



# **INSTALLATION**

# **MANUAL**

**Solar optimizer and solar wireless  
communication gateway**

**Revision Sheet**

<b>Release No.</b>	<b>Date</b>	<b>Revision Description</b>
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# Installation Manual

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## **1.0 Important safety information**

## 1.0 IMPORTANT SAFETY INFORMATION

In order to ensure the installation and operation safety of solar optimizer and solar wireless communication gateway (the optimizer and gateway are used to refer to the two products below) and reduce the risk of electric shock, this manual contains important points that need to be followed when installing and maintaining the above products.

Product information is subject to change without notice. Please download the latest information on the Solar Point website [www.spo.cn](http://www.spo.cn)

The installation and operation of these products must be completed only by professional and technical personnel. The professional and technical personnel include but are not limited to the following requirements:

- 1) After professional training, be aware of the safety risks in the process of exposure to solar power systems,
- 2) Read this manual completely and master the related safety matters of operation,
- 3) Familiar with the relevant safety regulations of electrical systems

### 1.1 Safety warning

- 1) Only qualified professionals can install and replace the optimizer and gateway.
- 2) The electrical installation of the optimizer and gateway must comply with local electrical codes.
- 3) Before installing and using the optimizer and gateway, please read all the instructions and warnings in this manual and warning signs on the inverter and solar array.
- 4) When disconnecting the optimizer or gateway from the solar module, you must first disconnect the AC side grid connection.
- 5) Don't try to repair these products. If there is a malfunction, please contact Solar Point customer service staff to obtain authorization to return the product and initiate the return process. Destroy or open these products without authorization will not be guaranteed.
- 6) The optimizer and gateway are both one-for-one products (that is, the above-mentioned products are only electrically connected to one solar module). The overvoltage damage caused by the connection of the above products with multiple solar modules will not be covered by the warranty.

## **1.2 Safety statement on shutdown of solar modules**

The optimizer can be turned on or off remotely, but it is not ruled out that the optimizer will return wrong information to the system due to factors on solar power station, which may cause the optimizer on or off status displayed by the system to be inconsistent with the on-site. Based on the above risks, please confirm the system voltage and system current before proceeding.

## **1.3 Radio interference safety statement**

EMC compliance: The equipment complies with relevant EMC requirements (the EMC law is formulated to prevent harmful radio interference when electronic products are installed in residential areas). These devices comply with the requirements of the Class B digital device limit. If the instructions are not followed during installation and use, the equipment may emit radio frequency energy, which may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur after a specific installation of these devices. If these device cause harmful interference to radio or television reception, please take the following measures to resolve the problem:

- 1) Relocate the receiving antenna and keep it away from the device
- 2) Consult the dealer or ask someone who is proficient in radio/TV technology to help

Any unauthorized changes may cause damage to the user's right to use these devices.

## **1.4 Safety statement on solar connectors**

The optimizer and gateway choose to use connectors that have completed TUV1500V certification and are compatible with MC4 connectors by default. The company's products support the designation of connectors according to requirements, and it is recommended to use connectors consistent with solar modules or connectors produced by the same company. If the customer does not specify the connector, it means that the risk of connector mismatch is known and the mismatch will be avoided during subsequent use.

**2.0 System installation of solar optimizer and solar wireless communication gateway**

## **2.0 SYSTEM INSTALLATION OF SOLAR OPTIMIZER AND GATEWAY**

Each optimizer and gateway can be easily installed on the solar mounting system under the solar module or on the mounting hole of solar module, but please read all the instructions and warnings in this manual and warning signs on inverters and solar array before installation and use.

### **2.1 Installation parts included with the system**

None

### **2.2 Parts and tools that customers need to prepare**

- 1) Installation kit (Screws, nuts, washers).
- 2) Adjustable wrench, screwdriver, Allen wrench.
- 3) Multimeter.

### **2.3 Precautions before installation**

- 1) Confirm that the output current and output voltage of solar module match the rated parameters of the optimizer and gateway.
- 2) Confirm that the 4G network or WIFI network to be used for the gateway communication is normal. If the WIFI network is used, it needs to be fully configured in advance, see 2.4 for details.

