



Creating Undertaking & Sharing



PYTES (USA) Energy Inc.

BATTERY EXPERT-GREEN ENERGY PROVIDER

LI-ION BATTERY FOR ENERGY STORAGE



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Pytes embarked on its journey in 2004, focusing on developing solutions for energy storage systems. Our goal is to assist individuals in cutting costs and feeling assured during power outages, offering continuous support and leveraging over 20 years of technological expertise.

Driven by a commitment to better serve clients, Pytes operates three fulfillment centers in the US. These centers enable us to expand coverage areas, ensuring speedy delivery and timely responses to customer inquiries.

Creating, Undertaking, and Sharing are the core values which drive our company operations. Guided by this philosophy, Pytes is committed to delivering safe, reliable, and affordable clean energy to homes and communities, contributing to a more carbon-free future.



\$810M

Total Assets

20 Years

Industry Experience



1000+

Employees

4GWh

Annual Capacity



Global Marketing & Service



Dallas Office & Warehouse



Dutch Warehouse

North American
Branch

Los Angeles
warehouse

Panama
Warehouse

Puerto Rico
Warehouse

Hungary
Warehouse &
Service Center

South Africa — — —



German Branch



Shanghai
Headquarter



Ho Chi Minh
Vietnam

EU
Branch

China

Sydney
Australia



SGS, TUV, BV, DEKRA

Accredited Cooperative Testing Labs

Mechanical Tests



Vibration Test



Drop Test



Shocking Test



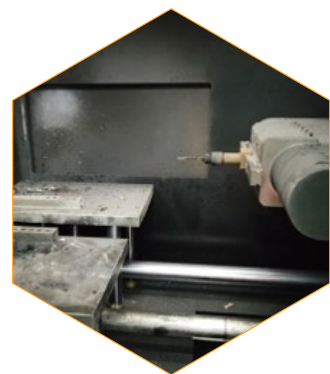
Safety Tests



Short Circuit Test



Impact Test



Needle Test

Environmental Tests



Altitude Simulation



Thermal Shock

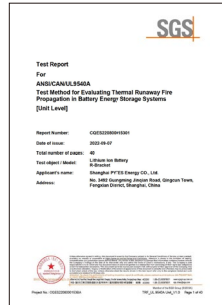
Electrical Tests



Qualification & Certification



UL 9540



