Pytes

Quick Installation and Operation Guide

LFP Battery
(Low Voltage)

V12



Information Version: 1.0
Release Date: 14, July 2025

Support Contact Information

In case of any technical issues with Pytes products,

please contact us at:

ess_support@pytesgroup.com

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Version: 1.0, july 2025

Subject to change without notice.

For the Pytes V12 – Complete User Manual,

scan the QR code:

Note: This quick guide briefly describes required installation steps. Please refer to the User Manual for more detailed information.

Before Using

Warning

1. This equipment may only be installed, operated and maintained by qualified skilled person(electrician).
2. The local safety regulations and relevant operating procedures must be observed during the installation, operation and maintenance of the equipment, otherwise the equipment may get damaged. The safety precautions mentioned in the manual are only the supplement to local safety regulations.

Danger

1. Keep the Li-ion battery away from water, dust and contamination, otherwise it may cause explosion or other harmful conditions that may even lead to personal injury.
2. Do not short-circuit the Li-ion battery.
3. Observe the positive (+) and negative (-) marks on the Li-ion battery and equipment and ensure correct use. Do not reverse the Li-ion battery.
4. Do not dismantle, crush, puncture, open or shred the Li-ion battery.
5. Before removing or reconnecting with the running system, the power must be off and the system should be shut down, otherwise there will be risk of electric shock.
6. Do not expose Li-ion battery to heat or fire. In case of fire, please use dry powder fire extinguisher.
7. Do not dismantle any part of the system without contacting PYTES or PYTES authorized technical engineers. System failure caused by such will not be covered by the warranty.
8. Before operating inverter, make sure that all batteries have been started up.

Caution

1. Do not dispose of batteries in fire. The batteries may explode.
2. Do not open or mutilate batteries. Released electrolyte can prove harmful to the skin and eyes. It may be toxic.
3. A battery can present a risk of electric shock and burns by high short-circuit current.
4. A malfunctioned battery can reach temperatures that exceed the threshold of contact surface.

The following precautions should be observed when working on batteries:

a) Disconnect the power and loads before connecting or disconnecting battery terminals;
b) Do not wear any metal objects including watches and rings;
c) Use tools with insulated handles;
d) Do not lay tools or metal parts on top of batteries;
e) Wear personal protective equipment.
f) Make sure the battery is well grounded.

Contact with any part of a poorly grounded or ungrounded battery can cause electric shock and burns by high short-circuit current.

The risk of such hazards can be reduced if conductive surroundings are removed by a skilled person during installation and maintenance.

The battery should be charged within 12 hours when it's fully discharged or over-discharging protection mode is activated. Fail to follow this instruction will damage the battery and is not covered by warranty.



This symbol on the product means: Do not dispose of this product with general household waste. Consult your local regulations for proper disposal instructions.

Safety and Handling Instructions

Read this entire document before installing or operating the Pytes V12 Battery (referred to as the “Battery”). Failure to do so or to follow any of the instructions or warnings in this document can result in electrical shock, serious injury, or death, or may damage the Battery and other property.

Optimize Battery Performance

1. Battery life is the amount of time your battery runs before it needs to be recharged.
2. Battery lifespan is the amount of time your battery lasts until it needs to be replaced.
3. Maximize both and you’ll get the most out of your battery.

Avoid Extreme Ambient Temperatures

1. V12 is designed to perform well in a wide range of temperatures, with Charge: 0°C~55°C (32°F~131°F).
2. Discharge: -20°C~55°C(-4°F~131°F) as the ideal comfort operation zone.
3. It’s important to avoid exposing your battery to ambient temperatures higher than 55°C(131°F).

Avoid Over-Discharging

1. Over discharge will permanently damage battery capacity and is not covered by warranty.
2. Under certain circumstance, battery will be over-discharged.
3. When it's an open loop, it is essential to set 49V as the value of low battery cut out voltage.
4. When it's a closed loop, it is essential to set low battery SOC and shutdown SOC on inverter, of which 20% and 10% are the recommended values.
5. Inverter will alarm when battery is below the low battery SOC value and will shut down when battery is below shutdown SOC value.