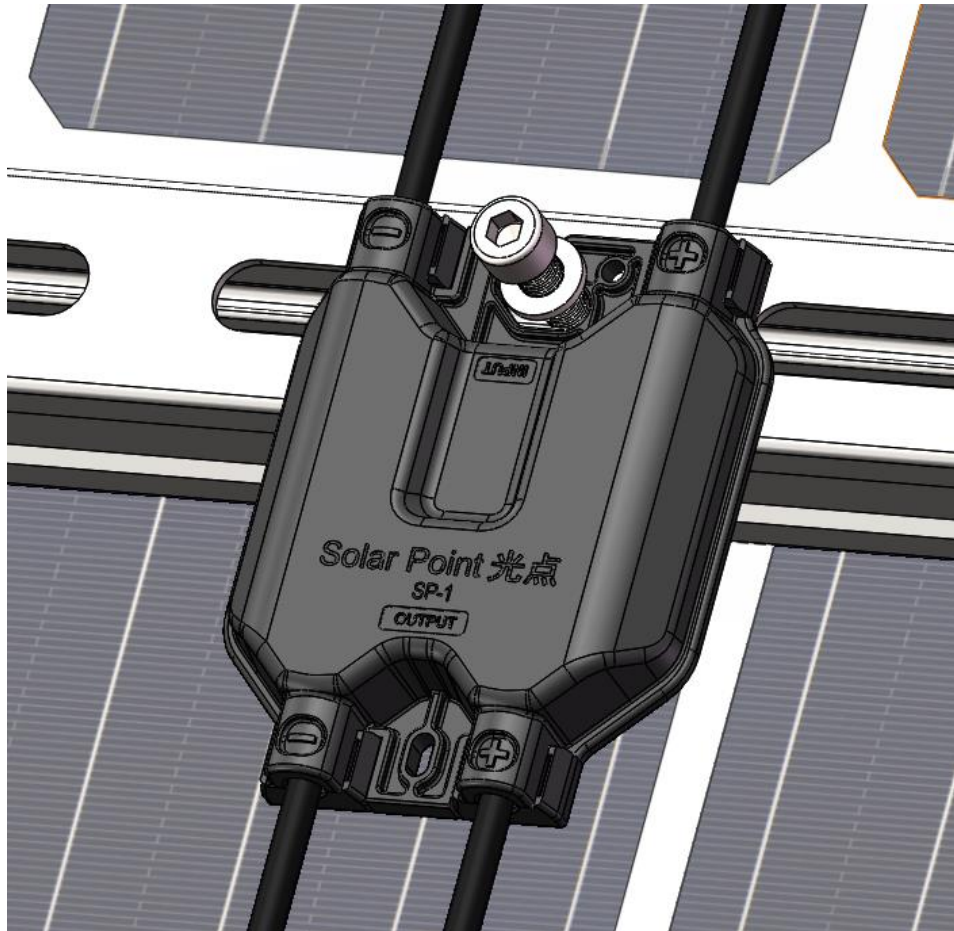
### **2.4 Configuration method of solar wireless communication gateway**

If you need to change the server's IP address that communicate with the gateway, port, gateway ID, communication network and other information, please contact the customer service staff of solar point to provide "Solar Wireless Communication Gateway Configuration Manual" and configuration software.