UL 9540A



UL 1773



UL 1642



IEC62619



CE



UN38.3



RoHS



REACH



KC



ISO9001:2015



ISO14001:2015

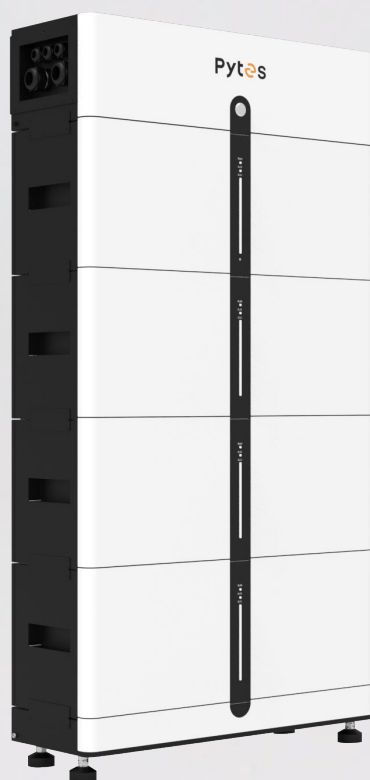
ESS Products

ESS Products

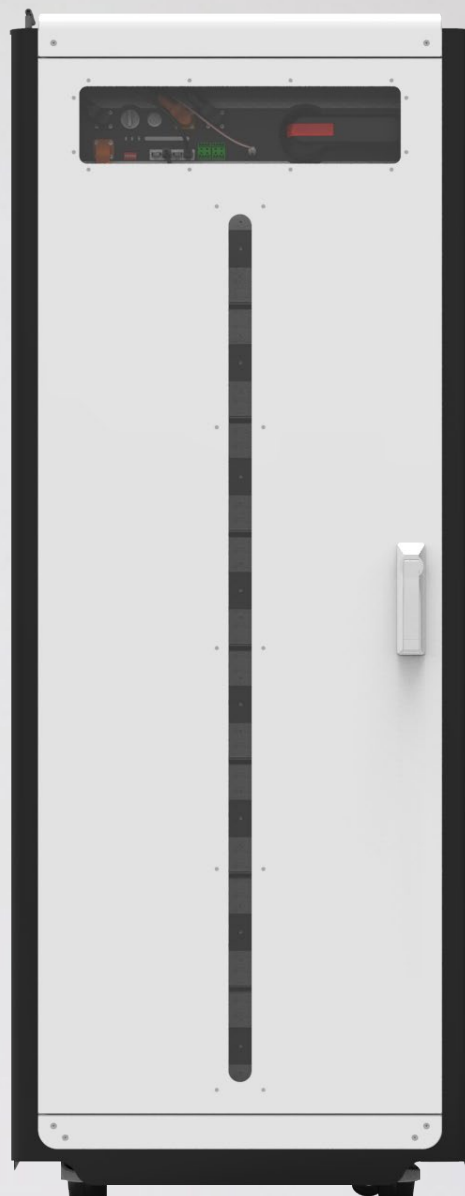




E-BOX 48100R

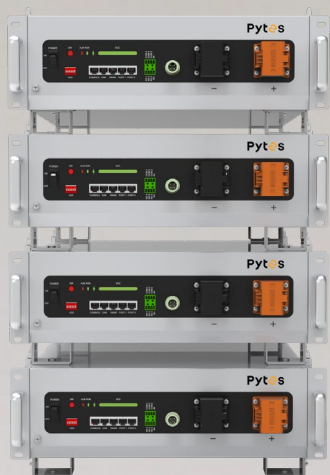


Pi LV1



HV48100





V5°



V-BOX-IC



V-BOX-OC

E-BOX 48100R

Features



Scalable

- From 5.12kWh to 491.5kWh



Easy to Install



Long-lasting

- ≥ 6000 Cycles @ 90% DoD



Wide Compatibility



Safe & Reliable

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

10 Years Warranty



E-BOX 48100R Specifications

Electrical

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

General

Chemistry	LFP
Communication Protocol	CAN/RS485
Dimensions (L x W x H)	17.32 x 24.41 x 4.61inch (2.6U) / 440 x 620 x 117 mm(2.6U)
Weight	112.5lbs / 51kg
Operating Temperature	Charge:32°F~113°F / 0°C~45°C Discharge:14°F~122°F / -10°C~50°C
Round-Trip Efficiency	≥ 95%
Cycle Life	≥ 6000 Cycles
Altitude	< 13123.35ft / 4000m
Warranty	10 Years
Scalability	16 pcs (81.92kWh) in a group 6 groups (491.52kWh) in a system w / a Hub

Certifications

UL 9540 Ed.2 (2020), UL 9540A, UL 1973, CEC, SGIP

E-BOX 48100R Brackets & Enclosures

F & B. Bracket



5.12kWh

Up to 5 x E-BOX 48100R

Floor Mount

Cool-rolled Steel

Front 19.05 x 5.87 x 1.5inch /
484 x 149 x 38mm
Back 17.44 x 5.87 x 2.07inch /
443 x 149 x 52.5mm

4.85lbs / 2.2kg

R-Bracket



5.12kWh

Up to 8 x E-BOX 48100R

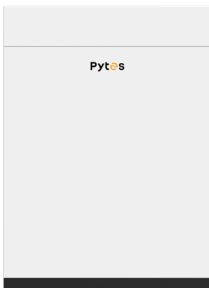
Floor Mount

SPCC

120.87 x 28.35 x 5.31inch /
530 x 720 x 135mm

17.6lbs / 8kg

R-BOX



10.24kWh

2 x E-BOX 48100R

Wall / Floor Mount

Cool-rolled Steel

IP20

11.0 x 20.1 x 27.5 inch
(30.8 inch H w / Wall
Mount Bracket) /
280 x 510 x 700 mm
(780 mm H w /
Wall Mount Bracket)

