

MSP Surveillance Box User Manual

AC110-277V & Victron Surveillance Box

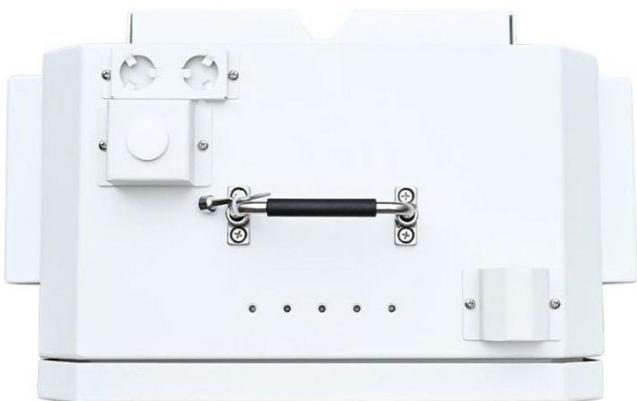


MSP Surveillance box user manual

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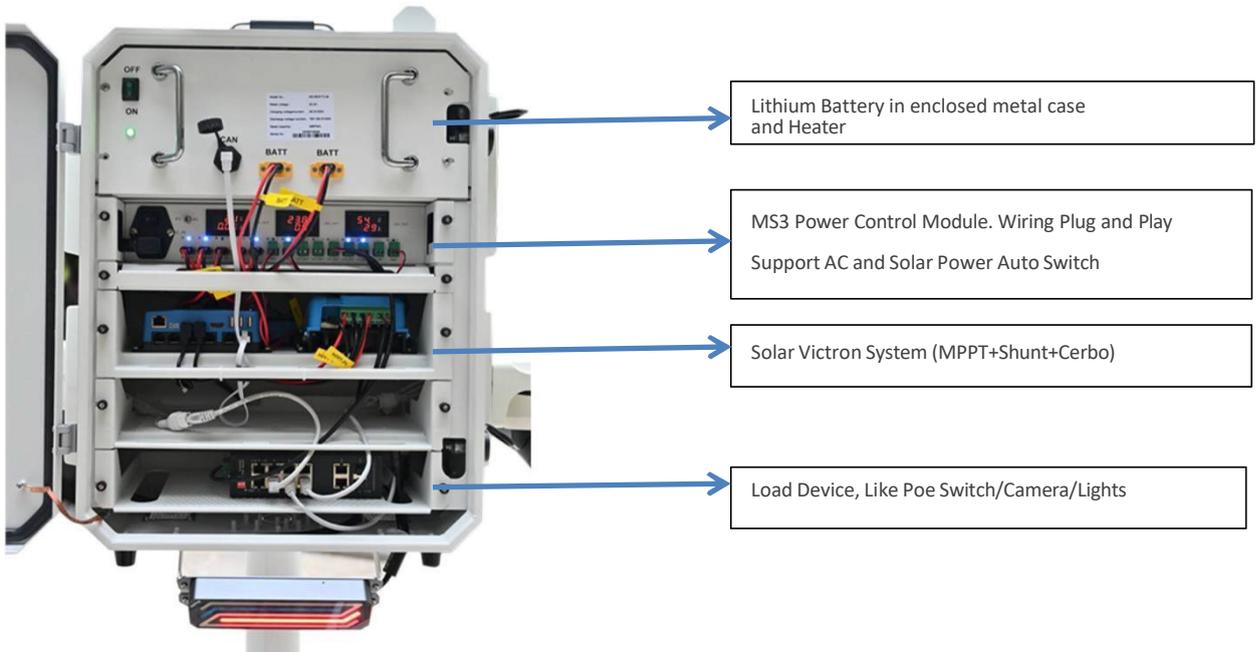
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1. Box Overview



2. Function Description

2.1 Box Interior Overview



2.2 System Function Description

MSP boxes are equipped with a Victron Connect device, featuring intelligent battery power controls and other functions. After registering a Victron Connect account, users can remotely view key information such as battery level, device power consumption, and photovoltaic power generation in real-time, and can also remotely control the device's startup and shutdown.



