USER MANUAL
512314 LFP Battery



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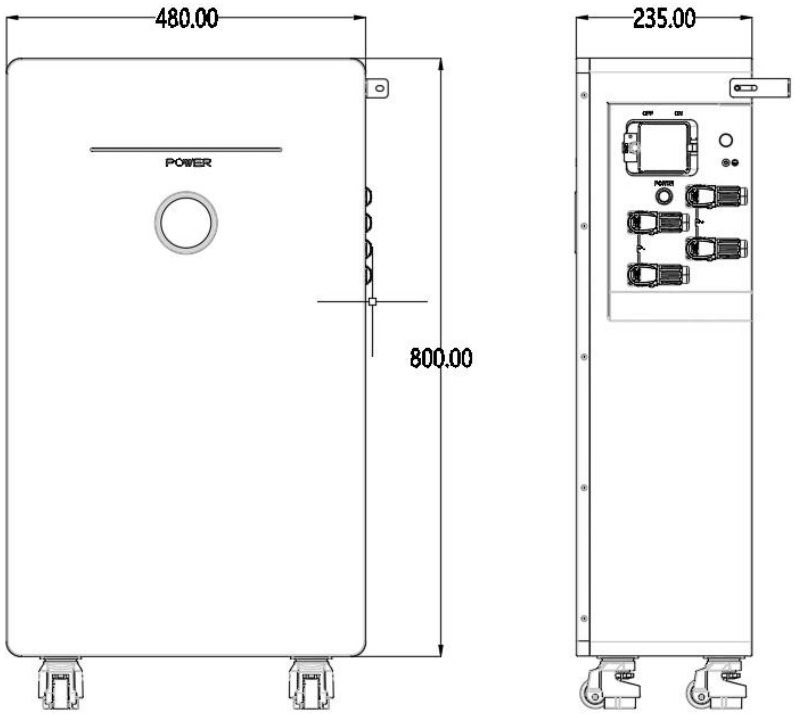
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1 Product Overview

512314 is a 51.2V 314Ah Lithium battery that can be wall mounted or 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 Switch ON/OFF

1、Switch ON

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

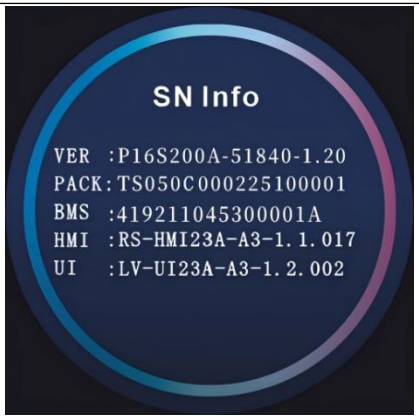
For multiple 512314 connected in parallel, set DIP switch according to 1.2.1, then switch ON POWER buttons of all batteries.

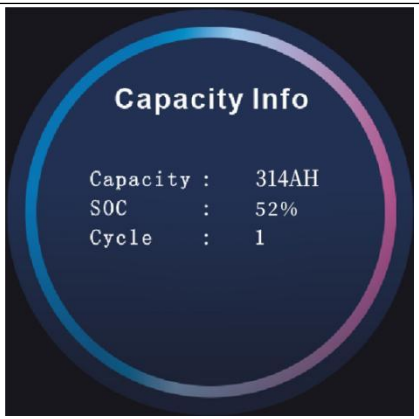
2、Switch OFF

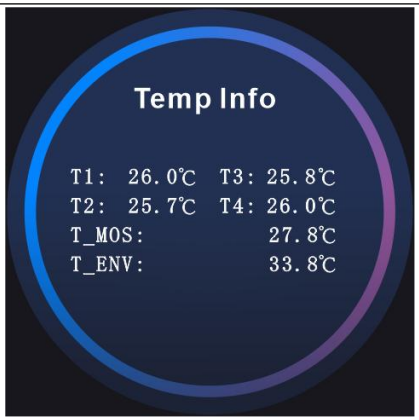
Switch OFF POWER button(s) of all batteries.