37.5lbs / 17kg

R-BOX-NEMA3



10.24kWh

2 x E-BOX 48100R
Wall / Floor Mount
NEMA3
SGCC(Galvanized Steel)

20.8 x 15.7 x 28.9inch /
530 x 400.3 x 734.7mm

66.1lbs / 30kg

R-BOX-OC



20.48kWh

4 x E-BOX 48100R
Floor Mount
SGCC(Galvanized Steel)
IP55, NEMA 3
Integrated Busbar &
DC Circuit Breaker

31.5 x 13.0 x 62.0inch /
800 x 330 x 1575mm

176.4lbs / 80kg

Forest RB Plus



30.72kWh

6 x E-BOX 48100R
Floor Mount
IP20
Natural Convection
SGCC(Galvanized Steel)
Integrated Busbar

28.3 x 15.7 x 45.3inch /
720 x 400 x 1150mm

150lbs / 68kg



F&B Bracket



R-BOX



R-BOX-OC



Forest-RB

V5°

Features



Remote Monitoring and Upgrading



Higher Charge / Discharge Rate



Wider Operation Temperature



Higher Energy Density



Greater Scalability

10 Years Warranty



V5° Specifications

Electrical

Nominal Voltage	51.2V
Voltage Range	47.5V~57.6V
Nominal Capacity	100Ah
Nominal Energy	5.12kWh
Recommended Charge /	75A(3.84kW)
Discharge Current ^[1]	
Maximum Charge /	100A(5.12kW)
Discharge Current ^[2]	
Peak Charge /	101A~120A(3min) ; 121A~180A(15sec)
Discharge Current	

[1], [2]: The recommended and maximum charge / discharge currents apply when battery cell temperature is within 50°F~104°F / 10°C~40°C.

De-rated charge / discharge currents will occur if battery is operated outside of this temperature range.

General

Chemistry	LFP
Communication Protocol	CAN/RS485
Dimensions (L x W x H)	17.40 x 20.87 x 5.51inch(3.2U) / 424 x 530 x 140mm(3.2U)
Weight	97lbs / 44kg
Operating Temperature	Charge:32°F~113°F / 0°C~45°C Discharge:14°F~122°F / -10°C~50°C
Round-Trip Efficiency	≥95%
Cycle Life ^[3]	≥6000 Cycles
Altitude	< 13123.35ft / 4000m
Warranty	10 Years
Scalability	16 pcs (81.92kWh) in a group 6 groups (491.52kWh) in a system w / a Hub

[3]: Test conditions 0.2C Charging / Discharging, @77°F / 25°C, 90% DoD

Special Features

WIFI Connection (Optional)	Remote monitoring and upgrade
Heating Pad (Integrated)	Temperature Rise: 18°F / h / 10°C / h Operation Temperature: -4°F~50°F / -20°C~10°C

Certifications

UL 9540 Ed.2 (2020), UL 9540A, UL 1973, CEC, SGIP

V5° Brackets & Enclosures

V-Bracket



5.12kWh

Up to 6 x V5°

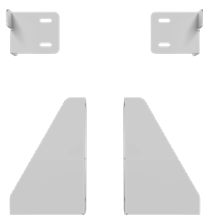
Floor Mount

SGCC(Galvanized Steel)

1.97 x 7 x 2.45inch /
50 x 177.8 x 62.2mm

3.2lbs / 1.44kg

V5 BK1



5.12kWh

1 x V5°

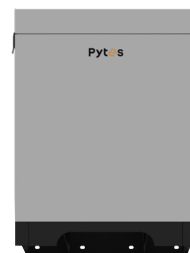
Wall

SGCC(Galvanized Steel)

