



Version: 1.5



USER MANUAL

Power Lite-U Lithium Battery System

HISTORY

Date	Revision	Description	Owner
2025-04-24	V1.0	Initial Version	TangXX
2025-07-11	V1.1	Update the circuit breaker	TangXX
2025-07-28	V1.2	Update accessory description	TangXX
2025-12-04	V1.3	Update the wiring diagram of the communication cable. Other minor adjustments.	Vera WU
2026-01-29	V1.4	Updated parameters; added DIP switch configuration instructions.	Vera WU
2026-04-02	V1.5	Parameter table updated	Vera WU

Contents

1. Detailed Specifications.....	4
1.1 Product Parameter.....	4
2. Preface.....	5
3. Safety.....	6
3.1 Important Safety Instructions.....	6
3.2 Installation Requirements.....	7
3.3 Grounding Requirement	7
3.4 Personal Safety.....	7
3.5 Equipment Security.....	7
4. Unpacking and Storage.....	8
4.1 Scope of Delivery	8
5. Product Overview.....	9
5.1 Dimensions.....	9
5.2 Interfaces and Functions	10
6. Mounting	11
6.1 Installation Environment Requirements.....	11
6.2 Multiple Installation Methods.....	11
6.3 System Introduction.....	14
6.4 DC Cable Instruction	14
6.5 DC Cable Connection.....	16
6.6 Ground Cable Connection.....	17
6.7 Communication Cable	18
6.8 Dry Contact Protection.....	18
6.9 Protocol DIP Switch Settings.....	19
7. Power On and Off	21
7.1 System Power On.....	21
7.2 System Power Off	22
7.3 Maintenance	24
8. Transportation and Storage.....	26
8.1 Transportation.....	26
8.2 Storage	26
9. Recycling Disposal.....	27
9.1 Decommissioning.....	27
9.2 Disposal	27

1 Detailed Specifications

1.1 Product Parameters

Item Name	Specification	Remark
Nominal Capacity	100 Ah	
Nominal Energy	5.12 kWh	
Usable Energy ¹	5 kWh	
Nominal Voltage	51.2 V	
Rated Current	0.6C, 60 A	
Working Voltage Range	43.2 V to 58.4 V	
Max. Parallel Quantity	Max. 32 Sets in parallel, 163.84 kWh	
Rated Charging Current	0.6C, 60 A	
Max. Charging Continuous Current	0.6C, 60 A	
Rated Discharge Current	0.6C, 60 A	
Max. Discharge Continuous Current	1C, 100 A	
Battery Max. Charge / Discharge Power	3.0 kW / 5.12 kW	
Peak Discharge Current / Power	105 A / 5.37 kW, 1 min	
Recommended Power	1.95 kW	
Available SOC Range	0% to 100%	
SOC Transportation Range	50%	
Dimensions [W×D×H]	Width: 440 (±5) mm / 17.32 in Depth: 530 (±5) mm / 20.87 in Height: 132 (±5) mm / 5.20 in	
Weight	~ 44.5 kg	
Operating Temperature ²	Charge: 0 °C to 55 °C Discharge: -15 °C to 55 °C	With Heating Function: Charge: -15 °C to 55 °C Discharge: -15 °C to 55 °C
Storage Temperature ³	-15 °C to 55 °C	
Working Humidity	< 95% RH (non-condensing)	
Altitude ⁴	≤ 2,000 m / 78.74 in	
Communication	CAN, RS485, Dry Contact, Wi-Fi	Wi-Fi Stick Optional
Certifications	UN 38.3 / UL1973 / UL9540A / UL9540 / IEC 61000 / IEC 62619	
Designed Cycle Life (25 °C ± 2 °C)	6,000 Cycles	0.5C / 80%DoD / 80%SOH / 1 cycle per day
IP Rating	IP20	
Cooling	Natural Cooling	
Heating Power	205 W	Optional
Fire Protection	Yes	Optional
Emergency Stop Function	Yes	External wiring required
Environment Protection Standard	RoHS	

¹ Test Conditions, 100% DoD, 0.2C charge and discharge at 25°C ± 3°C for battery system at beginning of life (BOL). System usable energy may vary with different inverters.

² Recommended operating temperature: 10 °C to 30 °C.

³ Recommended storage temperature: 10 °C to 30 °C.

⁴ Recommended working height is less than 2,000 m / 78.74 in, and the max. working height is 3,000 m / 118.1 in.

※ Information is subject to change without notice.

2 Preface

About This Manual

This manual covers the installation, electrical connection, and commissioning of the Power Lite-U Battery System. Please first read the manual and related documents carefully before using the product and store it in a place where installation, operation and Maintenance personnel can access it at any time. The illustration in this user manual is for reference only. This user manual is subject to change without prior notice. (Specific please in kind prevail.)

Target Group

Power Lite-U Battery System must be installed by professional electrical engineers who have obtained relevant qualifications.

Scope

This manual is applicable to the following Energy storage system:

- L051100-B

Conventions

The following safety instructions and general information are used within this user manual.

 DANGER	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
 WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
 NOTICE	Indicates a situation which, if not avoided, can result in property damage.
 NOTE	Information that is important for a specific topic or goal, however not related to safety.

3 Safety

3.1 Important Safety Instructions

The product has been designed and tested strictly according to the international safety requirements. As with all electrical or electronic devices, there are residual risks despite careful construction. To prevent personal injury and property damage and to ensure long-term operation of the product, read this section carefully and observe all safety information at all times.

