

USER MANUAL

512314 Li Battery



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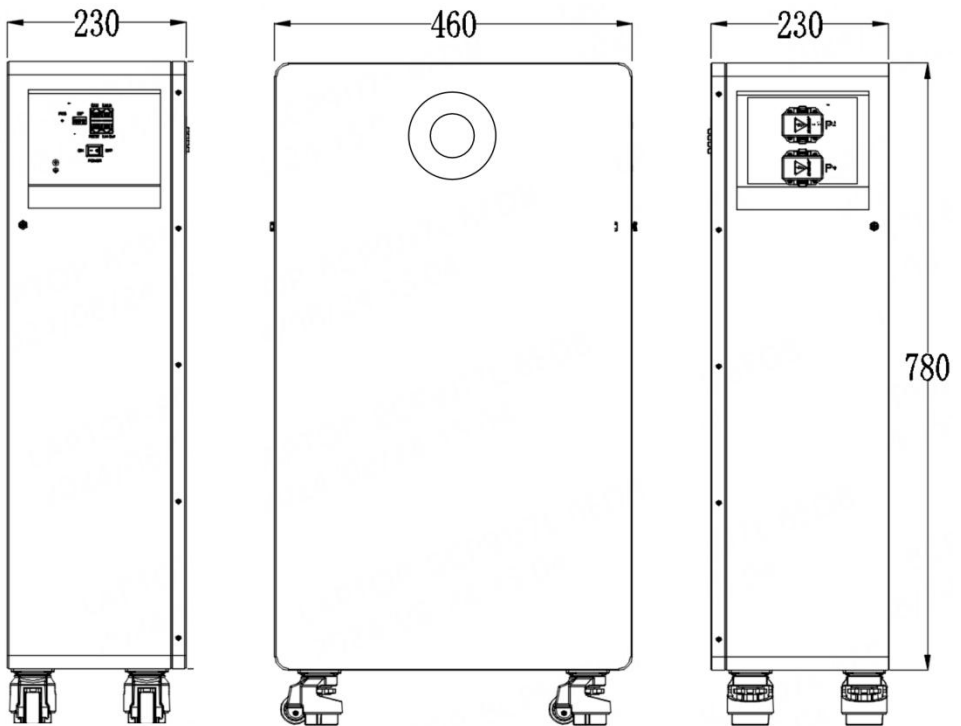
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1 Product Overview

512314 is a 51.2V 314Ah Lithium battery that can be floor mounted.

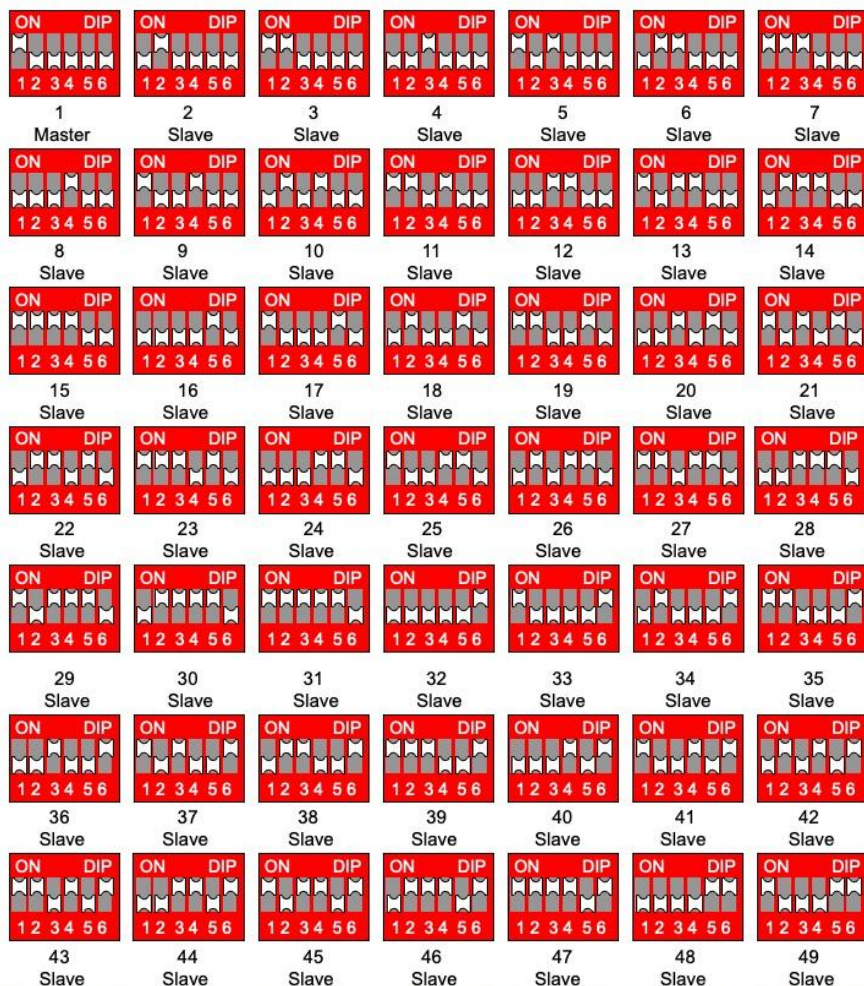
Note: 512314 is **NOT** suitable for life-sustaining medical devices.

