



User Manual

TSOL-ESK400-Air (V)

TSOL-ESK400-BA

TSOL-ESK400-BV

TSOL-ESK400-P

TSOL-ESK400-SA

TSOL-ESK400-SV

TSOL-ESK400-U

TSOL-ESK400-T

TSOL-ESK400-Air (A)

TSOL-ESK800-Air (V)

TSOL-ESK800-BA

TSOL-ESK800-BV

TSOL-ESK800-P

TSOL-ESK800-SA

TSOL-ESK800-SV

TSOL-ESK800-U

TSOL-ESK800-T

Trademarks and Permissions

TSUN and other TSUNESS trademarks are trademarks of TSUNESS Co., Ltd. All other trademarks and trade names mentioned in this document are the property of their respective holders.

TSUNESS Co., Ltd makes no representations express or implied, concerning this documentation or any of the equipment and / or software it may describe, including (with no limitation) any implied warranties of utility, merchantability, or fitness for any particular purpose.

All such warranties are expressly disclaimed. Neither TSUNESS nor its distributors or dealers shall be liable for any indirect, incidental, or consequential damages under any circumstances. (The exclusion of implied warranties may not apply in all cases under some statutes, and thus the above exclusion may not apply.)

Specifications are subject to change without notice. Every attempt has been made to make this document complete, accurate, and up-to-date. Readers are cautioned, however, that TSUNESS reserves the right to make changes without notice and shall not be responsible for any damages, including indirect, incidental, or consequential damages, caused by reliance on the material presented, including, but not limited to, omissions, typographical errors, arithmetical errors or listing errors in the content material.

All trademarks are recognized even if these are not marked separately. Missing designations do not mean that a product or brand is not a registered trademark. All trademarks are recognized as the property of their respective owners.

Product information is subject to change without notice. User documentation is updated frequently; Check www.tsun-ess.com for the latest information. To ensure optimal reliability and meet warranty requirements, the TSUN Easy Solar Kit must be installed according to the instructions in this manual. For warranty text refer to www.tsun-ess.com.

© 2022 TSUNESS Co., Ltd All rights reserved.

Audience

This manual is intended for use by professional installation and maintenance personnel.

Content

Trademarks and Permissions	- 1 -
Audience	- 2 -
Content	- 3 -
Read This First	- 4 -
Important Safety Information	- 4 -
Product Label	- 4 -
System Introduction	- 5 -
Product Description	- 5 -
Parking List	- 8 -
Datasheet	- 14 -
Easy Solar Kit Installation	- 19 -
Pre-installation Check	- 19 -
Installation Steps	- 20 -
1.TSOL- ESK400-Air (V)	- 20 -
2.TSOL- ESK400-BA	- 22 -
3.TSOL- ESK400-BV	- 24 -
4.TSOL- ESK400-P	- 25 -
5.TSOL- ESK400-SA	- 28 -
6.TSOL- ESK400-SV	- 31 -
7.TSOL- ESK400-U	- 33 -
8.TSOL- ESK800-Air (V)	- 38 -
9.TSOL- ESK800-BA	- 40 -
10.TSOL- ESK800-BV	- 43 -
11.TSOL- ESK800-P	- 45 -
12.TSOL- ESK800-SA	- 48 -
13.TSOL- ESK800-SV	- 51 -
14.TSOL- ESK800-U	- 53 -
15.TSOL- ESK400-T、 TSOL-ESK800-T	- 61 -
16.TSOL- ESK400-Air (A)	- 68 -
Fault Code and Troubleshooting	- 72 -
Maintenance Guide	- 73 -
Routine Maintenance	- 73 -
Storage and Dismantling	- 73 -

Read This First

Dear customer, thank you for choosing the Easy Solar Kit from TSUN. We hope you will find our products meet your needs for renewable energy. Meantime, we appreciate your feedback regarding our products.

TSUN Easy Solar Kit is a portable micro power generation system for home users that integrates flexible PV panel, microinverter, and accessory and AC cable. It converts DC generated by sunlight into AC for home use, which is provided for home loads. The built-in Wi-Fi communication module of the microinverter can connect to the home network, and users can download the TSUN App to monitor the power generation and operation status of the Easy Solar Kit through simple configuration operations.




This manual contains important instructions for Easy Solar Kit and must be read in their entirety before installing or commissioning the equipment.

Important Safety Information






During installation, testing, and inspection, adherence to all the handling and safety instructions is mandatory. Failure to do so may result in injury or loss of life and damage to the equipment.

Product Label

The following safety symbols are used in this document. Familiarize yourself with the symbols and their meaning before installing or operating the system.

 DANGER
· DANGER indicates a hazardous situation that can result in deadly electric shock hazards, other serious physical injury, or fire hazards.
 WARNING
· WARNING indicates directions that must be fully understood and followed in their entirety in order to avoid potential safety hazards including equipment damage or personal injury.
 CAUTION
· CAUTION indicates that the described operation must not be carried out. The reader should stop using and fully understand the operations explained before proceeding.

The symbols on the Easy Solar Kit are listed below and illustrated in detail.

Symbol	Description
	This device is directly connected to the public grid, thus all work to the inverter shall only be carried out by qualified personnel.
	The components inside the inverter will release a lot of heat during operation. Do not touch metal plate housing during operation.
	Please read the installation manual first before installation, operation, and maintenance.
	This device SHALL NOT be disposed of in residential waste.
	This device fulfills the requirements of the Radio Equipment Directive.
RoHS	This device complies with the RoHS Directive.

System Introduction

Product Description

The Easy Solar Kit is used in grid-tied applications, the microinverter converts the DC electricity generated by solar panels into AC electricity which is in accordance with the requirements of the public grid and sends the AC into the grid, reducing the load pressure of the grid. The bracket system can adapt to different installation conditions.



TSOL-ESK400-Air (V)

TSOL-ESK800-Air (V)



TSOL-ESK400-BV

TSOL-ESK800-BV



TSOL-ESK400-BA

TSOL-ESK800-BA



TSOL-ESK400-P

TSOL-ESK800-P



TSOL-ESK400-SA

TSOL-ESK800-SA



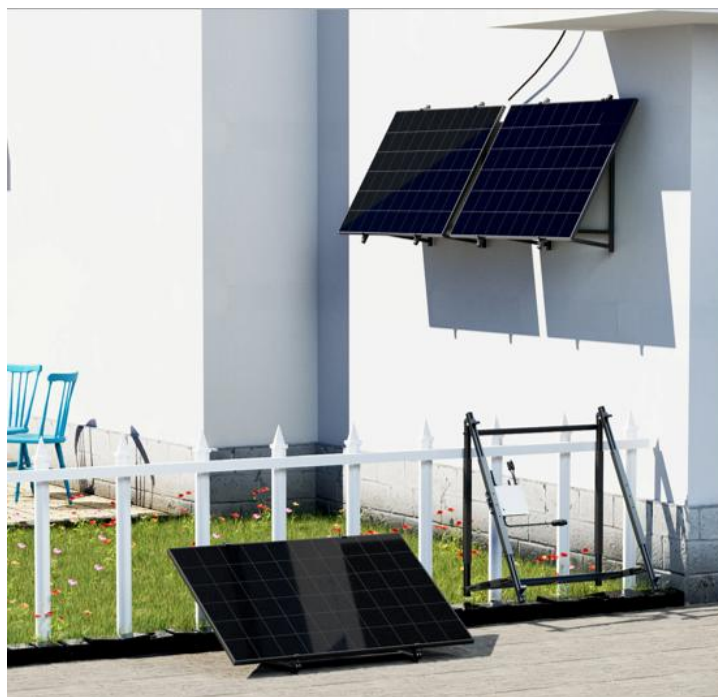
TSOL-ESK400-U

TSOL-ESK800-U



TSOL-ESK400-SV

TSOL-ESK800-SV



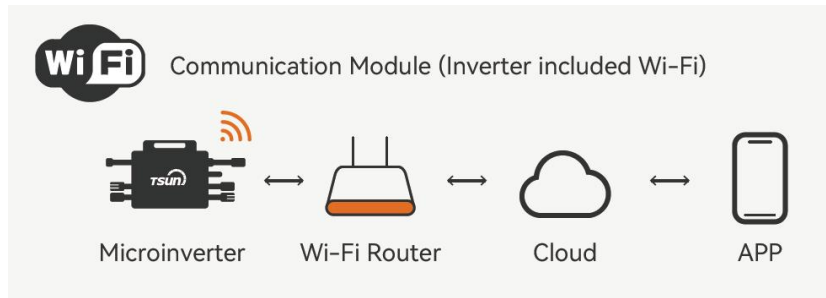
TSOL- ESK400-T

TSOL- ESK800-T



TSOL- ESK400-Air (A)

The microinverter is integrated with the Wi-Fi module and connects to the home Wi-Fi router directly. Users can monitor the power generation of the system by TSUN monitoring App















Parking List

	M7 * 2		M5 * 2		T1 * 1
			S11 * 1		SN * 1
	M8 * 1		S13 * 20		Quick Installation Guide * 1
			S14 * 1		
	M4 * 1		M6*16		














TSOL-ESK400- Air (V)

	M1 * 1		S2 * 8		S9 * 2	
			M8*50	S3 * 2		M10*120
	B1 * 2		S5 * 2		S11 * 2	
	B2 * 2		M8*35	S6 * 2	T1 * 1	
	B3 * 1		S7 * 2		SN * 1	
	M8*12	S1 * 8		M8*50	S8 * 4	Quick Installation Guide * 1


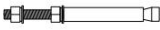






TSOL- ESK400-BA

	M1 * 1	 S7 * 2	 T1 * 1
		 M8*50 S8 * 4	 SN * 1
	B5 * 2	 S9 * 2	 Quick Installation Guide * 1
	S5 * 4	 M10*120 S10 * 2	
 M8*35	S6 * 4	 S11 * 2	

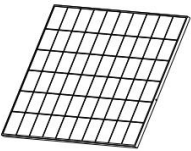

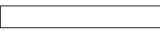















TSOL- ESK400-BV

	M1 * 1	 M8*12 S1 * 8	 M8*35 S6 * 2
		 S2 * 8	 T1 * 1
	B1 * 2	 M8*50 S3 * 4	 SN * 1
	B2 * 2	 S4 * 4	 Quick Installation Guide * 1
	B3 * 2	 S5 * 2	

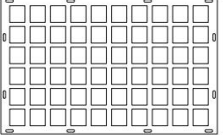










TSOL- ESK400-SA

	M1 * 1	 S4 * 4	 T1 * 1
		 M8*50 S8 * 8	 SN * 1
	B4 * 2	 S12 * 4	 Quick Installation Guide * 1


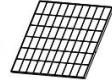




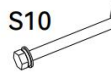













TSOL- ESK400-SV

	M1 * 1		S2 * 8		S9 * 2
			S3 * 4		S10 * 2
	B1 * 2		S5 * 2		S11 * 2
	B2 * 2		S6 * 2		T1 * 1
	B3 * 2		S7 * 2		SN * 1
	S1 * 8		S8 * 4		Q * 1
	S4 * 4				



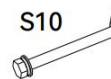









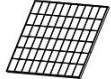


TSOL- ESK400-U

	M7 * 4		M5 * 4		T1 * 1
			S11 * 1		SN * 1
	M2 * 1		S13 * 40		Quick Installation Guide * 1
			S14 * 1		
	M4 * 1		S15 * 2		



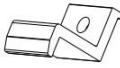

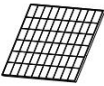











TSOL- ESK800-Air (V)

	Box1	Box2		Box1	Box2		Box1	Box2
B1 	2	2	M6 	1	1	S8  M8*50	4	4
B2 	2	2	S1  M8*12 S2 	8	8	S10  M10*120	2	2
B3 	1	1	S3  M8*50	2	2	S11 	2	2
M2 	1	0	S5 	2	2	T1 	1	1
M4 	1	0	S6  M8*35	4	2	SN 	1	0
M5 	2	0	S7  S9 	2	2	Quick Installation Guide 	1	0


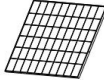

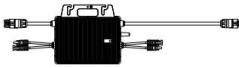









TSOL- ESK800-BA

	Box1	Box2		Box1	Box2		Box1	Box2
B5 	2	2	S5 	4	4	S10  M10*120	2	2
M2 	1	0	S6  M8*35	6	4	S11 	2	2
M4 	1	0	S7 	2	2	T1 	1	1
M5 	2	0	S8  M8*50	4	4	SN 	1	0
M6 	1	1	S9 	2	2	Quick Installation Guide 	1	0

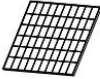


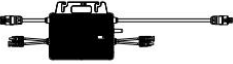

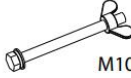
















TSOL- ESK800-BV

	Plus	Minus		Plus	Minus		Plus	Minus
B1 	2	2	M5 	2	0	S5 	2	2
B2 	2	2	M6 	1	1	S6  M8*35	4	2
B3 	2	2	S1  M8*12	8	8	T1 	1	1
M2 	1	0	S3  M8*50	4	4	SN 	1	0
M3  M4 	1	0	S4 	4	4	Quick Installation Guide 	1	0

























TSOL- ESK800-SA

	Plus	Minus		Plus	Minus		Plus	Minus
B4 	2	2	M6 	1	1	S12 	4	4
M2 	1	0	S4 	4	4	T1 	1	1
M3  M4 	1	0	S6  M8*35	2	0	SN 	1	0
M5 	2	0	S8  M8*50	8	8	Quick Installation Guide 	1	0

TSOL- ESK800-SV

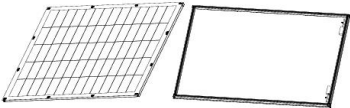


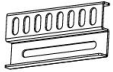

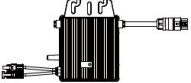







	Box1	Box2		Box1	Box2		Box1	Box2
	M6*1	1	 M8*12	S1*8	8		S9*2	2
	M2*1	0		S2*8	8	 M10*120	S10*2	2
	B1*2	2	 M8*50	S3*4	4		S11*2	2
	B2*2	2		S4*4	4		T1*1	1
	B3*2	2		S5*2	2		SN*1	0
	M3*1	0	 M8*35	S6*4	2		Q*1	0
	M4*1	0		S7*2	2			
	M5*2	0	 M8*50	S8*4	4			

TSOL- ESK800-U

					
① Microinverter * 1 pcs	② AC End Cable * 1 pcs	③ Protection Cap * 1 pcs	① Microinverter * 1 pcs	② AC End Cable * 2 pcs	③ Protection Cap * 2 pcs
					
④ Bracket A1 * 1 pcs Bracket A2 * 1 pcs	⑤ Bracket B * 2 pcs	⑥ Bracket C1 * 1 pcs Bracket C2 * 2 pcs	④ Bracket A1 * 2 pcs Bracket A2 * 2 pcs	⑤ Bracket B * 4 pcs	⑥ Bracket C1 * 2 pcs Bracket C2 * 4 pcs
					
⑦ M8*12 Screw * 8 pcs Spring Washer * 8 pcs	⑧ M8*50 Screw * 6 pcs	⑨ M8*60 Screw * 1 pcs Washer * 1 pcs Nut * 1 pcs	⑦ M8*12 Screw * 16 pcs Spring Washer * 16 pcs	⑧ M8*50 Screw * 12 pcs	⑨ M8*60 Screw * 2 pcs Washer * 2 pcs Nut * 2 pcs
					
⑩ Clevis * 2 pcs	⑪ Wire Rope * 4 pcs	⑫ U blocks * 4 pcs	⑩ Clevis * 4 pcs	⑪ Wire Rope * 8 pcs	⑫ U blocks * 8 pcs

TSOL-ESK400-T

TSOL-ESK800-T

	Box1	Box2		Box1	Box2		Box1	Box2
M9 	0	2	S14 	1	0	S9 	1	4
			S17 	0	4	T1 	1	1
M8 	1	0	S16 	0	4	SN 	1	1
B6 	0	4	S15 	2	0	Quick Installation Guide 	0	1
S11 	1	8	S18 	0	12			

TSOL-ESK400-Air (A)

Datasheet

Model	TSOL-ESK400-Air(V)	TSOL-ESK400-BA	TSOL-ESK400-BV	TSOL-ESK400-P
PV Module Parameter *				
Module Power(Pmpp @STC)	200*2			
Max. Module Efficiency	20.4%	20.7%	20.7%	20.7%
Temp. Coef. (Power)	-0.36%/°C	-0.34%/°C	-0.34%/°C	-0.34%/°C
Colour	Black			
AC Output Parameter				
Max. System Continuous Output Power (W)**	400			
Max. Output Current (A)	2			
Nominal Output Voltage (V)***	220/230/240			
Nominal Frequency (Hz)***	50/60			
Power Factor	>0.99			
Output Current Harmonic Distortion	<3%			
Length of AC End Cable***	5m (10m, 15m optional)			
Certification				
Solar Module	CE,TUV,UL,CQC,IEC 61215,IEC 61730			
Microinverter	CE-LVD,CE-EMC,CE-RED,VDE 4105,EN 50549-1			
Bracket	EN 10204:2017, EN 1090-1:2009+A1: 2011			
Environmental Parameter				
Environmental Protection Rating	IP67			
Operating Ambient Temperature Range	-25 °C to 65 °C			
Relative Humidity	0-100%			

Max. Operating Altitude Without Derating [m]	2000			
Mechanical Parameter				
Weight [kg]	2x3.4kg	29kg	27kg	29.5kg
Package Dimensions (W×H×D mm)	2*(1270×900×2.5)	1722x1195x605	1722x1195x164	1724*1164*90
Warranty	12 years			

Model	TSOL- ESK400-SA	TSOL- ESK400-SV	TSOL- ESK400-U
PV Module Parameter *			
Module Power(Pmpp @STC)	200*2		
Max. Module Efficiency	20.7%	20.7%	20.7%
Temp. Coef. (Power)	-0.34%/°C	-0.34%/°C	-0.34%/°C
Colour	Black		
AC Output Parameter			
Max. System Continuous Output Power (W)**	400		
Max. Output Current (A)	2		
Nominal Output Voltage (V)***	220/230/240		
Nominal Frequency (Hz)***	50/60		
Power Factor	>0.99		
Output Current Harmonic Distortion	<3%		
Length of AC End Cable***	5m (10m, 15m optional)		
Certification			
Solar Module	CE,TUV,UL,CQC,IEC 61215,IEC 61730		
Microinverter	CE-LVD,CE-EMC,CE-RED,VDE 4105,EN 50549-1		
Bracket	EN 10204:2017, EN 1090-1:2009+A1: 2011		
Environmental Parameter			
Environmental Protection Rating	IP67		
Operating Ambient Temperature Range	-25 °C to 65 °C		
Relative Humidity	0-100%		
Max. Operating Altitude Without Derating [m]	2000		
Mechanical Parameter			
Weight [kg]	29kg	27kg	29kg
Package Dimensions (W×H×D mm)	1722x1195x605	1722x1195x164	1722x1195x605
Warranty	12 years		

Model	TSOL- ESK800-BA	TSOL- ESK800-BV	TSOL-ESK800-SA	TSOL-ESK800-SV
PV Module Parameter *				
Module Power(Pmpp @STC)	400*2			
Max. Module Efficiency	20.7%	20.7%	20.7%	20.7%
Temp. Coef. (Power)	-0.34%/°C	-0.34%/°C	-0.34%/°C	-0.34%/°C

Colour	Black			
AC Output Parameter				
Max. System Continuous Output Power (W)**	800			
Max. Output Current (A)	4			
Nominal Output Voltage (V)***	220/230/240			
Nominal Frequency (Hz)***	50/60			
Power Factor	>0.99			
Output Current Harmonic Distortion	<3%			
Length of AC End Cable***	5m (10m, 15m optional)			
Certification				
Solar Module	CE,TUV,UL,CQC,IEC 61215,IEC 61730			
Microinverter	CE-LVD,CE-EMC,CE-RED,VDE 4105,EN 50549-1			
Bracket	EN 10204:2017, EN 1090-1:2009+A1: 2011			
Environmental Parameter				
Environmental Protection Rating	IP67			
Operating Ambient Temperature Range	-25 °C to 65 °C			
Relative Humidity	0-100%			
Max. Operating Altitude Without Derating [m]	2000			
Mechanical Parameter				
Weight [kg]	58kg	54kg	58kg	54kg
Package Dimensions (W×H×D mm)	1722x1195x605 *2pcs	1722x1195x164 *2pcs	1722x1195x605 *2pcs	1722x1195x164 *2pcs
Warranty	12 years			

Model	TSOL- ESK800-Air (V)	TSOL- ESK800-P	TSOL-ESK800-U
PV Module Parameter *			
Module Power(Pmpp @STC)	200*4	400 * 2	400 * 2
Max. Module Efficiency	20.4%	20.7%	20.7%
Temp. Coef. (Power)	-0.36%/°C	-0.34%/°C	-0.34%/°C
Colour	Black		
AC Output Parameter			
Max. System Continuous Output Power (W)**	800		
Max. Output Current (A)	4		
Nominal Output Voltage (V)***	220/230/240		
Nominal Frequency (Hz)***	50/60		
Power Factor	>0.99		

Output Current Harmonic Distortion	<3%		
Length of AC End Cable***	5m (10m, 15m optional)		
Certification			
Solar Module	CE,TUV,UL,CQC,IEC 61215,IEC 61730		
Microinverter	CE-LVD,CE-EMC,CE-RED,VDE 4105,EN 50549-1		
Bracket	EN 10204:2017, EN 1090-1:2009+A1: 2011		
Environmental Parameter			
Environmental Protection Rating	IP67		
Operating Ambient Temperature Range	-25 °C to 65 °C		
Relative Humidity	0-100%		
Max. Operating Altitude Without Derating [m]	2000		
Mechanical Parameter			
Weight [kg]	4x3.4kg	59kg	27+31kg
Package Dimensions (W×H×D mm)	(1270x900x2.5)*4pcs	(1724x1164x90)*2pcs	(1722x1195x605)*2pcs
Warranty	12 years		

Model	TSOL- ESK400-T	TSOL- ESK800-T
PV Module Parameter *		
Recommended Module Power(Wp)	400-460	
Length of Solar Module (mm)	>900	
Width of Solar Module (mm)	>500 ; < 1150	
Thickness of Solar Module (mm)	30	
AC Output Parameter		
Max. System Continuous Output Power (W)**	400	800
Max. Output Current (A)	2	4
Nominal Output Voltage (V)***	220/230/240	
Nominal Frequency (Hz)***	50/60	
Power Factor	>0.99	
Output Current Harmonic Distortion	<3%	
Length of AC End Cable***	5m (10m, 15m optional)	
Certification		
Solar Module	CE,TUV,UL,CQC,IEC 61215,IEC 61730	
Microinverter	CE-LVD,CE-EMC,CE-RED,VDE 4105,EN 50549-1	
Bracket	EN 10204:2017, EN 1090-1:2009+A1: 2011	
Environmental Parameter		
Environmental Protection Rating	IP67	
Operating Ambient Temperature Range	-25 °C to 65 °C	

Relative Humidity	0-100%	
Max. Operating Altitude Without Derating [m]	2000	
Mechanical Parameter		
Weight [kg]	12kg	24kg
Package Dimensions (W×H×D mm)	885x360x108	885x360x150
Warranty	12 years	

Model	TSOL-ESK400-Air(A)
PV Module Parameter *	
Module Power(Pmpp @STC)	200*2
Max. Module Efficiency	20.4%
Temp. Coef. (Power)	-0.36%/°C
Colour	Black
AC Output Parameter	
Max. System Continuous Output Power (W)**	400
Max. Output Current (A)	2
Nominal Output Voltage (V)***	220/230/240
Nominal Frequency (Hz)***	50/60
Power Factor	>0.99
Output Current Harmonic Distortion	<3%
Length of AC End Cable***	5m (10m, 15m optional)
Certification	
Solar Module	CE,TUV,UL,CQC,IEC 61215,IEC 61730
Microinverter	CE-LVD,CE-EMC,CE-RED,VDE 4105,EN 50549-1
Bracket	EN 10204:2017, EN 1090-1:2009+A1: 2011
Environmental Parameter	
Environmental Protection Rating	IP67
Operating Ambient Temperature Range	-25 °C to 65 °C
Relative Humidity	0-100%
Max. Operating Altitude Without Derating [m]	2000
Mechanical Parameter	
Weight [kg]	2×5kg
Package Dimensions (W×H×D mm)	2*(1270×900×500)
Warranty	12 years

* The colour brand and power of the solar module can be customized if the PV module is compatible to ESK system.

- ** The output power of the system can be limited to 300W(ESK400) or 600W(ESK800).
- *** The AC voltage, frequency range and plug type may vary depending on specific country grid.

Simplified Declaration of Conformity

By virtue of this document, TSUNESS Co., Ltd declares that the type of radio equipment, Easy Solar Kit is in conformity with the EMC (2014/30/EU) on Electromagnetic Compatibility, RED (2014/53/EU) on Radio Equipment, and RoHS (2011/65/EU) on the use of certain hazardous substances in electrical and electronic equipment.

The full text of the EU Declaration of Conformity is available on the following website:

[https://www.tsun-ess.com/File/\\$random-2023-10-08-053919-T0fvyw-V](https://www.tsun-ess.com/File/$random-2023-10-08-053919-T0fvyw-V)

Easy Solar Kit Installation

Pre-installation Check

Check the Package

Although TSUN's Easy Solar Kit have surpassed stringent testing and are checked before they leave the factory, it is uncertain that the Easy Solar Kit may suffer damage during transportation. Please check the package for any obvious signs of damage, and if such evidence is present, do not open the package and contact your dealer as soon as possible.

Security Recommendations:

DO NOT disassemble, repair or modify the unit.

DO NOT place the unit near or in the vicinity of fire.

DO NOT touch the connection points with wet hands.

DO NOT connect metal objects to the AC inlet or outlet.

DO NOT dispose of the unit with household waste.

DO NOT use unsuitable power cords.

