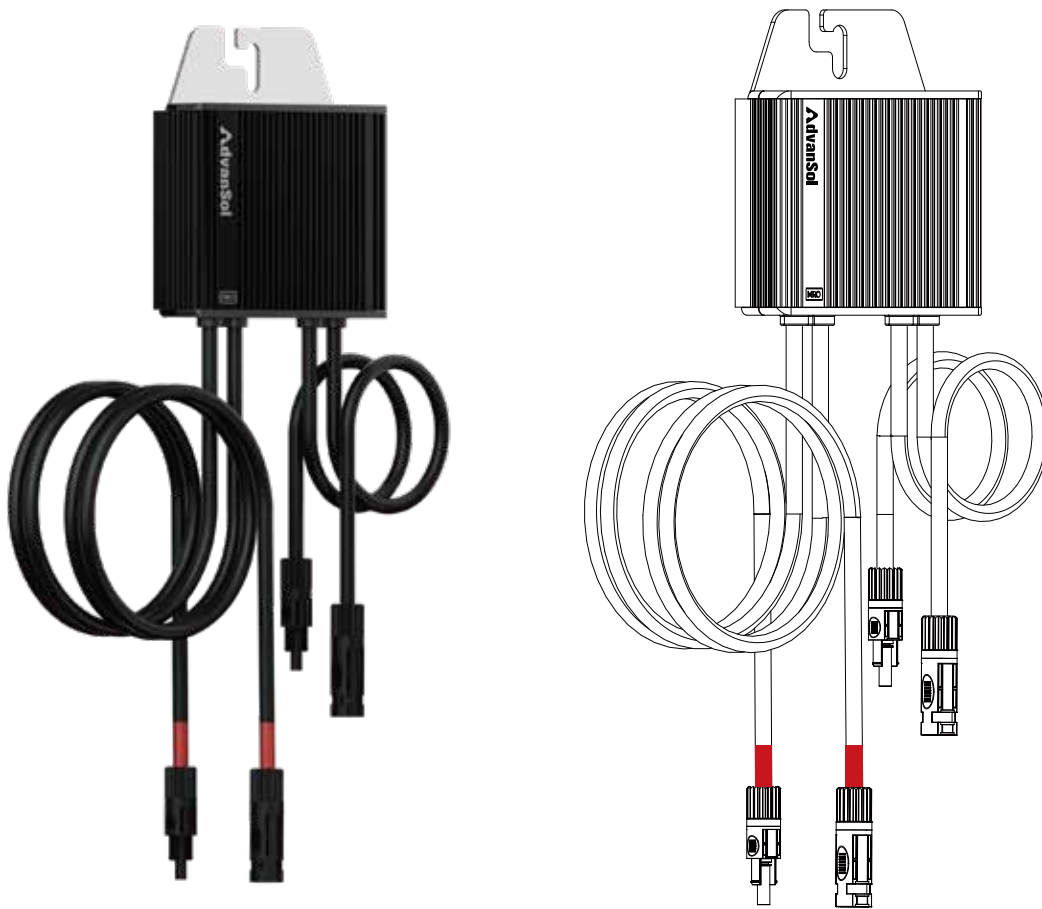


MRO Series Module-level Micro Controller  
(Module-level Full-function Optimizer)

