

Installation Manual

Integrated Modular Intelligent Solar Power Supply System



SCAN FOR LATEST

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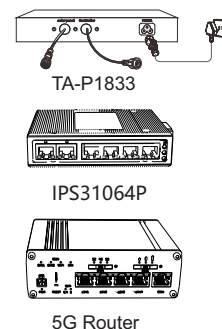
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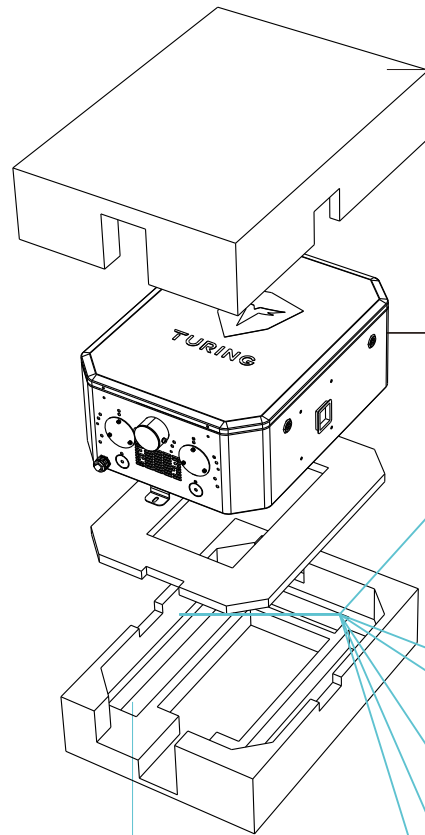
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1. List of Accessories

1.1 Water-resistant Case



List of Screws

M3×10 mm	15
M3×10 mm (Without spacer)	15
M4×14 mm	35
M4×14 mm (Without spacer)	10
M4×20 mm	10
M4×35 mm	8
M4×14 mm (Round head)	15
M8×16 mm	3



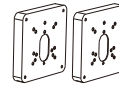
X2 Instruction manual



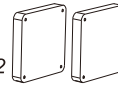
X1 Intelligent Controller



X1



X2



X2

TP-SDLPZ/TP-SDC



X1 Rain Shade

DC power cable



X2



X1



X2



X1



X1

4G antenna

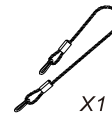
WIFI antenna

Antenna mounting plate

Network cable



X6

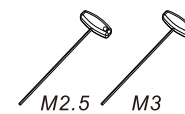


X1 Safety rope



X4

Stainless steel clamp



M2.5 M3
Screw wrench



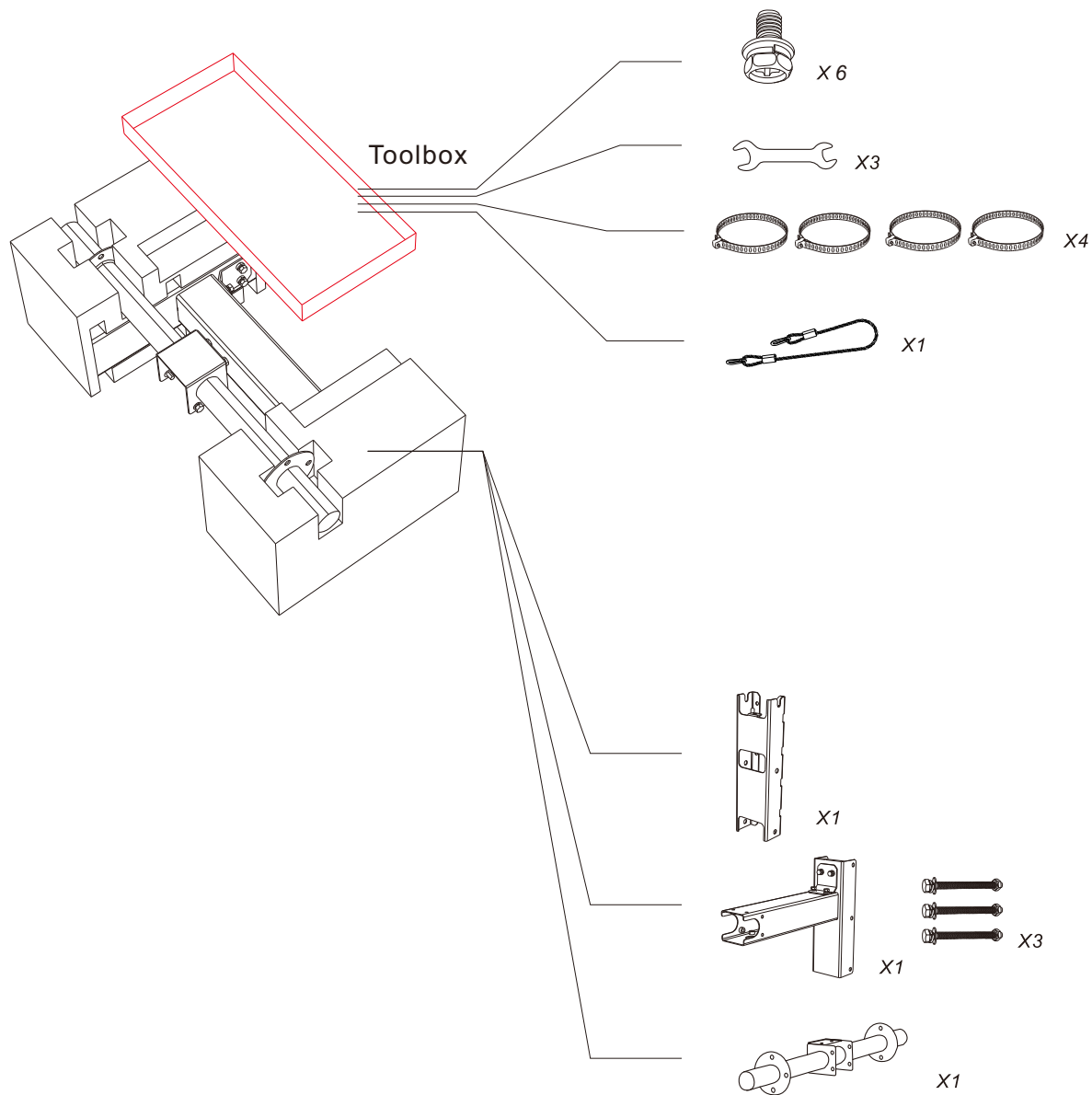
X2

Key

• Specification and Parameters

Parameters	LS-KG2-EGEN-01
Dimensions (L * W * H)	26.77*19.9*13.78
Weight	Net Wt: 41.89 lbs / Gross Wt: 46.3 lbs
Material	Cold-rolled steel/electro-coating/powder coating

