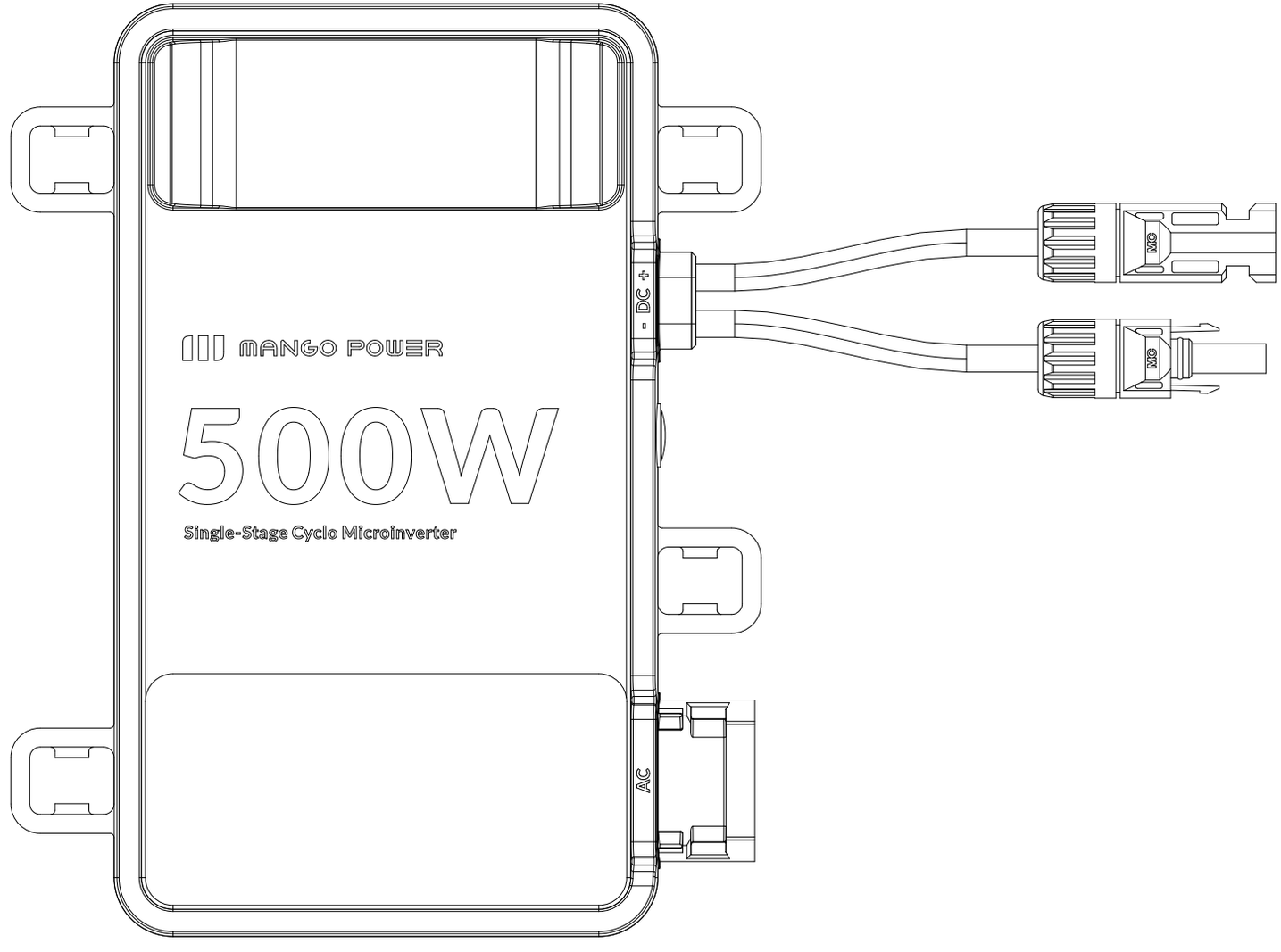
# Quick Installation Guide

Mango Power S
Mango Power S Pro



# 01 Pre-Installation Inspection Tasks

## A. Install the MANGO POWER APP on Your Phone

Please use your phone to scan the QR code on the right to download the app and register an account. With this app, you can scan the microinverter's SN and connect it to the DTU to track your system's installation process.

