DAIKIN

OPERATION MANUAL

Packaged air-cooled water chillers and packaged reversible air to water heatpumps

EWAQ009ACV3
EWAQ010ACV3
EWAQ011ACV3

EWYQ009ACV3
EWYQ010ACV3
EWYQ011ACV3

EWAQ009ACW1
EWAQ011ACW1
EWAQ013ACW1

EWYQ009ACW1
EWYQ011ACW1
EWYQ013ACW1

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.

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.

INTRODUCTION

Thank you for purchasing this Daikin inverter chiller.

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

This unit is designed for outdoor installation and used for both heating and cooling applications. The unit is designed to be combined with fan coil units or air handling units for air conditioning purposes.

Heat pump and cooling only versions

This chiller range consists of 2 main versions: a heat pump (EWYQ) version and a cooling only (EWAQ) version, available in 6 standard sizes:

- V3: 9, 10, and 11 kW (single phase)
- W1: 9, 11, and 13 kW (3 phase)

Options

- Remote alarm kit EKRP1HB
- Heater tape option OP10

  Both versions are also available with a heater tape option (OP10) for protecting internal water pipework at cold outdoor temperatures.

To obtain more information concerning these option kits, please refer to dedicated installation manuals of the kits.

Connection to a benefit kWh rate power supply

This equipment allows for connection to benefit kWh rate power supply delivery systems which do not interrupt the power supply. Refer to chapter "Connection to a benefit kWh rate power supply" in the installation manual for more details.

OPERATING THE UNIT

OPERATING THE DIGITAL CONTROLLER

Operating the 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 cooling only installation.

Both installations are available in multiple versions which vary in capacity.

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:
  - heating (refer to "Heating operation (☼)" on page 4),
  - cooling (refer to "Cooling operation (❄)" on page 4),
  - quiet mode (refer to "Quiet mode operation (🏠)" on page 4),
- Selection of features:
  - quiet mode (refer to "Quiet mode operation (🏠)" on page 4),
  - weather dependent control (refer to "Selecting weather dependent set point operation (heat pump models only)" on page 4).
- Temperature set point adjustment (refer to "Controller operations" on page 4).

The digital controller supports a power cut off of maximum 2 hours. When autorestart is enabled (see "Field settings" on page 9) this allows a power supply shut down of 2 hours without user intervention (e.g. benefit kWh rate power supply).

Clock function

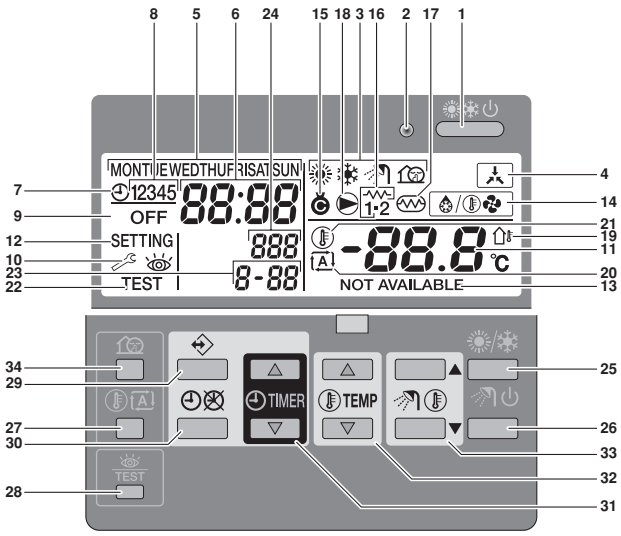
The clock functions are:

- 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).

2. OPERATION LED ○

   The operation LED is lit during cooling or heating operation. The LED blinks if a malfunction occurs. When the LED is OFF, cooling or heating are inactive.

3. OPERATION MODE ICONS ☼❄🏠

   These icons indicate the current operation mode(s): heating (☼), cooling (❄) or quiet mode (🏠). Quiet mode is a feature of the cooling or heating operation mode. When quiet mode is activated, the quiet mode icon and the heating or cooling mode icon will be displayed simultaneously.

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

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

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 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 cooling and 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 unit is active.