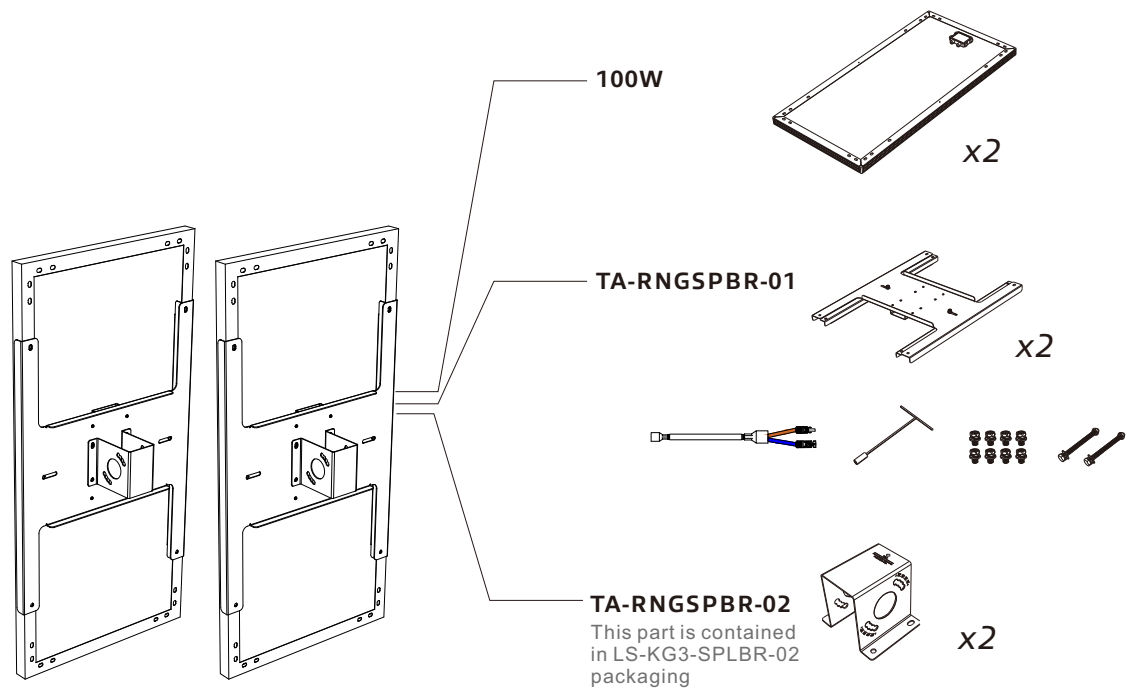
1.2 1 Solar Panel Racking



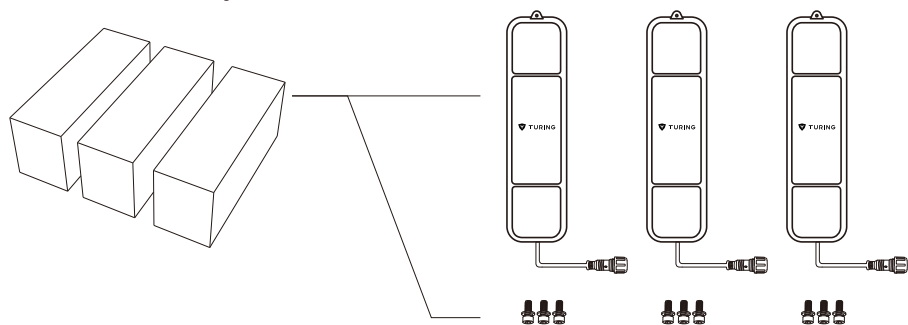
• Specification and Parameters

Parameters	LS-KG2-SPBR-02
Dimensions (L * W * H)	30.71*16.14*10.43
Weight	Net Wt: 18.74 lbs / Gross Wt: 22.05 lbs
Material	Cold-rolled steel/electro-coating/powder coating

1.3 Solar Photovoltaic Panels



1.4 Lithium Battery X3



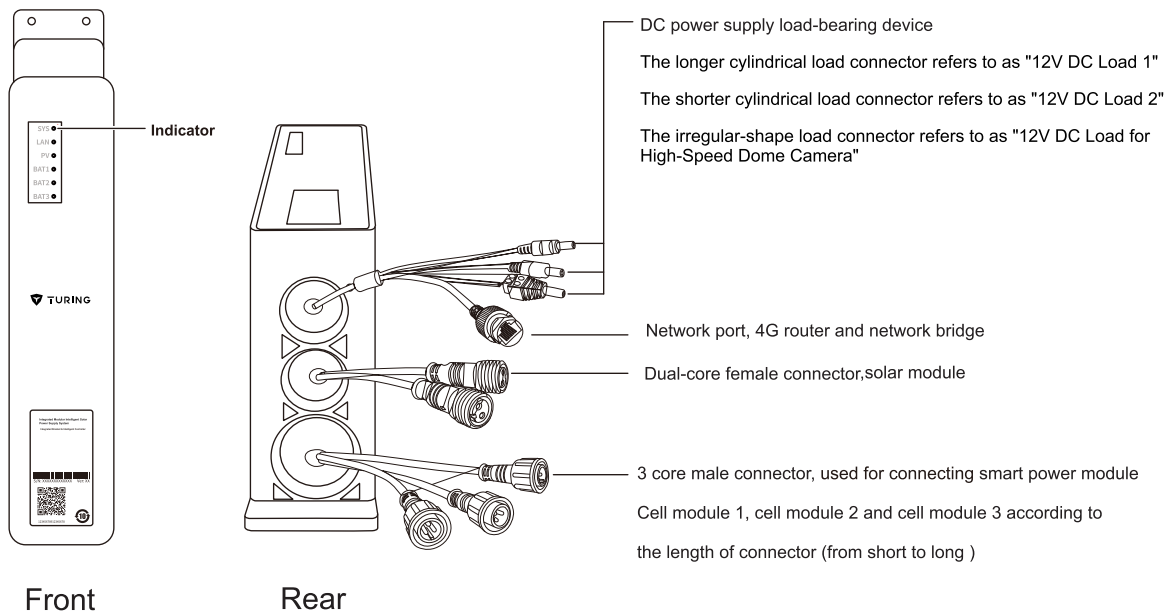
• Specification and Parameters

Parameters	TA-C26AH
Dimensions (L * W * H)	14.17*4.72*5.91
Weight	Net Wt: 3.57 lbs / Gross Wt: 4.06 lbs

*Note: LS-KG2-STD-3Y has 2 Solar Panels and 3 Batteries

2. Product Appearance

2.1 Intelligent Controller

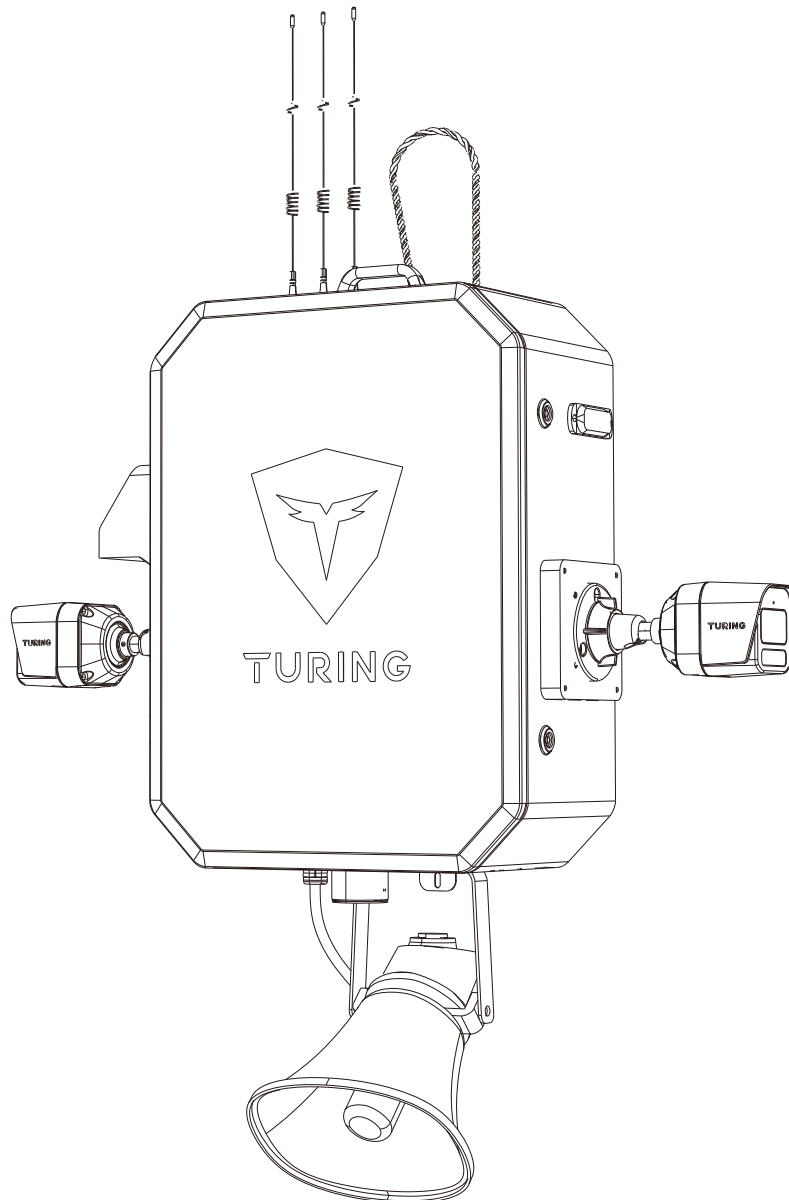


• Indicator Description

Indicator		Working Status	Description
SYS	System indicator	NO	The system is working and the load is on
		Flash	The system is working and the load is off
		Off	The system is not working
LAN	LAN indicator	NO	Cloud connection is normal
		Flash	Network connection is normal but without cloud connection
		Off	Network disconnected
PV	PV panel indicator	NO	Solar panel is connected and supplies voltage
		Off	No voltage
BAT1-3	BAT 1-3 indicator	NO	Battery level is above 5%
		Slow flash	Battery level is below 5%
		Quick flash	Intelligent heating is in progress
		Off	Battery is disconnected or invalid