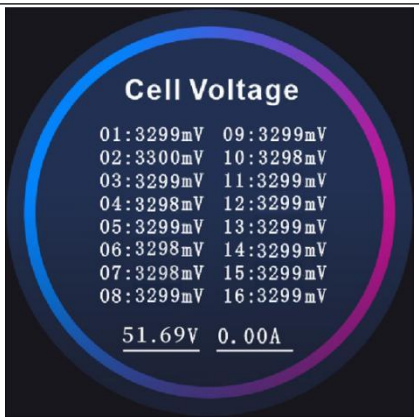
1.2.2 Color touchscreen

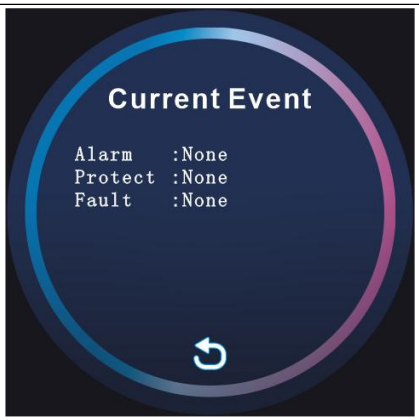
1) Swipe the screen to see “SN Info”, “Capacity Info”, “Temp Info”, “Cell Voltage”, “Current Event”, “History Event, “Set Protocol” & “Display Time”. 2) If current protocol is incorrect, tap “CAN” checkbox and select correct protocol. 3) If current time is incorrect, tap “Set Time” button and change time then tap “Save” button.	

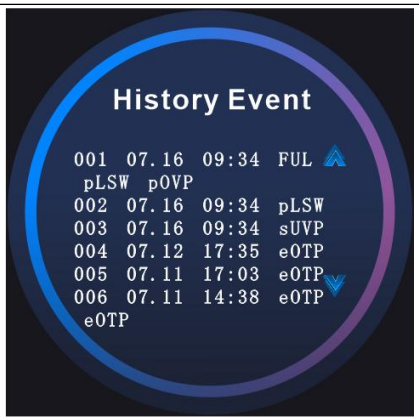

SN Info
VER :P16S200A-51840-1.20
PACK:TS050C000225100001
BMS :419211045300001A
HMI :RS-HMI23A-A3-1.1.017
UI :LV-UI23A-A3-1.2.002


Capacity Info
Capacity : 314AH
SOC : 52%
Cycle : 1


Temp Info
T1: 26.0℃ T3: 25.8℃
T2: 25.7℃ T4: 26.0℃
T_MOS: 27.8℃
T_ENV: 33.8℃


Cell Voltage
01:3299mV 09:3299mV
02:3300mV 10:3298mV
03:3299mV 11:3299mV
04:3298mV 12:3299mV
05:3299mV 13:3299mV
06:3298mV 14:3299mV
07:3298mV 15:3299mV
08:3299mV 16:3299mV
51.69V 0.00A

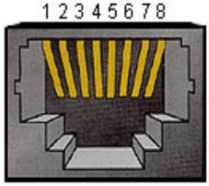
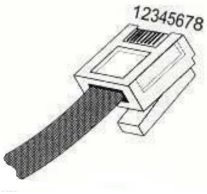

Current Event
Alarm :None
Protect :None
Fault :None


History Event
001 07.16 09:34 FUL
pLSW pOVP
002 07.16 09:34 pLSW
003 07.16 09:34 sUVP
004 07.12 17:35 eOTP
005 07.11 17:03 eOTP
006 07.11 14:38 eOTP
eOTP

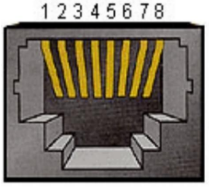

Set Protocol
01:PYLON
02:GROWATT
03:VICTRON
04:SMA
05:MUST
06:SOFAR
07:HOYMILES
Set Protocol
01:VOLTRONIC
02:SUNRAY
03:PYLON
04:SRNE
Set Protocol
CAN : PYLON
RS485: VOLTRONIC
Set Time
2025-09-30 16:50
Save
Cancel
Display Time
2025-09-30 16:48
Set Time
Select Language
1. English
2. العربية
3. فارسی

1.2.3 Communication Port Definition

1.2.3.1 CAN/RS485 to PCS

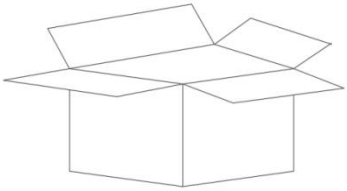
Port definitions	RJ45 Pin	Function
 	1	RS485-B
	2	RS485-A
	3	GND
	4	CAN-H
	5	CAN-L
	6	NC
	7	RS485-A
	8	RS485-B