# INSTALLATION GUIDE



## The Installation and Verification of V2.5 System Control (Solution MRO)

Installation and Verification  
MRO Series Micro controller



Installation and Verification of  
V2.5 Control Box DCON-4G/WIFI

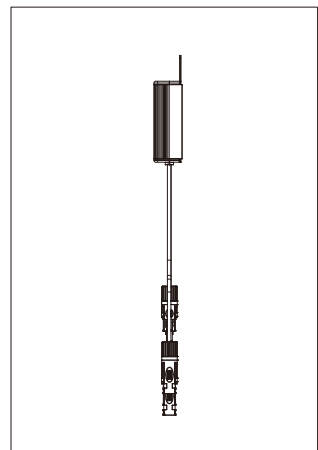
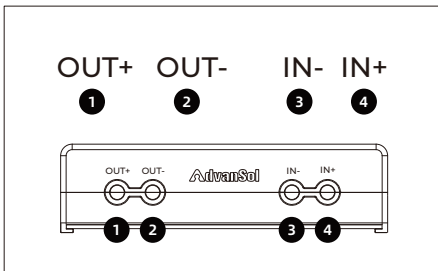
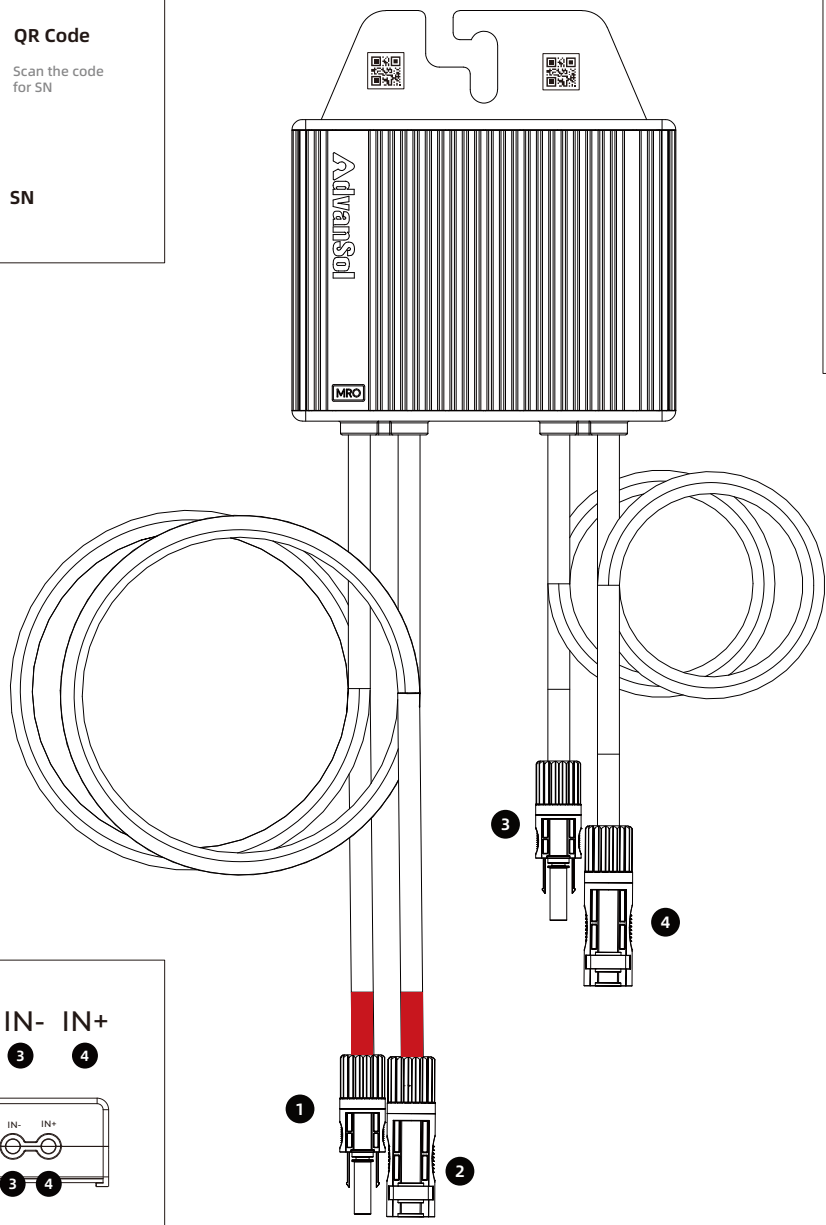
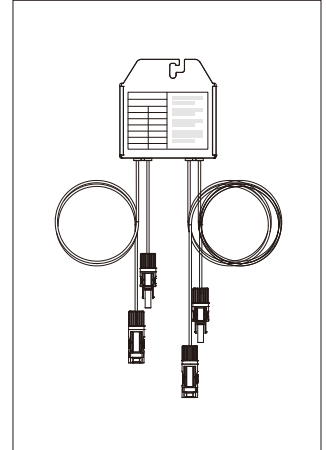


Solution MRO  
System Setting

**Note:** Please strictly follow this guide for installation and operation, otherwise the performance and warranty may be affected by some wrong operations.

### 1. Product Introduction

APT-MC-MRO (hereinafter referred as to MRO) has 4 wires, namely, IN+IN- (Input) and OUT+OUT-(Output)

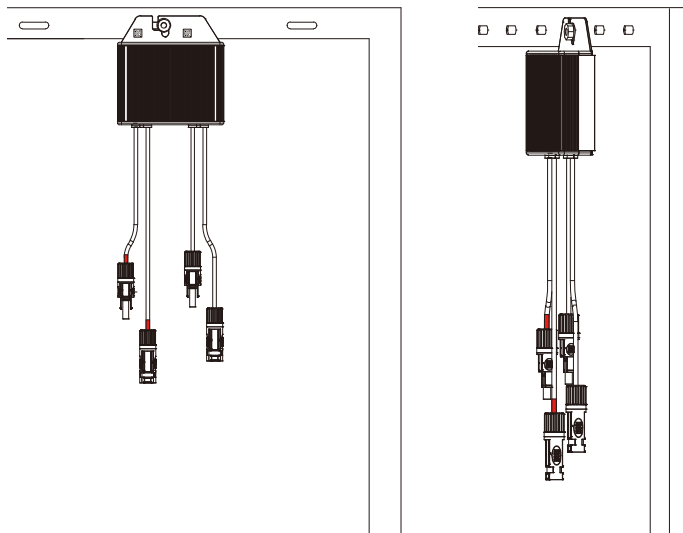


- 1    OUT+Positive Output (to adjacent MRO)
- 2    OUT- Negative Output (to adjacent MRO)
- 3    IN- Negative Input (to panel)
- 4    IN+ Positive Input (to panel)