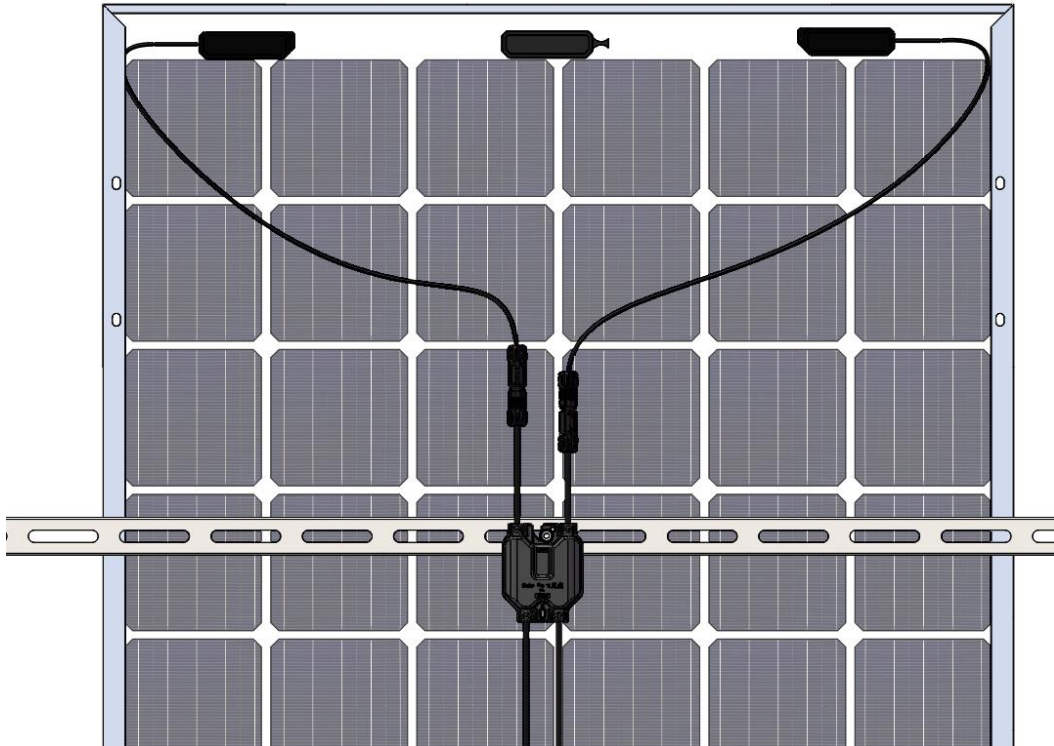


## 2.5 Installation Steps

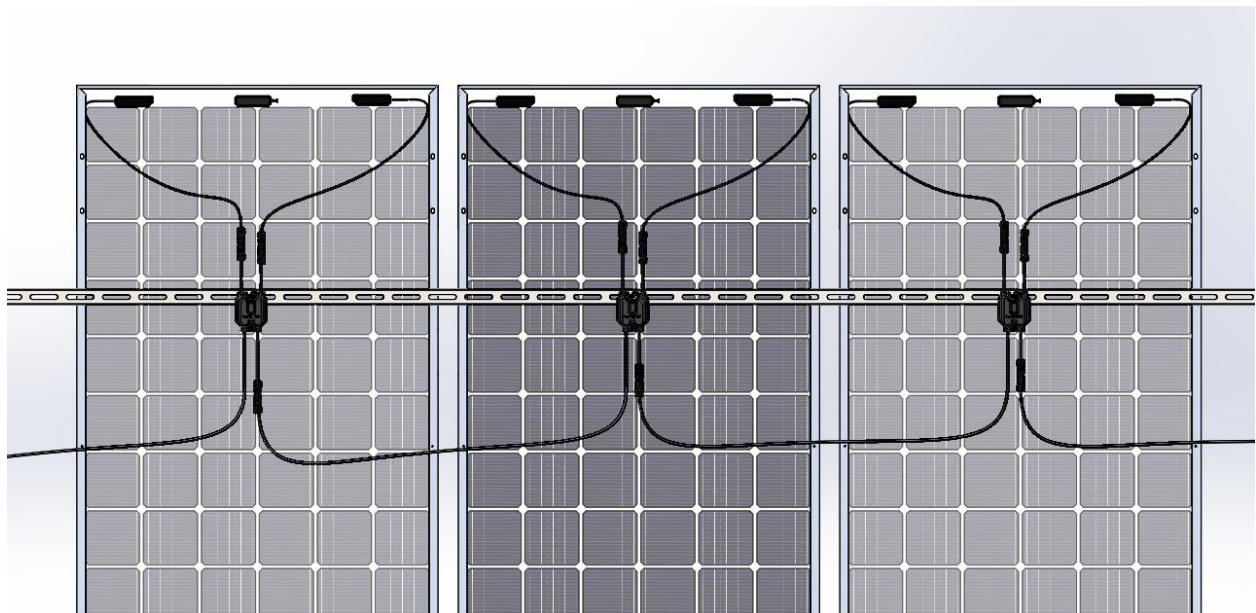
### 2.5.1 Install the optimizer on the solar bracket or solar module frame