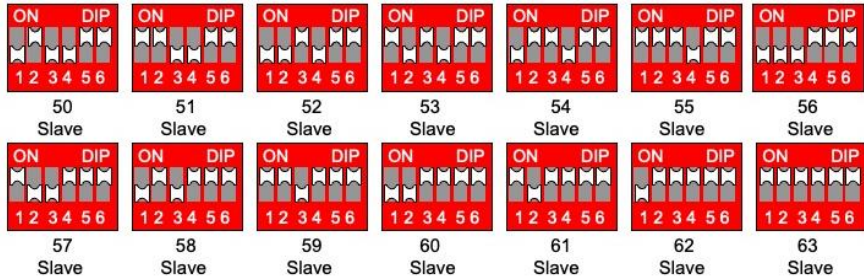
1.1 Appearance



1.2 Switch, LCD, LED & Communication Port

1.2.1 DIP Switch





1.2.2 Switch ON/OFF

1、Switch ON

For single 512314, set DIP switch to 1, then switch ON POWER button.

For multiple 512314 connected in parallel, set DIP switch according to 1.2.1, then switch ON POWER buttons of all batteries.

2、Switch OFF

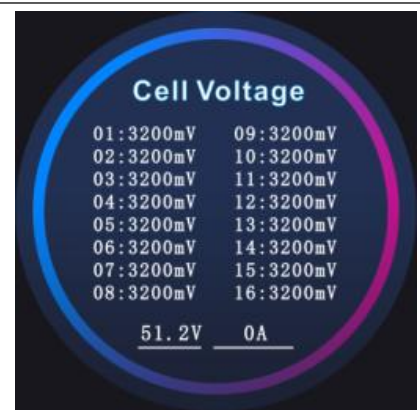
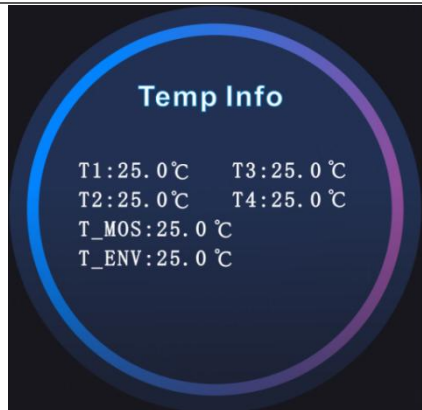
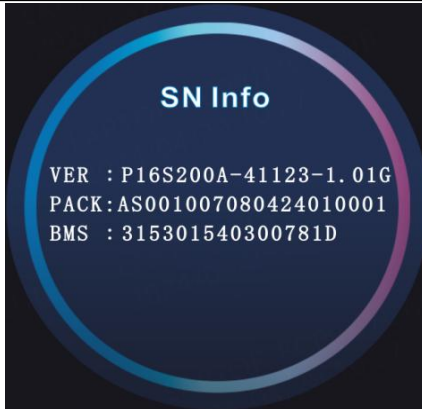
Switch OFF POWER button(s) of all batteries.

