

## Installing a Huayu HY-500/600-Pro Microinverter

A PV system by Microinverters is simple to install. Each Microinverter easily mounts on the PV racking system, directly beneath the PV module. Low voltage DC wires connect from the PV module directly to the Microinverter, eliminating the risk of high DC voltage. Installation MUST comply with local regulations and technical rules.

Special Statement! An AC GFCI device should not be used to protect the dedicated circuit to the Microinverter even though it is an outside circuit. None of the small GFCI devices(5~30mA) are designed for back feeding and will be damaged if so. In a similar manner, AC AFCIs have not been evaluated for back feeding and may be damaged if back feed with the output of a PV inverter.



**WARNING**

Perform all electrical installations in accordance with local electrical codes.

Be aware that only qualified professionals should install and/or replace Microinverters.

Before installing or using a Microinverter, please read all instructions and warnings in the technical documents and on the Microinverter itself as well as on the PV array.

Be aware that installation of this equipment includes the risk of electric shock.

Do not touch any live parts in the system, including the PV array, when the system has been connected to the electrical grid.

Strongly recommend to install surge protection devices in the dedicated combiner box.

### Additional Installation Components

- ① AC Male and Female Interconnection Connectors(offered separately)
- ② Sealing end caps(offered separately)

### Required Parts and Tools

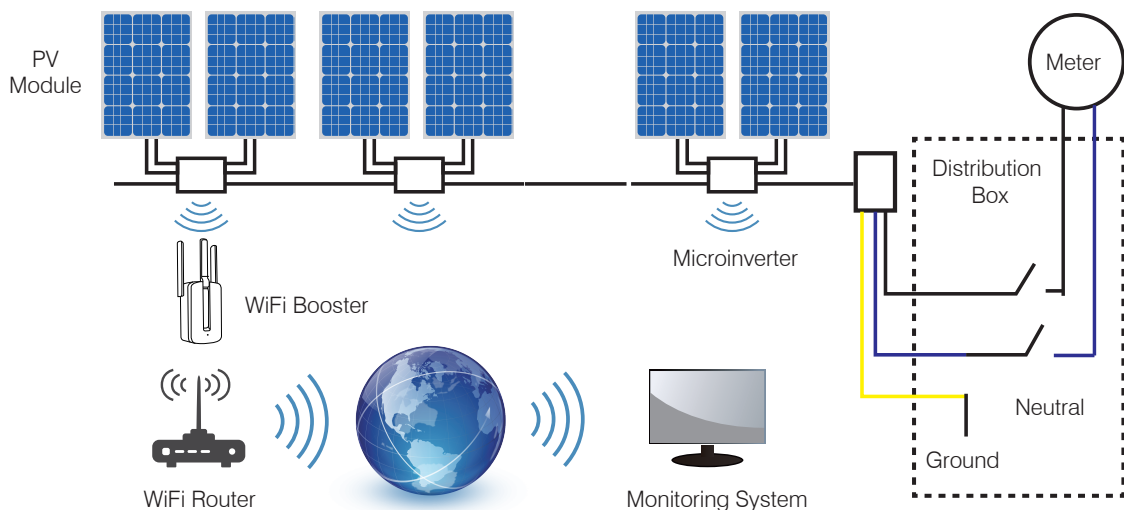
In addition to your PV array and its associated hardware, the following items are needed for installation:

- ① An AC connection junction box
- ② Mounting hardware suitable for module racking system
- ③ Sockets and wrenches for mounting hardware
- ④ Continuous grounding conductor and grounding washers
- ⑤ A Phillips screwdriver
- ⑥ A torque wrench

### Simple to Install

You can install individual PV modules in any combination of Module quantity and orientation, different type and power rate. The Ground wire (PE) of the AC cable is connected to the chassis inside of the Microinverter, potentially eliminating the installation of grounding wire(check local regulation).

Data collection adopts internal WiFi, wireless router is needed near the Microinverter. When complete the installation of microinverter, configure wireless router with internal WiFi(refer to the WiFi user manual). The data will be uploaded automatically. Users can monitor and manage the microinverter through corresponding website or APP.



**NOTE:**

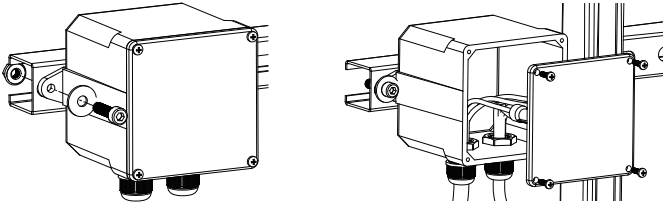
If the wireless signal in the area for the Microinverter is weak, it is necessary to add a WiFi signal booster at a suitable place between the router and the microinverter.

This integrated system improves safety; maximizes solar energy harvest; increases system reliability and simplifies solar system design, installation, maintenance and management.

