



USER MANUAL

LVTS-5220-HV LFP Battery



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1 Product Overview

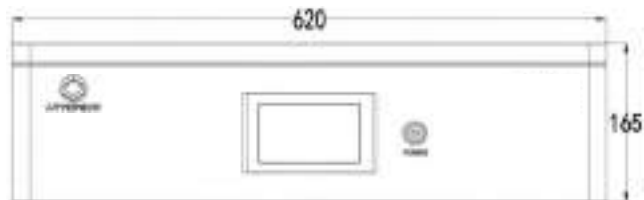
LVTS-5220-HV is a stackable 51.2V 102Ah LFP (Lithium Iron Phosphate) battery that can be series connected to form a high voltage (100-600V) LFP battery system.

Note: LVTS-5220-HV is **NOT** suitable for life-sustaining medical devices.

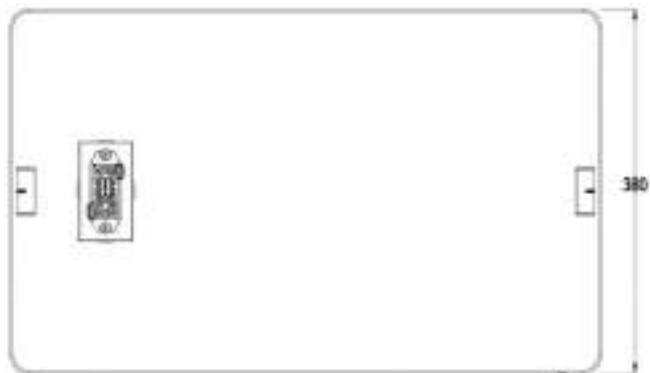
1.1 Appearance

1.1.1 LVTS-5220-HV Main control

Front View

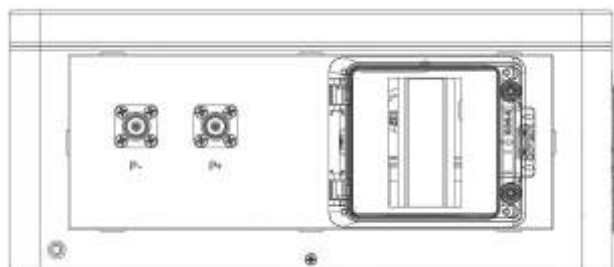


Top View

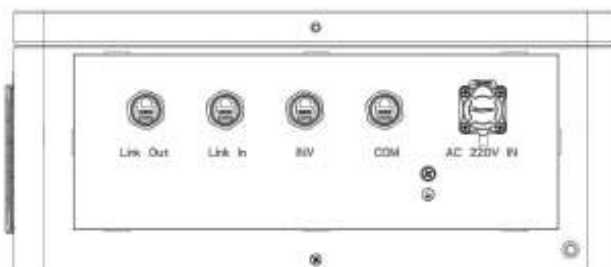




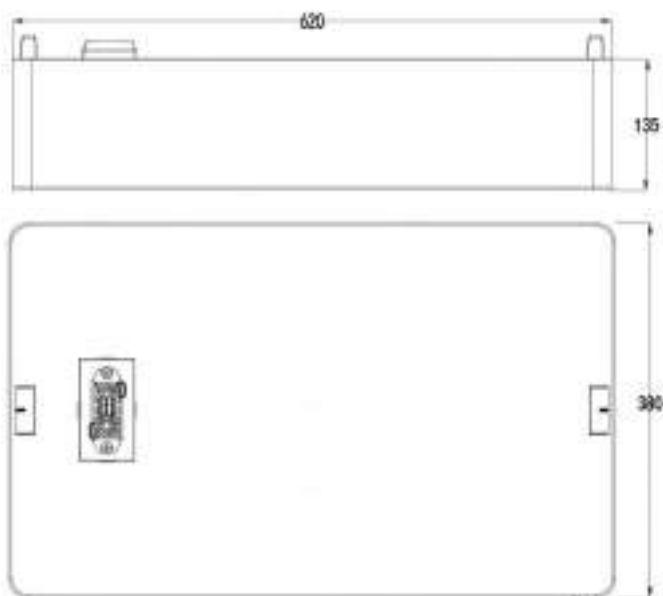
Left View



Right View



1.1.2 LVTS-5220-HV Battery



1.2 Button, Touchscreen & Communication Port

1.2.1 Switch ON/OFF

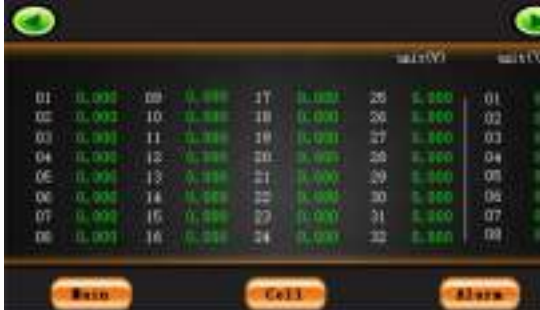
Switch ON:

Switch ON Circuit Breaker, then long press (>3 sec) POWER button.