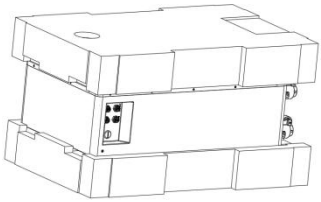
1.2.3.2 RS232 to PC

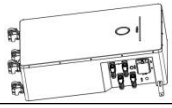
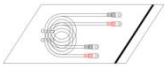
Port definitions	RJ45 Pin	Function
 	1	RS232-TX
	2	GND
	3	RS232-RX
	4	NC
	5	NC
	6	NC
	7	NC
	8	NC

2 Installation Guide

2.1 Checking Deliverables

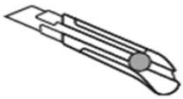
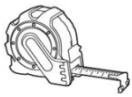
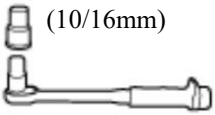
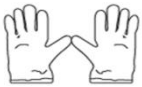




NO.	Pictures	Quantity	Description
1		1 pcs	Battery
2		2 pair	Power cable
3		1 pcs	Comm cable
4		1 pcs	Manual
5		1 pcs	Expansion Bolt
6		2 pcs	Wall Connector
7		2 pcs	Battery hanging bolt

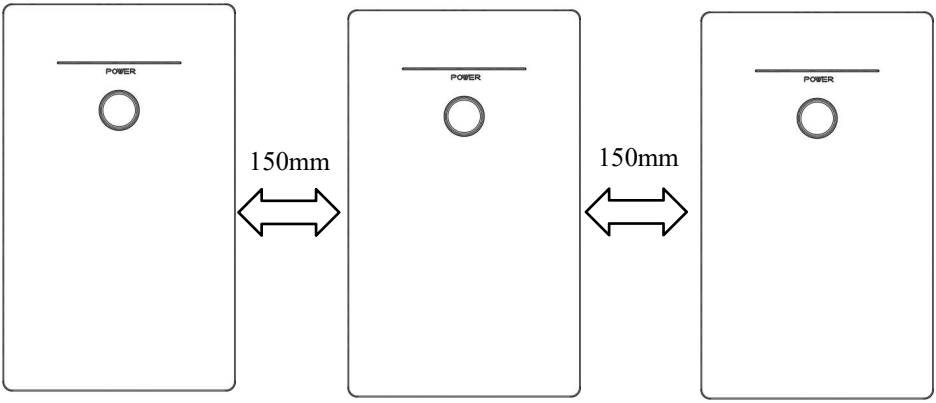
8		1 pcs	Drying agent

2.2 Tools

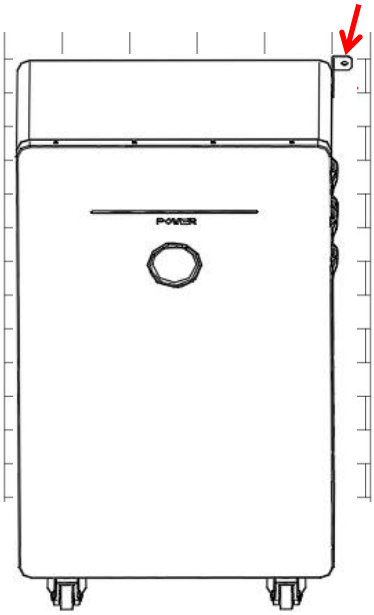
Tools			
Installation	Knife 	Measuring tape 	Socket wrench (10/16mm) 
	Hammer 	Cross Screwdriver 	Hammer drill 
Protection	ESD gloves 	Safety goggles 	Safety Shoes 

2.3 Installation Instructions

Minimum mounting distance requirement: (Wall Mounted)