16. Not applicable

17. Not applicable

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 unit and the outdoor ambient 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. HEATING/COOLING BUTTON

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

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

26. Not applicable

27. WEATHER DEPENDENT SET POINT BUTTON

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

    If the controller is set in permission level 2 or 3 (refer to "Field settings" on page 9), 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 9.

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 9), 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 unit, outdoor ambient 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. Not applicable

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 9), 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 6.

Description of the operation modes

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 4) or weather dependent (refer to "Selecting weather dependent set point operation (heat pump models only)" on page 4).

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 heating operation, freezing of the 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 system. After a maximum of 8 minutes of defrost operation, the system returns to heating operation.

NOTE

Defrosting stops:

- when switching between cooling and heating,
- at a low outdoor temperature and a low temperature of the incoming water,
- when the desired defrost temperature is reached, i.e. defrost stop temperature (contact your local dealer).

Heating operation restarts automatically when the water temperature is above the defrost stop temperature.

NOTE

Heating operation is not possible if the installation is a "cooling only" installation.

Cooling operation (❄)

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

NOTE

- The cooling temperature set point can only be set manually (refer to "Manual operation" on page 4).
- Switching between heating and cooling operation can only be done by pressing the ☼/❄ button or by an external room thermostat. (Provided the unit is not a "cooling only" unit)

Quiet mode operation (🍃)

Quiet mode operation means that the unit works at reduced capacity so that the noise produced by the 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.

Two quiet modes are available.

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 5).

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 cooling (❄) and heating (☼)

1 Use the ☼/❄ button to select cooling (❄) or 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
- Temperature range for cooling: 5°C to 22°C

NOTE

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.

NOTE

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 (cooling or heating).

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 9), the 🍃 button will not be operable.

Selecting weather dependent set point operation (heat pump models only)

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 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 4). 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 3.
- Manually adjust the clock for summertime and wintertime. Refer to "Setting the clock" on page 3.
- 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 3 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 6.

What can the schedule timer do?

The schedule timer allows the programming of:

1. Heating and cooling (refer to "Programming cooling or heating" on page 6)
   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 cooling and heating is overruled by the external room thermostat.

2. Quiet mode (refer to "Programming quiet mode" on page 7)
   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 heating or cooling **OFF**, the controller will also be switched off.

What can the schedule timer NOT do?

The schedule timer can not change the operation mode from cooling to 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 8.

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 2.
- 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 cooling/heating program, 5 actions can be programmed per weekday. The same actions are repeated on a weekly basis.
  - In the quiet mode program, 5 actions can be programmed. 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.

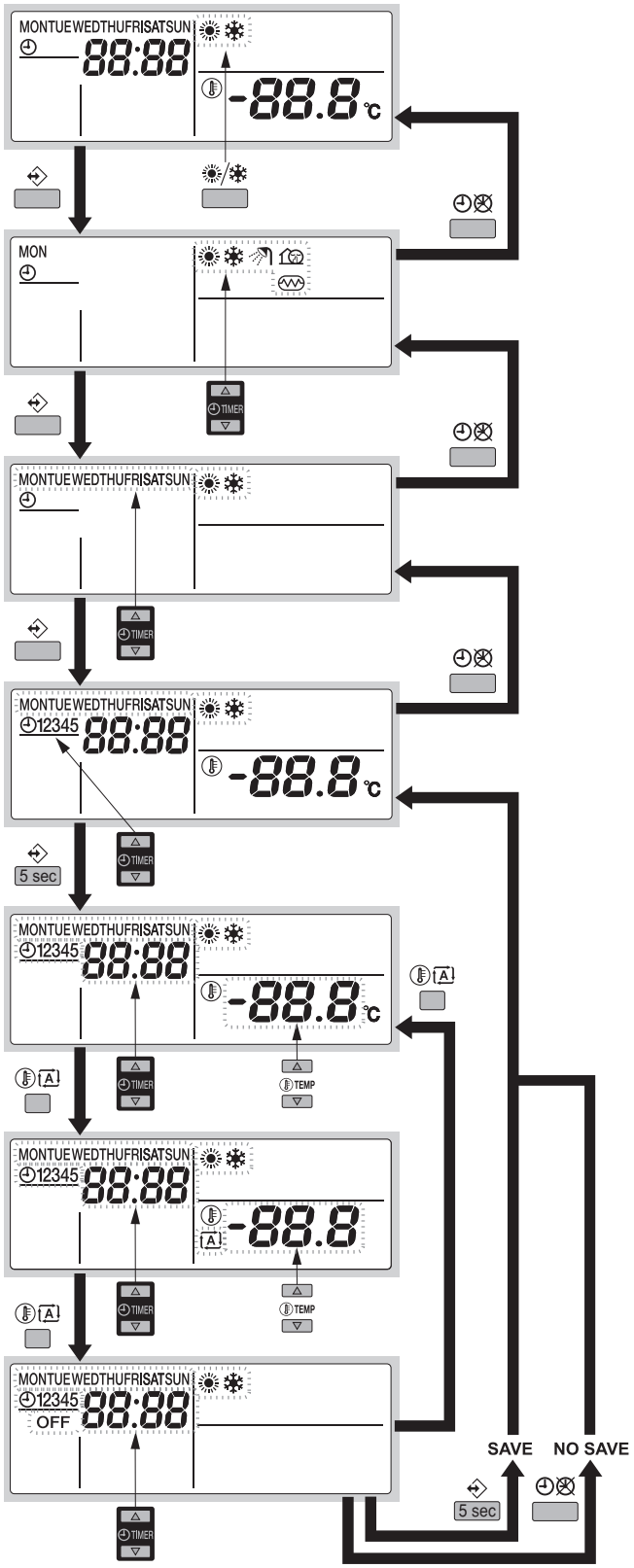
Due to the fact that the schedule timer cannot switch between operation modes (cooling or heating) and the fact that each programmed action implies a cooling setpoint and a heating setpoint, the following situations may occur:

- 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.

Programming

Programming cooling or heating



NOTE

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

As mentioned in "Getting started" on page 6, adjust both heating and cooling setpoints for each programmed action. Otherwise, default setpoints will be used.

Programming cooling or 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**°C: 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.

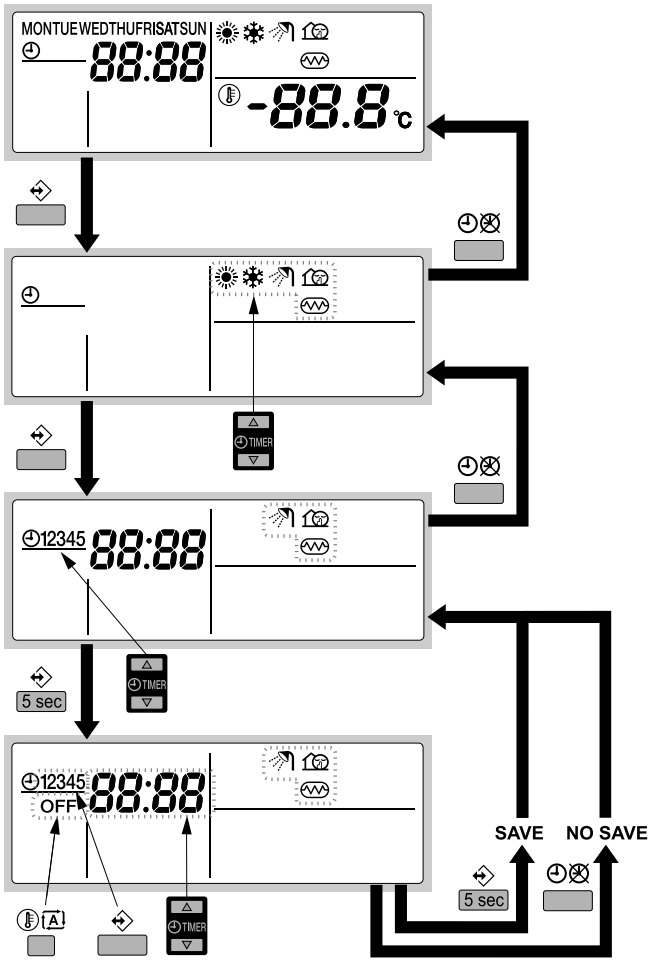
12 Press the ⏎ button for 5 seconds to store the programmed actions.

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



Programming 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.

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.

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 cooling or heating actions

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

Consulting cooling or 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 quiet mode

Consulting 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 quiet mode (quiet mode 🏠).

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 🏠 or current mode).

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] Alarm output logic of EKRP1HB" on page 10 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 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.

