Pytes

Creating
Undertaking & Sharing

PYTES (USA) Energy Inc.
BATTERY EXPERT-GREEN ENERGY PROVIDER

LI-ION BATTERY FOR ENERGY STORAGE

CONTENTS

Pytes

Our journey began in 2004, developing solutions for residential energy storage systems. We help people save money and feel confident facing outage, with our ongoing support and technology accumulated over the 19 years.

Driven by the desire to better serve our customers, we run 3 logistics and service centers apart from 4 self-owned production bases, specifically in Los Angeles CA, Dallas TX and Panama to cover more areas with quicker delivery and faster response to customer calls.

Creating, Undertaking, Sharing, we practice our philosophy and fulfill the mission that to deliver safe, reliable and affordable clean energy to home and community for a more carbon-free future.

$125M
Total Asset

19 Years
Industry experience

Pytes
Since 2004

1000+
Employee

3.95Gwh
Annual capacity

Shanghai Pytes Energy Co.,Ltd.

Global Marketing & Service

PYTES EU office
(The Netherlands)

North America
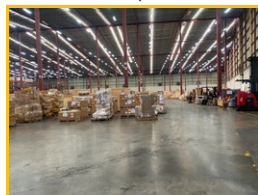
PYTES USA office & Warehouse
(Los Angeles)

Factory in
Hungary

PYTES office
in France

PYTES office
in Germany

PYTES USA Warehouse
(Dallas)

PYTES Panama Warehouse

Shandong PYTES New Energy Technology

Shandong PYTES Electronics

China

Headquarter/ Factory in Shanghai

Vietnam

Factory in Ho Chi Minh City

SGS, TÜV, BV, DEKRA
Accredited Cooperative Testing Labs

Mechanical Tests

Vibration Test
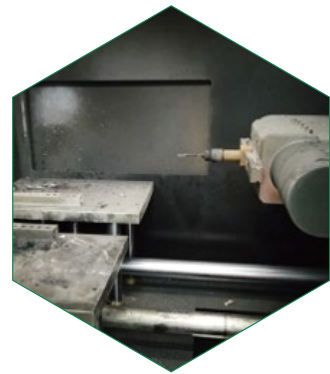

Drop Test

Shocking Test

Safety Tests

Short Circuit Test

Impact Test

Needle Test

Environmental Tests

Electrical Tests

Altitude Simulation

Thermal Shock
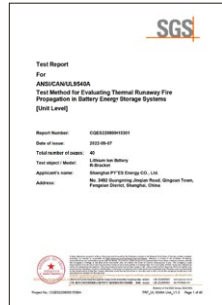
Qualification & Certification
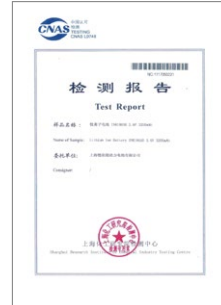