2.2.1 Support AC and Solar Power Auto Switch

The MSP Surveillance Box supports battery charging via AC power (110–277V) and up to 600W solar input. AC charging is routed through the MPPT controller, simulating solar charging and displaying status on the Victron system.

The control module features a PV/AC mode switch. Use AC mode for indoor charging; in all other scenarios, select Solar mode. When in Solar mode, the system automatically prioritizes solar charging and switches to AC if solar power is unavailable.

For outdoor use, after charging the battery indoors, always return the switch to Solar mode. The factory default is Solar mode.



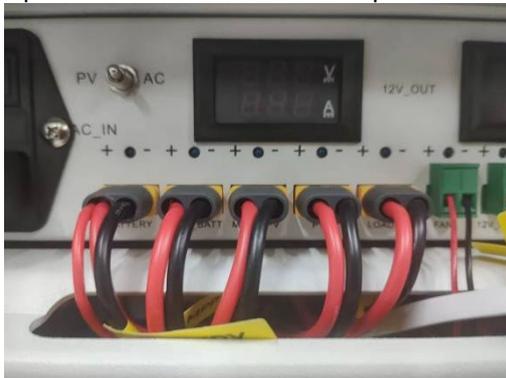
2.2.2 Support Remotely turn on/off of load devices

Quick overview:

Victron connect>Cerbo GX>Devices>Smart Solar Charger>Setting>Load Output>Always on/off

2.2.3 Power Usage Instructions

The XT60 socket is the power input section for connecting to the photovoltaic system. Unplugging is prohibited for non-authorized personnel.



The power supply can automatically recognize PV and AC inputs and it switches modes automatically when the system is in Solar mode.

The load switch can be remotely controlled via the Victron system using the IO_LOAD interface.



2.2.4 Output Current data:

12V_EPS: Rated current 2A. This port is not controlled by the power supply load switch and can be used to power devices that need constant power, such as routers (Cerbo GX power connection is on this port; it must remain connected during use).

12V_OUT: Rated current 7A. Can be used to power general DC devices.

24V_OUT: Rated current 3A. Can be used to power general DC devices.

52V_OUT: Rated current 5A. Can be used to power PoE switches.

LED_OUT: Used for the LED alarm light.

FAN, IO_LOAD: These are control ports for system operation; do not change the connections.

IO_AC: Used to output an AC signal; closed when using grid power, open when using photovoltaic power.

AC Input Switch: Press at 'O' to turn off grid input, press at 'I' to turn on grid input (shown in the on state in the illustration).