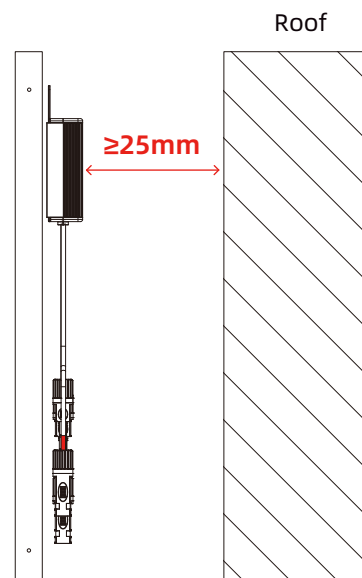
**⚠ Red casing on the OUT terminals**

## 2. Installation Requirements

- ① Ensure that the installation position is well ventilated



- ⚠ The distance is  $\geq 25\text{mm}$  from the roof

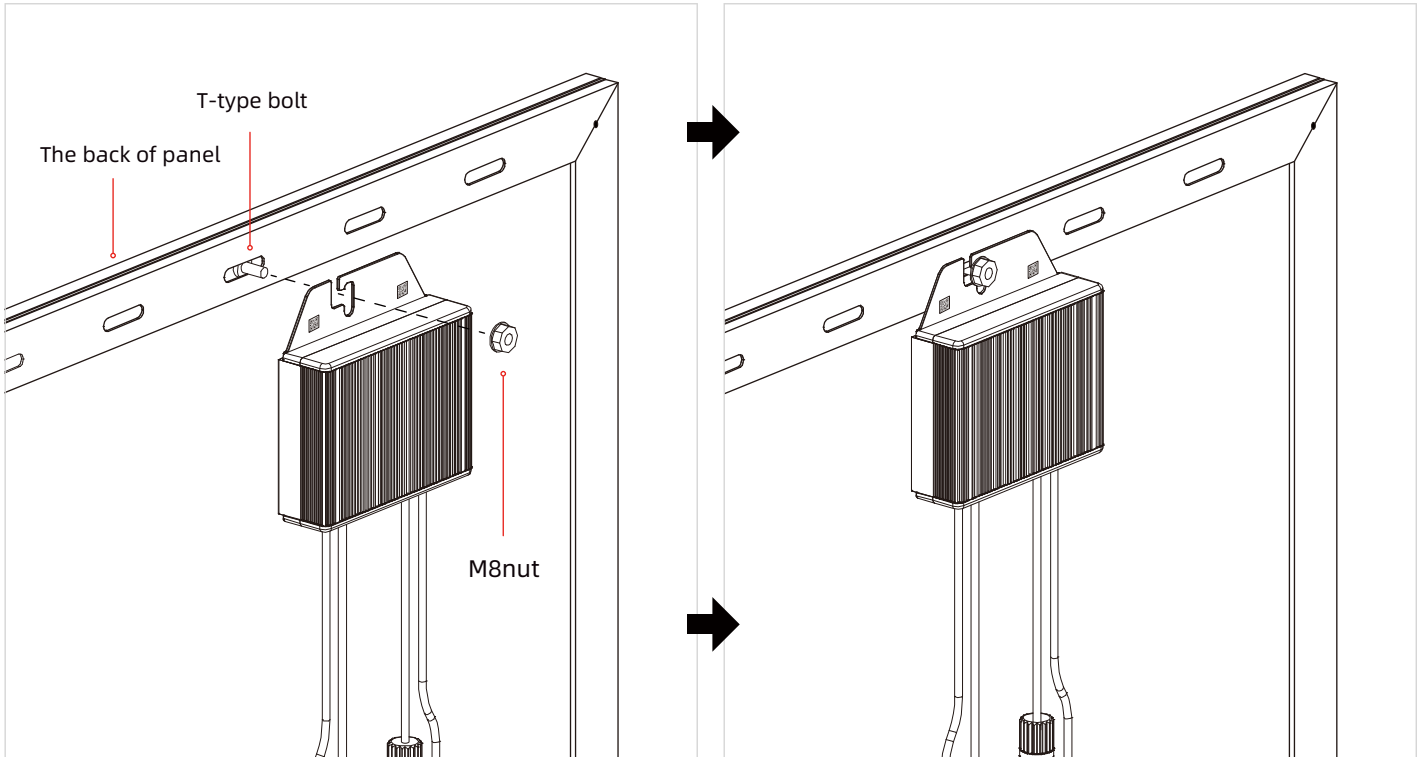


- ② It is prohibited to cut the cable.
- ③ The cable length between the farthest MRO and the control box shall not exceed 300M.
- ④ Within the permissible range of MRO input parameters, one MRO can support multiple panels that are connected in series instead of in parallel.
- ⑤ Must comply with the specified parameters of MRO.
- ⑥ Please take protective measures and ensure that the DC side of the inverter and the power supply of the control box are turned off during installation
- ⑦ It is recommended to install the microcontroller in a low-light environment.
- ⑧ If a string is severely shaded, please connect this string to a separate MPPT of the inverter.
- ⑨ When there are more than one strings parallel inputs under the same MPPT, there are the following limitations  
When configuring the MRO: photovoltaic strings connected to the same MPPT must use the same model and quantity of panels and MRO, and must be fully installed with MRO. The orientation and angle of all panels of strings under the same MPPT must be the same. (If ASP is installed in the photovoltaic system, this item can be ignored)