## B. Choose the Appropriate MicroInverter to Match the PV Modules

| Model | Typical PV Module (Number of Cells) |
|---|---|
| Mango Power S<br>Mango Power S Pro | 54–cell/108 half–cell 60–cell/120 half–cell<br>66–cell/132 half–cell 72–cell/144 half–cell<br>All of the above are compatible. |

*Mango Power S Series micro-inverters are also compatible with bifacial modules that meet input requirements.

## C. Confirm Grid Voltage in the Installation Area

Select either single-phase or three-phase installation based on the voltage system of the installation area, and ensure that the voltage range meets the requirements in the table below.

| Phase | Voltage Range |
|---|---|
| Single Phase L-L | 240V/180V-275V |
| Three Phase L-L | 208V/180V-275V 220V/180V-275V |

## D. Prepare Products and Accessories

Plan the required quantity of micro-inverters and cables in advance, and prepare the corresponding accessories. The specific accessories are as follows.

| Name | Function |
|---|---|
| AC Bus End Cap | Protects unused cable ends to prevent leakage. |
| AC Connector Sealing Cap | Seals unused connectors to prevent leakage. |
| AC Connector Removal Tool | Used to disconnect AC connectors when needed. |
| Branch Junction Box | A box used for grounding and combining each branch. |
| 20A Circuit Breaker | Used to protect each branch of micro-inverters and household devices. |
| M8 x 25mm Screws | Used for securing micro-inverters. |
| SN Map | Record SN and determine micro-inverter installation location |

## E. Recommended Number of Micro-Inverters per AC Branch

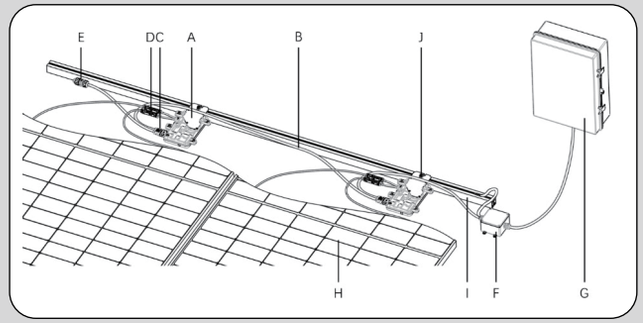
The AC branch cables used in the Mango Power S system are available in 20A (12AWG) and 30A (10AWG) options, with the maximum number of micro-inverters per branch shown below.

| Model | Power | Max Number of Connections per String (20A) | Max Number of Connections per String (30A) |
|---|---|---|---|
| Mango Power S | 400W | 7 | 13 |
| Mango Power S Pro | 500W | 7 | 11 |

*This limit may differ by region, and you should configure the number of micro-inverters per branch according to local regulations.

## F. Additional Preparations

Although the Mango Power S Series inverters have passed the 6000V surge test, it is still recommended to purchase an SPD (Surge Protection Device) to protect your PV system.




### Overall Diagram of Product and Accessories

A Microinverter
B Combiner Bus
C AC Port
D DC Port
E End Cap
F Junction Box
G Combiner Box
H Solar Panel
I Solar Panel Mounting Bracket
J T-Bolt