UL9540

UL9540A

UL1973

UL1642

IEC62619

CE

UN38.3

RoHS

REACH

KC

ISO9001:2015

ISO14001:2015

Standard Products

Introduction

V5°
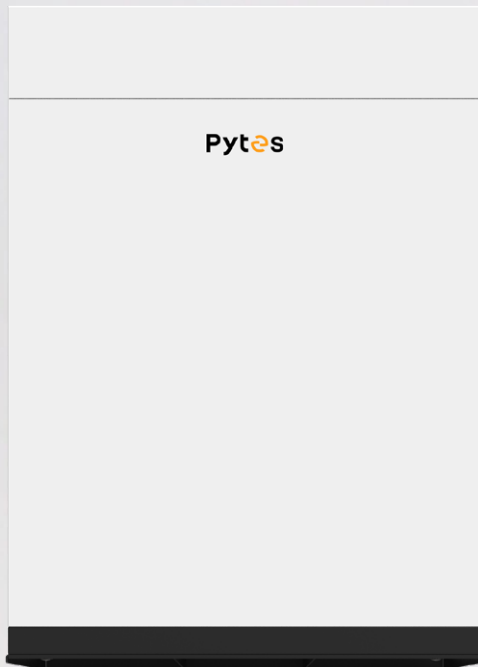
E-BOX 48100R

R-BOX

V-BOX-OC

Stack LV Series
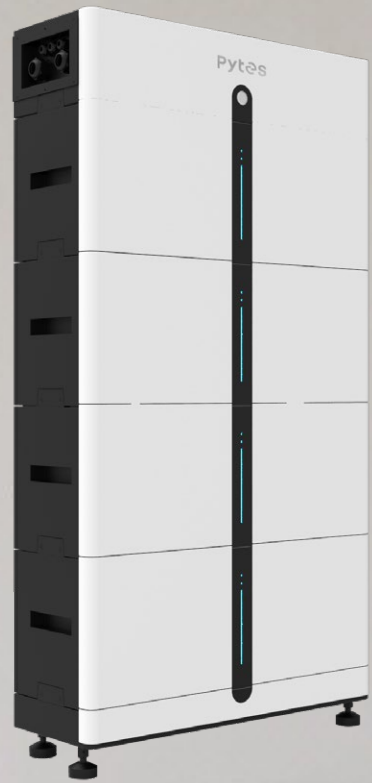
HV48100

E-BOX 48100R

E-BOX 48100R

Pytes
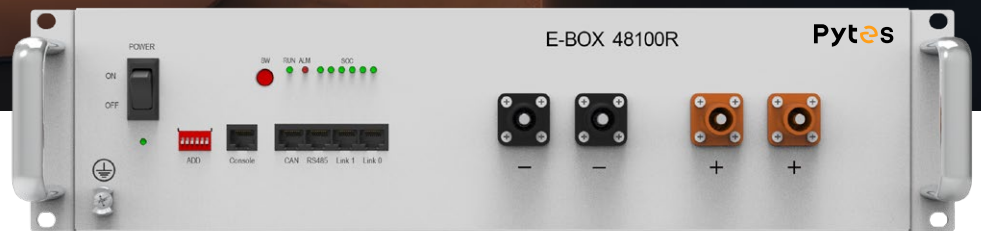
Features

Scalable
- From 5.12kWh to 245.76kWh

Long-lasting
- ≥6000 Cycles @ 90%DOD

Safe & Reliable
- Tier 1 Automotive Grade A LiFePO4 cells
- Self-designed & Field-proven BMS

Compact, Flexible and Easy Install

Wide Compatibility

10 Years Warranty

SGS | TUV SUD | CE | CEC | SGIP | UN38.3

E-Box 48100R Specs

Electrical

Nominal Voltage	51.2V
Voltage Range	47.5V~57.6V
Nominal Capacity	100Ah
Nominal Energy	5.12kWh
Recommended Charge/ Discharge Current	50A (2.56kW DC)
Maximum Charge/ Discharge Current	50A (2.56kW DC)
Peak Discharge Current	102A (5.22kW@15s)

General

Chemistry	LFP
Communication Protocol	CAN/RS485
Dimensions (L*W*H)	17.32 * 24.41 * 4.61 inch (2.6U)
Weight	112.5lbs
Ambient Temperature	14°F~122°F
Round-Trip Efficiency	≥95%
Cycle Life	≥6000cycle
Warranty	10 Years

Certifications

UL9540 Ed.2 (2020), UL9540A, UL1973, CEC, SGIP

R-BOX
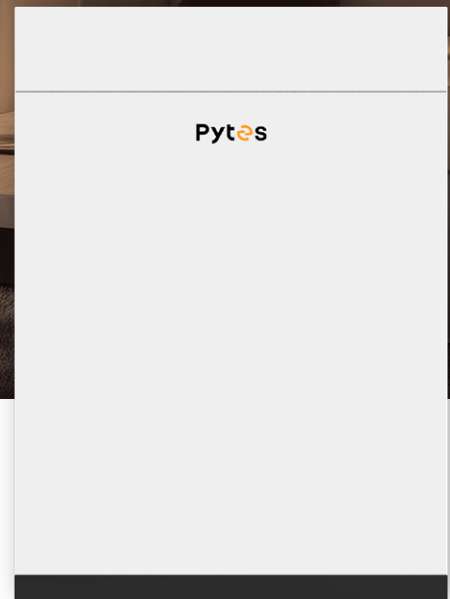
R-Box Specs

- -

Mechanical

Load Capacity	2*E-Box 48100R
Dimensions (L*W*H)	11.0*20.1*27.5 inch (30.8 inch H w/holder)
Weight	37.5lbs
Mount	Wall/Floor Mount
Enclosure Rating	IP20
Enclosure Material	Cool-rolled Steel
Cooling	Natural Convection

