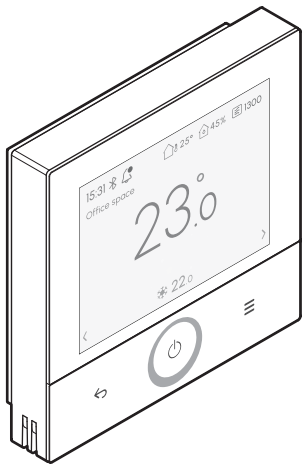
Installer and user reference guide

Madoka Plus wired remote controller



BRC1KPD51W
BRC1KPD51K

Table of contents

1 About this document

Target audience

Authorised installers

Documentation set

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

- **Installation manual:**
  - Installation instructions
- **Installer and user reference guide:**
  - Extended installation and operation information
- **Declaration of conformity:**

INFORMATION: Declaration of conformity

Hereby, Daikin Europe N.V. declares that the radio equipment type BRC1K is in compliance with the Directive 2014/53/EU. The original declaration of conformity is available from the BRC1K product pages.

The documentation set for each of the variants is available from the BRC1K product pages:

PD51W

https://qr.daikin.eu/?N=BRC1KPD51W

PD51K

https://qr.daikin.eu/?N=BRC1KPD51K

INFORMATION: Madoka Assistant in-app documentation

The controller only allows for basic settings and operation. Advanced settings and operation are performed via the Madoka Assistant app. For more information, see the app and its in-app documentation. The Madoka Assistant app is available from Google Play and the Apple Store.

INFORMATION

The Madoka Assistant app is available in additional languages, some of which are not currently offered on the remote controller. This document displays the user interface examples in English for languages that are not currently available on the remote controller

The latest revision of the supplied documentation is published on the regional Daikin website and is available via your dealer.

The original instructions are written in English. All other languages are translations of the original instructions.

2 User safety instructions

Always observe the following safety instructions and regulations.

2.1 General

WARNING

To clean the controller, do NOT use organic solvents, such as paint thinner.

WARNING

Do NOT use flammable materials (e.g. hairspray or insecticide) near the controller.

WARNING

To prevent electric shocks or fire:

- Do NOT operate the controller with wet hands.
- Do NOT disassemble the controller and touch interior parts. Contact your dealer.
- Do NOT modify or repair the controller. Contact your dealer.
- Do NOT relocate or reinstall the controller by yourself. Contact your dealer.

WARNING

Do NOT play with the unit or its remote controller. Accidental operation by a child may result in impairment of bodily functions and harm health.

2.2 Instructions for safe operation

CAUTION

Before starting up the system, make sure:

- The indoor and outdoor unit wiring is completed.
- The switch box covers of the indoor and outdoor units are closed.

WARNING

Before carrying out any maintenance or repair activities, stop system operation with the controller, and turn off the power supply circuit breaker. **Possible consequence:** electrical shock or injury.

WARNING

Do NOT wash the remote controller. **Possible consequence:** electric leakage, electrical shock, or fire.

3 Specific installer safety instructions

Always observe the following safety instructions and regulations.

NOTICE

When the controller is used as room thermostat, select an installation location where the average temperature in the room can be detected.

NOTICE

During the installation of the controller, keep the installation environment dust-free in order to avoid any particles entering the PCB side of the controller. Close or cover the controller to protect against dust.

NOTICE

When mounting the rear casing to a flush-mounted electrical installation box inside a wall, make sure that that wall is completely flat.

NOTICE

Be careful not to deform the rear casing by overtightening the mounting screws.

NOTICE

The wiring for connection is NOT included.

NOTICE

When wiring, run the wiring away from the power supply wiring in order to avoid receiving electric noise (external noise).

NOTICE

When the remote controller casing is open during installation, be careful not to damage the flat foil cables.

CAUTION

NEVER touch the internal parts of the controller.

CAUTION

When closing the controller, be careful not to pinch the wiring.

NOTICE

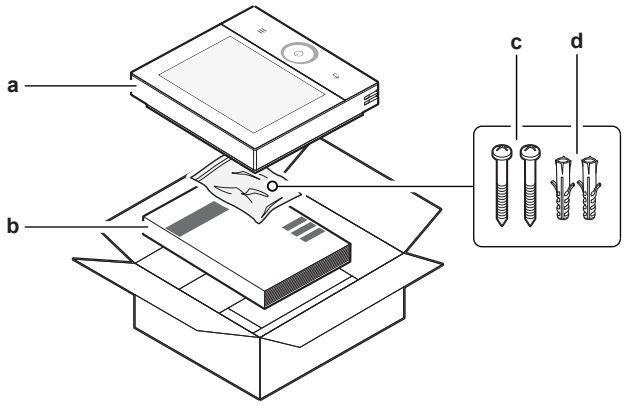
To prevent damage, make sure the front of the controller is clicked into the rear casing securely.

4 About the box

4.1 To unpack the controller

1 Open the box.

2 Separate the accessories.



a Remote controller
b Installation manual
c Screws
d Wall plugs (Ø4.0×20)

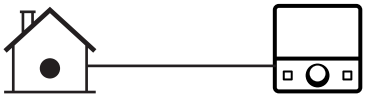
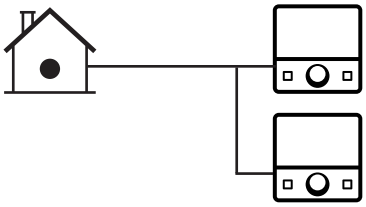
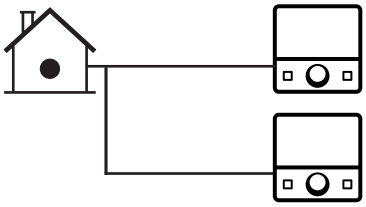
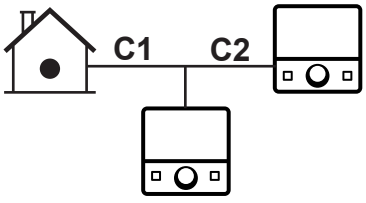
5 Preparation

5.1 Wiring requirements

All wiring must comply with the following requirements:

Use flexible, double insulated sheathed vinyl cord or cable (stranded, 2 wires) for any wiring between remote controllers and indoor units. Determine the maximum wiring length for each situation based on the following table.

Wire section	Single remote controller	Dual remote controller		
		Cable split at the end	Cable split at the indoor unit	Cable split in between indoor unit and the end
0.75 mm^2	≤300 m	≤100 m	≤200 m	C1 + C2: ≤100 m
1.00 mm^2		≤125 m	≤250 m	C1 + C2: ≤125 m
1.50 mm^2		≤200 m	≤300 m	C1 +C2: ≤200 m

Single remote controller	
Dual remote controller – Cable split at the end	
Dual remote controller – Cable split at the indoor unit	
Dual remote controller – Cable split in between unit and the end	

5.2 Installation site requirements

INFORMATION

Also read the maximum cable length requirements set out in "5.1 Wiring requirements" [▸ 9].

- The controller is designed to be wall-mounted in dry, indoor locations only.
- Make sure the installation surface is a flat and vertical non-combustible wall.

- Mind the spacing installation guidelines as defined in Figure 2. When mounting multiple controllers in close proximity to each other, ensure a minimum of 5 mm of horizontal space between the different controllers (Figure 2.2).

NOTICE

When the controller is used as room thermostat, select an installation location where the average temperature in the room can be detected.

Do NOT install the controller in the following places:

- In places that are affected by outside air or air draught due to e.g. door opening/closing.
- In places where it is exposed to direct sunlight.
- In places where it is near a heat source.

Also see "14.2 Technical specifications" [▸ 146] for more information regarding the intended operating environment of the controller.

6 Installation

NOTICE

During the installation of the controller, keep the installation environment dust-free in order to avoid any particles entering the PCB side of the controller. Close or cover the controller to protect against dust.

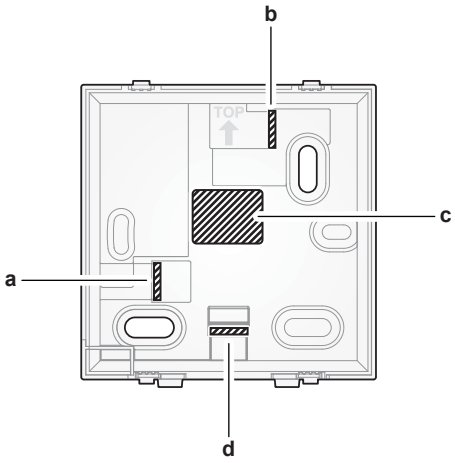
6.1 Overview: Installation

The installation of the controller typically consists of the following stages:

1. Determining how you want to route the electrical wiring, and nipping away a piece of the rear casing accordingly.
2. Mounting the rear casing to the wall.
3. Connecting the electrical wiring.
4. Closing the controller.

6.2 Mounting the controller

Before you can mount the controller, determine the wiring routing, and accordingly, remove a piece oft he controller's rear casing. The wiring can be routed from the left, the top, the rear, or the bottom.



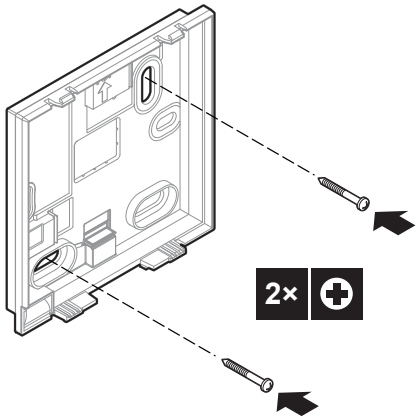
a Wiring from the left
b Wiring from the top
c Wiring from the rear
d Wiring from the bottom

When routing the wiring from any other side than the rear, use a knife to cut away the piece of plastic in order to open the routing channel. When routing the wiring from the rear, push out the knockout hole in the center of the rear casing with your thumb.

6.2.1 To mount the controller

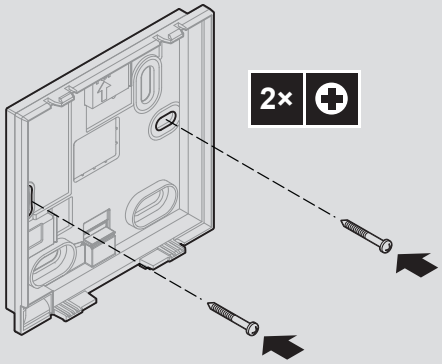
1 Take the screws and plugs from the accessory bag.

2 Mount the rear casing to a flat surface.



INFORMATION

If required (e.g. when mounting to a flush-mounted electrical installation box), mount the rear casing by way of the knockout holes.



NOTICE

When mounting the rear casing to a flush-mounted electrical installation box inside a wall, make sure that that wall is completely flat.

NOTICE

Be careful not to deform the rear casing by overtightening the mounting screws.

6.3 Connecting the electrical wiring

NOTICE

The wiring for connection is NOT included.

NOTICE

When wiring, run the wiring away from the power supply wiring in order to avoid receiving electric noise (external noise).

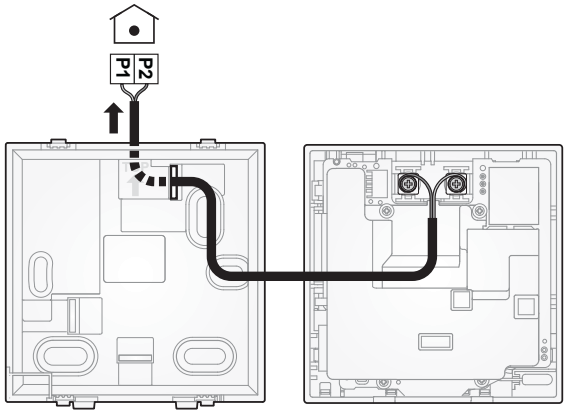
NOTICE

When the remote controller casing is open during installation, be careful not to damage the flat foil cables.

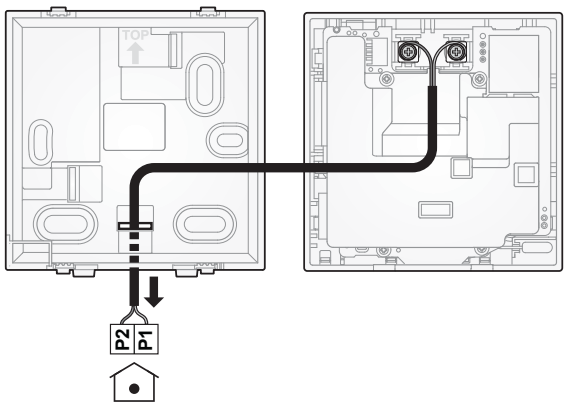
6.3.1 To connect the electrical wiring

Connect controller terminals P1/P2 to indoor unit terminals P1/P2. Depending on the entry point of the wiring in the rear casing, the wiring is routed in a slightly different way.

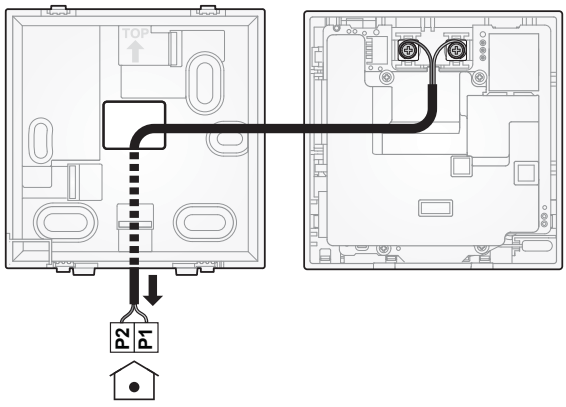
From the top



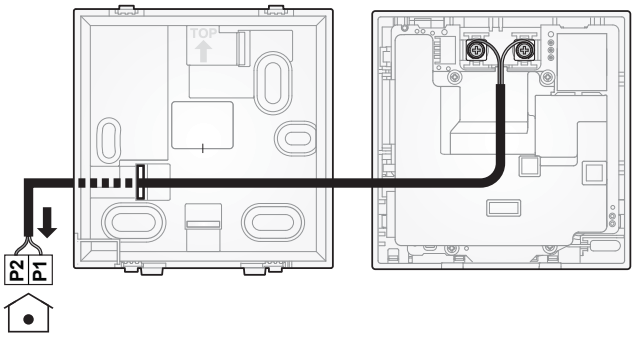
From the bottom



From the left



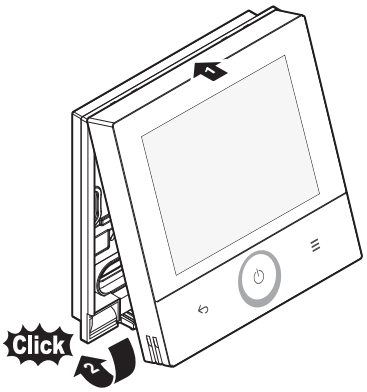
From the rear



6.4 Closing the controller

6.4.1 To close the controller

1 Click the front of the controller into the rear casing.



2 When the installation site is dust-free, peel off the protective seal.

6.5 Opening the controller

6.5.1 To open the controller

CAUTION

Do NOT pinch the wiring.

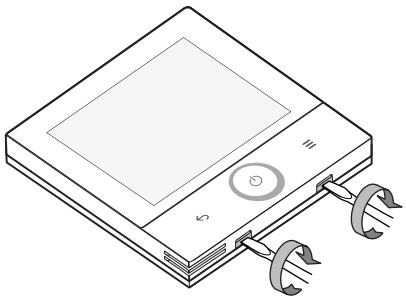
NOTICE

Under normal circumstances, it is NOT required to open the controller again after closing it. However, if the electrical wiring must be adjusted, open the controller according to the procedure below.

1 Insert a broad, flat head screwdriver (5~6 mm width) in the slots on the bottom of the controller casing.

2 Slowly twist the screwdriver without pushing.

Result: The controller casing opens.



7 Starting up the system

CAUTION

Before starting up the system, make sure:

- The indoor and outdoor unit wiring is completed.
- The switch box covers of the indoor and outdoor units are closed.

The controller gets its power from the indoor unit. It will start up as soon as it is connected. For the controller to be operable, make sure the indoor unit is powered on. Once the controller is powered, the controller will automatically start up and begin initialisation. During initialisation, it is possible to configure the role and mode of the controller. For more information, see "7.1 Role assignment" [▸ 16] and "7.2 Mode assignment" [▸ 17].

After initialisation, the controller screen indicates that the set-up has been completed successfully. Tap `Confirm` on the display, or press ↩ to enter the home screen. In case the set-up fails, a notification pop-up appears on screen. Tap `Retry` to attempt to initialise the controller again. In case of repeated failures, see "12 Troubleshooting" [▸ 134] for other possible causes and corrective actions.

7.1 Role assignment

The remote controller can operate as either a master or a slave remote controller. A master remote controller provides full functionality and acts as the primary control device. A slave remote controller receives commands and status updates from the master remote controller. As such, a slave remote controller is more limited in functionality, allowing only for basic operations.

There can only be 1 master remote controller. By default, the remote controller is a master remote controller. When 2 remote controllers are connected to the unit, 1 controller must be designated as a slave remote controller.

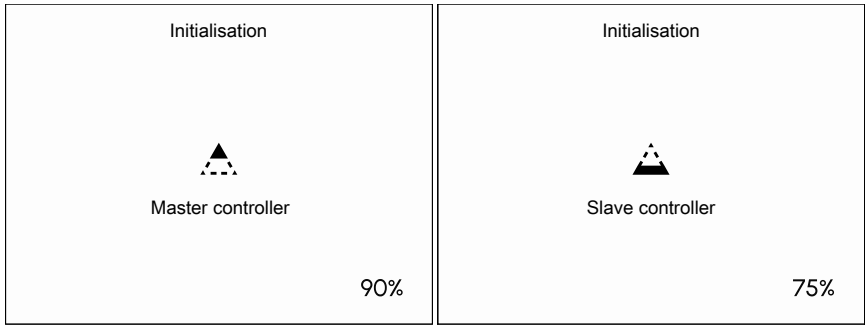
INFORMATION

In a dual remote controller setup, the master remote controller is the primary device one should rely on for detailed notifications and status information, as it provides the full notification view. A slave remote controller can show notifications, however in some cases notifications may be less detailed or show less information than the notification on the master remote controller. If a notification is not visible on the slave remote controller, check the master remote controller.

7.1.1 To change the controller role during initialisation

1 While on the initialisation screen, long press ↩.

Result: The remote controller role changes from master to slave. If the controller was already a slave controller, the role changes from slave back to master. The current role and its accompanying icon are displayed on the initialisation screen.



Note: : if required, the controller role can be changed in the installer menu at a later point. For more information, see "9.1.6 Controller settings" [▸ 92].

7.2 Mode assignment

Depending on the required configuration, the remote controller can be set to be operable in 1 of 3 different modes. Each mode offers different controller functionality.

Mode	Role	Functionality
Normal		The controller is fully functional. All functionality described under "8 Operation" [▸ 19] is available. The controller can be a master or a slave controller.
Alarm only		The controller only acts as leak detection alarm for a single indoor unit group, which consists of 1 or more indoor units. This mode is intended for a controller that is to be used in a location where end users are not intended to operate the controller, for example, a hospital room. No functionality described under "8 Operation" [▸ 19] is available. The controller can be a master or a slave controller. In this mode, the display is OFF. The installer menu remains accessible. For information on the leak detection alarm, see "12.3 Refrigerant leak detection" [▸ 135].
Supervisor		The controller only acts as leak detection alarm for the whole system (multiple indoor units and their respective controllers). This mode is intended for a controller that is to be used in a supervision location, for example, the reception desk of a hotel. No functionality described under "8 Operation" [▸ 19] is available. The controller can only be a slave controller. In this mode, the display is OFF. The installer menu remains accessible. For information on the leak detection alarm, see "12.3 Refrigerant leak detection" [▸ 135].

7.2.1 To change the controller mode during initialisation

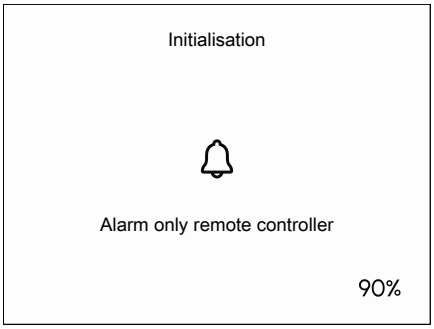
INFORMATION

To change the remote controller to `Supervisor` mode, the controller must be a slave.

Change to Alarm only mode

1 While on the initialisation screen, press and hold ☰ for 5 seconds.

Result: The remote controller mode changes to `Alarm only`. The current mode and its accompanying icon are displayed on the initialisation screen.

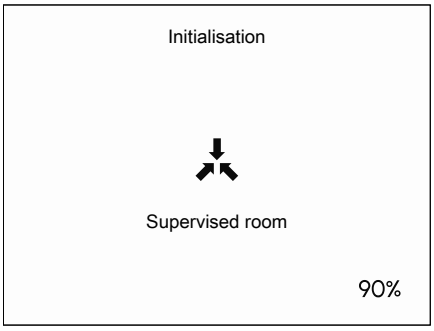


2 Optional: press and hold ☰ for 5 seconds again to revert back to `Normal` mode.

Change to Supervisor mode

1 While on the initialisation screen, press and hold ☰ and ↩ simultaneously for 5 seconds.

Result: The remote controller mode changes to `Supervisor`. The current mode and its accompanying icon are displayed on the initialisation screen (`Supervised room`).



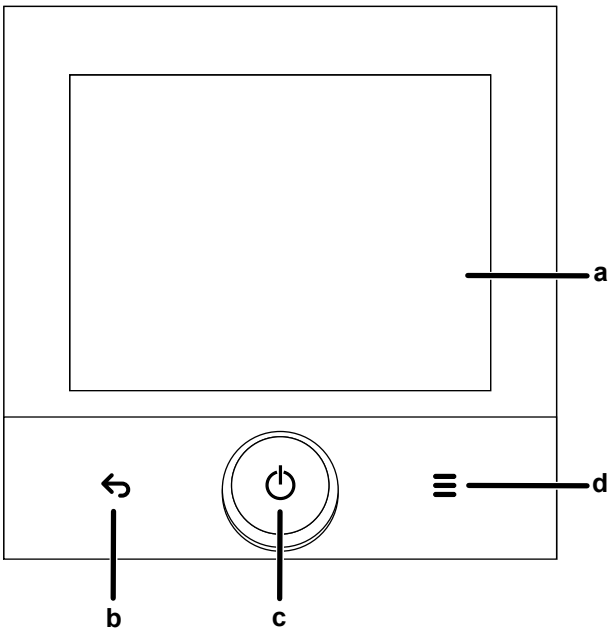
2 Optional: press and hold ↩ for 5 seconds again to revert back to `Normal` (slave) mode.

8 Operation

8.1 Remote controller: Overview

8.1.1 Buttons

Overview



a Touch screen
b Back button
c Operation button with Daikin eye
d Menu button

Touch screen

The touch screen is the primary component for interacting with the remote controller. Apart from displaying information, the touch screen is used to navigate the menus and make settings. You can interact with the touch screen in several ways:

Touch gesture	Description
Tap 	Quickly tapping the touch screen on a specific item or area. Applicable for: ▪ interacting with menu items and buttons, toggle buttons, switches, …
Press and hold 	Touching the screen on a specific item or area and staying in place for a short period of time. Applicable for: ▪ up/down buttons **Note:** Press and hold the +/- button to change the values more quickly.

Touch gesture	Description
Swipe horizontally 	Touching the screen and sliding your finger left or right while keeping your finger on the screen. Applicable for: ▪ navigating between main menu pages ▪ using sliders to set values (e.g. brightness)
Swipe vertically 	Touching the screen and sliding your finger downwards or upwards while keeping your finger on the screen. Applicable for: ▪ scrolling through vertically organised submenus (e.g. field settings) ▪ selecting a value from a list (e.g. auto reset setpoint duration) ▪ using sliders to set values (e.g. setpoint)

NOTICE

When using the touch screen to change values for settings, wait until the value has updated before interacting with the touch screen or any of the touch buttons again.

INFORMATION

Some button actions and button combinations are only applicable to installers. These actions are indicated by 🔧. Actions that are available to end users are indicated by 👤.

Back

Action	Level
Go back to a previous screen or menu level. If any values were modified, confirm the changes.	👤
Press and hold simultaneously with ☰ for 5 seconds to enter the installer settings menu from any screen.	🔧
When in the installer settings menu, tap to exit the installer settings menu.	🔧
During initialisation only: press and hold simultaneously with ☰ for 5 seconds to switch the remote controller from master to slave or the other way around.	🔧

Operation

Action	Level
Press briefly to turn system operation ON/OFF. **Note:** when turning OFF system operation, a countdown of 5 seconds starts. Press the button again to skip the countdown and turn off the system operation immediately.	👤

Action	Level
Press and hold to access the task manager (quick actions) menu.	
Exit the task manager (quick actions) menu.	
Press and hold for 15 seconds to restart the remote controller.	

The operation button is encircled by the Daikin eye, which functions as a status indicator. For more information, see "8.1.3 Status indicator" [▶ 23].

Menu

Action	Level
Enter the main menu from the home screen.	
When in the installer settings menu, exit the installer settings menu.	
While on the field settings screen: press and hold simultaneously with ⏻ to access outdoor unit field settings.	
During initialisation only: press and hold simultaneously with ↩ for 5 seconds to switch the remote controller from master to slave or the other way around.	
During initialisation only: press and hold for 5 seconds to switch the slave remote controller to an Alarm only remote controller.	

8.1.2 Status icons

Icon	Description
	Bluetooth.[1] Indicates that the controller is communicating with a mobile device, for use with the Madoka Assistant app.
	Lock. A closed lock icon indicates that a function or operation mode is locked and therefore cannot be used or selected. In the lock function menu, an open lock is displayed to indicate that a function or operation mode is not currently locked.
	Master remote controller. Indicates that the remote controller is a master remote controller.
	Slave remote controller. Indicates that the remote controller is a slave remote controller.
	Centralised control. Indicates that the system is controlled by central control equipment (optional accessory) and that control of the system by the controller is limited.

[1] The Bluetooth® word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. and use of such marks by Daikin Europe N.V. is under license. Other trademarks and trade names are those of their respective owners.

Icon	Description
	Changeover under centralised control. Indicates that the cooling/heating changeover is under centralised control by another indoor unit, or by an optional cool/ heat selector that is connected to the outdoor unit. When this icon is displayed, manually selecting cooling or heating operation is not possible. When the icon is blinking in the status bar, this indicates that the remote controller can be set as Cooling/Heating master. For more information, see "Cooling/ Heating masterhood" [▸ 93].
	Defrost/Hot start. Indicates that defrost operation or hot start (VRV only) is active.
	Schedule/Timer. Indicates that the system operates according to a schedule, or that the OFF timer is enabled. This icon is also displayed when the system time is not set.
	Self-cleaning filter operation. Indicates that self-cleaning filter operation is active.
	Quick Start. Indicates that Quick Start mode is active (Sky Air only)
	Test operation. Indicates that Test Operation mode is active (Sky Air only).
	Inspection. Indicates that the indoor or outdoor unit is being inspected.
	Periodic inspection. Indicates that the indoor or outdoor unit is being inspected.
	Backup. Indicates that in the system an indoor unit is set as backup indoor unit.
	Individual airflow direction. Indicates that the individual airflow direction setting is enabled.
	Information. Indicates an information screen.
	Notification. Indicates that an error or malfunction has occurred, or that an indoor unit component needs to be maintained.
	Warning. Indicates that an error or malfunction (R32 refrigerant leak, initialisation error) has occurred.
	Rotation. Indicates that duty rotation is enabled and active.
	Setback. Indicates that the indoor unit is operating under setback conditions.
	Quiet mode. Indicates that quiet mode is enabled and active.
	Holiday. Indicates that holiday mode is enabled and active.
	Door/Window open. Indicates that a Madoka Plus intelligent door/window sensor has detected an open window or door.
	Ventilation. Indicates that a heat reclaim ventilation unit is connected.
	Fresh up. Indicates that Fresh up is enabled and active.

INFORMATION

- For information on the operation mode and ventilation mode icons, see "8.6 Operation mode" [▶ 39] and "8.4.1 Ventilation mode" [▶ 33] respectively.
- Most icons are related to things set in the Madoka Assistant app. For more information, see the app.

8.1.3 Status indicator

Daikin eye

The Daikin eye functions as a status indicator which Daikin eye behaves differently depending on system conditions. The colour and behaviour of the Daikin eye provide more information about the current state of the system.

Colour and behaviour		Meaning
Blue, constant		▪ Cooling operation ▪ Dry operation ▪ Fan only operation ▪ Brightness setting menu (even when operation is OFF or the controller is in an error state) ▪ Firmware update successful (the Daikin eye will stay blue until the notification is dismissed)
Blue, blinking		Pairing (mobile phone or wireless sensor) **Note:** the Daikin eye turns solid blue for 3 seconds to indicate successful pairing.
Orange, constant		Heating operation
Purple, constant		▪ Ventilation operation ▪ Air Clean operation
Red, blinking		Error state
Red, blinking in combination with alarm sound	+	R32 refrigerant leak alarm
Green, constant		First initialisation
Green and blue alternating while blinking	/	Firmware update in progress
Red, constant		Firmware update failure **Note:** the Daikin eye will stay red until the system has recovered from the error.
OFF	-	▪ No operation is running ▪ System is OFF

8.2 Basic usage

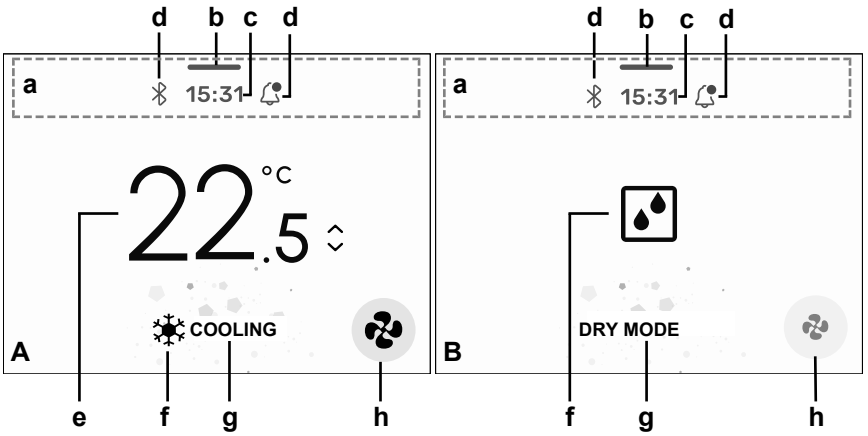
8.2.1 Home screen

After initialisation or wake-up, the home screen is the first screen you see when interacting with the remote controller. The home screen provides essential information about the current state of the system. In addition, the home screen allows for quick access to some functions (see "Quick actions" [▸ 25]). After a period of operation inactivity, the controller will always revert to the home screen.

Depending on the currently active operation mode and the configuration of the system, the items displayed on the home screen can vary slightly. For more information about operation modes, see "8.6 Operation mode" [▸ 39].

Default home screen

Some operation modes (Dry, Fan only, Ventilation) do not make use of setpoints. When these modes are active, the home screen displays the operation mode icon instead.



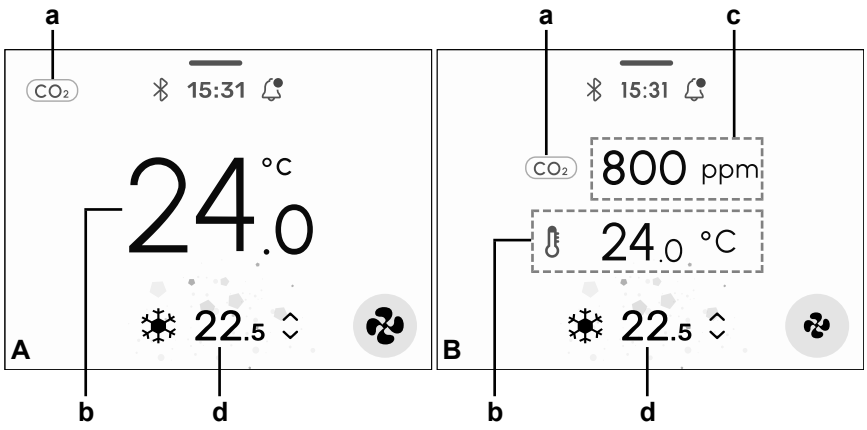
A Default home screen in Cooling operation
B Default home screen in Dry operation
a Status bar
b Handle bar (pull down indicator for drop-down menu)
c System time
d Status icons
e Setpoint (if applicable)
f Operation mode icon
g Current operation mode
h Airflow or fan speed setting

Sensor visualisations

The home screen can be configured to visualise the following sensor data, in addition to the items already present on the default home screen:

- Room temperature
- CO_2 concentration (when a CO_2 sensor is connected)

The visualisation options are configured using field settings to determine which sensor data is to be displayed on the home screen. For more information, see "9.1.2 Field settings" [▸ 78].



A Home screen with room temperature and CO_2 concentration indicator
B Home screen with room temperature and CO_2 concentration value
a CO_2 concentration indicator
b Room temperature
c CO_2 concentration value
d Setpoint (if applicable)

When the room temperature is visualised, the room temperature value is displayed in the centre of the screen, while the setpoint value is relocated to the bottom of the home screen. For operation modes without setpoint (Dry, Fan only), the operation mode is displayed instead.