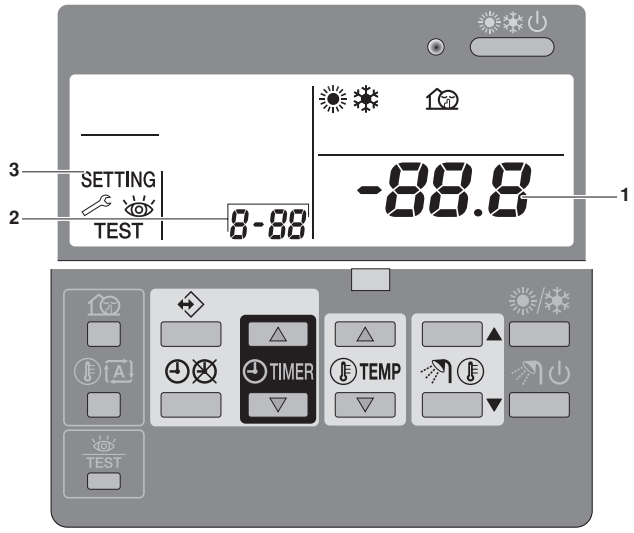
Each field setting is assigned a 3-digit number or code, for example [5-03], which is indicated on the user interface display. The first digit [5] indicates the 'first code' or field setting group. The second and third digit [03] together indicate the 'second code'.

A list of all field settings and default values is given under "Field settings table" on page 12. 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 9.

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 12.
- When exiting FIELD SET MODE, "88" may be displayed on the user interface LCD while the unit initialises itself.

Detailed description

[0] User permission level

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

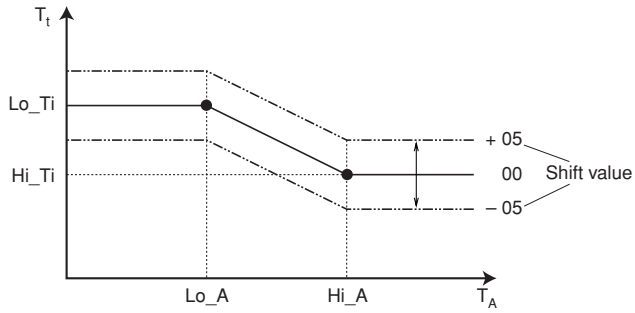
Three permission levels are defined (see the table below). Switching between level 1 and level 2/3 is done by simultaneously pressing buttons TIMER▲ and TIMER▼ immediately followed by simultaneously pressing buttons and , and keeping all 4 buttons pressed for at least 5 seconds (in normal mode). Note 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
On/off button	ON/OFF	operable	operable	operable
Operation changeover button		operable	operable	operable
Sanitary water heating button		*– Not available –*		
Sanitary temperature adjust buttons		*– Not available –*		
Temperature adjust buttons	TEMP▲ TEMP▼	operable	operable	operable
Time adjust buttons	TIMER▲ TIMER▼	operable		
Programming button		operable		
Schedule timer enable/ disable button		operable	operable	
Quiet mode button		operable		
Weather dependent set point button		operable		
Inspection/test operation button	TEST	operable		

[1] Weather dependent set point (heat pump models 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 the operation manual 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

[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)**.

NOTE If the benefit kWh rate power supply is of the type that power supply is interrupted, then always allow the auto restart function.

[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 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.
- [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.

[A] Quiet mode

This field setting allows to select the desired quiet mode. Two quiet modes are available: quiet mode A and quiet mode B.

In quiet mode A, priority is given to the unit operating quietly under **all** circumstances. Fan and compressor speed (and thus performance) will be limited to a certain percentage of the speed at normal operation. In certain cases, this might result in reduced performance.

In quiet mode B, quiet operation might be overridden when higher performance is required. In certain cases, this might result in less quiet operation of the unit to meet the requested performance.

- [A-00] Quiet mode type: defines whether quiet mode A (0) or quiet mode B (2) is selected.
- [A-01] Parameter 01: do not change this setting. Leave it set to its default value.

Do not set other values than the ones mentioned.

