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USER MANUAL
APEX 5220 LFP Battery

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5220 LFP Lithium Battery

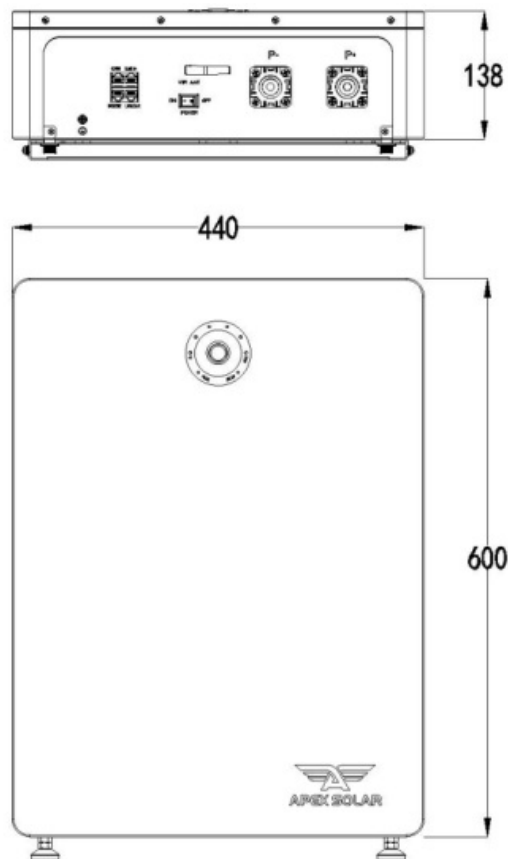


Product Overview

APEX 5220 can be floor mounted, or wall mounted.

APEX 5220 is not suitable for life-sustaining medical devices.

1.1 Appearance



1.2 Button, LED & Communication Port

1.2.1 Switch ON/OFF

1. Switch ON

For single APEX 5220, switch ON POWER button, then long press (3 sec) SW button (surrounded by led lights).

For multiple APEX 5220 connected in parallel, switch ON POWER buttons of all batteries, then long press (3 sec) SW button of master battery.

2. Switch OFF

Switch OFF all POWER button(s).

1.2.2LED Indicator Definition

Note: Flash 1 – 0.25s ON / 3.75s OFF

Flash 2 – 0.5s ON / 0.5s OFF









Flash 3 – 0.5s ON / 1.5s OFF

SOC Status while charging









STATUS	CHARGE							
	L8 ●	L7 ●	L6 ●	L5 ●	L4 ●	L3 ●	L2 ●	L1 ●

SOC (%)	0 17	ON	OFF	OFF	OFF	OFF	OFF	OFF	Flash 2
	18 33			OFF	OFF	OFF	OFF	Flash 2	ON
	34 50			OFF	OFF	OFF	Flash 2	ON	ON
	51 66			OFF	OFF	Flash 2	ON	ON	ON
	67 83			OFF	Flash 2	ON	ON	ON	ON
	84 100			Flash 2	ON	ON	ON	ON	ON

SOC Status while discharging

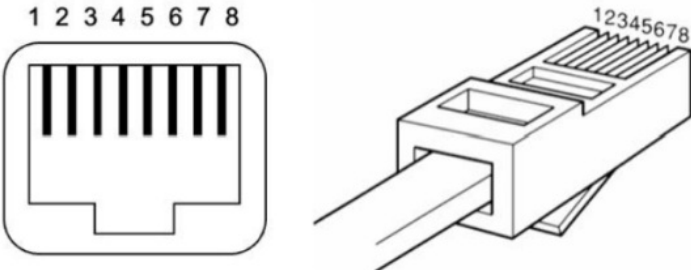
STATUS		DISCHARGE							
		L8 	L7 	L6 	L5 	L4 	L3 	L2 	L1 
SOC (%)	0 17	Flash 3	OFF	OFF	OFF	OFF	OFF	OFF	ON
	18 33			OFF	OFF	OFF	OFF	ON	ON
	34 50			OFF	OFF	OFF	ON	ON	ON
	51 66			OFF	OFF	ON	ON	ON	ON
	67 83			OFF	ON	ON	ON	ON	ON
	84 100			ON	ON	ON	ON	ON	ON