3. Installation

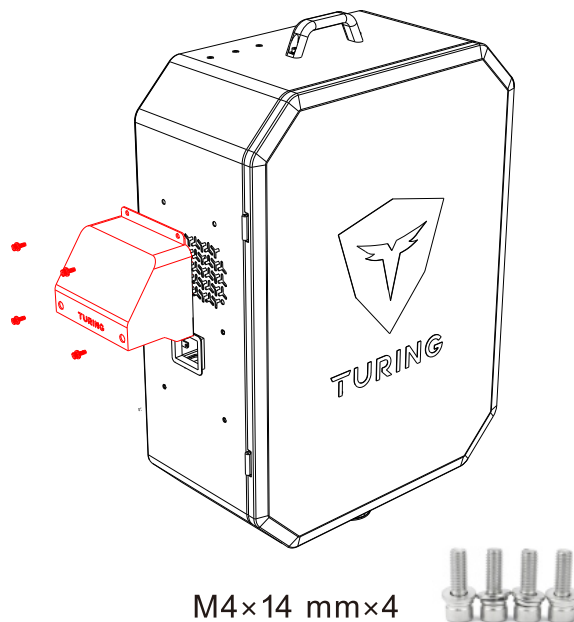
Step 1: How to Setup Your Cameras



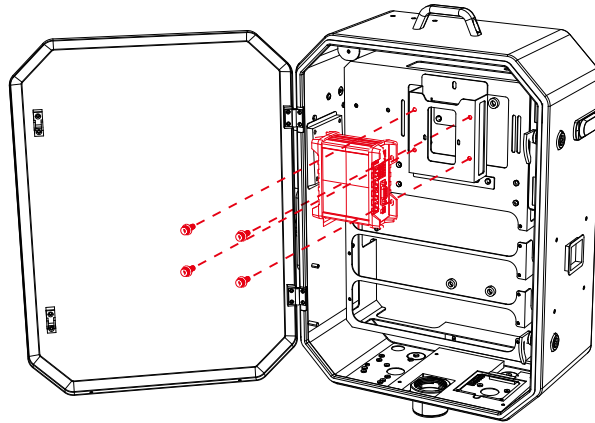
Note: Please remove all foams inside the enclosure box before using, since they are used as protection during shipping.

3.1 Mounting the Rain Shade

Mount rain shade to the left side of the SkyShield with 4×M4×14 mm Screws. Rain Shade can be found in a brown box inside the Enclosure.



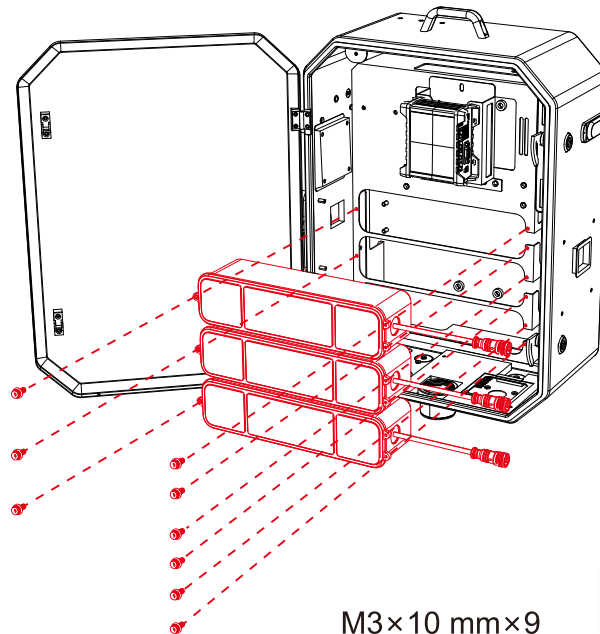
3.2 Mounting the Router



M4×14 mm×4



3.3 Mounting the Battery

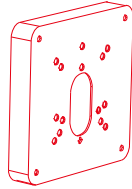


M3×10 mm×9
(Without Padding)

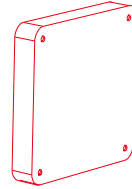


3.4 Mounting Cameras

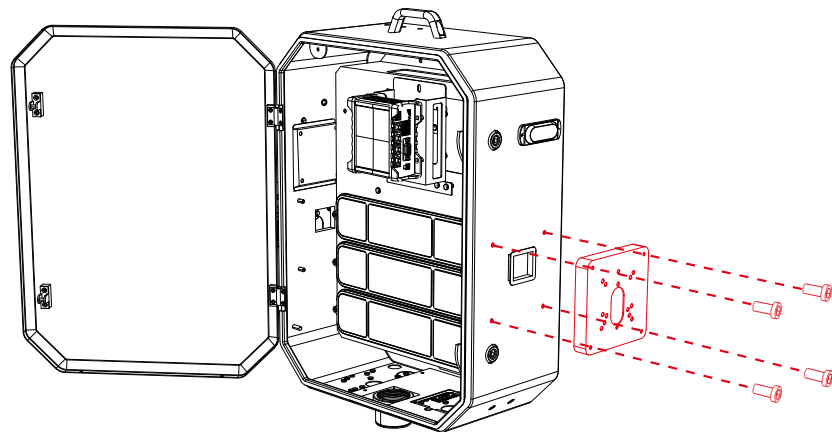
3.4.1 Mounting Cameras to the Left/Right Position



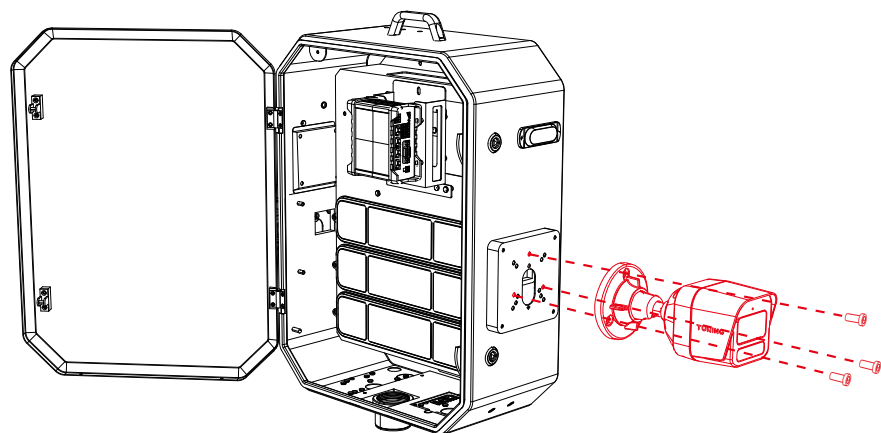
TP-SDLPZ
Install the camera



TP-SDC
Waterproofing



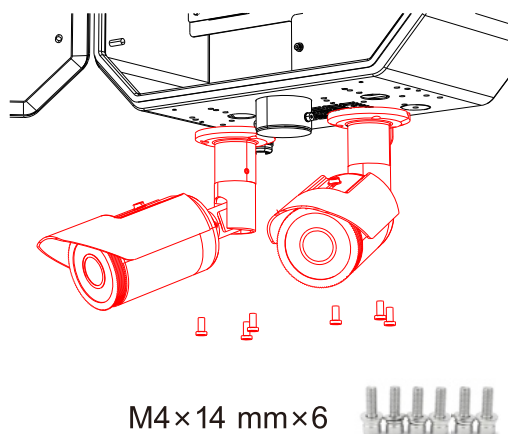
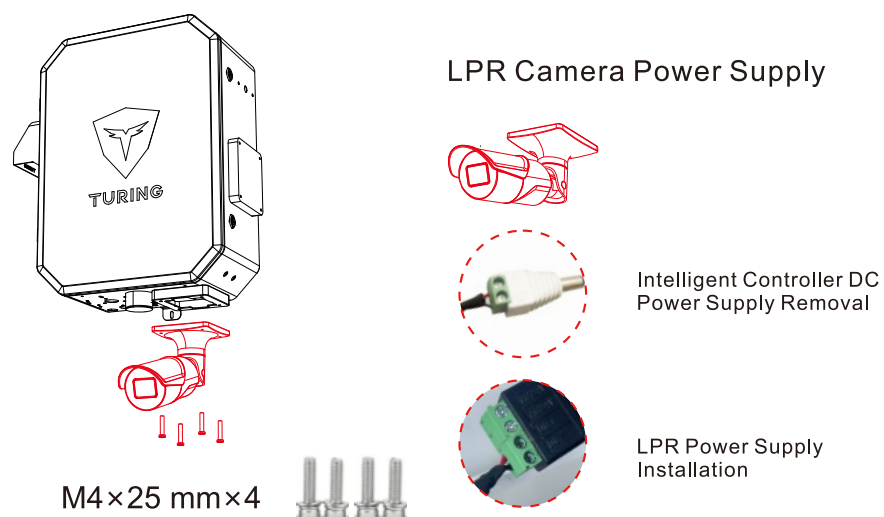
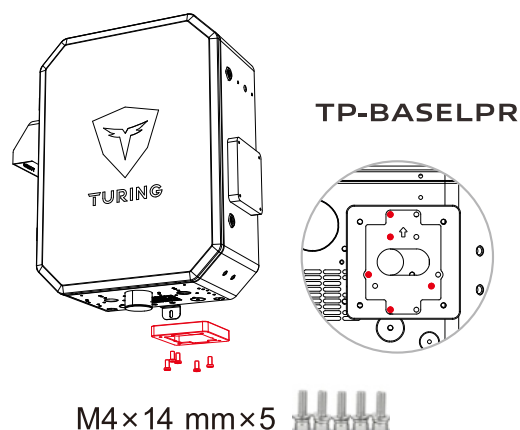
M4×35 mm×8



