

USER MANUAL
512100 LFP Battery



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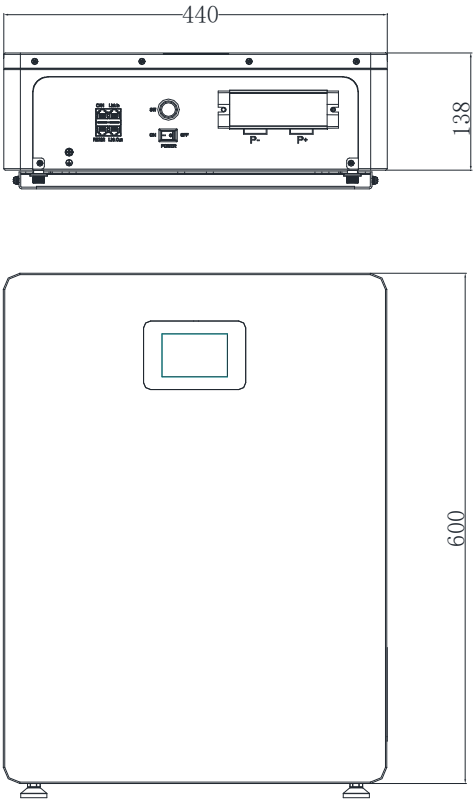
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1 Product Overview

512100 is a 51.2V 100Ah Lithium battery that can be wall mounted or floor mounted.

Note: 512100 **is NOT suitable for life-sustaining medical devices.**

1.1 Appearance



1.2 Switch, LCD & Communication Port

1.2.1 Switch ON/OFF

1、Switch ON

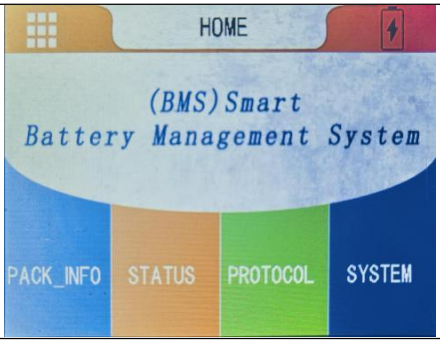
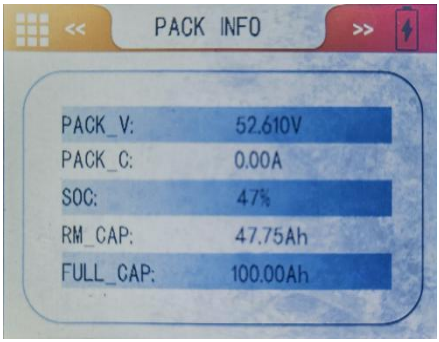
For single 512100 , switch ON POWER button, then long press (3 sec) SW button.

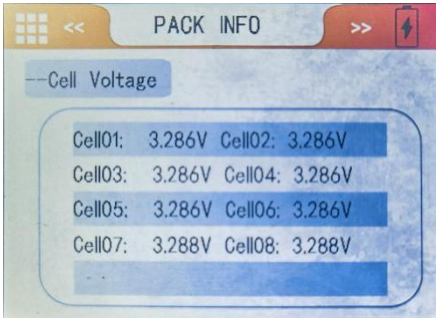
For multiple 512100 connected in parallel, switch ON POWER buttons of all batteries, then long press (3 sec) SW button of master battery.

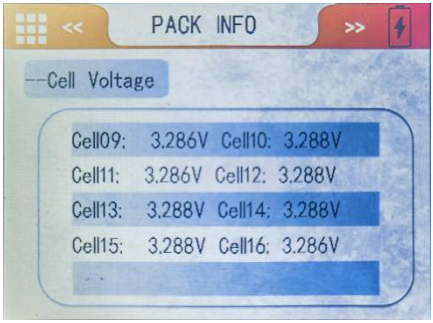
2、Switch OFF

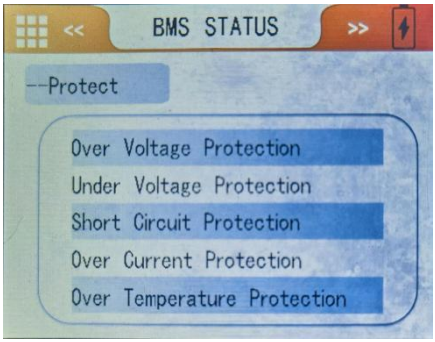
Switch OFF POWER button(s) of all batteries.

