Installer reference guide

Daikin Cloud Plus

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1 About this document

This guide explains how to install and commission the DC+ Edge controller and how to use Daikin Cloud Plus Commissioning and the accompanying DC+ Edge connect application. For some functionality, references are made to the user reference guide.

Thank you for purchasing this product. Please:

- Keep the documentation for future reference.

Target audience

Installers, Daikin affiliates and Daikin administrators.

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

INFORMATION

This appliance is intended to be used by expert or trained users in shops, in light industry, and on farms, or for commercial use by lay persons.

Daikin Cloud Plus has 4 types of user roles, which correspond to 4 different access levels. This document describes the interface from the highest level available. Depending on your user role, some functions may not be available to you, or screenshots may differ slightly.

The information presented in this document is relevant for users that need to commission a Daikin Cloud Plus system, with the installer role or higher (Daikin affiliate, Daikin administrator).

This document applies to version 1.2 of the software. Deviations from what you see in your version might occur.

2 General safety precautions

Please read these general safety precautions carefully before installing air conditioning equipment, and be sure to install the equipment correctly.

Failure to follow these instructions properly may result in property damage or personal injury, which may be serious depending on the circumstances.

Meaning of warnings and symbols

These safety messages are used to attract your attention. The meaning of each safety message is described below:

WARNING

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

CAUTION

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

DANGER

Indicates a situation that results in death or serious injury.

DANGER: RISK OF EXPLOSION

Indicates a situation that could result in explosion.

INFORMATION

Indicates useful tips or additional information.

NOTICE

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

2.1 General

CAUTION

Wear adequate personal protective equipment (protective gloves, safety glasses,...) when installing, maintaining or servicing the system.

If you are NOT sure how to install or operate the unit, contact your dealer.

WARNING

Tear apart and throw away plastic packaging bags so that nobody, especially NOT children, can play with them. **Possible consequence:** suffocation.

WARNING

Make sure installation, testing and applied materials comply with applicable legislation (on top of the instructions described in the Daikin documentation).

WARNING

Improper installation or attachment of equipment or accessories could result in electrical shock, short-circuit, leaks, fire or other damage to the equipment. ONLY use accessories, optional equipment and spare parts made or approved by Daikin unless otherwise specified.

2.2 Installation site

Do NOT install the equipment in a potentially explosive atmosphere.

2.3 Electrical

DANGER: RISK OF ELECTROCUTION

- Turn OFF all power supply before connecting electrical wiring or touching electrical parts.
- Disconnect the power supply for more than 10 minutes, and measure the voltage at the terminals of main circuit capacitors or electrical components before servicing. The voltage MUST be less than 50 V DC before you can touch electrical components. For the location of the terminals, see the wiring diagram.
- Do NOT touch electrical components with wet hands.
- Do NOT leave the unit unattended when the service cover is removed.

Install power cables at least 1 meter away from televisions or radios to prevent interference. Depending on the radio waves, a distance of 1 meter may NOT be sufficient.

WARNING

- After finishing the electrical work, confirm that each electrical component and terminal inside the switch box is connected securely.
- Make sure all covers are closed before starting up the unit.

WARNING

A main switch or other means for disconnection, having a contact separation in all poles providing full disconnection under overvoltage category III condition, shall be installed in the fixed wiring.

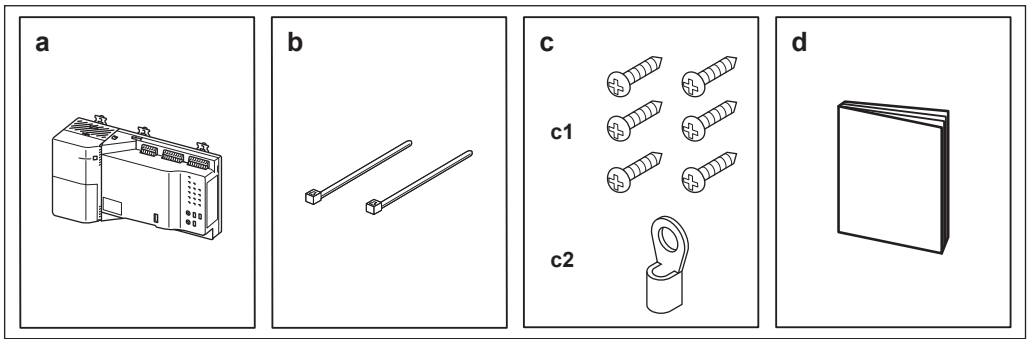
WARNING

- ONLY use copper wires.
- Make sure the field wiring complies with the national wiring regulations.
- All field wiring must be performed in accordance with the wiring diagram supplied with the product.
- Make sure to install earth wiring. Do NOT earth the unit to a utility pipe, surge absorber, or telephone earth. Incomplete earth may cause electrical shock.
- Make sure to use a dedicated power circuit. NEVER use a power supply shared by another appliance.
- Make sure to install the required fuses or circuit breakers.
- Make sure to install an earth leakage protector. Failure to do so may cause electrical shock or fire.

3 About the box

3.1 Contents of the kit

Based on the following accessory list, check that all parts and accessories for the DC+ Edge/DC+ Edge Lite are included. If there is any missing or defective part, contact the dealer where you purchased this product.



a DC+ Edge (DGE601A51) / DC+ Edge Lite (DGE602A51) body
b Zip ties for fixing power supply cable
c1 Round-head wood screw (Ø 3 mm, 15 mm length) for securing the body
c2 Round crimp-type terminal (2-M4)
d Installation manual

4 Preparation

4.1 Before installation

Before you start installing the DC+ Edge, complete the following preparations:

- Check that the DC+ Edge/DC+ Edge Lite comes with all accessories. See "3.1 Contents of the kit" [▸ 7].
- Familiarise yourself with the location of terminals, switches and LEDs of the DC+ Edge. See "4.3 Location of terminals and switches" [▸ 10].
- Check that the installation space requirements are met. See "4.2 Determining installation space" [▸ 8].

4.2 Determining installation space

Make sure to install the DC+ Edge / DC+ Edge Lite in a place that meets the conditions described in the following sections.

4.2.1 Installation space and mounting direction

Make sure the installation place complies with the following requirements:

- Location: indoor, inside an electrical cabinet or control enclosure.
- The electrical cabinet:
  - must be lockable or designed to be opened only with a special tool. The key or tool should be available only to service personnel.
  - must be installed in a space with no access for the general public.
  - must conform with local legislation.
- Mounting direction: vertical only

4.2.2 Environmental conditions

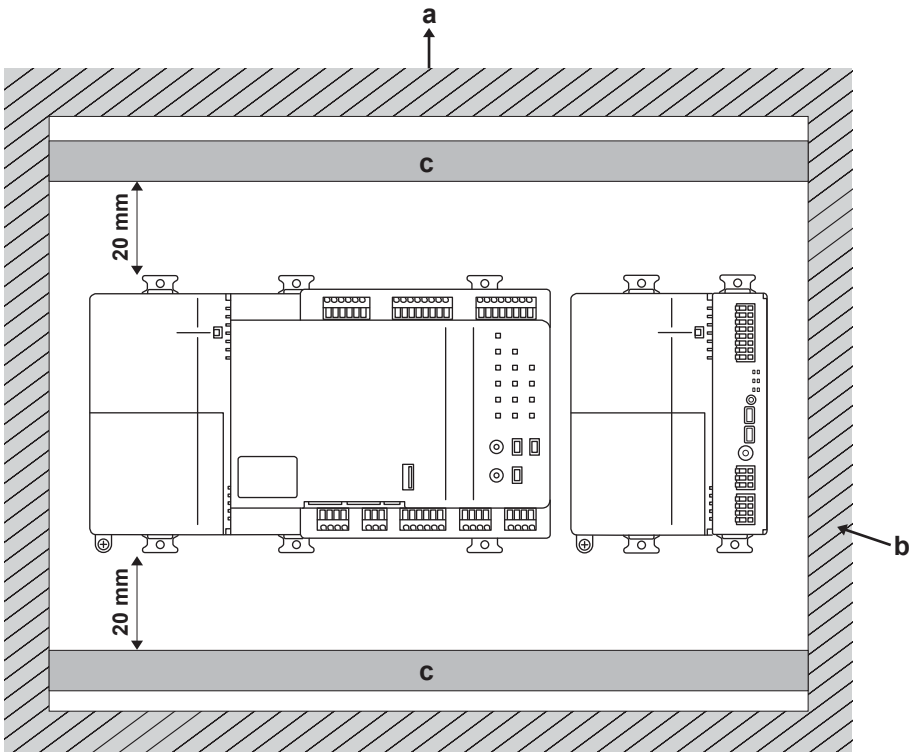
Make sure the installation environment meets the following conditions:

- Ambient temperature: –10~50°C
- Relative humidity: 85% RH or less (without condensation)
- DC+ Edge operation is not affected by electromagnetic interference.

4.2.3 Required space

The following figure indicates the minimum space required for installation.

- Provide a minimum clearance of 20 mm from the top edge and 20 mm from the bottom edge of the DC+ Edge.
- Close contact in a lateral direction is possible, if attaching a DC+ Edge DIII plus ADP or similar.



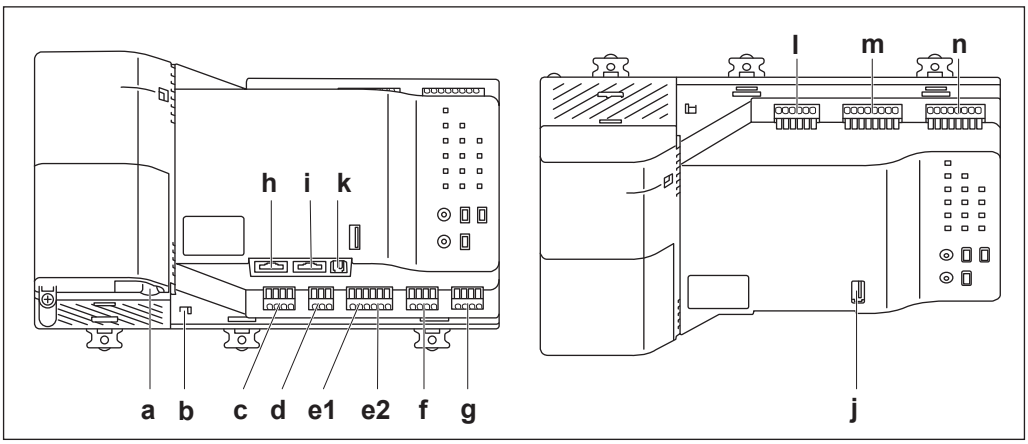
a Top
b Wall
c Cable duct

4.3 Location of terminals and switches

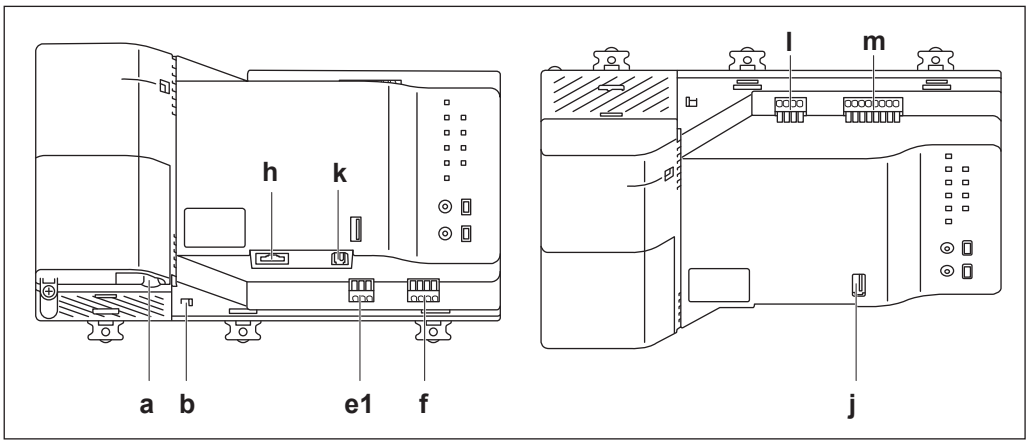
Terminals and connections

To facilitate the installation process, consider the position of all terminals and switches in order to plan cable routing and the order in which the wiring will be connected. For more information about connecting the electrical wiring, see "5.2 Connecting the electrical wiring" [▸ 16].

DC+ Edge (DGE601A51)



DC+ Edge Lite (DGE602A51)



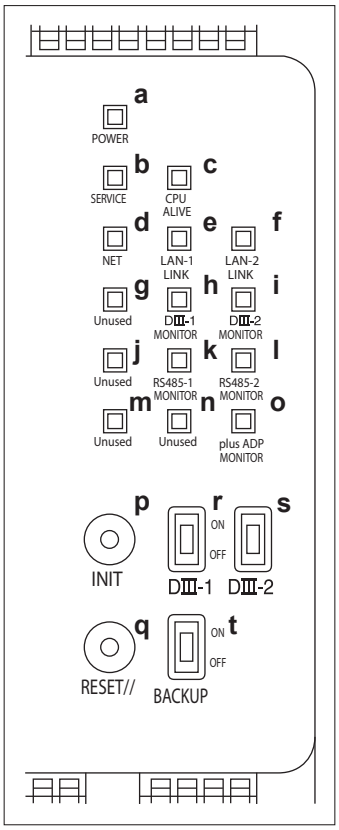
a	Intake for power supply cable	
b	Inter-unit lock	Used to lock the power supply and DC+ Edge unit in place.
c	Unused	
d	Plus ADP IF	Terminals for connecting DGE601A52, for when the system needs to control more than 128 indoor unit groups.
e1	RS485	Terminal for connecting a WAGO I/O module. Note that the terminal is physically present on DGE602A51, but is not supported by the software.
e2	RS485	Terminal for connecting to an open network (e.g. BACnet).
f	DIII-1	Terminal for connecting the DIII-NET communication line, for communication with Daikin air conditioners.
g	DIII-2	Terminal for connecting the DIII-NET communication line, for communication with Daikin air conditioners.
h	LAN-1	Port for connecting to the Daikin Cloud Plus cloud.
i	LAN-2	Port for connecting to a local network.
j	USB-1	Unused
k	USB-2	
l	Do	DC+ Edge: 1-3, DC+ Edge Lite: 1-2. Used for controlling a device that can be signalled by an external input.
m	Di1-4	Terminals for stopping air conditioner operation by an external signal in case of an emergency, or for connecting electric energy meters.
n	Di5-8	Terminals for stopping air conditioner operation by an external signal in case of an emergency, or for connecting electric energy meters.

NOTICE

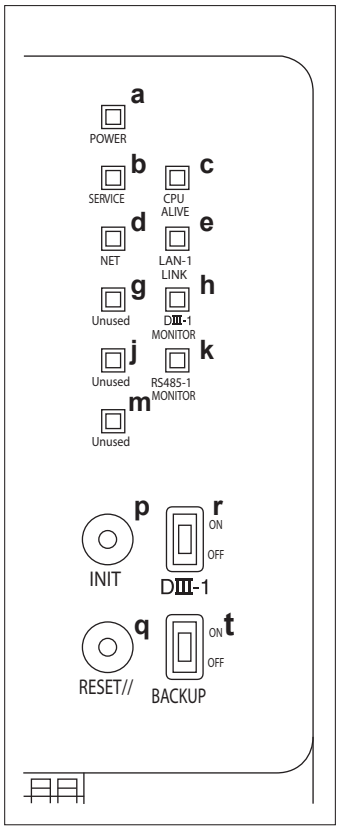
When the forced stop contact input is closed, a stop signal is sent to all connected devices. There is no hard guarantee that all devices have effectively stopped and remain stopped during the time the forced stop contact input is active.

LEDs and switches

DC+ Edge (DGE601A51)



DC+ Edge Lite (DGE602A51)



a	POWER LED	Green - Indicates power status. ▪ ON: power is turned ON ▪ OFF: power is turned OFF
b	SERVICE LED	Green - Indicates that the registration of the DC+ Edge in the cloud is complete and that service has started. ▪ OFF: waiting for service to begin, or service has been stopped ▪ ON: normal operation
c	CPU ALIVE LED	Green – Blinking indicates that the DC+ Edge is operating normally.
d	NET LED	Green - Indicates the cloud connection status. ▪ OFF: stopped/error ▪ ON: normal
e	LAN-1 LINK LED	Green - Indicates that the hardware connection between the DC+ Edge and the equipment connected to the LAN is in a normal state. ▪ ON: connected ▪ Blinking: transmitting or receiving data
f	LAN-2 LINK LED	
g	Unused LED	
h	DIII-1 MONITOR LED	Orange - Blinks when data is transmitted or received over the DIII-NET communication line.
i	DIII-2 MONITOR LED	
j	Unused LED	
k	RS485-1 MONITOR LED	Orange - Indicates the communication status of RS-485. ▪ ON: transmitting or receiving data.
l	RS485-2 MONITOR LED	
m	Unused LED	
n	Unused LED	
o	Plus ADP MONITOR LED	Orange - Indicates communication status of the DIII plus adaptor . Lit: transmitting or receiving data.
p	INIT switch	Depends on the software.
q	Push switch	Used to perform a forced restart of the DC+ Edge.
r	DIII-1 switch	Switch for changeover of DIII-NET MAIN/SUB. ▪ ON: MAIN ▪ OFF: SUB
s	DIII-2 switch	
t	BACKUP switch	Turns the power of the set backup battery ON/OFF.

5 Installation

The installation instructions for the DC+ Edge (DGE601A51), DC+ Edge Lite (DGE602A51), as well as the expansion adapter for the DC+ Edge (DGE601A52) and its expansion slots (DGE601A53 are described in the corresponding installation manuals.

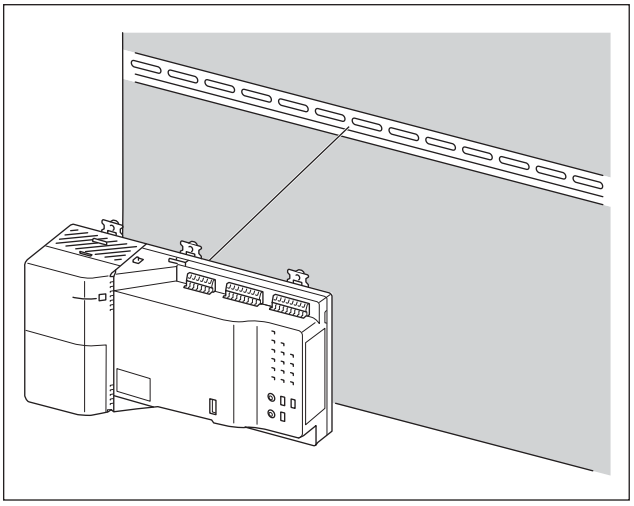
- The installation manuals are available from https://www.daikin.eu/. Use the search function to find your model.
- Make sure the hardware is installed as described before starting the commissioning process.

5.1 Mounting the DC+ Edge

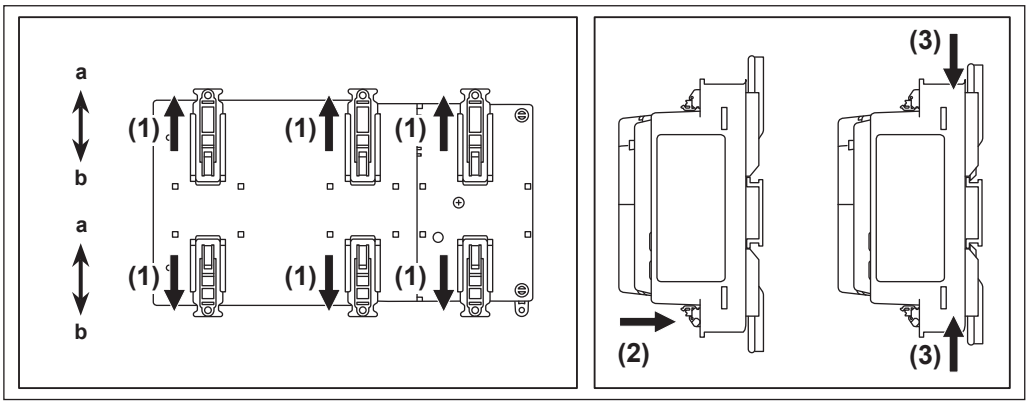
The DC+ Edge can be mounted to a DIN rail. Alternatively, it can be screw-mounted to a control enclosure. Also see the "12.1 External dimensions" [▸ 165] to take into account when mounting the DC+ Edge.

5.1.1 To mount the DC+ Edge to a DIN rail

The DC+ Edge is intended to be mounted onto a 35 mm DIN rail.



1. Set all upper and lower DIN rail locks to the "a" (open) position.
2. Press the DC+ Edge body against the DIN rail.
3. Set all upper and lower DIN rail locks to the "b" (closed) position.



a DIN rail lock in open position
b DIN rail lock in closed position

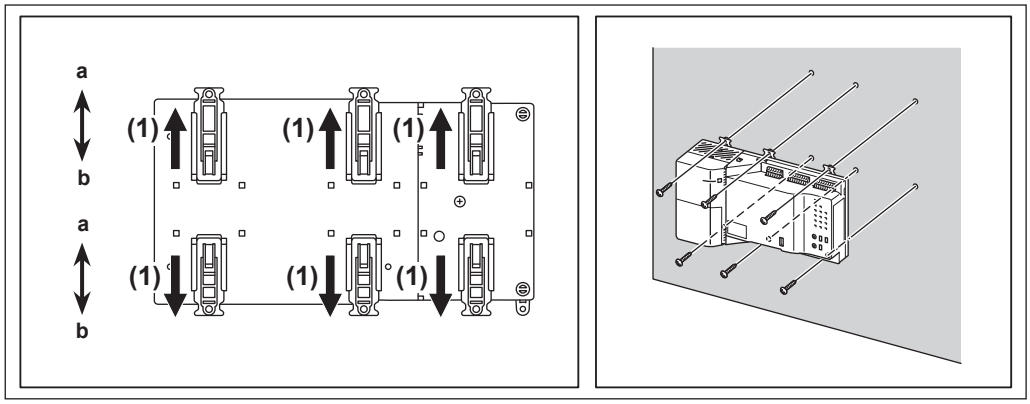
NOTICE

Do NOT use screws to secure the unit onto the DIN rail. Use DIN rail fasteners in case the mounting needs to be stronger.

5.1.2 To mount the DC+ Edge to a control enclosure

As an alternative to DIN rail mounting, the DC+ Edge can be mounted to a control enclosure using the 6 supplied round-head wood screws.

1. Set all upper and lower DIN rail locks to the "a" (open) position.
2. Insert thee 6 round-head wood screws through the DIN rail lock screw holes and tighten.



a DIN rail lock in open position
b DIN rail lock in closed position

5.2 Connecting the electrical wiring

This chapter describes how to connect the DC+ Edge to Daikin air conditioners and other equipment. The DC+ Edge can connect to a wide range of equipment. However, the required connection procedures vary depending on the equipment to be connected.

WARNING

- Do NOT turn ON the power supply before all wire connections are completed. NOT doing so may cause an electrical shock.
- After the wiring is completed, double-check that all wires are connected correctly before turning ON the power supply.
- All field supplied parts, materials and electric works MUST comply with the applicable legislation.

CAUTION

Make sure that the power supply is not connected to anything except for the power supply terminals of the unit. If the power supply is connected incorrectly, either the unit or the DC+ Edge will malfunction.

5.2.1 Wiring specifications

WARNING

All field wiring and components MUST be installed by a licensed electrician and MUST comply with the applicable legislation.

All wiring must comply with the following requirements:

Connection	Specifications	Maximum length	Remarks
Power supply	Ordinary tough rubber sheathed cord equivalent or higher (60245 IEC 53) Ordinary polyvinyl chloride sheathed cord equivalent or higher (60227 IEC 53) Power: Ø 1.0~2.0 mm² Earth: according to applicable legislation, but must be same thickness as power wire	—	▪ Use a 3-core cable rated at 300 V AC or higher ▪ Power supply voltage: single phase 100~240 V AC (at 50/60 Hz) ▪ Earth lead terminal treatment: use a round crimp-type terminal (2-M4) ▪ Voltage fluctuation: ±10% or less ▪ Power consumption: 23 W ▪ Earth leakage breaker: rated current 10 A (rated sensitivity current 30 mA, operating time 0.1 sec or less)

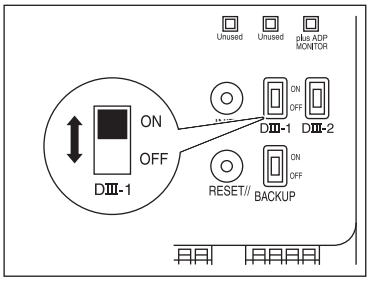
Connection	Specifications	Maximum length	Remarks
DIII-NET (F1/F2)	Ø 0.75~1.25 mm²	Total length[(a)]: 2000 m (<1500 m when using shielded wire) Max length[(b)]: 1000 m	▪ Use 2-core vinyl insulated vinyl-sheathed cable/vinyl cabtyre cable or 2-core shielded cable ▪ Do NOT use multicore cables with 3 or more cores ▪ Do NOT use mixed cable types ▪ NEVER bundle the cables ▪ When using a shielded cable, connect only one end of each shield wire to the ground ▪ Make sure the wiring is routed and fixed, so as NOT to touch unearthed accessible conductive parts ▪ Make sure a strain relief is available for each wire entering the electrical cabinet For more information on DIII-NET, refer to the DBACS design guide (ED72721)
DIII plus adaptor	Ø 0.65~0.90 mm²	50 m	See the DIII plus adaptor (DGE601A52) installation manual.
WAGO I/O module	Ø 0.65~0.90 mm²	500 m	When using a shielded cable, connect the cable to the G terminal (ground).
Digital inputs (Di1-4, Di5-8)	Ø 0.65~0.90 mm² Ø 0.75~1.25 mm²	200 m	For pulse signals: pulse width 20~400 ms, with a pulse interval of 100 ms or more
Digital outputs	Ø 0.65~0.90 mm² Ø 0.75~1.25 mm²	200 m	Voltage free contact connected to the terminal: 24 V DC, max. load current 50 A
LAN	LAN-1: 100Base-TX LAN-2: 100Base-TX or 10Base-T (only for DC+ Edge)	100 m	Connector standard: RJ-45
USB	Commercial USB 2.0 type A	5 m	—

[(a)] Total length is the sum of all wiring in the DIII-NET network.
[(b)] Max. length is the maximum distance between any 2 connection points in the DIII-NET network.

5.2.2 Precautions for using multiple centralised controllers

A centralised controller refers to the equipment (e.g. DC+ Edge) that controls multiple air conditioners. Apart from the DC+ Edge, there are various other Daikin centralised controllers suitable for different applications and building sizes. These can be used to in combination to construct an optimal air conditioning control system. If multiple centralised controllers are connected on the DIII-NET network, you must set the Main (also known as master) and Sub (also known as slave) relationship for those controllers. Be sure to set only 1 of the controllers as Main (master), and the other controllers as Sub (slave).

The DIII-1 and DIII-2 (only for DGE601A51) switches are located on the front face of the DC+ Edge. The ON position corresponds to Main (master), while the OFF position corresponds to Sub (slave).



When installing multiple centralised controllers, set only the highest-priority controller as Main (master), and all other controllers as Sub (slave) according to the following order of priority, from highest to lowest:

1. Interface for use in BACnet
2. Interface for use in LonWorks
3. iTM plus adaptor or DIII plus adaptor
4. DC+ Edge
5. Central remote controller
6. On/off controller

There are also some centralised controllers that cannot be connected to the same network as the DC+ Edge:

- CALCULATE UNIT
- intelligent Processing Unit
- Parallel Interface
- intelligent Touch Controller
- DIII-NET plus adaptor
- Residential central remote controller
- Schedule timer
- Wiring adaptor for electrical appendices (KRP2)

INFORMATION

When the DC+ Edge is installed in parallel with other centralised controllers (i.e. there is a Main/Sub relationship between different controllers), the DC+ Edge will not communicate directly with the other centralised controller. For example, when using a DC+ Edge in combination with iTM, schedules and interlocks that were configured on the iTM are NOT stored on the DC+ Edge, and thus NOT visualised in Daikin Cloud Plus.

INFORMATION

It is possible to connect 3 centralised controllers as long as there is only a single Main (master) controller on both hardware and software level. For example, it is possible to have a setup where iTM hardware is Sub (slave), its software Main (master), combined with a DC+ Edge controller that is configured as Sub (slave) on both hardware and software level, and finally have a BACnet server that functions as Main (master) on a hardware level.

5.2.3 Connecting DIII-NET compatible equipment

DIII-NET is an original Daikin air conditioner communication protocol. Using DIII-NET, you can centrally control multiple Daikin DIII-NET compatible air conditioning units by connecting them to the DC+ Edge. See "5.2.1 Wiring specifications" [▸ 16] for more information about the wiring used to connect the DIII-NET compatible equipment.

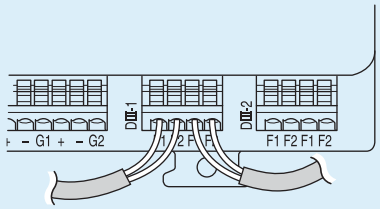
1 Use the F1 and F2 terminals located on the front face of the DC+ Edge to connect the DIII-NET communication line. The terminals are indicated as DIII-1 and/or DIII-2.These 2 terminals have no polarity.

INFORMATION

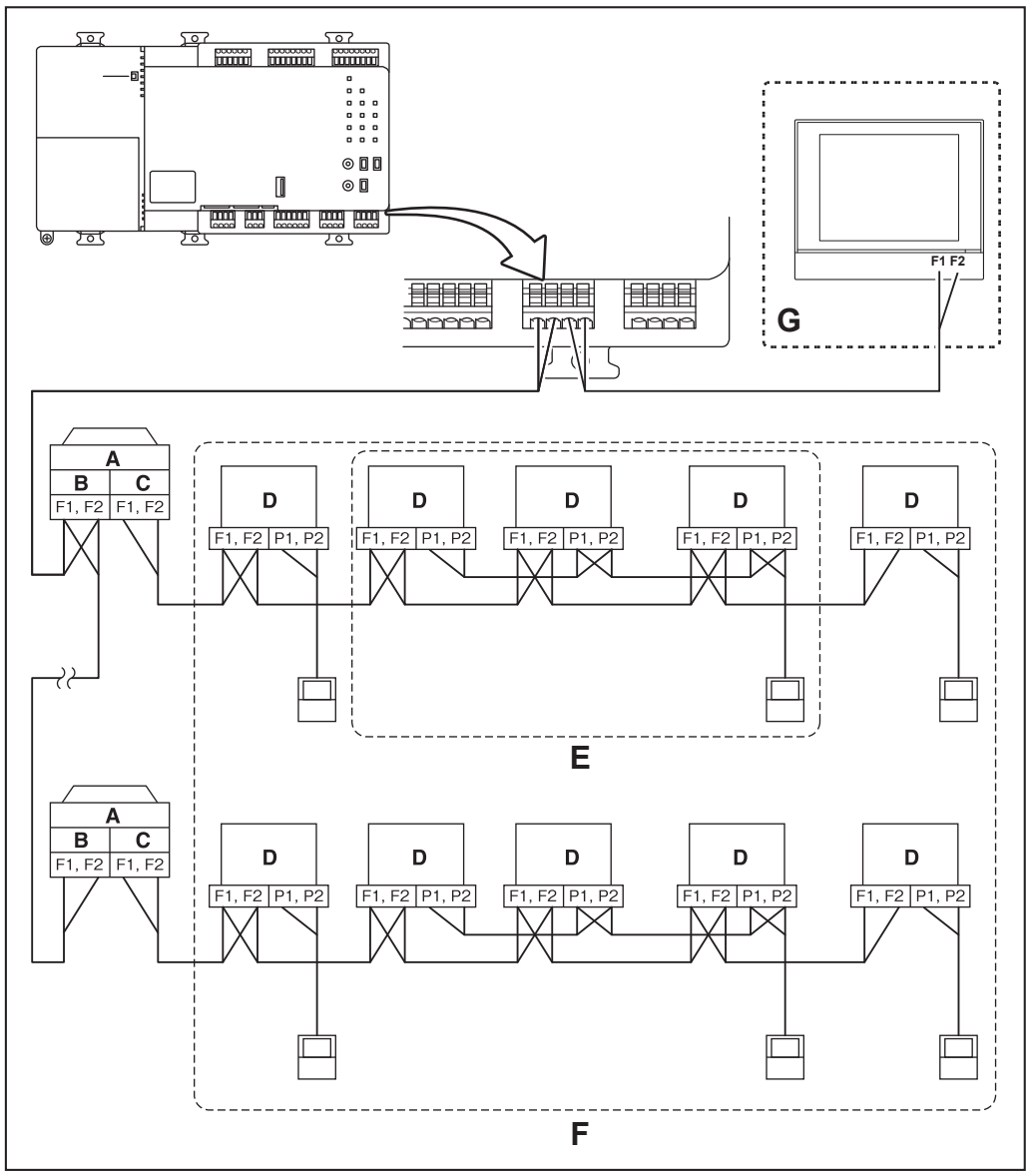
The DC+ Edge Lite (DGE602A51) has only 1 DIII-NET terminal (DIII-1), as opposed to the DC+ Edge (DGE601A51), which has 2.

NOTICE

Do NOT connect multiple wires to a single F1 or F2 terminal on the DC+ Edge. If you want to connect multiple wires, connect the second pair of DIII-NET communication wires to the second pair of F1/F2 terminals as shown below. Make sure you connect F1 and F2 in the same way as the first pair of DIII-NET communication wires were connected.



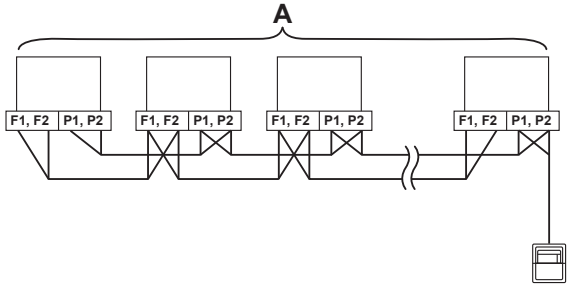
An example diagram for connecting more than 2 air conditioning units is shown in the following schematic connection diagram:



A Outdoor unit
B OUT — OUT communication (terminal)
C IN — OUT communication (terminal)
D Indoor unit
E A maximum of 16 indoor units can be connected to 1 remote controller group.
F A maximum of 64 indoor units can be connected to each DIII-NET communication line.
G Connection of an additional centralised controller

Remote controller group

A remote controller can simultaneously control a maximum of 16 indoor units. This capability is referred to as group control. A remote controller group is a group of indoor units controlled under by the same remote controller.



a Remote controller group — maximum 16 indoor units
b Remote controller

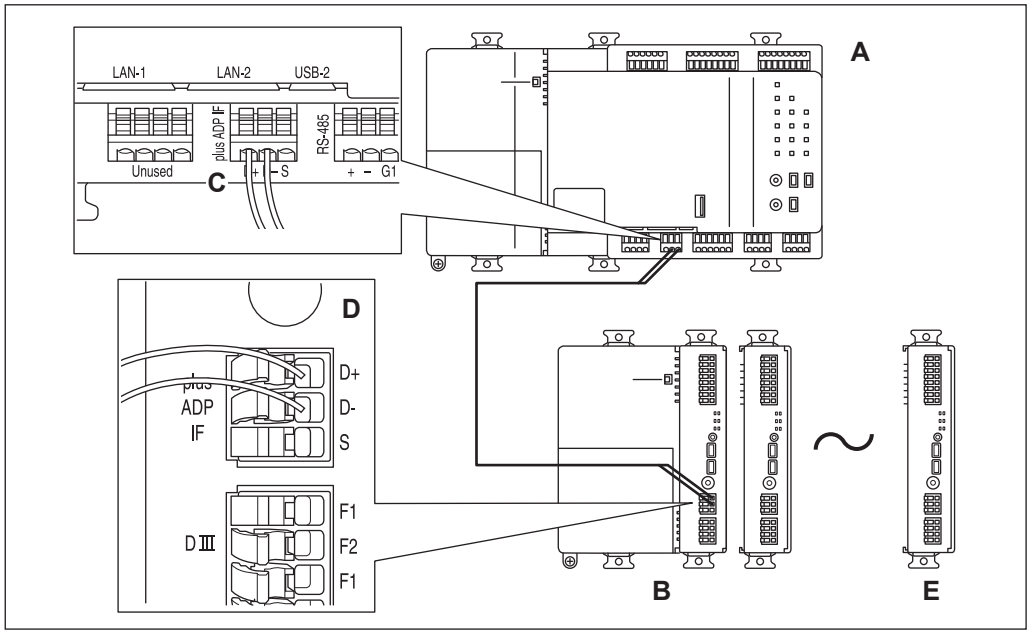
5.2.4 Connecting a DIII plus adaptor (DGE601A52)

> **INFORMATION**
>
> This section is only applicable to DC+ Edge (DGE601A51).

Up to 64 indoor units can be connected to each DIII-NET port on the DC+ Edge. In case the system requires control over more than 128 indoor units, DGE601A52 can be used to connect them to the DC+ Edge. The DIII plus adaptor makes it possible to connect an additional 64 units to a single DIII-NET port on the DC+ Edge. In combination with up to 5 DGE601A53 (DIII plus adaptor slot), the system can support up to 512 units in total. See "5.2.1 Wiring specifications" [▸ 16] for more information about the wiring used to connect DGE601A52.

1. Connect DGE601A52 to the plus ADP IF terminal on the front of the DC+ Edge. Make sure to connect the positive wire to the D+ terminal and the negative wire to the D- terminal respectively, as these wires have polarity.

An example diagram for connecting DGE601A52 is shown in the following schematic connection diagram:



A DC+ Edge
B DGE601A52 (DIII-NET plus adaptor)
C plus ADP IF terminal block on the DC+ Edge
D plus ADP IF terminal block on the DGE601A52 (DIII plus adaptor)
E DGE601A52 (DIII plus adaptor) on which the termination resistor must be enabled. For more details, see the installation manual of DGE601A52.

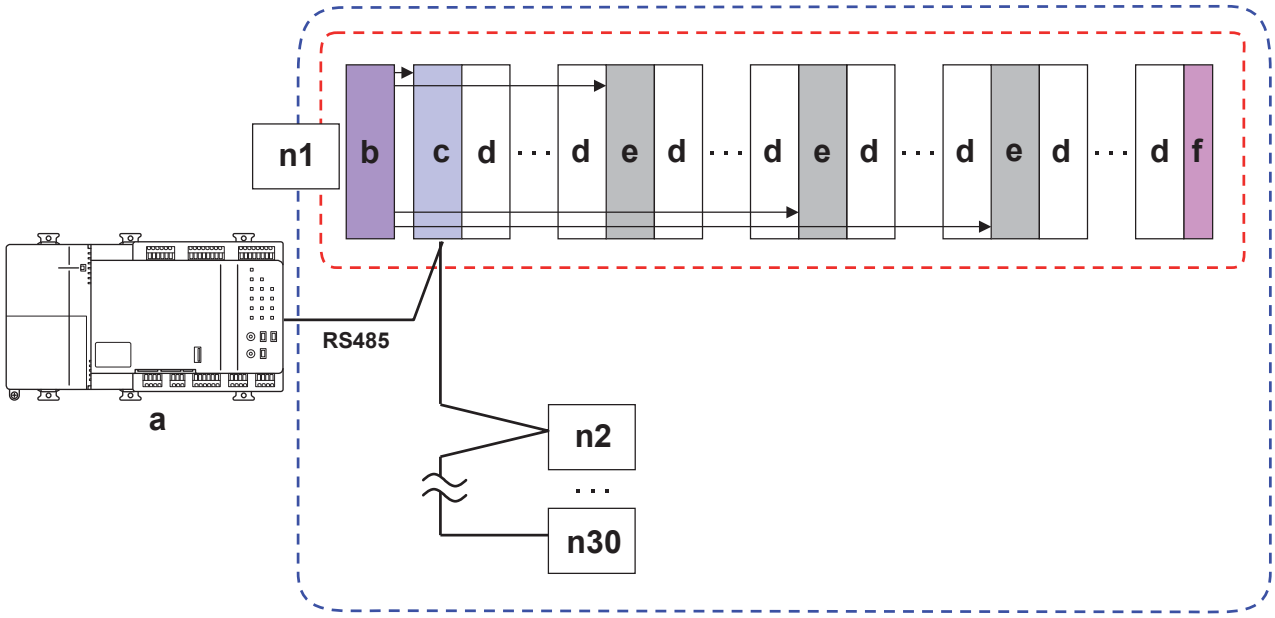
5.2.5 Connecting a WAGO I/O module

In combination with a WAGO I/O module, the DC+ Edge allows for the connection and monitoring of up to 960 points for controlling non-Daikin peripheral devices, such as lighting equipment and security systems. The equipment is configured via external I/O modules (Di, Do, Pi, Ao, and Ai) and is collectively referred to as "external equipment. The WAGO I/O module serves as the communication unit for all connected I/O modules. For more information on how to use and configure various modules, see the manuals that come with the respective products. For an overview of all compatible modules, see "12.4 Supported I/O modules" [▸ 174]. See

"5.2.1 Wiring specifications" [▸ 16] for more information about the wiring used to connect the WAGO I/O module. Also see the communication specifications and example system configuration below.

System configuration

The following diagram illustrate how external equipment is configured:



a DC+ Edge
b 24 V DC power supply unit
c Power supply and communication unit
d Module (I/O or power supply)
e Power supply module
f Termination module
n1 Node (maximum 120 contacts per node)
n2~n30 Nodes (maximum 30)

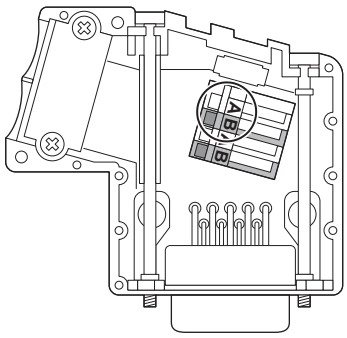
Communication specifications

The table below provides an overview of the communication specifications for communication between the DC+ Edge and the external equipment.

Item		Specifications
Communication method		2-wire
Synchronisation method		Asynchronous communication
Connection form		1:N
Maximum number of connected nodes		30
Communication distance		500 m (maximum total length)
Communication rate		115,200 bps
Data format	Data length	8 bit
	Stop bit	1 bit
	Parity bit	No parity
Error detection		CRC-16

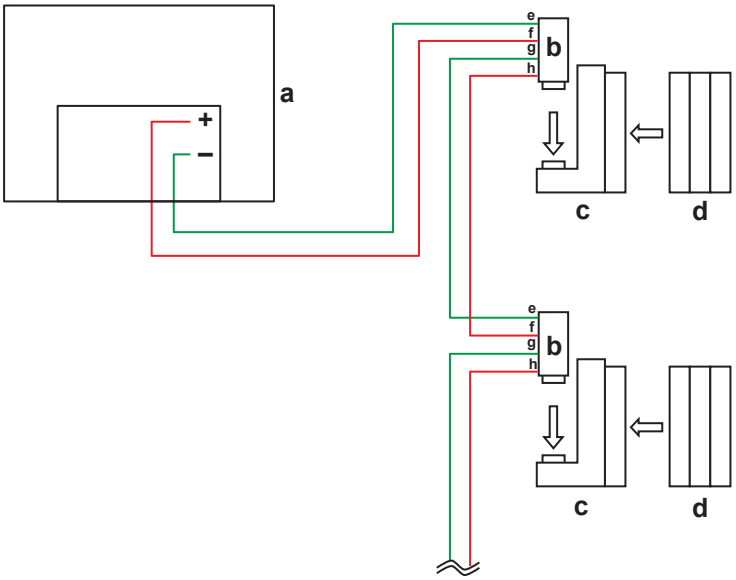
To connect a WAGO **I/O module**

1 Connect the WAGO /IO module to the RS-485 terminals on the front face of the DC+ Edge using the connector (750-960). The connector uses 2 pairs of A and B terminals. In the figure below, the pair of terminals indicates the input side. The other terminal pair is the output side, which is used to connect to other nodes.



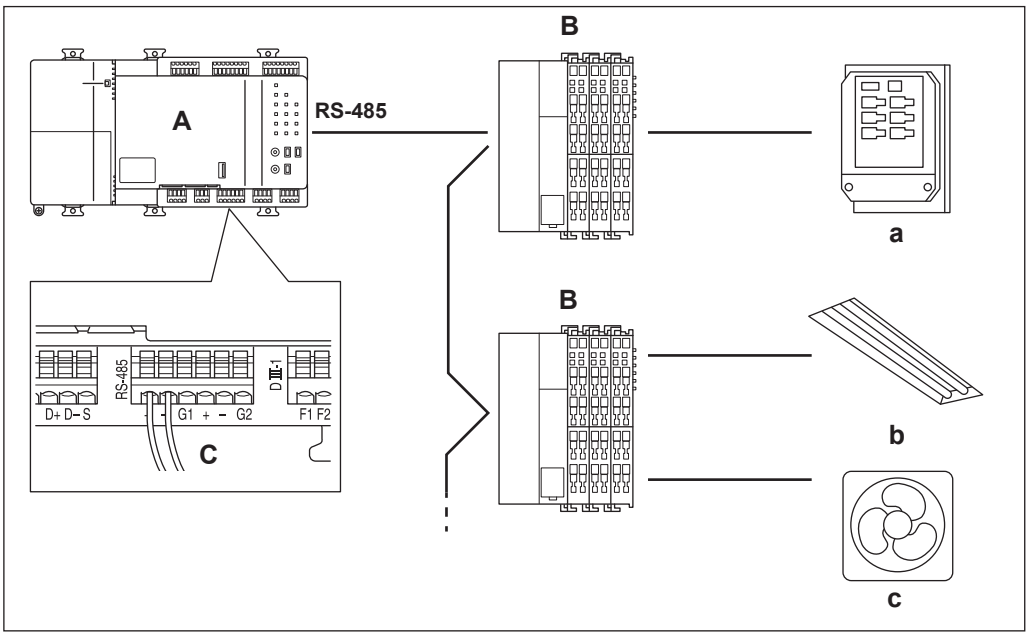
2 Connect the A terminal of the connector to the "–" RS-485 terminal on the front face of the DC+ Edge.

3 Connect the B terminal of the connector to the RS-485 "+" terminal on the front face of the DC+ Edge. Make sure to connect the positive core wire (+) to the "+" terminal and the negative core wire (–) to the "–" terminal respectively.



a DC+ Edge
b Connector (750-960)
c WAGO I/O module (communication unit)
d Modules (I/O or power supply)
e Terminal A (input)
f Terminal B (input)
g Terminal A (output)
h Terminal B (output)

An example diagram for connecting WAGO I/O modules is shown in the following schematic connection diagram:



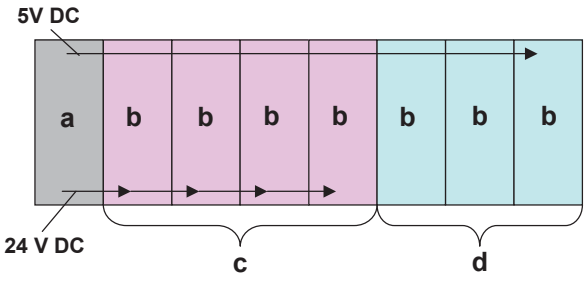
A DC+ Edge
B WAGO I/O module (communication unit)
C RS-485 terminal block on the DC+ Edge
a Electric energy meter
b Lighting
c Fan

> **INFORMATION**
>
> The maximum number of contacts per node is 120. The maximum number of nodes is 30.

Precautions for connecting modules to the DC+ Edge

When connecting modules to the DC+ Edge, keep the following in mind:

1. All nodes connected to a Pi module must consist of Pi modules only.
2. Modules that require a 24 V DC (Pi, Di, Ao) must be connected together after the communication unit or power supply. Other modules (Do, Ai, thermistor) must be connected in the rear slots. Consider the following example:

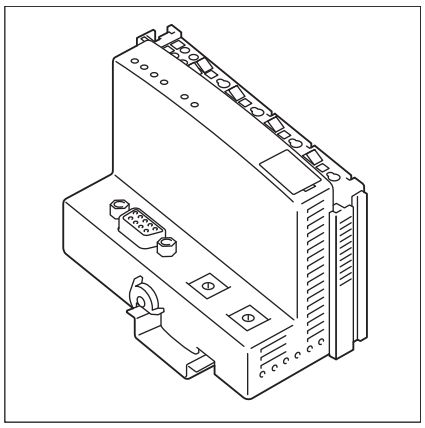


a Power supply module
b I/O module
c Modules that require 24 V DC
d Modules that do not require 24 V DC

3. A power supply module must be connected for every 32 I/O modules.

Address setup

The WAGO I/O module located at the left end of the nodes has rotary switches for setting the addresses. A unique address for every node must be set.

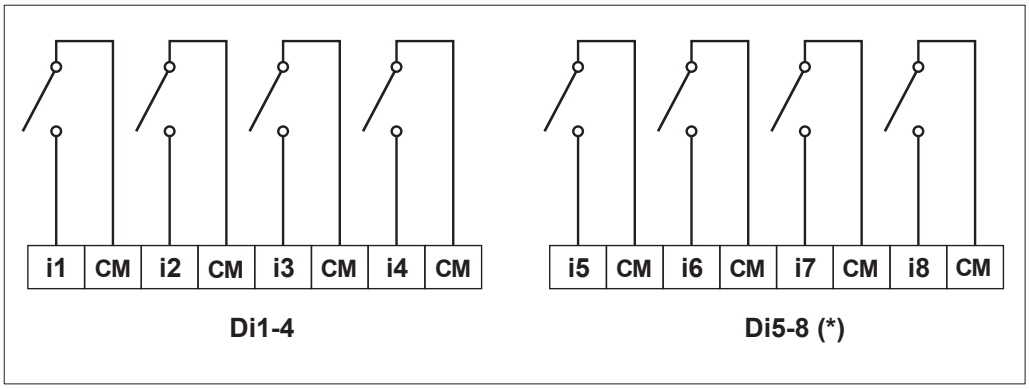


For more information, see "12.6 Address settings for external equipment" [▸ 177].

5.2.6 Connecting digital input devices

The DC+ Edge can be connected to an external signal input device for stopping air conditioners, or with power meters for calculating the power consumption of individual units. See "5.2.1 Wiring specifications" [▸ 16] for more information about the wiring used to connect digital input devices.

1 Connect the contact input or pulse input lines to the and CM terminals of Di1~4 or Di5~8 (only in case of DGE601A51) located on the front face of the DC+ Edge.



i1~i8 Contact input or pulse input terminal
CM Common terminal
(*) Only for (DGE601A51)

NOTICE

When using open collector type outputs, connect CM to the negative side.

NOTICE

When the forced stop contact input is closed, a stop signal is sent to all connected devices. There is no hard guarantee that all devices have effectively stopped and remain stopped during the time the forced stop contact input is active.

CAUTION

The contact connected to the contact input terminal must be capable of handling 10 mA at 16 V DC. If an instantaneous contact is used for triggering an emergency stop, use one that has an energisation time of 200 ms or more.

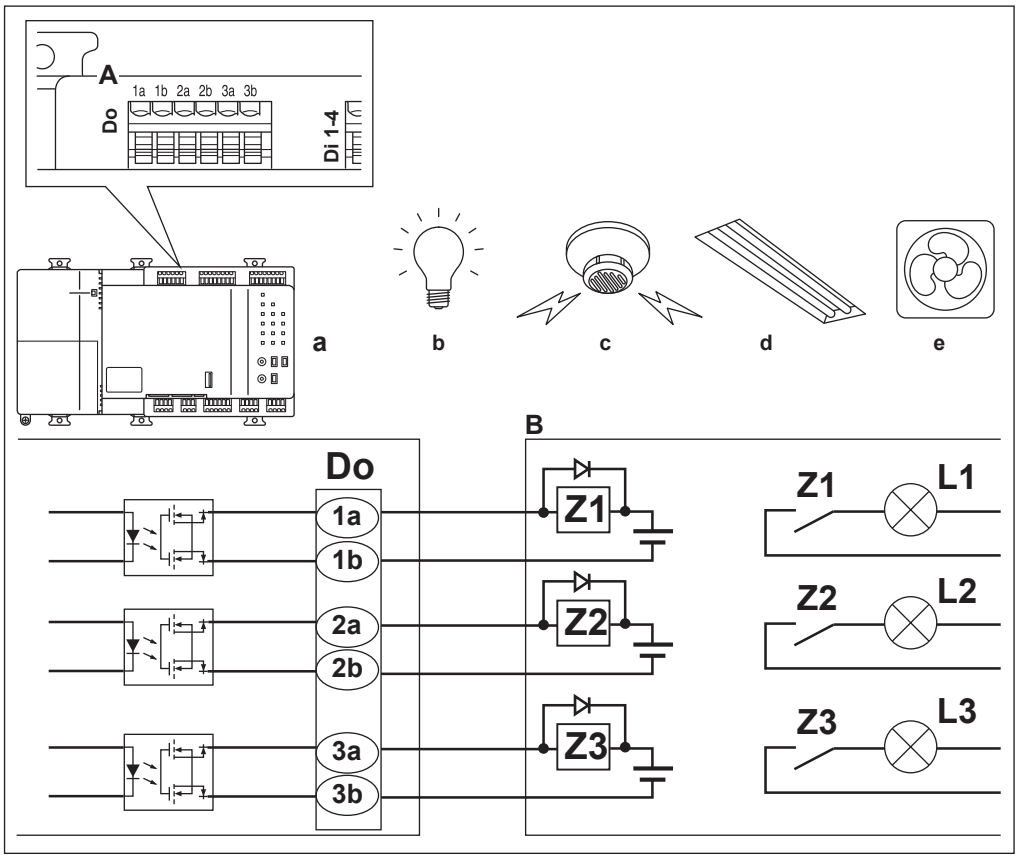
5.2.7 Connecting digital output devices

The digital outputs of the DC+ Edge can be used to control other equipment (lighting, fans, buzzer, ...), by connecting to that equipment's contact inputs. See "5.2.1 Wiring specifications" [▸ 16] for more information about the wiring used to connect equipment to the digital outputs.

To connect digital output devices

1 Connect the contact output lines to the terminals of Do1~2 or Di3 (only in case of DGE601A51) located on the front face of the DC+ Edge.

An example diagram for connecting equipment to the digital outputs is shown in the following schematic connection diagram:



A Digital outputs on the DC+ Edge
B Field supply
a DC+ Edge
b Lamp (L1~L3 example)
c Buzzer or alarm
d Lighting
e Fan
L1~L3 Load L1 to L3
Z1~Z3 Relay module

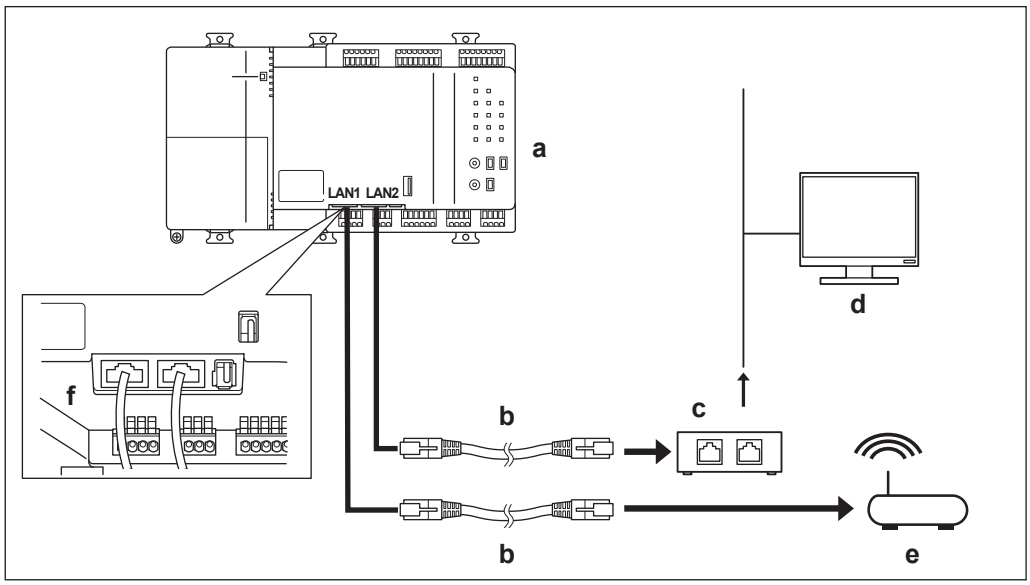
2 Be sure to insert a diode on both ends of the relay coil. A built-in type diode is recommended.

5.2.8 Connecting a LAN cable

The DC+ Edge can be connected to a network with the LAN1 and LAN2 (only in case of DGE601A51) ports. See "5.2.1 Wiring specifications" [▸ 16] for more information about the LAN cable requirements.

To connect a LAN cable

1 Use a LAN cable to connect the LAN1 port and LAN2 port (only for DGE601A51) to the network hub. Note that the LAN1 port is for connecting to Daikin Cloud Plus, while the LAN2 port is for connecting to a local network (e.g. BACnet).



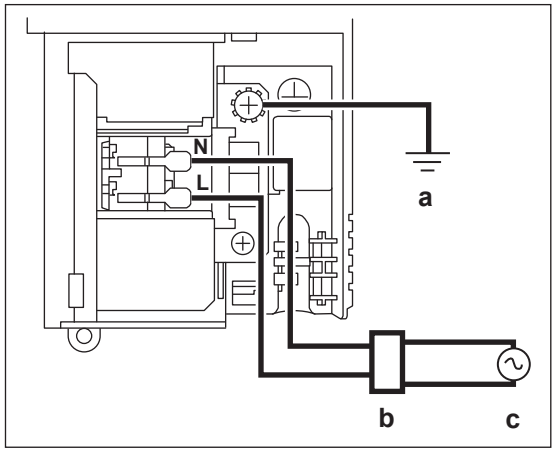
a DC+ Edge
b LAN cable
c Hub
d Monitoring panel
e Router
f LAN1/LAN2 ports

5.2.9 Connecting the power supply

DANGER: RISK OF ELECTROCUTION

Do NOT turn on the power supply before all connections have been made. Perform the steps described during power-off conditions.