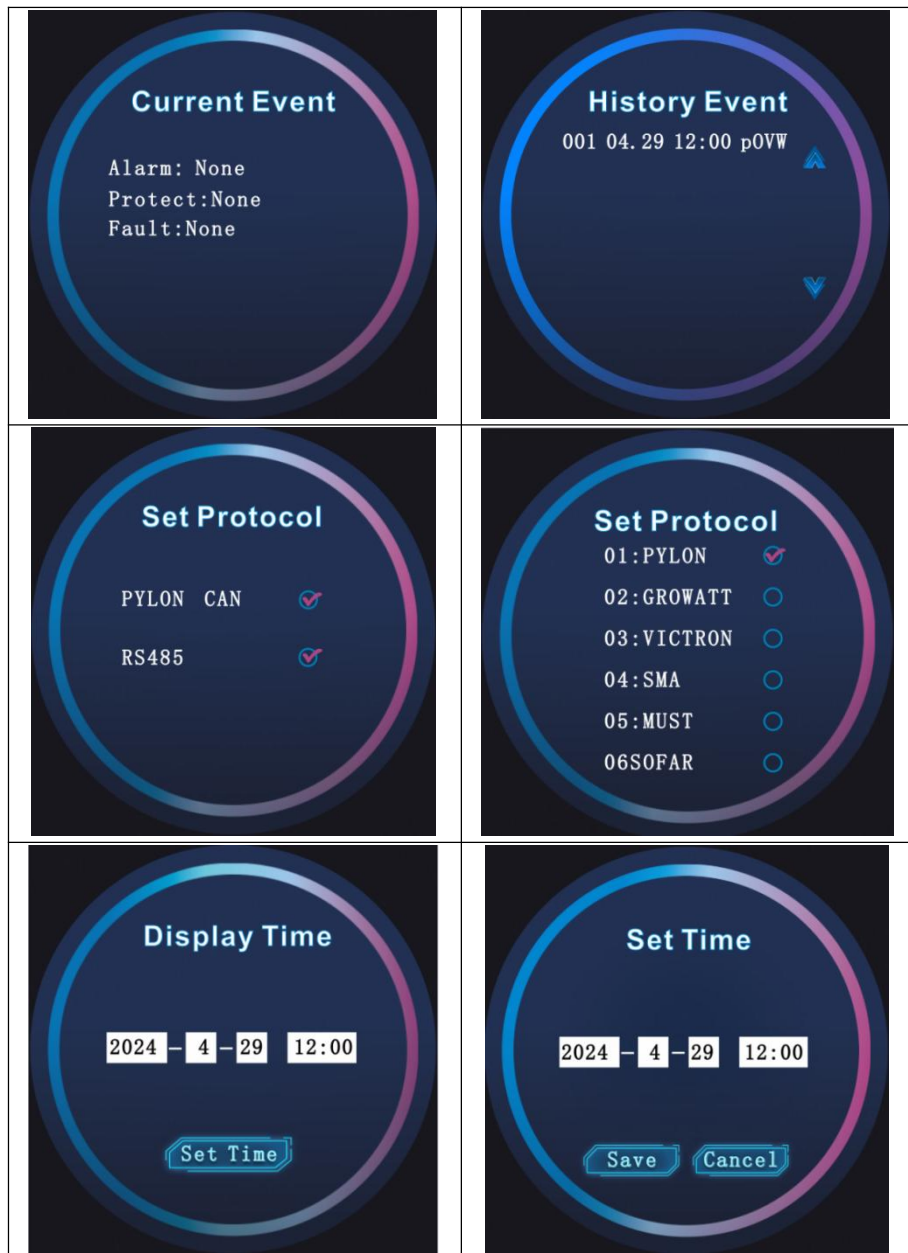
1.2.3 Color touchscreen

1) Swipe the screen to see “SN Info”, “Capacity Info”, “Temp Info”, “Cell Voltage”, “Current Event”, “History Event”, “Set Protocol” & “Display Time”.

2) If current protocol is incorrect, tap “CAN” checkbox and select correct protocol.

3) If current time is incorrect, tap “Set Time” button and change time then tap “Save” button.





1.2.4 Communication Port Definition

1.2.4.1 CAN/RS485 to PCS

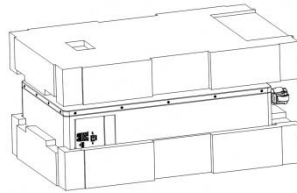
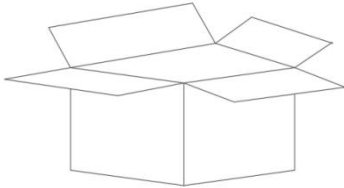
Port definitions	RJ45 Pin	Function
	1	RS485-B
	2	RS485-A
	3	GND
	4	CAN-H
	5	CAN-L
	6	NC
	7	RS485-A
	8	RS485-B