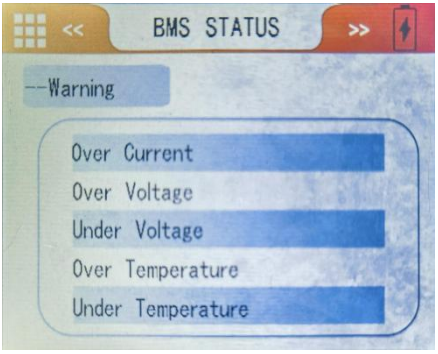
1.2.2 Color touchscreen

<table>
<tr>
<td>1) Swipe the screen to see “PACK LNFO”，“STATUS”，“PROTOCOL”，“SYSTEM”。
2) If current protocol is incorrect, tap “PROTOCOL” checkbox and select correct protocol。
3) The communication protocol password is 123456</td>
<td>
</td>
</tr>
<tr>
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<td>
</td>
</tr>
</table>


PACK INFO
--Cell Voltage
Cell01: 3.286V Cell02: 3.286V
Cell03: 3.286V Cell04: 3.286V
Cell05: 3.286V Cell06: 3.286V
Cell07: 3.288V Cell08: 3.288V


PACK INFO
--Cell Voltage
Cell09: 3.286V Cell10: 3.288V
Cell11: 3.286V Cell12: 3.288V
Cell13: 3.288V Cell14: 3.288V
Cell15: 3.288V Cell16: 3.286V


BMS STATUS
--Protect
Over Voltage Protection
Under Voltage Protection
Short Circuit Protection
Over Current Protection
Over Temperature Protection

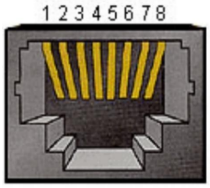
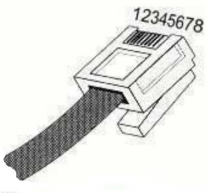

BMS STATUS
--Warning
Over Current
Over Voltage
Under Voltage
Over Temperature
Under Temperature


PROTOCOL
CurrentProtocol:
--RS485: PYLON
--CAN: PYLON

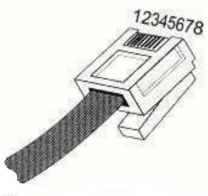

SYSTEM SET
PACK_SN:
SFT_VER: CTP35H-V2.08A
--Language

1.2.3 Communication Port Definition

1.2.3.1 CAN/RS485 to PCS

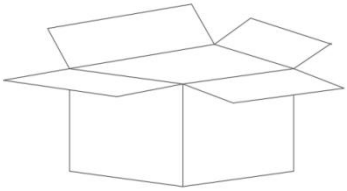
Port definitions	RJ45 Pin	Function
 	1	RS485-B
	2	RS485-A
	3	GND
	4	CAN-H
	5	CAN-L
	6	NC
	7	RS485-A
	8	RS485-B

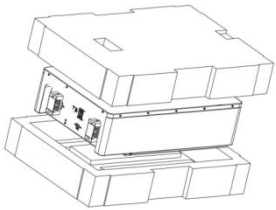
1.2.3.2 RS232 to PC

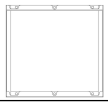
Port definitions	RJ45 Pin	Function
 	1	RS232-TX
	2	GND
	3	RS232-RX
	4	NC
	5	NC
	6	NC
	7	NC
	8	NC

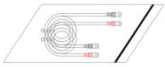
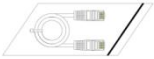
2 Installation Guide

2.1 Checking Deliverables

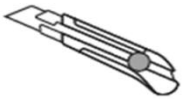
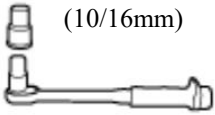
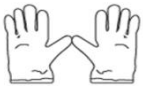




NO.	Pictures	Quantity	Description
1		1 pcs	Battery
2		4 pcs	Battery hanging bolt
3		4 pcs	Battery hanger
4		1 pcs	Wall Mount
5		2 pcs	Wall Mount Bottom Bolt
6		6 pcs	Expansion Bolt
7		1 pcs	cover

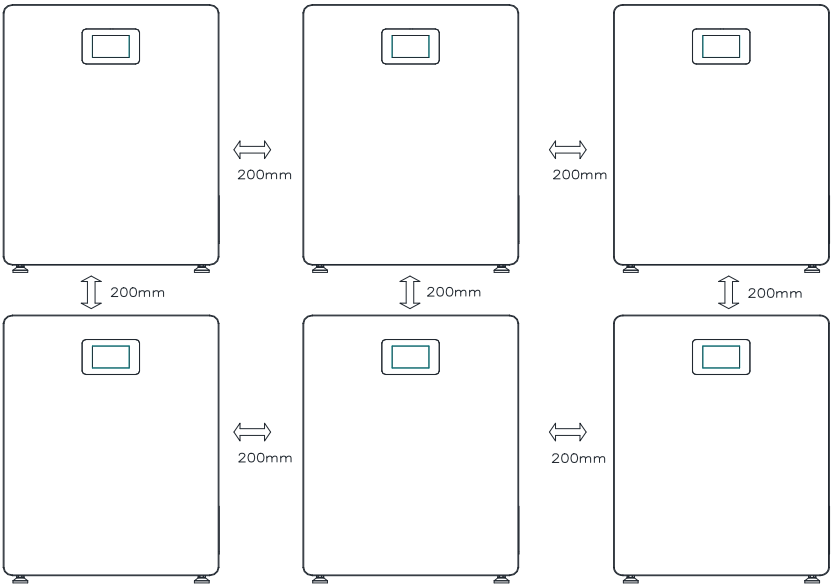
8		2 pcs	Cover bolt
9		1 pair	Power cable
10		1 pcs	Comm cable