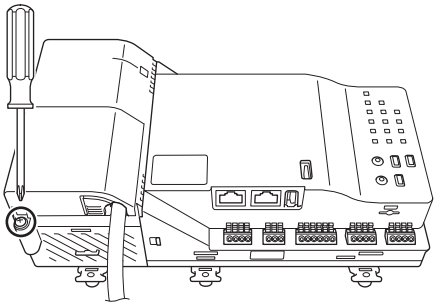
Connect the DC+ Edge to a power supply. An example is shown in the following schematic connection diagram:



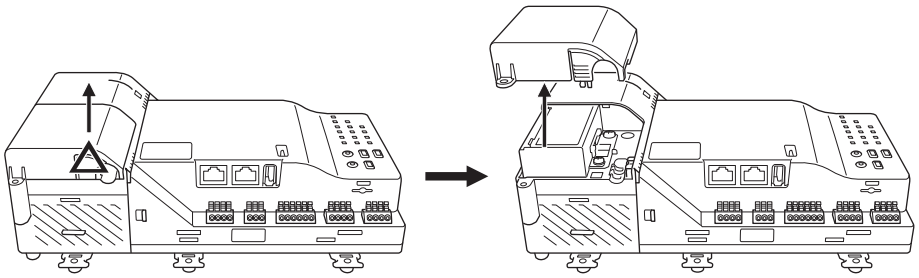
a Earth
b Earth leakage breaker
c Power supply (100~240 V AC, 50/60 Hz)
N Neutral
L Live

Removing the power supply cover and terminal block cover

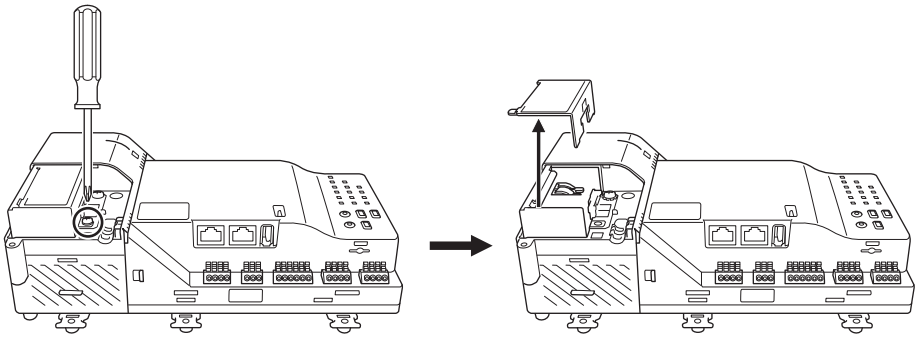
1 Remove the screw from the power supply cable cover.



2 Push the are marked with a triangle in the direction of the arrow. Then, remove the cover.

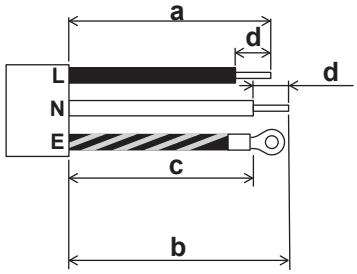


3 Remove the screw from the power supply terminal block cover, and remove the cover.



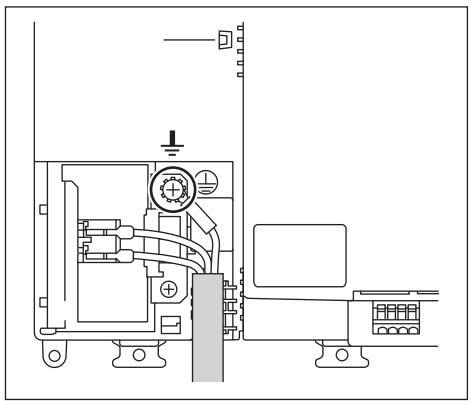
Connecting the wiring

4 Strip the sheath of the power cable and coating of the individual power wires to match the dimensions shown below. You can also refer to the terminal block cover (strip gauge) to check whether the wire is stripped correctly.

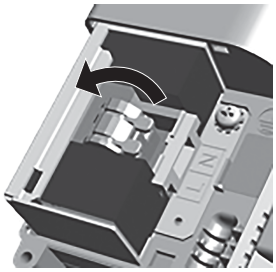


a 45 mm
b 50 mm — Use the included round crimp-type terminal (2-M4) for the end of the earth wire only
c 40 mm
d 10 mm

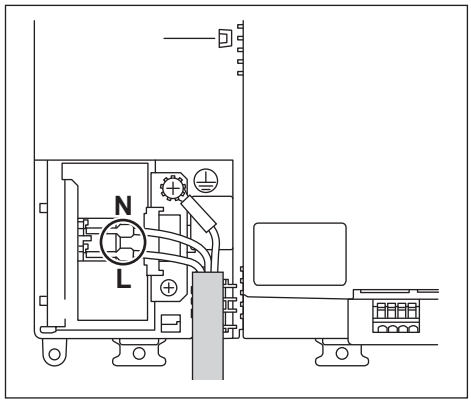
5 Secure the earth wire onto the sheet metal earth terminal with the screw.



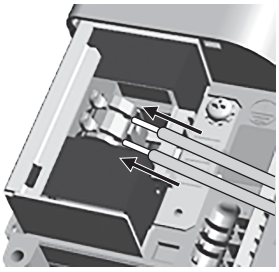
6 Lift the knob on the power supply terminal block, to set it to the open position.



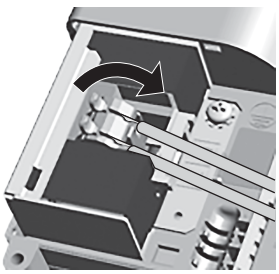
7 Insert the L and N wires into the terminal block.



8 Continue to push up the knob until you feel it click.

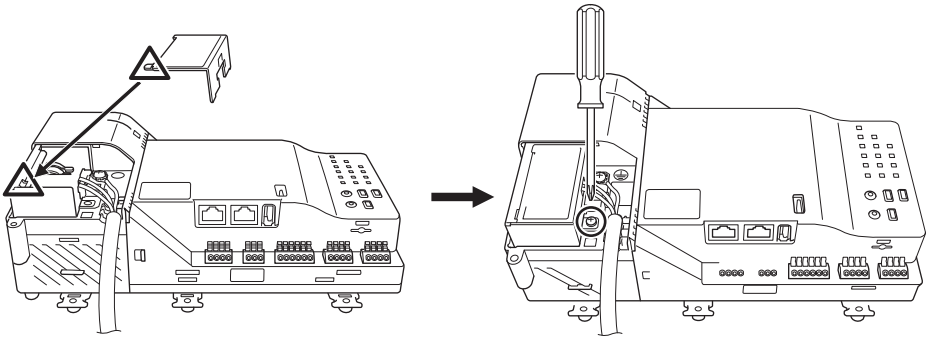


9 Push down the know on the power supply terminal block securely and completely.

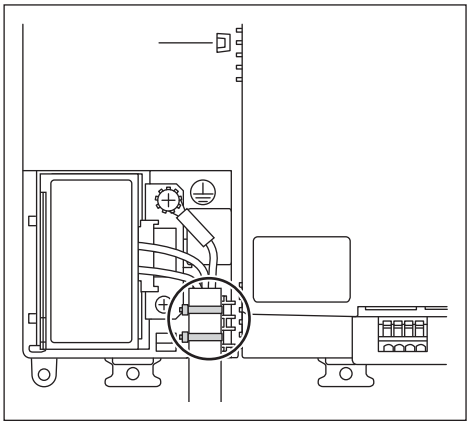


Finishing up

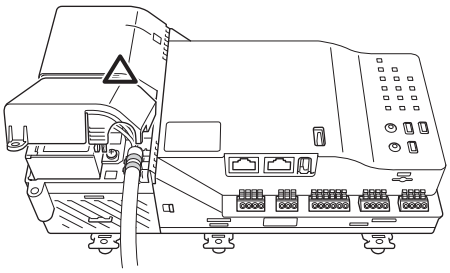
10 While engaging the tab in the area marked with a triangle, attach the terminal block cover and secure it with the screw.



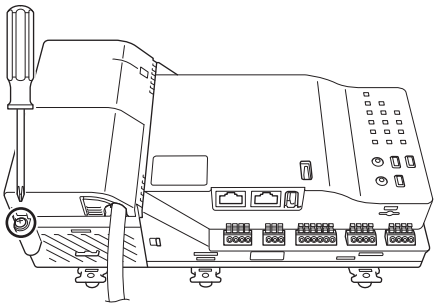
11 Secure the sheath of the power cable in place with 2 cable ties. Make sure the power cable does not move anymore.



12 Hook the power supply cover onto the tab in the area marked with a triangle.



13 Close the cover and secure it with the screw.

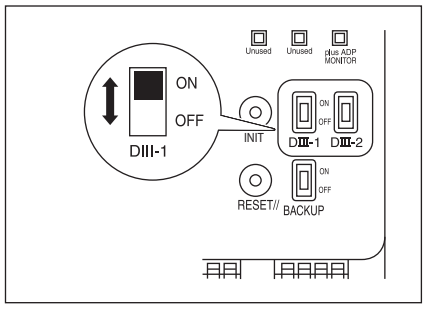


5.3 Initial setup

After checking that all connections are completed, some preparatory steps must be taken in order to be able to control air conditioning equipment with the DC+ Edge.

5.3.1 DIII-NET Main/Sub switch setting

The DIII-NET Main/Sub switch setting must match the environment of the DIII-NET connected to the DC+ Edge. The switch is set to ON (Main) by default.



INFORMATION

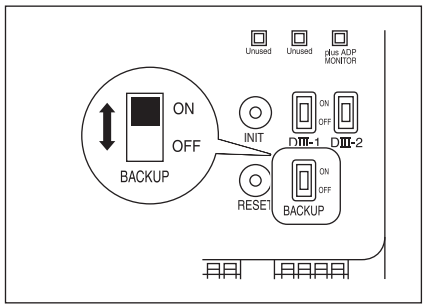
The second DIII-NET switch is only relevant for DGE601A51.

INFORMATION

It is possible to connect 3 centralised controllers as long as there is only a single Main (master) controller on both hardware and software level. For example, it is possible to have a setup where iTM hardware is Sub (slave), its software Main (master), combined with a DC+ Edge controller that is configured as Sub (slave) on both hardware and software level, and finally have a BACnet server that functions as Main (master) on a hardware level.

5.3.2 Backup battery

In order to retain settings even in the event of a power outage, the DC+ Edge has a built-in backup battery. Since the backup battery is disabled by default (factory setting), make sure to enable it by setting the backup battery switch in the ON position.



Note that the backup battery does not keep the DC+ Edge itself powered during a power outage. The purpose of the backup battery switch is to keep track of time, so that messages from the DC+ Edge can quickly be sent after a reset or power outage. When the switch is turned OFF, the controller will need resynchronise the current time first, which can delay other communication between the controller and the cloud.

5.3.3 Turning on the power supply

Turn on the power supply for the DC+ Edge and the units and/or equipment connected to the DC+ Edge. First, turn on the power supply for the units, and only then turn on the power supply for the DC+ Edge.

After some time, it is possible to set a DIII-NET address. The DIII-NET addresses are set using the remote controller of the unit. For more information, see "5.3.4 Setting addresses" [▸ 32].

5.3.4 Setting addresses

Once the DC+ Edge and the air conditioners are powered on, you can start setting DIII-NET addresses. The DIII-NET system makes use of DIII-NET addresses, unique control addresses used to identify each air conditioning group that is part of the system. The addresses can be set manually, with the remote controller of the units. The setting method differs depending on the type of remote controller. This section describes the 2 most commonly used types of remote controllers: BRC1H* and BRC1E*).

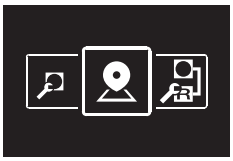
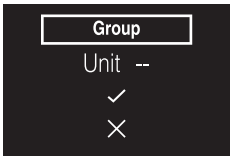
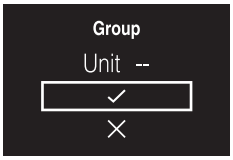
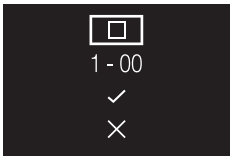
INFORMATION

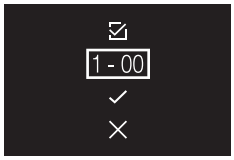
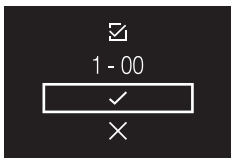
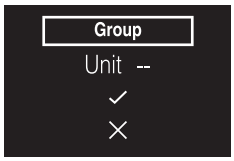
For more information about setting addresses for ventilation units, as well as various adaptors, see the respective documentation.

Setting addresses on BRC1H*

For more information about BRC1H* controllers, i.e. how to operate them, see the respective documentation.

To set the remote controller group MAIN DIII-NET **address**

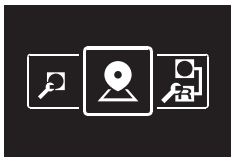
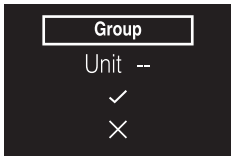
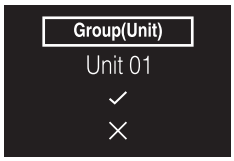
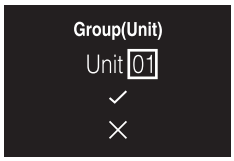
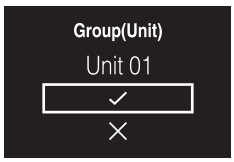
Step	Remote controller screen
From the main menu, use − and + to navigate to the address settings menu. Press ○ to select the menu.	
The following screen is displayed;	
Use − and + to move to ✓ and select it using ○.	
The current address is displayed. Use − and + to move to □, then, press ○ to select it.	
Press + to select the check box. This allows you to edit the DIII-NET address. Then, press ○ to confirm.	

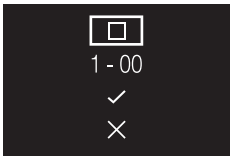
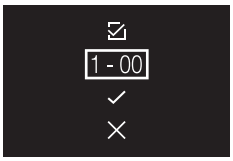
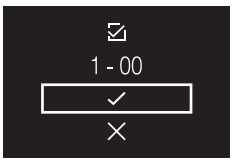
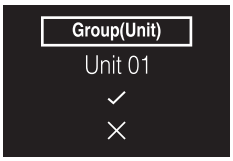
Step	Remote controller screen
Use − and + to move to the address, select it using ○, and then define the address using − and + (e.g. 1-00). Then, press ○ to confirm the address.	
Use − and + to move to ✓ and use ○ to confirm.	
The DIII-NET address is now assigned.	

INFORMATION

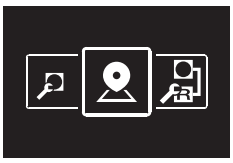
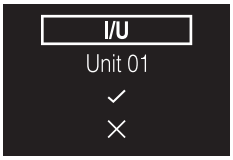
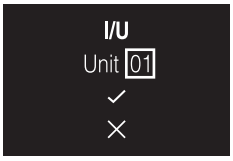
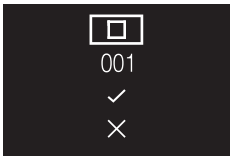
"Group" is NOT displayed on the remote controller when the DC+ Edge is NOT powered on. After powering on the DC+ Edge, wait for some time before trying to operate the remote controller. "Group" is also NOT displayed on the remote controller when the DC+ Edge is NOT communicating with the indoor units normally. In that case, verify that the wiring has been connected correctly.

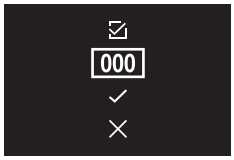
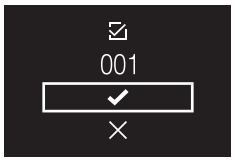
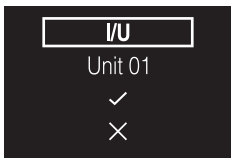
To set the remote controller group SUB DIII-NET **address**

Step	Remote controller screen
From the main menu, use − and + to navigate to the address settings menu. Press ○ to select the menu.	
The following screen is displayed;	
Use − and + to change the selection to "Group(Unit)". Press ○ to confirm.	
Use − and + to move to "Unit", then press ○ to select it. Use − and + to set a unit number. Confirm by pressing ○ again.	
Use − and + to move to ✓, then press ○ to confirm. This will confirm the unit number (e.g. 01).	

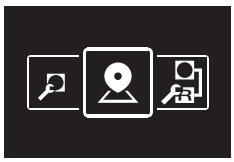
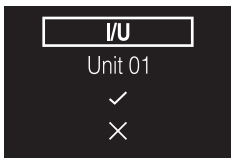
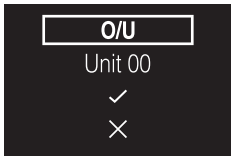
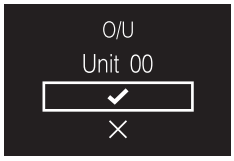
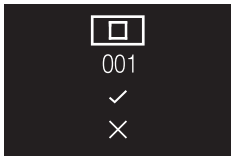
Step	Remote controller screen
Use − and + to move to □, then, press ○ to select it.	
Press + to select the check box. This allows you to edit the DIII-NET address. Then, press ○ to confirm.	
Use − and + to move to the address, select it using ○, and then define the address using − and + (e.g. 1-00). Then, press ○ to confirm the address.	
Use − and + to move to ✓ and use ○ to confirm.	
The DIII-NET address is now assigned.	

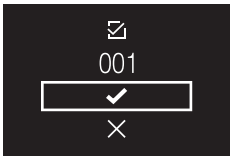
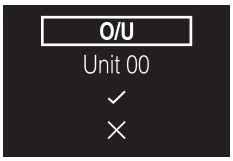
To set the indoor unit AirNet address

Step	Remote controller screen
From the main menu, use − and + to navigate to the address settings menu. Press ○ to select the menu.	
The following screen is displayed;	
Use − and + to move to "Unit" and select it using ○. Use − and + to set a unit number. Confirm by pressing ○ again.	
Use − and + to move to ✓ and use ○ to confirm.	
Use − and + to move to □, then, press ○ to select it.	

Step	Remote controller screen
Press + to select the check box. This allows you to edit the AirNet address, then press ○ to confirm.	
Use − and + to move to the address, select it using ○, and then define the address using − and + (e.g. 001). Then, press ○ to confirm the address.	
Use − and + to move to ✓ and use ○ to confirm.	
The AirNet address is now assigned.	

To set the outdoor unit AirNet address

Step	Remote controller screen
From the main menu, use − and + to navigate to the address settings menu. Press ○ to select the menu.	
The following screen is displayed;	
Use − and + to change the selection to "O/U". Press ○ to confirm.	
Use − and + to move to ✓, then press ○ to confirm.	
Use − and + to move to □, then, press ○ to select it.	
Press + to select the check box. This allows you to edit the AirNet address. Then, press ○ to confirm.	

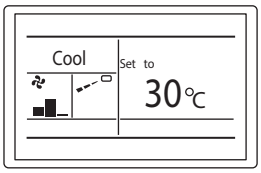
Step	Remote controller screen
Use − and + to move to the address, select it using ○, and then define the address using − and + (e.g. 001). Then, press ○ to confirm the address.	
Use − and + to move to ✓, then press ○ to confirm.	
The AirNet address is now assigned.	

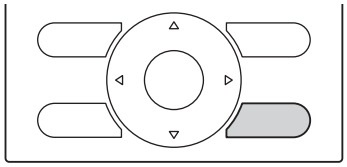
Setting addresses on BRC1E*

For more information about BRC1E* controllers, i.e. how to operate them, see the respective documentation.

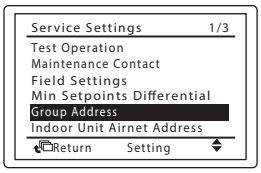
To set the remote controller group MAIN DIII-NET **address**

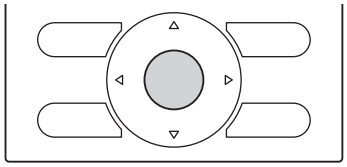
1 Press and hold the indicated button for at least 4 seconds. This displays the service settings menu.



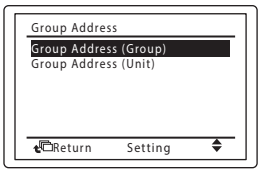


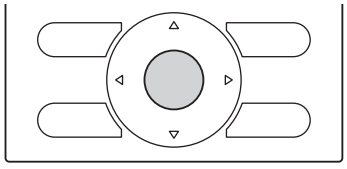
2 Move to the group address settings. Use the up and down buttons, then press the OK button to confirm.



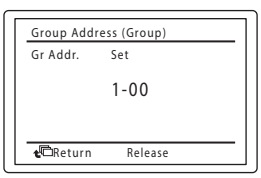


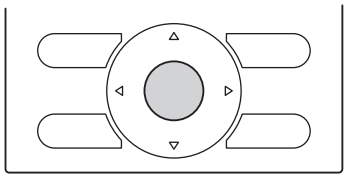
3 In the group address menu, select group address (for a group, not a unit). Press the OK button to confirm.



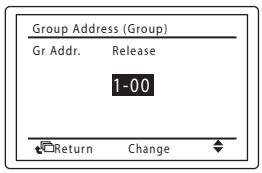


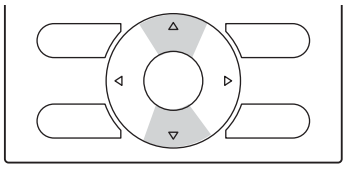
4 If an address is already set, press the OK button to release it. The indication changes from "Set" to "Release". You can now change the address.



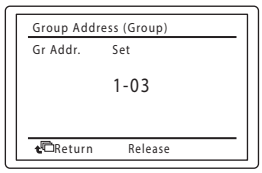


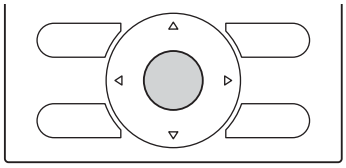
5 Set the address (e.g. 1-03) using the up and down buttons.





6 Press the OK button to confirm the address. The indication changes from "Release" to "Set".



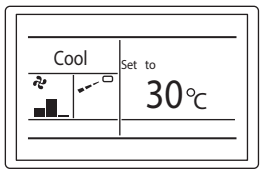


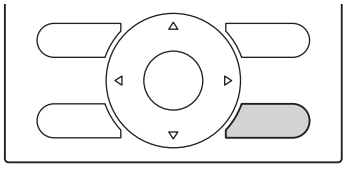
Result: The DIII-NET address is set.

> **INFORMATION**
>
> The group address menu is NOT displayed on the remote controller when the DC+ Edge is NOT powered on. After powering on the DC+ Edge, wait for some time before trying to operate the remote controller. The group address menu is also NOT displayed on the remote controller when the DC+ Edge is NOT communicating with the indoor units normally. In that case, verify that the wiring has been connected correctly.

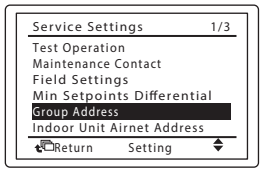
To set the remote controller group SUB DIII-NET **address**

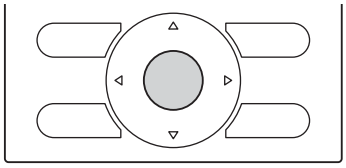
1 Press and hold the indicated button for at least 4 seconds. This displays the service settings menu.



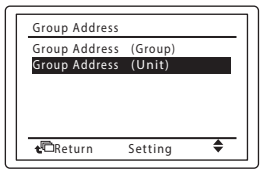


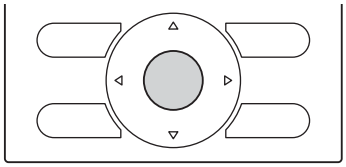
2 Move to the group address settings. Use the up and down buttons, then press the OK button to confirm.



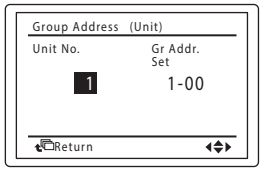


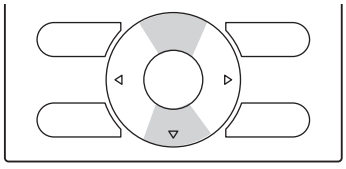
3 In the group address menu, select group address (for a unit, not a group). Press the OK button to confirm.



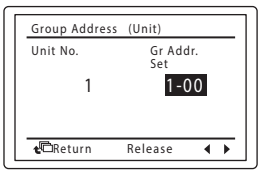


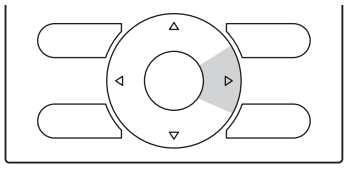
4 Set the unit number (e.g. 1) using the up and down buttons.



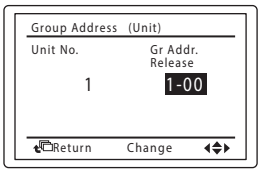


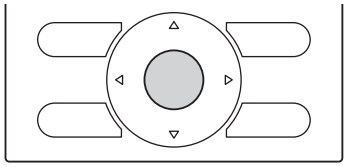
5 Move to the group address using the right button.



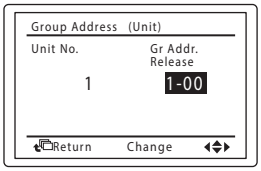


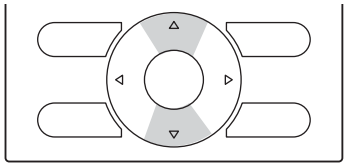
6 If an address is already set, press the OK button to release it. The indication changes from "Set" to "Release". You can now change the address.



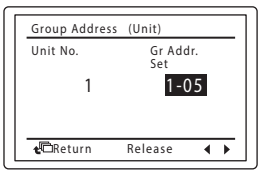


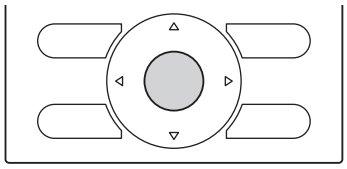
7 Set the address (e.g. 1-05) using the up and down buttons.





8 v

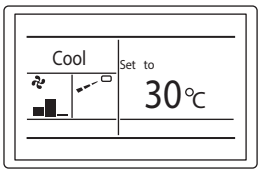


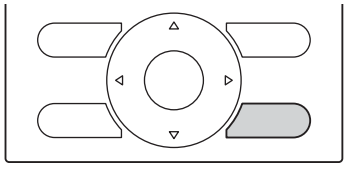


Result: The DIII-NET address is set.

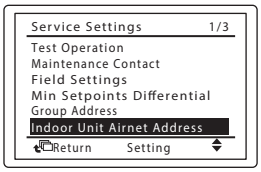
To set the indoor unit AirNet address

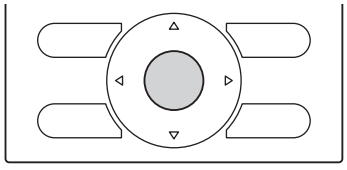
1 Press and hold the indicated button for at least 4 seconds. This displays the service settings menu.



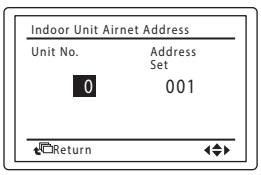


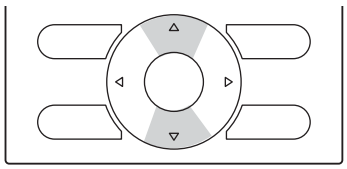
2 Move to the indoor unit AirNet address settings. Use the up and down buttons, then press the OK button to confirm.



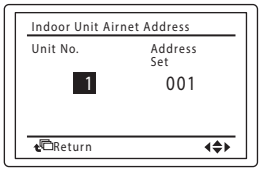


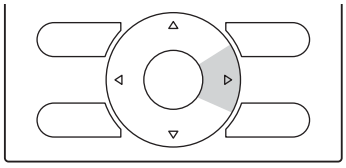
3 Set the unit number (e.g. 1) using the up and down buttons.



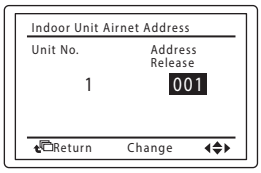


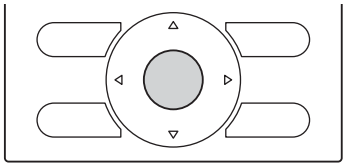
4 Move to the AirNet address using the right button.



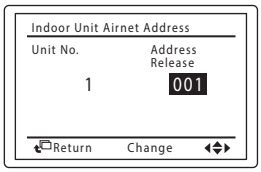


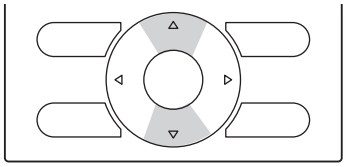
5 If an address is already set, press the OK button to release it. The indication changes from "Set" to "Release". You can now change the address.



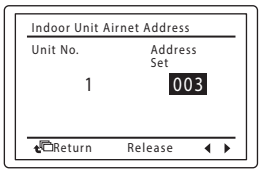


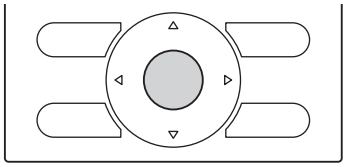
6 Set the AirNet address (e.g. 003) using the up and down buttons.





7 Press the OK button to confirm the address. The indication changes from "Release" to "Set".

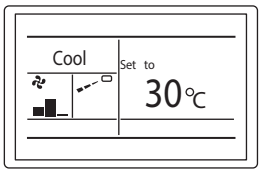


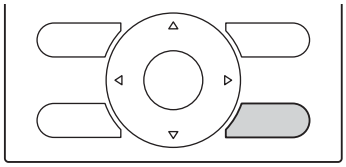


Result: The AirNet address is set.

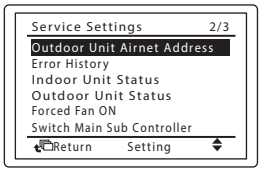
To set the outdoor unit AirNet address

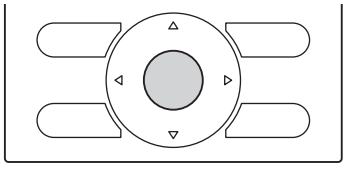
1 Press and hold the indicated button for at least 4 seconds. This displays the service settings menu.



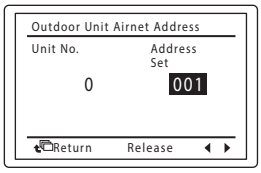


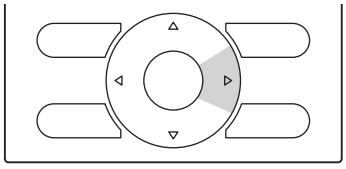
2 Move to the outdoor unit AirNet address settings. Use the up and down buttons, then press the OK button to confirm.



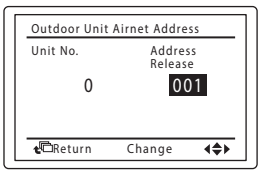


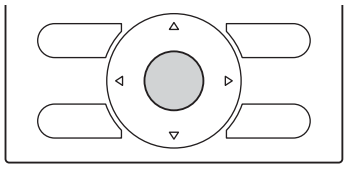
3 Move to the AirNet address using the right button.



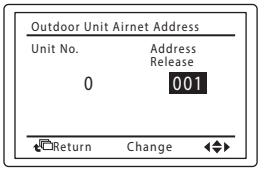


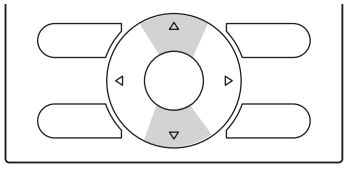
4 If an address is already set, press the OK button to release it. The indication changes from "Set" to "Release". You can now change the address.



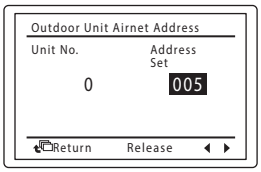


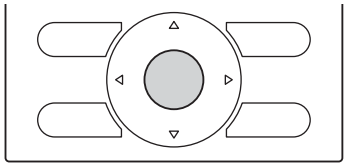
5 Set the AirNet address (e.g. 005) using the up and down buttons.





6 Press the OK button to confirm the address. The indication changes from "Release" to "Set".





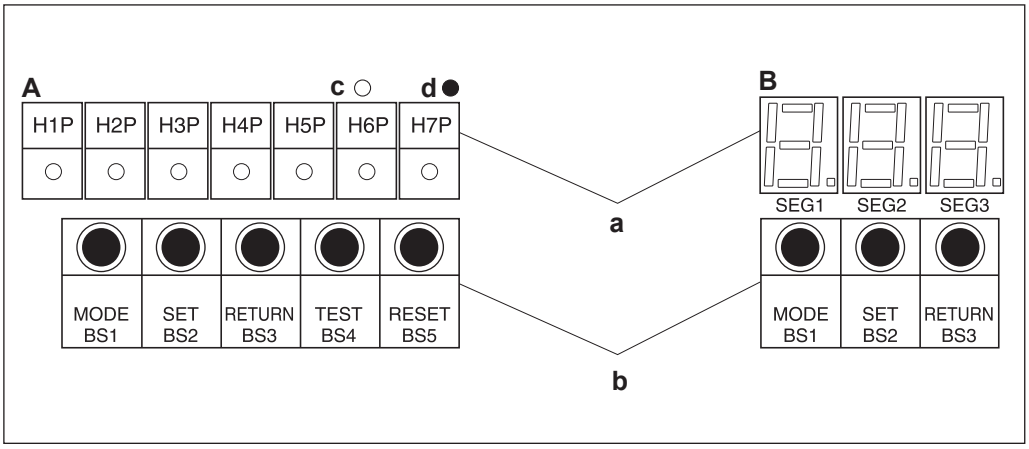
Result: The AirNet address is set.

Setting addresses on outdoor units

In the following cases, AirNet addresses cannot be set on the remote controller:

- When there are multiple systems that exist in 1 remote controller group.
- When the outdoor unit AirNet address is not displayed in the service settings (BRC1E*).

In these cases, it is necessary to set the AirNet address using the push buttons located on the PCB of the unit. The current setting or operating status of an outdoor unit is indicated by the LED or segment display of the outdoor unit.



A Outdoor unit with LED display
B Outdoor unit with segment display
a Display of each mode (LED or segment)
b Push buttons
c Unlit
d Lit

If you intend to use demand control functionality, also set demand addresses for the outdoor units, and enable demand setting.

To set the outdoor unit AirNet address

1 Press BS1 for at least 5 seconds.

Result: The LEDs and segment display will be in the state as shown in the table below:

LED display							Segment display		
H1P	H2P	H3P	H4P	H5P	H6P	H7P	SEG1	SEG2	SEG3
○	●	●	●	●	●	●	2	0	0

2 Press BS2 13 times.

Result: The LEDs and segment display will be in the state as shown in the table below:

LED display							Segment display		
H1P	H2P	H3P	H4P	H5P	H6P	H7P	SEG1	SEG2	SEG3
○	●	●	○	○	●	○	2	1	3

3 Press BS3. You can now see the current AirNet address setting on the segment display.

4 Press BS2 to change to any AirNet address any number (1~63).

5 Press BS3 2 times to confirm the AirNet address setting.

6 Press BS1 1 time to return to normal mode.

To set the outdoor unit demand address

If you intend to use demand control functionality, it is necessary to set the demand address for the outdoor units using the push buttons located on the PCB of the unit. The current setting or operating status of an outdoor unit is indicated by the LED or segment display of the outdoor unit. For more information about demand control, see the user reference guide.

7 Press BS1 for at least 5 seconds.

Result: The LEDs and segment display will be in the state as shown in the table below:

LED display							Segment display		
H1P	H2P	H3P	H4P	H5P	H6P	H7P	SEG1	SEG2	SEG3
○	●	●	●	●	●	●	2	0	0

8 Press BS2 2 times.

Result: The LEDs and segment display will be in the state as shown in the table below:

LED display							Segment display		
H1P	H2P	H3P	H4P	H5P	H6P	H7P	SEG1	SEG2	SEG3
○	●	●	●	●	○	●	2	0	2

9 Press BS3. You can now see the current demand address setting on the segment display.

10 Press BS2 to change to any demand address any number (0~31).

11 Press BS3 2 times to confirm the demand address setting.

Result: The demand address is set.

12 Press BS2 12 times.

Result: The LEDs and segment display will be in the state as shown in the table below:

LED display							Segment display		
H1P	H2P	H3P	H4P	H5P	H6P	H7P	SEG1	SEG2	SEG3
○	●	●	○	○	●	●	2	1	2

13 Press BS3. You can now see the currently set value (enabled or disabled) on the segment display.

14 If the demand setting is disabled, press BS1 1 time to enable it.

Result: The LEDs and segment display will be in the state as shown in the table below:

LED display							Segment display		
H1P	H2P	H3P	H4P	H5P	H6P	H7P	SEG1	SEG2	SEG3
○	●	●	●	●	○	●	0	0	1

15 Press BS3 2 times to confirm the set value.

16 Press BS1 1 time to return to normal mode.

Also see the installer reference guide of your unit for more information.

5.3.5 Using a DIII plus adaptor

For installations using a DIII plus adaptor, the following settings must be changed in cases 1 to 3 below. The setting method differs depending on the board.

Jumper pins

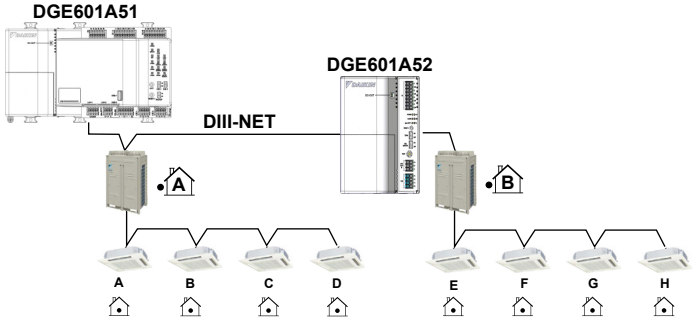
Outdoor unit monitoring

To use functions that are processed based on information from the outdoor unit (outdoor unit monitoring), such as using an internal Pi, cut jumper pin J1.

Demand and low noise function

To use the demand or low noise function, cut jumper pin J4. In addition to cutting the jumper pin, make sure to:

- Connect the DC+ Edge to the upstream side of the DIII plus adaptor.
- Assign the AirNet addresses to the outdoor units consecutively from the upstream side of the DIII plus adaptor, starting from 1. An example of how to assign AirNet addresses:



Outdoor unit	A				B			
Indoor unit	A	B	C	D	E	F	G	H

Outdoor unit AirNet address	1				2			
Indoor unit AirNet address	2	3	4	5	6	7	8	9

See "5.3.4 Setting addresses" [▸ 32] for more information about setting addresses.

INFORMATION

Make sure that indoor unit AirNet addresses have consecutive values within the same outdoor unit series.

INFORMATION

The total number of outdoor units connected downstream of the DIII-NET expander adapter with jumper pins cut and outdoor units connected directly to the DC+ Edge should be no more than 7.

DIP switches

Outdoor unit monitoring

To use functions that are processed based on information from the outdoor unit, such as using an internal Pi, turn on DS501-1 and DS101-1.

Demand and low noise function

To use the demand or low noise function, turn on DS501-4 and DS101-4. In addition to changing the DIP switches, make sure to:

- Connect the DC+ Edge to the upstream side of the DIII plus adaptor.
- Assign the AirNet addresses to the outdoor units consecutively from the upstream side of the DIII plus adaptor, starting from 1.

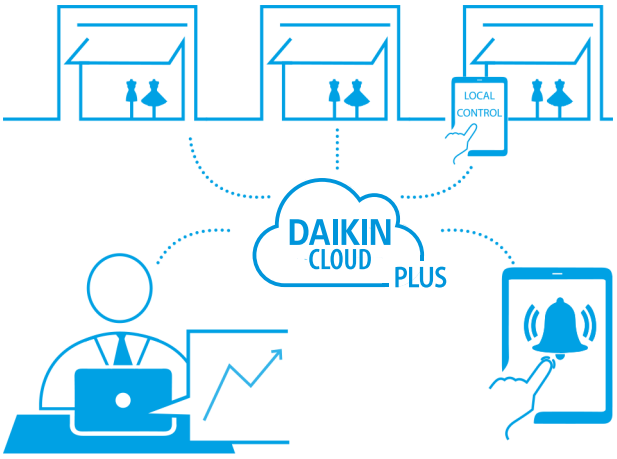
INFORMATION

The total number of outdoor units connected downstream of the DIII plus adaptor with their DIP switches turned on and the outdoor units connected directly to the DC+ Edge should be no more than 7.

6 System overview

6.1 About Daikin Cloud Plus

Daikin Cloud Plus is accessible via https://cloudplus.daikineurope.com/. The Daikin Cloud Plus user interface allows you to control your building's climate from any location. It can connect multiple building locations and is accessible via any web enabled device. Installers and technicians also have access to the Cloud so that they can remotely log in and immediately begin troubleshooting if there is ever a malfunction.



The user-friendly interface makes control even easier, and the automatic energy consumption tracking helps you reduce your costs in the long-run. There are 4 possible user roles, each with different access levels.

Depending on your role, you have more or less functions available. See the user reference guide for an overview.

6.1.1 Applications

Apart from the main Daikin Cloud Plus web application, there are 2 other applications that are used during commissioning, each with their own function:

Application	Type	Usage
Daikin Cloud Plus	Browser application[(a)]	Manage and monitor sites and equipment.
Daikin Cloud Plus Commissioning	Browser application[(a)]	Web commissioning application used for most of the commissioning process: create and check equipment data detected by DC+ Edge connect. Also used to check the operation status of connected equipment, and to update the DC+ Edge software version.
DC+ Edge connect	Mobile application[(b)]	Optional: local commissioning application. Used to register a DC+ Edge and to detect equipment connected to the DC+ Edge.

Application	Type	Usage
DC+ Fallback control[c]	Mobile application[b]	Optional: basic monitoring and control of equipment. The application is directly connected to a DC+ Edge without passing through the cloud. This application is not used during commissioning, but an initial password must be set during commissioning for later use of the application.

[a] An up-to-date, Chromium-based web browser (such as Google Chrome or Microsoft Edge) is recommended to run the web browser applications.

[b] A tablet is recommended. However, smartphones are also supported. Please download the DC+ Fallback control and DC+ Edge connect applications directly via the application store of your device (App Store or Google Play). For Android devices, Android 10.0 or higher is required. For Apple devices, iOS 14.0 or or higher is required.

[c] Up to 2 instances of DC+ Fallback control can be connected simultaneously. In this case, take care to avoid operation conflicts. For example, do not operate the same equipment simultaneously from different instances.

INFORMATION

DC+ Fallback control and DC+ Edge connect CANNOT run on a single device simultaneously.

INFORMATION

Take the following into account when using any of the applications:

- Depending on the screen resolution, the sidebar in the user interface may not be displayed fully. In this case, tap or click the "Hamburger" icon to expand the sidebar.
- When selecting an item from a drop-down list or menu, the item may not be set unless you press anywhere outside of the drop-down list or menu first.

6.1.2 About cookies

Daikin Cloud Plus uses cookies. When browsing to https://cloudplus.daikineurope.com/ for the first time, a pop-up window will ask you to accept these cookies. For the application to function optimally, some essential and functional cookies ("minimal cookies") must be accepted. For more information about cookies and how they are used to optimise your experience, click the link in the pop-up window. You can also always reach this page by clicking the COOKIES link near the bottom of the page.

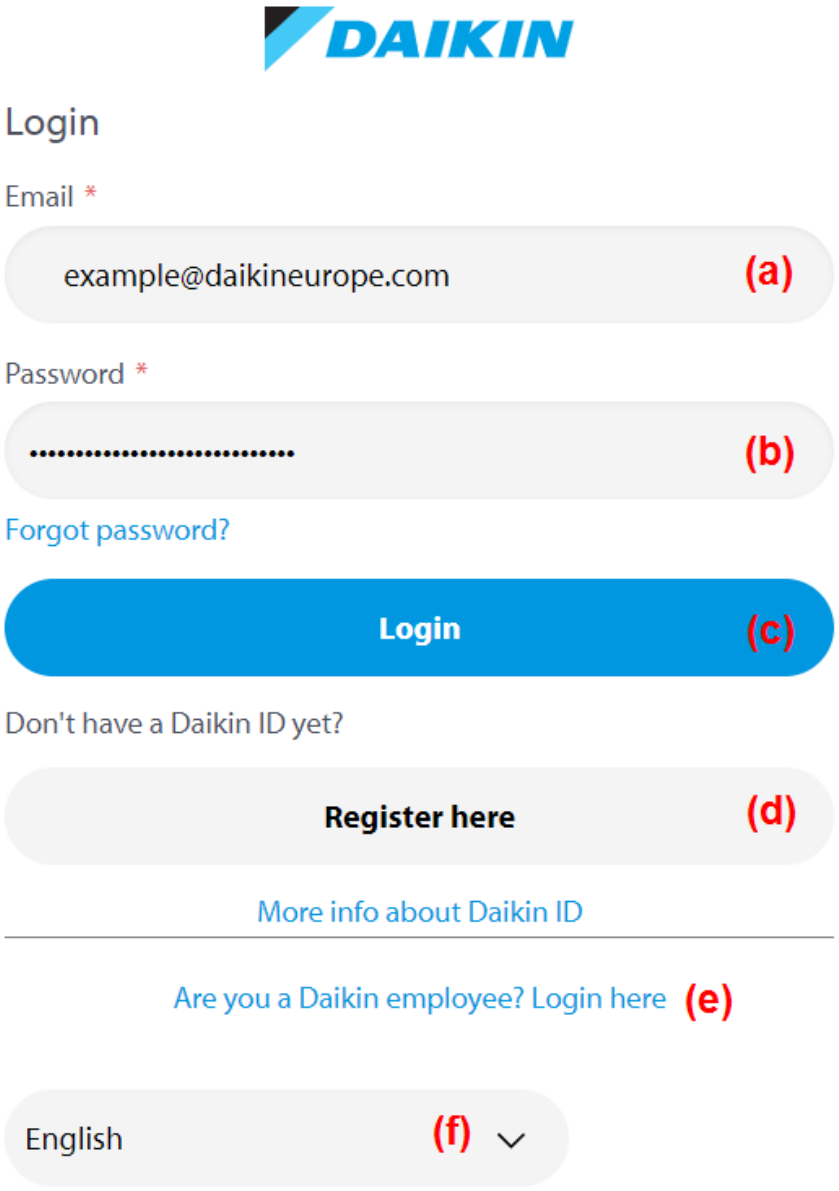
6.1.3 Terms of use

Before you can start using Daikin Cloud Plus, Daikin Cloud Plus Commissioning, or DC+ Edge connect, you have to accept the Terms of use. After first logging in, the Terms of use will be displayed on screen. You can return to the Terms of use again at any time by clicking the TERMS OF USE link near the bottom of the page.

6.1.4 To log into Daikin Cloud Plus

> **INFORMATION**
>
> A Daikin ID is required in order to log into Daikin Cloud Plus. If you do NOT have a Daikin ID yet, click the link on the login page to register for an account with your local affiliate.

1. In your web browser, go to https://cloudplus.daikineurope.com/.
2. If this is your first time visiting, accept the cookies from the pop-up window. For more information about cookies, see "6.1.2 About cookies" [▸ 45].
3. Click Login.
4. Enter your Daikin ID credentials (a, b).



5. Log in with your Daikin ID. Alternatively, you can log in as a Daikin employee (e). If you do not have a Daikin ID yet, register for an account by clicking the button (d).
6. If required, change the language of the user interface using the drop-down list (f).

7 Click Login (c).

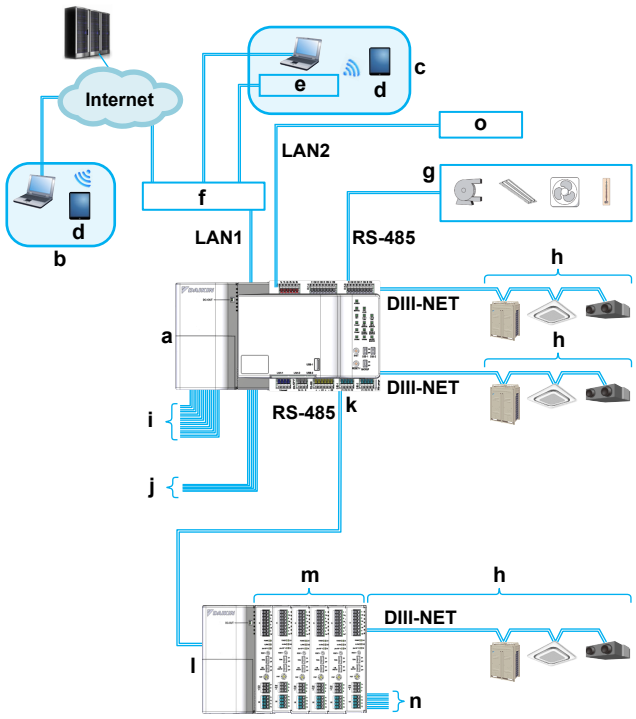
Result: You are now logged in.

INFORMATION

After the first login, you will be presented with the terms of use for Daikin Cloud Plus. Please review the terms of use carefully before using the application.

6.2 System configuration

DC+ Edge (DGE601A51)



a DC+ Edge (DGE601A51)
b Remote connections
c Local connections
d Tablet (or smartphone)
e Wi-Fi router
f Hub, switch, router, ...
g External equipment (pump, lighting, fan, sensor, ...)
h Air conditioning units
i Di/Pi
j Do port
k RS485 expander adapter port
l DIII plus adaptor (DGE601A52)
m DIII plus adaptor slot (DGE601A53)
n Di/Pi ports
o Local network (e.g. BACnet)

Notes:

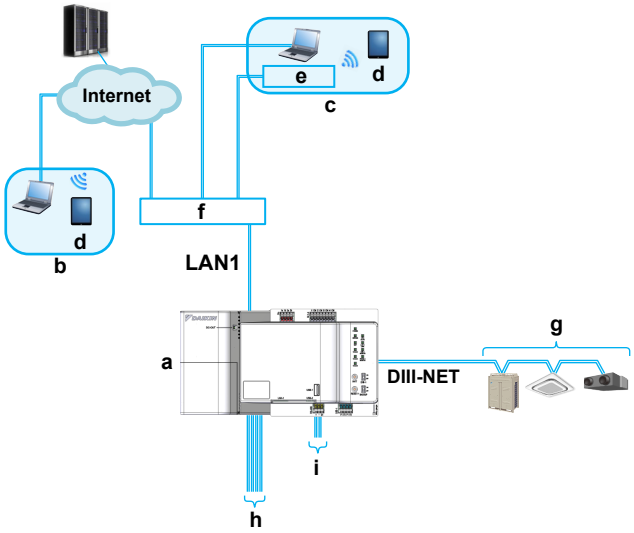
- Up to 30 pieces of external equipment can be connected.
- Up to 64 units can be connected to each DIII-NET port. In case DGE601A52 is included in the system, an additional 64 units can be connected to its DIII-NET port. DGE601A52 can be expanded with up to 5 additional slots (DGE601A53) in order to support an additional 64 units per slot. With DGE601A52 and 5 additional slots (DGE601A53), the system can support up to 512 units.
- Remote connections are connections made through the cloud to Daikin Cloud Plus and Daikin Cloud Plus Commissioning. Local connections are connections made to any of the applications (see "6.1.1 Applications" [▸ 44]) on the local network and do not pass through the cloud. For example, DC+ Fallback control can be used to control units over the local network.
- Do NOT set the IP address for LAN1 to 192.168.200.**. There is a possibility that the initial DHCP host IP address of the router is set to this address already. See the operation manual of your router and confirm the DHCP host address. In case the address is 192.168.200.**, change the address.

INFORMATION

By default, the IP address for LAN2 is 192.168.200.**, even if LAN2 is NOT used. When LAN1 is set to the same IP address as LAN2, you will NOT be able to connect to the cloud, and as a result, you will be unable to perform an update of the DC+ Edge software, which is required step during commissioning. To avoid issues, you can enable DHCP for LAN2, or simply assign an IP address outside of the default LAN2 IP range.

- The DC+ Edge Di/Pi port 1 can be used as an emergency stop signal input only. Other Di/Pi ports (2-8) can be used as emergency stop signal inputs, pulse inputs or contact inputs. The Do ports (1-3) can be used as contact outputs.
- The slot Di/Pi ports (1-4) can be used as emergency stop signal inputs, pulse inputs or contact inputs.

DC+ Edge Lite (DGE602A51)



a DC+ Edge Lite (DGE602A51)
b Remote connections
c Local connections
d Tablet (or smartphone)
e Wi-Fi router
f Hub, switch, router, ...
g Air conditioning units
h Di/Pi ports
i Do port

Notes:

- Up to 64 units can be connected.
- Remote connections are connections made through the cloud to Daikin Cloud Plus and Daikin Cloud Plus Commissioning. Local connections are connections made to any of the applications (see "6.1.1 Applications" [▸ 44]) on the local network and do not pass through the cloud. For example, DC+ Fallback control can be used to control units over the local network.
- Do NOT set the IP address for LAN1 to 192.168.200.**. There is a possibility that the initial DHCP host IP address of the router is set to this address already. See the operation manual of your router and confirm the DHCP host address. In case the address is 192.168.200.**, change the address.
- The DC+ Edge Lite Di/Pi port 1 can be used as an emergency stop signal input only. Other Di/Pi (2-4) can be used as emergency stop signal inputs, pulse inputs or contact inputs. The Do ports (1-2) can be used as contact outputs.

6.3 Network configuration

Keep the following in mind regarding the network configuration:

- Make sure the DC+ Edge is installed in a place within reach of the LAN cable used to connect the DC+ Edge to the router.
- If necessary, an optional hub can be placed in between the DC+ Edge and the router. In this case, run an extra LAN cable between the hub and the router. For more information about the LAN cables to use, see "5.2.1 Wiring specifications" [▸ 16].
- After powering the router (and optionally, the hub), make sure to set the backup switch on the DC+ Edge to the ON position. This enables the built-in backup battery of the DC+ Edge, which will retain any settings when a power outage occurs. For more information, see "5.3.2 Backup battery" [▸ 31].
- When using DC+ Edge connect application, the tablet should be connected to the wireless network of the router connected to the DC+ Edge.

INFORMATION

It is recommended to ALWAYS use DHCP .for LAN port 1. If a static IP address is required, assign a static lease linked to the MAC address of the DC+ Edge. This allows for remote management of DC+ Edge (for example, by the IT department of the client), without requiring access to the DC+ Edge itself.

7 Commissioning

7.1 Checklist before commissioning

After the installation of the DC+ Edge, check the items listed below.

☐	You read the complete installation instructions, as described in the **installer reference guide**.
☐	The **DC+ Edge** is properly mounted.
☐	The following **field wiring** has been carried out according to this document and the applicable legislation: ▪ Between the power supply and the DC+ Edge ▪ Between DIII-NET compatible equipment and the DC+ Edge ▪ Between the DIII plus adaptor (DGE601A52) and the DC+ Edge (if applicable) ▪ Between the WAGO I/O module and the DC+ Edge, as well as between the WAGO I/O module and the modules connected to it (if applicable) ▪ Between any digital input and/or output devices and the DC+ Edge (if applicable) ▪ Between the DC+ Edge and the cloud and/or local network.
☐	There are NO **loose connections** or damaged electrical components.
☐	The system is properly **earthed** and the earth terminals are tightened.
☐	The **fuses** or locally installed protection devices are installed according to this document, and have NOT been bypassed.
☐	The **power supply voltage** matches the voltage on the identification label of the unit.
☐	The power supply and the DC+ Edge unit are **locked in place** with the inter-unit lock.
☐	The **DIII-NET Main/Sub switch position** matches the environment of the DIII-NET connected to the DC+ Edge.
☐	The **backup battery switch** is set to the ON position.
☐	The **DC+ Edge** is **powered ON**.
☐	The **DIII-NET addresses** (group address, AirNet address, demand address if demand control is to be used) for all units have been set and the units are powered on.

7.2 Overview: Commissioning

This chapter describes what you have to do and know to commission the system after it is installed.

Typical workflow

Commissioning typically consists of the following stages:

1 Reviewing the "Checklist before commissioning".
2 Set up a temporary network to perform the commissioning.
3 Creating a site in Daikin Cloud Plus.
4 Creating a DC+ Edge controller in Daikin Cloud Plus commissioning.
5 Registering the DC+ Edge controller in DC+ Edge connect.
6 Performing an update of the DC+ Edge software in Daikin Cloud Plus Commissioning.
7 Detecting DIII equipment with the DC+ Edge connect app.
8 Uploading equipment data to Daikin Cloud Plus commissioning and creating equipment.
9 Performing a check of DIII equipment data and resolving potential errors in Daikin Cloud Plus Commissioning.
10 Registering other types of equipment (I/O, external equipment, BACnet equipment) in Daikin Cloud Plus commissioning.
11 Registering and sending all equipment data to the controller in Daikin Cloud Plus Commissioning.
12 Performing configuration checks.
13 Changing the commissioning status of equipment.
14 Configuring the R32 leak alarm and performing a refrigerant leak alarm test.
15 Starting service.
16 Optional: setting up power proportional distribution.

Tools and requirements

- Laptop (to access Daikin Cloud Plus and Daikin Cloud Plus Commissioning)
- Android or iOS tablet (to access DC+ Edge connect and DC+ Fallback control)
- 3G/4G/5G/LTE router

7.3 Setting up a temporary network

It is strongly recommended to use a portable 3G/4G/5G/LTE to WiFi router (field supply) in order to set up a temporary network for until the system has been fully commissioned. A temporary network setup makes it easy to connect the tablet used to run DC+ Edge connect and DC+ Fallback control to the same network as the DC+ Edge. While not required for every step of the process, a temporary network can greatly facilitate the commissioning process on site. It also eliminates the need to directly access the network of the customer directly during initial commissioning.