R-BOX-IP64

R-Box-IP64 Specs

Mechanical

Load Capacity   2*E-Box 48100R

Dimensions (L*W*H)   12.2*20.9*29 inch (33.7 inch H w/holder)

Weight   51.8lbs

Mount   Wall Mount

Enclosure Rating   IP64

Enclosure Material   Cool-rolled Steel

Cooling   Natural Convection

R-BOX-OC (IV)
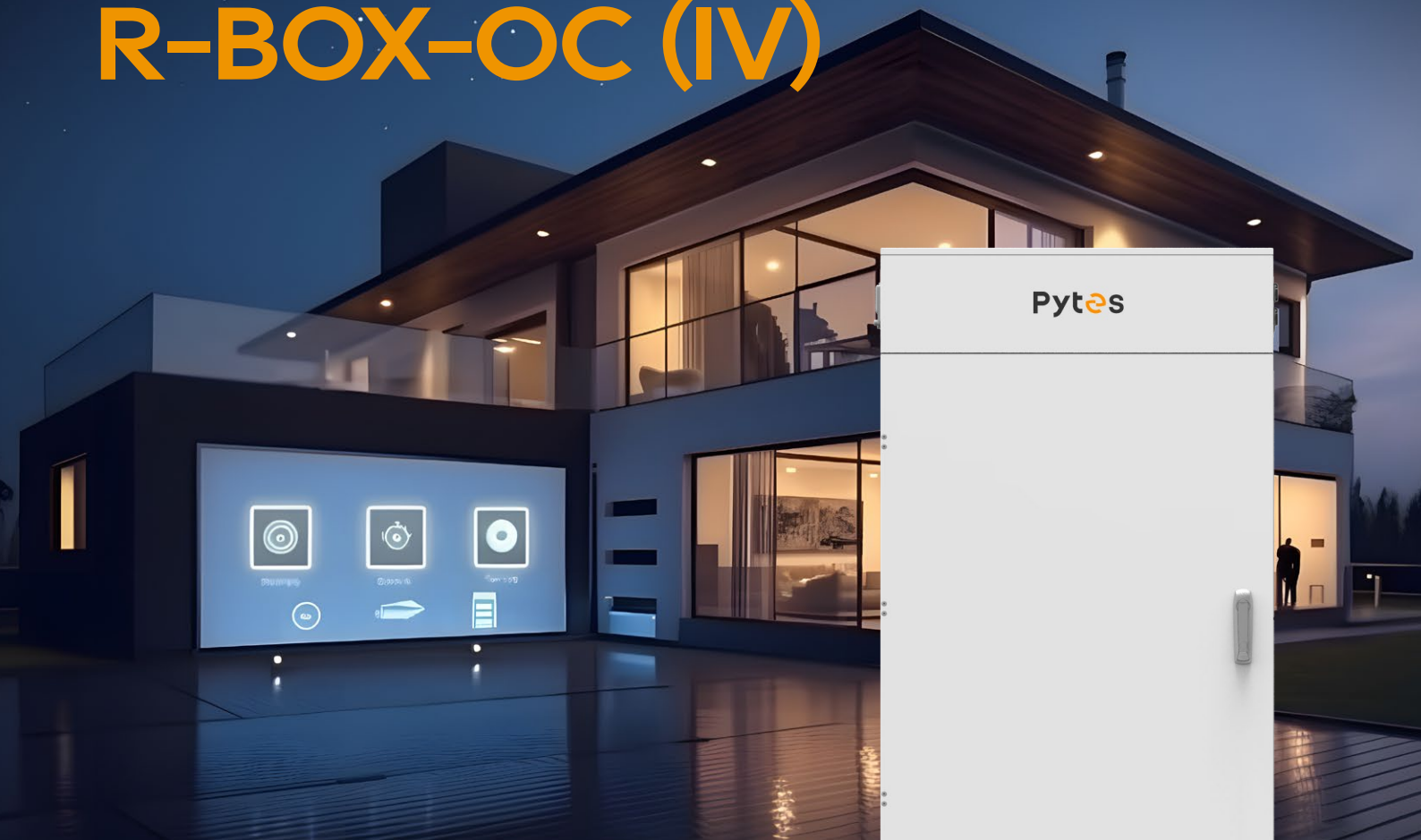
R-Box-OC (IV) Specs

Mechanical

Load Capacity	4*E-Box 48100R
Structure	Busbar & DC Circuit Breaker Integrated