When a CO_2 sensor is connected, the CO_2 concentration indicator is displayed by default. The system can be configured in order to also display the numerical concentration value via "9.1.2 Field settings" [▸ 78]. The colour of the CO_2 concentration indicator also provides information about the air quality:

Indicator	Colour	Air quality
CO_2	Green	Good
CO_2	Yellow	Moderate
CO_2	Red	Poor

INFORMATION

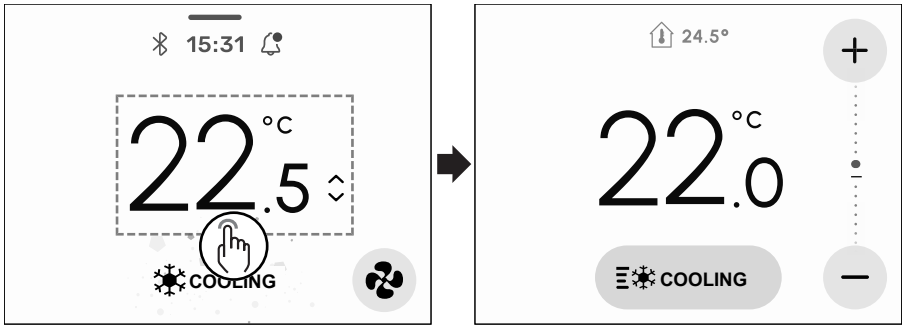
The controller is equipped with a power saving function that causes the screen to turn off after a period of inactivity. To make the screen light up again, press anywhere on the touch screen or any of the touch buttons.

Quick actions

Some actions can quickly be performed directly from the home screen, providing shortcuts to settings that are otherwise accessed via the main menu.

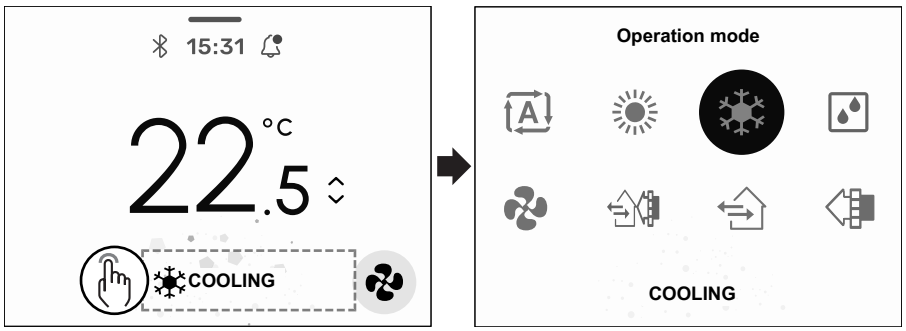
Changing the setpoint

While on the home screen, tap the centre of the home screen or the setpoint at the bottom of the screen to change the setpoint in Cooling, Heating, or Auto operation mode. See "8.5 Setpoint" [▸ 36] for more information.



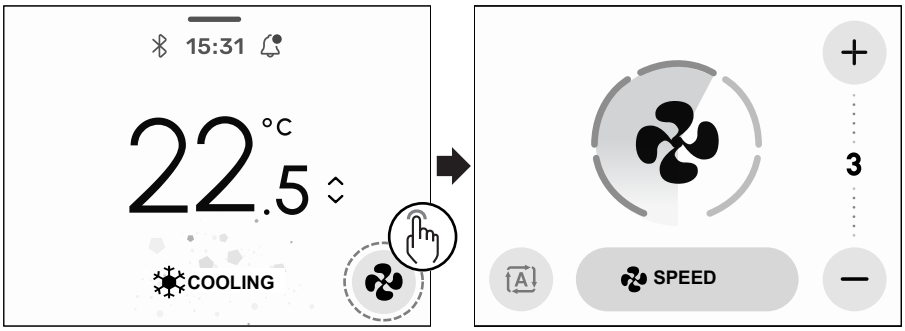
Setting the operation mode

While on the home screen, tap the operation mode icon or text to change the operation mode. See "8.6 Operation mode" [▸ 39] for more information



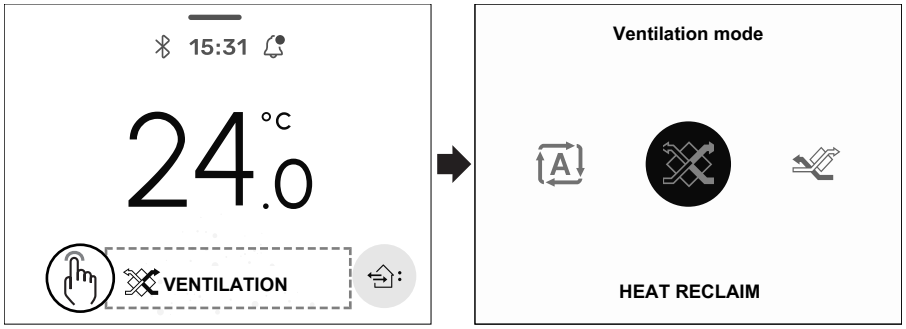
Setting the fan speed and airflow direction

While on the home screen, tap to change the fan speed. From the resulting screen, the fan speed mode and airflow direction can also be changed quickly. See "8.3.3 Fan speed" [▸ 32] and "8.3.2 Airflow direction" [▸ 30] for more information.



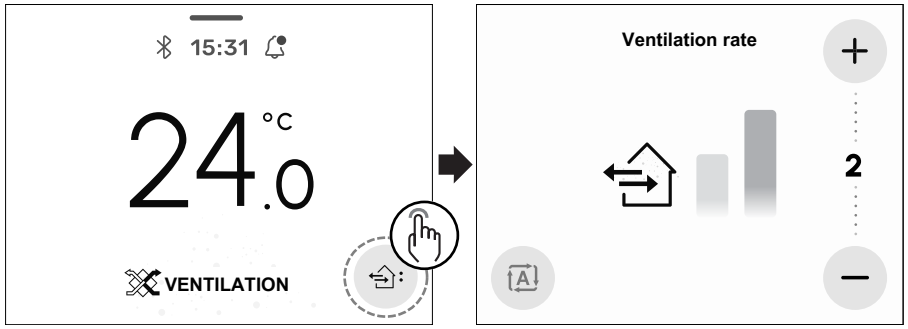
Setting the ventilation mode

Only applicable when the system is composed of ONLY ventilation units. While on the home screen, tap the ventilation mode at the bottom of the screen to change the ventilation mode. See "8.4 Ventilation" [▸ 33] for more information



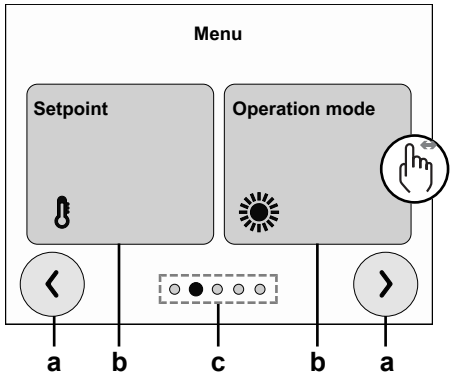
Setting the ventilation rate

Only applicable when the system is composed of ONLY ventilation units. See "8.4 Ventilation" [▸ 33] for more information



8.2.2 Main menu

From the home screen, press ☰ to enter the main menu. In the main menu, swipe left or right to cycle through pages of the main menu. Alternatively, tap the left and right arrows to cycle between the main menu pages.



a Arrow buttons
b Submenus
c Current main menu page indicator

Tap a menu item to enter one of the submenus.

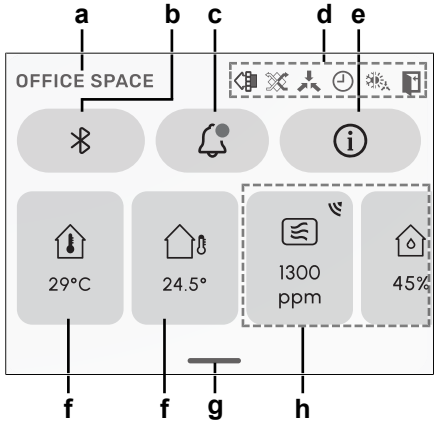
INFORMATION
Depending on system configuration, different or fewer submenus may be available.

Submenu	Description
	`Airflow`. Set the indoor unit airflow direction range, or enable Draught prevention. See "8.3 Airflow" [▸ 30].
	`Ventilation`. Set the fan speed and mode for ventilation operation. Enable `Fresh up`. See "8.4 Ventilation" [▸ 33].
	`Setpoint`. Set the desired temperature for operation modes that need a setpoint value (Auto, Heating, Cooling). See "8.5 Setpoint" [▸ 36].
	`Operation mode`. Set the space operation mode. See "8.6 Operation mode" [▸ 39].

Submenu	Description
⚙	`User settings`. Configure user-related settings: ▪ `Time`, `Date` and `Language` ▪ `Screen settings` ▪ `Bluetooth` See "8.7 User settings" [▸ 43].
🍃	`Energy saving`. Configure various settings to help save energy: ▪ `Off timer` ▪ `Setpoint auto reset` ▪ `Setback` ▪ `Power consumption limit` See "8.8 Energy saving" [▸ 48].
🏠	`Sensors`. View sensor information and interlocks. See "8.9 Sensors" [▸ 53].
🔔	`Notifications`. View pending notifications and consult the notification history. See "8.10 Notifications" [▸ 71].
ⓘ	`Information`. View information about the system and the remote controller. See "8.11 Information" [▸ 72].

8.2.3 Drop-down screen

The drop-down screen provides the following information and functionality:



a Location name / BLE identifier (only when Bluetooth is ON)
b Bluetooth toggle button
c Notification button (quick access to "8.10 Notifications" [▸ 71])
d Status indicators
e Information button (quick access to "8.11 Information" [▸ 72])
f Indoor temperature
Outdoor temperature
g Handle bar
h Sensor statuses (if applicable)

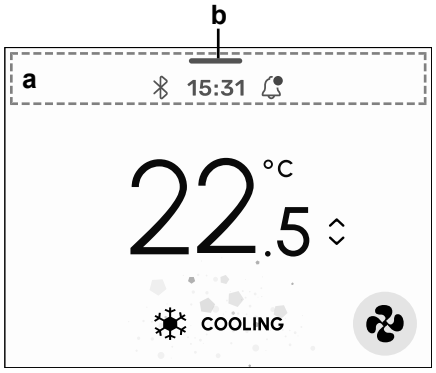
INFORMATION

The sensor statuses are only displayed when additional sensors are connected. The buttons display values relevant to the connected sensor type. Depending on the number of connected sensors, it becomes possible to swipe in order to scroll through more sensor statuses. For more information about sensors, see "8.9 Sensors" [▸ 53].

The drop-down screen is accessible directly from the home screen. For more information, see "To access the drop-down screen" [▸ 29].

To access the drop-down screen

1 Tap anywhere on the info bar. Alternatively, swipe down the handle bar.



a Info bar
b Handle bar

Result: The drop-down screen is displayed.

2 Swipe up the handle bar or press ↩ on the remote controller to return to the home screen.

8.2.4 Screen backlight

For the controller to be operable, the screen backlight needs to be ON. Otherwise, the controller does not detect any button presses.

After a period of operation inactivity, the backlight will either turn OFF, or go into a faint ON state, depending on operation conditions:

- Operation OFF: backlight OFF;
- Operation ON: backlight ON faintly.

INFORMATION

- Backlight state changeover after inactivity is set with remote controller field setting R1-8 (No-operation timer). For more information, see "Remote controller field settings" [▸ 82].
- Backlight faintness is set with remote controller field setting R1-10 (Backlight faintness). For more information, see "Remote controller field settings" [▸ 82].
- For instructions on how to set screen brightness and contrast when the backlight is ON, see "8.7.4 Screen settings" [▸ 46].

8.3 Airflow

8.3.1 Draught prevention

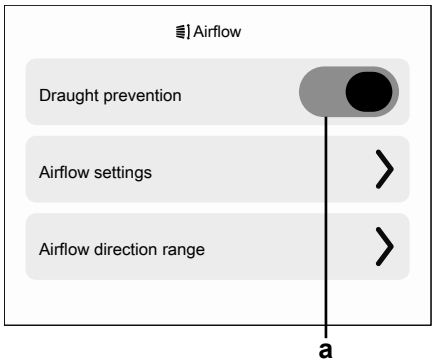
INFORMATION

To use this function, it is required that the indoor units are equipped with a motion sensor (optional accessory). The Madoka Plus intelligent sensor (WLPIR) is NOT compatible with this function.

INFORMATION

This function is not supported when the system contains Sky Air RR or RQ outdoor units.

Draught prevention is a setting that allows the indoor unit to control the airflow direction automatically in order to prevent direct airflow from affecting people in the room, based on (the lack of) presence detected by a motion sensor. You can enable or disable draught prevention by tapping the toggle switch.



a Draught prevention toggle switch

8.3.2 Airflow direction

The airflow direction is the direction in which the indoor unit blows its air.

About airflow direction

The following airflow directions can be set:

Direction	Icon	
	Horizontal	Vertical
Fixed. The indoor unit blows air in 1 of 5 fixed positions. When the icon is greyed out, fixed mode is active (toggle option).		
Swing. The indoor unit alternates between the 5 positions. When the icon is blue on a white background, swing is active (toggle option).		
Auto. The indoor unit adjusts its airflow direction according to movement sensed by a movement sensor.		

INFORMATION

- Depending on the type of indoor unit, and/or on system layout and organisation, Auto airflow direction may not be available.
- For some types of indoor unit, you cannot set the airflow direction.

Automatic airflow control

In the following operating conditions, the airflow direction of the indoor units is controlled automatically:

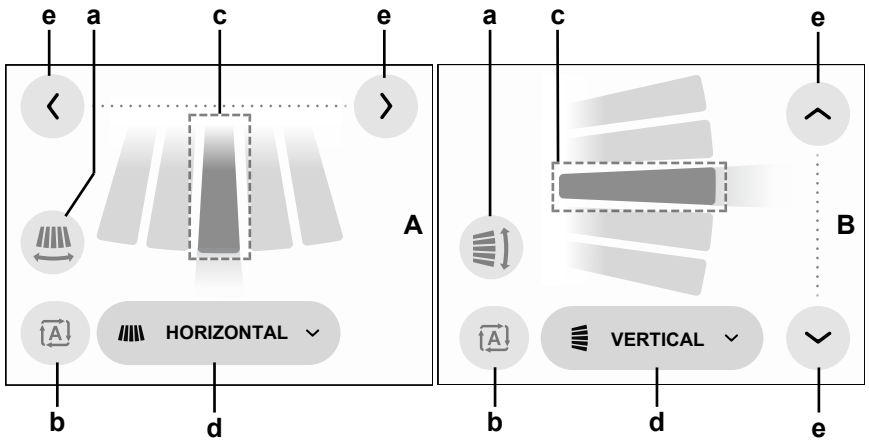
- When the room temperature is higher than the controller's setpoint for Heating operation (including Auto operation).
- When the indoor units run in Heating operation mode, and the Defrost function is active.
- When the horizontal airflow direction is set to Automatic, the vertical fan direction will also become Automatic and the other way around.

To set the airflow direction

1 Go to the airflow direction screen. This can be done in 2 ways:

- On the home screen, tap . Then, tap the selector and choose either VERTICAL or HORIZONTAL.
- While on the home screen, press ☰ to open the main menu. Then, go to Airflow > Airflow settings. Then, tap the selector and choose either VERTICAL or HORIZONTAL.

Result: The airflow direction setting screen appears.



A Horizontal airflow direction screen
B Vertical airflow direction screen
a Swing toggle
b Automatic toggle
c Current airflow direction (blue)
d Selector with current airflow setting
e Arrows (left/right or up/down depending on selected direction)

2 Tap the arrow buttons to adjust the airflow direction. You can also tap any of the airflow direction bars to change the direction to the desired value directly.

Result: The currently selected airflow direction is highlighted in blue.

3 Tap the swing toggle switch to enable swing. Tap the toggle switch again to disable swing.

4 Tap to enable Automatic mode. Tap the toggle switch again to disable Automatic mode.

Result: The indoor unit changes its airflow direction.

INFORMATION

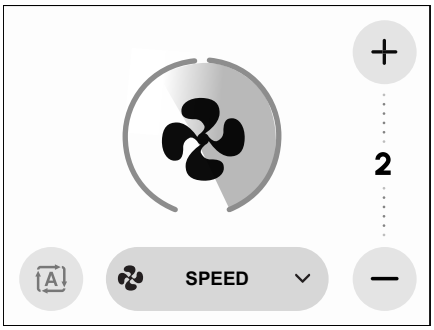
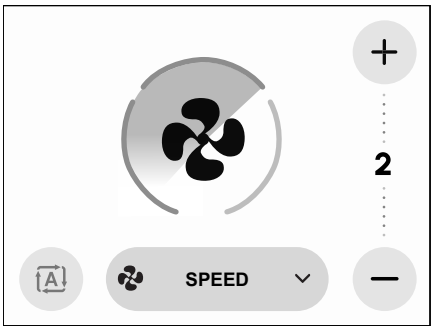
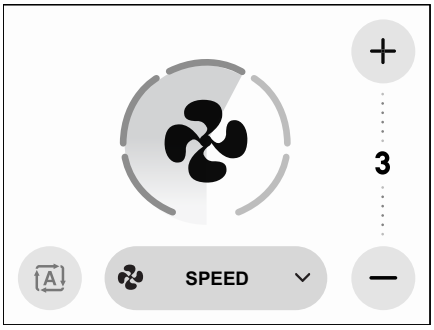
Manually selecting an airflow direction when the airflow direction is set to Automatic will disable Automatic mode.

8.3.3 Fan speed

The fan speed is the strength of the airflow coming out of the indoor unit.

About fan speed

Depending on the indoor unit, you can choose between either:

Fan speed	Screen
2 fan speeds	
3 fan speeds	
5 fan speeds	

Indoor units may support a different number of fan speed options (2, 3, or 5 selectable fan speeds). Some indoor units additionally support Automatic fan speed. In this case, the indoor unit adjusts its fan speed automatically, according to the setpoint and the indoor temperature. When this fan speed mode is available, [A] is displayed.

INFORMATION

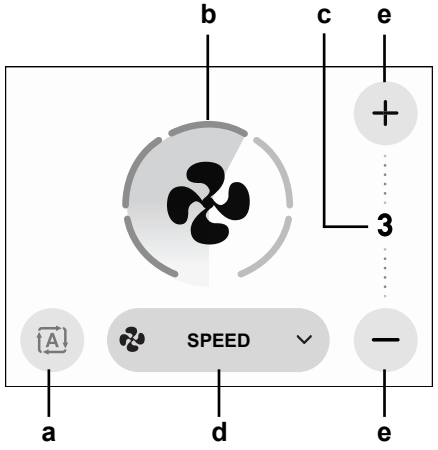
- For mechanical protection purposes, it is possible that the indoor unit switches itself to 'Automatic fan speed' mode.
- If the fan stops operating, this does not necessarily mean system failure. The fan can stop operating at all times.
- It may take some time before changes made to fan speed settings are actually carried out.

To set the fan speed

1 Go to the fan speed screen. This can be done in 2 ways:

- On the home screen, tap .
- While on the home screen, press ☰ to open the main menu. Then, go to `Airflow` > `Airflow settings`.

Result: The fan speed screen is displayed.



a Automatic toggle
b Current fan speed (blue)
c Fan speed level
d Selector
e Buttons (increase/decrease)

2 Tap the + or – buttons to adjust the fan speed. You can also tap any of the fan speed bars to change the fan speed to the desired level directly.

Result: The currently select fan speed is highlighted in blue. The number of segments (1~5) corresponds to selected fan speed level.

3 Tap to enable Automatic mode. Tap the toggle switch again to disable Automatic mode.

Result: The indoor unit changes its fan speed.

8.4 Ventilation

INFORMATION
Ventilation settings can ONLY be made for heat reclaim ventilation units.

8.4.1 Ventilation mode

The heat reclaim ventilation unit can operate in various operation modes.

Icon	Ventilation mode
	Energy Reclaim Ventilation. The outdoor air is supplied to the room after passing through a heat exchanger.
	Bypass. The outdoor air is supplied to the room without passing through a heat exchanger.
	Auto. To ventilate the room in the most efficient way, the heat reclaim ventilation unit automatically switches between "Bypass" and "Energy Reclaim Ventilation" mode (based on internal calculations).

INFORMATION

Depending on the heat reclaim ventilation unit, more or less ventilation modes are available.

INFORMATION

Ventilation mode changes are possible regardless of Cooling/Heating masterhood. For more information, see "Cooling/Heating masterhood" [▸ 93].

INFORMATION

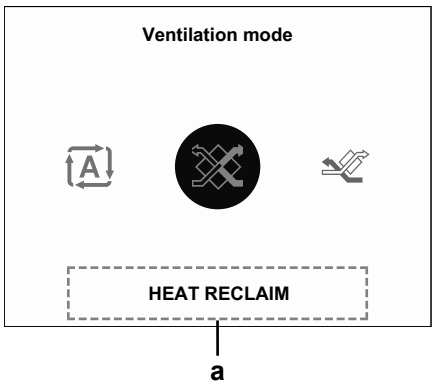
To ensure a smooth start, do not turn off the system while it is operating.

To set the ventilation mode

1 Go to the ventilation mode screen. This can be done in 2 ways:

- On the home screen, tap the ventilation operation mode text or icon (quick action).
- While on the home screen, press ☰ to open the main menu. Then, tap the `Ventilation` menu item and select `Ventilation mode`.

Result: The ventilation mode screen is displayed.



a Currently selected ventilation mode

2 Tap an operation mode icon to select it.

Result: The unit changes its operation mode.

8.4.2 Ventilation rate

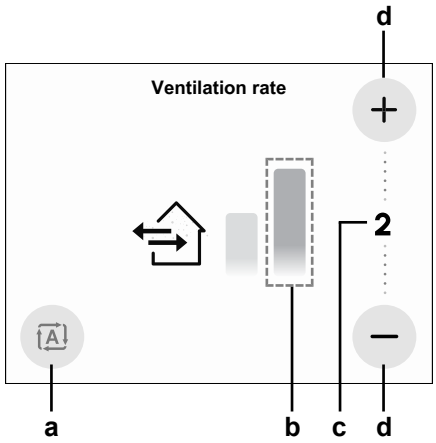
The ventilation rate is the fan speed during ventilation operation.

To set the ventilation rate

1 Go to the ventilation rate screen. This can be done in 2 ways:

- On the home screen, tap the ventilation operation mode text or icon (quick action).
- While on the home screen, press ☰ to open the main menu. Then, go to `Ventilation` > `Ventilation rate`.

Result: The ventilation rate screen is displayed.



a Automatic toggle
b Current ventilation rate (purple)
c Ventilation rate level
d Buttons (increase/decrease)

2 Tap the + or – buttons to adjust the ventilation rate. You can also tap a ventilation rate bars to change the ventilation rate to the desired level directly.

Result: The currently selected ventilation rate is highlighted in purple. The number of bars (1~2) corresponds to the selected ventilation rate level.

3 Tap to enable Automatic mode. Tap the toggle switch again to disable Automatic mode.

Result: The ventilation unit changes its ventilation rate.

8.4.3 Fresh up

When the system includes compatible ventilation units, `Fresh up` becomes available in the `Ventilation` menu. During normal ventilation operation, the air supply and exhaust volume is the same. `Fresh up` is a feature that allows for separate control of the air supply and exhaust taps.

INFORMATION

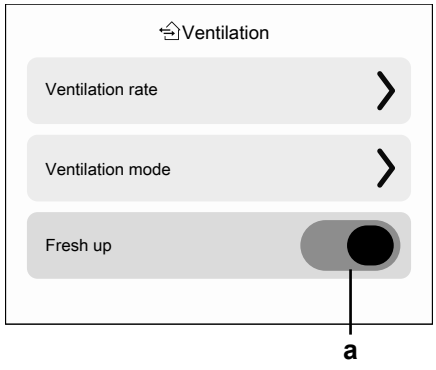
The remote controller only can only enable or disable `Fresh up` operation when the system configuration is right. To change the specific `Fresh up` mode the unit operates in, see the documentation of the unit for the relevant field setting.

To enable or disable fresh up

Prerequisite: The system configuration supports fresh up.

1 In the main menu, go to `Ventilation`.

Result: The following screen is displayed.



a Toggle switch

2 Tap the toggle switch.

Result: `Fresh up` is enabled/disabled.

8.5 Setpoint

The setpoint is the target temperature for the Cooling, Heating, and Auto operation modes.

8.5.1 About the setpoint

Depending on configuration, the home screen displays the temperature setpoint either as a numerical value, or as a symbol.

> **INFORMATION**
> For how to set the home screen setpoint, see the Madoka Assistant app. Also see "Screen" [▸ 120].

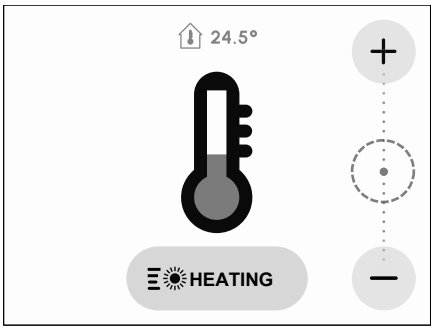
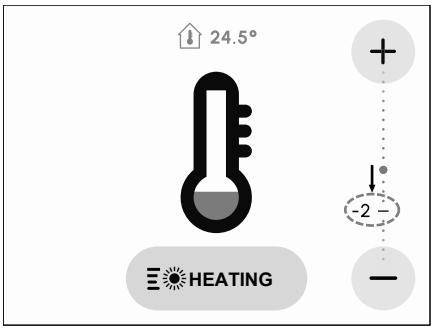
Home screen setpoint: Numerical

In case the home screen displays the temperature setpoint as a numerical value, you control the room temperature by raising or lowering the setpoint by 0.5°C increments.

The default setpoint range is 16°C~32°C. If any limitations are set to this range, it is only possible to raise or lower the setpoint up/down to the set maximum/minimum setpoint range limits. This can be configured either via the installer menu (see "Setpoint range limit" [▸ 97]) or by using the Madoka Assistant app.

Home screen setpoint: Symbolic

In case the home screen displays the temperature setpoint as a symbol, you control the room temperature by raising or lowering the setpoint in relation to a reference setpoint.

Setpoint at reference temperature	Adjusted setpoint
	
The reference setpoint is indicated by the dot in the centre of the setpoint adjustment section. In addition, the reference setpoint is visually indicated by the half-full thermometer.	The adjusted setpoint is indicated as a number as opposed to the original setpoint (in this case -2 to indicate -2°C). The fullness of the thermometer is adjusted to visually indicate the setpoint change. Note that the dot representing the reference setpoint remains visible in the setpoint adjustment section.

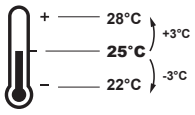
INFORMATION

When the system configuration includes a slave remote controller, a change in any of the following settings will force a reboot of the slave remote controller in order maintain synchronisation with the master remote controller:

- Setpoint range limits
- Minimum setpoint differential (with Madoka Assistant app)
- Symbol view

It is possible to raise the setpoint up to three steps of 1°C above and up to three steps of 1°C below the reference setpoint.

Example: if the reference setpoint is 25°C, it is possible to raise the setpoint to 28°C and lower it to 22°C.



INFORMATION

For how to set the reference setpoint, see the Madoka Assistant app.

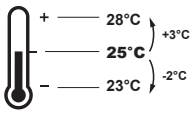
Exceptions to this logic are possible in case of:

- Setpoint range limitations
- Central control / control by a schedule

Setpoint range

If any limitations are set to the default setpoint range (16°C~32°C), either via the installer menu or using the Madoka Assistant app, it is only possible to raise or lower the setpoint up/down to the set upper/lower setpoint range limits. For more information about configuring setpoint range limits, see "Setpoint range limit" [▸ 97].

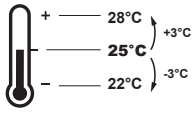
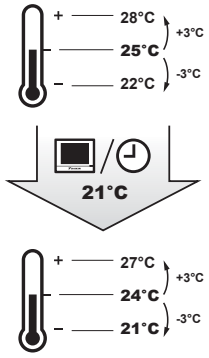
Example: if the reference temperature is 25°C, you can normally lower the setpoint three steps to 22°C. However, if a setpoint range limit is set to 23°C, you can only lower the setpoint to 23°C.



Central control / Schedule

If the system is under the control of a centralised controller or a schedule, then the regular +3°C/–3°C setpoint range limits can get overruled AND changed.

IF	THEN
The centralised controller or schedule imposes a setpoint that is within the regular +3°C/–3°C setpoint range.	Nothing unusual happens and the system follows the regular setpoint and setpoint range logic.

IF	THEN
The centralised controller or schedule imposes a setpoint that exceeds the regular +3°C/–3°C setpoint range.	The imposed setpoint becomes the new upper/lower limit of the +3°C/–3°C range, and the whole range shifts in relation to this new limit. **Example:** the reference setpoint is set to 25°C, yielding the following setpoint range:  If the centralised controller or schedule changes the setpoint to 21°C, which is below the range, then "21°C" becomes the new lower limit, and the range shifts in relation to this new limit. 

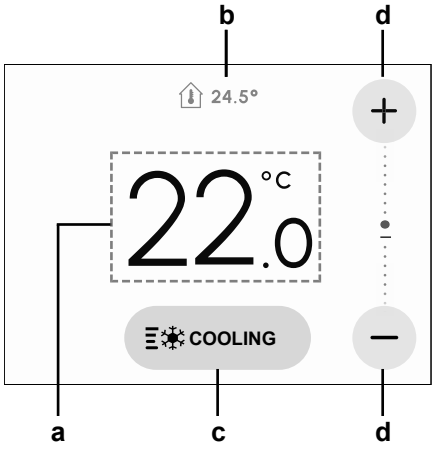
8.5.2 To set the setpoint

Prerequisite: The active operation mode is either Cooling, Heating, or Auto.

1 Go to the setpoint screen. This can be done in 2 ways:

- On the home screen, tap the setpoint value (quick action).
- While on the home screen, press ☰ to open the main menu. Then, tap the `Setpoint` menu item.

Result: The setpoint screen is displayed.



a Setpoint value

b Room temperature
c Operation mode selector
d Buttons (increase/decrease)

2 Adjust the setpoint in one of the following ways:

- Tap + or - to increase or decrease the setpoint value.
- Swipe up or down on the current setpoint value to increase or decrease it.

Result: The indoor unit changes its temperature setpoint.

8.6 Operation mode

The indoor unit can operate in various operation modes.

Icon	Operation mode
	Cooling. In this mode, cooling is activated as required by the setpoint, or by Setback operation.
	Heating. In this mode, heating is activated as required by the setpoint, or by Setback operation.
	Auto. In this mode, the indoor unit automatically switches between heating and cooling mode, as required by the setpoint.
	Fan only. In this mode, air circulates without heating or cooling.
	Dry. In this mode, the air humidity will be lowered with a minimal temperature decrease.
	Ventilation. In this mode, the space gets ventilated, but not cooled or heated.
	Air Clean. In this mode, the optional air cleaning unit operates.
	Ventilation + Air Clean. This mode combines ventilation operation and air clean operation.

INFORMATION

Depending on the indoor unit, more or less operation modes are available.

8.6.1 About the operation modes

INFORMATION

When operation modes are not available in the operation mode menu, it is additionally possible that they are locked. The locking of operation modes occurs through the Madoka Assistant app. For more information, see the Madoka Assistant app and "Function lock" [▸ 130].

INFORMATION

If the operation mode changeover of an indoor unit is under centralised control (is visible in the status bar on the home screen), then it is NOT possible to change the operation mode of that indoor unit. For more information, see "Cooling/Heating masterhood" [▸ 93].

Cooling

If the outdoor air temperature is high, it can take some time until the indoor room temperature reaches the setpoint temperature.

The indoor unit can run in Cooling operation mode because it is operating under Setback conditions. For more information, see "Setback" [▸ 126].

Heating

When running in Heating operation mode, the system requires a longer time to reach the setpoint temperature than when running in Cooling operation mode. To make up for this, it is recommended to let the system start operation in advance by making use of the timer function.

The indoor unit can run in Heating operation mode because it is operating under Setback conditions. For more information, see "Setback" [▸ 126].

Operation	Description
Defrost	To prevent the loss of heating capacity due to frost accumulation in the outdoor unit, the system will automatically switch to defrost operation. During defrost operation, the indoor unit fan will stop operation, and the following status indicator icon will appear in the "8.11 Information" [▸ 72] menu.  The system will resume normal operation after approximately 6 to 8 minutes.
Hot start (VRV **only)**	During hot start, the indoor unit fan will stop operation, and the following status indicator icon will appear in the "8.11 Information" [▸ 72] menu. 

INFORMATION

When the system is stopped while the indoor unit is running in Heating operation mode, the fan will continue to operate for approximately 1 minute, this to get out any heat remaining in the indoor unit.

INFORMATION

- The lower the outdoor air temperature, the lower the heating capacity. If the system's heating capacity is insufficient, it is recommended to include another heating appliance into the setup (if you use a combustion appliance, ventilate the room regularly. Also, do not use the heating appliance in places where it is exposed to the airflow of the indoor unit).
- The indoor unit is of the hot air circulation type. As a result, after operation start, it takes the indoor unit some time to warm up the room.
- The indoor unit fan will automatically operate until the indoor temperature of the system rises to a certain level.
- When hot air stays under the ceiling and your feet feel cold, it is recommended to include a circulator into the setup.

Dry

NOTICE

To prevent water leakage or system failure, do NOT turn off the system immediately after indoor unit operation. Before turning off the system, wait until the drain pump finishes discharging any water remaining in the indoor unit (approximately 1 minute).

INFORMATION

To ensure a smooth start, do not turn off the system while it is operating.