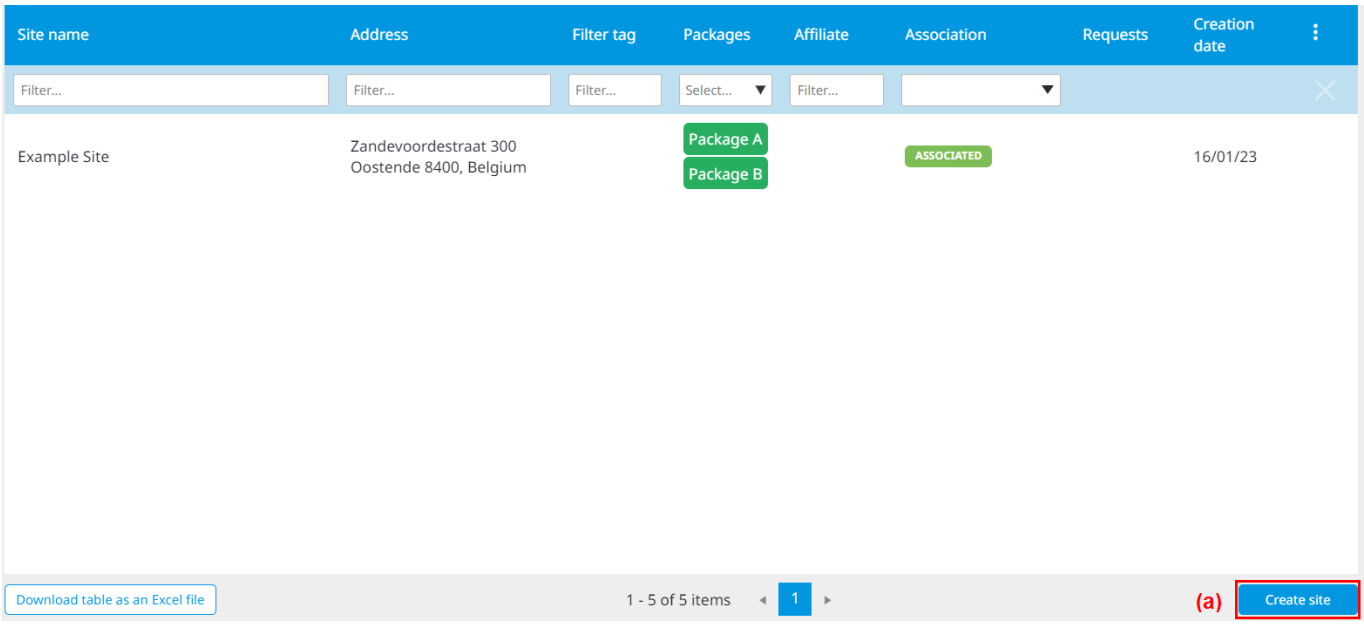
Make sure to read the remarks in "6.2 System configuration" [▸ 48] and "6.3 Network configuration" [▸ 50] before continuing with the other steps in the commissioning process.

7.4 Creating a site

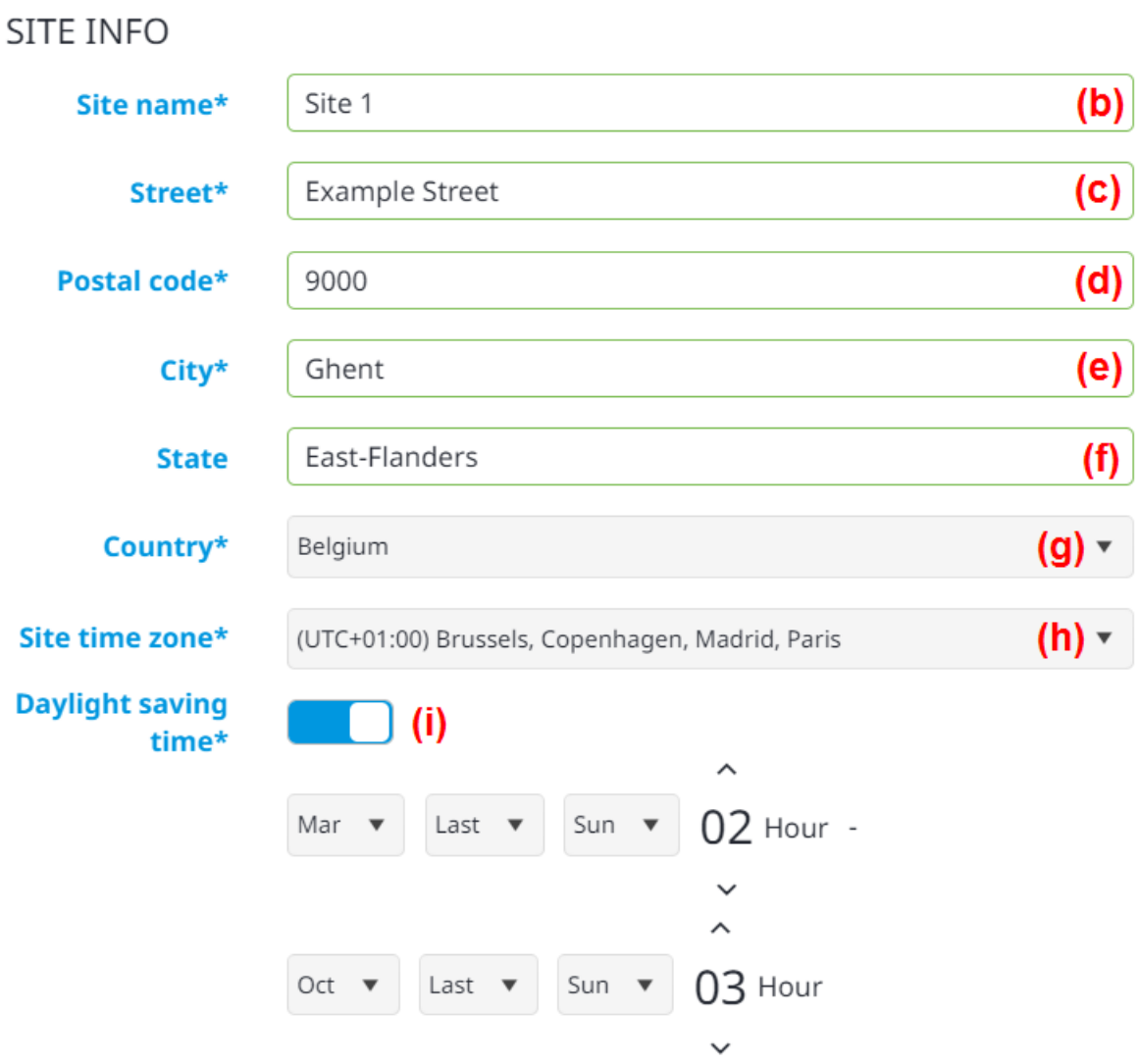
The following steps are performed in Daikin Cloud Plus. The actions described can be performed remotely or on site.

1 In the sidebar, go to ADMINISTRATION > SITE LIST.

2 Select Create site (a).



3 Enter the basic site details: Site name (b), Street (c), Postal code (d), City (e), State (f), and select a Country (g) from the drop-down list. Items marked with * are mandatory. Other items are optional.



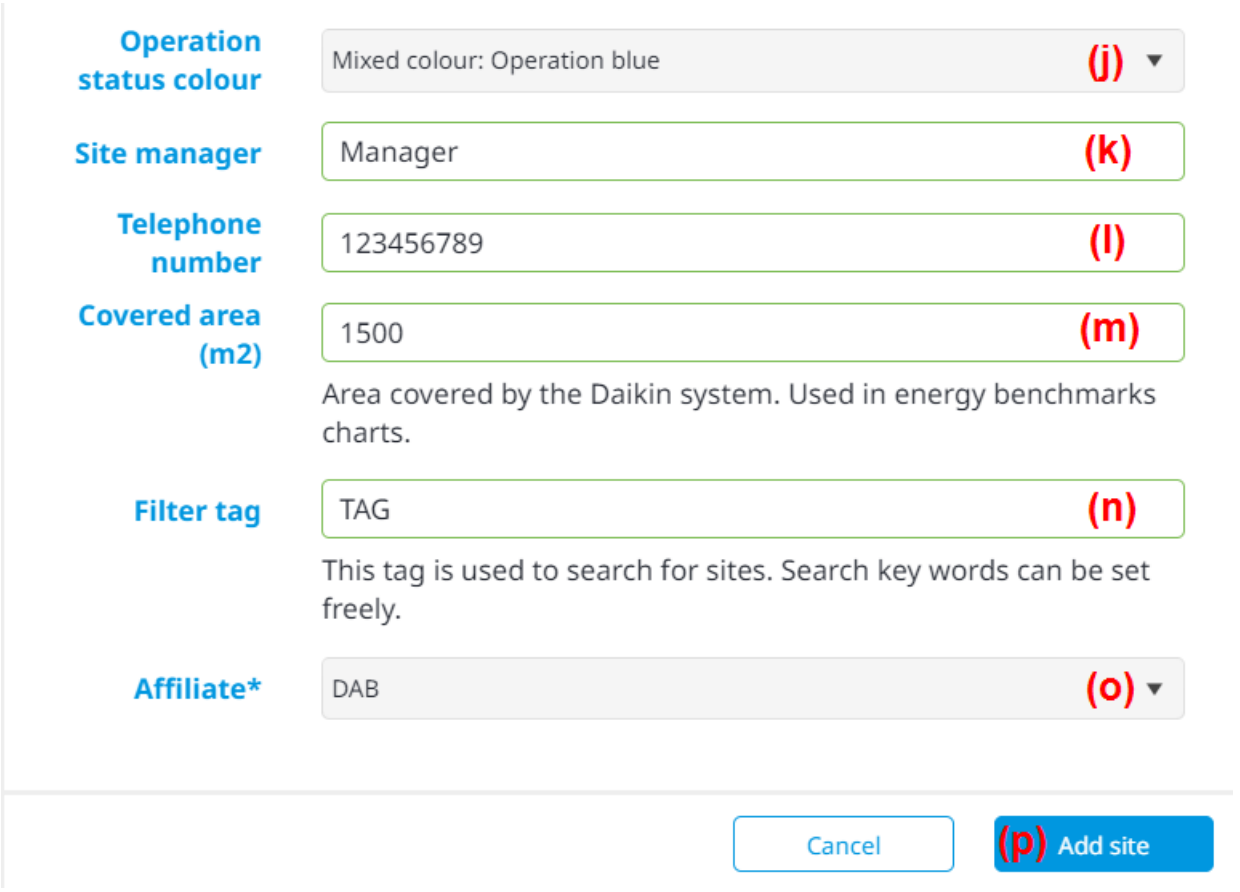
4 Select the Site time zone (h) from the drop-down list.

5 Choose whether or not to enable Daylight saving time for the site using the toggle switch (i). If enabled, the daylight savings time are updated based on the selected time zone (h). In the example above, daylight savings time starts on the last Sunday of March (the clock advances from 2:00 AM to 3:00 AM), and ends the last Sunday of October (the clock turns back from 3:00 AM to 2:00 AM). You cannot manually change the daylight savings time.

INFORMATION

It is important to configure time-related site settings correctly, as a lot of Daikin Cloud Plus functionality relies on the site time to perform actions at the appropriate time (e.g. schedules). It is also ONLY possible ot change time-related settings in Daikin Cloud Plus, and not in the other applications used during commissioning.

6 Select an Operation status colour (j) from the drop-down list. The selected colour theme will determine the colours displayed on equipment list tiles. This can still be changed at a later point.



7 Specify (optional) details such as the Site manager (k), Telephone number (l), Covered area (m2) (m) and the Filter tag (n). The Filter tag can help you find a site more easily in the Site list.

8 Select an Affiliate (o) from the drop-down menu. It is important that the correct affiliate is selected, as this can no longer be changed after the site has been created. Once the site is created, the affiliate also handles contract creation. If you are not sure which affiliate to select, contact your local Daikin representative.

9 Click Add site (p).

Result: The site is created.

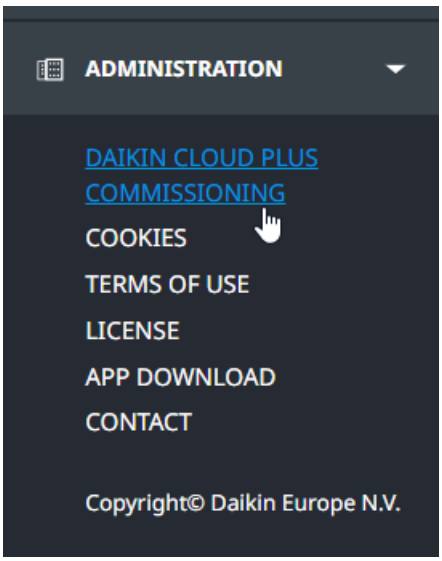
INFORMATION

After saving your site, trial packages (package A and B) are activated for the site temporarily. This allows the user to experience the full functionality of Daikin Cloud Plus for a limited amount of time (30 days). In order to set up a service contract for the user, contact a Daikin affiliate or representative. If no service contract is created within 30 days of the commissioning, nor the user or installer will be able to access their site in Daikin Cloud Plus any longer.

10 In the sidebar, go to ADMINISTRATION > SITE LIST.

11 Verify that the site has been created (i.e. it appears in the list).

12 Click the Daikin Cloud Plus Commissioning link in the footer under the sidebar.



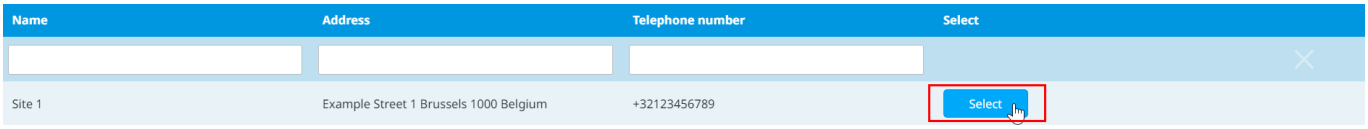
Result: Daikin Cloud Plus Commissioning opens in a new tab.

7.5 Creating the DC+ Edge

The following steps are performed in Daikin Cloud Plus Commissioning. The actions described can be performed remotely or on site.

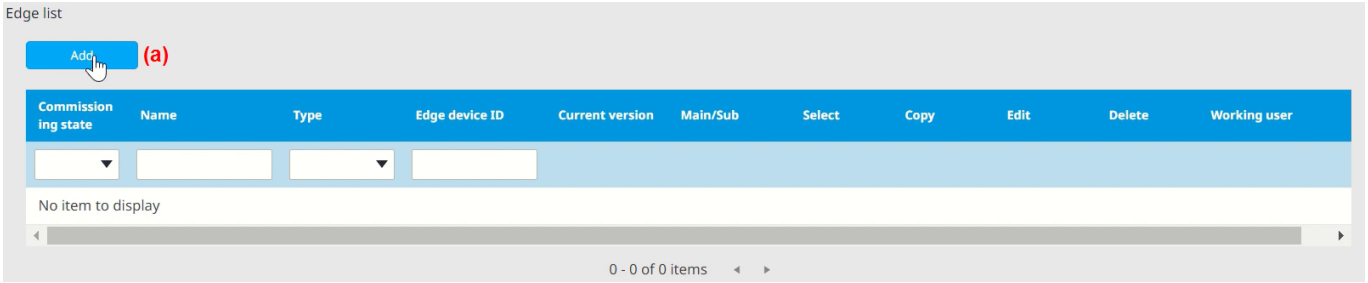
Prerequisite: You have created the site you want to commission in Daikin Cloud Plus. See "7.4 Creating a site" [▸ 52] for more information about how to create a site.

1 In Daikin Cloud Plus Commissioning, select the site that you want to commission from Site list. When Daikin Cloud Plus Commissioning is opened, this is the first screen that is displayed.

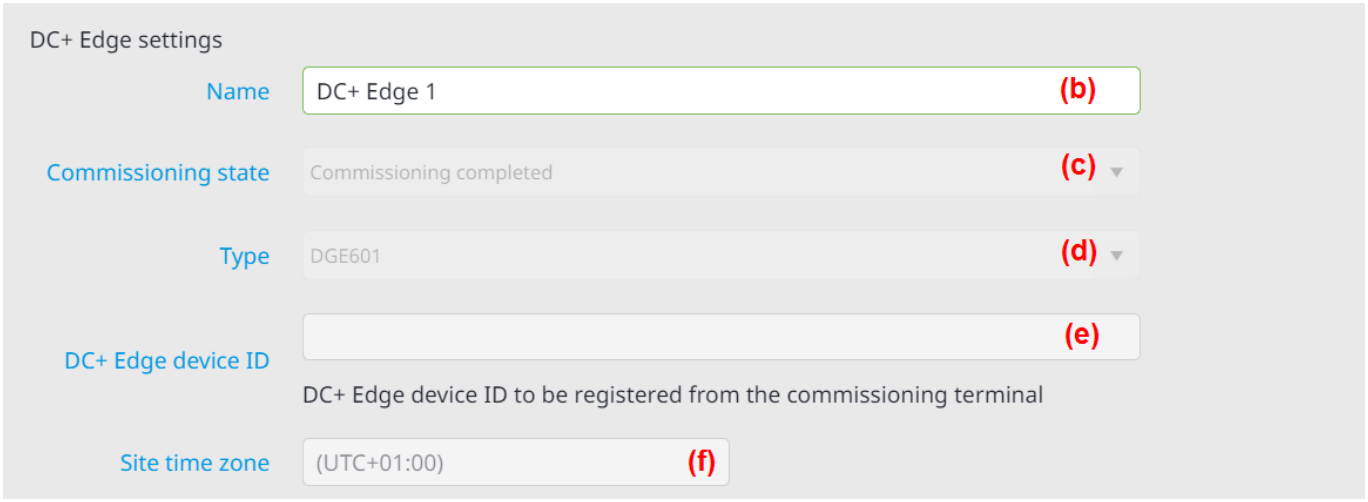


Result: The DC+ Edge list is displayed.

2 In the DC+ Edge list, click Add (a).



Result: The following page is displayed.



3 Name the DC+ Edge. The Name (b) entered here will also be the name for the default zone in Daikin Cloud Plus. This name cannot be changed later.

4 The Commissioning state (c) cannot be edited. This happens later during the commissioning process.

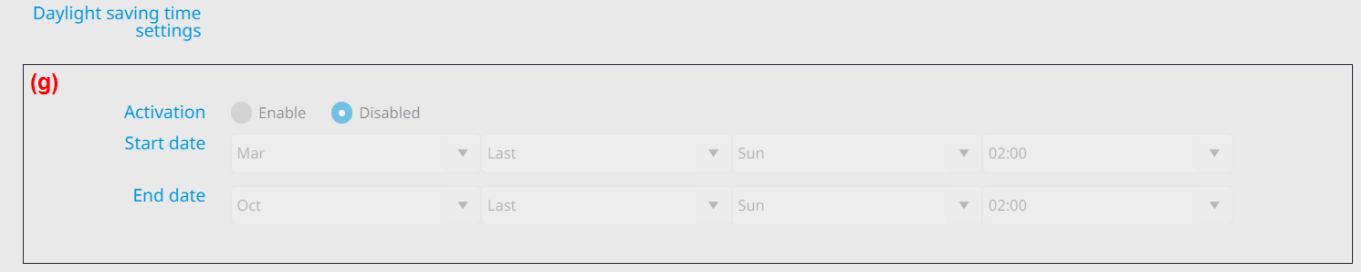
5 Select the Type (d) of DC+ Edge controller you want to add from the dropdown menu. You can choose between DGE601A51 (DC+ Edge) or DGE602A51 (DC+ Edge Lite).

INFORMATION

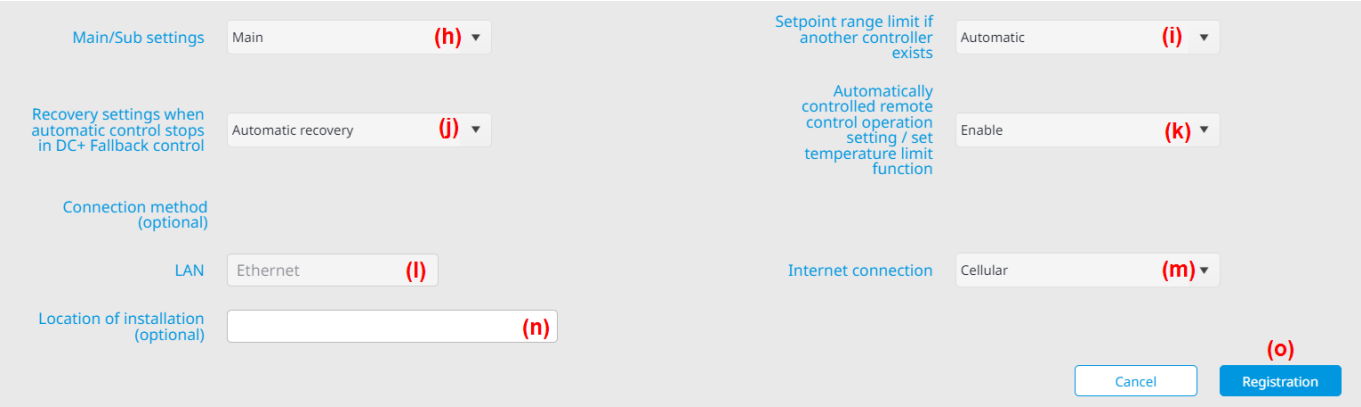
During DC+ Edge creation, make sure to select the correct Type. If set incorrectly, the commissioning CANNOT be completed.

6 The DC+ Edge device ID (e) field is blank and cannot be edited. Registration of the DC+ Edge happens later in the commissioning process.

7 Verify that the Site time zone (f) and Daylight saving time settings (g) are correct. The settings are greyed out and cannot be edited here. Daikin Cloud Plus Commissioning reads this data from the site that was created in Daikin Cloud Plus. If the settings are not correct, you can choose to create a new site with the correct settings in Daikin Cloud Plus, or change the settings after commissioning the whole system.



8 Configure the following settings:



Setting	Description
(h) Main/Sub settings	Set whether the DC+ Edge controller is Main or Sub. This setting is required when using the DC+ Edge in combination with other centralised controllers. Also see "5.2.2 Precautions for using multiple centralised controllers" [▸ 17] and "5.3.1 DIII-NET Main/Sub switch setting" [▸ 31] for more information.

Setting	Description
(i) Setpoint range limit if another controller exists	This setting determines what happens to the setpoint temperature limit function when a higher level centralised device or controller is connected: ▪ Enable: functionality is enabled regardless of whether a higher level centralised device or controller is connected. ▪ Automatic: functionality is automatically disabled when a higher level centralised device or controller is connected, and enabled when it is not connected. For more information about using centralised controllers, see "5.2.2 Precautions for using multiple centralised controllers" [▸ 17].
(j) Recovery settings when automatic control stops in DC+ Fallback control	It is possible to start or stop automatic controls (for example, schedules and interlock programs, forced stop programs) over the local network using the DC+ Fallback control application when either the DC+ Edge or the cloud is offline. This setting determines what happens when the system recovers and the cloud connection returns after automatic controls were previously stopped from the DC+ Fallback control application: ▪ Automatic recovery: automatic controls are recovered automatically when the system recovers. Schedules, interlock programs, and forced stop programs are reactivated automatically and run as normal once the system recovers. ▪ Manual recovery: manually enable automatic controls again in the DC+ Fallback control application. Schedules, interlock programs, and forced stop programs will NOT run until you manually enable automatic controls from the DC+ Fallback control application again. **Note:** interlock programs based on sensor triggers are stored in the cloud. As long as there is no cloud connection, these interlock programs will NOT be executed even when the DC+ Edge automatic controls are enabled from the DC+ Fallback control application.

Setting	Description
(k) Automatically controlled remote control operation setting / set temperature limit function	Select whether remote control permit/ prohibit settings and temperature limits can be controlled using schedules and interlock programs in Daikin Cloud Plus: ▪ Enabled : the settings are displayed and can be controlled using schedules and interlock programs. ▪ Disabled: the settings will not be displayed and cannot be controlled using schedules and interlock programs.
(l) Connection method (optional)	Read-only.
(m) Internet connection	Specify the type of internet connection the DC+ Edge is connected to: ▪ Cellular ▪ LPWA ▪ Wired ▪ Others
(n) Location of installation (optional)	Enter the installation location. This is optional.

INFORMATION

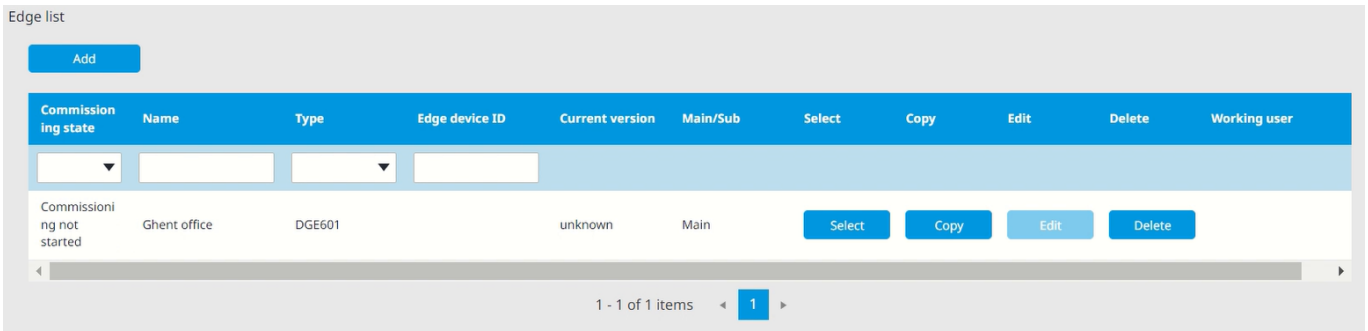
It is possible to connect 3 centralised controllers as long as there is only a single Main (master) controller on both hardware and software level. For example, it is possible to have a setup where iTM hardware is Sub (slave), its software Main (master), combined with a DC+ Edge controller that is configured as Sub (slave) on both hardware and software level, and finally have a BACnet server that functions as Main (master) on a hardware level.

Depending on the needs of the installation, these settings can be edited again after initial commissioning.

9 At the bottom right of the page, click Registration (o).

10 Confirm by clicking OK in the pop-up window.

Result: The DC+ Edge list appears. The DC+ Edge has been registered and appears in the list.



7.6 Registering the DC+ Edge

The following steps are performed in DC+ Edge connect. The actions described can only be performed on site.

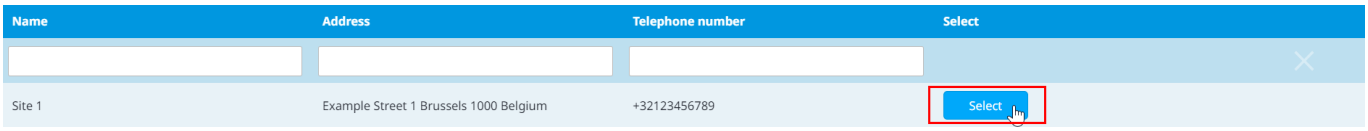
For these steps, all equipment has to already be connected to the DC+ Edge being commissioned. For more information about the installation of the DC+ Edge, see the corresponding installation manual and the "5 Installation" [▸ 14] chapter.

Registering the DC+ Edge

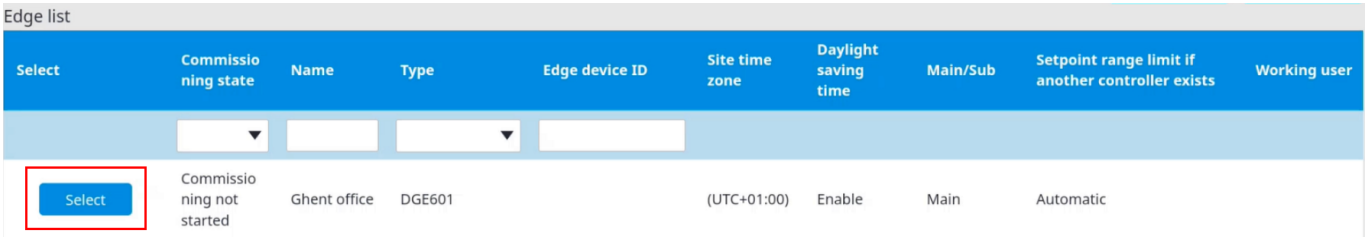
Prerequisite: The tablet used to commission (using the DC+ Edge connect application) is connected to the same network as the DC+ Edge.

1 If required, log into the application using your Daikin ID.

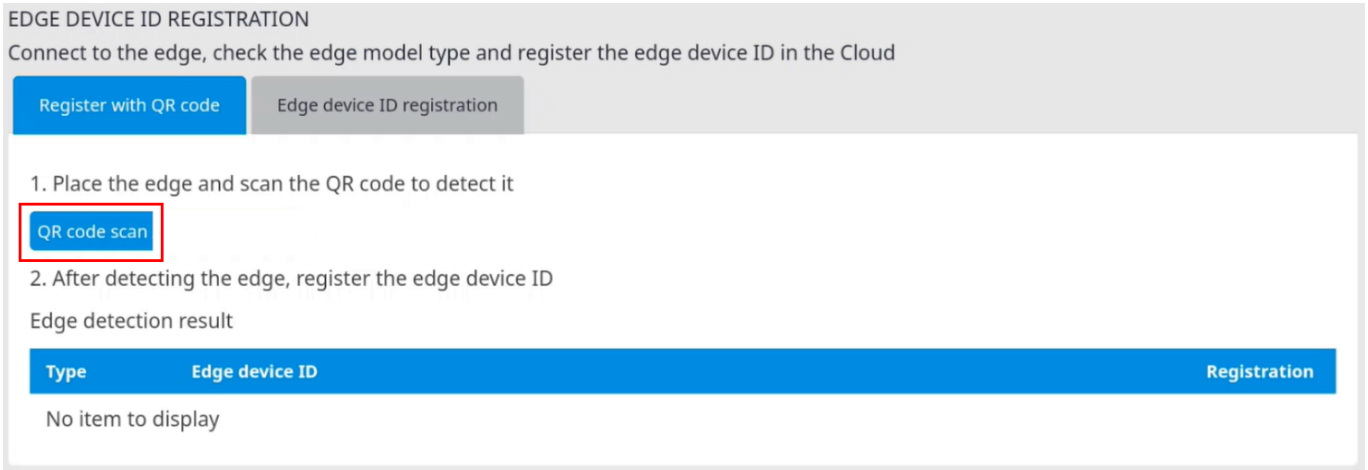
2 From the Site list, select the site you want to commission.



3 From the DC+ Edge list, select the DC+ Edge you want to commission.



4 On the DC+ Edge device ID registration page, select QR code scan.

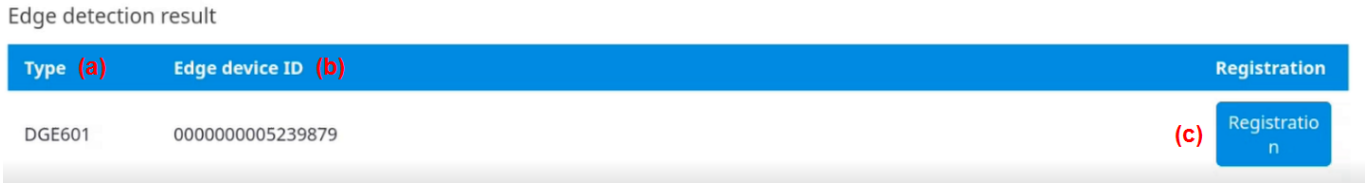


INFORMATION

The application may ask for permission to use the camera on your device. The application needs this permission in order to scan the QR code on the DC+ Edge.

5 Scan the QR code on the DC+ Edge. Alternatively, you can also register the DC+ Edge by detecting it on the local network (for example, when the device you are using has no camera). To do this, select the DC+ Edge device ID registration tab, and tap the button to detect the ID. Note that successfully scanning the QR code does not mean that the DC+ Edge is already correctly on the network. Actual registration of the DC+ Edge is still required.

6 Verify that the Type (a) is correct and that the DC+ Edge device ID (b) matches with the ID on the DC+ Edge. The ID can be found on the body of the front face of the DC+ Edge, below the QR code.



7 Select Registration (c).

8 Tap OK in the pop-up window to confirm.

Result: The DC+ Edge has been registered. You are redirected to DC+ Edge settings page.

Writing settings to the DC+ Edge

1 In the sidebar, go to DC+ EDGE > DC+ EDGE SETTINGS.

2 Select Register DC+ Edge.

3 Tap Yes in the pop-up window to confirm.

Result: The NET LED on the DC+ Edge lights up to indicate that the controller is being registered.to the cloud.

4 Once completed, tap OK in the pop up window to confirm.

Result: The DC+ Edge setup has been performed.

Configuring the network settings

1 In the sidebar, go to DC+ EDGE > NETWORK SETTINGS.

2 Select the check box (c) to enable DHCP for LAN port 1.

Note: when a fixed IP address is required, uncheck DHCP and make sure to set an IP address (e) that is not within the same range as the IP address (g) of LAN port 2 (b). Also set the Subnet mask (i). Then, set the Default gateway (i), Preferred DNS (j), and Alternate DNS (k).

INFORMATION

By default, the IP address for LAN2 is 192.168.200.**, even if LAN2 is NOT used. When LAN1 is set to the same IP address as LAN2, you will NOT be able to connect to the cloud, and as a result, you will be unable to perform an update of the DC+ Edge software, which is required step during commissioning. To avoid issues, you can enable DHCP for LAN2, or simply assign an IP address outside of the default LAN2 IP range.

NOTICE

When DHCP is enabled, do NOT input any settings for the default gateway or for any of the DNS server addresses. These settings overrule DHCP settings. If the addresses are set incorrectly, this may result in loss of network connectivity, and the DC+ Edge will be in an offline state.

INFORMATION

The Default gateway, Preferred DNS and Alternate DNS are shared between LAN port 1 and LAN port 2.

3 Optional: if you want to connect the DC+ Edge to a local network (to connect to BACnet servers), you can already set the IP address (g) for LAN port 2 (b). Note that only LAN port 2 can be used for BACnet communication.

INFORMATION

Settings for LAN port 2 are NOT editable in case DGE602A51 is used.

4 Tap Save setting changes.

Result: The network setting are saved.

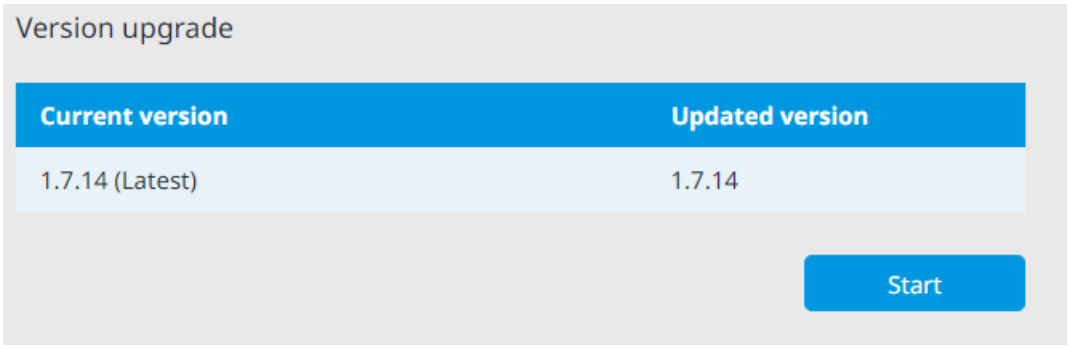
After performing these steps, perform a power reset of the DC+ Edge. See "10.4 To reset the unit" [▸ 162] for more information. After the reset, the SERVICE LED and NET LED should light up within 5 minutes.

7.7 Performing a software update

The following steps are performed in Daikin Cloud Plus Commissioning.

To ensure that the DC+ Edge is running the latest software, a software update must be performed before continuing the commissioning process. When first commissioning the DC+ Edge, it is very likely that the controller is still running an older software version. Additionally, the controller may also not detect some units if it is running an older software version.

1 In the sidebar, go to DC+ EDGE > VERSION UPGRADE.



2 Select Start.

3 Click OK in the pop-up window to confirm.

Result: The software update is performed.

4 Once the update is completed, click Close in the pop-up window.

Result: The DC+ Edge software version is updated to the latest version.

INFORMATION

The DC+ Edge will restart after a software update. When updating the software after initial commissioning, make sure to perform the software update at a time when there is little impact.

INFORMATION

Refresh the page if the software update takes more than 15 minutes, or if the new version is NOT shown after the update is completed. Then, check if the version is updated.

7.8 Detecting DIII equipment and uploading equipment data to the cloud

The following steps are performed in DC+ Edge connect. The actions described can only be performed on site.

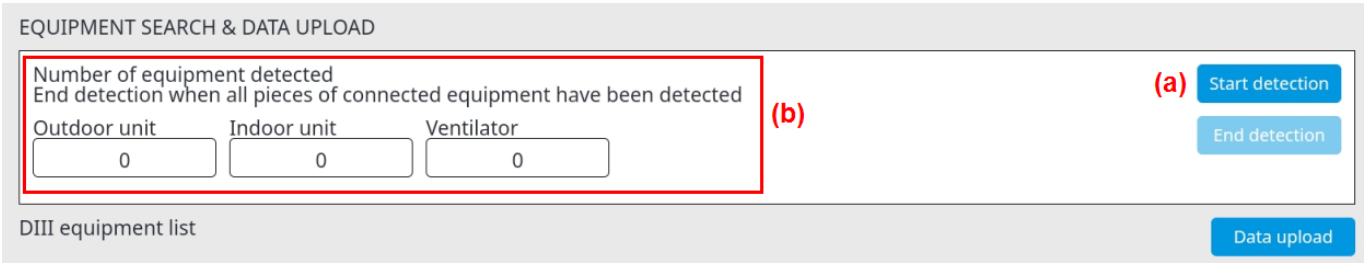
INFORMATION

When a large number of units is connected (>64 units), perform the steps described until "7.10 Sending all equipment data to the DC+ Edge" [▶ 128] for every DIII-NET line separately. Otherwise, if the data for too many units is sent to the DC+ Edge at once, there is a possibility that this process can fail.

Make sure you have updated the DC+ Edge software version in Daikin Cloud Plus Commissioning. See "7.7 Performing a software update" [▶ 64] for more information. Units or equipment may not be detected if this step is not performed before starting detection.

1 In the sidebar, go to DIII EQUIPMENT > EQUIPMENT SEARCH & DATA UPLOAD.

2 Select Start detection (a).

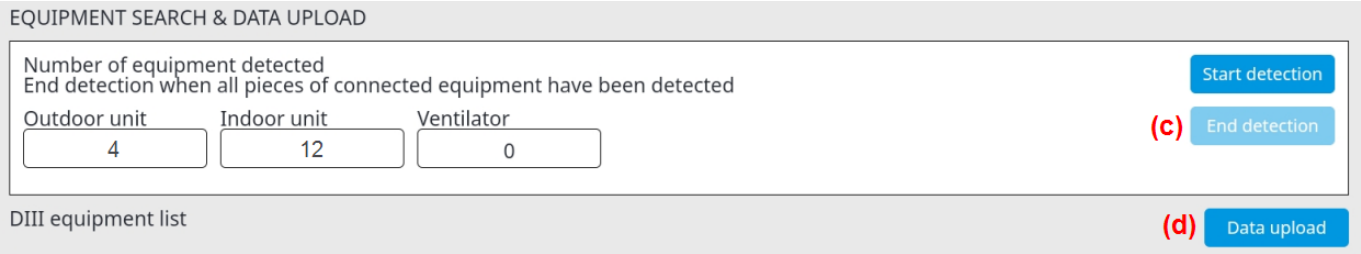


3 Tap OK in the pop-up window to confirm.

Result: Detection of the DIII equipment starts. An animation indicates that detection is ongoing. Detected equipment appears in the DIII equipment list. Detected units are added to the list as soon as they are detected. The number of every type of detected equipment (indoor unit, outdoor unit, ventilator) is also displayed at the top of the page (b). If not all equipment is detected, verify that that the equipment has been connected to the DC+ Edge correctly and start the detection process again until all equipment has been detected.

Type	Name	Port No.	Group address		Airnet address	Demand address	Equipment model info		
							Model code	HP	Capacity
Outdoor unit	1:2	1			2	2	21139	20.000000	
Outdoor unit	1:1	1			1	1	21139	20.000000	
Indoor unit	1:2-01	1	2-01		6		26882		2.200000
Indoor unit	1:2-00	1	2-00		5		26882		2.200000
Indoor unit	1:1-02	1	1-02		4		26882		2.200000
Indoor unit	1:1-01	1	1-01		3		26882		2.200000

4 When all DIII equipment has been detected, select End detection (c).



5 Tap OK in the pop-up window to confirm.

6 Verify that all equipment has been detected, then select Data upload (d).

Result: The detected equipment data is uploaded to the cloud.

INFORMATION

When you plan to use demand control functionality, make sure that the correct demand address is set for the outdoor units. If the demand address is not set, demand control will not be able to trigger the outdoor unit. For more information about demand control, see the user reference guide.

7.9 Creating equipment

The following steps are performed in Daikin Cloud Plus Commissioning.

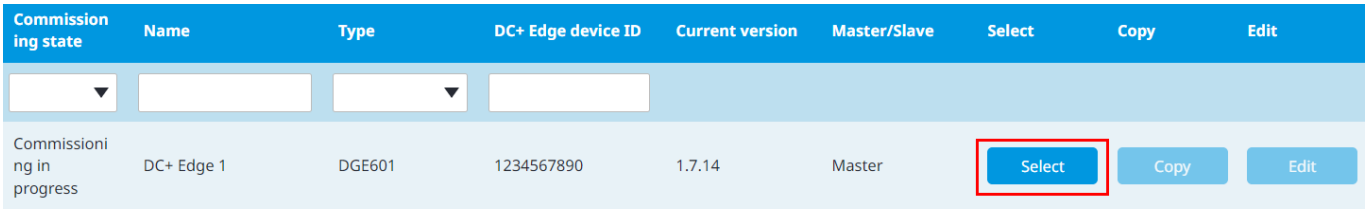
7.9.1 DIII equipment

The following steps describe how to create DIII equipment after you have detected and uploaded equipment data to the cloud using DC+ Edge connect as described in "7.8 Detecting DIII equipment and uploading equipment data to the cloud" [▸ 65]. This includes compatible indoor units, outdoor units, and ventilators.

In case you want to create DIII equipment manually instead, see "To create DIII equipment manually" [▸ 72]. If you want to use the Excel import functionality to create DIII equipment, see "7.9.6 Excel export and import" [▸ 124].

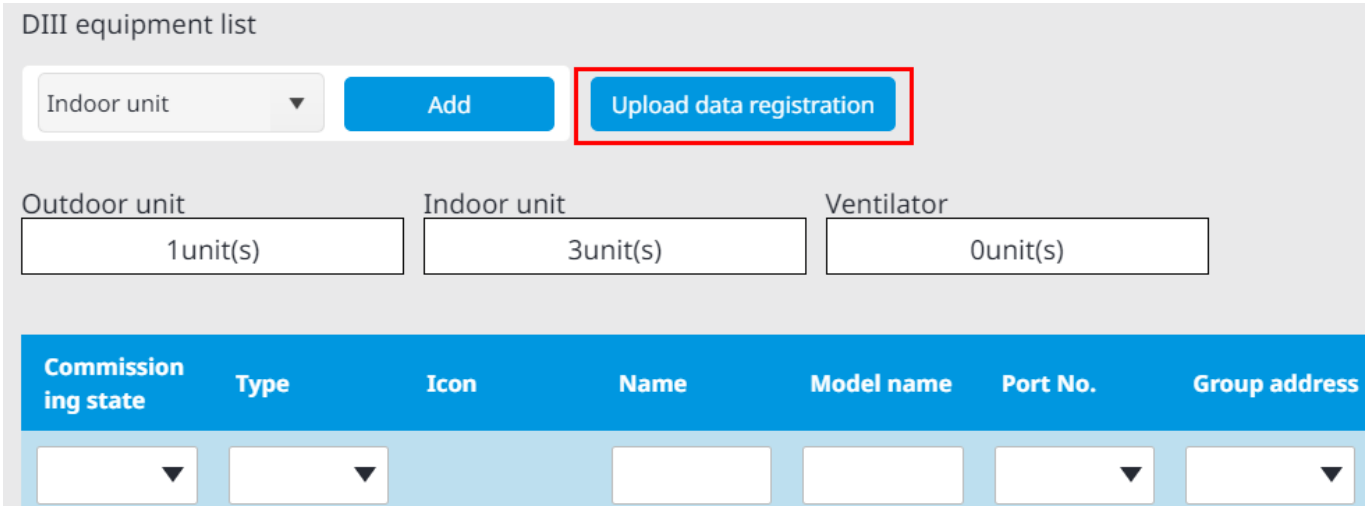
1 In the sidebar, go to DC+ EDGE > DC+ EDGE LIST.

2 Select the DC+ Edge you for which you want to create equipment.

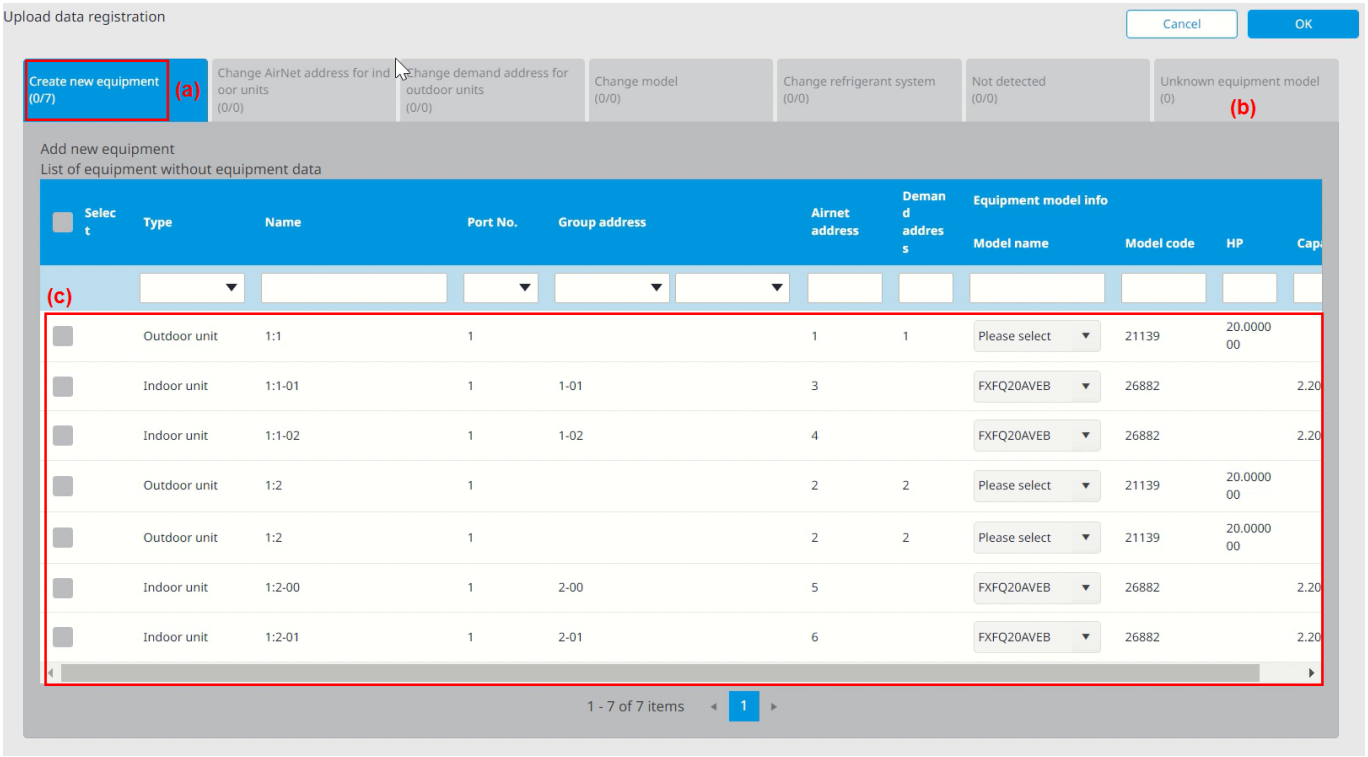


3 In the sidebar, go to DIII EQUIPMENT > DIII EQUIPMENT LIST.

4 Select Upload data registration. This will upload the data transmitted to the cloud by the DC+ Edge connect application.



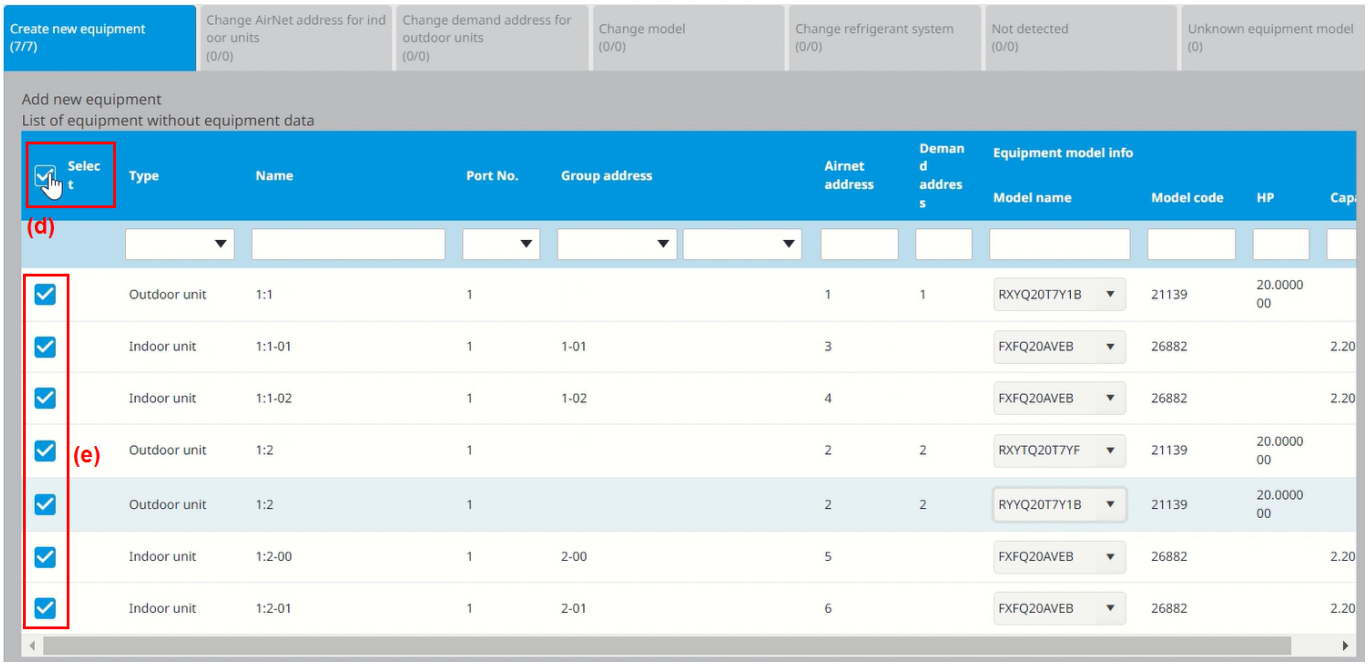
5 Verify the equipment data in the Create new equipment tab (a). If required, complete any missing or incorrect information (e.g. select the correct model name from the drop-down list). The data (c) entered here is the data that will eventually be registered to the DC+ Edge. If not all equipment data is showing up here, check whether any equipment data is listed under the Unknown equipment model tab (b).



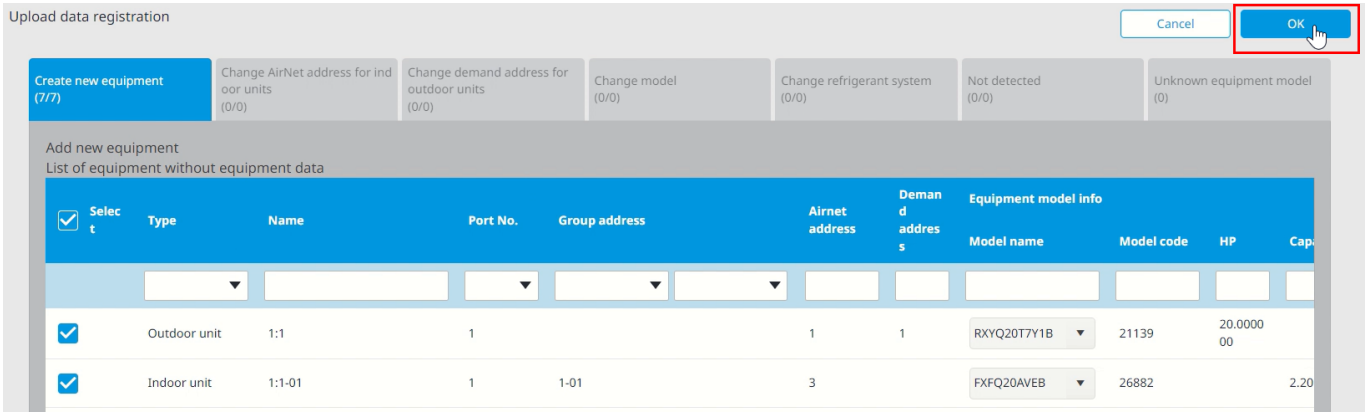
INFORMATION

It is possible that some units are not detected as indoor or outdoor units in the Create new equipment tab. Units that classify as "unknown" appear in the Unknown equipment model tab. These units cannot be added via the Upload data registration page. Instead, these units can be added manually from the DIII equipment list, or via an Excel import. See "To create DIII equipment manually" [▸ 72] for more information.

6 Once missing and/or incorrect data has been completed, click the checkbox (d) in the column header to select all units, or individually select units (e) you want to create.



7 Click OK.



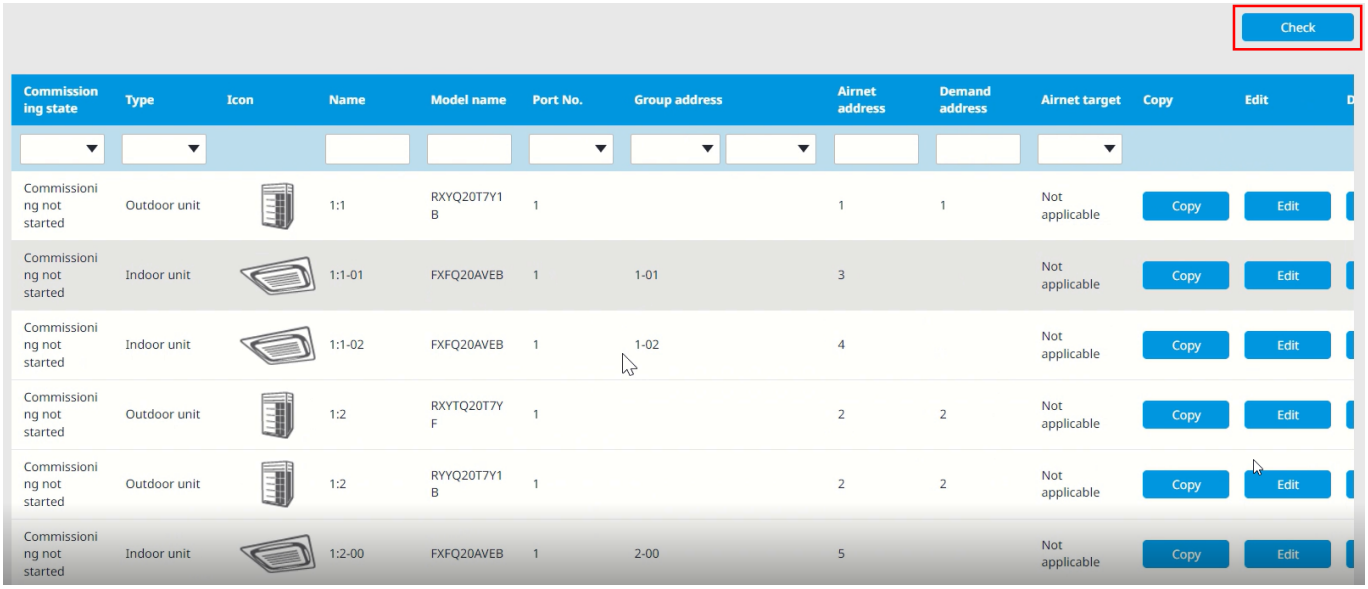
> **NOTICE**
>
> Make sure that all DIII equipment that you want to create is selected before clicking OK. Equipment for which the check boxes are unchecked will NOT be created.

8 Click OK in the pop-up window to confirm.

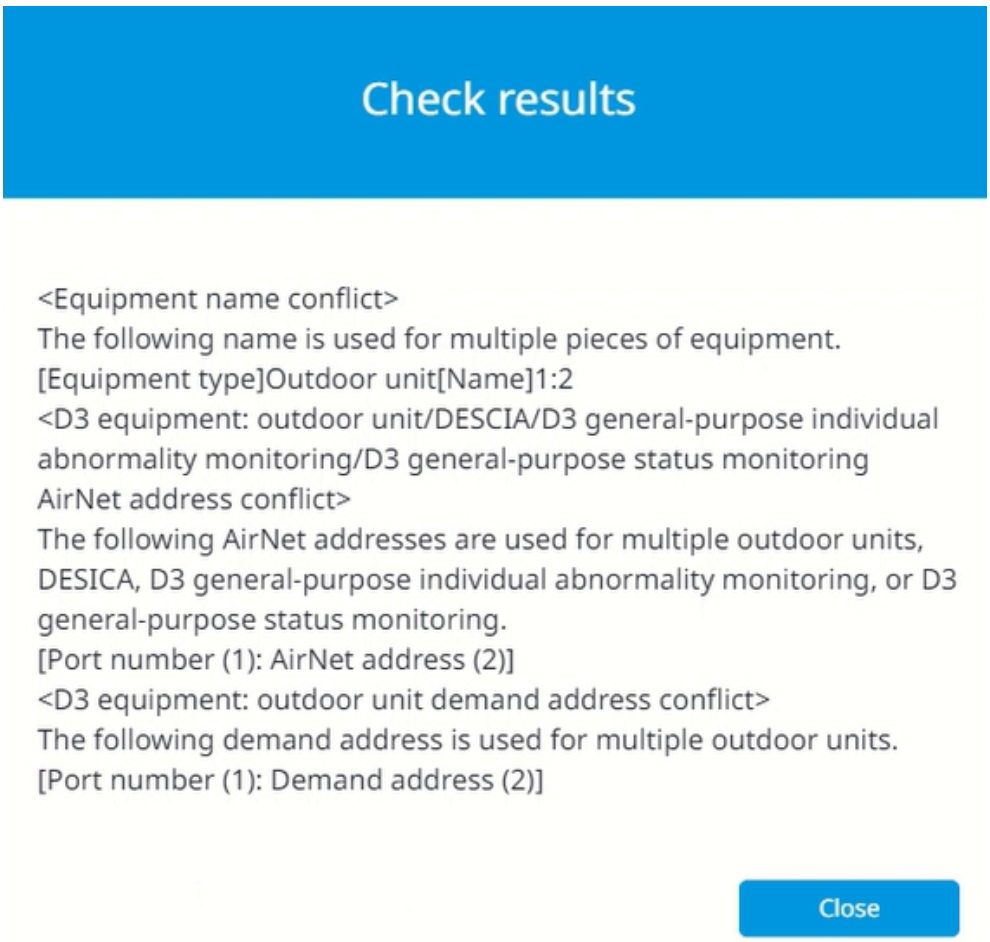
Result: The equipment data is registered to the cloud. The DIII equipment is created. You are redirected back to the DIII equipment list, where the equipment is now listed. Note that the equipment data still has to be registered to the DC+ Edge.