DO NOT use the unit with an input voltage higher than specified.

DO NOT use the unit if it is not working properly.

Check the unit before use.

DO NOT use the unit if the power cord is damaged or broken.

Keep the unit out of the reach of children. DO NOT allow children to use the power supply.

Keep the unit out of the reach of pets.

DO NOT place the unit on its side or upside down while in use or storage.

DO NOT use accessories for other purposes.

If you notice rust, peculiar odours or other abnormal circumstances, stop using the unit immediately

and contact the dealer or our customer service centre.

Carefully read the instructions of the electrical appliances you intend to connect to your power supply.

Recommendations:

Before starting installation, please note the following recommendations:

- Two or more persons are required.
- Suitable tools and skills are required.
- Wear work gloves during installation.
- Avoid dropping devices during installation.
- Do not cast shadows on the photovoltaic panel.

IMPORTANT NOTICE

The Easy Solar Kit is intended for installation by the end consumer. It is not necessary to use a professional for its installation, however, you must take into account the legal requirements of your country regarding the installation of photovoltaic panels.

- For this purpose, we recommend that you:
 - Have a 0-discharge system or a separate circuit for the solar kit. In this way, you will avoid the discharge of energy into your electricity grid as a result of a possible excess of energy generation, in which case it would be considered as an installation with surplus.
 - Check that the electrical systems in your home meet all safety requirements.
 - Have the installation certified by a professional electrician, who will check that the installation complies with legal and safety regulations.
 - Register the installation and obtain the self-consumption code, if required by local regulations in your country.

***Note: Compliance with the regulations for photovoltaic installations is the sole responsibility of the end user of the product, and under no circumstances will the brand (TSUN) be held responsible for the users' decisions regarding non-compliance with their obligations.**

Installation Steps

1. TSOL- ESK400-Air (V)

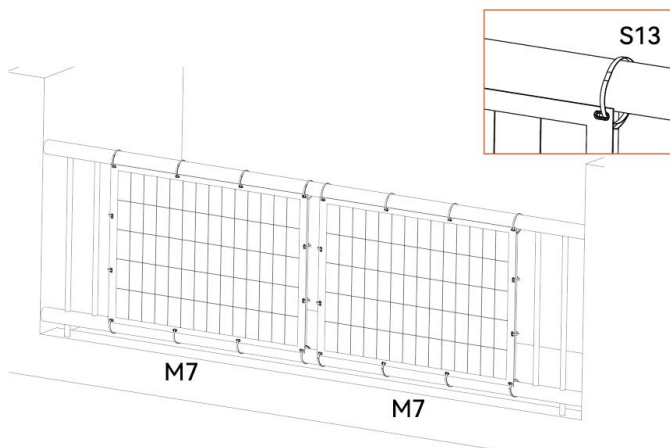
Step 1. Install flexible PV panel.



·Preventing high-altitude falls during flexible PV panel installation.

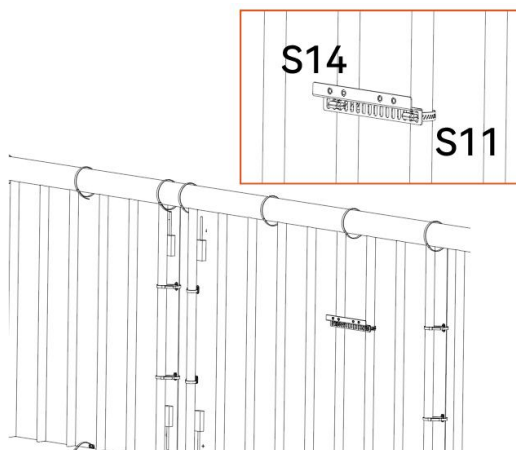
- Take out M7 and S13 from the packaging box and use S13 to tie M7 tightly to the balcony

railing.



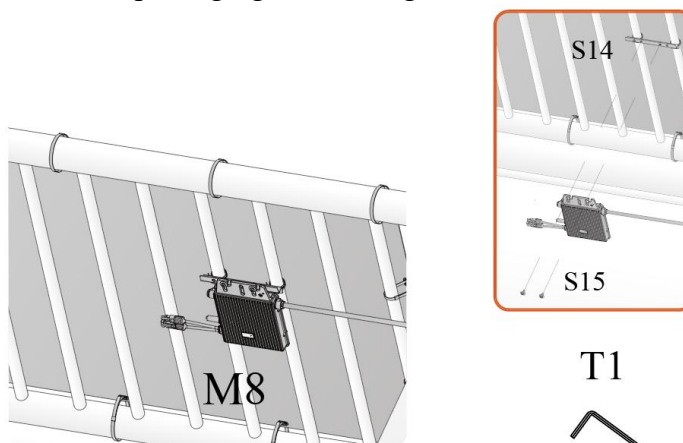
Step 2. Assembly accessories.

- Take out S11 and S14 from the packaging box and tie S14 tightly to the appropriate position on the railing through S11.



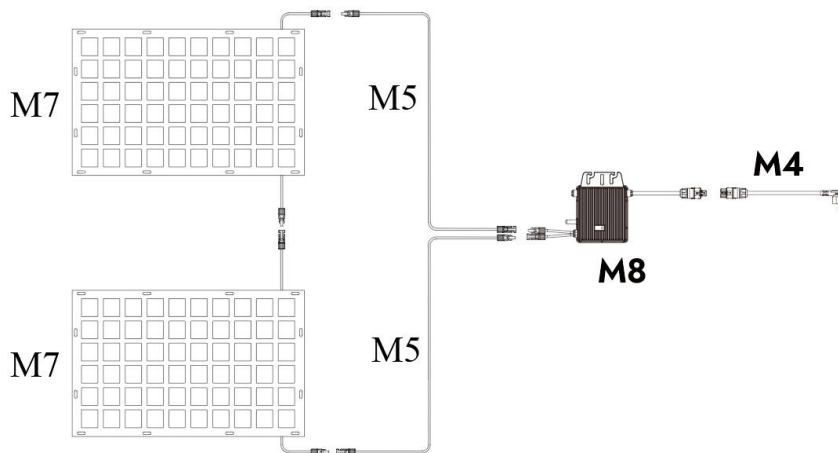
Step 3. Install Microinverter.

- Take out M8 and S15 from the packaging box and tighten M8 and S14 with S15.



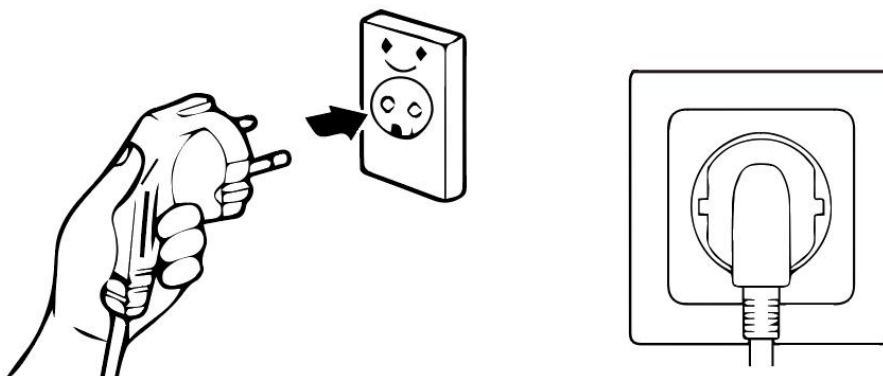
Step 4. Connect Easy Solar Kit system.

- Take out M5 and M4 from the packaging box.
- Connect M8 and M7 with M5.
- Connect M4 to M8.



Step 5. Start Easy Solar Kit system.

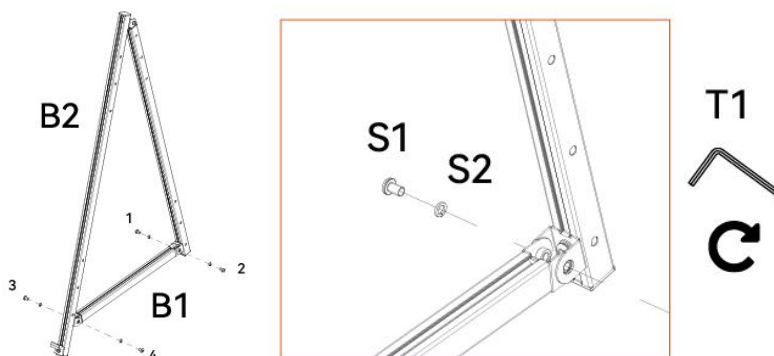
- After plugging in the socket and connecting to the power supply, the system will start working within 2 minutes.



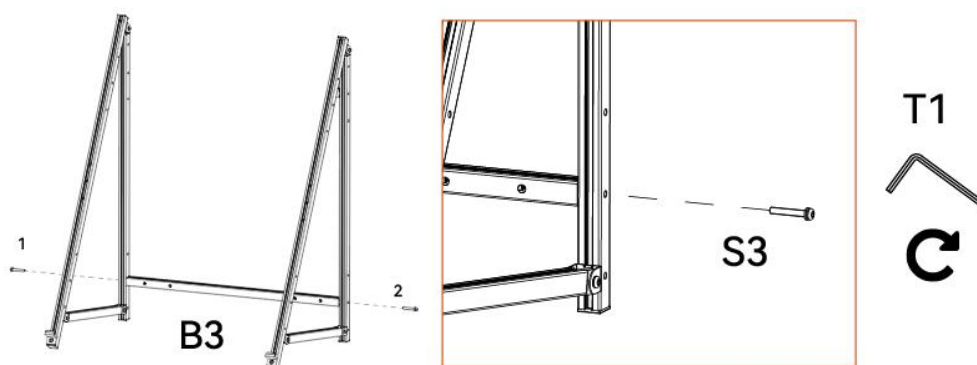
2. TSOL- ESK400-BA

Step 1. Assembling bracket.

- Take out B1, B2, S1 and S2 from the packaging box and screw B1, B2 through S1, S2 accessories.

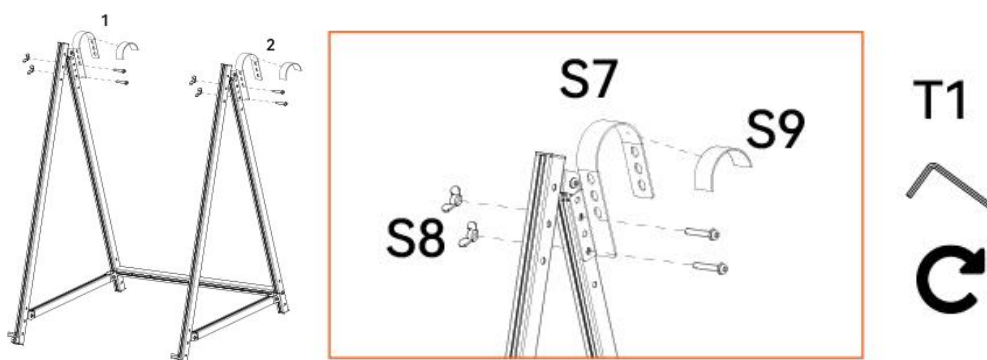


- Take out B3, S3 from the packaging box and screw B3 with B2, B1 through S3 accessory.



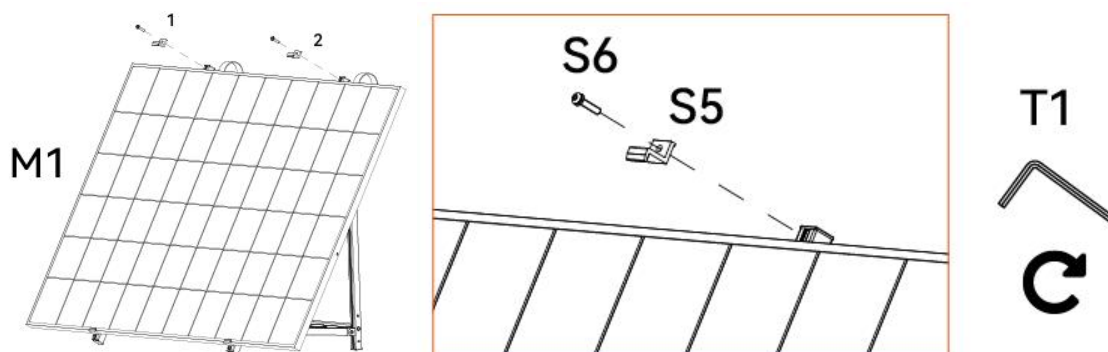
Step 2. Install the hooks.

- Fix the hook S7 to the bracket through the S8 accessory and attach the S9 gasket to the inside of the hook.





Step 3. Install PV module.

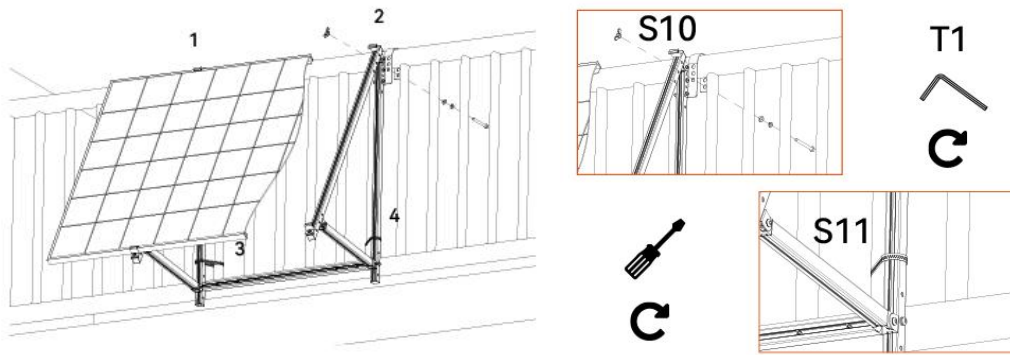
- Take out M1, S5 and S6 from the packaging box and install the M1 PV module onto the bracket through S5, S6 accessories.



Step 4. Hanging system.

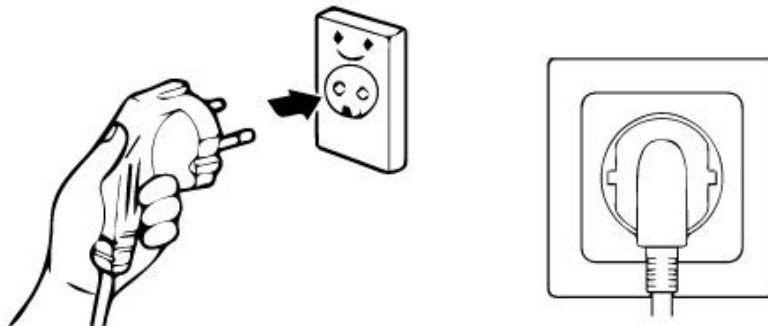
 DANGER
·Preventing high-altitude falls during Easy Solar Kit installation.
 WARNING
·Ensure that the load-bearing capacity of the balcony railing meets the installation requirements. (ESK400 weight: 29Kg)

- Hang Easy Solar Kit to the outside of the balcony and fix it through S10 and S11.



Step 5. Start Easy Solar Kit system.

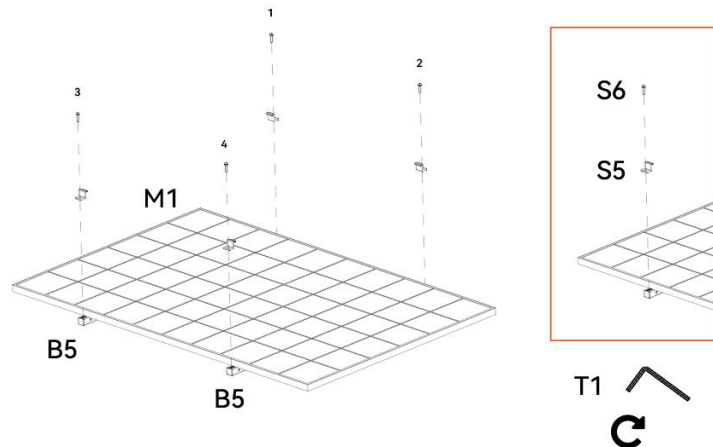
- After plugging in the socket and connecting to the power supply, the system will start working within 2 minutes.



3. TSOL- ESK400-BV

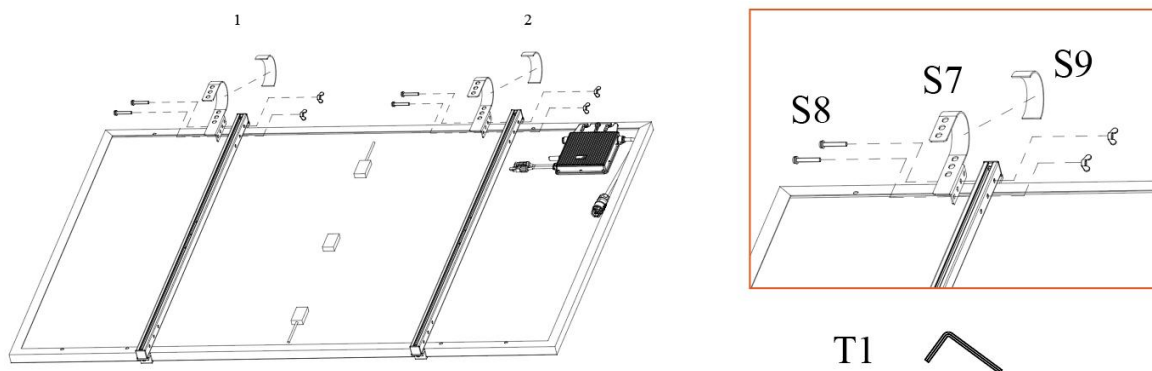
Step 1. Assembling bracket and PV module

- Take out M1, B5, S5 and S6 from the packaging box and screw M1, B5 through S5, S6 accessories.





Step 2. Install the hooks.

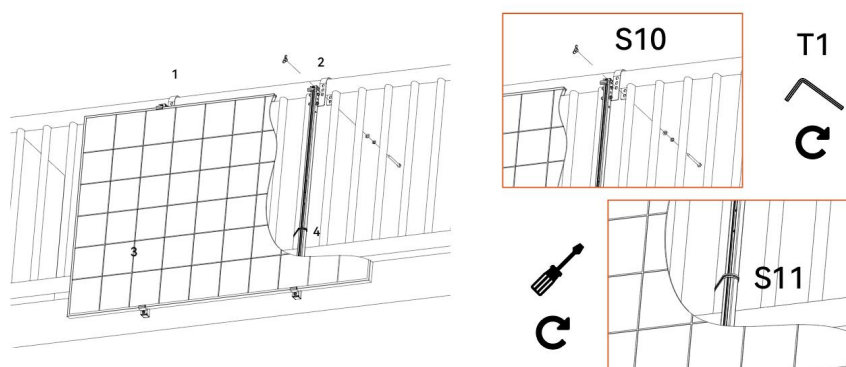
- Fix the hook S7 to the bracket through the S8 accessory and attach the S9 gasket to the inside of the hook.



Step 3. Hanging system.

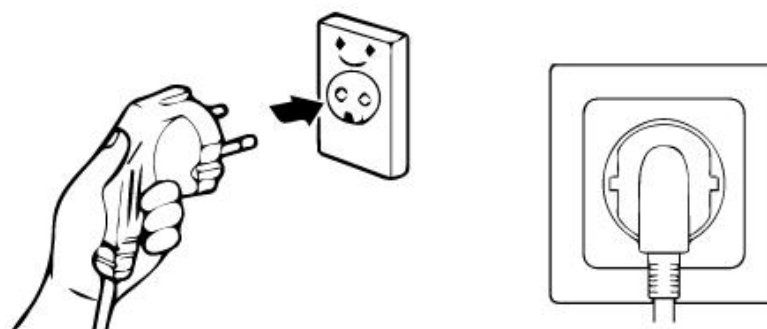
 DANGER
·Preventing high-altitude falls during Easy Solar Kit installation.
 WARNING
·Ensure that the load-bearing capacity of the balcony railing meets the installation requirements. (ESK400 weight: 27Kg)

- Hang Easy Solar Kit to the outside of the balcony and fix it through S10 and S11.



Step 4. Start Easy Solar Kit system.

- After plugging in the socket and connecting to the power supply, the system will start working within 2 minutes.

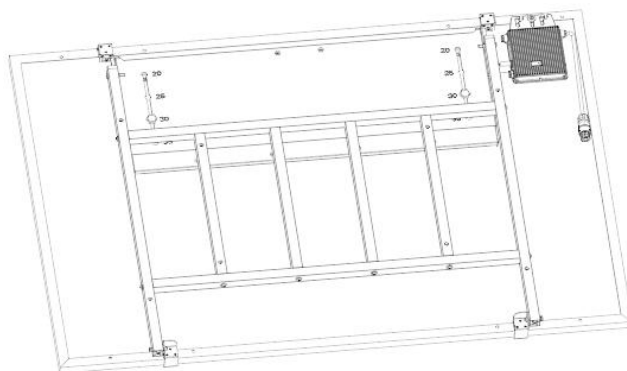


4. TSOL- ESK400-P

Step 1. Open the Easy Solar Kit

- Pick the Easy Solar Kit out of the package. Put down it slowly and make the bracket upside. Open the Easy

Solar Kit.

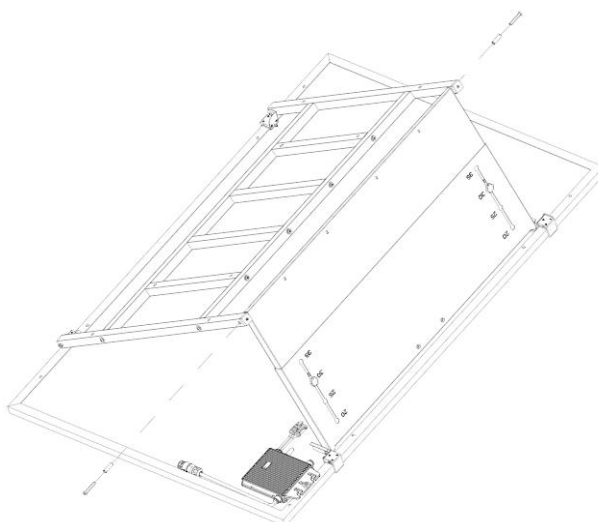


Step 2. Fix the bracket to the base plate.

! WARNING

·The bracket must be fixed on the base plate, which will promote the wind loading rating of Easy Solar Kit.

- Lift up the base plate and the bracket. Screw on the ESK locks to fix the bracket on the base plate as shown below.

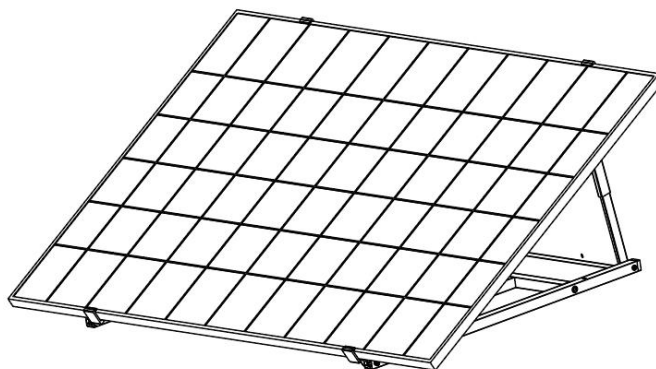


Step 3. Find a suitable location.

! CAUTION

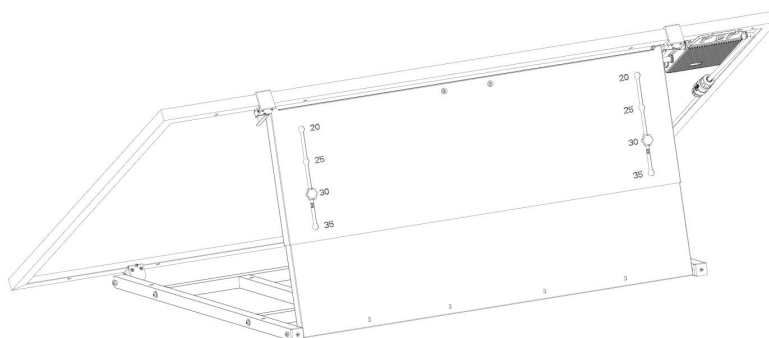
·Please put the Easy Solar Kit on a flat and non-shadow location.
 ·Easy Solar Kit has a 5m end cable and should be set near the socket. Or use the expansion cable as shown in Step 5.

- Turn around the Easy Solar Kit and make the base plate downside. Find a suitable location and put down the Easy Solar Kit lightly. Adjust the direction and make the solar panel facing the sunlight.



Step 4. Adjust the angle of bracket (optional)

- Angle Lock is an optional function for Easy Solar Kit. There are two angle locks on the bracket.

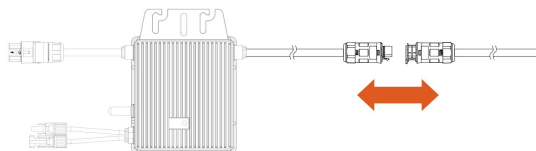


- Open the angle locks. Slowly put down the solar panel and make the angle locks slip into the right angle. Then tighten the angle locks again.

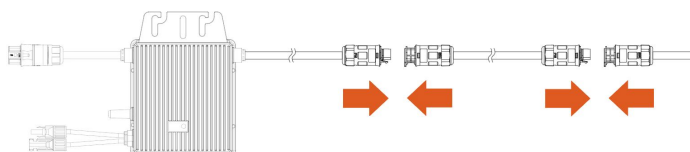


Step 5. Extend the end cable (optional)

- Extension cable can be used to extend the end cable. Dismantle the end cable.



- Connect the two sides of extension cable to the microinverter and the end cable.

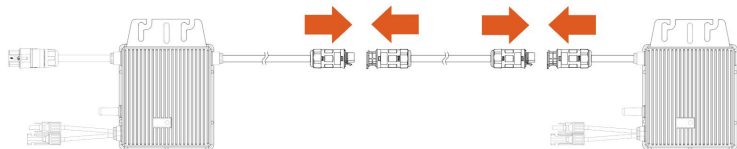


Step 6. Install more Easy Solar Kit (optional)



·Because of the current limit of the AC End Cable, the quantity of Easy Solar Kit in the same cable branch should be less than 10.