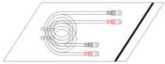
1.2.4.2 RS232 to PC

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

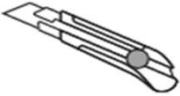
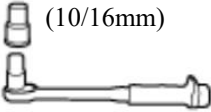
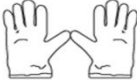
2 Installation Guide

2.1 Checking Deliverables



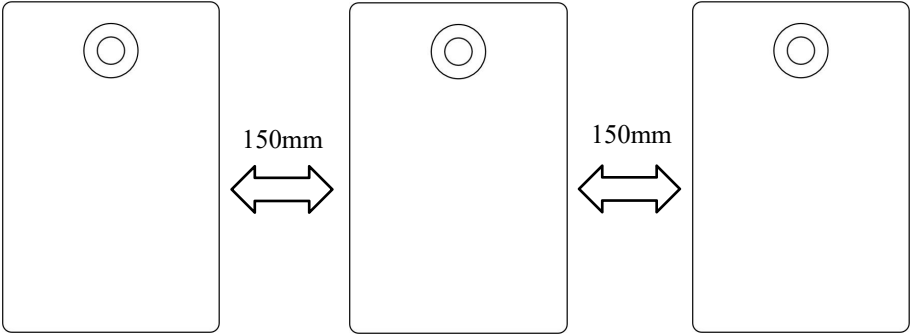
NO.	Pictures	Quantity	Description
1		1 pcs	Battery
2		2 pcs	Battery hanging bolt
3		2 pcs	Expansion Bolt
4		1 pair	Power cable
5		1 pcs	Comm cable
6		1 pcs	Manual
7		2 pcs	Wall Connector

2.2 Tools

Tools			
Installation	Knife 	Measuring tape 	Socket wrench (10/16mm) 
	Hammer 	Cross Screwdriver 	Hammer drill 
Protection	ESD gloves 	Safety goggles 	Safety Shoes 