Performing a check of the DIII equipment data and resolving errors

1 On the DIII equipment list page, select Check on the top right of the page.

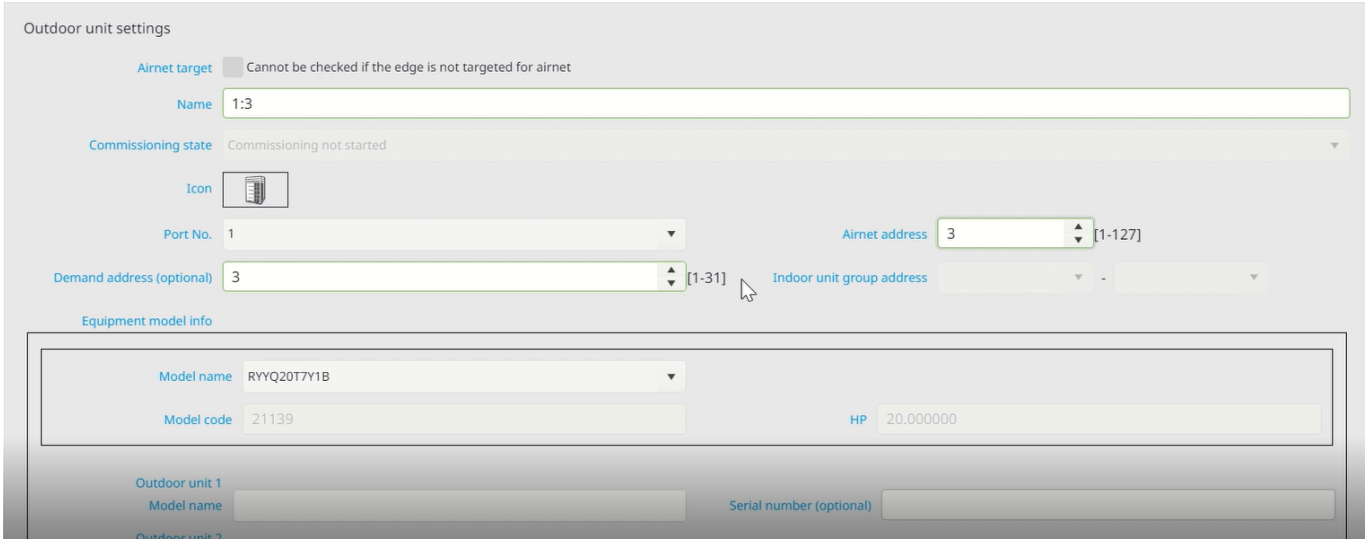


2 Carefully read the Check results that appear in the pop-up window. Any equipment naming or address conflicts have to be resolved in order to continue.



3 If required, edit equipment data by selecting the Edit button next to the applicable unit in the list.

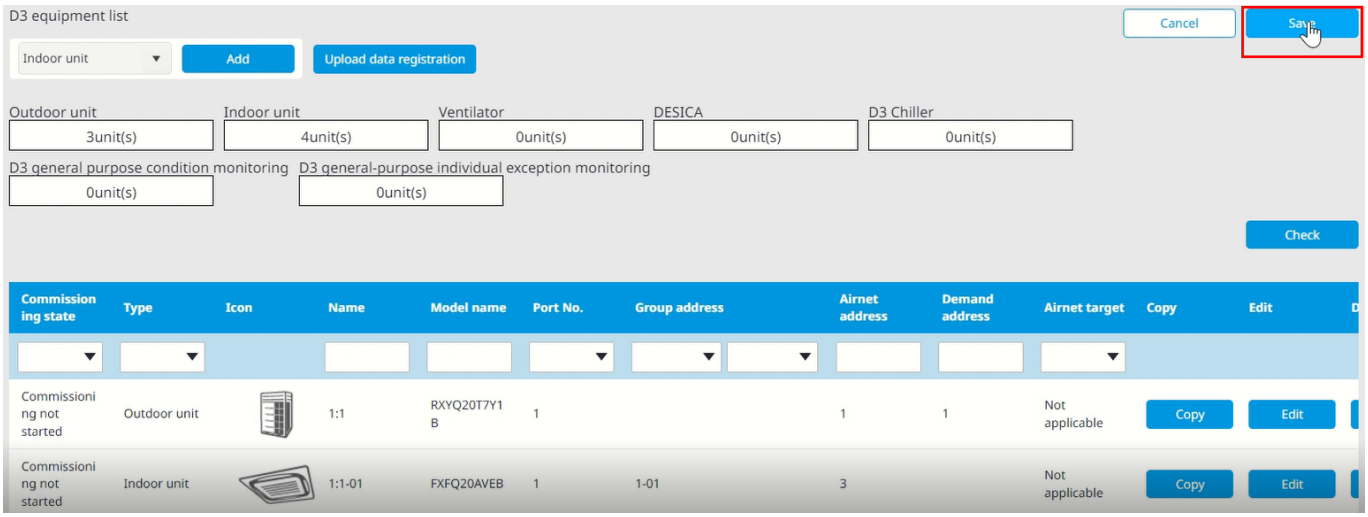
4 Modify the unit settings to resolve any errors or conflicts. For more information about all possible fields and settings for DIII–compatible units, see "To create DIII equipment manually" [▸ 72].



5 Click OK at the bottom right of the page to save.

6 Edit the equipment data for all equipment errors that show up in the Check results window until the Check results window no longer reports any problems. Then, close the window.

7 Click Save in the top right of the page.



8 Click OK in the pop-up window to confirm.

Result: The changes to the equipment data are saved. Note that saving does not yet update the information on the DC+ Edge. The equipment data still has to be registered and sent to the DC+ Edge.

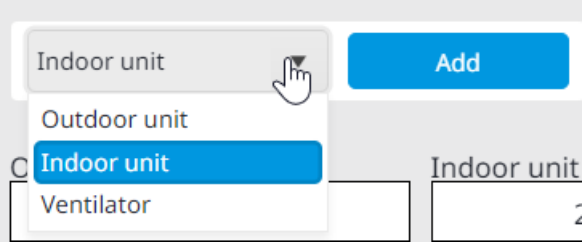
> **INFORMATION**
>
> When commissioning units using R32 refrigerant, make sure to set up and test the R32 leak detection alarm as well. See "7.14 R32 leak detection alarm" [▶ 135] for more information.

To create DIII equipment manually

You can create DIII equipment (indoor units, outdoor units, ventilators) manually, as opposed to using the DC+ Edge connect to detect DIII equipment connected to the DIII-NET lines (see "7.8 Detecting DIII equipment and uploading equipment data to the cloud" [▸ 65]). Lastly, you can also create DIII equipment via Excel import. For more information, see "7.9.6 Excel export and import" [▸ 124]. The following steps are performed in Daikin Cloud Plus Commissioning.

1 In the sidebar, go to DIII EQUIPMENT > DIII EQUIPMENT LIST.

2 From the drop-down list, select the type of unit you want to create.

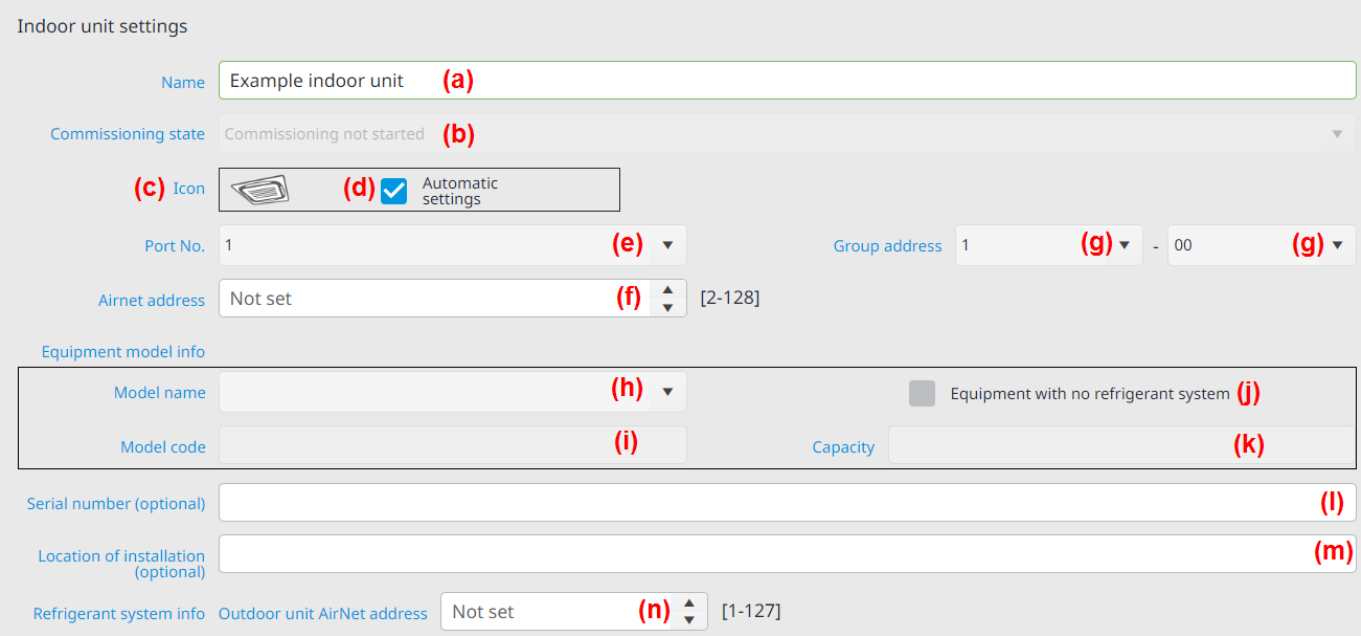


3 Click Add.

Result: Depending on the type of unit that was chosen, a settings screen is displayed.

4 Configure the settings for the selected type of unit:

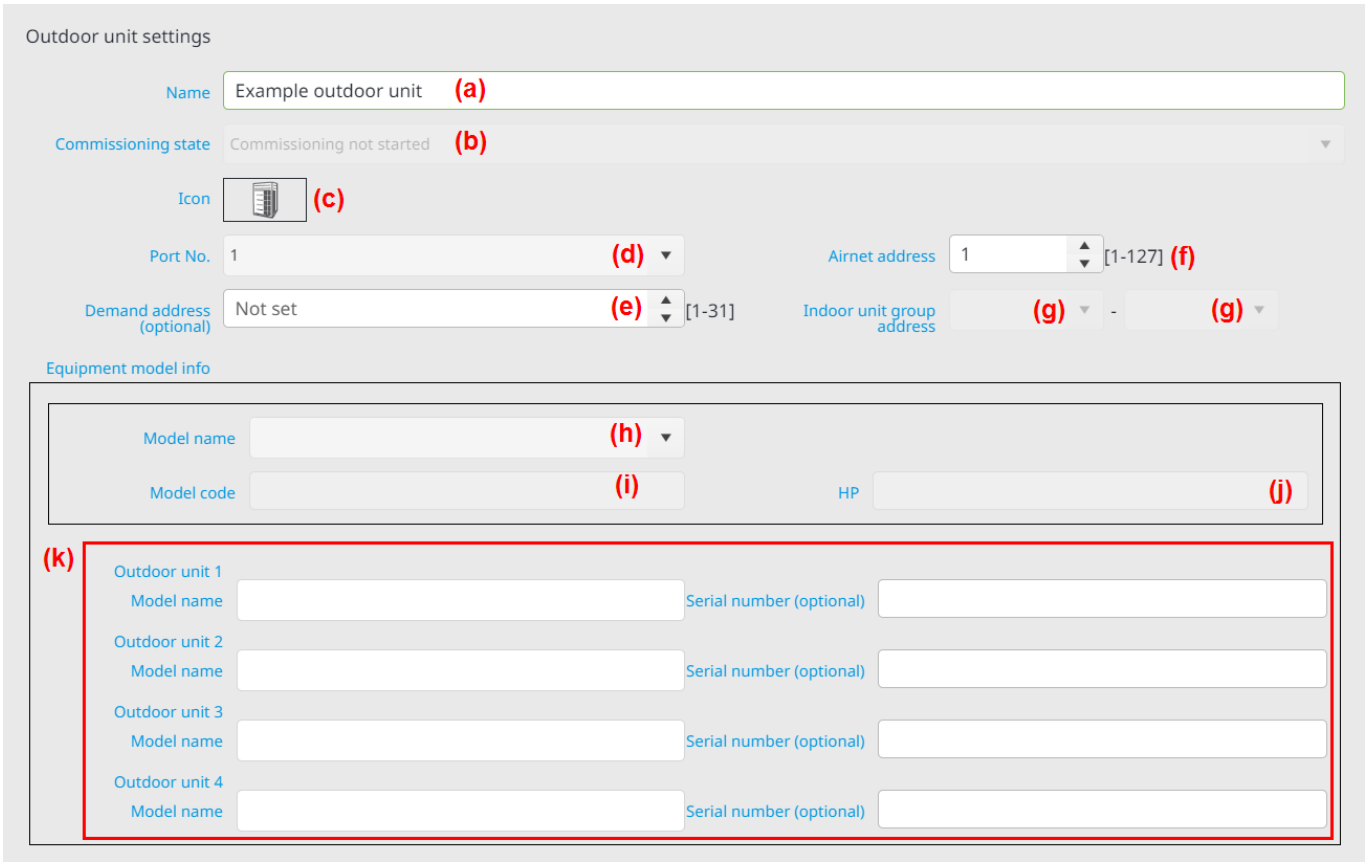
Indoor unit

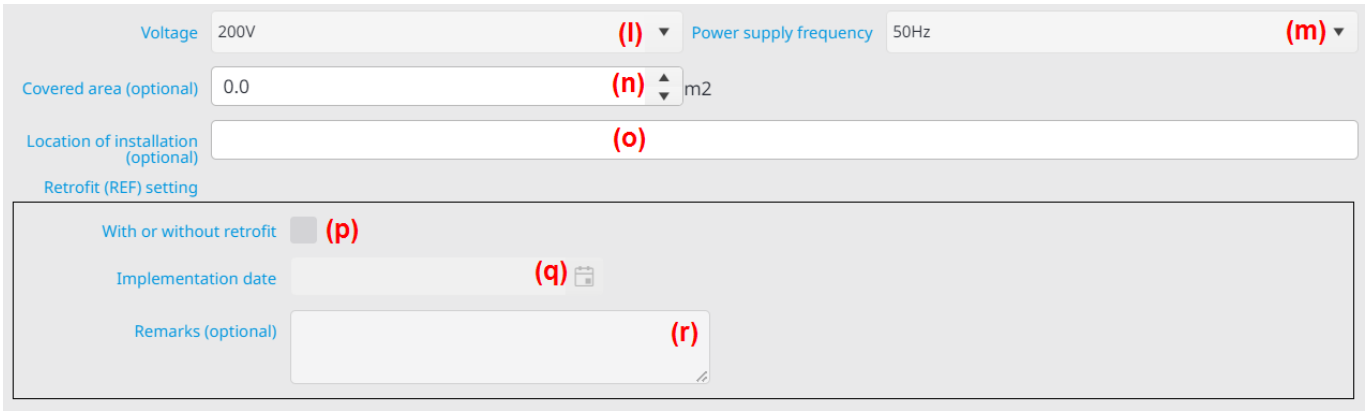


Item	Description
(a) Name	Enter the indoor unit name.
(b) Commissioning state	Displays the Commissioning state of the unit. During equipment registration, this is read-only.
(c) Icon	When clicked, allows you to select an icon from the list of icons. Select an icon from the list, then click OK. This icon is displayed on the equipment list tile.

Item	Description
(d) Automatic settings checkbox	When checked, an icon is assigned to the indoor unit automatically based on the Model name (h).
(e) Port No.	From the drop-down list, select the port number of the DIII port to which the unit is connected.
(g) Group address	Set the indoor unit Group address using the 2 drop-down lists.
(f) Airnet address	Set the indoor unit Airnet address (2~128).
(h) Model name	Set the Model name. Once you start typing, model names will be suggested. If the model name of the unit does not appear as a suggestion; enter it manually.
(i) Model code	Displays the model code or number for the selected Model name (h).
(j) Equipment with no refrigerant system	Indicate whether a refrigerant system is present or not. Select the check box to indicate a refrigerant system is present. If you are not creating the outdoor unit connected to the indoor unit you are creating, make sure to check the box.
(k) Capacity	Displays the capacity of the indoor unit once a Model name (h) is selected.
(l) Serial number	Optional: enter the serial number.
(m) Location of installation	Optional: describe the location where the unit is installed.
(n) Outdoor unit AirNet address	Set the outdoor unit AirNet address (1~63). Use the up and down arrows to select a value.

Outdoor unit



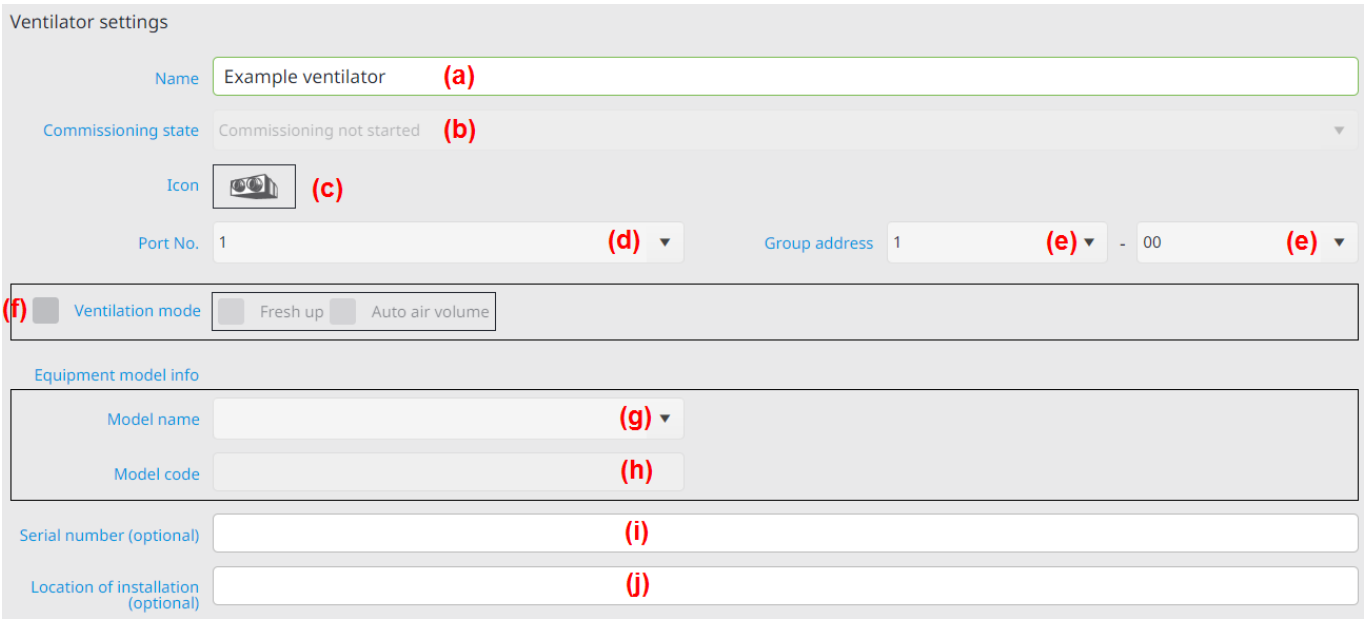


Item	Description
(a) Name	Enter the outdoor unit name.
(b) Commissioning state	Displays the commissioning state of the unit. During equipment registration, this is read-only.
(c) Icon	When clicked, allows you to select an icon from the list of icons. Select an icon from the list, then click OK. This icon is displayed on the equipment list tile
(d) Port No.	From the drop-down list, select the port number of the DIII port to which the unit is connected.

Item	Description
(e) Demand address	Optional: set the Demand address (1~31) for the outdoor unit. This is required when you want to make use of outdoor capacity control functionality.
(f) Airnet address	Set the Airnet addressfor the outdoor unit. Note that while options 1~127 is displayed as possible addresses, the outdoor unit address must be between 1~63.
(g) Indoor unit group address	Only available in case a commercial unit model name (h) is selected. Set the group address for the indoor unit connected to the outdoor unit.
(h) Model name	Set the Model name. Once you start typing, model names will be suggested. If the model name of the unit does not appear as a suggestion, enter it manually. The model names of multi-outdoor unit systems are followed by additional numbers that indicate the capacity of the different units that make up the system. For example, RWEYQ30T9Y1B-12-10-08 is a multi-outdoor unit system with a total capacity of 30 HP, which combines the following units: ▪ RWEYQ12T9Y1B ▪ RWEYQ10T9Y1B ▪ RWEYQ08T9Y1B Note that in these cases, different capacity combinations may be possible, e.g. RWEYQ30T9Y1B-14-08-08 or RWEYQ30T9Y1B-10-10-10.
(i) Model code	Displays the model code or number for the selected Model name (h).
(j) HP	Displays the unit horse power, based on the selected model name (h).
(k) Outdoor unit model names and serial numbers	Optional: when creating a multi-outdoor unit system, set model names and serial numbers for each outdoor unit.
(l) Voltage	From the drop-down list, select the voltage of the power supply of the outdoor unit. This value is used to calculate power consumption.
(m) Power supply frequency	Select the frequency of the outdoor unit power supply (50/60 Hz) from the drop-down list.

Item	Description
(n) Covered area (optional)	Optional: set the area covered by the outdoor unit (in m^2). This value can be used in various calculations.
(o) Location of installation	Optional: describe the location where the unit is installed.
(p) With or without retrofit checkbox	Select the checkbox if a retrofit has been performed. Leave unchecked if not applicable.
(q) Implementation date	Only when (p) has been checked: set the implementation date.
(r) Remarks	Only when (p) has been checked: Enter any additional information you want to save.

Ventilator



Item	Description
(a) Name	Enter the outdoor unit name.
(b) Commissioning state	Displays the commissioning state of the unit. During equipment registration, this is read-only.
(c) Icon	When clicked, allows you to select an icon from the list of icons. Select an icon from the list, then click OK. This icon is displayed on the equipment list tile
(d) Port No.	From the drop-down list, select the port number of the DIII port to which the unit is connected.
(e) Group address	Set the group address using the 2 drop-down lists.
(f) Ventilation mode	Select the check box to enable ventilation operation. You can also select the checkboxes of Fresh up and Auto air volume (i.e. automatic airflow). If the checkboxes remain unchecked, these operation modes cannot be controlled from the Daikin Cloud Plus user interface.
(g) Model name	Set the Model name. Once you start typing, model names will be suggested. If the model name of the unit does not appear as a suggestion; enter it manually.
(h) Model code	Displays the model code or number for the selected Model name (h).
(i) Serial number	Optional: enter the serial number.

Item	Description
(j) Location of installation	Optional: describe the location where the unit is installed.

5 Once all settings have been made, select OK.

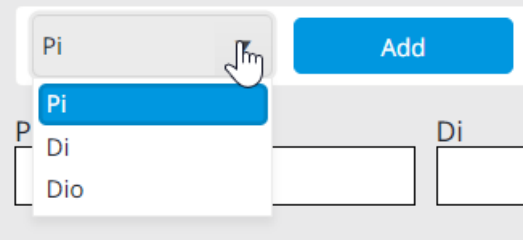
Result: The equipment is created and appears in the DIII equipment list.

7.9.2 Pi, Di and Dio

You can create a Pi (pulse input), Di (digital input) or a Dio (digital input and output) manually.

1 In the sidebar, go to Pi/Di/Dio LIST.

2 From the drop-down list, select the type of input you want to create.

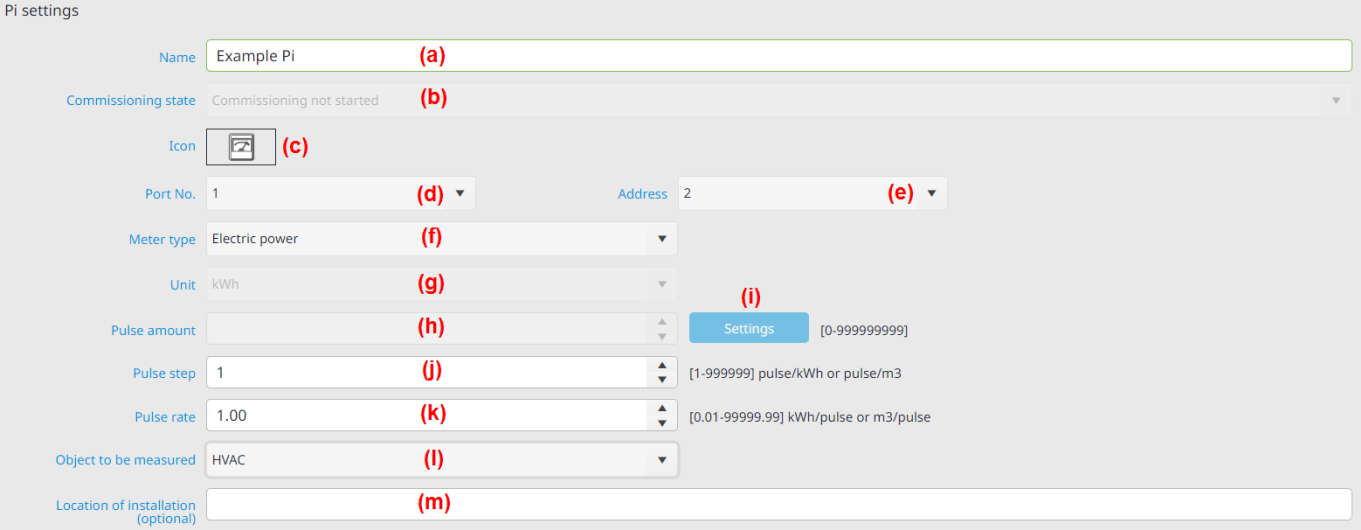


3 Click Add.

Result: Depending on the type of input that was chosen, a settings screen is displayed.

4 Configure the settings for the selected type of input:

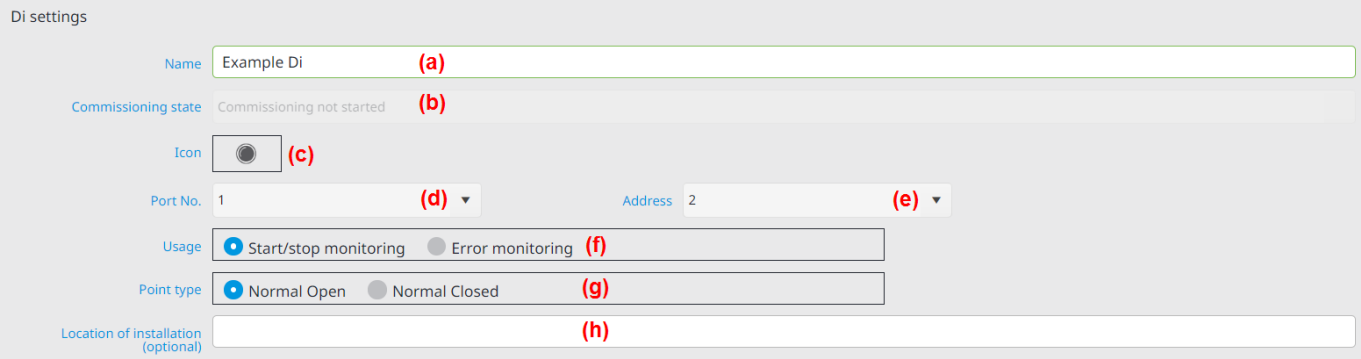
Pi (pulse input)



Item	Description
(a) Name	Enter the Pi name.
(b) Commissioning state	Displays the Commissioning state of the equipment. During equipment creation, this is read-only.
(c) Icon	When clicked, allows you to select an icon from the list of icons. Select an icon from the list, then click OK. This icon is displayed on the equipment list tile.
(d) Port No.	From the drop-down list, select the port number to which the Pi is connected on the DC+ Edge (1) or the DIII plus adaptor.(3~8).
(e) Address	From the drop-down list, set the address of the port number to which the Pi is connected on the DC+ Edge (2~8) or the DIII plus adaptor.(1~4).

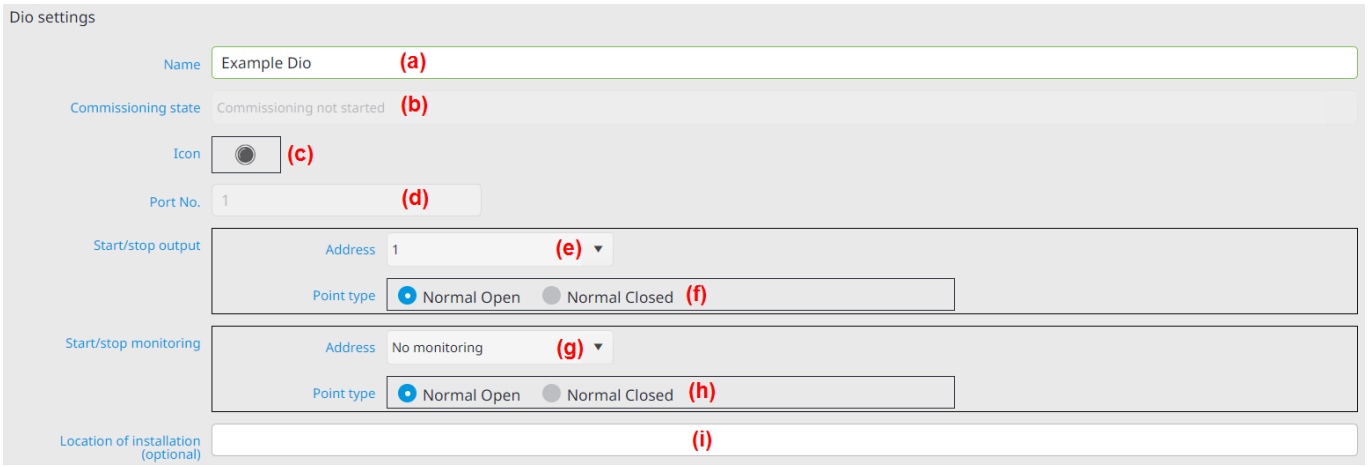
Item	Description
(f) Meter type	From the drop-down list, select the type of meter (Electric power, Gas , or Water).
(g) Unit	Displays the unit type automatically (e.g. kWh), based on the selected Meter type (f).
(h) Pulse amount	Cannot be edited when registering the Pi. This value is used when aligning meters. The Pulse amount can be set later to the value calculated based on the meter value. For more details, see "Meter alignment procedure for Pi equipment" [▸ 83].
(i) Settings	Cannot be clicked when registering the Pi. Used when aligning meters. For more details, see "Meter alignment procedure for Pi equipment" [▸ 83].
(j) Pulse step	Set the pulse step according to the specifications of the meter used for measurement. You may have to reconfigure this value later depending on the meter used. For more details, see "Meter alignment procedure for Pi equipment" [▸ 83].
(k) Pulse rate	Set the pulse rate according to the specifications of the meter used for measurement. This value can be seen as a multiplier for the Pulse amount (h). You may have to reconfigure this value later depending on the meter used. For more details, see "Meter alignment procedure for Pi equipment" [▸ 83].
(l) Object to be measured	Set the type of energy consumption to be measured by the meter (HVAC or Non-HVAC). Select Non-HVAC when measuring energy consumption for things other than HVAC units.
(m) Location of installation	Optional: describe the location where the Pi is installed.

Di (digital input)



Item	Description
(a) Name	Enter the Diname.
(b) Commissioning state	Displays the Commissioning state of the equipment. During equipment registration, this is read-only.
(c) Icon	When clicked, allows you to select an icon from the list of icons. Select an icon from the list, then click OK. This icon is displayed on the equipment list tile.
(d) Port No.	From the drop-down list, select the port number to which the Diis connected on the DC+ Edge (1) or the DIII plus adaptor.(3~8).
(e) Address	From the drop-down list, set the contact address of the port number to which the Di is connected on the DC+ Edge (2~8) or the DIII plus adaptor. (1~4).
(f) Usage	Select the contact monitoring type. You can monitor the start/stop status of equipment, or monitor errors.
(g) Point type	Select the contact type to be monitored (A-type: normally open, B-type: normally closed.)
(h) Location of installation	Optional: describe the location where the Di is installed.

Dio (digital input and output)



Item	Description
(a) Name	Enter the Dio name.
(b) Commissioning state	Displays the Commissioning state of the equipment. During equipment registration, this is read-only.
(c) Icon	When clicked, allows you to select an icon from the list of icons. Select an icon from the list, then click OK. This icon is displayed on the equipment list tile.
(d) Port No.	Port number to which the is connected on the DC+ Edge. This value is fixed (1) and cannot be changed.
(e) Address	From the drop-down list, set the contact address of the port number to which the Dio is connected on the DC+ Edge (2~8) or the DIII plus adaptor. (1~4).
(f) Point type	Select the contact type to be monitored (A-type: normally open, B-type: normally closed.)
(g) Address	From the drop-down list, set the contact address of the port number to which the Dio is connected on the DC+ Edge (2~8) or the DIII plus adaptor. (1~4). If you do not want to perform start/stop monitoring, select "No monitoring".
(h) Point type	Set the contact type (A-type: normally open, B-type: normally closed.)
(i) Location of installation	Optional: describe the location where the Dio is installed.

5 Once all settings have been made, click OK.

Result: The equipment is created and appears in the Pi/Di/Dio LIST. If you have created a pulse input, also see "Meter alignment procedure for Pi equipment" [▸ 83].

Meter alignment procedure for Pi equipment

When Pi equipment (Pi or external Pi) is registered, the meter still needs to be aligned properly to make sure the correct values are measured and displayed in Daikin Cloud Plus. This process cannot be performed during registration of the equipment. It is crucial that power meters are aligned properly in order to gain any meaningful energy consumption data, especially for functionality such as demand control or power proportional distribution.

The procedure involves 2 settings:

1 Pulse amount: the amount of pulses that need to be input to the Pi port subsequently in order to increase the Pulse step by 1 (1~999999).

2 Pulse rate: multiplier for the pulse amount (0.01~99999.99).

Multiplying the values of these 2 settings by each other results in the energy usage (e.g. in kWh). Example: you want to make sure that every incoming pulse signal corresponds to 1 kWh. In this case, the Pulse amount would be set to 1, because we want every incoming pulse to increase the pulse step by 1. The Pulse rate (multiplier) is also set to 1, because 1 incoming pulse signal equals 1 pulse step. Multiplying 1 by 1 results in 1. The meter counts 1 kWh for every incoming pulse signal.

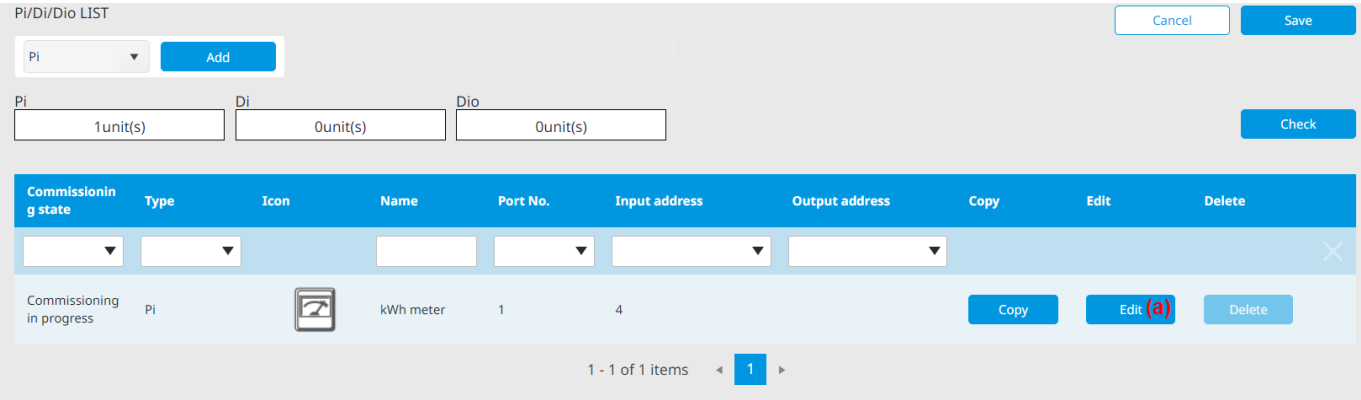
However, depending on the meter type, it may be possible that only every third (or fifth, or tenth, …) incoming pulse signal should count as a Pulse step (e.g. power is consumed). In this case, you can alter the Pulse amount to 3 to reflect this. Every 3 incoming pulses, the Pulse step increases by 1. With the Pulse rate set to 1, the meter counts 1 kWh for every third incoming pulse signal. Information regarding the pulse outputs of power meters is often imprinted on the meter itself.

In this manner, you can combine the Pulse amount and Pulse rate in order to align the meter to count any type of energy consumption correctly. The basic formula is as follows: Pulse amount × Pulse rate = energy consumption. For example, if every incoming pulse should correspond to 10 kWh consumed, you can set the Pulse amount to 1 and the Pulse rate to 10.

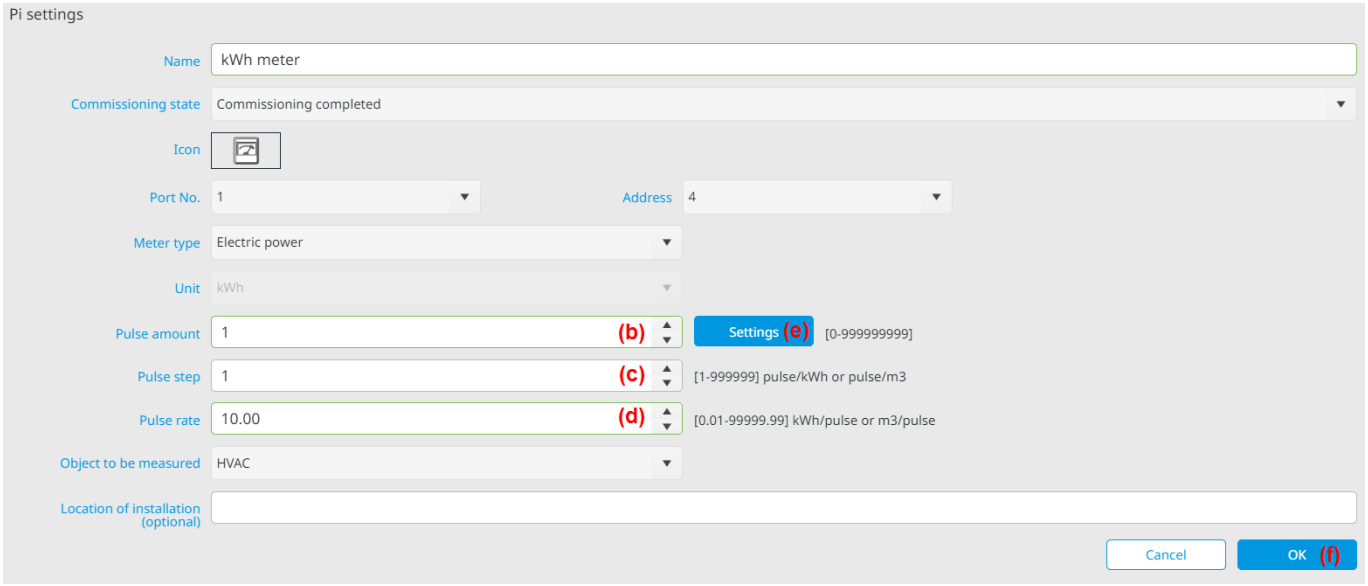
To perform meter alignment for Pi equipment

1 In the sidebar, go to Pi/Di/Dio LIST.

2 Click Edit (a) for the Pi equipment whose meter is to be aligned.



Result: A settings page appears.



3 Enter a value for the Pulse amount (b) (1~ 999999999). If necessary, also adjust Pulse step (c) and/or Pulse rate (d). To clear the Pulse amount value, enter 0 and proceed to the next step.

4 Click Settings (e).

5 Click OK in the pop-up window to confirm.

6 Click OK (f) to save.

Result: The meter alignment is completed.

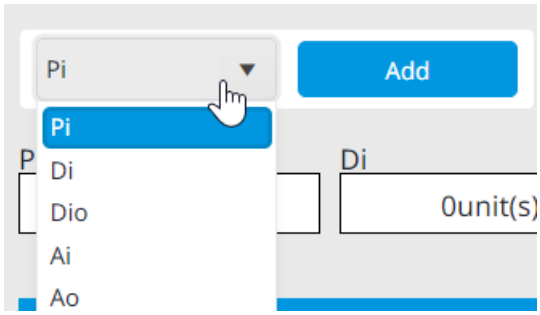
INFORMATION

The Pulse amount value CANNOT be edited when the DC+ Edge controller is offline.

7.9.3 External equipment

You can create external equipment manually.

1. In the sidebar, go to EXTERNAL EQUIPMENT LIST.
2. From the drop-down list, select the type of equipment you want to create.

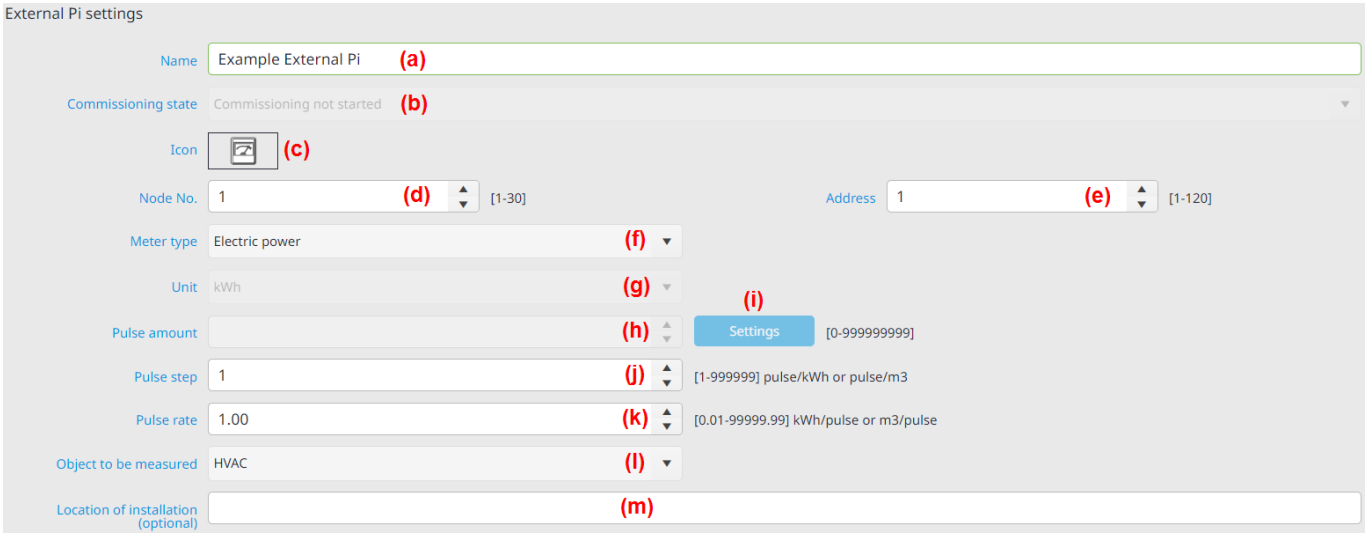


3. Click Add.

   Result: Depending on the type of equipment that was chosen, a settings screen is displayed.

4. Configure the settings for the selected type of equipment:

External Pi (pulse input)

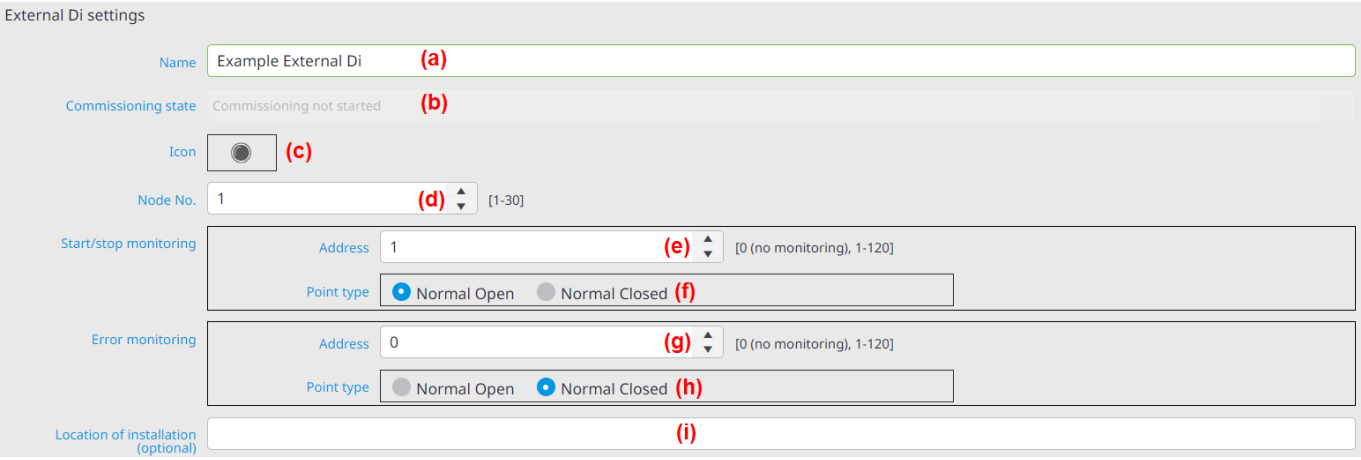


Item	Description
(a) Name	Enter the external Pi name.
(b) Commissioning state	Displays the Commissioning state of the equipment. During equipment creation, this is read-only.
(c) Icon	When clicked, allows you to select an icon from the list of icons. Select an icon from the list, then click OK. This icon is displayed on the equipment list tile.
(d) Node No.	Use the up and down arrows to set the node number. The node number must match the WAGO I/O node number (1~30).[a]
(e) Address	Use the up and down arrows to set the contact address (1~120).[a]

Item	Description
(f) Meter type	From the drop-down list, select the type of meter (Electric power, Gas , or Water).
(g) Unit	Displays the unit type automatically (e.g. kWh), based on the selected Meter type (f).
(h) Pulse amount	Cannot be edited when creating the external Pi. This value is used when aligning meters. The Pulse amount can be set later to the value calculated based on the meter value. For more details, see "Meter alignment procedure for Pi equipment" [▸ 83].
(i) Settings	Cannot be clicked when creating the external Pi. Used when aligning meters. For more details, see "Meter alignment procedure for Pi equipment" [▸ 83].
(j) Pulse step	Set the pulse step according to the specifications of the meter used for measurement. You may have to reconfigure this value later depending on the meter used. For more details, see "Meter alignment procedure for Pi equipment" [▸ 83].
(k) Pulse rate	Set the pulse rate according to the specifications of the meter used for measurement. This value can be seen as a multiplier for the Pulse amount (h). You may have to reconfigure this value later depending on the meter used. For more details, see "Meter alignment procedure for Pi equipment" [▸ 83].
(l) Object to be measured	Set the type of energy consumption to be measured by the meter (HVAC or Non-HVAC). Select Non-HVAC when measuring energy consumption for things other than HVAC units.
(m) Location of installation	Optional: describe the location where the external Pi is installed.

[a] For more information about node contact addresses, see "12.6 Address settings for external equipment" [▸ 177].

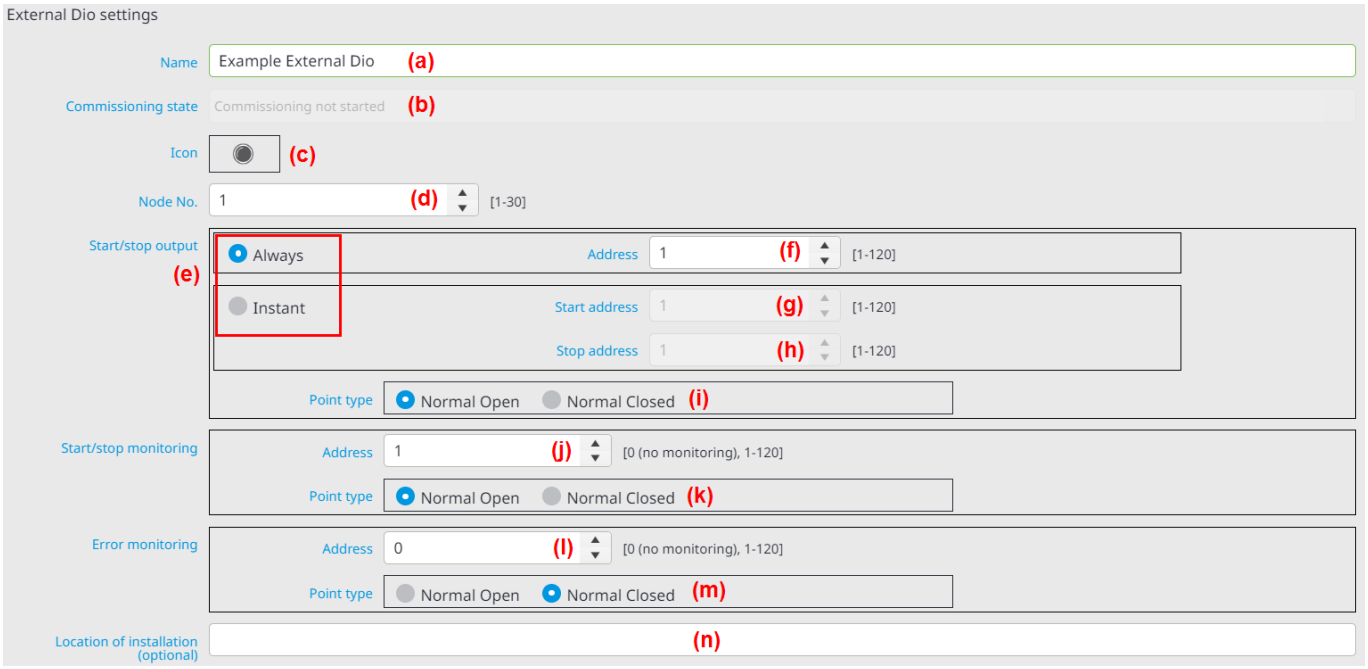
External Di (digital input)



Item	Description
(a) Name	Enter the external Di name.
(b) Commissioning state	Displays the commissioning state of the equipment. During equipment creation, this is read-only.
(c) Icon	When clicked, allows you to select an icon from the list of icons. Select an icon from the list, then click OK. This icon is displayed on the equipment list tile.
(d) Node No.	Use the up and down arrows to set the node number. The node number must match the WAGO I/O node number (1~30).[a]
(e) Address	Use the up and down arrows to set the contact address (1~120) for start/stop monitoring.[a]
(f) Point type	Select the contact type to be monitored (A-type: normally open, B-type: normally closed.)
(g) Address	Use the up and down arrows to set the contact address (1~120) for error monitoring.[a]
(h) Point type	Select the contact type to be monitored (A-type: normally open, B-type: normally closed.)
(i) Location of installation	Optional: describe the location where the external Di is installed.

[a] For more information about node contact addresses, see "12.6 Address settings for external equipment" [▶ 177].

External Dio (digital input and output)

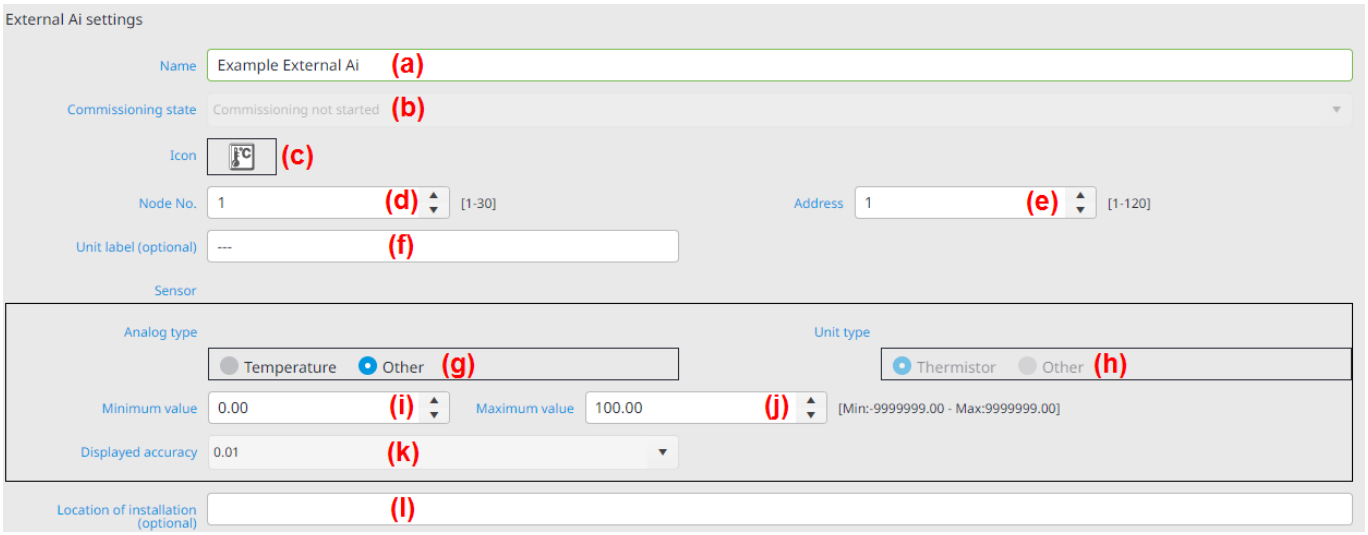


Item	Description
(a) Name	Enter the external Dio name.
(b) Commissioning state	Displays the commissioning state of the equipment. During equipment creation, this is read-only.
(c) Icon	When clicked, allows you to select an icon from the list of icons. Select an icon from the list, then click OK. This icon is displayed on the equipment list tile.
(d) Node No.	Use the up and down arrows to set the node number. The node number must match the WAGO I/O node number (1~30).[a]
(e) Start/stop output behaviour	Select whether the start/stop contact signal output is always active (Always), or whether the DC+ Edge should output the start/stop contact signal with a pulse width of 2 seconds (Instant). When you select Instant, the start and stop contact addresses (g, h) cannot overlap.
(f) Address	Only when Always (e) is selected. Use the up and down arrows to set the start/stop control contact address (1~120).[a]
(g) Start address	Only when Instant (e) is selected. Use the up and down arrows to set the start output contact address (1~120).[a]
(h) Stop address	Only when Instant (e) is selected. Use the up and down arrows to set the stop output contact address.(1~120).[a]

Item	Description
(i) Point type	Select the contact type to be monitored (A-type: normally open, B-type: normally closed.)
(j) Address	Use the up and down arrows to set the contact address (1~120) for start/stop monitoring.[a]
(k) Point type	Select the contact type to be monitored (A-type: normally open, B-type: normally closed.)
(l) Address	Use the up and down arrows to set the contact address (1~120) for error monitoring.[a]
(m) Point type	Select the contact type to be monitored (A-type: normally open, B-type: normally closed.)
(n) Location of installation	Optional: describe the location where the equipment is installed.

[a] For more information about node contact addresses, see "12.6 Address settings for external equipment" [▸ 177].

External Ai (analog input)

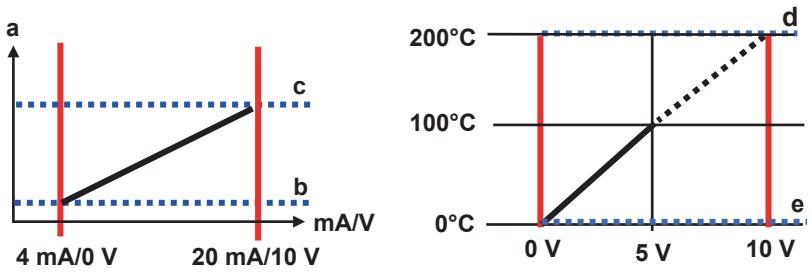


Item	Description
(a) Name	Enter the external Ai name.
(b) Commissioning state	Displays the Commissioning state of the equipment. During equipment creation, this is read-only.
(c) Icon	When clicked, allows you to select an icon from the list of icons. Select an icon from the list, then click OK. This icon is displayed on the equipment list tile.
(d) Node No.	Use the up and down arrows to set the node number. The node number must match the WAGO I/O node number (1~30).[a]
(e) Address	Use the up and down arrows to set the analog input contact address (1~120).[a]
(f) Unit label	Optional: set the unit label for the analog value measured by the equipment (e.g. °C for temperature). When the Analog type (g) is set to Temperature, this value is set to "°C" and cannot be changed.
(g) Analog type	Set the analog type to either Temperature when the input corresponds to a temperature value, or Other when using another sensor type for measuring things other than temperature (e.g. humidity).
(h) Unit type	Only when the Analog type (g) is set to Temperature. Set the unit type for the external Ai. Set to Thermistor if you are using one of the following thermistor models: 750-461/020-000, 750-461, 750-460. When using I/O modules other than the thermistor models listed, set to Other (e.g.mA/V).