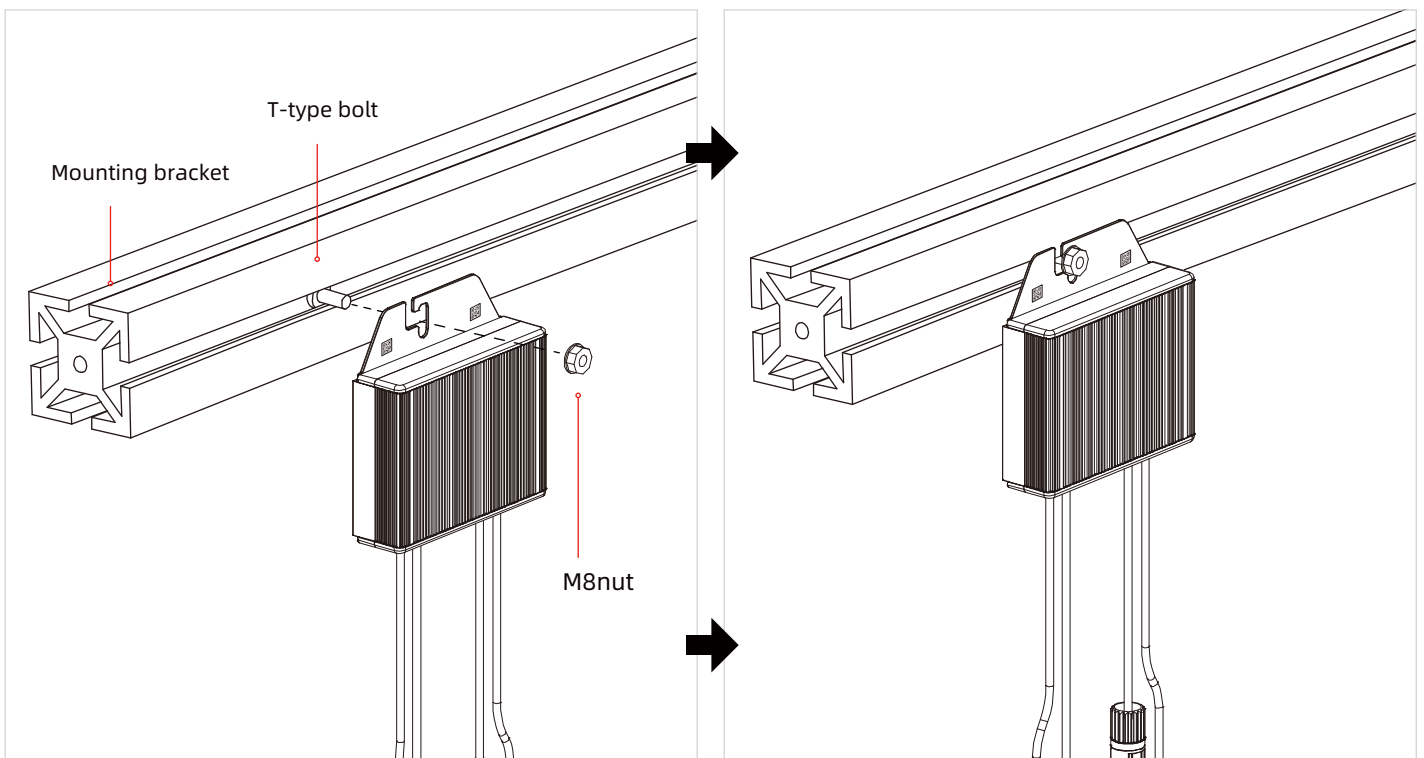
### 3. Installation Procedures

#### 1 Select the appropriate method to install based on the actual situation

Method A: Secure MRO on the frame of panels



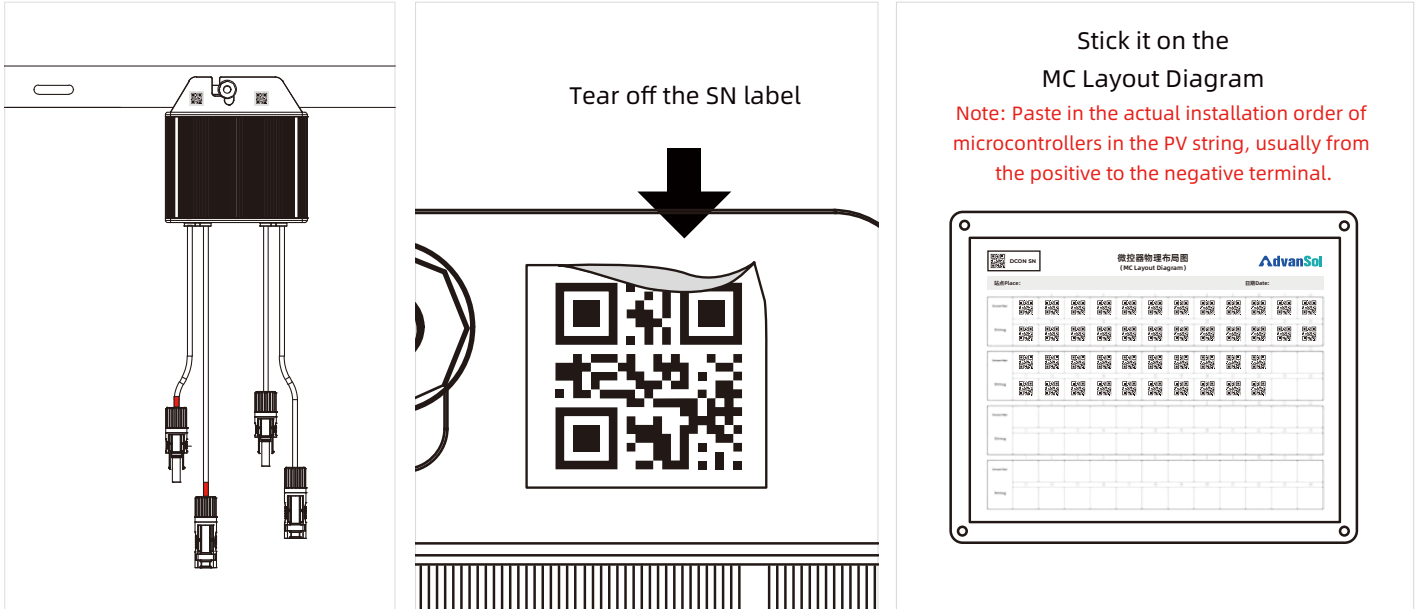
Method B: Secure MRO on the mounting bracket