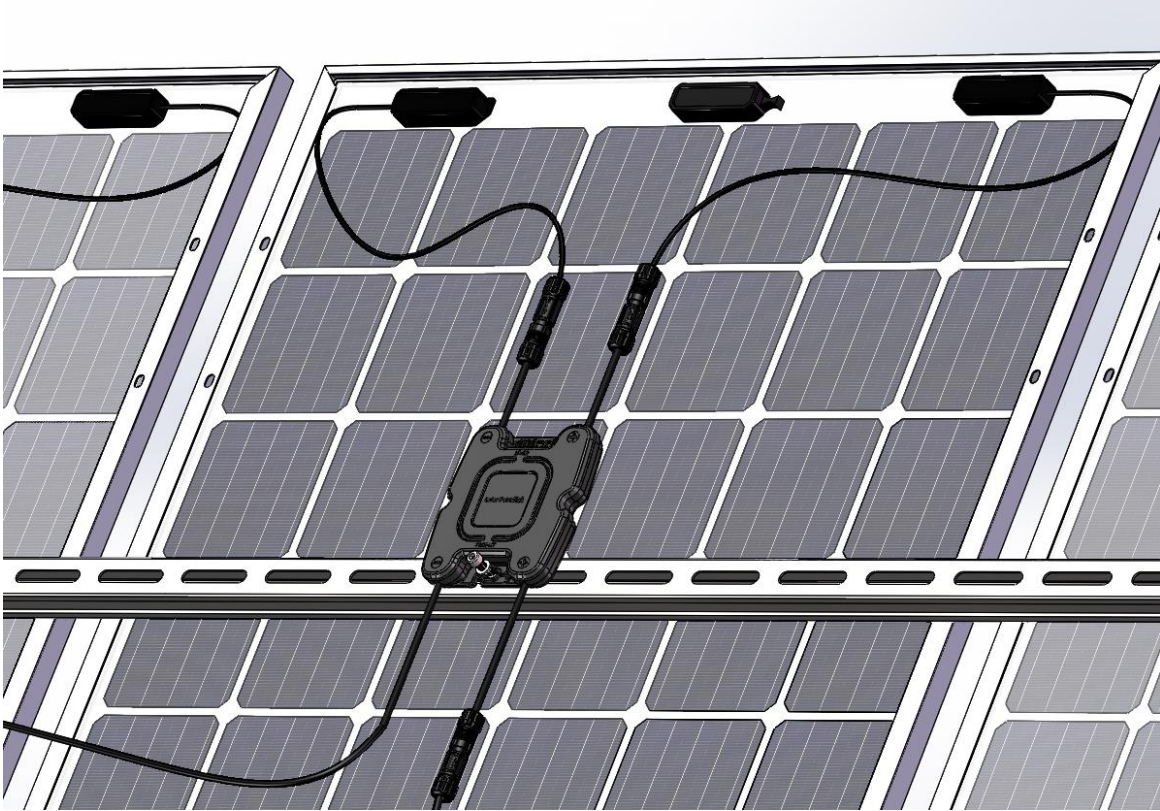
2.5.2 Connect solar module and the input end of optimizer through connectors



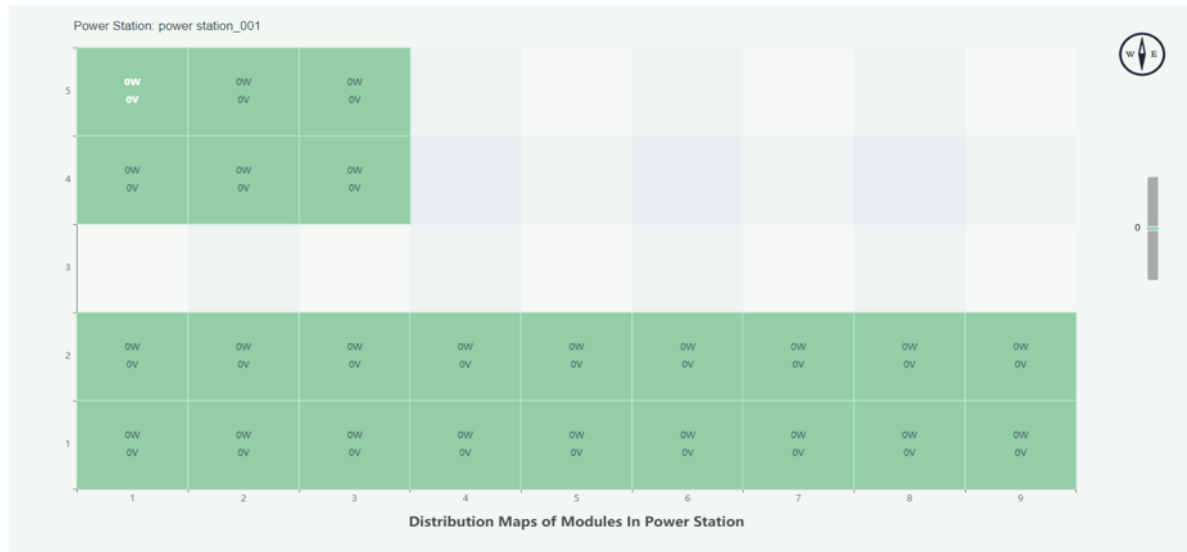
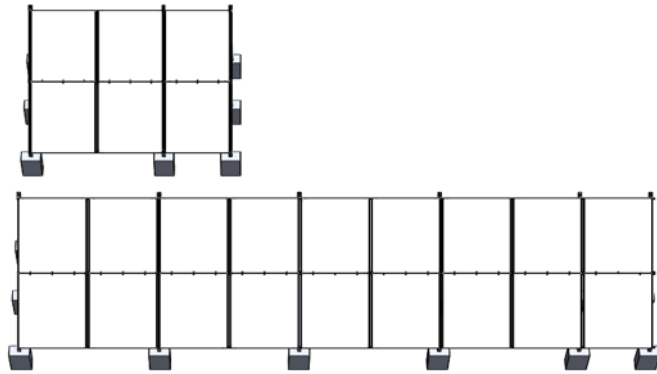
2.5.3 Connect the outputs of solar optimizers or solar modules