3. Included Accessories

● 4.1 Accessory Overview



● 4.2 Accessory Categories and Details

10×100 Expansion Bolts × 6



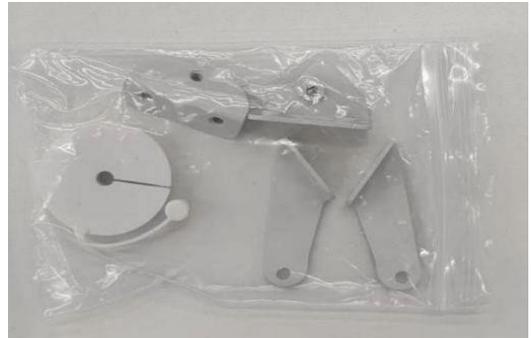
Hose Clamp



AC Waterproof Power Connector



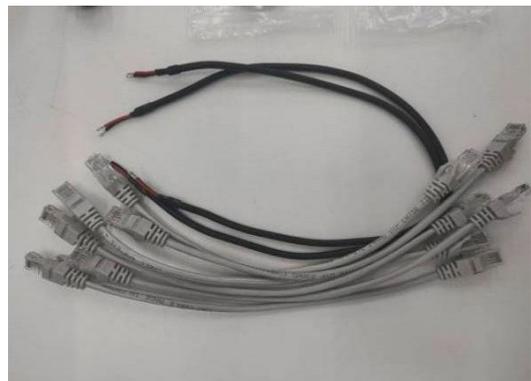
POE Light Bracket Accessories



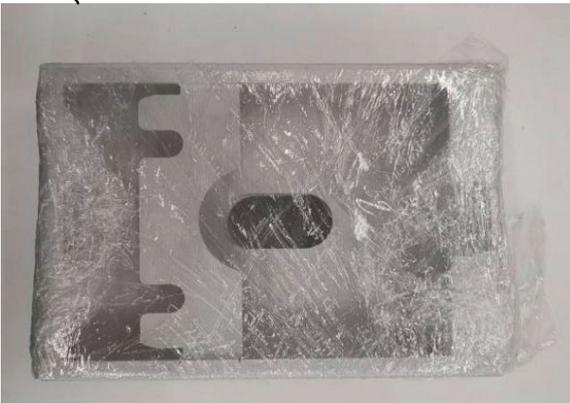
Expansion Mounting Screws



Cables (Net Cable , Power Cable)



Expansion Mounting Side Panel



PTZ Camera Mounting Plates



4. Box Installation Instructions

● 5.1 Installation Methods

Wall Mounting



Pole Mounting



● 5.2 Required Materials and Tools