Item	Description
(i) Minimum value	Set up minimum and maximum analog values that correspond respectively to the minimum and maximum input signals (voltage or current) of the external Ai. The minimum analog value corresponds to an input of 0 V / 4 mA, the maximum analog value to an input of 10 V / 20 mA. For an example, see below.
(j) Maximum value	
(k) Displayed accuracy	Select the display accuracy of the analog values from the drop-down list. If the Analog type (g) is set to Temperature, the accuracy is fixed at 0.01.
(l) Location of installation	Optional: describe the location where the external Ai is installed.

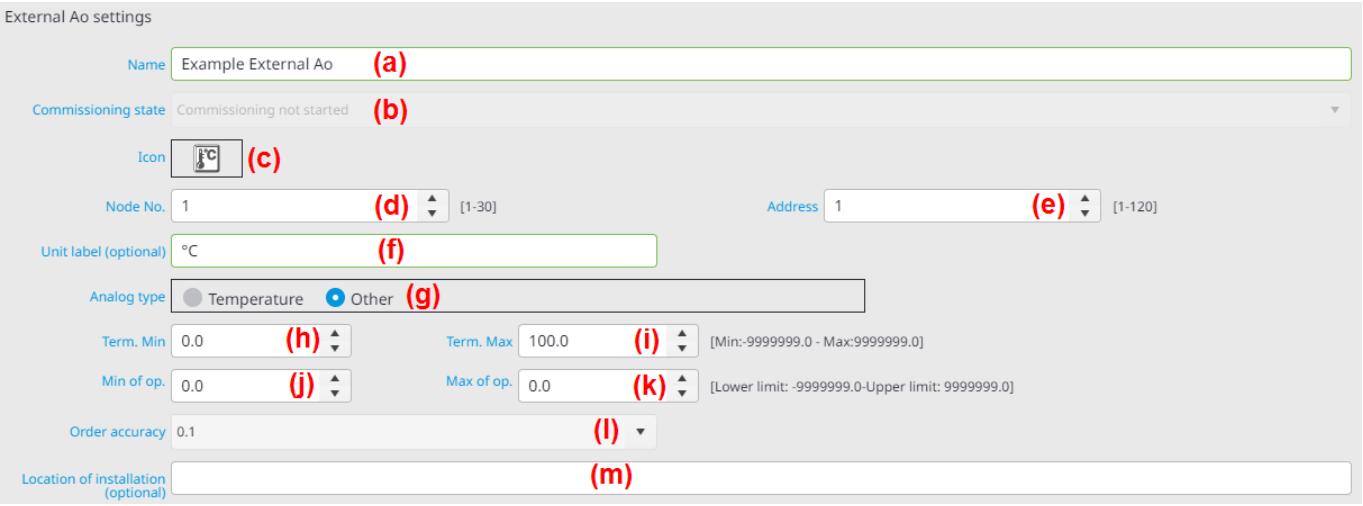
[a] For more information about node contact addresses, see "12.6 Address settings for external equipment" [▸ 177].

In the following example, a 0 V to 5 V (0°C to 100°C) sensor is used. The Analog type is set to Temperature. The minimum value is set to 0°C, and the maximum value is set to 200°C.



a Analog value
b Minimum value
c Maximum value
d Maximum value set to 200°C
e Minimum value set to 0°C

External Ao (analog output)

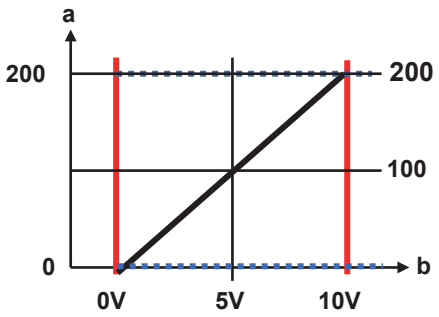


Item	Description
(a) Name	Enter the external Ao name.
(b) Commissioning state	Displays the Commissioning state of the equipment. During equipment creation, this is read-only.
(c) Icon	When clicked, allows you to select an icon from the list of icons. Select an icon from the list, then click OK. This icon is displayed on the equipment list tile.
(d) Node No.	Use the up and down arrows to set the node number. The node number must match the WAGO I/O node number (1~30).[(a)]
(e) Address	Use the up and down arrows to set the analog output contact address (1~120).[(a)]
(f) Unit label	Optional: set the unit label for the analog value measured by the equipment (e.g. °C for temperature). When the Analog type (g) is set to Temperature, this value is set to "°C" and cannot be changed.
(g) Analog type	Set the analog type to either Temperature when the input corresponds to a temperature value, or Other when using another sensor type for measuring things other than temperature (e.g. humidity).

Item	Description
(h) Term. Min	Set up minimum and maximum analog values (i.e. terminal values) that correspond respectively to the minimum and maximum output signals (voltage or current) of the external Ao. The minimum analog value corresponds to an output of 0 V / 4 mA, the maximum analog value to an output of 10 V / 20 mA. For an example, see below.
(i) Term. Max	
(j) Min of op.	Set up minimum and maximum limits for the operation value (i.e. the analog values) that can be specified. For an example, see below.
(k) Max of op.	
(l) Displayed accuracy	Select the display accuracy of the analog values from the drop-down list. If the analog type (g) is Temperature, display accuracy is fixed [0.01].
(m) Location of installation	Optional: describe the location where the Ao is installed.

[a] For more information about node contact addresses, see "12.6 Address settings for external equipment" [▸ 177].

In the following example, the Analog type is set to Other. The minimum and maximum terminal values (Term. Min and Term. Max) are set to 0.00 and 200.0 respectively. The lower and upper limits (Min of op.. and Max of op.) for the analog values are set to 0.00 and 200.0 respectively. The Displayed accuracy is set to 0. When set to −2 instead, the accuracy would be 0.01.



a Operation value
b Output signal

INFORMATION

Duplicate node contact addresses CANNOT be registered. All addresses MUST be unique. However, for external Di and external Dio modules, it is possible leave the address unspecified.

5 Once all settings have been made, click OK.

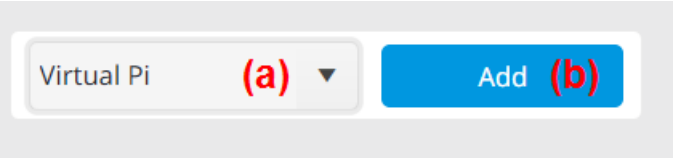
Result: The equipment is created and appears in the External equipment list. If you have created an external pulse input, also see "Meter alignment procedure for Pi equipment" [▸ 83].

7.9.4 Virtual equipment

You can create "virtual" Pi equipment. A virtual Pi sums the energy consumption values of multiple other meters (i.e. Pi) and/or integrated unit meters into a single, virtual Pi. This can be useful for visualising the data of multiple units.

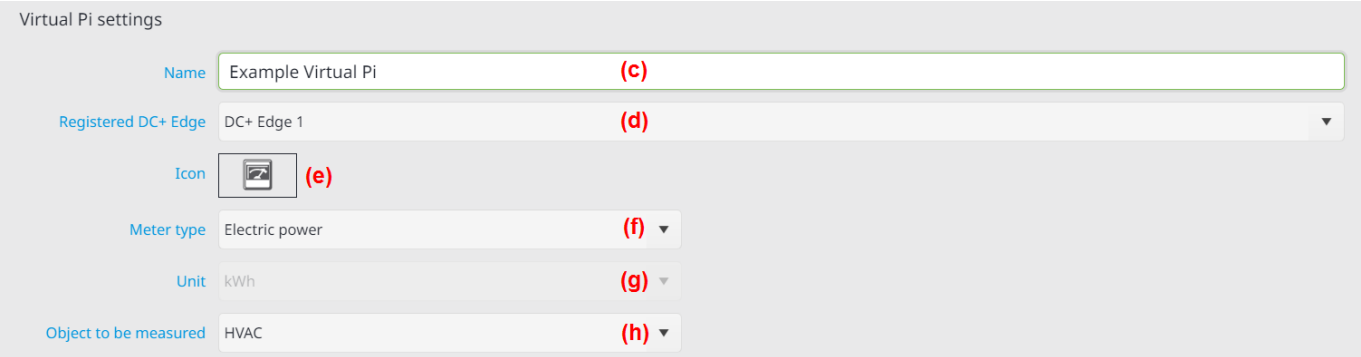
1 In the sidebar, go to VIRTUAL EQUIPMENT LIST.

2 From the drop-down list (a), select Virtual Pi.



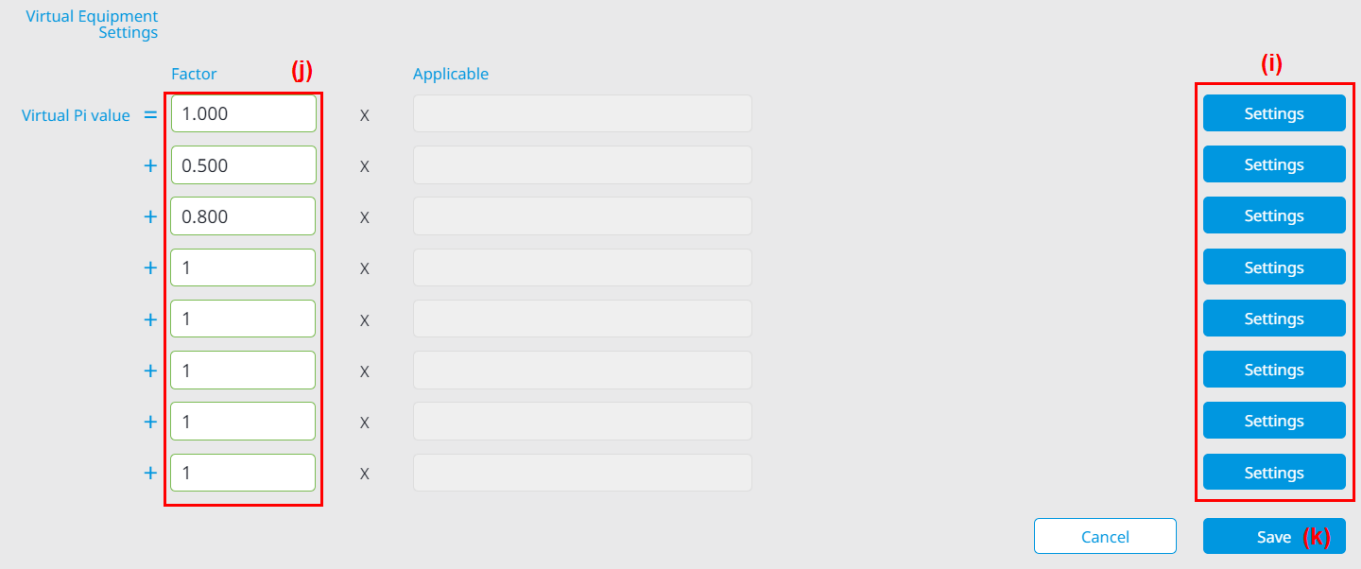
3 Click Add (b).

4 Configure the following settings:



Item	Description
(c) Name	Enter the virtual Pi name.
(d) Registered DC+ Edge	From the drop-down list, select the DC+ Edge to which the equipment you want to add is registered.
(e) Icon	When clicked, allows you to select an icon from the list of icons. Select an icon from the list, then click OK. This icon is displayed on the equipment list tile.
(f) Meter type	From the drop-down list, select the type of meter (Electric power, Gas , or Water).
(g) Unit	Displays the unit type automatically (e.g. kWh), based on the selected Meter type (f).
(h) Object to be measured	Set the type of energy consumption to be measured by the meter (HVAC or Non-HVAC). Select Non-HVAC when measuring energy consumption for things other than HVAC units.

5 Click Settings (i) to add equipment.



6 Select the checkboxes of the meters and/or units you want to include in the virtual Pi. Then, click OK.

7 Set a Factor (j) for all selected equipment. You can use this to decrease the weight of a certain piece of equipment in the total virtual Pi value. For example, if you only want half of the power consumption values of a certain unit to be included in the virtual Pi value, you can set the Factor to 0.5. If you want to keep the measured value as is, set the Factor to 1.

8 Click Save.

7.9.5 BACnet equipment

Via the LAN-2 port on the controller, the DC+ Edge can be connected to a local network in order to connect to BACnet servers on the network. The DC+ Edge functions as a BACnet client. The network settings for the LAN-2 port can be configured under DC+ EDGE > NETWORK SETTINGS. Here, you can configure the IP address for the DC+ Edge. Also see " Registering the DC+ Edge" [▸ 62] for more information.

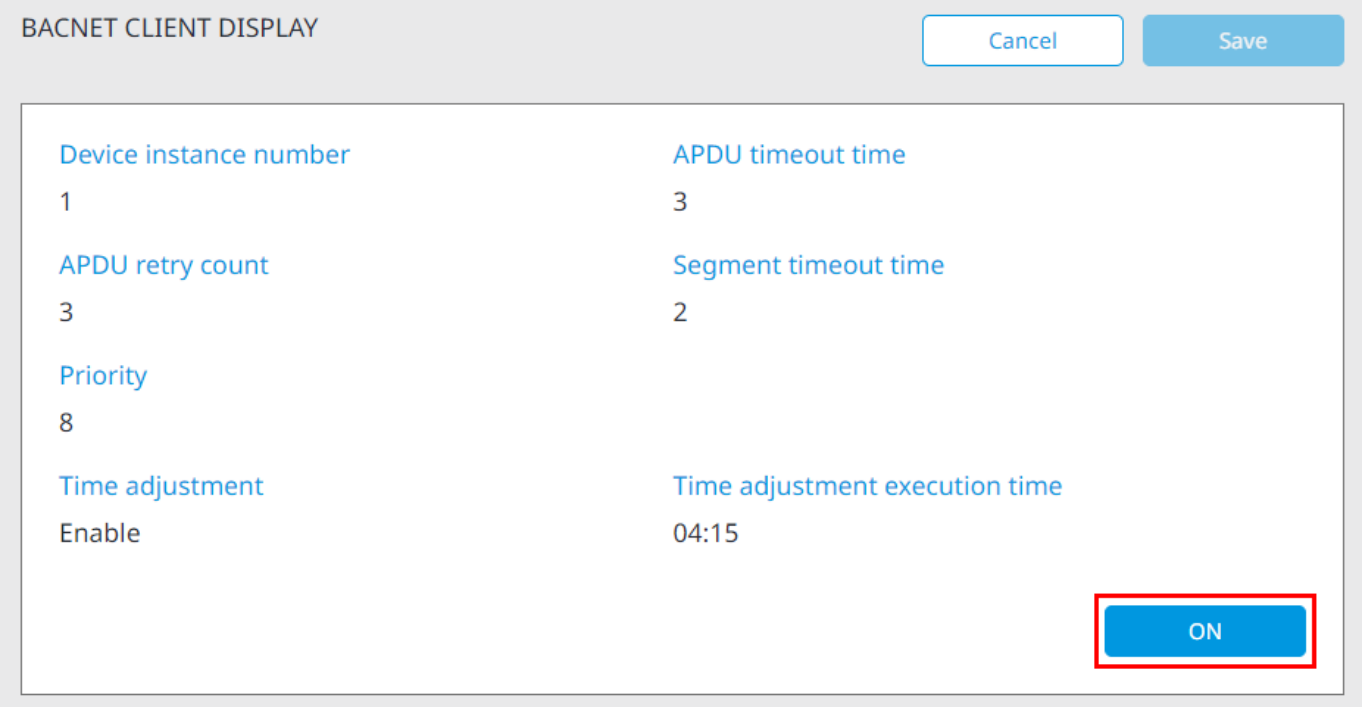
Third-party software can be used to manage, view and control BACnet networks and any connected equipment. This can offer a better view of which objects are on the network and how they should be configured in Daikin Cloud Plus Commissioning. It is recommended to also refer to the documentation of any of the BACnet objects or servers you intend to create in Daikin Cloud Plus Commissioning, as some settings can depend on what is supported by the BACnet server you want to connect with.

Set up the BACnet client settings first. See "To set up the BACnet client" [▸ 96] for more information. After the configuration of the BACnet client settings, you can:

- Manually add BACnet servers and objects. For more information, see the subchapters below.
- Set up BACnet groups, which group multiple BACnet objects together in a single management point (e.g. for integrating air handling units).
- Import BACnet servers and objects via an Excel import. For more information, see "7.9.6 Excel export and import" [▸ 124].

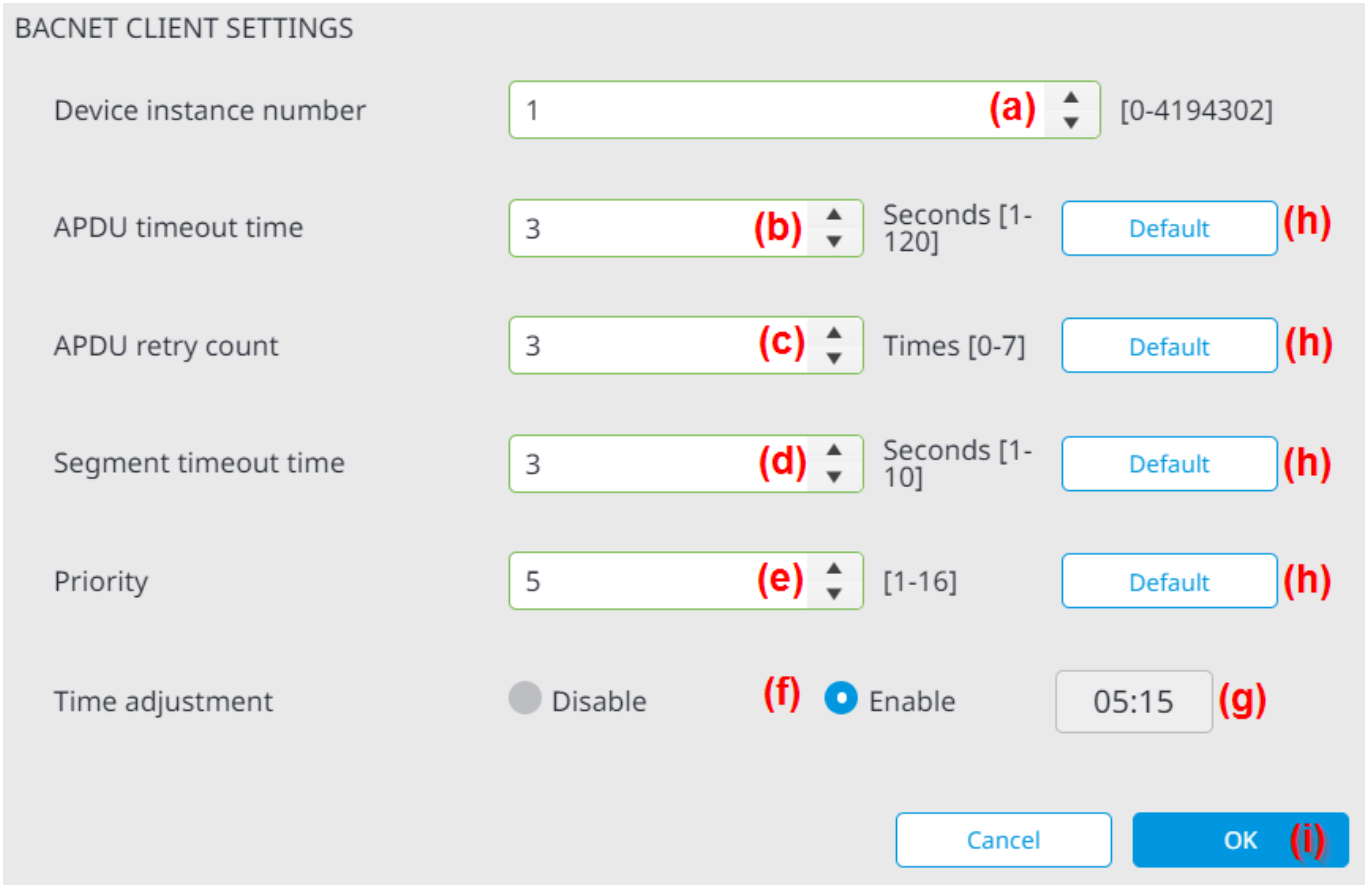
To set up the BACnet client

1 In the sidebar, go to BACNET CLIENT EQUIPMENT > BACNET CLIENT DISPLAY.



2 Select ON.

Result: The BACNET CLIENT SETTINGS appear.



3 Configure the settings:

Item	Description
(a) Device instance number	Set the device instance number for the DC+ Edge controller. The instance number MUST be a unique number on the network between 0 and 4194302.
(b) APDU timeout time	Set the time in seconds (default: 3 seconds) the BACnet client waits to receive a response from the BACnet server after sending a request. It is not recommended to change this value unless the response time between the BACnet client and server is slow, which can be caused by network overload. If this value is set too low, communication between the BACnet server and client may fail.
(c) APDU retry count	Enter the amount of times (default: 3) the BACnet client should request retransmission of a message after an error or APDU timeout occurs. It is not recommended to change this value unless you are unable to receive a response from the BACnet server. Unnecessary changes to this value may slow down or otherwise negatively impact the network.

Item	Description
(d) Segment timeout time	Daikin Cloud Plus supports segmented BACnet communication. If a single message exceeds the maximum data packet size, the transmission and reception of the message is performed in multiple segments. In case of segmented communication, set the time in seconds (default: 3 seconds) the BACnet client waits between retransmission of a segment from the BACnet server after sending a request. It is not recommended to change this value unless the response time between the BACnet client and server is slow, which can be caused by network overload. If this value is set too low, communication between the BACnet server and client may fail.
(e) Priority	Set the priority level (default: 8) of the BACnet client write commands. When multiple BACnet client devices can potentially write to the same property of a BACnet object in the BACnet server, the priority level allows you to prioritise write commands of the DC+ Edge over the commands of other BACnet clients. A priority level of 1 is the most important, while a priority level of 16 is least important.
(f) Time adjustment	BACnet supports time synchronisation, which allows the BACnet servers and client to operate with the exact same time. When this setting is enabled (f), you can set the time when the synchronisation of the client to the server time should occur (default: every day at 04:15 AM). Click the time, then set a time in the overlay and click OK to confirm.

4 Select OK (i) to confirm the settings. You can also click Default (h) for any setting to reset the setting to its default value.

5 Click Save.

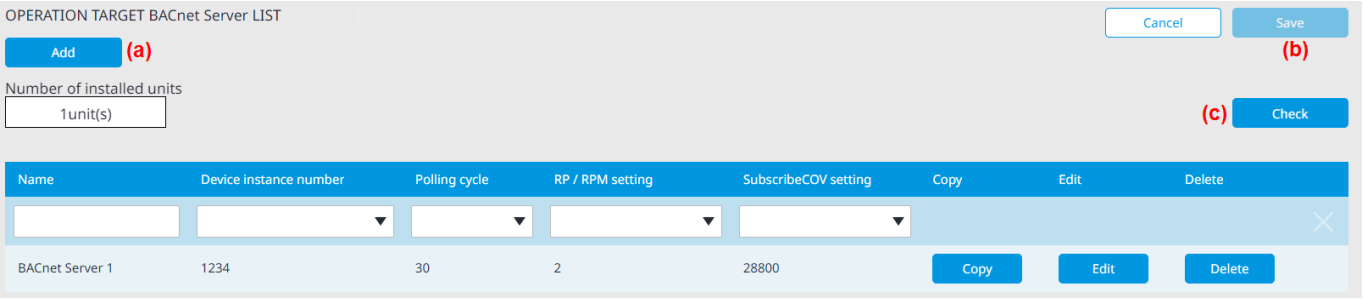
6 Select OK in the pop-up window to confirm.

Result: The settings are saved.

To add a BACnet server

In order to communicate with communicate with any BACnet server on the network ,the server has to be added first. You can BACnet servers manually.

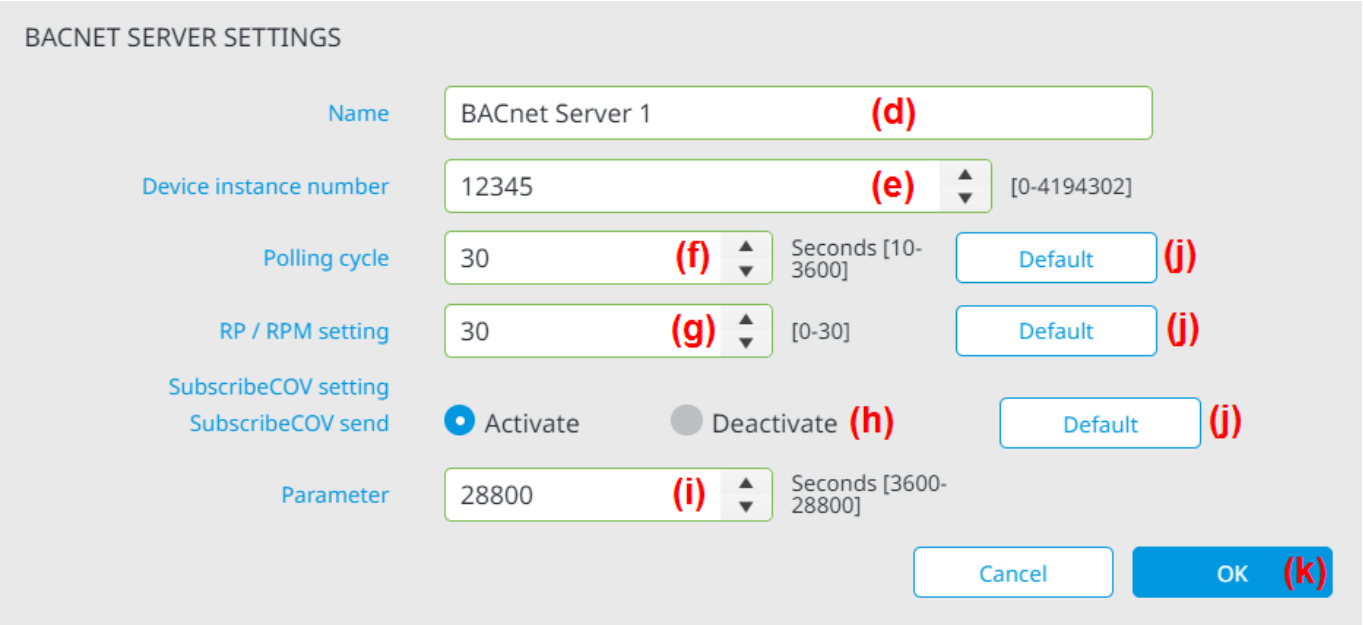
1 In the sidebar, go to BACNET CLIENT EQUIPMENT > OPERATABLE BACNET SERVER LIST.



Result: A list of all BACnet servers appears.

2 Click Add (a).

Result: A settings window appears.



3 Configure the settings:

Item	Description
(d) Name	Name the BACnet server.
(e) Device instance number	Set the device instance number for the BACnet server you are communicating with. The instance number MUST be unique number between 0 and 4194302.
(f) Polling cycle	Set the interval time in seconds the DC+ Edge polls for data.

Item	Description
(g) RP / RPM setting	Use "Read property" or "Read Property Multiple" for reading BACnet object properties. This setting defines the amount of properties (1~30) for a given object requested in a single message when the DC+ Edge polls for data. When this is set to 1 (RP = read property), the DC+ Edge requests a read of a single property of an object in a request. When this is set higher (2~30), the DC+ Edge can request multiple properties of different objects in a single request.
(h) SubscribeCOV setting / SubscribeCOV send	Some BACnet servers support the SubscribeCOV (COV stands for change of value) request type. When supported, this means that the server can detect changes of object property values for one or more objects. When this setting is enabled, this allows the client (the DC+ Edge) to communicate to the server that it is interested in receiving updates about when a specific property value changes. This is called subscription. When the client needs to monitor many device properties of devices on the BACnet network, this may lead to excessive traffic on the network, as the client attempts to constantly read property values (polling). In this case, it may be beneficial to enable SubscribeCOV to limit traffic on the network. **Note:** : not all objects and their properties support COV.
(i) Parameter	When SubscribeCOV is enabled, sets the time (in seconds) the client subscription should last. If the server sends no update during this period and the subscription expires, the client has to renew the subscription in order to keep receiving updates. Keeping this value low enough can ensure that the server does not keep notifying the client of updates (for example, in case it is temporarily offline or unreachable) when not needed. This also avoids overloading the network in such situations.

4 Click OK (k) to confirm the settings. You can also click Default (j) for any applicable setting to reset the setting to its default value.

Result: The BACnet server is added.

5 Optional: select Check (c) to verify that the BACnet server can be reached. Then, click OKin the pop-up window to confirm.

6 Click Save (b) on the top right of the page.

Result: The settings are saved.

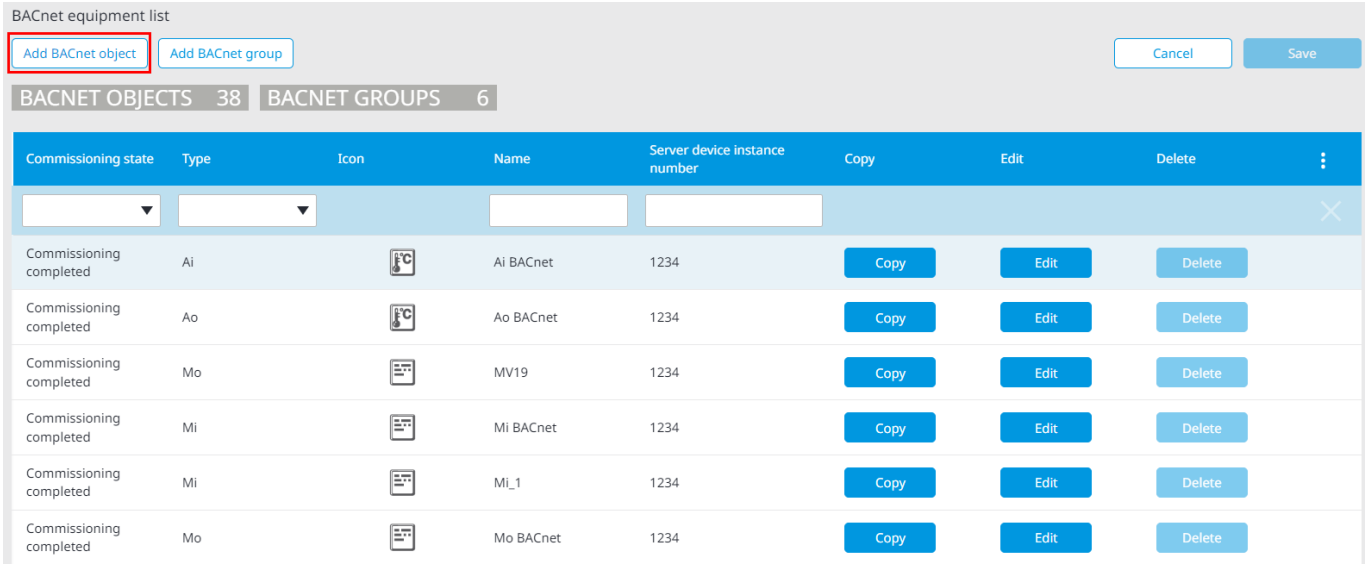
Note: in case several different servers need to be added, it is also possible to add BACnet servers in bulk via Excel import. For more information, see "7.9.6 Excel export and import" [▸ 124].

To create a single BACnet object

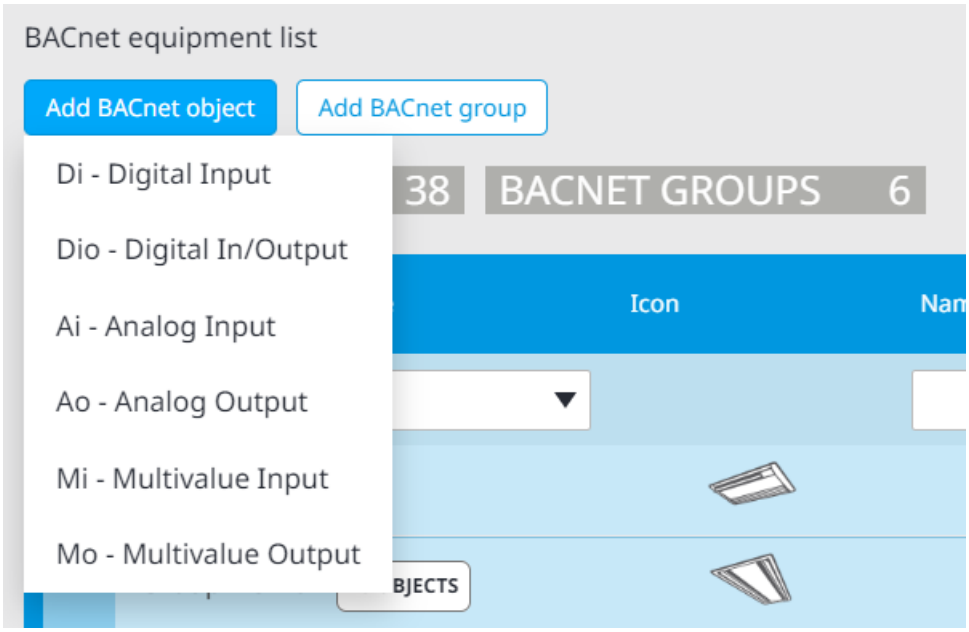
After adding a BACnet server, you create and configure individual BACnet objects. This can be done manually, as described in the procedure below. For more information about which BACnet object types are supported, see "12.5 BACnet equipment mapping" [▸ 176].

> **INFORMATION**
>
> Consider whether the BACnet equipment you want to create needs to be part of a BACnet group. Individually created BACnet equipment (objects) CANNOT be moved to a BACnet group later. If you want to move an already existing BACnet object to a BACnet group, you must first manually delete it. Then, you have to manually add it directly in the BACnet group again. For more information, see the steps for creating a BACnet group below.

1 In the sidebar, go to BACNET CLIENT EQUIPMENT > BACNET EQUIPMENT LIST.



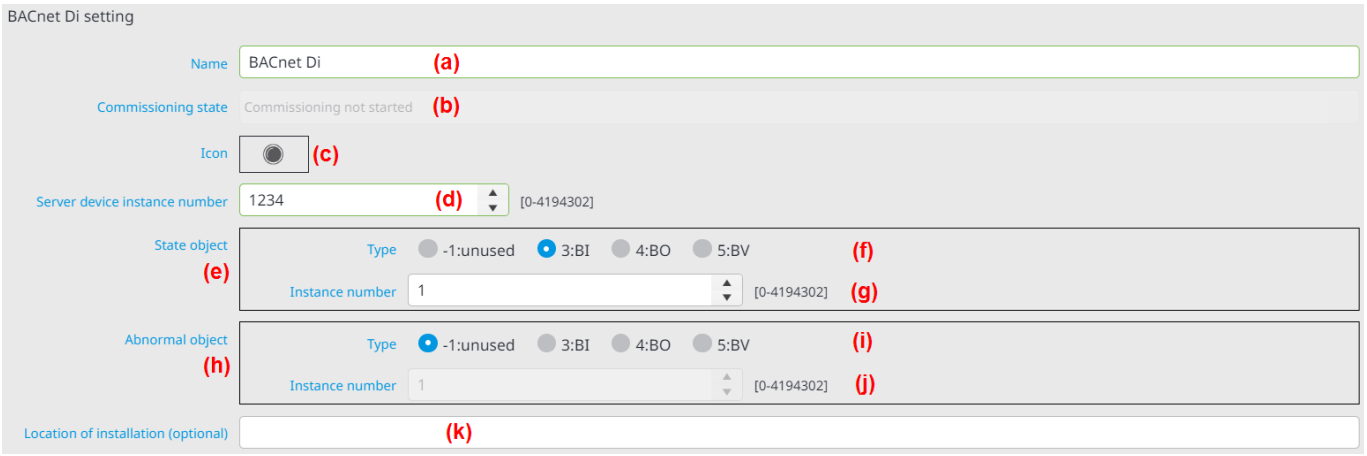
2 Click Add BACnet object and select the type of object you want to create.



Result: Depending on the type of object that was chosen, a settings screen is displayed.

3 Configure the settings for the selected type of object:

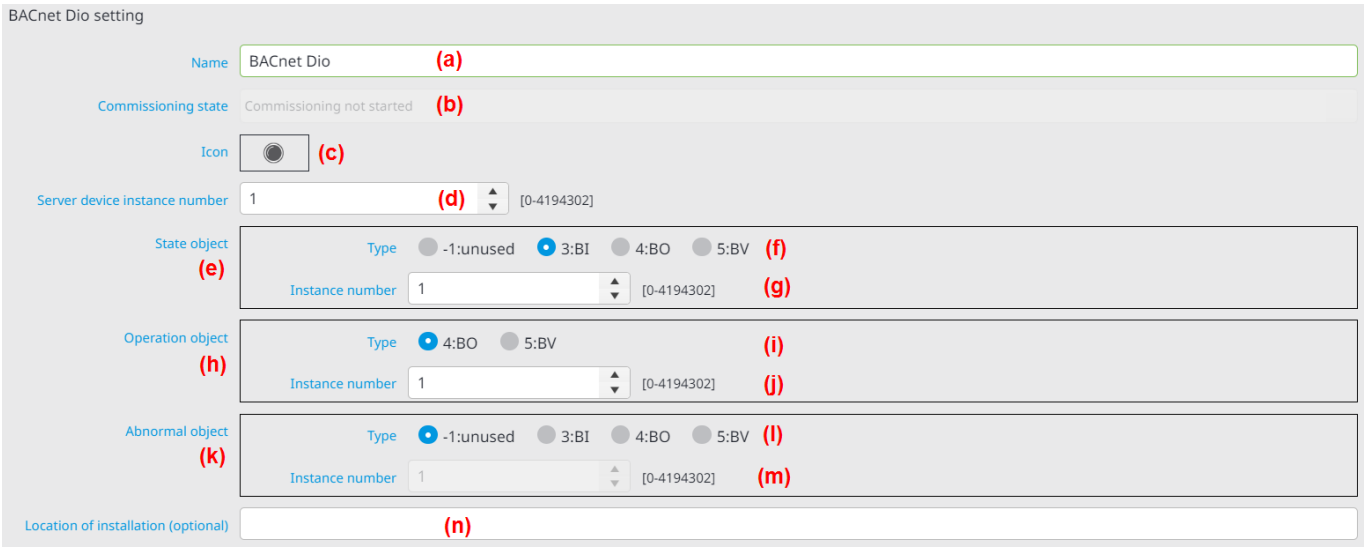
BACnet Di (digital input)



Item	Description
(a) Name	Enter the BACnet Di name.
(b) Commissioning state	Displays the commissioning state of the equipment. During equipment creation, this is read-only.
(c) Icon	When clicked, allows you to select an icon from the list of icons. Select an icon from the list, then click OK. This icon is displayed on the equipment list tile.
(d) Server device instance number	Set the device instance number for the BACnet server you are communicating with. The instance number MUST be a unique number between 0 and 4194302.
(e) State object	Type (f): ▪ -1:unused: ▪ 3:BI: binary input ▪ 4:BO: binary output ▪ 5:BV: binary value Instance number (g): set the instance number of the BACnet object. This instance number MUST be a unique number on the network between 0 and 4194302.
(h) Abnormal object	Type (i): ▪ -1:unused: ▪ 3:BI: binary input ▪ 4:BO: binary output ▪ 5:BV: binary value Instance number (j): set the instance number of the BACnet object. This instance number MUST be a unique number on the network between 0 and 4194302.

Item	Description
(k) Location of installation	Optional: describe the location where the BACnet Di is installed.

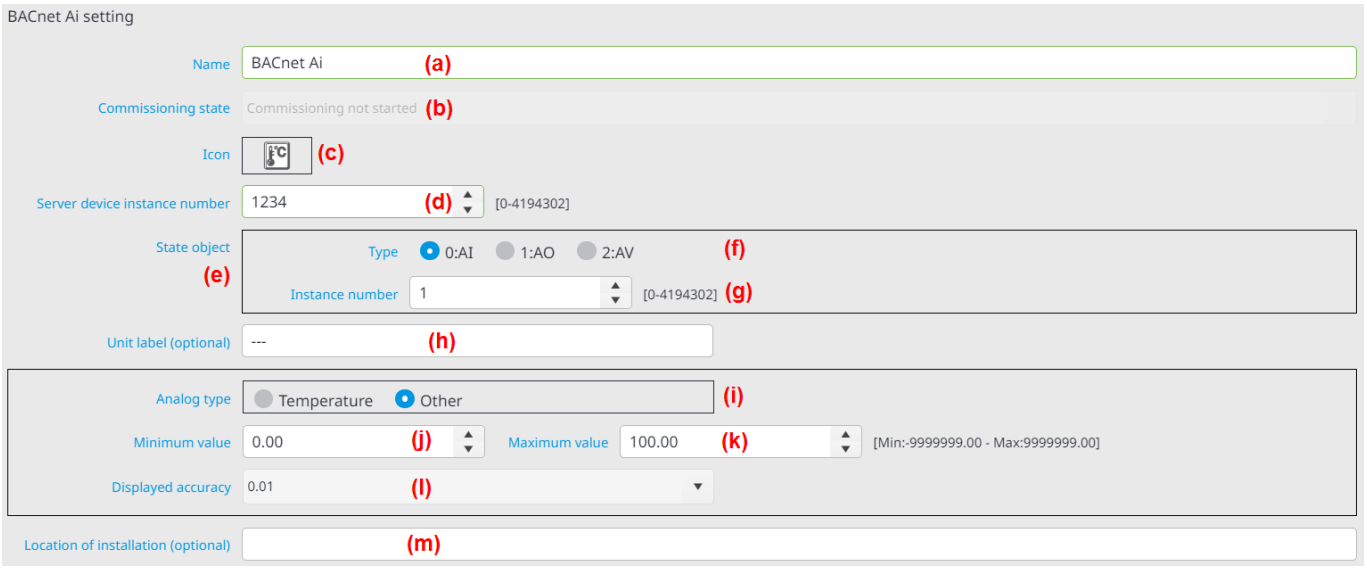
BACnet Dio (digital input and output)



Item	Description
(a) Name	Enter the BACnet Dio name.
(b) Commissioning state	Displays the commissioning state of the equipment. During equipment creation, this is read-only.
(c) Icon	When clicked, allows you to select an icon from the list of icons. Select an icon from the list, then click OK. This icon is displayed on the equipment list tile.
(d) Server device instance number	Set the device instance number for the BACnet server you are communicating with. The instance number MUST be a unique number between 0 and 4194302.
(e) State object	Type (f): ▪ -1:unused: ▪ 3:BI: binary input ▪ 4:BO: binary output ▪ 5:BV: binary value Instance number (g): set the instance number of the BACnet object. This instance number MUST be a unique number on the network between 0 and 4194302.
(h) Operation object	Type (i): ▪ -1:unused: ▪ 3:BI: binary input Instance number (j): set the instance number of the BACnet object. This instance number MUST be a unique number on the network between 0 and 4194302.

Item	Description
(k) Abnormal object	Type (l): ▪ -1:unused: ▪ 3:BI: binary input ▪ 4:BO: binary output ▪ 5:BV: binary value Instance number (m): set the instance number of the BACnet object. This instance number MUST be a unique number on the network between 0 and 4194302.
(n) Location of installation	Optional: describe the location where the BACnet Dio is installed.

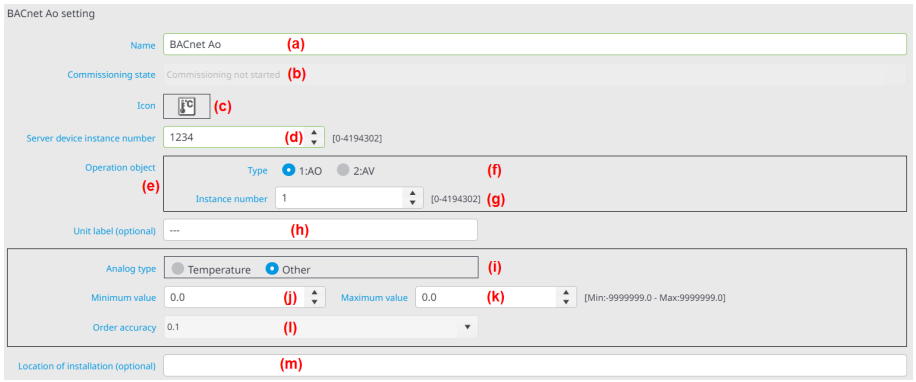
BACnet Ai (analog input)



Item	Description
(a) Name	Enter the BACnet Ai name.
(b) Commissioning state	Displays the commissioning state of the equipment. During equipment creation, this is read-only.
(c) Icon	When clicked, allows you to select an icon from the list of icons. Select an icon from the list, then click OK. This icon is displayed on the equipment list tile.
(d) Server device instance number	Set the device instance number for the BACnet server you are communicating with. The instance number MUST be a unique number between 0 and 4194302.
(e) State object	Type (f): ▪ 0:AI: analog input ▪ 1:AO: analog output ▪ 2:AV: analog value Instance number (g): set the instance number of the BACnet object. This instance number MUST be a unique number on the network between 0 and 4194302.
(h) Unit label	Optional: set the unit label for the analog value measured by the equipment (e.g. °C for temperature). When the Analog type is set to Temperature, this value is set to °C and cannot be changed.

Item	Description
(i) Analog type	Set the Analog type to either Temperature when the input corresponds to a temperature value, or Other when using another sensor type for measuring things other than temperature (e.g. humidity).
(j) Minimum value	Set up minimum and maximum limits for the operation value (i.e. the analog values) that can be specified by the user from the equipment list.
(k) Maximum value	
(l) Displayed accuracy	Select the display accuracy of the analog values from the drop-down list. If the analog type is Temperature, display accuracy is fixed [0.01].
(m) Location of installation	Optional: describe the location where the BACnet Ai is installed.

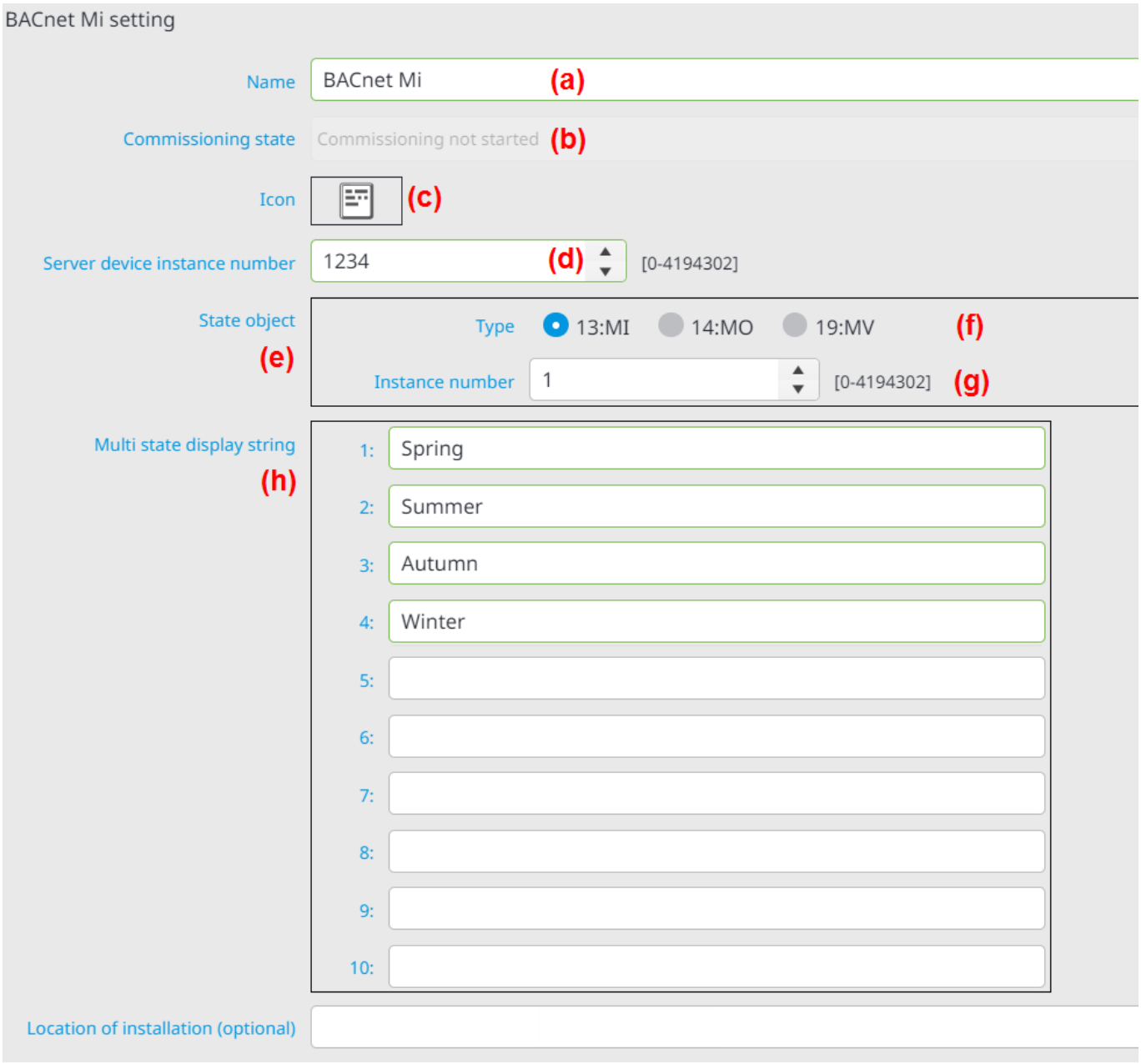
BACnet Ao (analog output)



Item	Description
(a) Name	Enter the BACnet Ao name.
(b) Commissioning state	Displays the commissioning state of the equipment. During equipment creation, this is read-only.
(c) Icon	When clicked, allows you to select an icon from the list of icons. Select an icon from the list, then click OK. This icon is displayed on the equipment list tile.
(d) Server device instance number	Set the device instance number for the BACnet server you are communicating with. The instance number MUST be a unique number between 0 and 4194302.
(e) Operation object	Type (f): ▪ 0:AO: analog output ▪ 2:AV: analog value Instance number (g): set the instance number of the BACnet object. This instance number MUST be a unique number on the network between 0 and 4194302.
(h) Unit label	Optional: set the unit label for the analog value measured by the equipment (e.g. °C for temperature). When the Analog type is set to Temperature, this value is set to °C and cannot be changed.
(i) Analog type	Set the Analog type to either Temperaturewhen the input corresponds to a temperature value, or Other when using another sensor type for measuring things other than temperature (e.g. humidity).
(j) Minimum value	Set up minimum and maximum limits for the operation value (i.e. the analog values) that can be specified by the user from the equipment list.
(k) Maximum value	

Item	Description
(l) Order accuracy	Select the order accuracy of the analog values from the drop-down list. If the analog type is Temperature, order accuracy is fixed [0.1].
(m) Location of installation	Optional: describe the location where the BACnet Ao is installed.

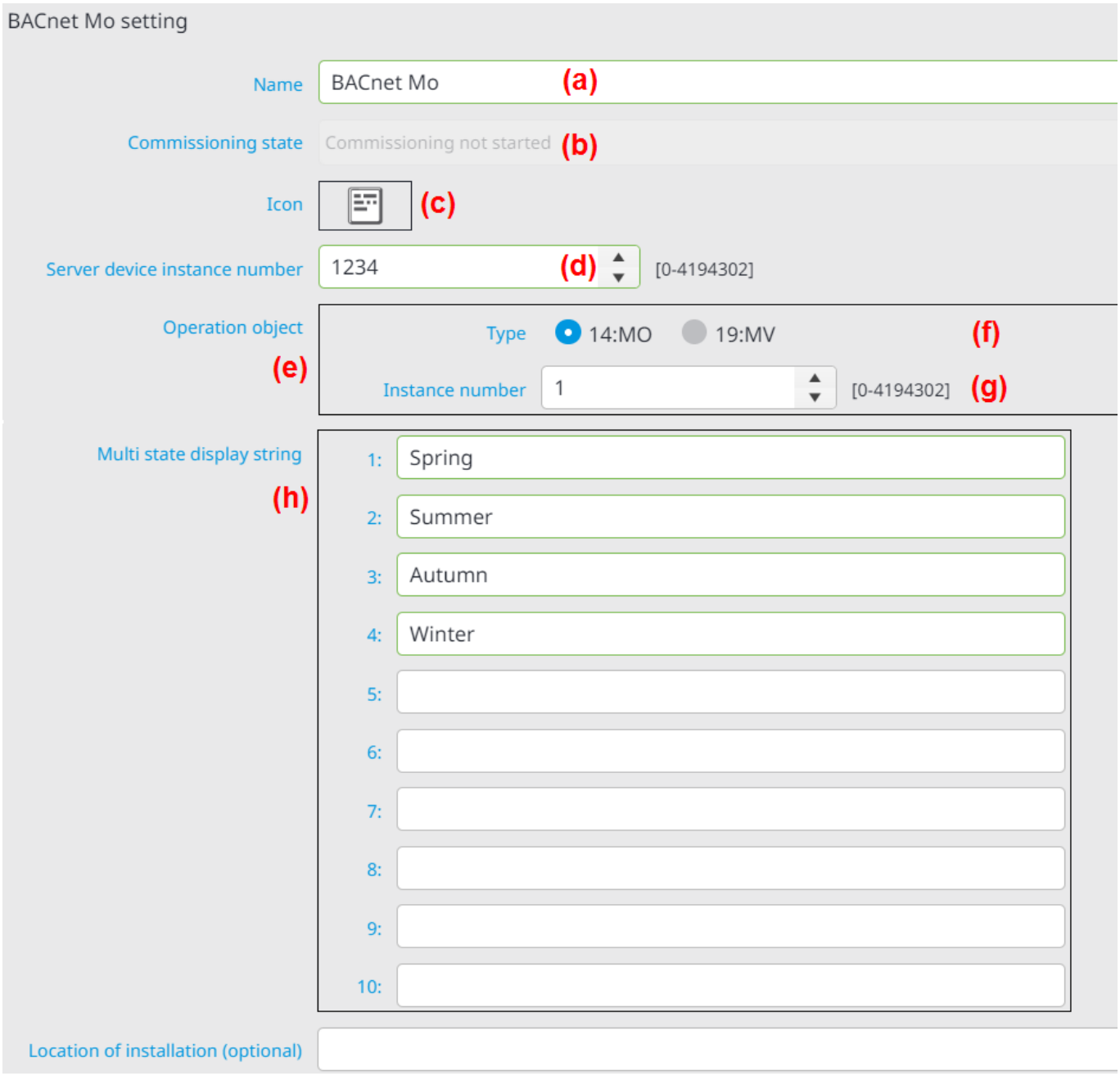
BACnet Mi (multivalue input)



Item	Description
(a) Name	Enter the BACnet Mi name.
(b) Commissioning state	Displays the commissioning state of the equipment. During equipment creation, this is read-only.
(c) Icon	When clicked, allows you to select an icon from the list of icons. Select an icon from the list, then click OK. This icon is displayed on the equipment list tile.
(d) Server device instance number	Set the device instance number for the BACnet server you are communicating with. The instance number MUST be a unique number between 0 and 4194302.

Item	Description
(e) State object	Type (f): ▪ 13:MI: multi state input ▪ 14:MO: multi state output ▪ 19:MV: muti state value Instance number (g): set the instance number of the BACnet object. This instance number MUST be a unique number on the network between 0 and 4194302.
(h) Multi state display string	Enter up to 10 different multi state display strings. These strings are displayed on equipment list tile.
(i) Location of installation	Optional: describe the location where the BACnet Mi is installed.

BACnet Mo (multivalue output)



Item	Description
(a) Name	Enter the BACnet Mi name.
(b) Commissioning state	Displays the commissioning state of the equipment. During equipment creation, this is read-only.
(c) Icon	When clicked, allows you to select an icon from the list of icons. Select an icon from the list, then click OK. This icon is displayed on the equipment list tile.
(d) Server device instance number	Set the device instance number for the BACnet server you are communicating with. The instance number MUST be a unique number between 0 and 4194302.

Item	Description
(e) Operation object	Type (f): ▪ 14:MO: multi state output ▪ 19:MV: multi state value Instance number (g): set the instance number of the BACnet object. This instance number MUST be a unique number on the network between 0 and 4194302.
(h) Multi state display string	Enter up to 10 different multi state display strings. These strings are displayed on equipment list tile.
(i) Location of installation	Optional: describe the location where the BACnet Mo is installed.

4 Once all the settings have been made, click OK.

5 Click Save on the top right of the BACnet equipment list.

Result: The BACnet object is created and appears in the BACnet equipment list.