What's in the Package

V12

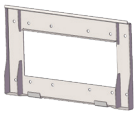




Cover Plate



Conduit Entry Plate



Wall-Mounted Bracket



V12 Power Cable x 1set



Spare RJ45 Connector



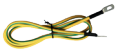
Cascading Cable x 1



Expansion Screws



Hexagon Cross Slot Screw



Earthing

Required Personnel and Tools



Qualified Installer



Pliers



Drill



Wrench



Insulating Tape



Screw Driver



Multimeter



Ammeter



Wire Stripper



Temperature Gun

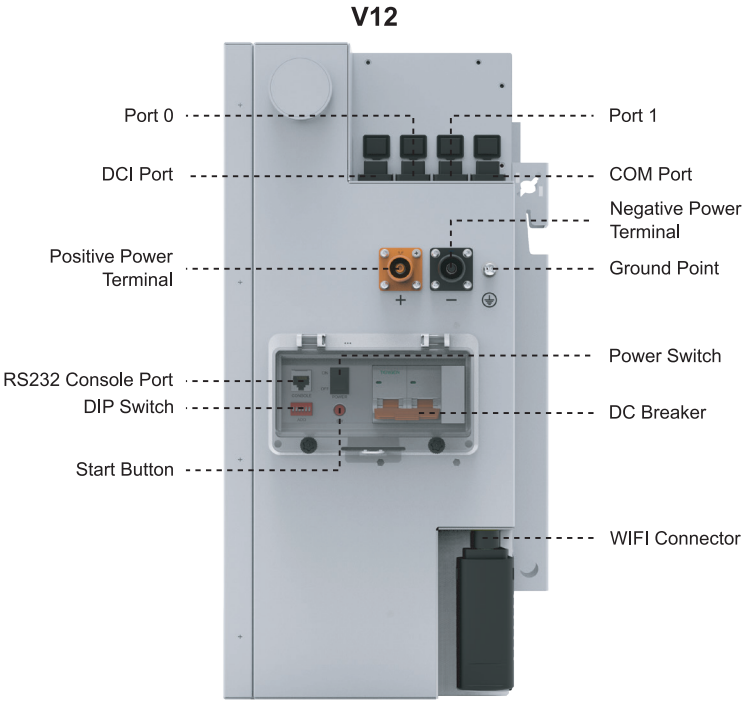
Only trained professionals in the power system with a good knowledge of the power system is allowed to install the device.

Installation Prerequisites

1. Keep the product away from heat sources, flammable materials, and explosive substances.
2. Avoid direct sunlight to prevent overheating or damage.
3. Install in a restricted area where children and pets cannot access it.
4. Place the product on a flat, level surface to ensure stability.
5. Do not install in areas with standing water or excessive moisture.
6. Minimize dust and dirt in the installation area for optimal performance.
7. Maintain a minimum distance of 0.5 meters from power conversion system (PCS).
8. Ensure fire extinguishers or other fire-fighting equipment are available nearby.
9. Always power off the battery before performing any maintenance or adjustments.

Before installing or removing the battery, make sure that the system is disconnected from any power source and that the battery device is turned off.

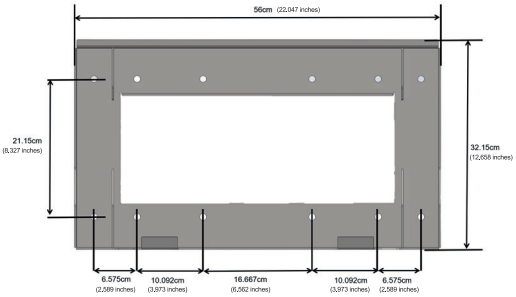
V12

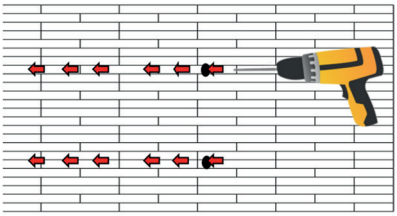


Installation

1. Install the Battery

Step 1. Mark the drilling position with the mounting bracket, and then drill 8 holes of appropriate size. The size is as follow.

