

The logo for Pytes, featuring the word "Pytes" in a bold, sans-serif font. The "e" is stylized with an orange circular element around it.

Pytes

New Products

New Products

2023

Pytes

E-BOX 12100

Flexible configuration

Heating module system

Fully intelligent design

Self-protecting function



Introduction

PYTES E-BOX 12100 is high current carrying Lithium Iron Phosphate (LiFePO_4) battery pack specially designed for the safe, reliable and long term operation in different high current applications. It has high energy density, robust design and long life. The pack has an inbuilt heating system and a BMS for centralized monitoring and protection against unexpected situation.

Features

1 High reliability, high energy density and high temperature cycling performance

Long lifespan and high-performance Lithium Iron Phosphate (LFP) cells are adopted in the battery module, which effectively ensures safety, and lifespan over 6000 cycles.

2 High-performance power management module (BMS)

The BMS provides protection against over discharge, overcharge, overcurrent, short circuit, reverse connection, and high or low temperature to ensure the battery safety.

3 Supports CAN and RS485 communication

The battery panel provides a M12 port for RS485 and CAN communication.

4 Excellent discharge rate performance.

The battery can continue to discharge at 1C to meet high power output.

Technical Specification

Battery Model	E-BOX 12100
Nominal Capacity	100Ah
Nominal Voltage	12.8Vdc
Voltage Range	DC 10.8V~14.4V
Maximum Continuous Charging Current	50A
Maximum Continuous Discharge Current	DC 100A
Peak Discharging Current	200A@15sec
Discharge Working Temperature	-10°C~55°C
Charge Working Temperature	0°C~55°C
Storage Temperature	Within 1 month: -20°C~55°C, 1-3 months: 0°C~35°C, 3-12 months: 20°C~25°C
Operating Relative Humidity	0%~95%RH No Condensation
Unit Dimension	W320mm * D166mm * H200mm
Unit Weight	14kg
Protection class	IP65
BMS Communication	RS485, CAN
System Connection	Up to 2S8P or 1S16P
Cycle Life	6000 cycle (@90%DOD)
Heating	Supported
Certification	UN38.3, CE, IEC62619

Suitable For

PYTES E-BOX 12100 is suitable for diverse applications requiring high discharge current and least supervised operations. A few of the applications of the battery pack are:

- Van life and Van building
- Solar Energy Storage
- Overland and Truck Builds
- RV Camper Trailers
- Off Grid Electrical Systems
- Marine Applications
- Construction and Work Trucks
- Recreational Vehicles
- Off-Grid Homes



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V5°α



Introduction

V5°α, the new generation LFP battery for home energy storage system. It provides safe, well-designed and high-performance standard LFP battery pack for you. The battery pack is compact, easy to install, free of maintenance, and could be deployed to the building block of energy storage system by being assembled in parallel. It is widely applied in home applications, small commercial and industrial energy storage system as well as Telecom stations.

Features



Basic Functions

self-consumption, time-of-use bills reduction, back-up power supply, wide-compatibility



Short-Time Charging/Discharging

maximum charge/discharge current: 100A



Easy Connection

new terminals are compatible with copper bar/wire connection
up to 3 pcs connected in parallel without using busbars