Work Status

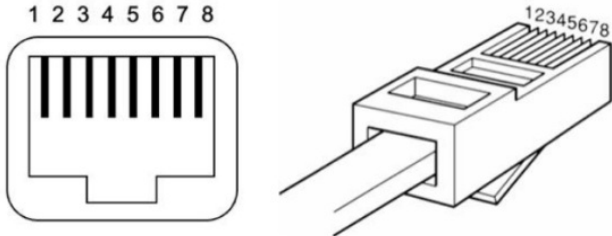
STATUS		RUN	AL M	SOC						DESCRIP TION
		L8 	L7 	L6 	L5 	L4 	L3 	L2 	L1 	
Shutdown		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	
Standby		Flash 1	OFF	According to SOC						
Charge	Normal	ON	OFF	According to SOC						
	Over voltage	ON	OFF	ON	ON	ON	ON	ON	ON	Switch to standby mode
	Protection	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	Stop charging
Discharge	Normal	Flash 3	OFF	According to SOC						
	Under voltage	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	Stop discharging
	Protection	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	Stop discharging
Faulty		OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	Stop charging and discharging

1.2.3 Communication Port Pin Definition

1.2.3.1 CAN/RS485 to PCS

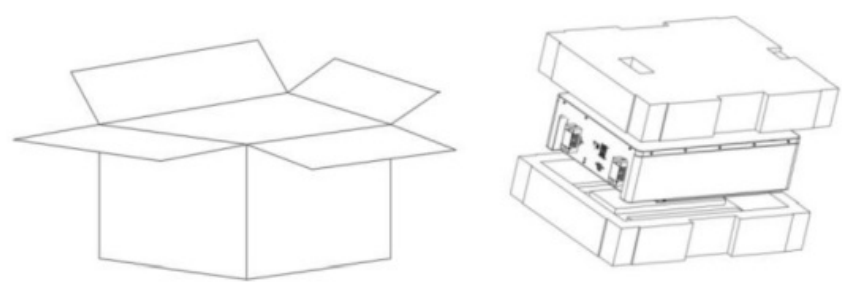
Port definitions	RJ45 Pin	Function
	1	RS485-B
	2	RS485-A
	3	GND
	4	CAN-H
	5	CAN-L
	6	NC
	7	RS485-A
	8	RS485-B







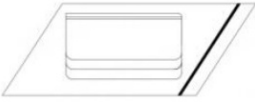

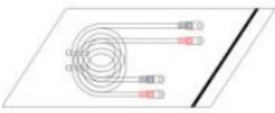

1.2.3.2 RS232 to PC


Port definitions	RJ45 Pin	Function
	1	RS232-TX
	2	GND
	3	RS232-RX
	4	NC
	5	NC
	6	NC
	7	NC
	8	NC

Installation Guide

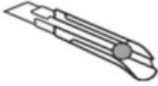

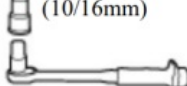



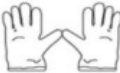


2.1 Checking Deliverables



NO.	Pictures	Quantity	Description
1		1 pc	Battery
2		4 pcs	Battery hanging bolt
3		4 pcs	Battery hanger
4		1 pc	Wall Mount
5		2 pcs	Wall Mount Bottom Bolt
6		4 pcs	Expansion Bolt
7		1 pc	User Manual
8		1 pc	cover
9		1 pair	Power cable
10		1 pc	Comm cable

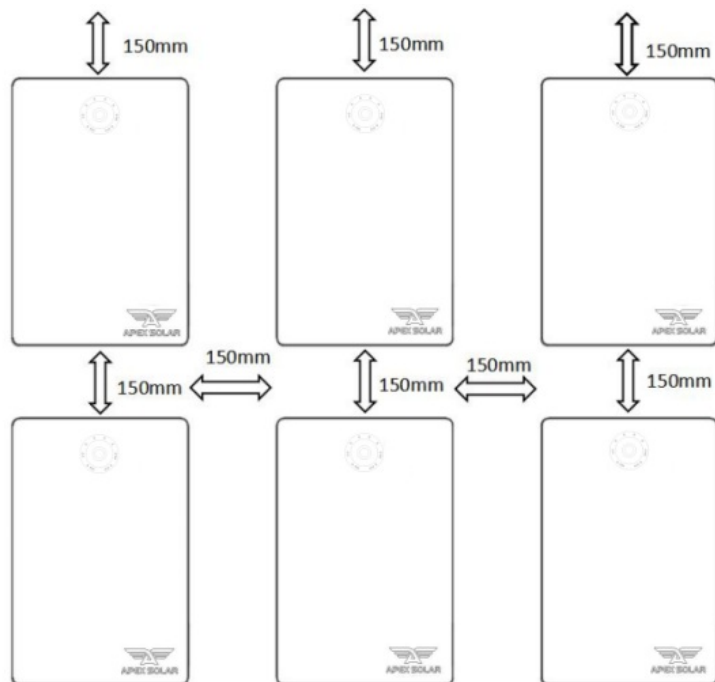
11		2 pcs	Cover bolt
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2.2 Tools