Dimensions (L*W*H)	31.5*13.0*62.0 inch
Weight	176.4lbs
Mount	Floor Mount
Enclosure Rating	IP55
Enclosure Material	SGCC(Galvanized Steel)
Cooling	Natural Convection

Forest-RB

Forest-RB Specs

Mechanical

Load Capacity	6*E-Box 48100R
Structure	Busbar Integrated
Dimensions (L*W*H)	28.3*15.7*45.3 inch
Weight	44.1lbs
Mount	Floor Mount
Enclosure Rating	IP20
Enclosure Material	SGCC(Galvanized Steel)
Cooling	Natural Convection
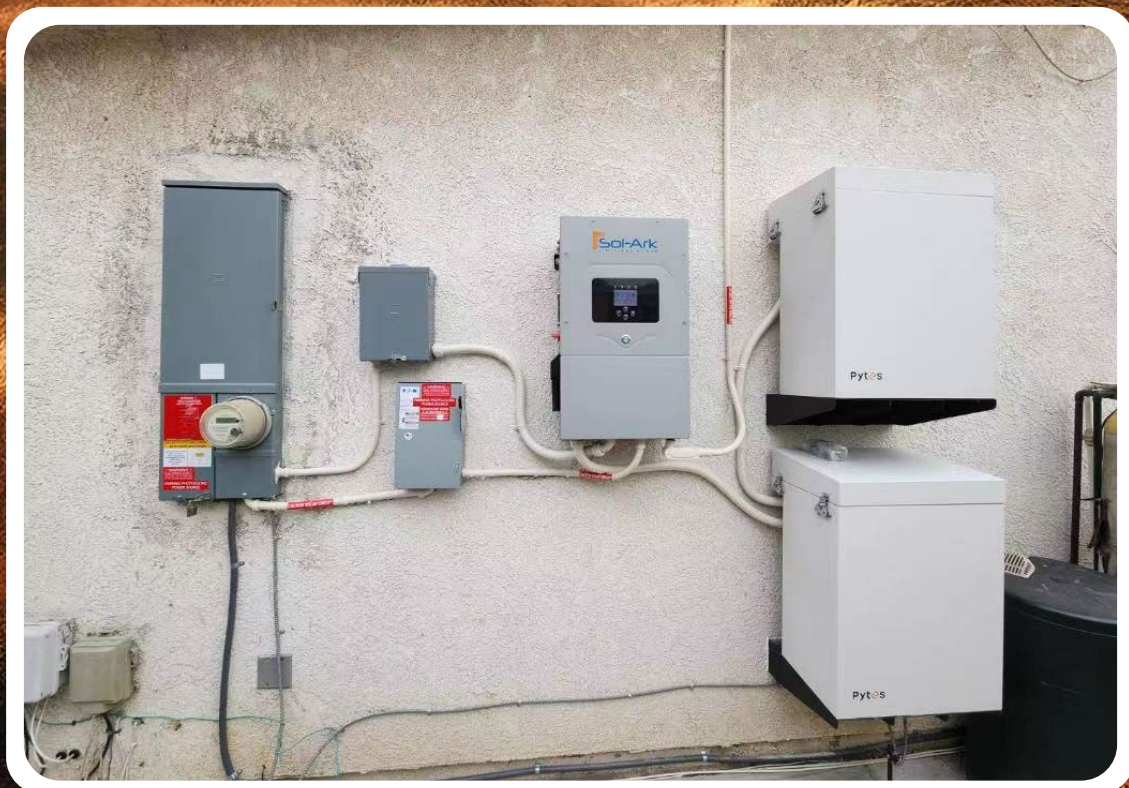
R-BOX