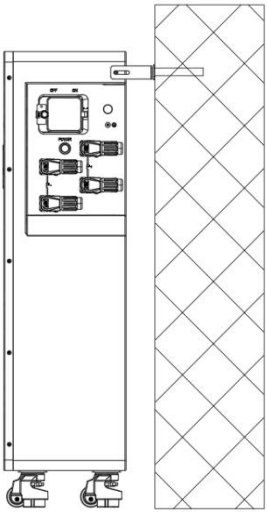
2.3.1 Installation Step



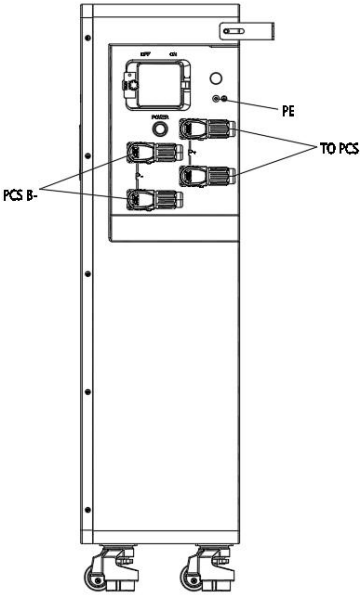
Step 1 place 512314 on the floor, close to wall.

Determine hole position using marker.

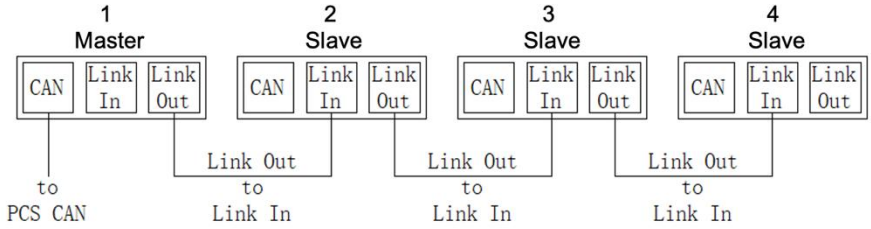
Step 2 drill hole on the wall,
fix wall connector using expansion bolt



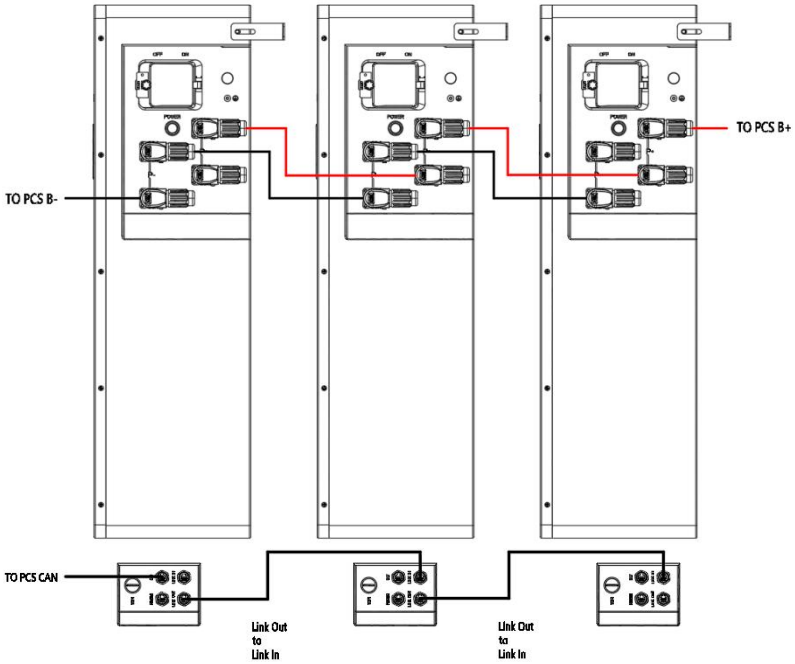
Step3 Connect PE cable & power cable.



Step 4 Connect communication cable.



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		H800*W480*D235(mm)
Weight		117.5KG (Wall Bracket Included)
IP Level		IP65

4 Maintenance

4.1 Recharge Requirements During Storage

Batteries should be stored in temperature between -10℃～ +45℃, and recharged regularly according to the following table with 0.2C (60A) current to 50% SOC after long time storage.

Recharge requirement during storage

Storage Temperature	Storage Relative Humidity	Storage Time	SOC
Below -10℃	/	Not Allowed	/
-10~0℃	5%~70%	≤1 months	30%≤SOC≤60%
0~25℃	5%~70%	≤12 months	30%≤SOC≤60%
25~35℃	5%~70%	≤6 months	30%≤SOC≤60%
35~45℃	5%~70%	≤1 months	30%≤SOC≤60%
Above 45℃	/	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

Attention：Disposal of batteries should follow local regulations.