

# PS90 VIGI Solar System Controller Installation Guide

August 25,  
2025



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## Installation Guide

# VIGI Solar System Controller

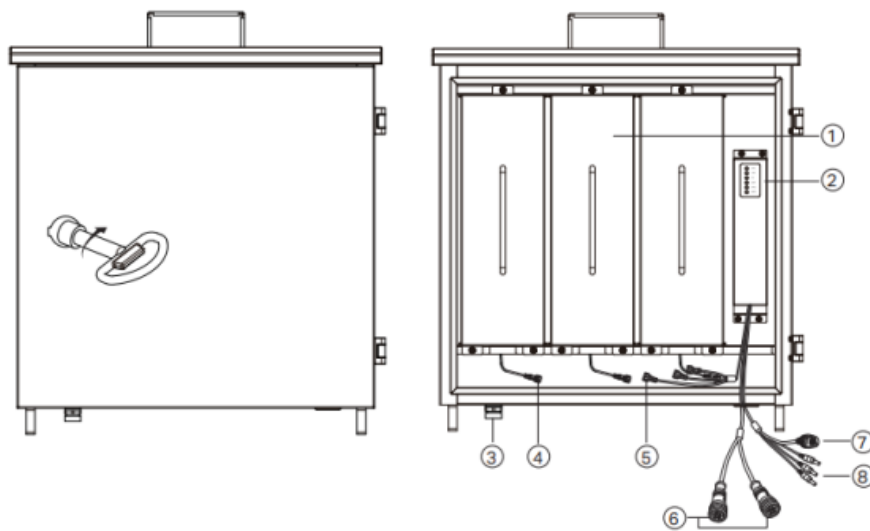
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## Chapter 1 Overview

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The VIGI Solar System Controller should work with VIGI Solar Mount, and VIGI Solar Panels.

Open the waterproof box with the provided key and the solar system controller is shown as below.



Note: Keep the key in a safe place for future use.

(1) Modular Battery\*3

(2) Controller LED

(3) Explosion-proof Valve: Used to help discharge the exhaust gas in the waterproof box when the battery explodes to ensure safety.

(4) Three-pin female connector for connecting the controller

(5) Three-pin male connector for connecting the modular battery

(6) Four-pin female connector for connecting the solar panel

(7) RJ45 Network interface for connecting network devices such as 4G routers and bridges

(8) Load Interface for connecting cameras

Load Interface #1: 9-12.6VDC

Load Interface #2: 9-12.6VDC

Load Interface #3: 12VDC

- Controller LED

LED	Indication
SYS	<b>On:</b> The system is working and the load is enabled. <b>Flashing:</b> The system is working and the load is disabled. <b>Off:</b> The system is not working.
LAN	<b>On:</b> The RJ45 interface is connected. <b>Flashing:</b> Data is being transferred. <b>Off:</b> The RJ45 interface is not connected.
PV	<b>On:</b> PV panels are connected and have voltage. <b>Off:</b> PV panels have no voltage.
BAT1/2/3	<b>On:</b> Battery power is higher than 20%. <b>Slow Flashing:</b> Battery power is lower than 20%. <b>Off:</b> Battery is abnormal.

## Chapter 2 Installation

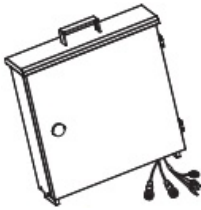
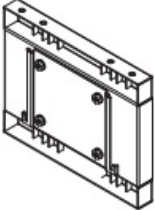
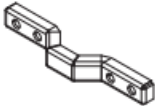
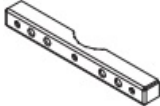


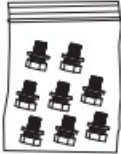

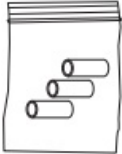


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### 2.1 Package Contents

Make sure that the package contains the following items. Please contact your distributor, if any of the listed items are damaged or missing.

The figures are for demonstration only. The actual items may differ in appearance and

quantity from what is depicted.

 1x	 1x	 2x	 2x	 1x
<div><div> M10*220 1x</div><div> M8*16 1x</div></div> <div><div> 1x</div><div> 1x</div><div> 1x</div><div> 1x</div></div>				

## 2.2 Safety Precautions

- During installation, collision and knocking are strictly prohibited to avoid damage.
- When placing the modular battery, make sure that the solar panel is facing upwards and placed horizontally. Uneven ground may scratch or damage the solar panel.
- Make sure there are no fixed obstructions. If installed around buildings or trees, it is necessary to ensure the installation height of the battery panel is higher than the obstacle.
- All modular battery load interfaces should take strict waterproof measures to avoid short circuit, leakage, and other problems.

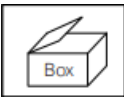
## 2.3 Installation

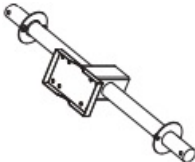

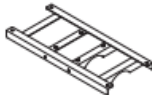

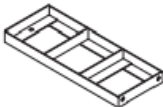



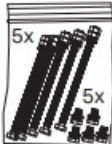

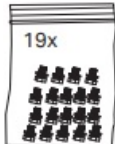
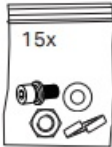
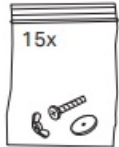

### Step 1. Prepare all components

The VIGI Solar System Controller should work with VIGI Solar Mount, and VIGI Solar

Panels.

