

**TOKNAV**

# **U6-B Kit**

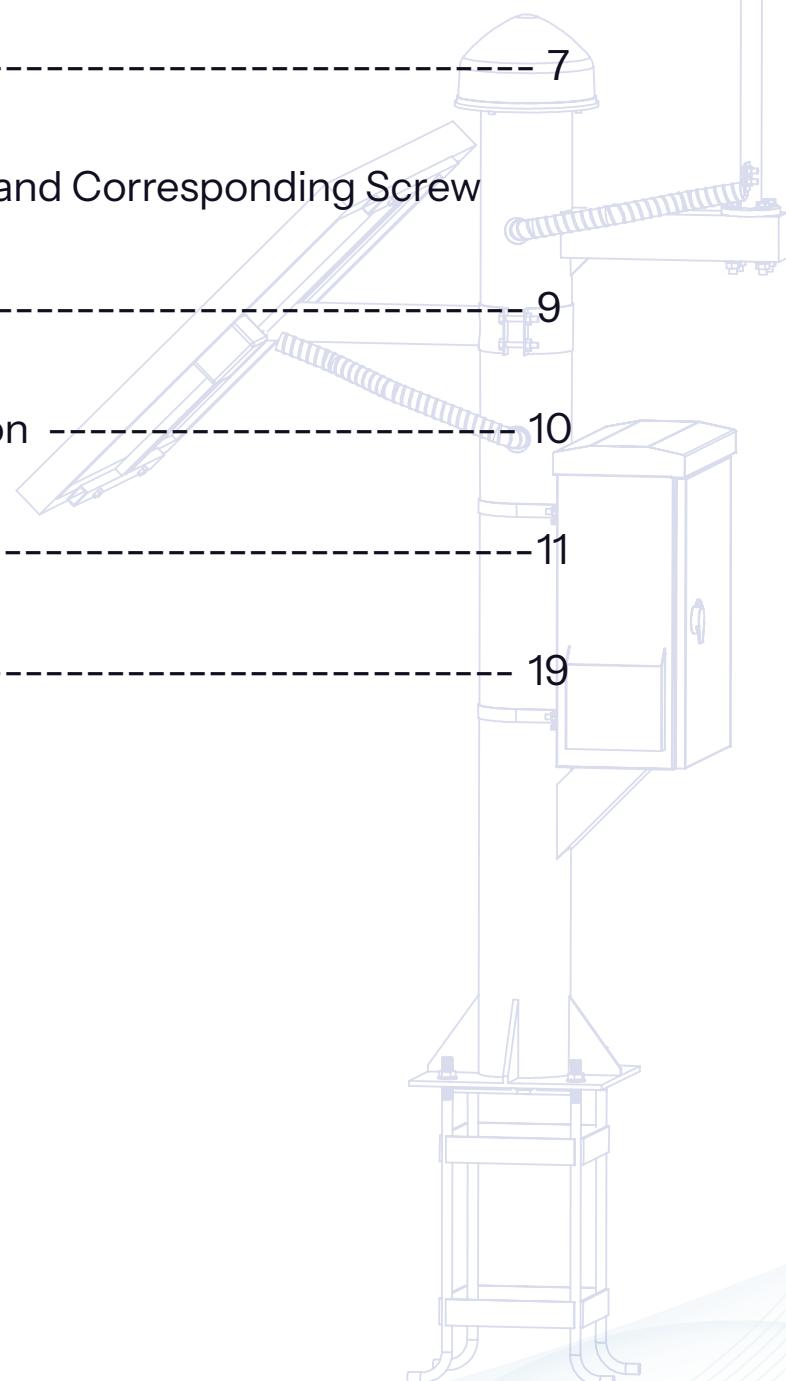
*Solar Energy + UPS  
Monitoring System*