[C] Alarm output logic of EKRP1HB

- [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] Benefit kWh rate power supply

■ If [D-01]=1 or 2 and the benefit kWh rate signal of the electricity company is received, following devices will be switched off:

[D-00]	Compressor
0 (default)	Forced off
1	Forced off
2	Forced off
3	Forced off

NOTE [D-00] settings 1, 2 and 3 are only meaningful if the benefit kWh rate power supply is of the type that power supply is not interrupted,

■ [D-01] Defines whether or not the unit is connected to a benefit kWh rate power supply.

If [D-01]=0, the unit is connected to a normal power supply (default value).

If [D-01]=1 or 2, the unit is connected to a benefit kWh rate power supply. In this case the wiring requires specific installation like explained in chapter "Connection to a benefit kWh rate power supply" of the installation manual.

When parameter [D-01]=1 at the moment that the benefit kWh rate signal is sent by the electricity company, that contact will open and the unit will go in forced off mode(1).
When parameter [D-01]=2 at the moment that the benefit kWh rate signal is sent by the electricity company, that contact will close and the unit will go in forced off mode(2).

[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.

(1) When the signal is released again, the voltage free contact will close and the unit will restart operation. It is therefore important to leave the auto restart function enabled. Refer to "[3] Auto restart" on page 10.

(2) When the signal is released again, the voltage free contact will open and the unit will restart operation. It is therefore important to leave the auto restart function enabled. Refer to "[3] Auto restart" on page 10.

Field settings table

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	**Not available**									
3	**Auto restart**									
	00	Status					0 (ON)	0/1	—	—
4	**Not available**									
5	**Not available**									
6	**Not available**									
7	**Not available**									
8	**Not available**									
9	**Cooling and heating set point ranges**									
	00	Heating set point upper limit					55	37~55	1	°C
	01	Heating set point lower limit					15	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
A	**Quiet mode**									
	00	Quiet mode type					0	0/2	—	—
	01	Parameter 01					3	—	—	—
C	**Alarm output logic of EKRP1HB**									
	00	Not applicable. Do not change the default value!					0	—	—	—
	01	Output logic of the EKRP1HB remote alarm input/output PCB					0	0/1	—	—
D	**Benefit kWh rate power supply**									
	00	Not available								
	01	Unit connection to benefit kWh rate power supply					0 (OFF)	0/1/2	—	—
	02	Not applicable. Do not change the default value!					0	—	—	—
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.

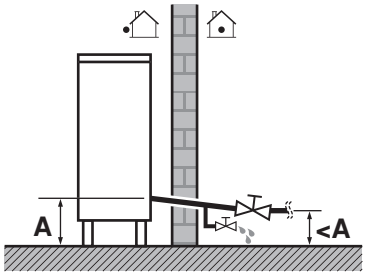
Besides keeping the remote controller clean by means of a soft damp cloth, no maintenance is required by the operator.

Standstill

During longer periods of standstill, e.g. during summer with a heating only application or during longer periods when there is no need of an operating unit, 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.

In case of a power supply failure or pump operating failure, drain the system (as suggested in the figure below).



When water is at standstill inside the system, freezing up is very likely to happen and damaging the system in the process.

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.
  - The benefit kWh rate power supply is active
- 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.

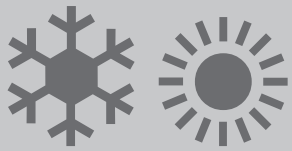
DISPOSAL REQUIREMENTS

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.



	[hh:mm]	[°C]	[°C]	OFF [☑]
MON				
1	:			❑
2	:			❑
3	:			❑
4	:			❑
5	:			❑
TUE				
1	:			❑
2	:			❑
3	:			❑
4	:			❑
5	:			❑
WED				
1	:			❑
2	:			❑
3	:			❑
4	:			❑
5	:			❑
THU				
1	:			❑
2	:			❑
3	:			❑
4	:			❑
5	:			❑
FRI				
1	:			❑
2	:			❑
3	:			❑
4	:			❑
5	:			❑
SAT				
1	:			❑
2	:			❑
3	:			❑
4	:			❑
5	:			❑
SUN				
1	:			❑
2	:			❑
3	:			❑
4	:			❑
5	:			❑

	[hh:mm]	ON [☑]	OFF [☑]
1	:	❑	❑
2	:	❑	❑
3	:	❑	❑
4	:	❑	❑
5	:	❑	❑

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