Upper 5.71 x 3.62 x 1.06inch /
145 x 92 x 27mm
Lower auxiliary
2.36 x 1.97 x 1.89inch /
60 x 50 x 48mm

1.29lbs / 0.586kg

V-BOX NEMA 3



10.24kWh

2 x V5°

Wall / Floor Mount

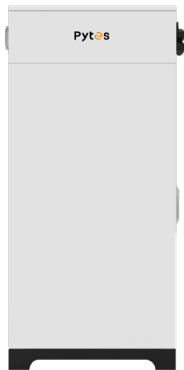
NEMA3

SGCC

20.5 x 17.0 x 25.5inch /
521.5 x 430.9 x 647.4mm

65lbs / 29.5kg

V-BOX-OC



20.48kWh

4 x V5°

Floor Mount

SGCC(Galvanized Steel)

IP55, NEMA 3

Integrated Busbar &

DC Circuit Breaker

25.4 x 15.6 x 54.9inch /
645 x 395 x 1395mm

194lbs / 88kg

V-BOX-IC



15.36kWh

3 x V5°

Floor mount

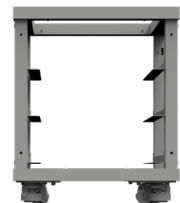
SGCC(Galvanized steel)

IP20

21.0 x 24.3 x 25.6inch /
533 x 616 x 650mm

93lbs / 42.2kg

V-BOX-IC se



15.36kWh

3 x V5°

Floor mount

SGCC(Galvanized steel)

21.0 x 22.2 x 26.0inch /
533 x 565 x 660mm

61.1lbs / 27.7kg

SMART MONITOR

Features



Real-time Monitoring



Data Visualization



Remote Upgrading



Error Detection



Alarm Notification



WIFI Modules



WD01

Part No: 110409100151

For E-BOX 48100R

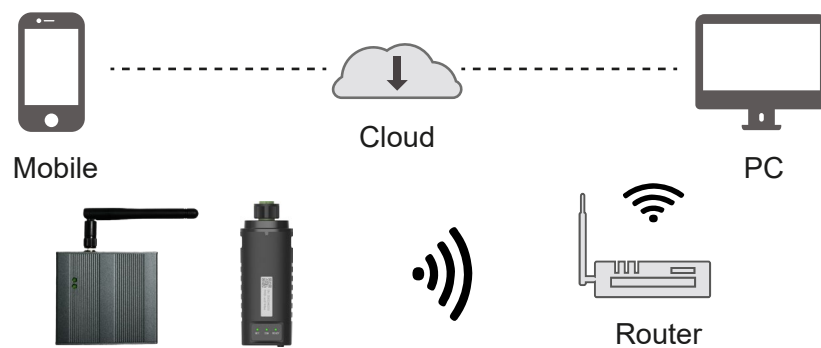


LSW-5

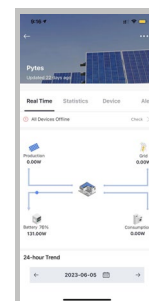
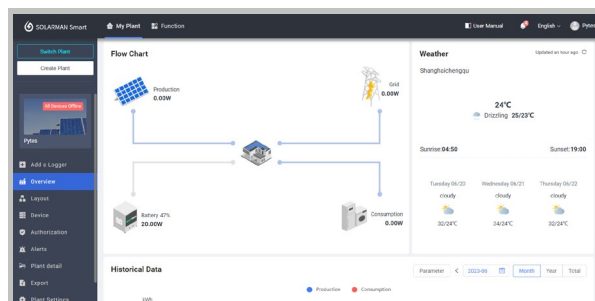
Part No: 162002100019

For V5°

Diagram



WEB/APP



Pi LV1

Features



Safe

- LFP Chemistry, Field-Proven BMS Included in Individual Module, Integrated DC Breaker & Fuse