Hammer Drill and 12mm Drill Bit



Medium Phillips Screwdriver



Small Flathead Screwdriver



Adjustable Wrench



● 5.3 Pre-Installation Preparation

The surveillance box uses a drawer-type modular design for easy installation. It is recommended to install expansion devices first and remove the battery before installation. Reinstall the battery after installation is complete.

Battery Removal and Installation

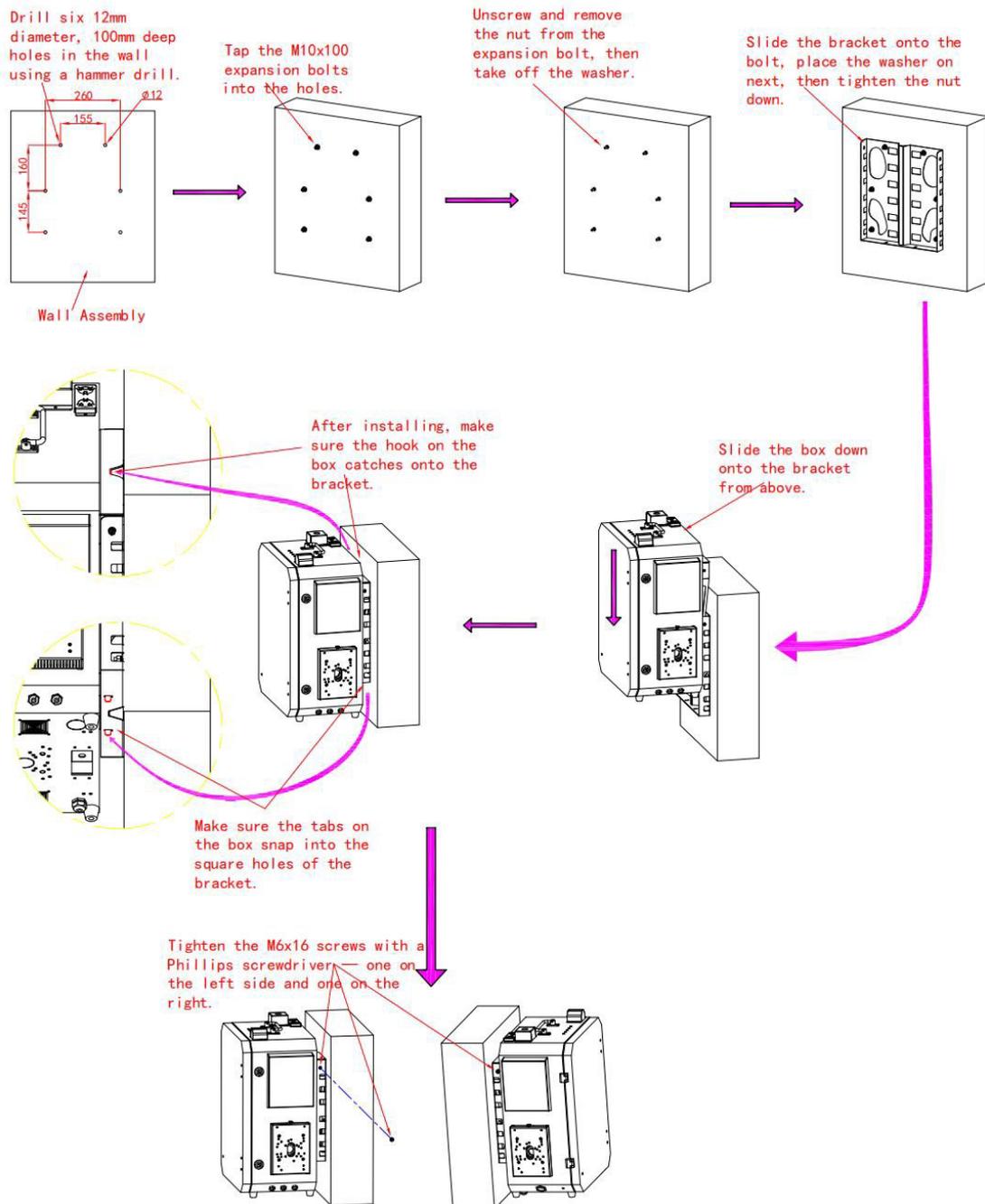
Remove the 4 fixing screws on the panel, slowly pull the battery out halfway, support the bottom of the battery with one hand, and slowly remove it.

