

Microinverter Quick Installation Guide



Microinverter Installation

When choosing the position of installation, comply with the following conditions:

- To avoid unwanted power derating due to an increase in the internal temperature of the inverter, do not expose it to direct sunlight.
- To avoid overheating, always make sure the flow of air around the inverter is not blocked.
- Do not install in places where gasses or flammable substances may be present.
- Avoid electromagnetic interference that can compromise the correct operation of electronic equipment. It's recommended to install microinverter on structures underneath the photovoltaic modules so that they work in the shade.

Installation Steps

DANGER

- Only qualified personnel should install, troubleshoot, or replace microinverters or the cable and accessories.
- Before installation, check the unit to ensure absence of any transport or handling damage, which could affect insulation integrity or safety clearances.
- Unauthorized removal of necessary protections, improper use, incorrect installation and operation may lead to serious safety and shock hazards or equipment damage.
- Be aware that installation of this equipment includes risk shock of electric.

CAUTION

- If there are more than one installation site, please make the installation map separately and give a clear description about the installation site.
- The row of the table corresponds the shorter side of PV module and the column of the table corresponds the longer side of PV module. The direction on the upper left corner means the actual installation orientation.

Take out the SN labels and installation map from the package. Paste the SN labels on the installation map as below and complete the information of the solar plant.

Customer: (Name of customer or power station)	Installation Direction: (Direction that the PV modules face to)						Installation Site: (If there are other installation sites, use different installation map and give them different Map No.)				
	1	2	3	4	5	6	7	8	9	10	11
A											
B											
C											

Step 2. Fix the microinverter

DANGER

- Do not install the equipment in adverse environment conditions such as flammable, explosive, corrosive, extreme high or low temperature, and humid.

WARNING

- Choose installation location carefully and adhere to specified cooling requirements. Micro-inverter should be installed in a suitable position with good ventilation and no directly sunshine.
- A 5cm space needs to be left between the microinverter and the roof to ensure its heat dissipation.

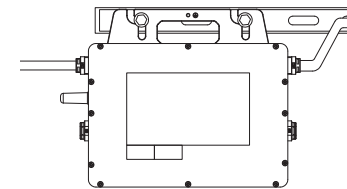
CAUTION

- There are no screws and nuts in the package.
- The distance between every two micro-inverters should meet the length of AC cables. The length of AC cables are shown as below:

Model	Cable Length
TSOL - MX400/MX450/MX500	1.4 m
TSOL - MX800/MX900/MX1000	2.5 m

- Please use your mobile phone to check the WiFi signal strength at the installation location, ensuring that the WiFi signal is at least two bars. If the WiFi signal is not good, please try installing the microinverter in another location or moving the WiFi router.

Choose an installation position. Using two pairs of screws and nuts to fix the microinverter on the frame. Make sure that the label of microinverter should be upside.

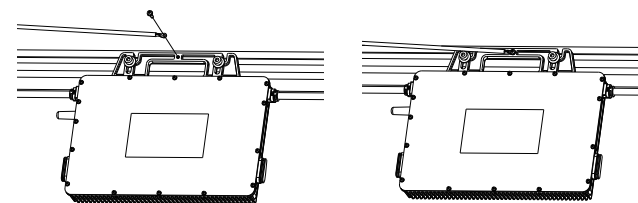


Step 3. Connect the ground cable

WARNING

- Ensure that all microinverters are well grounded.
- Use $\phi 6$ screw for the ground port.

Connect the ground cable to the enclosure of the microinverter



Step 4. Connect the AC cable of two microinverters

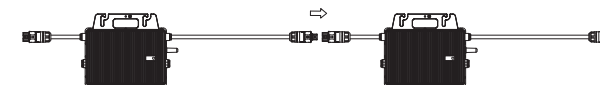
WARNING

- According to the max current of the AC cables, there is a max installation quantity for the micro-inverter in each cable section.

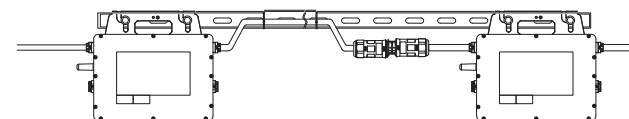
Model	Quantities for each cable section
TSOL-MX400/MX450/MX500	11 / 10 / 9
TSOL-MX800/MX900/MX1000	6 / 5 / 5

Every micro-inverter could be connected to the other one by its AC cables.