Switch OFF:

Long press long press (>3 sec) POWER button, then Switch OFF Circuit Breaker.

1.2.2 Touchscreen

	Main Page
	Cell Page Tap “Cell” button to see cell voltage information



	BMU Page Tap “BMU” button, then select correct BmuNums (number of 5220-H connected in series) and PcsType (inverter protocol)
	Alarm Page1 Tap “Alarm” button on Main Page to see battery alarm information
	Alarm Page2

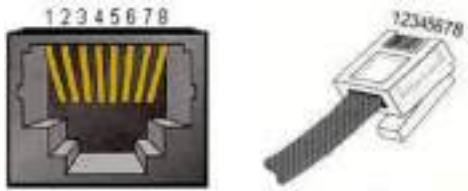


1.2.3 Communication Port Definition

1.2.3.1 INV CAN to PCS

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

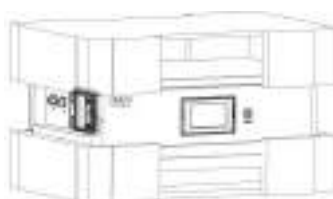
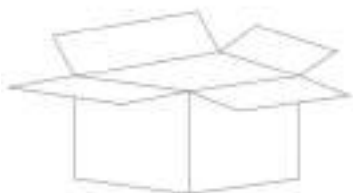
1.2.3.2 COM CAN to PC

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



2 Installation Guide

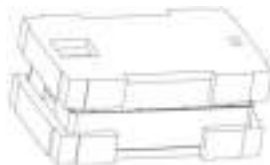
2.1 Checking Deliverables



NO.	Pictures	Quantity	Description
1		1 pc	LVTS-5220-HV Main control
2		1 pc	Base
3		2 pcs	bolt
4		1 pair	Power cable
5		1 pc	Comm Cable & PE Cable
6		1 pc	User Manual
7		1 pc	AC In Cable

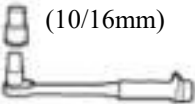


8		2 pcs	Wall Connector
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NO.	Pictures	Quantity	Description
1		1 pc	LVTS-5220-HV Battery
2		2 pcs	bolt

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 Instruction

2.3.1 Installation Step

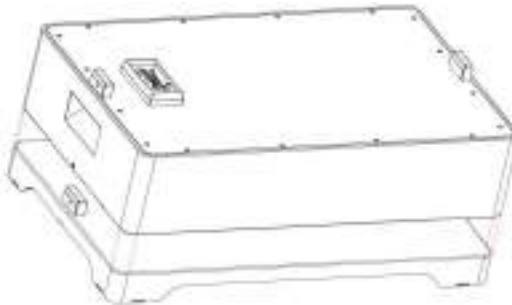
Step 1

Place the base on the ground



Step 2

Fit LVTS-5220-HV battery on the base (max 12pcs LVTS-5220-HV Battery per stack)