Installation: Lift the battery to the installation position, slide it in, and install the 4 fixing screws on the panel.

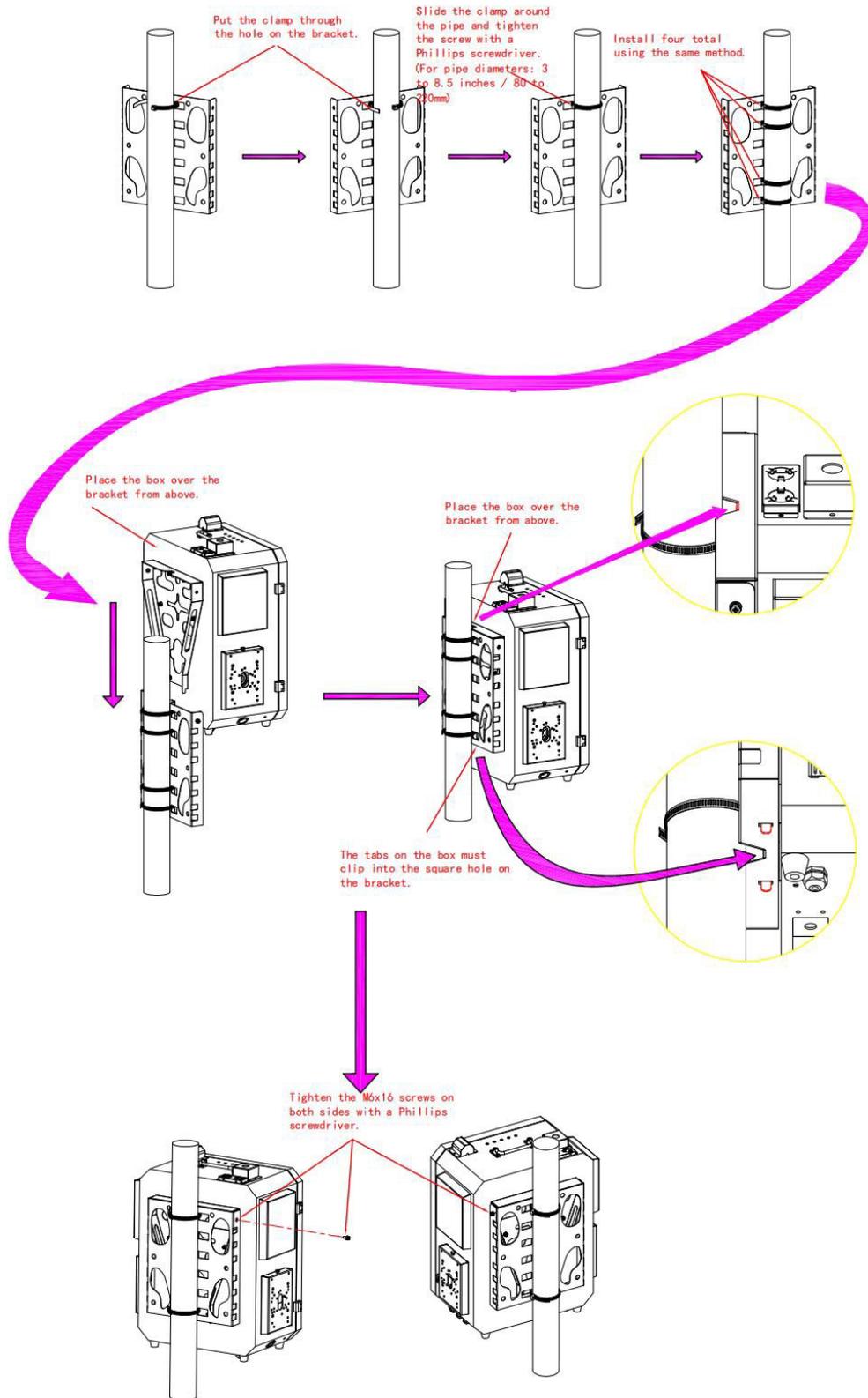


● 5.4 Installation Index

Wall Mounting



Pole Mounting



5. Power Supply Installation Instructions

● 6.1 AC Power Supply

Step 1: Open the waterproof installation hole at the lower left corner of the box (save the cover). Pass the AC waterproof power cable from the box through the reserved waterproof installation hole.



Step 2: Install the waterproof installation hole cover as shown.



Step 3: Take out the AC waterproof power connector from the accessories and install it as shown. And then install the AC waterproof power connector properly.



● 6.2 PV Power Supply

Step 1: Locate the reserved MC4 connector at the bottom.



Step 2: Plug the MC4 connector from the photovoltaic panel into the box.



6. Other devices Installation Instructions

● 7.1 Horn Speaker

Tools required: Medium screwdriver and adjustable wrench.



Step 1: Prepare the horn speaker and take out the expansion screws from the accessories (use 3 of the M6 pan head screws, store the rest).



Step 2: Remove the horn speaker fixing bracket and install it on the top of the box.



Step 3: Remove the cable entry hole waterproof cover (keep the removed parts).



Step 4: Place the speaker cable harness into the cable entry hole, insert the waterproof rubber plug, and reinstall the waterproof cover.



● 7.2 Side Camera

Tools required: Medium screwdriver.



Step 1: Remove the side panel and take out the waterproof plug (save the removed screws).



Step 2: Remove the camera's mounting plate. Take 4 M4 screws from the accessory pack and install the camera mounting plate onto the side panel.

