USER MANUAL

LVTS-256280 Lithium Battery





Contents

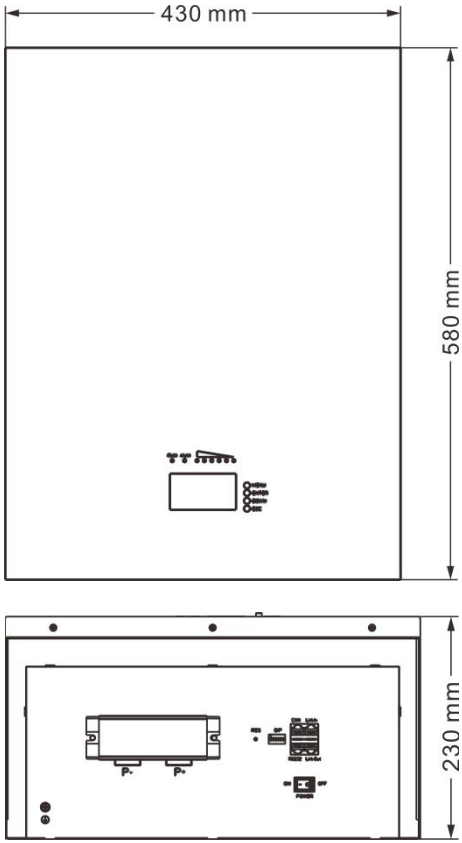
1 Product Overview 1
1.1 Appearance 1
1.2 Switch, LCD, LED & Communication Port 2
1.2.1 DIP Switch 2
1.2.2 Switch ON/OFF 3
1.2.3 LCD Display 3
1.2.4 LED Definition 4
1.2.5 Communication Port Definition 6
2 Installation Guide 7
2.1 Checking Deliverables 7
2.2 Tools 8
2.3 Installation Instructions 9
2.3.1 Installation Step 9
3 Technical Specifications 13
4 Maintenance 14
4.1 Recharge Requirements During Storage 14
4.2 Recharge Requirements When Over Discharged 14

1 Product Overview

LVTS-256280 is a 25.6V 280Ah Lithium battery that can be wall mounted or floor mounted.

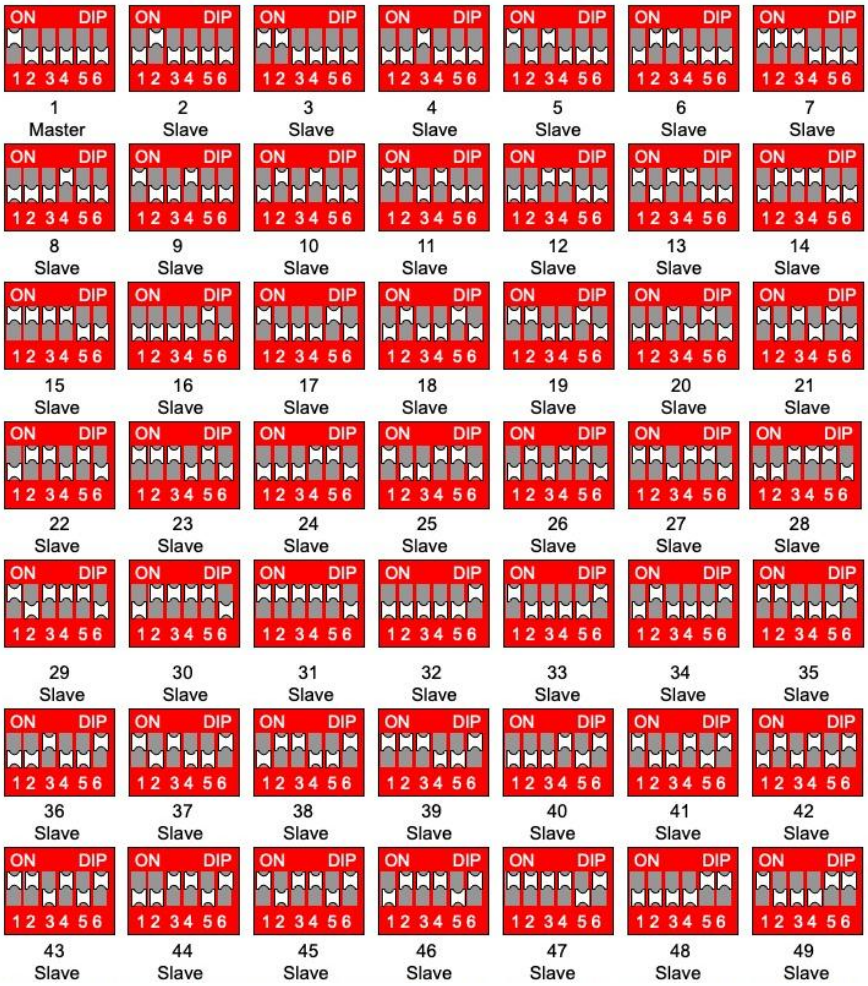
Note: LVTS-256280 **is NOT suitable for life-sustaining medical devices.**