Scalable on Demand

- Flexible Configuration from 5.12 to 30.72 kWh per Stack, Up to 4 Stacks



Powerful

- Up to 10.24kW Continuous Output



Outdoor Rated Enclosure

- Water & Dust Proof for Both Indoor and Outdoor Installation



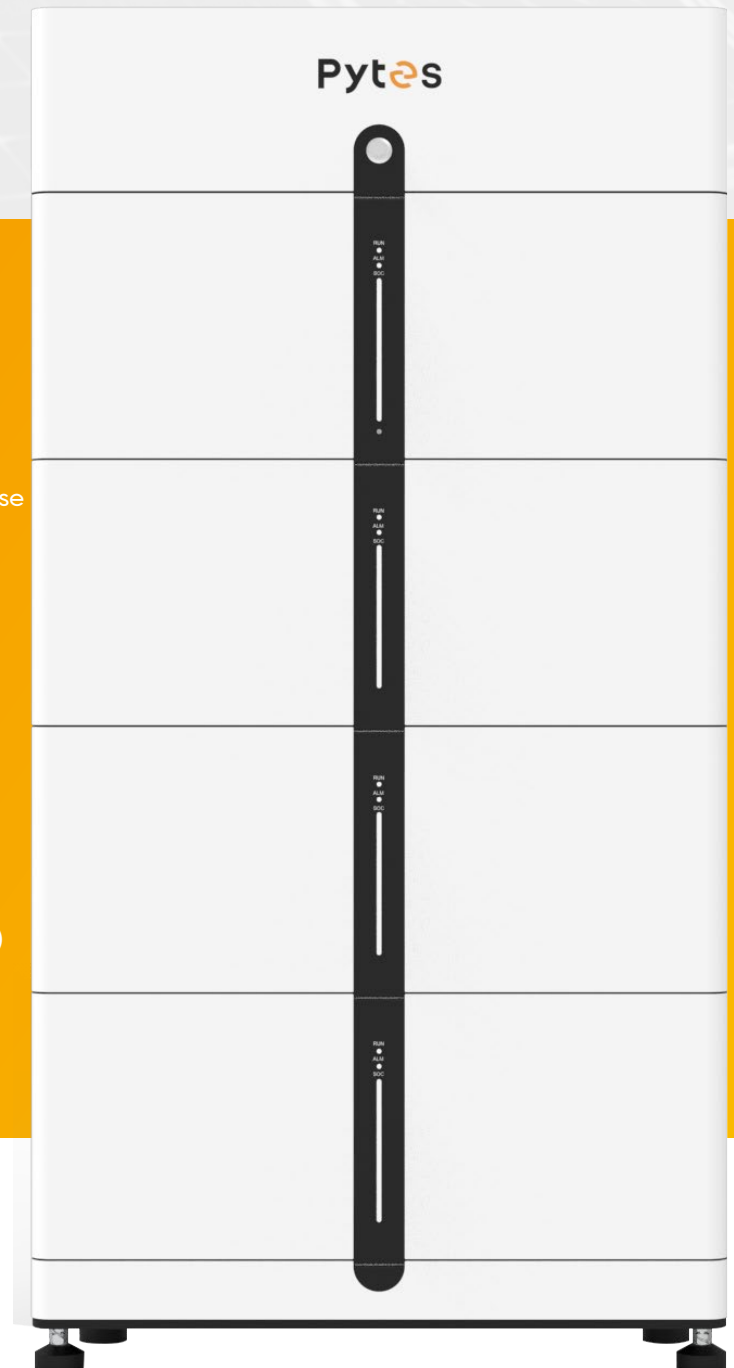
Plug-and-play (15-min installation)