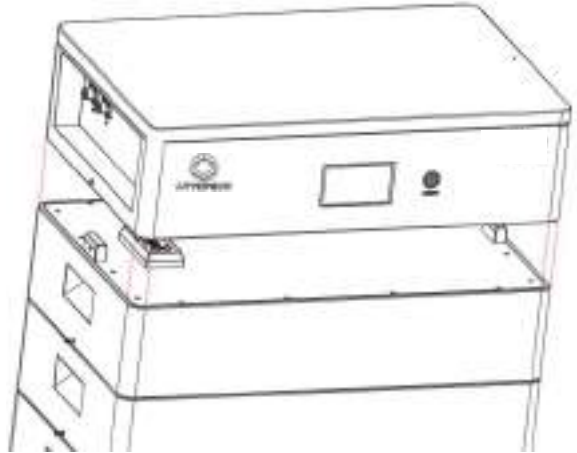
Step 3

Install bolts on both sides to fix LVTS-5220-HV battery on base

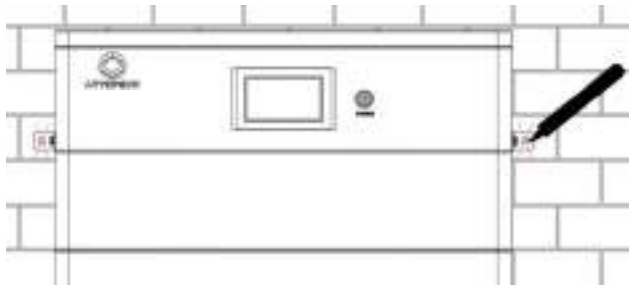


Step 4

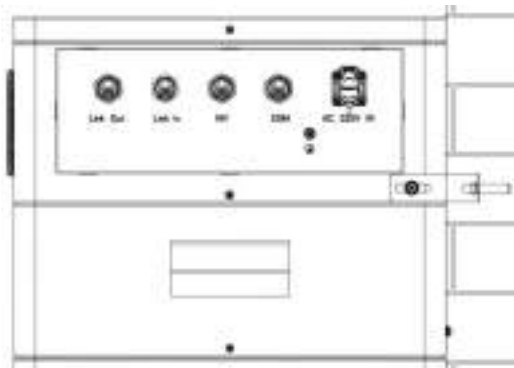
After fitting all LVTS-5220-HV battery, fit main control on battery, install bolts on both sides to fix main control on LVTS-5220-HV battery

**Step 5**

Install wall connectors, use a marker pen to mark the expansion bolt positions, then drill holes in the wall.

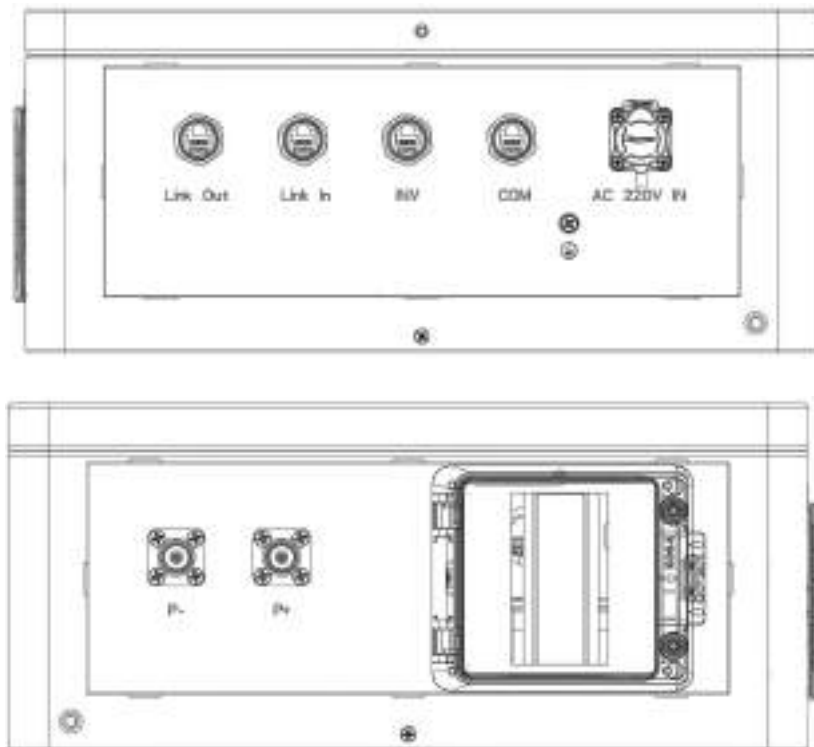
**Step 6**

Use expansion bolts to fix LVTS-5220-HV to the wall to prevent tip-overs.



**Step 7**

Connect PE cable first, then connect power cable & com cable to PCS.



3 Technical Specifications (LVTS-5220-HV12)

Model		LVTS-5220-HV12
Nominal Voltage		614.4 V
Nominal Capacity		102 Ah
Nominal Energy		62.64 kWh
Operating Voltage		499.2 – 681.6 V
Charge Current		100A
Discharge Current		100A
Communication Mode		CAN/RS485
Working	Charge	0°C ~ 55°C
Temperature	Discharge	-20°C ~ 55°C
Storage	Short Term (within 1 month)	-10°C ~ 45°C
Temperature	Long Term (within 1 year)	0°C ~ 35°C
Storage Humidity		<95% RH
Cell Type		LiFePO ₄ , Lithium Iron Phosphate
Size		H1877*W620*D380(mm)
Weight		560KG (Wall Bracket Included)
IP Level		IP65

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 (20A) 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.