Installation Tools	Knife 	Measuring Tape 	Socket Wrench (10/16mm) 
	Hammer 	Cross Screwdriver 	Hammer Drill 
Protection Tools	ESD Gloves 	Safety Goggles 	Safety Shoes 

2.3 Installation Instructions

Minimum mounting distance requirement: (Wall Mounted)



2.3.1 Installation Step (Floor Mounted)

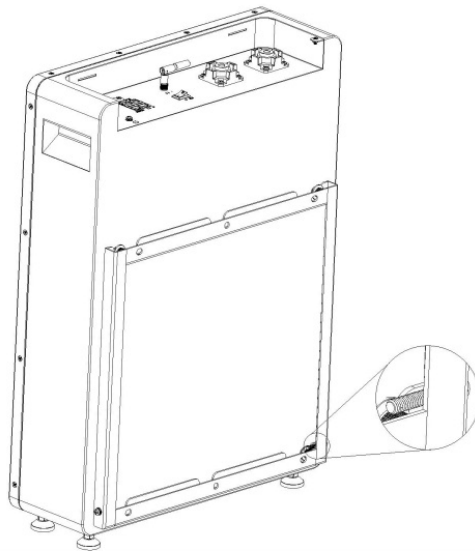
Step 1

put APEX 5220 on floor then start from Step 6

2.3.2 Installation Step (Wall Mounted)

Step 1

Remove 2 pcs wall mount bottom bolts, remove wall mount from battery.



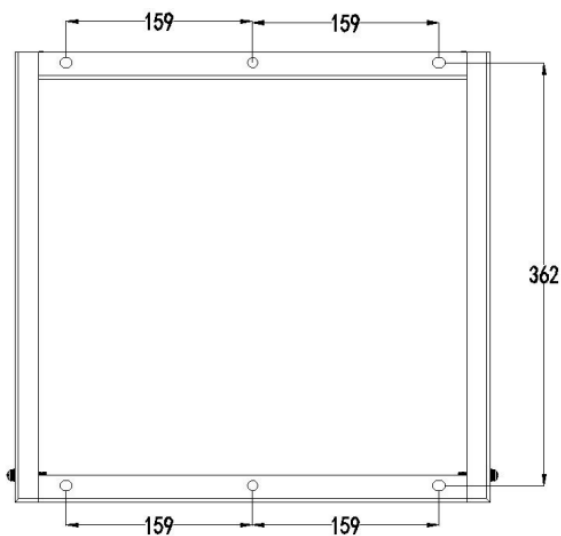
Step 2

Drill holes in the wall according to wall mount.



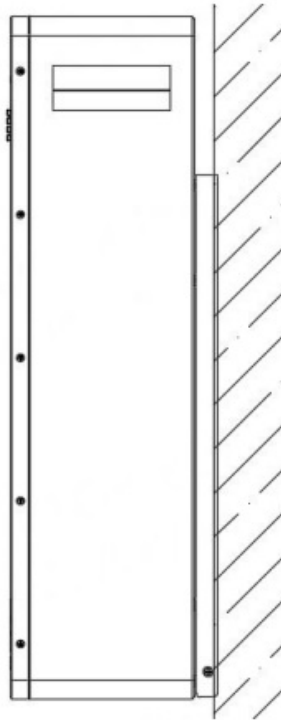
Step 3

Fix wall mount to the wall using expansion bolt.