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 (Floor Mounted)

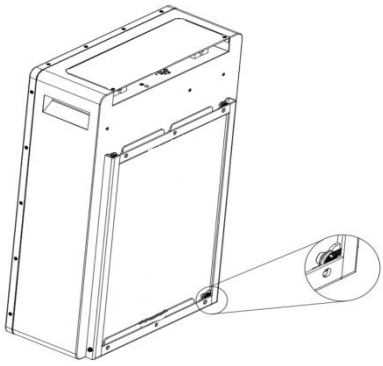
Step 1

put 512100 on floor then start from Step 1

2.3.2 Installation Step (Wall Mounted)

Step 1

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



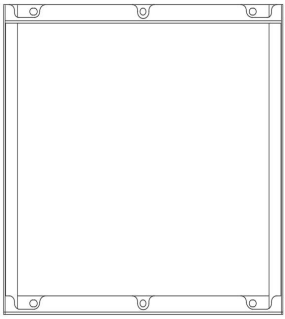
Step 2

Fix top & bottom wall brackets to the wall.



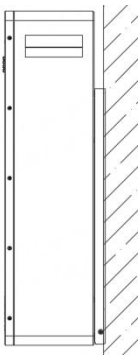
Step 3

Fix wall mount to the wall
using expansion bolt.



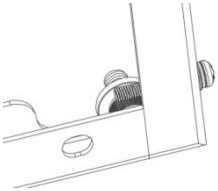
Step 4

Hang 512100 battery on wall mount.



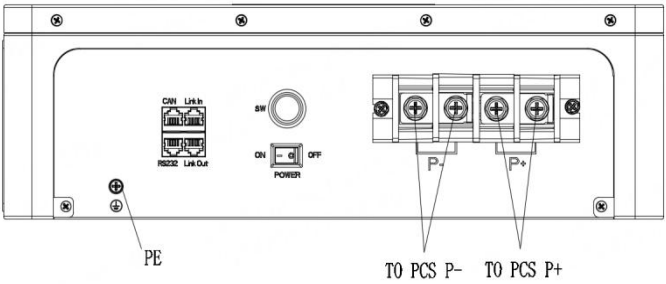
Step 5

Install 2 pcs wall mount bottom bolts.

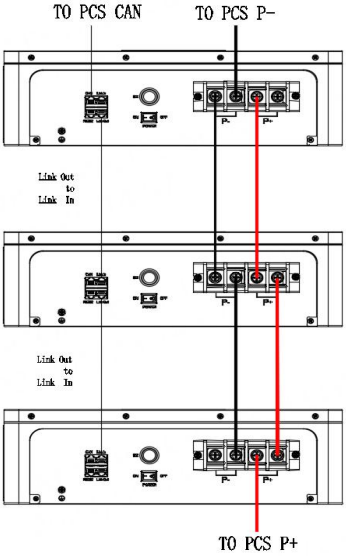


Step 6

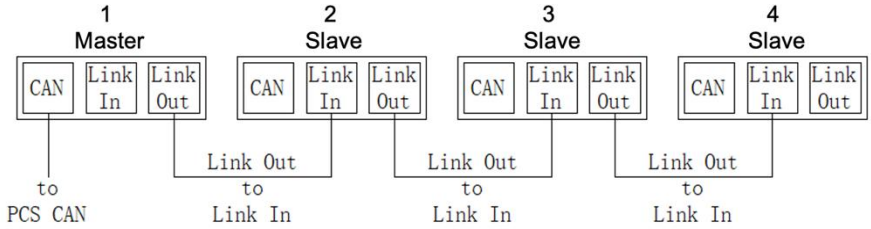
Connect PE cable & power cable.



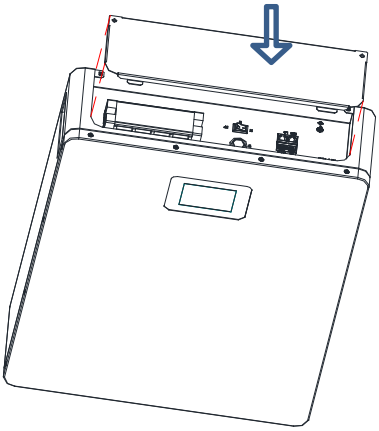
Step 7 Refer to the following diagram when multiple batteries are connected in parallel:



Step 8 Connect communication cable.



Step 9 Install cover using cover bolts.



3 Technical Specifications

Basic Project		Parameter
Nominal Voltage		51.2V
Nominal Capacity		100Ah
Nominal Energy		5120Wh
Charge Voltage		56.16V
Charge Current		50A
Discharge Voltage Range		45.6V～56.16V
Discharge Current		100A
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		H600*W440*D138(mm)
Weight		47.2KG (Wall Bracket Included)
IP Level		IP20

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 (20A) 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.