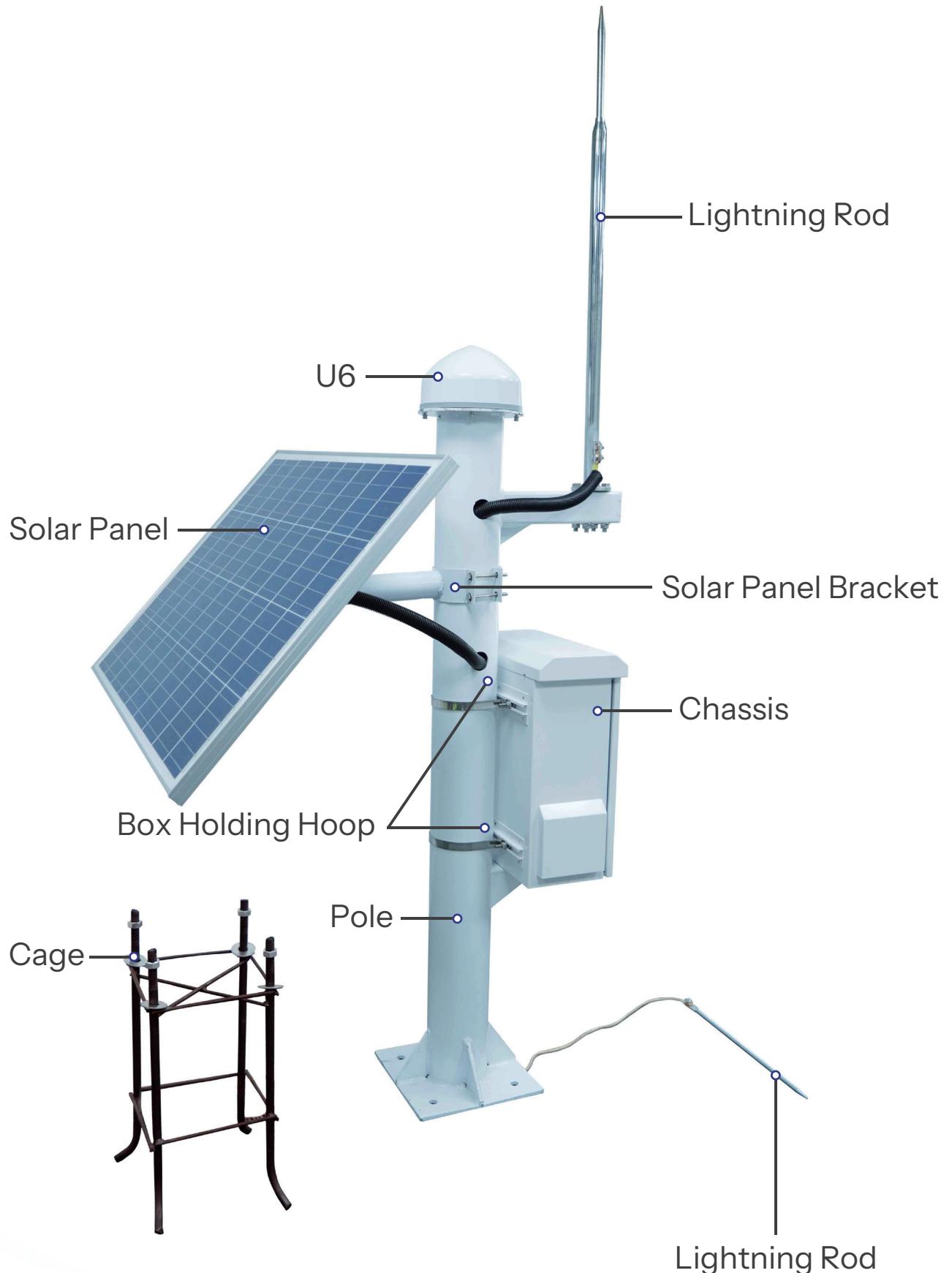
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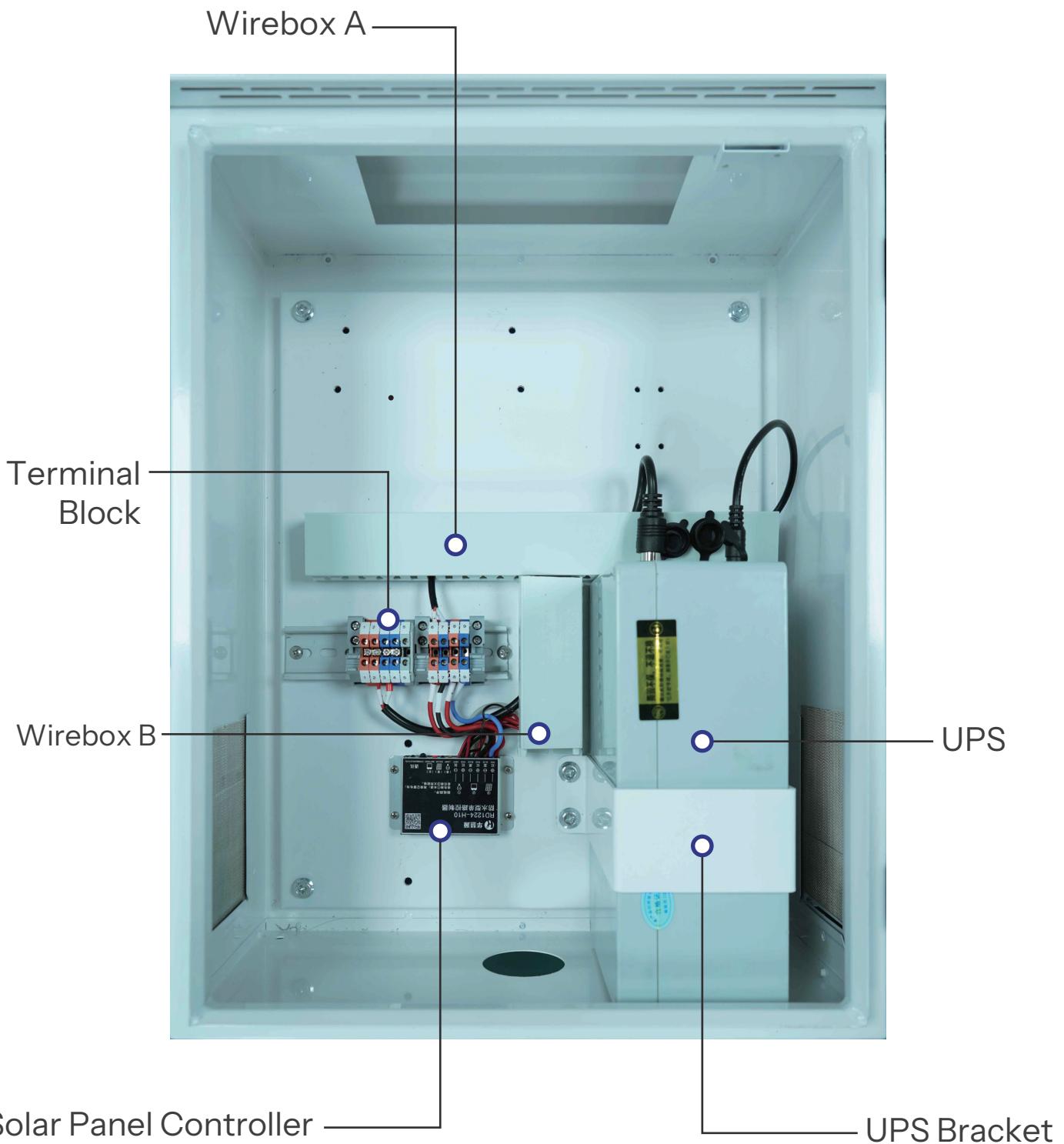
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# I. Monitoring System Assembly Drawing