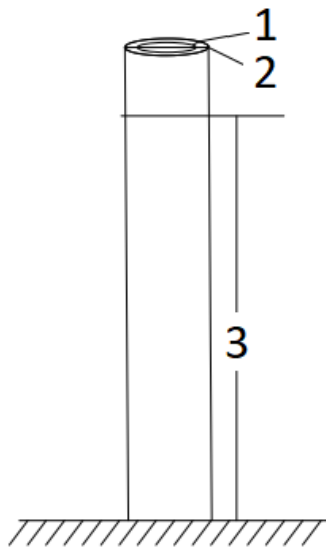
Step 2. Install the solar mount



 1x	 1x	 2x	 2x
 4x	 2x	 1x	 2x
 M8*16&M10*220 Kit 1x	 M5*20& M10*120 Kit 1x	 M8*16 1x	
 M8*20 Kit 1x	 M3*25 Kit 1x	 1x	



A round pole is recommended.



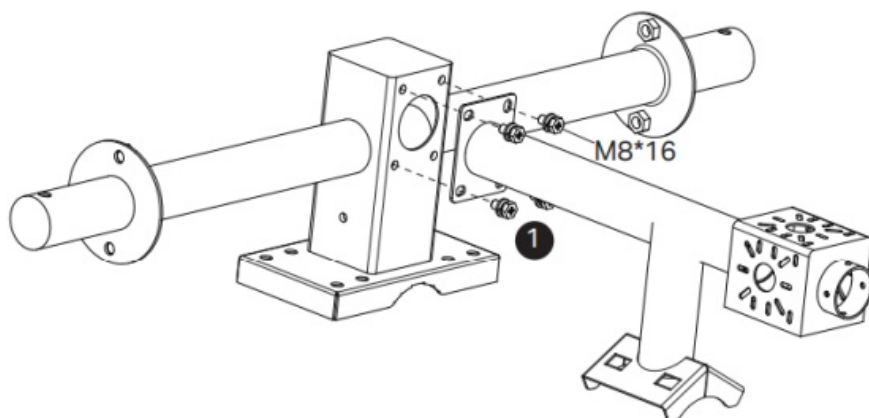
1. D: Thickness of the pole
2.  $\varphi$ : Diameter of the pole
3. H: Recommended Mounting Height

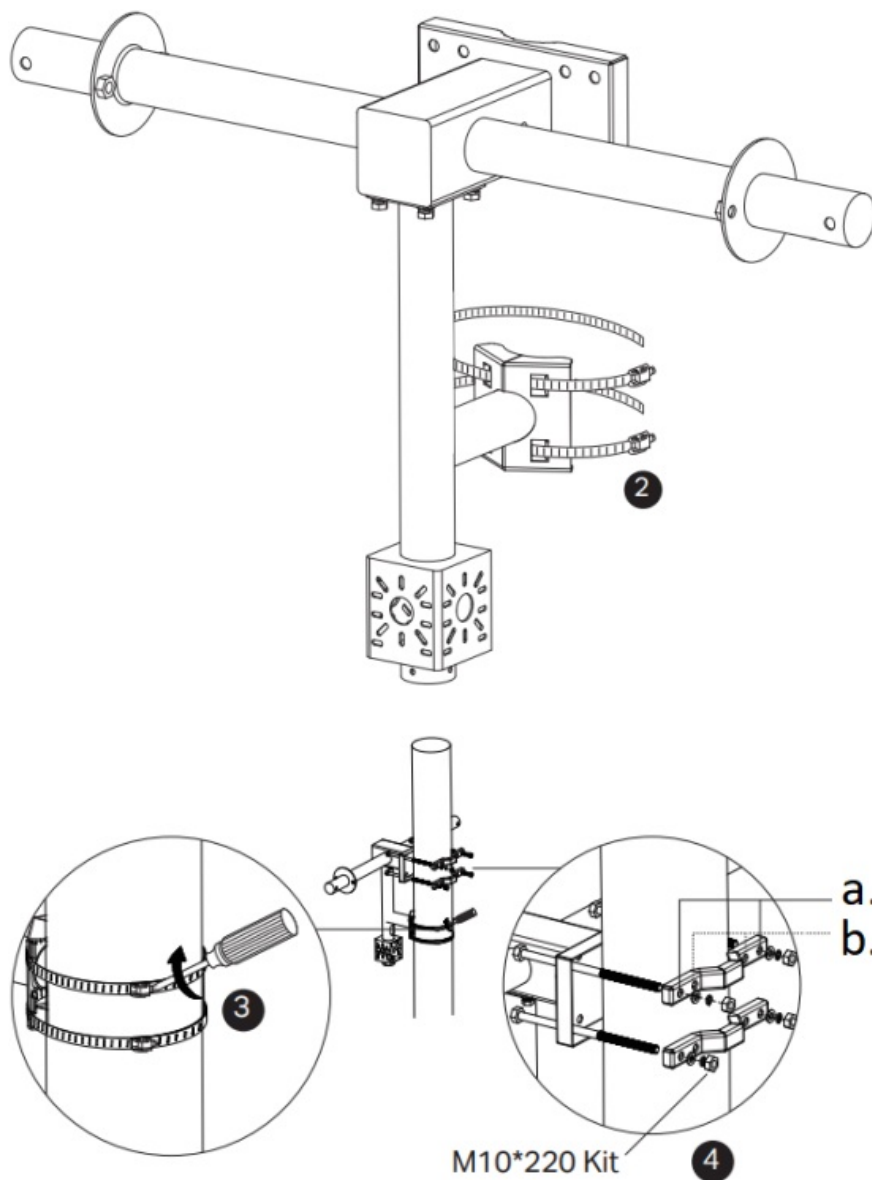
$D \geq 5 \text{ mm}$

$80 \text{ mm} \leq \varphi \leq 160 \text{ mm}$ , Recommended:  $120 \text{ mm} \leq \varphi \leq 160 \text{ mm}$

$3 \text{ m} \leq H \leq 5 \text{ m}$

Note: Keep no obstacles within 1.5 meters of the center diameter of the pole.