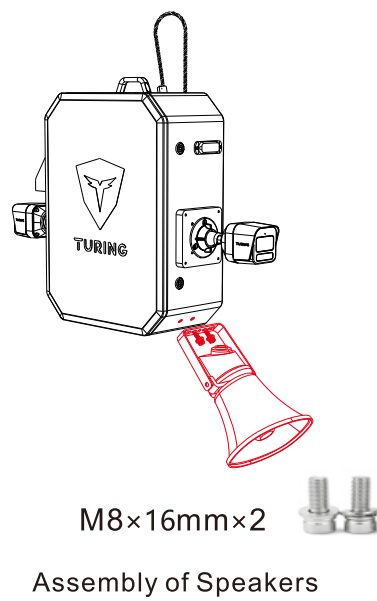
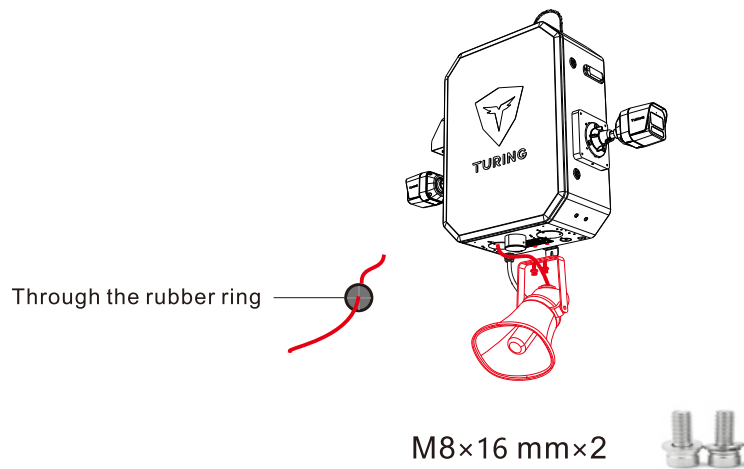
M4×14 mm×6



3.4.2 Mounting Cameras on the Bottom



3.5 Mounting Speakers

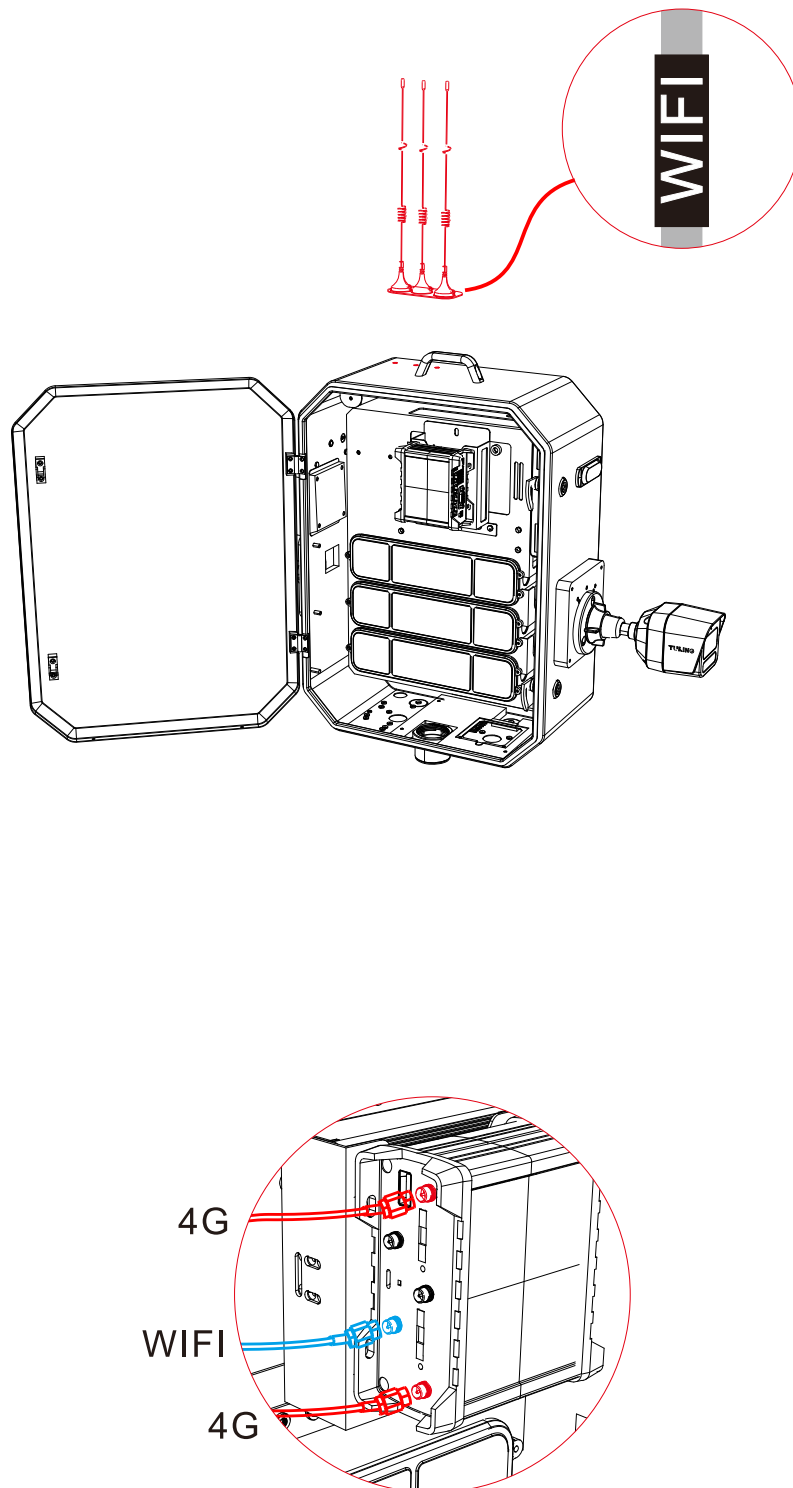


Note: Speaker integration is optional and only supported on model LS-KG2-STD-3Y

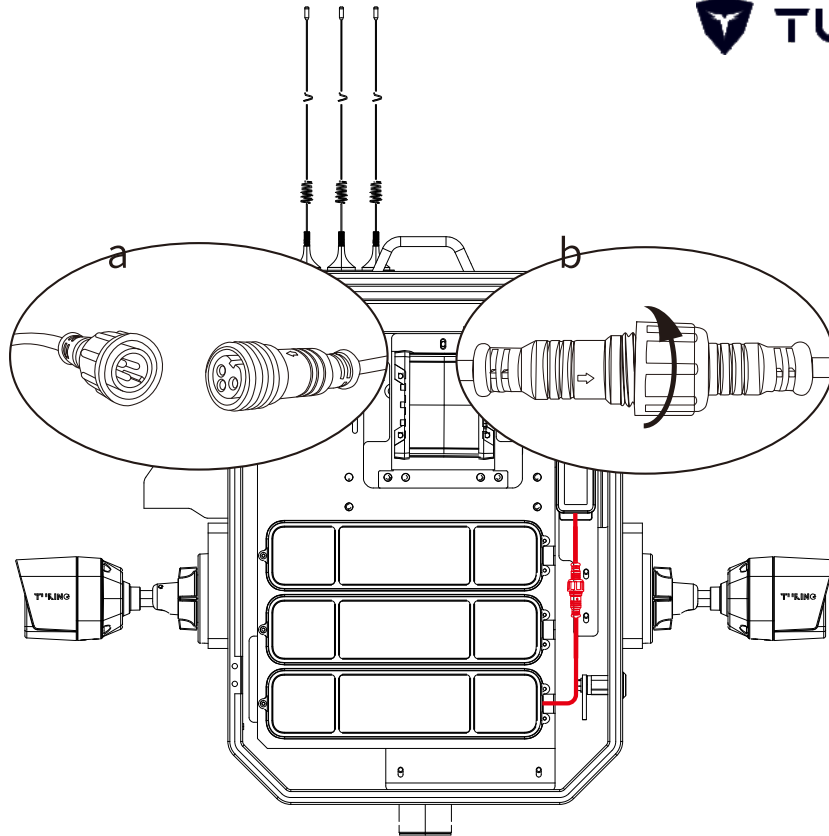
3.6 Install Antennas

Note: Antennas are required otherwise router network signals would be blocked by the metal box.