### 2 Tear the SN label of MRO off and stick it on the MC Layout Diagram

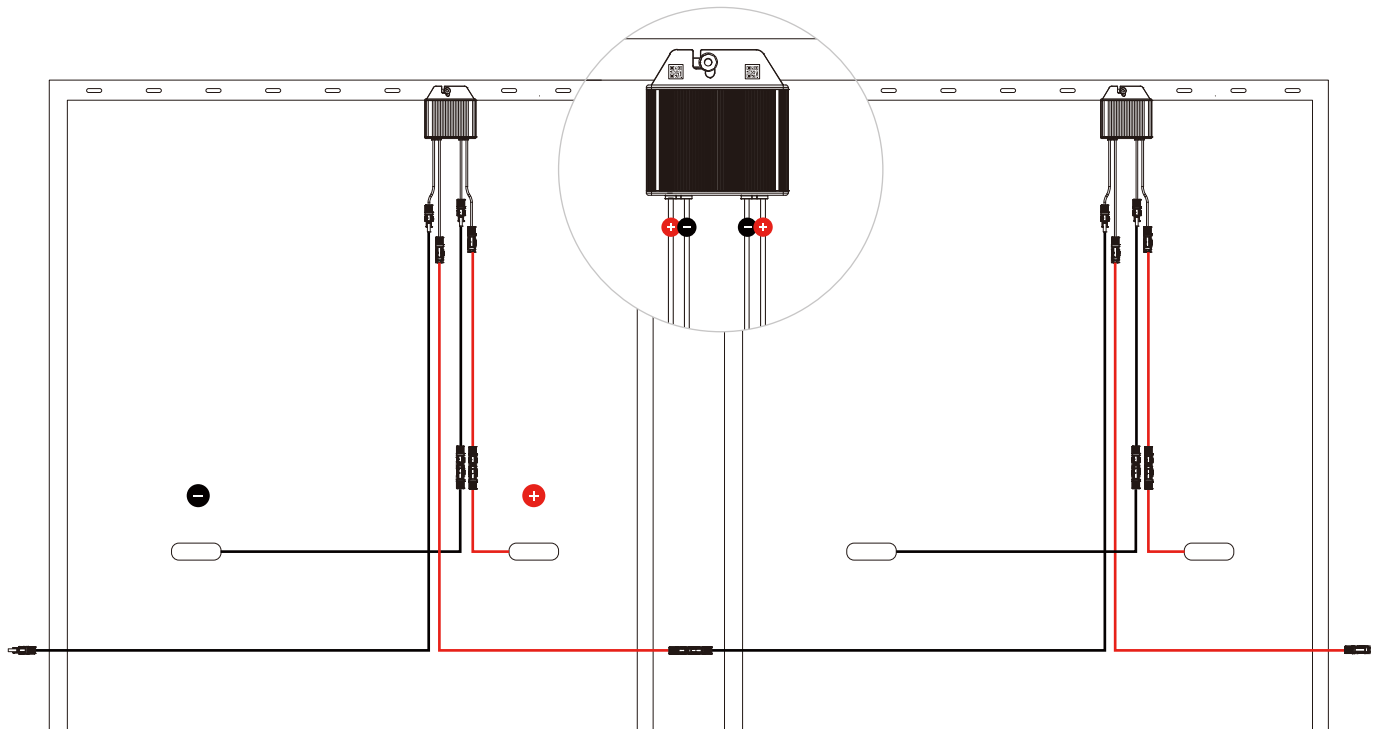
Note: The MC Layout Diagram is included in the packing of the V2.5 Control Box DCON-4G/WIFI .

