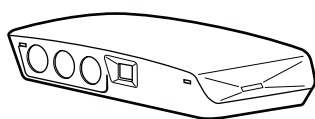




Installation manual

Daikin Altherma LAN adapter



BRP069A61
BRP069A62

Installation manual
Daikin Altherma LAN adapter

English

Table of contents

1	About the documentation	2
1.1	About this document.....	2
2	About the adapter	2
2.1	Compatibility.....	3
2.2	System requirements	3
3	About the box	3
3.1	To unpack the adapter	3
4	Preparation	4
4.1	Installation site requirements.....	4
4.2	Overview of electrical connections	4
4.2.1	Router	4
4.2.2	Indoor unit.....	4
4.2.3	Electricity meter	4
4.2.4	Solar inverter/energy management system	5
5	Installation	5
5.1	Mounting the adapter	5
5.1.1	To mount the rear casing to the wall.....	6
5.1.2	To mount the PCB to the rear casing.....	6
5.2	Connecting the electrical wiring.....	6
5.2.1	To connect the indoor unit	6
5.2.2	To connect the router.....	7
5.2.3	To connect the electricity meter	7
5.2.4	To connect the solar inverter/energy management system.....	7
5.3	Finishing adapter installation.....	8
5.3.1	Adapter serial number.....	8
5.3.2	To close the adapter	8
6	Starting up the system	8

1 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,...
 - Format: Digital files on <http://www.daikineurope.com/support-and-manuals/product-information/>

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 Business Portal (authentication required).

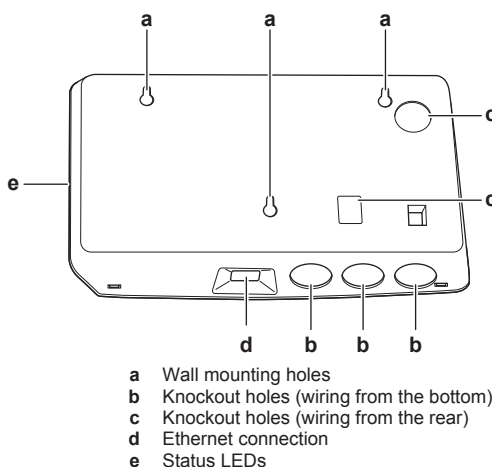
2 About the adapter

The LAN adapter allows for app control of the heat pump system and, depending on the model, allows for the integration of the heat pump system in a Smart Grid application.

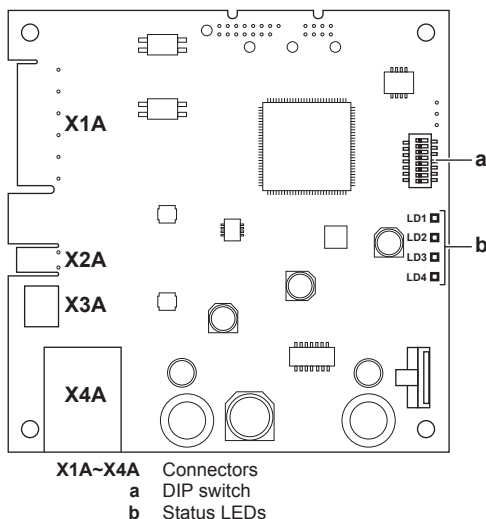
The LAN adapter is available in 2 versions:

Model	Functionality
BRP069A61	App control + Smart Grid application
BRP069A62	App control only

Components: casing





Components: PCB



Status LEDs

LED	Description	Behaviour
LD1 ♥	Indication of power to the adapter, and of normal operation.	<ul style="list-style-type: none"> • LED flashing: normal operation. • LED NOT flashing: no operation.

LED	Description	Behaviour
LD2 	Indication of TCP/IP communication with the router.	<ul style="list-style-type: none"> LED ON: normal communication. LED flashing: communication problem.
LD3 P1P2	Indication of communication with the indoor unit.	<ul style="list-style-type: none"> LED ON: normal communication. LED flashing: communication problem.
LD4 ^(a) 	Indication of Smart Grid activity.	<ul style="list-style-type: none"> LED ON: Smart Grid functionality of the indoor unit is controlled by the LAN adapter. LED OFF: system operating in normal operation conditions (space heating/cooling, production of domestic hot water), or running in the "Normal operation"/"Free running" Smart Grid operation mode.