NEXT →

# 02 Installation Steps

## A. Install Microinverter

### A.1 Position Marking

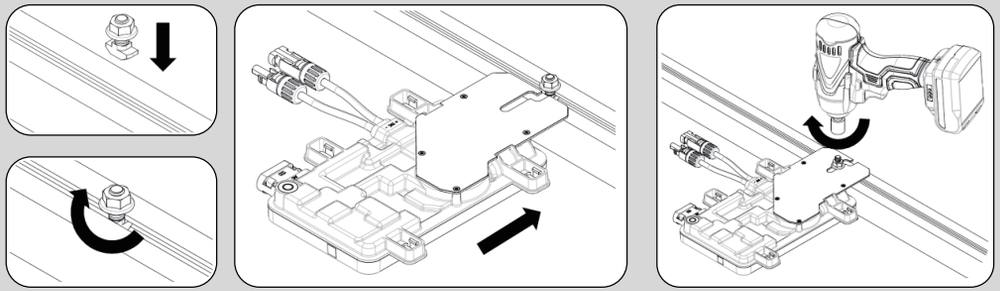
After installing the photovoltaic module rails, mark the position of the microinverter on the rails based on the module layout. It is recommended to mark it in the central area of the photovoltaic module.

### A.2 Install Screws

Install M8 x 25mm screws at the marked positions.

### A.3 Secure Tightening

Position the microinverter and tighten the screws with a torque of 9N·m to ensure it is firmly secured to the rail.



Note

* Ensure at least 2cm of space around the microinverter for optimal heat dissipation.
* The microinverter must be installed below the photovoltaic module. Do not install the microinverter upside down.

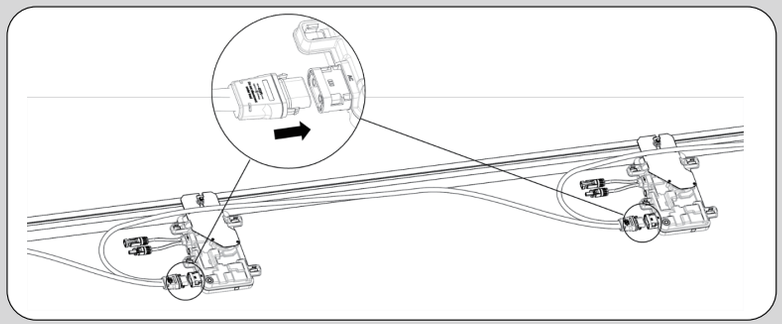
## B. Connect Microinverter to AC Cable

### B.1 Cable Planning

Plan the AC cable layout on the rail according to the site conditions, ensuring the cable connectors align with each microinverter.

### B.2 Connect Inverter

Connect the AC cable connector to the microinverter until a "click" sound is heard, confirming a secure connection.



## C. Seal AC Tail Line and Unused AC Connectors

### C.1 Strip Wires

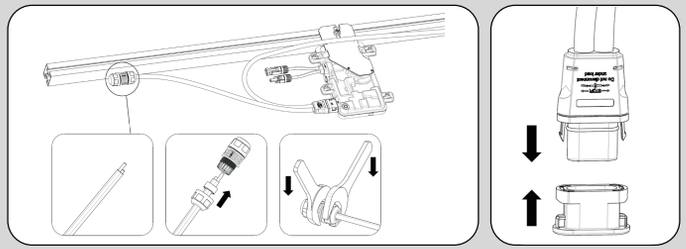
Use a wire stripper to strip the cable, ensuring a difference of about 15mm in length between the two cables.

### C.2 Seal Tail Line

Insert the sealing gasket and nut of the plug into the cable and tighten with a wrench.

### C.3 Seal Connectors

Use sealing caps to seal any unused AC connectors.



Note

* All unused connectors must be sealed with sealing caps.
* Dismantling sealing caps or connectors requires specialized removal tools.

## D. Install AC Junction Box

### D.1 Wire Stripping

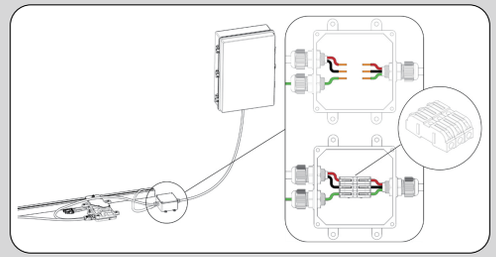
Use wire strippers to remove approximately 25mm of the outer cable sheath, and strip about 12mm of insulation from the L1 and L2 wires.

### D.2 Connect Cables

Connect the AC cables to the AC junction box as shown in the diagram.