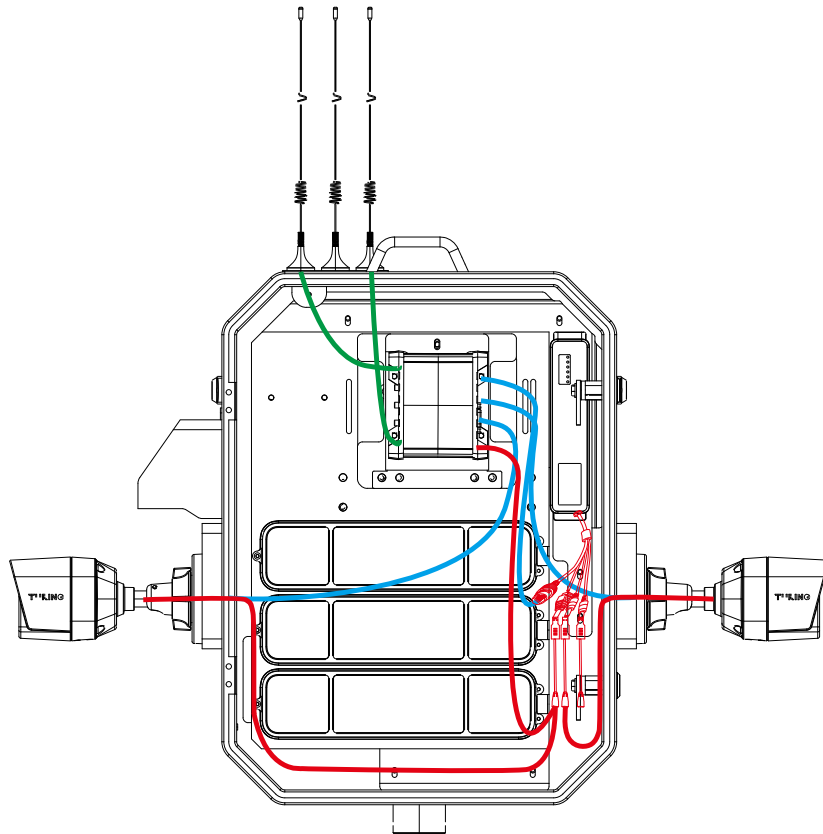
Note: Wi-Fi logo and fixed order.



3.7 Wiring



Connect the 3-pin male connector of the controller to the 3-pin female connector of the cell module and then tighten the waterproof cap.

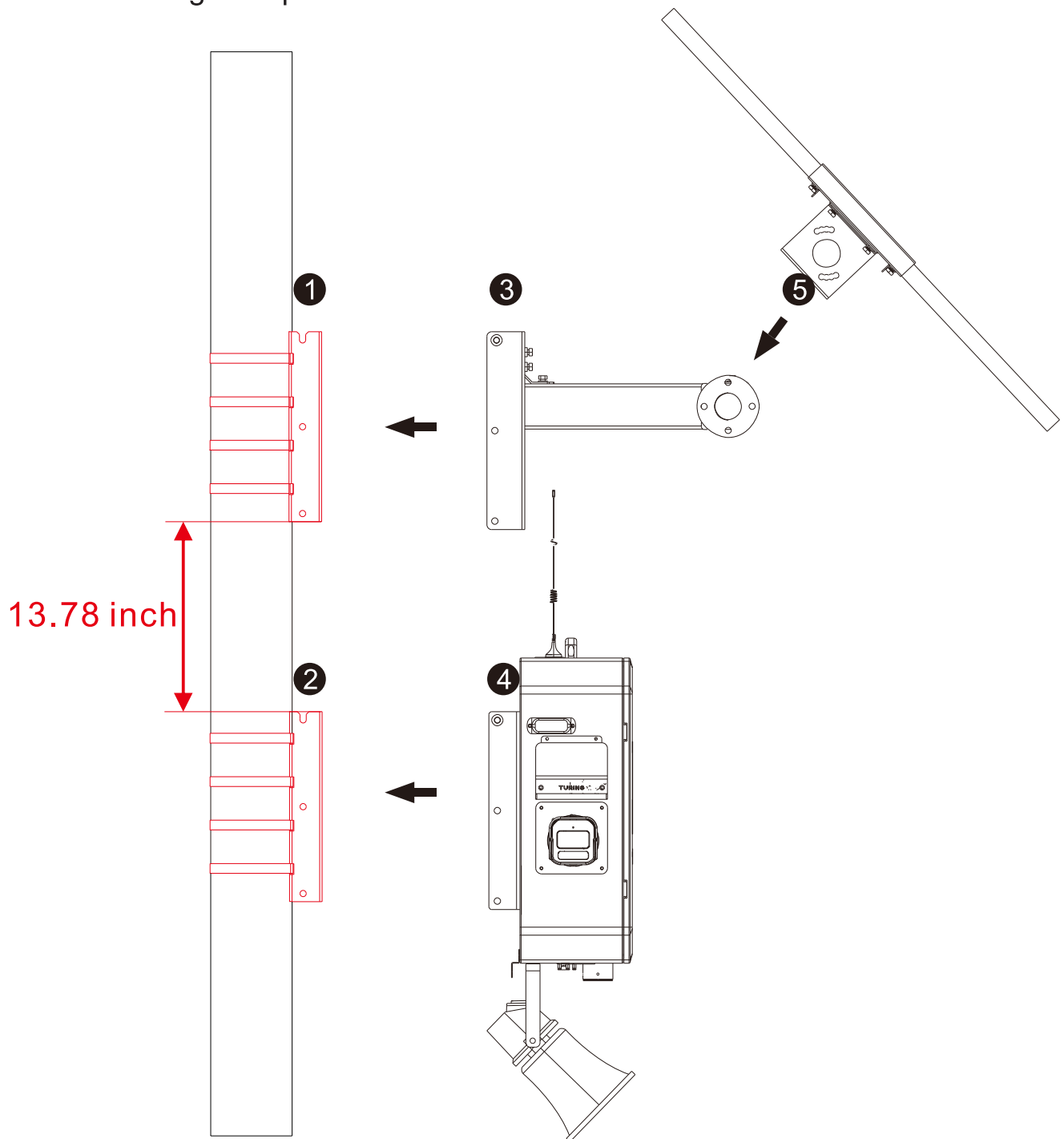


Connect the load-bearing device to the relevant connector of the controller.

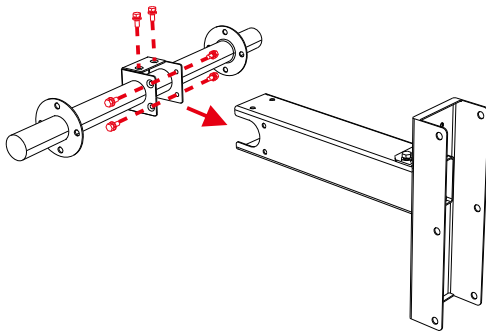
4. Installation

Step 2: How to Setup Your System

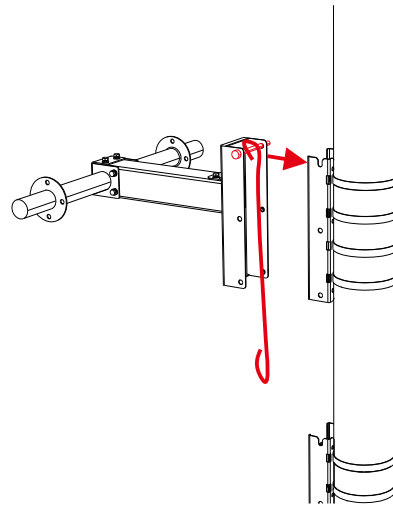
4.1 Mounting Backplane



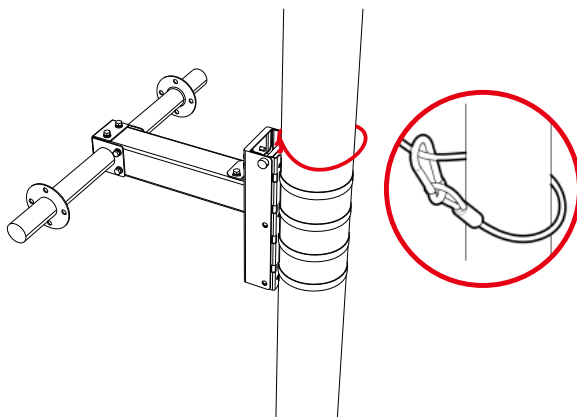
4.2 Mounting Bracket



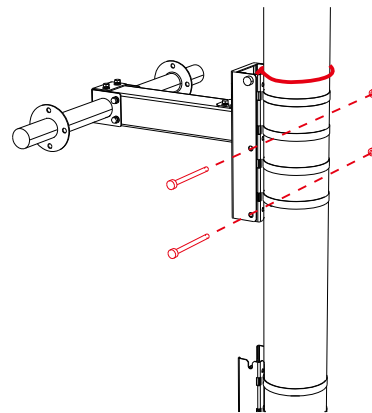
4.2.1



4.2.2

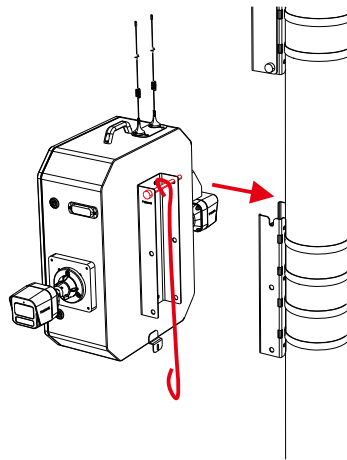


4.2.3

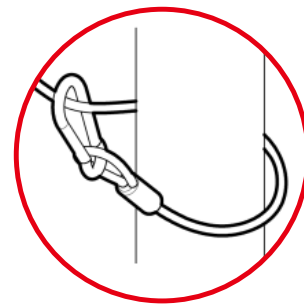
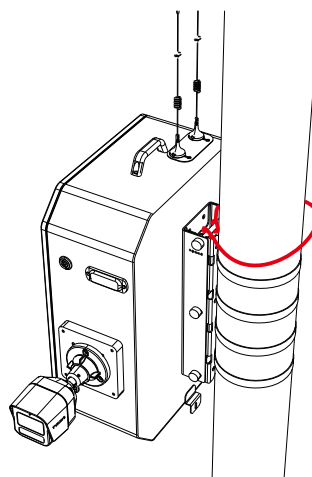