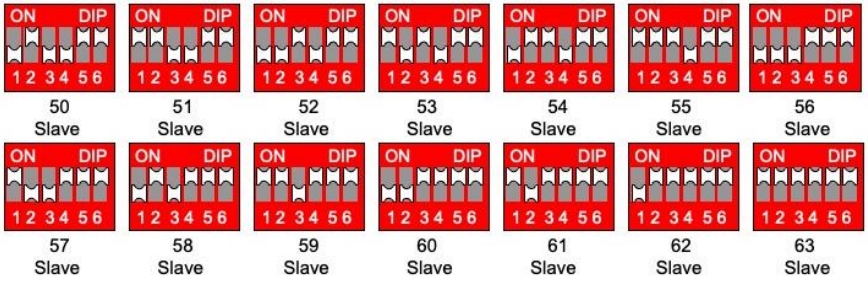
1.1 Appearance



1.2 Switch, LCD, LED & Communication Port

1.2.1 DIP Switch





1.2.2 Switch ON/OFF

1、Switch ON

For single LVTS-256280, set DIP switch to 1, then switch ON POWER button.

For multiple LVTS-256280 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 LCD Display

Press “MENU” button to main menu page.

Press “ESC” button to return to previous menu.

Every line is started with “>>” or “--”, “>>” is the current cursor.

Press “DOWN” button to move cursor.

If a line is ended with “>>”, you can press “ENTER” button to see more information.

If you don’t press any button, LCD display will switch OFF after 1 min to save energy. You can press any button to switch ON LCD display.

1.2.4 LED 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

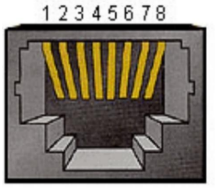
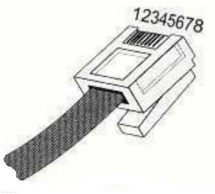
STATUS		DISCHARGE							
		L8 ●	L7 ●	L6 ●	L5 ●	L4 ●	L3 ●	L2 ●	L1 ●
SOC (%)	0～17	Flash 3	OFF	OFF	OFF	OFF	OFF	OFF	ON
	18～33			OFF	OFF	OFF	OFF	ON	ON
	34～50			OFF	OFF	OFF	ON	ON	ON
	51～66			OFF	OFF	ON	ON	ON	ON
	67～83			OFF	ON	ON	ON	ON	ON
	84～100			ON	ON	ON	ON	ON	ON

Work Status

STATUS		RUN	ALM	SOC						DESCRIPTION
		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 volt	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 volt	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

1.2.5 Communication Port Definition

1.2.5.1 CAN/RS485 to PCS

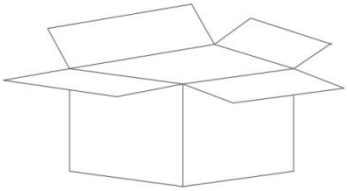
Port definitions	RJ45 Pin	Function
 	1	RS485-B
	2	RS485-A
	3	GND
	4	CAN-H
	5	CAN-L
	6	NC
	7	RS485-A
	8	RS485-B

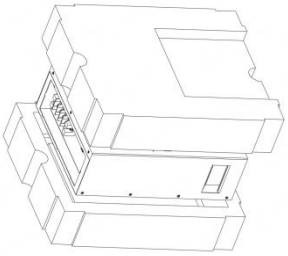
1.2.5.2 RS232 to PC

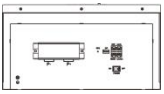
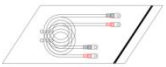
Port definitions	RJ45 Pin	Function
 	1	RS232-TX
	2	GND
	3	RS232-RX
	4	NC
	5	NC
	6	NC
	7	NC
	8	NC