In this mode, the temperature and fan speed are controlled automatically and cannot be controlled by the remote controller. As such, the remote controller does not display a setpoint on the home screen when this operation mode is active. In Dry mode, the fan operates at low speeds, making this an economic and efficient mode when the outdoor temperature is not too high.

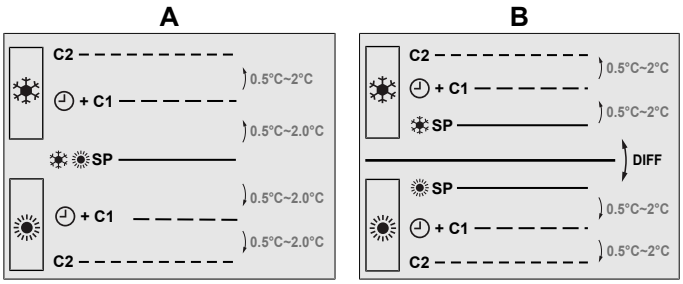
Dry operation will not function if the room temperature is too low.

Auto

INFORMATION

In case of indoor unit setpoint logic, the system cannot run in Auto operation mode. Therefore, to allow for Auto operation mode, go for remote controller setpoint logic. For more information, see the Madoka Assistant app and "Setpoint logic" [▸ 125].

The Auto operation mode logic depends on the set setpoint logic (Madoka Assistant app setting).



A	Single setpoint
B	Dual setpoint
	Cooling setpoint
	Heating setpoint
+C1	Changeover setpoint (with configurable guard timer, field setting 1e-11)
C2	Forced changeover setpoint
0.5°C~2°C	Field settable temperature intervals between setpoints
DIFF	Minimum setpoint differential between the Heating and the Cooling setpoint

INFORMATION

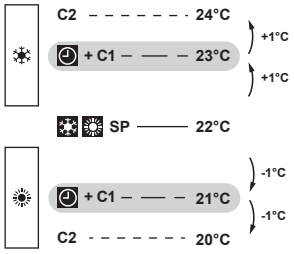
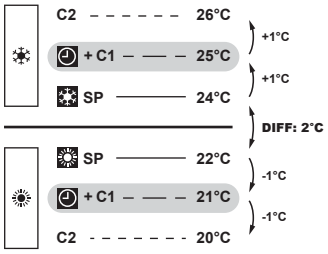
The default value of the settable temperature range (0.5°C~2°C) is 0.5°C.

A changeover from the one operation mode to the other occurs in the following cases:

Case 1: primary changeover (+C1)

A changeover occurs from the moment the room temperature rises above/drops below the Cooling/Heating changeover setpoint (C1), and the guard timer has run out.

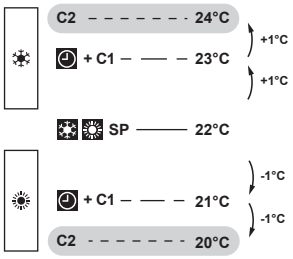
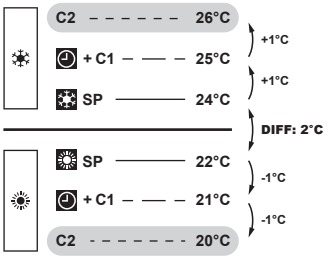
Example:

Single setpoint	Dual setpoint
	
The system is heating up the room. When after a while the room temperature rises above C1 (23°C), a changeover from Heating to Cooling occurs, provided that the guard timer has run out. If the guard timer has not run out, the changeover will only occur from the moment the timer does run out. As a result of the changeover, the guard timer starts running again so as to allow for or prevent the next changeover.	The system is heating up the room. When after a while the room temperature rises above C1 (25°C), a changeover from Heating to Cooling occurs, provided that the guard timer has run out. If the guard timer has not run out, the changeover will only occur from the moment the timer does run out. As a result of the changeover, the guard timer starts running again so as to allow for or prevent the next changeover.
The system is cooling down the room. When after a while the room temperature drops below C1 (21°C), a changeover from Cooling to Heating occurs, provided that the guard timer has run out. If the guard timer has not run out, the changeover will only occur from the moment the timer does run out. As a result of the changeover, the guard timer starts running again, to allow for or prevent the next changeover.	The system is cooling down the room. When after a while the room temperature drops below C1 (21°C), a changeover from Cooling to Heating occurs, provided that the guard timer has run out. If the guard timer has not run out, the changeover will only occur from the moment the timer does run out. As a result of the changeover, the guard timer starts running again, to allow for or prevent the next changeover.

Case 2: forced changeover (C2)

A changeover is forced from the moment the room temperature rises above/drops below the Cooling/Heating forced changeover setpoint (C2) while the guard timer is still running.

Example:

Single setpoint	Dual setpoint
	
The system is heating up the room. When the room temperature rises above C2 (24°C) while the guard timer is still running, a changeover is forced from Heating to Cooling. The system is cooling down the room. When the room temperature drops below C2 (20°C) while the guard timer is still running, a changeover is forced from Cooling to Heating.	The system is heating up the room. When the room temperature rises above C2 (26°C) while the guard timer is still running, a changeover is forced from Heating to Cooling. The system is cooling down the room. When the room temperature drops below C2 (20°C) while the guard timer is still running, a changeover is forced from Cooling to Heating.

INFORMATION

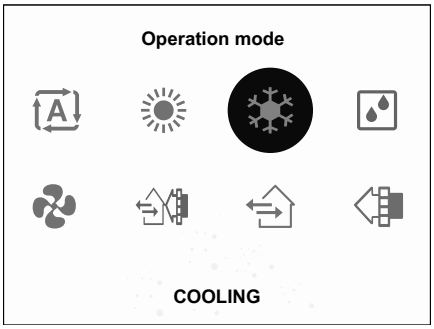
To prevent operation mode changeovers from occurring too frequently, changeovers typically occur only after the guard timer has run out (i.e. Case 1). However, to prevent the room from getting too hot or too cold, a changeover is forced when the room temperature reaches C2 while the guard timer is still running (i.e. Case 2).

8.6.2 To set the operation mode

1 Go to the operation mode screen. This can be done in 2 ways:

- On the home screen, tap the operation mode text or icon (quick action).
- While on the home screen, press ☰ to open the main menu. Then, tap the `Operation mode` menu item.

Result: The operation mode screen is displayed.



2 Tap an operation mode icon to select it.

Result: The indoor unit changes its operation mode.

8.7 User settings

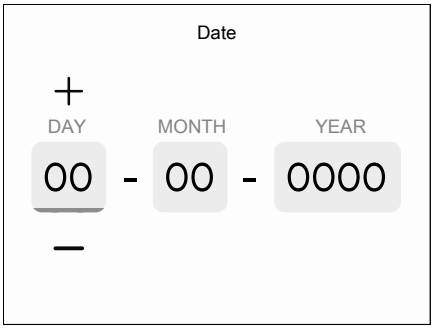
8.7.1 Date

Set the current date for the remote controller and the units connected to the remote controller. The date is not set by default.

To set the date

1 Go to `User settings` > `Date`.

Result: The following screen is displayed.



2 Tap the **DAY** field to select the day.

3 Use + and – to set the correct day (1~31).

4 Tap the **MONTH** field to select the month.

5 Use + and – to set the correct month (1~12).

6 Tap the **YEAR** field to select the year.

7 Use + and – to set the correct year (2026~2099).

8 Press ↩ to confirm.

INFORMATION

The earliest date that can be set is the manufacturing date of the remote controller.

8.7.2 Time

Set the current time for the remote controller and the units connected to the remote controller. The time is not set by default.

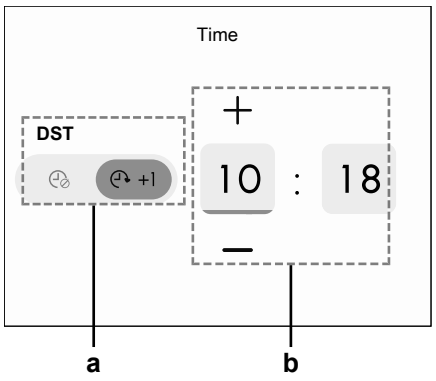
INFORMATION

Some functions of the remote controller require the time to be set in order to function correctly. Make sure to set the time correctly.

To set the time

1 Go to `User settings` > `Time`.

Result: The following screen is displayed.



a Daylight saving time toggle (only in case of manual changeover)
b Time configuration

2 Tap the first field from the left to select the hour.

3 Use + and – to set the correct hour (1~24).

4 Tap the second field from the left to select the minutes.

5 Use + and – to set the correct minutes (0~59).

6 Optional: tap the daylight savings time toggle switch to apply summer time.

7 Press ↩ to confirm.

INFORMATION

The daylight saving time toggle switch ONLY appears when field setting 1b-08 = 3 (manual changeover). When field setting 1b-08 = 2 (automatic changeover), the toggle switch does NOT appear and the changeover is handled by the remote controller automatically. The remote controller time switches from winter time to summer time or the other way around at a predetermined date and time:

- Daylight saving time start: on the last Sunday in March, 2:00 AM becomes 3:00 AM.
- Daylight saving time end: on the last Sunday in October, 3:00 AM becomes 2:00 AM.

INFORMATION

The daylight saving time toggle switch is intended to configure daylight saving time manually (with field setting 1b-08 = 3). Daylight saving time CANNOT be configured manually when:

- The daylight savings time setting is disabled entirely (field setting 1b-08 = 1).
- The daylight savings time is controlled by the system automatically (field setting 1b-08 = 2).
- The daylight savings time is controlled by a centralised controller (field setting 1b-08 = 4)
- The setting of date and time is locked by the lock function (see "Lock function" [▶ 107]).
- The remote controller is a slave remote controller.

8.7.3 Language

The user interface of the remote controller can be set to the following languages:

English	Bulgarian	Czech
German	Greek	Spanish
French	Croatian	Hungarian
Italian	Dutch	Polish
Portuguese	Romanian	Russian
Slovak	Slovenian	Albanian
Serbian (Latin)	Turkish	

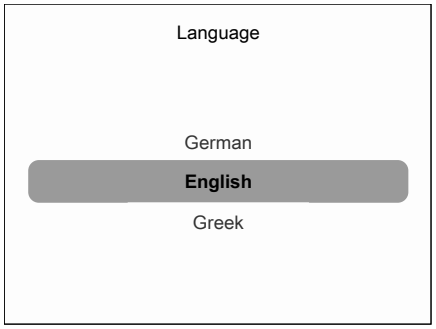
INFORMATION

The user interface language of the remote controller is NOT synchronised to the user interface language of the Madoka Assistant app. The language on the remote controller does NOT affect the app, nor does the app language affect the language used on the remote controller.

To set the language of the user interface

1 Go to User settings > Language.

Result: The following screen is displayed.



2 Swipe up or down to scroll between languages.

3 With the desired language selected, press ↩ to confirm.

Result: The language of the user interface changes to the selected language.

8.7.4 Screen settings

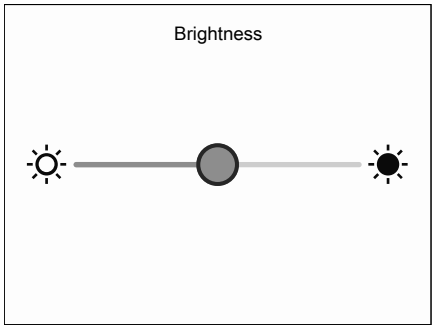
Brightness

Adjust the brightness of the remote controller screen.

To adjust the screen brightness

1 Go to `User settings` > `Screen settings` > `Brightness`.

Result: The following screen is displayed.



2 Touch and drag the slider left to lower, or right to increase the screen brightness.

3 Press ↩ to confirm.

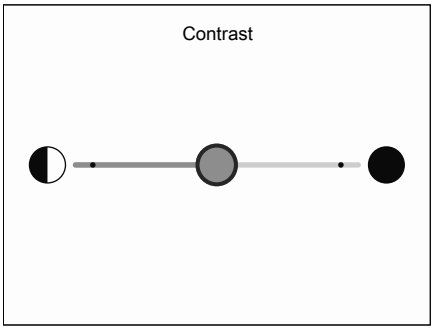
Contrast

Adjust the contrast of the remote controller screen.

To adjust the screen contrast

1 Go to `User settings` > `Screen settings` > `Contrast`.

Result: The following screen is displayed.



2 Touch and drag the slider left to lower, or right to increase the contrast.

3 Press ↩ to confirm.

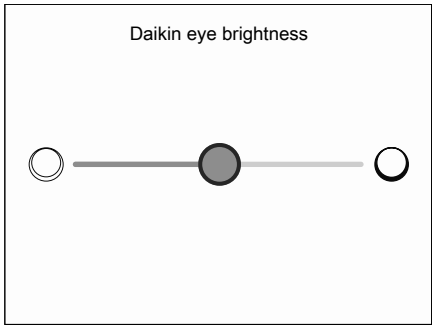
Daikin eye brightness

Adjust the brightness of the Daikin eye status indicator.

To adjust the Daikin eye brightness

1 Go to `User settings` > `Screen settings` > `Daikin eye`.

Result: The following screen is displayed.



2 Touch and drag the slider left to lower, or right to increase the brightness of the Daikin eye.

3 Press ↩ to confirm.

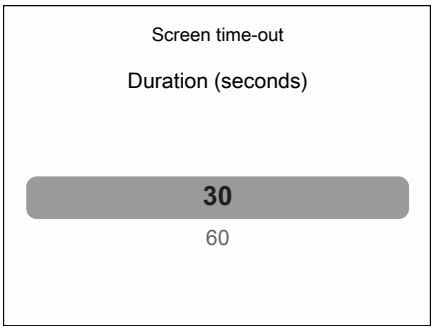
Screen time-out

When there is no operation on the remote controller for a certain period, the remote controller screen is turned OFF automatically. By default, the screen stays on for 60 seconds after the last input. The screen time-out duration can be lowered to 30 seconds.

To adjust the screen time-out

1 Go to `User settings` > `Screen settings` > `Screen time-out`.

Result: The following screen is displayed.



2 Swipe up or down to scroll between values (duration in seconds).

3 With the desired duration selected, press ↩ to confirm.

8.7.5 Bluetooth

The `Bluetooth` menu is used to enable Bluetooth connectivity on the remote controller in order to communicate with a mobile device, for use with the Madoka Assistant app.

INFORMATION

The Bluetooth menu is available to both end users and installers. Installers can access the Bluetooth menu by entering the installer menu first, which is required when the remote controller is in Alarm only or Supervisor mode.

Before the app can be used to make settings on the remote controller, the remote controller must be paired. For more information about the pairing procedure and other Bluetooth related actions, see:

- "10.2.2 To pair the app with a controller" [▸ 112]
- "10.2.3 To turn the Bluetooth connection ON or OFF" [▸ 113]
- "10.2.4 To remove bonding information" [▸ 114]

8.8 Energy saving

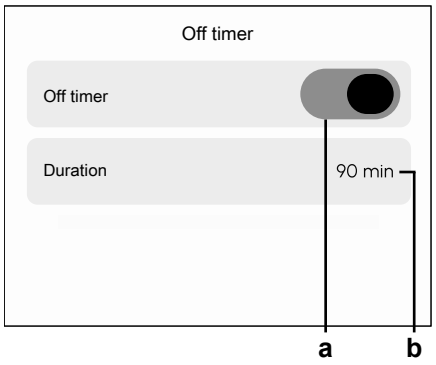
8.8.1 OFF timer

The OFF timer is a function to automatically turn OFF the system after predetermined period (30~180 minutes). When the OFF timer is enabled, it starts running each time the system is turned ON.

To configure the OFF timer

1 Go to `Energy saving` > `Off timer`

Result: The following screen is displayed.

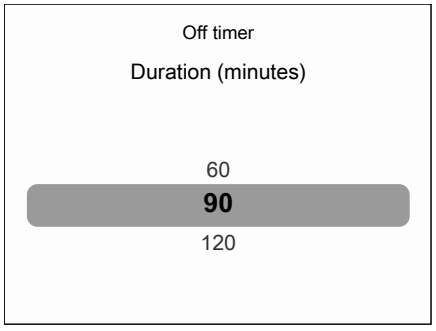


a `Off timer` toggle switch
b `Off timer` duration

2 Tap the toggle switch to enable the timer.

3 Tap `Duration` to configure the duration of the timer.

Result: The following screen is displayed.



4 Swipe up or down to scroll between values.

5 With the desired value (in minutes) selected, press ↩ to confirm.

8.8.2 Setpoint auto reset

Setpoint auto reset is a timer function that allows to automatically reset the setpoint to a specific value after a predetermined period (30~120 minutes). You can configure setpoint auto reset for Heating and Cooling operation mode independently. When setpoint auto reset is enabled, the timer starts running each

time the system is turned ON. When the timer runs out, the setpoint for the desired operation mode will automatically change to the set value.

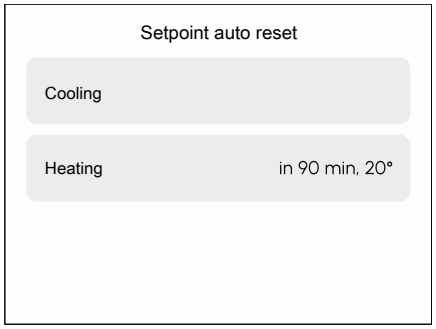
INFORMATION

When this function is enabled, the setpoint can still be changed manually. However, a manual setpoint change will also cause the reset timer to restart. For example: the auto reset setpoint is configured to 24°C. The reset timer is set to 30 minutes. If after 10 minutes a manual setpoint change to 21°C occurs, the timer will start counting down from 30 minutes again. Every setpoint change before the timer expires will restart the timer.

To configure the auto reset setpoint

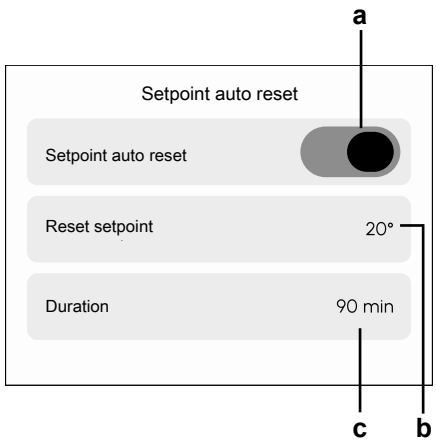
1 Go to `Energy saving` > `Setpoint auto reset`.

Result: The following screen is displayed.



2 Tap the operation mode for which you want to configure the auto reset setpoint.

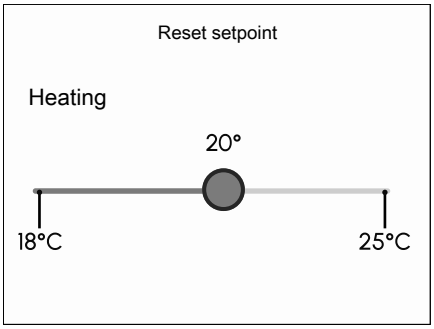
Result: The following screen is displayed (example in case of heating).



a Toggle switch
b Reset setpoint
c Reset timer duration

3 Tap the toggle switch to enable or disable setpoint auto reset for the selected operation mode.

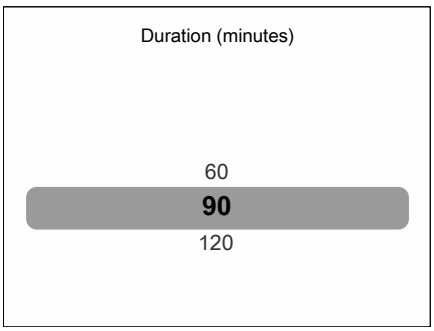
4 Tap `Reset setpoint` to configure the reset setpoint.



5 Touch and drag the slider left to lower, or right to increase the value for the reset setpoint.

6 Press ↩ to confirm.

7 Tap `Duration` to configure the reset timer.



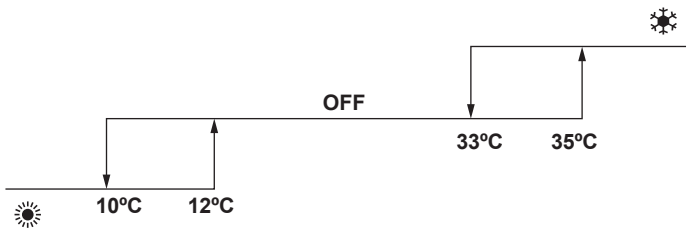
8 Swipe up or down to scroll between values (in minutes).

9 With the desired value selected, press ↩ to confirm.

8.8.3 Setback

Setback is a function that keeps the room temperature in a specific range when the system is turned off (by the user, the schedule function, or the OFF timer). To achieve this, the system temporarily runs in Heating or Cooling operation mode, according to the setback setpoint and recovery differential.

Example:



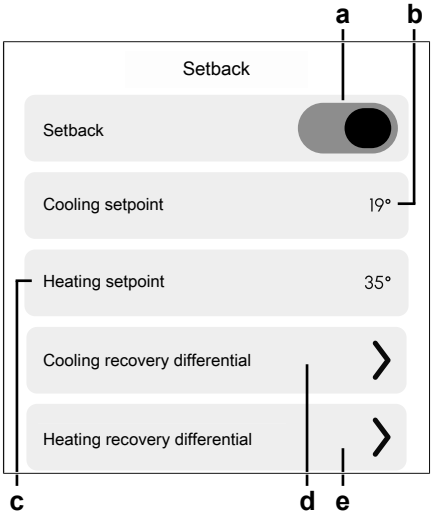
Settings			Result
Heating operation ☼	Heating setback setpoint	10°C	If the room temperature drops below 10°C, the system automatically starts heating operation. If after 30 minutes the temperature rises above 12°C, the system stops heating operation, and turns off again. When the room temperature drops below 10°C again, the process gets repeated.
	Heating recovery differential	+2°C	

Settings			Result
Cooling operation ❄	Cooling setback setpoint	35°C	If the room temperature rises above 35°C, the system automatically starts cooling operation. If after 30 minutes the temperature drops below 33°C, the system stops cooling operation, and turns off again. When the room temperature rises above 35°C again, the process gets repeated.
	Cooling recovery differential	–2°C	

To configure setback

1 Go to Go to `Energy saving` > `Setback`.

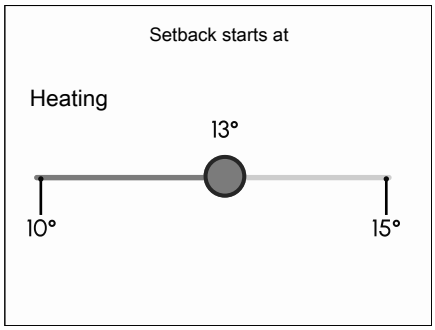
Result: The following screen is displayed.



a Toggle switch
b `Cooling setpoint`
c `Heating setpoint`
d `Cooling recovery differential`
e `Heating recovery differential`

2 Tap the toggle switch to enable or disable setback.

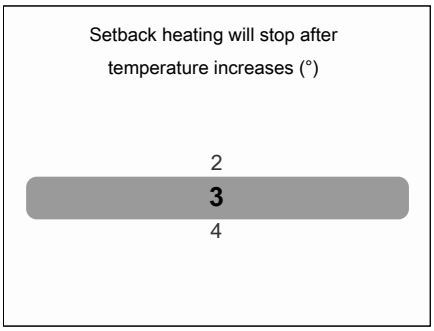
3 Tap the setpoint for an operation mode (example for heating).



4 Touch and drag the slider left to lower, or right to increase the setback starting value (in °C).

5 Press ↩ to confirm.

6 Tap `Heating recovery differential` or `Cooling recovery differential` to configure the differential for the selected operation mode.



7 Swipe up or down to scroll between values (2°C~8°C).

8 With the desired value selected, press ↩ to confirm.

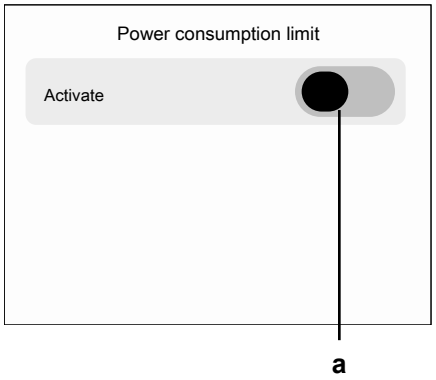
8.8.4 Power consumption limit

This function limits the peak power consumption of the system. When enabled, the outdoor unit operates at 40% or 70% of the usual power consumption for a set timespan.

To configure the power consumption limit

1 Go to Go to `Energy saving` > `Power consumption limit`.

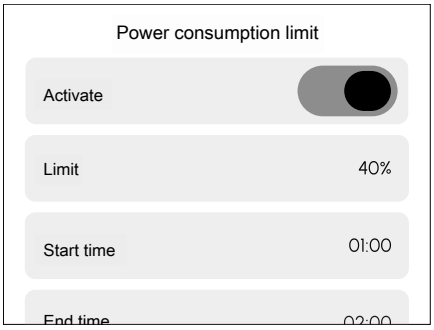
Result: The following screen is displayed.



a Toggle switch

2 Tap the toggle switch to limit power consumption.

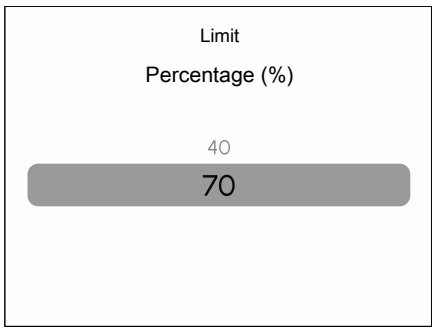
Result: More options appear.



a `Limit` (in %)
b `Start time`
c `End time`

3 Tap `Limit`/

Result: The following screen is displayed.



4 Swipe up or down to select a percentage limit.

5 With the desired percentage selected, press ↩ to confirm and return to the previous menu.

6 Tap `Start time`.

7 Swipe up or down to set the desired start time. The time can be adjusted in 30-minute increments (0:00~23:30).

8 With the desire time selected, press ↩ to confirm and return to the previous menu.

9 Tap `End time`.

10 Swipe up or down to set the desired end time. The time can be adjusted in 30-minute increments (0:00~23:30).

11 With the desired time selected, press ↩ to confirm.

12 Press ↩ to confirm again.

Result: Power consumption limitation is active. During the set timespan, the system will operate at the defined percentage of the usual power consumption.

8.9 Sensors

8.9.1 About Madoka Plus intelligent sensors

The remote controller allows for pairing of optional wireless sensors. The following types of sensors can be paired with the controller:

Madoka Plus intelligent sensor	Main function	Maximum connectable[a]
Motion sensor (WLPIR)	Detect motion	4
Temperature/humidity sensor (WLTRH)	Measure room temperature and humidity levels	1
CO_2 sensor (WLCO2)	Monitor air quality (CO_2 concentration value)	1
Window/door sensor (WLDW)	Detect open/closed state of a window or door.	4

[a] Maximum connectable wireless sensors per master remote controller. Wireless sensors can only be paired with master remote controllers.

INFORMATION

Up to a maximum of 10 total Madoka Plus intelligent sensors (all types combined) can be connected to a single master remote controller.

The Madoka Plus intelligent sensors can be used to read out captured information on the remote controller. In addition, the sensors can be linked to actions which allow for greater automated control over the system. For more information, see "8.9.3 Sensor interlocking" [▸ 56].

For more detailed information about the installation of Madoka Plus intelligent sensors, see the dedicated documentation. For the pairing procedure, see "8.9.5 To pair a Madoka Plus intelligent sensor" [▸ 64]. For the wireless communication specifications, see "14.2 Technical specifications" [▸ 146].

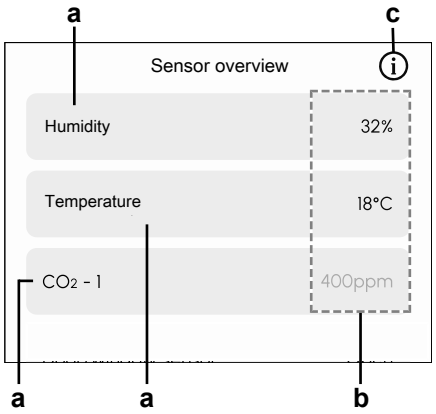
NOTICE

It is to possible that other types of sensors are connected directly to the indoor unit. The Madoka Plus intelligent sensors described in this manual are always connected directly to the remote controller. As a result, the logic and control options offered by these different types of sensors differs, and it is recommended to consider on a case-by-case basis which sensor is best suited for the intended application. In either case, it is recommended to not mix sensor types for similar applications, as to prevent unpredictable system behaviour. This includes:

- Madoka Plus intelligent temperature/humidity sensor and KRCS* or K.RSS room temperature sensors
- Madoka Plus intelligent CO_2 sensor and BRYMA* sensors
- Madoka Plus intelligent motion sensor and presence sensors integrated into the indoor unit (BRYQ*)

8.9.2 Sensor overview

The `Sensor overview` screen summarises the data for all sensors connected to the system in one location.



a Connected sensors
b Sensor values
c Information button

The displayed sensor values depend on the type of sensor that is connected:

Madoka Plus intelligent sensor type	Sensor value
Temperature sensor (WLTRH)	Temperature, in °C
Humidity sensor (WLTRH)	Relative humidity, in %.
CO_2 sensor (WLCO2)	CO_2 concentration value, in ppm
Door/Window sensor (WLDW)	Open/closed state of the door or window
Motion sensor (WLPIR)	Motion detected: yes or no

If multiple sensors are connected, you can swipe down to scroll between additional sensors in the overview. When tapped, the information button presents a notification that refers you to the Madoka Assistant app in order to pair new sensors with the remote controller. For more information about pairing sensors, see "8.9.5 To pair a Madoka Plus intelligent sensor" [▸ 64].

Tapping a specific sensor in the overview reveals more information for that sensor. The following information is available:

Information	Description
`Status`	Connection status
Sensor value	Depends on the sensor type
`Name`	Name given to the sensor in the Madoka Assistant app
`Location`	Location assigned to the sensor in the Madoka Assistant app
`Battery life`	Remaining battery life of the sensor, in %
`Connection`	Indicates the strength of the wireless communications between the sensor and the remote controller: ▪ `Excellent` ▪ `Good` ▪ `Weak`
`UUID`	The UUID of the sensor, as found on the sensor itself.

INFORMATION

After a reboot or power cycle, it may take up to an hour for the wireless communication between the Madoka Plus intelligent sensor and the remote controller to be fully restored, depending on how long the remote controller has been turned off. During this period, sensor data may not be immediately available.

INFORMATION

Notifications for Madoka Plus intelligent sensors are listed in the `Notifications` menu. Madoka Plus intelligent controllers pair with the master remote controller only. If sensor notifications are missing on a slave remote controller, verify that the sensor is paired correctly and check the master remote controller for notifications instead.

8.9.3 Sensor interlocking

In combination with the Madoka Assistant app, the remote controller can read out and instruct the system to react to sensor parameters, based on predefined conditions. This principle is referred to as sensor interlocking.

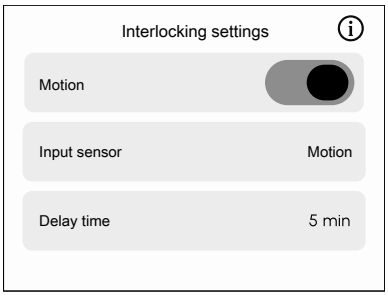
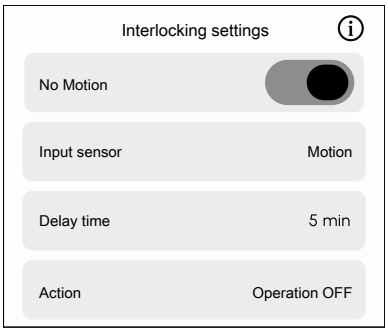
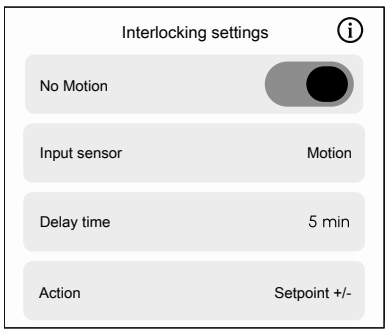
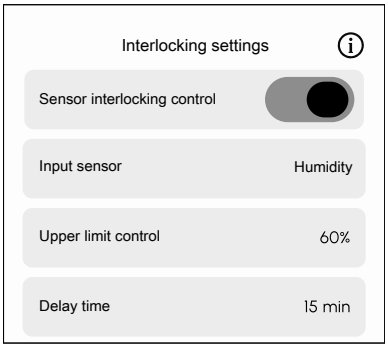
For example, the remote controller can force a change in ventilation or airflow rate when the concentration of CO_2 in a room is too high. After the CO_2 concentration value has dropped to an acceptable level, the ventilation unit returns to its original state.

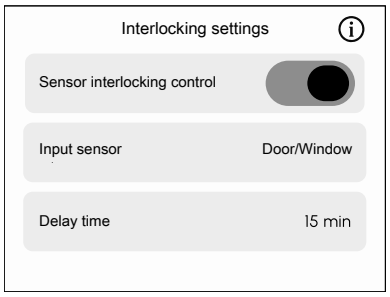
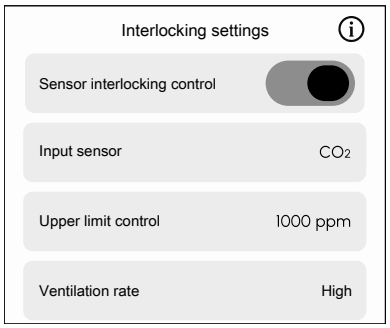
INFORMATION

Sensor interlocks are configured using the Madoka Assistant app. However, the remote controller allows you to:

- View created sensor interlocks and their state (enabled/disabled),
- Enable/disable sensor interlocks,
- View interlocking setting details for each sensor interlock.