## II. Chassis assembly drawing



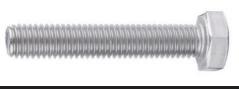
### III. Chassis Accessories Table

No.	Name	Specifications	QTY	Picture
1	UPS chassis	White	1	
2	UPS chassis bottom plate	White	1	
3	UPS Cable Box A	PVC gray-white 40*30*300mm	1	
4	UPS Cable Box B	PVC gray and white 40*30*110mm	1	
5	UPS battery (including charger)	DC5V/12V 6000mAh, with two cores, aircraft head, charger output 12.6V/5a	1	
6	UPS battery holder	Metal dusting white	1	
7	Hexagon anti-loosening screws with inner cross groove	SS304 M6X8	8	
8	Solar controller	RD1224-H10	1	
9	Cross recessed pan head with medium screws	Carbon Steel, silver white, nickel plated M3X8	4	
10	Terminal clapboard	UK-2.5 b grey	2	
11	Terminal Row -(Orange)	UK-2.5 B nylon, orange	4	
	Terminal Row (gray)	UK-2.5 B nylon, grey	1	
	Terminal Row -(blue)	UK-2.5 B nylon, blue	4	
12	Marker Bar (number)	UK series, White, 10 bits/bar, 12345678910	2	
13	Terminal Connection Bar FBI-2-6	FBI-2-6 silver with cross recessed screws	2	

### III. Chassis Accessories Table

No.	Name	Specifications	QTY	Picture
14	Terminal EUK fastener	UK-2.5 b grey	3	
15	C45U guide rail	1.3 mm thickness, oxidized round hole, hole distance 17 m, length 144.5 mm	1	
16	Cross recessed TM large flat head screw	SS304 M4X8	13	
	Standard type spring washers	SS304 M4	6	
17	Cold pressed terminal E1508	Red 1.5 mm <sup>2</sup>	11	
18	Foam back	Eva, Black T1*W15*L150mm	2	
19	Foam back	Eva, Black T1*W15*L40mm	2	
20	TNC line public to mother	0,4 m in length	1	
21	Bellows	D25, PP black, cut, 1m	2	
22	Thread pressing cap	CE-5X, cream	2	
23	Line number tube	White heat-shrinkable tube, content: + -	4	

## IV. List of Assembly Parts for Pole

No.	Name	Specifications	QTY	Picture
1	UPS top lightning rod	Stainless steel, 1M, D32, H1000	1	
2	Outer hexagonal locknut	SS304 M12	4	
	External hexagon bolts	SS304 M12X100	4	
3	UPS pole	Hot-dip galvanized, White, 1.5 m	1	
4	UPS chassis	Galvanized, White, V4520-V1	1	
5	Lightning rod ground wire	5 meters, 16 square meters	1	
6	UPS grounding needle	0,5 m galvanized	1	
7	Cage	Steel, supplier with M16 nut and gasket	1	
9	U-tube hoop	SS304, Hole 8. 5140 mm	2	
	T-bolt	SS304 M8X25	4	
	Outer hexagonal locknut	SS304 M8	4	
	Gasket	SUS304, M8 * 17 * 1,5	4	
10	Bellows	D25, PP black, cut, 1m	1	
11	Solar panel bracket	Hot-dip galvanized, white, with bolts and nuts (4 M8X90)	1	
12	Solar panels	100W, with screws (4 M5X20)	1	
13	U6 mainframe	/	1	
14	U6 data line	/	1	