4.2.4

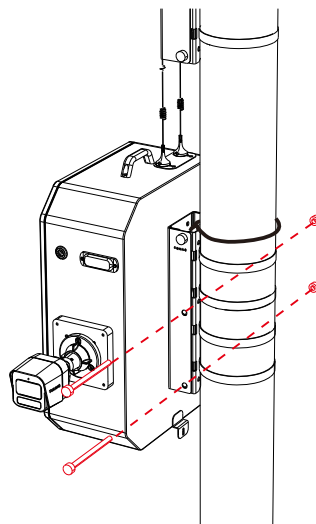
4.3 Mounting Water-resistant Case



4.3.1

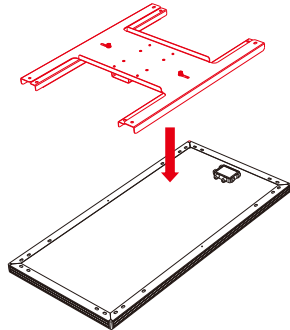


4.3.2



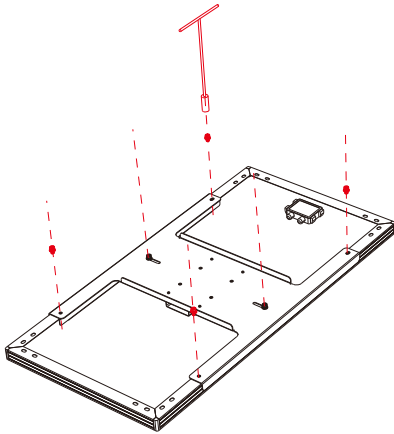
4.3.3

4.4.1 Installation of Solar Module



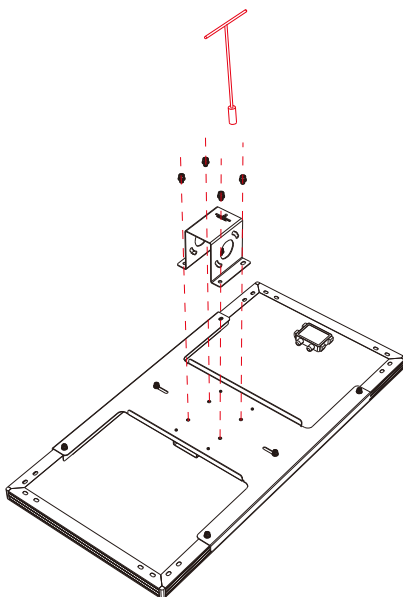
TA-RNGSPBR-01

Integral into the solar panel



set screw

M8 x 20mm x 6

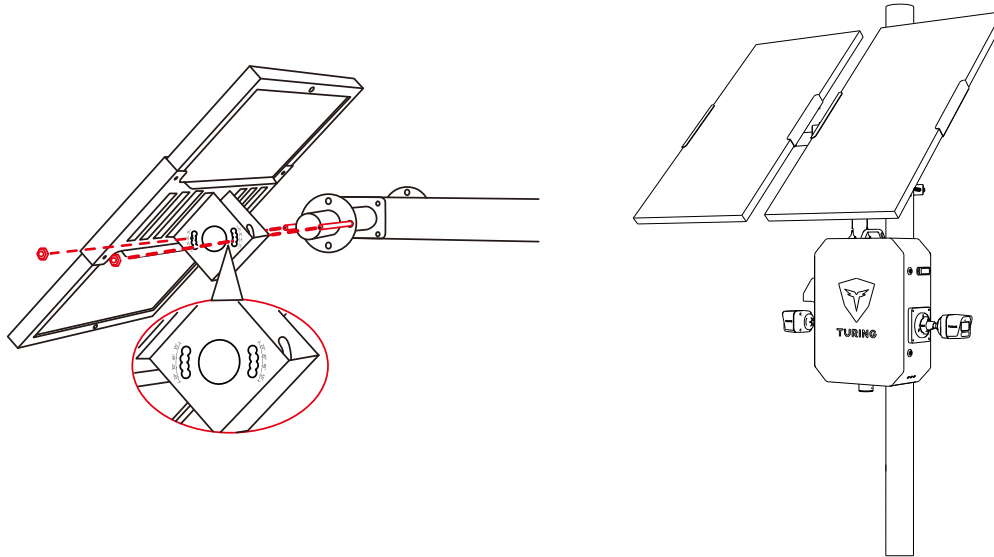


TA-RNGSPBR02

set screw

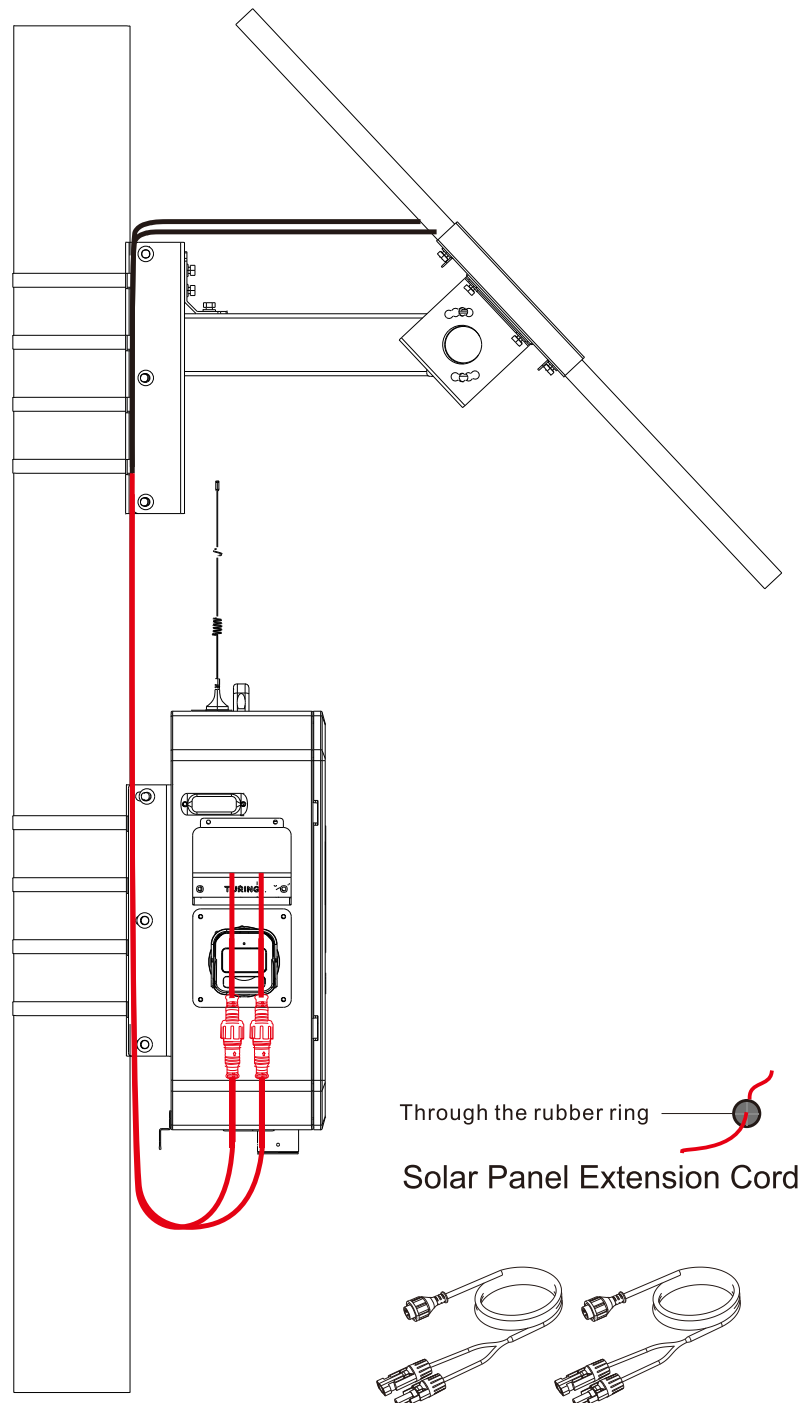
M8 x 20mm x 4

4.4.2 Mounting and Angling the Solar Panel



U.S. City	Longitude (W)	Latitude (N)	Recommended Tilt Angle
New York	74.0°	40.7°	45°
Chicago	87.6°	41.8°	55°
Houston	95.4°	29.8°	20°
Dallas	96.8°	32.8°	20°
St. Louis	90.2°	38.6°	20°
Denver	104.9°	39.7°	55°
Orlando	81.4°	28.5°	30°
Miami	80.2°	25.8°	20°
New Orleans	90.1°	29.95°	55°
Minneapolis	93.3°	44.9°	55°
Honolulu	157.8°	21.3°	20°
Atlanta	84.4°	33.7°	30°
Nashville	86.8°	36.2°	30°
Kansas City	94.6°	39.1°	45°
San Antonio	98.5°	29.4°	30°
Los Angeles	118.2°	34.05°	30°
Detroit	83.0°	42.3°	55°
Philadelphia	75.2°	39.9°	45°
Seattle	122.3°	47.6°	55°