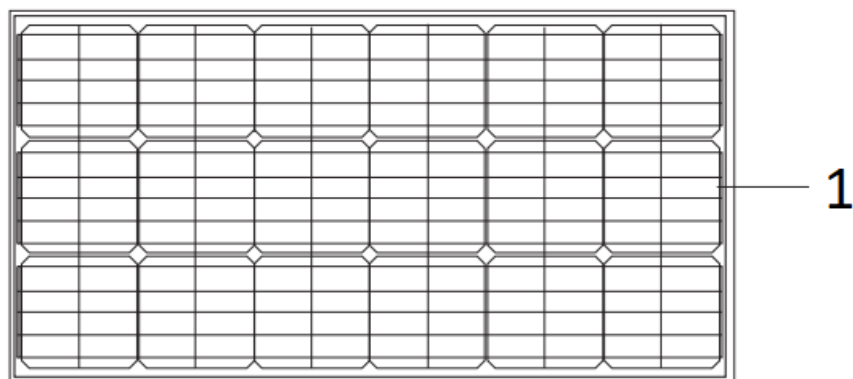




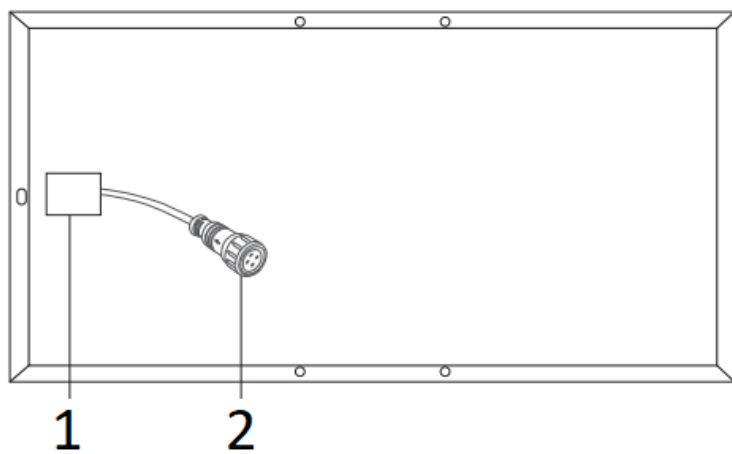
a. Suitable for poles:  $\varphi \geq 100 \text{ mm}$