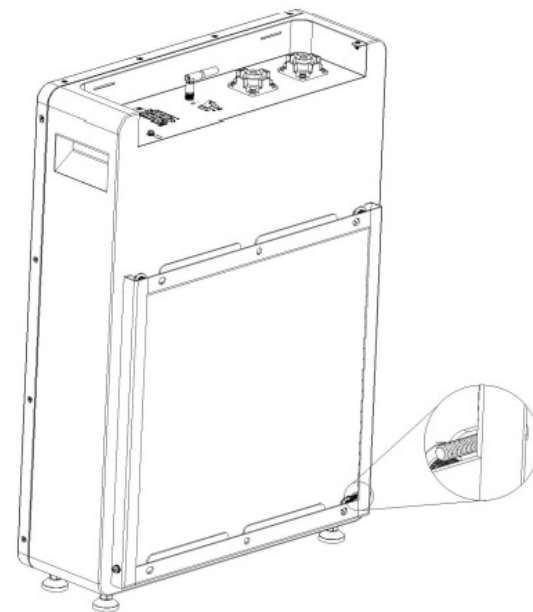
Step 4

Hang APEX 5220 battery on wall mount.



Step 5

Install 2 pcs wall mount bottom bolts.

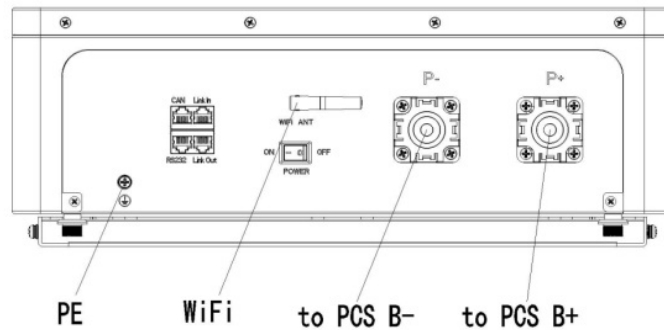


Step 6

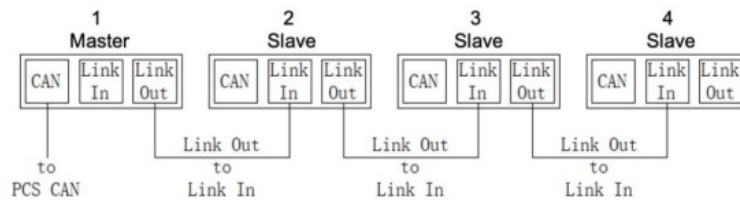
remove levelling feet.



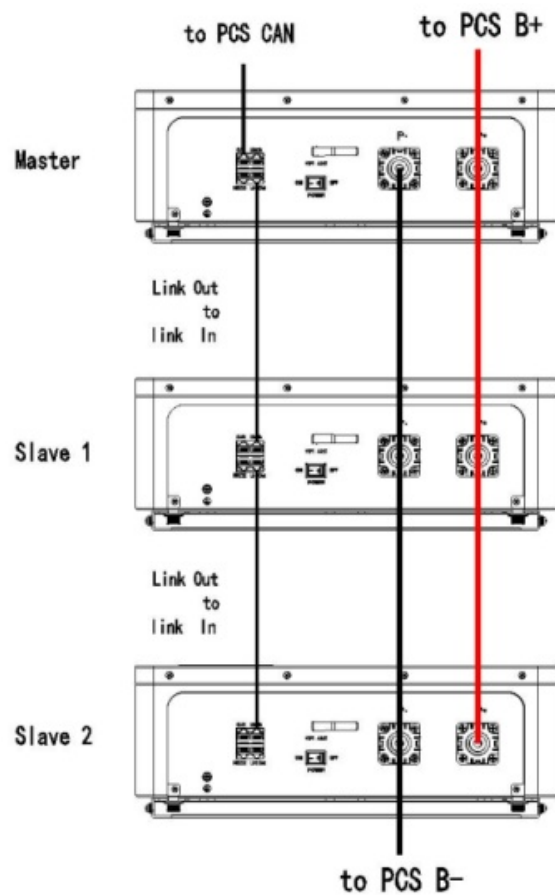
Step 7 Connect PE cable & power cable.



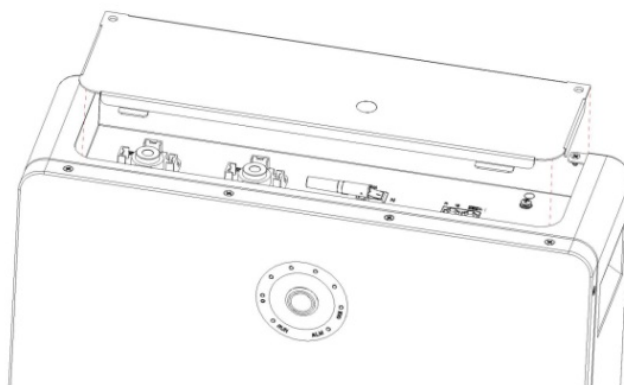
Step 8 Connect communication cable.