 DANGER	Danger to life due to electric shock where surge protection is not used! If there is no surge protection, a voltage surge can be conducted into the building and to other connected devices in the same system through power cables, network cables or other types of cable. Touching live parts and cables may result in death or lethal injury due to electric shock. • Ensure all devices in the same system and the inverter are integrated within existing surge protection systems/devices. • Refer to local installation regulations to determine the requirements for the installation of surge protection devices.
 WARNING	Danger to life due to electric shock from destruction of measurement devices due to overvoltage! Overvoltage can damage a measurement device and result in voltage being present in the enclosure of the measurement device. Touching the live enclosure of the measuring device can result in death or lethal injuries due to electric shock. • Only use measuring devices with a higher voltage range than the system battery voltage.
 CAUTION	Risk of injury due to weight of product! Injuries may result if the product is lifted incorrectly or dropped while being transported or mounted. • Lift and transport the product carefully. • Wear suitable personal protective equipment, in accordance with local regulations, when working on the product.
 NOTICE	Damage to the battery system due to electrostatic discharge! Internal components of the battery system can be irreparably damaged by electrostatic discharge. • Ground yourself before touching any component.

3.2 Installation Requirements

Before installing, operating, and maintaining the device, the personnel must be trained to understand all safety precautions and correct operation methods.

- Only qualified and trained personnel are allowed to install, operate, and maintain devices.
- Only qualified professionals are allowed to remove safety facilities and repair equipment.
- The product must be installed and used in accordance with the specifications described in this manual (refer to "Installation" and "Technical Specifications"). Otherwise, the product may be faulty, and the resulting abnormal function or component damage is not covered by the product quality guarantee

3.3 Grounding Requirement

The following applies only to devices that need to be grounded (except energy storage units).

- When installing devices, ground them. When removing the device, remove the ground cable at the end.
- Do not damage the ground conductor.
- Do not operate the device without a ground conductor installed. Before operating the device, check the electrical connections of the device to ensure that the device is reliably grounded.

3.4 Personal Safety

- Do not operate devices or cables during thunderstorms.
- Before opening a device, wear ESD clothes, ESD gloves, and an ESD wrist strap. Remove conductive objects such as jewelry and watches to avoid electric shocks or burns.
- If there is a fire, evacuate the building or equipment area and press the fire alarm bell, or call the fire alarm number. Under no circumstances is it permitted to re-enter a burning building.
- Do not turn on the switch before the device installation is complete.

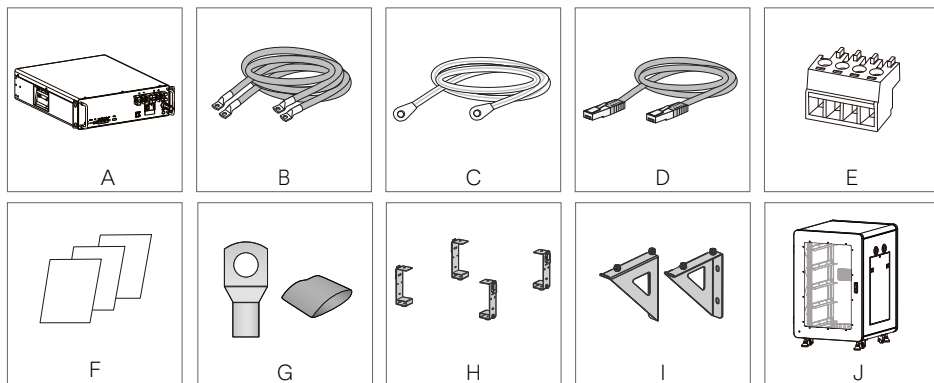
3.5 Equipment Security

- Before operation, the device should be securely fixed to the floor or other stable objects, such as walls or mounting racks.
- Do not block vents when the system is running.
- Before powering on the device, ensure that screws inside the device are secured to prevent them from falling off during running.
- After installing the device, clear the empty packing materials from the device area.
- Replace unclear hazard signs promptly.
- In any case, do not change the structure of the equipment, installation sequence, etc., without the permission of the manufacturer.
- Do not use water to clean electrical components inside or outside the cabinet under any circumstances.
- Do not drill holes directly into the cabinet.

4 Unpacking and Storage

4.1 Scope of Delivery

Check the scope of delivery for completeness and any visible external damage. Contact your supplier if the package is damaged upon delivery or is incomplete or damage.



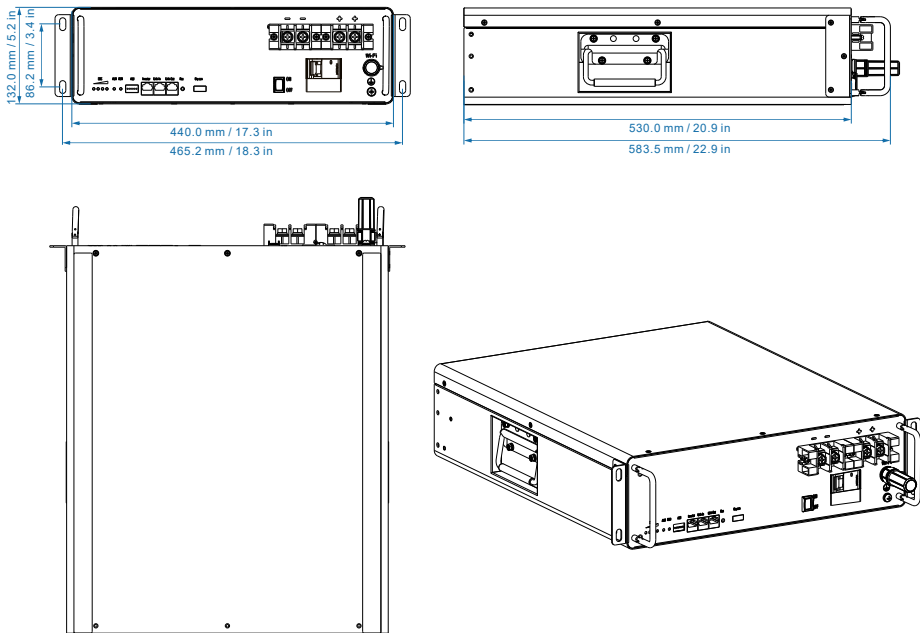
Object	Item Name	Details	Quantity	Notes
A	Battery	440 × 530 × 132 mm 17.3 × 20.9 × 5.2 in	1 PC	
B	Output Cable	Positive: red, 25 mm ² / 4 AWG, L: 0.8 m to, SC25-8 on the inverter side. Negative: black, 25 mm ² / 4 AWG, L: 0.8 m to, SC25-8 on the inverter side.	1 SET	Continuous current capacity: 100A Terminal adapts to M8 screws
C	Grounding Cable	Ground cable yellow & green / L:1 m / double OT M6	1 PC	
D	Communication Cable	Standard network cable black / L: 0.8 m / Double RJ45 Plug	1 PC	
E	4 pin Dry contact plug		1 PC	
F	Manual / Shipping list / Shipping report		3 PCS	
G	Terminal Kit	2 pcs SC35-8 tinned copper terminals, 2 pcs red and black heat shrink tubing.	1 SET	
H	H100	Stacking Kit	1 SET	Optional
I	C300A	Wall Mount Kit	1 SET	Optional
J	R100A	Cabinet Kit	1 SET	Optional