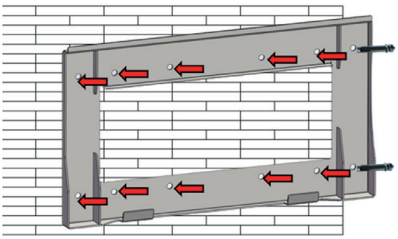




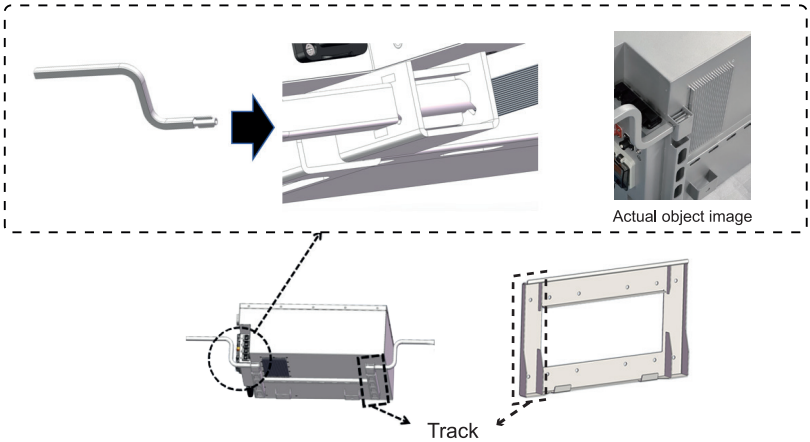
Ensure the wall is structurally sound and can support the full weight of the battery when mounted.

Use a stud finder or wire detector to avoid pipes, electrical wires, or reinforcements inside the wall.

Step 2. Install and tighten the expansion screw (figure1) into the hole. Then install and fix the wall bracket (Figure2) to the wall using the corresponding nut.



Step 3. After ensuring stability, install the left and right handles on the V12 battery. Tilt the handle 45 degrees to lock it. Lift the battery and align the rear track with the track on the wall to complete the installation.



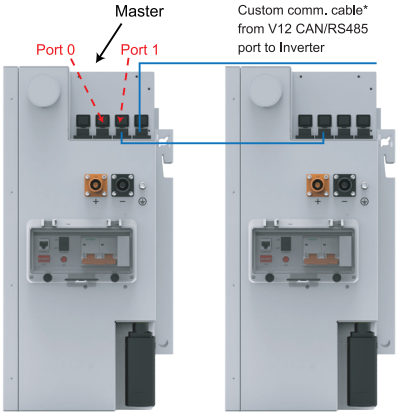
2. Connect Ground Cable

- Attach one end to the battery ground point and tighten the screw.
- Connect the other end to a reliable ground point.



⚠ **The grounding resistance should be less than 0.1Ω.**

3. Connect Communication Cable

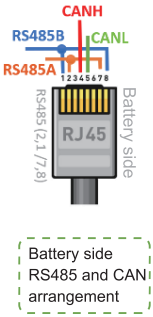


Multiple Batteries

Note:

1. From master to salve, **Link 1 → Link 0**
2. Make sure pin configuration of communication cable (battery & inverter) is correct (refer to manual);
3. The Communication between batteries require basic RJ45 cable.

Note: Use communication cables provided with accessories to connect batteries in parallel.