- Quick Connectors, Easy to Install



Smart

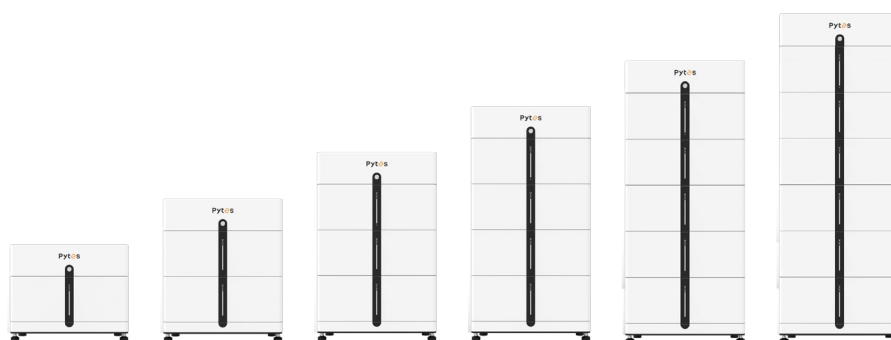
- Remote Upgrading & Monitoring



Pi LV1 Specifications

Battery Module Unit

Chemistry	LFP
Nominal Energy	5.12kWh
Nominal Voltage	51.2V
Voltage Range	47.5V~ 56.8V
Nominal Capacity	100Ah
Recommended Continuous Charge / Discharge Current	50A (2.56kW)



Modules ^[1]	1	2	3	4	5	6
Nominal Voltage	51.2V					
Voltage Range	47.5V~56.8V					
Nominal Capacity	100Ah	200Ah	300Ah	400Ah	500Ah	600Ah
Nominal Energy	5.12kWh	10.24kWh	15.36kWh	20.48kWh	25.6kWh	30.72kWh
Recommended Power	2.56kW	5.12kW	7.68kW	10.24kW	10.24kW	10.24kW
Dimensions (L x W x H) (inch / mm)	268 x 95 x 213 / 681 x 242 x 540	268 x 95 x 315 / 681 x 242 x 800	268 x 95 x 417 / 681 x 242 x 1060	268 x 95 x 520 / 681 x 242 x 1320	268 x 95 x 622 / 681 x 242 x 1580	268 x 95 x 724 / 681 x 242 x 1840
Weight(kg / lbs)	71.7 / 158.1	125 / 275.6	178.3 / 393.1	231.6 / 510.6	284.9 / 628.1	338.2 / 745.6
Efficiency	≥95%					
Communication	CAN, RS485					
Operating Temperature	Charge:32°F~113°F / 0°C~45°C Discharge:14°F~122°F / -10°C~50°C					
Ingress Protection	NEMA 3 / IP55					
Cycle Life ^[2]	≥ 6000 Cycles					
Altitude	< 13123.35ft / 4000m					
Warranty	10 Years					
Certifications	UL 9540 Ed.2 (2020), UL 9540A, UL 1973, CEC, SGIP					

[1]: 4 models parallel in Pi LV1 is Recommended.

[2]: @77°F / 25°C, 0.5C Charging / Discharging, 90% DoD.

HV48100

Features



Safety-Oriented

LFP Chemistry, Grade A Cells & Field-Proven Modular BMS Built-In



Powerful

High Power Output, Suitable for Applications that Require Quick Bursts of Energy



Scalable & Flexible

Increase Capacity on Demand, Ideal for Residential, Commercial & Industrial Use



Compatibility

Field Integrated Solutions, Wide Voltage Range Compatible with Industry Leading Inverters



High Energy Efficiency

Increased Energy Density and Low Resistive Losses



Smart

Remote Upgrading & Monitoring



HV48100 Specifications

HV48100 BCU (Battery Control Unit)

Controller Working Voltage	200V~870V
Self-consumption Power	7.56W
Dimensions (W x D x H)	19.06 x 20.09 x 5.51inch / 484 x 510 x 140mm
Weight	29.32lbs / 13.3kg

HV48100 BMU (Battery Module Unit)

Nominal Voltage	51.2V
Voltage Range	45.5~58V
Nominal Capacity	100Ah
Nominal Energy	5.12kWh
Continuous Discharging / Charging Current	50Adc
Chemistry	LFP
Communication	CAN, RS485
Dimensions (W x D x H)	19.06 x 20.87 x 5.51inch / 484 x 530 x 14mm
Weight	94.8lbs / 43kg