## V. Chassis Mounting Hole Locations and Corresponding Screw Specifications

**A - 4 pieces of M6X8 internal cross-slot external hexagon anti-loosening screws**

For fixing the bottom plate

**B - 7 pieces of M4X8 cross-slot TM large flat head screws + washers**

For fixing the junction box

**C - 2 pieces of M4X8 cross-slot TM large flat head screws + washers**

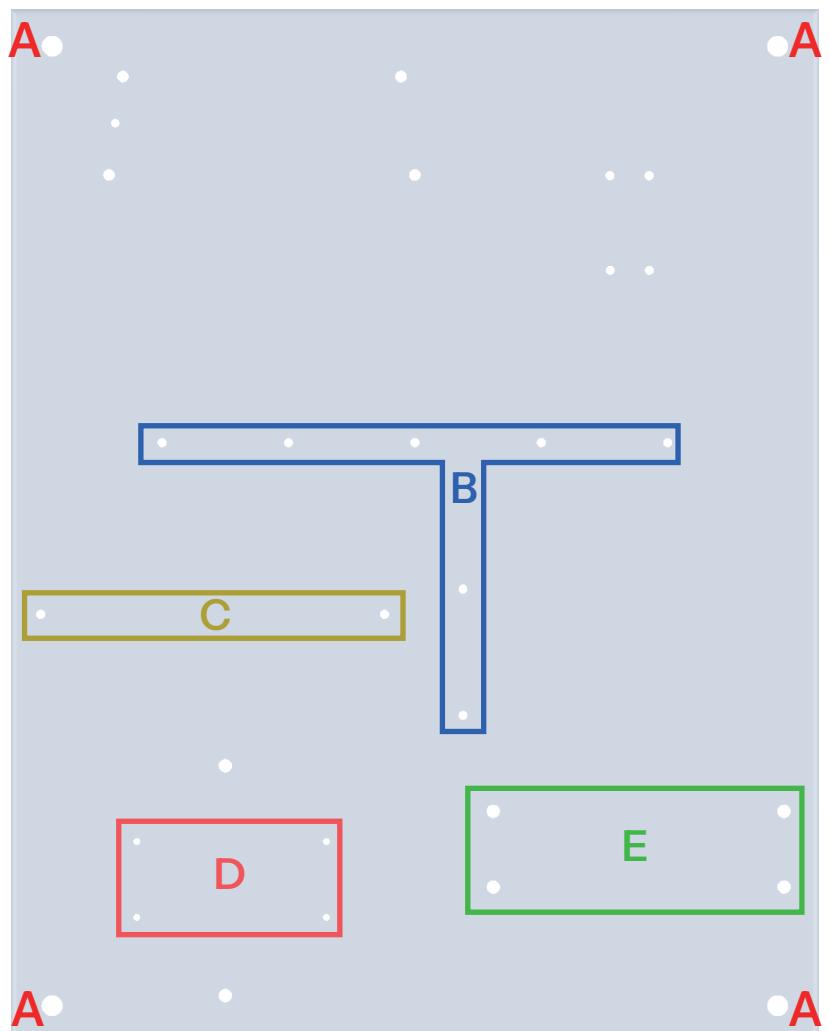
For fixing the terminal block rail

**D - 4 pieces of M3X8 cross-slot pan head screws with insulation**

For fixing the solar controller

**E - 4 pieces of M6X8 internal cross-slot external hexagon anti-loosening screws**

For fixing the UPS power supply



# VI. List of tools required for installation

## Tool List for installation

Specifications	Corresponding screws and terminals	Picture
Cross # 0 screwdriver	M3X8 M4X8 connecting rod screw	
Cross # 1 screwdriver	M5X8	
Hex Socket Type 11 Screwdriver	M6X8	
Flathead #0 Screwdriver	Terminal screws for wiring	
0.25-2.5mm <sup>2</sup> Wire Cap Crimping Tool	Ground wire of sky-fed lightning arrester	
0-25mm movable wrench	Antenna Connector, lightning rod hexagon screw, chassis hoop	
0.25-6mm <sup>2</sup> Tubular Terminal Crimping Tool	All cold-pressed terminals	
5 mm outer hexagon wrench	M 6 hexagon socket screws	

# VII. Chassis Installation Diagram

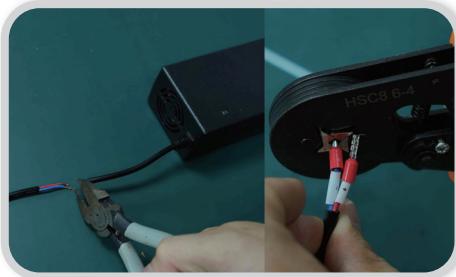


Figure 1-1



Figure 1-2

## ① Modified UPS charging line

Cut off the charging end of UPS Charger as shown in figure 1-1, put on the wire number: red (+) Blue (-) , put on the Red Cold Press Terminal E1508, press it down with wire clamp as shown in figure 1-2.



Figure 2-1



Figure 2-2

## ② Conversion of solar controller

As shown in figure 2-1, the solar controller, set the line number: red (+) Blue (-) black (-) Gray (-) , the red cold-pressed terminal E1508 set, with pliers, compression; as shown in figure 2-2, the three-core red-black-yellow wire wrapped with tape, to avoid bare thread.



Figure 3

## ③ Remakes the battery output line

As shown in Figure 3, set the line number +to the red (+) black (-) line, set the red cold pressing terminal E1508, and press it down with wire clamp.



Figure 4

## ④ Cutting terminal row guide rail

C45U guide rail, as shown in Figure 4 cut into 144. 5 mm-strip.

# VII. Chassis Installation Diagram



Figure 5

## ⑤ Cutting wire box

As shown in Figure 5, UPS Cable Box A, cut into 300mm strips, UPS Cable Box B, cut into 110mm strips.



Figure 6

## ⑥ Bellows

D25 bellows, as shown in Figure 6 cut into 1 meter two.

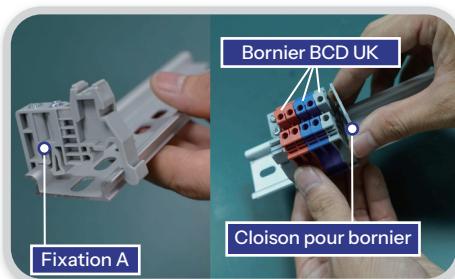


Figure 7-1

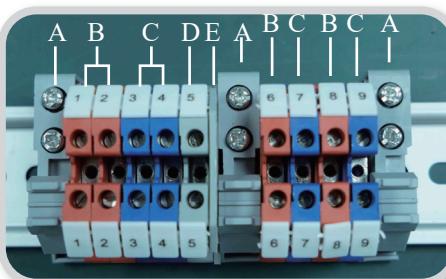


Figure 7-2

## ⑦ Install terminal block

As figure 7-1 will be fixed, UK terminal, terminal clapboard buckle. Among them, the terminal bulkhead should be pressed on the terminal.

A-3, B-4, C-4, D-1, E-1, as shown in figure 7-2

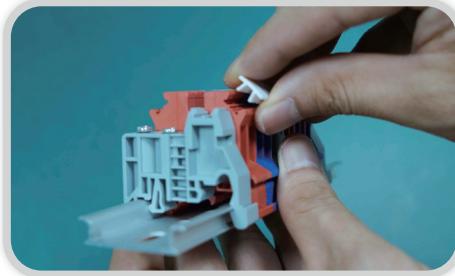


Figure 8-1

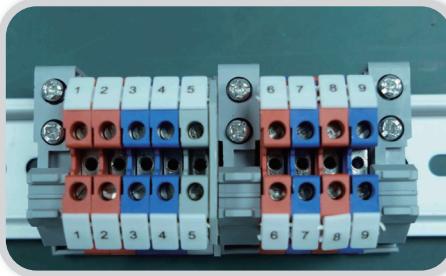


Figure 8-2

## ⑧ Mark

Button the tag number into the terminal row as shown in figure 8-1,123456789 from left to right, as shown in figure 8-2.