***Note:** This list is for reference only. For detailed accessory specifications, always refer to the Packing list. Updates to the Packing list will not be notified in this manual.

5 Product Overview

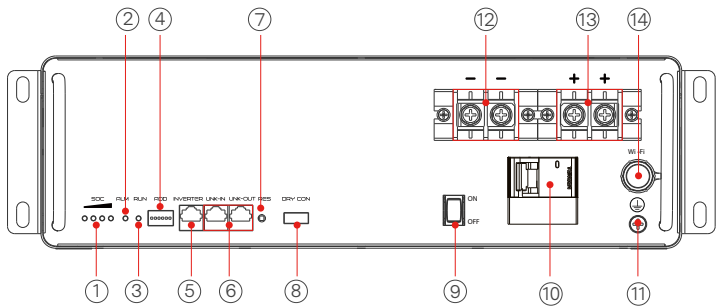
5.1 Dimensions

L051100-B dimensions is presented in Figure 2. It is designed for 19-inch cabinets.



L051100-B Dimensions (mm / in)

5.2 Interfaces and functions



Number	Name	Details	Notes
1	SOC LED ×4		
2	Alarm LED		
3	RUN LED		
4	Dialer		
5	Communication Port	RJ45	Inverter
6	Communication Port ×2	RJ45	Link in, Link out
7	Reset		
8	Dry Contact		
9	Power On / Off Switch		
10	125A DC Breaker		
11	GND	M6	Yellow-Green, 10 AWG
12	Negative Port ×2		Black Cable: 4 AWG or 25 mm² with M8 terminal
13	Positive Port ×2		Red Cable: 4 AWG or 25 mm² with M8 terminal
14	Wi-Fi Socket		Function (Option)

• RJ45 Port Pin Definition

Item	View	Description	1	2	3	4	5	6	7	8
5		INVERTER	-	RS485-A	RS485-B	CAN-H	CAN-L	GND	-	-
6		LINK IN	-	BMS-RS485-A	BMS-RS485-B	DI+	DI-	NC	BMS-CAN-H	BMS-CAN-L
		LINK OUT	-	BMS-RS485-A	BMS-RS485-B	DO+	DO-	NC	BMS-CAN-H	BMS-CAN-L

6 Mounting

6.1 Installation Environment Requirements

1. Ensure that the equipment is installed in a dry and well-ventilated environment.
2. The installation location must be far away from fire sources.
3. The installation location must be far away from water sources, such as taps, sewer pipes, and sprinklers, to prevent water seepage.
4. Do not expose the equipment to flammable or explosive gases or smoke.
5. Humidity: 5% to 95% RH (non-condensing); Operating Temperature: -15°C to $+55^{\circ}\text{C}$.

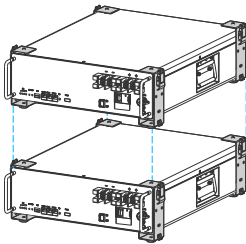
Max 55°C Min -15°C 

RH: 5% to 95%

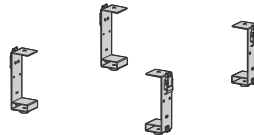
6.2 Multiple Installation Methods

Stack installation (H100)

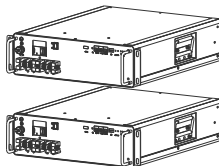
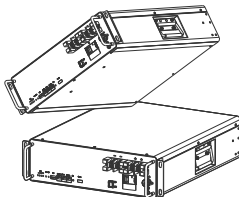
Stack the packs one by one from bottom to top.



H100 Stacking Kit

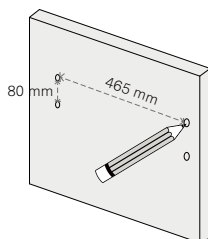
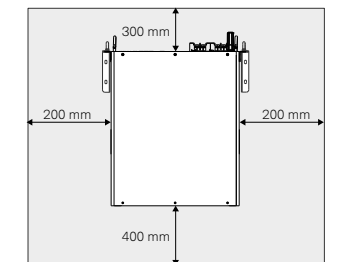


Do not tilt the pack to one side during installation.
Do not install the pack upside down.

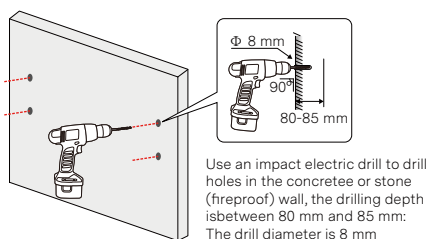


Wall installation (C300 A)

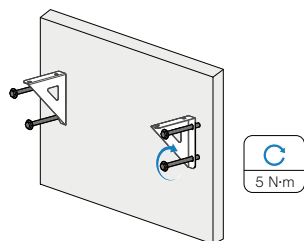
The installation location description should meet the size requirements of the figure below:



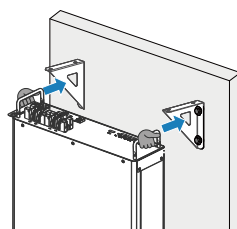
① Measure and Mark Positions



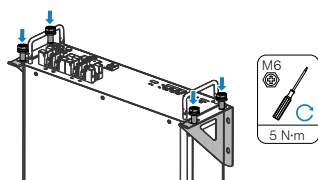
② Drill Holes at Marked Positions



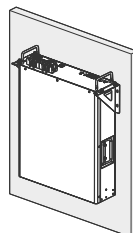
③ Use expansion screws to secure the left and right brackets.