If it is lost, please go to AdvanSol website for a copy: ([https://www.advansol-power.com/ServicesDownload\\_en.html](https://www.advansol-power.com/ServicesDownload_en.html))  
Download Center-Service Download Center-MC Layout Diagram



### 3 Connect micro controller and panels according to the wiring diagram

⚠ Ensure that MRO wiring is correct, otherwise the devices may be damaged

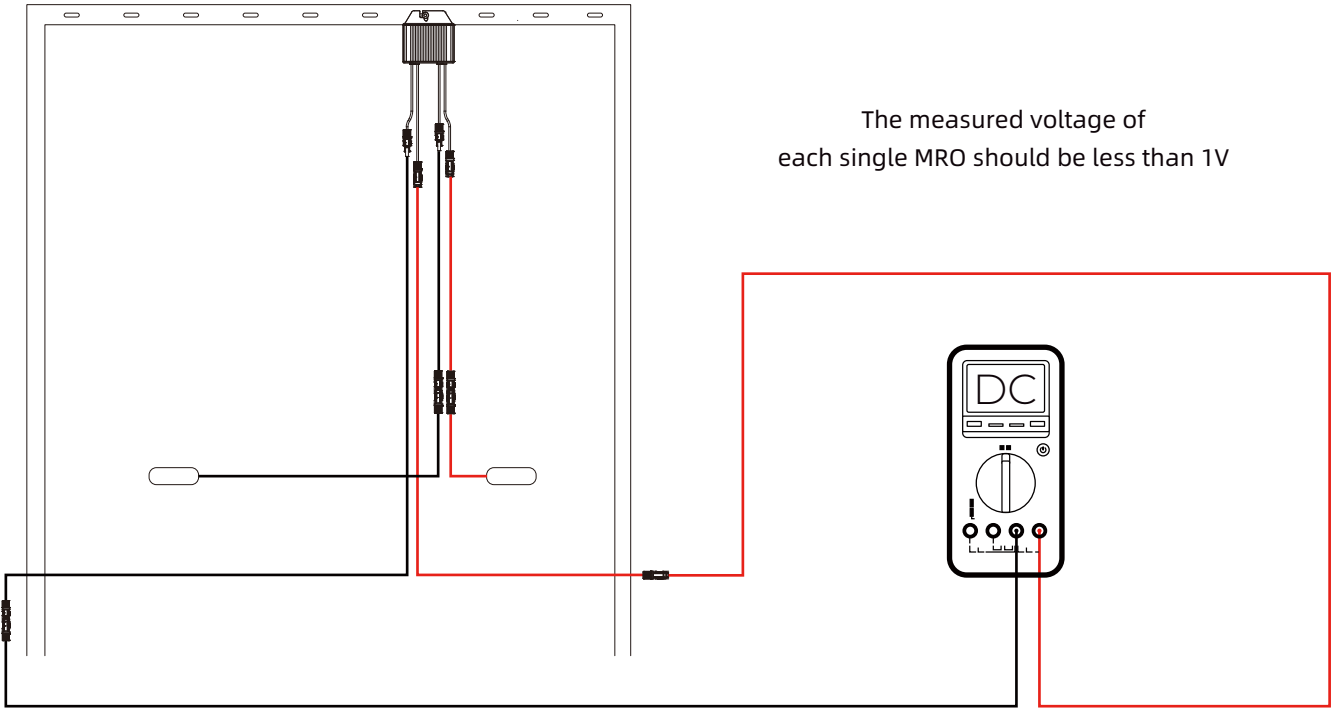


Connect input wires to the panel, and output wires to that of the adjacent MRO

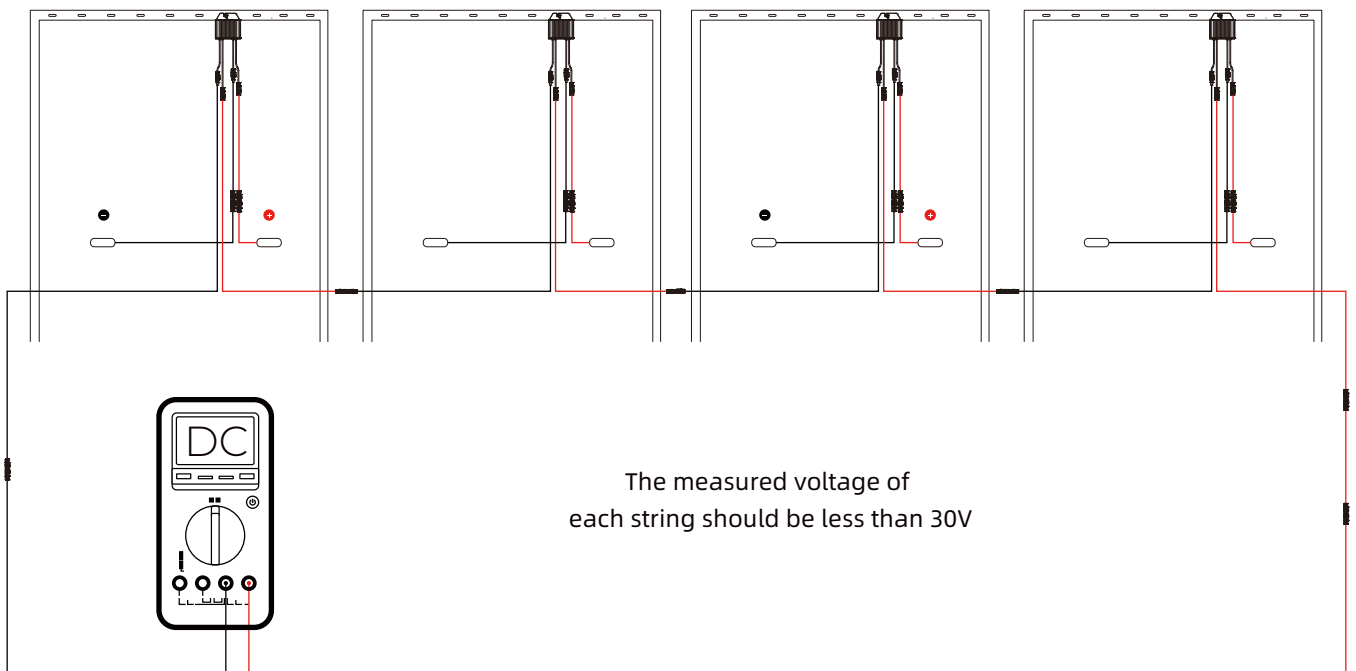