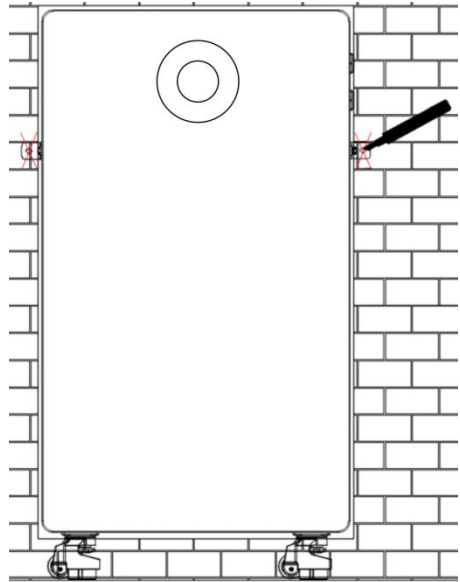
2.3 Installation Instructions

Minimum mounting distance requirement:

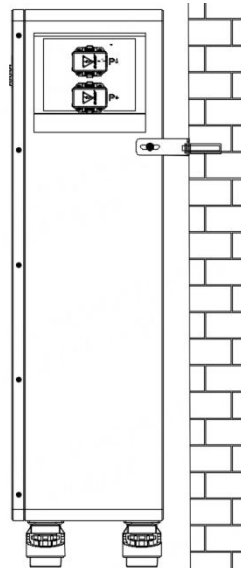


2.3.1 Installation Step

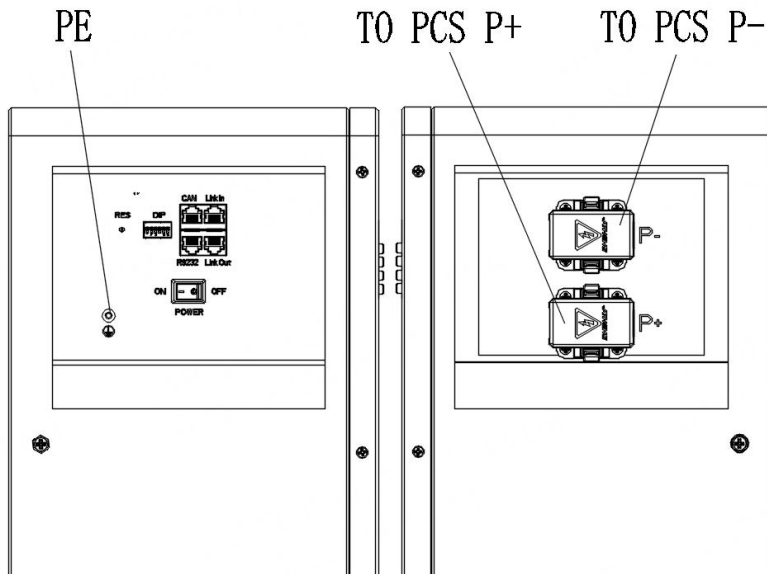
Step 1 place 512314 on the floor,
close to wall.
Determine hole position using marker.



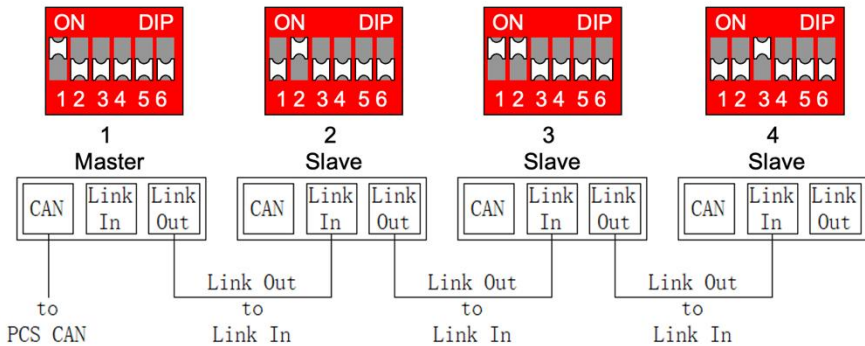
Step 2 drill hole on the wall,
fix wall connector using expansion bolt



