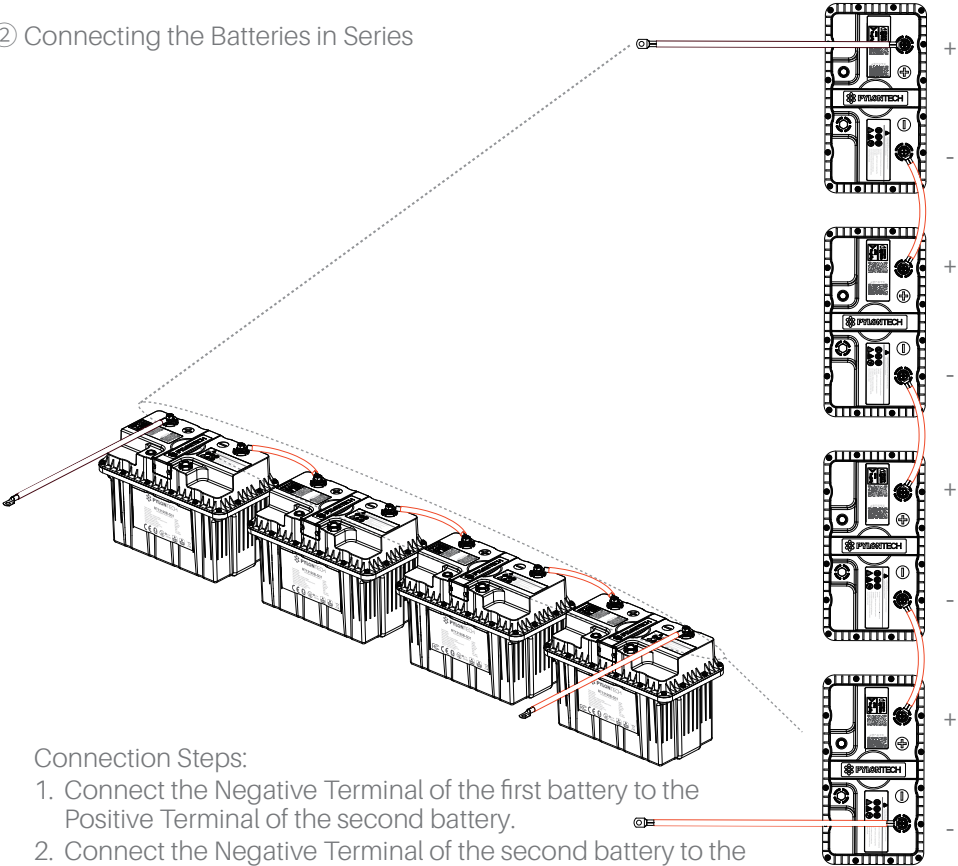


② Connecting the Batteries in Series



Connection Steps:

- 1. Connect the Negative Terminal of the first battery to the Positive Terminal of the second battery.
- 2. Connect the Negative Terminal of the second battery to the Positive Terminal of the third battery, and so on.
- 3. Finally, connect the Positive Terminal of the first battery and the Negative Terminal of the last battery to the system.



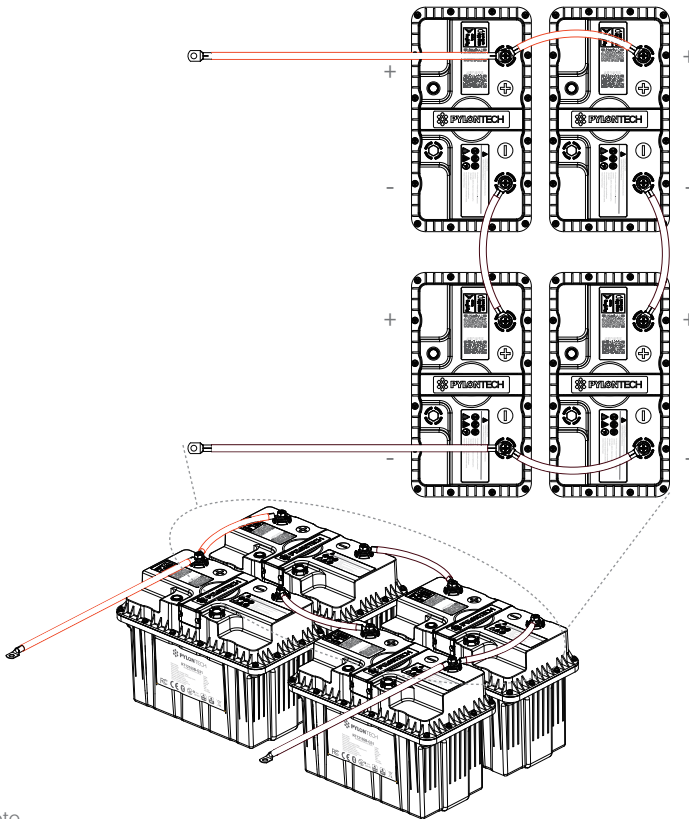
Note

- Up to 4 batteries can be connected in series.
- Using batteries in a series connection for a long time may lead to imbalances. It is recommended to regularly connect the batteries in parallel, and float charge them for 24 hours after a full charge.