# VII. Chassis Installation Diagram

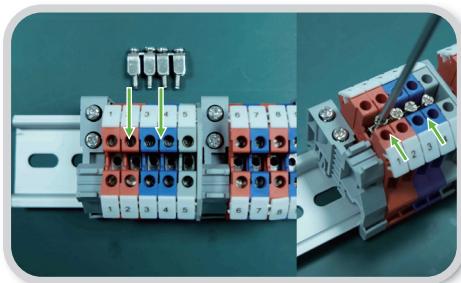


Figure 9

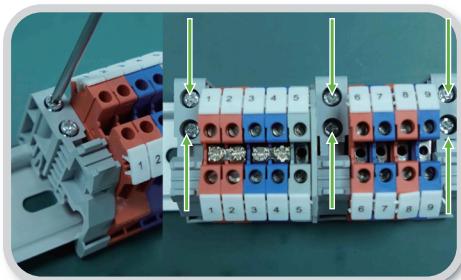


Figure 10

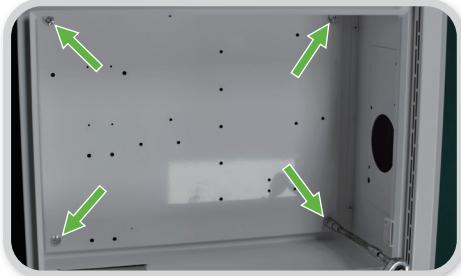


Figure 11

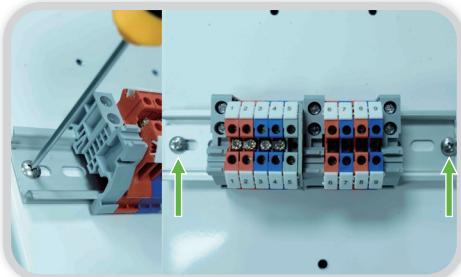


Figure 12

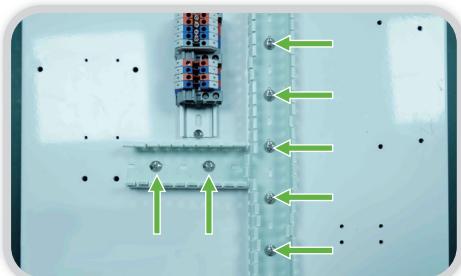


Figure 13

## ⑨ Install the connecting strip

As shown in Figure 9, two sets of FBI -2 -6 connection bar were inserted into the 12,34 terminal fixed hole after tightening 4 fixed screws.

## ⑩ Fastening fastener

As shown in Figure 10 by hand to all the UK -2.5 B Terminal Row to resist, with a screwdriver EUK fixed on the 6 screws to ensure that no gap between the terminal row.

## ⑪ Remove the chassis from the chassis

As shown in Figure 11, remove the four hexagonal anti-loosening screws outside the inner cross groove and remove the floor from the chassis.

## ⑫ Fixed terminal row to the bottom plate

As shown in Figure 12, refer to the chassis assembly drawing (P02 page) , the terminal arrangement to the bottom plate corresponding position, position, with 2 m 4 cross-screw sleeve on M 4 elastic pad twisted tight.

## ⑬ Install the connecting strip

Refer to the chassis assembly drawing (P02) , with M4 cross-screw, respectively, the Cable Box A, cable box B on the corresponding position in the bottom plate, as shown in figure 15.

# VII. Chassis Installation Diagram

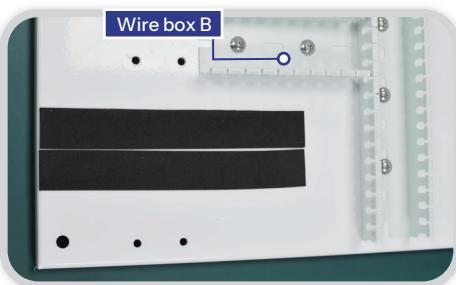


Figure 14-1

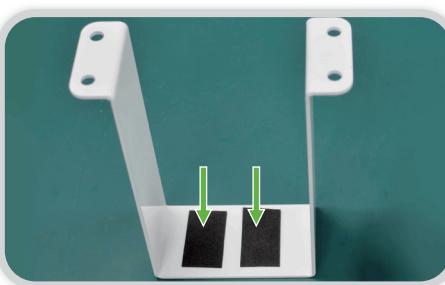


Figure 14-2

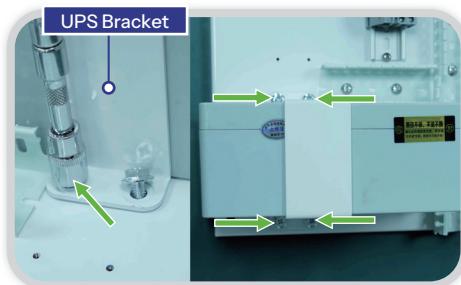


Figure 14-3

## 14 Fixed UPS

Refer to the chassis assembly drawing (P02) , put two strips of T1xw15x150 foam on the right side of online box B, as shown in figure 14-1 on the left, and two strips of T1xw15x140 foam on the bottom of UPS, as shown in figure 14-2

As shown in figure 14-3, place the UPS on the bottom plate and mount the bracket and tighten it with four M6 external hexagon screws.

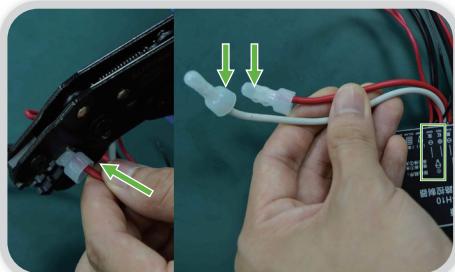


Figure 15-1



Figure 15-2

## 15 Solar controller solar terminal wiring

As shown in the left figure 15 -1, the solar controller power supply red-gray wire with wire clamp pressure, pressure wire cap;

Figure 15-2 shows an enlarged view of the controller



Figure 16

## 16 Fixed Solar Controller

Refer to the chassis assembly drawing (P02) , place the solar controller in the corresponding position on the bottom plate and fix it with 4 M3X8 cross recessed pan head screws, as shown in Fig. 16.

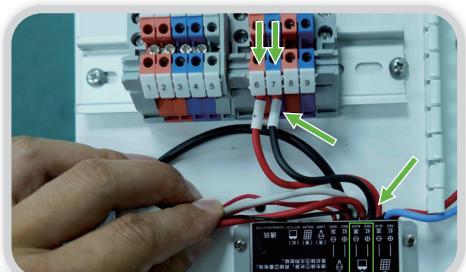


Figure 17-1



Figure 17-2

# VII. Chassis Installation Diagram

## ⑯ Solar controller battery terminal wiring

As shown in left figure 17 -1, the solar controller battery end red-black line connected to the terminal row 6(Red)7(black) interface, and the terminal screw tightening, figure 17 -2 for the controller magnification.