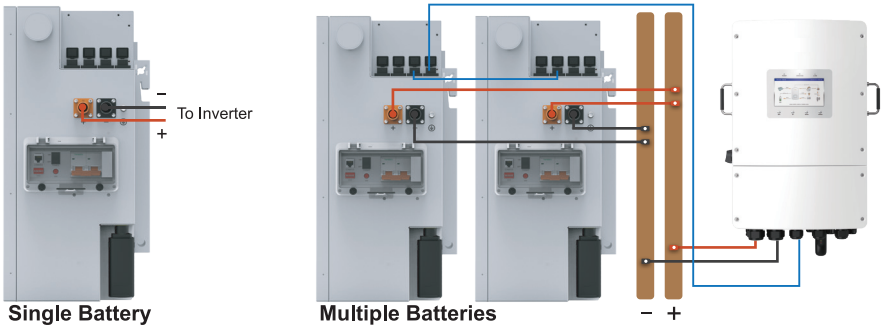
Single battery: Choose port to be inserted according to the communication protocol (RS485/-CAN) between the battery and ESS inverter, then insert the communication cables to the port;

Multiple batteries: The master and the slave communicate in cascade mode: one is the Master and the rest are the slaves. Please refer to the following picture for the cascade connection.

Note: From Battery CAN or RS485 Port depends on inverter communication type to Inverter BMS port.

The system may not be able to communicate if not followed the instruction.

4. Connect Power Cable



Note: Use Power cable provided with accessories to connect batteries.

Single battery: Connect the positive and negative poles of the battery to the positive and negative terminal of the DC port of the energy storage inverter (or the junction box);

Multiple batteries: The connection of several batteries is only permitted in parallel. Firstly, connect the positive and negative terminals from battery separately to positive and negative busbars.Then connect the positive and negative busbars to inverter. V12 supports up to 16pcs in parallel connection.

Note: When actually routing, the cables are led out from specific holes for wire outlet on cover plate.

Batteries connected in series are forbidden, high voltage would lead to hazard shock.

5. Set DIP Address



Single Battery: Set the DIP switch, based on the inverter installed.

Multiple Batteries: Set the DIP switch on Master Battery only, based on the inverter installed.

DIP Addresses

Sol-Ark		Victron		Solis		Deye SUNSYNK	
Luxpower		Goodwe		Growatt		SMA	
Megarevo		Afore		Phocos		Voltronic	
SRNE INHENERGY		MUST		Studer		Hoymiles APsystem	
Ingeteam		Senergy		Aiswei (Solplante)		Livoltek	
Epever		*White column indicates the DIP bar position.					

Note: If you change battery DIP switch while battery is running you need to restart otherwise it won't communicate.
Note: White mark denotes the switch position, select relevant DIP switch address according to your inverter.

6. Start Procedure

Note: Before starting the system, strictly check the connection terminals to ensure that the terminals are firmly connected. Make sure battery is powered on prior to turn on the inverter. This is to avoid battery shock by the in-rush current of the large capacitors of the inverter.

Single battery:

Step 1. Turn on the DC breaker.
Step 2. Turn on the power button.
Step 3. Press SW button for 1 second to turn on battery.

Note: If battery is parallel connected, only press SW of master battery to power on the system.

Step 4. Battery indicator lights will go on indicating batteries are running.

Multiple batteries:

Step 1. Turn on all of the DC breaker.
Step 2. Turn on all power button.
Step 3. Only press SW button of master battery for 1 second.
Step 4. Battery indicator lights will go on indicating batteries are running.

Note: Make sure that all batteries have been started, then running the inverter.
Battery can be connected with LSW-5 WiFi Dongle. For specific operation instructions, please refer to Pytes Battery Cloud Guide.

7. Shut down Procedure

Note: Ensure the inverter is off before shutting down the battery. Prior to performing the shutdown procedure, verify that the battery is in standby mode — with both charging and discharging operations fully stopped.

Single battery:

Step 1. Press SW button for 3 seconds.

Note: If battery is parallel connected, only press SW of master battery.

Step 2. Wait for the indicator lights to go off.

Step 3. Turn off the power button.

Step 4. Turn off the DC breaker.

Multiple batteries:

Step 1. Only press SW button of master battery for 3 seconds.

Step 2. Wait for the indicator lights to go out before turning off the power button.

Step 3. Turn off all power button.

Step 4. Turn off all of the DC breaker.

Note: Wait for all the battery lights to go out before turning off the power button.

Do not discard this document! After installation, keep it adjacent to the Battery for future reference!



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