4.5 Wiring



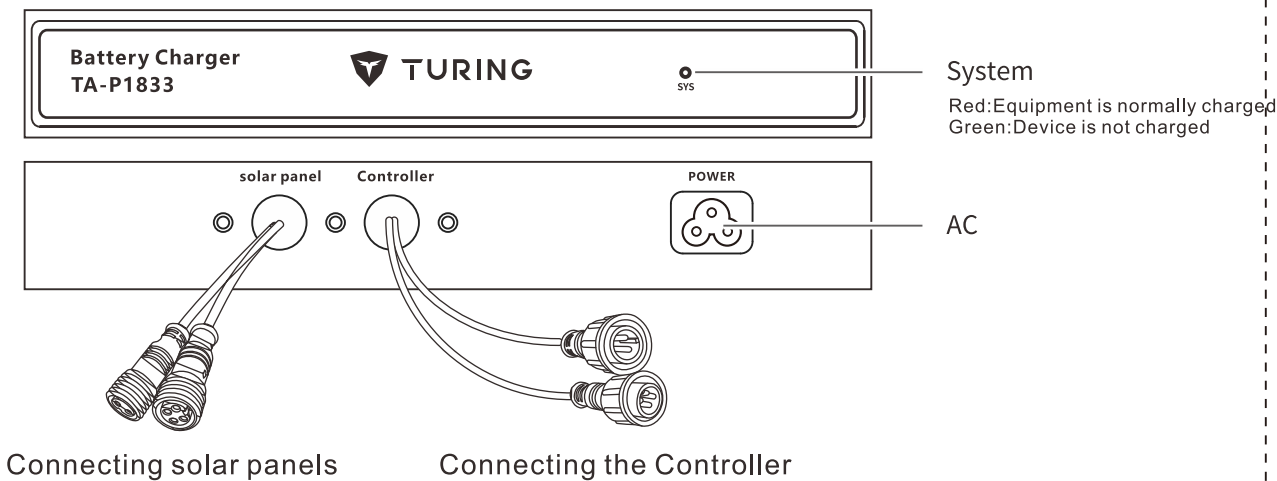
- The connecting wire of the solar module to the 2-pin female connector of the controller and then tighten the waterproof cap.
- Check the status of the controller indicator and make sure that the controller, smart cell module, solar module and load-bearing device are working properly.

(optional)

5. 1 Optional Charger

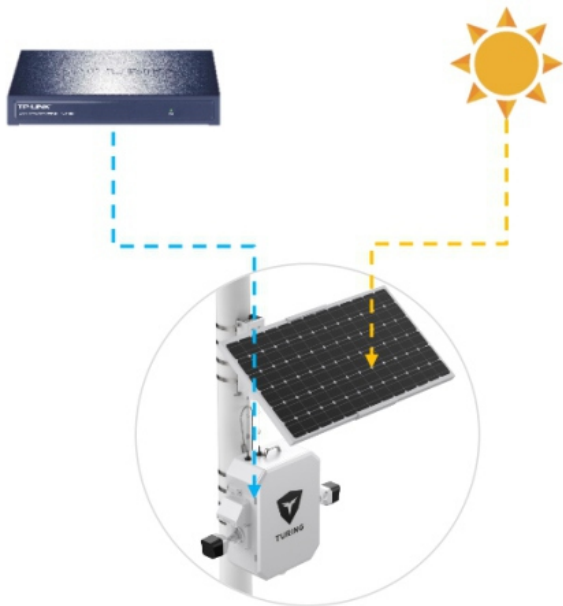
5.1.1Charger Introduction

- Solar power products can be charged by mains electricity, while also using solar power and mains electricity as redundant backups to enhance the reliability of the power supply system.



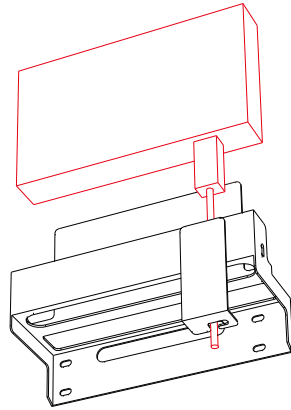
• Specification and Parameters

Parameters	TA-P1833
Dimensions (L * W * H)	285*223*68
Weight	Net Wt:1.12 kg / Gross Wt:1.52 kg
Material	Cold-rolled steel/powder coating
Input	AC:110V Photovoltaic panel: 18V
Output	DC:18V

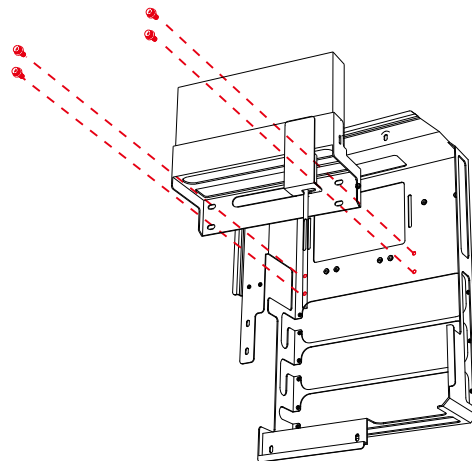


(optional)