- More Easy Solar Kits can be connected together to form a whole system.
- Take out the end cable of the second Easy Solar Kit. Connect the two sides of Extension Cable to the first and second microinverter.

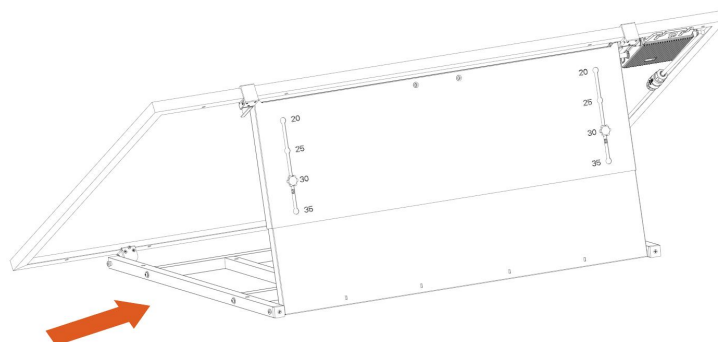


Step 7. Fix the base plate.

! WARNING

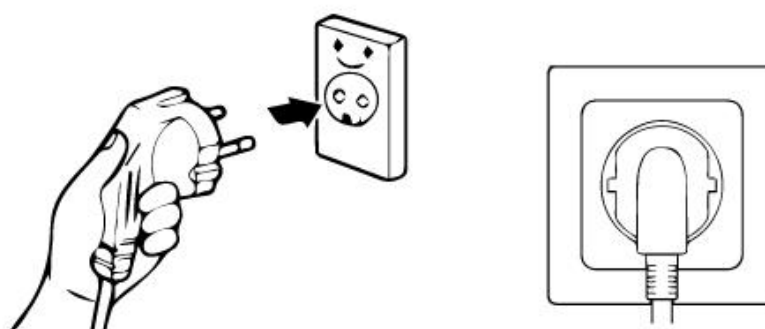
·Weights (Brick, Stone etc.) should be more than 20kg.

- Put weights (Brick, Stone etc.) on the base plate to promote the wind loading rating of Easy Solar Kit.



Step 8. Start Easy Solar Kit system.

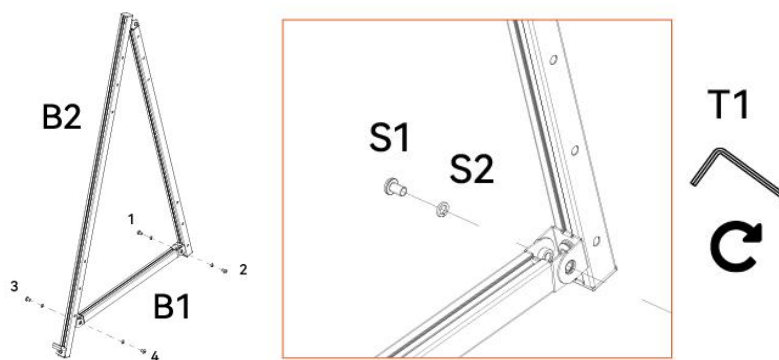
- After plugging in the socket and connecting to the power supply, the system will start working within 2 minutes.



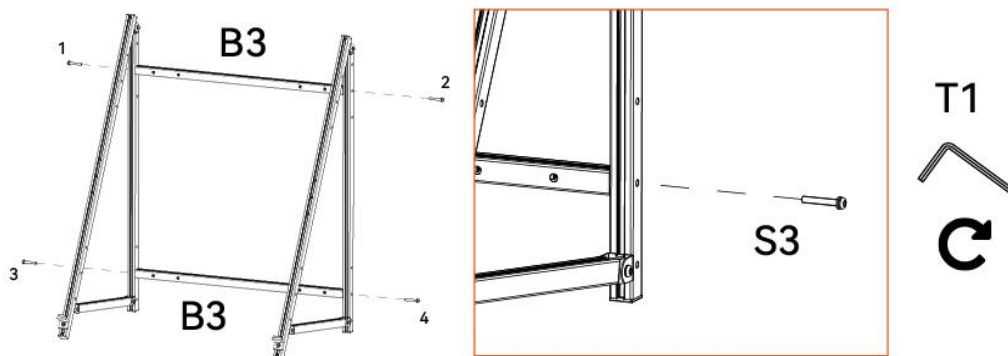
5. TSOL- ESK400-SA

Step 1. Assembling bracket.

- Take out B1, B2, S1 and S2 from the packaging box and screw B1, B2 through S1, S2 accessories.



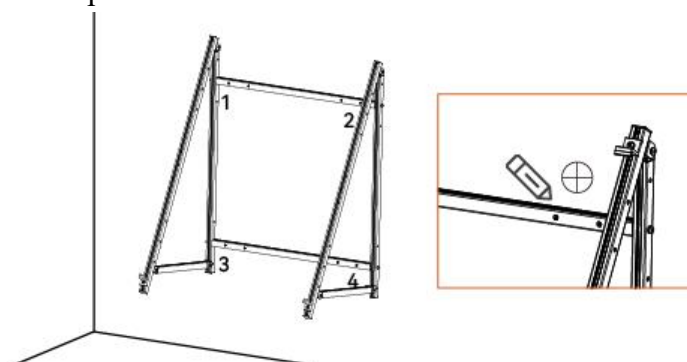
➤ Take out B3, S3 from the packaging box and screw B3 with B2, B1 through S3 accessory.



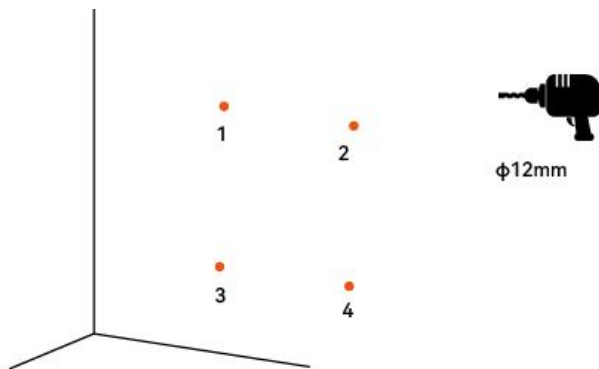
Step 2. Install the bracket.

⚠ WARNING
·Ensure that the wall's load-bearing capacity meets installation requirements. (ESK400 weight:29kg)
⚠ CAUTION
·The drilling diameter is 12mm.

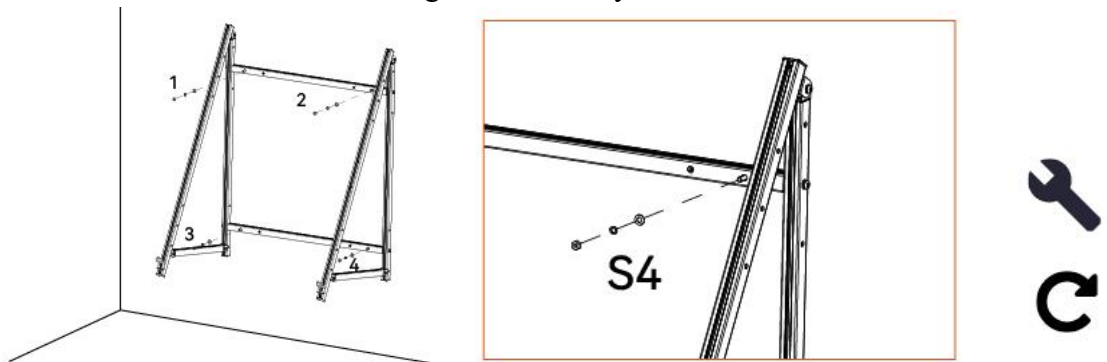
➤ Mark the installation holes position.




➤ Drill holes at marked hole locations.



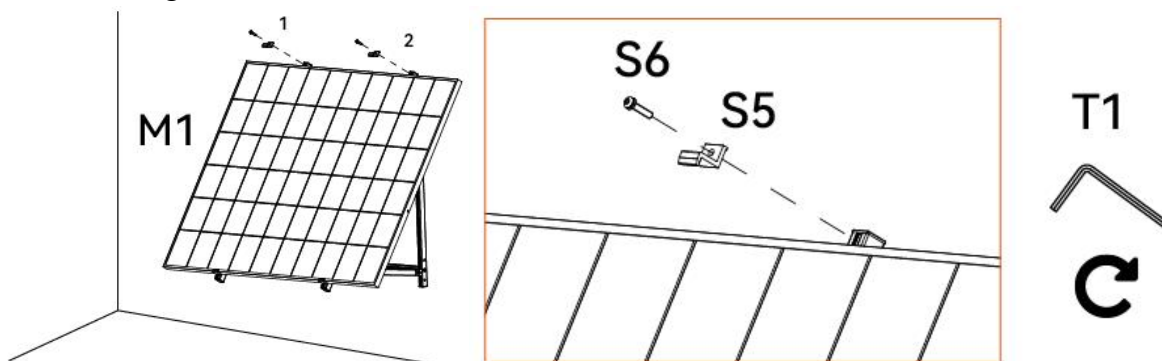
- Install the bracket onto the wall through S4 accessory.



Step 3. Install PV module.

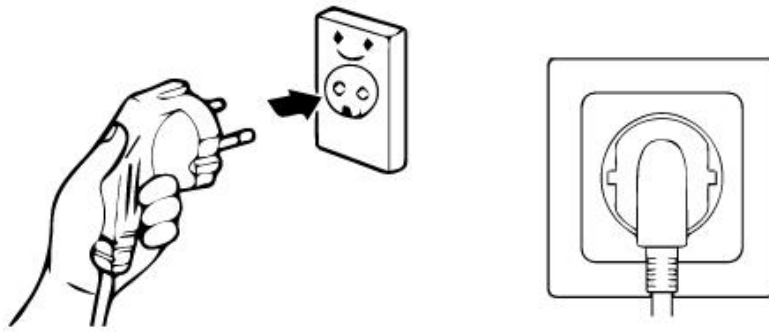
 DANGER
·Preventing high-altitude falls during PV module installation.

- Take out M1, S5 and S6 from the packaging box and install the M1 PV module onto the bracket through S5, S6 accessories.



Step 4. Start Easy Solar Kit system.

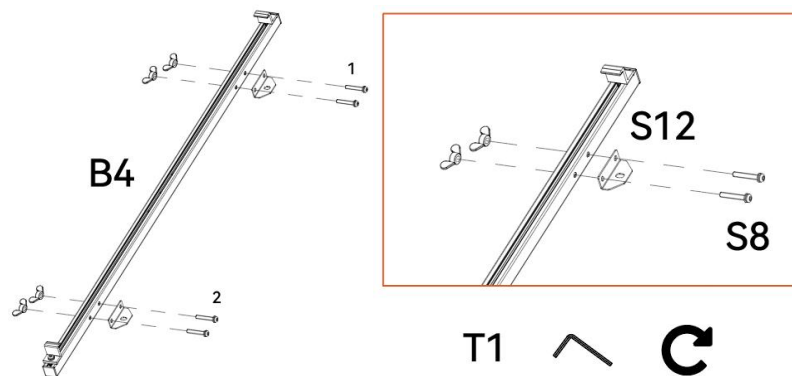
- After plugging in the socket and connecting to the power supply, the system will start working within 2 minutes.



6. TSOL- ESK400-SV

Step 1. Assembling bracket.

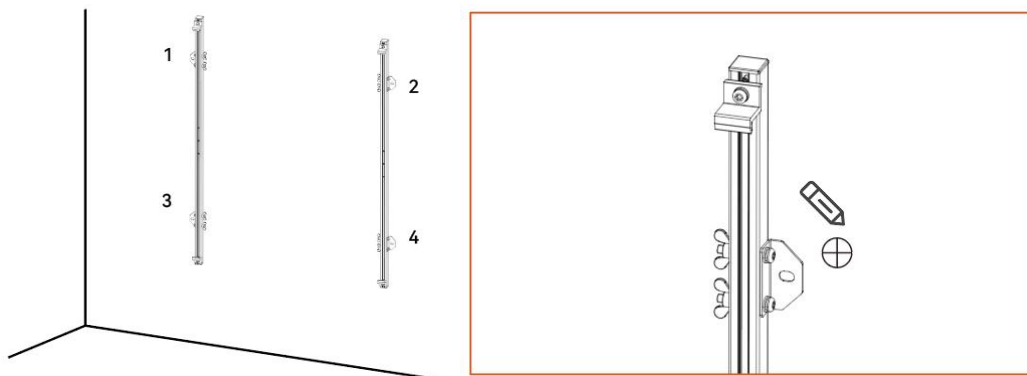
- Take out B4, S8 and S12 from the packaging box and screw B4 and S12 through S8 accessory.



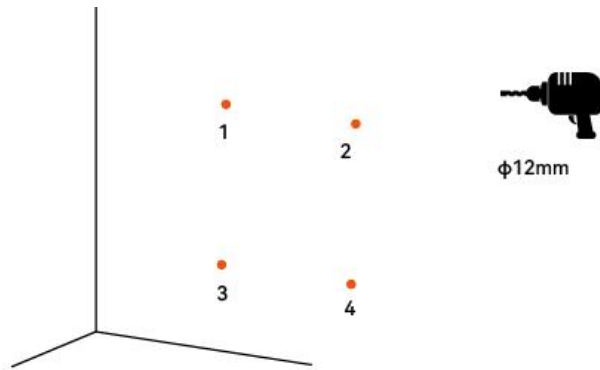
Step 2. Install the bracket.

! WARNING
·Ensure that the wall's load-bearing capacity meets installation requirements. (ESK400 weight:29kg)
! CAUTION
·The drilling diameter is 12mm.

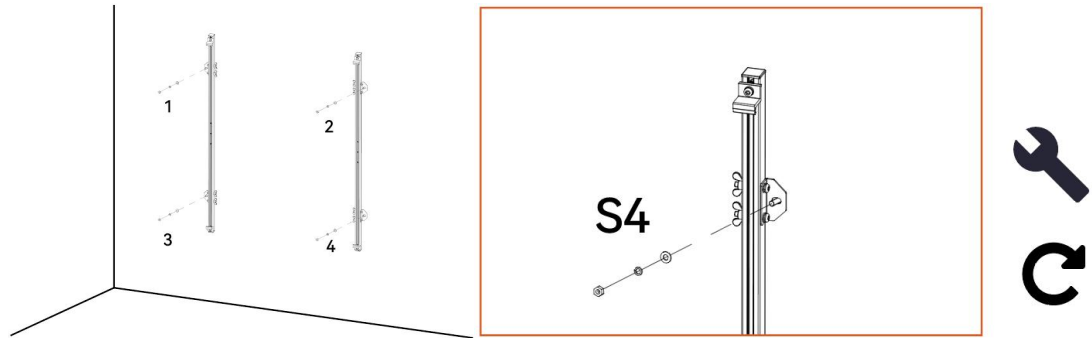
- Mark the installation holes position.



- Drill holes at marked hole locations.

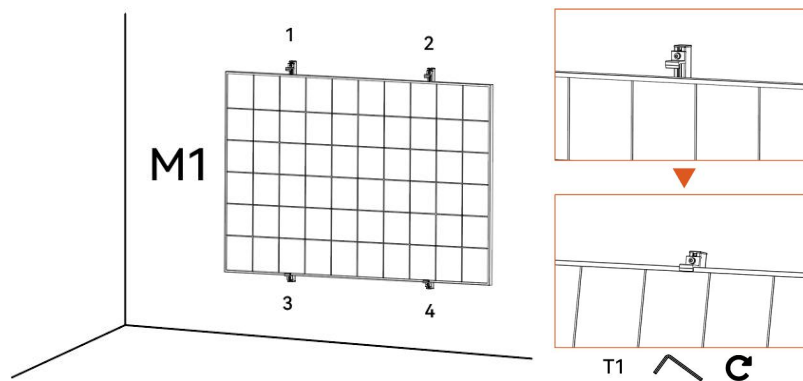


- Install the bracket onto the wall through S4 accessory.



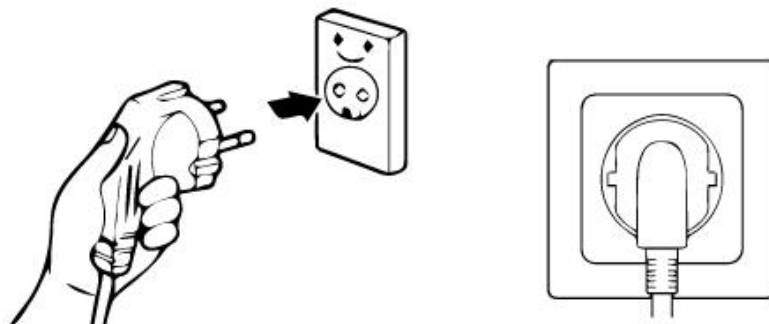
Step 3. Install PV module.

- Take out M1 from the packaging box and install the M1 PV module onto the bracket, fix M1 at both ends of B4 bracket.



Step 4. Start Easy Solar Kit system.

- After plugging in the socket and connecting to the power supply, the system will start working within 2 minutes.

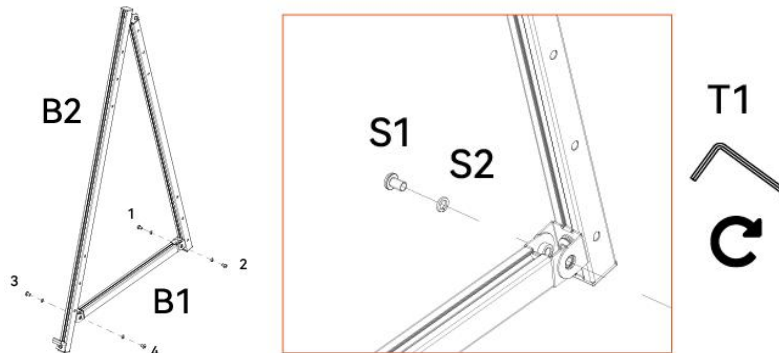


7. TSOL- ESK400-U

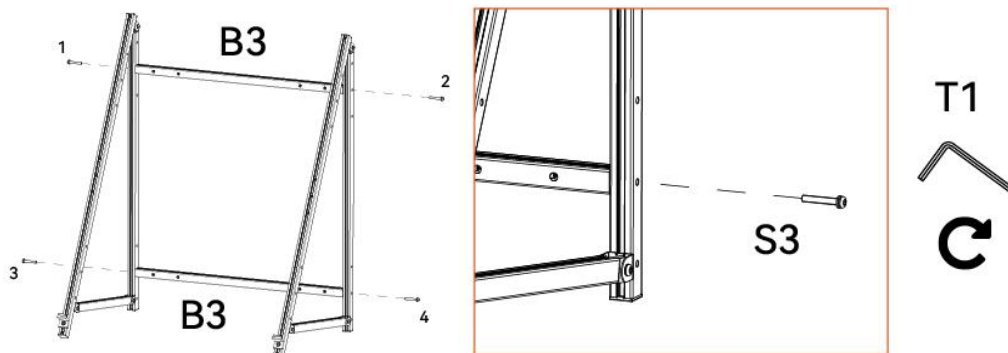
① Wall Installation

Step 1. Assembling bracket.



- Take out B1, B2, S1 and S2 from the packaging box and screw B1, B2 through S1, S2 accessories.



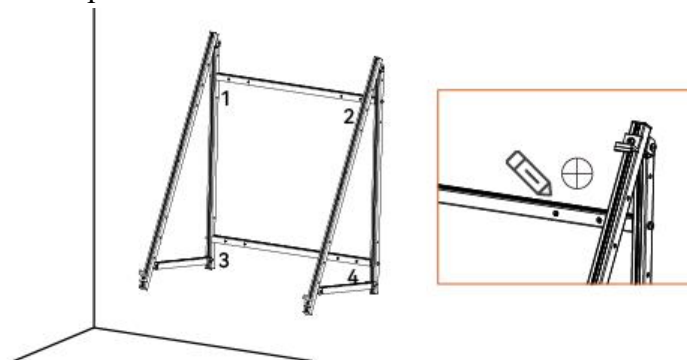
- Take out B3, S3 from the packaging box and screw B3 with B2, B1 through S3 accessory.



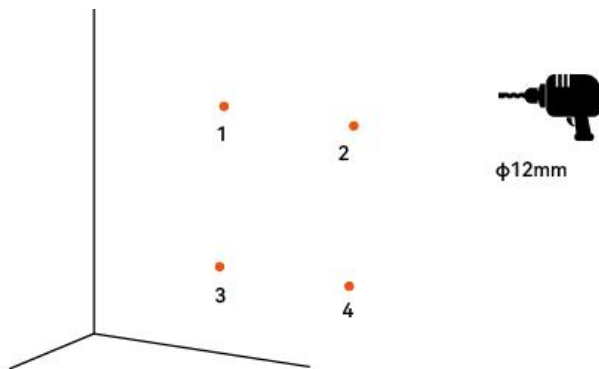
Step 2. Install the bracket.

 WARNING
·Ensure that the wall's load-bearing capacity meets installation requirements. (ESK400 weight:30kg)
 CAUTION
·The drilling diameter is 12mm.

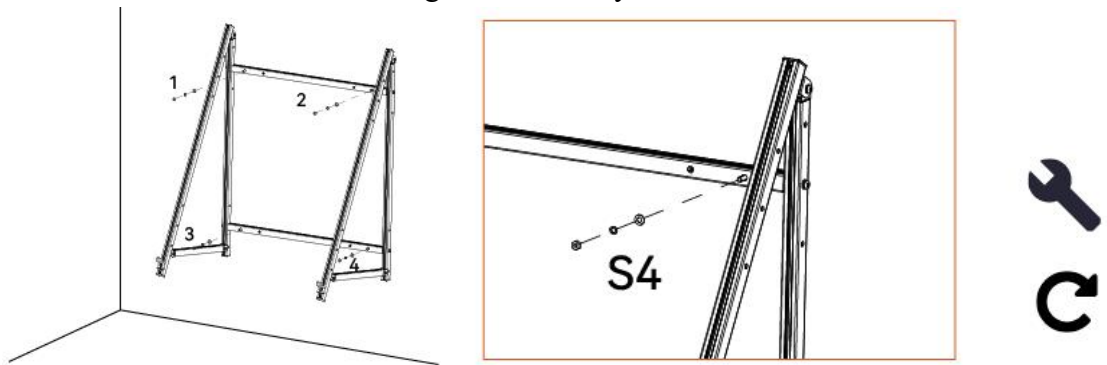
- Mark the installation holes position.



- Drill holes at marked hole locations.



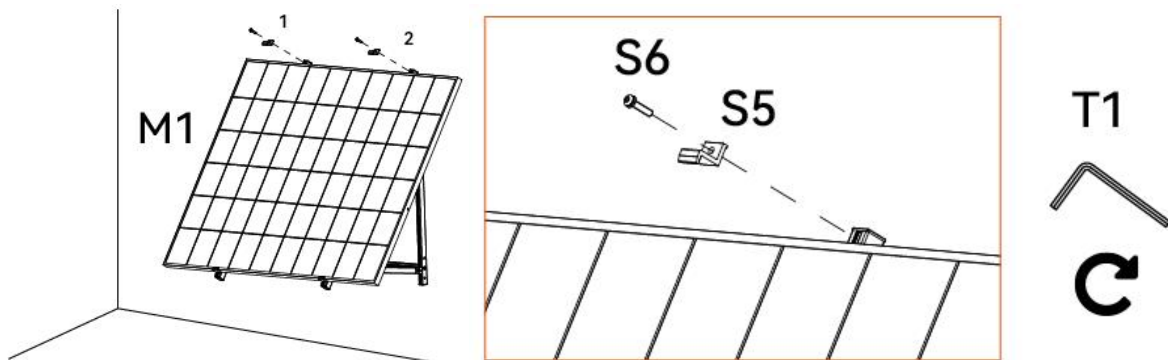
➤ Install the bracket onto the wall through S4 accessory.



Step 3. Install PV module.

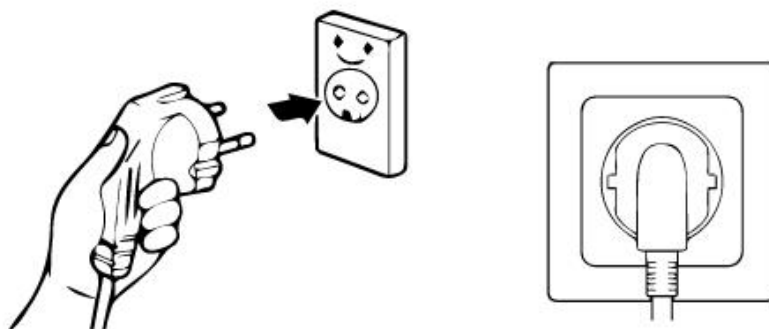
DANGER
·Preventing high-altitude falls during PV module installation.

➤ Take out M1, S5 and S6 from the packaging box and install the M1 PV module onto the bracket through S5, S6 accessories.



Step 4. Start Easy Solar Kit system.

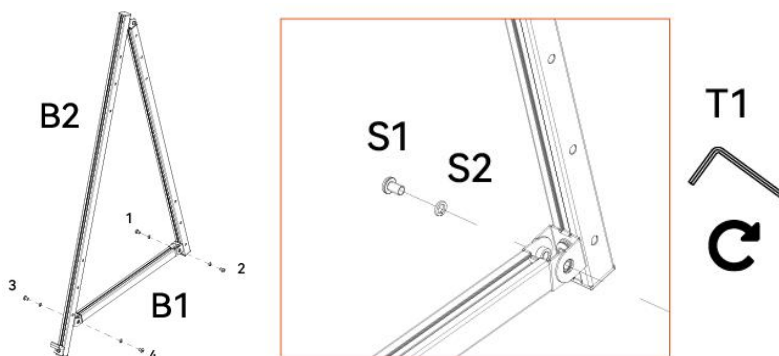
➤ After plugging in the socket and connecting to the power supply, the system will start working within 2 minutes.



