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# About the documentation

## 1.1 About this document

### Target audience

- Authorised installers

### Documentation set

This document is part of a documentation set. The complete set consists of:
- General safety precautions
- Safety instructions that you must read before installing
- Format: Paper (in the box of the indoor unit)
- Installation manual:
  - Installation instructions
  - Format: Paper (supplied in the kit)
- Installer reference guide:
  - Installation instructions, configuration, application guidelines...

Latest revisions of the supplied documentation may be available on the regional Daikin website or via your dealer.

The original documentation is written in English. All other languages are translations.

### Technical engineering data

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

## About the product

The Daikin Altherma LAN adapter allows for smartphone control of Daikin Altherma systems and, depending on the model, can be used in various Smart Grid applications, such as the storage of self-generated electrical energy as thermal energy (e.g., as domestic hot water).

The LAN adapter is available in 2 versions:

<table>
<thead>
<tr>
<th>Model</th>
<th>Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRP068A61</td>
<td>Smartphone control + Smart Grid applications</td>
</tr>
<tr>
<td>BRP068A62</td>
<td>Smartphone control only</td>
</tr>
</tbody>
</table>

The LAN adapter is available in 2 versions:

- **BRP068A61**
  - Smartphone control + Smart Grid applications
- **BRP068A62**
  - Smartphone control only
3 About the box

Components: casing

![Diagram of casing components]

- Wall mounting holes
- Knockout holes (wiring from the bottom)
- Knockout holes (wiring from the rear)
- Ethernet connection
- Status LEDs

Components: PCB

![Diagram of PCB components]

- X1A
- X2A
- X3A
- X4A
- DIP switch
- Status LEDs
- microSD card slot

Status LEDs

<table>
<thead>
<tr>
<th>LED</th>
<th>Description</th>
<th>Behaviour</th>
</tr>
</thead>
</table>
| ![LED symbol] | Indication of power to the adapter, and of normal operation. | • LED flashing: normal operation.  
• LED OFF: no operation. |
| ![LED symbol] | Indication of TCP/IP communication with the router. | • LED ON: normal communication.  
• LED flashing: communication problem. |
| ![LED symbol] | Indication of communication with the indoor unit. | • LED ON: normal communication.  
• LED flashing: communication problem. |

INFORMATION

When the LAN adapter performs a Smart Grid compatibility check, the Smart Grid LED flashes. This is NOT erroneous behaviour. After a successful check, the LED will either stay ON or go OFF. When the LED keeps flashing for more than 30 minutes, the compatibility check failed, and NO Smart Grid operation is possible.

2.1 System requirements

Make sure your Daikin Altherma system is compatible for use with the LAN adapter (smartphone control and/or Smart Grid applications), and that all system components meet software requirements. For more information, see [http://www.daikineurope.com/support-and-manuals/product-information/](http://www.daikineurope.com/support-and-manuals/product-information/)

3 About the box

3.1 To unpack the LAN adapter

1. Unpack the LAN adapter.
2. Separate the accessories.
4 Preparation

4.1 Installation site requirements

- Mind the following spacing installation guidelines:
  - (a) Provide enough space to connect the Ethernet cable without exceeding its minimum bend radius (typically 90 mm)
  - (b) Provide enough space to open the casing with a flat-blade screwdriver (typically 160 mm)

- The LAN adapter is designed to be wall-mounted in dry, indoor locations only. Make sure the installation surface is a flat and vertical non-combustible wall.
- The LAN adapter is designed to be mounted in the following orientation only: with the PCB on the right-hand side in the casing, and the Ethernet connector facing the floor.
- The LAN adapter is designed to operate in ambient temperature ranging from 5~35°C.
- Do NOT install the LAN adapter in the following places:
  - In places with high humidity (max. RH=95%), such as bathrooms.
  - In places where frost is possible.