### D.3 Integrate Equipment

Connect the cable from the AC junction box to a combiner box with a 20A circuit breaker, and then to the main household distribution panel.



### D.4 Installation Position

Install the junction box at an appropriate location.

### D.5 Seal Protection

Close the junction box cover and seal both ends to prevent moisture ingress.

Danger

* It's recommended to use a waterproof junction box. If not waterproof, seal with sealing adhesive.
* When wiring, ensure all exposed conductors are fully enclosed in terminals and not exposed to air.

Note

* It's advisable to connect the rail grounding wire into the junction box and route it together.

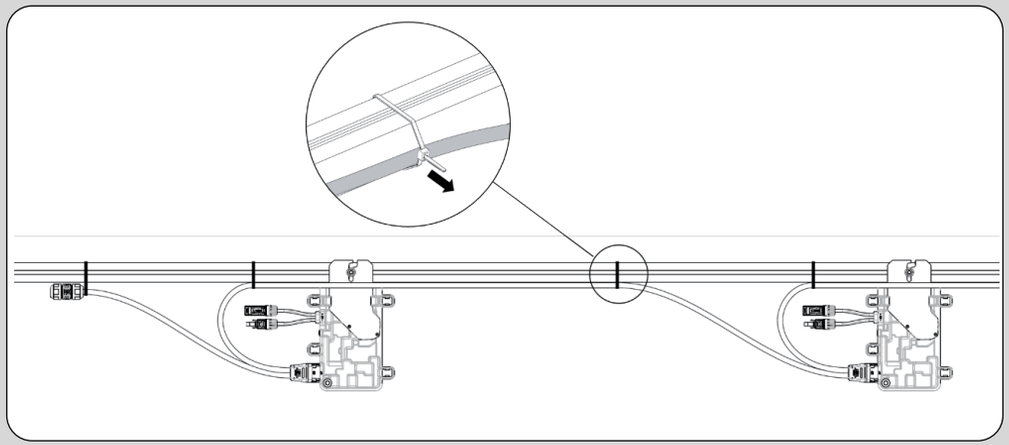
## E. Organizing AC Cables

### E.1 Cable Tying

Use cable ties to bind the cables to the rail at 1-meter intervals.

### E.2 Arrange Cables

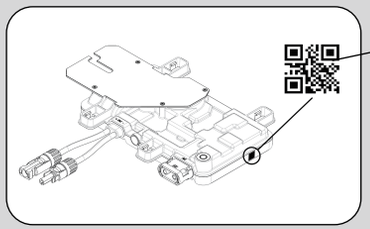
Bundle and secure any excess cables, placing them beneath the photovoltaic modules.

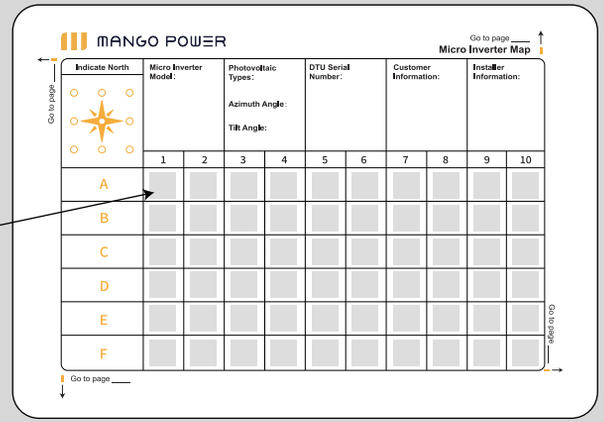


Note * Ensure cable ties are not directly exposed to direct sunlight.

## F. Create a Paper Installation Map

Please print the SN map and attach the SN label from the microinverter in the order of installation.