Step 9 Refer to the following diagram when multiple batteries are connected in parallel:



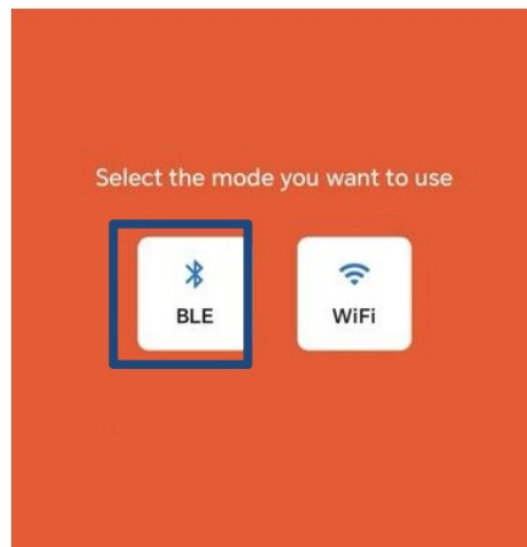
Step 10 Install cover using cover bolts.



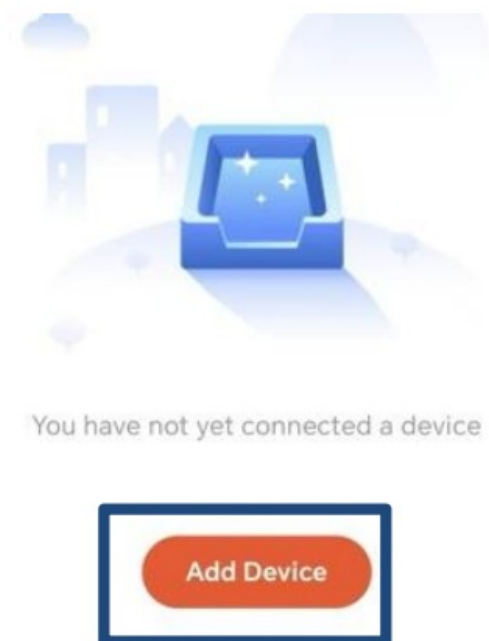
Bluetooth and Wi-Fi Function

3.1 Bluetooth

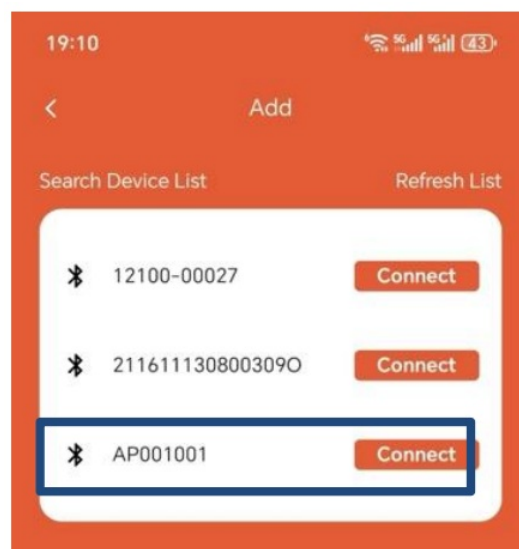
1. Turn on Bluetooth function on your phone, open "APEX SOLAR" APP, tap "BLE"



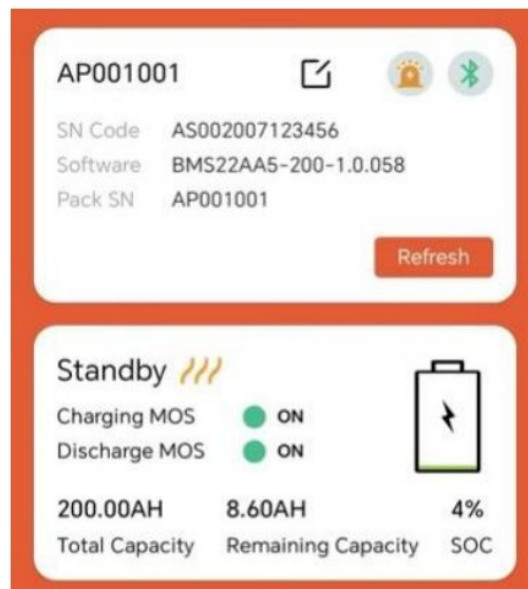
2. Tap “Add Device”