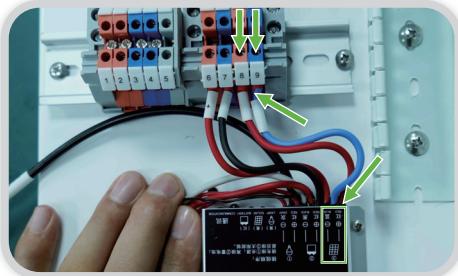


Figure 18-1



Figure 18-2

## ⑯ Solar controller solar panel terminal wiring

As shown in left figure 18 -1, the red and blue wires at the solar panel end of the solar controller are connected to the 8(red) and 9(Blue) interface of the Terminal Row, and the terminal screw is twisted tight; figure 18 -2 is an enlarged picture of the controller.

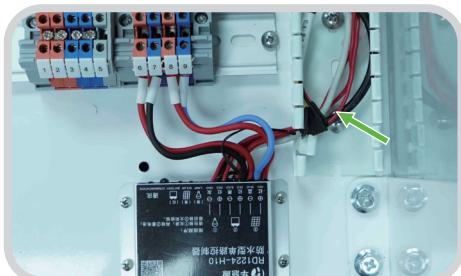


Figure 19-1

## ⑯ The solar controller is Wired

Thread the temporarily useless wire harness to box B as shown in figure 19.



Figure 20-1

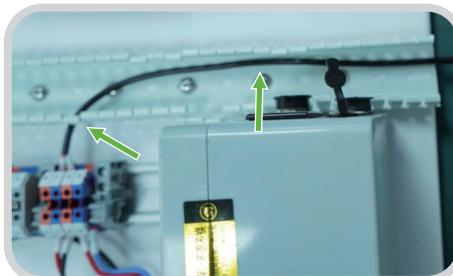


Figure 20-2

## ⑯ UPS charging cable connection

Connect the red (+) Blue (-) of the UPS charging line connection to the 6(Red)7(Blue) interface above the terminal row and tighten the terminal screw as shown in Figure 20 -1;

The wiring in the A box is shown in figure 20-2.

# VII. Chassis Installation Diagram

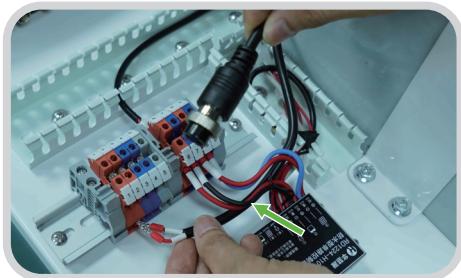


Figure 21-1

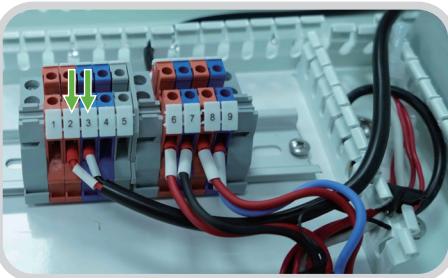


Figure 21-2

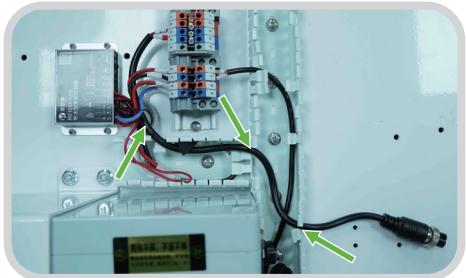


Figure 21-2

## 21 Output terminal wiring

As shown in figure 21-1, the battery output line red (1) black (-) line from the solar controller line through the lower part, connected to the terminal row 2(Red) , 3(black) interface, and the terminal screw tightening, as shown in figure 21-2; Line Boxes A and B as shown in figure 21-3.

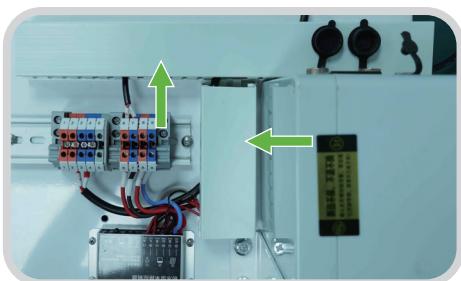


Figure 22-1

## 22 Cover the cover plate of the cable box

As shown in Figure 22, cover the cover plates of Box A and B respectively.



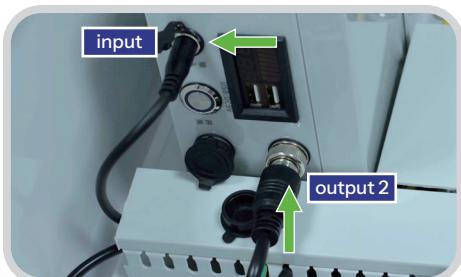
Figure 23-1



Figure 23-2

## 23 Mounting base plate

As shown in figure 23-1, the assembled bottom plate is loaded into the chassis at an inclined angle, and then four M6 outer hexagonal anti-loosening screws are tightened, as shown in figure 23-2.



## 24 UPS Input and Output Wiring

As shown in Figure 24, insert the power plug into the UPS input terminal, and the aviation plug into Output 2.