Interlocking settings overview

Input sensor	Interlock trigger	Conditions	Action
WLPIR	Motion (motion detected) 	Delay	Turn operation ON
	No motion (motion stopped) 		Turn operation OFF
	No motion (motion stopped) 		Setpoint adjustment: ▪ Cooling setpoint limit ▪ Heating setpoint limit ▪ Adjust interval
WLTRH	Humidity 	Humidity limit Delay	Change the operation mode to Dry

Input sensor	Interlock trigger	Conditions	Action
WLDW	Door/window open 	Delay	Turn operation OFF
WLCO2	CO_2 concentration 	CO_2 concentration limit Delay	Increase ventilation rate

8.9.4 Application examples

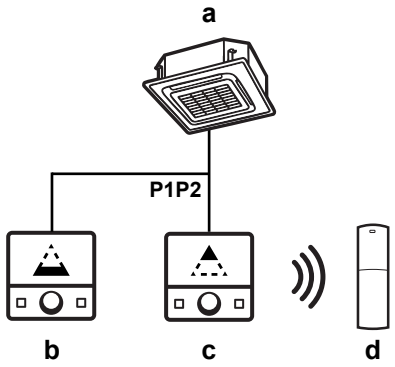
Typical master/slave configuration

In a typical master/slave configuration:

- the unit is connected to the master and the slave remote controller via P1P2 wiring.
- the Madoka Plus intelligent sensor is paired with the master remote controller. The Madoka Plus intelligent sensor communicates exclusively with the master remote controller, which processes data provided by the sensors and applies actions to the unit (based on interlocking settings).
- the slave remote controller only acts as a secondary interface and does not interact with the Madoka Plus intelligent sensor.

Door/window sensor

The door/window sensor (WLDW) communicates the open/closed status to the master remote controller. Based on the sensor status, the master remote controller turns operation for the unit ON or OFF.

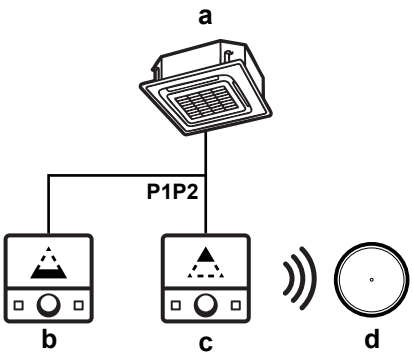


a Indoor unit
b Slave remote controller
c Master remote controller

d Door/window sensor (WLDW)

Temperature/humidity sensor

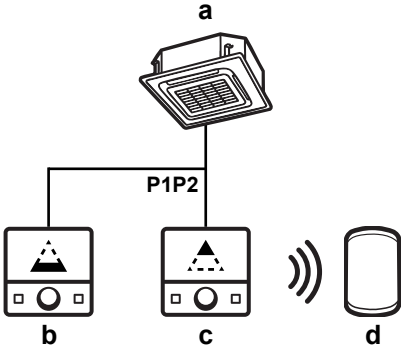
The master remote controller can be configured (field setting 1c-SW8=3) to use the temperature reading provided by the temperature/humidity sensor (WLTRH) as control input for the indoor unit instead of the default internal temperature sensor of the remote controller. This allows the master remote controller to instruct the indoor unit to perform Thermo ON/OFF based on readings from the temperature/humidity sensor. The Madoka Plus intelligent sensor also provides a humidity reading. Based on the humidity reading, the master remote controller can enable Dry operation when a set threshold is exceeded.



a Indoor unit
b Slave remote controller
c Master remote controller
d Temperature/humidity sensor (WLTRH)

Motion sensor

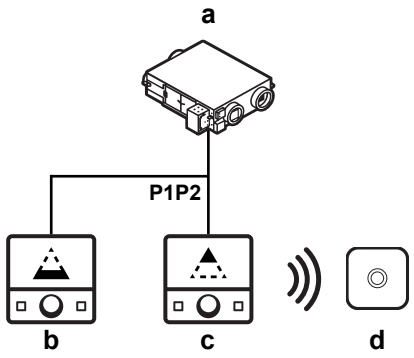
The motion sensor (WLPIR) communicates to the master remote controller when motion (or lack thereof) is detected. Based on whether motion (or lack thereof) is detected, the master remote controller can turn operation for the unit ON or OFF, or adjust the setpoint.



a Indoor unit
b Slave remote controller
c Master remote controller
d Motion sensor (WLPIR)

CO_2 sensor

The CO_2 sensor (WLCO2) monitors the CO_2 concentration value and communicates this value to the master remote controller. Based on the concentration value, the master remote controller can control the ventilation rate of the ventilation unit, increasing the ventilation rate when the set threshold is exceeded.



a Ventilation unit
b Slave remote controller
c Master remote controller
d CO_2 sensor (WLCO2)

INFORMATION

Madoka Plus intelligent sensors can ONLY be paired with master remote controllers.

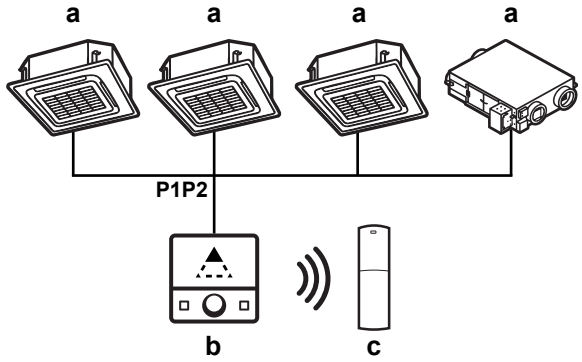
Typical group control configuration

In a typical group control configuration:

- the units are connected to a single master remote controller via P1P2. Optionally, additional slave remote controllers can also be connected.
- connected units operate as a group. The units share the same ON/OFF status, temperature setpoint and operating mode.
- the Madoka Plus intelligent sensor is paired with the master remote controller. The Madoka Plus intelligent sensor communicates exclusively with the master remote controller, which processes data provided by the sensors and applies actions to the group (based on interlocking settings).
- if the configuration involves any slave remote controllers, these controllers only act as secondary interfaces and do not interact with the Madoka Plus intelligent sensor.

Door/window sensor

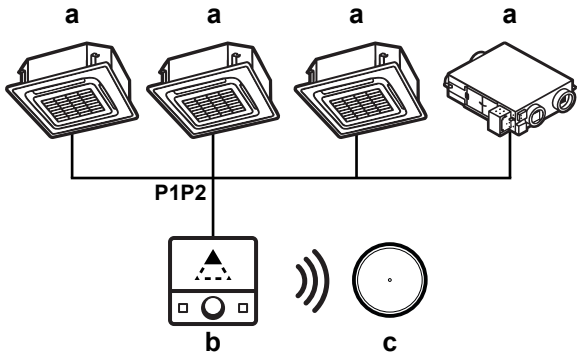
The door/window sensor (WLDW) communicates the open/closed status to the master remote controller. Based on the sensor status, the master remote controller can turn operation for all units in the group ON or OFF.



a Units in the group
b Master remote controller
c Door/window sensor (WLDW)

Temperature/humidity sensor

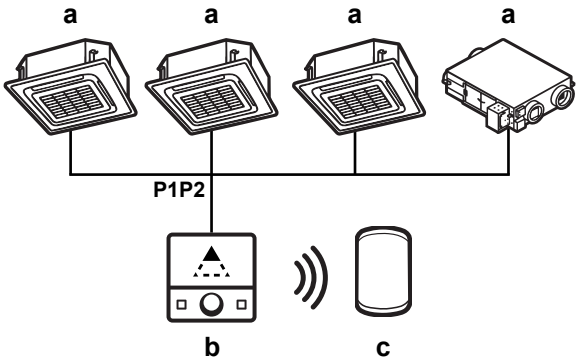
The master remote controller can be configured (field setting 1c-08 = 3) to use the temperature reading provided by the Madoka Plus intelligent sensor for Thermo ON/OFF instead of the default internal temperature sensor of the remote controller. The Madoka Plus intelligent sensor also provides a humidity reading. Based on the humidity reading, the master remote controller can enable Dry operation when a set threshold is exceeded.



a Units in the group
b Master remote controller
c Temperature/humidity sensor (WLTRH)

Motion sensor

The motion sensor (WLPIR) can communicate to the master remote controller when motion (or lack thereof is) detected. Based on whether motion is detected (or not), the master remote controller can turn operation for all units in the group ON or OFF, or adjust the setpoint.



a Units in the group
b Master remote controller
c Motion sensor (WLPIR)

CO_2 sensor

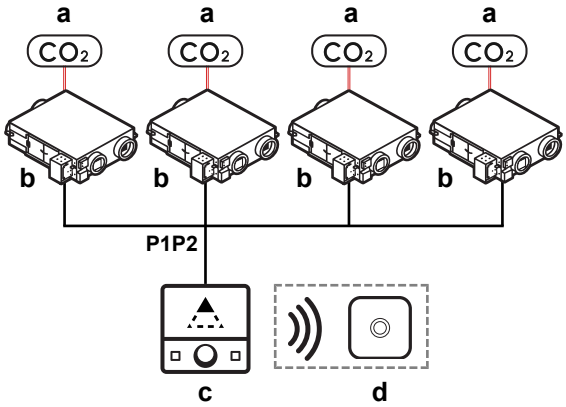
The CO_2 sensor (WLCO2) communicates the CO_2 concentration value to the master remote controller. Based on the measured value, the master remote controller can adjust the ventilation rate of all units in the group. However, when integrating the Madoka Plus intelligent CO_2 sensor in a configuration of ventilation units, each unit in the group may already have an individual wired CO_2 sensor connected. Compare the following situations:

WLCO2 with BRYMA* sensor function disabled – centrally controlled ventilation rate

A wired BRYMA* CO_2 sensor is connected to each ventilation unit in the group. However, the sensor function field setting is disabled for each unit. Group ventilation is managed centrally by the master remote controller, based on the

input of the Madoka Plus intelligent sensor CO_2. The input of the Madoka Plus intelligent sensor overrides local control:

- The Madoka Plus intelligent CO_2 sensor controls the ventilation rate based on the interlocking settings (via the master remote controller).
- The ventilation rate is NOT adjusted based on the wired BRYMA* sensor data.

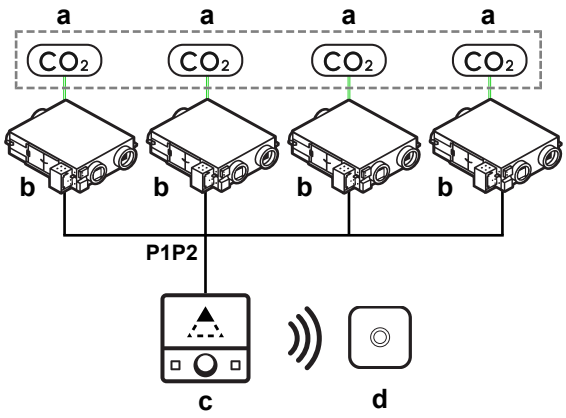


a Wired CO_2 BRYMA* sensors (field setting disabled)
b Units in the group
c Master remote controller
d Madoka Plus intelligent CO_2 sensor (WLCO2)

WLCO2 with BRYMA* sensor function enabled – independently controlled ventilation rate

A wired BRYMA* CO_2 sensor is connected to each ventilation unit in the group. The sensor function field setting is enabled for each unit.

- When ventilation rate is set to Auto, each ventilation unit independently adjusts its ventilation rate based on the input of the wired BRYMA* CO_2 sensor connected to it.
- The Madoka Plus intelligent CO_2 sensor provides additional monitoring of CO_2 values on a group level, but is not used as an input to control or adjust ventilation rates.



a Wired CO_2 BRYMA* sensors (field setting enabled)
b Units in the group
c Master remote controller
d Madoka Plus intelligent CO_2 sensor (WLCO2)

Configuration with digital inputs adapter

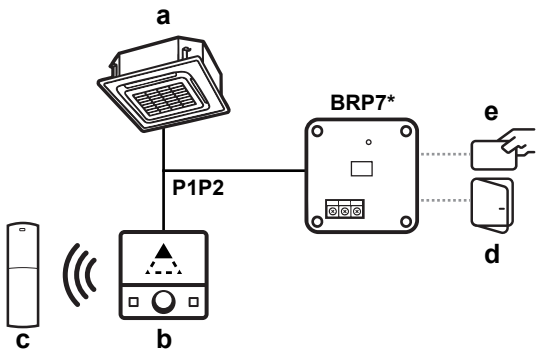
Madoka Plus intelligent sensors can be combined with wired sensors by way of a digital inputs adapter to provide complimentary control. In this configuration:

- the indoor unit is connected to a single master remote controller via P1P2. Optionally, additional slave remote controllers can also be connected.

- the indoor unit is connected to BRP7* via P1P2 wiring, which integrates 2 wired sensors:
  - A wired door/window contact
  - A key card sensor
- the Madoka Plus intelligent sensor is paired with the master remote controller. The Madoka Plus intelligent sensor communicates exclusively with the master remote controller.
- any slave remote controllers only act as a secondary interface and do not interact with the Madoka Plus intelligent sensor.

Typical hotel room setup with wireless door/window sensor and BRP7*

The wired sensors allow for the indoor unit to turn ON whenever a key card is inserted, or to turn OFF whenever the window or door is left open. In this case, the wireless door/window sensor provides complimentary control. As opposed to the wired sensors, it can monitor the state of an additional door or window in the room wirelessly. For example, the room may have a window on the opposite side, which is unmonitored by the wired door/window contact. The wireless sensor can monitor the extra window, and based on the sensor status, allow the master remote controller to turn the unit ON or OFF.



a Indoor unit
b Master remote controller
c Madoka Plus intelligent door/window sensor (WLDW)
BRP7* Digital inputs adapter
e Wired key card sensor (field supply)
f Wired door/window contact (field supply)

Individual zone control with a common outdoor unit

The combination of Madoka Plus intelligent sensors with the remote controller allows for a setup where each indoor unit can be controlled individually, while still using a common outdoor unit.

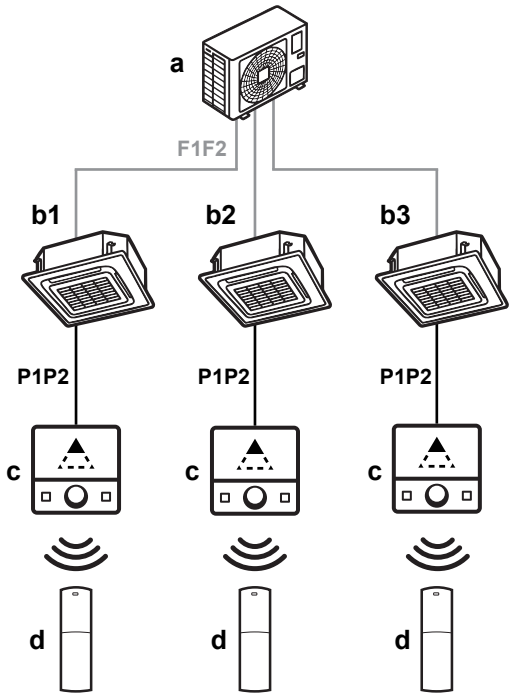
In this configuration:

- indoor units are connected to a common outdoor unit via F1F2 wiring.
- each indoor unit is connected to its own master remote controller via P1P2 wiring.
- a dedicated Madoka Plus intelligent door/window sensor is paired with each of the master remote controllers. Each sensor communicates exclusively with the master remote controller to which it is paired. The master remote controllers process data provided by the sensors and apply actions to the unit (based on interlocking settings).

Example office setup with door/window sensor

Each door/window sensor is placed near (≤10 m) the corresponding indoor unit. Each door/window sensor communicates the open/closed status to its master

remote controller. Based on the sensor status, the master remote controller turns operation for the unit ON or OFF. As each sensor only communicates to the master remote controller to which it is paired, indoor units can to be turned ON or OFF based on the local open/closed state of the window or door. For example, when a window is opened near indoor unit b1, its operation can be turned OFF, while the other indoor units (b2, b3) are not affected and keep operating.



a Common outdoor unit
b Indoor unit
c Master remote controller
d Door/window sensor (WLDW)

8.9.5 To pair a Madoka Plus intelligent sensor

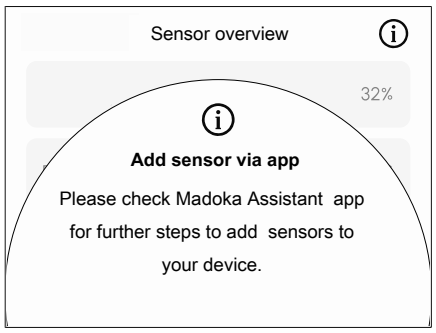
To pair a sensor to the remote controller, make sure that the sensor you want to pair has been installed correctly and is within 10 m of the remote controller. It is also recommended to pair the Madoka Assistant with the remote controller before pairing a sensor. See "10.2.2 To pair the app with a controller" [▸ 112].

INFORMATION

A larger QR code sticker is included in the the packaging of the Madoka Plus intelligent sensor. Please keep this QR code safe for future use.

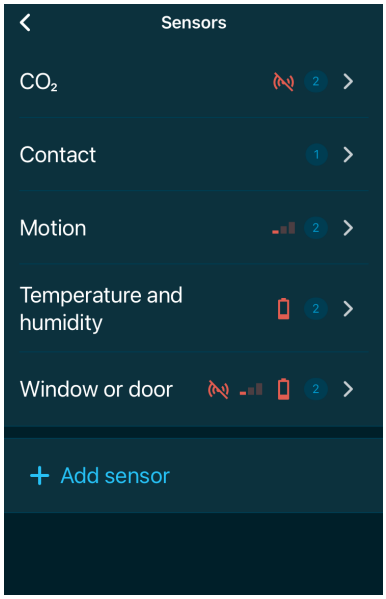
1. In the `Sensors` menu, tap `Sensor overview`.
2. Tap ⓘ in the top right corner.

   Result: A pop-up message appears, indicating to continue the sensor pairing process in the Madoka Assistant app.

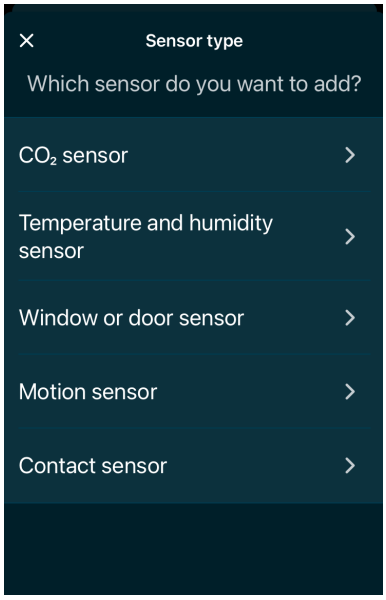


3 In the Madoka Assistant app, go to the **Sensors** menu.

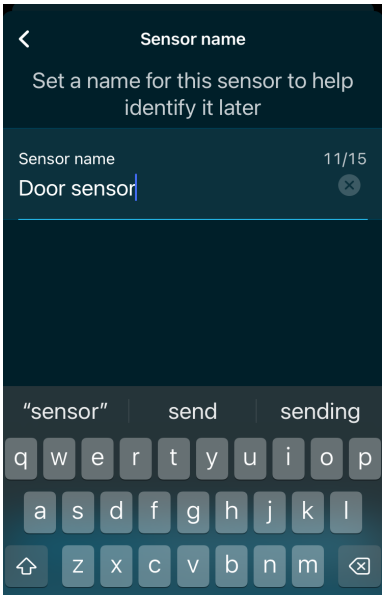
4 Tap **Add sensor**.



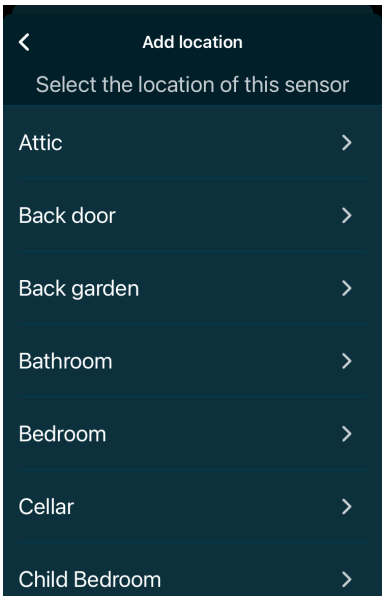
5 Select the sensor type.



6 Name the sensor. Then, tap **Continue**.

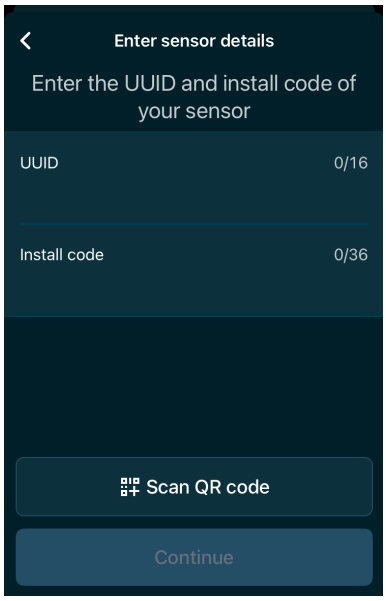


7 Select a location for the sensor.



8 Tap **Scan QR code** and scan QR code using the camera of your mobile device. The QR code is located either on the sensor itself. A larger, QR code sticker is also included in the packaging of the sensor (recommended). In case

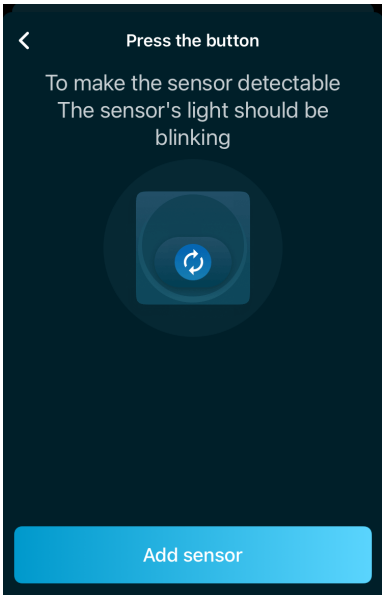
the QR cannot be scanned, the UUID and the install code can be entered manually. For more information, see "12 Troubleshooting" [▸ 134].



9 Enable pairing mode on the wireless sensor. Depending on the wireless sensor type, perform the following actions:

Madoka Plus intelligent sensor	Actions
CO_2 sensor (WLCO2) 	▪ Place the batteries into the battery compartment (4x AA alkaline). ▪ Verify that the LED blinks amber every 2~3 seconds.
Motion sensor (WLPIR) 	▪ Pull the exposed battery tab to remove it from the sensor. ▪ Verify that the LED blinks amber 3 times every 3 seconds.
Temperature and humidity sensor (WLTRH) 	▪ Pull the exposed battery tab to remove it from the sensor. ▪ Verify that the LED blinks green 3 times, indicating that the sensor has started up successfully. ▪ Verify that the LED blinks amber every 2~3 seconds.
Door/window sensor (WLDW) 	▪ Pull the exposed battery tab to remove it from the sensor. ▪ Verify that the LED blinks green for 3 seconds, indicating that the sensor has started up successfully. ▪ Verify that the LED blinks every 2~3 seconds

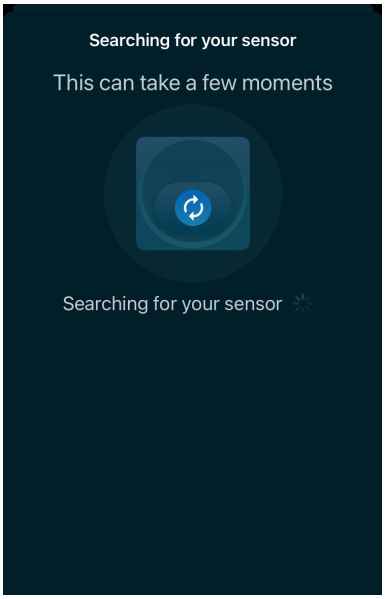
10 When the sensor is in pairing mode, tap `Add sensor` in the app.



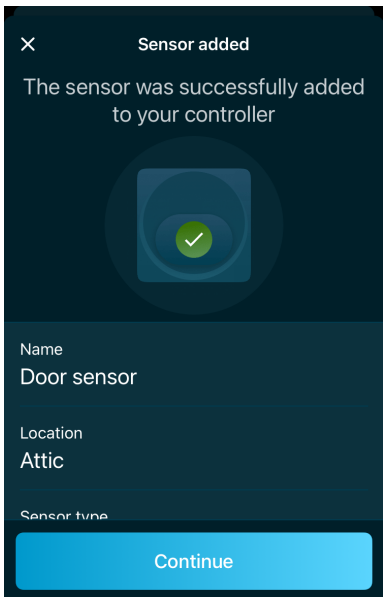
Result: The app starts searching for sensors to pair with. When the app detects the sensor, it will attempt to pair to it automatically. At the same time, the remote controller screen indicates that the sensor is being paired.

INFORMATION

If the sensor is not detected by the Madoka Assistant app within 3 minutes, the sensor will enter sleep mode. When this happens, reset the sensor according to the instructions in "8.9.7 To reset a Madoka Plus intelligent sensor" [▸ 69]. Then, reattempt the pairing procedure. If the problem persists, see "12 Troubleshooting" [▸ 134].



11 Verify that the details of the connected sensor are correct. Then, tap `Continue`.

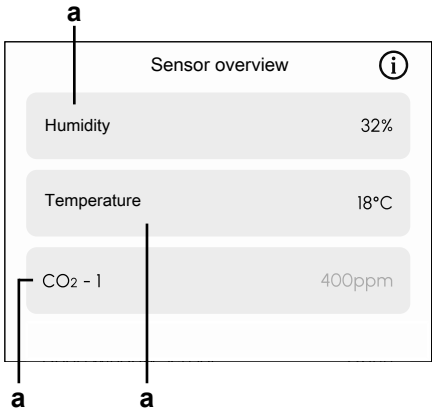


Result: The wireless sensor has been paired to the remote controller. See "8.9.2 Sensor overview" [▸ 54] for more information.

8.9.6 To remove a Madoka Plus intelligent sensor

1 Go to `Sensors` > `Sensor overview`.

Result: A list of all connected sensors appears.



a Connected

2 Find and tap the sensor that you want to remove.

Result: A detailed sensor information screen is displayed.

3 Swipe to scroll down to the bottom of the information screen.

4 Tap `Remove sensor`.

Result: A confirmation pop-up is displayed.

5 Confirm the sensor removal.

Result: The sensor is removed.

8.9.7 To reset a Madoka Plus intelligent sensor

In some situations, it may be required that that the sensor needs to be reset to factory settings. For example:

- When the wireless sensor needs to be recommissioned, for example, to be paired with another remote controller located elsewhere.

- In case of pairing issues, resetting the wireless sensor to factory settings can help with completing the pairing procedure.

1 Depending on the wireless sensor type, perform the following steps:

Wireless sensor	Actions
CO_2 sensor (WLCO2) 	▪ Remove 1 of the 4 batteries from the sensor. ▪ Wait 10 seconds. ▪ Reinsert the battery while holding down the tamper switch. ▪ Hold down the tamper switch for 1~5 seconds, then release the switch. **Result:** the LED starts blinking.
Motion sensor (WLPIR) 	▪ Remove the cover using the case release button. ▪ Remove the battery from the sensor. ▪ Wait 10 seconds. ▪ Reinsert the battery while holding down the tamper switch. ▪ Hold down the tamper switch for 1~5 seconds, then release the switch. **Result:** the LED starts blinking.
Temperature and humidity sensor (WLTRH) 	▪ Remove the rear cover from the sensor. ▪ Remove the battery from the sensor. ▪ Insert the battery upside down (negative side facing outwards) and keep it inserted for 2 seconds. ▪ Remove the battery again. ▪ Insert the battery correctly (positive side facing outwards) while holding down the button on the side of the sensor. ▪ Hold down the button for 1~5 seconds, then, release the button. **Result:** the LED blinks red twice, then yellow three times.
Door/window sensor (WLDW) 	▪ Remove the battery from the sensor for at least 5 seconds. ▪ Reinsert the battery. ▪ Press the button on top of the sensor for 5 seconds. **Result:** the LED starts rapidly blinking. After 5 seconds, the LED turns solid for 2 seconds to confirm that the sensor has been reset.

Result: the wireless sensor has been reset. The wireless sensor is now in pairing mode again.

2 Continue to pair the sensor as normal. See the steps in "8.9.5 To pair a Madoka Plus intelligent sensor" [▸ 64] for more information.

8.10 Notifications

8.10.1 About notifications

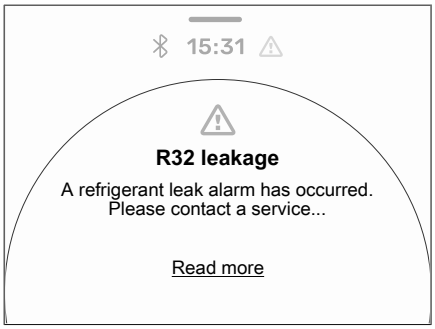
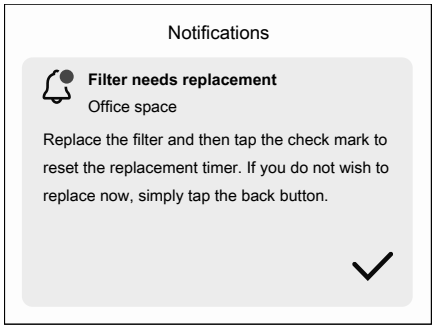
Notifications are messages that provide information about the state of the system. The remote controller groups all notifications in the `Notifications` menu. Notifications can include:

- Errors or warnings related to the indoor unit
- Maintenance reminders for the indoor unit
- Refrigerant leak alarm messages
- Madoka Plus intelligent sensor messages

Sometimes, notifications pop-ups appear on top of the home screen, which can take you to the more detailed notification directly. Alternatively, all notifications can be accessed from the `Notifications` menu.

INFORMATION

In a dual remote controller setup, the master remote controller is the primary device one should rely on for detailed notifications and status information, as it provides the full notification view. A slave remote controller can show notifications, however in some cases notifications may be less detailed or show less information than the notification on the master remote controller. If a notification is not visible on the slave remote controller, check the master remote controller.

Notification pop-up	Detailed notification
	

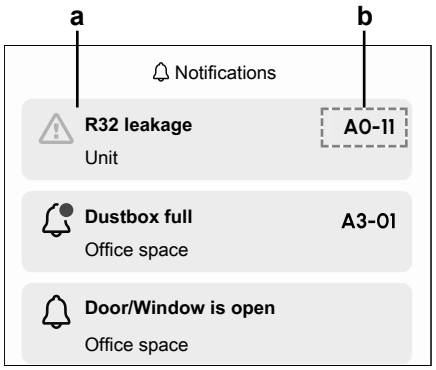
To indicate that there is a pending notification, the controller displays 🔔 on the home screen. When the notification displays ✓, the notification can be dismissed. The dismissal of a notification does not necessarily imply that the underlying issue has been resolved, it only acknowledges the notification itself. As such, notifications can remain in the notification list until they are manually dismissed there, even if in the meantime the underlying issue has been resolved. The dismissal of notifications is also not necessarily permanent. If a resolved issue occurs again, the same notification message can reappear.

8.10.2 To view notifications

1 Go to the `Notifications` menu. This can be done in 2 ways:

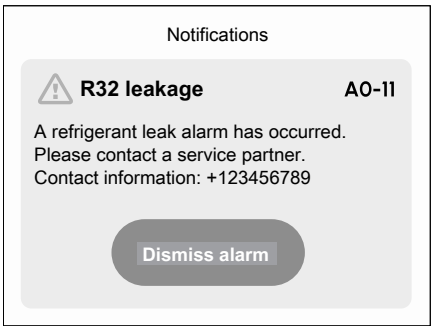
- On the home screen, tap 🔔 in the info bar.
- While on the home screen, press ☰ to open the main menu. Then, tap `Notifications`.

Result: A list of all notifications is displayed. The notifications are listed in the order that they have occurred (newest notifications at the top, oldest notification at the bottom).



a Notification
b Error code (if applicable)

2 Tap a notification to display more detailed information about the notification.



3 Read out notification information.

4 If applicable, dismiss the notification. Depending on the type of notification, this can be done by either tapping a button or ✓.

8.11 Information

8.11.1 About the information menu

In the `Information` menu, you can see the following information:

Item	Description
`Device information`	Submenu with more information about the remote controller. See the table below for more detailed information about the listed items.
`Contact details`	When tapped, retrieves information about the installer of the system. This includes the name, address, and phone number of the installer.
`Master & slave`	Indicates whether the remote controller is a master or a slave remote controller.
`Bluetooth`	Indicates the current Bluetooth connectivity status.

In addition, the information menu can list status icons for functions that are currently active (e.g. `Quick start`, `Quiet mode`, `Setback`, ...). For a full list of status icons and their meanings, see "8.1.2 Status icons" [▸ 21].

`Device information` (submenu)

Item	Description
`Software ID`	Remote controller software ID
`Software version`	Current remote controller software version
`Wireless ModuIe Product ID`	Displays the product ID of the wireless module.
`MAC address`	MAC address of the remote controller
`Software update`	Perform a software update. See "9.2 Software update" [▸ 110] for more information.