R-BOX-IP64

Forest-RB

V5°

Features

📺	**Remote Monitoring and Upgrading**	📈	**Higher Charge/Discharge Rate**
	Wider Operation Temperature		**Higher Energy Density**
	Greater scalability		

10 Years Warranty

SGS · TÜV · CE · CEC · SGIP · UN38.3

V5° Specs

Electrical

Nominal Voltage	51.2V
Voltage Range	47.5V~57.6V
Nominal Capacity	100Ah
Nominal Energy	5.12kWh
Recommended Charge/ Discharge Current [1]	75A
Max Continuous Charge/ Discharge Current [2]	100A
Peak Charge/Discharge Current	101A~120A(3min) ; 121A~180A(15sec)

[1], [2]: The recommended and Max continuous charge and discharge current is for a battery cell temperature within 50°F~104°F to consider.
It will result in a derating on current if out of the temperature range.

General

Chemistry	LFP
Communication Protocol	CAN/RS485
Dimensions (L*W*H)	17.32*20.87*5.51 inch (3.2U)
Weight	97lbs
Ambient Temperature	14°F~131°F
Round-Trip Efficiency	≥95%
Cycle Life [3]	≥6000 cycles
Warranty	10 Years

[3]: Test conditions 0.2C Charging/Discharging, @77°F, 80% DOD

Add-on Functionalities

WIFI Connection	Remote monitoring and upgrade
Heating Pad	Temperature Rise: 18°F/h
Scalability	14 pcs (71.68kWh) in a group
	6 groups (430.08kWh) in a system w/a Hub

Certifications (On-going)

UL9540 Ed.2 (2020), UL9540A, UL1973, CEC, SGIP

V-BOX-OC

V-Box-OC Specs

Mechanical

Load Capacity	4*V5°
Structure	Busbar & DC Circuit Breaker Integrated
Dimensions (L*W*H)	25.4*15.6*54.9 inch
Weight	194lbs
Mount	Floor Mount
Enclosure Rating	IP55
Enclosure Material	SGCC(Galvanized Steel)
Cooling	Natural Convection

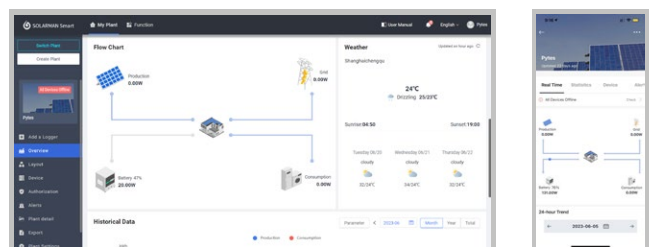# SMART MONITOR

Smart Monitor feature

- **Real-time Monitoring**
- **Data Visualization**
- **Remote Upgrading**
- **Error Detection**
- **Alarm Notification**

Diagram

Mobile — Cloud — PC

Router
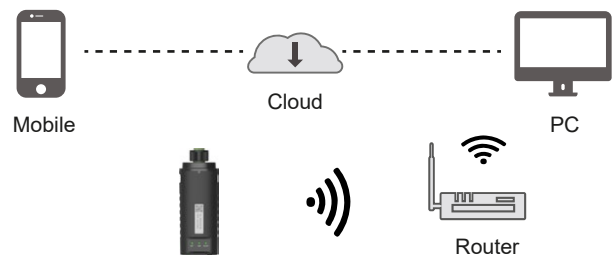
WEB/APP

Stack LV Series

Features

Safe
- DC Breaker & Fuse Integrated

Smart
- Remote Upgrading & Monitoring

Powerful
- Scalable to 30.72 kWh (2 to 6 modules) per Stack
- Up to 15.36kW Output Power (Surge: 15.36kW)