(a) This LED is ONLY active for BRP069A61 (present for BRP069A62, but ALWAYS inactive).

2.1 Compatibility

Make sure the heat pump system is compatible for use with the LAN adapter (app control and/or Smart Grid applications). For more information, see the installer reference guide of the heat pump system.

2.2 System requirements

The requirements posed on the heat pump system depend on the LAN adapter application/system layout.

App control

Item	Requirement
LAN adapter software	It is recommended to ALWAYS keep the LAN adapter software up-to-date.

Smart Grid application

Item	Requirement
LAN adapter software	It is recommended to ALWAYS keep the LAN adapter software up-to-date.
Domestic hot water settings	To allow for energy buffering in the domestic hot water tank, on the user interface, make sure to set: <ul style="list-style-type: none"> [E-05]=1 [E-06]=1
Power consumption control settings	On the user interface, make sure to set: <ul style="list-style-type: none"> [4-08]=1 [4-09]=1



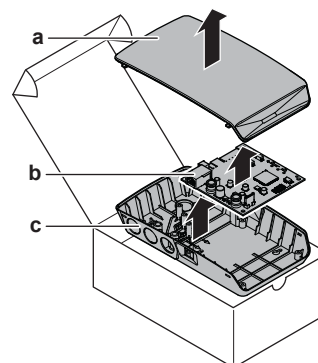
INFORMATION

For instructions on how to perform a software update, see the installer reference guide.

3 About the box

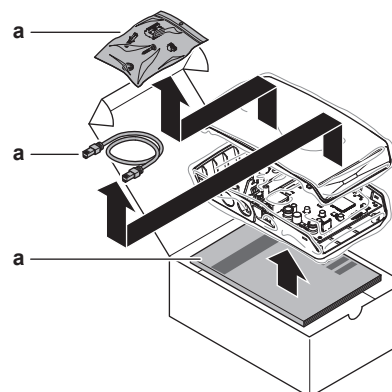
3.1 To unpack the adapter

1 Unpack the LAN adapter.



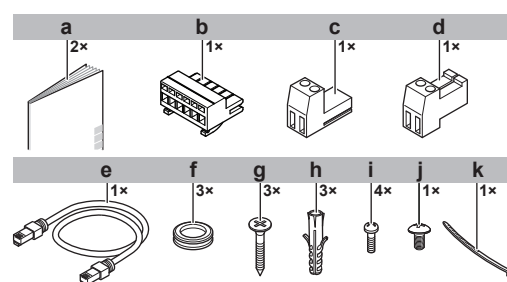
- a Front casing
- b PCB
- c Rear casing

2 Separate the accessories.



- a Accessories

Accessories



Accessory	BRP069A61	BRP069A62
a Installation manual	O	O
b 6-pole slide connector for X1A	O	—
c 2-pole slide connector for X2A	O	—
d 2-pole slide connector for X3A	O	O
e Ethernet cable	O	O
f Grommets	O	O
g Screws to mount rear casing	O	O
h Plugs to mount rear casing	O	O
i Screws to mount PCB	O	O

4 Preparation

Accessory		BRP069A61	BRP069A62
j	Screw to close front casing	○	○
k	Cable tie	○	—

4 Preparation

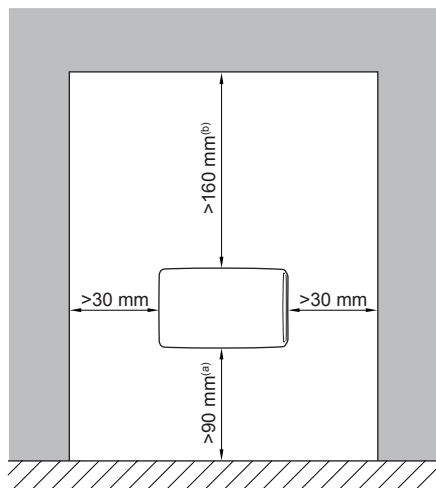
4.1 Installation site requirements



INFORMATION

Also read the maximum cable length requirements set out in "4.2 Overview of electrical connections" [▶ 4].