4.2 Overview of electrical connections

Connections

<table>
<thead>
<tr>
<th>Connection</th>
<th>Cable section</th>
<th>Wires</th>
<th>Maximum cable length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessory cables</td>
<td>—</td>
<td>—</td>
<td>50/100 m²</td>
</tr>
<tr>
<td>Router (X4A)</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Field-supplied cables</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
</tbody>
</table>
5 Installation

5.1 Overview: Installation

The installation of the LAN adapter consists of the following stages:
1. Mounting the rear casing to the wall
2. Mounting the PCB to the back casing
3. Connecting electrical wiring
4. Mounting the front casing to the back casing

5.2 Mounting the LAN adapter

5.2.1 About mounting the LAN adapter

The LAN adapter is mounted to the wall by way of the mounting holes (a) in the rear casing. Before mounting the rear casing to the wall, you have to remove some knockout holes (b)(c), depending on how you want to route the wiring and insert it into the adapter. You can route and insert the wiring from the bottom or from the rear. Respect the following rules and restrictions:

<table>
<thead>
<tr>
<th>Wiring routed and inserted from the bottom</th>
<th>Possibilities and restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONLY for surface wiring routed from the bottom.</td>
<td></td>
</tr>
<tr>
<td>• When routing wiring from the bottom, ALWAYS let it enter the adapter via the holes in the bottom of the casing (b). It is NOT allowed to clamp this wiring between the casing and the wall and let it enter via the holes in the rear (c).</td>
<td></td>
</tr>
<tr>
<td>• The wiring for X1A and X4A MUST be routed and inserted from the bottom. The wiring for X2A and X3A CAN be routed and inserted from the bottom (or from the rear).</td>
<td></td>
</tr>
<tr>
<td>• When routing and inserting wiring from the bottom, remove the required knockout holes in the bottom of the casing (b) and replace them with the grommets from the accessory bag.</td>
<td></td>
</tr>
</tbody>
</table>

4.2.2 Indoor unit

For power and communication with the indoor unit, the LAN adapter is to be connected to the indoor unit via a 2-wire cable. There is NO separate power supply: the adapter gets its power from the indoor unit.

4.2.3 Electrical meter

If the LAN adapter is connected to an electrical pulse meter (field supply), make sure the meter meets the following requirements:

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Pulse meter (5 V DC pulse detection)</td>
</tr>
<tr>
<td>Possible number of pulses</td>
<td>0.1 pulse/kWh</td>
</tr>
<tr>
<td></td>
<td>1 pulse/kWh</td>
</tr>
<tr>
<td></td>
<td>10 pulse/kWh</td>
</tr>
<tr>
<td></td>
<td>100 pulse/kWh</td>
</tr>
<tr>
<td></td>
<td>1000 pulse/kWh</td>
</tr>
<tr>
<td>Pulse duration</td>
<td>Minimum On time</td>
</tr>
<tr>
<td></td>
<td>10 ms</td>
</tr>
<tr>
<td></td>
<td>Minimum Off time</td>
</tr>
<tr>
<td></td>
<td>100 ms</td>
</tr>
<tr>
<td>Measurement type</td>
<td>Depends on the installation:</td>
</tr>
<tr>
<td></td>
<td>• Single-phase AC meter</td>
</tr>
<tr>
<td></td>
<td>• Three-phase AC meter (balanced loads)</td>
</tr>
<tr>
<td></td>
<td>• Three-phase AC meter (unbalanced loads)</td>
</tr>
</tbody>
</table>

X1A/N+L supply a detection voltage to the input contact of X1A. The detection voltage enables the detection of the state (open or close) of the digital inputs, and does NOT supply power to the rest of the LAN adapter PCB.

Make sure X1A/N+, are protected by a fast acting circuit breaker (rated current 100 mA~6 A).

The rest of the wiring to X1A differs depending on the Smart Grid application. For more information, see "7 Smart Grid application" on page 11.

5.2.4 Digital inputs

Connector X1A is for the connection of the LAN adapter to the digital inputs of a solar inverter / energy management system, and allows for use of the Daikin Altherma system in various Smart Grid applications.

<table>
<thead>
<tr>
<th>Connection</th>
<th>Cable section</th>
<th>Wires</th>
<th>Maximum cable length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indoor unit (X3A)</td>
<td>0.75~1.25 mm²</td>
<td>2²</td>
<td>200 m</td>
</tr>
<tr>
<td>Electrical meter (X2A)</td>
<td>0.75~1.25 mm²</td>
<td>2²</td>
<td>100 m</td>
</tr>
<tr>
<td>Digital inputs (X1A)</td>
<td>0.75~1.5 mm²</td>
<td>Depends on application²</td>
<td>100 m</td>
</tr>
</tbody>
</table>

(a) The Ethernet cable delivered as an accessory is 1 m long. It is, however, possible to use a field-supplied Ethernet cable. In this case, respect the maximum allowed distance between LAN adapter and router, which is 50 m in case of Cat5e cables, and 100 m in case of Cat6 cables.

(b) These wires MUST be sheathed. Recommended strip length: 6 mm.

(c) These wires MUST be sheathed. Recommended strip length: 6 mm.