## G. Connect the PV Modules

### G.1 Connecting Cables

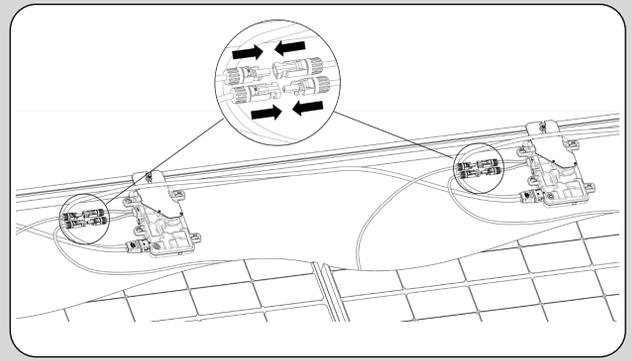
Connect the DC output cables of the PV modules to the DC input side of the microinverters. A clicking sound will confirm a successful connection.

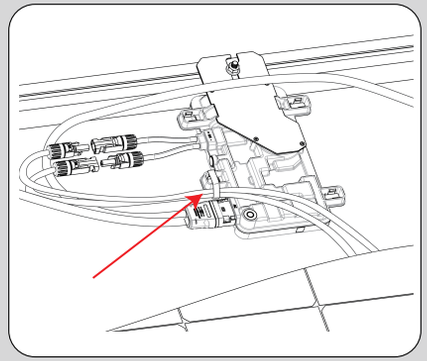
### G.2 Checking the Inverter

Ensure the indicator light on the microinverter is on to confirm a successful connection.

### G.3 Installing Modules

Mount the PV modules onto the rails.





Note

* Although the Mango Power S series microinverters are compatible with most industry-standard PV modules, please ensure the maximum input voltage is ≤60V and the maximum short circuit current is ≤15A. Exceeding these specifications may damage the inverter and void the warranty.
* It is recommended to bundle the DC cables of the PV modules as shown in the diagram above.

## H. Activate the PV System

### H.1 Switching On Branches

Turn on each branch circuit breaker.

### H.2 Starting the System

Turn on the main household AC breaker. The system will start generating power once the micro PV inverter's green light starts flashing.

### H.3 Setting Up DTU

Install the DTU and set up the monitoring system according to the《 DTU User Manual 》.

Note * The system will not output AC power until the DTU is activated.