- Mind the following spacing installation guidelines:

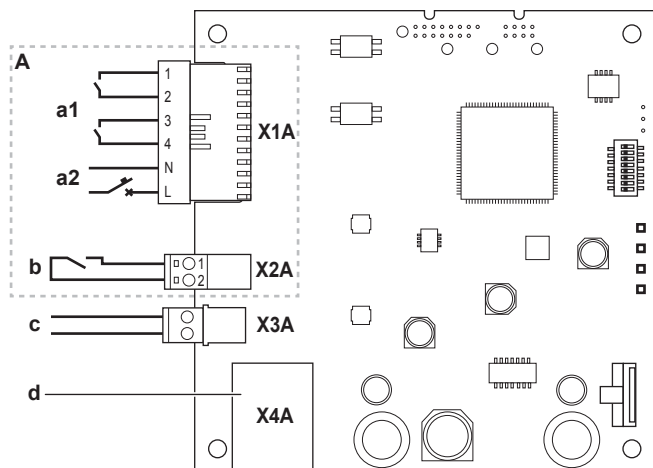


- Provide enough space to connect the Ethernet cable without exceeding its minimum bend radius (typically 90 mm)
- Provide enough space to open the casing with a flat-blade screwdriver (typically 160 mm)

- 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 temperatures ranging from 5~35°C.

4.2 Overview of electrical connections

Connectors



- A Smart Grid application only
- a1 To solar inverter/energy management system
- a2 230 V AC detection voltage
- b To electricity meter
- c To indoor unit (P1/P2)
- d To router

Connections

Connection	Cable section	Wires	Maximum cable length
Accessory cables			
Router (X4A)	—	—	50/100 m ^(a)
Field-supplied cables			
Indoor unit (P1/P2) (X3A)	0.75~1.25 mm ²	2 ^(b)	200 m
Electricity meter (X2A)	0.75~1.25 mm ²	2 ^(c)	100 m
Solar inverter/energy management system + 230 V AC detection voltage (X1A)	0.75~1.5 mm ²	Depends on application ^(d)	100 m

- 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.
- These wires MUST be sheathed. Recommended strip length: 6 mm.
- These wires MUST be sheathed. Recommended strip length: 6 mm.
- All wiring to X1A MUST be H05VV. Required strip length: 7 mm.

4.2.1 Router

Make sure the LAN adapter can be connected via a LAN connection.

The minimum category for the Ethernet cable is Cat5e.

4.2.2 Indoor unit

For power and communication with the indoor unit, the LAN adapter is connected to the indoor unit's P1/P2 terminals via a 2-wire cable. There is NO separate power supply: the adapter gets its power from the indoor unit's P1/P2 terminals.

4.2.3 Electricity meter

If the LAN adapter is connected to an electricity meter, make sure it is an **electrical pulse meter**.

Requirements:

Item		Specification
Type		Pulse meter (5 V DC pulse detection)
Possible number of pulses		<ul style="list-style-type: none"> 100 pulse/kWh 1000 pulse/kWh
Pulse duration	Minimum On time	10 ms
	Minimum OFF time	100 ms
Measurement type		Depends on the installation: <ul style="list-style-type: none"> 1N~ AC meter 3N~ AC meter (balanced loads) 3N~ AC meter (unbalanced loads)

**INFORMATION**

It is required that the electricity meter has a pulse output that can measure the total energy injected INTO the grid.

Suggested electricity meters

Phase	ABB reference
1N~	2CMA100152R1000 B21 212-100
3N~	2CMA100166R1000 B23 212-100

4.2.4 Solar inverter/energy management system

**INFORMATION**

Before installation, confirm that the solar inverter/energy management system is equipped with the digital outputs required to connect it to the LAN adapter. For more information, see the installer reference guide.

Connector X1A is for the connection of the LAN adapter to the digital outputs of a solar inverter/energy management system, and allows for the integration of the heat pump system in a Smart Grid application.

X1A/N+L supply a 230 V AC detection voltage to the input contact of X1A. The 230 V AC 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+L are protected by a fast acting circuit breaker (rated current 100 mA~6 A, type B).

The rest of the wiring to X1A differs depending on the digital outputs available on the solar inverter/energy management system and/or on the Smart Grid operation modes that you want the system to run in.