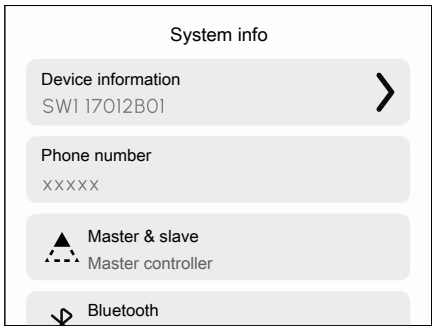
INFORMATION

Information about the remote controller is available to both end users and installers. Installers can access the information by entering the installer menu first. Remote controller information is then accessible under `System info`.

8.11.2 To see information

1 In the main menu, go to `Information`.

Result: The following screen is displayed:



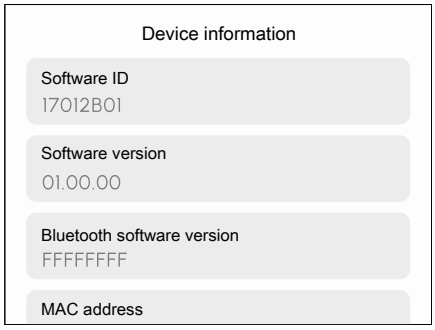
INFORMATION

Apart from the master/slave status and the Bluetooth connection status, the `Information` menu lists the status indicators for all functions that are currently active. For a full list of all status icons and their meaning, see "8.1.2 Status icons" [▸ 21].

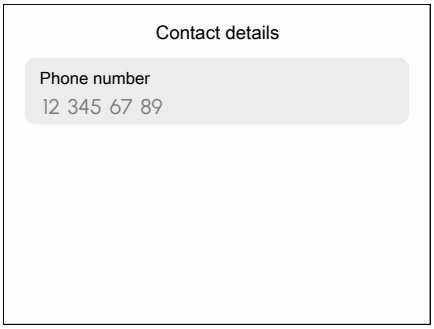
2 Swipe up or down to scroll through all status icons.

3 For more information about the remote controller, tap `Device information`.

Result: All remote controller information is displayed.



4 To find the contact details of your installer, tap `Contact details`.



5 Read out the information.

8.12 Task manager

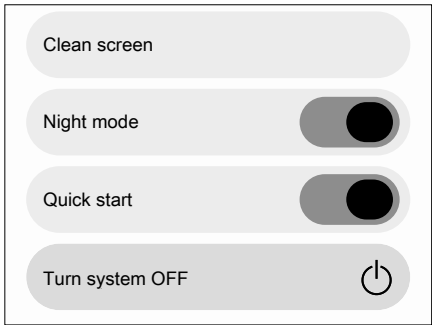
The task manager is an easily accessible menu that allows you to perform some quick actions:

Action	Description
`Clean screen`	When this menu item is selected, the remote controller touch screen and touch buttons are locked for 5 seconds. This allows for cleaning of the remote controller without accidentally activating any functions or changing any settings. After 5 seconds, the touch screen and the touch buttons are unlocked again.
`Night mode`	When enabled, this mode lowers the brightness of the remote controller display after 15 seconds if there is no interaction with the remote controller for 15 seconds. After another 15 seconds of inactivity, the backlight of the display and the Daikin eye lights are turned OFF completely. Interacting with the controller resets these countdown timers. This mode is intended for use in hotel rooms or other spaces where people sleep.
`Quick start`	**Note:** only for Sky Air indoor units. This function quickly brings the room to a comfortable temperature. When `Quick start` is active, the outdoor unit operates with increased capacity to reach the desired setpoint faster. After activation, Quick start is active for up to 30 minutes (configurable field setting 1b-SW5). `Quick start` is deactivated when: ▪ the desired setpoint is reached, ▪ the operation mode changes, ▪ the 30 minute timer expires. When `Quick start` is deactivated, the system automatically resumes normal operation. **Restriction:** when `Quick start` is active, the indoor unit fan speed is controlled automatically, making manual changes is not possible.
`Turn system OFF` / `Turn system ON`	Turns system operation OFF (or ON in case it is OFF).

8.12.1 To access the task manager

1 Press and hold ⏻ for a few seconds.

Result: The task manager menu opens.



2 To exit the task manager, briefly press either ⏻ or ↩.

8.13 Advanced usage

The controller allows for basic and some advanced operation. However, some advanced functionality (e.g. pairing sensors, sensor interlocks) requires the Madoka Assistant app. In addition, not all functionality is available to all user access levels. Consult the table below for an overview.

Functionality	User access level		
	Basic	Advanced	Installer
Quiet operation	—	●	●
Minimum setpoint differential	—	●	●
Filter auto clean	—	●	●
Remote controller thermostat sensor adjustment	—	—	●
Outdoor condition	—	●	●
Defrost operation	—	●	●
Unit number	—	—	●
Sensor information (Sensor Address Data Indication)	—	—	●
Presence detection	—	●	●
Schedules	●	●	●
Active airflow circulation	—	●	●
Individual airflow direction	—	●	●
Duty rotation (rotation operation)	—	—	●
Model name (unit number)	—	—	●
Energy consumption	●	●	●
Contact information	●	●	●
Daylight saving time	—	●	●

Functionality	User access level		
	Basic	Advanced	Installer
Operation hours	—		●
Supervised room address	—	●	●

For more information about Madoka Assistant app functionality, see "10 About the app" [▸ 112].

INFORMATION

To operate the controller with the app, you need to connect the controller to a mobile device on which the app is installed. For instructions, see "10.2 Pairing" [▸ 112].

9 Configuration

9.1 Installer menu

> **INFORMATION**
>
> Some functions of the remote controller require the time to be set in order to function correctly. Make sure to set the time correctly.

9.1.1 About the installer menu

In the installer menu you can make the following settings:

The installer menu is used to modify advanced parameters that are not available in the regular main menu. In the installer menu, the following submenus are available:

Submenu	Description
`Field settings`	Modify field settings for indoor units, outdoor units and the remote controller itself.
`Group & AirNet addresses`	Set or modify group addresses for indoor units and AirNet addresses for indoor units and outdoor units.
`Unit Testing`	Perform a unit test run, force the unit fan to operate in order to identify specific indoor units, or perform a test of the refrigerant leak alarm.
`Controller settings`	Configure miscellaneous settings related to the remote controller: ▪ `Cooling/Heating masterhood` ▪ `Switch master/slave controller` ▪ `Setpoint range limit` ▪ `External input interlock` ▪ `Controller mode` (i.e. Supervisor, Alarm only, Normal) ▪ `Lock function`
`Sensors`	Manage sensors paired to the remote controller and view interlocks.
`Bluetooth`	Enable or disable Bluetooth connectivity on the remote controller.
`System info`	Consult information about the remote controller, consult the notification history, or check the status of an indoor unit connected to the remote controller.

For more information on how to access the installer menu, see "To enter the installer menu" [▸ 78].

To enter the installer menu

> **INFORMATION**
> The installer menu can be accessed the same way regardless of which mode (Normal, Alarm only, Supervisor) the controller is set to be operable in. It is also possible to access the installer menu from any screen.

1 On the home screen, press ↩ and ☰ simultaneously and keep them pressed for at least 5 seconds.

Result: You are now in the installer menu.

To exit the installer menu

Prerequisite: You are currently not in any submenus of the installer menu, but on the main installer settings menu.

1 Shortly press ↩.

Result: The normal user menu is displayed again.

9.1.2 Field settings

About field settings

The controller allows for making field settings related to the indoor unit, the outdoor unit, and the controller itself.

Field settings are composed of the following components:

1 Modes ("Mode"),
2 Settings ("SW"), and
3 Values for those settings.

The field settings menu displays different information depending on which Mode is currently selected. Based on the currently selected Mode number, the applicable settings and their corresponding values are displayed.

Component	Description
Mode	A mode is a group of parameters. The mode number also determines which type of field setting is being modified (remote controller, indoor unit, or outdoor unit). Mode number ranges: ▪ 1a, 1b, 1c, 1d, 1e, R1, R2 (remote controller) ▪ 10~19: indoor unit (group) ▪ 20~29, 2d: indoor unit (individual) In the field settings tables, find available mode numbers in the Mode column.
Setting (SW)	A setting is a settable parameter. Setting number range: 0~15 (depending on setting) In the field settings tables, find the available setting numbers in the "SW" column.

Component	Description
Value	A value can be assigned to the setting once a setting has been selected, Each setting has a fixed set of values that you can select from. Value number range: 0~16 (depending on setting) In the field settings tables, find available values for each setting in the Value column.

Setting procedure

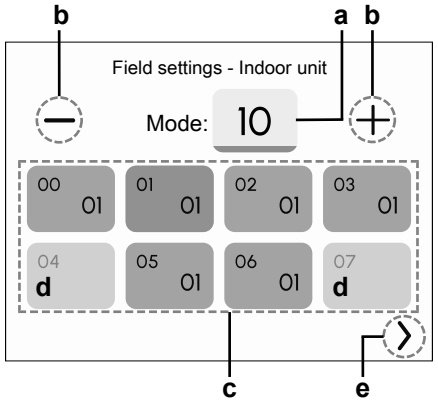
To make remote controller and indoor unit field settings

Prerequisite: You are on the Field settings menu screen.

1 Tap the menu item to modify the field settings belonging to that item. You can modify field settings for:

- all the indoor units in a group
- individual indoor units
- the remote controller.

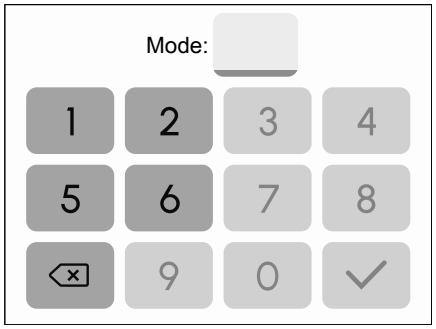
Result: The field settings overview screen is displayed for the selected option (example for indoor unit).



a Current Mode number
b Increase/decrease Mode number
c Settings and values for selected Mode
d Unavailable settings for selected Mode
e Navigation arrow

2 Tap + and – to set the desired Mode. To directly set a specific Mode number, tap the current Mode number.

Result: A numeric keypad is displayed.

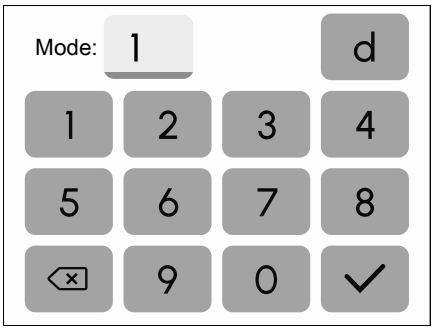


NOTICE

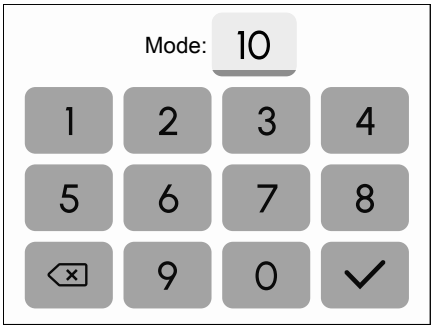
When entering the **Mode** number, please consider the following:

- Selectable digits or letters are displayed in a bright blue colour. Digits that cannot be selected are greyed out. More selectable characters become available after you enter a first character. Only numbers for which settings can actually be made are able to be entered using the numeric keypad.
- The letters "c" and "d" on the selection screen are only able to be selected after 1 or 2 has been selected as the first digit. It will not appear on the numeric keypad if a different number has been selected as the first digit.

3 Tap the first digit or letter of the **Mode** number.



4 Tap the second digit or letter of the **Mode** number.

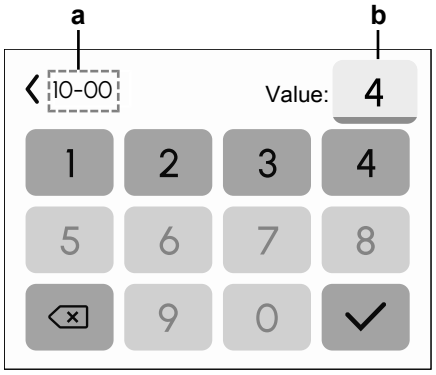


5 Tap ✓ to confirm.

Result: The **Mode** number has been changed. Depending on the selected **Mode** number, different settings and their values appear on screen.

6 Tap the setting for which you want to change the value. You can navigate between all available settings by tapping the arrows.

Result: A numeric keypad is displayed.



a Current mode and setting for which a value is being set (format: **Mode**-**SW**)
b Selected value

7 Tap a number to set that number as the setting value.

8 Tap ✓ to confirm.

Result: The modified setting value appears in darker blue colour to indicate that the value has been changed. If a set value differs from the value set for a unit under group control, the setting, the value is marked with an asterisk (*).

Indoor unit field settings

INFORMATION

- The connection of optional accessories to the indoor unit might cause changes to some field settings. For more information, see the installation manual of the optional accessory.
- For details about the specific field settings of each type of indoor unit, see the installation manual of the indoor units.
- Field settings that are not available for a connected indoor unit are not displayed.
- Field setting default values are different depending on the indoor unit model. For more information, see the service manual of the indoor units.

Mode	SW	Description	Value
10(20)	00	**Filter contamination timer** Set the timer for the filter cleaning notification.	Ultra long life filter: ▪ 01: Light (±10000 hours) ▪ 02: Heavy (±5000 hours) Long life filter: ▪ 01: Light (±2500 hours) ▪ 02: Heavy (±1250 hours) Standard filter: ▪ 01: Light (±200 hours) ▪ 02: Heavy (±100 hours)
	01	**Long life filter** Set which type of long life filter is used (if applicable).	▪ 01: Long life filter ▪ 02: Ultra long life filter
	02	**Controller thermostat sensor** Configure how the controller thermostat sensor is used.	▪ 01: Used in combination with indoor unit thermistor ▪ 02: Not used ▪ 03: Used exclusively
	03	**Filter cleaning notifications** Determine whether filter cleaning notifications can be displayed.	▪ 01: Display ▪ 02: Do not display
11(21)	00	**Simultaneous operation** Set the simultaneous indoor unit operation mode (Sky Air).	▪ 01: Pair ▪ 02: Twin ▪ 03: Triple ▪ 04: Double twin

Mode	SW	Description	Value
12(22)	01	**External ON/OFF input** Configure the operation of voltage free contacts on the indoor unit (T1**/**T2).	▪ 01: Forced OFF ▪ 02: ON/OFF operation ▪ 03: Emergency operation ▪ 04: Forced OFF (multi-tenant)
	02	**Thermostat differential** Set the increase/decrease increments in case the system contains a remote sensor.	▪ 01: 1°C ▪ 02: 0.5°C
13(23)	00	**High air outlet velocity** Set in case of high-ceiling applications.	▪ 01: h ≤ 2.7 m ▪ 02: 2.7 m< h ≤3 m ▪ 03: 3 m < h ≤ 3.5 m
	01	**Airflow direction** Set in case the indoor unit is equipped with an option kit that blocks the airflow.	▪ 01: 4-way flow ▪ 02: 3-way flow ▪ 03: 2-way flow
	03	**Airflow function** Set whether the indoor unit is equipped with a decoration panel at its air outlet.	▪ 01: Equipped ▪ 02: Not equipped
	04	**Airflow direction range** Set the airflow direction range.	▪ 01: Upper ▪ 02: Normal ▪ 03: Lower
	06	**External static pressure** Set the external static pressure (according to the resistance of the connected ducts). **For** FHYK: follow the high-ceiling setting	▪ 01: Normal ▪ 02: High static pressure ▪ 03: Low static pressure For FHYK: ▪ 01: Normal ▪ 02: High ceiling
15(25)	03	**Humidification drain pump**	▪ 01: Not equipped ▪ 02: Heating operation: continuous ▪ 03: Heating operation: 3 minutes ON/5 minutes OFF

Remote controller field settings

INFORMATION

Remote controller field setting R1-11 allows for changes to the behaviour of the status indicator, making the controller suitable for use in hotels.

Mode	SW	Description	Value[a]	
R1[b]	03	**Controller thermistor adjustment (Cooling)**	▪ 0: –3.0°C ▪ 1: –2.5°C ▪ 2: –2.0°C ▪ 3: –1.5°C ▪ 4: –1.0°C ▪ 5: –0.5°C ▪ **6: ±0°C**	▪ 7: +0.5° ▪ 8: +1.0°C ▪ 9: +1.5°C ▪ 10: +2.0°C ▪ 11: +2.5°C, ▪ 12 : +3.0°C
	04	**Controller thermistor adjustment (Heating)**		
	05	**Controller thermistor adjustment (Auto)**		
	06	**Controller thermistor adjustment (Fan only)**		
	07	**Controller theme** Set the theme for the user interface of the remote controller.	▪ 0: Minimal ▪ **1: Standard**	
	08	**No-operation screen time-out** Set the duration after which the screen turns OFF if there are no inputs during this time.	▪ 0:30 seconds ▪ **1: 60 seconds**	
	09	**Daikin eye faintness** Set the brightness level of the Daikin eye status indicator under weak lighting conditions.	▪ 0: 0% (OFF) ▪ 1: 1% ▪ 2: 2% ▪ 3: 3%, ▪ 4: 5% ▪ 5: 7%	▪ 6: 9% ▪ 7: 11%, ▪ 8: 13% ▪ **9: 15%** ▪ 10: 17% ▪ 11**:** 20%
	10	**Backlight faintness** Set the brightness of the remote controller screen under weak lighting conditions.	▪ 0: 0% (OFF) ▪ 1: 1% ▪ 2: 2% ▪ 3: 3% ▪ 4: 4% ▪ **5: 5%**	
	11	**Daikin eye mode** Configure in which user mode the Daikin eye status indicator should operate.	▪ **0: Normal** ▪ 1: Dimmed ▪ 2: OFF	
	13	**Bluetooth** Low Energy advertising	▪ **0: Always ON** ▪ 1: Enable manually	

Mode	SW	Description	Value[(a)]	
R2	05	**Remote controller mode** Set the mode the remote controller is operable in.	▪ **0: Normal** ▪ 1: Alarm only ▪ 2: Supervisor	
	07	**CO_2 concentration display mode** Configure how the CO_2 concentration value is displayed on the home screen.	▪ 0: Hidden ▪ **1: Icon** ▪ 2: Value	
	08	**CO_2 sensor low threshold value**	▪ 0: 500 ▪ 1: 600 ▪ 2: 700 ▪ 3: 800 ▪ 4: 900 ▪ **5: 1000** ▪ 6: 1100 ▪ 7: 1200	▪ 8: 1300 ▪ 9: 1400 ▪ 10: 1500 ▪ 11: 1600 ▪ 12: 1700 ▪ 13: 1800 ▪ 14: 1900 ▪ 15: 2000
	09	**CO_2 sensor high threshold value**	▪ 0: 500 ▪ 1: 600 ▪ 2: 700 ▪ 3: 800 ▪ 4: 900 ▪ 5: 1000 ▪ 6: 1100 ▪ 7: 1200	▪ 8: 1300 ▪ **9: 1400** ▪ 10: 1500 ▪ 11: 1600 ▪ 12: 1700 ▪ 13: 1800 ▪ 14: 1900 ▪ 15: 2000
1b	08	**Daylight saving time** Set how the system controls daylight saving time.	▪ 1: Disabled ▪ **2: Automatic changeover** ▪ 3: Manual changeover ▪ 4: According to centralised controller	

Mode	SW	Description	Value[a]
1c	01	**Room temperature display** Determine which temperature sensor reading to display as the room temperature.	▪ 1: Indoor unit temperature sensor ▪ **2: Remote controller temperature sensor** ▪ 3: Wireless temperature sensor
	06	**CO_2 sensor value display** Set which CO_2 sensor data to use for displaying CO_2 concentration readings.	▪ **1: Wired CO_2 sensor (**BRYMA***)** ▪ 2: Wireless CO_2 sensor (WLCO2)
	08	**Thermo ON/OFF temperature sensor** Determine the temperature sensor to use for Thermo ON/OFF.	▪ **1: Remote controller temperature sensor** ▪ 2: Indoor unit temperature sensor ▪ 3: Wireless temperature sensor
	12	**Window contact** B1 (external input)	▪ 1: Do not use ▪ **2: Use**
	13	**Key card contact** B2 (external input)	▪ 1: Do not use ▪ **2: Use**
	14	**Primary changeover setpoint (with guard timer)**	▪ **1: 0.5°C** ▪ 2: 1.0°C ▪ 3: 1.5°C ▪ 4: 2.0°C
	15	**Forced changeover setpoint**	
1e	02	**Setback** Configure setback operation.	▪ 1: No setback operation ▪ 2: Heating only ▪ 3: Cooling only ▪ **4: Heating and cooling**
	07	**Duty rotation overlap time** Set the duty rotation overlap time.	▪ 1: 30 minutes ▪ 2: 15 minutes ▪ **3: 10 minutes** ▪ 4: 5 minutes
	08	**Home screen setpoint** Set how the home screen displays the setpoint.	▪ **1: Numerical** ▪ 2: Symbolic
	11	**Guard timer** Set the guard timer for automatic cooling/ heating changeover (primary changeover).	▪ 1:15 minutes ▪ 2: 30 minutes ▪ **3: 60 minutes** ▪ 4: 90 minutes

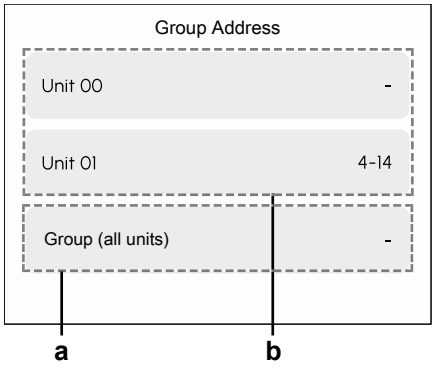
[a] Default value in bold

[b] R1 - SW3~6: temperature measurement is done by either by the temperature sensor of the indoor unit, the built-in temperature sensor of the remote controller, or a wireless sensor connected to the system. Indoor unit field setting 1c – SW01 determines which temperature sensor is used for measurements.

9.1.3 Group & AirNet addresses

About group address

To control the system with central control equipment, it is required that you assign the indoor units with the necessary addresses. It is possible to assign an address to a group of indoor units, or to individual indoor units.



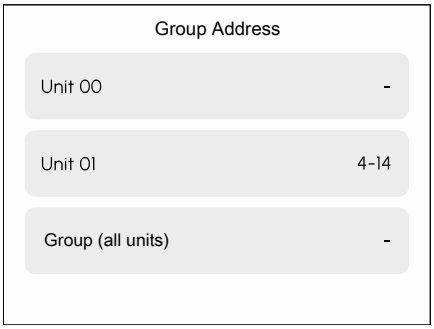
a Group of indoor units
b Individual indoor units

To set the group address

Prerequisite: You are in the installer menu.

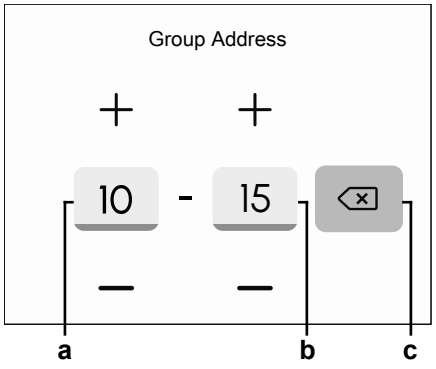
1. In the installer menu, go to `Group & AirNet addresses`.
2. Tap `Group Address`.

   Result: An overview of all units and their addresses is displayed.



3. Select the unit for which you want to change the address. If many units are listed, swipe up or down to view all units for which addresses can be changed.

   Result: The following screen is displayed

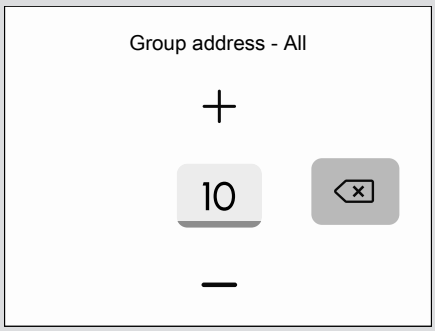


a Group number
b Number of unit within the group (0~15)
c Address release button

4. Tap + or – to adjust the address values.

INFORMATION

When setting the group address for all units that belong to the same group, only the group number can be adjusted.



5 Tap ↩ to confirm the address value.

Result: The group address is set..

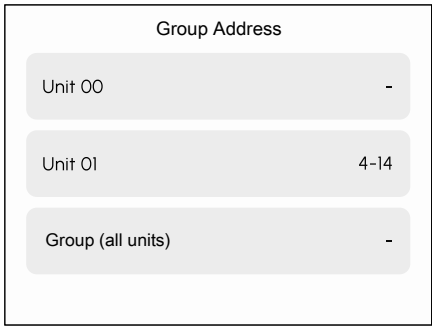
To release the group address

Prerequisite: You are in the installer menu.

1 In the installer menu, go to `Group & AirNet addresses`.

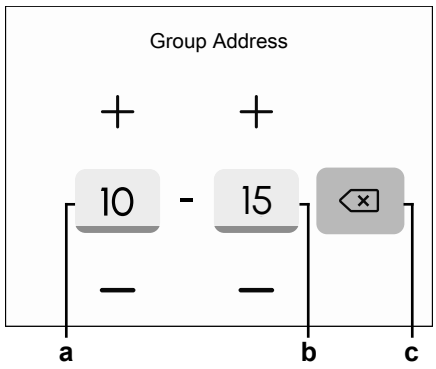
2 Tap `Group Address`.

Result: An overview of all units and their addresses is displayed.



3 Select the unit for which you want to release the address. If many units are listed, swipe up or down to view all units for which addresses can be released.

4 The following screen is displayed



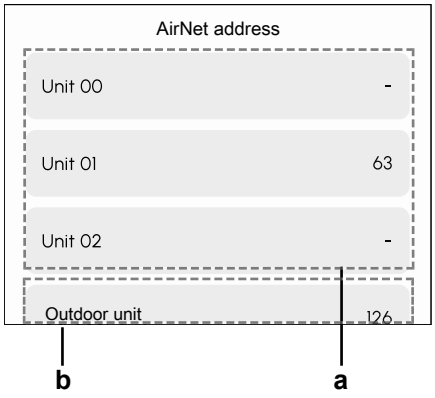
a Group number
b Number of unit within the group (0~15)
c Address release button

5 Tap ⌫ to release the address.

Result: The group address for the selected unit (or group of units) is released.

About AirNet address

To connect the system to the AirNet monitoring and diagnostics system, it is required that you assign the necessary addresses to the indoor and outdoor units.



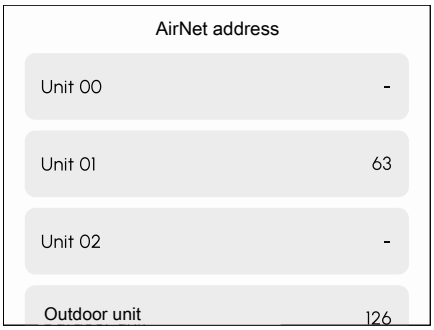
a Indoor units
b Outdoor units

To set the AirNet address

Prerequisite: You are in the installer menu.

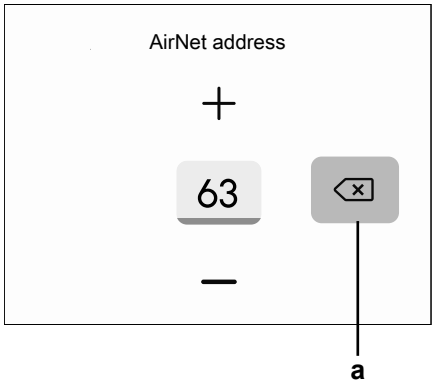
1. In the installer menu, go to `Group & AirNet addresses`.
2. Tap `AirNet address`.

   Result: An overview of all units and their addresses is displayed.



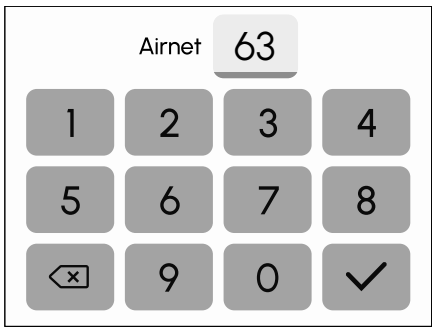
3. Select the unit for which you want to change the address. Swipe up or down to view all units for which addresses can be changed.

   Result: The following screen is displayed.



4. Tap + or – to set the address values. To directly set a specific address value, tap the current address value.

   Result: A numeric keypad is displayed.



5 Tap the digit(s) to enter the address value.

INFORMATION

When setting AirNet addresses, keep in mind that:

- Every indoor unit must have a unique AirNet address (0~127).
- Every outdoor unit must have a unique AirNet address (0~63).

6 Tap ✓ to confirm the address value.

Result: The AirNet address is now set.

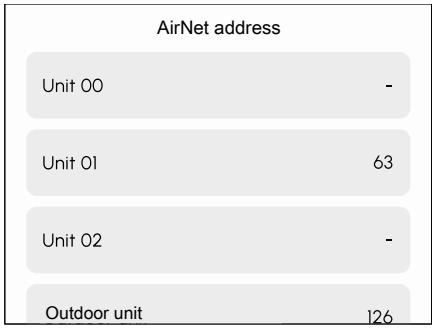
To release the AirNet address

Prerequisite: You are in the installer menu.

1 In the installer menu, go to `Group & AirNet addresses`.

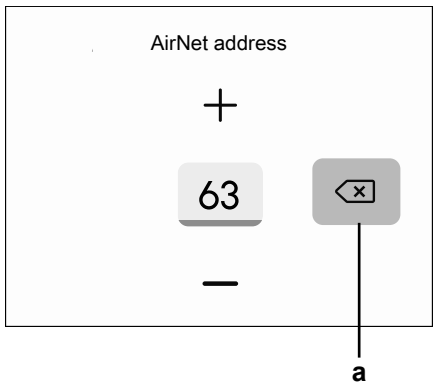
2 Tap `AirNet address`.

Result: An overview of all units and their addresses is displayed.



3 Select the unit for which you want to release the address. Swipe up or down to view all units for which addresses can be changed.

Result: The following screen is displayed.



a Address release button

4 Tap ⌫ to release the address.

Result: The AirNet address for the selected unit is released.

9.1.4 Unit testing

About unit testing

You can perform the following unit tests from the `Unit Testing` menu:

Type of unit test	Description
`Test operation`	Used to test whether there are no unit abnormalities after the installation of the unit has been completed.
`Test R32 alarm`	Used for testing the R32 refrigerant leak alarm.
`Force fan on`	Used to force fan operation of individual units in order to more easily identify units.

Test operation

After the installation of an indoor unit, the unit can be tested with the help of the test operation feature to make sure there are no abnormalities and to ensure the unit performs as expected. During test operation, the indoor unit cycles through various operation modes and functions to verify that they are ready for actual operation.

While test operation is ongoing, normal operation is not possible, and some functionality is temporarily unavailable. Functionality that is temporarily not available is greyed out in the menu. The following settings cannot be used during test operation:

- All setpoint related functions (including setpoint auto reset, setpoint range limit, setpoint logic, setback, ...)
- Individual airflow direction

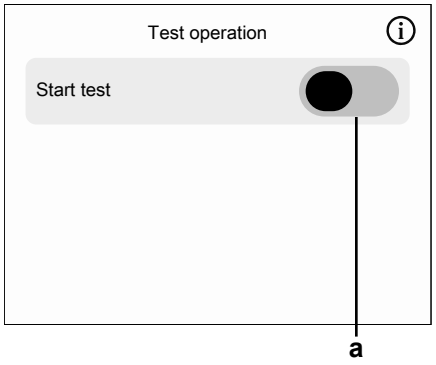
The settings may become invisible or greyed out in the Madoka Assistant app for the duration of the test. On the remote controller, the home screen indicates that test operation is ongoing. The setpoint is temporarily hidden from the home screen, and the setpoint main menu item is greyed out.

To perform an operation test

Prerequisite: You are in the installer menu.

1. In the installer menu, go to `Unit Testing`.
2. Tap `Test operation`.

   Result: The following screen is displayed.

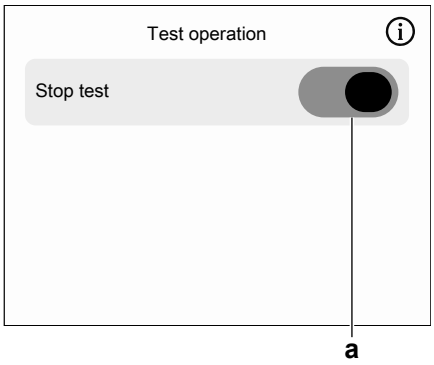


a Toggle switch

3. Tap the toggle switch to enable the operation test.

   Result: The indoor unit(s) enter test operation mode.

4 After 30 minutes, the operation test finishes. If required, you can manually stop test operation by returning to `Test operation` in the installer menu and tapping `Stop test`.



a Toggle switch

Force fan ON

About Force fan ON

Force fan ON allows you to force fan operation of individual indoor units. In this way, you can check which indoor unit number was assigned to which indoor unit.

To force fan operation

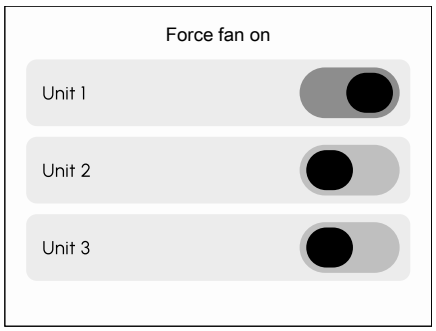
Prerequisite: You are in the installer menu.

1 In the installer menu, go to `Unit Testing`.

2 Tap `Force fan on`.

Result: A list of all units is displayed.