# 03 Light Indicator

## Startup Status

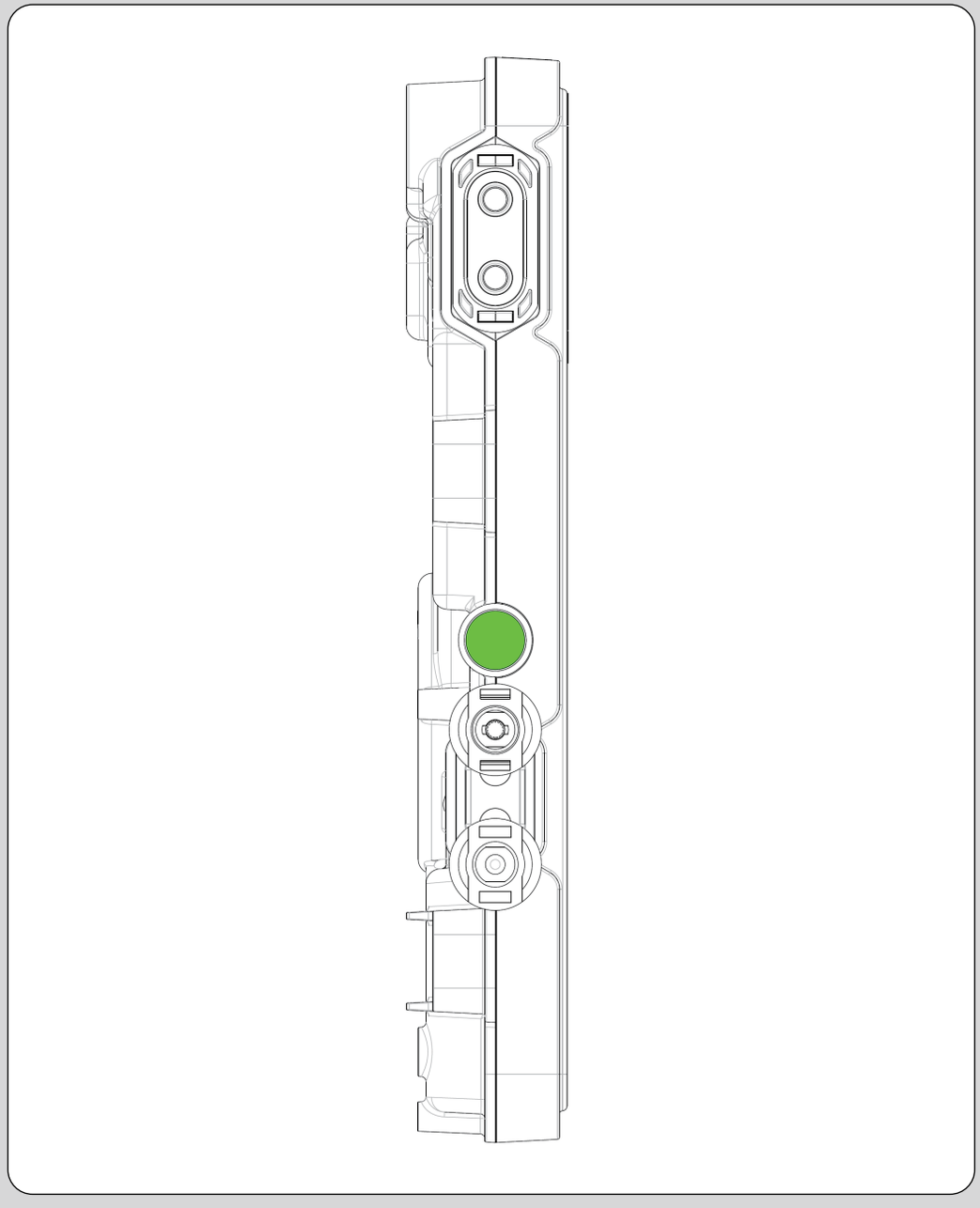
| | | |
|---|---|---|
| Steady Red Light (Duration 6s) | Microinverter self-check in progress | |
| Steady Green Light (Duration 5s) | Microinverter installation environment check in progress | |

## Operating Status

| | | |
|---|---|---|
| Slow Flashing Green Light (Interval 2s) | Generating power | |
| Fast Flashing Green Light (Interval 1s) | Generating power, but microinverter is offline | |
| Slow Flashing Red Light (Interval 2s) | Abnormal connection with the AC grid | |
| Fast Flashing Red Light (Interval 1s) | Abnormal connection with the AC grid, microinverter is offline | |
| Steady Red Light | DC side malfunction | |