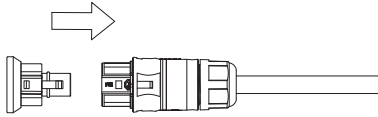
Plug the female AC connector of one microinverter into a male AC connector of another micro-inverter to form a continuous AC branch circuit.



Use Nylon cable ties to fix the AC cables onto the frame



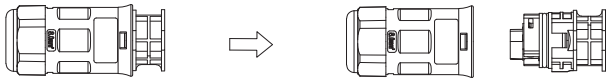
Use a Connector Protective Cap to make sure the unused AC connector to be closed.



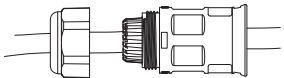
Step 5. Connect AC end cable

DANGER	
<ul style="list-style-type: none"> · Do not install the AC junction box without first removing AC power from the system. · To prevent electrical hazards, make sure the micro-inverter system is disconnected from the home distribution network and the AC breaker is open. 	
WARNING	
<ul style="list-style-type: none"> · Ensure that all AC cables are correctly wired and that none of the wires are pinched or damaged. · Use AWG 12 (4 mm²) cable for AC end cable 	
CAUTION	
<ul style="list-style-type: none"> · The installation technician is responsible for selecting a kind of AC cable and connecting the micro-inverter system into the home distribution network correctly. · The AC connectors may be provided by different suppliers. The port definitions are subject to actual objects. · The AC connector and protection cap is not in the package. 	

Separate the AC connector as shown below.



Get the AC cable through the shell of AC connector and connect the cable to the right port.

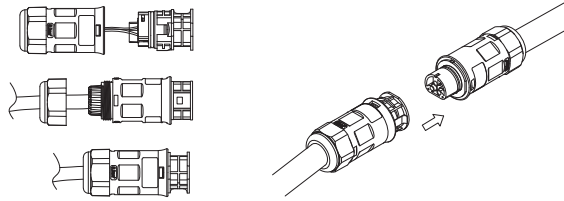


The definition of the port is shown below:



L:	Live	_____	(Brown/Red)
N:	Neutral	_____	(Blue/Black)
PE:	Ground	_____	(Yellow-Green)

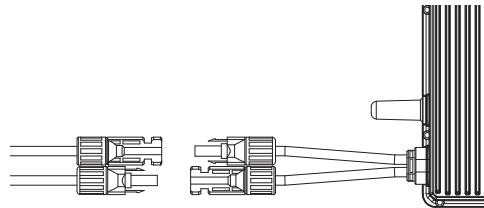
Reassemble the AC connector. Plug it into the microinverter and connect the AC cable to the AC distribution box.



Step 6. Connect DC cable

DANGER	
<ul style="list-style-type: none"> · When the photovoltaic array is exposed to light, it supplies a DC voltage to the inverter. 	
WARNING	
<ul style="list-style-type: none"> · Ensure that all DC cables are correctly wired and that none of the wires are pinched or damaged. · The DC conductors of this photovoltaic system are ungrounded and may be energized. · The maximum open circuit voltage of the PV module must not exceed the specified maximum input DC voltage of the TSOL micro inverter. 	
CAUTION	
<ul style="list-style-type: none"> · If the DC cable is too short for installation, use a DC Extension Cable to connect PV modules to the microinverter. · Use MC4 compatible DC connectors in the inverter side of DC extension cable, or get the DC connectors form TSUN. · Contact PV module manufacturers for the requirements of DC connectors in the module side of DC extension cable 	

Install the PV modules and connect the DC cable to the microinverter.



Step 7. Start the system

DANGER	
<ul style="list-style-type: none"> · Only qualified personnel should connect this system to the utility grid. 	
CAUTION	
<ul style="list-style-type: none"> · Do not connect micro-inverters to the grid or energize the AC circuit(s) until you have completed all the installation procedures and have received prior approval from the electrical utility company. 	

While installation is all finished, turn on the main utility-grid AC circuit breaker. Your system will start producing power after about a two-minute wait time.
The LED will flash green and red at start up. The definition of LED is shown as below.

Status	Indicates
Flashing Green (0.2-0.8s)	Working normally
Flashing Red	Working abnormally
Solid Red	Fault

Step 8. Monitoring and other information explanation

After completing the installation, please use the Monitoring User Guide and Monitoring User Manual to download the monitoring platform and register your account.

For more detailed information, please scan the QR code to read.



EU Declaration of Conformity (DOC)



Full Manual Microinverter

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