(d) All wiring to X1A MUST be H05VV. Required strip length: 7 mm. For more information, see "4.2.4 Digital inputs" on page 5.
5 Installation

### Wiring Possibilities and restrictions

<table>
<thead>
<tr>
<th>Wiring routed and inserted from the rear</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ ONLY for in-wall wiring entering the adapter from the rear.</td>
</tr>
<tr>
<td>▪ The wiring for X2A and X3A CAN be routed and inserted from the rear (or from the bottom). The wiring for X1A and X4A CANNOT be routed and inserted from the rear.</td>
</tr>
<tr>
<td>▪ It is NOT allowed to route wiring from the bottom, clamp it between the casing and the wall, and let it enter via the holes in the rear.</td>
</tr>
</tbody>
</table>

### Wiring from the bottom

ALWAYS replace any removed knockout holes with the grommets delivered in the accessory bag. Before inserting the grommets into the holes, cut them open with a utility knife, so that you can let the wiring enter the adapter through the grommets. The grommets MUST be inserted into the holes before you insert the wiring into the adapter.

### Wiring from the rear

When removing knockout holes, make sure to remove any sharp edges that might arise around the holes, to protect the wiring from damage.

**INFORMATION**

Letting the wiring enter the adapter from the rear allows you to hide the wiring in the wall.

It is NOT possible to let the Ethernet cable enter from the rear. The Ethernet cable is ALWAYS connected from the bottom.

#### 5.2.2 To mount the rear casing to the wall

1. Hold the rear casing against the wall and mark the position of the holes.
2. Drill the holes.

#### 5.2.3 To mount the PCB to the rear casing

NOTICE: Risk of electrostatic discharge

Before mounting the PCB, touch an earthed part (a radiator, the casing of the indoor unit, …) to eliminate static electricity and protect the PCB from damage. ONLY handle the PCB by its sides.

### 5.3 Connecting the electrical wiring

#### 5.3.1 About connecting the electrical wiring

**Typical workflow**

Connecting the electrical wiring typically consists of the following stages:

1. Connecting the adapter to the indoor unit.
2. Connecting the adapter to a router.
3. Connecting the adapter to an electrical meter (BRP069A61 only).
4. Connecting the adapter to the digital outputs of a solar inverter / energy management system (BRP069A01 only).
5.3.2 Precautions when connecting the electrical wiring

**INFORMATION**
Also read the precautions and requirements in the following chapters:
- General safety precautions
- Preparation

**DANGER: RISK OF ELECTROCUTION**
Do NOT turn on the power supply (both the power supplied by the indoor unit to X3A and the detection voltage supplied to X1A) before you have connected all the wiring and closed the adapter.

**NOTICE**
To prevent damage to the PCB, it is NOT allowed to connect the electrical wiring with the connectors already connected to the PCB. First connect the wiring to the connectors, then connect the connectors to the PCB.

**WARNING**
To prevent damage and/or injury, do NOT make any connections to X1A and X2A on LAN adapter BRP069A62.

5.3.3 To connect the indoor unit

**INFORMATION**
- In the indoor unit switch box, the cable is connected to the same terminals the user interface is connected to. For more information, see the installation manual of the indoor unit.
- The 2 wires from the cable are NOT polarised. When connecting them to the terminals, their polarity does NOT matter.

1. When entering the wiring from the bottom: inside the LAN adapter casing, ensure strain relief by routing the cable along the indicated cable path.
2. Connect indoor unit terminals X5M/1+2 to LAN adapter terminals X3A/1+2.

5.3.4 To connect the router

**WARNING**
To prevent communication problems due to cable breakdown, do NOT exceed the minimum bend radius of the Ethernet cable.

5.3.5 To connect the electrical meter

**INFORMATION**
This connection is ONLY supported by LAN adapter BRP069A61.

1. When entering the wiring from the bottom: inside the LAN adapter casing, ensure strain relief by routing the cable along the indicated cable path.
2. Connect the electrical meter to LAN adapter terminals X2A/1+2.

**INFORMATION**
Mind the polarity of the cable. The positive wire MUST be connected to X2A/1; the negative wire to X2A/2.

**INFORMATION**
Make sure to connect the electrical meter in the correct direction, so that it measures the total energy injected INTO the grid.

5.3.6 To connect the digital inputs

**INFORMATION**
This connection is ONLY supported by LAN adapter BRP069A61.
5 Installation

INFORMATION
How the digital outputs are connected to X1A depends on the Smart Grid application. The connection described in the instructions below is for the system to run in the "Recommended ON" operation mode. For more information, see "7 Smart Grid application" on page 11.

