Installing a Huayu **HY-1000/800-Plus** 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).

Huayu monitoring data logger connects the microinverter to the Huayu Portal server via the cloud, allowing for collection of production and other data useful in system monitoring and trouble shooting. Users can monitor and manage the microinverter through corresponding website or APP.
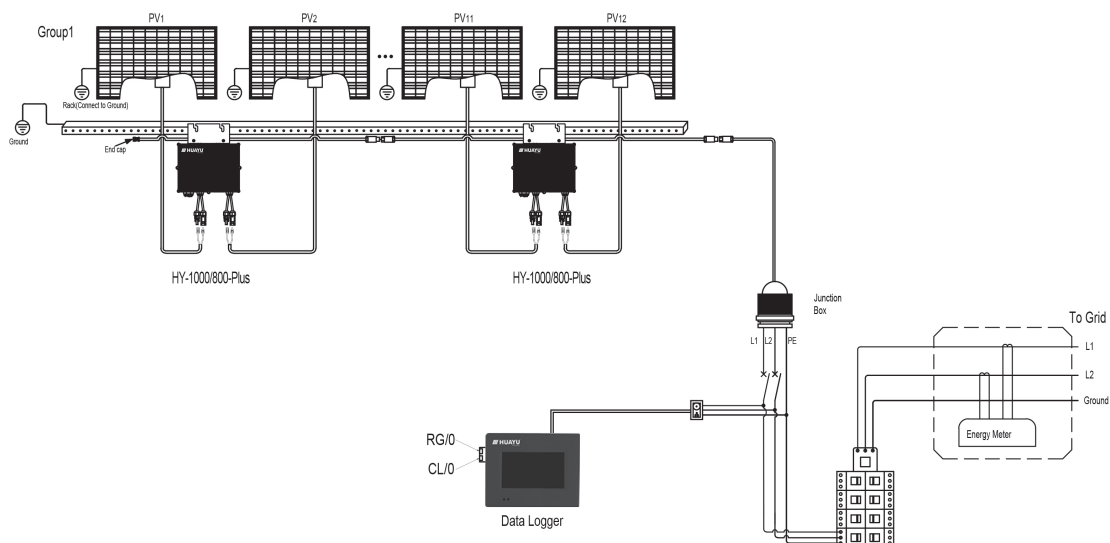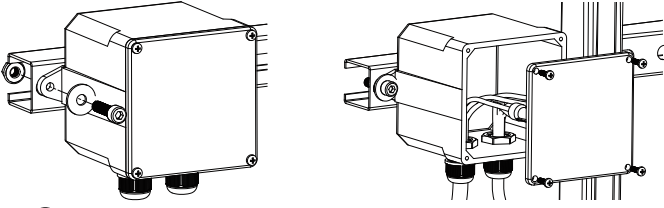

NOTE:

If the PLC signal is weak, it may be significantly improved by moving the data logger to closer to the microinverter arrays, and/or farther away from other interferers, and/or install a signal filter (LCF) to reduce the interference to PLC communication.

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-1000/800-Plus
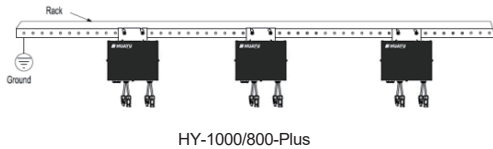
| ⚠️ **WARNING**	Prior to installing any of Microinverters, verify that the utility voltage at the point of common connection matches the voltage rating on Microinverter label. Do not place the Microinverter(including DC and AC connectors) where exposed to the sun, rain or snow, even gap between modules. 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.


Affix serial number labels
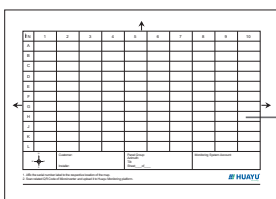
1. Peel the removable serial number label from each microinverter and affix it to the respective location on the paper installation map.

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
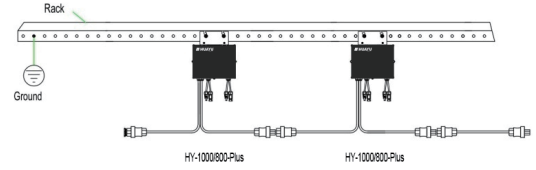
1. Check Microinverter technical data for the maximum allowable number of Microinverters on each AC branch circuit.

2. Plug the male AC connector of Microinverter into the female connector to get it connected. AC connector interface is as follows.
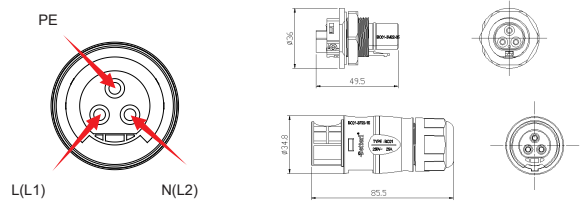

⚠️ **WARNING**	DO NOT exceed maximum number of Microinverters in an AC branch circuit.For 12awg trunk cable, each HY-1000/800-Plus ac branch circuit must be sourced from a dedicated branch circuit protected by a 20a maximum breaker.

### Step 5- Install an AC Cable Protective End Cap at the End of AC Cable

⚠️ **WARNING**	Installed on all unused ac connectors. Unused ac HY-1000/800-Plus wire harness connectors are live when the system is energized by the utility system.
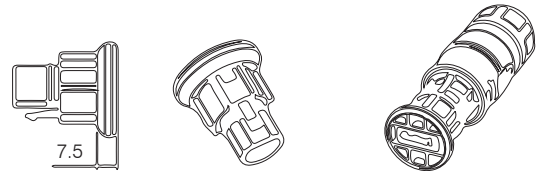
Step 6- Connect Microinverter to PV Modules

Completely install all HY-1000/800-Plus and all system inter-wiring connections prior to installing the PV modules.
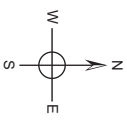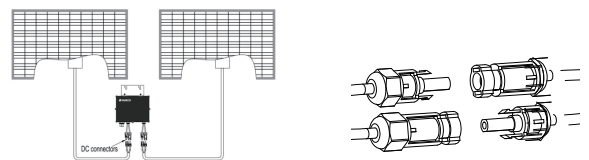

NOTE:

The microinverter is powered on when sufficient DC voltage from the module is applied. The status LED will start flashing after sufficient DC power is applied as an indication that the microinverter is live.

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

↑N	1	2	3	4	5	6	7	8	9	10
A										
B										
C										
D										
E										
F										
G										
H										
J										
K										
L										

Customer:

Installer:

Panel Group:
Azimuth:
Tilt:
Sheet _____ of _____

Monitoring System Account:

W — N
S — E

1. Affix the serial number label to the respective location of the map.
2. Input the serial number through data logger touch screen or Huayu Monitoring platform.

HUAYU
new energy