④ Carefully align the battery with the bracket.

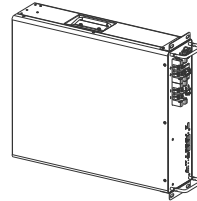
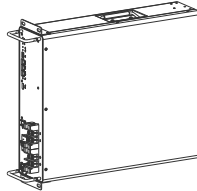
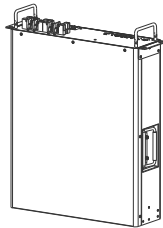


⑤ Use screws (C) to secure the battery.

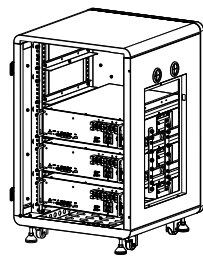
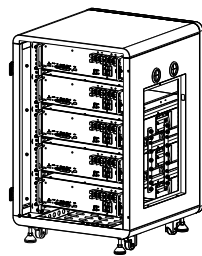
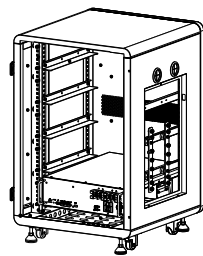
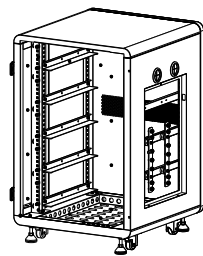


⑥ Installation Completed

Note the allowable installation modes.

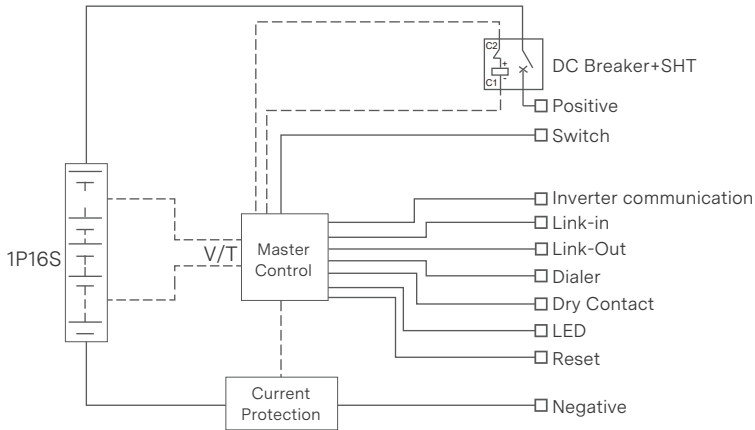


Cabinet installation (R100A)



6.3 System Introduction

L051100-B Energy Storage System is consisted of 16 pcs of 100 Ah LFP cell originated. The overall system also provides standard communication port, i.e. CAN and RS485, to monitor the working status and communicate with upper machine as well as the Power Conversion System (PCS) in front. The system schematic drawing is presented in Figure .



6.4 DC Cable Instruction

6.4.1 DC Cable Requirements

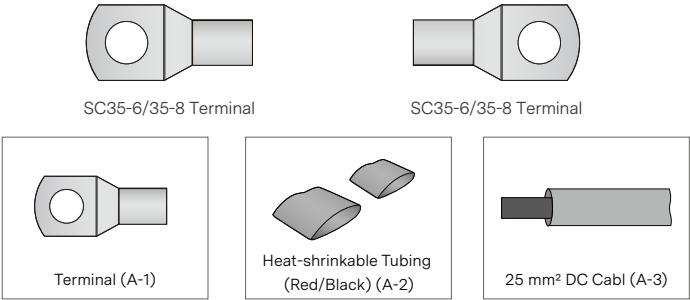
Some main features of this product are:

Size	Outer Diameter	Max. Voltage	Max. Current
21-33 mm ²	10-12 mm	1000 V	100 A

 CAUTION	DC cable must be a multicore wire.
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6.4.2 Preparation of DC Power Cable Materials

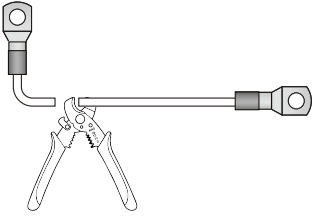
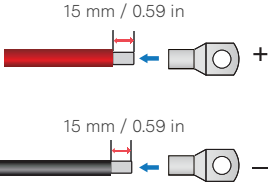
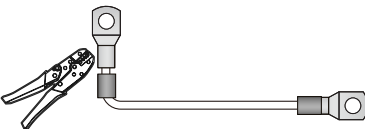
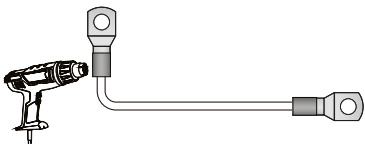
- Terminal Kit (A)
* This Terminal Kit is already included in the accessories list.



- Positive DC Cable and Negative DC Cable (B)
* This cable is already included in the accessories list.



