space heating off temperature: outdoor temperature above which space heating is turned off, to avoid overheating.

[9] Cooling and heating set point ranges

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.

CAUTION

- 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 (field setting of parameter [9-03]) to 16~18°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.

[C] Setup on EKRP1HB digital I/O PCB

Solar priority mode

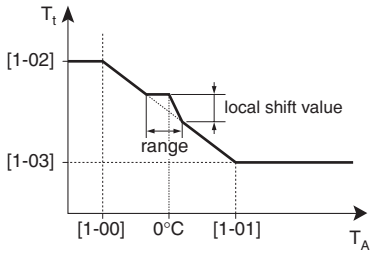
- [C-00] Solar priority mode setting: for information concerning the EKSOLHW solar kit, refer to the installation manual of that kit.

[D] Local shift value weather dependent

Local shift value weather dependent

The local shift value weather dependent field setting is only relevant in case weather dependent set point (see field setting "[1] Weather dependent set point (heating operation only)" on page 14) is selected.

- [D-03] Local shift value weather dependent: determines the shift value of the weather dependent set point around outdoor temperature of 0°C.



T_t	Target water temperature
T_A	Outdoor temperature
range	Range
local shift value	Local shift value
[1-00], [1-01], [1-02], [1-03]	Applicable field setting of the weather dependent set point [1]

[D-03]	Outdoor temperature range (T_A)	Local shift value
0	—	—
1	–2°C~2°C	2
2		4
3	–4°C~4°C	2
4		4

[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	—
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	Installation related setting								
	01	Installation related setting								
	02	Space heating off temperature					25	14~25	1	°C
	03	Installation related setting								
	04	Installation related setting								
5	**Installation related settings**									
	00	Installation related setting								
	01	Installation related setting								
	02	Installation related setting								
	03	Installation related setting								
	04	Installation related setting								
6	**Installation related settings**									
	00	Installation related setting								
	01	Installation related setting								
	02	Installation related setting								
7	**Installation related settings**									
	00	Installation related setting								
	01	Installation related setting								
	02	Installation related setting								
	03	Installation related setting								
	04	Installation related setting								
8	**Installation related settings**									
	00	Installation related setting								
	01	Installation related setting								
	02	Installation related setting								
	03	Installation related setting								
	04	Installation related setting								

First code	Second code	Setting name	Installer setting at variance with default value				Default value	Range	Step	Unit
			Date	Value	Date	Value				
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	Installation related setting								
A	**Quiet mode**									
	00	Quiet mode type					0	0/2	—	—
	01	Parameter 01					3	—	—	—
	02	Not applicable					1	Read only	—	—
	03	Not applicable					0	Read only	—	—
	04	Not applicable					0	Read only	—	—
b	**Not applicable**									
	00	Not applicable					0	Read only	—	—
	01	Not applicable					0	Read only	—	—
	02	Not applicable					0	Read only	—	—
	03	Not applicable					0	Read only	—	—
	04	Not applicable					0	Read only	—	—
C	**Setup on EKRP1HB digital I/O PCB**									
	00	Solar priority mode setting					0	0/1	1	—
	01	Installation related setting								
	02	Installation related setting								
	03	Installation related setting								
	04	Installation related setting								
D	**Local shift value weather dependent**									
	00	Installation related setting								
	01	Installation related setting								
	02	Installation related setting								
	03	Local shift value weather dependent					0	0/1/2/3/4	—	—
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
F	**Installation related settings**									
	00	Installation related setting								
	01	Installation related setting								
	02	Installation related setting								
	03	Installation related setting								
	04	Installation related setting								

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

DANGER

- Do not touch water pipes during and immediately after operation as the pipes may be hot. Your hand may suffer burns. To avoid injury, give the piping time to return to normal temperature or be sure to wear proper gloves.
- Do not touch any switch with wet fingers. Touching a switch with wet fingers can cause electrical shock.

WARNING

Do not touch the refrigerant pipes during and immediately after operation as the refrigerant pipes may be hot or cold, depending on the condition of the refrigerant flowing through the refrigerant piping, compressor, and other refrigerant cycle parts. Your hands may suffer burns or frostbite if you touch the refrigerant pipes. To avoid injury, give the pipes time to return to normal temperature or, if you must touch them, be sure to wear proper gloves.

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 (see installation manual).

The only maintenance which may be required by the operator is:

- keeping the remote controller clean by means of a soft damp cloth,
- checking if the water pressure indicated on the manometer is above 1 bar.

Only for the optional domestic hot water tank:

- A check for correct operation of the pressure relief valve installed on your domestic hot water tank, has to be carried out at least every 6 months: it is important that the lever on the valve is actuated to prevent accumulation of mineral deposits that may impair valve operation and to confirm that the valve and discharge pipe are not blocked. The lever should be operated slowly and smoothly to avoid a sudden rush of hot water from the discharge pipe.
  Failure to operate the relief valve actuating lever may result in the water heater exploding.
- Continuous leakage of water from the discharge pipe may indicate a problem with the water heater.
- If a discharge pipe is connected to the pressure relief device it must be installed in a continuously downward direction and in a frost-free environment. It must be left open to the atmosphere.

CAUTION

If the supply cord is damaged, it must be replaced by the manufacturer, its agent or similar qualified persons in order to avoid hazards.

Standstill

NOTE

- 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 pump 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.

POSSIBLE CAUSES	CORRECTIVE ACTIONS
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. Refer to the installation manual for a detailed list of error codes.
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.
The schedule timer is programmed but does not work.	In case the ⏲⊗ icon is not displayed, push the ⏲⊗ button to enable the schedule timer.
Capacity shortage	Consult your local dealer.

DISPOSAL REQUIREMENTS

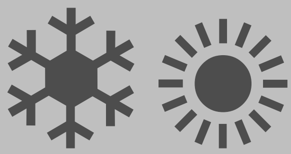
Dismantling of the unit, treatment of the refrigerant, of oil and of other parts must be done in accordance with relevant local and national legislation.

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.

NOTES



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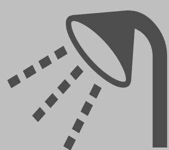

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