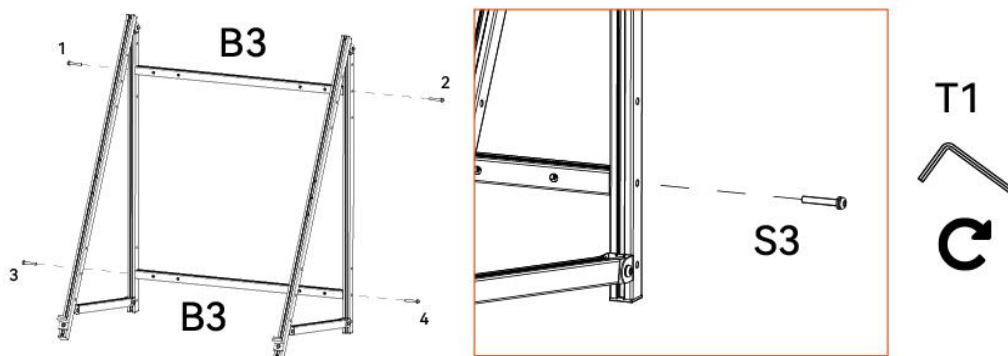
②Balcony Installation

Step 1. Assembling bracket.

- Take out B1, B2, S1 and S2 from the packaging box and screw B1, B2 through S1, S2 accessories.

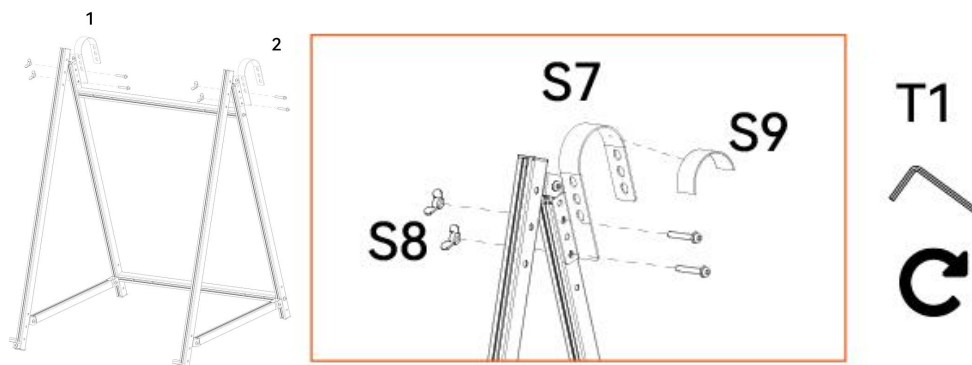


- Take out B3, S3 from the packaging box and screw B3 with B2, B1 through S3 accessory.



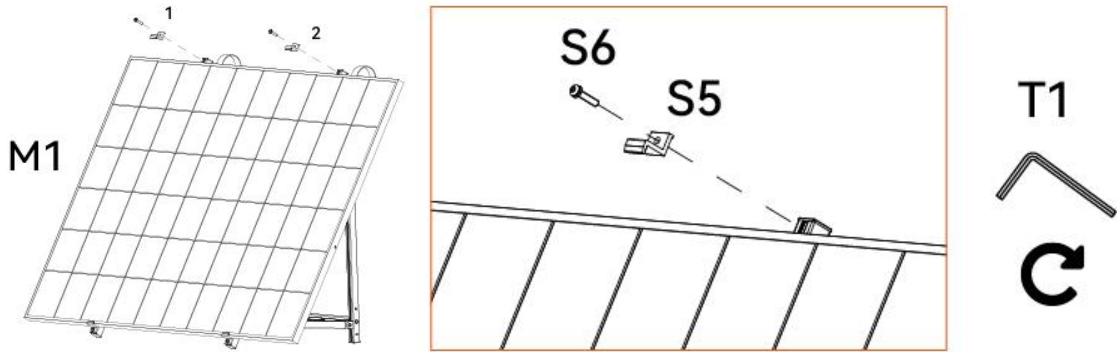
Step 2. Install the hooks.

- Fix the hook S8 to the bracket through the S7 accessory and attach the S9 gasket to the inside of the hook.





Step 3. Install PV module.

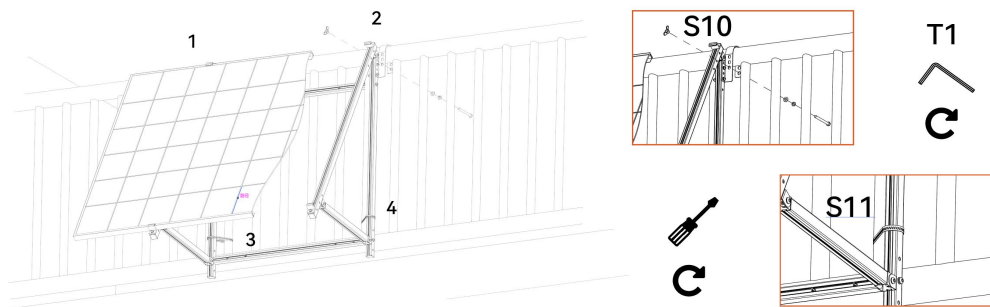
- Take out M1, S5 and S6 from the packaging box and install the M1 PV module onto the bracket through S5, S6 accessories.



Step 4. Hanging system.

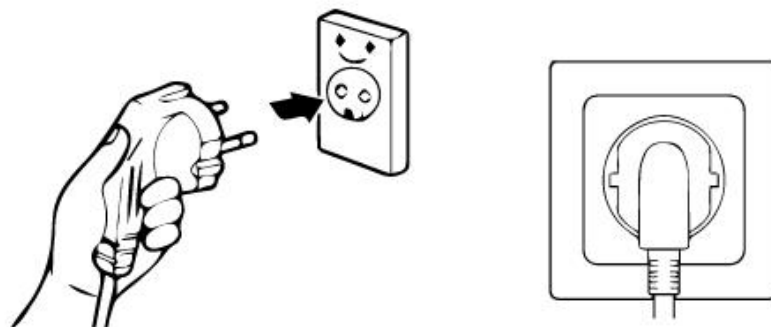
 DANGER
·Preventing high-altitude falls during Easy Solar Kit installation.
 WARNING
·Ensure that the load-bearing capacity of the balcony railing meets the installation requirements. (ESK400 weight: 30Kg)

- Hang Easy Solar Kit to the outside of the balcony and fix it through S10 and S11.



Step 5. Start Easy Solar Kit system.

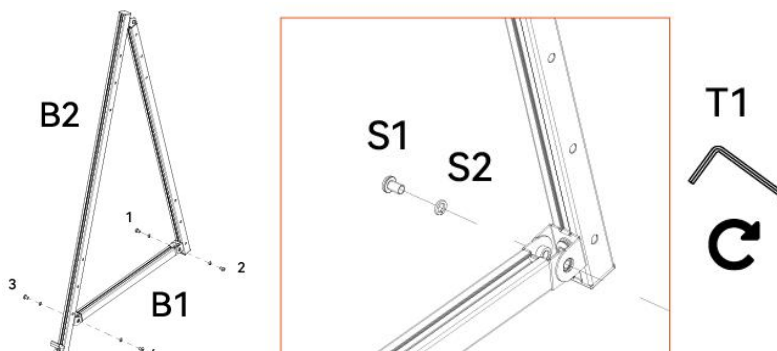
- After plugging in the socket and connecting to the power supply, the system will start working within 2 minutes.



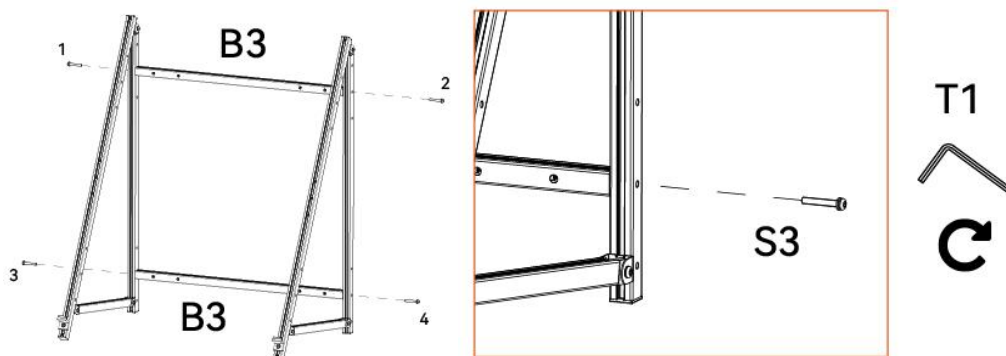
③ Garden Installation

Step 1. Assembling bracket.

- Take out B1, B2, S1 and S2 from the packaging box and screw B1, B2 through S1, S2 accessories.

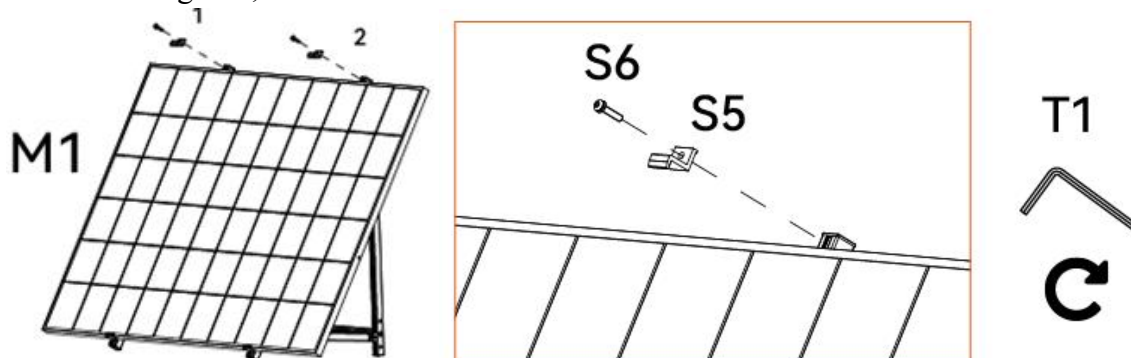


- Take out B3, S3 from the packaging box and screw B3 with B2, B1 through S3 accessory.



Step 2. Install PV module.

- Take out M1, S5 and S6 from the packaging box and install the M1 PV module onto the bracket through S5, S6 accessories.

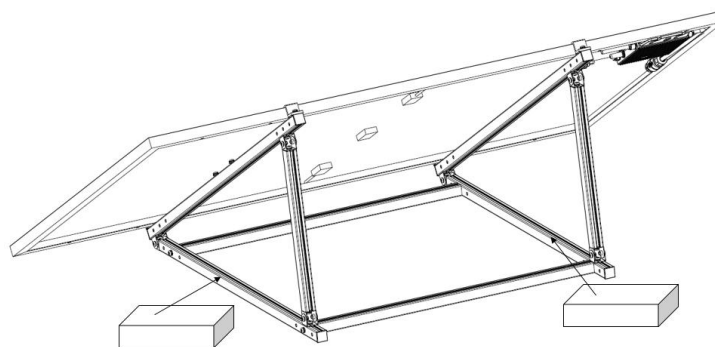


Step 3. Place Easy Solar Kit system.

⚠ CAUTION

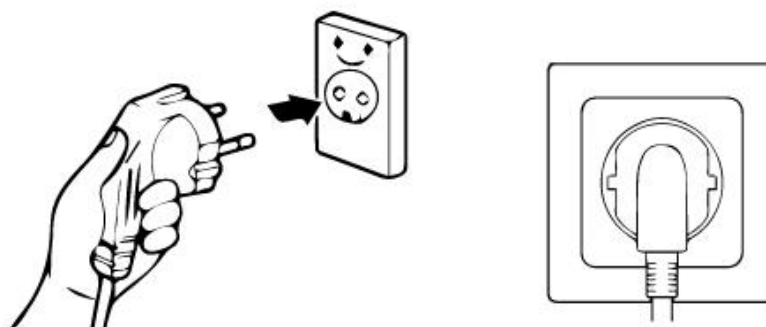
·Placing heavy objects on the base is beneficial for improving system stability and wind resistance.

- Place the long side of the bracket on the ground, adjust the orientation of the PV module to face sunlight, and place a heavy object on the base bracket to secure the system.



Step 4. Start Easy Solar Kit system.

- After plugging in the socket and connecting to the power supply, the system will start working within 2 minutes.



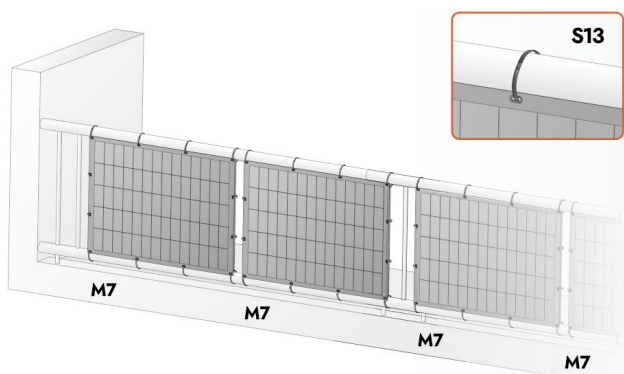
8. TSOL- ESK800-Air (V)

Step 1. Install flexible PV panel.



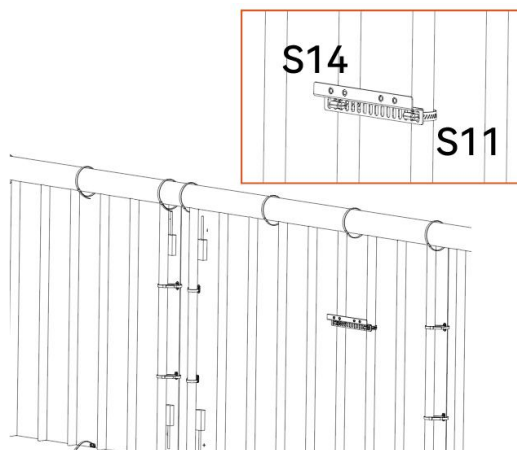
·Preventing high-altitude falls during flexible PV panel installation.

- Take out M7 and S13 from the packaging box and use S13 to tie M7 tightly to the balcony railing.



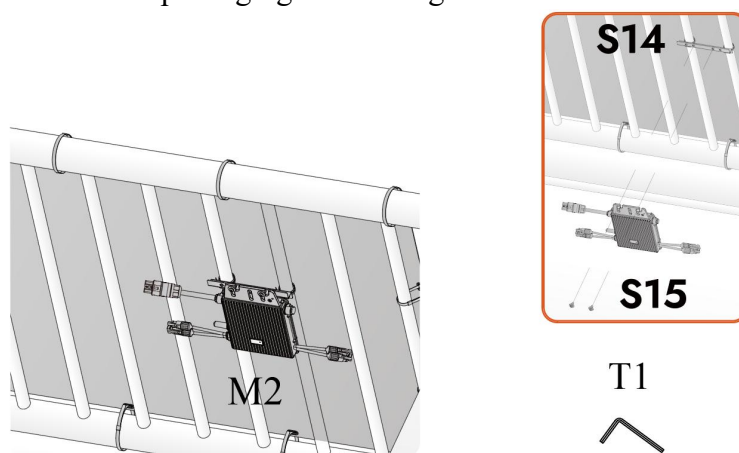
Step 2. Assembly accessories.

- Take out S11 and S14 from the packaging box and tie S14 tightly to the appropriate position on the railing through S11.



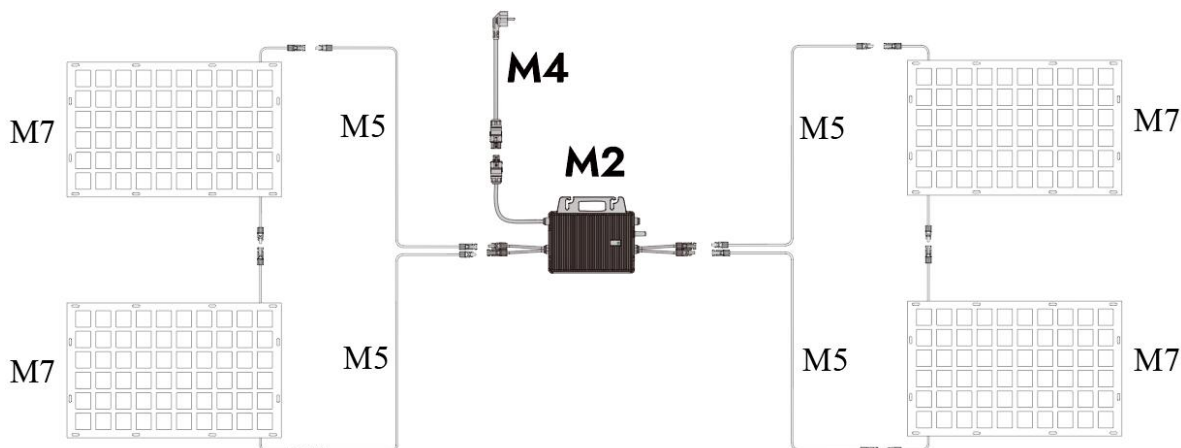
Step 3. Install Microinverter.

- Take out M8 and S15 from the packaging box and tighten M8 and S14 with S15.



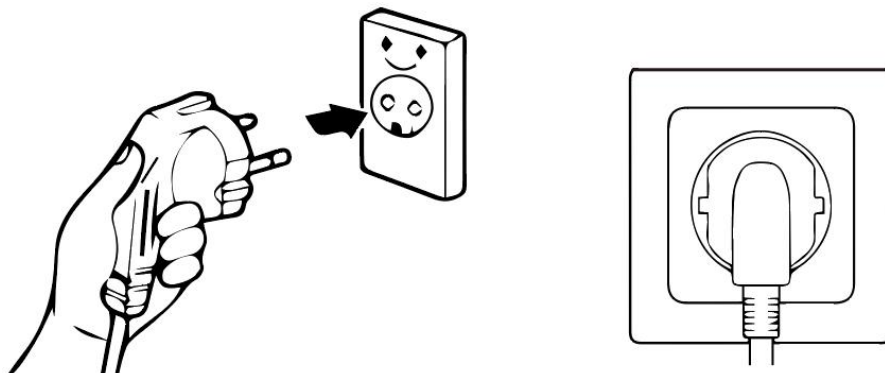
Step 4. Connect Easy Solar Kit system.

- Take out M5 and M4 from the packaging box.
- Connect M2 and M7 with M5.
- Connect M4 to M2.



Step 5. Start Easy Solar Kit system.

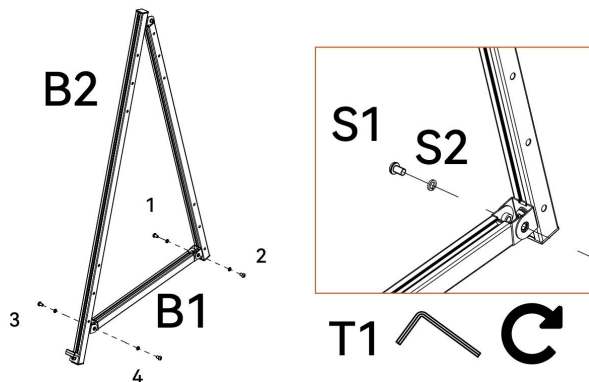
- After plugging in the socket and connecting to the power supply, the system will start working within 2 minutes.



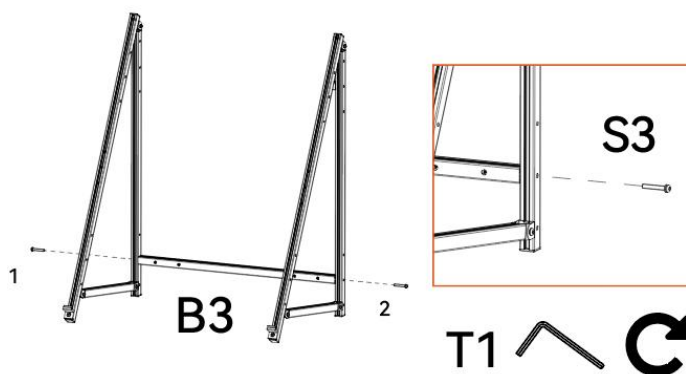
9. TSOL- ESK800-BA

Step 1. Assembling bracket.

- Take out B1, B2, S1 and S2 from the packaging box and screw B1, B2 through S1, S2 accessories.

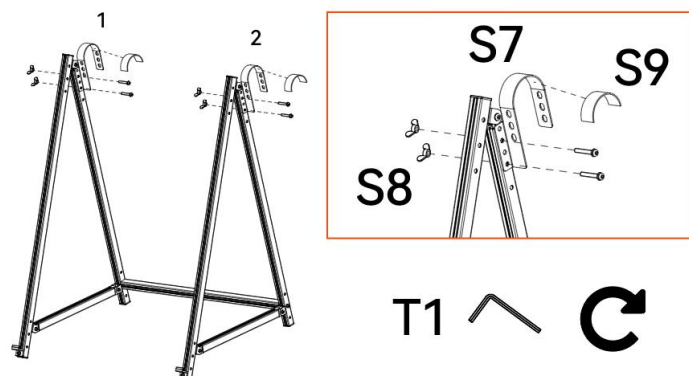


- Take out B3, S3 from the packaging box and screw B3 with B2, B1 through S3 accessory.



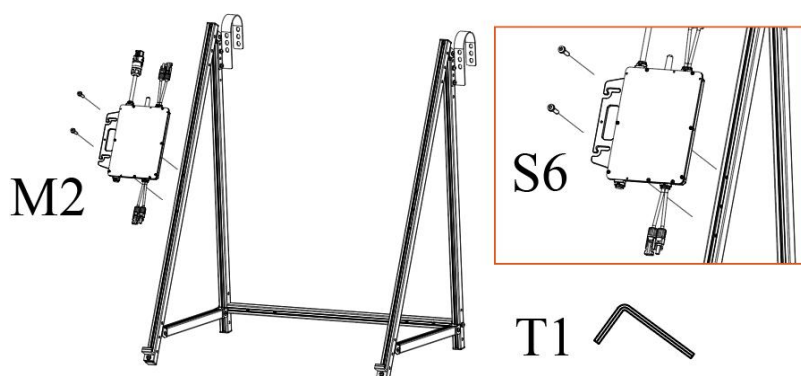
Step 2. Install the hooks.

- Fix the hook S7 to the bracket through the S8 accessory and attach the S9 gasket to the inside of the hook.

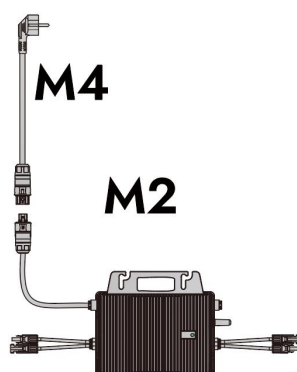


Step 3. Install Microinverter

- Take out M2 and S6 from the packaging box and install the M2 onto the bracket through S6 accessory.

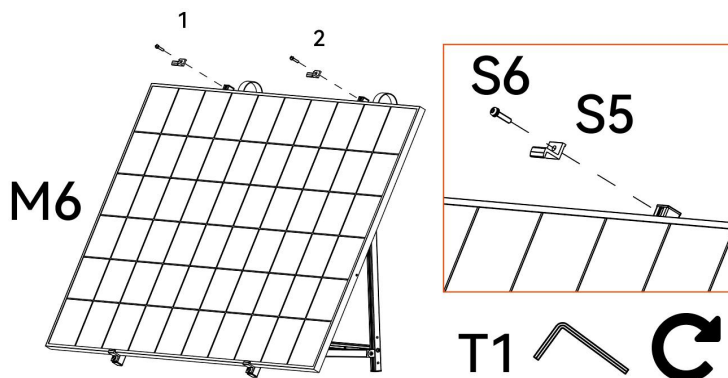


- Take out M4 from the packaging box and connect M2 with M4 through AC cable.





Step 4. Install PV module.

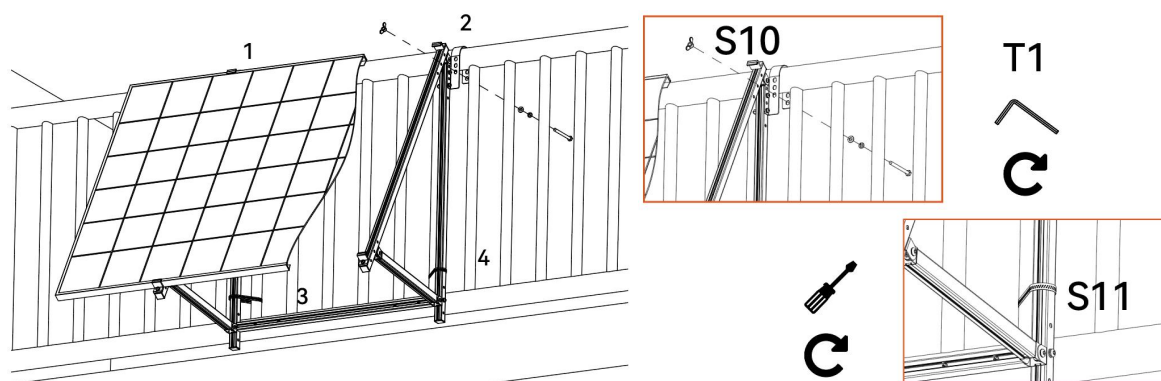
- Take out M6, S5 and S6 from the packaging box and install the M6 onto the bracket through S5, S6 accessories.



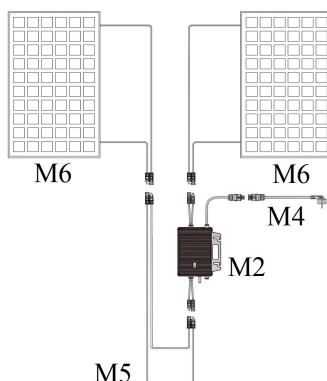
Step 5. Hanging system.