## VII. Chassis Installation Diagram

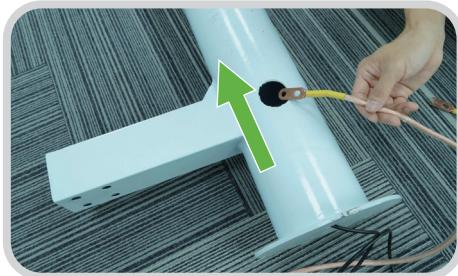
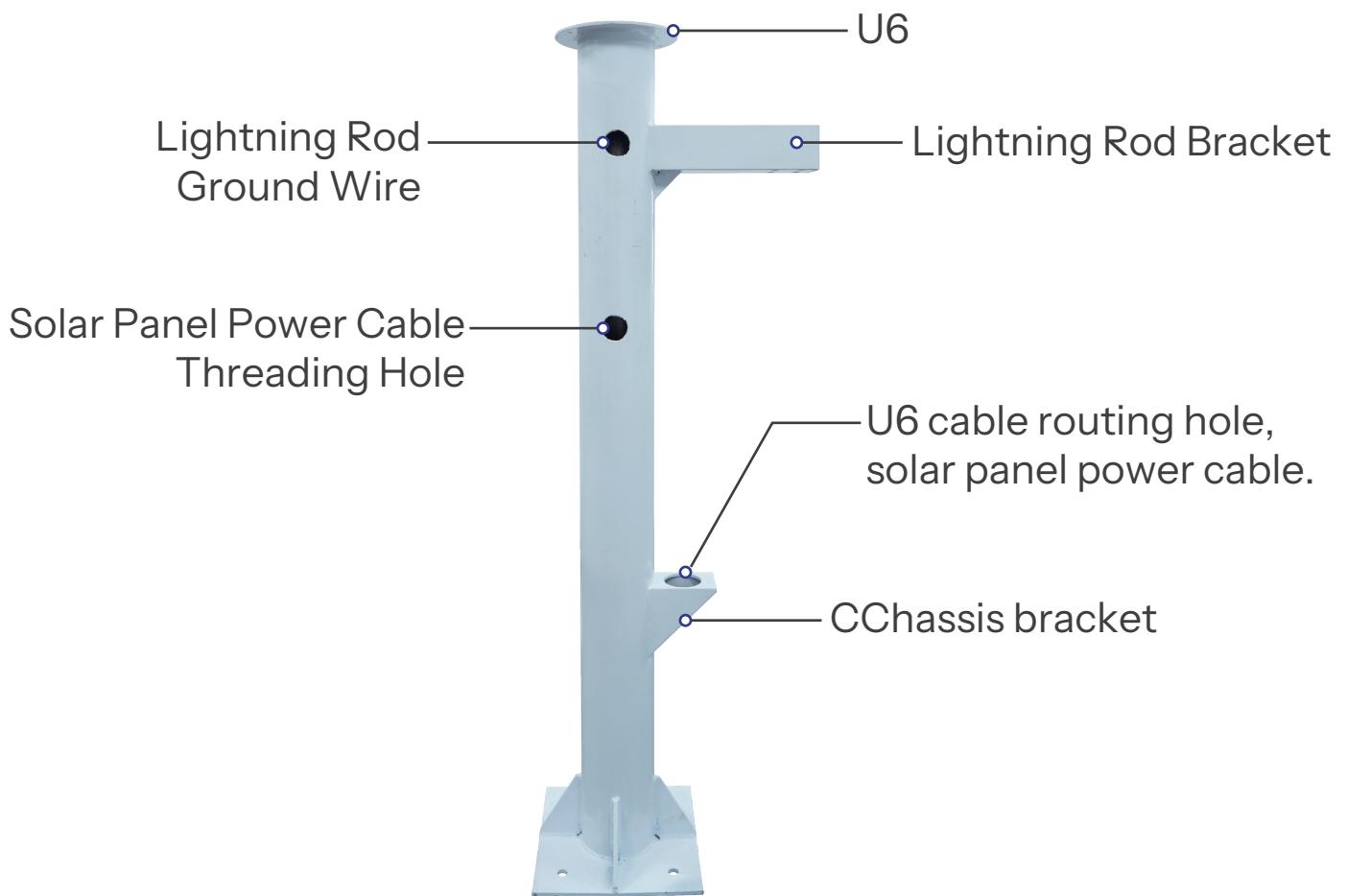


Figure 1-1

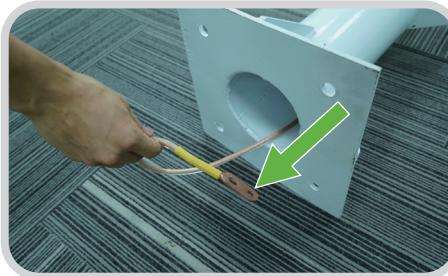


Figure 1-2

### ① Thread the lightning rod

As shown in figure 1-1, thread the ground wire of the lightning rod from the Lightning Rod, the ground wire threading hole down (vertical pole threading, will be easier), as shown in figure 2-2 and then from the column, the bottom out.

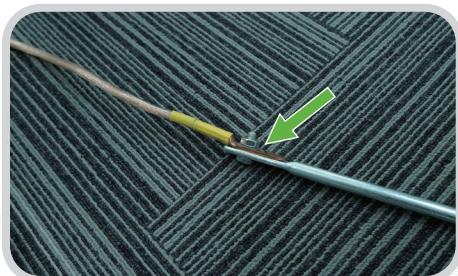


Figure 2

### ② Ground connectors

As shown in Figure 2, the lightning rod and ground wire are respectively inserted with the screws fixed on the ground.

# VIII. Column Installation Diagram

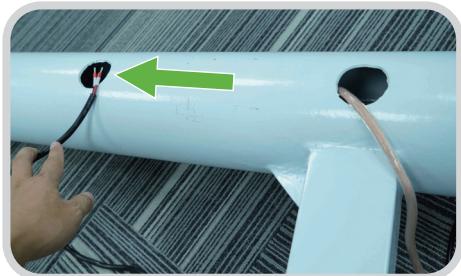


Figure 3-1

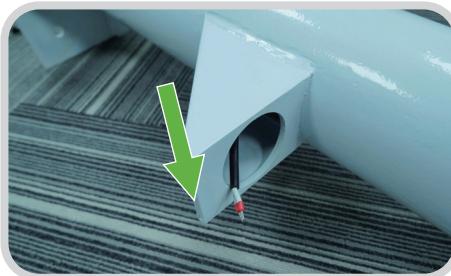


Figure 3-2

## ③ Wear solar panel power cord

As shown in Figure 3-1 will solar panel power line by the Sun, the panel power line threading hole down to wear, from the chassis support hole out as shown in Figure 3-2.