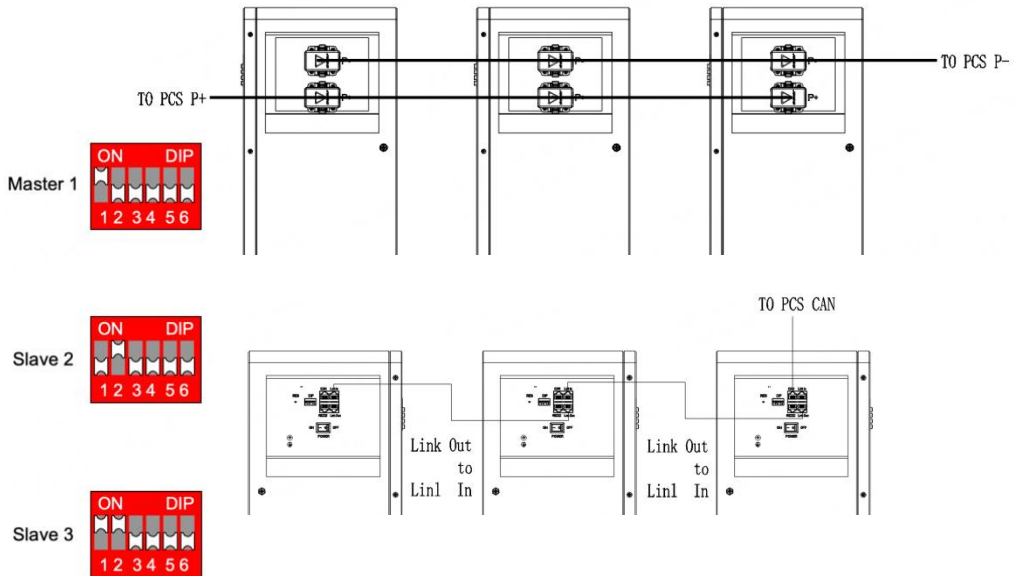
Step3 Connect PE cable & power cable.



Step 4 Connect communication cable. Wire all cables thru rubber grommet.



Step 5 Refer to the following diagram when multiple batteries are connected in parallel:



3 Technical Specifications

Basic Project		Parameter
Nominal Voltage		51.2V
Nominal Capacity		314Ah
Nominal Energy		16076.8Wh
Charge Voltage		56.16V
Charge Current		150A
Discharge Voltage Range		45.6V~56.16V
Discharge Current		200A
Communication Mode		CAN/RS485
Working Temperature	Charge	0℃~45℃
	Discharge	-20℃~60℃
Storage Temperature	Short Term (within 1 month)	-10℃~45℃
	Long Term (within 1 year)	0℃~35℃
Storage Humidity		<95% RH
Cell Type		LiFePO ₄ , Lithium Iron Phosphate
Size		H780*W460*D230(mm)
Weight		115.6KG
IP Level		IP20

4 Maintenance

4.1 Recharge Requirements During Storage

Batteries should be stored in temperature between $-10^{\circ}\text{C} \sim +45^{\circ}\text{C}$, and recharged regularly according to the following table with 0.2C (62.8A) 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	/
$-10 \sim 0^{\circ}\text{C}$	5%~70%	≤ 1 months	$30\% \leq \text{SOC} \leq 60\%$
$0 \sim 25^{\circ}\text{C}$	5%~70%	≤ 12 months	$30\% \leq \text{SOC} \leq 60\%$
$25 \sim 35^{\circ}\text{C}$	5%~70%	≤ 6 months	$30\% \leq \text{SOC} \leq 60\%$
$35 \sim 45^{\circ}\text{C}$	5%~70%	≤ 1 months	$30\% \leq \text{SOC} \leq 60\%$
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
$-10 \sim 25^{\circ}\text{C}$	≤ 15 days	Battery disconnected from PCS
$25 \sim 45^{\circ}\text{C}$	≤ 7 days	
$-10 \sim 45^{\circ}\text{C}$	< 12 hours	Battery connected to PCS

Attention: Disposal of batteries should follow local regulations.