b. Suitable for poles:  $\varphi < 100 \text{ mm}$

### Step 3. Install the solar panel

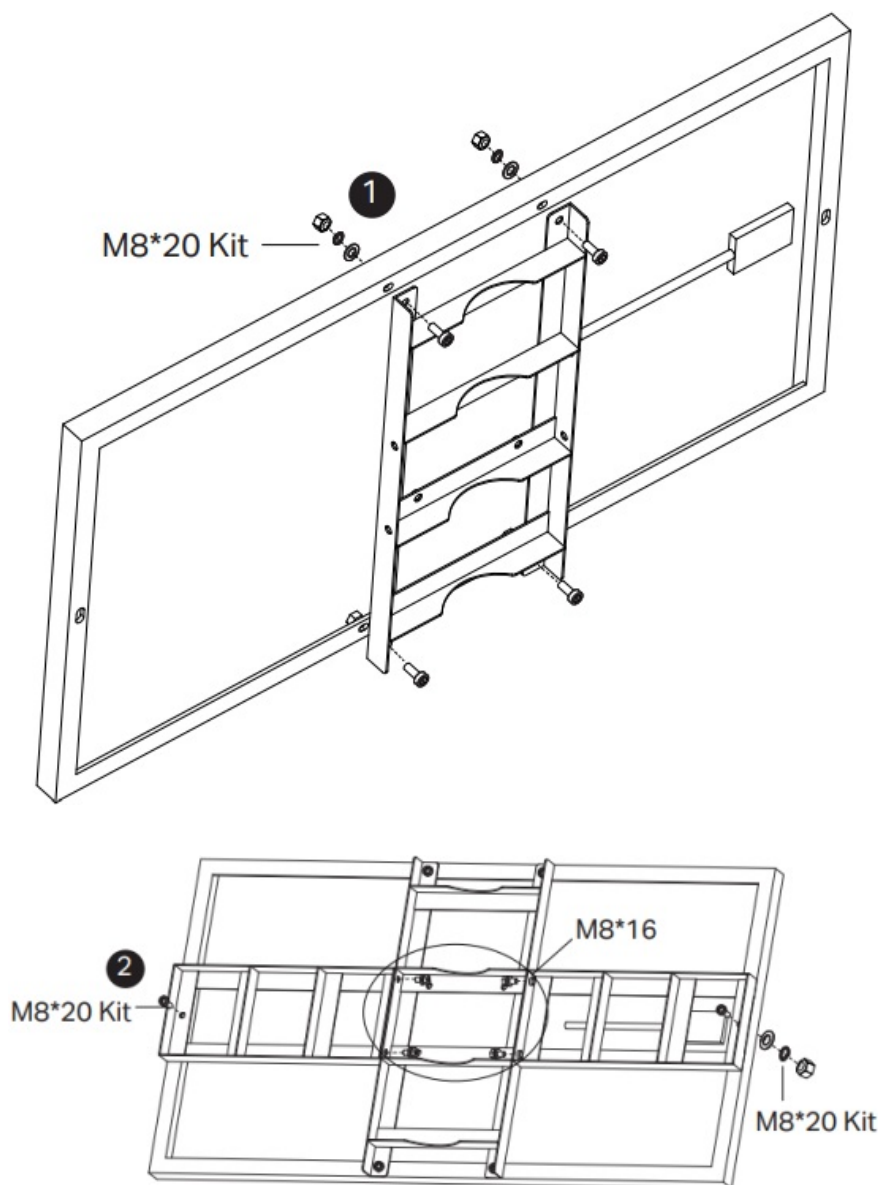


1. Solar panel



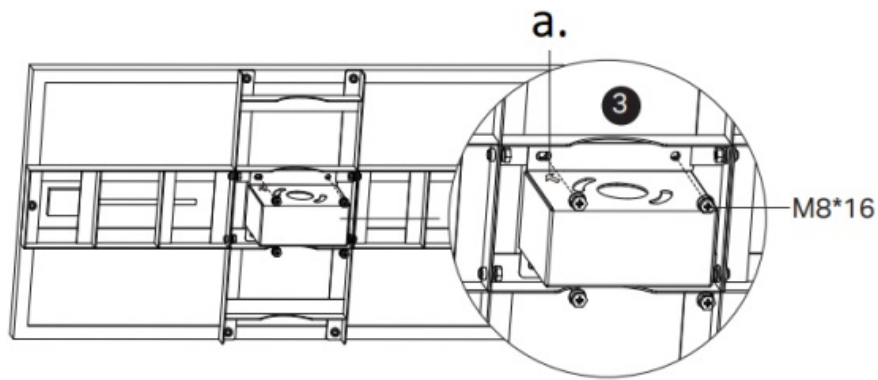
1. Junction box

2. Four-pin male connector for connecting solar system controller

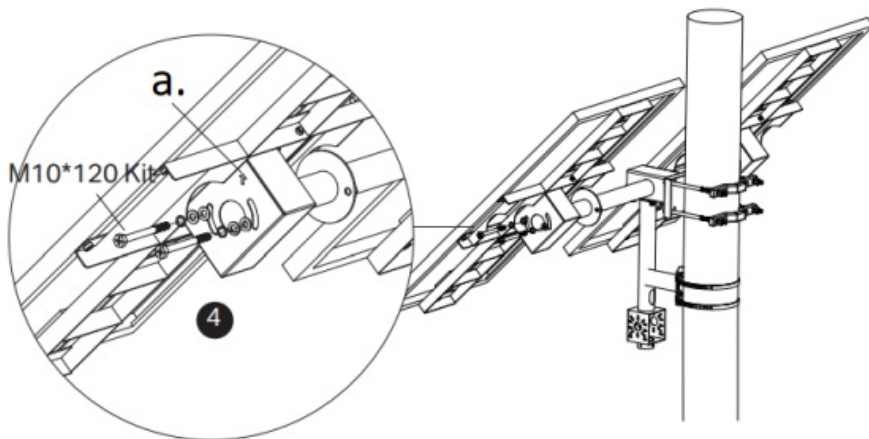


\*If you are using a 60W solar panel, skip step (2).





a. The arrow should point toward the panel's junction box.