3 Tap the toggle switch for a specific unit.



Result: The fan of the indoor unit that corresponds to the selected indoor unit number starts operating.

4 Tap toggle switch again to stop fan operation.

INFORMATION

The fan can only be forced on for 1 unit at a time.

Refrigerant leak alarm test

About refrigerant leak alarm test

It is possible to test the refrigerant leak alarm.

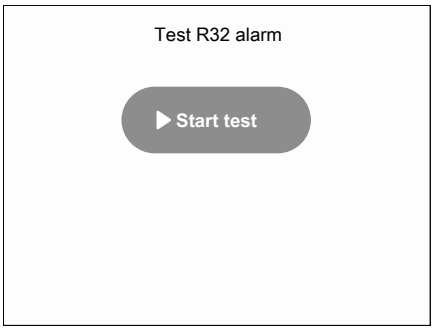
To test the refrigerant leak alarm

Prerequisite: You are in the installer menu.

1 In the installer menu, go to `Unit Testing`.

2 Tap `Test R32 alarm`.

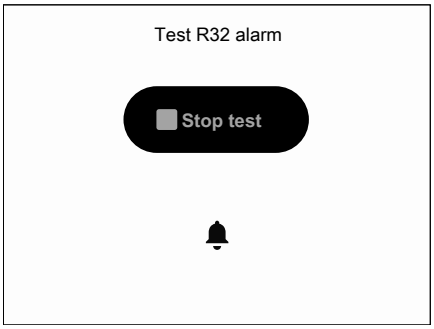
Result: The following screen is displayed.



3 Tap `Start test`.

Result: The alarm starts to sound. A buzzer sound (65 dB) is audible. The Daikin eye starts blinking red.

4 Tap `Stop test` to disable the alarm and conclude the test.



9.1.5 Sensors

The installer menu provides access to the same `Sensors` menu accessible in the regular menu. For more information, see "8.9 Sensors" [▸ 53].

9.1.6 Controller settings

About controller settings

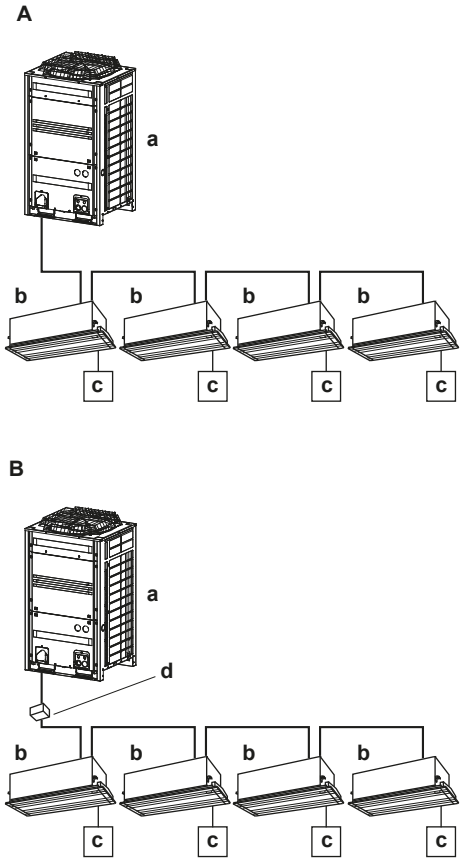
The following settings are available from the `Controller settings` menu:

Item	Description
`H/C Masterhood`	View and set the Heating/Cooling masterhood status of indoor units connected to the controller (VRV only).
`Switch master/slave controller`	Set whether the remote controller is master or slave remote controller.
`Setpoint range limit`	Set and enable a limitation to the temperature setpoint range for both cooling and heating operation.
`Controller settings`	Configure settings for integrating external contacts in the system's control logic.
`Controller mode`	Set the remote controller to be operable in a specific mode (e.g. Normal, Alarm only, Supervisor).

Item	Description
Controller UI	Change the user interface theme of the remote controller.
Lock function	Configure which remote controller functionality is accessible to end users.
Factory reset	Reset the remote controller to its default factory state.

Cooling/Heating masterhood

About Cooling/Heating masterhood



A Heat pump system
B Heat recovery system
a Outdoor unit
b Indoor unit
c Remote controller
d BS unit

When multiple indoor units are connected to an outdoor unit, one of these units (or a group of indoor units, in case of group control) needs to be set as Cooling/Heating master. The other units/groups then become Cooling/Heating slaves, and are restricted in their operation by the master (e.g. one outdoor unit does not allow for one indoor unit to run in Cooling operation while another runs in Heating operation).

When an indoor unit or group of indoor units is set as Cooling/Heating master, the other indoor units automatically become its slaves. For instructions, see "To set Cooling/Heating masterhood" [▸ 94].

Status icon

Cooling/Heating masterhood corresponds to the following status icon:

The behaviour of this status icon is according to the following table:

If a controller displays ...	Then ...
... NO status icon	... The indoor unit connected to that controller is Cooling/Heating master
... a CONSTANT status icon	... The indoor unit connected to that controller is slave to a Cooling/Heating master.
... a BLINKING status icon	...The Cooling/Heating masterhood status is currently `Released`. No unit is currently assigned as Cooling/Heating master.

Operation mode

The operation mode behaviour of the indoor units is according to the following table:

If the master ...	Then the slaves ...[(a)]
... is set to "Heating", operation mode	... cannot run in "Cooling" or "Dry mode, but can still run in "Heating or "Fan only" mode.
... is set to "Cooling" or "Dry" operation mode	... cannot run in "Heating" mode, but can still run in "Cooling", Dry", or "Fan only" mode.
... is set to "Auto" operation mode	... start running in the same operation mode as the master is currently running in, which is either in "Cooling" or "Heating" mode.
... is set to "Fan only" mode	... can ONLY run in "Fan only" mode.

[(a)] The operation modes "Ventilation", Air Clean" and "Ventilation + Air Clean" are always available if supported by the system configuration.

Once an indoor unit is set as master, it can be released from masterhood. For instructions, see "To release Cooling/Heating masterhood" [▸ 95]. To turn a slave unit/group into the master, first release the currently active master from its masterhood.

INFORMATION

Ventilation mode changes are possible regardless of Cooling/Heating masterhood.

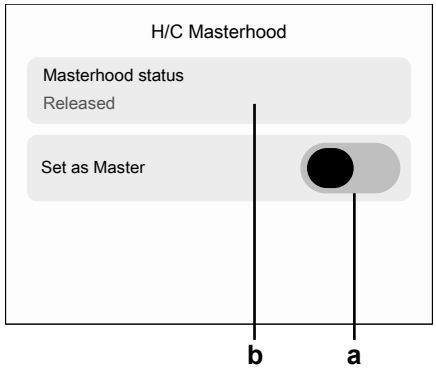
To set Cooling/Heating masterhood

Prerequisite: No indoor unit is currently already set as Heating/Cooling master (`Masterhood status` is `Released`).

Prerequisite: You are operating the controller of the indoor unit that you want to set as Heating/Cooling master.

1 Go to `Controller settings` > `H/C Masterhood`.

Result: The following screen is displayed.

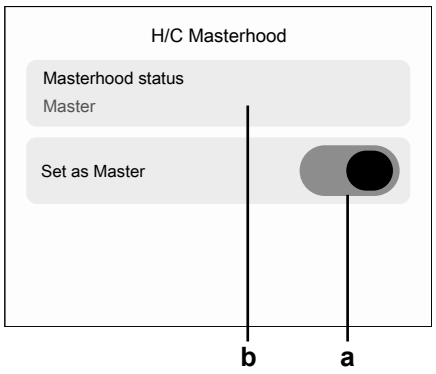


a Toggle switch
b `Masterhood status` (`Released`)

> **INFORMATION**
>
> When `Masterhood status` is `Released`), any indoor unit can in the system can be set as Heating/Cooling master. However, when the `Masterhood status` is `Slave`, this means there is still a unit in the system which is Heating/Cooling master. Release the Heating/Cooling masterhood on the remote controller connected to that unit first before setting a different Heating/Cooling master. Setting another indoor unit as Heating/Cooling master can be done via the installer menu. It is NOT possible to set an indoor unit as Heating/Cooling master by changing the operation mode when the `Masterhood status` is `Released`).

2 Tap the toggle switch.

Result: The indoor unit is now Heating/Cooling master.



a Toggle switch
b `Masterhood status` (`Master`)

Result: All Heating/Cooling slave remote controllers now display in the status bar.

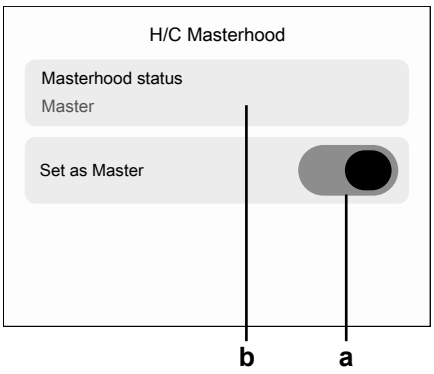
To release Cooling/Heating masterhood

Prerequisite: You are in the installer menu.

Prerequisite: You are operating the remote controller of the indoor unit that you want to release from its masterhood.

1 Go to `Controller settings` > `H/C Masterhood`.

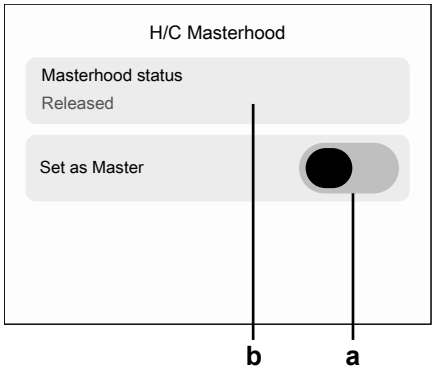
Result: The following screen is displayed.



a Toggle switch
b `Masterhood status` (`Master`)

2 Tap the toggle switch.

Result: The indoor unit is released from its masterhood.



a Toggle switch
b `Masterhood status` (`Released`)

Result: The remote controllers of all indoor units no longer display in the status bar. Any of the indoor units can now claim Heating/Cooling masterhood. For more information, see "To set Cooling/Heating masterhood" [▸ 94].

Switch master/slave controller

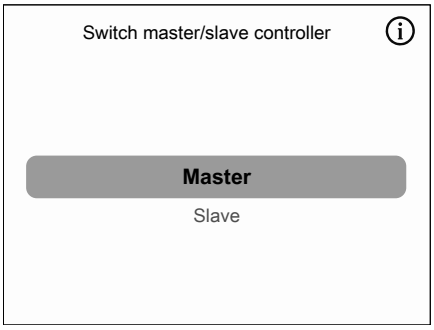
This function allows the remote controller role to be switched from `Master` to `Slave` or the other way around.

To switch the remote controller role

Prerequisite: You are in the installer menu.

1 Go to `Controller settings` > `Switch master/slave controller`.

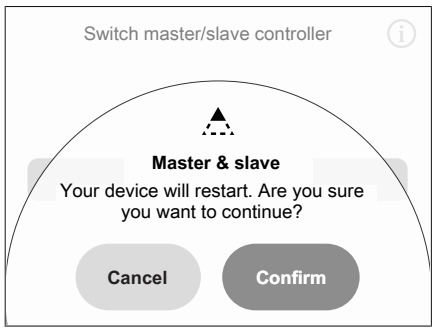
Result: The following screen is displayed.



2 Swipe up or down to scroll between roles.

3 With the desired role selected, press ↩ to confirm.

Result: A pop-up notification appears.



4 Tap `Confirm`.

Result: The remote controller restarts. After the restart, the remote controller role has been changed.

Setpoint range limit

This function allows you to configure minimum and maximum limits for the indoor unit temperature setpoint. When enabled, this function effectively limits which setpoint values can be set using the remote controller. The setpoint range limits ensure that the indoor temperature remains within a specified range at all times, in order to ensure maximum comfort and energy efficiency.

INFORMATION

If the system is under control of a centralised controller or a schedule, then the regular +3°C/–3°C setpoint range limits can get overruled or disabled.

INFORMATION

When the system configuration includes a slave remote controller, a change in any of the following settings will force a reboot of the slave remote controller in order maintain synchronisation with the master remote controller:

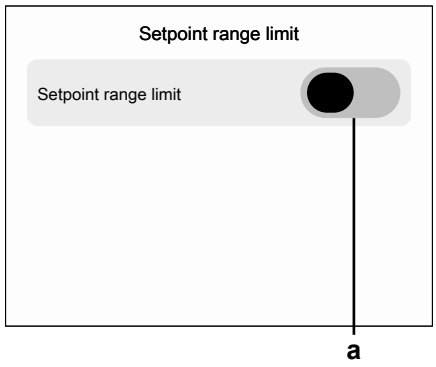
- Setpoint range limits
- Minimum setpoint differential (with Madoka Assistant app)
- Symbol view

To configure the setpoint range limit

Prerequisite: You are in the installer menu.

1 Go to `Controller settings` > `Setpoint range limit`.

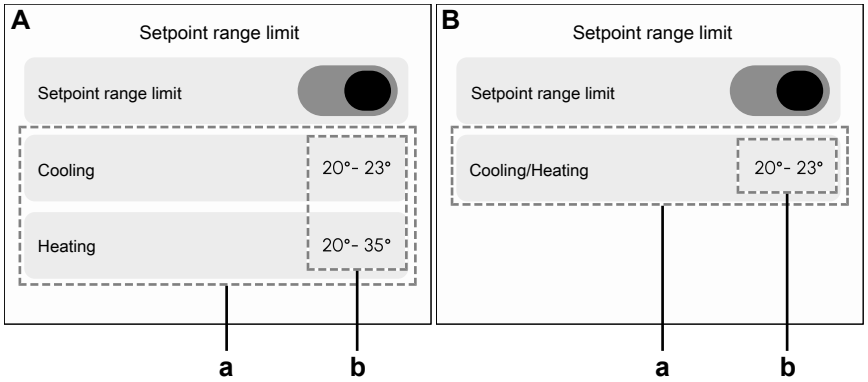
Result: The following screen is displayed.



a Toggle switch

2 Tap the toggle switch to enable the function.

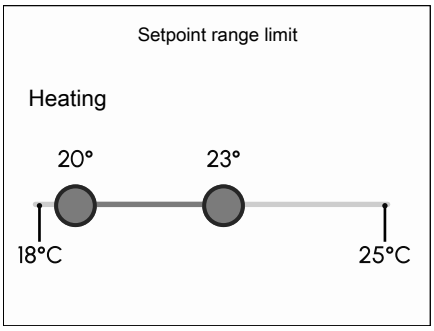
Result: Depending on the setpoint logic (single or dual setpoint), 1 or 2 additional options appear in the menu. For more information about the differences between different options, see "Setpoint logic" [▸ 125].



A In case of dual setpoint logic
B In case of single setpoint logic
a Configurable setpoint ranges
b Current setpoint range values

3 Tap an option to configure the setpoint range limit for that operation mode.

Result: The following screen is displayed (example: Heating).



4 Touch and drag the sliders left to lower, or right to increase the setpoint range limits (in °C).

5 Press ↩ to confirm.

6 In case of dual setpoint logic, also configure the setpoint range limit for the other operation mode.

External input interlock

About external input interlock

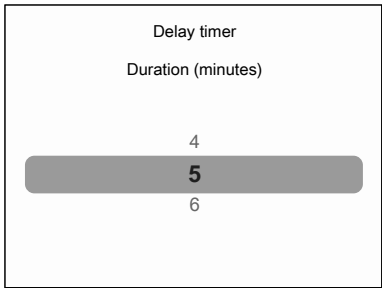
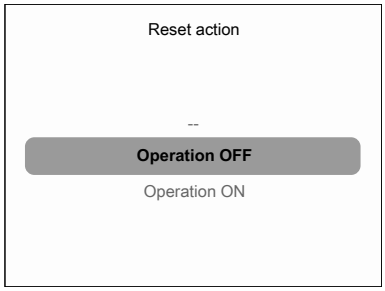
External input interlock allows for the integration of external contacts in the system's control logic. By adding a key card contact and/or a window contact to the control setup, it is possible to have the system respond to the insertion/removal of a key card in/from a card reader, and/or the opening/closing of windows.

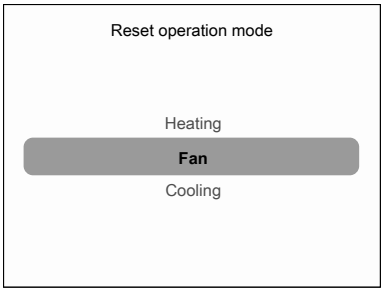
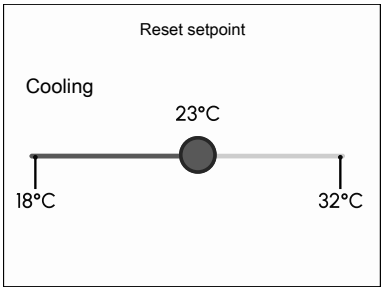
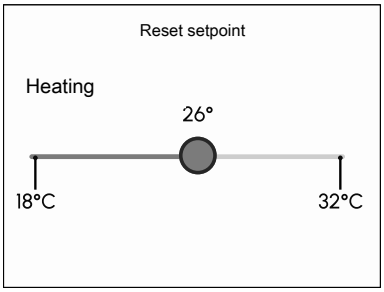
INFORMATION

To use this function, it is required that digital input adapter BRP7A5* is part of the system.

- Make sure that the digital input adapter and its optional contacts (window contact B1 and key card contact B2) are correctly installed. Confirm that the voltage free contact of the digital input adapter is in the correct position. For instructions on how to install the digital input adapter, see the installation manual of the digital input adapter.
- When the digital input adapter does not function properly, external input interlock is not available in the menu.
- When the digital input adapter is part of the system, the system does not allow for the connection of a slave controller.
- When the digital input adapter is part of the system, it is not possible to use the Schedule function.
- When the digital input adapter is part of the system, as well as a centralised controller, the external input interlock function is controlled by the centralised controller, and not by the adapter.

External input interlock settings overview

Parameter	Description	Possible values	Default value
`Delay timer` (B2) 	Timer that starts as soon as the key card is removed. The unit continues normal operation until the timer expires.	0~10 (minutes)	1
`Reset timer` (B2) 	Timer that starts as soon as the Delay timer expires. When this timer expires, the previous state (i.e. regular setpoint) changes to the **"Default Reset Setting"** state.	0~20 (hours)	20
`Reset action` 	**"Default Reset Setting"** on/off state	`Operation ON`, `Operation OFF`, --	`Operation OFF`

Parameter	Description	Possible values	Default value
`Reset operation mode` 	**"Default Reset Setting"** operation mode	Auto, Cooling, Heating, Fan only, --	--
`Reset setpoint` (Cooling) 	**"Default Reset Setting"** cooling setpoint	See indoor unit's setpoint range and setpoint range limitation,	22°C
`Reset setpoint` (Heating) 	**"Default Reset Setting"** heating setpoint	See indoor unit's setpoint range and setpoint range limitation, "--"	22°C

INFORMATION

When the value for a parameter is "- -", this means that when the timers expires, nothing changes for that parameter and the current active value is kept.

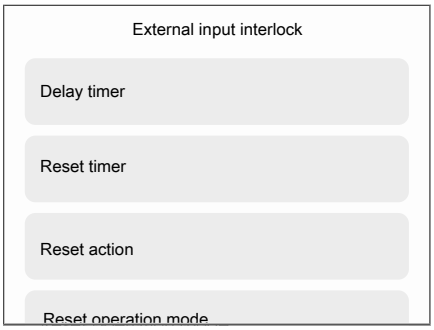
To make external input interlock settings

Delay timer, Reset timer, Reset action, Reset operation mode

Prerequisite: You are in the installer menu.

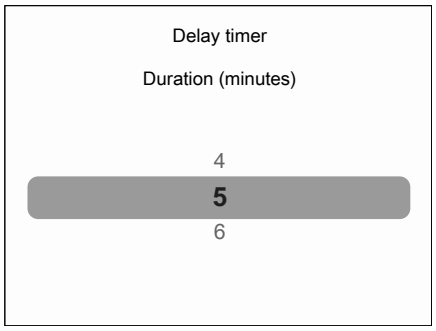
1 Go to `External input interlock`.

2 The following screen is displayed.



3 Swipe up or down to scroll through all available parameters in the menu. Then, tap a parameter to configure it.

4 Swipe up or down to select a value for the parameter (example: `Delay timer`).



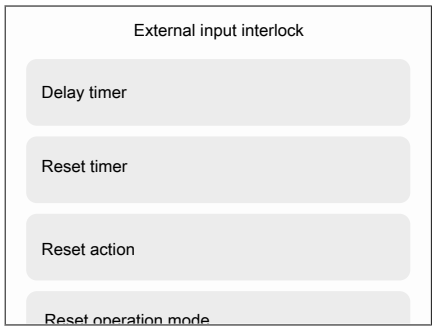
5 With the desired value selected, press ↩ to confirm.

Reset setpoint

Prerequisite: You are in the installer menu.

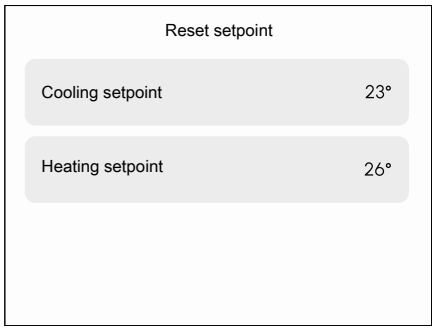
1 Go to `External input interlock`.

2 The following screen is displayed.



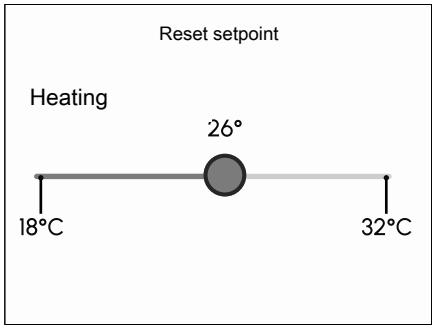
3 Tap `Reset setpoint`.

Result: The following screen is displayed.



4 Select the operation mode for which you want to configure the reset setpoint.

Result: The following screen is displayed.



5 Touch and drag the slider left to lower, or right to increase the setpoint value (example: heating).

6 Press ↩ to confirm.

INFORMATION

For an overview of settable parameters and what they mean, see "External input interlock settings overview" [▸ 99].

Window contact logic

Window contact B1	Key card contact B2	Time	Action
Contact closed (window closed)	Contact closed (key card IN)	—	▪ Normal indoor unit operation. ▪ The unit returns to the previous state before opening the contact.
Contact open (window open)	Contact closed (key card IN)	—	Unit operation is forced off: ▪ No delay and reset timer functionality. ▪ No Setback functionality. ▪ Not possible to turn on/off the unit with the controller's ON/OFF button.

Key card contact logic

Window contact B1	Key card contact B2	Time	Action
Contact closed (window closed)	Contact closed (key card IN)	▪ — ▪ Delay timer<Time<Reset timer ▪ Time>Reset timer	▪ The unit operates normally. ▪ If the reset timer has not expired, the unit returns to the previous state before opening the contact. ▪ If the reset timer has expired, the unit returns to the **"Default Reset Setting"** (see "External input interlock settings overview" [▸ 99]).
Contact closed (window closed)	Contact open (key card OUT)	Time<Delay timer	Normal indoor unit operation.

Window contact B1	Key card contact B2	Time	Action
Contact closed (window closed)	Contact open (key card OUT)	Time>Delay timer	Unit operation is forced off: ▪ Depending on whether the Setback function is enabled, Setback will work or not. ▪ Not possible to turn on/off the unit with the controller's ON/OFF button. ▪ After the delay timer has expired, the reset timer will start counting.

INFORMATION

- The "previous state" can be the on/off state, operation mode, cooling setpoint, and heating setpoint.
- When using the contacts, the fan speed as well as the Setback cooling and heating setpoints can be changed at any time, without losing changes.
- The fan speed is stored independently for the two main operation modes (Heating and Cooling). Separate fan speed settings are saved for Heating operation mode on the one hand, and Cooling, Dry and Fan only operation mode on the other hand.
- When closing the contact, changes made while the key card contact is open and the delay timer has not expired (normal operation) will not be saved.

Combination of window contact and key card contact logic

- The window contact has priority over the delay timer and the Setback functionality of the key card contact:

  When the window contact is opened while the key card contact is open, the delay timer will immediately expire if it is still running, and Setback will not work anymore. The reset timer will immediately start counting or will not reset when it was already running.
- The reset timer functionality of the key card contact has priority over the window contact when returning to the previous state:

  When the key card contact is opened while the window contact is open, the delay timer will start running. When the delay timer expires the reset timer will start running. When the reset timer expires, the previous state is updated to the "**Default Reset Setting**" state.

Example 1

1. You remove the key card.

   Result: The indoor unit continues operating normally until the delay timer expires.
2. You open the window before the delay timer expires.

   Result: The indoor unit stops immediately. It is not possible to turn the unit on or off, the Setback functionality does not work, the delay timer stops counting, and the reset timer starts counting.
3. You insert the key card again.

   Result: An update of the previous state occurs. The unit is forced off and the Setback functionality is still disabled (see "Window contact logic" [▸ 102]).

IF the reset timer HAS NOT expired before inserting the key card, the previous state is the same as the original state because there was only a change to the original state.

IF the reset timer HAS expired before inserting the key card, the previous state is the "**Default Reset Setting**" state.

4 You close the window.

Result: The unit reverts to the previous state. The previous state depends on the expiration of the reset timer.

Example 2

1 You open the window.

Result: The unit stops immediately. It is not possible to turn the unit on or off with the ON/OFF button, the Setback functionality does not work, and the delay timer does not start counting.

2 You remove the key card.

Result: The delay timer starts counting.

3 You close the window again.

Result: There is no change in state. It is as if you never opened the window (Setback will work if enabled).

IF the delay timer HAS expired before closing the window, the reset timer will have started counting. Closing the window has no influence on the reset timer.

IF the delay timer HAS NOT expired before closing the window, it will expire immediately and the reset timer will start counting. When the reset timer expires, the previous state is updated to the "Default Reset Setting" state.

4 You insert the key card again.

Result:

IF the reset timer HAS NOT expired before inserting the key card, the unit returns to the state before the window was opened (last "on" state);

IF the reset timer HAS expired before inserting the key card, the unit goes to the "Default Reset Setting" state.

Controller mode

Change the mode remote controller is set to be operable in.

Depending on the required configuration, the remote controller can be set to be operable in 1 of 3 different modes. Each mode offers different controller functionality.

Mode	Role	Functionality
Normal	▲	The controller is fully functional. All functionality described under "8 Operation" [▸ 19] is available. The controller can be a master or a slave controller.
	▲	

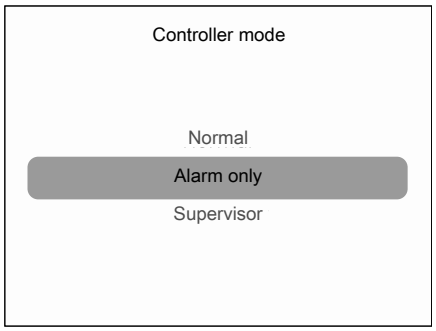
Mode	Role	Functionality
Alarm only		The controller only acts as leak detection alarm for a single indoor unit group, which consists of 1 or more indoor units. This mode is intended for a controller that is to be used in a location where end users are not intended to operate the controller, for example, a hospital room. No functionality described under "8 Operation" [▸ 19] is available. The controller can be a master or a slave controller. In this mode, the display is OFF. The installer menu remains accessible. For information on the leak detection alarm, see "12.3 Refrigerant leak detection" [▸ 135].
Supervisor		The controller only acts as leak detection alarm for the whole system (multiple indoor units and their respective controllers). This mode is intended for a controller that is to be used in a supervision location, for example, the reception desk of a hotel. No functionality described under "8 Operation" [▸ 19] is available. The controller can only be a slave controller. In this mode, the display is OFF. The installer menu remains accessible. For information on the leak detection alarm, see "12.3 Refrigerant leak detection" [▸ 135].

To change the controller mode

Prerequisite: You are in the installer menu.

1 Go to `Controller settings` > `Controller mode`.

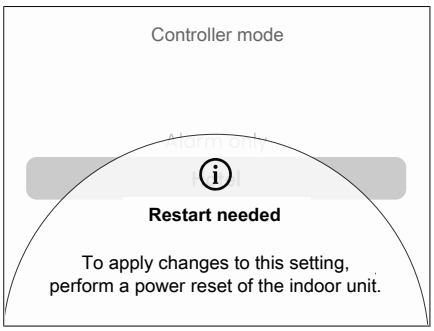
2 The following screen is displayed.



3 Swipe up or down to scroll between modes.

4 With the desired mode selected, press ↩ to confirm.

Result: A pop-up notification appears.



5 Perform a power reset of the indoor unit for the remote controller mode change to take effect.

Controller UI

This menu allows to set a theme for the user interface of the remote controller. Depending on the selected theme, more or less functionality is available. When the theme is set to `Minimal`, accessible functionality is restricted. The `Standard` theme offers all functionality without restrictions.

Only the following functionality is available or accessible when the theme is set to `Minimal`.

- Turning operation ON/OFF
- Changing the operation mode (or ventilation mode)
- Changing the setpoint
- Changing the fan speed (or ventilation rate)
- Changing the airflow direction

The `Minimal` theme is intended for use in spaces where the user only needs to be able to access essential functions, for example, hotel rooms or offices.

INFORMATION

When `Controller UI` is set to `Minimal`:

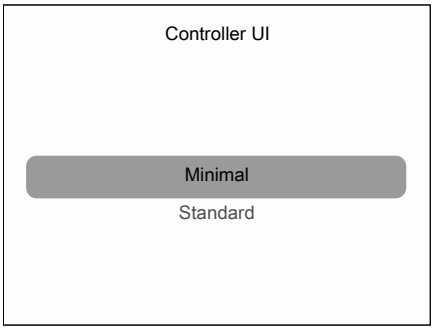
- The installer menu remains accessible.
- Pop-up notifications (e.g. for sensors, leak alarms, ...) can still appear on the home screen.
- The drop-down screen is not accessible, but notifications remain accessible by tapping in the status bar.
- No functions are accessible during test operation.

To change the controller theme

Prerequisite: You are in the installer menu.

1 Go to `Controller settings` > `Controller UI`.

2 The following screen is displayed.



3 Swipe up or down to scroll between themes.

4 With the desired theme selected, press ↩ to confirm.

Result: The controller UI changes.

Lock function

This function allows supervisors or building administrators to lock specific remote controller functionality, limiting which functions are accessible to end users. The following items are able to be locked:

Item	Details
Menu button (☰)	Locking the menu button prevents the user from entering the main menu. As a result, only the following actions remain available to the end user: ▪ Turning operation ON/OFF ▪ Adjusting the setpoint (when the operation mode is Cooling, Heating or Automatic) ▪ Changing the ventilation rate (only when the system is composed of ONLY ventilation units)
Operation modes	The following operation modes can be locked: ▪ Automatic ▪ Cooling ▪ Heating ▪ Fan only ▪ Dry ▪ Ventilation When operation modes are locked, they are hidden form the operation mode screen. When all operation modes are locked at the same time, the currently active operation mode remains active.

Item	Details
Functions	The following functions can be locked: ▪ Setpoint ▪ Operation mode ▪ Fan speed ▪ Airflow direction ▪ Turn system ON/OFF ▪ Setpoint range ▪ Setback ▪ Presence sensor – setpoint adjustment ▪ Presence sensor – Auto OFF ▪ Setpoint adjustment timer ▪ OFF timer ▪ Power consumption limit ▪ Schedule ▪ Filter auto clean (including test run) ▪ Date and time ▪ Draught prevention ▪ Airflow direction range ▪ Individual airflow direction ▪ Ventilation rate ▪ Ventilation mode ▪ Quiet operation ▪ Madoka Plus intelligent sensors Locked items remain visible, but are indicated by 🔒 in the user interface.

9.1.7 Bluetooth

The `Bluetooth` menu is used to enable Bluetooth connectivity on the remote controller in order to communicate with a mobile device, for use with the Madoka Assistant app.

INFORMATION

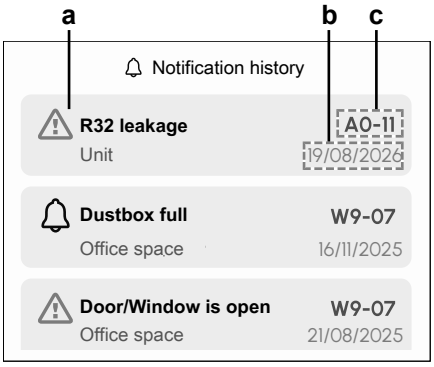
The Bluetooth menu is available to both end users and installers. Installers can access the Bluetooth menu by entering the installer menu first, which is required when the remote controller is in Alarm only or Supervisor mode.

Before the app can be used to make settings on the remote controller, the remote controller must be paired. For more information about the pairing procedure and other Bluetooth related actions, see:

- "10.2.2 To pair the app with a controller" [▸ 112]
- "10.2.3 To turn the Bluetooth connection ON or OFF" [▸ 113]
- "10.2.4 To remove bonding information" [▸ 114]

9.1.8 System info

The following items are available from the `System info` menu.