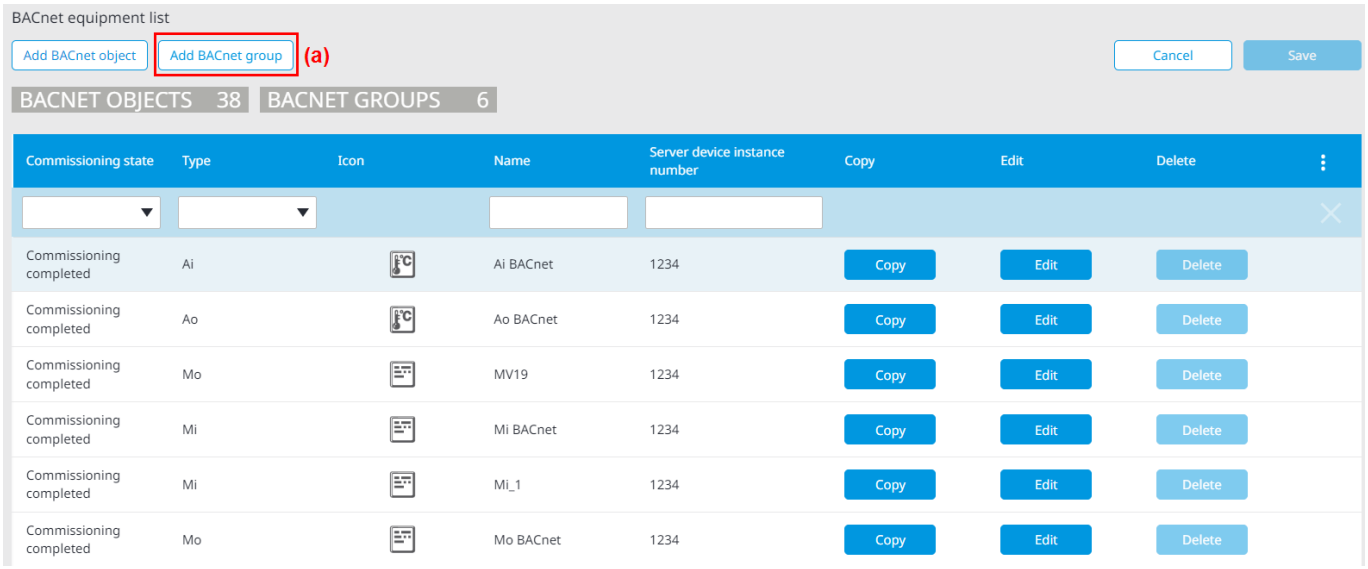
See also

Excel export and import [} 124]

To create a BACnet group

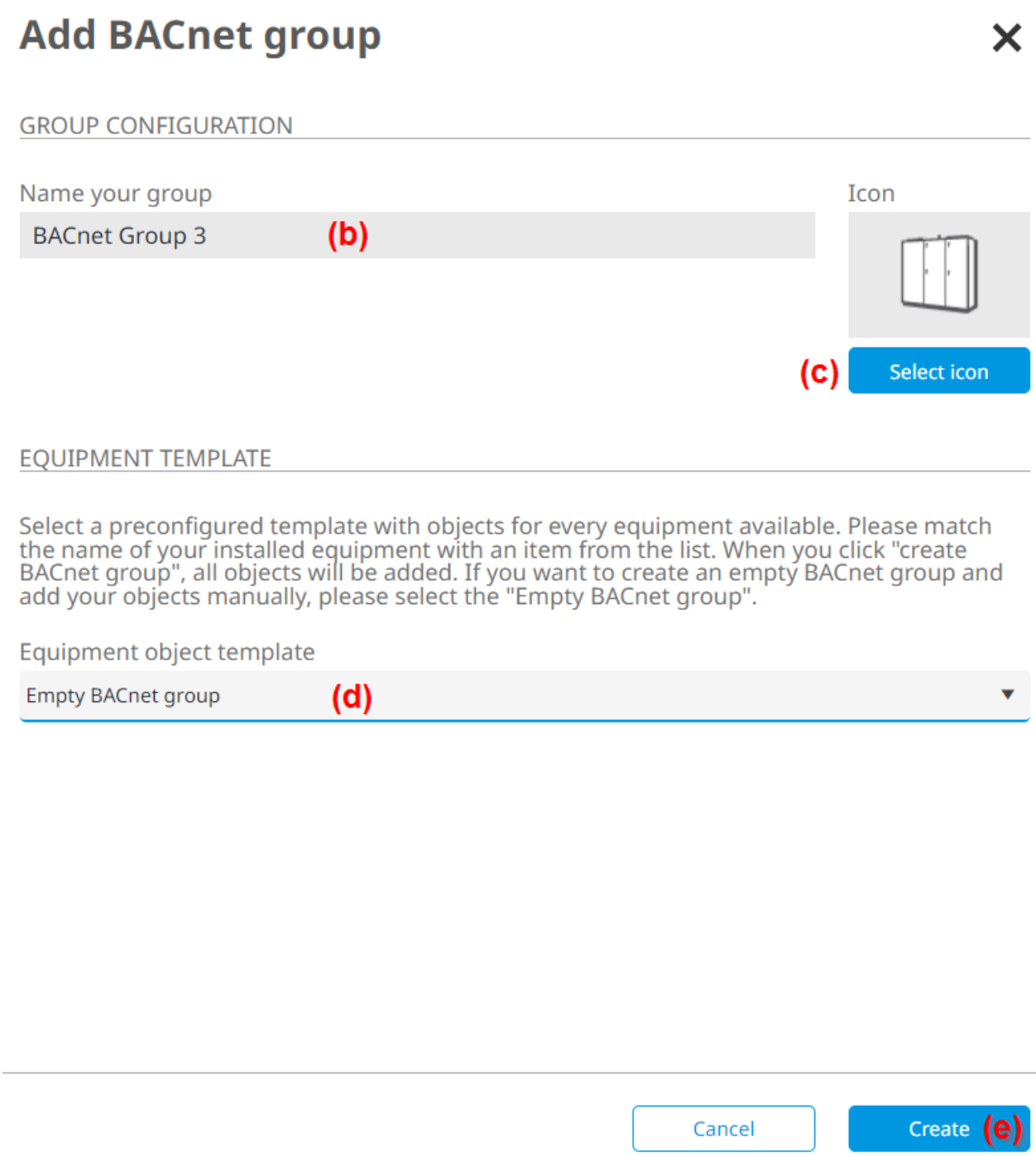
As opposed to creating individual BACnet objects, you can group multiple BACnet objects together in a single management point, a BACnet group. In Daikin Cloud Plus, BACnet groups are listed in the Other tab when in the equipment list. Objects that are in a group do not appear again elsewhere in the equipment list. You can use groups, for example, to integrate air handling units into Daikin Cloud Plus.

1 In the sidebar, go to BACNET CLIENT EQUIPMENT > BACNET EQUIPMENT LIST.



2 Click Add BACnet group (a).

Result: A settings panel appears on the right side of the page.



3 Name the BACnet group (b).

4 Click Select icon (c) and select an icon from the list. Then, click Save.

5 From the drop-down list (d), select an equipment object template.

INFORMATION

Currently, the only equipment object template is Empty BACnet group. At the time of writing, it is only possible to create an empty BACnet group, to which objects can be added. Future versions of Daikin Cloud Plus will offer templates predefined for specific BACnet devices.

6 Click Create (e).

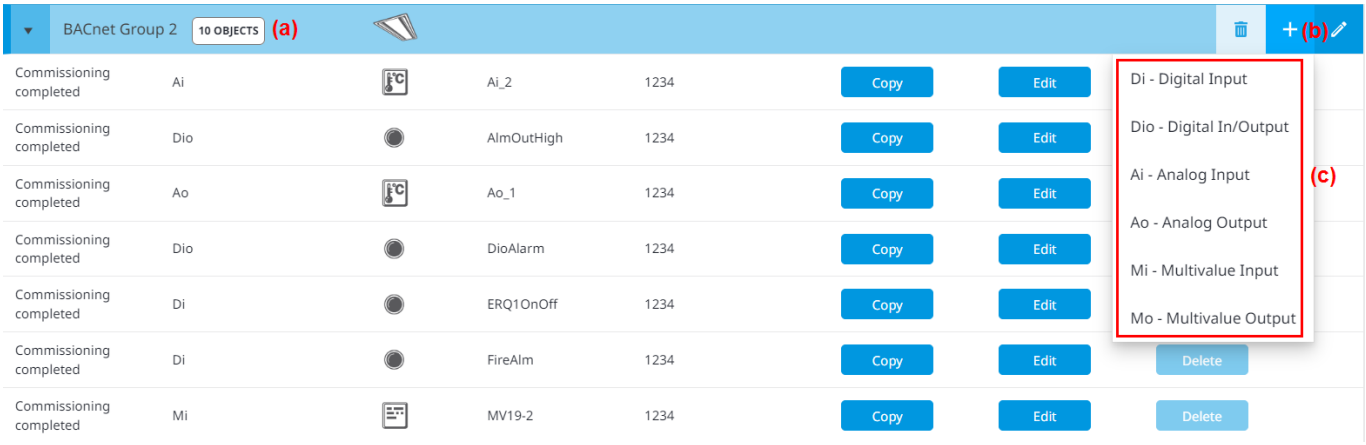
Result: The BACnet group is created. You can now create BACnet equipment directly in the BACnet group.

To create a BACnet object in a BACnet group

When several BACnet objects are required to be in a BACnet group, for example, when integrating air handling units, they must be created directly in the BACnet group itself. Moving individually created BACnet objects to a group is NOT possible. If already existing BACnet objects need to be included in a group, delete them first and recreate them following the steps described below.

Prerequisite: You have created a BACnet group.

1. In the sidebar, go to to BACNET CLIENT EQUIPMENT > BACNET EQUIPMENT LIST.
2. Locate the BACnet group (a) in which you want to create a BACnet object.
3. Hover over the group name in the list and click the + icon (b). Then, select the type of object you want to create (c).



Result: Depending on the type of equipment that was selected, a settings screen is displayed.

4. Configure the settings for the selected type of equipment. For more information about the configurable settings for each type of equipment, see the settings as descibed in "To create a single BACnet object" [▶ 102].
5. Once all settings have been configured, click OK.
6. Click Save on the top right of the BACnet equipment list.

Result: The BACnet equipment is created and is added to the BACnet group. The group and the objects that belong to it appear in the BACnet equipment list.

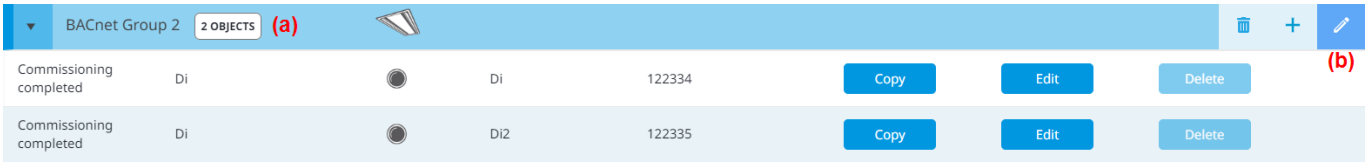
To manage a BACnet group

Once a BACnet is created, you can perform the following actions:

- Create BACnet objects directly in the group. See "To create a BACnet object in a BACnet group" [▸ 117].
- Edit the BACnet group.
- Delete the entire BACnet group.
- Delete objects in a BACnet group.

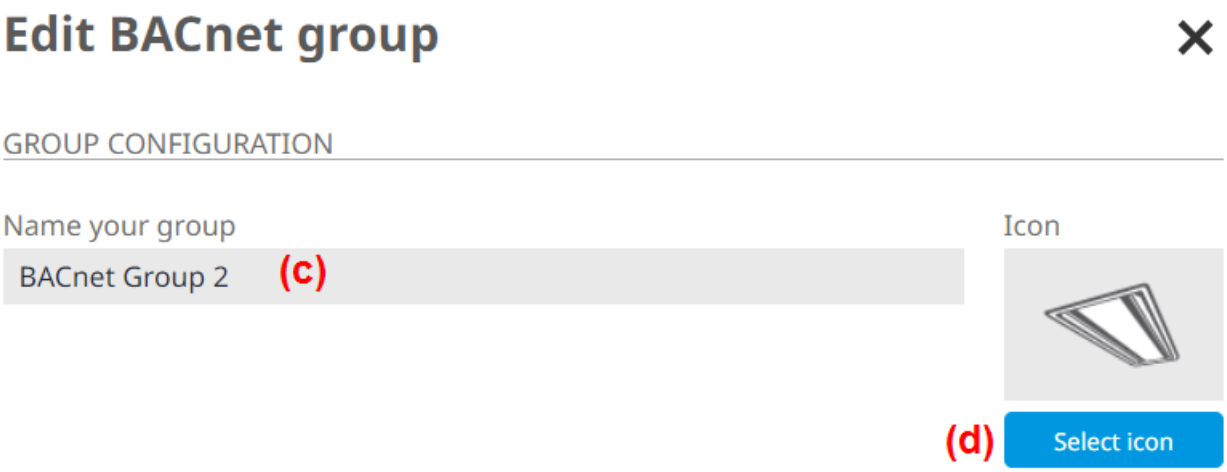
To edit the BACnet group

1 Locate the BACnet group (a) you want to edit.



2 Hover over the group name in the list and click the pencil icon (b).

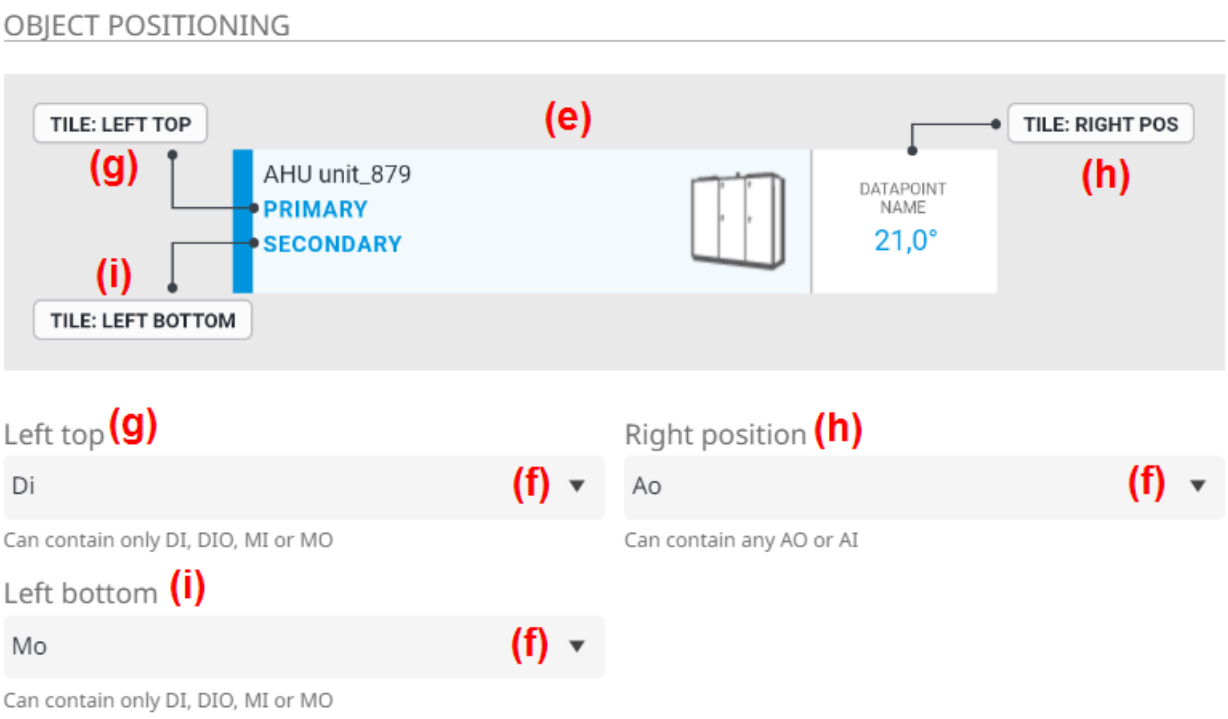
Result: A settings panel appears on the right side of the page.



3 Optional: rename (c) the group.

4 Optional: click Select icon (d) and select an icon from the list. Then, click Save.

5 Select which object data you want to display directly on the equipment list tile (e) for the BACnet group. You can select 3 different object values. Use the drop-down lists (f) to select the objects for which values are displayed on the equipment list tile.



Note that not every type of object can be displayed on any of the 3 positions:

Position on tile	Applicable objects
(g) Left top	BACnet Di, BACnet Dio, or BACnet Mo
(h) Right position	BACnet Ai, BACnet Ao
(i) Left bottom	BACnet Di, BACnet Dio, or BACnet Mo

6 Click UPDATE (j) to confirm changes.

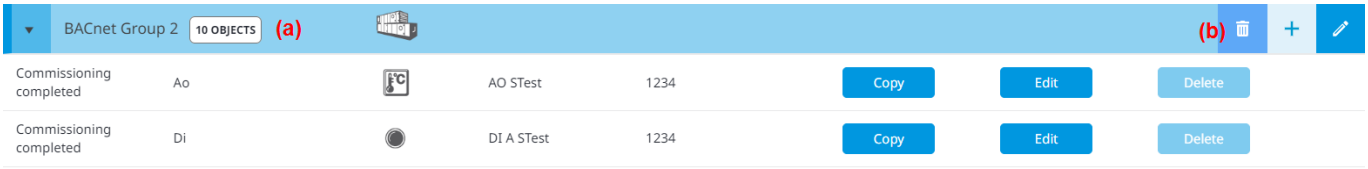
7 Click Save on the top right of the BACnet equipment list.

Result: The BACnet group is updated.

To delete the BACnet group

> **INFORMATION**
>
> Deleting a BACnet group also deletes ALL objects that are in the group. This CANNOT be undone. Make sure you want to delete the group and all its objects before you proceed.

1 Locate the BACnet group (a) you want to delete.



2 Hover over the group name in the list and click the trashcan icon (b).

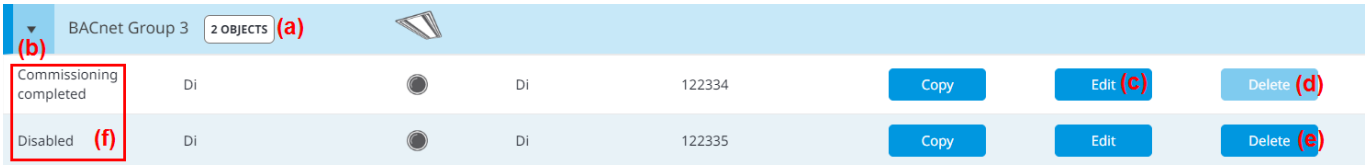
3 Click OK in the pop-up window to confirm.

4 Click Save on the top right of the BACnet equipment list.

Result: The BACnet group and all the objects within the group are deleted.

To delete an object in a BACnet group

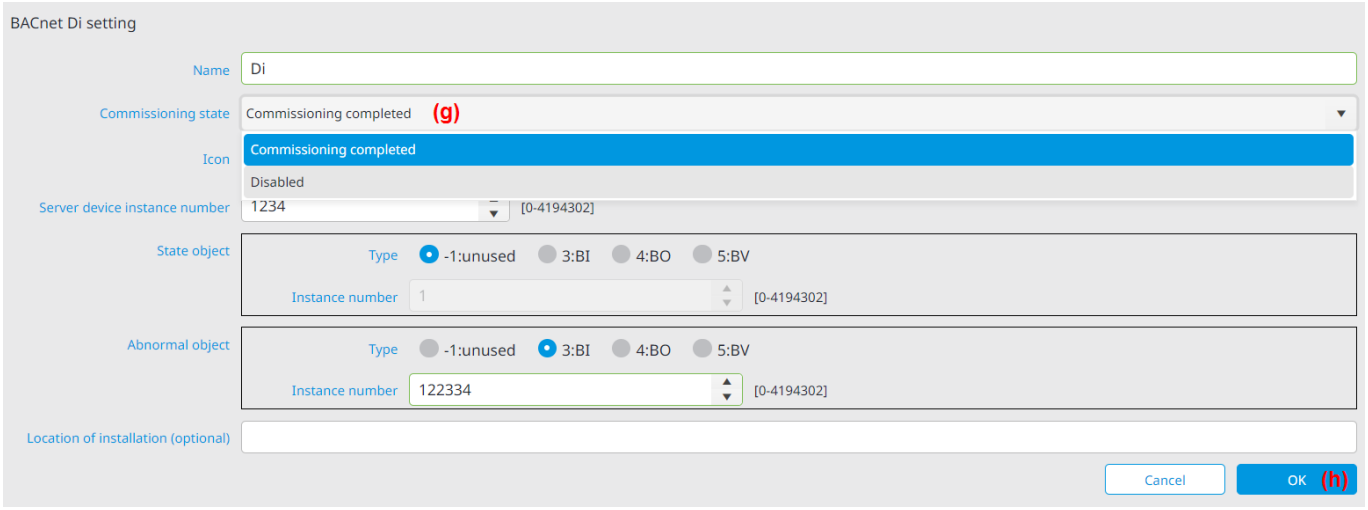
1 Locate the BACnet group (a) that contains the object you want to delete.



2 Click the arrow (b) next to the group name to display all the objects that are in the group.

3 Locate the object you want to delete and click Delete (e).

If Delete is greyed out (d), this means commissioning for this object was already completed. If this is the case, the commissioning status (f) must be changed to Disabled (g) before the object can be deleted. To do this, click Edit (c). Then change the commissioning status using the drop-down menu (g), and click OK (h) to confirm.



4 Click Save on the top right of the BACnet equipment list.

Result: The BACnet object is deleted.

To import the BACnet configuration of another site

You can import an existing BACnet configuration from a different site. However, in order to correctly import the group configuration, some manual actions must be performed. The following procedure explains how to import the configuration from site A to site B.

Prerequisite: You currently have selected the site A in Daikin Cloud Plus Commissioning.

1. In the sidebar, go to EXCEL BATCH IMPORT/EXPORT.
2. Select Download table as an Excel file to download the Excel file for site A. For more information about importing and exporting Excel files, see "To import or export an Excel file" [▸ 125].
3. Open the Excel file and remove all the equipment IDs of all BACnet objects, the group IDs for grouped BACnet objects, and the BACnet groups.

The individual BACnet objects (i.e. objects that do not belong to a BACnet group) have an equipment ID, which must be removed. Note that you should keep all other attributes intact.

Before

BACNETDI-H	EQUIPMENTID	NAME
BACNETDI-D	07b5f251-b3c3-11ee-b7e9-23b2b96811c9	BACnet Di 1
BACNETDI-D	07b6941f-b3c3-11ee-95d2-23b2b96811c9	BACnet Di 2
BACNETDI-D	31e0105a-92bf-11ee-85a8-66381159b265	BACnet Di 3
BACNETDI-D	31e18e4e-92bf-11ee-85a8-66381159b265	BACnet Di 4
BACNETDIO-H	EQUIPMENTID	NAME
BACNETDIO-D	41cbbc60-99c4-11ee-aea7-9e6117b4f1d0	BACnet Dio 1
BACNETDIO-D	31e244a6-92bf-11ee-85a8-66381159b265	BACnet Dio 2
BACNETDIO-D	31e0cd6a-92bf-11ee-85a8-66381159b265	BACnet Dio 3
BACNETDIO-D	41caf1b8-99c4-11ee-aea7-9e6117b4f1d0	BACnet Dio 4
BACNETAI-H	EQUIPMENTID	NAME
BACNETAI-D	591d3ef0-5c63-11ee-be29-369c84b8c7d7	BACnet Ai 1
BACNETAI-D	cd63b9be-5c7d-11ee-9436-caa43bbc9265	BACnet Ai 2
BACNETAI-D	41d2a3f4-99c4-11ee-aea7-9e6117b4f1d0	BACnet Ai 3
BACNETAI-D	cd5f6904-5c7d-11ee-9436-caa43bbc9265	BACnet Ai 4
BACNETAO-H	EQUIPMENTID	NAME
BACNETAO-D	cd5b220e-5c7d-11ee-9436-caa43bbc9265	BACnet Ao 1
BACNETAO-D	41cd459e-99c4-11ee-aea7-9e6117b4f1d0	BACnet Ao 1
BACNETAO-D	cd674336-5c7d-11ee-9436-caa43bbc9265	BACnet Ao 1
BACNETAO-D	cd6a2c86-5c7d-11ee-9436-caa43bbc9265	BACnet Ao 1
BACNETMI-H	EQUIPMENTID	NAME
BACNETMI-D	cd5df5ec-5c7d-11ee-9436-caa43bbc9265	BACnet Mi 1
BACNETMI-D	1fe8d416-8dcb-11ee-b1f5-a6886722998f	BACnet Mi 2
BACNETMI-D	41cc7f42-99c4-11ee-aea7-9e6117b4f1d0	BACnet Mi 3
BACNETMI-D	95776e0e-b9cf-11ee-9aea-073cc10ac37a	BACnet Mi 4
BACNETMO-H	EQUIPMENTID	NAME
BACNETMO-D	cd68b220-5c7d-11ee-9436-caa43bbc9265	BACnet Mo 1
BACNETMO-D	41cf9326-99c4-11ee-aea7-9e6117b4f1d0	BACnet Mo 2
BACNETMO-D	ad096da4-5d12-11ee-8670-aa68804dad4d	BACnet Mo 3
BACNETMO-D	cd60d492-5c7d-11ee-9436-caa43bbc9265	BACnet Mo 4

After

BACNETDI-H	EQUIPMENTID	NAME
BACNETDI-D		BACnet Di 1
BACNETDI-D		BACnet Di 2
BACNETDI-D		BACnet Di 3
BACNETDI-D		BACnet Di 4
BACNETDIO-H	EQUIPMENTID	NAME
BACNETDIO-D		BACnet Dio 1
BACNETDIO-D		BACnet Dio 2
BACNETDIO-D		BACnet Dio 3
BACNETDIO-D		BACnet Dio 4
BACNETAI-H	EQUIPMENTID	NAME
BACNETAI-D		BACnet Ai 1
BACNETAI-D		BACnet Ai 2
BACNETAI-D		BACnet Ai 3
BACNETAI-D		BACnet Ai 4
BACNETAO-H	EQUIPMENTID	NAME
BACNETAO-D		BACnet Ao 1
BACNETAO-D		BACnet Ao 1
BACNETAO-D		BACnet Ao 1
BACNETAO-D		BACnet Ao 1
BACNETMI-H	EQUIPMENTID	NAME
BACNETMI-D		BACnet Mi 1
BACNETMI-D		BACnet Mi 2
BACNETMI-D		BACnet Mi 3
BACNETMI-D		BACnet Mi 4
BACNETMO-H	EQUIPMENTID	NAME
BACNETMO-D		BACnet Mo 1
BACNETMO-D		BACnet Mo 2
BACNETMO-D		BACnet Mo 3
BACNETMO-D		BACnet Mo 4

The grouped BACnet objects (i.e. the objects that were created directly in a group) have both an equipment ID and a group ID, Delete the ID numbers under GROUPID and EQUIPMENTID.

Before

GROUPDI-H	GROUPID	EQUIPMENTID
GROUPDI-D	8074cf9e-1206-4f36-8aa4-fe0bdf8ea107	8a61f8ac-b9d0-11ee-a68c-93a711258c26
GROUPDI-D	336245c9-87b6-419d-8c13-f7ec49b29f55	41ced10c-99c4-11ee-aea7-9e6117b4f1d0
GROUPDI-D	336245c9-87b6-419d-8c13-f7ec49b29f55	41d1e90a-99c4-11ee-aea7-9e6117b4f1d0
GROUPDI-D	336245c9-87b6-419d-8c13-f7ec49b29f55	41d123da-99c4-11ee-aea7-9e6117b4f1d0
GROUPDI-D	843c4914-02c6-4ba3-a1b8-76ab925ed150	31e18e4e-92bf-11ee-85a8-66381159b265
GROUPDI-D	843c4914-02c6-4ba3-a1b8-76ab925ed150	31e0105a-92bf-11ee-85a8-66381159b265
GROUPDI-D	843c4914-02c6-4ba3-a1b8-76ab925ed150	5abb44dc-b3a7-11ee-b093-5f890019690b
GROUPDI-D	843c4914-02c6-4ba3-a1b8-76ab925ed150	07b6941f-b3c3-11ee-95d2-23b2b96811c9

After

GROUPDI-H	GROUPID	EQUIPMENTID
GROUPDI-D		
GROUPDI-D		
GROUPDI-D		
GROUPDI-D		
GROUPDI-D		
GROUPDI-D		
GROUPDI-D		
GROUPDI-D		

The BACnet groups only have a group ID. To delete the groups, delete the data rows (GROUP-D in column A) for the groups, but leave the header row (GROUP-H in column A).

Before

GROUP-H	NAME	GROUPID
GROUP-D	BACnet GROUP 1	8074cf9e-1206-4f36-8aa4-fe0bdf8ea107
GROUP-D	BACnet GROUP 2	336245c9-87b6-419d-8c13-f7ec49b29f55
GROUP-D	BACnet GROUP 3	843c4914-02c6-4ba3-a1b8-76ab925ed150
GROUP-D	BACnet GROUP 4	137f9656-5660-4ea4-88e2-69cb578f4b0f

After

GROUP-H	NAME	GROUPID

4. Open Daikin Cloud Plus Commissioning for site B.
5. Go to EXCEL BATCH IMPORT/EXPORT.

6 Import the modified Excel file (exported from site A).

Result: Daikin Cloud Plus Commissioning shows all objects that were imported. After the import, an equipment ID is assigned to each object automatically.

7 Create the required BACnet groups. See "To create a BACnet group" [▸ 115] for more information.

8 Go to EXCEL BATCH IMPORT/EXPORT.

9 Select Download table as an Excel file to download the Excel file for site B.

Result: The exported Excel file shows the new equipment ID for the individual objects and the group ID for the groups that were created.

10 Open the Excel file and link the objects and groups together.

To do this, create grouped object data rows for all objects that need to be in a group, and copy the group ID and the equipment ID to the correct cells for each object. For example, the configuration below is the original group configuration of site A, with 3 BACnet Di and 1 BACnet Dio:

To recreate this in the Excel file, find the data rows for the individual objects that need to be in the group and take note of the EQUIPMENTID.

BACNETDI-H	EQUIPMENTID	NAME
BACNETDI-D	07b5f251-b3c3-11ee-b7e9-23b2b96811c9	BACnet Di 1
BACNETDI-D	07b6941f-b3c3-11ee-95d2-23b2b96811c9	BACnet Di 2
BACNETDI-D	31e0105a-92bf-11ee-85a8-66381159b265	BACnet Di 3
BACNETDIO-H	EQUIPMENTID	NAME
BACNETDIO-D	41cbbc60-99c4-11ee-aea7-9e6117b4f1d0	BACnet Dio 1

Then, find the data rows for the groups and take note of the GROUPID.

GROUP-H	NAME	GROUPID
GROUP-D	BACnet Group 1	11111aaa-1111-111a-11aa-aa1aaa1aa111
GROUP-D	BACnet Group 2	22222bbb-2222-222b-22bb-bb2bbb2bb222
GROUP-D	BACnet Group 3	33333ccc-3333-333c-33cc-cc3ccc3cc333

Locate the header rows for the equipment types present in the group, and create the required data rows. In this example, 3 BACnet Di and 1 BACnet Dio need to be created. For more information about the Excel file structure and the possible keywords, see "To import or export an Excel file" [▸ 125] and "12.2 Overview of Excel file keywords and values" [▸ 165].

GROUPDI-H	GROUPID	EQUIPMENTID
GROUPDI-D		
GROUPDI-D		
GROUPDI-D		
GROUPDIO-H	GROUPID	EQUIPMENTID
GROUPDIO-D		

Finally, copy the GROUPID.of the correct group and paste it in the correct cells. Also copy and paste the respective EQUIPMENTID to the correct location. When finished, the grouped objects should have both a GROUPID and an EQUIPMENTID. Repeat this procedure for all groups.

GROUPDI-H	GROUPID	EQUIPMENTID
GROUPDI-D	11111aaa-1111-111a-11aa-aa1aaa1aa111	07b5f251-b3c3-11ee-b7e9-23b2b96811c9
GROUPDI-D	11111aaa-1111-111a-11aa-aa1aaa1aa111	07b6941f-b3c3-11ee-95d2-23b2b96811c9
GROUPDI-D	11111aaa-1111-111a-11aa-aa1aaa1aa111	31e0105a-92bf-11ee-85a8-66381159b265
GROUPDIO-H	GROUPID	EQUIPMENTID
GROUPDIO-D	11111aaa-1111-111a-11aa-aa1aaa1aa111	41cbbc60-99c4-11ee-aea7-9e6117b4f1d0

11 Save the file.

12 Go to EXCEL BATCH IMPORT/EXPORT and import the modified Excel file.

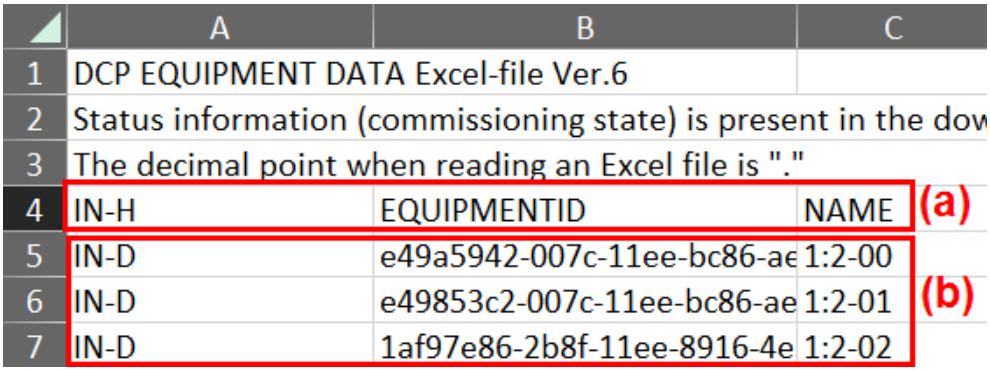
Result: The BACnet configuration from site A has been imported to site B. The grouped objects are in the correct groups.

7.9.6 Excel export and import

As an alternative to detecting and registering equipment with the DC+ Edge connect application (optional) or manually registering equipment, it is possible to register equipment by importing an Excel file that contains all equipment information. With minor adjustments, files from other systems (e.g. iTM) can be migrated to Daikin Cloud Plus. It also allows equipment data to be prepared in bulk prior to registering it in Daikin Cloud Plus Commissioning.

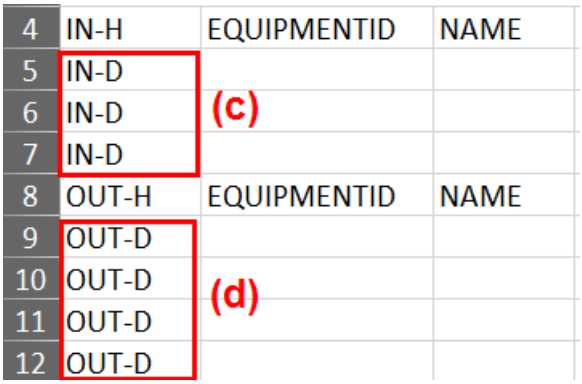
When registering equipment from an Excel file, make sure to export a clean Excel file from Daikin Cloud Plus Commissioning first. Then, edit the exported file. This guarantees that the Excel file already has the correct structure for importing back into Daikin Cloud Plus Commissioning.

The Excel file contains header rows (ending in "-H") and data lines (ending in "-D") for each type of equipment that can be registered. When you export an Excel file when no equipment has been registered yet, note that no data rows will be present in the file yet, only header rows. Depending on the type of equipment, the header rows also specify different keywords for which information can be entered in the respective columns.



	A	B	C	
1	DCP EQUIPMENT DATA Excel-file Ver.6			
2	Status information (commissioning state) is present in the dow			
3	The decimal point when reading an Excel file is "."			
4	IN-H	EQUIPMENTID	NAME	(a)
5	IN-D	e49a5942-007c-11ee-bc86-ae	1:2-00	
6	IN-D	e49853c2-007c-11ee-bc86-ae	1:2-01	(b)
7	IN-D	1af97e86-2b8f-11ee-8916-4e	1:2-02	

To add a certain equipment type, insert new data rows under the header row of that type of equipment as shown in the example below. In this example, we created 3 indoor units (c) and 4 outdoor units (d).



4	IN-H	EQUIPMENTID	NAME
5	IN-D		
6	IN-D	(c)	
7	IN-D		
8	OUT-H	EQUIPMENTID	NAME
9	OUT-D		
10	OUT-D	(d)	
11	OUT-D		
12	OUT-D		

For an overview of the header and data row names for every type of equipment, see the table below:

Equipment type	Header row	Data row
Indoor unit	IN-H	IN-D
Outdoor unit	OUT-H	OUT-D
Ventilator	VENT-H	VENT-D
Ventilator (VAM , VKM)	EXTERNALHRV-H	EXTERNALHRV-D
Pi	PI-H	PI-D

Equipment type	Header row	Data row
Di	DI-H	DI-D
Dio	DIO-H	DIO-D
Pi	EXTERNALPI-H	EXTERNALPI-D
External Di	EXTERNALDI-H	EXTERNALDI-D
External Dio	EXTERNALDIO-H	EXTERNALDIO-D
External Ai	EXTERNALAI-H	EXTERNALAI-D
External Ao	EXTERNALAO-H	EXTERNALAO-D
BACnet Di	BACNETDI-H	BACNETDI-D
BACnet Dio	BACNETDIO-H	BACNETDIO-D
BACnet Ai	BACNETAI-H	BACNETAI-D
BACnet Ao	BACNETAO-H	BACNETAO-D
BACnet Mi	BACNETMI-H	BACNETMI-D
BACnet Mo	BACNETMO-H	BACNETMO-D
BACnet server	BACNETSERVER-H	BACNETSERVER-D
BACnet client	BACNETCLIENT-H	BACNETCLIENT-D
BACnet group	GROUP-H	GROUP-D
Grouped BACnet equipment	GROUPDI-H GROUPDIO-H GROUPAI-H GROUPAO-H GROUPMI-H GROUPMO-H	GROUPDI-D GROUPDIO-D GROUPAI-D GROUPAO-D GROUPMI-D GROUPMO-D

You can then continue to enter the information (e) in the data rows for all keywords specified by the header row. Depending on the type of equipment, the required items can differ. Below is an example for indoor units.

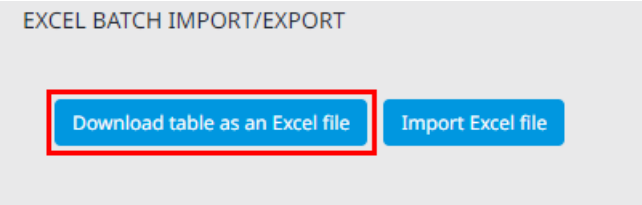
4	IN-H	EQUIPMEI	NAME	LOCATION	STATUS	ICON	PORTNO	ANADDR	GROUPADDR1	GROUPADDR2	MODELNAME	REFRI-SYSTEM	SERIALNO	OUTANADDR	AIRNETSERVICE	WIRING
5	IN-D		1:2-00		2	0	1		2	0	FNQ25A2VEB	1		-1	0	
6	IN-D	(e)	1:2-01		2	0	1		2	1	FFQ25C2VEB	1		-1	0	
7	IN-D		1:2-02		1	0	1		2	2	FBQ71D2VEB	1		-1	0	

For a detailed overview of all possible (required and optional) keywords for every type of equipment, as well as their possible values, see "12.2 Overview of Excel file keywords and values" [▸ 165].

To import or export an Excel file

To export the Excel file

1. In the sidebar, go to EXCEL BATCH IMPORT/EXPORT.
2. Select Download table as an Excel file.

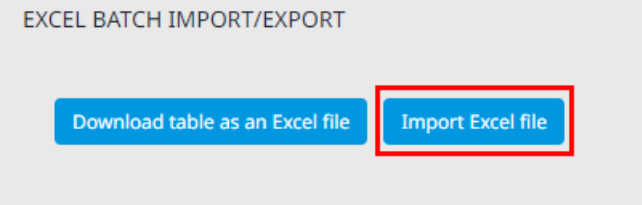


Result: The Excel file is downloaded. When you have already registered equipment before, the file contains the equipment data and the file can be edited. When no equipment has been registered before, the file only contains all the header rows and keywords for every type of equipment.

To import the Excel file

1 In the sidebar, go to EXCEL BATCH IMPORT/EXPORT.

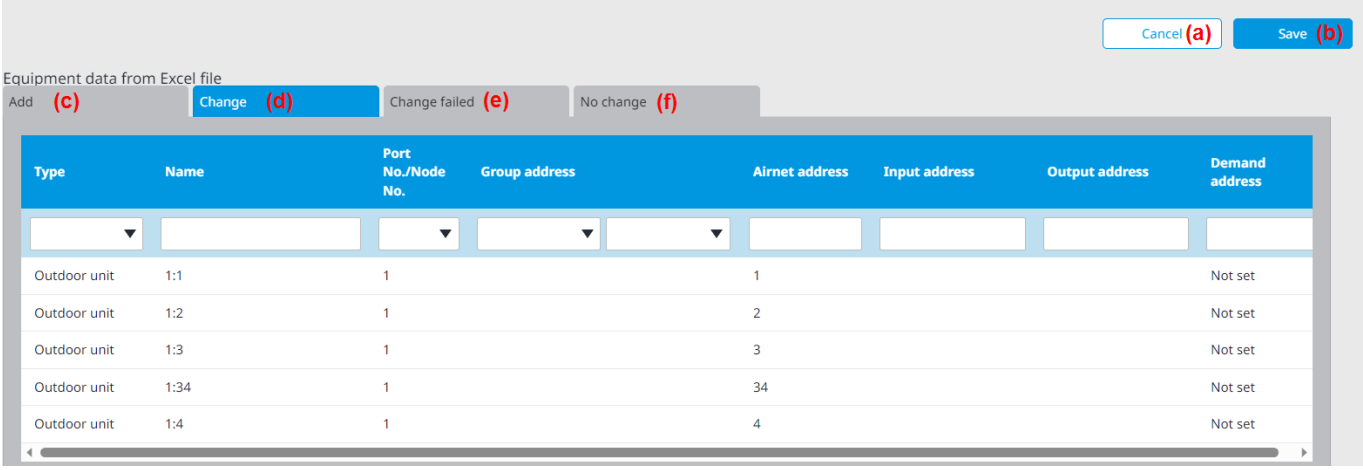
2 Select Import Excel file file.



Result: A dialog window opens.

3 Select the Excel file you want to import.

Result: The Excel file is imported. The import results are displayed:



4 Select one of the tabs (a, b, c, d) to display more information about the imported equipment data. There are 4 possible situations that correspond to the tabs:

Tab	Description
(c) Add	Displays all equipment with a blank equipment ID. When you click Save (b), the equipment is assigned an equipment ID and is registered.
(d) Change	Displays the equipment for which the system recognises the equipment ID but has also detected changes to equipment data. When you click Save (b), the changes to the equipment data are registered.

Tab	Description
(e) Change failed	Displays the equipment for which the system recognises the equipment ID, but the specified equipment type or data is incorrect. In this case, correct the Excel file and try again. Make sure to verify that data for the required keywords have been entered, and that the entered values for every keyword are valid. See "12.2 Overview of Excel file keywords and values" [▸ 165] for an overview of all keywords and their possible values.
(f) No change	Displays the equipment for which the registered equipment ID is recognised, but no changes were detected. When you click Save (b), the data for this equipment will remain unchanged.

5 Once you have verified that equipment data was imported correctly, click Save to apply the changes. If you want to modify the file before importing the data again first, click Cancel (a).

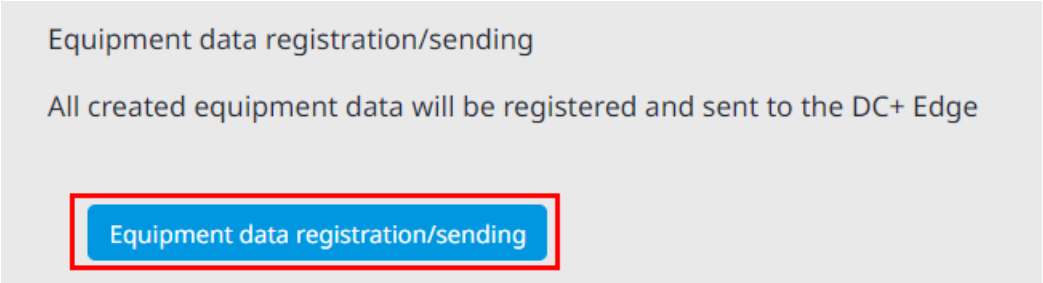
7.10 Sending all equipment data to the DC+ Edge

The following steps are performed in Daikin Cloud Plus Commissioning.

Once all units and different types of equipment have been created, the equipment data needs to be registered and sent from the cloud to the DC+ Edge. This step needs to be performed every time new equipment is created, or whenever changes are made to equipment in Daikin Cloud Plus Commissioning.

Prerequisite: You have created and configured all required equipment.

1. In the sidebar, go to EQUIPMENT DATA REGISTRATION/SENDING.
2. Click Equipment data registration/sending.



3. Click OK in the pop-up window to confirm.

   Result: Daikin Cloud Plus Commissioning starts sending the equipment data to the DC+ Edge and the data is registered to the DC+ Edge controller. An animation indicates this process is ongoing.

4. Once the process has completed, click Close in the pop-up window.

Result: The DC+ Edge restarts. After some time, the equipment data is sent from the cloud and registered to the DC+ Edge.

INFORMATION

Check whether you are online before sending and registering equipment data to the DC+ Edge. It is still possible to send and register equipment data when offline, but the data will not actually be registered to the DC+ Edge once you are online again.

INFORMATION

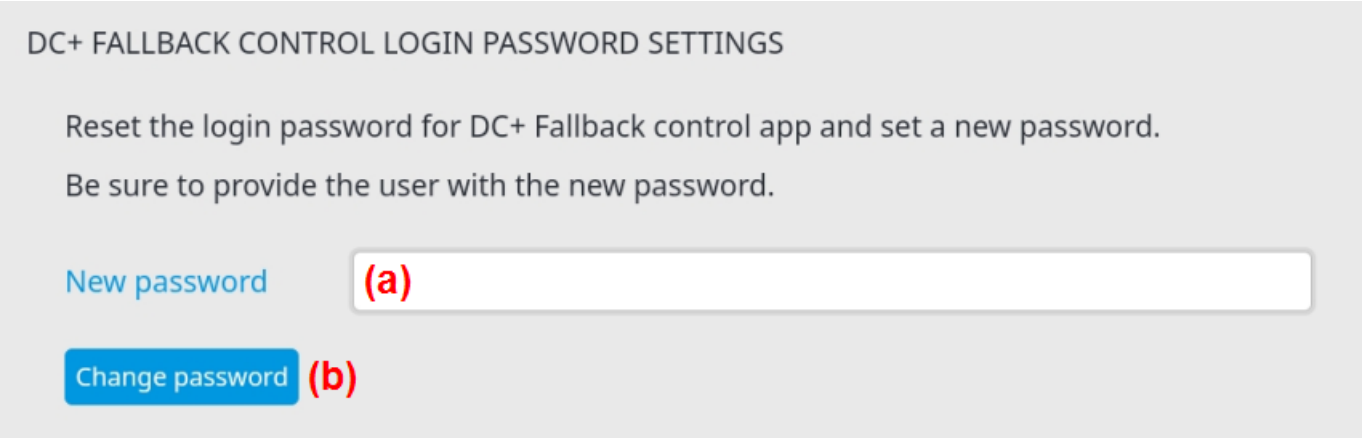
The DC+ Edge restarts when data is sent and registered to it. Make sure to perform this process only when there is little impact. If the DC+ Edge software version is outdated, it will also be updated automatically during this process.

7.11 Setting an initial password for DC+ Fallback control

The following steps are performed in DC+ Edge connect.

In order to make use of the DC+ Fallback control application later, it is important to set up the initial password during commissioning. This password is required to log into the application, allowing you to connect to the DC+ Edge over the local network (e.g. when there is an internet outage). This password can be changed in the DC+ Fallback control application at a later time. If the end user has already changed the password in the app and has forgotten the password, it can also be reset here. For more information about the DC+ Fallback control application, see the user reference guide.

1 In the sidebar, go to DC+ EDGE > BACKUP ACCESS APP LOGIN PASSWORD SETTINGS.



2 Enter a password in the New password field (a).

3 Click Change password (b).

4 Select OK in the pop-up windows to confirm.

Result: The password for DC+ Fallback control is set.

INFORMATION

The new password MUST meet the following requirements:

- It should contain only single-byte alphanumeric characters.
- It should at least contain 1 of the following special characters: = + ^ $ * . [ ] { } ( ) ? - “ ! @ # % & / \ , > < ‘ : ; | _ ~ `SPACE.
- It should be at least 10 and maximum 64 characters.
- It should at least contain 1 capital letter (A-Z).
- It should at least contain 1 lowercase letter (a-z).
- It should at least contain 1 number.
- It should not start with a blank space.

7.12 Performing a configuration check

You can perform an (optional) automatic configuration check after all equipment has been created and registered.

The following steps are performed in Daikin Cloud Plus Commissioning.

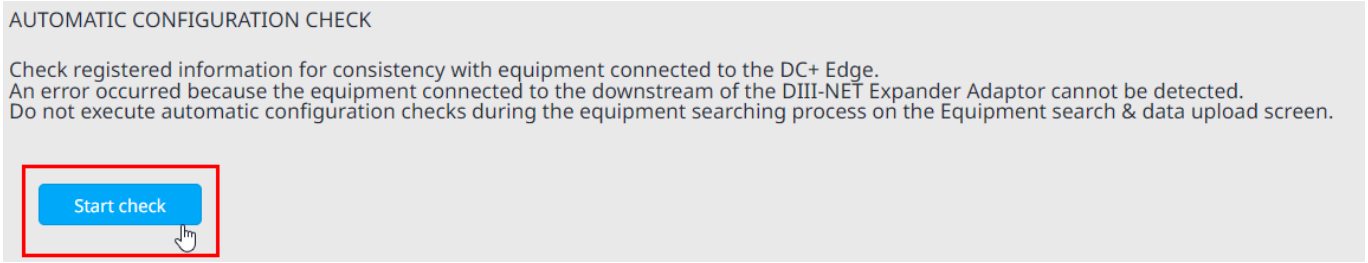
INFORMATION

Do NOT perform the automatic configuration check immediately after sending and registering data to the DC+ Edge. The DC+ Edge may still be processing data even when the pop-up window indicates that the process has finished. Please wait for at least 5 minutes before performing the automatic configuration check.

INFORMATION

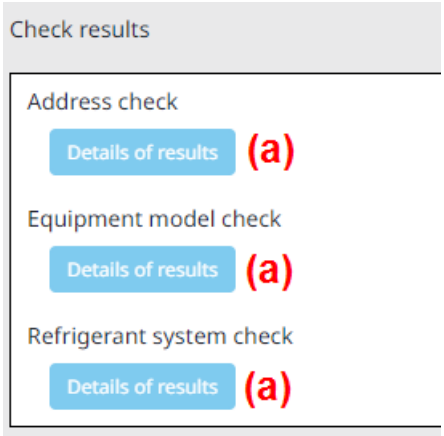
Depending on the amount of equipment, checking equipment data using Automatic configuration check can take some time. Foresee at least 30 minutes for the system to perform the check.

1. In the sidebar, go to COMMISSIONING CHECK > AUTOMATIC CONFIGURATION CHECK.
2. Select Start check.



3. Click OK in the pop-up window to confirm.

   Result: The automatic configuration check will start. Results will appear in the pop-up window. If necessary, the check can be interrupted.
4. Once the check has completed, close the pop-up window.
5. Click the Details of results buttons (a) for more information about the results.



6. Depending on which check details you consult, you may be presented with different screens that help you determine which equipment information may be incorrect.

Check type	Possible problem (tab)	Description
Address check	Missing equipment	Displays information about units for which the registered address could not be detected.
	Outdoor unit AirNet address mismatch	Displays information about the outdoor units for which there is an AirNet address conflict.
	Indoor unit AirNet address mismatch	Displays information about the indoor units for which there is an AirNet address conflict.
	Outdoor unit demand address mismatch	Displays information about the outdoor units for which there is a demand address conflict.
	Unknown indoor unit	Displays information about indoor units for which no data is detected other than the group address and the AirNet address.
Equipment model check	–	Displays information about indoor units for which the registered model information is incorrect.
Refrigerant system check	–	Displays information about the indoor units for which the group address is the same, but the refrigerant system information is incorrect.

7 Once you have determined what the cause of the error(s), correct the data in the DIII equipment list. Then, after sending and registering the data to the DC+ Edge again, perform a new automatic configuration check. If no more errors are detected, continue the commissioning workflow.

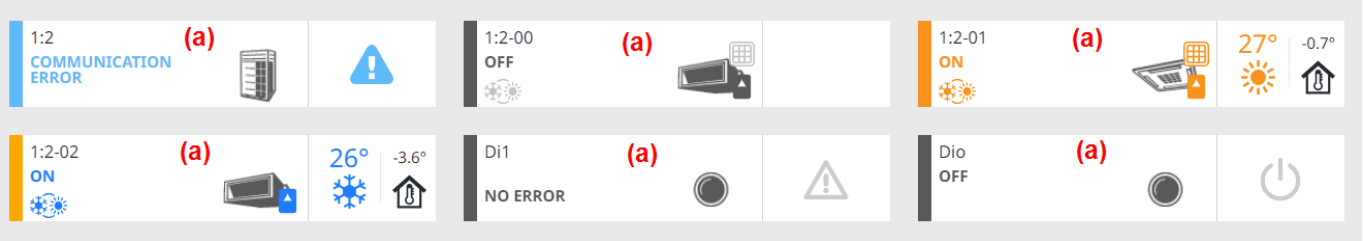
7.13 Changing the equipment commissioning status

Checking equipment operation and changing the commissioning status

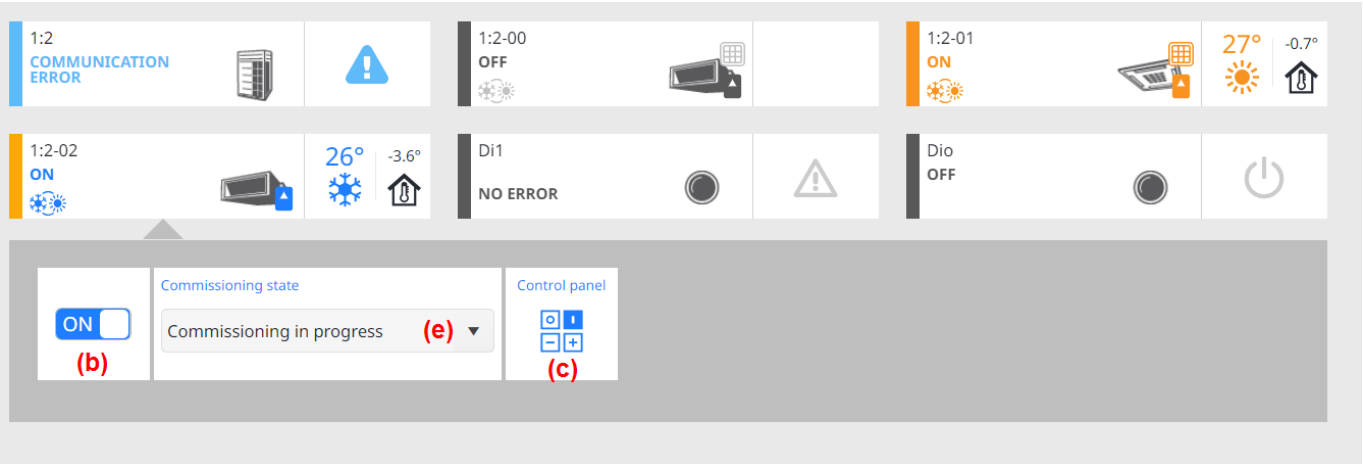
1 In the sidebar, go to COMMISSIONING CHECK > POINT CHECK.

Result: The registered equipment is displayed.

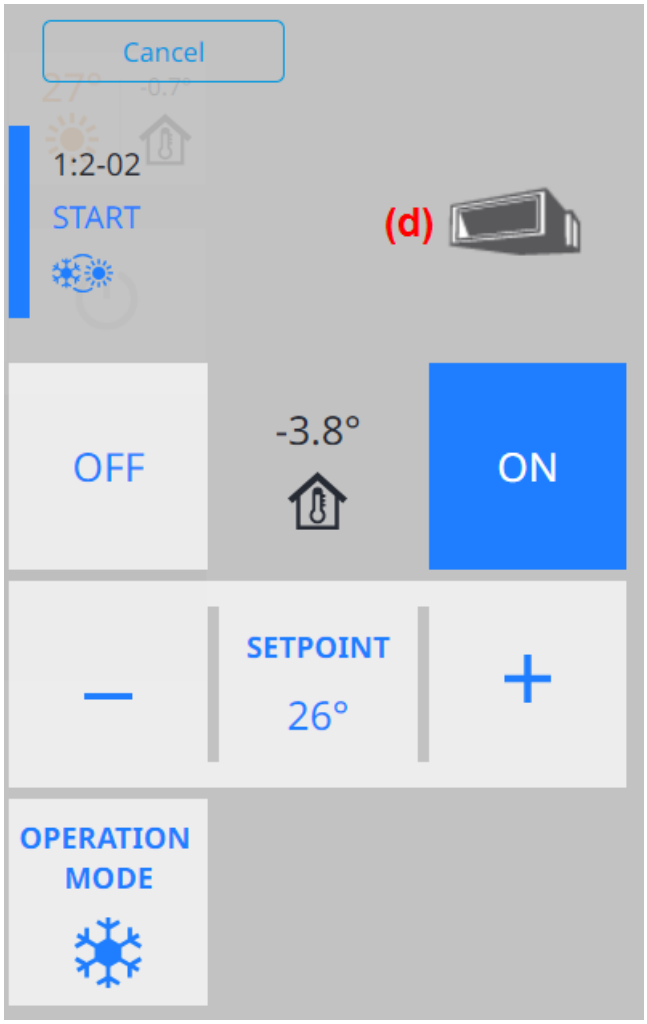
2 Click an equipment tile (a) to reveal more options.



3 Attempt to start/stop the equipment using the toggle switch (b) settings to verify the equipment is operating as expected.



4 If applicable, you can click the control panel icon (c) in order to open the control panel for a unit on the right side of the page. You can alter other settings (e.g. change the operation mode or the fan speed) to further verify that the equipment is operating correctly.



INFORMATION

For Di/Dio equipment, try to start/stop the equipment from Daikin Cloud Plus Commissioning to verify that the Dio can be operated. For the Di , change the status on the equipment itself and verify that the status changes on screen in Daikin Cloud Plus Commissioning. For Ai/Ao equipment, you can enter a value after clicking the equipment tile. Verify that the Ao can be operated, and check the Ai status on the equipment itself. For Pi equipment, check whether the increased value on the power meter matches the increased value on screen in Daikin Cloud Plus Commissioning.