WARNING
Make sure X1A/N+L are protected by a fast acting circuit breaker (rated current 100 mA~6A).

WARNING
When connecting the wiring to LAN adapter terminal X1A, make sure each wire is securely fastened to the appropriate terminal. Use a screwdriver to open the wire clamps. Make sure the bare copper wire is fully inserted into the terminal (bare copper wire CANNOT be visible).

1 Ensure strain relief by fastening the cable with a cable tie to the cable tie mounting.
2 Provide a detection voltage to X1A/N+. Make sure X1A/N+ are protected by a fast acting circuit breaker.
3 For the system to run in the "Recommended ON" operation mode (Smart Grid application), connect the digital input to the X1A/1+2 LAN adapter digital input.

To connect to a controllable wall socket (Smart Grid)
If a wall socket is available that is controlled by the solar inverter / energy management system, connect the LAN adapter as follows:

INFORMATION
The voltage free contact should be able to switch 230 V AC ~ 20 mA.

To connect to a voltage free contact (Smart Grid)
If the solar inverter / energy management system has a voltage free contact, connect the LAN adapter as follows:

5.4 Finishing the LAN adapter installation

5.4.1 LAN adapter serial number
Before closing the LAN adapter, note down its serial number. This number can be found on the adapter's Ethernet connector (bottommost number on X4A). Note it down in the table below.

<table>
<thead>
<tr>
<th>Serial number</th>
</tr>
</thead>
</table>

INFORMATION
The serial number is used during the configuration of the LAN adapter. For more information, see "6 Configuration" on page 9.

5.4.2 To close the LAN adapter
1 Put the front casing to the rear casing and tighten the screw.

5.5 Opening the LAN adapter

5.5.1 About opening the LAN adapter
The average installation procedure does NOT involve opening the adapter. However, in case you do have to open it, follow below procedure.
DANGER: RISK OF ELECTROCUTION
Before opening the LAN adapter, turn OFF all power supply (both the power received from the indoor unit to X3A and the detection voltage supplied to X1A, if applicable).

5.5.2 To open the LAN adapter
1. Remove the screw with a screwdriver.
2. Pull the top of the front casing towards you.

6 Configuration

6.1 Overview: Configuration
The LAN adapter is configured via the:
- Configuration web interface
- DIP switch

The LAN adapter is mostly plug-and-play. You ONLY have to make changes to settings in the following cases:

<table>
<thead>
<tr>
<th>Case</th>
<th>Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software update: the software of the LAN adapter, Daikin Altherma unit, or user interface is NOT up-to-date.</td>
<td>Update to the required software. Follow the instructions set out in “6.2 Updating software” on page 9.</td>
</tr>
<tr>
<td>Network settings: you want to make changes to the network settings (e.g. make use of a custom, static IP address).</td>
<td>Go to the configuration web interface and change the network settings there. See “6.3 Configuration web interface” on page 10 and “6.3.2 Network settings” on page 10.</td>
</tr>
<tr>
<td>Smart Grid: you want to use the LAN adapter in a Smart Grid application.</td>
<td>Go to the configuration web interface and make Smart Grid settings there. See “6.3 Configuration web interface” on page 10 and “6.3.3 Smart Grid settings” on page 10.</td>
</tr>
</tbody>
</table>

For more information on the DIP switch, see “6.4 DIP switch” on page 10. For instructions on how to perform a factory reset, see “6.3.4 Factory reset” on page 10.

6.2 Updating software
You can update the LAN adapter software in the following ways:
- using the Daikin Online Controller app
- using a micro SD card
- using the configuration web interface
- using a micro SD card

INFORMATION
For ease of use and to save time, it is recommended to update the LAN adapter software using the app.

INFORMATION
For the Daikin Altherma unit and user interface to function with the LAN adapter, it is required that their software meets requirements. ALWAYS make sure the unit and user interface have the latest software version. For more information, see http://www.daikineurope.com/support-and-manuals/product-information/.

6.2.1 To update with the Daikin Online Controller app
Prerequisite: The Daikin Online Controller app is installed on your smartphone, and you received a notification that a new update is available.
1. Open the app and start the update.
2. Result: The new software is automatically downloaded to the LAN adapter.
3. Result: To implement changes, the LAN adapter automatically performs a power reset.
4. Result: The LAN adapter software is now updated to the latest version.