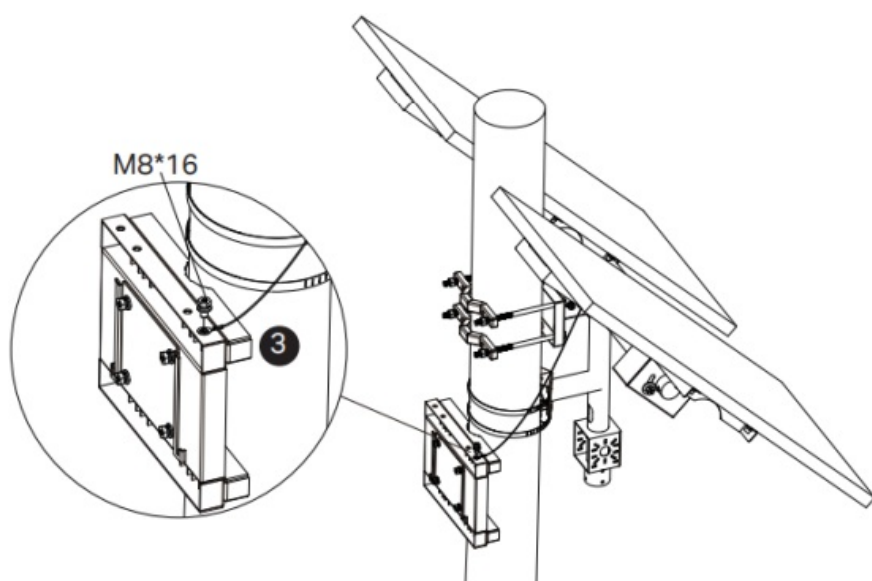
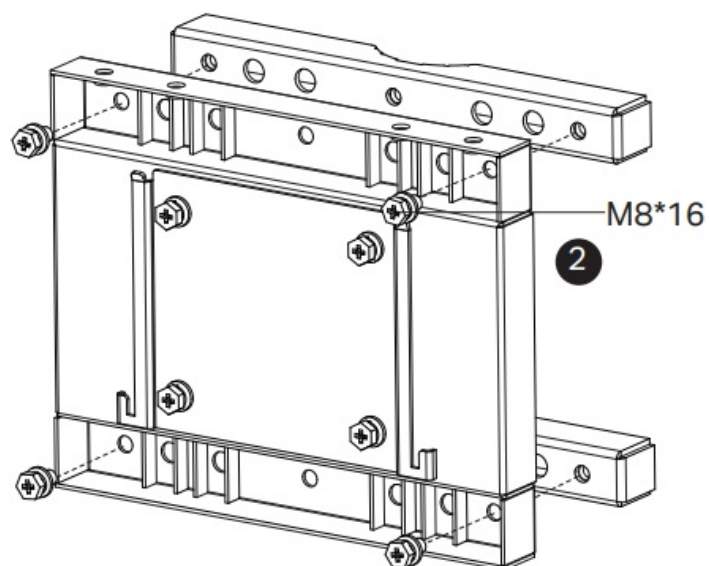
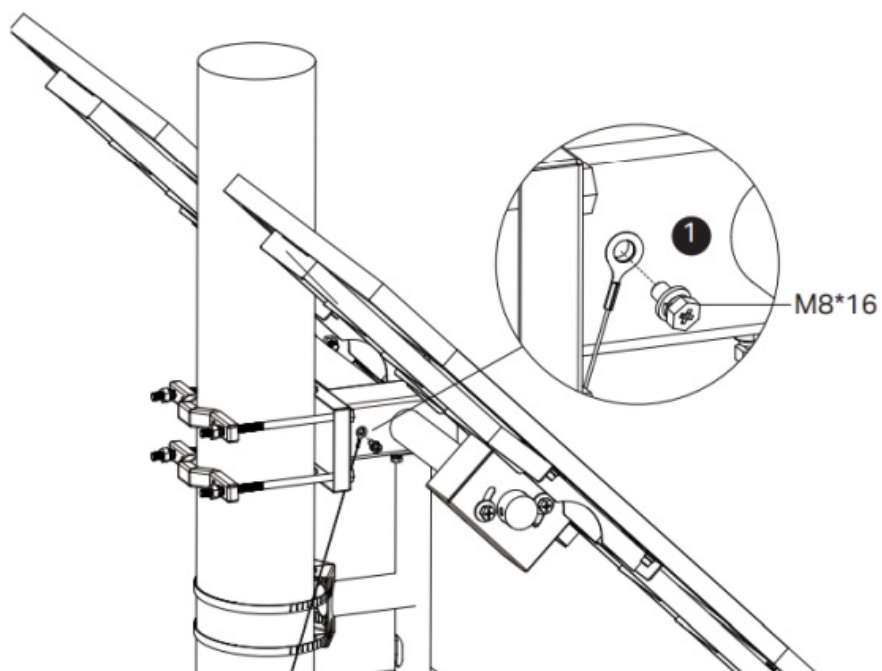


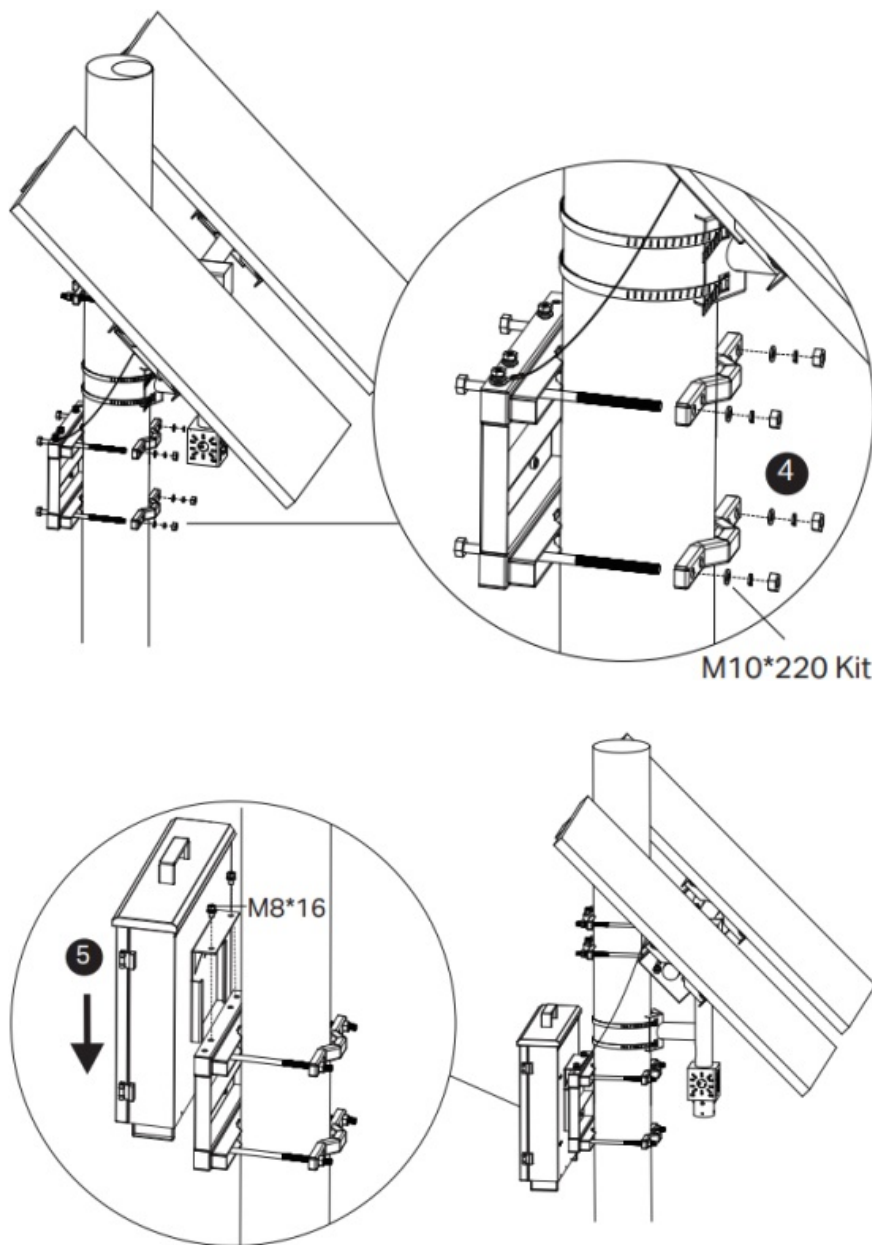
a. Keep the arrow pointing up.