Smart Energy Management

add dry contacts and IoT interfaces for remote upgrades and real-time monitoring



Longest Life and Highest Safety

more than 6000 cycles @80%DOD



Self-Heating System

low temperature resistance to ensure normal charging

10 Years Warranty



UN38.3

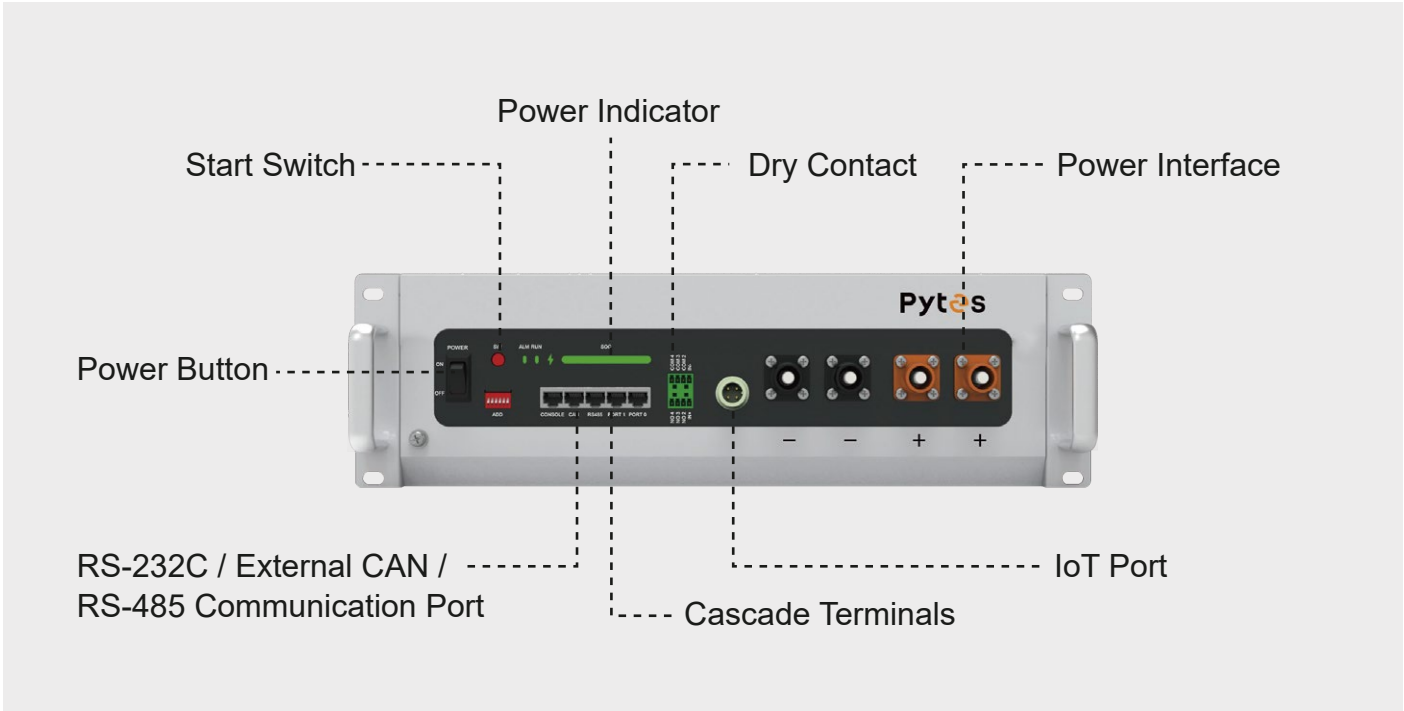


Technical Specifications

Battery Model	V5°α
Chemistry	LFP
Nominal Voltage	51.2V
Voltage Range	44.8V-57.6V
Nominal Capacity	100Ah
Nominal Energy	5.12kWh
Unit Dimension	W483mm * D530mm * H140mm (3.2U)
Unit Weight	46.2kg
Standard Charge/Discharge	50A
Maximum Charge/Discharge	75A*
Peak Charge/Discharge	100A*
Round-Trip Efficiency	≥95%
Communication Protocol	CAN/RS485
Cycle Life	≥6000cycles
Calendar Life	≥10years
Operating Temperature	-10°C~55°C
Connect style	Parallel
Heating system	8~10°C/h

*75A for 45mins
*100A for 30mins

Operation Panel



E-BOX 4850G



Introduction

E-BOX series, the new generation LFP battery for home energy storage system, provide safe, well-designed and high-performance standard LFP battery pack for you. The battery pack is compact, easy to install, free of maintenance, and could be deployed to the building block of energy storage system by being assembled in parallel. They are widely applied in home applications, small commercial and industrial energy storage system as well as Telecom stations.

Features



Self-Consumption

store excess energy generated by solar panels and use it whenever needed



Back-Up Power Supply

provide emergency power supply during grid outage



Electricity Bills Reduction

charge the battery during off-peak period and discharge the battery during peak period



Smart Energy Management

measure, monitor and manage the system in real-time
optimize the system life span by intelligent algorithms