INFORMATION
During the software update, the LAN adapter and the app CANNOT be operated. It is possible that the user interface of the Daikin Altherma unit displays error U8-01. When the update is finished, this error code will disappear automatically.

6.2.2 To update with a micro SD card
Prerequisite: You have an empty micro SD card with a capacity 256 MB–32 GB.
1. Insert the micro SD card into the SD card slot of your computer.
2. Go to http://www.daikineurope.com/support-and-manuals/product-information/ and download the latest LAN adapter software (zip file) to the root directory of the micro SD card.
3. Unzip the zip file in the root directory of the micro SD card.
4. Result: A folder appears on the SD card. In that folder there is a software file.
5. Make sure the power to the LAN adapter is turned OFF.
6. Insert the micro SD card into the SD card slot of the LAN adapter.
7. Turn ON the power to the LAN adapter.

Result: The LAN adapter software is now updated to the latest version.
8. Result: To implement changes, the LAN adapter automatically performs a power reset.

INFORMATION
After the automatic power reset, the status LEDs go ON and OFF alternately for 5 times. After this, the heartbeat LED will start flashing, indicating normal LAN adapter operation. It can take up to 30 minutes before the LAN adapter is synchronised with the Daikin Altherma unit.
6 Configuration

6.2.3 To update using the configuration web interface

2. Unzip the zip file on your desktop.
3. Go to the configuration web interface.
4. On the configuration web interface, go to Upload adapter SW.
5. Follow the upload instructions set out on the web interface.

Result: The LAN adapter software is now updated to the latest version.

Result: To implement changes, the LAN adapter automatically performs a power reset.

6.3 Configuration web interface

The LAN adapter is largely configured via a dedicated configuration web interface. It allows you to make changes to network settings, and configure the adapter for use of the system in Smart Grid applications. Additionally, it allows you to update the LAN adapter software, and perform a factory reset.

6.3.1 Accessing the configuration web interface

Normally, you should be able to access the configuration web interface by browsing to its URL (http://altherma.local). If this is NOT possible, 2 workarounds are available.

Access via URL

Prerequisite: Your computer is connected to the same router the LAN adapter is connected to.
Prerequisite: The router supports DHCP.

1. In your browser, go to http://altherma.local

Workaround - LAN adapter IP address

Prerequisite: Your computer is connected to the same network the LAN adapter is connected to.
Prerequisite: You have retrieved the LAN adapter's IP address.

1. In your browser, go to the LAN adapter's IP address.

To retrieve the LAN adapter's IP address, various ways are possible:

<table>
<thead>
<tr>
<th>Retrieval via</th>
<th>Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Daikin Online Controller app</td>
<td>1. In the app, go to &quot;Adapter information&quot; &gt; &quot;IP address&quot;.</td>
</tr>
<tr>
<td>Your router's DHCP client list</td>
<td>2. Retrieve the LAN adapter's IP address.</td>
</tr>
<tr>
<td>Find the LAN adapter in the router's DHCP client list.</td>
<td>3. Find the LAN adapter in the router's DHCP client list.</td>
</tr>
<tr>
<td>Retrieve the LAN adapter's IP address.</td>
<td>4. Retrieve the LAN adapter's IP address.</td>
</tr>
</tbody>
</table>

Workaround - DIP switch + fixed IP address

Prerequisite: Your computer is directly connected to the LAN adapter with an Ethernet cable, and is NOT connected to any network (wifi, LAN, ...).
Prerequisite: The power to the LAN adapter is OFF.

1. Put DIP switch 4 in the ON position.
2. Turn ON the power to the LAN adapter.
3. In your browser, go to [http://169.254.10.10](http://169.254.10.10)

For more information on the DIP switch, see "6.4 DIP switch" on page 10.

6.3.2 Network settings

To make changes to network settings, go to Network settings on the configuration web interface.

To enable/disable DHCP

1. To enable DHCP, select Automatic.
2. To disable DHCP, select Manually.

To define a static IP address

Prerequisite: Make sure Manually is selected.

1. Fill in the desired network settings.
2. To implement the settings, perform a power reset on the adapter.

6.3.3 Smart Grid settings

To make changes to Smart Grid settings, go to Smart Grid on the configuration web interface.

6.3.4 Factory reset

To perform a factory reset, go to Factory reset on the configuration web interface.

INFORMATION

Performing a factory reset is also possible by way of the DIP switch. For instructions, see "6.4 DIP switch" on page 10.