Recommended solar panel inclination angles (the following inclination angles correspond to the holes on the mount):

Latitude Range	Recommended Inclination
0-5°	5°
5-15°	15°
15-25°	25°
25-35°	35°
35-45°	45°
>45°	55°

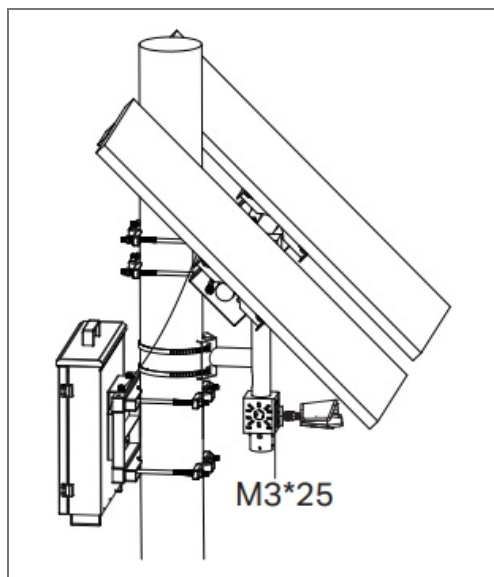
**Step 4. Install the solar system controller**

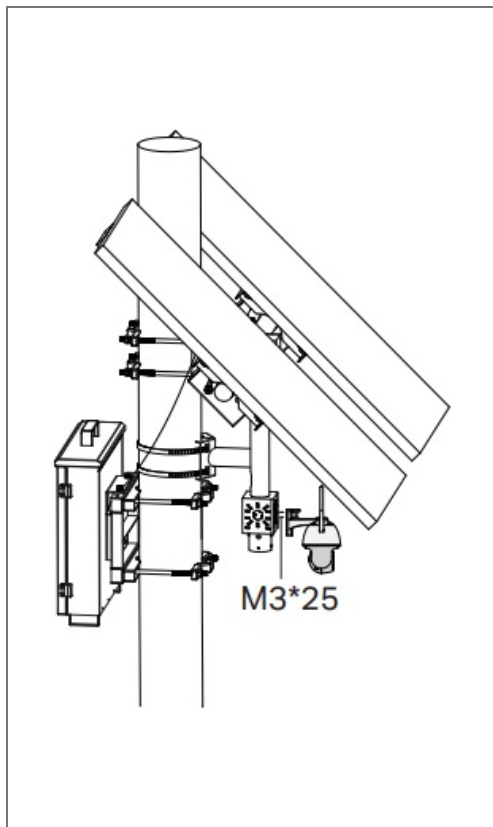




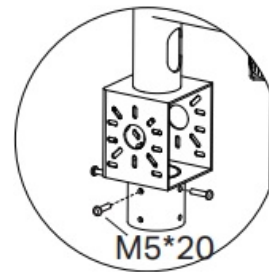
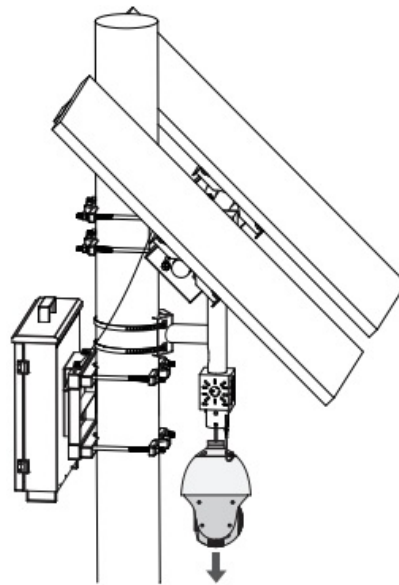
## Step 5. Install the cameras

When connecting the camera, refer to Step 7 to waterproof the cable.

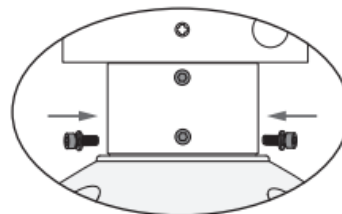




(1)



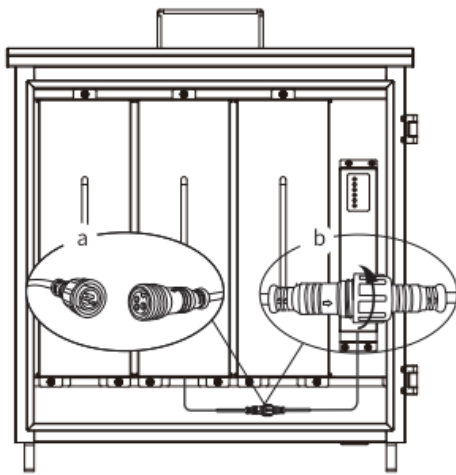
(2) Use the screws that came with your camera.