Series Configuration	Recommended Charge Voltage Value (VDC)	Recommended Discharge Voltage Value (VDC)
1S	14 ~ 14.4	10.8 ~ 14.4
2S	28 ~ 28.5	22 ~ 28.5
3S	42 ~ 43	33 ~ 43
4S	56 ~ 57	44 ~ 57

Installation

③ Connecting the Batteries in Series & Parallel



Note

- To avoid triggering battery protection due to the large voltage difference, it is recommended to connect the batteries in parallel, float charge them for 24 hours after a full charge, and then use them in series and parallel connection.
- When connecting the batteries in series and parallel, please connect them in series first and then in parallel.
- If you want to read the battery system information via APP, the maximum number of batteries connected in the system shall be no more than 16 (Max 4S4P) .

Post-Installation Check

Please check if the positive and negative connections are correct.

Charging

Please charge the battery with a battery charger or charge controller that is compatible with the lithium iron phosphate battery.



Note

- A charger with the power of more than 100 W is recommended.
- Charger Voltage Range: 14 V ~ 14.4 V.



Caution

When the battery shuts down due to under-voltage, charge the battery immediately with a LiFePO4 battery charger (voltage should be 14.4 V) to wake up the BMS. DO NOT use a lead acid charger in this case.

Recommended Charging Temperature

50 °F ~ 95 °F (10 °C ~ 35 °C)



Note

- The battery is supported to be charged at a temperature between -32 °F and 158 °F (0 °C ~ 70 °C), but long-term exposure to high/low temperatures may reduce the battery life.
- If the ambient temperature is out of the charging temperature range, the battery stops operating to protect itself, and it cannot be charged.

Charging Time

It takes about 2 hours to fully charge a battery with a current of 50 A.

Max. Continuous Charging Current 100 A

Discharging

The battery discharges at a constant current of 50 A(Max) until the battery voltage reaches 10.8 V.



Note

- The battery can be discharged to 100% of its capacity, and it will enter sleep mode when fully discharged. However, in order to optimize battery performance and avoid BMS disconnecting the battery, it is recommended to limit the discharge to 80%.
- When the battery is fully discharged, remember to disconnect it from other devices or charge it in time.



Caution

In off-grid PV applications, please charge the battery promptly after it has been fully discharged if the temperature is below 32°F(0°C). Otherwise, the PV panel may activate the battery repeatedly, leading to battery damage due to overdischarge.

Recommended Discharging Temperature

50 °F ~ 95 °F (10 °C ~ 35 °C)



Note

The battery is supported to be discharged at a temperature between -4 °F and 158 °F (-20 °C ~ 70 °C), but long-term exposure to high/low temperatures may reduce the battery life.

Max. Continuous Discharging Current 100 A

Battery Storage

Please follow the steps below to store the battery.

1. Charge the battery to 40% ~ 70%.
2. Disconnect the battery from the system.
3. Store the battery in a well ventilated, clean, dry area with temperatures between 41 °F and 104 °F (5 °C ~ 40 °C).



Note

Charge the battery at least once every 6 months to prevent overdischarge.

Storage Temperature

Recommended storage temperature: 23 °F~ 95 °F (-5 °C ~ 35 °C)

Storage up to 1 month: 4 °F~ 140 °F (-20 °C ~ 60 °C)

Storage up to 3 months: 14 °F~ 95 °F (-10 °C ~ 35 °C)

Extended storage time: 59 °F~ 95 °F (15 °C ~ 35 °C)

Protection and Warnings	Over-voltage
	Under-voltage
	Over-current
	High/Low Temperature
	Short Circuit
Management and Monitoring	Cell Balancing
	Smart Charging Mode
	SOC Calculation
	Operation Log
	APP Real-time Monitoring

FCC Regulations

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.


FCC Conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC RF Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. To comply with FCC RF Exposure compliance requirements, this grant is applicable to only Mobile Configurations. The antennas used for the transmitter must be installed to provide a separation distance of at least 20cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

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