### 4. Installation Verification

⚠ Ensure that MRO wiring is correct, otherwise the devices may be damaged

The measured voltage of each single MRO should be less than 1V



The measured voltage of each string should be less than 30V



**The MRO are well installed**

**Contact us**

If you have any technical questions on AdvanSol products, or need other language files, please contact us for help.

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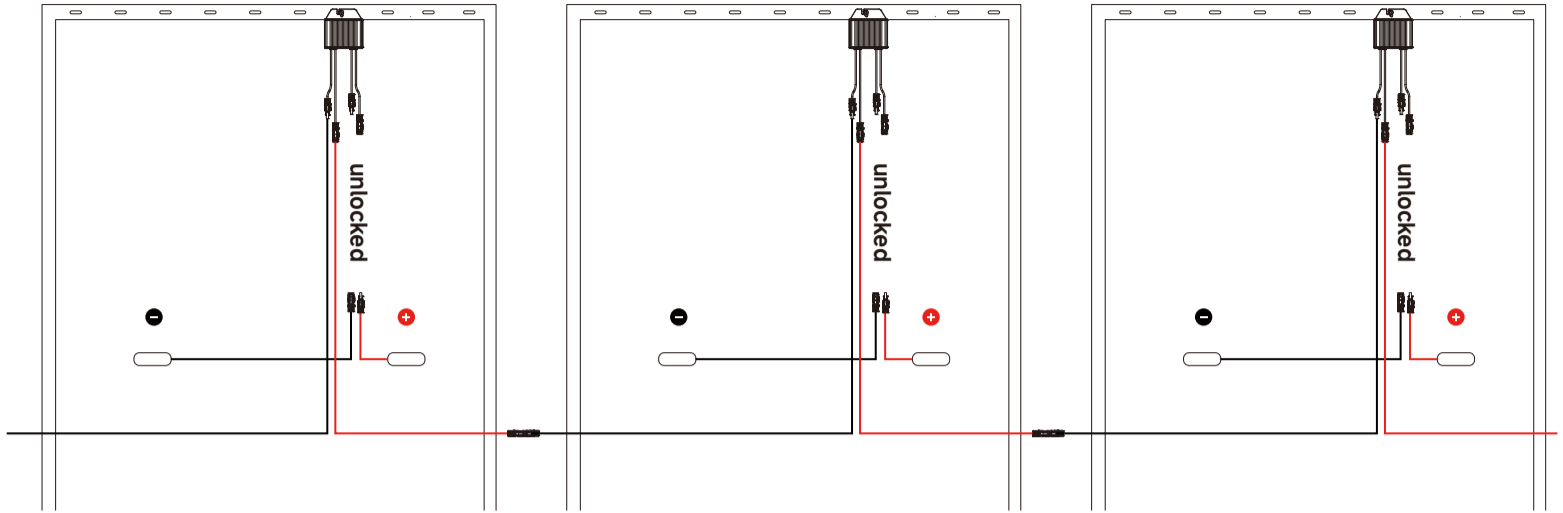
🌐 [www.advansol-power.com](http://www.advansol-power.com)

✉ [service@advansol-power.com](mailto:service@advansol-power.com)