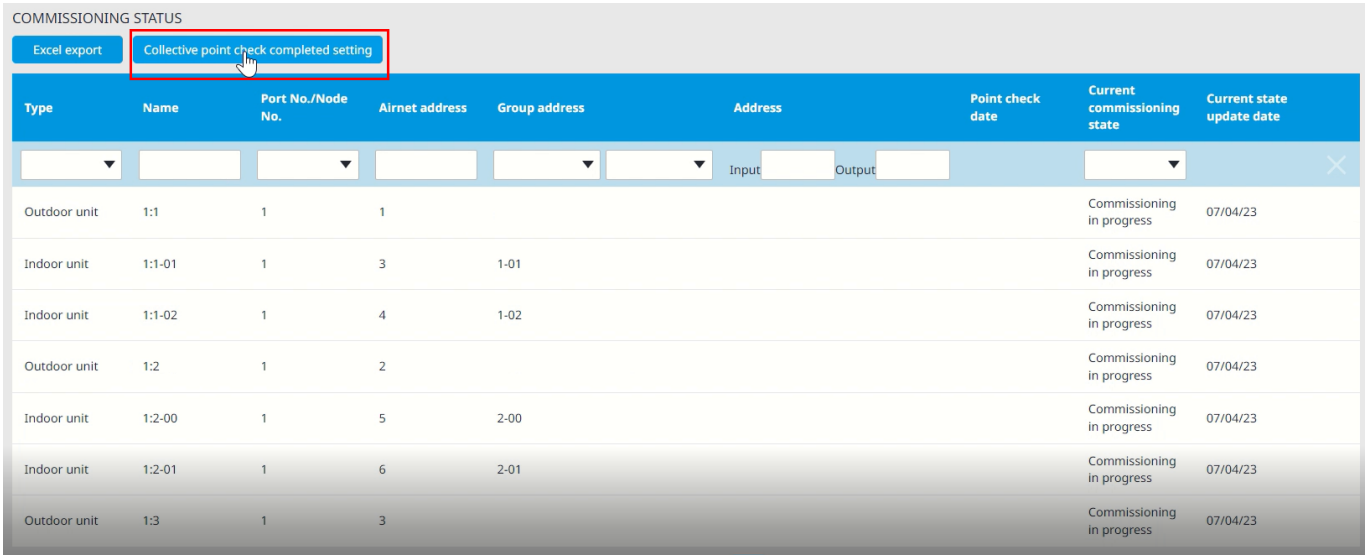
5 Set the commissioning state for the equipment from drop-down list (e). You can also set the commissioning status for all pieces of equipment at once later.

6 Repeat the steps above for all units or pieces of equipment.

Changing the commissioning status for all units at once

1 In the sidebar, go to COMMISSIONING CHECK > COMMISSIONING STATUS.

2 Select Collective point check completed setting.



3 Click OK in the pop-up window to confirm.

Result: The commissioning status of all equipment changes from Commissioning in progress to Point check completed.

7.14 R32 leak detection alarm

In case R32 refrigerant units equipped with a leak detection sensor are connected to the DC+ Edge, the controller can be used as a supervisor alarm. In this case, the controller acts as a leak detection alarm for all units in the system that support leak detection. When an indoor unit reports a refrigerant leak, it triggers the refrigerant leak alarm on the DC+ Edge controller.

To comply with IEC 60335-2-40, the alarm is legally required in rooms, parts of buildings and buildings where:

- sleeping facilities are provided
- people are restricted in their environment
- an uncontrolled number of people are present, or
- to which any person has access without being personally acquainted with the necessary safety precautions.

In addition, the alarm must warn visibly and audibly (at least 15 dBa above the background noise level) when a refrigerant leak occurs.

When the DC+ Edge is to function as the supervisor alarm, a buzzer and a flashing lamp must be connected to the output ports of the controller. Daikin Cloud Plus Commissioning offers functionality to test the R32 leak detection alarm. When the DC+ Edge is to function as the supervisor alarm, a test of the leak alarm is a mandatory step during commissioning. See "7.14.1 To set up and test the leak detection alarm" [▸ 135] for more information.

When the leak alarm is enabled and a leak is detected, the buzzer starts making noise and the lamp starts flashing. The alarm can be stopped in 2 ways:

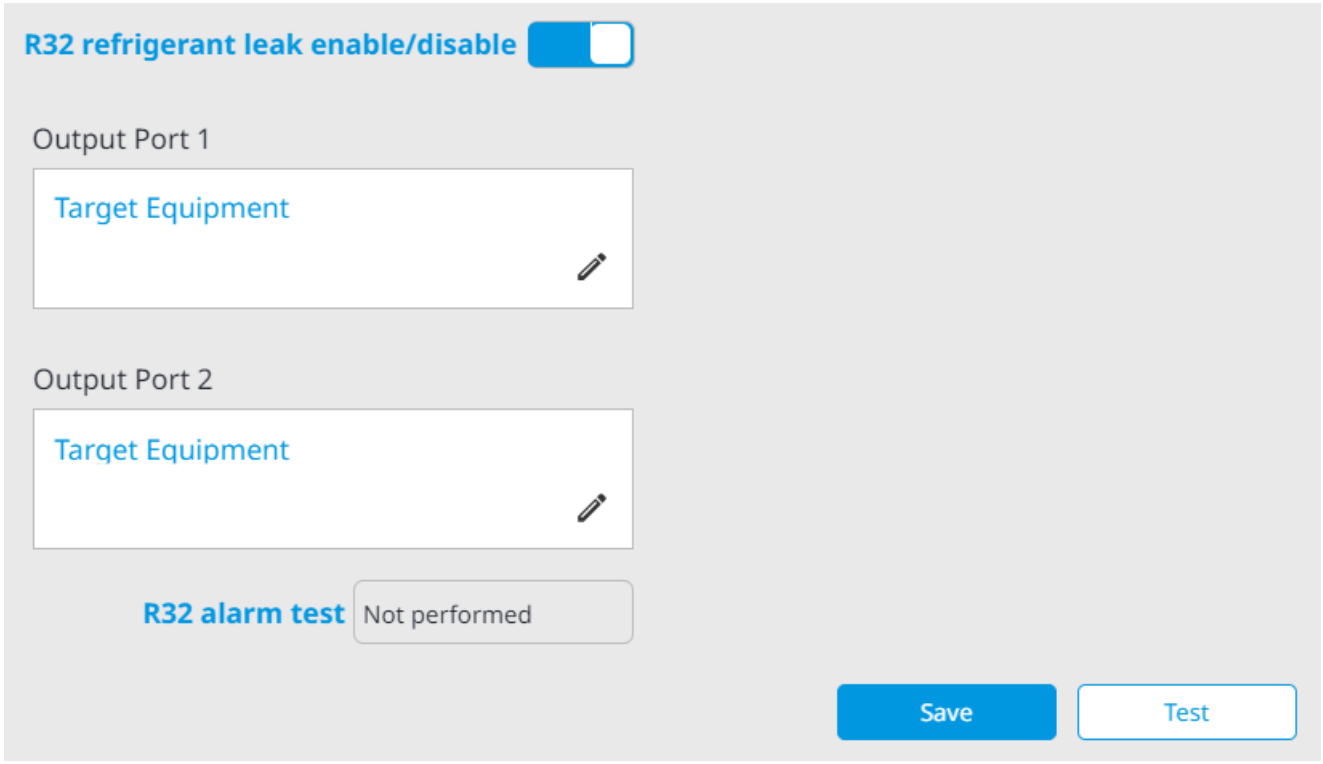
- Disabling the leak detection alarm functionality entirely from Daikin Cloud Plus Commissioning. See "7.14.1 To set up and test the leak detection alarm" [▸ 135].
- Stopping the alarm from the unit control panel in the equipment list. When an alarm is active, the alert bar and the equipment list tile in Daikin Cloud Plus indicate an equipment error:

Note that even if the DC+ Edge is not required to function as a supervisor alarm (for example, because no R32 units are connected to the DC+ Edge), the refrigerant leak alarm is enabled by default to ensure compliance with IEC 60335-2-40.

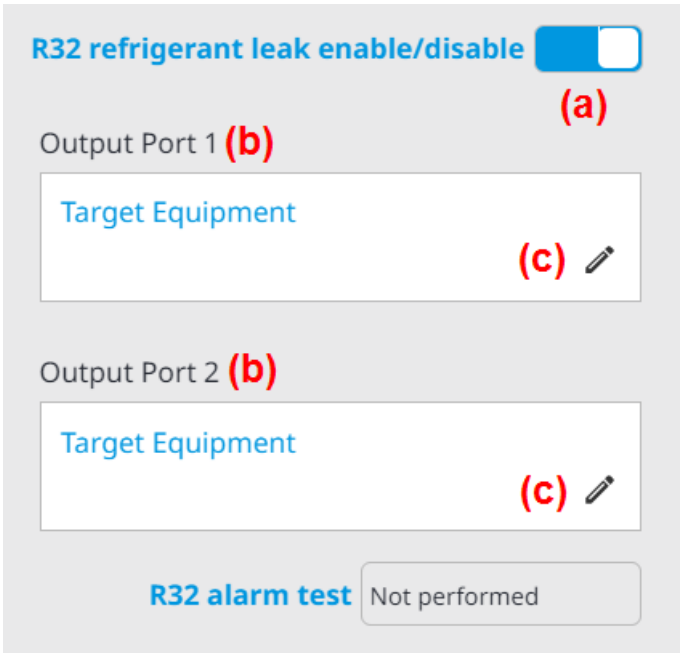
7.14.1 To set up and test the leak detection alarm

1 In the sidebar, go to R32 ALARM BUZZER SETTING.

Result: The following page is displayed.

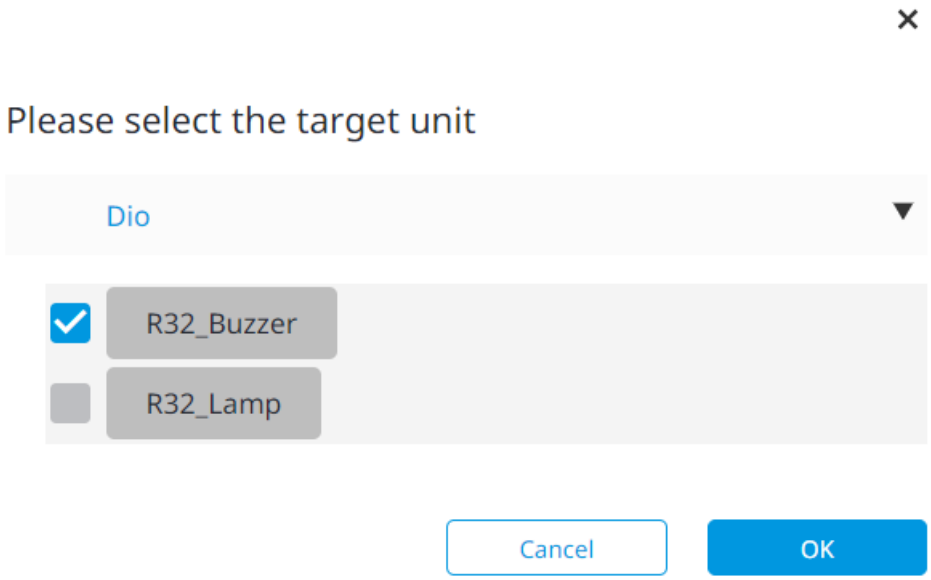


2 The R32 refrigerant leak alarm is enabled by default. If testing the leak alarm is not required (in case the DC+ Edge does not need to function as supervisor alarm), click the toggle switch (a) to disable the leak alarm and continue with step 10.



3 Click the pencil icon (c) for Output Port 1 or Output Port 2 (b).

Result: A settings panel appears on the right side of the page.

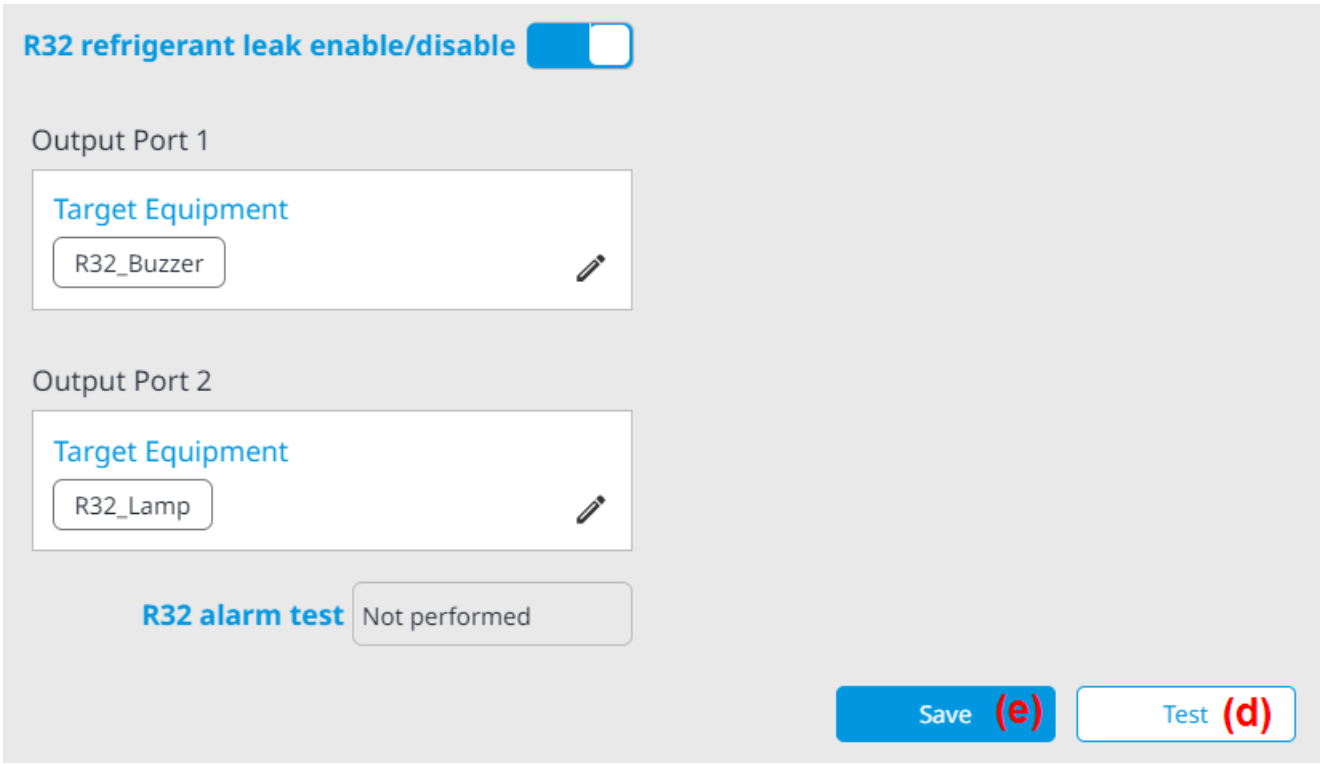


4 Select the checkbox of the digital output (Dio or external Dio) to which the buzzer or lamp is connected.

5 Click OK to confirm.

6 Repeat steps 3-4 for the second output port.

7 Click Test (d).



Result: The R32 leak alarm is activated.

8 Verify that the alarm works correctly. The buzzer should be making a noise, and the lamp should be flashing.

9 Click OK in the overlay to conclude the R32 leak alarm test.

Result: The status changes to indicate that the leak alarm test has been performed. The leak alarm must be tested, otherwise settings cannot be saved.

10 Click Save (e).

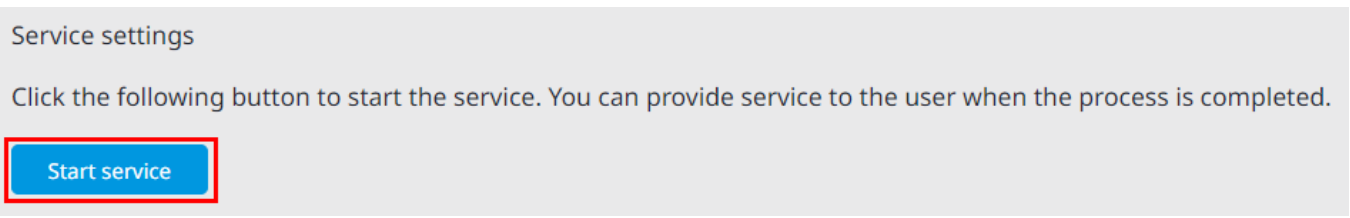
Result: The leak detection alarm settings are saved.

7.15 Starting service

The following steps are performed in Daikin Cloud Plus Commissioning.

1 In the sidebar, go to SERVICE SETTINGS.

2 Select Start service.



3 Click Close in the pop-up window.

Result: Daikin Cloud Plus is now operational with the commissioned units available in the system. Users can now start configuring equipment in Daikin Cloud Plus.

INFORMATION

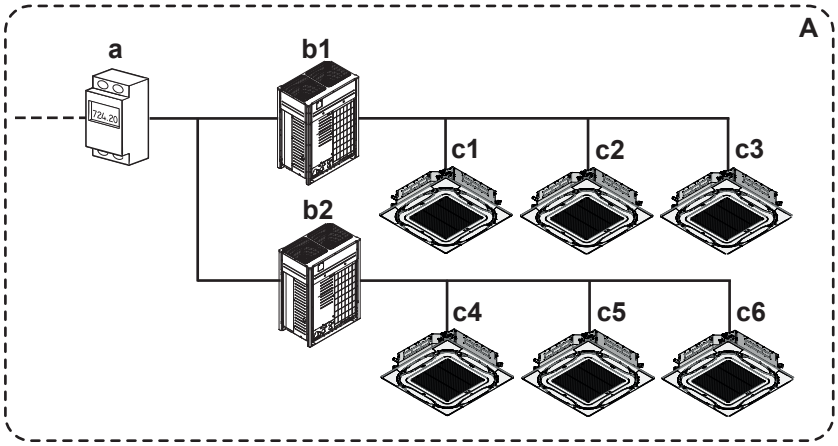
Trying to start service without performing the R32 refrigerant leak alarm test will result in an error. Perform the test before starting service, or disable the leak alarm if it the DC+ Edge does not function as the supervisor alarm. See "7.14 R32 leak detection alarm" [▸ 135] for more information.

7.16 Power proportional distribution

Power proportional distribution (in this manual sometimes abbreviated as PPD) is an optional function of the DC+ Edge. Using a power meter, it measures the total amount of power used by air conditioning units in buildings with multiple different user groups, for example, in tenant buildings. This allows building owners to calculate usage fees for each tenant. The calculation results can also be output to an Excel file for further processing outside of Daikin Cloud Plus.

PPD groups and power meters

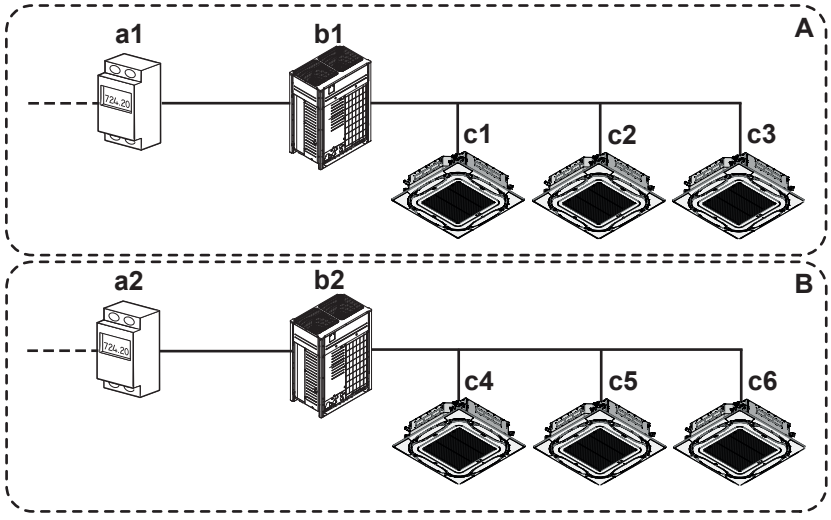
To calculate how power is distributed, units are divided into PPD groups. Each PPD group must contain at least 1 outdoor unit power meter, as well as the indoor units connected to the outdoor unit. However, multiple outdoor units can be connected to the same power meter. For example, a PPD group can look as follows:



A PPD group
a Power meter
b* Outdoor unit
c* Indoor unit

In this case, a single PPD group consists of 2 outdoor units, with 3 indoor units connected to each outdoor unit. Based on the outdoor unit power meter value, the power consumption for each of the 6 indoor units is calculated.

It is recommended to create a PPD group for each outdoor unit power meter. Registering multiple outdoor unit meters in a single power group would lead to inaccurate distribution, as the calculation logic adds the values of both meters together. Consider the following configuration:



A PPD group A
B PPD group B

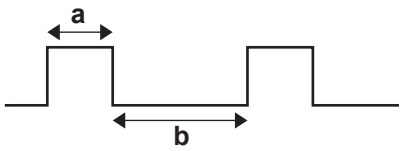
a* Power meter
b* Outdoor unit
c* Indoor unit

If group A and B were to be a single PPD group with 2 outdoor power meters, power the power consumption of the outdoor units would be considered equally efficient, while in reality it is likely that the outdoor unit power consumption differs significantly. This would lead to inaccurate calculations for the power consumption of the individual indoor units. Thus, it is generally recommended to limit the amount of outdoor units connected to a single power meter. The higher the number of power meters used, the more accurate the registration will be.

Power meter specifications

The power meters should adhere to the following specifications:

- The power meter should have a voltage free pulse transmitter (semiconductor relay type)
- Output pulse range: 0.1 kWh/pulse (m^3/pulse)~10.0 kWh/pulse (m^3/pulse)
- Output pulse width: 20~400 ms, with an interval of 100 ms or more
- In case an External Pi is used, the minimum pulse width is 1 ms,according to the module specification outlined in "12.4 Supported I/O modules" [▸ 174] .



a Pulse width (20~400 ms)
b Pulse interval (≥100 ms)

Limitations

Calculations can be performed for up to 64 indoor units per DIII-NET port on the DC+ Edge or DIII plus adaptor. If calculations for units on different DIII-NET lines are required, create separate PPD groups for the groups of units on each respective DIII-NET line. Up to 80 groups can be created.

Commissioning power proportional distribution

The commissioning process can be divided into the following main steps:

Step	Description
Registering Pi equipment	In order to perform proration calculations, at least 1 power meter is required. For more information about creating a power meter (Pi), see "7.9.2 Pi, Di and Dio" [▸ 79] and "7.9.3 External equipment" [▸ 85].
Setting and enabling a calculation method	See "7.16.2 To set the PPD method" [▸ 142].
Registering PPD equipment	See "7.16.3 To register PPD equipment" [▸ 143].
Configuring PPD groups	See "7.16.4 To configure PPD groups" [▸ 146].
Checking operation	Verify that PPD functionality is set up correctly. See "7.16.7 To check the pulse input" [▸ 150] and "7.16.8 To confirm the accumulated values" [▸ 151].

Note that there are some additional settings (e.g. excluded time and exceptions) that can be set only in Daikin Cloud Plus. See the user reference guide for more information about these settings.

7.16.1 Precautions before commissioning power proportional distribution

Performing any of the following actions will result in the loss of ALL calculations that have been made so far:

- Changing the calculation method (as well as initialising the method)
- Deleting a PPD group
- Editing a PPD group
- Adding a PPD group
- Changing the local time

Note: calculations will only be lost when the local time is changed manually, for example when the site time is changed in Daikin Cloud Plus. However, when the daylight saving time setting changes the local time, this will not cause a loss of calculations as this time change happens automatically.

If you have to perform any of the actions above, be sure to save all PPD data before doing so. In addition, disabling PPD functionality and enabling it again later will result in a partial loss of PPD data. Note that PPD calculation data can only be exported from Daikin Cloud Plus, and not from Daikin Cloud Plus Commissioning. For more information about exporting PPD calculation data, see the user reference guide.

7.16.2 To set the PPD method

NOTICE

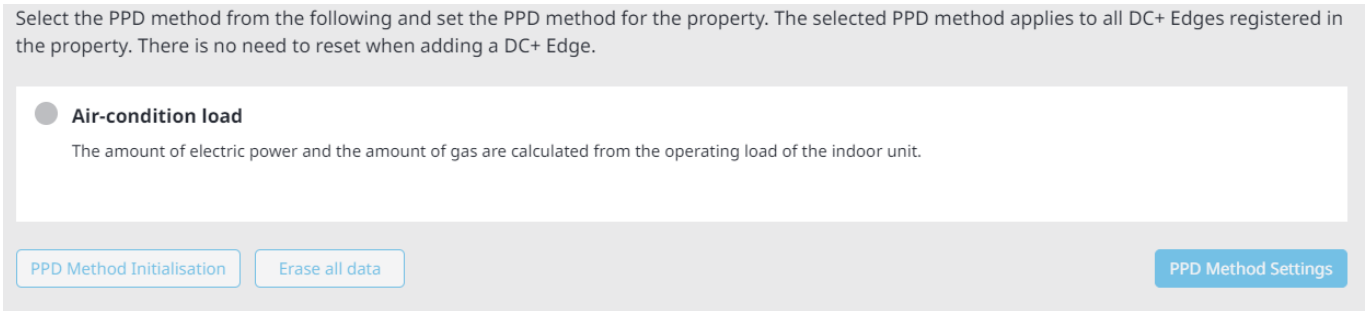
Setting or initialising the PPD method will result in a loss of ALL power proportional distribution calculations that have been made so far. Be sure to save all data that you want to retain before proceeding.

INFORMATION

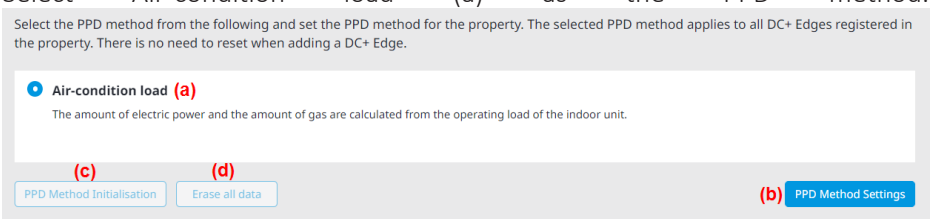
Only 1 PPD method is available. This page exists because other regional implementations of Daikin Cloud Plus have different PPD calculation methods available, which are hidden for the EMEA region.

1 In the sidebar, go to PPD > PPD METHOD SETTINGS settings.

Result: The following page is displayed.



2 Select Air-condition load (a) as the PPD method.



3 Click PPD Method Settings (b) to set the method.

4 Click OK in the pop-up window to confirm.

5 If the PPD method has already been set, click PPD Method Initialization (c) to initialise the method. This will deselect the method that was active. Note that this will result in a loss of all PPD calculation data and will reset PPD settings for that site.

6 Select OK in the pop-up window to confirm.

Result: The system initialises the method. This can take up to a few seconds. The DC+ Edge is restarted. If the DC+ Edgeis not currently online, it will restart once the connection to the cloud is established.

7 If required, you can erase all PPD calculation data. Select Erase all data

8 Select OK in the pop-up window to confirm.

Result: The PPD calculation data is erased.

7.16.3 To register PPD equipment

1 In the sidebar, go to PPD > PPD EQUIPMENT LIST.

Result: All equipment (a) is listed.

Select	Equipment name	Port No./Node No.	Group address	PPD group name	Model name	Equipment Type	Calculation status	PPD	Calculatic at stop
	(c)	(c)	(c)	(c)	(c)	(d)	(d)		
	Office 1 (b) Edit	1	1-09	Not registered	FXMQ80PVE	Indoor unit	Not registered	Activate	Activate
	Office 2 (b) Edit	1	2-06	Not registered	FXYLP45M	Indoor unit	Not registered	Activate	Activate
	Office 3 (b) Edit	1 (a)	2-07	Not registered	FXYLP45M	Indoor unit	Not registered	Activate	Activate
	Office 4 (b) Edit	1	2-00	Not registered	FXYLP45M	Indoor unit	Not registered	Activate	Activate
	Office 5 (b) Edit	1	2-08	Not registered	FXYLP45M	Indoor unit	Not registered	Activate	Activate

2 Click Edit (b) for the equipment for which you want to configure settings. If necessary, you can filter the list by typing in any of the fields (c), or by using the drop-down lists (d).

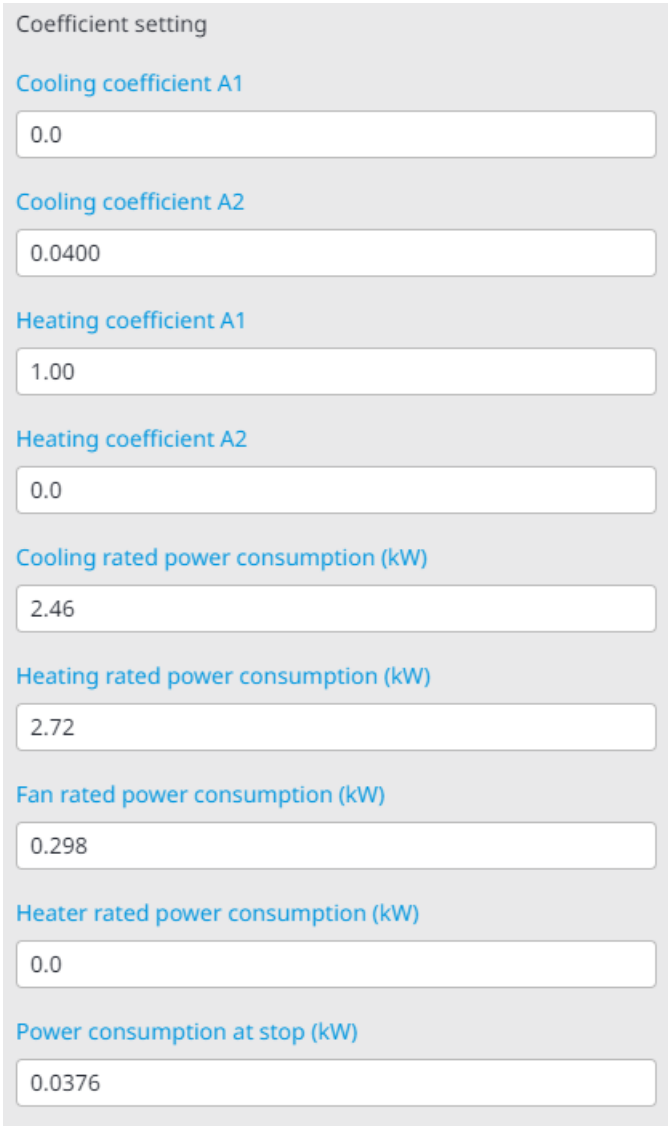
INFORMATION

If the Edit button is greyed out, this means the equipment already belongs to a PPD group for which calculations are ongoing. You CANNOT change settings during calculation. If you want to modify the settings, pause the calculation first. Note that when the calculation is paused, no PPD calculation data is accumulated in the cloud.

3 Set the coefficient and/or power consumption values:

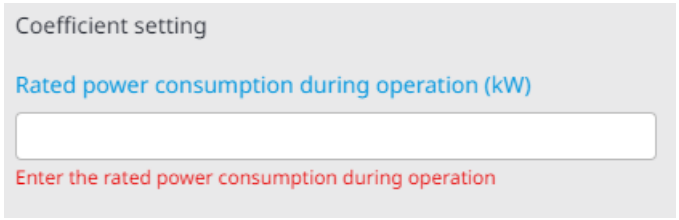
Indoor unit

All coefficient and power consumption values are entered automatically. However, you can still modify any values if desired.

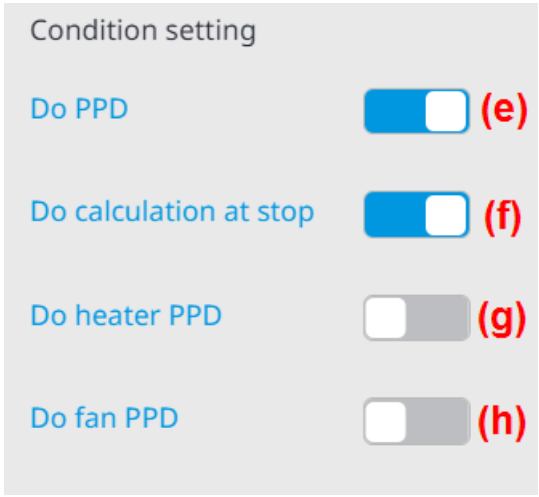


Ventilator, Di, External Di, External Dio

Enter the power consumption value manually.



4 In case of indoor units, also configure condition settings. Use the toggle switches to enable or disable a setting.



Condition setting	Description
(e) Do PPD	Determines whether the equipment is included in the calculations. If disabled, the equipment is NOT included.
(f) Do calculation at stop	Determines whether to include the power consumption of the unit (i.e. the power consumption of the crankcase heater) when the unit is stopped. When enabled, the system will apply power proportional distribution to the power consumption of the crankcase heater and add it to the actual power consumption of the unit. When disabled, the system will display the power consumption when the unit is in a stopped state separately.
(g) Do heater PPD	Determines whether to include the (optional) indoor unit heater power consumption to the actual power consumption of the indoor unit. Enable when the indoor unit is equipped with an (optional) heater.
(h) Do fan PPD	Determines whether to include the power consumption of the indoor unit fan to the actual power consumption of the indoor unit. Enable when the power system of the indoor unit is connected to the meter and the pulse input to the DC+ Edge is enabled. Disable when the meter is not connected to the power system of the indoor unit and there is no pulse input from the indoor unit power system.

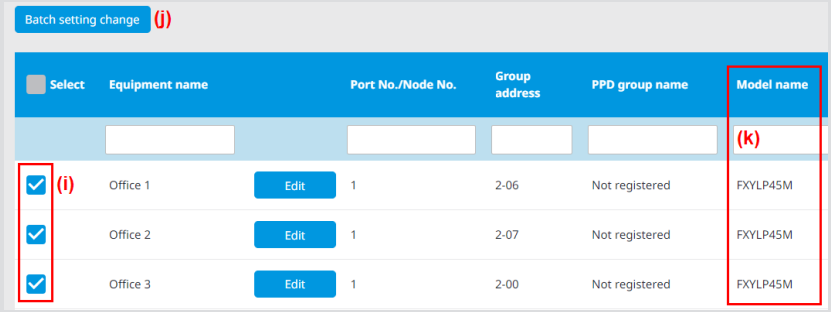
5 Click OK to confirm the settings. You are returned to the PPD equipment list.

6 Click Save.

Result: The equipment is registered.

INFORMATION

It is possible to batch edit coefficient and condition settings by selecting the checkboxes (i) of multiple units in the PPD equipment list, then selecting Batch setting change (b). However, this only works for units that have the same model name (k). You can also NOT edit units for which calculations are currently ongoing.

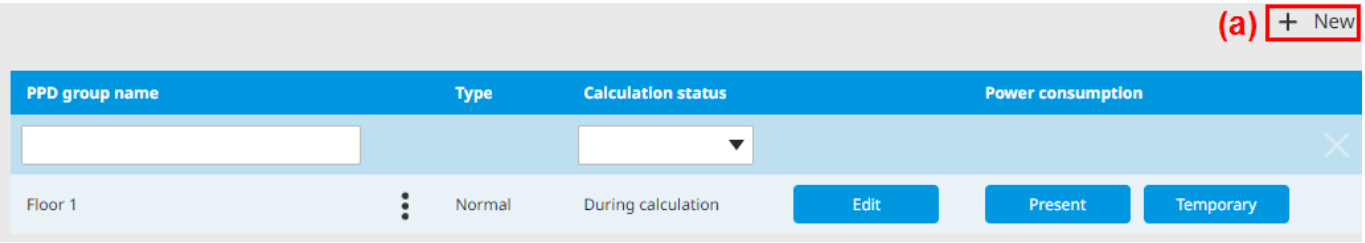


7.16.4 To configure PPD groups

To create and register a new PPD group

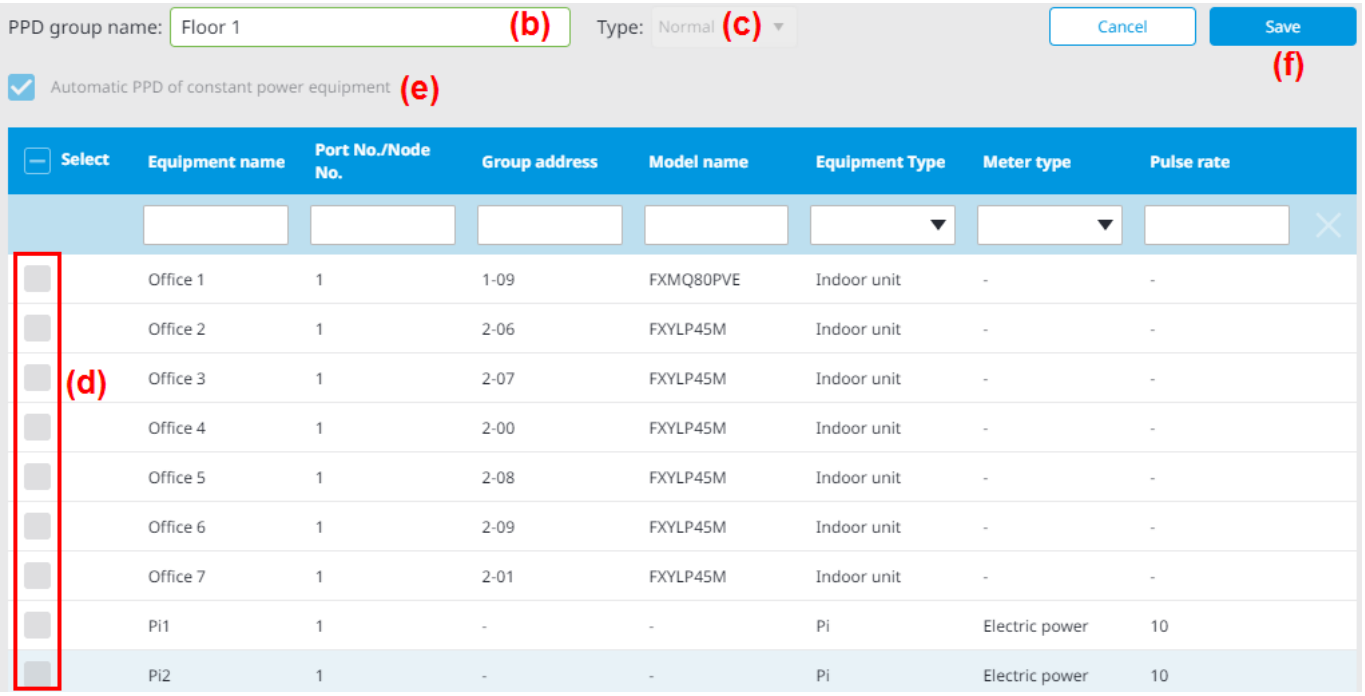
1 In the sidebar, go to PPD > PPD GROUP LIST.

Result: The following page is displayed.



2 Click New (a).

3 Name (b) the group (maximum 20 characters). Duplicate names are not allowed.



4 Select the group Type (c): Normal or GHP (gas heat pump).

5 Select the checkboxes (d) of the equipment you want to include in the group. You must include at least 1 power meter (Pi) to register the group.

> **INFORMATION**
>
> If no coefficient is set, the equipment is NOT displayed in the list. Additionally, when the group type is normal, only equipment whose meter type is electric can be registered.

6 Choose whether you want to perform automatic proportional distribution calculations on equipment that has a constant power consumption (e). If you opt to perform automatic proportional distribution on equipment with a constant power consumption, and all of the indoor units that belong to the group have a constant power consumption (e.g. ventilator), the actual power consumption is calculated through power proportional distribution based on the pulse rate at the rated value, rather than by multiplying the operating hours by the rated value:

Automatic PPD of constant power equipment	**Power consumption calculation**
Enabled	Pulse rate prorated by rated value
Disabled	Operating time multiplied by rated value

7 Click Save (f).

8 Select OK in the pop-up window to confirm.

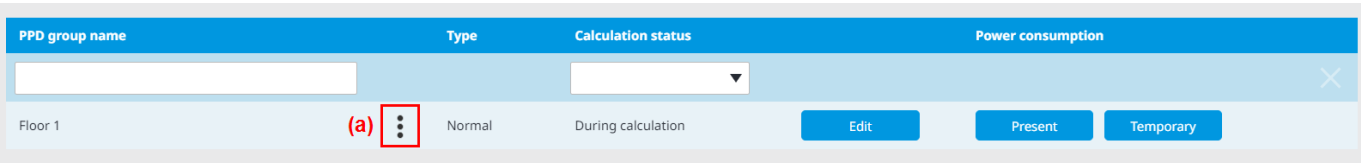
Result: The group is created and registered.

To start, pause or stop calculations

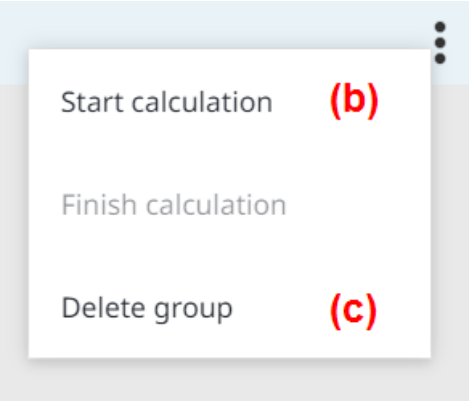
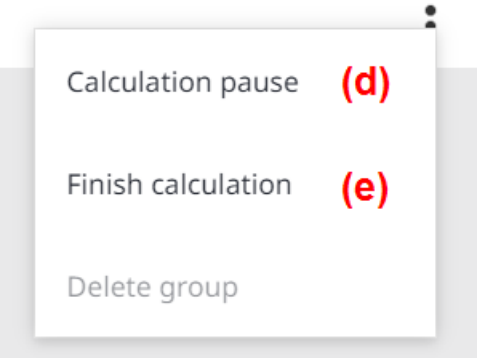
> **INFORMATION**
>
> Make sure all required PPD groups have been configured before starting calculations. When a new group is added after starting calculation, this will result in a loss of ALL calculation data.

1 In the sidebar, go to PPD > PPD GROUP LIST.

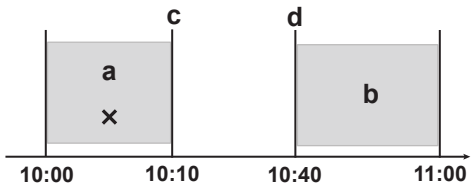
2 Click the vertical ellipsis (a) of the group for which you want to start, pause or stop calculations.



3 Select one of the options:

When calculation has not been started yet	When calculation is already running
	
▪ (b) Start calculation: starts the calculation. ▪ (c) Delete group: deletes the group. Note that the group cannot be deleted once the calculation is running, the calculations for that group must be stopped first (e). Note that regardless of the option you select, you need to confirm the action in a pop-up window first.	▪ (d) Calculation pause: temporarily stops the calculation for the selected group. Note that as long as the calculation is paused, no calculation data is recorded. It is also not possible to delete the group when the calculation for the group is paused, the calculations must be stopped first (e). ▪ (e) Finish calculation: stops the calculation for that group entirely (e). Note that regardless of the option you select, you need to confirm the action in a pop-up window first.

- **Note:** after finishing the calculation for a group, the provisional power consumption data recorded so far is deleted when you start the calculation again at a later time, Export the data in Daikin Cloud Plus if you want to retain this data before finishing the calculation. See the user reference guide for more information.

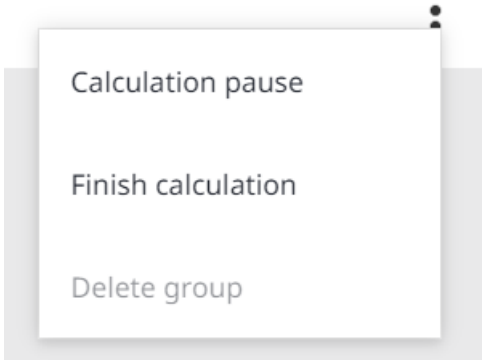


a Provisional power consumption data (deleted)
b Provisional power consumption data
c End of calculation
d Start of calculation

7.16.5 To delete a PPD group

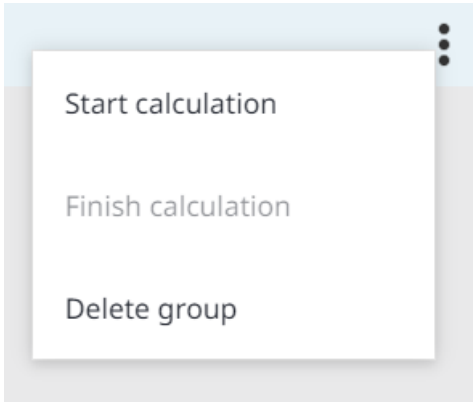
You can only delete PPD groups for which calculations have been stopped.

1. In the sidebar, go to PPD > PPD GROUP LIST.
2. Select the vertical ellipsis of the group you want to delete.
3. Select Finish calculation. To prevent any data loss, be sure to export any calculation data that you do not want to lose in Daikin Cloud Plus.



4 Select OK in the pop-up window to confirm.

5 Select the vertical ellipsis of the group you want to delete.



6 Select Delete group.

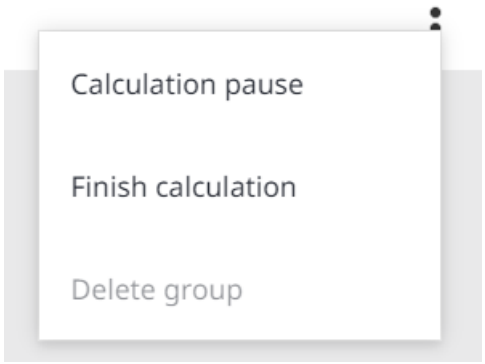
7 Select OK in the pop-up window to confirm.

Result: The group is deleted.

7.16.6 To modify pulse input settings

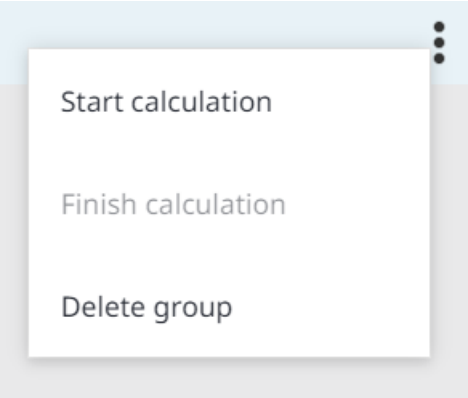
In some cases, it may be required to modify the pulse input settings for a meter that is used to perform calculations. Attempting to modify pulse input settings from the Pi/Di/Dio LIST is not possible when the meter is registered to a PPD group. The following procedure offers a workaround:

1 Click the vertical ellipsis of the group, and select Finish calculation.



2 Select OK in the pop-up window to confirm.

3 Click the vertical ellipsis of the group again, and delete the PPD group to which the equipment that you want to modify settings for belongs. To prevent any data loss, be sure to save any calculation data that you do not want to lose in Daikin Cloud Plus first.

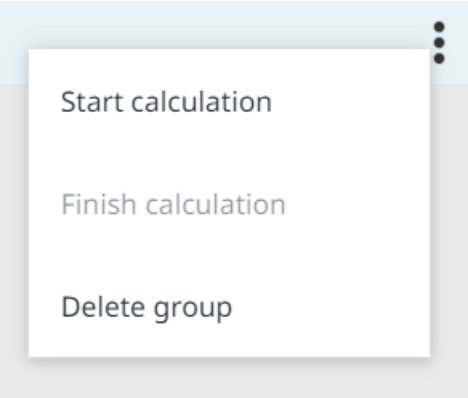


4 Select OK in the pop-up window to confirm.

5 Modify the pulse input settings for the equipment (e.g. for a Pi, modify settings as described in To register a Pi, Di or Dio and " To perform meter alignment for Pi equipment" [▸ 83]).

6 Create and configure a new PPD group with the meter for which you have changed the pulse input settings before. See "7.16.4 To configure PPD groups" [▸ 146] for more information.

7 Click the vertical ellipsis of the newly created group, and select Start calculation.



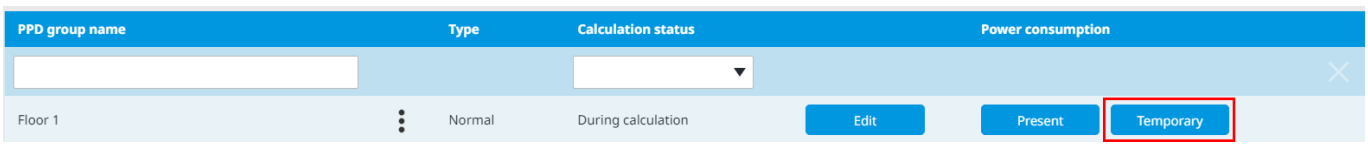
Result: The pulse input settings have been modified.

7.16.7 To check the pulse input

When PPD calculation has been started, you can verify that the functionality is operating as intended. To do this, you can check the pulses that are output from the integrated kWh meter (in case of units) are input correctly to the DC+ Edge. If more than 1 meter is connected, also make sure that the pulse inputs correspond to the correct PPD group.

1 In the sidebar, go to PPD > PPD GROUP LIST.

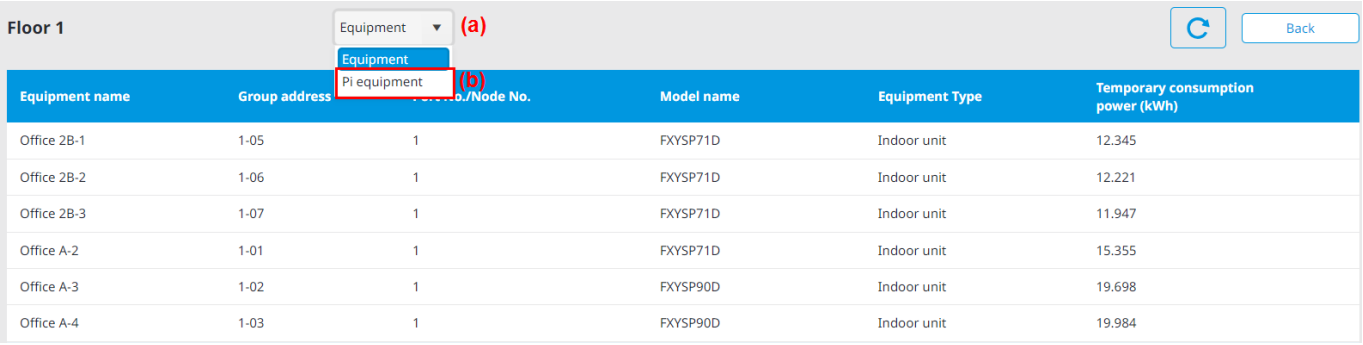
2 Select Temporary for the PPD group for which you want to check the pulse inputs. This displays the provisional power consumption.



INFORMATION

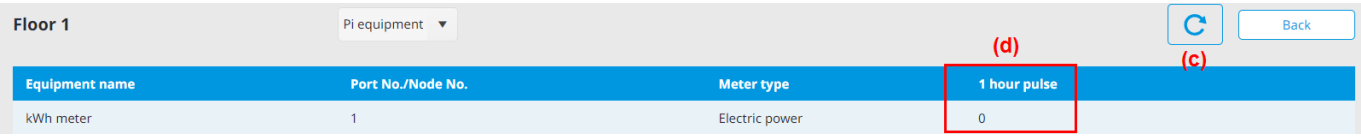
If the provisional consumption amount cannot be displayed, wait a few minutes and try again.

3 From the drop-down list (a), select Pi equipment (b).



Result: The Pi equipment for the group is displayed.

4 Make sure the units that belong to the group are operating. Wait until the integrated kWh meter counts up (i.e. outputs a pulse).Then, click the refresh button (c).



5 Check the value in the 1 hour pulse column (d). If everything is correct, this column displays the received pulses per hour, and the value should be increasing. It can take some time for the values to be displayed.

6 Repeat the procedure for other connected meters.

7.16.8 To confirm the accumulated values

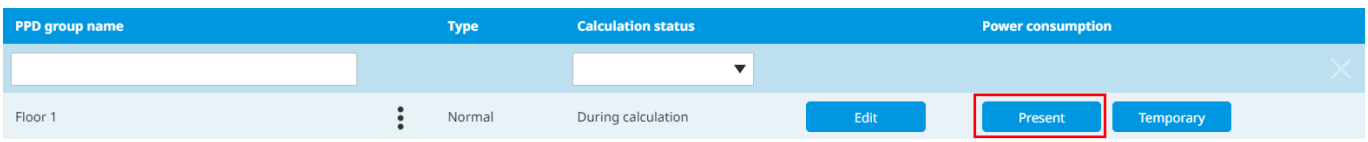
As an additional confirmation that power proportional distribution has been set up correctly, you can compare the accumulated power consumption value for every indoor unit with the value of the meter. This should be verified for every PPD group.

1 Check the value of the meter at a specific time. It is a good idea to record the value around the hour mark (e.g. at 14:00). Note down this value and name it M1.

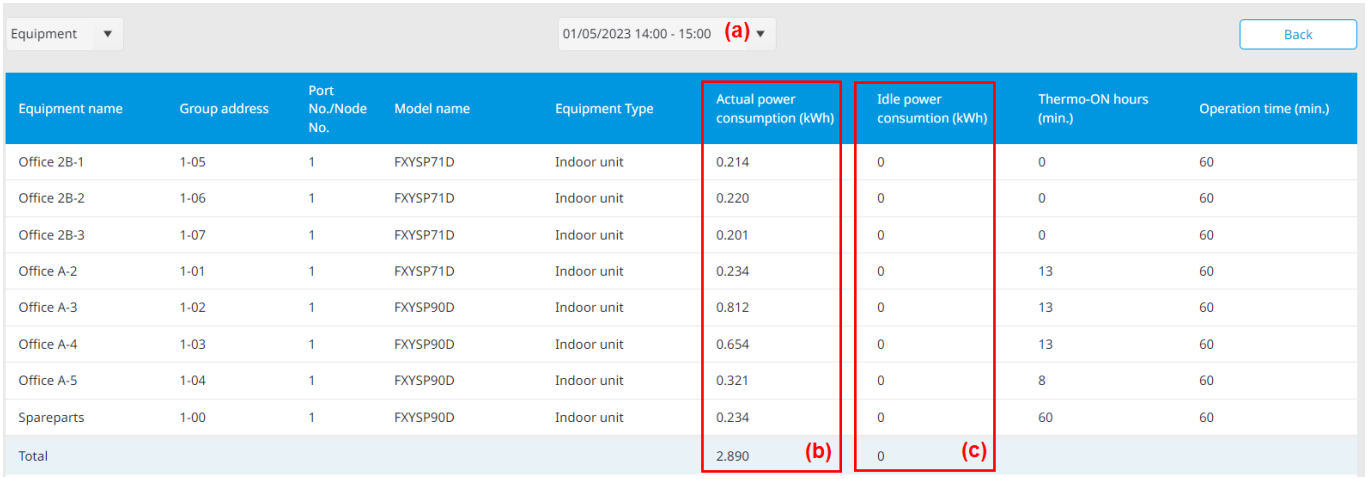
2 Check the value of the meter again, 1 hour later (e.g. at 15:00). Note down this value as well and name it M2.

3 In the sidebar, go to PPD > PPD GROUP LIST.

4 Select Present next to the PPD group for which you want to check the accumulated power consumption.



5 From the drop-down menu (a), select the same time period as for which the meter values were recorded (e.g. 14:00-15:00).



Equipment ▼ 01/05/2023 14:00 - 15:00 (a) ▼ Back

Equipment name	Group address	Port No./Node No.	Model name	Equipment Type	Actual power consumption (kWh)	Idle power consumtion (kWh)	Thermo-ON hours (min.)	Operation time (min.)
Office 2B-1	1-05	1	FXYSP71D	Indoor unit	0.214	0	0	60
Office 2B-2	1-06	1	FXYSP71D	Indoor unit	0.220	0	0	60
Office 2B-3	1-07	1	FXYSP71D	Indoor unit	0.201	0	0	60
Office A-2	1-01	1	FXYSP71D	Indoor unit	0.234	0	13	60
Office A-3	1-02	1	FXYSP90D	Indoor unit	0.812	0	13	60
Office A-4	1-03	1	FXYSP90D	Indoor unit	0.654	0	13	60
Office A-5	1-04	1	FXYSP90D	Indoor unit	0.321	0	8	60
Spareparts	1-00	1	FXYSP90D	Indoor unit	0.234	0	60	60
Total					2.890 (b)	0 (c)		

6 Check the accumulated power consumption values for all of the indoor units that belong to the PPD group and record their combined total (b). Also include the total idle power consumption value (c) in the total value.

7 Compare the total meter value (M2−M1) to the actual power consumption value. If these values are close to each other (i.e. about the same, allowing for slight deviations), then the accumulated power consumption is correct.

INFORMATION

When calculating the actual power consumption values for each indoor unit, the values are rounded up by 0.1 Wh to protect the building owner from overpayment. Because of this, there may be a very slight deviation between the values measured by the meter and the values in Daikin Cloud Plus Commissioning.