 DANGER
·Preventing high-altitude falls during Easy Solar Kit installation.
 WARNING
·Ensure that the load-bearing capacity of the balcony railing meets the installation requirements. (ESK800 weight: 58Kg)

- Hang Easy Solar Kit to the outside of the balcony and fix it through S10 and S11.

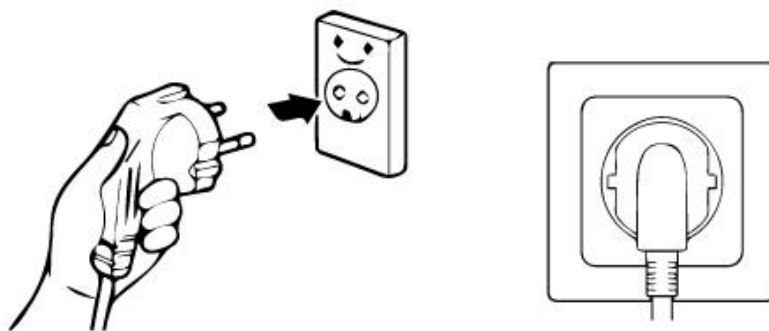


- Take out M5 from the packaging box and connect M2 with M6 through M5 and DC cable.



Step 6. Start Easy Solar Kit system.

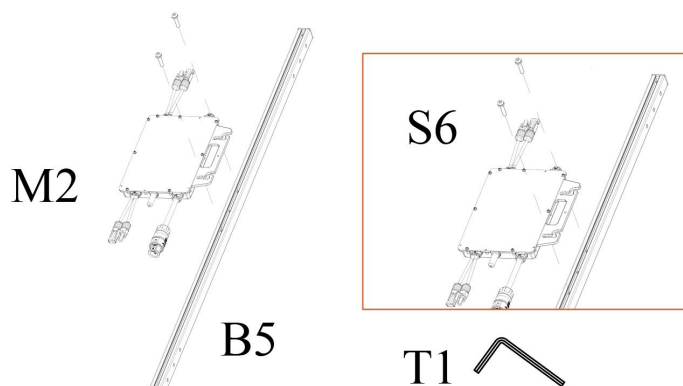
- After plugging in the socket and connecting to the power supply, the system will start working within 2 minutes.



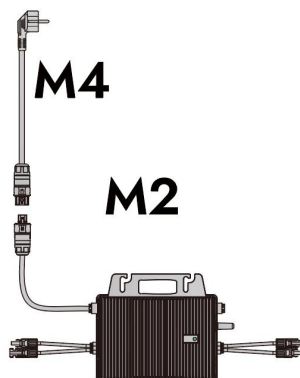
10. TSOL- ESK800-BV

Step 1. Install Microinverter

- Take out M2, B5 and S6 from the packaging box and install the M2 onto the bracket B5 through S6 accessory.

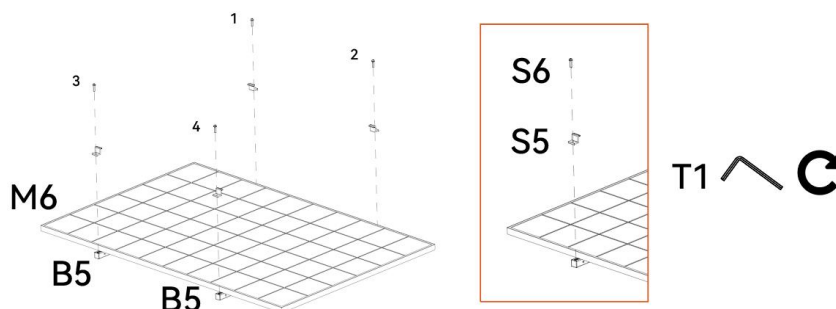


- Take out M4 from the packaging box and connect M2 with M4.



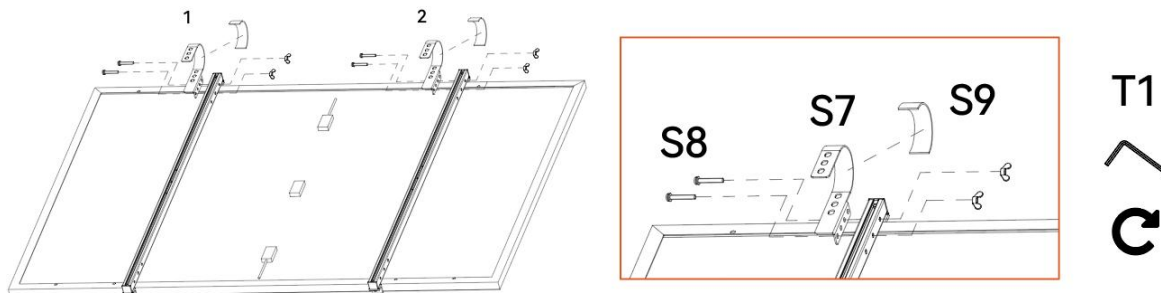
Step 2. Install PV module.

- Take out M6, S5 and S6 from the packaging box and install the M6 onto the bracket B5 through S5, S6 accessories.



Step 3. Install the hooks.

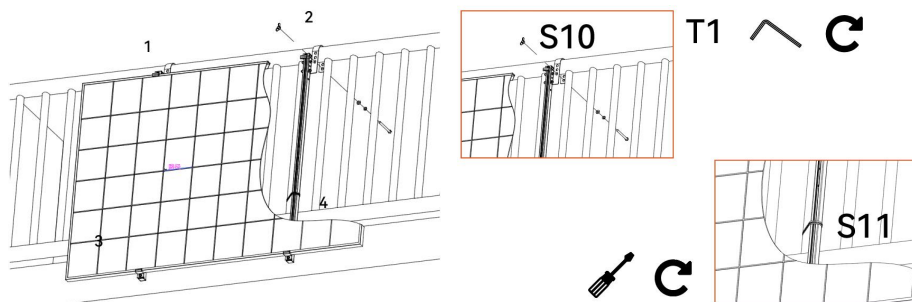
- Fix the hook S7 to the bracket through the S8 accessory and attach the S9 gasket to the inside of the hook.



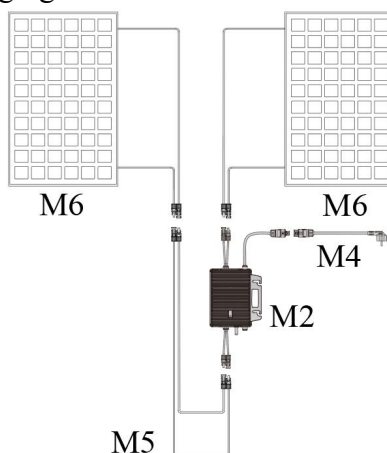
Step 4. Hanging system.

DANGER
·Preventing high-altitude falls during Easy Solar Kit installation.
WARNING
·Ensure that the load-bearing capacity of the balcony railing meets the installation requirements. (ESK800 weight: 54Kg)

- Hang Easy Solar Kit to the outside of the balcony and fix it through S10 and S11.

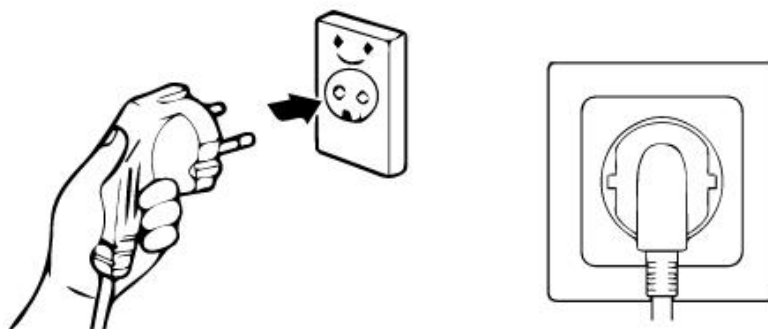


- Take out M5 from the packaging box and connect M2 with M6 through M5 and DC cable.



Step 5. Start Easy Solar Kit system.

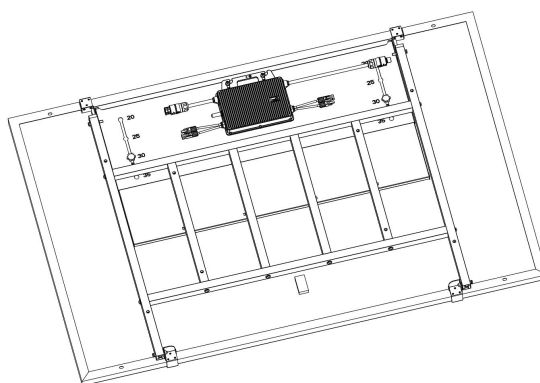
- After plugging in the socket and connecting to the power supply, the system will start working within 2 minutes.



11. TSOL- ESK800-P

Step 1. Open the Easy Solar Kit

- Pick the Easy Solar Kit out of the package. Put down it slowly and make the bracket upside. Open the Easy Solar Kit.

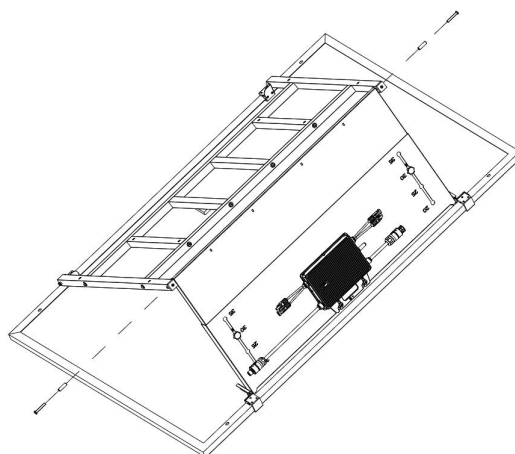


Step 2. Fix the bracket to the base plate.

WARNING

·The bracket must be fixed on the base plate, which will promote the wind loading rating of Easy Solar Kit.

- Lift up the base plate and the bracket. Screw on the ESK locks to fix the bracket on the base plate as shown below.



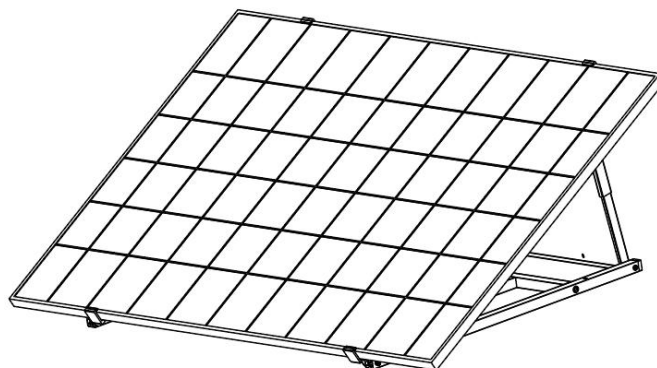
Step 3. Find a suitable location.



CAUTION

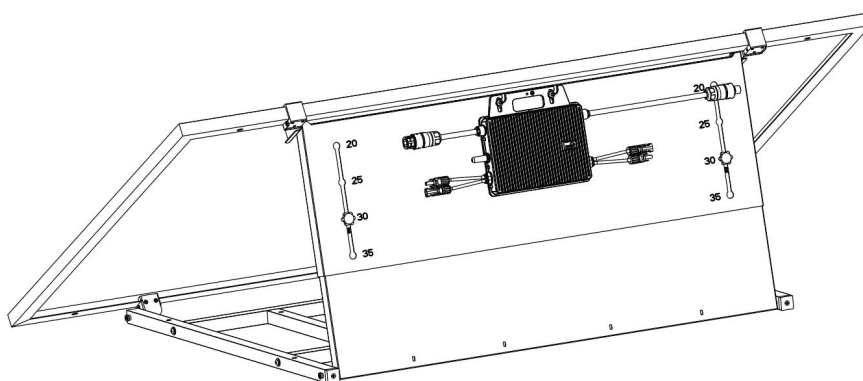
- Please put the Easy Solar Kit on a flat and non-shadow location.
- Easy Solar Kit has a 5m end cable and should be set near the socket. Or use the expansion cable as shown in Step 5.

- Turn around the Easy Solar Kit and make the base plate downside. Find a suitable location and put down the Easy Solar Kit lightly. Adjust the direction and make the solar panel facing the sunlight.



Step 4. Adjust the angle of bracket (optional)

- Angle Lock is an optional function for Easy Solar Kit. There are two angle locks on the bracket.

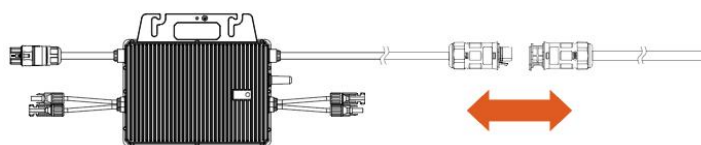


- Open the angle locks. Slowly put down the solar panel and make the angle locks slip into the right angle. Then tighten the angle locks again.

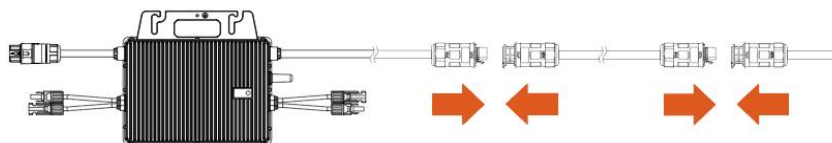


Step 5. Extend the end cable (optional)

- Extension cable can be used to extend the end cable. Dismantle the end cable.



- Connect the two sides of extension cable to the microinverter and the end cable.

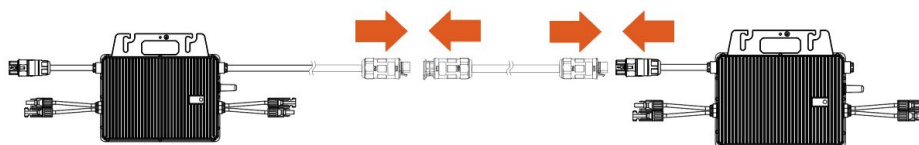


Step 6. Install more Easy Solar Kit (optional)

⚠ CAUTION

·Because of the current limit of the AC End Cable, the quantity of Easy Solar Kit in the same cable branch should be less than 10.

- More Easy Solar Kits can be connected together to form a whole system.
- Take out the end cable of the second Easy Solar Kit. Connect the two sides of Extension Cable to the first and second microinverter.

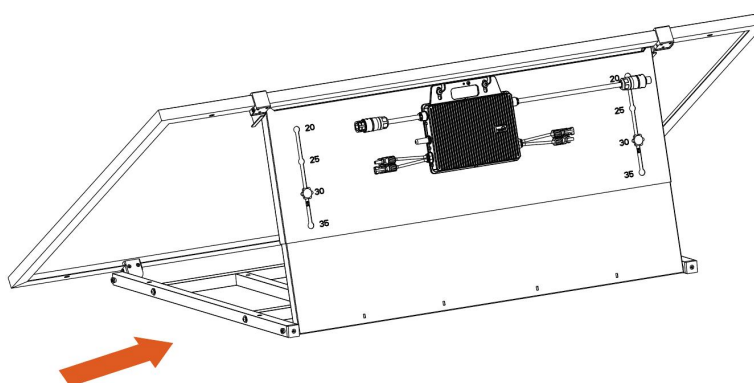


Step 7. Fix the base plate.

⚠ WARNING

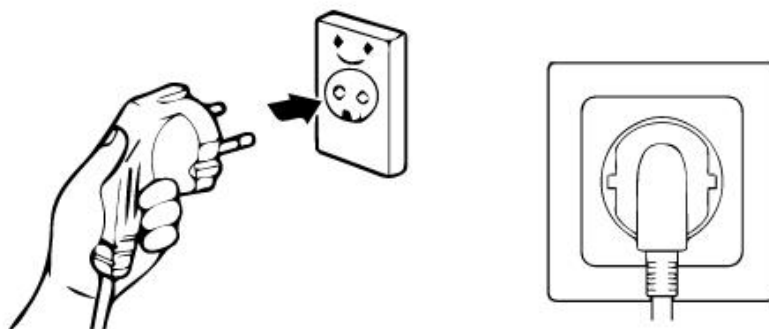
·Weights (Brick, Stone etc.) should be more than 20kg.

- Put weights (Brick, Stone etc.) on the base plate to promote the wind loading rating of Easy Solar Kit.



Step 8. Start Easy Solar Kit system.

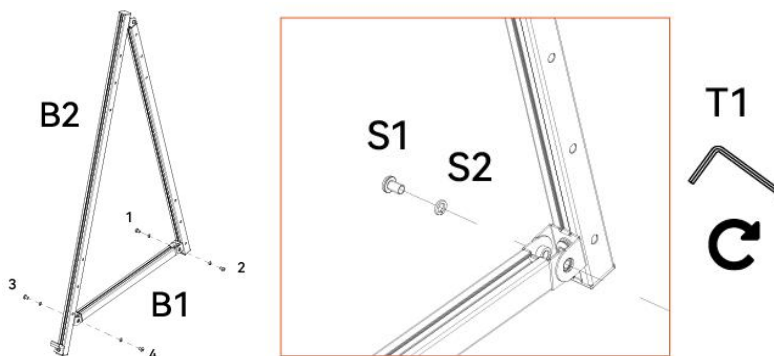
- After plugging in the socket and connecting to the power supply, the system will start working within 2 minutes.



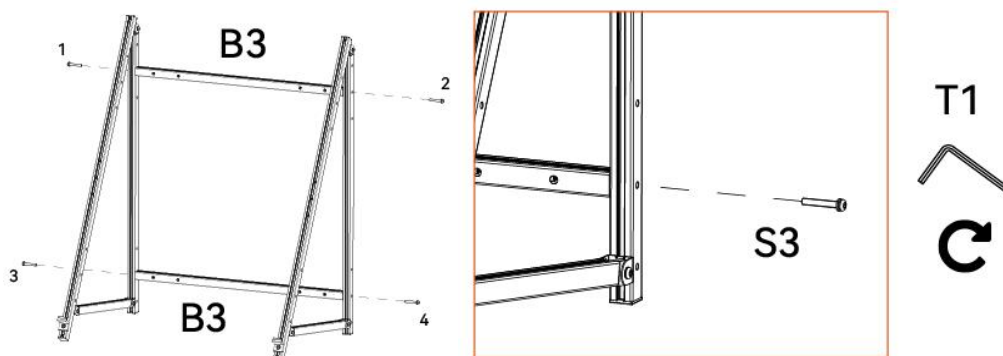
12. TSOL- ESK800-SA

Step 1. Assembling bracket.

- Take out B1, B2, S1 and S2 from the packaging box and screw B1, B2 through S1, S2 accessories.



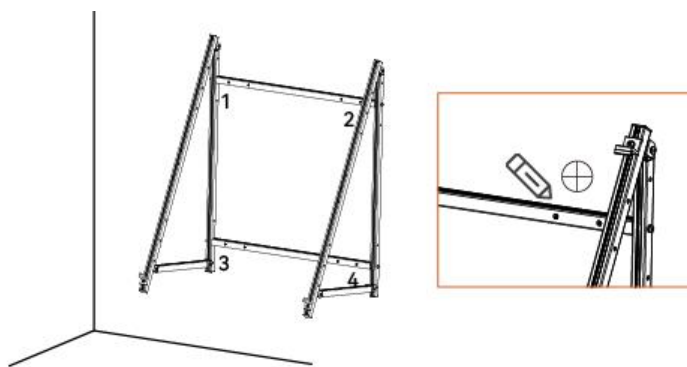
- Take out B3, S3 from the packaging box and screw B3 with B2, B1 through S3 accessory.



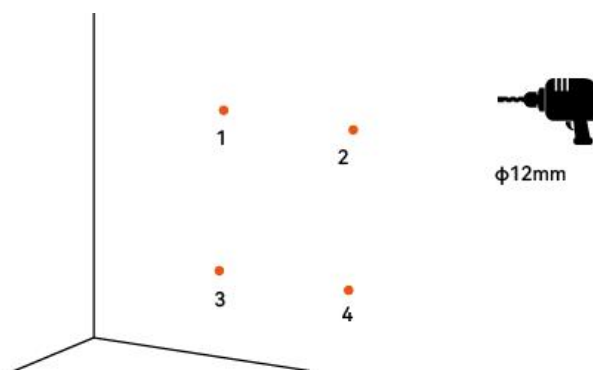
Step 2. Install the bracket.

⚠ WARNING
·Ensure that the wall's load-bearing capacity meets installation requirements. (ESK800 weight:48kg)
⚠ CAUTION
·The drilling diameter is 12mm.

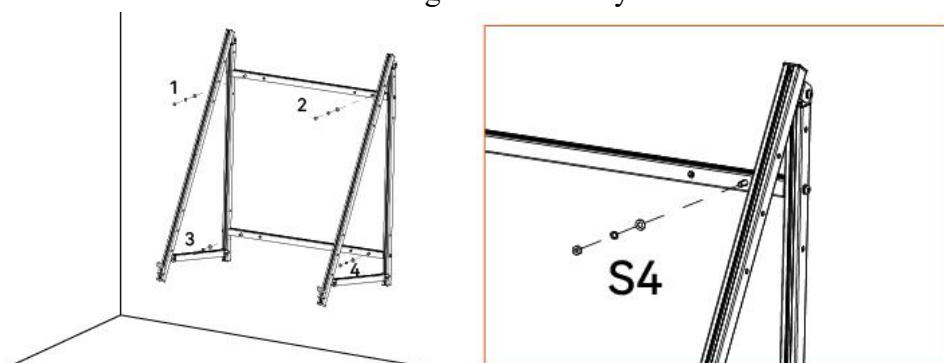
- Mark the installation holes position.



➤ Drill holes at marked hole locations.

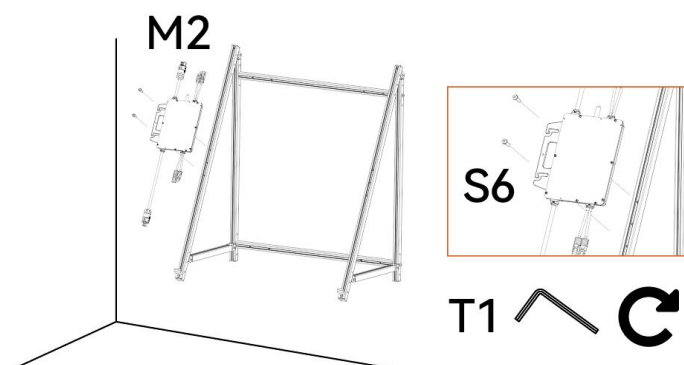


➤ Install the bracket onto the wall through S4 accessory.

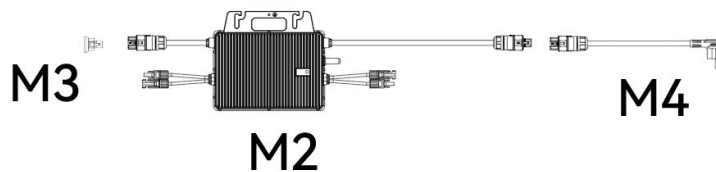


Step 3. Install Microinverter

➤ Take out M2 and S6 from the packaging box and install the M2 onto the bracket through S6 accessory.

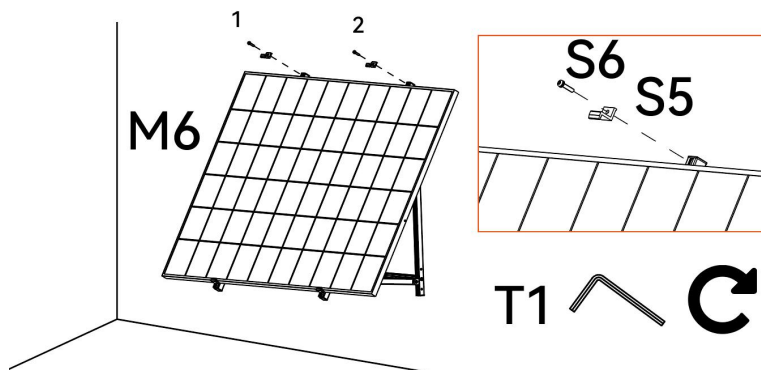


- Take out M3 and M4 from the packaging box and connect M2 with M3 and M4 through AC cable.

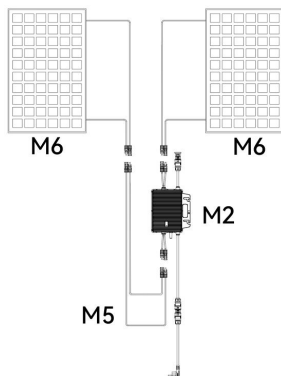


Step 4. Install PV module.

- Take out M6, S5 and S6 from the packaging box and install the M6 onto the bracket through S5, S6 accessories.

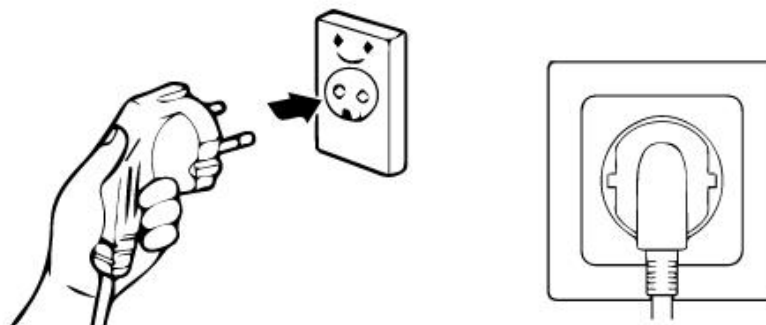


- Take out M5 from the packaging box and connect M2 with M6 through M5 and DC cable.



Step 5. Start Easy Solar Kit system.