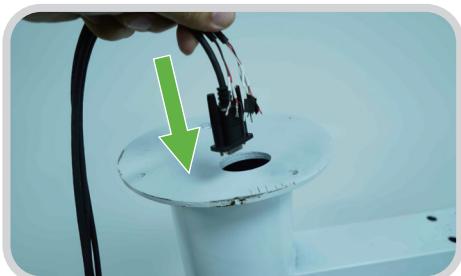


Figure 4-1



Figure 4-2

## ④ Thread the U6 data line

As shown in figure 4-1, the DB9 and scatter lines of the U 6 data line are run down the large round hole of the stand tray, exit from the housing bracket hole as shown in figure 5-2.



Figure 5-1

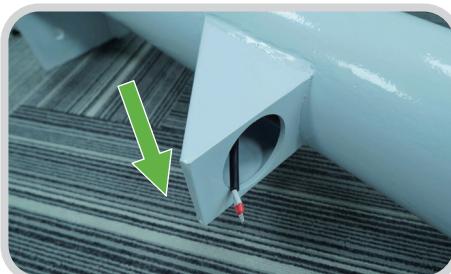


Figure 5-2

## ⑤ Wear solar panel power cord

As shown in Figure 5-1, the solar panel power line from the Sun, the panel power line threading holes down, from the chassis support threading holes out as shown in figure 5-2.



Figure 6-1



Figure 6-2

# VIII. Column Installation Diagram

## ⑥ Data line connected to U6 host

As shown in figure 6-1 will be 12-core plug heart to heart inserted into the U6 host seat, and then corresponding to the threading hole, the position flat host, as shown in figure 6-2.



Figure 7-1



Figure 7-2

## ⑦ Fixed U6 mainframe

As shown in figure 7-1 with 5mm hexagon wrench will be the main, the machine with 4 screws screw fixed host, installed as shown in figure 7-2.



Figure 8-1



Figure 8-2



Figure 8-3

## ⑧ Install chassis rubber sleeve and through the solar panel power line and U6 data line

Cut the rubber sleeve with scissors as shown in figure 8-1, pull the solar panel power cord and U 6 data line through the rubber sleeve into the cabinet as shown in figure 8-2, press the line into the bellows, and insert the bellows into the rubber sleeve as shown in figure 8-3.

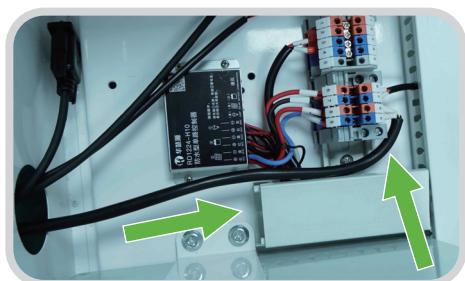


Figure 9-1



Figure 9-2

## ⑨ Connect the power cord to the solar panel

As shown in figure 9-1, the solar panel power line and U6 data line are penetrated into the chassis through the wire hole at the bottom of the chassis,

As shown in figure 9 -2, connect the solar panel power cord red (+) black (-) to the 8(Red)9(black) interface of the terminal row and tighten the screw.

# VIII. Column Installation Diagram

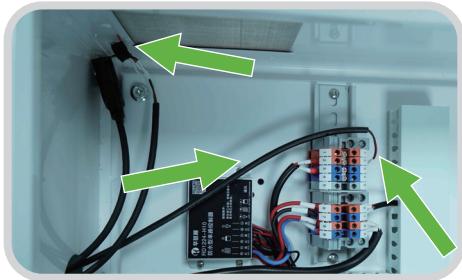


Figure 10-1

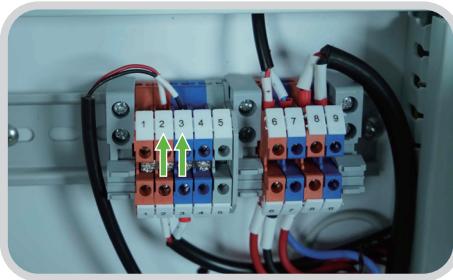


Figure 10-2

## 10 Connect the U-6 power cord

Line the U6 data line from the bottom of the chassis as shown in figure 10-1 (wrap the temporarily unused line head with tape to avoid exposing), as shown in figure 10-2, connect the U 6 power cord red (+) black (-) to the 2(Red)3(black) interface of the terminal row and tighten the screw.



Figure 11-1



Figure 11-2

## 11 Fixed chassis

First put the chassis on the stand of the chassis, as shown in Fig. 11-1, insert 4 M8T Bolts with gasket into the cabinet slot; as shown in Fig. 11-2, after the clamp is aligned with 4 t bolts, use M8 to prevent loosening, and the nut fastens the cabinet to the column.



Figure 12

## 12 Guard fixed lightning rod

In figure 12, four M12 screws are used to attach the lightning rod to the column arm.



Figure 13

## 13 Fixed lightning rod ground wire

As shown in Figure 13 with two lightning rod with the screws will be lightning rod ground wire copper nose lock, tighten to the lightning rod wire ear, and then the soft copper wire with bellows.

# VIII. Column Installation Diagram



Figure 14

## 14) fixer le panneau solaire sur le support

Figure 14 : fixer le panneau solaire au support à l'aide de quatre vis.



Figure 15

## 15) fixer le support du panneau solaire

Comme le montre la figure 15, le support du panneau solaire est fourni avec 4 vis fixées à la tige verticale.



Figure 16

## 16) le cordon d'alimentation du panneau solaire est gainé d'un soufflet

Comme le montre la figure 16, le cordon d'alimentation du panneau solaire exposé est inséré dans le soufflet et inséré dans le poteau.



Figure 17

## 17) Fixation du poteau vertical

Redressez le poteau vertical et alignez-le avec les boulons d'ancrage au sol. Fixez le poteau à l'aide d'écrous, comme illustré à la figure 17.

(Scellez ensuite les trous de passage des câbles sur le poteau avec de la mousse expansive pour éviter l'entrée de corps étrangers.)