3. Select your APEX SOLAR device and connect



4. Check APEX SOLAR battery info on your phone




3.2 Wi-Fi

1. Connect your phone to Wi-Fi, open “APEX SOLAR” APP, tap “WiFi”



2. Tap “Sign Up”



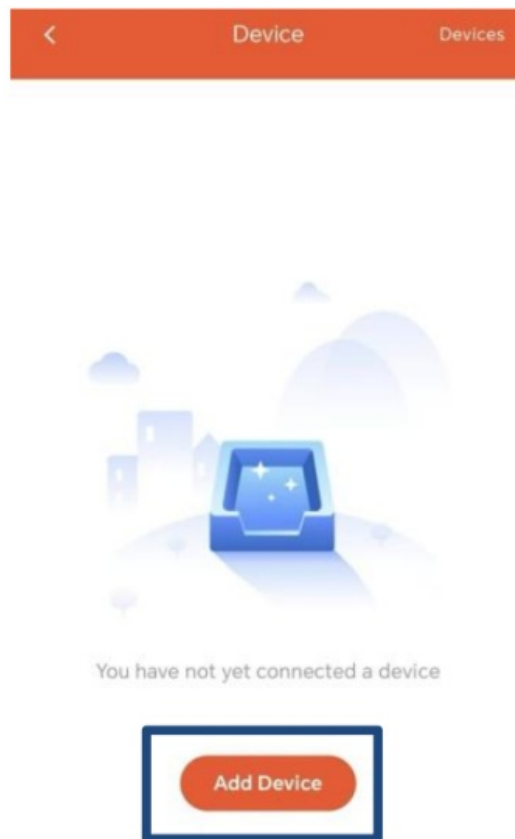
The image shows the Apex Solar Login screen. At the top, there is a back arrow and the title "Login". Below the title is the Apex Solar logo, which consists of a stylized red and white bird icon above the text "APEX SOLAR" and "Apex Solar". The main form area contains a "Phone Number" field with a dropdown menu showing "+86" and a "Password" field. Below the password field is a link that says "Forgot Password?". At the bottom of the form are two buttons: "Login" and "Sign Up". The "Sign Up" button is highlighted with a blue border.

3. Create your account and login

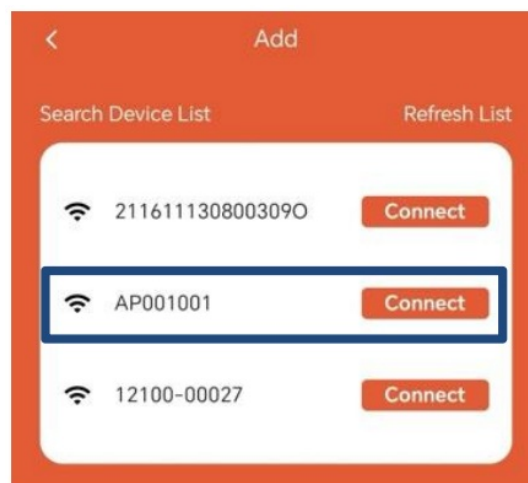


The image shows the Apex Solar Sign Up screen. At the top, there is a back arrow and the title "Sign Up". Below the title is the Apex Solar logo, which consists of a stylized red and white bird icon above the text "APEX SOLAR" and "Apex Solar". The main form area contains four fields: "Phone Number" with a dropdown menu showing "+86", "Password", "Confirm Password", and "Verify Code". Below the "Verify Code" field are two buttons: "Send Verify Code" and "Sign Up".

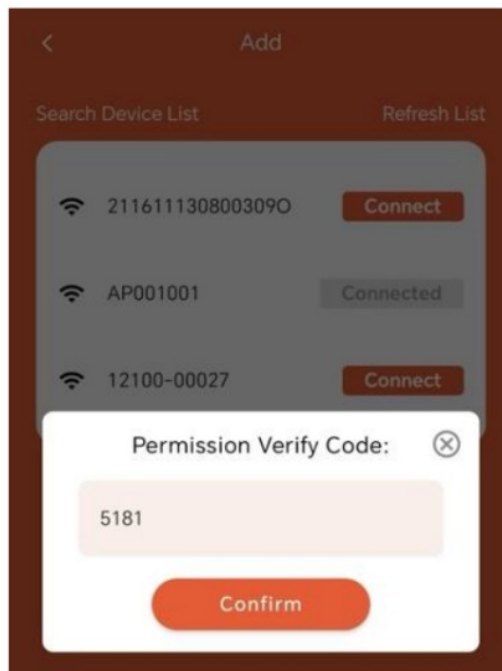
4. Tap "Add Device"