Longest Life and Highest Safety

more than 6000 cycles @90%DOD



Wide Compatibility

compatible with 16 mainstream inverters in the market

10 Years Warranty



UN38.3

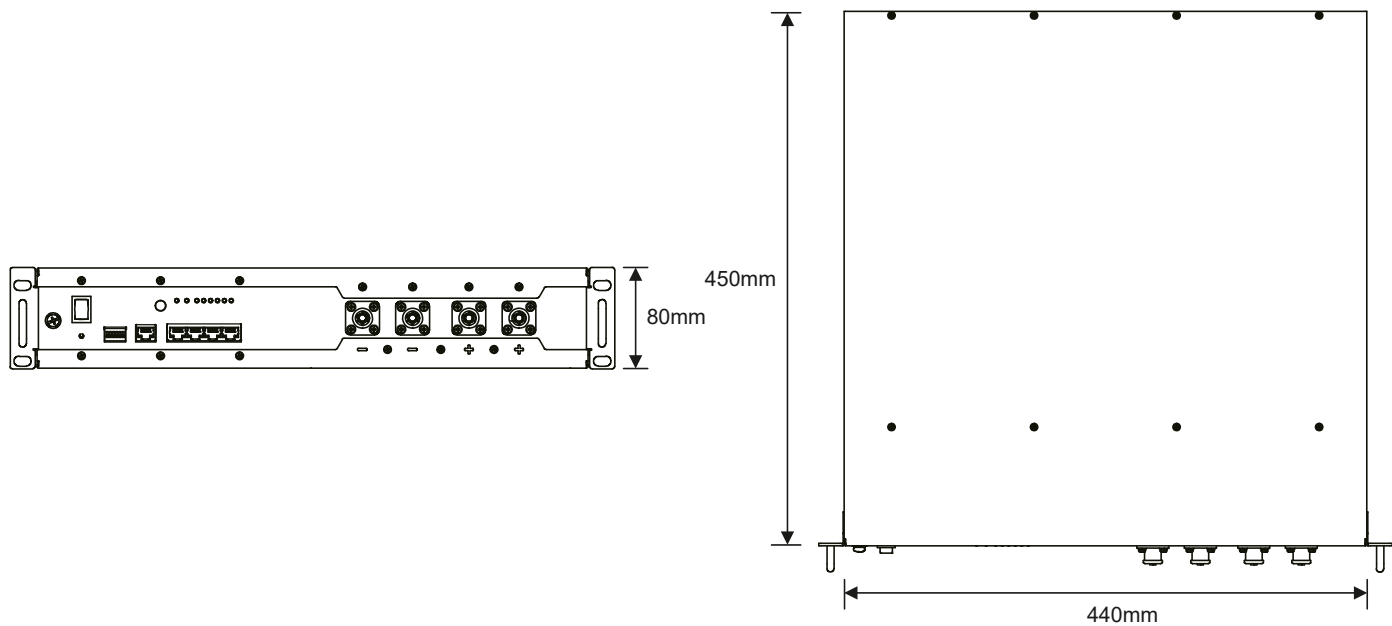


Technical Specifications

Battery Model	E-BOX 4850G
Chemistry	LFP
Nominal Voltage	48V
Voltage Range	45V-54V
Nominal Capacity	50Ah
Nominal Energy	2.4kWh
Unit Dimension	W440mm * D450mm * H80mm
Unit Weight	23.5kg
Standard Charge Current	25A
Maximum Charge Current	50A
Standard Discharge	25A
Maximum Discharge Rate	50A
Round-Trip Efficiency	≥95%
Communication Protocol	RS485, CAN
Cycle Life	≥6000cycles
Warranty	10years
Operating Temperature	Charge:0°C~45°C Discharge:-10°C~50°C
Connect style	Parallel
Storage Temperature	Within 1month: -20~45°C, 1-3months: -20~35°C, 3-12months: 20~25°C

E-BOX 4850 series are widely used in low-voltage household photovoltaic energy storage system and small industrial and commercial energy storage and power storage systems , which are lithium iron phosphate battery with BMS inside.

Overall Dimensions



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HV4850



Introduction

HV4850 is a high-voltage ESS based on LiFePO₄ batteries. It is a new type of energy storage product developed and produced by Pytes. It could be used in various scenarios that require lithium battery energy storage, such as microgrids, photovoltaic ESS, and off grid island ESS, in conjunction with power equipment such as PCS (bidirectional converters) DC chargers, inverters, and UPS. HV4850 could meet the requirements of long cycle life, limited installation space and load-bearing. The HV4850 is equipped with an intelligent battery management system (BMS) that could manage and monitor battery cell information, including voltage, current, and temperature, for easy installation and good compatibility with PCS energy storage requirements; balance the charging and discharging of the battery cells to extend the cycle life. It's also could get real-time reporting of battery status parameters through RS485 or could protocol for external communication.

Features



Fully non-toxic, pollution-free, and environmentally friendly;



BMS has functions such as over discharge/charging protection, over current protection high/low temperature protection, etc.