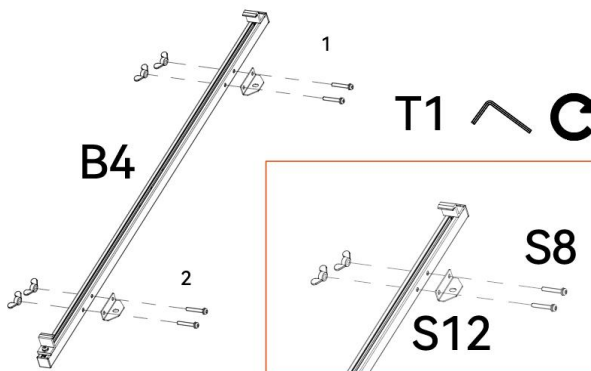
- After plugging in the socket and connecting to the power supply, the system will start working within 2 minutes.



13. TSOL- ESK800-SV

Step 1. Assembling bracket.

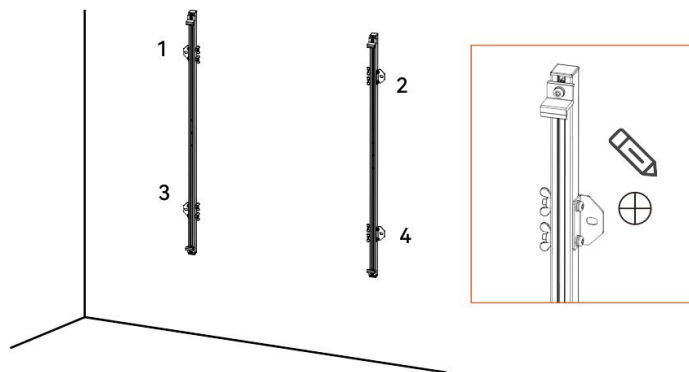
- Take out B4, S8 and S12 from the packaging box and screw B4 and S12 through S8 accessory.



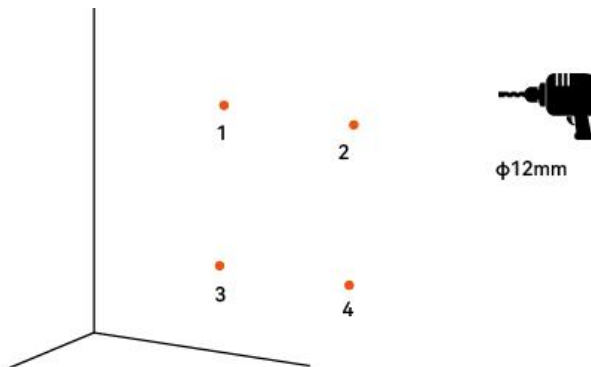
Step 2. Install the bracket.

⚠ WARNING
·Ensure that the wall's load-bearing capacity meets installation requirements. (ESK800 weight:45kg)
⚠ CAUTION
·The drilling diameter is 12mm.

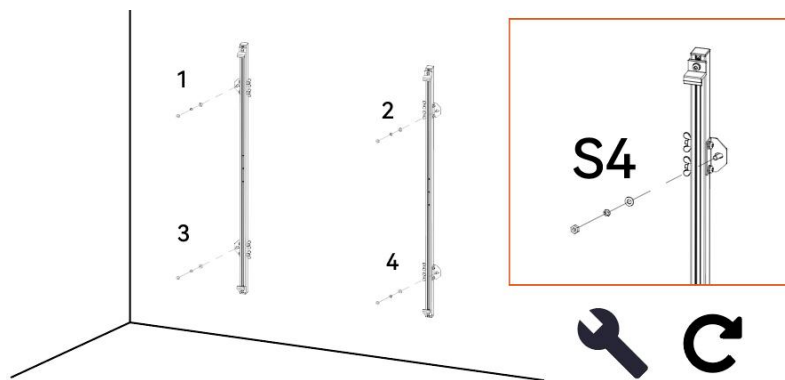
- Mark the installation holes position.



- Drill holes at marked hole locations.

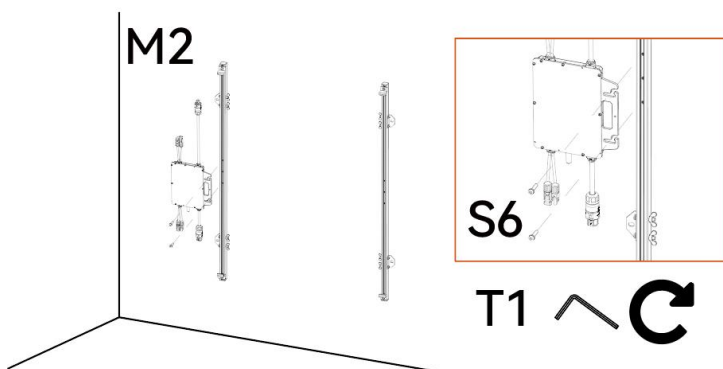


- Install the bracket onto the wall through S4 accessory.

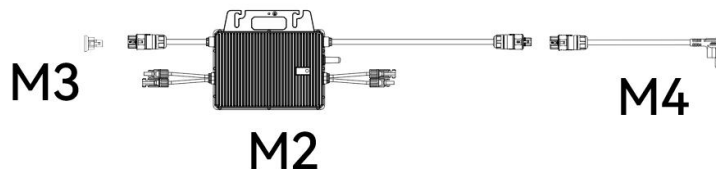


Step 3. Install Microinverter

- Take out M2 and S6 from the packaging box and install the M2 onto the bracket through S6 accessory.

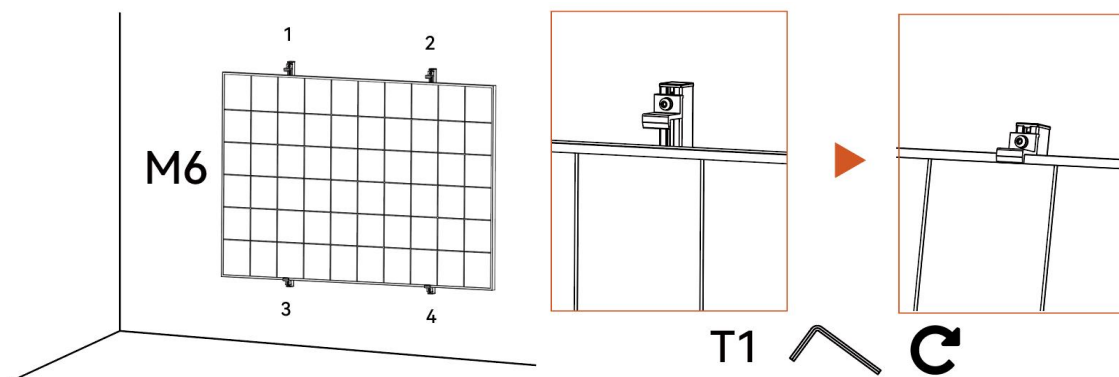


- Take out M3 and M4 from the packaging box and connect M2 with M3 and M4 through AC cable.

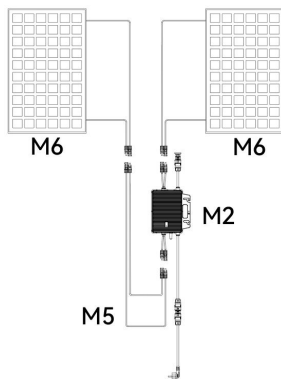


Step 4. Install PV module.

- Take out M6 from the packaging box and install the M6 onto the bracket, fix M6 at both ends of B4 bracket.

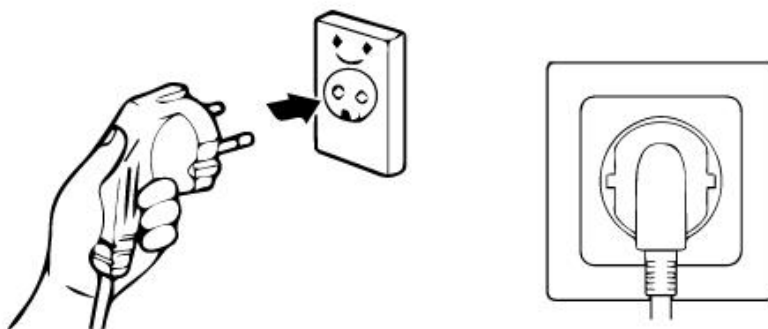


- Take out M5 from the packaging box and connect M2 with M6 through M5 and DC cable.



Step 4. Start Easy Solar Kit system.

- After plugging in the socket and connecting to the power supply, the system will start working within 2 minutes.

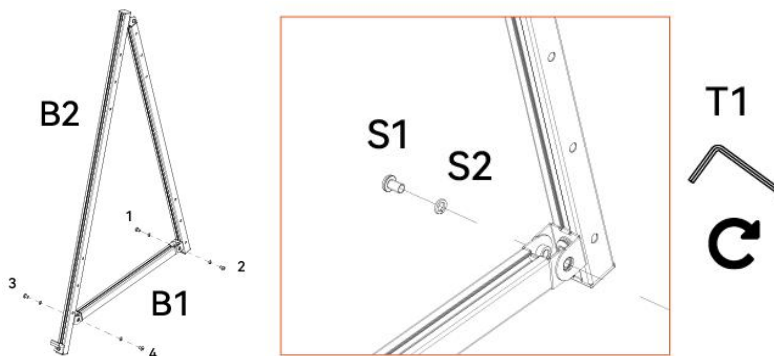


14. TSOL- ESK800-U

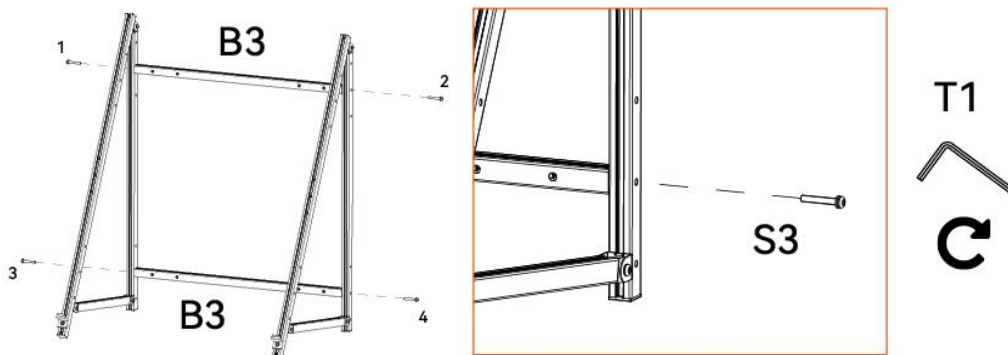
① Wall Installation

Step 1. Assembling bracket.



- Take out B1, B2, S1 and S2 from the packaging box and screw B1, B2 through S1, S2 accessories.



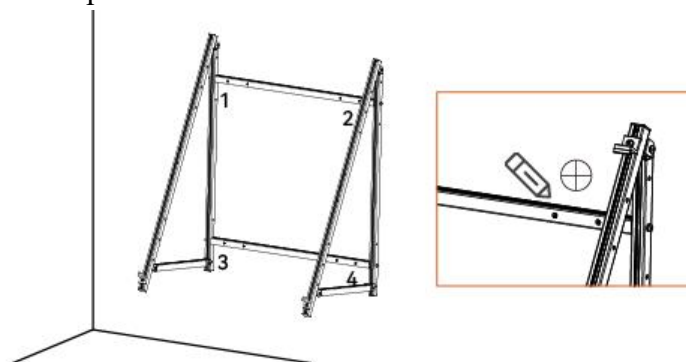
- Take out B3, S3 from the packaging box and screw B3 with B2, B1 through S3 accessory.



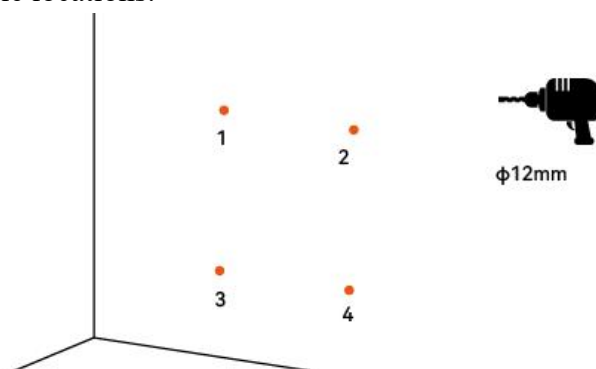
Step 2. Install the bracket.

 WARNING
·Ensure that the wall's load-bearing capacity meets installation requirements. (ESK800 weight:58kg)
 CAUTION
·The drilling diameter is 12mm.

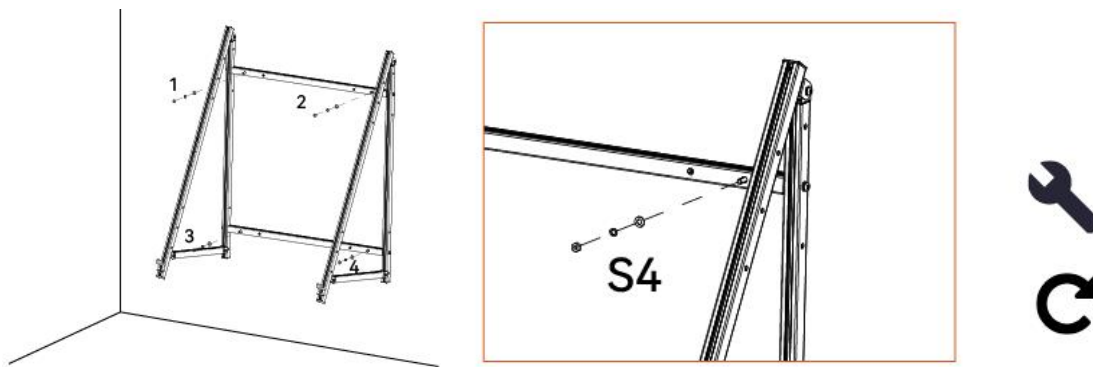
➤ Mark the installation holes position.



➤ Drill holes at marked hole locations.

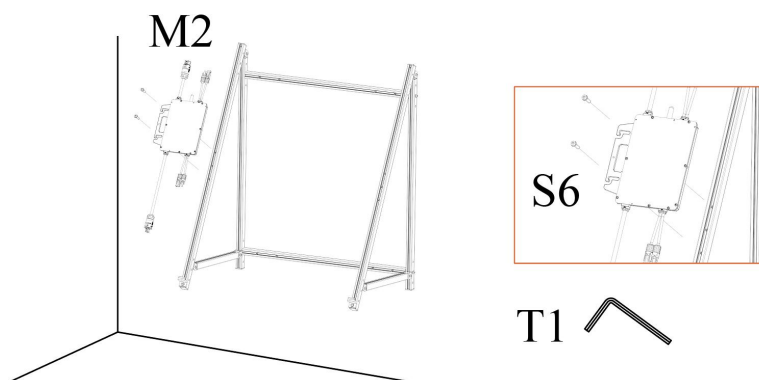


➤ Install the bracket onto the wall through S4 accessory.

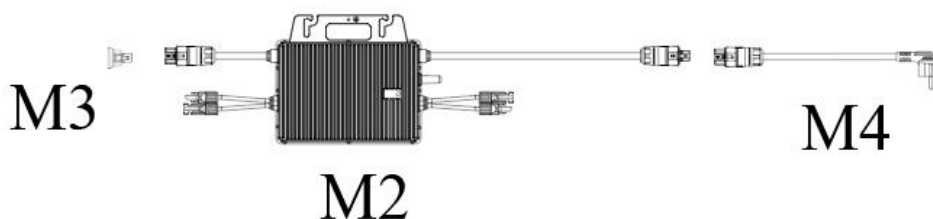


Step 3. Install Microinverter.

- Take out M2 and S6 from the packaging box and install the Microinverter onto the bracket through S6 accessories.



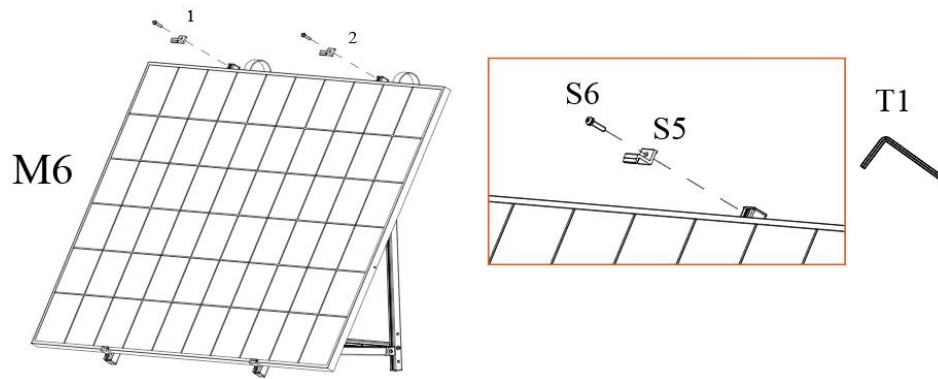
- Take out M3 and S4 from the packaging box and connect M2 with M3 and M4



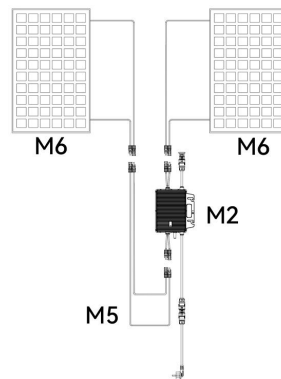
Step 4. Install PV module.

DANGER
·Preventing high-altitude falls during PV module installation.

- Take out M6, S5 and S6 from the packaging box and install the M6 PV module onto the bracket through S5, S6 accessories.

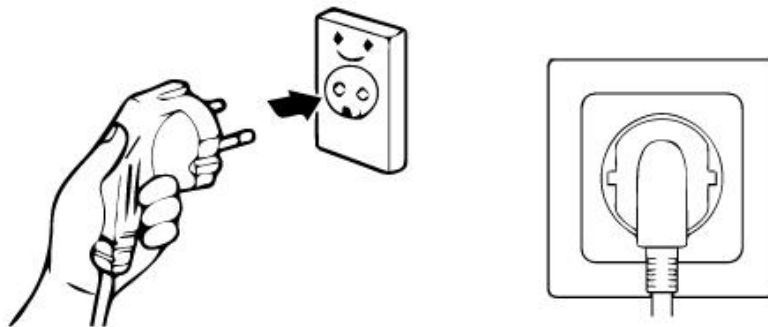


- Take out M5 from the packaging box and connect M2 with M6 through M5 and DC cable.



Step 5. Start Easy Solar Kit system.

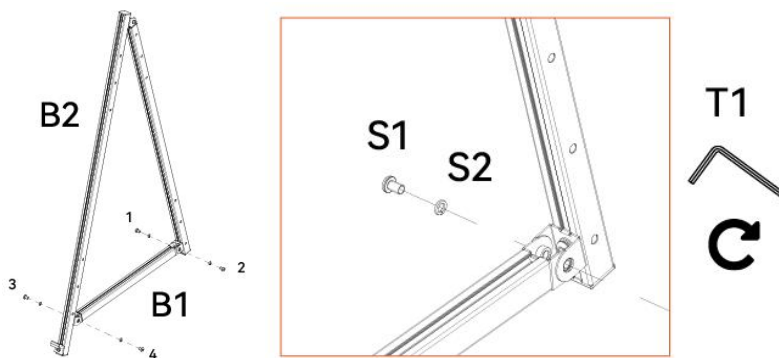
- After plugging in the socket and connecting to the power supply, the system will start working within 2 minutes.



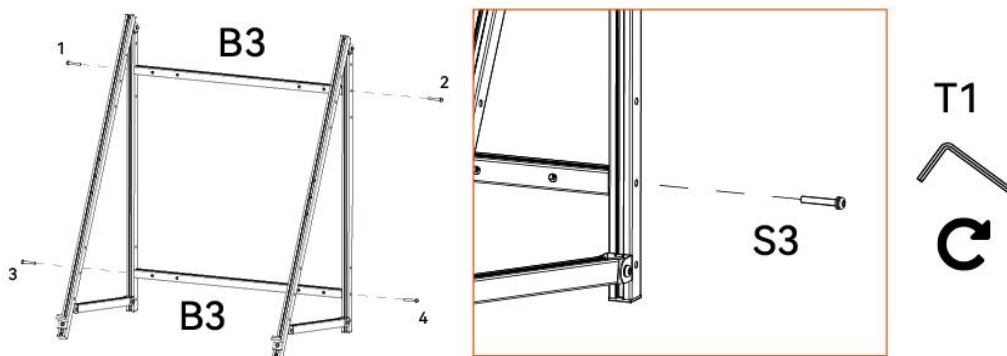
②Balcony Installation

Step 1. Assembling bracket.

- Take out B1, B2, S1 and S2 from the packaging box and screw B1, B2 through S1, S2 accessories.

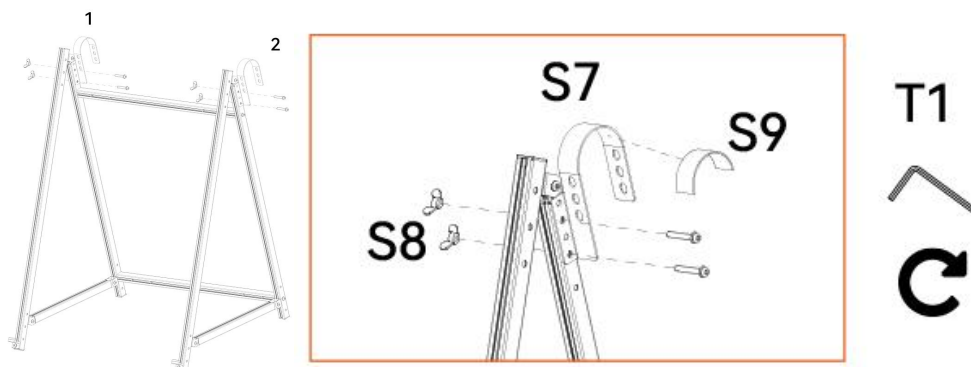


➤ Take out B3, S3 from the packaging box and screw B3 with B2, B1 through S3 accessory.



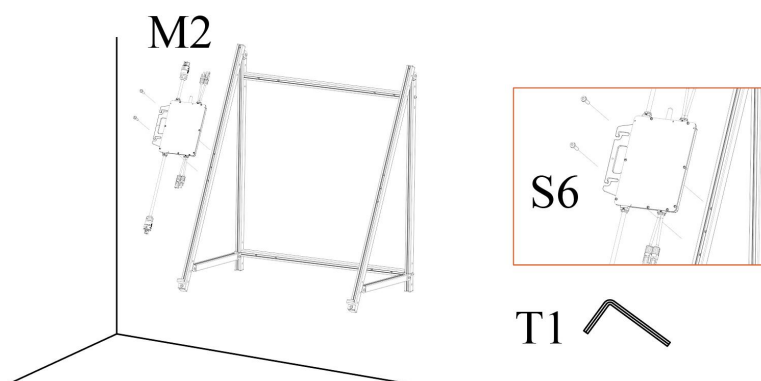
Step 2. Install the hooks.

➤ Fix the hook S8 to the bracket through the S7 accessory and attach the S9 gasket to the inside of the hook.

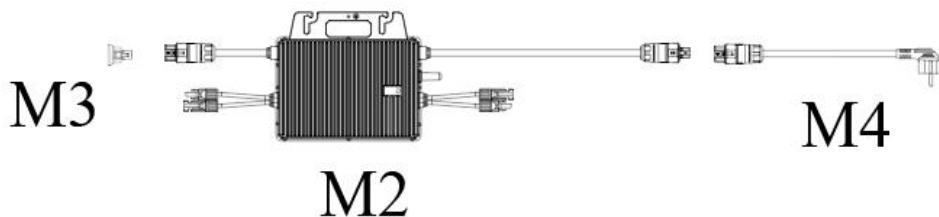


Step 3. Install Microinverter.

➤ Take out M2 and S6 from the packaging box and install the Microinverter onto the bracket through S6 accessories.

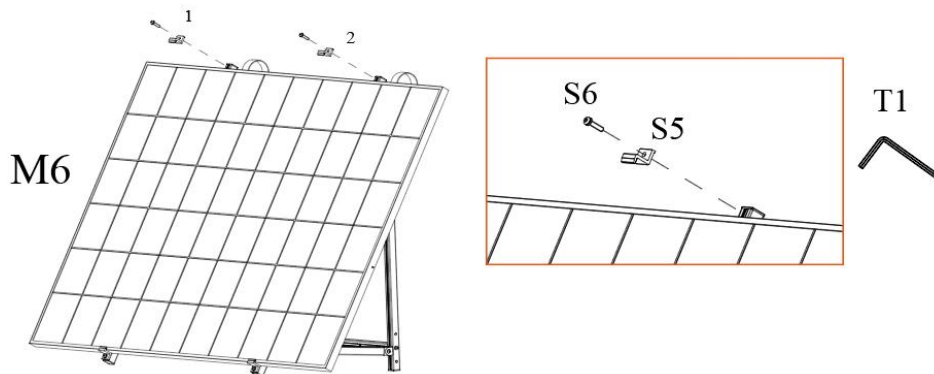


- Take out M3 and S4 from the packaging box and connect M2 with M3 and M4





Step 4. Install PV module.

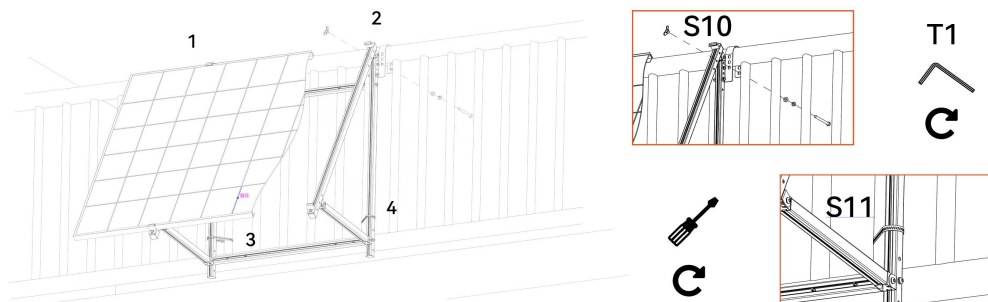
- Take out M6, S5 and S6 from the packaging box and install the M6 PV module onto the bracket through S5, S6 accessories.