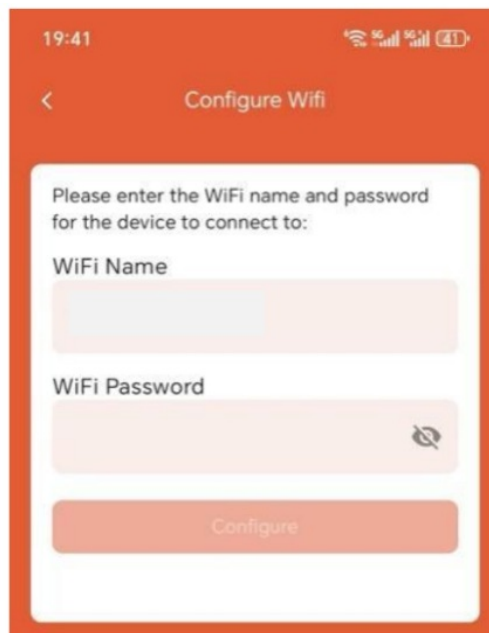
5. select your APEX SOLAR device and connect



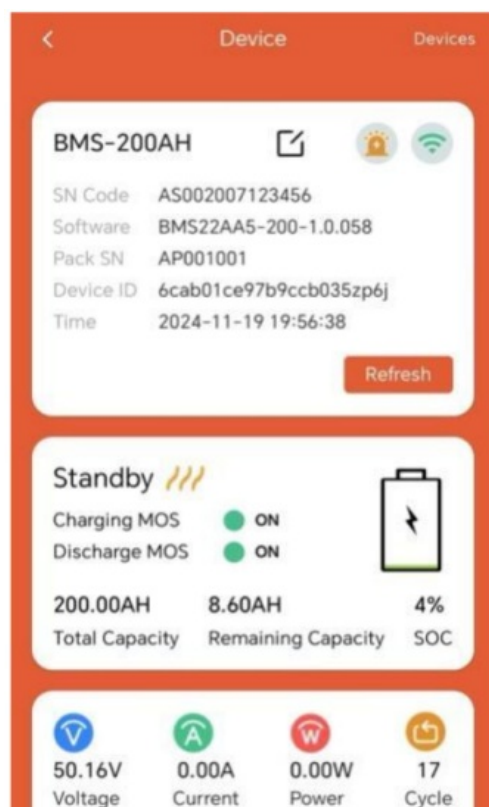
6. Permission code 5181



7. Confirm your WiFi Name and enter your WiFi password



8. Check APEX SOLAR battery info on your phone



Maintenance

4.1 Recharge Requirements During Storage

Batteries should be stored in temperature between -10 °C +45 °C, and recharged regularly according to the following table with 0.2C (20A) current to 50% SOC after long time storage.

Recharge requirement during storage

Storage Temperature	Storage Relative Humidity	Storage Time	SOC
Below -10°C	/	Not Allowed	/
-10~25°C	5%~70%	≤12 months	30%≤SOC≤60%
25~35°C	5%~70%	≤6 months	30%≤SOC≤60%
35~45°C	5%~70%	≤3 months	30%≤SOC≤60%
Above 45°C	/	Not Allowed	/

4.2 Recharge Requirements When Over Discharged


Please recharge over discharged (>90% DOD) batteries according to the following table, otherwise over discharged battery will be damaged.

Recharge requirement when battery is over discharged

Storage Temperature	Storage Time	Note
-10~25℃	≤15 days	Battery disconnected from PCS
25~45℃	≤7 days	
-10~45℃	< 12 hours	Battery connected to PCS



Documents / Resources

	<p>APEX SOLAR 5220 LFP Lithium Battery [pdf] User Manual</p> <p>5220, 5220 LFP Lithium Battery, LFP Lithium Battery, Lithium Battery</p>
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References

- [User Manual](#)

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5220, 5220 LFP Lithium Battery, APEX SOLAR, LFP Lithium Battery, Lithium
Battery

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