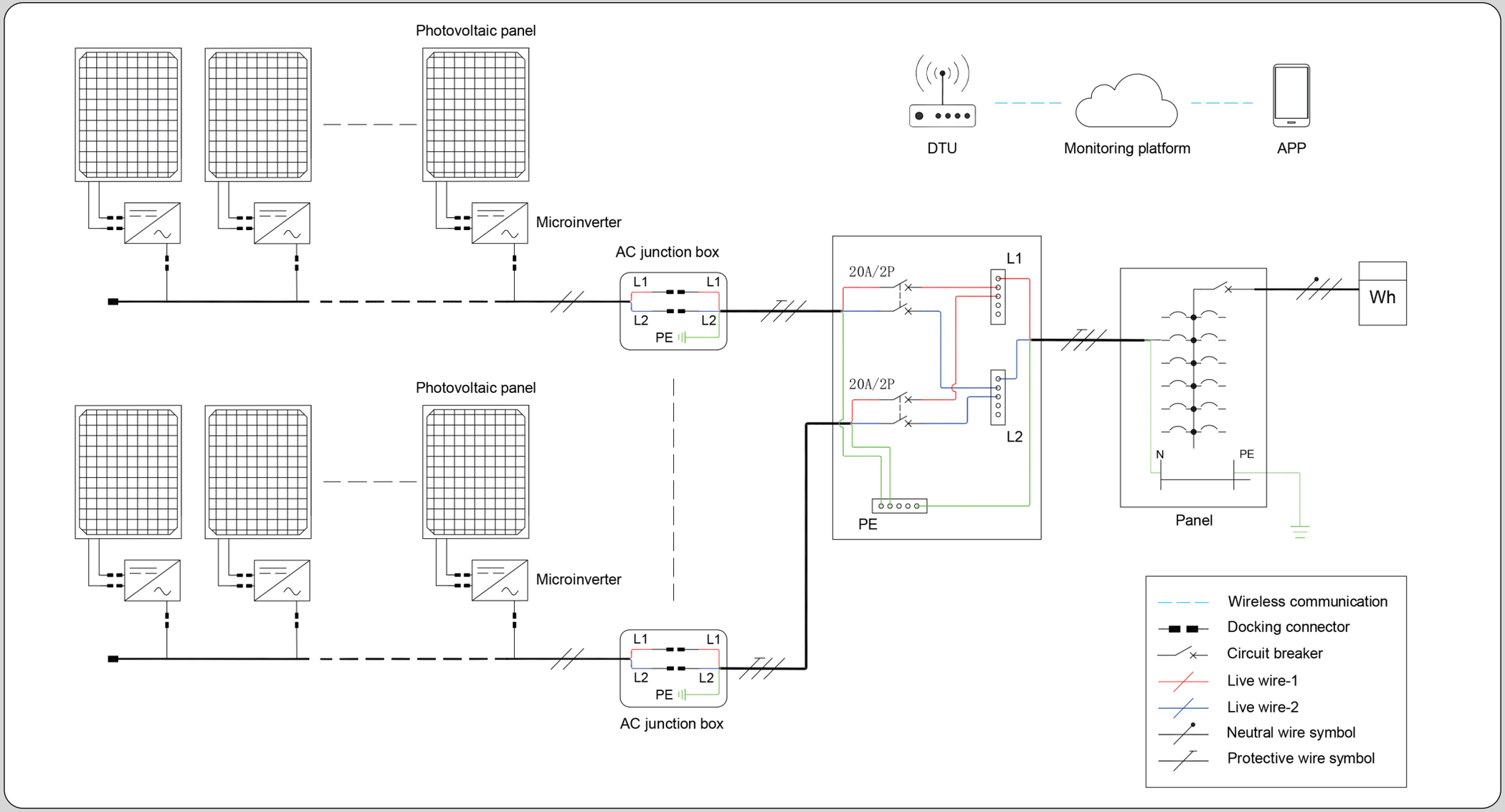
## Other Statuses

| | | |
|---|---|---|
| Alternating Red and Green Lights (Interval 1s) | Microinverter is upgrading | |
| No lights on | PV modules not supplying power | |