Flexible configuration, able to match multiple PCS, easy to use;



Working temperature range is from 0°C to 50°C, with excellent discharge performance and cycle life;



Good safety performance and long cycle life;



It can automatically manage the charging/discharging status, balance the capacity and voltage of each battery cell;



Natural air cooling for heat dissipation, reducing system noise and increasing reliability;



Embedded design of the standard module is small in size, light in weight, and easy to install and maintain.

10 Years Warranty



UN38.3



Parameter

HV4850		
1	Module	HV4850
2	Cell	Lithium Iron Phosphate(LFP)
3	Battery Modules Qty.	8
4	Battery System Capacity	19.2kWh
5	Battery System Voltage	384VDC
6	Battery System Capacity	50Ah
7	BMS Module	HV4850 BCU
8	Battery Module	HV4850 BMU
9	Battery System Charge Voltage	420VDC
10	Standard Charge/Discharge Current	25A(0.5C)
11	Max. Charge/Discharge Current	50A(1C)
12	Discharge Cut-off Voltage	336VDC
13	Discharge Current(Short Time Max.)	100A@15S
14	Depth of Discharge	90%
15	Efficiency	96%
16	Communication	RS485/CAN/Dry Contact
17	Communication(Wireless)	WiFi
18	Communication(Upper Computer)	RS232
19	Charging Temperature	0~50°C
20	Discharge Temperature	-10°C~50°C
21	Storage Temperature	-10°C~50°C
22	Cycle Life	6000
23	Warranty	10 years
24	Dimensions(HV4850 Cabinet)	W535mm * D462mm * H940mm
25	Weight	230KG
26	Ingress Protection Code	IP20
27	Cooling Strategy	Free cooling
28	Product Certification	CE/IEC62619

HV4850 BMU		
1	Cell	Lithium Iron Phosphate (LFP)
2	Capacity	2.4KWH
3	Nominal Voltage	48VDC
4	Nominal Capacity	50Ah
5	Charging Voltage	53.5V
6	Discharge Cut-off Voltage	44.5V
7	Communication	RS485/CAN
8	Communication(Upper Computer)	RS232
9	Charging Temperature	0°C~50°C
10	Discharge Temperature	-10°C~50°C
11	Storage Temperature	-10°C~50°C
12	Dimension	W440mm * D450mm * H80mm
13	Weight	23KG
14	Ingress Protection Code	IP20
15	Cooling Strategy	Free cooling
16	Product Certification	UN38.3

Test conditions: 0.2C charge/discharge @25°C, 80%DOD

HV48100



Introduction

HV48100 is a distributed energy storage system with IP20 protection level cabinet, which is integrated with battery Pack, high voltage control box and battery management system. It has the advantages of high performance, scalability and Small Space Consumption. Also, the system has a cycle life of over 6000 times with efficiency of 95%. It can be widely used in charging stations, buildings, factories and other scenarios to realize the functions of peak shaving, emergency power backup, and weak system pv power storage.

Features



High performance battery cell

The HV48100 distributed energy storage system adopts high-performance LFP energy storage battery which is equipped with pytes independent battery management system that can effectively guarantee battery safety, with a cycle life of over 6,000 times and a cycle efficiency of up to 95%.



System Expansion

The HV48100 distributed energy storage system supports to extend the systems to 8 sets in series in maximum, which can meet the demand of 25.6 KWh to 40.96 KWh energy storage configuration and realize the collaborative control of multiple devices through the intelligent control system.



Short charging time

Full charge in 2 hours with 2.56KW per module peak continuous output.

10 Years Warranty



UN38.3



Technical Specifications

HV48100 BMU

Module Type	LFP
Nominal Voltage	51.2V
Voltage Range	44.8-58.4V
Continuous Discharging/ Charging Current ^[1]	DC 50A
Depth of Discharge	90%
Cycle Life ^[2]	6000 cycle
Charge Temperature	0~50°C
Discharge Temperature	-10~50°C
Storage Temperature ^[3]	Within 1 month: -20~55°C, 1-3 months: 0~35°C, 3-12 months: 20~25°C
Dimensions	W440mm * D530mm * H140mm
Weight	43kg
Protection level	IP20
Communication Port	RS485, CAN
Certification	IEC62619, UN38.3, CE