# INSTALLATION

## Installation Procedure

### Step 1- Install AC branch circuit junction box



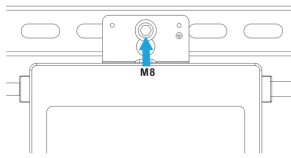
- 1 Install an appropriate junction box at a suitable location on the PV racking system (typically at the end of a branch of modules).
- 2 Connect the open wire end of the AC cable into the junction box using an appropriate gland or strain relief fitting.
- 3 Wire the conductors of the AC (127/220/230): L - red; N - black; PE - yellow green. Wire the conductors of the AC (208/240): L1 - red; L2 - black; PE - yellow green.
- 4 Connect the AC branch circuit junction box to the point of utility interconnection.

**WARNING**

Wiring colour code can be different according to local regulation, check all the wires of the installation before connecting them to the AC cable. Wrong cabling can damage irreparably Microinverters, such an issue is not covered by the warranty.

### Step 2- Attach Microinverters to racking system or the PV module frame

- 1 Mark the location of the Microinverter on the rack, with respect to the PV module junction box or any other obstructions.
- 2 Mount one Microinverter at each of these locations by recommended hardware.



HY-500-Pro / HY-600-Pro(-127V)

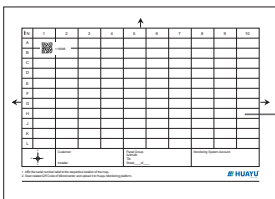
**WARNING**

Prior to installing any of Microinverters, verify that the utility voltage at the point of common connection matches the voltage rating on Microinverter label.

Do not place the Microinverter (including DC and AC connectors) where exposed to the sun, rain or snow, even gap between modules. Allow a minimum of 3/4 inch (2cm) between roof and bottom of the Microinverter to allow proper air flow.

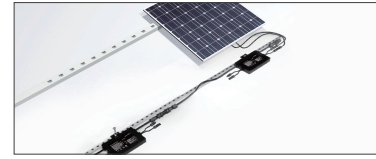
### Step 3- Create an Installation Map

Create a paper installation map to record microinverter serial numbers and position in the array.



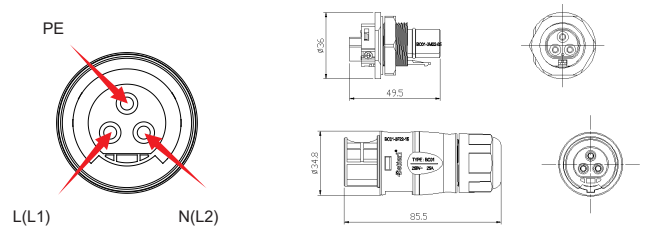
- 1 Peel the removable serial number label from each microinverter and affix it to the respective location on the paper installation map.
- 2 Fill in the monitoring system account information to the installation map
- 3 Always keep a copy of the installation map for your records.

### Step 4- Connect the Microinverters in parallel



HY-500-Pro / HY-600-Pro(-127V)  
connected in parallel

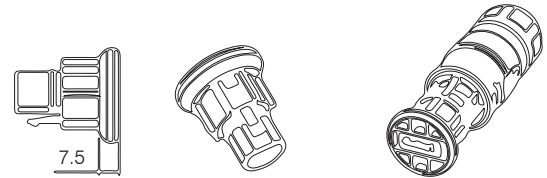
- 1 Check Microinverter technical data for the maximum allowable number of Microinverters on each AC branch circuit.
- 2 Plug the male AC connector of Microinverter into the female connector to get it connected. AC connector interface is as follows.



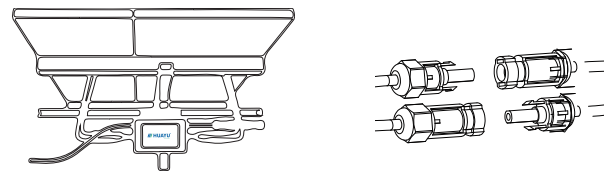
**WARNING**

DO NOT exceed maximum number of Microinverters in an AC branch circuit.

### Step 5- Install an AC cable protective end cap at the end of AC cable



### Step 6- Connect Microinverter to PV Modules



**NOTE:**

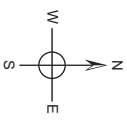
When plugging in the DC cable, if AC is already available, the Microinverter should immediately blink red light and will start working within the setting time (default 60 seconds). If AC is not available, the red light will blink 3 times quickly until AC is connected.

**NOTE:**

When AC power is applied but Microinverter is not started up, about 0.1A current and 25VA(W) power for each Microinverter may be measured by a power meter, this power is reactive power, not from grid.

**NOTE:**

Specifications subject to change without notice - please ensure you are using the latest manual found at the manufacturer website: [www.huayu-energy.com](http://www.huayu-energy.com)

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1. Affix the serial number label to the respective location of the map.
2. Scan related QR Code of Microinverter and upload it to Huayu Monitoring platform.