Reliable
- Heating Pad Integrated for Wider Operation Temperature

Compact
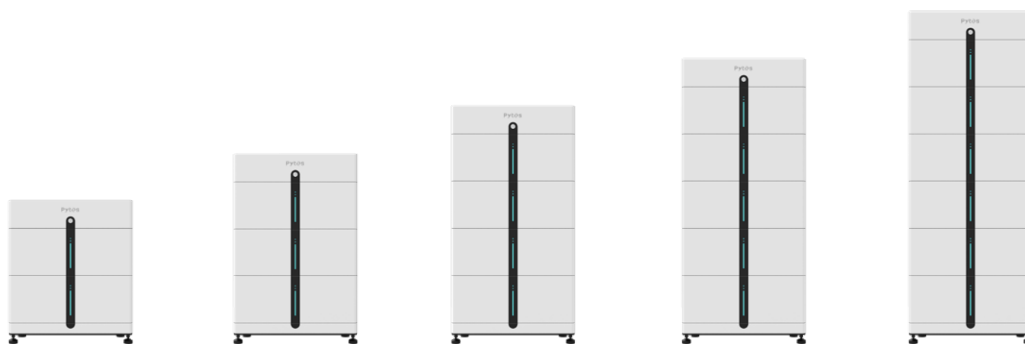- Modular Design, Easy Installation, Save Labor Costs

Elegant
- Modernized Design, IP55 Rated Suitable for Indoor & Outdoor installation

Stack LV Series

Battery Management Unit:

Cell Type	LFP
Nominal Energy	5.12kWh
Nominal Voltage	51.2V
Voltage Range	44.8V~57.6V
Nominal Capacity	100Ah
Recommended Discharging/Charging Current	50A
Maximum Discharge/Charge Current	75A
Peak Charge/Discharge Current	100A
Certifications	UL1973, UN38.3, (TBD: UL9540, UL9540A)

Model	2	3	4	5	6
Cell Type	LFP				
Nominal Voltage	51.2V				
Voltage Range	44.8V~57.6V				
Nominal Capacity	100Ah				
Nominal Energy	10.24kWh	15.36 kWh	20.48 kWh	25.6 kWh	30.72 kWh
Recommended Power	5.12kW	7.68KW	10.24KW	12.8KW	15.36KW
Maximum Power	7.68kW	11.52kW	15.36kW	15.36kW	15.36kW
Peak Power	10.24kW	15.36kW	15.36kW	15.36kW	15.36kW
Dimensions (L*W*H)	26.8*9.5*31.5 inch	26.8*9.5*41.7 inch	26.8*9.5*52.0 inch	26.8*9.5*62.2 inch	26.8*9.5*72.4 inch
Weight(lbs)	285.5	411.2	536.8	662.5	788.2
Communication	CAN, RS485				
Cycle Life	≥6000 cycles				
Protection Level	IP55				
Ambient Temperature	14°F~131°F				
Storage Temperature	Within 1 month: −4°F~131°F 1~3 months: 32°F~95°F 4~12 months: 68°F~77°F				

HV48100

Features

📊 **Higher Energy Density**	📈 **Lower Resistive Losses**
⬆️ **Superior Performance**	🖥️ **Remote Upgrading & Monitoring**
🗄️ **Enhanced Safety Features**	

HV48100 Specs

Battery Controller Unit: HV48100 BCUs

Controller Working Voltage	200V~432V
Self-consumption Power	7.56W
Dimensions (W*D*H)	17.3*20.9*5.5 inch
Weight	28.7 lbs
Communication	CAN, RS485, Dry Contact, WiFi

Battery Management Unit: HV48100 BMUs

Cell Type	LFP
Nominal Energy	5.12kWh
Nominal Voltage	51.2V
Nominal Capacity	100Ah
Continuous Discharging/Charging Current	50Adc
Voltage Range	47.5–57.6V
Dimensions (W*D*H)	17.3*20.9*5.5 inch
Weight	94.8lbs
Communication	CAN, RS485
Cycle Life	⩾6000 cycles
Operation Temperature	32°F~122°F
Storage Temperature	–4°F~140°F