HV48100 Cabinet

Battery Type	LFP
Battery System Capacity	5.12kWh*n
Battery System Voltage	51.2V*n
Battery System Capacity	100AH
Battery Modules Qty. (Optional)	5-8
Battery System Charge Voltage-Range	(44.8-58.4V)*n
Continuous Discharging/ Charging Current ^[1]	DC 50A
Depth of Discharge	90%
Cycle Life ^[2]	6000 cycle
Charge Temperature	0~50°C
Discharge Temperature	-10~50°C
Storage Temperature ^[3]	Within 1month: -20~55°C, 1-3months: 0~35°C, 3-12months: 20~25°C
Operation Humidity	0~95%, No Condensation
Dimensions	W600mm * D640mm * H1600mm
Weight	100kg+43kg*n
Protection level	IP20
Communication Port	RS485, CAN
Certification	IEC62619, CE, UN38.3

[1] Test conditions: 0.5C charge/discharge current@80% DOD, 25°C.

[2] The current is affected by temperature and SOC.

[3] Please use 48V DC battery charger to charge battery before selling to customer, If storing the battery more than 6 months

ST20



Introduction

ST20 is a modularly expandable Lithium-ion battery storage system. The system can be built as quickly as a stack of bricks. The system is composed of brick battery packs and an energy control box. The brick battery packs are stacked one by one, and the energy control box is placed on the top of the brick battery pack, it is easy to add up all these to form an energy system for users.

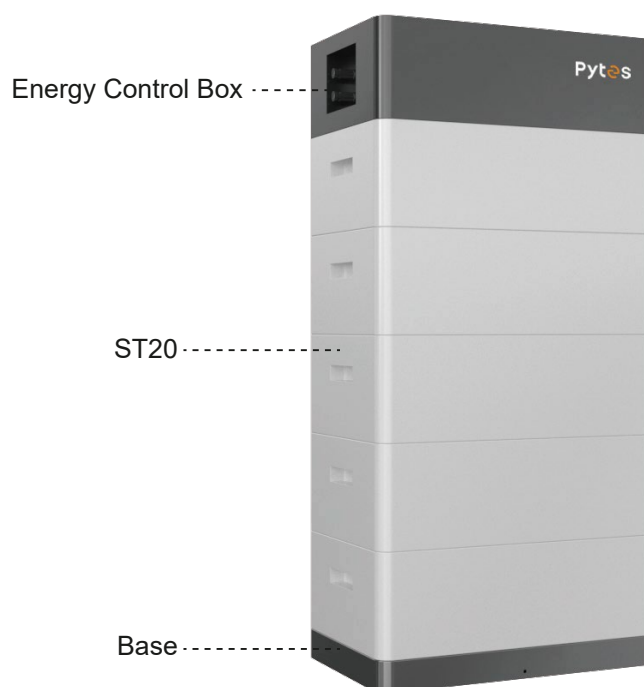
Application Field

- ◆ High Electricity Price Areas
- ◆ High Subsidy Area
- ◆ Areas with Unstable Power Grids
- ◆ Small Business

ST20

ST20 is a 102.4V battery with flexible and modular design.

A ST20 system containing 2 and up to 4 battery modules connected in series and achieves from 204.8V to 409.6V.



PRODUCT PARAMETER

Module	ST20
Number of modules	4
Total Energy(25±2°C, 0.5C, New Battery State)	20.48 kWh
Nominal Voltage (V)	409.6
Operating Voltage Range (V)	320~467.2
Communication	CAN
Dimensions (W/D/H)mm	600*390*1025
Weight(kg)	228±4
Operating temperature	Charge: 0°C~50°C Discharge: -20°C~55°C
Certification & Safety Standard	UN 38.3 / IEC62619 / CE-EMC
Enclosure Protection Rating	IP55
Warranty	10 years

Cell Type	LFP
Standard Capacity(Ah)	50 (25±2°C, 0.5C, New Battery State)
Nominal Capacity (kWh)	5.12
Depth of Discharge	80%(Recommend)、 100%(Max)
Operating voltage (V)	80-116.8
Nominal Voltage (V)	102.4
Charge /Discharge Current (A)	Recommend 25(0.5C) Max 45(1C)
Weight (Kg)	51±2Kg
Dimensions (W*D*H) mm	600*390*229
Recommend Storage Temperature	5°C~35°C
Humidity	5%-95%
Altitude	≤4000m
Warranty	10 years

	Energy Control Box
Dimensions (W*D*H)	600*390*165mm
Weight	16±1kg

Pytes

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Weitere Kataloge



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