To perform a factory reset

1. Click the reset button below Factory reset.

6.4 DIP switch

Some LAN adapter functions are controlled by the DIP switch. The adapter ONLY checks the configuration of the DIP switch after a power reset. To configure the DIP switch, therefore make sure the power to the adapter is OFF.
7 Smart Grid application

INFORMATION
This information ONLY applies to LAN adapter BRP069A61.

The LAN adapter allows for the connection of the Daikin Altherma system to a photovoltaic system, minimising the power injection into the grid, and maximising the self-consumption of the power generated by the photovoltaics.

The Smart Grid application poses the following requirements to the Daikin Altherma system:

- It is recommended to ALWAYS keep the LAN adapter software up-to-date.
- The Daikin Altherma unit CANNOT be controlled with the user interface in LWT control (IC-OTV).
- Power consumption control settings [A.8.3.1] (Mode) MUST be set to "Continuous" ([4-08]=1).
- Power consumption control settings [A.8.3.2] (Type) MUST be set to "Power" ([4-09]=1).

For the Smart Grid application, the LAN adapter PCB has 2 digital inputs (SG0 (X1A/1+2) and SG1 (X1A/3+4)). These inputs need to be controlled by an external controller, such as a solar inverter, or a home energy management system. Depending on the state of the inputs, you can make the system run in 4 Smart Grid operation modes:

<table>
<thead>
<tr>
<th>Smart Grid operation mode</th>
<th>SG0</th>
<th>SG1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal operation (free mode)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Recommended ON</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Forced OFF</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Forced ON</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

7.1 "Normal operation" mode
In "Normal operation" mode, the Daikin Altherma unit operates as normal, according to its owner's settings and schedules. No Smart Grid functionalities are enabled.

7.2 "Recommended ON" mode
In "Recommended ON" mode, the Daikin Altherma system makes use of photovoltaic energy for space heating/cooling and/or domestic hot water production (i.e. energy buffering), minimising the power injection into the grid. The amount of photovoltaic energy that is used for buffering depends on the domestic hot water tank and/or the room temperature. To align the photovoltaic capacity and the power consumption by the Daikin Altherma system, the power consumption of the Daikin Altherma unit is limited either statically or dynamically.

7.2.1 Energy buffering
The "Recommended ON" operation mode allows for buffering of electrical energy into thermal energy. On the configuration web interface, you can choose what to use as buffer: the domestic hot water tank only, or the domestic hot water tank and the room.

6.5 Removal
When you connect the LAN adapter to the Daikin Altherma unit, the system registers its presence automatically. However, when you remove the adapter from the system after installation, you have to configure this manually.

6.5.1 To remove the LAN adapter from the system
1. On the user interface, go to [A.2.2.0] Installer settings > System layout > Options.
2. In the options list, select LAN adapter.
3. Select "No".

The following functions are controlled by the DIP switch:

<table>
<thead>
<tr>
<th>DIP switch</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1</td>
<td>Enable/disabled Smart Grid functionality.</td>
</tr>
<tr>
<td>2</td>
<td>Factory reset. By performing below procedure, you can reset the LAN adapter to default configuration parameters (i.e. those set in the configuration web interface). The factory state of the pin is &quot;OFF&quot;.</td>
</tr>
<tr>
<td>3</td>
<td>Spare switch</td>
</tr>
<tr>
<td>4</td>
<td>Enable/disabled a custom static IP address. By default, IP settings are configured dynamically by way of the DHCP protocol. However, it is possible to bypass this protocol and activate a custom static IP address. This is useful in case you are NOT able to access the configuration web interface automatically. For more information, see &quot;6.3.1 Accessing the configuration web interface&quot; on page 10 and &quot;Workaround - DIP switch + fixed IP address&quot; on page 10.</td>
</tr>
<tr>
<td>5-8</td>
<td>Spare switches</td>
</tr>
</tbody>
</table>

(a) ONLY supported by LAN adapter BRP069A61.

INFORMATION
For BRP069A61, 'power' is both the power supplied by the indoor unit AND the 230 V AC detection voltage supplied to X1A.

For BRP069A62, 'power' is the power supplied by the indoor unit. For BRP069A61+BRP069A62, 'power' is the power supplied by the indoor unit AND the 230 V AC detection voltage supplied to X1A.

Notices:
- Beware of electrostatic discharge.
- Use appropriate tooling to set the DIP switches to another position.
8 Troubleshooting

To use the room as buffer
1. Make the appropriate setting on the configuration web interface.
2. Make sure user interface setting [C-07] is set to 2: RT Control.