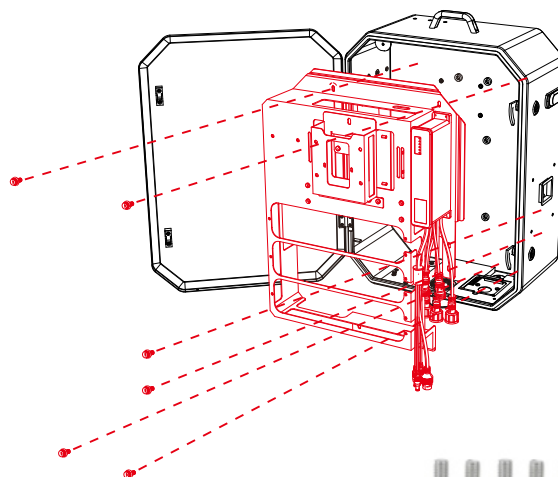
5.1.2 Mounting Charger



Charger Mounting Bracket
Note: SKU for Charger Mounting Bracket is TP-SCB



M4x14mmx4

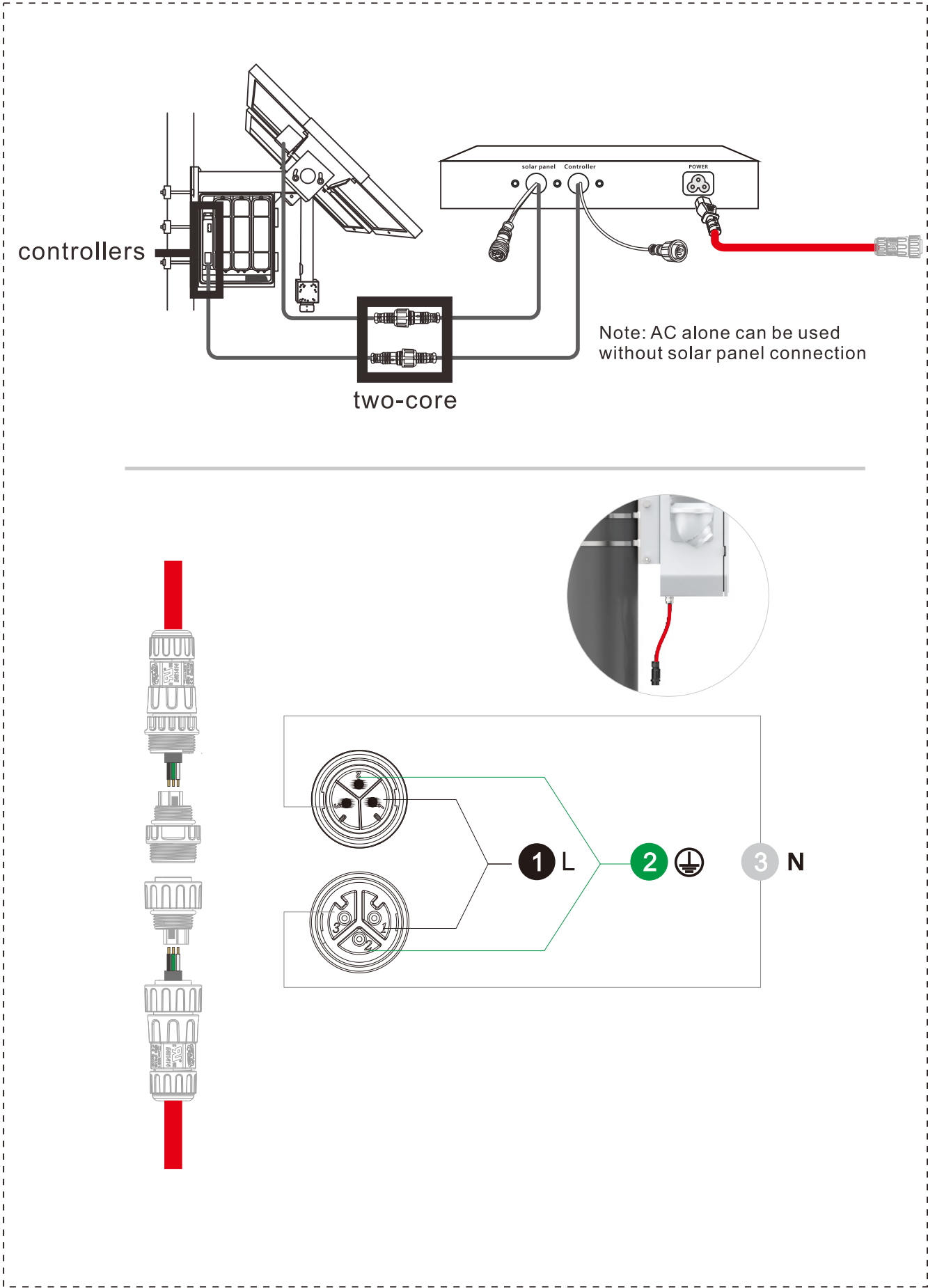


M4x14mmx6



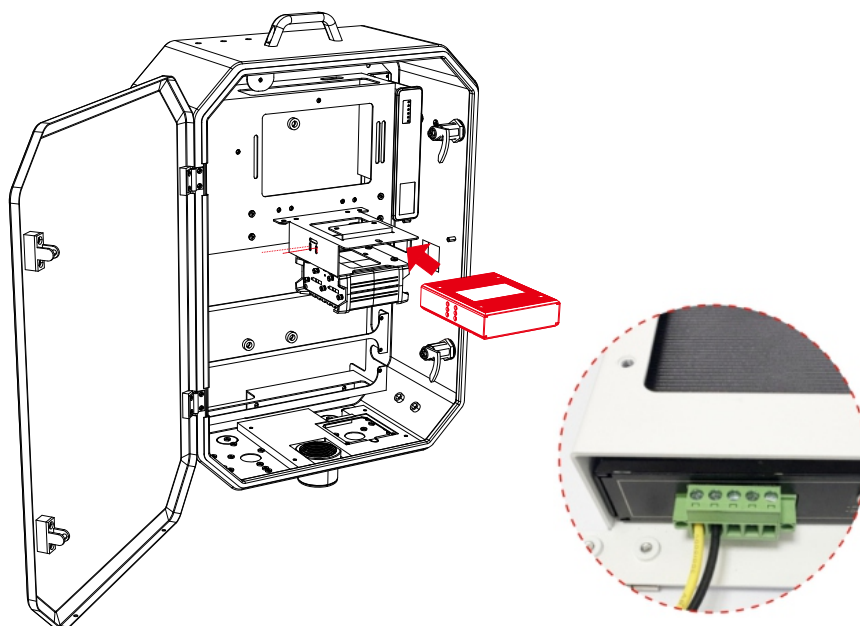
(optional)

5.1.3 Wiring



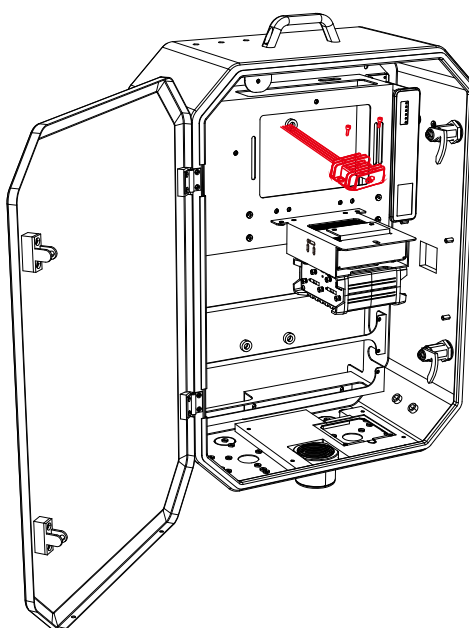
(optional)

5.2 Mounting the POE Switch



Install the switch and secure the left side with screws.

M3x10mmx2



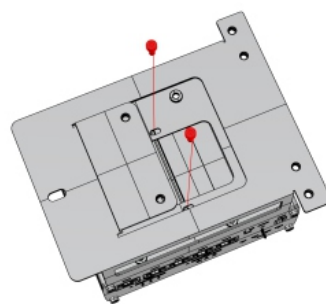
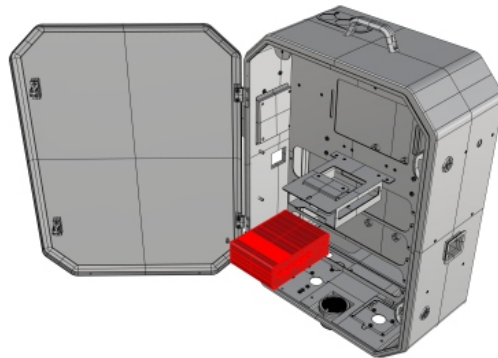
Install the 48V DC-DC boost converter .

M4×14 mm×2

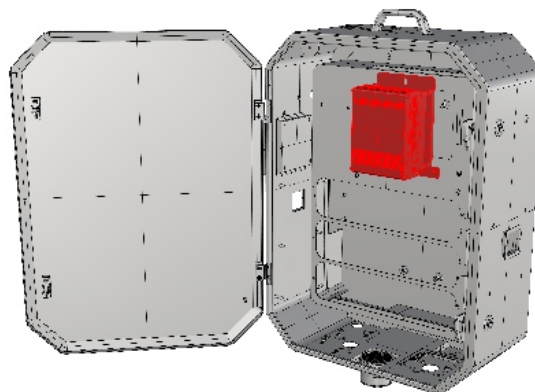


(optional)

5.3 Mounting the 5G Router



M3 x 6 mmx2



M4 x 14 mmx2



Appendix

Installation Precautions and Common Fault Processing

1. Installation of solar panels

- Please handle gently during the transportation and installation. Collision and knocking are strictly prohibited to avoid product damage;
- Install the solar panel in a manner that the front side is horizontally facing upwards as it may be scratched or damaged by uneven ground;
- Make sure that there is no obstruction around the installation point. If the solar panel is installed around houses or trees, it must be installed higher than the obstacles;
- All solar panel connectors must be properly protected against water to avoid short circuit or leakage.

2. Installation of Li-ion Battery

- Please handle the Li-ion Battery gently during the transportation as it is very heavy. Be careful not to drop or smash the battery.
- The battery box must be properly protected against water to avoid the failure of the battery and wire due to moisture.

3. Common Fault Processing

a. Abnormal status of controller indicator

- System indicator not ON: The solar module or battery is working abnormally or not connected and there is no power input;
- LAN indicator not ON: There is no network connection;
- PV panel indicator not ON: The PV panel is not connected or working abnormally without power;
- BAT1, BAT2 and BAT3 indicators not ON: The battery is not connected or working abnormally.

b. Short system running time and monitoring time

- Low battery power: Check whether all battery connectors are properly connected and make sure that all batteries are in working condition;
- Solar panel disconnected: Check whether the solar panel connector is properly connected and make sure that the solar panel is in working condition;
- Solar panel blocked: Check whether the solar panel is blocked or whether the front of the panel is dirty. The power generation efficiency will be affected due to blockage or dirt.
- Unreasonable system model: Confirm the power consumption of the equipment. If the consumption is too high, it is recommended to replace it with a higher model of solar power supply system.

c. Camera not online and AP unable to access the internet

- Insufficient power supply: Check the battery connector, solar panel connector and network interface to ensure that all equipment is in normal working condition;
- SIM card error: Check whether the SIM card of the 4G device and 4G transmission device is connected properly, whether it is inserted backwards, whether the 4G signal strength meets the requirements and whether the 4G card is overdue on payment;
- Network bridge blocked: Check the transmission quality of the bridge and resolve the connection problems.



TURING