HV48100 System

System Energy	5.12kWh*n
System Voltage	51.2V*n
System Capacity	100Ah
Battery System Charge Upper-Voltage	58.4V*n
Battery System Discharge Lower-Voltage	44.8V*n
Continuous Discharging/ Charging Current	50Adc
BCU Model	HV48100 BCUs
BMU Model	HV48100 BMUs
BMU Qty. (Optional)	5~8
Depth of Discharge	90%
Dimensions (W*D*H)	23.6*25.2*63.0 inch
Weight	396.8lbs+94.8lbs*n
Communication	CAN, RS485, Dry Contact, WiFi
Cycle Life	⩾6000 cycles
Operation Temperature	32°F~122°F
Storage Temperature	–4°F~140°F
Operation Humidity	0~95%, No Condensation
Protection Level	IP20
Certifications	UL1973, UN38.3, (TBD: UL9540, UL9540A)

Accessories

Brackets for E-Box-48100R

150219100018 & 150219100019
F. & B. Bracket

110409100019
R-Bracket (Single Rack)
Single Bracket for 1 pc E-Box 48100R
Easy to expand up to 8 layers

110409100020
R-Bracket (8-in-1)
8 layers for holding 8 pcs E-Box 48100R

Brackets for V5°

150208100001
V-Bracket

Equipments

HUB

110409100001
Hub
Enables communication with multiple groups
of batteries

Busbar:

161506100003
300A Junction Box
300A/6*M5+2*M10 Terminals

110409100026
300A Busbar
300A/12*M6+2*M8 Terminals

110409100027
600A Busbar
600A/6*M10+2*M8 Terminals

Cables

Power Cables

161412100244 & 161412100245
4AWG/2000mm/Amphenol to M8 Bolt

161412100251 & 161412100252
4AWG/160mm/both Amphenol ends

161412100467 & 161412100468
4AWG/2000mm/Amphenol to M10 Bolt

161412100461 & 161412100462
4/0AWG/2000mm/both M10 ends

161412100465 & 161412100466
2/0AWG/2000mm/both M10 ends

Communication Cables

161412101071
Standard Communication Cable
Compatible with： Sol Ark, Megarevo, Luxpower, Growatt, APsystems, SMA, Studer

1614121010XX
Customized Communication Cable
Customized for: Victron, Voltronic, Phocos, MPP, SRNE

161412100916
Console Cable
USB to RJ45 cable for monitoring & upgrading

Curacao

Puerto Rico

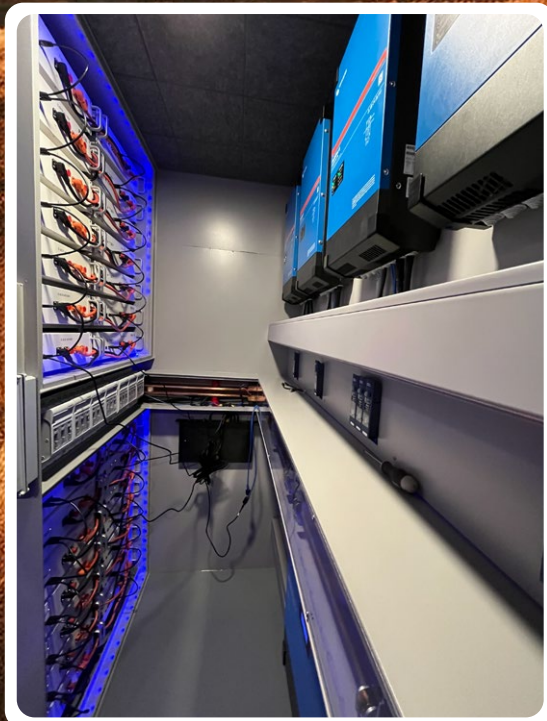Dominican Republic

Indiana

Puerto Rico

Netherlands

Germany

Germany

Netherlands

Austria

Compatibility List of PYTES ESS and Inverters

Pytes

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