- 2.5.4 Install the gateway on the solar bracket or solar module frame (It is recommended that the gateway be installed in the center of the PV matrix to ensure better communication with all optimizers)**



## 2.6 Record the position of solar modules and corresponding optimizers or gateway in the PV matrix



- 1) The information of each solar module that needs to be recorded is PV module serial number, optimizer serial number, string serial number, position in power station matrix (row number and column number).
- 2) The southernmost row of the solar power station is the first row, increasing in order to the north.
- 3) The westernmost column of the photovoltaic power station is the first column, and it increases to the east.
- 4) Customize the serial number of the string.

## **2.7 Add information to solar point data platform**

Proceed as follows :

- 1) Use your email or mobile phone number to register an account on Solar Point Data Platform.
- 2) Create new solar power station information under the account, provide address information, photos, etc.
- 3) Add solar module information collected in the process of 2.6 to the created solar power station. For the specific adding process, please refer to the "Instructions for Use of Solar Data Platform".

**3.0 Other statements of the system**

## 3.0 OTHER STATEMENTS OF THE SYSTEM

This chapter declares other precautions during the use of the system, in order to avoid trouble in the subsequent use, please read carefully!

### 3.1 Data storage statement

- 1) With the accumulation of time, the system collects more and more power generation data of solar modules. However, the server storage space is limited. In order to bring all users a faster and more efficient browsing experience, please allow solar point to delete some obsolete data after negotiate in advance.
- 2) Solar point will do its best to remedy data loss caused by irresistible factors, but it shall not bear all kinds of losses caused by data loss. All customers who use the system are deemed to recognize the risk of data loss and can bear all the consequences caused by data loss.

### 3.2 Data transfer statement

One of the gateway's communication methods is 4G communication, that is, data is transmitted to the server through the 4G network of the telecom operator. Due to the long working life of the gateway, it is not ruled out that telecom operators will no longer support 4G communications during the life cycle of the gateway. As the gateway cannot work normally due to the cancellation of the network by the telecom operator, solar point will actively negotiate with the telecom operator to solve the problem, but should not bear the corresponding responsibility.

### 3.3 Statement on the use of IoT cards

In China, the gateway supports data transmission on networks provided by 4G IoT cards of operators such as China Mobile, China Unicom, and China Telecom. However, due to national policies and other reasons, the use of IoT cards in high-risk roaming areas defined by the Ministry of Industry and Information Technology is prohibited. Therefore, customers who intend to use gateways to transmit data through 4G networks in high-risk roaming areas can use normal mobile phone card traffic or change to WIFI network communication, otherwise the IoT card will not work normally.

**High-risk roaming areas currently defined by the Ministry of Industry and Information Technology: Yunnan, Xinjiang, Tibet, Fujian Anxi, Fujian Nanjing, Fujian Longyan, Hubei Xiaochang, Hubei Xiantao, Guangxi Luchuan, Guangxi Binyang, Hainan Dongfang, Hainan Danzhou, Liaoning Anshan, Henan Shangcai , Hunan Shuangfeng, Sichuan Deyang, Guangdong Maoming, Guangdong Raoping, Jiangxi Yugan, Hebei Fengning**