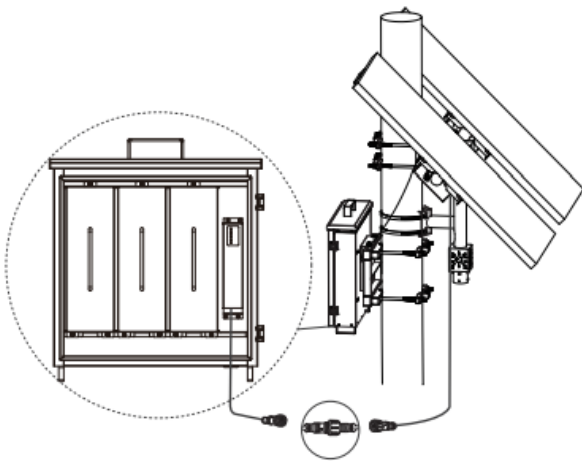
### Note:

1. Third-party PTZ cameras are compatible.
2. If the product is used in a windy area, it is recommended to securely attach VIGI 5-Series cameras directly to the pole to minimize the impact of strong winds on image quality.

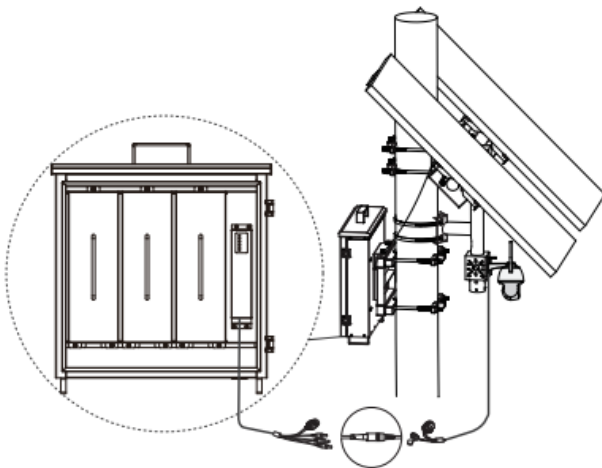
### Step 6. Connect the cables



**Connect modular battery**



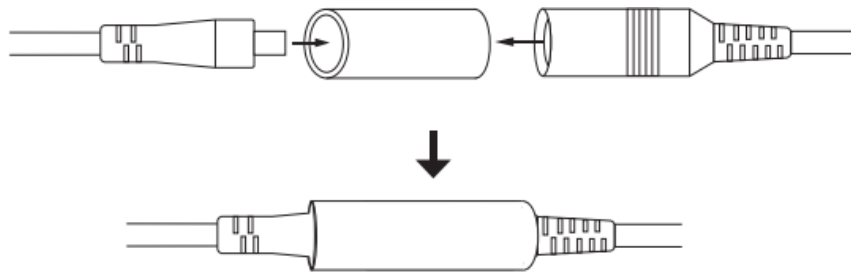
**Connect solar panel**



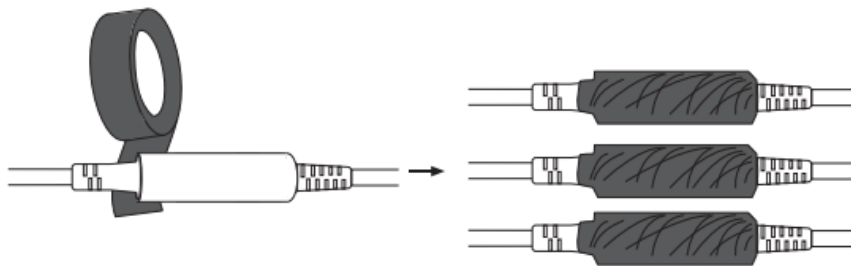
**Connect cameras**

## **Step 7. Waterproof cables**

1. When connecting the cameras, use the provided waterproof rubber pipe sleeves for waterproofing.

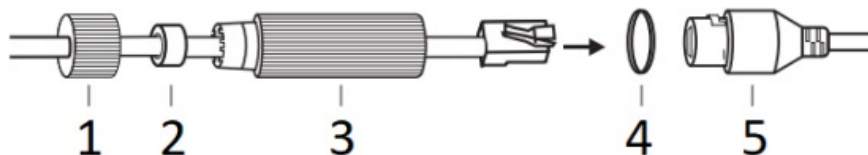


**Note:** For secure waterproofing, you can wrap the connection with over two layers of waterproof tape (not included), as shown below. Wrap the first layer, then cut. Apply a second layer, ensuring no gaps between the connection and tape.