HV48100 System

Nominal System Voltage	256~768V
System Voltage Range	(45.5V~58V) x n
Nominal System Capacity	100Ah
Nominal System Energy	25.6~76.8kWh
Continuous Charge / Discharge Current	50Adc
BMU Qty. (Variable)	5~15
Communication	CAN, RS485, Dry Contact, WiFi
Recommended Depth of Discharge	90%
Dimensions (W x D x H)	23.62 x 25.2 x 61.22inch / 600 x 640 x 1555mm
Weight (Cabinet+BCU+BMU)	197.5lbs+29.32lbs+94.8lbs x n 89.6kg+13.3kg+43 kg x n
Operating Temperature	Charge:32°F~134.6°F / 0°C~57°C Discharge:-0.4°F~134.6°F / -18°C~57°C
Ingress Protection	IP20
Cycle Life	≥6000 Cycles
Altitude	<13123.35ft / 4000m
Warranty	10 Years

*Note."n" represent the quantity of BMU, from 5 to 15 pcs.

Certifications

UL 9540 Ed.3 (2023), UL 9540A, UL 1973

Accessories

Equipments



HUB

110409100001

Hub

Enables communication between multiple groups of batteries



Busbar:

161506100003

300A Junction Box

300A/6 x M5+2 x M10 Terminals

Busbar:

110409100026

300A Busbar

300A/12 x M6+2 x M8 Terminals

110409100027

600A Busbar

600A/6 x M10+2 x M8 Terminals



V-Busbar

110409100167

V-Busbar

Combines DC battery terminals of Sol-Ark 15K inverter.
Sold as a pair of two brackets

Cables



Power Cables

161412100244 & 161412100245

4AWG / 78.74inch / Amphenol to M8 Bolt

161412100251 & 161412100252

4AWG / 6.30inch / both Amphenol ends

161412100467 & 161412100468

4AWG / 78.74inch / Amphenol to M10 Bolt

161412100461 & 161412100462

4/0AWG / 78.74inch / both M10 ends

161412100465 & 161412100466

2/0AWG / 78.74inch / both M10 ends

61412101024 & 161412101026

1/0AWG / 78.74inch / M6 to 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



Cases Gallery



Puerto Rico



Puerto Rico



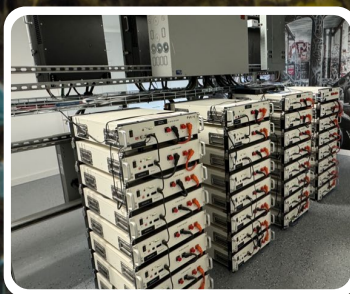
Puerto Rico



South Carolina



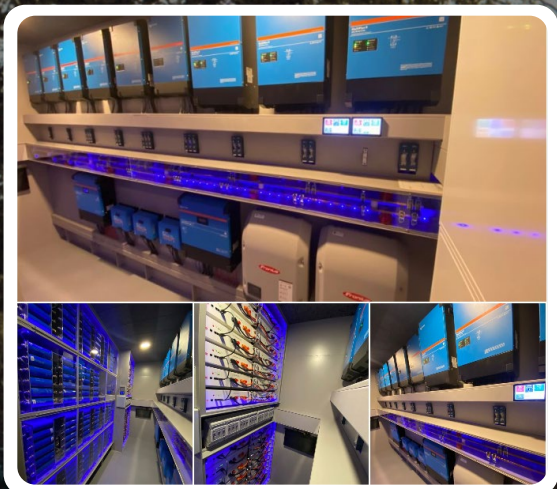
Arizona



Arizona



Indiana



Austria



Austria



Poland



Netherlands



Germany

Inverter Compatibility List

Low Voltage



High Voltage





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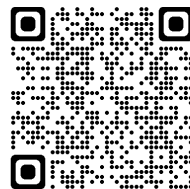
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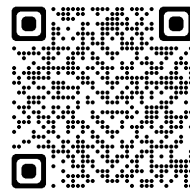
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