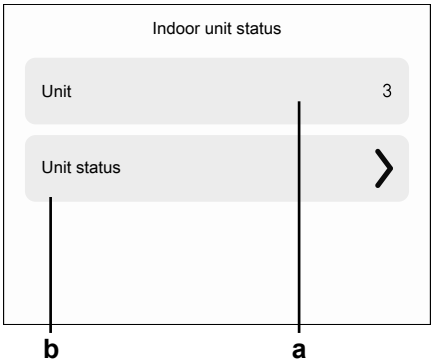
Item	Description
`Device information`	Displays the same information as **`Device information`** in the regular **`Information`** menu. See "8.11 Information" [▸ 72].
`Notification history`	Displays the same information as the notification overview in the regular **`Notifications`** menu. However, the installer can see when every notification occurred.  **a** Notification **b** Date when the notification occurred **c** Error code See "8.10 Notifications" [▸ 71] for more information.
`Indoor condition indication`	Allows the installer to view technical parameters of indoor units.

To view the indoor unit status

Prerequisite: You are in the installer menu.

1. In the installer menu, go to **`System info`**.
2. Tap .**`Indoor unit status`**

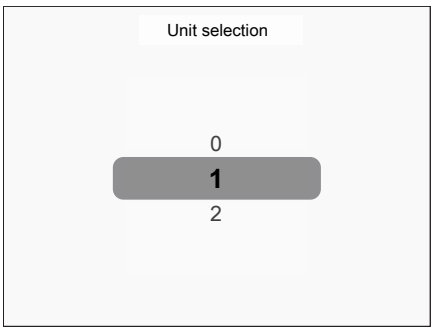
   Result: The following screen is displayed.



a **`Unit`** number (in the group)
b **`Unit status`**

3. Tap **`Unit`**.

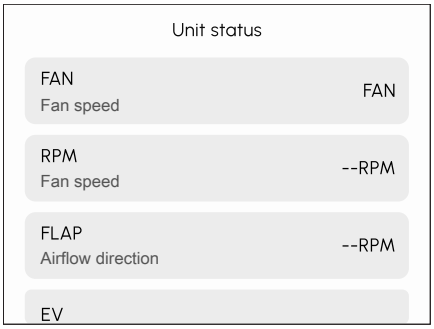
   Result: The following screen is displayed.



4 Swipe up or down to scroll between values (0~15).

5 With the desired unit selected, press ↩ to confirm.

6 Tap `Unit status` to view indoor unit parameters for the selected unit.



INFORMATION

For information about the meaning and possible values of all parameters, refer to the service manual of the unit.

INFORMATION

Depending on the type of unit, different parameters may be displayed.

9.2 Software update

9.2.1 About software updates

It is strongly recommended to run the latest software version available. The software update is performed using the Madoka Assistant app, which requires pairing the app to the remote controller first. For more information, see "10.2 Pairing" [▸ 112].

INFORMATION

- When the software of a remote controller is out-of-date, the Madoka Assistant app will suggest a software update for that remote controller as soon as you try to connect the remote controller to the app.
- Checking the current controller software version is possible from the information menu (see "8.11.1 About the information menu" [▸ 72]).

9.2.2 To perform a software update

INFORMATION

The software update process relies on a stable Bluetooth connection between a mobile device and the remote controller. A software update failure may be a result of an interruption of the Bluetooth communication. For common causes, see "12 Troubleshooting" [▸ 134].

Prerequisite: The remote controller is not running the latest version of the software.

Prerequisite: The remote controller has been paired with the Madoka Assistant app. See "10.2.2 To pair the app with a controller" [▸ 112] for more information.

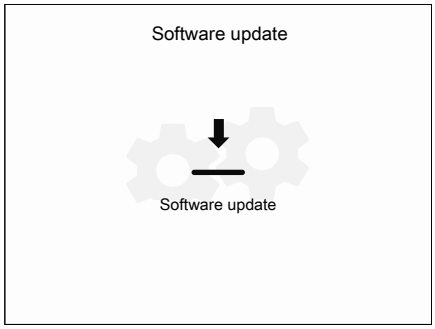
Prerequisite: Bluetooth connectivity is enabled on the remote controller (is displayed in the info bar on the home screen). See "10.2.3 To turn the Bluetooth connection ON or OFF" [▸ 113].

Prerequisite: Bluetooth connectivity is enabled on the mobile device.

1 Open the Madoka Assistant app on your mobile device.

2 On the home screen, tap the tile tap the tile of the remote controller for which you want to update the software, and follow the instructions from there.

Result: The software update starts. The remote controller screen displays the progress.



INFORMATION

The software update can also be started directly from the remote controller, provided that it is paired with the Madoka Assistant app and Bluetooth connectivity is enabled. Press and hold all 3 touch buttons on the remote controller simultaneously for 10 seconds in the following order: > > .

3 Once the update has completed, tap `Confirm`.

Result: The remote controller software is updated.

10 About the app

The Madoka Assistant app is a companion to the remote controller. Where the controller only allows for basic operation and configuration, the app offers advanced operation and configuration functionality.

10.1 Operation and configuration overview

The app continually searches for controllers to connect with. All controllers that are in range of your mobile device are listed in the home menu under Nearby Devices. You can also find a list of controllers you have recently interacted with under Recent Devices.

To operate and/or configure the system, tap the tile of the controller that is connected to the indoor units that you want to control.

INFORMATION

In installer mode, the "Recent devices" section is not shown. See "10.3 User access levels" [▸ 115] for more information.

10.2 Pairing

10.2.1 About pairing

Before you can actually connect with a controller, you have to make sure that the app and the controller are paired. Pair the app with all the controllers that you want to connect with.

10.2.2 To pair the app with a controller

Prerequisite: You have a mobile device on which the Madoka Assistant app is installed and running.

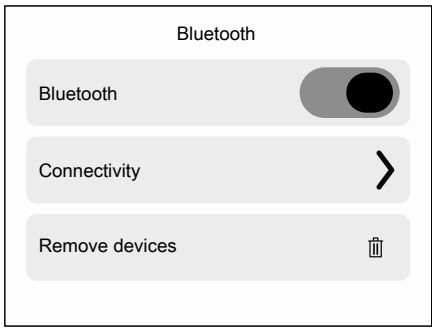
Prerequisite: On the mobile device, Bluetooth is turned ON.

Prerequisite: You are close to the remote controller (within 10 meter).

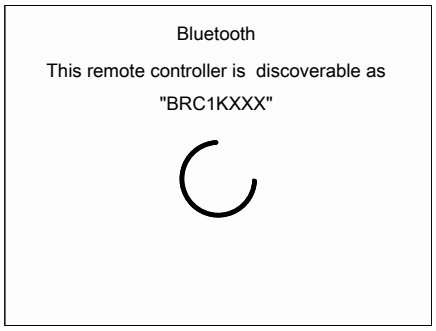
1 On the remote controller, enable Bluetooth. Depending on the mode the controller is set to be operable in, there are different ways of enabling Bluetooth connectivity:

- Normal mode: go to `User settings` > `Bluetooth`.
- Alarm only or Supervisor mode: enter the installer menu (see "To enter the installer menu" [▸ 78]) and go to `Bluetooth`.

2 In the `Bluetooth` menu, tap `Connectivity` to set the remote controller to advertising mode.



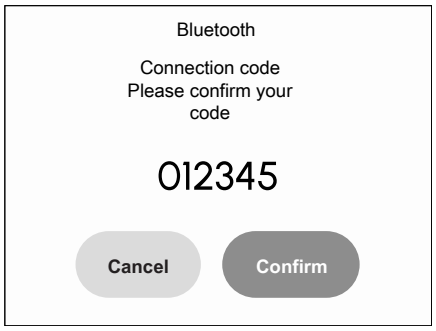
Result: The controller sends out a Bluetooth signal and advertises itself as "BRC1K".



3 In the Madoka Assistant app, find and tap the name of the remote controller.

Result: The operating system of your mobile device sends out a pairing request, which includes a numeric string.

Result: The controller displays a numeric string for comparison with that of the pairing request.



4 In the app, accept the pairing request.

5 On the controller, tap `Confirm` to accept the pair request.

Result: The app is paired with the controller.

INFORMATION

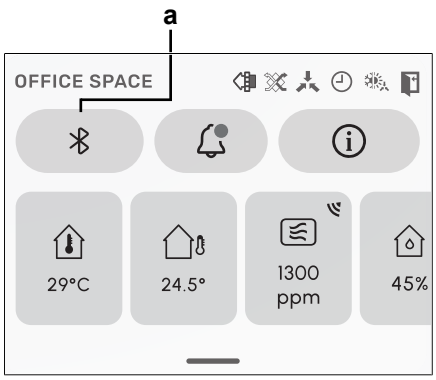
Once paired with the app, the controllers will remain bonded. It is not required to repeat this procedure each time you want to use the app, unless you delete the bonds.

10.2.3 To turn the Bluetooth connection ON or OFF

Via the drop-down screen

1 Open the drop-down screen. See "To access the drop-down screen" [▸ 29] for more information.

2 Tap the **Bluetooth** button to turn Bluetooth ON (ᛒ) or OFF (ᛒ).



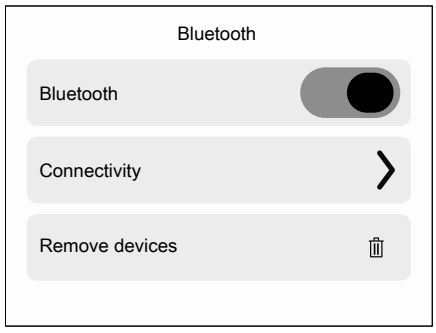
a **Bluetooth** button

Via the Bluetooth menu

3 Go to the **Bluetooth** menu. Depending on the mode the controller is set to be operable in, there are different ways to enter the menu:

- Normal mode: go to **User settings** > **Bluetooth**.
- Alarm only or Supervisor mode: enter the installer menu (see "To enter the installer menu" [▸ 78]) and go to **Bluetooth**.

4 In the **Bluetooth** menu, tap the toggle switch to turn Bluetooth ON or OFF.

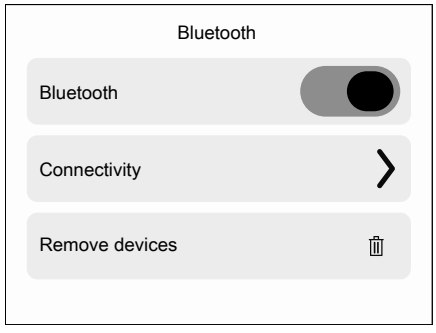


10.2.4 To remove bonding information

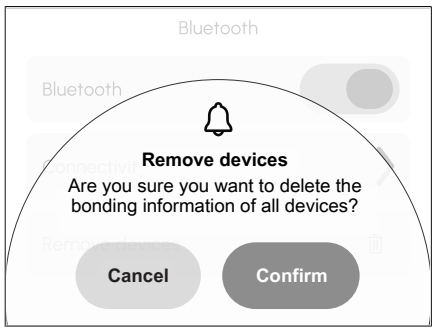
1 On the remote controller, go to the menu. Depending on the mode the controller is set to be operable in, there are different ways of reaching the menu:

- Normal mode: go to **User settings** > **Bluetooth**.
- Alarm only or Supervisor mode: enter the installer menu (see "To enter the installer menu" [▸ 78]) and go to **Bluetooth**.

2 In the **Bluetooth** menu, tap **Remove devices**.



3 Tap **Confirm** in the pop-up screen.



Result: The bonding information for all paired devices is removed.

10.3 User access levels

10.3.1 About user access levels

The user access level defines which functions and settings are visible to the user of the app. A higher user access level will allow the user to make more in-depth changes to advanced operation and configuration settings. There are 3 possible user access levels that correspond to 3 possible modes:

- Basic
- Advanced
- Installer

10.3.2 Basic mode

This mode allows the user to access all necessary basic settings. This mode is recommended for regular end users. When you first install the app, this mode is enabled by default. To change to a different mode, see "10.3.3 Advanced mode" [▸ 115] or "10.3.4 Installer mode" [▸ 116].

10.3.3 Advanced mode

About advanced mode

Advanced mode allows you to make in-depth changes to more advanced operation and configuration settings. Once enabled, you will be able to see and modify settings that, when misconfigured, may harm the working of your device. It is recommended that only advanced users enable this setting. For an overview of which settings can be made in advanced mode, see "10.5.1 Overview: Functions" [▸ 117].

To activate advanced mode

Prerequisite: You are not in advanced mode.

1. Go to the main menu.
2. Tap "App Settings ".
3. Tap "Advanced Settings".
4. Tap the switch to toggle on "Advanced Settings".
5. Confirm your selection by selecting "I understand" when asked.

Result: Advanced mode is activated. Advanced Settings are visible in the "Unit settings" menu.

To deactivate advanced mode

Prerequisite: You are in advanced mode.

1. Go to the main menu.
2. Tap "App Settings ".
3. Tap "Advanced Settings".
4. Tap the switch to toggle off "Advanced Settings".

Result: Advanced mode is deactivated. Advanced Settings are no longer visible in the "Unit settings" menu.

10.3.4 Installer mode

About installer mode

In installer mode you have access to settings that are not available for regular end users or advanced users. For an overview of which settings can only be made in installer mode, see "10.5.1 Overview: Functions" [▶ 117].

To activate Installer mode

Prerequisite: You are not in installer mode.

1. Go to the main menu.
2. Tap "About".
3. Tap "Application version" five times.

Result: You are in the installer mode menu.

Result: Installer mode is automatically activated.

INFORMATION

- To continue using the app in installer mode, tap the return button.
- The duration of installer mode depends on installer mode settings. For more information, see "To make Installer mode settings" [▶ 116].
- There is a visual indication that installer mode is active, which can be disabled. For more information, see "To make Installer mode settings" [▶ 116].

To deactivate Installer mode

Prerequisite: You are in installer mode.

1. Go to the main menu.
2. Tap "Installer mode enabled".

   Result: You are in the installer mode menu.

   Result: Installer mode is automatically activated.
3. Deactivate installer mode by tapping the slider.

Result: Installer mode is deactivated.

To make Installer mode settings

1. Enable installer mode.

   Result: You are in the installer mode menu.
2. Make installer mode settings.

Installer mode settings	Description
Installer mode	Enable or disable installer mode.
Temporary / Indefinite	Set the duration of installer mode. ▪ Temporary: installer mode active for 30 minutes. After 30 minutes, installer mode will automatically deactivate. (default) ▪ Indefinite: installer mode active until the next manual deactivation.
Installer mode indicator	Set whether installer mode activation is indicated by the installer mode indicator.

INFORMATION

Mind that installer mode is automatically enabled as soon as you enter the installer mode menu.

10.4 Demo mode

10.4.1 About demo mode

To try out the app's operation and configuration functions in a safe environment, it is possible to launch a demo version of the app.

10.4.2 To launch demo mode

Prerequisite: You are not in demo mode.

1. Go to the main menu.
2. Tap "Demo mode".

Result: You are in demo mode.

10.4.3 To exit demo mode

Prerequisite: You are in demo mode.

1. Go to the main menu.
2. Tap "Exit demo mode".

Result: You exited demo mode.

10.5 Functions

10.5.1 Overview: Functions

NOTICE

Depending on the user access level, more or less settings may be visible in the unit settings menu. See "10.3 User access levels" [▸ 115] for more information about changing modes.

INFORMATION

Settings can be saved as favourites by tapping the star symbol in the top-right corner in the menu of a specific setting. These settings are then displayed at the top of the unit settings menu, making them more easily accessible.

Category	Control
Operation	Turn ON/OFF unit operation
	Read out temperature sensor information
	Change the operation mode
	Change the setpoint
	Change the fan speed
	Change the ventilation mode
	Change the ventilation rate
	Change the airflow direction
	See notifications
Configuration and advanced operation	Make controller and indoor unit settings: **General** ▪ Firmware update ▪ Notifications **Remote controller settings** ▪ Master/slave status[a] ▪ Screen[a] - Home screen setpoint: Numerical or Symbolic ▪ Status indicator[a] ▪ Date and time[a] ▪ About ▪ Remove bonding information[a] **Energy saving** ▪ Presence detection[a] ▪ OFF timer[a] ▪ Energy consumption ▪ Power consumption limit[b] ▪ Setpoint auto reset[a] >> to be continued

[a] Available in advanced or installer mode only. For more information, see "10.3.3 Advanced mode" [▸ 115] and "10.3.4 Installer mode" [▸ 116].

[b] Available in installer mode only. For more information, see "10.3.4 Installer mode" [▸ 116].

Category	Control
<< continuation Configuration and advanced operation	**Scheduling** ▪ Schedule ▪ Holiday **Configuration and operation** ▪ Setpoint logic[a] - Single setpoint or Dual setpoint ▪ Setback[a] ▪ Individual airflow direction[a] ▪ Active airflow circulation[a] ▪ Setpoint range[a] ▪ Cooling/Heating masterhood[a] ▪ Airflow direction range[a] ▪ Draught prevention[a] ▪ Quick start[a] ▪ Defrost operation[a] ▪ Function lock[a] ▪ Quiet mode[a] ▪ External input interlock[a] **Maintenance** ▪ R32 refrigerant settings[a] - R32 refrigerant system settings - Supervised room address ▪ Errors and warnings[b] ▪ Unit number[b] ▪ Filter auto clean[a] ▪ Filter notifications[a] ▪ Contact information ▪ AirNet address[b] ▪ Group address[b] ▪ Field settings[b] ▪ Duty rotation [b] ▪ Test operation[b] ▪ Unit status[b] ▪ Operating hours[b]

[a] Available in advanced or installer mode only. For more information, see "10.3.3 Advanced mode" [▶ 115] and "10.3.4 Installer mode" [▶ 116].

[b] Available in installer mode only. For more information, see "10.3.4 Installer mode" [▶ 116].

10.5.2 General

Remote controller firmware update

Update remote controller firmware. It is required to keep remote controller firmware up to date. When new firmware is available for a controller, the app will send out a notification in the operation screen of that controller.

To update remote controller firmware

The "Firmware update" menu allows you to perform an update to the software of the remote controller. For more detailed instructions, follow the steps in "9.2.2 To perform a software update" [▸ 111].

Notifications

Get an overview of active system notifications. These can be:

- Errors
- Warnings
- System information

10.5.3 Setting migration

Some functions allow you to save settings to your mobile device, and load them to other remote controllers. This is useful in case you have to make the same settings for multiple controllers.

When you are finished making settings on one controller, choose to save them to your mobile device. After saving, connect the app to another controller, go to the applicable setting, and tap "Load configuration".

The following Madoka Assistant app functions allow you to save and load settings:

- Schedule
- Setback
- Setpoint range
- Field settings
- Power consumption limit

10.5.4 Remote controller settings

Master/slave status

Find out if the controller you are operating is a master or a slave controller. It is not possible to make changes to master/slave status from the app. For instructions on how to change a controller's master/slave status, see "7 Starting up the system" [▸ 16].

Screen

Make remote controller screen settings:

Setting	Description
Home screen mode	Set the home screen mode: ▪ Standard: limited information about system operation (few status icons). ▪ Detailed: extensive information about system operation through status icons.
Home screen setpoint	Set how the home screen displays the setpoint: ▪ Numerical: by way of a numerical value. ▪ Symbolic: by way of a symbol. In case "Home screen setpoint " is set to "Symbolic", set the reference setpoints for both Cooling and Heating operation: ▪ Cooling reference setpoint ▪ Heating reference setpoint For more information, see "Home screen setpoint: Symbolic" [▸ 36].
Brightness	Set screen brightness.
Contrast	Set screen contrast.

INFORMATION

When making remote controller screen settings from the app, it is possible that the remote controller does not implement changes immediately. To make the controller implement changes: on the controller, navigate to the installer menu, and then back to the home screen. For instructions on how to enter the installer menu, see "To enter the installer menu" [▸ 78].

Status indicator

Make remote controller status indicator settings:

Settings	Description
Mode	Check the active status indicator mode. It is not possible to set the status indicator mode from the app; this happens through remote controller field setting R1-11. For more information, see "Remote controller field settings" [▸ 82].
Intensity	Set status indicator intensity.

Date and time

Set the remote controller date and time. In the date and time menu you send date and time information to the remote controller from the app. You can choose to either send the date and time information of your mobile device ("Synchronise with device date and time"), or to manually create and send date and time information.

INFORMATION

If the controller is disconnected from the power for more than 48 hours, the date and the time need to be set again.

INFORMATION

The clock will maintain accuracy to within 30 seconds/month.

INFORMATION

The toggle switch to that enables daylight savings time acts on field setting 1b-08 of the remote controller. When enabled, the value for 1b-08 is set to 2 (automatic changeover). When not enabled, the value for 1b-08 is set to 1 (disabled). Unlike what is possible via the user interface on the remote controller (see "8.7.2 Time" [▸ 44]), the changeover cannot be set to manual.

About

Read out the current remote controller and remote controller Bluetooth module software version.

Remove bonding information

Make the controller forget all previously bonded mobile devices.

10.5.5 Energy saving

Presence detection

Set a timer for the system to adjust the temperature setpoint or to turn off automatically, based on (the lack of) presence detected by a motion sensor.

Action	Description
Auto OFF	Set an OFF timer that starts running as soon as the motion sensor detects the room is unoccupied.
Setpoint adjustment	Set setpoint adjustment increments and intervals for both heating and cooling operation. When the motion sensor detects the room is unoccupied, the system will raise (cooling operation) or lower (heating operation) the setpoint, until the set limit is reached.

INFORMATION

To use this function, it is required that the indoor units are equipped with a motion sensor (optional accessory). The Madoka Plus intelligent sensor (WLPIR) is NOT compatible with this function.

INFORMATION

This function cannot be used when the indoor units are controlled by a centralised controller.

INFORMATION

This function is not supported when the system contains Sky Air RR or RQ outdoor units.

INFORMATION

This function cannot be used when the indoor units are in group control.

INFORMATION

For systems in which the indoor units run in simultaneous operation, this function is controlled by the motion sensor mounted in the master indoor unit.

OFF timer

Set a timer for the system to turn OFF automatically. The timer can be enabled or disabled. When the timer is enabled, it starts running each time the system gets turned ON.

The timer has a range of 30~180 minutes, and can be set in increments of 30 minutes.

Energy consumption

See and compare energy consumption data.

INFORMATION

The availability of this function depends on the type of indoor unit.

INFORMATION

This function cannot be used when the indoor units are in group control.

INFORMATION

This function is not supported when the system contains Sky Air RR or RQ outdoor units.

INFORMATION

The displayed energy consumption can be different from the actual energy consumption. The displayed data is not the result of a kWh measurement, but the result of a calculation based on measured operation data. Some of that operation data are absolute values, but some are interpolations, including room for interpolation tolerance.

Power consumption limit

Set a timespan in which the system limits its peak power consumption. When enabled, this function makes the outdoor unit operate with limited energy consumption (70% or 40% of usual consumption) in the set timespan.

INFORMATION

The availability of this function depends on the type of outdoor unit.

Setpoint auto reset

Set a timer for the system to automatically adjust the temperature to a set temperature value. The timer can be enabled or disabled for Heating and Cooling operation separately. When a timer is enabled, it starts running each time the system gets turned ON. When the timer runs out, the temperature setpoint will always change to the set value, also if the temperature setpoint has been changed in the meanwhile.

The timer has a range of 30~120 minutes, and can be set in increments of 30 minutes.

INFORMATION

This function is not advised to be used when the indoor units are controlled by a centralised controller.

10.5.6 Scheduling

Schedule

Organise system actions into schedules. The schedule function allows you to set up to 5 timed actions for each day of the week. It is possible to create up to 3 different schedules, though only 1 schedule can be active at the same time.

Each schedule has a base schedule associated to it. When no actions are set in the schedule, and the schedule is active, the base schedule actions are triggered instead.

Example: a schedule contains an action of which the timespan is set to 14:00-15:00. The schedule is active, but no other actions are defined in the schedule. During the time where no actions are defined, the schedule falls back to the base schedule.

The action logic is as follows:

1 Set a timespan for the action.
2 Choose to turn system operation ON or OFF, and set the conditions.
3 Choose to turn system operation ON or OFF, and set the conditions for the base schedule.

IF "Operation"	THEN
ON	Set action-specific temperature setpoints for Cooling and/or Heating operation, or choose to maintain the current setpoints.
OFF	Set action-specific Setback setpoints for Cooling and/or Heating setback operation, or choose to maintain the current setpoints. For more information, see "Setback" [▸ 126]. **Note:** when adding or editing schedule actions, the Setback setpoints for Cooling and/or Heating can be modified. However, the Setback setpoints will only be taken into account if Setback operation is enabled. Modifying the Setback setpoints from the Add action screen does NOT enable Setback operation automatically.

INFORMATION

If the "Home screen setpoint" setting is set to "Symbolic", there is only a limited range of possible temperature setpoints. However, if "Home screen setpoint" is set to "Symbolic", and there is a setpoint change coming from a schedule, then the system will disregard the regular setpoint limitations and allow the schedule to exceed the limited setpoint range. For more information, see "Home screen setpoint: Symbolic" [▸ 36].

INFORMATION

This function cannot be used when the indoor units are controlled by a centralised controller.

INFORMATION

This function cannot be used when digital input adapter BRP7A5* is part of the system.

Holiday

Select days of the week for which the schedule does not apply. On the selected days, any actions set with the schedule function do not get executed. The holiday function can be enabled or disabled. When enabled, it applies to any schedule that is set to be active.

INFORMATION

For more information, see "Schedule" [▶ 124].

10.5.7 Configuration and operation

Setpoint logic

Set up the setpoint logic. Choose whether the setpoint logic is executed by the indoor unit, or by the remote controller.

Setpoint logic	Description
Indoor unit	The setpoint logic is executed by the indoor unit.
Remote controller	The setpoint logic is executed by the remote controller.

In case of remote controller setpoint logic, choose whether to have single setpoint logic, or dual setpoint logic.

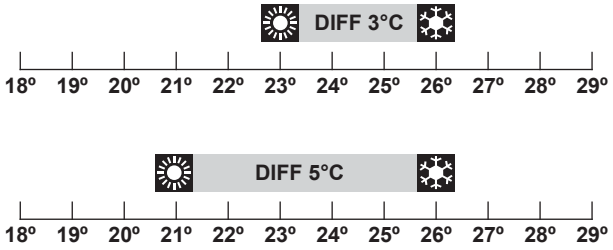
Remote controller setpoint logic	Description
Single setpoint	There is only one temperature setpoint, independent of the operation mode. If this is the case, changing the operation mode does NOT change the setpoint. Or the other way around, if you change the setpoint, you do so for both Cooling and Heating operation.
Dual setpoint	There are two temperature setpoints: one specifically for Cooling operation, and one specifically for Heating operation. If this is the case, changing the operation mode DOES change the setpoint (i.e. to the setpoint of the other operation mode). Or the other way around, if you change the Cooling setpoint, you do NOT change the Heating setpoint.

In case of dual setpoint logic, set the Minimum setpoint differential. This is the minimum difference between the possible setpoints for Cooling and Heating operation:

- Cooling setpoint ≥ (Heating setpoint + Minimum setpoint differential)
- Heating setpoint ≤ (Cooling setpoint – Minimum setpoint differential)

This means that:

- If you lower the Cooling setpoint < (Heating setpoint + Minimum setpoint differential), then the controller will automatically lower the Heating setpoint.
- If you raise the Heating setpoint > (Cooling setpoint – Minimum setpoint differential), then the controller will automatically raise the Cooling setpoint.



DIFF Minimum setpoint differential

INFORMATION

When the minimum setpoint differential is changed in the Madoka Assistant app, this may not always be reflected in the setpoint range limits on the remote controller.

INFORMATION

When the system is controlled by central control equipment, control of the system by the controller is limited. When this is the case, it is not possible to set dual setpoint logic in the Madoka Assistant app.

INFORMATION

When the indoor units are under control of a centralised controller, only indoor unit setpoint logic is possible.

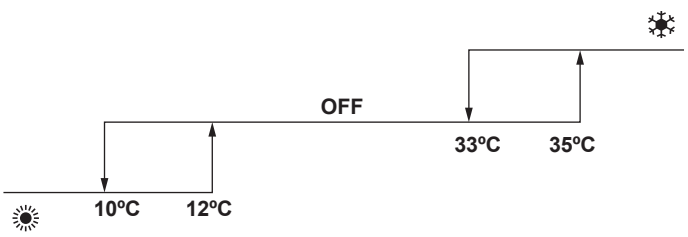
INFORMATION

In case of indoor unit setpoint logic, the system cannot run in Auto operation mode. To enable Auto operation mode for VRV heat pump systems, go for remote controller setpoint logic.

Setback

Setback is a function that keeps the room temperature in a specific range when the system is turned off (by the user, the schedule function, or the OFF timer). To achieve this, the system temporarily runs in Heating or Cooling operation mode, according to the setback setpoint and recovery differential.

Example:



Settings			Result
Heating operation	Heating setback setpoint	10°C	If the room temperature drops below 10°C, the system automatically starts heating operation. If after 30 minutes the temperature rises above 12°C, the system stops heating operation, and turns off again. When the room temperature drops below 10°C again, the process gets repeated.
	Heating recovery differential	+2°C	
Cooling operation	Cooling setback setpoint	35°C	If the room temperature rises above 35°C, the system automatically starts cooling operation. If after 30 minutes the temperature drops below 33°C, the system stops cooling operation, and turns off again. When the room temperature rises above 35°C again, the process gets repeated.
	Cooling recovery differential	–2°C	

INFORMATION

- Setback is by default enabled.
- Setback turns on the system for at least 30 minutes, unless the setback setpoint is changed, or the system is turned on with the ON/OFF button.
- When Setback is active, you cannot make changes to fan speed settings.
- When Setback activates while the system is set to Auto operation mode, the system will switch to Cooling or Heating operation mode, depending on which is required. The Setback setpoint displayed on the operation screen is then according to the operation mode.
- When Setback is active and the "Home screen setpoint" setting is set to "Symbolic", then there is no indication of Setback operation on the remote controller home screen.

INFORMATION

This function cannot be used when the indoor units are controlled by a centralised controller.

INFORMATION

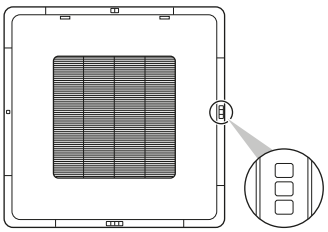
The default setpoint range limits for Setback operation are [33°C-37°C] for Cooling operation, and [10°C-15°C] for Heating operation. It is not possible to change these limits.

Individual airflow direction

Set the airflow direction of each individual indoor unit air outlet. The maximum number of indoor units for which you can make these settings depends on the type of system:

System	Maximum number of indoor units
Sky Air	4
VRV	16

Of cassette-type indoor units, it is possible to identify the individual air outlets by way of the following indicators:



INFORMATION

The availability of this function depends on the type of indoor unit.

Setpoint range

Set a limitation to the temperature setpoint range of both Cooling and Heating operation.

INFORMATION

This function cannot be used when the indoor units are controlled by a centralised controller.

INFORMATION

The default setpoint range limits for both Heating and Cooling operation is [16°C-32°C], regardless of whether or not "Setpoint range limitation" is enabled. It is not possible to exceed these limits.

INFORMATION

When the remote controller detects that the indoor unit changes the setpoint to a value outside of the setpoint range 3 consecutive times, the remote controller will disable its own setpoint range to prevent continuous setpoint changes.

Active airflow circulation

Enable Active airflow circulation to have a more even temperature distribution in the room.

When Active airflow circulation is enabled, indoor unit fan speed and airflow direction get controlled automatically, making manual fan speed and airflow direction changes impossible.

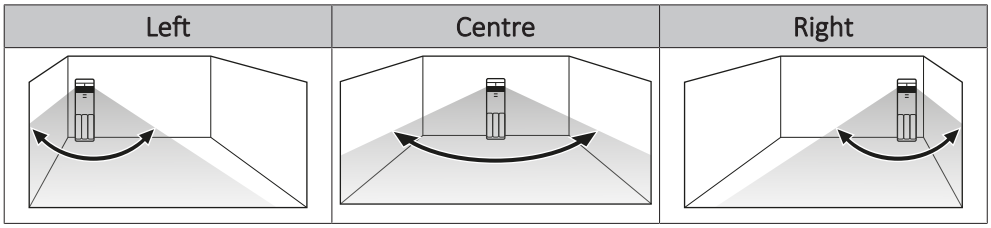
Cooling/Heating masterhood

Set an indoor unit (or group of indoor units) as Cooling/Heating master. When multiple indoor units are connected to an outdoor unit, one of these units (or a group of indoor units, in case of group control) needs to be set as Cooling/Heating master. The other units/groups then become Cooling/Heating slaves, and are restricted in their operation by the master (e.g. one outdoor unit does not allow for one indoor unit to run in Cooling operation while another runs in Heating operation).

When an indoor unit or group of indoor units is set as Cooling/Heating master, the other units/groups automatically become its slaves. To turn a slave unit into the master, first connect the app to the controller controlling the currently active master and release it from its masterhood, then set the (slave) unit as master.

Airflow direction range

Set the indoor unit airflow direction range according to the installation location. This function is available for floorstanding indoor units only. The maximum number of indoor units for which you can make these settings is 16.



INFORMATION

The availability of this function depends on the type of indoor unit.

INFORMATION

For systems in which the indoor units run in simultaneous operation, it is possible to set the airflow direction range of individual indoor units by connecting the controller to each indoor unit separately.

Draught prevention

Prevent people from getting affected by indoor unit airflow, based on (the lack of) presence detected by a motion sensor.

INFORMATION

To use this function, it is required that the indoor units are equipped with a motion sensor (optional accessory). The Madoka Plus intelligent sensor (WLPIR) is NOT compatible with this function.

INFORMATION

This function is not supported when the system contains Sky Air RR or RQ outdoor units.

Quick start

Activate Quick start to quickly bring the room to a comfortable temperature.