Smart Grid operation mode	SG0 (X1A/1+2)	SG1 (X1A/3+4)
Normal operation/Free running NO Smart Grid application	Open	Open
Recommended ON Energy buffering in the domestic hot water tank and/or the room, WITH power limitation.	Closed	Open
Forced OFF Deactivation of outdoor unit and electrical heater operation in case of high energy tariffs.	Open	Closed
Forced ON Energy buffering in the domestic hot water tank and/or the room, WITHOUT power limitation.	Closed	Closed

For more information, see the installer reference guide.

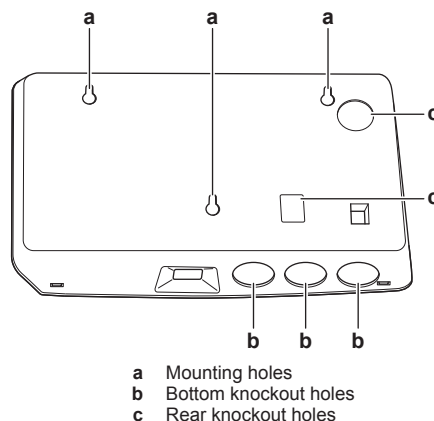
Wiring**Possibilities and restrictions**

Wiring routed and inserted from the bottom

- ONLY for surface wiring routed from the bottom.
- 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).
- 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).
- 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.

Wiring routed and inserted from the rear

- ONLY for in-wall wiring entering the adapter from the rear.
- 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.
- 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 (c).



5 Installation

5.1 Mounting the 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:

5 Installation

i INFORMATION

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.

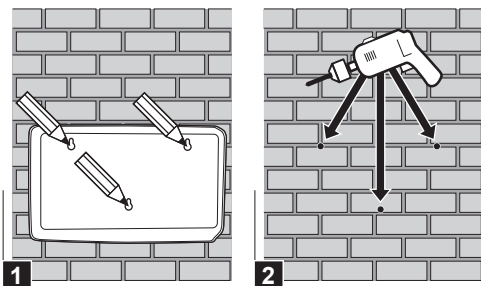


! NOTICE

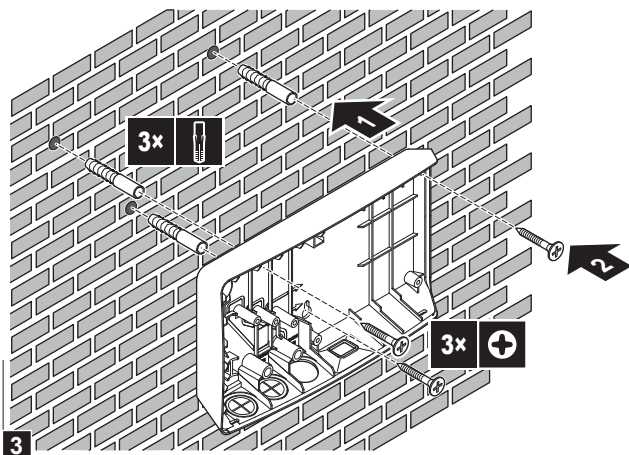
Wiring from the rear. When removing knockout holes, make sure to remove any sharp edges that might arise around the holes, this to protect the wiring from damage.

5.1.1 To mount the rear casing to the wall

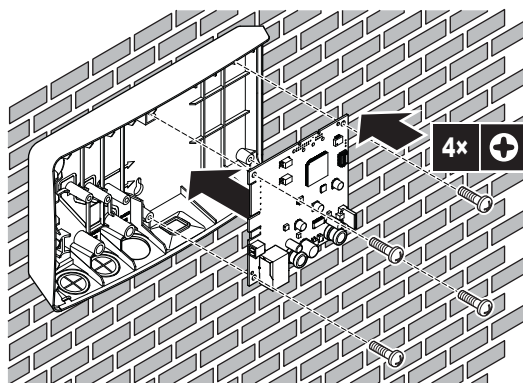
- 1 Hold the rear casing against the wall and mark the position of the holes.
- 2 Drill the holes.



- 3 Mount the rear casing to the wall with the screws and plugs from the accessory bag.