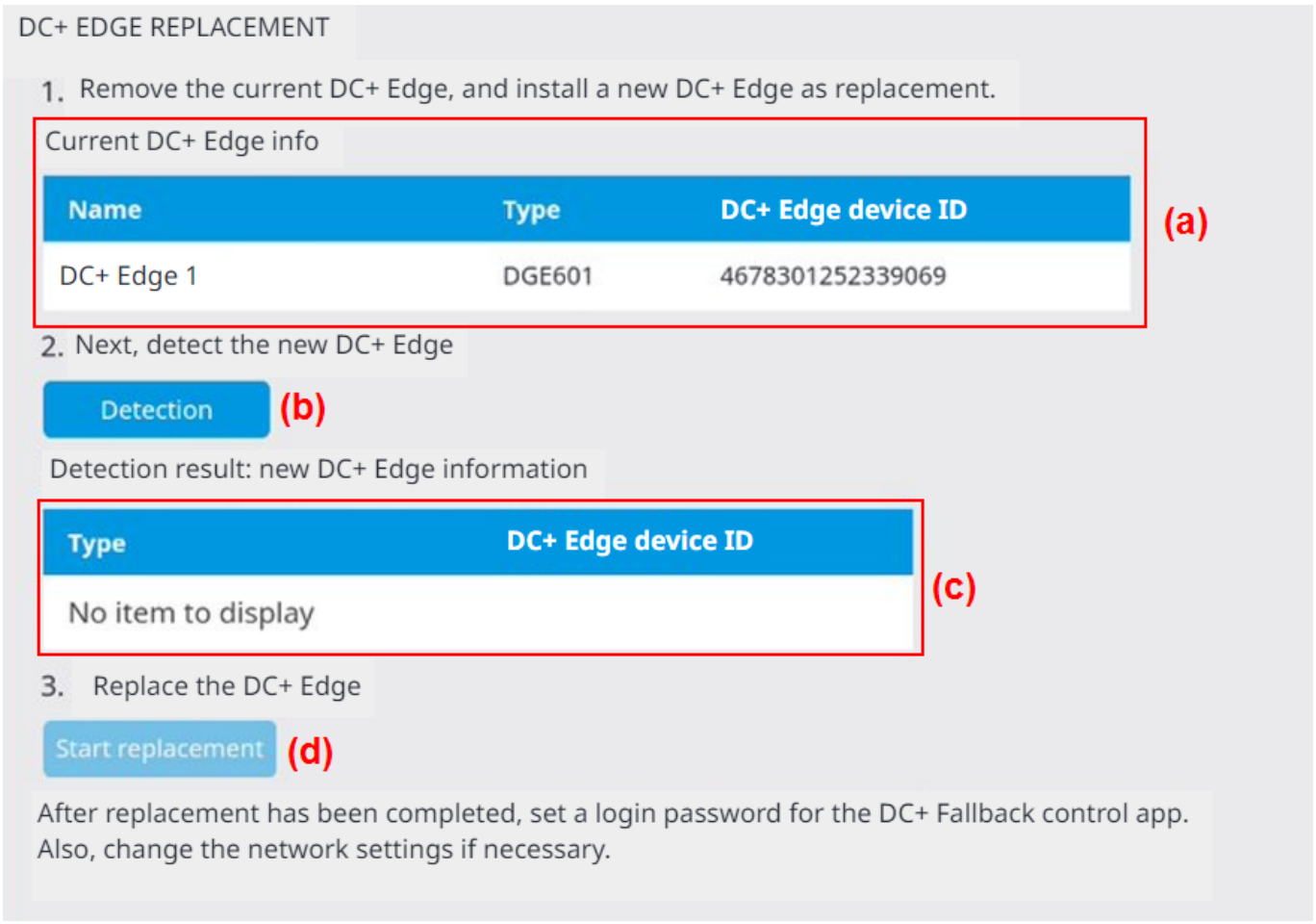
8 DC+ Edge replacement

You can replace DC+ Edge without the need to recommission the whole system.

The following steps are performed in DC+ Edge connect.

1 In the sidebar, go to DC+ EDGE > DC+ EDGE REPLACEMENT.

Result: The following page appears.



2 Uninstall the current DC+ Edge controller. You can see the information of the current current DC+ Edge on screen (a).

3 Install the new DC+ Edge controller. Make sure you have performed the installation as described in "5 Installation" [▸ 14].

4 Tap Detection (b).

Result: The new DC+ Edge device ID is detected (c).

5 Verify that the device ID matches with the ID on the controller.

6 Tap Start replacement (d).

Result: The replacement process starts.

7 Set a new password for the DC+ Fallback control app. See "7.11 Setting an initial password for DC+ Fallback control" [▸ 129] for more information.

Result: The DC+ Edge has been replaced.

9 Site decommissioning

NOTICE

Deleting a site CANNOT be undone. Make sure you actually want to delete the site before proceeding.

Once a site has been created, it cannot be deleted until some elements are removed manually. Some need to be removed in Daikin Cloud Plus, but certain elements that are linked to the site can only be removed in Daikin Cloud Plus Commissioning.

Deleting interlock programs and zones

The following steps are performed in Daikin Cloud Plus.

1. In the sidebar, go to MONITORING & OPERATION > INTERLOCKING and delete any existing interlock programs. See the user reference guide for more information on how to delete an interlock program.
2. In the sidebar, go to ADMINISTRATION > ZONE LIST and delete any zones that have been created. Note that the default zone cannot be deleted. See the user reference guide for more information on how to delete zones.

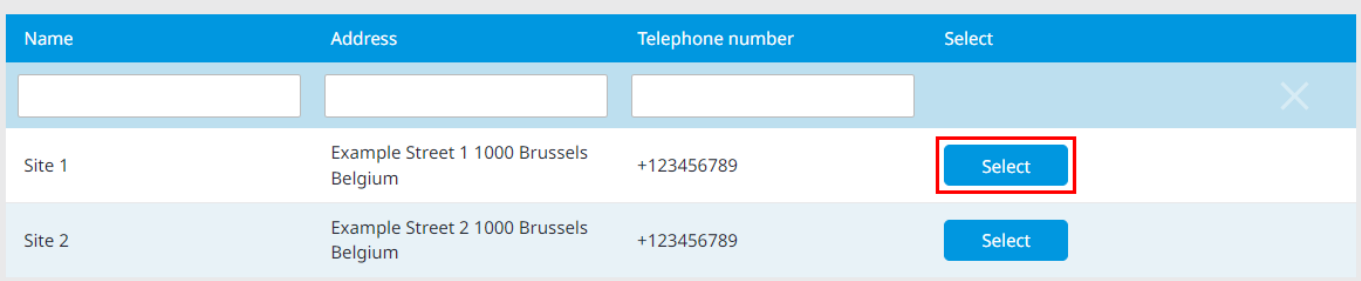
   Result: All interlock programs and user-created zones are deleted.

Deleting all equipment and the controller

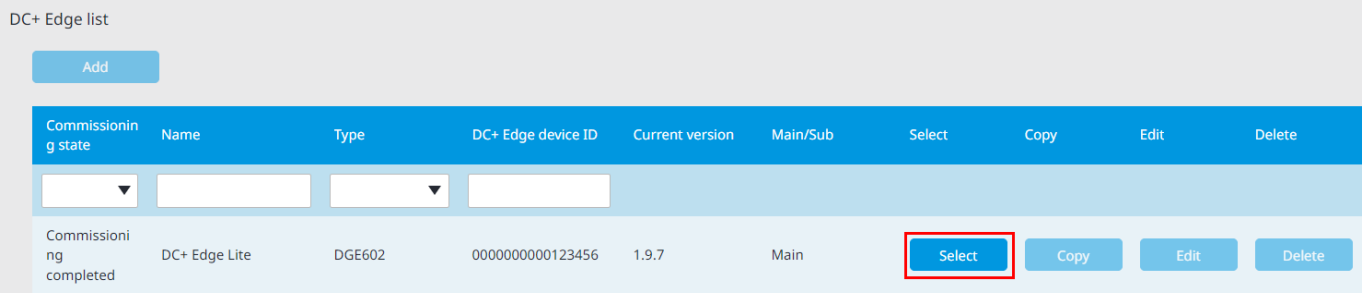
The following steps are performed in Daikin Cloud Plus Commissioning.

Delete all units and equipment. This includes DIII equipment, any I/O (Di, Dio , Pi), external equipment, as well as BACnet equipment (both objects and groups). Previous steps must be completed before performing this step.

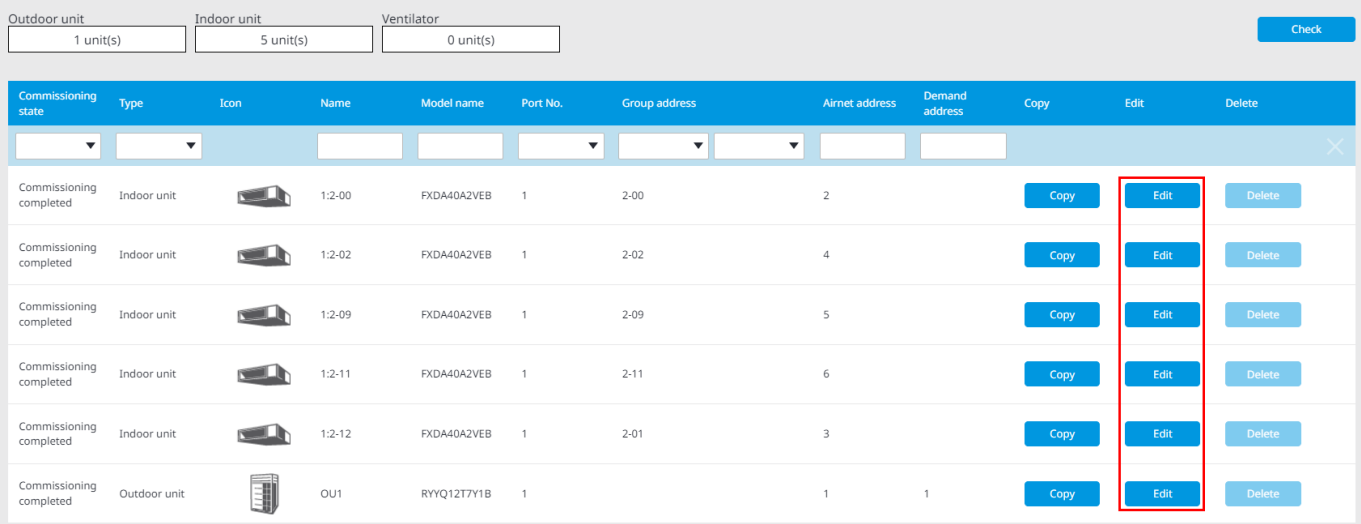
3. Select the site that you want to delete.



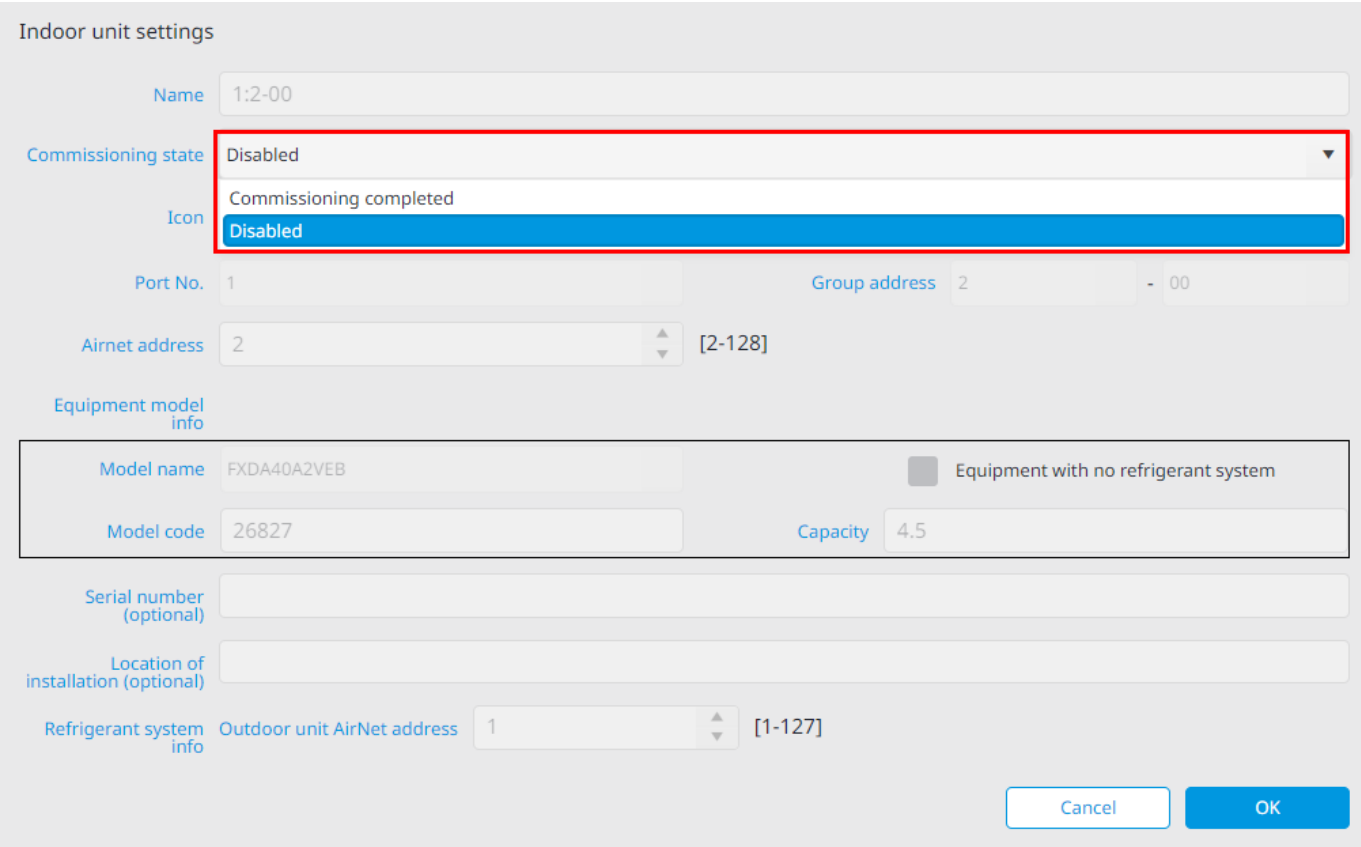
4. Select the controller that is linked to the site from the DC+ EDGE LIST.



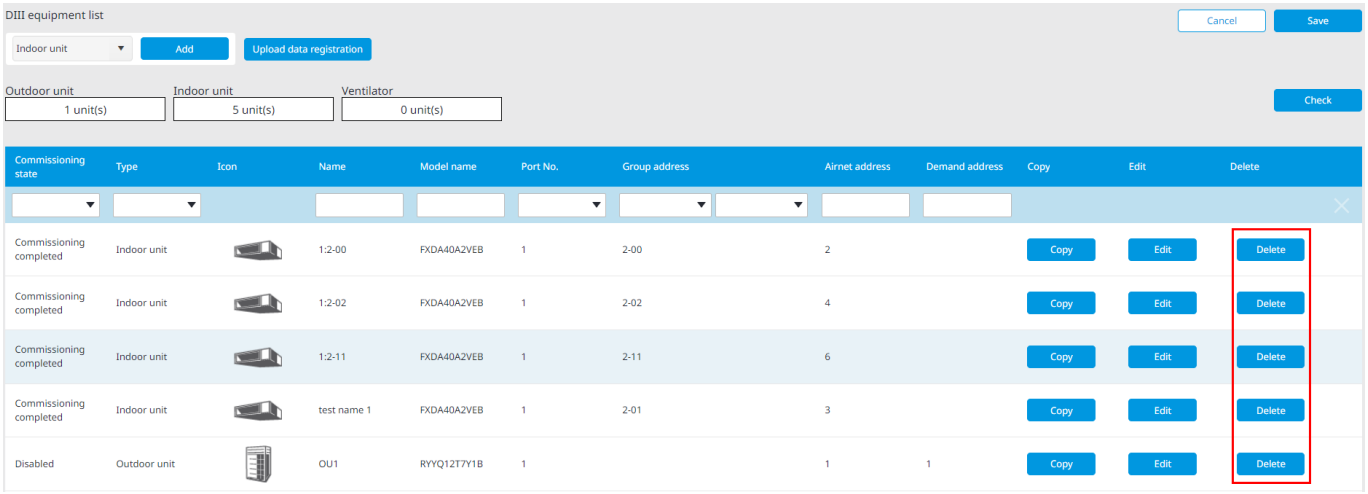
5. Set the commissioning status of all equipment to Disabled. To do this, click Edit next to a piece of equipment to open its settings.



6 In the settings menu, set the commissioning status to Disabled using the drop-down list. Then, click OK to confirm. Repeat this step for all equipment that needs to be deleted.



7 Click Delete to delete equipment from the list. Click OK in the pop-up window to confirm. Repeat this step for all equipment that needs to be deleted. If the Delete button is greyed out, this means that the commissioning status has not been changed to Disabled.



8 Once all equipment has been deleted, click Save on the top right of the page. Then, click OK in the pop-up window to confirm.

9 Repeat the procedure for all types of equipment.

Result: All units and equipment from the respective equipment list pages is deleted. The following pages should no longer list any equipment:

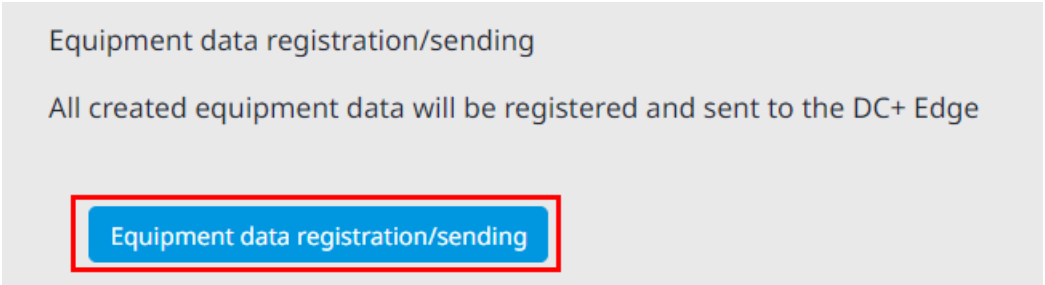
- DIII EQUIPMENT LIST
- Pi/Di/Dio LIST
- EXTERNAL EQUIPMENT LIST
- BACNET EQUIPMENT LIST

INFORMATION

When deleting a BACnet group, it is not required to change the commissioning status to Disabled before you are able to delete the group. When the group is deleted, all objects that are in the group are also deleted automatically. However, for individual BACnet objects that do NOT belong to a group, the commissioning status still has to be changed to Disabled before they can be deleted.

10 In the sidebar, go to EQUIPMENT DATA REGISTRATION/SENDING.

11 Click Equipment data registration/sending.

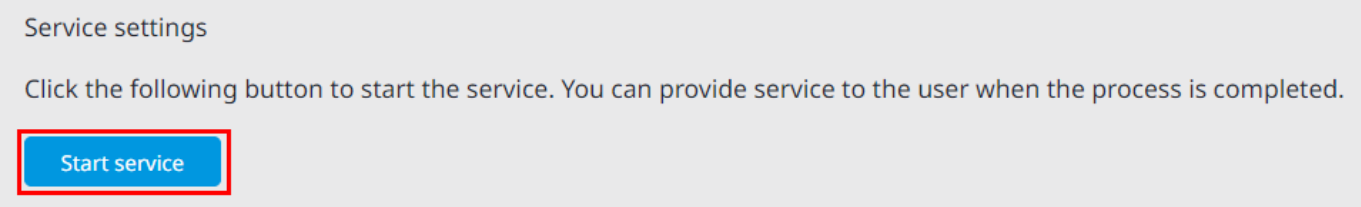


12 Click OK in the pop-up window to confirm.

13 Click Close in the pop-up window once the process has completed.

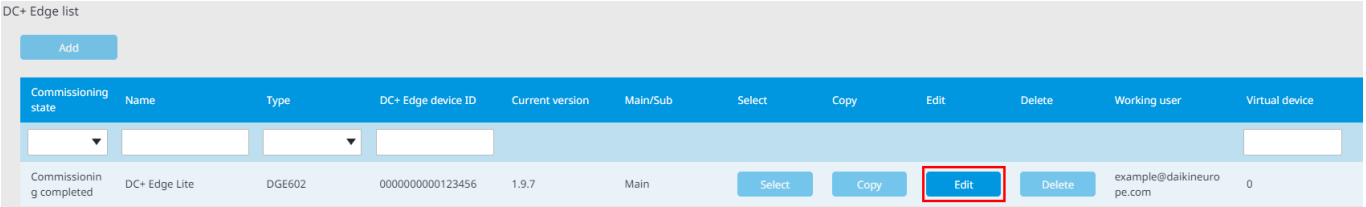
Result: The DC+ Edge restarts.

14 In the sidebar, go to SERVICE SETTINGS and select Start service.

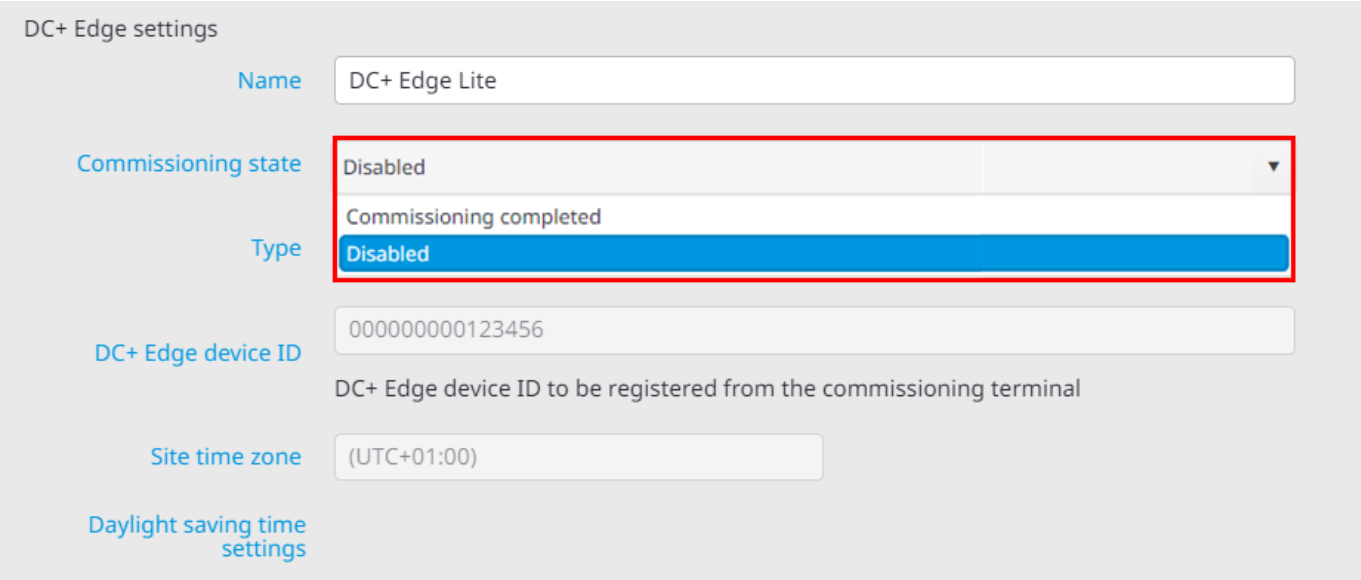


15 In the sidebar, go to DC+ EDGE > DC+ EDGE LIST.

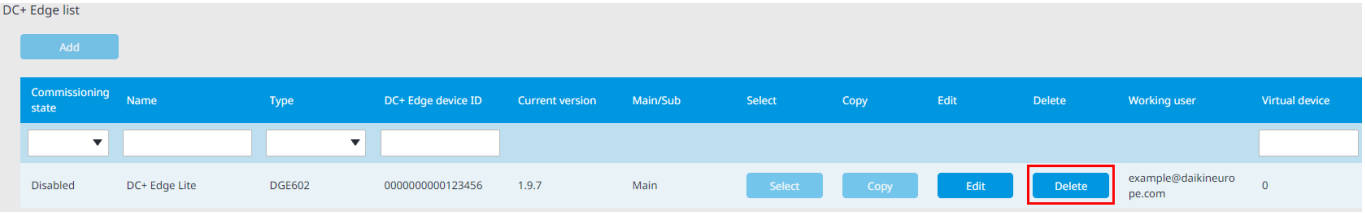
16 Click Edit.



17 Set the commissioning status to Disabled using the drop-down list. Then, click Registration to confirm. The system will only allow you to change the commissioning status of the controller if all equipment has been deleted.



18 Click Delete to delete the controller. The system will only allow you to delete the controller when the previous steps have been performed.



19 Click Save.

Result: All units, equipment, and the controller are deleted.

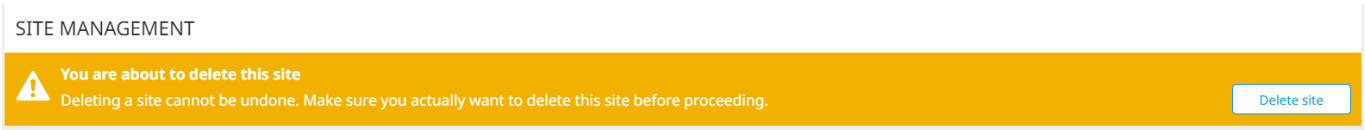
Deleting sensors, users, and the site

The following steps are performed in Daikin Cloud Plus.

20 In the sidebar, go to ADMINISTRATION > SITE LIST and go to the site you want to delete. Then, remove all users and other owners (except for yourself) from the site.

21 Under SENSORS, delete all sensors that are paired with the site.

22 Scroll down to Site management and click Delete site.



23 Click Yes in the pop-up window to confirm.

Result: The site is deleted.

10 Troubleshooting

10.1 General

10.1.1 Symptom: Cannot select the DC+ Edge in Daikin Cloud Plus Commissioning

Possible causes	Corrective action
The DC+ Edge controller is locked by the current working user in Daikin Cloud Plus Commissioning.	Ask the working user to log out of Daikin Cloud Plus Commissioning.
The DC+ Edge controller is locked by the current working user in DC+ Edge connect.	Ask the working user to log out of DC+ Edge connect. If the DC+ Edge is still not selectable, clear the DC+ Edge connect application cache on the tablet.

10.2 Network

10.2.1 Symptom: Unable to discover the DC+ Edge controller on the network

Possible causes	Corrective action
The mobile phone or tablet is NOT on the same subnetwork as the DC+ Edge.	Ensure that the mobile phone or tablet is on the same network as the DC+ Edge: ▪ Use a USB-C to Ethernet dongle to connect the tablet to the subnetwork directly. ▪ Use a switch and an Ethernet to Wi-Fi module/WLAN bridge. Place the switch between the DC+ Edge controller and the incoming Ethernet cable. USB-powered switches are good to use in this situation, as they do not require an additional power supply. ▪ Use a 4G/5G/LTE router to set up a temporary subnetwork.
The DC+ Edge is not powered.	Verify that the power supply is connected and that the DC+ Edge is receiving power. Check the POWER LED status on the DC+ Edge. See "4.3 Location of terminals and switches" [▸ 10] for more information.
No LAN cable is connected to the LAN-1 port.	Connect a LAN cable to the LAN-1 port. Verify that the LAN-1 LINK is ON. See "4.3 Location of terminals and switches" [▸ 10] for more information.

Possible causes	Corrective action
The LAN cable is connected to the LAN-2 port instead of the LAN-1 port.	Connect the LAN cable to the LAN-1 port. Verify that the LAN-1 LINK LED is ON. See "4.3 Location of terminals and switches" [▸ 10] for more information.
No DHCP service is active on the VLAN, or a fixed IP address with incorrect settings is configured for LAN port 1.	Verify that the DC+ Edge and the tablet receive a DHCP response from the same subnetwork.
The IP address for LAN port 1 is set within the IP address range for LAN port 2 during commissioning.	Enable DHCP for LAN port 2, or assign an IP address outside of the default LAN2 IP range.
The LAN cable is damaged.	Use a different, undamaged LAN cable.

10.2.2 Symptom: Daikin Cloud Plus sees the controller as offline

Possible causes	Corrective action
The DC+ Edge is NOT properly configured for the connected network.	See the corrective actions listed in "10.2.1 Symptom: Unable to discover the DC+ Edge controller on the network" [▸ 159].
The DC+ Edge does has no access to the internet.	Verify that the firewall does not block outgoing connections on port 80 and port 443, NTP and/or DNS requests.
No or inaccessible DNS servers.	Verify that the firewall allows the DC+ Edge to access the DHCP DNS server. When configured with a static IP address, make sure that the configured DNS servers are accessible.
There are routing or gateway problems on the local network.	Verify that the firewall allows for routing packets to the internet.

10.2.3 Symptom: Communication errors occur when connecting to the DC+ Edge over the local network via the DC+ Fallback control app

Possible causes	Corrective action
The DC+ Edge is NOT properly configured for the connected network.	See the corrective actions listed in "10.2.1 Symptom: Unable to discover the DC+ Edge controller on the network" [▸ 159].
The tablet is NOT on the same subnetwork as the DC+ Edge.	
The password used to log in to the application is incorrect, was forgotten, or does NOT work.	Reset the password for the application in the Daikin Cloud Plus Commissioning. See "7.11 Setting an initial password for DC+ Fallback control" [▸ 129].

10.3 Troubleshooting DIII-NET.

10.3.1 Symptom: Communication error of all DIII units on the same DIII-NET

Possible causes	Corrective action
The DIII-NET cable is not properly connected to the DC+ Edge terminal.	Check if the DIII-NET cable is properly connected to the DC+ Edge and reconnect to the correct DC+ Edge terminal if required.
The DIII-NET cable is not properly connected between the DC+ Edge and the outdoor unit.	Check if the DIII-NET cable is properly connected between the DC+ Edge and the outdoor unit and reconnect the cable if required.

10.3.2 Symptom: Some of the DIII units are always causing a communication error

Possible causes	Corrective action
No group address was configured for the DIII unit.	Check if a group address for the DIII unit is set. Set the correct address if no address is set.
The total number of indoor units connected exceeds 64 groups and 64 units.	Check the number of unit connections.
The total wiring length exceeds 2000 m (if shielded wire is used, it exceeds 1500 m).	Check whether the total wiring length does not exceed the specified length. Shorten the wiring length if necessary.
The units are connected to the wrong DIII-NET terminal.	Compare the unit situation with the electrical wiring diagram. Connect the units to the correct DIII-NET terminal.

10.3.3 Symptom: Some of the DIII units are occasionally causing a communication error

Possible causes	Corrective action
A multicore cable with 3 or more cores is used for the DIII-NET network wiring.	Determine which cable is being used and change to a cable with the correct specification.
The DIII-NET network contains branched wiring.	Compare the wiring to the electrical wiring diagram. Reconfigure the DIII-NET network without any branched wiring.
No group address was configured for the DIII unit.	Check if a group address for the DIII unit is set. Set the correct address if no address is set.
The total number of indoor units connected exceeds 64 groups and 64 units.	Check the number of unit connections.
The total wiring length exceeds 2000 m (if shielded wire is used, it exceeds 1500 m).	Check whether the total wiring length does not exceed the specified length. Shorten the wiring length if necessary.

Possible causes	Corrective action
More than 2 wires are connected to a single terminal.	Verify that the terminal only has a maximum of 2 wires connected to it.
A noise source is interfering with the DIII-NET network.	Check the installation status of the other equipment and move the DIII-NET network away from the noise source.

10.3.4 Symptom: DIII port parent concentration settings overlapping (Error)

Possible cause	Corrective action
"Parent concentration" has been set to multiple centralised devices.	Check if no other central devices set up for parent concentration are not connected. Disconnect the parent central configuration connector from the non-DC+ Edge centralised device. Then, switch the DC+ Edge master switch to SLAVE when a high-level centralised device is connected.

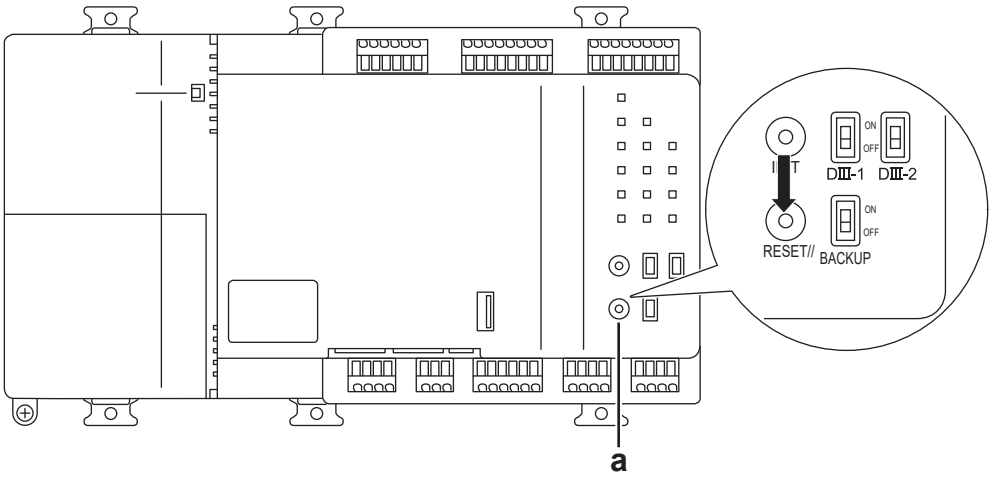
10.3.5 Symptom: DIII port transmit buffer overflow occurred (Error)

Possible causes	Corrective action
A multicore cable with 3 or more cores is used for the DIII-NET network wiring.	Determine which cable is being used and change to a cable with the correct specification.
The DIII-NET network contains branched wiring.	Compare the wiring to the electrical wiring diagram. Reconfigure the DIII-NET network without any branched wiring.
The DIII-NET network wiring is not properly connected.	Check the wiring and reconnect if required.
A noise source is interfering with the DIII-NET network.	Check the installation status of other equipment and move the DIII-NET network away from the noise source.

10.4 To reset the unit

The DC+ Edge can be restarted by pressing the reset button.

1 Operate the reset button using a thin rod or similar item.



a Reset button

CAUTION

Do not perform the operation with a pointed item. Doing so may result in malfunction.

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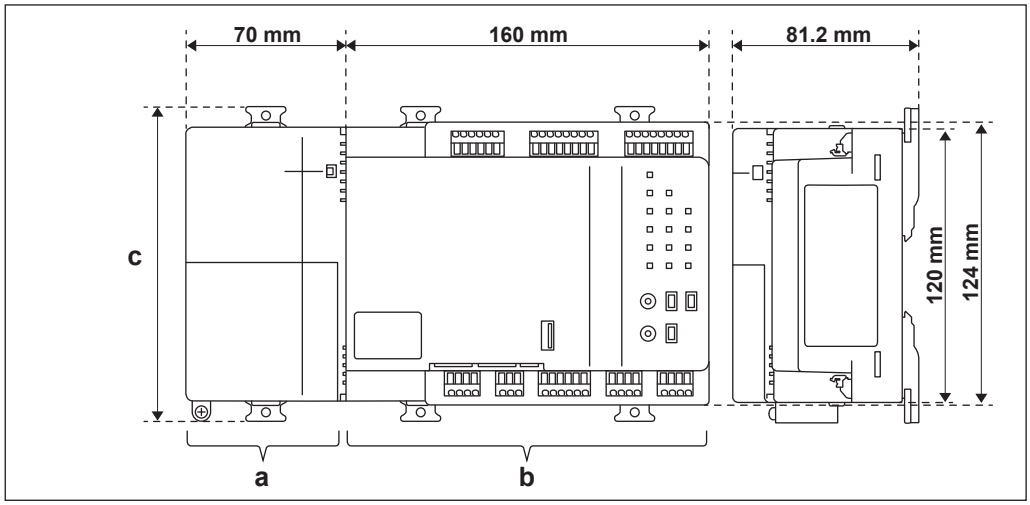
12 Appendixes

12.1 External dimensions



a Power supply unit
b DC+ Edge / DC+ Edge Lite unit
c 138 mm when DIN rail lock is closed – 146 mm when DIN rail lock is open

12.2 Overview of Excel file keywords and values

Common - DIII equipment

Keyword	Description	Values	Required	Column
Ending in "-H" (e.g.OUT-H)	Header row identifier	–	Yes	A
Ending in "-D" (e.g.OUT-D)	Data row identifier	–	Yes	A
EQUIPMENTID	Equipment ID	Set automatically. Do NOT enter a value.	No	B
NAME	Equipment name	1-20 characters	Yes	C
LOCATION	Installation location	< 50 characters	No	D
STATUS	Commissioning state	Set automatically. Do NOT enter a value.	No	E
ICON	Icon ID	Determines the equipment icon, value between 100~999. 0 = Automatic	Yes	F
PORTNO	Port number	1~8	Yes	G
ANADDR	AirNet address	Outdoor: 1~63 Indoor: 2-128 -1 = Not set	Yes	H

Keyword	Description	Values	Required	Column
GROUPADDR1	Group address	1~4	Yes	Indoor: I Outdoor: J
GROUPADDR2	Group address	0~15	Yes	Indoor: J Outdoor: K
MODELNAME	Model name	≤ 30 characters	No	Indoor: K Outdoor: L
AIRNETSERVICE	Eligible for AirNet	0	Yes	Indoor: O Outdoor: X
WIRING	Wiring	0~2[(a)]	No[(b)]	Indoor: P Outdoor: AC

(a) Outdoor units: if there is no direct connection to the DC+ Edge (connection via Sky Air indoor unit), set to 0. If both indoor and outdoor units are connected to the DC+ Edge, set to 1. If only the outdoor unit is connected directly, set to 2. For indoor units, if only Sky Air indoor units are directly connected to the DC+ Edge, set to 0. If both indoor and outdoor units are connected to the DC+ Edge, set to 1. If there is no direct connection to the DC+ Edge (connection via Sky Air outdoor unit), set to 2. If AirNet is not used, set to 0.

(b) Required only if the air conditioner is intended for use in a store.

Indoor unit

Keyword	Description	Values	Required	Column
REFRI-SYSTEM	Units without refrigerant systems	0: with refrigerant system 1: without refrigerant system	Yes	L
SERIALNO	Serial number	≤ 30 characters	No	M
OUTANADDR	Outdoor unit AirNet address	1~63 -1 = Not set	Yes	N

Outdoor unit

Keyword	Description	Values	Required	Column
MODELNAME1	Model name	≤ 30 characters	No	M
SERIALNO1	Model number	≤ 30 characters	No	N
MODELNAME2	Model name	≤ 30 characters	No	O
SERIALNO2	Model number	≤ 30 characters	No	P
MODELNAME3	Model name	≤ 30 characters	No	Q
SERIALNO3	Model number	≤ 30 characters	No	R
MODELNAME4	Model name	≤ 30 characters	No	S
SERIALNO4	Model number	≤ 30 characters	No	T
POWERVOLTAGE	Voltage	200, 208, 220, 380, 400, 415, 460, 480	No	U
POWERFREQ	Power frequency	50, 60	No	V
FLOORSPACE	Surface area in m^2	0~10000	No	W
INSTALLATIONDATE	Installation date	–	No	Y
PIPINGLENGTH	Piping length	–	No	Z
REFRIGERANTCHARGEAMOUNT	Refrigerant charge amount	–	No	AA

Keyword	Description	Values	Required	Column
ADDITIONALREFRIGERANTCHARGEAMOUNT	Additional refrigerant charge amount	–	No	AB

Ventilator

Keyword	Description	Values	Required	Column
VMODE	Units without refrigerant systems	0: with refrigerant system 1: without refrigerant system	Yes	L
FRESHENUP	Fresh up	0: Disabled 1: Enabled	Yes	K
AUTOVOL	Automatic air volume	0: Disabled 1: Enabled	Yes	L
SERIALNO	Serial number	≤ 30 characters	No	N

Common – Pi/Di/Dio

Keyword	Description	Values	Required	Column
Ending in "-H" (e.g. PI-H)	Header row identifier	–	Yes	A
Ending in "-D" (e.g. PI-D)	Data row identifier	–	Yes	A
EQUIPMENTID	Equipment ID	Set automatically. Do NOT enter a value.	No	B
NAME	Equipment name	1-20 characters	Yes	C
LOCATION	Installation location	< 50 characters	No	D
STATUS	Commissioning state	Set automatically. Do NOT enter a value.	No	E
ICON	Icon ID	Determines the equipment icon, value between 100~999.	Yes	F
PORTNO	Port number	Pi/Di: 1, 3~8 Dio: 1 (fixed)	Yes	G
ADDRESS	Address	Port 1: 2~8 Other: 1~4	Yes	H

Pi

Keyword	Description	Values	Required	Column
METER-TYPE	Meter type	1: Electricity 2: Gas 3: Water	Yes	I
METER-UNIT	Unit	1: kWh 2: m^3	Yes	J
PCONST	Pulse step	1~999999	Yes	K
PRATIO	Power ratio	0.01~99999.99	Yes	L

Keyword	Description	Values	Required	Column
USAGE	Measurement target	1: HVAC 2: Non-HVAC	Ye	M

Di

Keyword	Description	Values	Required	Column
MONTYPE	Application (type of monitoring)	0: Start/stop monitoring 1: Error monitoring	Yes	I
CPTYPE	Contact type	0: A-type contact 1: B-type contact	No	J

Dio

Keyword	Description	Values	Required	Column
STARTSTOP-ADDR	Output address	1~3	Yes	H
STARTSTOP-CPTYPE	Output contact type	0: A-type contact 1: B-type contact	Yes	I
STARTSTOPMON-ADDR	Start/stop monitoring address	Port 1: 2~8	Yes	J
STARTSTOPMON-CPTYPE	Start/stop monitoring contact type	0: A-type contact 1: B-type contact	Yes	K

Common – External equipment

Keyword	Description	Values	Required	Column
Ending in "-H" (e.g. EXTERNALPI-H)	Header row identifier	–	Yes	A
Ending in "-D" (e.g. EXTERNALPI-D)	Data row identifier	–	Yes	A
EQUIPMENTID	Equipment ID	Set automatically. Do NOT enter a value.	No	B
NAME	Equipment name	1-20 characters	Yes	C
LOCATION	Installation location	< 50 characters	No	D
STATUS	Commissioning state	Set automatically. Do NOT enter a value.	No	E
ICON	Icon ID	Determines the equipment icon, value between 100~999.	Yes	F
NODENO	Node number	1~30	Yes	G
ADDRESS	Address	1~120	Yes[(a)]	H

[(a)] Only relevant for External Pi, External Ai and External Ao.

External Pi

Keyword	Description	Values	Required	Column
METER-TYPE	Meter type	1: Electricity 2: Gas 3: Water	Yes	I

Keyword	Description	Values	Required	Column
METER-UNIT	Unit	1: kWh 2: m^3	Yes	J
PCONST	Pulse step	1~999999	Yes	K
PRATIO	Power ratio	0.01~99999.99	Yes	L
USAGE	Measurement target	1: HVAC 2: Non-HVAC	Ye	M

External Di/Dio

Keyword	Description	Values	Required	Column
STARTSTOPMON-ADDR	Start/stop monitoring address	1~120 0 = Not set	Yes	H
STARTSTOPMON-CPTYPE	Start/stop monitoring contact type	0: A-type contact 1: B-type contact	Yes	I
ERRORMON-ADDR	Error monitoring address	1~120 0 = Not set	Yes	J
ERRORMON-CPTYPE	Error monitoring contact type	0: A-type contact 1: B-type contact	Yes	K

External Dio

Keyword	Description	Values	Required	Column
STARTSTOP	Output method	0: Always 1: Instantaneous	Yes	L
STARTSTOP-ADDR1	Output 1 address	1~12	Yes	M
STARTSTOP-ADDR2	Output 2 address	1~120	Yes	N
STARTSTOP-CPTYPE	Output contact type	0: A-type contact 1: B-type contact	Yes	O

Ai/Ao

Keyword	Description	Values	Required	Column
UNITSTR	Unit label	≤ 8 characters	No	I
ANALOGTYPE	Analog type	0: Temperature 1: Other	Yes	J

Ai

Keyword	Description	Values	Required	Column
UNIT TYPE	Unit type	0: Thermistors 1: Other	Yes	K
MINVAL	Minimum value	Temperature: -512.0~512.0 Other: -9999999~9999999	No	L
MAXVAL	Maximum value		Yes	M
VIEWUNIT	Display accuracy	Temperature: 0.01 Other: 0.0001, 0.001, 0.01, 0.1, 1	Yes	N

Ao

Keyword	Description	Values	Required	Column
TERMMINVAL	Terminal maximum value	Temperature: -512.0~512.0 Other: -9999999~9999999	Yes	K
TERMMAXVAL	Terminal minimum value			L
OPMINVAL	Minimum operation value			M
OPMAXVAL	Maximum operation value			N
OPUNIT	Display accuracy	Temperature: 0.01 Other: 0.0001, 0.001; 0.01, 0.1, 1, 10, 100, 1000, 10000, 100000, 1000000	Yes	O

Common – BACnet equipment

Keyword	Description	Values	Required	Column
Ending in "-H" (e.g.BACNETDI-H)	Header row identifier	–	Yes	A
Ending in "-D" (e.g. BACNETDI-D)	Data row identifier	–	Yes	A
EQUIPMENTID	Equipment ID	Set automatically, do NOT enter a value.	No	B
NAME	Equipment name	1-20 characters	Yes	C
LOCATION	Installation location	< 50 characters	No	D
STATUS	Commissioning state	Set automatically, do NOT enter a value.	No	E
ICON	Icon ID	Determines the equipment icon, value between 100~999. 0 = Automatic	Yes	F
DEVICEINSTANCE-ID	Server device instance number (unique)	0~4194302	Yes	G

BACnet Di

Keyword	Description	Values	Required	Column
INPUTOBJECT-TYPE	State object type (input object)	-1: Unused 3: BI 4: BO 5: BV	Yes	H
INPUTOBJECT-ID	State object instance number (input object)	0~4194302	Yes, unless column H value is -1.	I

Keyword	Description	Values	Required	Column
ERROROBJECT-TYPE	Abnormal object type (error object)	-1: Unused 3: BI 4: BO 5: BV	Yes1.	J
ERROROBJECT-ID	Abnormal object instance number (error object)	0~4194302	Yes, unless column J value = -1.	K

BACnet Dio

Keyword	Description	Values	Required	Column
INPUTOBJECT-TYPE	State object type (input object)	-1: Unused 3: BI 4: BO 5: BV	Yes	H
INPUTOBJECT-ID	State object instance number (input object)	0~4194302	Yes, unless column H value is -1.	I
OUTPUTOBJECT-TYPE	Operation object type (output object)	4: BO 5: BV	Yes	J
OUTPUTOBJECT-ID	Operation object instance number (output object)	0~4194302	Yes	K
ERROROBJECT-TYPE	Abnormal object type (error object)	-1: Unused 3: BI 4: BO 5: BV	Yes1.	L
ERROROBJECT-ID	Abnormal object instance number (error object)	0~4194302	Yes, unless column L value = -1.	M

BACnet Ai

Keyword	Description	Values	Required	Column
INPUTOBJECT-TYPE	State object type (input object)	-1: Unused 3: BI 4: BO 5: BV	Yes	H
INPUTOBJECT-ID	State object instance number (input object)	0~4194302	Yes, unless column H value is -1.	I
UNITSTR	Unit label	≤ 8 characters	No	I
ANALOGTYPE	Analog type	0: Temperature 1: Other	Yes	

Keyword	Description	Values	Required	Column
MINVAL	Minimum value	Temperature: -512.0~512.0 Other: -9999999~9999999	No	
MAXVAL	Maximum value		Yes	
VIEWUNIT	Display accuracy	Temperature: 0.01 Other: 0.0001, 0.001, 0.01, 0.1, 1	Yes	N

BACnet Ao

Keyword	Description	Values	Required	Column
OUTPUTOBJECT-TYPE	Operation object type (output object)	1 AO 2: AV	Yes	H
OUTPUTOBJECT-ID	Operation object instance number (output object)	0~4194302	Yes	I
UNITSTR	Unit label	≤ 8 characters	No	J
ANALOGTYPE	Analog type	0: Temperature 1: Other	Yes	K
OPMINVAL	Minimum value	Temperature: -512.0~512.0 Other: -9999999~9999999	Yes	L
OPMAXVAL	Maximum value		Yes	M
OPUNIT	Display accuracy	Temperature: 0.01 Other: 0.0001, 0.001; 0.01, 0.1, 1, 10, 100, 1000, 10000, 100000, 1000000	Yes	N

BACnet Mi

Keyword	Description	Values	Required	Column
INPUTOBJECT-TYPE	State object type (input object)	13: MI 14: MO 19: MV	Yes	H
INPUTOBJECT-ID	State object instance number (input object)	0~4194302	Yes	I
MULTISTATE-STR1~10	Multi state display string	≤ 25 characters	No	J~S

BACnet Mo

Keyword	Description	Values	Required	Column
OUTPUTOBJECT-TYPE	Operation object type (output object)	14: MO 19: MV	Yes	H
OUTPUTOBJECT-ID	Operation object instance number (output object)	0~4194302	Yes	I
MULTISTATE-STR1~10	Multi state display string	≤ 25 characters	No	J~S

BACnet group

Keyword	Description	Values	Required	Column
Ending in "-H" (e.g.GROUP-H)	Header row identifier	–	Yes	A
Ending in "-D" (e.g.GROUP-D)	Data row identifier	–	Yes	A
NAME	Group name	1-20 characters	Yes	B
GROUPID	Group identifier	Set automatically, do NOT enter a value.	No	C
ICON	Group icon	Determines the group icon, value between 100~999. 0 = Automatic	Yes	D

Grouped BACnet **equipment**

Keyword	Description	Values	Required	Column
Ending in "-H" (e.g.GROUPDI-H)	Header row identifier	–	Yes	A
Ending in "-D" (e.g.GROUPDI-D)	Data row identifier	–	Yes	A
GROUPID	Group identifier	Set automatically, do NOT enter a value.	No	B
EQUIPMENTID	Equipment ID	Set automatically, do NOT enter a value.	No	C

BACnet **server**

Keyword	Description	Values	Required	Column
SETTINGID	Setting ID	Set automatically. Do NOT enter a value.	No	B
NAME	Server name	1-20 characters	Yes	C
DEVICEINSTANCE-ID	Device instance number (unique)	0~4194302	Yes	D
POLLING	Polling cycle	10~3600 seconds	Yes	E
RPM	RP / RPM setting	0~30	Yes	F
SUBSCRIBECOV	Parameter (for SubscribeCOV)	3600~28800 seconds	Yes	G

BACnet **client**

Keyword	Description	Values	Required	Column
SETTINGID	Setting ID	Set automatically. Do NOT enter a value.	Yes	B
DEVICEINSTANCE-ID	Device instance number (unique)	0~4194302	Yes	C
APDU-TIMEOUT	APDU timeout time	1~120 seconds	Yes	D
APDU-RETRY	APDU retry count	0~7	Yes	E
SEGMENT-TIMEOUT	Segment timeout time	1~10 seconds	Yes	F

Keyword	Description	Values	Required	Column
PRIORITY	Priority	1~16	Yes	G
TIMEADUST-FLAG	Time adjustment flag	0: Disabled 1: Enabled	Yes	H
TIMEADJUST-TIME	Time adjustment time	00:00~23:59	Yes	I

12.3 External equipment mapping

The following table describes the mapping between the types of external equipment and I/O modules.

Type of external equipment	I/O	I/O modules				
		Di	Do	Pi	Ai[a]	Ao
External Di	Operational state	●				
	Normal/error status	●[b]				
External Dio (constant contact)	Operational state	●[b]				
	Normal/error status	●[b]				
	Stopped state		●			
External Dio (instantaneous contact)	Operational state	●[b]				
	Normal/error status	●[b]				
	Instantaneously ON		●			
	Instantaneously OFF		●			
External Pi	Pulse input			●		
External Ai	Analogue input				●	
External Ao	Analogue output					●

[a] This includes thermistor modules.
[b] These contacts can be left unset during external equipment registration, to exclude them from input monitoring.

12.4 Supported I/O modules

The following table provides a list of all supported I/O modules.

I/O module type	Number of input/ output contacts per module	Specifications	Model number
Di	2 contacts / 4 contacts / 8 contacts	Voltage-free contact input Contact rating: 24 V DC / 4.5 mA	750-400 (2 contacts) 750-432 (4 contacts
		Voltage-free contact input Contact rating: 24 V DC / 2.8 mA	750-430 (8 contacts)

I/O module type	Number of input/ output contacts per module	Specifications	Model number
Do	2 contacts / 4 contacts	Voltage-free contact input Contact rating: 230 V AC / 30 V DC, 2 mA	750-513/000-001 (2 contacts)
		Voltage-free contact input Contact rating: 24 V DC / 0.5 A	750-504 (4 contacts)
Ai	2 contacts / 4 contacts	Rated at 4~20 mA: 12-bit resolution	750-454 (2 contacts / current) 750-455 (4 contacts / current)
		Rated at −10~10 V: 13-bit resolution	750-479 (2 contacts / voltage)
		Rated at 0~10 V: 12-bit resolution	750-459 (4 contacts / voltage)
Ao	2 contacts / 4 contacts	Rated at 4~20 mA: 12-bit resolution	750-554 (2 contacts / current) 750-555 (4 contacts / current)
		Rated at 0~10 V: 10-bit resolution	750-560 (2 contacts / voltage)
		Rated at 0~10 V: 12-bit resolution	750-559 (4 contacts / voltage)
Thermistor	2 contacts / 4 contacts	BTC20K thermistor	750-461/020-000 (2 contacts)
		PT100 3-wire	750-461 (2 contacts)
		PT100 2-wire	750-460 (4 contacts)
Pi	2 contacts	Minimum pulse width: 1 ms	750-638 (2 contacts)

In addition, there are external modules besides I/O modules that can either be required or optional:

I/O module type	Module type	Specifications	Model number
Required modules	24 V DC power supply unit	IN: 100~240 V AC OUT: 24 V DC, 2.5 A	787-712
	Communication unit (bus coupler)	RS485, Max: 115.2kbps Not programmable	750-315/300-002[(a)]
	Connectors[(b)]	—	750-960
	Termination module	—	750-600
Optional modules	Power supply module	IN: 24 V DC OUT: 5 V DC	750-613

[(a)] Daikin Industries, Ltd.. Communication units other than the model numbers listed CANNOT be connected.
[(b)] This connector must be attached to a communications unit that is connected to the RS485 port (2-pin) of the DC+ Edge.

12.5 BACnet equipment mapping

The following BACnet objects can be assigned in Daikin Cloud Plus:

ID	Object type	Description
0	AI	Analog input values Example: temperature, humidity, air pressure, air flow, …
1	AO	Analog output values Example: supply fan output
2	AV	Analog input values or analog output values
3	BI	Binary input values Example: unit on/off status, alarm on/off status
4	BO	Binary output values Example: change unit on/off status
5	BV	Binary input values or binary output values
13	MI	Multistate input values Same as binary input values, but can represent many states, which can be labelled (up to 10 states) Example: current operation mode (on, off, ventilation, eco, standby)
14	MO	Multistate output values Same as binary output values, but for more states (up to 10 states) Example: exhaust fan command
19	MV	Multistate input values or multistate output values

The following table describes the mapping between the BACnet objects (i.e. the type of equipment) in Daikin Cloud Plus and the supported objects according to the BACnet protocol.

BACnet object (in Daikin Cloud Plus)	I/O	Type of BACnet object								
		AI	AO	AV	BI	BO	BV	MI	MO	MV
BACnet Di	State object				●	●	●			
	Abnormal object				●	●	●			
BACnet Dio	State object				●	●	●			
	Abnormal object				●	●	●			
	Operation object					●	●			
BACnet Ai	State object	●	●	●						
BACnet Ao	Operation object		●	●						

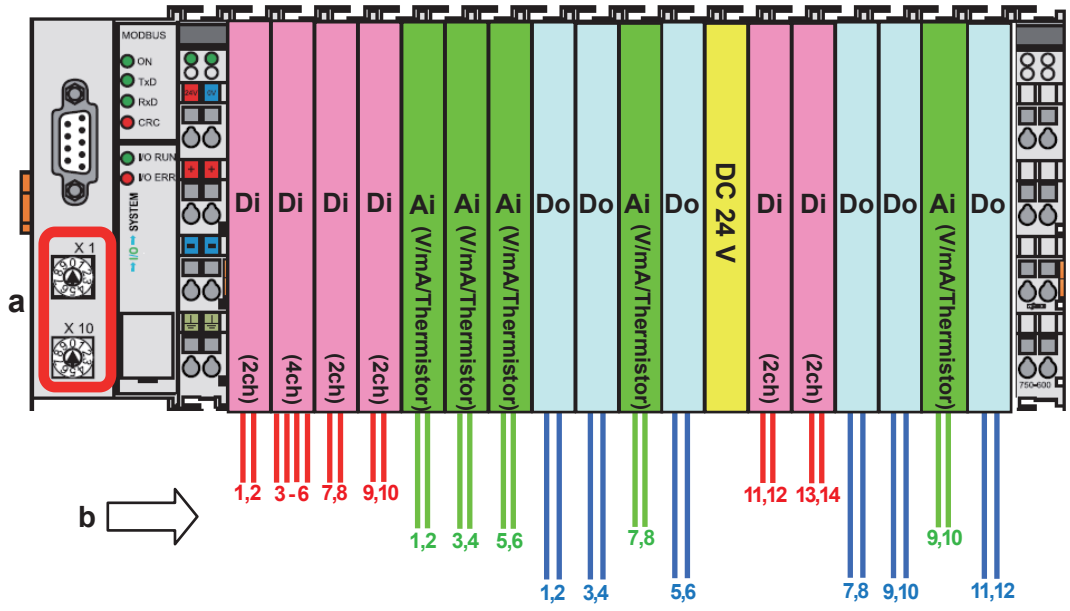
BACnet object (in Daikin Cloud Plus)	I/O	Type of BACnet object								
		AI	AO	AV	BI	BO	BV	MI	MO	MV
BACnet Mi	State object							●	●	●
BACnet Mo	Operation object								●	●

12.6 Address settings for external equipment

The node addresses of the external equipment must match the node addresses assigned to the communication unit (i.e. the bus coupler) and must be set within a range of 1 to 30. During registration of external equipment in Daikin Cloud Plus Commissioning, this number is referred to as the node number. Every node, (WAGO) can monitor up to 120 contacts, so potentially 120 node contact addresses can exist. Note that:

- The node contact address is assigned based on the position of the I/O module (left to right).
- The node contact address value is counted by module type.
- When a module is installed, the node contact address value is incremented regardless of whether the module wiring has been connected or not.
- Ai and thermistor modules are considered the same module type and must be assigned a series of consecutive addresses.
- Procedures for setting the node contact addresses may vary depending on the communication unit model.

See the configuration below as an example:



a Rotary switches (X1 and X10)
b Node contact addresses

Setting the contact addresses for external equipment (decimal setting)

The node addresses can be set on the communication unit by using rotary switches X1 and X10. Example:

- Node 1: set rotary switch X1 to 1 and X10 to 0.
- Node 10: set rotary switch X1 to 0 and X10 to 1.

- Node 30: set rotary switch X1 to 0 and X10 to 3.

Consult the node address reference table for any other node addresses:

Rotary switch	Node address (decimal)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
X1	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
X10	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1

Rotary switch	Node address (decimal)														
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
X1	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
X10	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3

Setting the node addresses for external equipment (hexadecimal setting)

The node addresses can be set on the communication unit by using the rotary switches X1 and X10. Example:

- Node 1: set rotary switch X1 to 1 and X10 to 0.
- Node 10: set rotary switch X1 to A and X10 to 0.
- Node 30: set rotary switch X1 to E and X10 to 1.

Consult the node address reference table for any other node addresses:

Rotary switch	Node address (hexadecimal)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
X1	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
X10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Rotary switch	Node address (hexadecimal)														
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
X1	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
X10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

For more information about supported modules, see "12.4 Supported I/O modules" [▸ 174].

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