To use the domestic hot water tank as buffer
1. Make the appropriate setting on the configuration web interface.
2. Make sure a domestic hot water tank is part of the system.
3. Make sure user interface setting [E-05] is set to 1: DHW.
4. Make sure user interface setting [E-06] to 1: DHW tank.

**INFORMATION**
- The system will ONLY buffer energy when the Daikin Altherma unit is in standby mode. Normal operation (scheduled actions, etc.) has priority over energy buffering.
- On the configuration web interface, the buffering is default set to “domestic hot water tank only”.
- The domestic hot water setpoint during domestic hot water tank buffering is the maximum tank temperature for the applicable tank type.
- The space heating/cooling setpoint during room buffering is the comfort setpoint for the room.

7.2.2 Power limitation
In “Recommended ON” operation mode, the power consumption of the Daikin Altherma system is limited either statically or dynamically. In both cases, it is possible to include the power consumption of the electrical heaters in the calculation (default NOT the case).

**INFORMATION**
- The electrical heaters will ONLY operate when the power limitation is higher than the power rating of the heaters.
- For ERLQ011~016 outdoor units, the power limitation functionality is NOT available. When these outdoor units are used in a Smart Grid system, they will operate without power limitation. Electrical heater assistance, however, will be disabled.

Static power limitation
The power consumption of the Daikin Altherma unit is limited statically based on a fixed value (default 1.5 kW) that is set in the configuration web interface. During energy buffering, the power consumption of the Daikin Altherma unit will NOT exceed this limit.

Dynamic power limitation
To enable dynamic power limitation, the system requires an electrical meter. In this case, the power limitation is auto-adaptive, and dynamically performed based on the power injection into the grid, measured by the electrical meter.

**INFORMATION**
- Make sure to connect the electrical meter in the correct direction, so that it measures the total energy injected into the grid.
- For dynamic power limitation to be possible, a single connection point to the grid is required (one connection point for the photovoltaic system AND the domestic appliances). To function properly, the Smart Grid algorithm requires the net sum of generated AND consumed energy. The algorithm will NOT work when there are separate meters for generated energy and consumed energy.
- Since dynamic power limitation is performed based on electrical meter input, you do NOT have to set the power limitation value in the configuration web interface.

7.3 “Forced OFF” mode
In "Forced OFF" operation mode, the external controller can be set to trigger the system to deactivate the operation of the outdoor unit compressor and the electrical heaters. This is especially useful when a controller is available that can react to high energy tariffs. Once active, “Forced OFF” mode will cause the system to stop space heating/cooling, as well as domestic hot water production.

**INFORMATION**
- Once connected to run in one of the Smart Grid operation modes, the system will keep running in that mode until the input state is changed. Beware that if the system runs in “Forced OFF” mode for a long time, comfort issues can occur.

7.4 “Forced ON" mode
In "Forced ON" operation mode, there is NO power limitation. The system selects the comfort setpoint for domestic hot water production. The outdoor unit compressor and the electrical heaters will consume as much energy as possible.

**INFORMATION**
- Once connected to run in one of the Smart Grid operation modes, the system will keep running in that mode until the input state is changed.

8 Troubleshooting

8.1 Overview: Troubleshooting
This chapter describes what to do in case of problems.
It contains information about:
- Solving problems based on symptoms
- Solving problems based on error codes
8 Troubleshooting

8.2 Solving problems based on symptoms

8.2.1 Symptom: Cannot access the web page

<table>
<thead>
<tr>
<th>Possible causes</th>
<th>Corrective action</th>
</tr>
</thead>
<tbody>
<tr>
<td>The LAN adapter is not powered (heartbeat LED not blinking).</td>
<td>Make sure that the LAN adapter is correctly connected to the Daikin Altherma unit, and that the power of all connected equipment is turned ON.</td>
</tr>
<tr>
<td>The configuration web interface is ONLY available for 2 hours after every power reset. Its timer can have run out.</td>
<td>Perform a power reset on the LAN adapter.</td>
</tr>
<tr>
<td>The LAN adapter is NOT connected to the network (network connection LED NOT blinking).</td>
<td>Connect the LAN adapter to a router.</td>
</tr>
<tr>
<td>The LAN adapter is NOT connected to the router or the router does NOT support DHCP.</td>
<td>Connect the LAN adapter to a router that supports DHCP.</td>
</tr>
<tr>
<td>The computer is NOT connected to the same router as the LAN adapter.</td>
<td>Connect the computer to the same router as the LAN adapter.</td>
</tr>
</tbody>
</table>