5.1.2 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.

5.2 Connecting the electrical wiring



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.

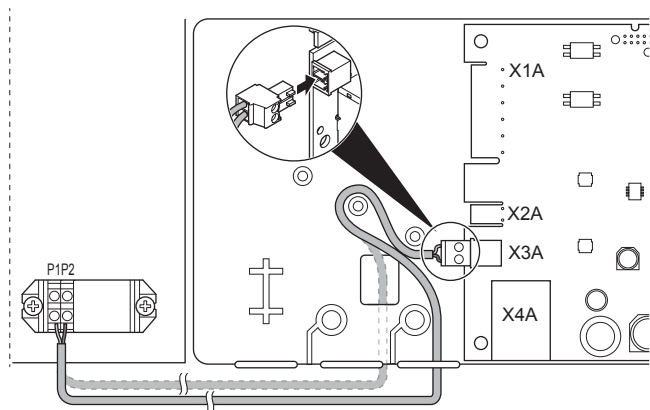
5.2.1 To connect the indoor unit



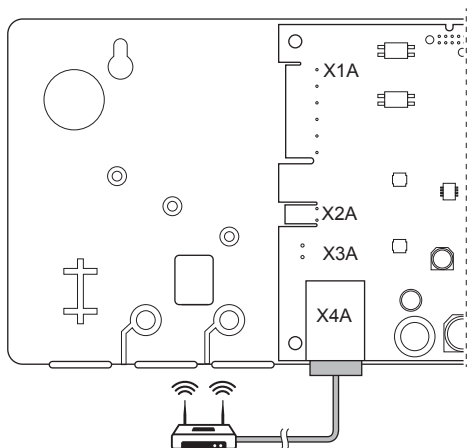
INFORMATION

- In the indoor unit switch box, the cable is connected to the same terminals the user interface is connected to (P1/P2). 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 P1/P2 to LAN adapter terminals X3A/1+2.



5.2.2 To connect the router



NOTICE

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

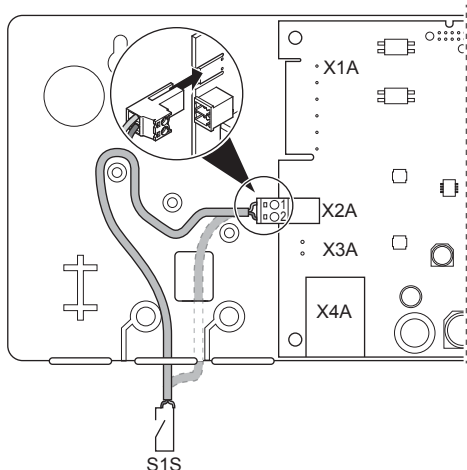
5.2.3 To connect the electricity meter



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 electricity 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.



WARNING

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

5.2.4 To connect the solar inverter/energy management system



INFORMATION

This connection is ONLY supported by LAN adapter BRP069A61.



INFORMATION

How the digital inputs 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 the installer reference guide.



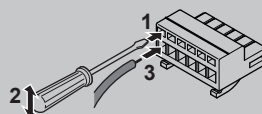
WARNING

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

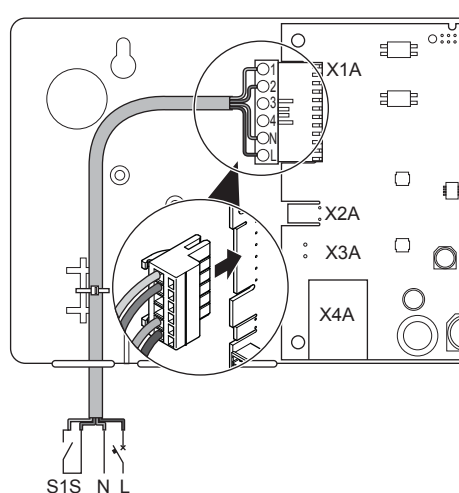


WARNING

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+L. Make sure X1A/N+L are protected by a fast acting circuit breaker (100 mA~6 A, type B).
- 3 For the system to run in the "Recommended ON" operation mode (Smart Grid application), connect the digital outputs of the solar inverter/energy management system to LAN adapter digital inputs X1A/1+2 LAN.











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