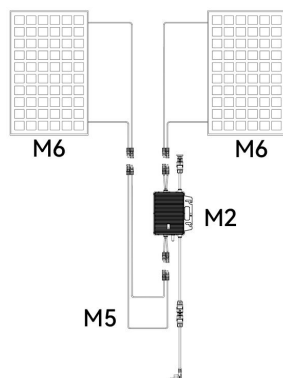
Step 5. Hanging system.

 DANGER
·Preventing high-altitude falls during Easy Solar Kit installation.
 WARNING
·Ensure that the load-bearing capacity of the balcony railing meets the installation requirements. (ESK800 weight: 58Kg)

- Hang Easy Solar Kit to the outside of the balcony and fix it through S10 and S11.

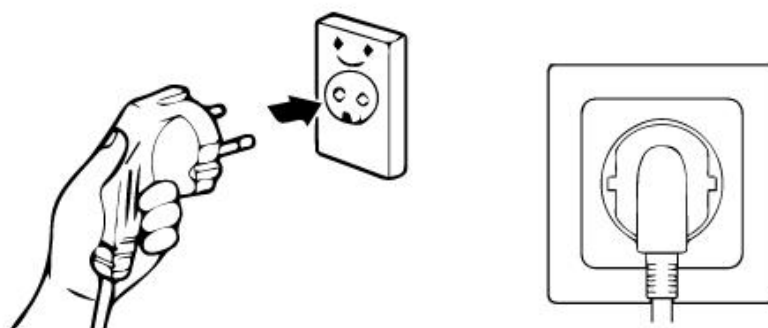


- Take out M5 from the packaging box and connect M2 with M6 through M5 and DC cable.



Step 6. Start Easy Solar Kit system.

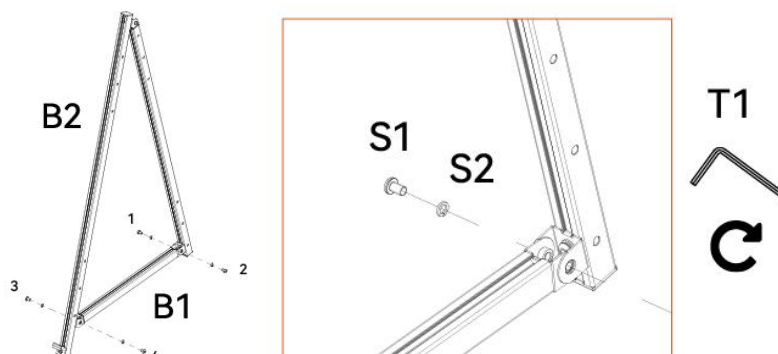
- After plugging in the socket and connecting to the power supply, the system will start working within 2 minutes.



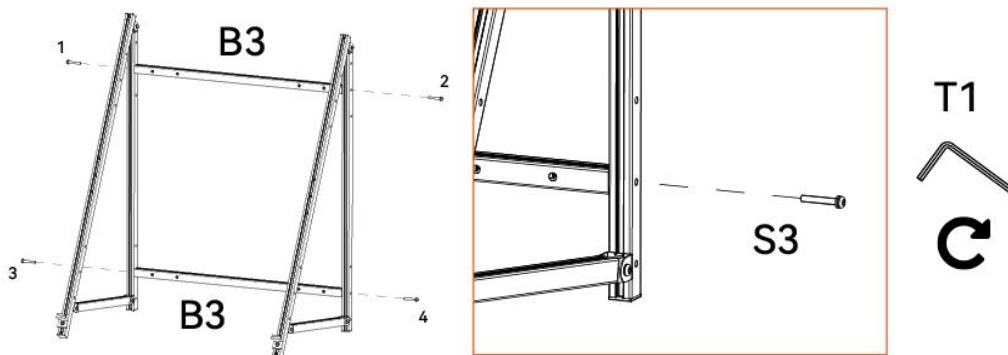
④ Garden Installation

Step 1. Assembling bracket.

- Take out B1, B2, S1 and S2 from the packaging box and screw B1, B2 through S1, S2 accessories.

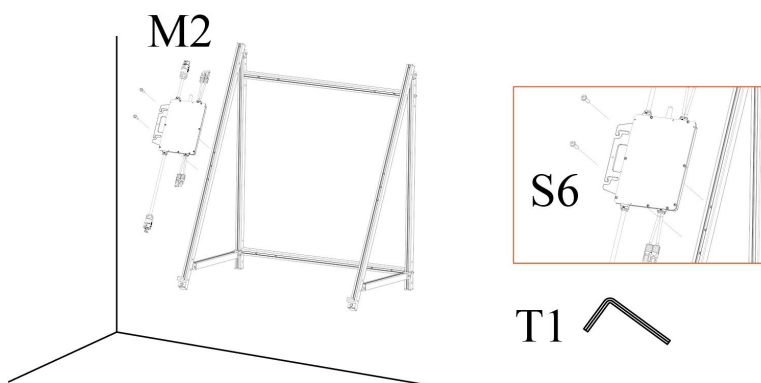


- Take out B3, S3 from the packaging box and screw B3 with B2, B1 through S3 accessory.

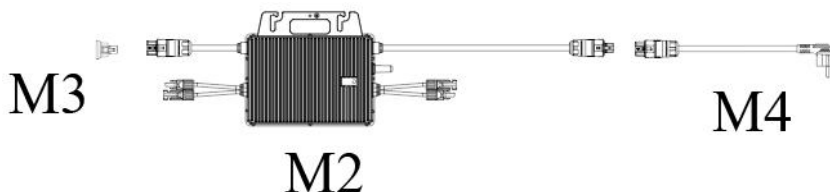


Step 2. Install Microinverter.

- Take out M2 and S6 from the packaging box and install the Microinverter onto the bracket through S6 accessories.

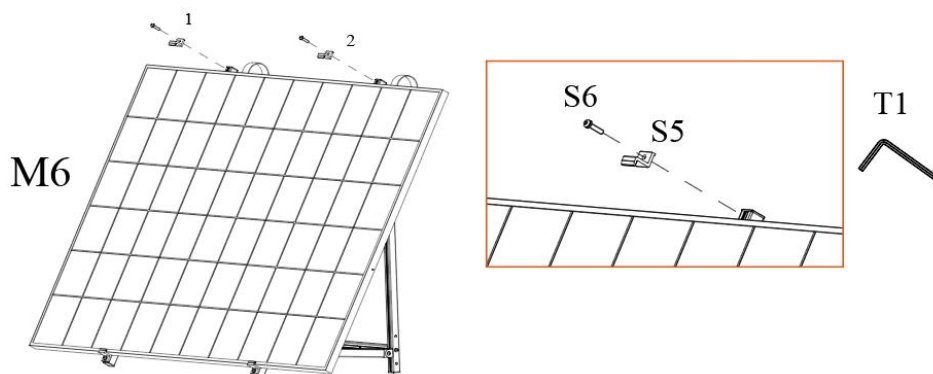


- Take out M3 and S4 from the packaging box and connect M2 with M3 and M4



Step 3. Install PV module.

- Take out M6, S5 and S6 from the packaging box and install the M6 PV module onto the bracket through S5, S6 accessories.

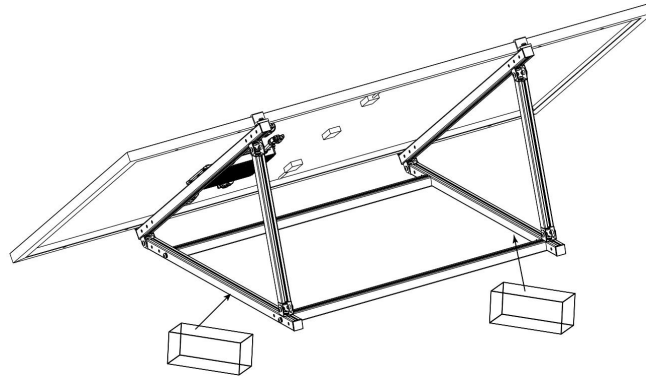


Step 4. Place Easy Solar Kit system.

 CAUTION
·Placing heavy objects on the base is beneficial for improving system stability and wind

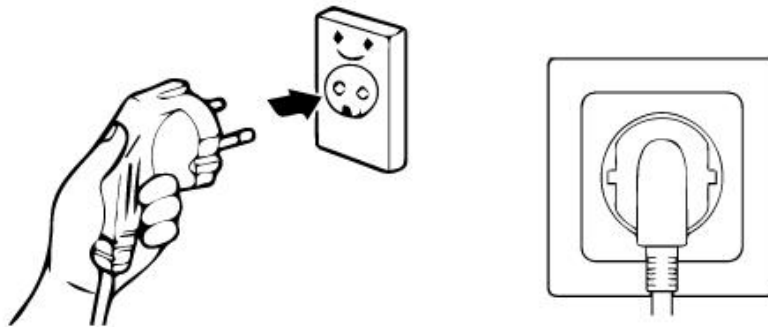
resistance.

- Place the long side of the bracket on the ground, adjust the orientation of the PV module to face sunlight, and place a heavy object on the base bracket to secure the system.



Step 4. Start Easy Solar Kit system.

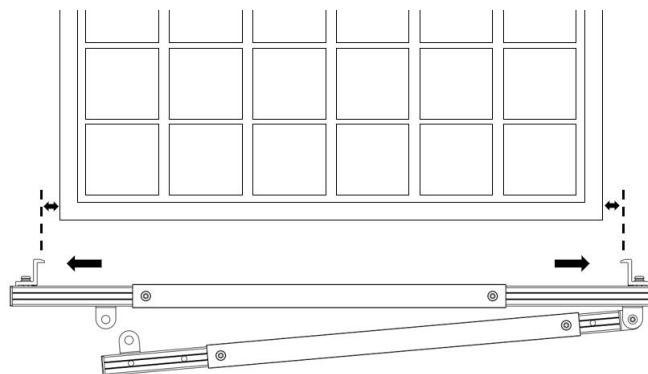
- After plugging in the socket and connecting to the power supply, the system will start working within 2 minutes.



15. TSOL- ESK400-T、TSOL-ESK800-T

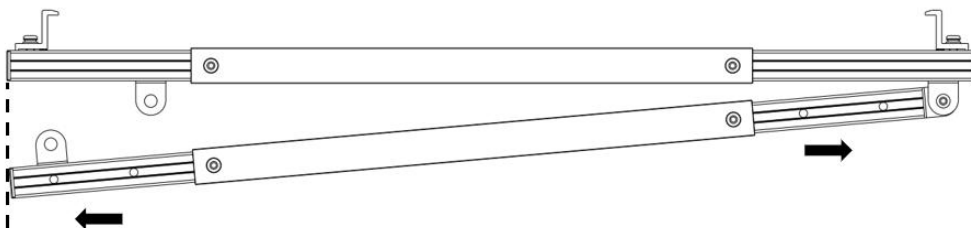
Step 1: Adjust the length of Bracket A1 and A2

- Take out the bracket A1 ④ and put it beside the solar module. Unscrew the length screw a and b. Adjust the length and make the distance of two module fasteners longer than the solar module. Tighten the length screw a and b.

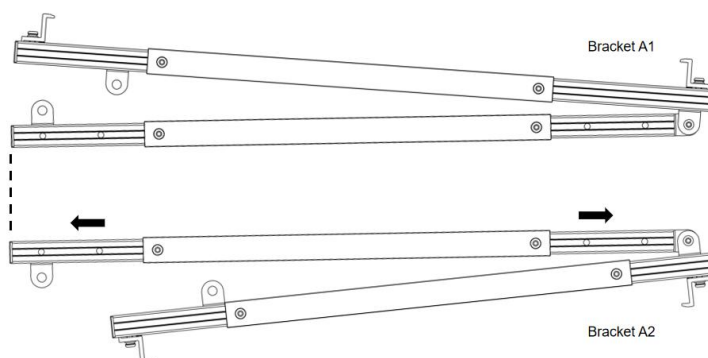


Tips: While unscrewing the length screw, DO NOT unscrew it excessively. This may cause the drop out of length screw and affect the next installations.

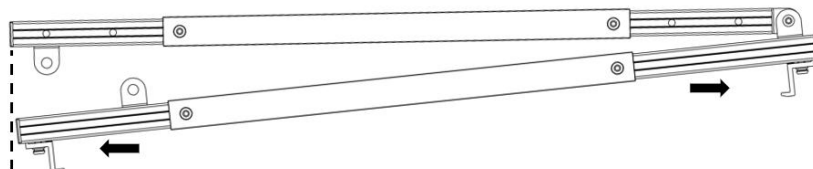
- Unscrew the length screw c and d of bracket A1 ④. Adjust the length and make it the same length between the two parts of bracket A1. Then tighten the length screw c and d.



- Take out the bracket A2 ④ and put it beside the bracket A1. Unscrew the length screw c and d. Adjust the length and make it the same as the bracket A1. Tighten the length screw c and d.

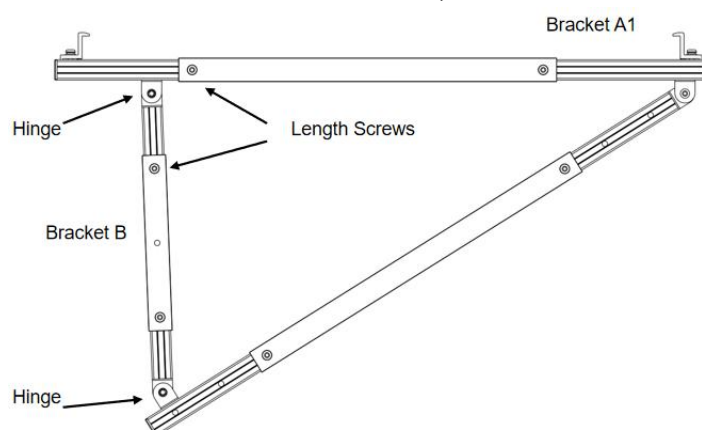


- Unscrew the length screw a and b of bracket A2 ④. Adjust the length and make it the same length between the two parts of bracket A2. Then tighten the length screw a and b.



Step 2: Connect Bracket B to Bracket A1/A2

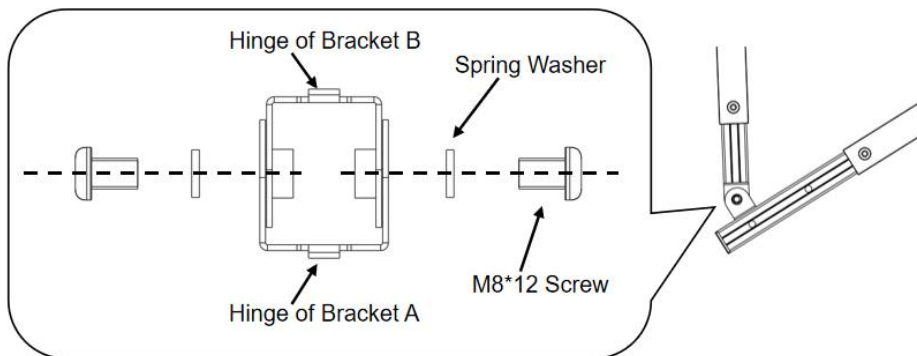
- Take out Bracket B ⑤ and screw accessories ⑦, connect bracket B to bracket A1.



Tips: Make sure the length screws of bracket B are on the same side as the length screws of bracket A.

Tips: DO NOT adjust the length screw e and f in this step.

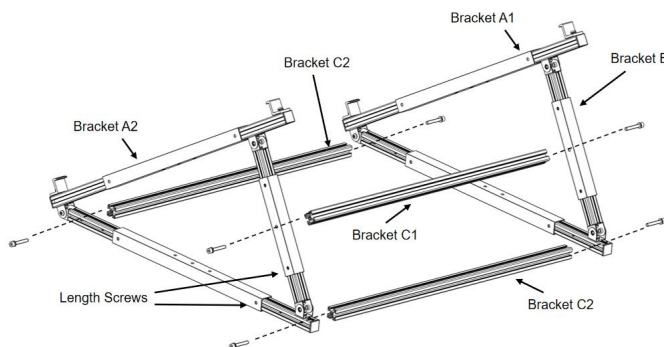
Use the M8*12 screws and spring washers to fix the hinges of bracket A1 and B.



➤ Repeat the previous step with bracket A2 and B.

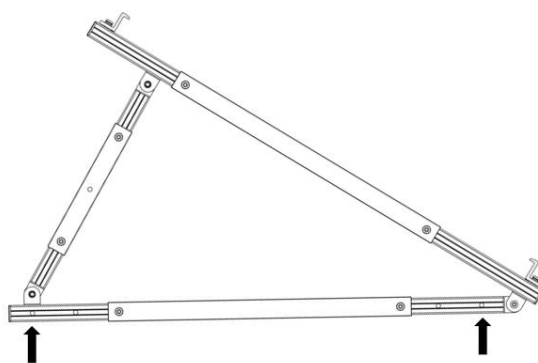
Step 3: Connect Bracket C1/C2 to Bracket A1/A2/B

➤ Take out Bracket C1/C2 ⑥ and screws ⑧. Connect bracket C2 to bracket A1/A2 and connect Bracket C1 to bracket B.

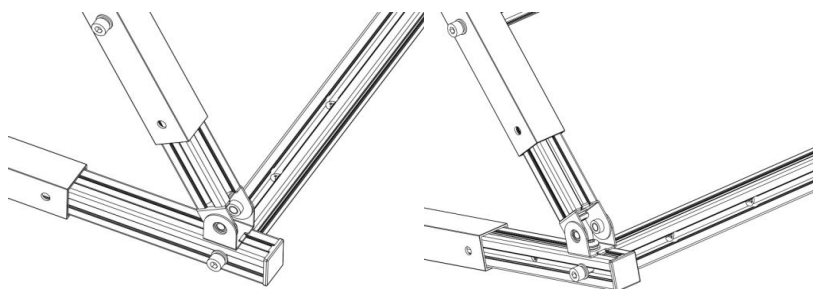


Tips: Make sure the length screws of bracket A1/A2 are facing the outside.

Tips: While connecting bracket C2 to bracket A1/A2, use the outside mounting holes as recommended.

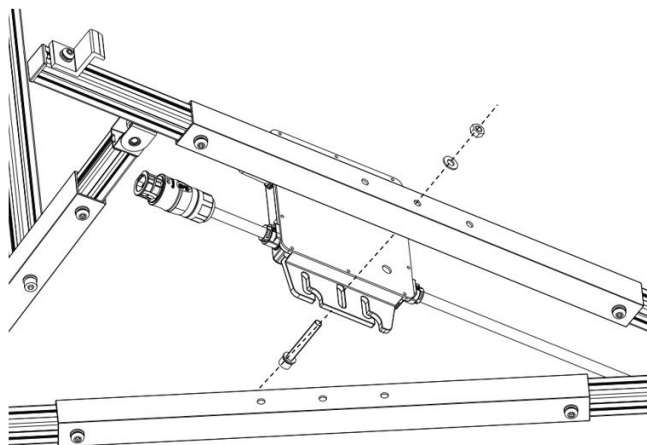


Tips: If this ESK-T is used on the flat ground or walls, make the mounting holes of bracket C2 in a vertical direction. If this ESK-T is used on the fences, make the mounting holes of bracket C2 in a horizontal direction.



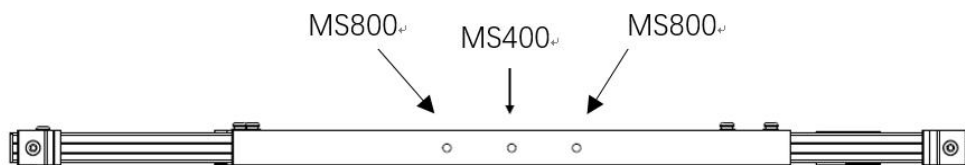
Step 4: Fix the microinverter to the bracket

- Take out Microinverter ① and screw accessories ⑨, fix the microinverter to microinverter mounting hole of bracket A1.



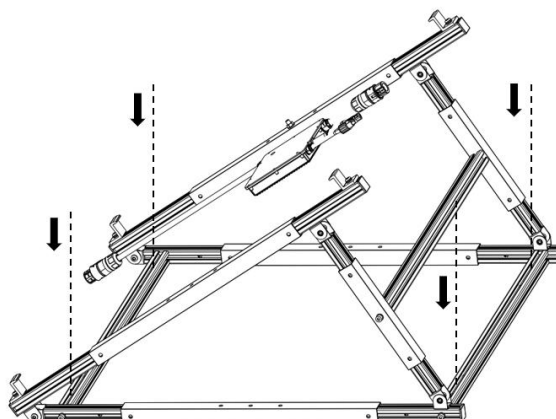
Tips: Make the light of microinverter and the screw in the downside direction.

Tips: There are three microinverter mounting holes on the bracket A1. The middle hole is used for MS400. Two side holes for MS800

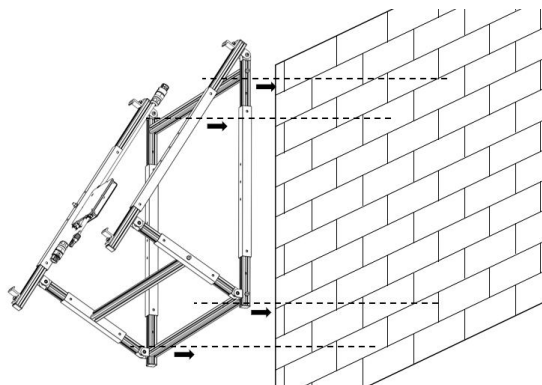


Step 5: Fix bracket to the right location

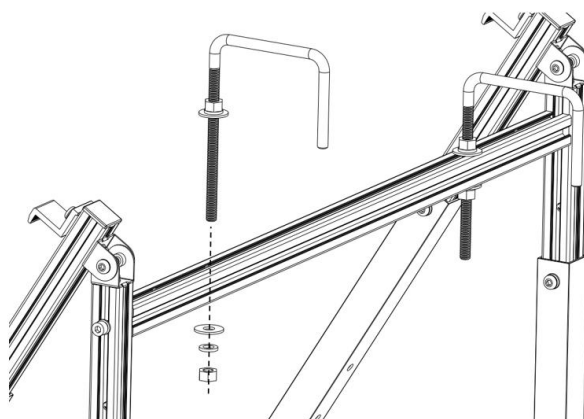
- While install ESK-T on the flat ground, use ground nails to fix the bracket C2 or put weights (Brick, Stone, Sand bag etc.) on the bracket C2.



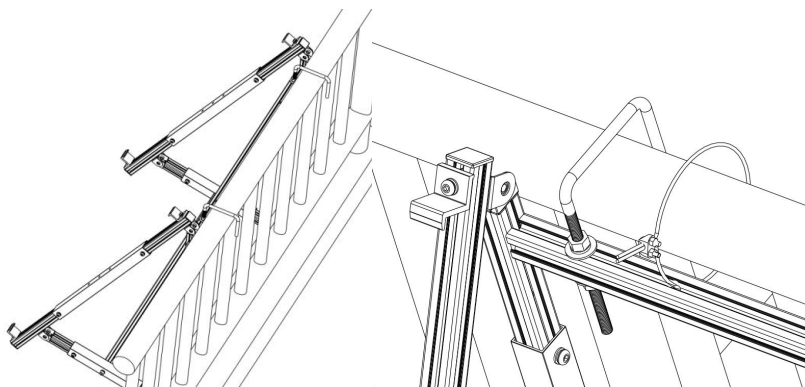
- While install ESK-T on the wall, use expansion screws to fix the bracket C2 on the wall.



- While install ESK-T on the fences, take out clevis ⑩ and install these two clevises on the bracket C2.



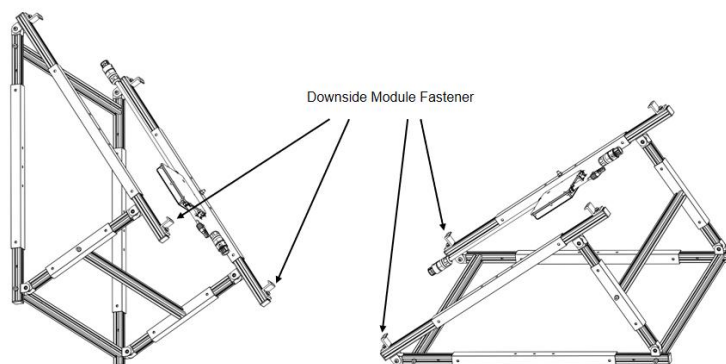
Hang the bracket on the fences. Using the wire rope to fix the bracket to the fences through the mounting holes.



Tips: If the ESK-T is hanged outside the balcony, solar module should be installed and connected first before fix the bracket on the fences. The installation sequence should be Step 6 → Step 7 → Step 8 → Step 5.

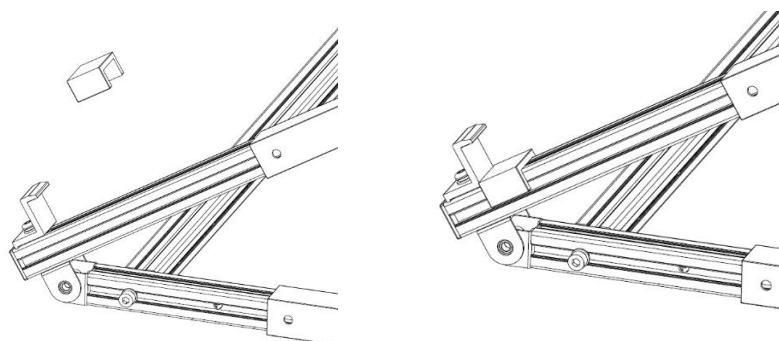
Step 6: Install the solar module

- Unscrew two downside module fasteners on bracket A1 and A2.