**INFORMATION**
If none of the corrective actions work, try performing a power reset of the total system.

8.2.2 Symptom: Router does not support DHCP

In the rare case that the router does NOT support DHCP, or this functionality is disabled, you can use the following steps to assign a fixed IP address to the router:

1. Set DIP switch 4 to the "ON" position and reset the adapter by turning the Daikin Altherma unit OFF and ON again.
   **Result:** The adapter now uses a fixed IP address (169.254.10.10).
2. Using an Ethernet cable, connect a computer directly to the LAN adapter.
3. In your browser, go to the fixed IP address.
   **Result:** The configuration web interface opens.
4. On the configuration web interface, go to Network settings, and define a fixed IP address (Static IP address)(make sure Manually is selected).
5. Turn OFF the power to the unit.
6. Set DIP switch 4 back to the "OFF" position.
7. Turn ON the power to the unit.
   **Result:** The adapter now uses a custom-set fixed IP address.

8.3 Solving problems based on error codes

8.3.1 Error codes of the indoor unit

If the Daikin Altherma unit loses its connection with the LAN adapter, the following error code appears on the user interface:

<table>
<thead>
<tr>
<th>Error code</th>
<th>Detailed error code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>08</td>
<td>01</td>
<td>Connection with adapter lost</td>
</tr>
</tbody>
</table>

8.3.2 Error codes of the LAN adapter

LAN adapter errors are indicated by the status LEDs. There is a problem if one or more status LEDs have the following behaviour:

<table>
<thead>
<tr>
<th>LED</th>
<th>Error behavior</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="heartbeat LED NOT blinking" /></td>
<td>No normal operation. Try resetting the LAN adapter or contact your dealer.</td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Network LED flashing" /></td>
<td>Communication problem. Check the network connection.</td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Daikin Altherma communication LED flashing" /></td>
<td>Communication problem with the Daikin Altherma unit.</td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Smart Grid LED flashing for more than 30 minutes" /></td>
<td>Smart Grid compatibility problem. Try resetting the LAN adapter or contact your dealer.</td>
<td></td>
</tr>
</tbody>
</table>

**INFORMATION**
When the LAN adapter performs a Smart Grid compatibility check, the Smart Grid LED flashes. This is NOT erroneous behaviour. After a successful check, the LED will either stay ON or go OFF. When the LED keeps flashing for more than 30 minutes, the compatibility check failed, and NO Smart Grid operation is possible.

For a complete description of the status LEDs, check "2 About the product" on page 2.
9 Technical data

9 Technical data
A subset of the latest technical data is available on the regional Daikin website (publicly accessible). The full set of latest technical data is available on the Daikin extranet (authentication required).

9.1 Wiring diagram

![Wiring Diagram]

Notes to go through before starting the unit

<table>
<thead>
<tr>
<th>English</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1M</td>
<td>Main terminal</td>
</tr>
<tr>
<td>X2M</td>
<td>Field wiring terminal for AC</td>
</tr>
<tr>
<td>X5M</td>
<td>Field wiring terminal for DC</td>
</tr>
<tr>
<td><strong>...</strong></td>
<td>Earth wiring</td>
</tr>
<tr>
<td>15</td>
<td>Wire number 15</td>
</tr>
<tr>
<td><strong>...</strong></td>
<td>Field supply</td>
</tr>
<tr>
<td><strong>...</strong></td>
<td>Connection ** continues on page 15 column 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>English</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A3P</td>
<td>LAN adapter PCB</td>
</tr>
<tr>
<td>LD1-LD4</td>
<td>PCB LED</td>
</tr>
<tr>
<td>Q1DI</td>
<td>Circuit breaker</td>
</tr>
<tr>
<td>SS1 (A3P)</td>
<td>DIP switch</td>
</tr>
<tr>
<td>S1S</td>
<td># SD0 contact</td>
</tr>
<tr>
<td>S2S</td>
<td># SD1 contact</td>
</tr>
<tr>
<td>S3S</td>
<td>* Electrical pulse meter input</td>
</tr>
<tr>
<td>X1A</td>
<td>Connector</td>
</tr>
<tr>
<td>X*M</td>
<td>Terminal strip</td>
</tr>
<tr>
<td>*</td>
<td>Optional</td>
</tr>
<tr>
<td>#</td>
<td>Field supply</td>
</tr>
</tbody>
</table>