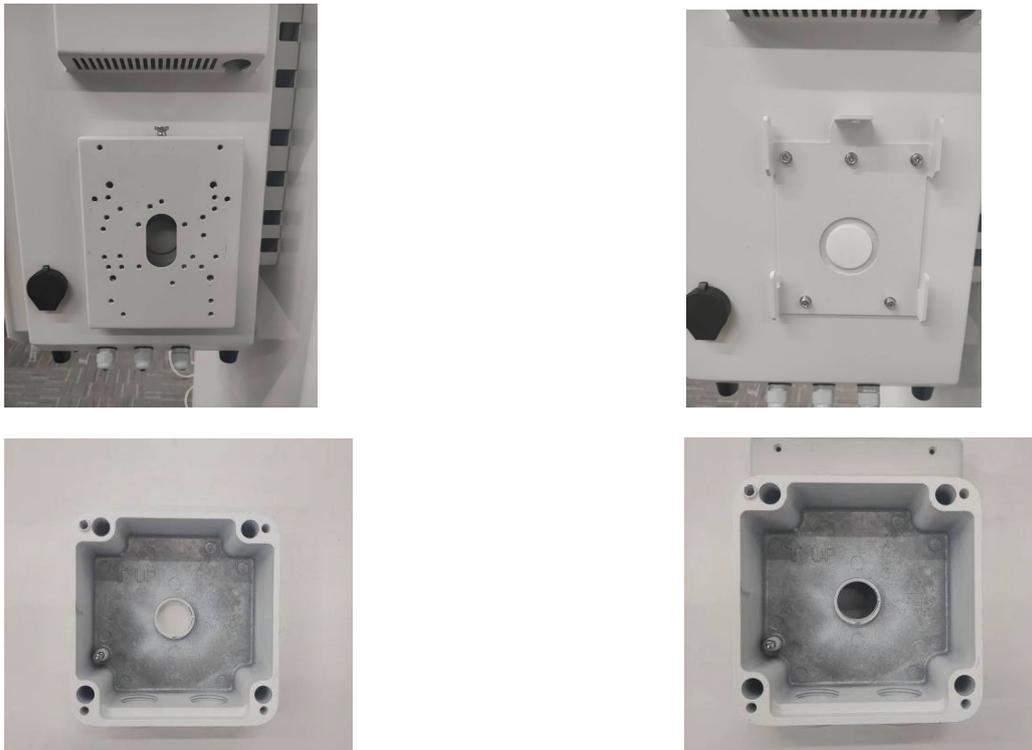


Step 3: Reinstall the side panel onto the box. Take out the camera and pass the cable through the side cable entry hole. Secure the camera to the mounting plate.



● 7.3 Side Camera for another camera mounting junction

Step 1: Remove the box side panel and take out the waterproof plug (save the removed screws). Remove the camera's base cover. Use the 4 M screws provided with the camera to install the base cover onto the side panel.



Step 2: Reinstall the side panel onto the box. Take out the camera and pass the cable through the side cable entry hole.



Step 3: Secure the camera to the mounting plate.

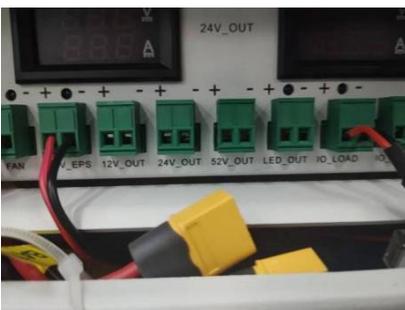


● 7.4 Poe Switch

Step 1: Place the switch inside the drawer.



Step 2: Take the two-core cable from the accessory pack and connect it between the switch and the power supply's 52V output port (pay attention to the power supply polarity).



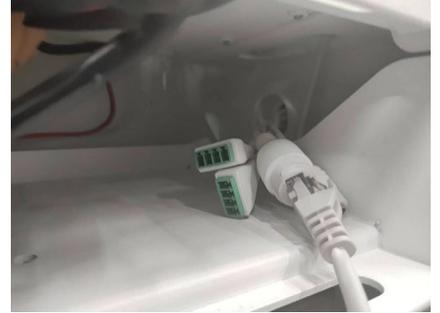
6.1 Top Horn Speaker wiring with PoE switch

Step 1: Take an Ethernet cable from the accessory pack and plug it into the speaker cable harness. Pass the cable harness through the right-side cable entry hole and connect it to the switch.



6.2 Side Camera

Step 1: Take an Ethernet cable from the accessory pack and plug it into the camera cable harness.



Step 2: Pass the cable harness through the cable entry hole and connect it to the switch.



7. Precautions

To ensure transportation safety, the battery harness is not connected during shipping. You need to connect it yourself during use or testing. The battery harness is tied with a zip tie under the battery. It consists of one CAN communication cable and two power cables. The two power ports function identically and do not need to be distinguished; connect them as shown.



The battery has a rocker switch that needs to be turned on during use.



Please pay attention: When using grid power, note that the voltage must be between 110VAC and 270VAC; both 50Hz and 60Hz can be used.

When using photovoltaic power, the MPPT can support a maximum voltage of 100VDC and a maximum current of 20A.

8. Appendix

Connection Diagram and Drawing