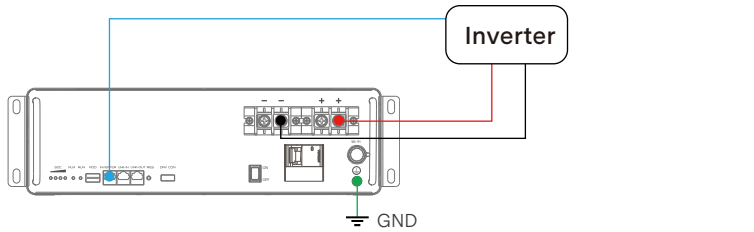
6.4.3 Convert Output Cables to Parallel Cables (Short cable)

 1 Cut off the end of the Positive DC Cable and Negative DC Cable (B)	 15 mm / 0.59 in 15 mm / 0.59 in Strip 15.0 mm / 0.59 in of the cable insulation (+0.5 / -0), avoid scratching the core wire when stripping a cable.
 3 After crimping the conductor crimp barrel of the OT terminal with a crimping tool, the formed cavity must fully enclose the core wires, and the core wires must be in close contact with the OT terminal.	 4 Wrap the wire crimping area with heat shrink tubing or insulation tape, then apply a heat gun (for heat shrink tubing).

6.5 DC Cable Connection

6.5.1 Single Unit (Output 100 A / 5 kW)

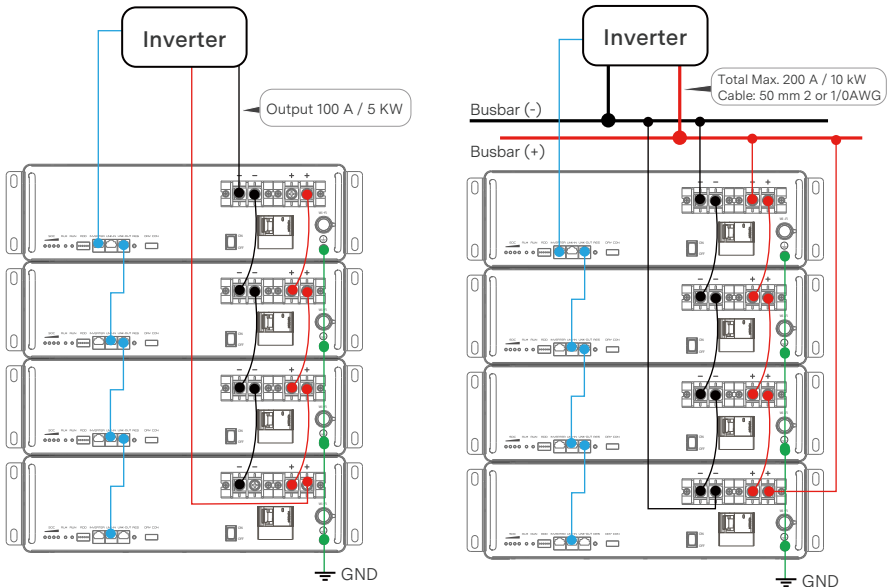
Single Unit Connection



6.5.2 Multi-Units in Parallel (4 sets as an example)

Multi-Units Connection-1 (Output 100 A / 5 kW Based on wiring method)

* Battery ΔV should be less than 3 V at first Parallel installation, 4 batteries suitable for scenarios where the inverter power ≤ 10 kW (With Busbar)

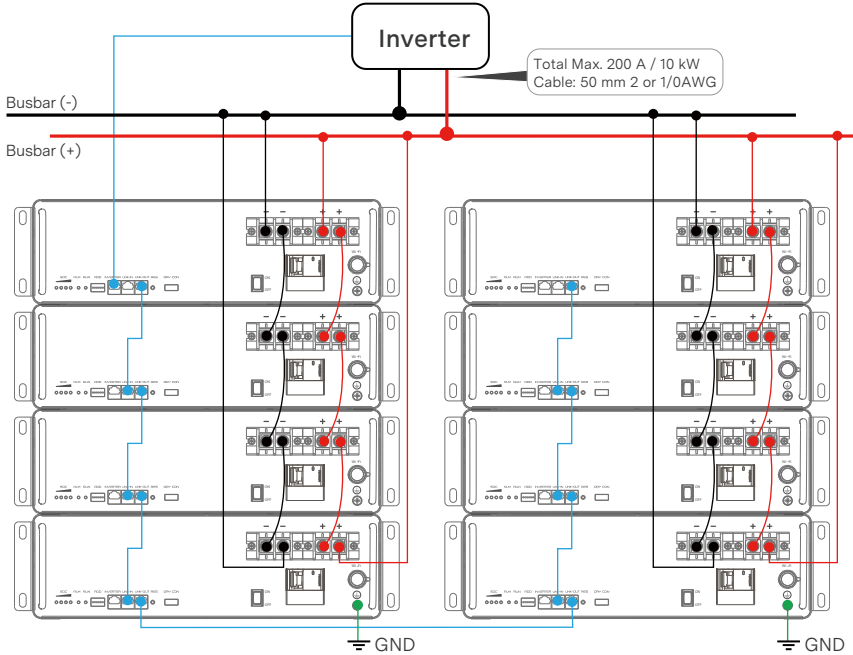


(Without Busbar Connection)

(Busbar Connection)

Multi-Units Connection-2 (Output 200 A / 10 kW based on wiring method)

* Battery ΔV should be less than 3 V at first parallel installation, It is suitable for scenarios where the inverter power > 10 kW.



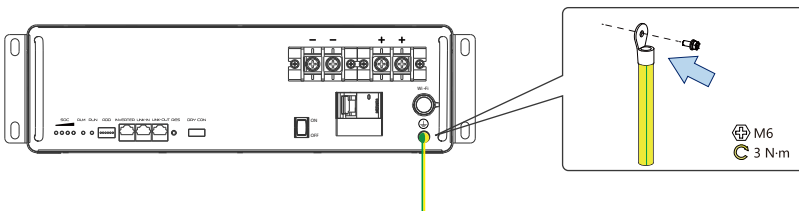
Master pack and slave pack L051100-B can be used as single unit as well as multi-units (in parallel) mode. The customer must inform supplier if multi-units mode is required. The master pack can be used individually, but slave pack cannot be used individually.



CAUTION

Parallel connection is not supported while the system is powered on. You need to power off the battery, perform the parallel connection, and then power it on again.