When Quick start is active, the outdoor unit operates with increased capacity. Indoor unit fan speed gets controlled automatically, making manual fan speed changes impossible.

After activation, Quick start is active up to 30 minutes. After 30 minutes, Quick start automatically deactivates, and the system resumes normal operation. Additionally, Quick start will deactivate from the moment you change the operation mode manually.

Quick start can ONLY be activated when the system is running in Cooling, Heating, or Auto operation mode.

INFORMATION

This function is only available for Sky Air indoor units.

INFORMATION

This function is not supported when the system contains Sky Air RR or RQ outdoor units.

Defrost operation

Make the system run in defrost operation mode, this to prevent the loss of heating capacity due to frost accumulation in the outdoor unit.

INFORMATION

The system will return to normal operation after approximately 6 to 8 minutes.

Function lock

Make functions and operation modes unavailable by locking them, or release a function lock if it is no longer required. It is possible to lock the following functions and operation modes:

INFORMATION

- When you lock an operation mode that is active at the moment of locking, that mode will still be active upon saving settings and leaving the menu. Only when you change the operation mode, that mode will not be available anymore.
- When you lock ALL operation modes, it will not be possible to switch to an operation mode other than the one that is active at the moment of locking.

Remote controller

Locking functions and operation modes from the app results in changes on the remote controller.

Quiet mode

Set a timespan in which the outdoor unit operates more quietly.

INFORMATION

The availability of this function depends on the type of outdoor unit.

External input interlock

External input interlock allows for the integration of external contacts in the system's control logic. By adding a key card contact and/or a window contact to the control setup, it is possible to have the system respond to the insertion/removal of a key card in/from a card reader, and/or the opening/closing of windows.

For more information, see "About external input interlock" [▸ 98].

INFORMATION

To use this function, it is required that digital input adapter BRP7A5* is part of the system.

- Make sure that the digital input adapter and its optional contacts (window contact B1 and key card contact B2) are correctly installed. Confirm that the voltage free contact of the digital input adapter is in the correct position. For instructions on how to install the digital input adapter, see the installation manual of the digital input adapter.
- When the digital input adapter does not function properly, external input interlock is not available in the menu.
- When the digital input adapter is part of the system, the system does not allow for the connection of a slave controller.
- When the digital input adapter is part of the system, it is not possible to use the Schedule function.
- When the digital input adapter is part of the system, as well as a centralised controller, the external input interlock function is controlled by the centralised controller, and not by the adapter.

11 Maintenance

11.1 Maintenance safety precautions

WARNING

Before carrying out any maintenance or repair activities, stop system operation with the controller, and turn off the power supply circuit breaker. **Possible consequence:** electrical shock or injury.

NOTICE

To clean the controller, do NOT use organic solvents, such as paint thinner. **Possible consequence:** damage, electrical shock, or fire.

WARNING

Do NOT wash the remote controller. **Possible consequence:** electric leakage, electrical shock, or fire.

INFORMATION

When the dirt on the surface cannot be removed easily while cleaning the controller, soak the cloth in neutral detergent diluted with water, squeeze the cloth tightly, and clean the surface. Afterwards, wipe dry with a dry cloth.

NOTICE

NEVER inspect or service the unit by yourself. Ask a qualified service person to perform this work. However, as end user, you may clean the air filter and empty the dust box of the unit yourself.

11.2 Overview: Maintenance and service

As an end user, when system components need maintenance or service, consult your dealer.

To indicate that maintenance is due, the controller displays on the home screen, and/or displays a notification pop-up as soon as you enter the main menu from the home screen. You can also view both pending notifications and the notification history in the dedicated menu. See "8.10 Notifications" [▸ 71] for more information. For specific notifications related to the maintenance of indoor units, see "11.4 Indoor unit maintenance" [▸ 133].

11.3 To clean the controller

1. Press and hold on the remote controller for a few seconds.

   Result: The task manager menu opens.

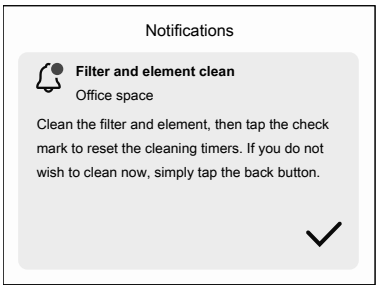
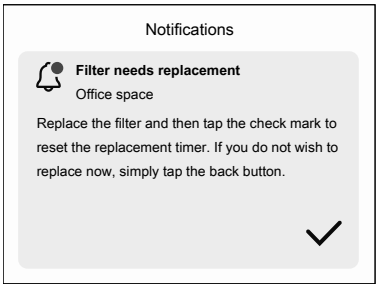
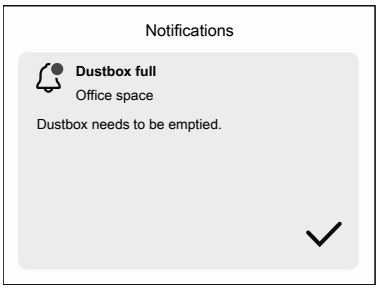
2. Tap `Clean screen`.

   Result: The touch screen and touch buttons of the remote controller become locked for 5 seconds.

3. Wipe the screen and other surface parts of the controller with a dry cloth.

11.4 Indoor unit maintenance

When the indoor unit requires maintenance, a notification can appear to serve as a reminder. The following notification screens are related to indoor unit maintenance:

Screen	Actions to undertake
	Clean the indoor unit filter, element, or both according to the instructions in the documentation of the indoor unit. After cleaning the filter, element, or both, tap ✓ to reset the cleaning timer.
	Replace the indoor unit filter according to the instructions in the documentation of the indoor unit. After the replacement filter has been installed, tap ✓ on the remote controller display to reset the cleaning timer.
	Empty the indoor unit dust box according to the instructions in the documentation of the indoor unit. After emptying the dust box, tap ✓ to dismiss the notification.

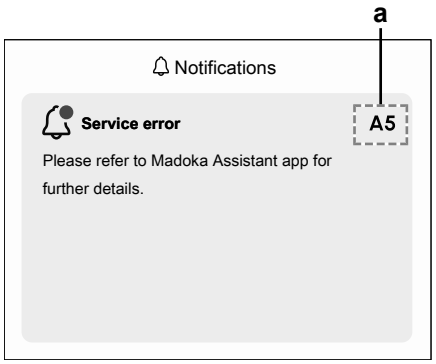
INFORMATION

Maintenance notifications for cleaning and replacing the filter or the element can be dismissed before the maintenance activity has been performed. When the notification is dismissed, the maintenance timer is reset, regardless of whether the maintenance has already been performed. Only dismiss maintenance notifications after the required maintenance activity has been performed, unless instructed otherwise by an installer.

12 Troubleshooting

12.1 Error handling

When the system is in error, the controller displays on the home screen, and an error notification is displayed. The notification can be viewed from the notifications menu (see "8.10 Notifications" [▶ 71] for more information).



a Error code

When an error occurs, the error code is displayed in the top right corner of the screen. Refer to the Madoka Assistant for more details about the error code. For a full list of error codes and their meaning, see the service manual of the unit. Once the system has recovered from the error, the notification will disappear by itself.

NOTICE

Some notifications related to sensors and maintenance are able to be dismissed. In case of a refrigerant leak notification, dismissing the notification will only mute the buzzer alarm. Normal error notifications are not able to be dismissed for as long as the underlying issue is present. The error notification will disappear by itself when the system recovers by itself or when the underlying issue has been resolved.

12.2 Initialisation errors

U5 transmission error

Possible cause	Corrective action
More than 1 remote controller in the system has the master role.	Change the role of the remote controller to slave so that there is only 1 master remote controller.
Wiring problem between remote controller and indoor unit	Verify that the P1P2 wiring between the remote controller and the unit follows the requirements as described in "5.1 Wiring requirements" [▶ 9].

U8 transmission error

Possible cause	Corrective action
Wiring problem between master remote controller and slave remote controller.	Verify that the P1P2 wiring between the remote controllers follows the requirements as described in "5.1 Wiring requirements" [▸ 9].
The system only contains a single slave remote controller.	Change the role of the remote controller to master.

UA transmission error

Possible cause	Corrective action
More than 16 indoor units are connected.	Reduce the number of connected indoor units to 16 or less.
Improper combination of indoor and outdoor unit	Verify that there is no refrigerant type mismatch.
Wiring problem	Verify that the wiring of the unit groups (Sky Air) is performed correctly..

12.3 Refrigerant leak detection

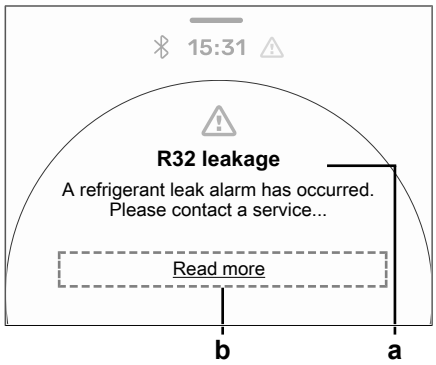
When the system detects a refrigerant leak, an alarm goes off on the controller, and the Madoka Assistant app sends out a notification. Stop the alarm and dismiss the notification.

12.3.1 About refrigerant leak detection

The information that the controller displays in case of a refrigerant leak depends on the mode that the controller is set to be operable in.

Normal and Alarm only mode

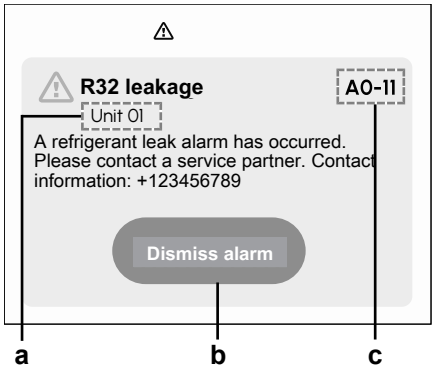
The controller displays the unit number of the leaking indoor unit in a pop-up. The Daikin eye blinks red and the buzzer alarm is sounding. To display more information, `Read more` can be tapped in the pop-up.



a Unit number of leaking unit
b More information (`Read more`)

The controller then displays the error code, the unit number of the leaking unit, and a button to temporarily dismiss the alarm.

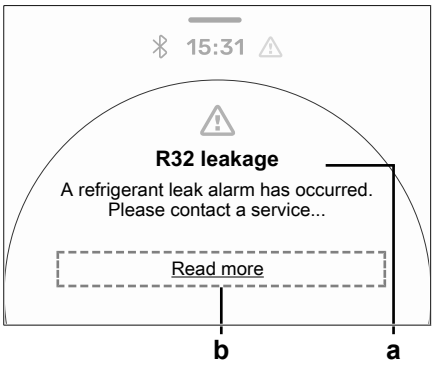
Note: dismissing the alarm will only mute the buzzer alarm.



a Unit number of leaking unit
b `Dismiss alarm` button
c Error code

Supervisor mode

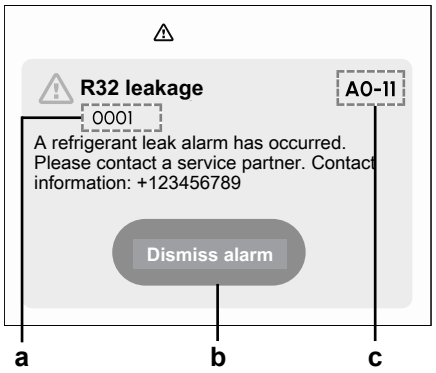
The controller displays the unit number of the leaking indoor unit in a pop-up. The Daikin eye blinks red and the buzzer alarm is sounding. To display more information, `Read more` can be tapped in the pop-up.



a Unit number of leaking unit
b More information (`Read more`)

The controller then displays the error code, the supervised room address of the leaking unit, and a button to temporarily dismiss the alarm.

Note: dismissing the alarm will only mute the buzzer alarm.



a Supervised room address of leaking unit
b `Dismiss alarm` button
c Error code

INFORMATION

For more information about the modes, see "7.2 Mode assignment" [▸ 17].

12.3.2 To stop the leak detection alarm

NOTICE

Depending on the configuration and mode the remote controller is set to be operable in, the remote controller or the Madoka Assistant app may allow you to temporarily dismiss the leak detection alarm locally. It may also be possible to temporarily stop the leak detection alarm sound (buzzer) and visual indicators. Dismissal or stopping of the leak detection alarm does NOT repair the leakage.

There are 2 ways of stopping an ongoing leak detection alarm:

1 On the remote controller, tap **`Dismiss alarm`** on the alarm screen.

2 From the Madoka Assistant app (Mute Alarm).

After stopping the alarm, consult your installer or service technician to fix the refrigerant leak of the unit.

INFORMATION

In case the controller is set to be operable in 'Supervisor' mode, the controller will indicate the supervised room address of the indoor unit for which the leak detection alarm occurs. However, it is not possible to stop the alarm of the indoor unit controller (set to be operable in either "Normal" or "Alarm only" mode) from the controller in "Supervisor" mode. The alarm of the controller connected to the indoor unit with the leak has to be stopped individually.

12.4 Madoka Plus intelligent sensors

Unable to start the pairing procedure

Possible cause	Corrective action
The remote controller is a slave remote controller.	Change the remote controller role to master (see "Switch master/slave controller" [▸ 96]). Madoka Plus intelligent sensors can only be paired with master remote controllers.
The maximum number of Madoka Plus intelligent sensors that can be paired with a remote controller has been reached.	Remove a sensor (see "8.9.6 To remove a Madoka Plus intelligent sensor" [▸ 69]). Then, attempt to pair the new sensor again.
The maximum number of Madoka Plus intelligent sensor for the sensor type has been reached.	

Sensor pairing failure

Possible cause	Corrective action
The Madoka Plus intelligent sensor is outside of the wireless communication range	Reposition the sensor so that it is closer to the remote controller.

Possible cause	Corrective action
The wireless communication signal is obstructed during paring.	▪ Check along the path from the sensor to remote controller and verify that there are no metal enclosures or other radio signalling devices that may interfere with the wireless communication. Make sure there is a direct, unobstructed line of sight between the sensor and the remote controller. ▪ Make sure that the sensor is placed in an adequate position (i.e. fixed to a wall). Reposition the sensor if necessary.
The Madoka Plus intelligent sensor is in sleep mode.	Remove the battery cover of the sensor and remove the batteries for at least 10 seconds in order to reset the sensor. Then, try to pair the sensor again.

Unable to scan QR code (Madoka Assistant)

Possible cause	Corrective action
The QR code on the sensor is too small to be scanned by the mobile device.	Scan the larger QR code sticker included in the packaging of the sensor.
The environment is too dark.	Ensure that the area is well-lit and scan the QR code again.
The camera of the mobile device is not positioned optimally for scanning the QR code.	Slowly adjust the angle and the distance of the mobile device camera to the QR code. Keep the QR code as flat as possible.

Possible cause	Corrective action

The QR code cannot be resolved by the scan function of the Madoka Assistant app.	Add the sensor to the Madoka Assistant app manually by entering the UUID and the install code:
	1 Scan the QR code with the camera app on your mobile device.
	2 Copy the text message that is displayed.
	3 Paste and save the text message to a note.
	4 Isolate the UUID and the install code from the text.
	Example:
	`G$M:H74426%Z:0x70AC08FEFED4F02C$I:70E783DDEDD6C8AE57EA2FF5BE6C68177467`
	The UUID is the string that follows `Z:0x7` and ends before `$I:`, in this case:
	`0AC08FEFED4F02C`
	The install code is the string that follows `$I:`, in this case:
	`70E783DDEDD6C8AE57EA2FF5BE6C68177467`
	5 Manually enter the UUID and install code in the the Madoka Assistant app, then follow the rest of the steps to complete the pairing process.

Connection error notification

Possible cause	Corrective action
The batteries of the Madoka Plus intelligent sensor are depleted.	Replace the batteries of the sensor.
The Madoka Plus intelligent sensor is outside of the wireless communication range of the remote controller.	Reposition the sensor so that it is closer to the remote controller. Make sure that the wireless sensor is within 10 m of the remote controller.
The wireless communication signal is obstructed.	▪ Check along the path from the sensor to remote controller and verify that there are no metal enclosures or other radio signalling devices that may interfere with the wireless communication. ▪ Make sure that the sensor is placed in an adequate position (i.e. fixed to a wall). Reposition the sensor if necessary.

Motion sensor – the system turns ON or OFF unexpectedly

Possible cause	Corrective action
The Madoka Plus intelligent motion sensor is used in combination with the integrated presence sensor of the unit.	Do NOT use the Madoka Plus intelligent sensor together with unit presence sensors to prevent unpredictable ON/OFF behaviour. The presence sensor of the indoor unit detects motion entirely independently from the Madoka Plus intelligent sensor. As such, either sensor is able to turn the system ON/OFF when no motion is detected.

Wireless sensor values are shown as blank (-) on the remote controller

Possible cause	Corrective action
No interlock is configured for the Madoka Plus intelligent sensor.	Configure an interlock in the Madoka Assistant app.
The remote controller has recently been turned OFF.	Wait a couple of minutes to allow the wireless communication between the sensor and the remote controller to restore.
For the Madoka Plus intelligent CO_2 sensor and motion sensor: the sensor is still starting up or has been reset.	Wait 45 seconds for the wireless sensor signal to stabilise.

Wireless CO_2 sensor data is inaccurate

Possible cause	Corrective action
The CO_2 sensor is too close to a heat source.	Reposition the sensor so that it is further away from the heat source.
The CO_2 sensor is picking up vibrations from a nearby device or motor.	Reposition the sensor so that it is further away from the source of vibrations.
The CO_2 sensor is mounted in a location where there is little airflow.	Reposition the sensor to a location where there is adequate airflow to improve the sensing accuracy.
Excessive dust or dirt is affecting the sensing ability of the CO2 sensor.	Carefully clean the sensor with a damp cloth (avoid contact with water or other fluids, minimize exposure while washing).

The unit is not responding to an interlock

Possible cause	Corrective action
The interlock is not set up correctly.	▪ Verify on the remote controller that the interlock is set up correctly. ▪ Verify on the Madoka Assistant app that the interlock is set up correctly.

Possible cause	Corrective action
The remote controller has recently been turned OFF, or there was a power interruption.	Wait a couple of minutes to allow the wireless communication between the sensor and the remote controller to restore.

12.5 Bluetooth connectivity

Pairing the remote controller with the app fails

Possible cause	Corrective action
Bluetooth was disabled on the mobile phone during pairing	Retry the pairing procedure and ensure that Bluetooth is enabled on both the remote controller and the mobile device.
The mobile device is out of the Bluetooth range of the remote controller.	Move closer (within 10 m) of the remote controller and retry the pairing procedure. Stay within 10 m or less for the duration of the pairing procedure.
The mobile device has known Bluetooth compatibility or stability issues.	▪ Ensure that the mobile device is running the latest operating system version and firmware. Issues with the stability of Bluetooth connectivity are often resolved through software updates. ▪ Check vendor support resources or reputable online forums for known Bluetooth compatibility or stability issues specific to the mobile device model. Apply recommended configuration changes or workarounds.

A full pairing memory notification appears when trying to pair

Possible cause	Corrective action
The maximum amount (4) of mobile devices that can be paired is reached.	▪ Tap `Confirm` to overwrite the oldest paired device's bonding information. ▪ Remove the bonding information (see "10.2.4 To remove bonding information" [▸ 114]). Then, retry the pairing procedure. Note that this will remove the bonding information of ALL previously paired devices.

12.6 Software update

The software update fails

Possible cause	Corrective action
Bluetooth was manually disabled on the mobile device during the software update.	Keep Bluetooth enabled for the entire duration of the update on both the remote controller and the mobile device.
Bluetooth was automatically disabled on the mobile device due to activating airplane mode, do not disturb mode, or similar modes which may disable or restrict background Bluetooth connectivity.	Ensure that the mobile device cannot restrict Bluetooth connectivity for the duration of the software update.
Only in case of mobile devices running iOS: an AirDrop transfer (either receiving or transmitting) is ongoing.	Disable AirDrop for the duration of the software update, or ensure that no transfers take place during the update.
The mobile device was moved out of the Bluetooth range of the remote controller during the software update.	Move closer (within 10 m) of the remote controller and retry the pairing procedure. Stay within 10 m or less for the duration of the software update.
The operating system of the mobile device gives priority to system functions over the Bluetooth connection. System functions that can cause this to happen are: ▪ Active or incoming calls ▪ System notifications or alarms that suspend background processes ▪ Battery saving mode	Ensure that no system functions of the mobile device can interfere with Bluetooth connectivity for the duration of the update.
The mobile device enters a sleep or locked state during the software update.	Keep the mobile device active and unlocked for the duration of the software update.
The Madoka Assistant app is closed or minimised during the software update.	Keep the Madoka Assistant app running in the foreground for the duration of the software update.
The remote controller loses power or is manually reset during the update.	Resolve the power issue, then reattempt the software update.

13 Disposal

- Units are marked with the following symbol:

This means that electrical and electronic products may NOT be mixed with unsorted household waste. Do NOT try to dismantle the system yourself: dismantling the system MUST be done by an authorised installer and MUST comply with applicable legislation.

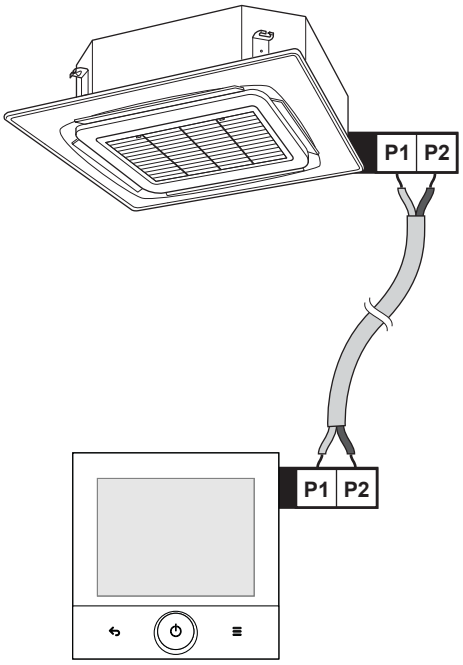
Units MUST be treated at a specialised treatment facility for reuse, recycling and recovery. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health. For more information, contact your installer or local authority.

14 Technical data

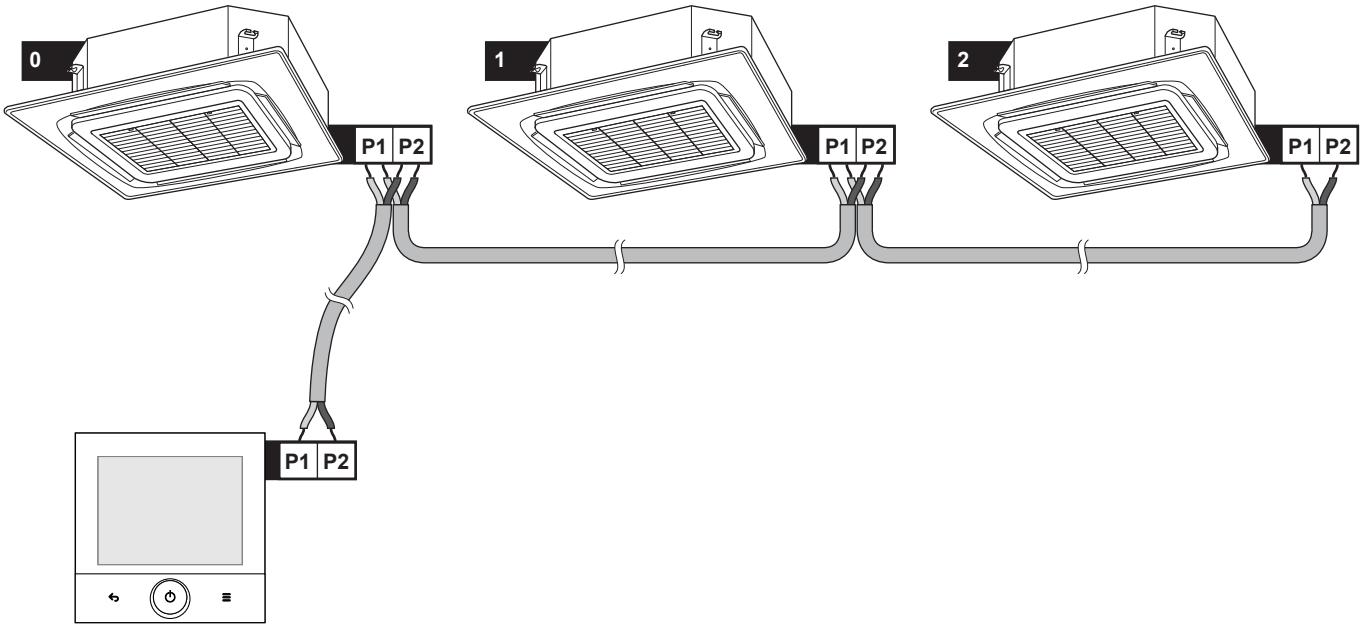
A **subset** of the latest technical data is available on the regional Daikin website (publicly accessible). The **full set** of the latest technical data is available on the Daikin Business Portal (authentication required).

14.1 Connection diagram

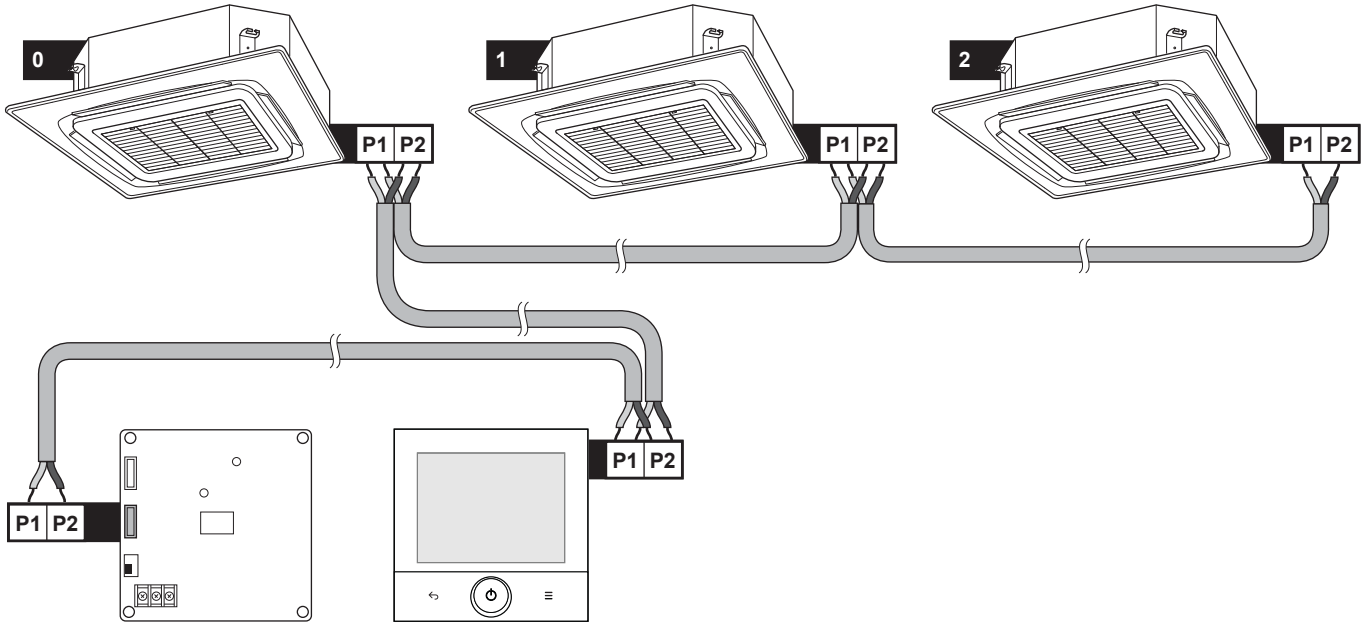
14.1.1 Typical layout



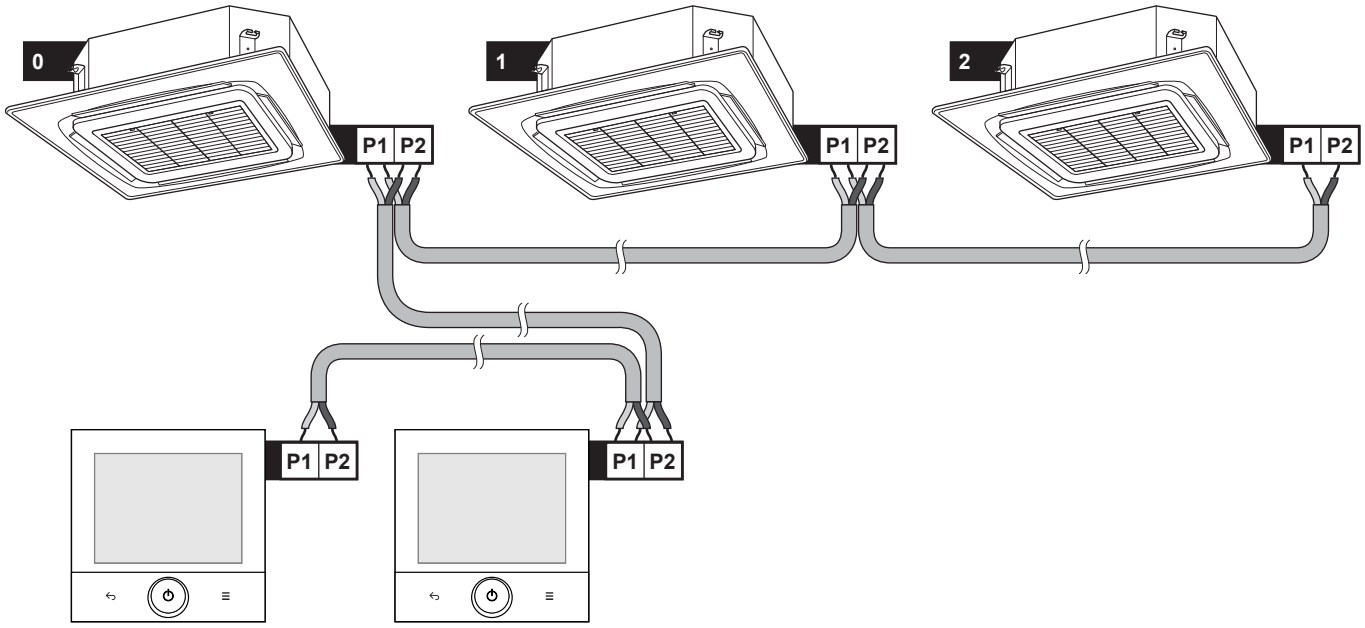
14.1.2 Typical layout for group control



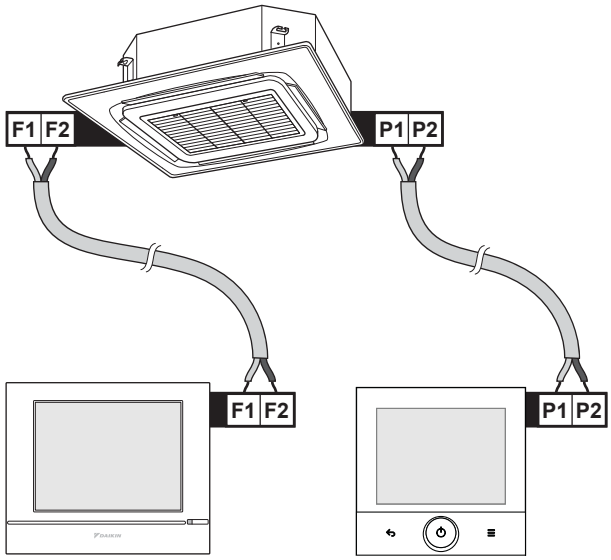
Group control: controller + digital inputs adapter BRP7A5



Group control: master and slave controller



14.1.3 Controller + DIII central control equipment



14.2 Technical specifications

BLE

Item	Specification
Frequency band	2.4 GHz
Communication standard version	5.4
Communication	5 m or more
Transmit power	+0 dBm
Compatible channels	Channel 0~39

Madoka Plus intelligent sensor communications

Item	Specification
Radio	IEEE 802.15.4
Transmit power	+0 dBm
Compatible channels	Channel 11~26
Frequency hopping	Enabled

Madoka Plus intelligent sensors

Item	WLDW	WLTRH	WLPIR	WLCO2
Installation				
Maximum connectable[(a)]	4	1	4	1
Communication range	10 m			
Operating conditions				
Ambient temperature	0°C~50°C	-10°C~50°C	0°C~45°C	-10°C~50°C
Ambient humidity	≤85% RH (no condensation)	0~100% RH	≤85% RH (no condensation)	10~90% RH (no condensation)

Item	WLDW	WLTRH	WLPIR	WLCO2
Battery				
Battery type	CR123A (x1)	CR2477 (x1)	CR123A (x1)	AA alkaline (x4)
Battery life	2.5~5 years	3 years	3 years	2 years
Measurement				
Accuracy	-	±0.5°C ±2% RH	-	±75 ppm+ 5% MV
Sensing range	-	0°C~50°C 20~80% RH	-	400~5000 ppm
Reporting frequency	Based on trigger	5 minutes	Based on trigger	20 minutes

[a] Maximum connectable wireless sensors per master remote controller. Wireless sensors can only be paired with master remote controllers.

Operating environment

Item			Specification
Operating conditions	Ambient temperature		-10°C~50°C
	Ambient humidity		95% RH or less (no condensation)
Power supply	P1P2	Rated voltage	16 V DC (± 5%)
		Rated current consumption	125 mA total (dual BRC1K master/slave)
Installation environment			Indoor installation only (no in-device installation)

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