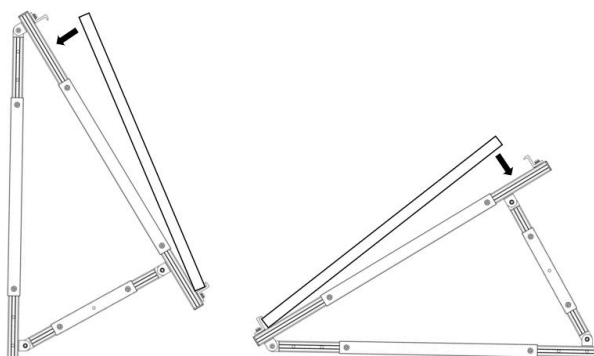


Tips: While unscrewing the module fastener, DO NOT unscrew it excessively. This may cause the drop out of module fastener and affect the next installations.

The module fastener is designed for 35mm frame. If a 30mm solar module is used, the four U blocks⁽¹²⁾ must be used as shown below:



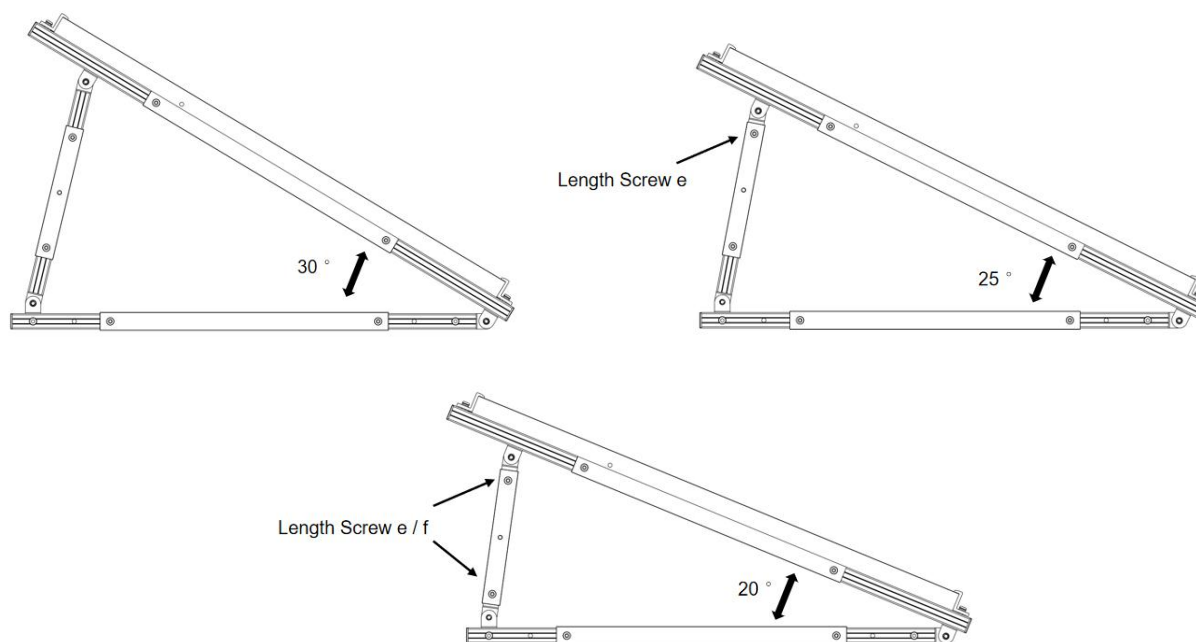
- Put the solar module on the bracket.



- Unscrew the upside module fasteners and adjust their positions. Tighten the four module fasteners to fix the solar module on the bracket.

Step 7: Adjust the angle of the solar module

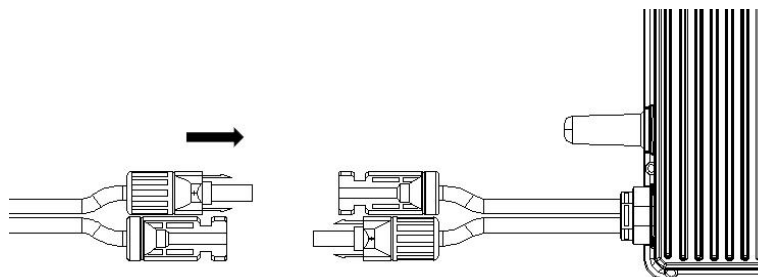
- Unscrew the length screw e and f. Adjust the angle of solar module as needed. Tighten the length screws.



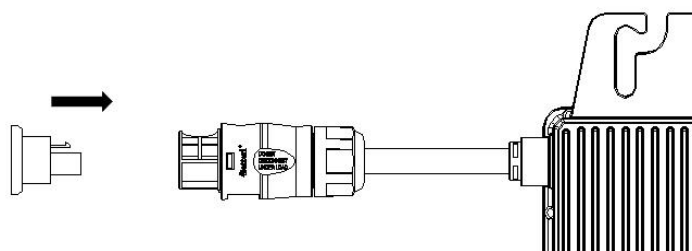
Tips: DO NOT adjust length screw e and f at the same time.

Step 8: Connect the Microinverter

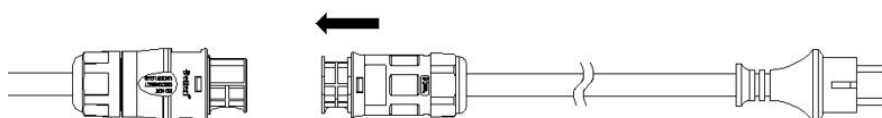
- Connect the DC connector of the solar module to the microinverter.



- Take out the protection cap ③ and connect it to the short AC cable of microinverter.

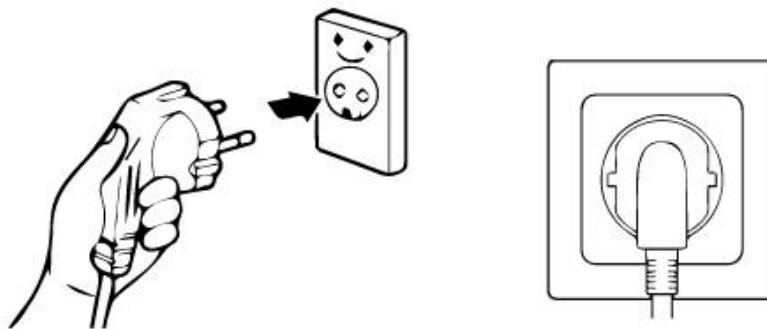


- Take out the AC end cable and connect the AC connector to the long AC cable of microinverter.



Step 9: Start the system

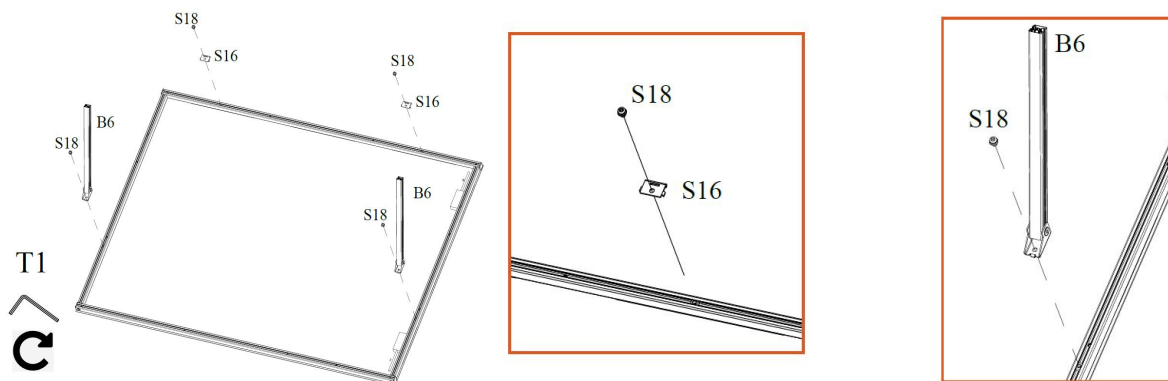
Insert the AC plug to socket and the system will start producing power a few minutes later.



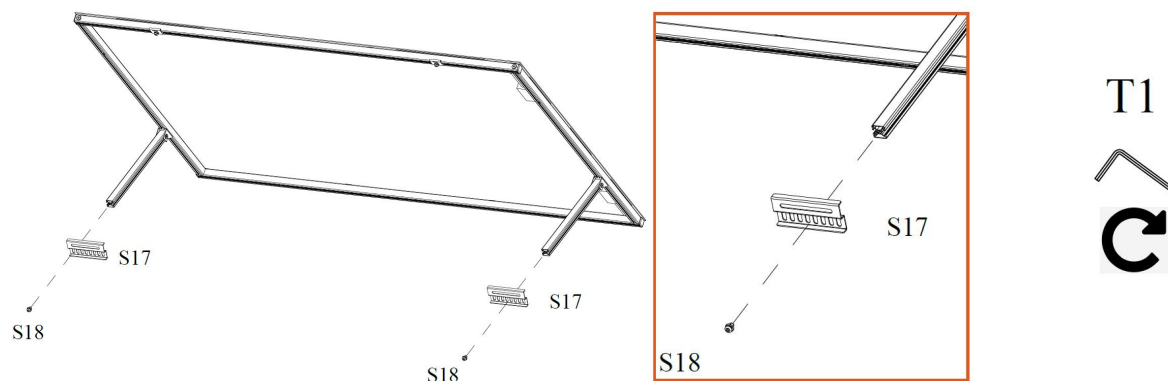
16. TSOL- ESK400-Air (A)

Step 1. Assembling bracket.

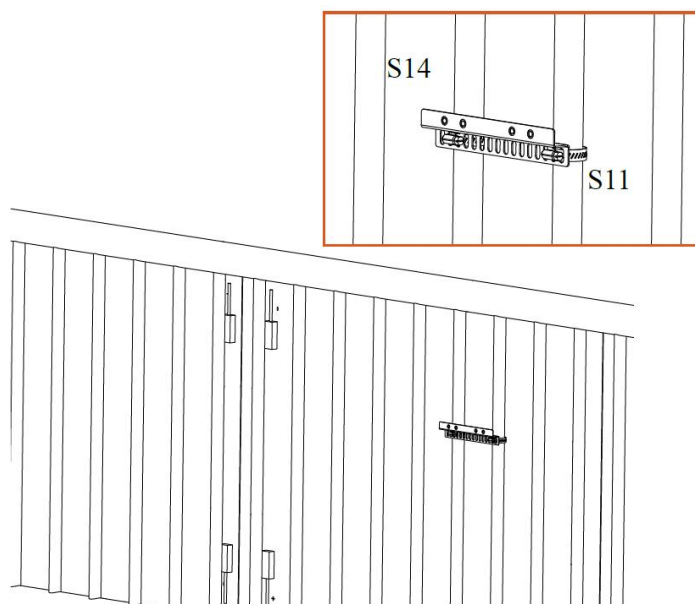
- Take out M9, B6, S18 and S6 from the packaging box, screw M9, B6 through S18 accessories, and screw M9, S16 through S18 accessories.



- Take out S17, S18 from the packaging box and screw S17 with B6 through S18 accessories.

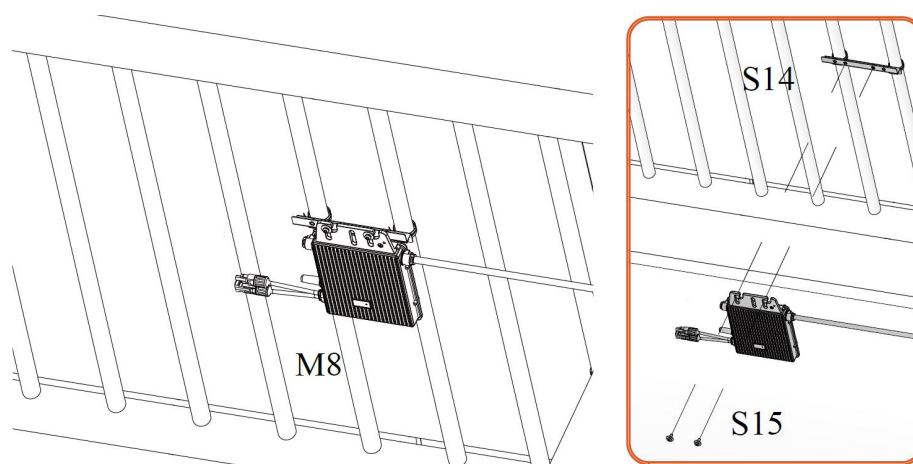


- Fix bracket S14 to the balcony railing using S11 stainless steel zip ties, and place S9 washers between the zip ties and the railing for buffering





Step 2. Installing microinverter

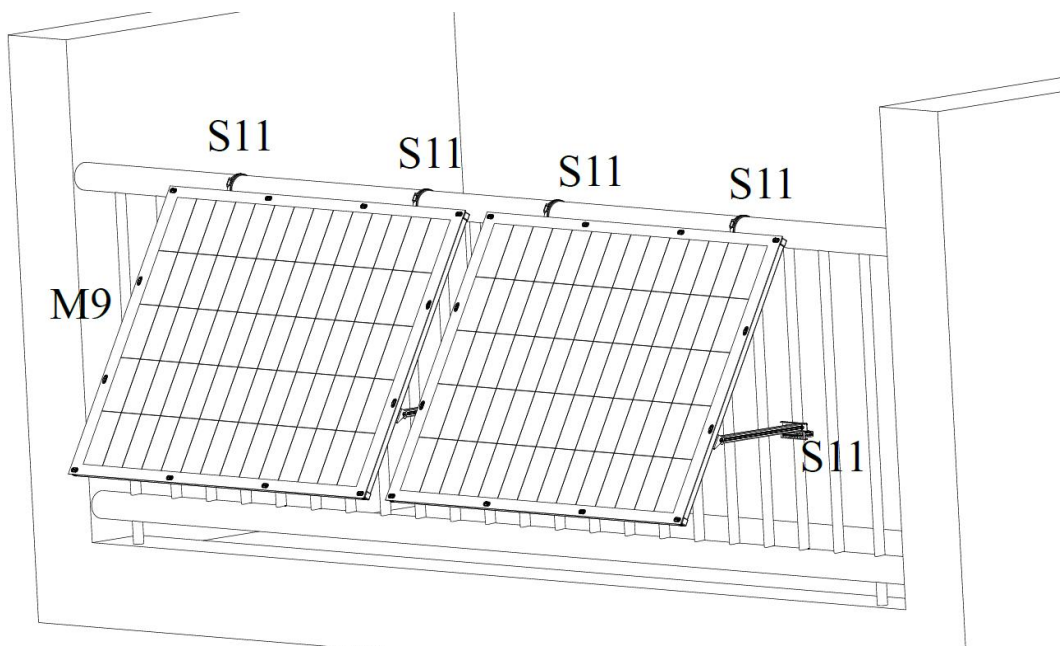
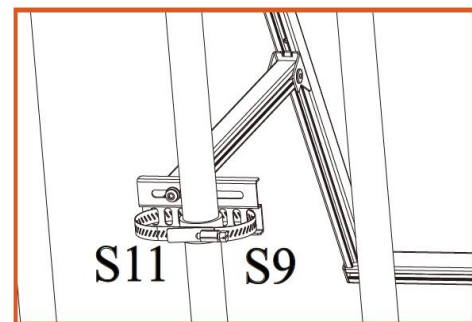
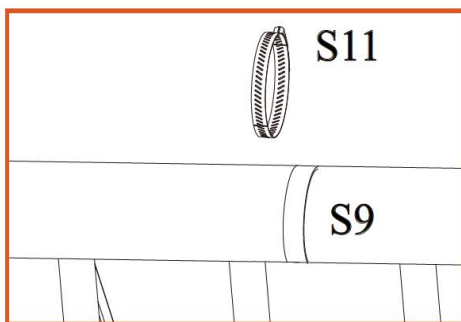
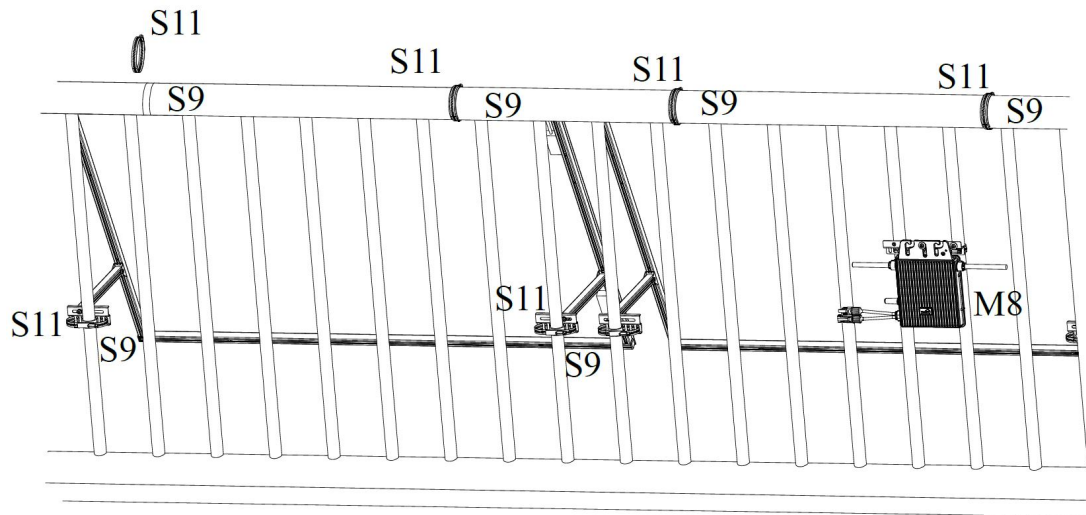
- Take out M8 and S15 from the packaging box, screw M8 with S14 through S15 accessories.



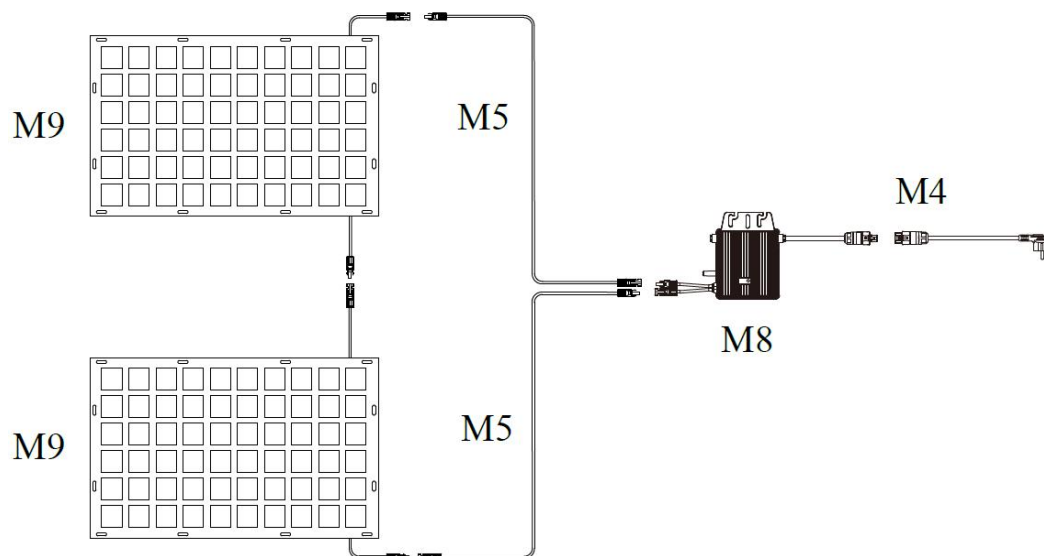
Step 3. Hanging system.

 DANGER
·Preventing high-altitude falls during Easy Solar Kit installation.
 WARNING
·Ensure that the load-bearing capacity of the balcony railing meets the installation requirements. (ESK400 weight: 10Kg)

- Hang Easy Solar Kit to the outside of the balcony and fix it through S11, and place S9 washers between S11 stainless steel ties and railings for buffering

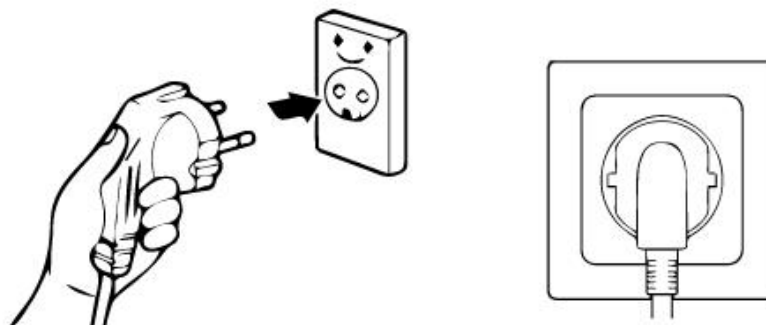


- Take out M5 and M4 from the packaging box, connect M8 with M9 through M5 and connect M8 with M4.



Step 4. Start Easy Solar Kit system.

- After plugging in the socket and connecting to the power supply, the system will start working within 2 minutes.



Fault Code and Troubleshooting

Code	Fault Information	Troubleshooting
1	PV1VoltOver_Fault	Check the voltage of the PV module and make sure that the voltage is below the maximum DC input voltage of the microinverter.
2	PV2VoltOver_Fault	If this fault appears continuously, please contact the TSUN service.
3	PV1VoltLow_Fault	This warning mostly appears in the morning or at dusk. It's normal and will disappear automatically. If this warning appears in the daytime, please check the connection of the PV module.
4	PV2VoltLow_Fault	If this fault appears continuously, please contact the TSUN service.
5	PV1CurrOver_Fault	Disconnect the AC power to restart the microinverter.
6	PV2 CurrOver_Fault	If this fault appears continuously, please contact the TSUN service.
7	No Utility	The AC power grid is disconnected. Check the AC power grid. If this fault appears continuously, please contact the TSUN service.
8	GridVoltOverRating	The AC power grid is abnormal. This fault will disappear automatically when the AC power grid is normal. If this fault appears continuously, please contact the TSUN service.
9	GridVoltUnderRating	
10	GridFreqOverRating	
11	GridFreqUnderRating	
12	OverTemp	Check the installation of the microinverter. Make sure the microinverter has good heat dissipation. If this fault appears continuously, please contact the TSUN service.
13	GFDI_Fault	This is an internal fault. Disconnect the AC power to restart the microinverter. If this fault appears continuously, please contact the TSUN service.
14	Fault 01 - 08	Disconnect the AC power to restart the microinverter. If this fault appears continuously, please contact the TSUN service.

Maintenance Guide

Routine Maintenance

- ◆ Only authorized personnel are allowed to carry out the maintenance operations and are responsible for reporting any anomalies.
- ◆ Always use the personal protective equipment provided by the employer when carrying out maintenance.
- ◆ During normal operation, check that the environmental and logistic conditions are appropriate. Make sure that the conditions have not changed over time and that the equipment is not exposed to adverse weather conditions and has not been covered with foreign bodies.
- ◆ DO NOT use the equipment if any problems are found and restore the normal conditions after the fault has been corrected.
- ◆ Conduct an annual inspection on various components and clean the equipment with a vacuum cleaner or special brushes.
- ◆ Firmware version can be checked by using the monitoring system.
- ◆ Always de-energize the AC branch circuit before servicing.
- ◆ Do not attempt to dismantle the Micro-inverter or make any internal repairs! To preserve the integrity of safety and insulation, the Micro inverters are not designed to allow internal repairs!
- ◆ Maintenance operations must be carried out with the equipment disconnected from the grid (AC power switch off) and the photovoltaic modules shaded or isolated unless otherwise indicated.
- ◆ For cleaning, DO NOT use rags made of filamentary material or corrosive products that may corrode parts of the equipment or generate electrostatic charges.
- ◆ Avoid temporary repairs. All repairs should be carried out using only genuine spare parts.

Storage and Dismantling

- ◆ If the equipment is not used immediately or is stored for long periods, check whether it is correctly packed. The equipment must be stored in well-ventilated indoor areas that do not have characteristics that might damage the components of the equipment.
- ◆ Take a complete inspection when restarting after a long time or prolonged stop.
- ◆ Please dispose of the equipment properly after scrapping, as component parts are potentially harmful to the environment, following the regulations in force in the country of installation.

Environmental care and waste disposal:

Electrical and electronic equipment (EEE) and batteries contain materials, components and substances that can be hazardous to humans and the environment, when waste disposal is not carried out correctly.

Electrical and electronic equipment and batteries must be marked with this symbol, which symbolises that these products cannot be disposed of together with normal household waste, but must be separated.

To this end, all cities have set up collection systems in which the disposal of electrical and electronic

equipment and batteries can be handed in free of charge at the local recycling station or other collection system. For more information, please contact your local technical department.

Warranty

Product manufactured by:

TSUNESS Co., Ltd.

2nd Floor, Building 3, No. 2266, Taiyang Road, Xiangcheng District, Suzhou, China

www.tsun-ess.com / sales@tsun-ess.com

Tel.: +86 512 66186028

TSUNESS Co., Ltd. warrants this product for a period of twelve (12) years, on all parts, against defects in workmanship and performance, from the date of delivery to the end user, at no charge to the end user.

To enforce this warranty, no further requirement is necessary other than the shipment of this product together with this warranty and the invoice or proof of purchase. The warranty can be claimed at the place of purchase.

This warranty shall not be valid in the following cases:

When the details on the warranty or proof of purchase do not match the product.

If the product has been used in other than normal conditions or if it has been used in disregard of the instruction manual accompanying this warranty document.

When the product has been opened or altered by unauthorised personnel.

Technical Service:

If you have technical problems with our products, please contact the TSUN service line.

TSUNESS Co., Ltd


Tel: +86-512-6618 6028

E-mail: sales@tsun-ess.com | www.tsun-ess.com


Add: 2nd Floor, Building 3, No. 2266, Taiyang Road, Xiangcheng District, Suzhou, China



TSUNESS Co., Ltd

 www.tsun-ess.com

 sales@tsun-ess.com

 No. 2266, Taiyang Road, Suzhou City,
Jiangsu Province, P. R. China