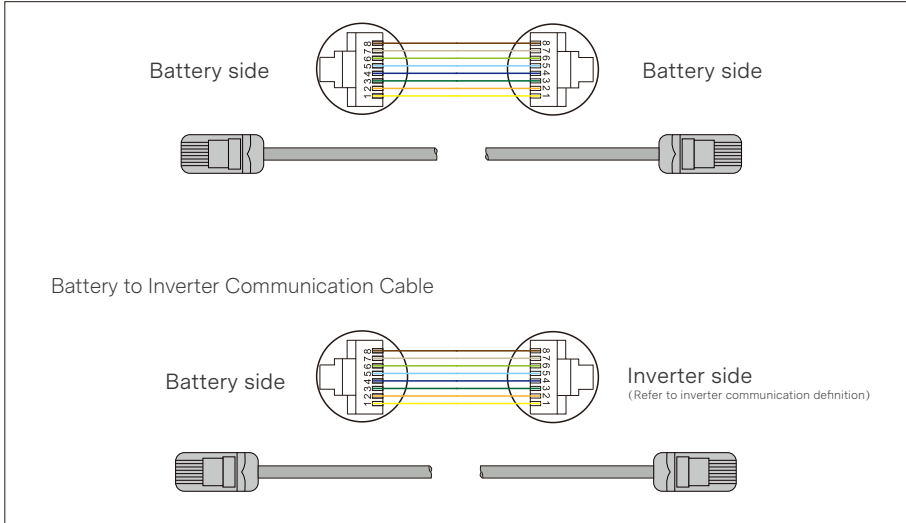
6.6 Ground Cable Connection



6.7 Communication Cable

Battery to Battery Communication Cable.

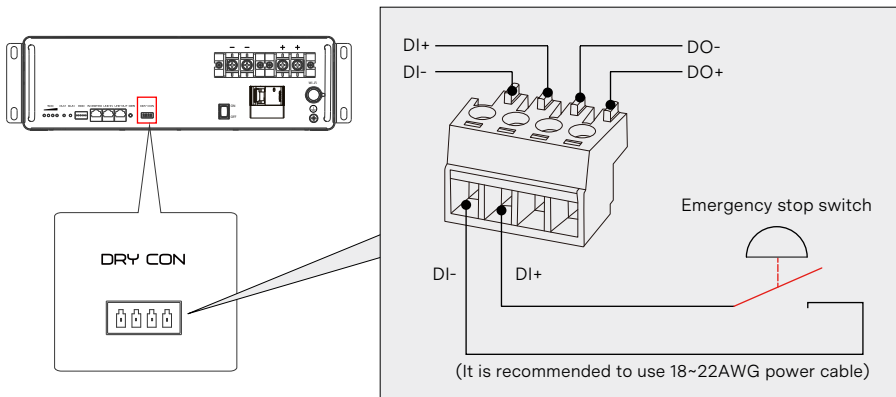
Pin definition as below, alternatively a standard straight CAT5 Ethernet cable can be used.



NOTE

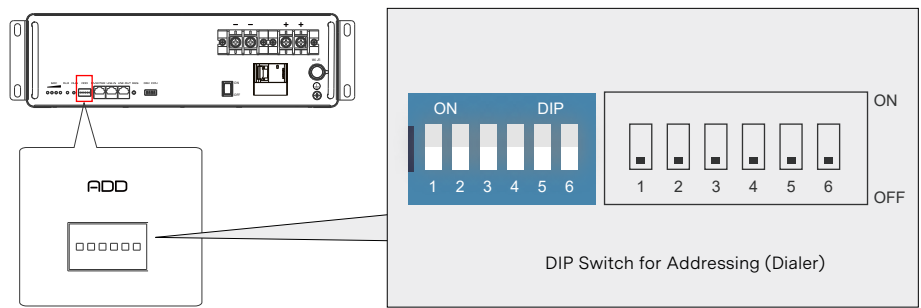
During installation, please turn off the battery power switch and check whether the power is off. The cable from the circuit breaker to the inverter is provided by the installation personnel (please refer to the Product Packaging List for cable specifications).

6.8 Dry Contact Protection



6.9 Protocol DIP Switch Settings

Adjust the DIP switches to correspond with the inverter type you are using (0 = OFF, 1 = ON for each switch labeled 1~6 from left to right in this table):



DIP Switch	Protocol	Description
000 000	Default	Default protocol, valid for most inverters such as Deye, Solis, GoodWe, etc.
100 000	SENERGY	For inverters using Senergy communication protocol
010 000	AISWEI	For Aiswei all-in-one inverter
110 000	SMA	For SMA Sunny Island
001 000	VICTRON	For Victron inverter/chargers with CAN bus support
101 000	VOLTRONIC	For inverters using Voltronic communication protocol
011 000	PYLON	Pylontech protocol, for use with inverters that support Pylontech batteries
111 000	GROWATT	For inverters using Growatt communication protocol



NOTICE

When using the battery with different inverters, please set the DIP switches according to the corresponding inverter brand. Otherwise, the system may not function properly, or the battery may not receive OTA updates via the inverter (not all inverters support OTA updates; updates are not notified separately—please consult your supplier for details).

Please note the following precautions to ensure the best long-term operation of Power Lite battery systems with multiple batteries in parallel. This document will refer to such a group of many parallel batteries as a battery bank.

Note: Make sure these requirements are met before powering on the batteries in parallel.

Maximum Voltage Difference between Batteries

Power Lite batteries are quite unique in that they have a dedicated integrated charge circuit so that after initial parallel connection, batteries with a lower voltage can be safely charged automatically from those with a higher voltage. However, we strongly recommend that all batteries in the battery bank are within 3.0 V of each other regardless to cover all corner cases. This means that the voltage of the battery with the highest voltage in the battery bank is no more than 3.0 V higher than the battery with the lowest voltage in the battery bank before initial connection. An example for a battery bank of 4 batteries:

Battery number	1	2	3	4
Voltage before first connection	51.2 V	52.6 V	50.8 V	50.1 V

In this example the highest voltage is from battery 2, with 52.6 V. The lowest voltage is from battery 4 with 50.1 V. The difference between the highest and lowest is $52.6 \text{ V} - 50.1 \text{ V} = 2.5 \text{ V}$. As 2.5 V is less than the recommended maximum difference of 3 V, these batteries may be connected in parallel to each other. If 3 V difference are exceeded, please charge the batteries with the lowest voltages, or discharge the batteries with the highest voltages until the difference between the highest and lowest voltage battery in the battery bank no longer exceeds 3 V.

