USER MANUAL
LW-512300-G4 LFP Battery

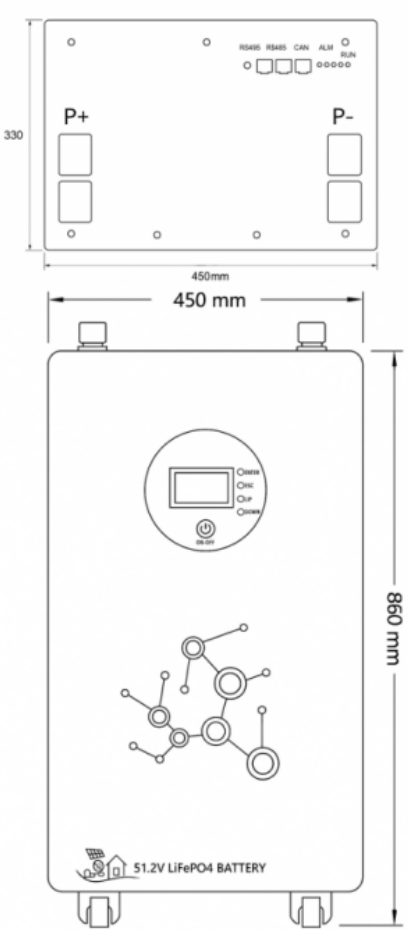
Contents

1 Product Overview

LW-512300-G4 is a 51.2V 300Ah Lithium battery that can be floor mounted

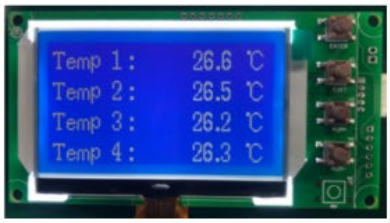
Note: LW-512300-G4 **is NOT suitable for life-sustaining medical devices.**

1.1 Appearance



1.2 LCD Display & Communication Port

1.2.1 LCD Display



Key introdution

ENTER——, RETURN——, Page Up——, Page Down——

Each item starts with a number, where "flashing number" indicates the current cursor position, and press Page. Up or Page Down keys can move the cursor position up and down; Press ENTER to enter the corresponding page.

Press the RETURN key to return to the previous directory.

The backlight of the display screen goes out in the sleep state. Press any key to light the backlight of the display screen.

Press NUM- key in the main page to ENTER the protocol switching interface, select the corresponding protocol, and press enter for 3S. Jump to SUCCESS, and the switch is complete.

-->CAN PAGE 1
PN GDLT: PYLON
GRWT: GROWATT
VCTR: Victron
SMA SF: SMA

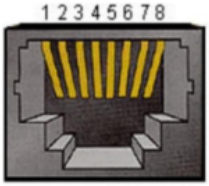
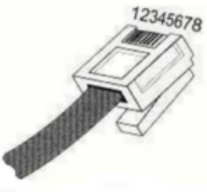
-->CAN PAGE 2
GINL: Solis
STUD: STUD

Pack V	Total battery pressure	**Cell V**	Cell voltage query
Current	Current	**Temperature**	Temperature query
SOC	Remaining capacity	**Warn**	Alarm query
Warn	Alert	**Capacity**	Capacity query

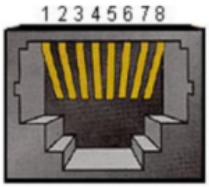
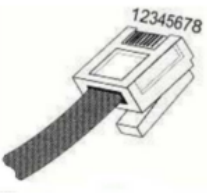
CellV16	Cell voltage value	**Tem1-Tem4**	Cell temperature
Envir-temp	Ambient temperature	**PCB-temp**	Power temperature
OV-Warn	High voltage warning	**OT-Warn**	High temp warning
OV-Prot	Overvoltage protection	**OT-Prot**	Over temp protection
UV-Warn	Low-voltage warning	**UT-Warn**	Low temp warning
UV-Prot	Undervoltage protection	**UT-Prot**	Under-temp protection
OC-Warn	Overcurrent warning	**SCP**	Short circuit protection
OC-Prot	Overcurrent protection	**FCC**	Battery capacity
CAPA-Warn	Remaining capacity alarm	**Rm**	The remaining capacity
OFF-USE	Failure warning	**Cycle Time**	Cycles