# 04 Single-phase System Installation Diagram

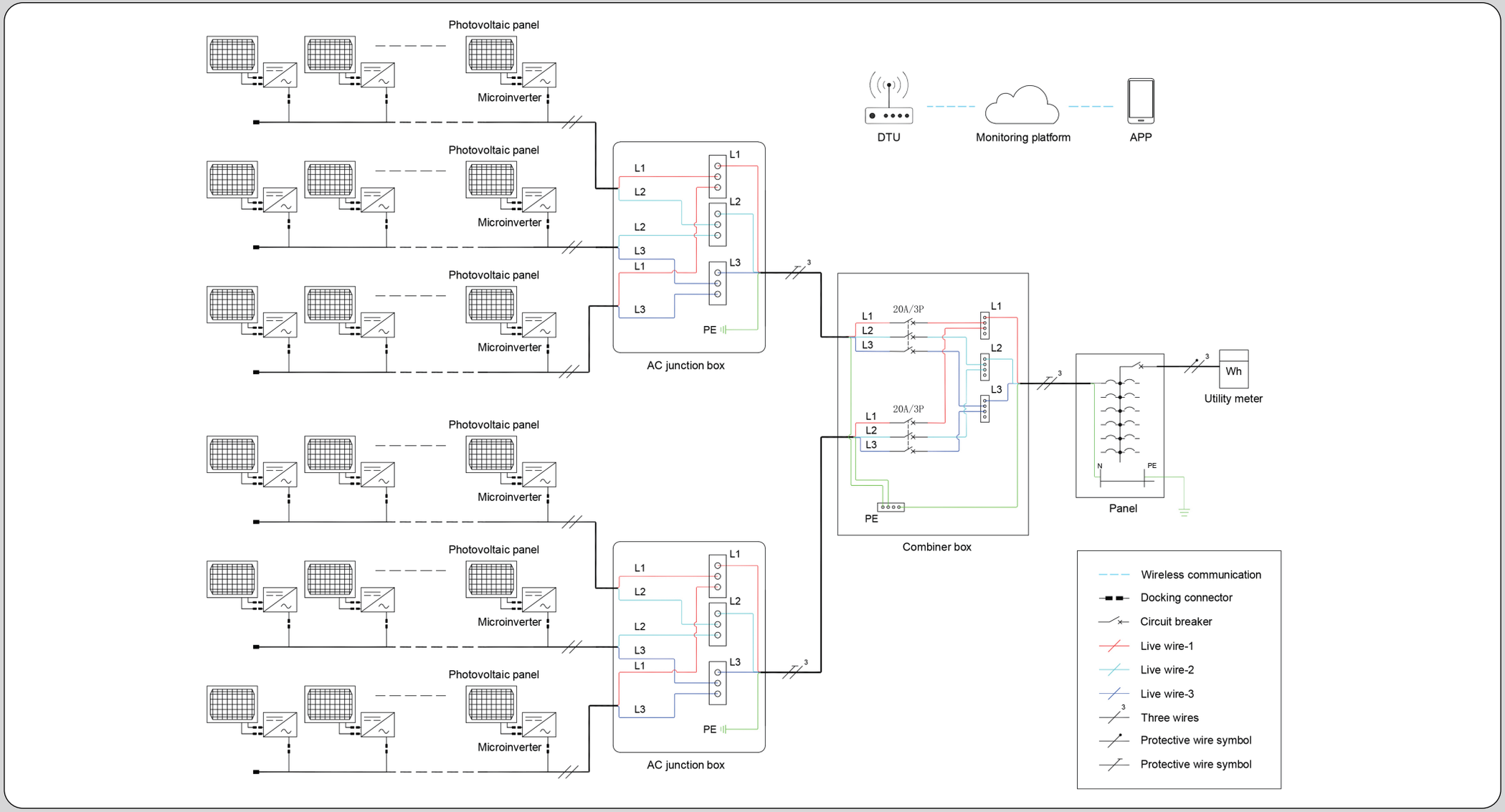
Before installation, please ensure that the household grid system is a single-phase system, and have a professional install the photovoltaic power generation system according to the diagram below.




Note: The AC junction box, terminal blocks, combiner box, and circuit breakers need to be provided by the installer based on the site conditions.

# 05 Three-phase System Installation Diagram

Before installation, please ensure that the household grid system is a three-phase system, and have a professional install the photovoltaic power generation system according to the diagram below.




Note: The AC junction box, terminal blocks, combiner box, and circuit breakers need to be provided by the installer based on the site conditions.

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# Micro Inverter Map

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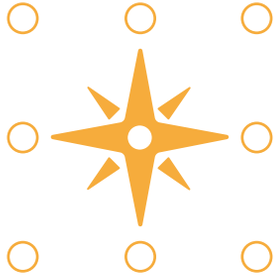
| Indicate North | Micro Inverter Model: | | Photovoltaic Types:<br>Azimuth Angle:<br>Tilt Angle: | | DTU Serial Number: | | Customer Information: | | Installer Information: | |
|---|---|---|---|---|---|---|---|---|---|---|
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| A | | | | | | | | | | |
| B | | | | | | | | | | |
| C | | | | | | | | | | |
| D | | | | | | | | | | |
| E | | | | | | | | | | |
| F | | | | | | | | | | |

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