Maximum Battery Bank Discharge Current

In any system with multiple batteries connected in parallel, maintaining equal charge and discharge currents under all operating conditions presents a significant challenge. Charging is generally easier to control because the charge current can be regulated through communication with the hybrid inverter/charger. However, discharging is determined by the inverter and the connected load. If no alternative energy source—such as the public grid—is available, the load can only be switched on or off, and cannot be adjusted to comply with any discharge limits set by the battery.

For this reason, we strongly recommend operating the inverters at a total output power that does not exceed the values specified in the following table:

Battery quantity in parallel	16	18	20 to 32
Rated power output	40 kW	40 kW	40 kW
Maximum power output	40 kW	45 kW	50 kW

This ensures that even in corner cases where only a small number of batteries are discharging, no damage occurs to the BMS. It also prevents the BMS from completely disabling discharge (and disconnecting the load) when sufficient energy remains in the battery bank.

7 Power On and Off

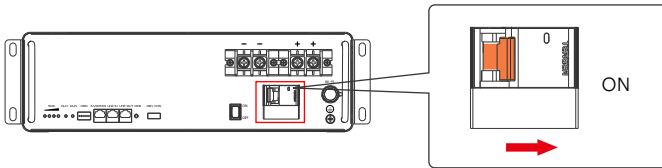


NOTICE

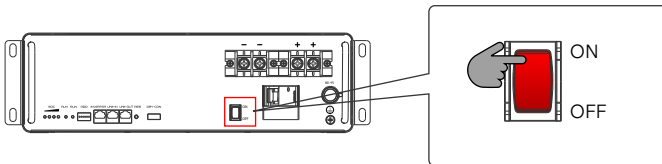
Failure to turn on all circuit breakers between the battery and the inverter before turning on the battery power switch will cause the pre-charge / soft-start functionality to fail. This may result in very high currents flowing between the inverter and the battery for a short duration, potentially damaging the battery, inverter, or wiring.

7.1 System Power On

- Installation (including DC cable, communication wire connection and dialer switch) is properly down.
Turn on breaker.

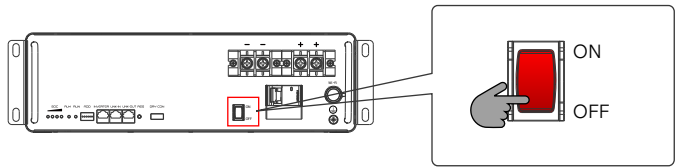


Press Power Switch button, green LED should be twinkling and then turn into function mode. (system status can be red from LED signal, as shown below)

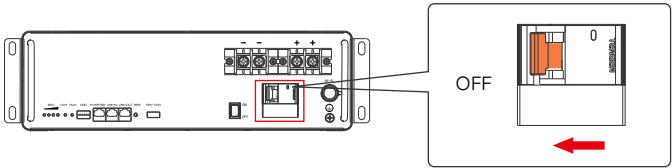


7.2 System Power Off

Attention: It must be confirmed that the system is off before taking off DC cables.
Press Power Switch button, Green LED should be twinkling and then turn into stop mode;



Turn off breaker.

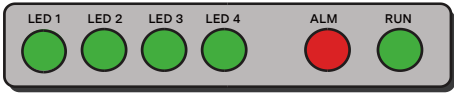


7.2.1 Sleep and Wake-up Function

Number	Sleep Condition	Wake-up Condition	Remarks
1	Normal standby for 48 hours (no communication, no charging or discharging)	External activation voltage (36.0 V to 48 V); Charging; Power On / Off Switch;	
2	When the minimum cell voltage drops below 2.7 V after 5 minutes	Charging; Power On / Off Switch;	
3	Severe under-voltage sleep. After 1 minute, it enters sleep mode	Press the reset button for 30 seconds.	

7.2.2 System Status LEDs

There are 6 LED indicators, 4 green LEDs give the status of SOC (state-of-charge), 1 red Alarm LED and 1 green Running Status LED (indicating charging, discharging etc.).



Status	Normal / Alarm / Protection	RUN	ALM	SOC				Notes
								
Shutdown / Sleep		Off	Off	Off				
Stand-by	Normal	On	Off	Off				
Charge	Normal	Based on battery indicator	Off	Based on battery indicator (Each LED indicates 25% SOC) flashing 2				
Discharge	Normal	Based on battery indicator	Off	Based on battery indicator (Each LED indicates 25% SOC) flashing 3				
BMS Fault	Short / Mos Error	Off	On	Off				
	Communication Error	Off	Flashing 2	Off				
	Other Error (Over-temp / Current / Voltage protection)	Off	Flashing 3	Off				
Boot / FW Update	-	Flashing 1	Off	Off				
Self-Checking	-	Flashing 2	Flashing 2	Off				

7.2.3 LED Flashing Status

Status	On	Off
Flashing 1	0.1 s	0.1 s
Flashing 2	0.5 s	0.5 s
Flashing 3	0.5 s	1.5 s

7.2.4 SOC Indicator

SOC	LED			
	●	●	●	●
	LED1	LED2	LED3	LED4
0% to 25%	On	Off	Off	Off
25% to 50%	On	On	Off	Off
50% to 75%	On	On	On	Off
75% to 100%	On	On	On	On