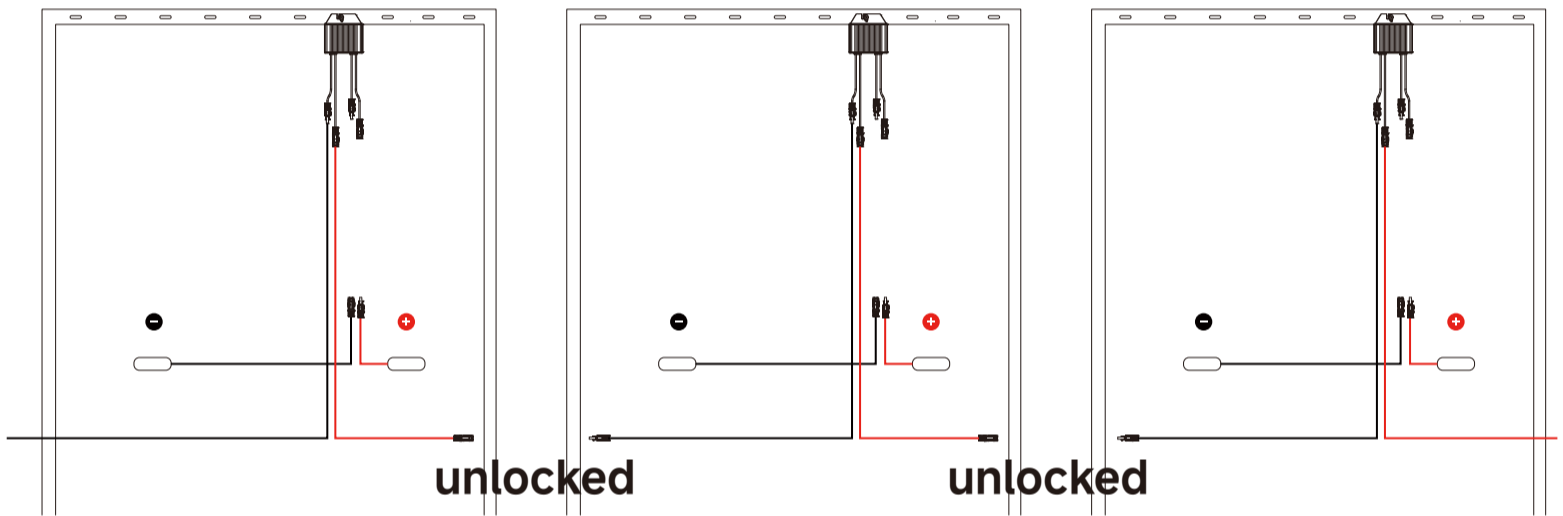


**Friendly reminder: Please scan the QR code to access versions in other languages.**

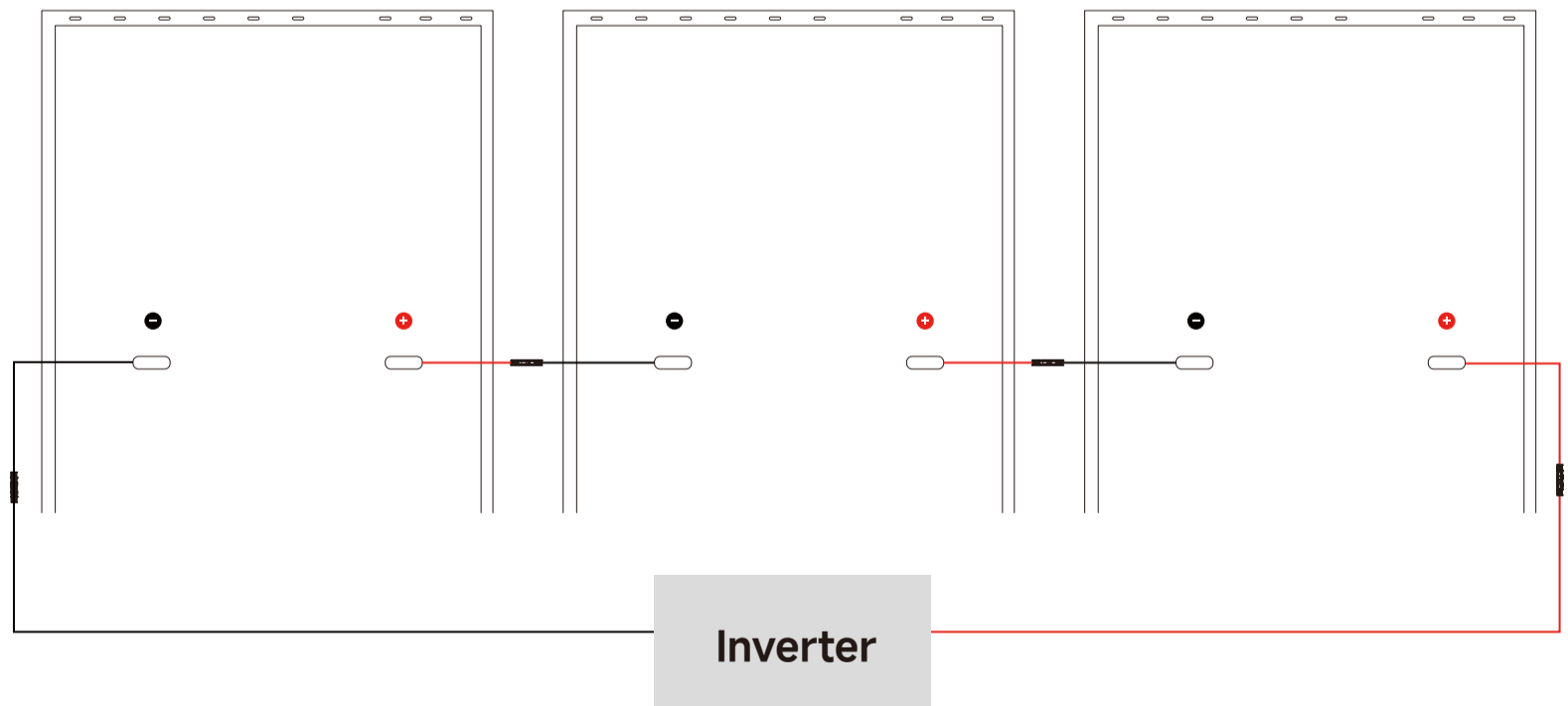
**1. Turn off the DC power of the inverter**



**2. Disconnect the optimizer (input) from the component in turn**



**3. Disconnect the optimizers (output) with each other in turn**



**4. Remove the optimizer (unscrewed)**

**5. Now that the optimizer is removed, connect the components in turn**