2 Installation Guide

2.1 Checking Deliverables

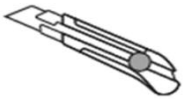
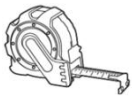
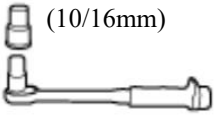
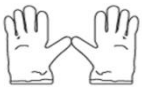




NO.	Pictures	Quantity	Description
1		1 pcs	Battery
2		1 pcs	Bracket
3		1 pcs	Comm cable
4		1 pair	Power cable
5		4 pcs	Expansion Bolt

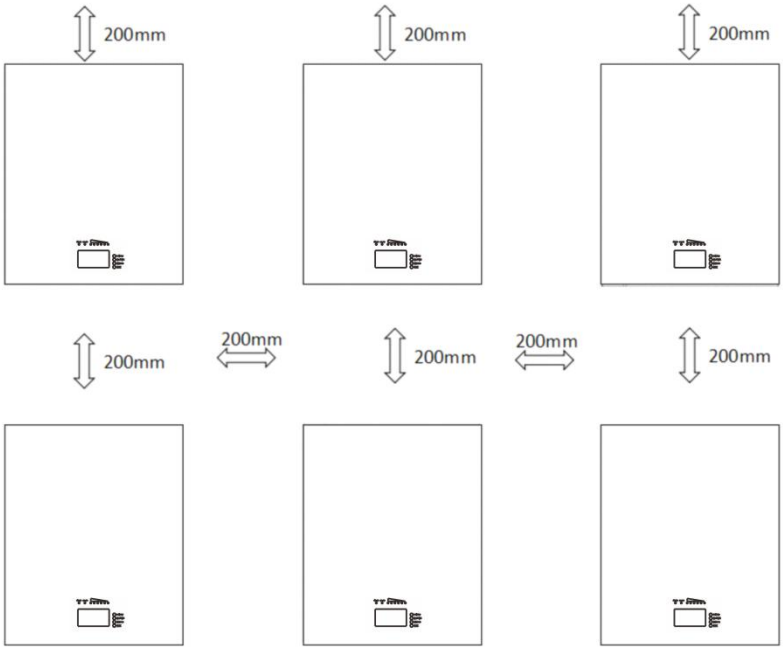
6		2 pcs	Bottom Wall Bracket Bolt

2.2 Tools

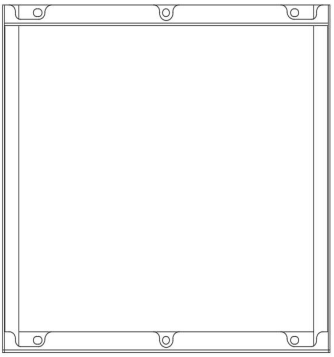
Tools			
Installation	Knife 	Measuring tape 	Socket wrench (10/16mm) 
	Hammer 	Cross Screwdriver 	Hammer drill 
Protection	ESD gloves 	Safety goggles 	Safety Shoes 

2.3 Installation Instructions

Minimum mounting distance requirement: (Wall Mounted)



2.3.1 Installation Step



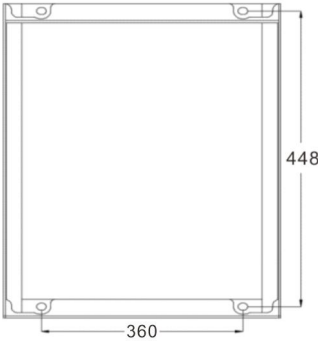


Step 1

Drill holes in the wall according to cardboard.

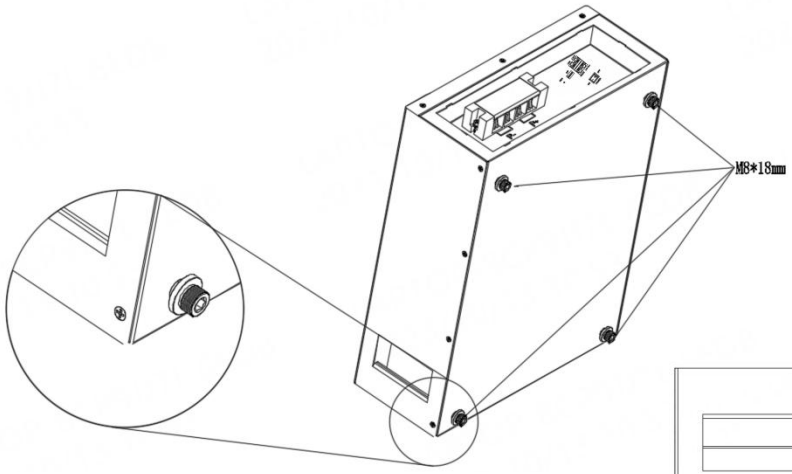
Step 2

Fix top & bottom wall brackets to the wall.