2. Install the waterproof cable attachments for the network interface.

**Note:** Make sure each part is securely attached and the waterproof rings are flush to keep out water.

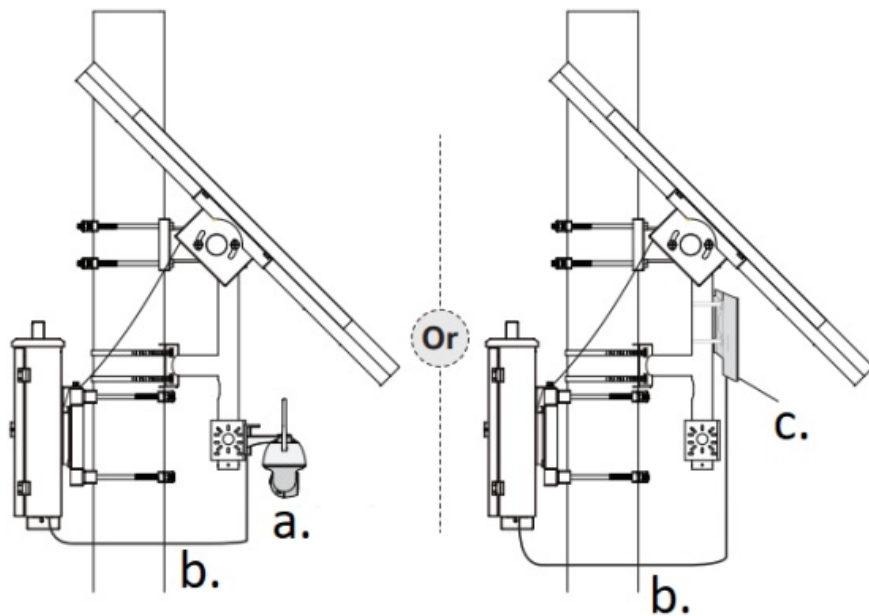


1. Fix Nut
2. Waterproof Ring
3. Waterproof Jacket
4. O-ring
5. Network Interface

## Chapter 3 Configuration

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Here is a typical network topology for the VIGI solar system controller.



a. VIGI C540-4G 4G Network Camera

b. Ethernet Cable

c. Network Devices (such as wireless access points, network bridges, etc.)

1. Connect the RJ45 network interface of the controller to the network devices (such as access points, bridges, and 4G cameras).

2. Download and install the latest TP-Link VIGI app.



or



3. Open the app and log in with your TP-Link ID. If you don't have an account, sign up first.

4. Tap the + button on the top right and follow the app instructions to add the VIGI solar system controller. Then you can control and manage the VIGI solar system controller via the VIGI app remotely.

### **Q1. The controller LED status is abnormal.**

- SYS LED is off: It may be out of power or the system board is damaged.
- LAN LED is off: There is no connection. Check whether the RJ45 interface is firmly connected to the network device.
- PV LED is off: The solar panel is not connected or works abnormally and cannot generate electricity.
- BAT LED is off: The battery is working abnormally.

### **Q2. Short system runtime and short monitoring time.**

- The battery board is disconnected: Check whether the solar panel interface is connected well, and ensure that the solar panel is in working condition.
- The solar panel is blocked: Check whether the solar panel is blocked by foreign objects or the front of the solar panel is dirty, which will affect its power generation efficiency.
- Inefficient equipment system: Confirm the power consumption of the equipment. If the power consumption is large, it is recommended to replace it with a solar-powered product with a higher specification.

### **Safety Information**

- Do not attempt to disassemble, repair, or modify the device.
- Do not use damaged charger or USB cable to charge the device.
- Do not use any other chargers than those recommended.
- Adapter shall be installed near the equipment and shall be easily accessible.
- Use only power supplies which are provided by manufacturer and in the original packing of this product. If you have any questions, please don't hesitate to contact us.
- Avoid disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion.
- Place the device with its bottom surface downward. Install it at stable places, and prevent it from falling.



- Keep the device away from fire or hot environments. DO NOT immerse in water or any other liquid.

This equipment is not suitable for use in locations where children are likely to be present. This equipment is not suitable for use in locations where children are likely to be present, such as family environment, school, children's playground and so on.

Please read and follow the above safety information when operating the device. We cannot guarantee that no accidents or damage will occur due to improper use of the device. Please use this product with care and operate at your own risk.

### CAUTION!

Avoid replacement of a battery with an incorrect type that can defeat a safeguard.

Avoid disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion.

Do not leave a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas.

Do not leave a battery subjected to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas.

### CAUTION!

Risk of fire or explosion if the battery is replaced by an incorrect type.

#### **EU Declaration of Conformity**

TP-Link hereby declares that the Solar System Controller is in compliance with the essential requirements and other relevant provisions of directives 2014/30/EU, 2014/35/EU, 2011/65/EU and (EU)2015/863.

The original EU Declaration of Conformity may be found at <https://www.tp-link.com/en/support/ce/>

## UK Declaration of Conformity


TP-Link hereby declares that the Solar System Controller is in compliance with the essential requirements and other relevant provisions of the Electromagnetic Compatibility Regulations 2016 and Electrical Equipment (Safety) Regulations 2016.

The original UK Declaration of Conformity may be found at <https://www.tp-link.com/support/ukca/>

For technical support, user guides, and other information, please visit <https://support.vigi.com/>.



## Documents / Resources

<div data-bbox="143 882 178 889">  </div> <div data-bbox="164 943 247 949"> <p>Installation Guide</p> </div> <div data-bbox="178 1032 240 1037"> <p>VIGI Solar System Controller</p> </div>	<div data-bbox="316 907 1297 925"> <p><a href="#">VIGI PS90 VIGI Solar System Controller [pdf]</a> Installation Guide</p> </div> <div data-bbox="316 963 1434 1050"> <p>PS90 VIGI Solar System Controller, PS90, VIGI Solar System Controller, Solar System Controller, System Controller</p> </div>
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## References

- User Manual

📁 VIGI

◆ PS90, PS90 VIGI Solar System Controller, Solar System Controller, System Controller, VIGI, VIGI Solar System Controller

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