1.2.2 Communication Port Definition

1.2.2.1 CAN/RS485 to PCS

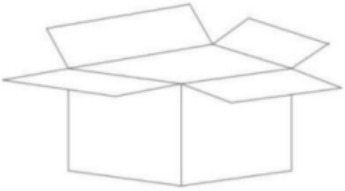
Port definitions	RJ45 Pin	Function
 	1	RS485-B
	2	RS485-A
	3	GND
	4	CAN-H
	5	CAN-L
	6	GND
	7	RS485-A
	8	RS485-B

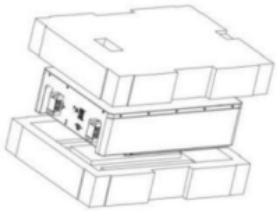
1.2.2.2 RS485 Battery Parallel Communication

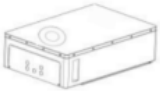
Port definitions	RJ45 Pin	Function
 	1	RS485-B
	2	RS485-A
	3	GND
	4	Internal Communication
	5	Internal Communication
	6	GND
	7	RS485-A
	8	RS485-B

2 Installation Guide

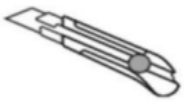
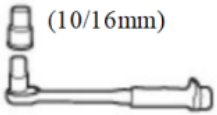
2.1 Checking Deliverables

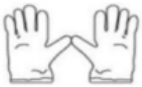




NO.	Pictures	Quantity	Description
1		1 pc	Battery
2		1 pair	Power cable
3		1 pc	Comm cable
4		1 pc	User Manual

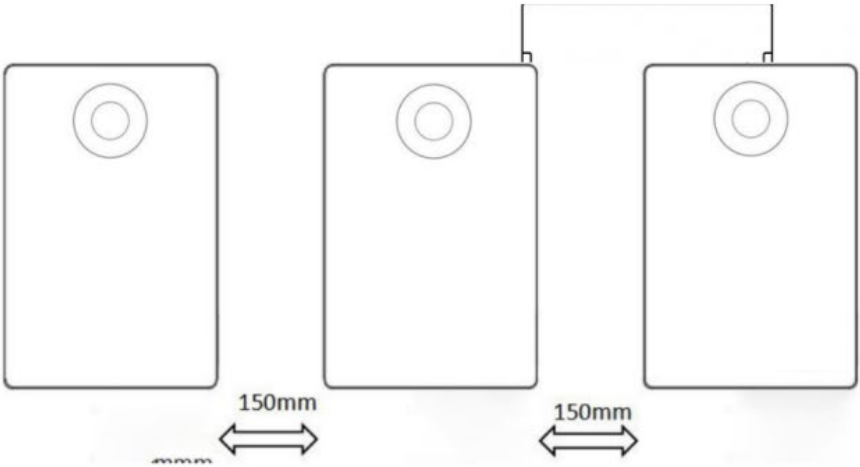
2.2 Tools

Tools			
Installation	Knife 	Measuring tape 	Socket wrench (10/16mm) 
	Hammer 	Cross Screwdriver 	Hammer drill 

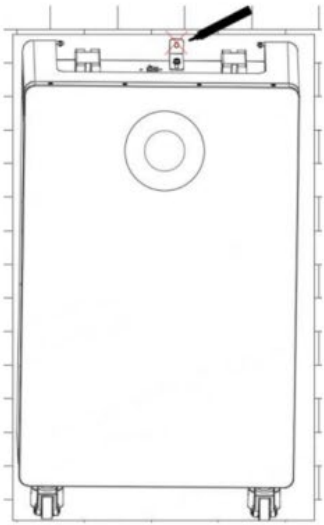
Protection	ESD gloves 	Safety goggles 	Safety Shoes 

2.3 Installation Instructions

Minimum mounting distance requirement:



2.3.1 Installation Step



Step 1

place LW-512314 on the floor, close to wall.

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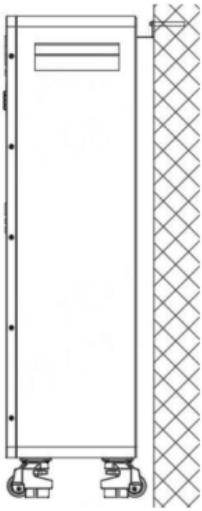
Step 2

Push the LW-512314 close to the wall and fix it.