Step 3

Install the hanging bracket.



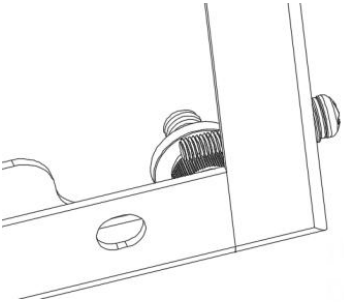
Step 4

Hang LVTS-256280 battery on wall brackets.



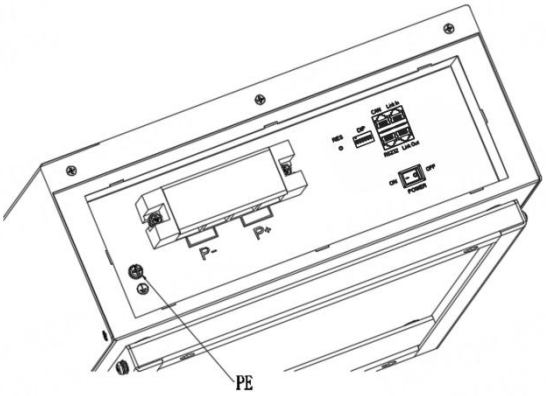
Step 5

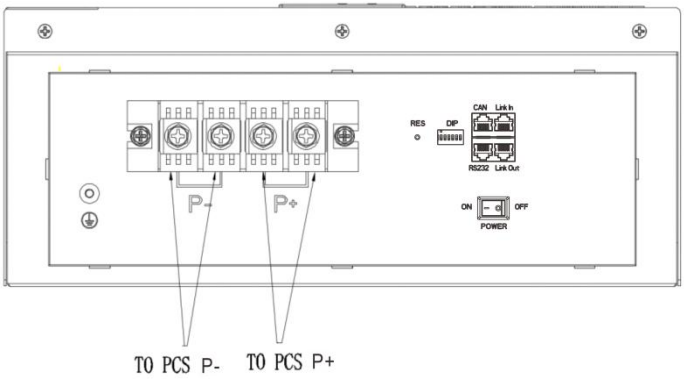
Install 2 pcs bottom bracket bolt.



Step 6

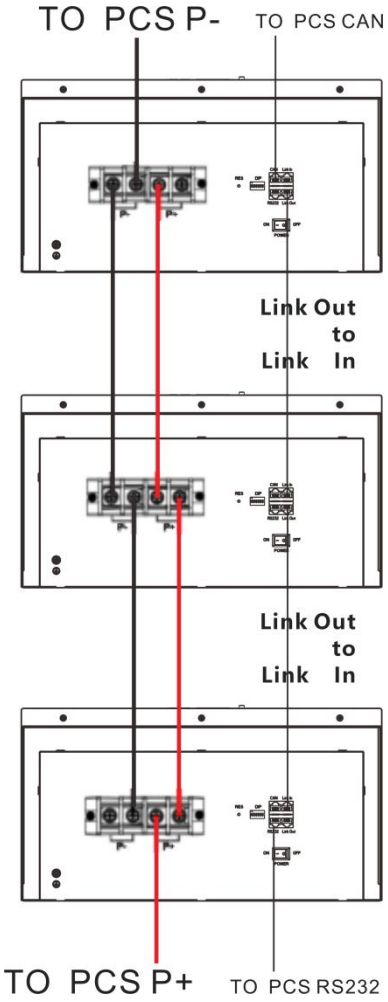
Connect PE cable & power cable.





Step 7

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



3 Technical Specifications

Basic Project		**Parameter**
Nominal Voltage		25.6V
Nominal Capacity		280Ah
Nominal Energy		7168Wh
Charge Voltage		28.4V
Charge Current		140A
Discharge Voltage Range		22.8V～28.4V
Discharge Current		200A
Communication Mode		/
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		H580*W430*D230(mm)
Weight		62.5KG
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.