7.3 Maintenance

- The inspection, maintenance, repair and connection of the battery system shall be completed by professionals or certified technicians.
- During the assembly of the Battery system, attention shall be paid not to touch the positive and negative terminals of the Battery system by hand or other metal objects at the same time, so as to avoid electric shock or short circuit.
- The Battery system shall be fixed firmly and reliably, and the Battery system shall not work in an inverted state.
- The product layout of the system must consider the convenient disassembly and easy wiring of the power system. In particular, rainwater, ponding or moisture shall be prevented from entering the battery compartment.
- The positive and negative output terminals of the Battery system are respectively marked with positive and negative signs, which shall be distinguished during connection.
- The direction of DC cable shall be reasonable, the connection shall be firm and in place, and attention shall be paid to safety during wiring.
- The red positive harness is connected to the red positive connector, and the black negative harness is connected to the black negative connector. The positive and negative cannot be reversed. The communication harness is connected to the left communication socket. Pay attention to the correspondence of communication pins.
- After the installation is correct, press the button switch. After a few seconds, the green light should be on and flash, and the system is normal. The green light is always on during normal operation.
- Check the Battery system before use, as shown in the table below:

Content	Description	Standard	Operation method
Cell voltage	Measure cell voltage	The measured voltage shall be greater than 2.5 V	When the voltage of single battery is less than 2.5 V, please contact the manufacturer
Battery system voltage	Measure the battery system voltage	The measured voltage shall be greater than 40 V	When the voltage of the Battery system is less than 40 V, please recharge or replace the battery
Battery connection	Check whether the single cells are correctly connected together	Each single cell must be correctly connected together	Before using the battery, ensure that each single cell is connected correctly. If the connection is found to be incorrect, please contact the manufacturer
Battery appearance	Check whether the single battery is broken, deformed or leaked	Avoid exceptions	In case of liquid leakage, replace the leaking battery if it is serious
	Check every possible damaged part	Avoid exceptions	Replace the damaged part
	Check the battery connections for rust	Avoid rust on jumper, connecting wire and end	Cleaning, rust prevention and repair
	Check whether the connectors are tight	Avoid loosening of nuts or screws	If loose, tighten

- The insulation resistance of the Battery System shall be checked before each use to prevent insulation failure and potential leakage. When the Battery System leaves the factory, its SOC is approximately 50%.
 - The recommended charging procedure for the Battery System is as follows:

At an ambient temperature of $23\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$, discharge the Battery System to voltage $N1 = 0.5C$ ($50\text{ A} \times 2.8\text{ V}$ (44.8 V), or until any single battery reaches 2.7 V . Allow the system to rest for 0.5 h , and then charge it to voltage $N1 = 0.5C$ ($50\text{ A} \times 3.6\text{ V}$ (57.6 V), or until any single battery reaches 3.65 V . Stop charging, allow the system to rest for 0.5 h , and then discharge again to $N1 = 0.5C$ ($50\text{ A} \times 2.8\text{ V}$ (44.8 V), or until any single battery reaches 2.7 V . After completing this conditioning cycle, the Battery System may be charged and used normally.

Voltage and temperature shall be continuously monitored during charging. Charging shall be
 - stopped immediately if the Battery System voltage exceeds $N1 \times 3.6\text{ V}$, if any single battery exceeds 3.7 V , or if the battery surface temperature exceeds $60\text{ }^{\circ}\text{C}$. Other charging methods may be adopted upon mutual agreement between both parties.
- During maintenance of the battery pack and the power management system, operations shall
- be carried out under external open-circuit conditions whenever possible to ensure safety.
- If maintenance must be performed while the Battery System is externally connected, all operations shall comply with the relevant insulation requirements to prevent electric shock.

8 Transportation and Storage

8.1 Transportation

It is forbidden to expose the battery to serious vibration and shock during transportation.

8.2 Storage

If the system is not used, the system must be correctly stored. Otherwise, if there are any issues, the company shall not be liable. Storage conditions are as follows:

- It should be stored in 50% SOC status.
- It should be stored at ventilation environment, Temp. < 30 °C, ROH < 65%.
- It should be stored avoiding humid condition.
- It should be stored in place where they can be monitored by professionals.



NOTE

A proper inspection shall be conducted every 3 months, to ensure no over-discharge of the battery (SOC is long time less than 5%) occurs. At over-discharge status, the battery would behavior as:

1. The battery could not start-up when turning the power switch to the ON position;
2. The battery output voltage is less than 40V when turned on;
3. Indicators are off and battery can not communicate to the upper computer via RS485/USB converter.

Please contact the technical person where you purchase the battery from immediately once the above abnormal issues occur. And actions in terms of re-charging the battery (to the SOC 50%) is required before the field installation.

9 Recycling Disposal

9.1 Decommissioning

Before decommissioning the battery system, all operations shall be performed by qualified personnel in accordance with local regulations and applicable safety standards.

1. Switch off the system using the Power Switch and confirm that all status indicators (LEDs) are off.
2. Disconnect the system from all external power sources, including the inverter, grid, and loads, and switch off all related DC and AC circuit breakers.
3. After shutdown, wait at least 5 minutes to allow internal capacitors to fully discharge.
4. Disconnect all power and communication cables in the reverse order of installation, and protect all connectors against short circuits.
5. If the battery shows signs of damage (such as deformation, leakage, overheating, smoke, or abnormal odor), immediately stop operation and isolate the battery. Do not open, disassemble, or attempt to repair the battery. Contact the installer, distributor, or manufacturer for further instructions.
6. Store decommissioned batteries in a dry, well-ventilated location, protected from moisture, direct sunlight, high temperatures, and mechanical impact.

9.2 Disposal

This section specifies mandatory legal and environmental requirements for the disposal of used or decommissioned batteries.

- Batteries, including rechargeable batteries, must not be disposed of in household or general waste.
- Used or damaged batteries shall be delivered to authorized collection or recycling facilities in accordance with applicable local regulations.
- Batteries may contain hazardous substances as well as valuable recyclable materials; improper disposal may harm human health and the environment.
- During storage and transportation, batteries shall be protected against short circuits, leakage, and mechanical damage.





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