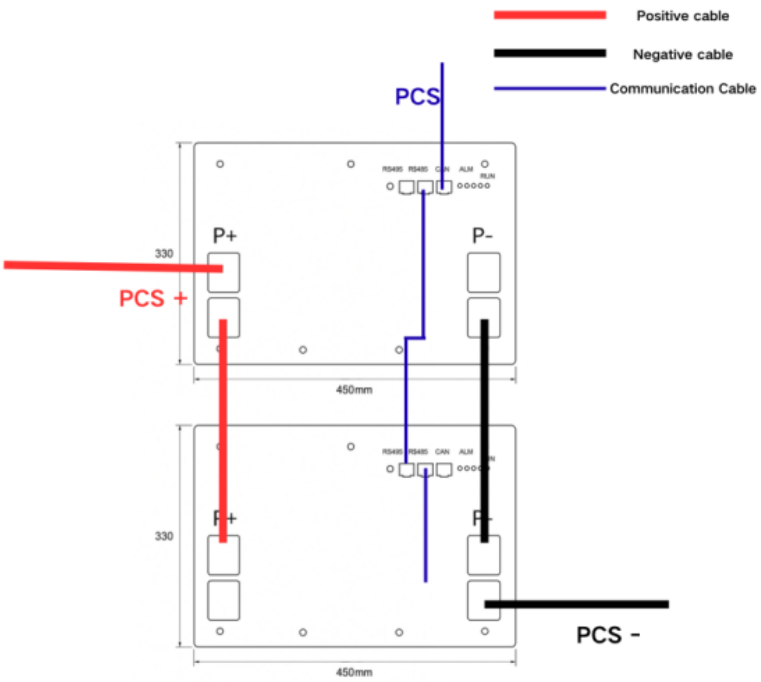


Step 3

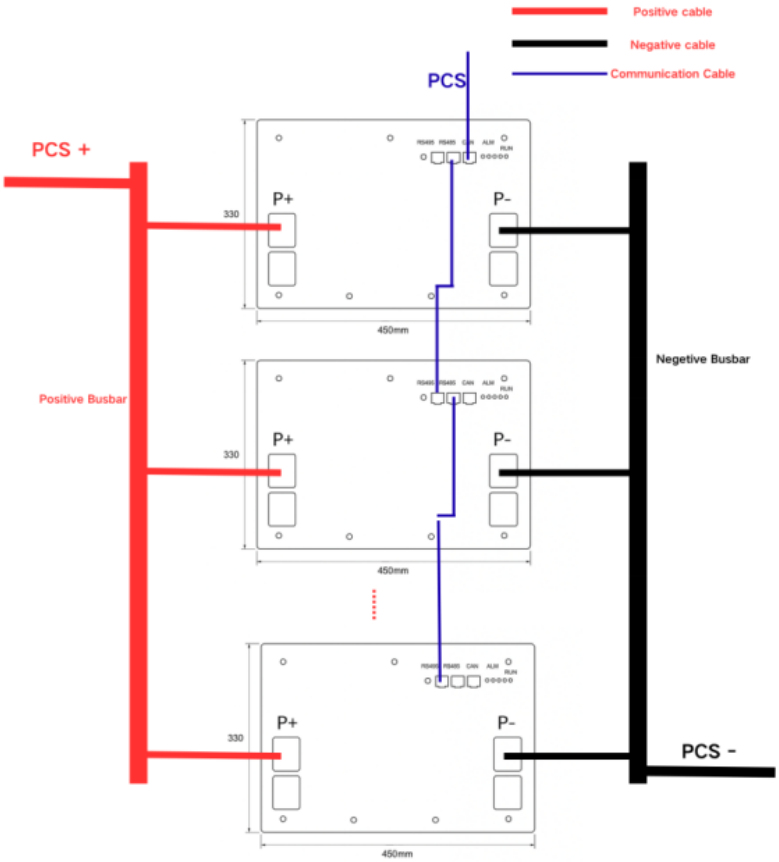
Connect power cable & communication cable.

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

When the number of batteries is less than 2



When the number of batteries is more than 2



3 Technical Specifications

Basic Project		Parameter
Nominal Voltage		51.2V
Nominal Capacity		280Ah
Nominal Energy		15076.8Wh
Charge Voltage		58.4V
Charge Current		200A
Discharge Voltage Range		43.2V～58.4V
Discharge Current		200A
Communication Mode		CAN/RS485
Working Temperature	Charge	-10℃~55℃
	Discharge	-15℃~55℃
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		H860*W450*D330(mm)
Weight		129KG (Wall Bracket Included)
IP Level		IP21

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.