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PHYLION EU

PHYLION BATTERY(NL)BV. / PHYLION BATTERY(HUNGARY)KFT

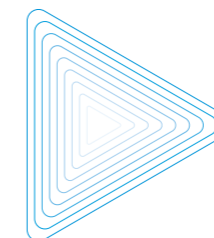
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**1-15 KWH LITHIUM BATTERY
COVERAGE IN ALL SCENARIOS**



ABOUT PHYLION

Phylion, founded in 2003 and headquartered in Suzhou, Jiangsu Province, is a leading domestic high-tech enterprise in the new energy industry. With production bases in Suzhou, Chuzhou, Indonesia, and Hungary, and subsidiaries in the Netherlands, India, and Singapore, the company also owns Joycube, a sub-brand focused on mid-to-high-end markets in Europe and the US.

Supported by technologies from the Institute of Physics, Chinese Academy of Sciences, Star Power focuses on the lithium battery industry, with integrated R&D and manufacturing capabilities covering materials, cells, modules, PACK, BMS and energy storage products. Its products are mainly used in new energy sectors such as energy storage, new energy vehicles and light electric vehicles. The current annual production production capacity is 14.2 GWh.

Phylion has also actively expanded into many segmented fields, including portable power stations, AGVs, balcony PV energy storage, automotive start-stop batteries and lead-acid to lithium-ion conversion, covering application scenarios of 1-15 kWh. At present, its products have entered international markets such as Europe, the United States, Southeast Asia and Africa.

200+

More than 200 R&D personnel, committed to continuous technological innovation and R&D.

8million

With an annual output of 8 million battery packs, it can fully meet market demand.

14.2GWh

14.2GWh production capacity, fully ensuring battery supply.

MILESTONES

1994

With funding from the Ford Foundation, started research on lithium batteries for cars.

2001

Undertook major national special projects of "863" and "973" for electric vehicles.

2003

·Phylion was established.
·Manganese-based technology route was determined.

2006

·Initiate the domestic lithium battery industry for electric bicycles.
·Export to Europe, initiating a globalization strategy.

2012

New production base operated in Suzhou, China.

2011

Mass delivery for French BEV with accumulative +3,000 units in France.

2010

Serve the Shanghai World Expo by electric vehicles powered by Phylion.

2009

Establishing an European office.

2008

Serve the Beijing Olympic Games by electric vehicles powered by Phylion.

2014

Mass delivery for French BEV with accumulative +3,000 units in France.

2018

·Chuzhou Production Base Starts Production.
·Enter the Indian market.

2019

Chuzhou base started production.

2020

Super Lithium S7 launched, define industry standards.

2021

Establish a Branch of Chengmadian and Phylion New Materials.

2025

The second phase of the 4GWh project at the Chuzhou production base goes into operation.

2024

·Be Included in the Lithium-Ion Battery Enterprise Whitelist.
·Launch the Super Lithium S30 Dual High-Performance Lithium-Ion Battery.

2023

·Establish hungary and Indonesia factory, Singapore, Vietnam, Thailand office.
·Initiate a Full-Scenario Layout for 1-15kWh Lithium-Ion Batteries.

2022

·Qingyuan New Materials Technology Co., Ltd is established.
·Build an ecosystem across the entire industry chain.

BUSINESS SCOPE

LEV: Light electric vehicle, including electric 2 wheelers, 3 wheelers, low speed 4 wheelers.

EV: BEV(Battery Electric Vehicle), HEV (Hybrid Electric Vehicle), etc.

EES: Electrical energy storage

E2W



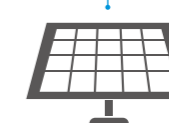
E3W



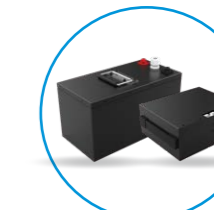
EV



EES

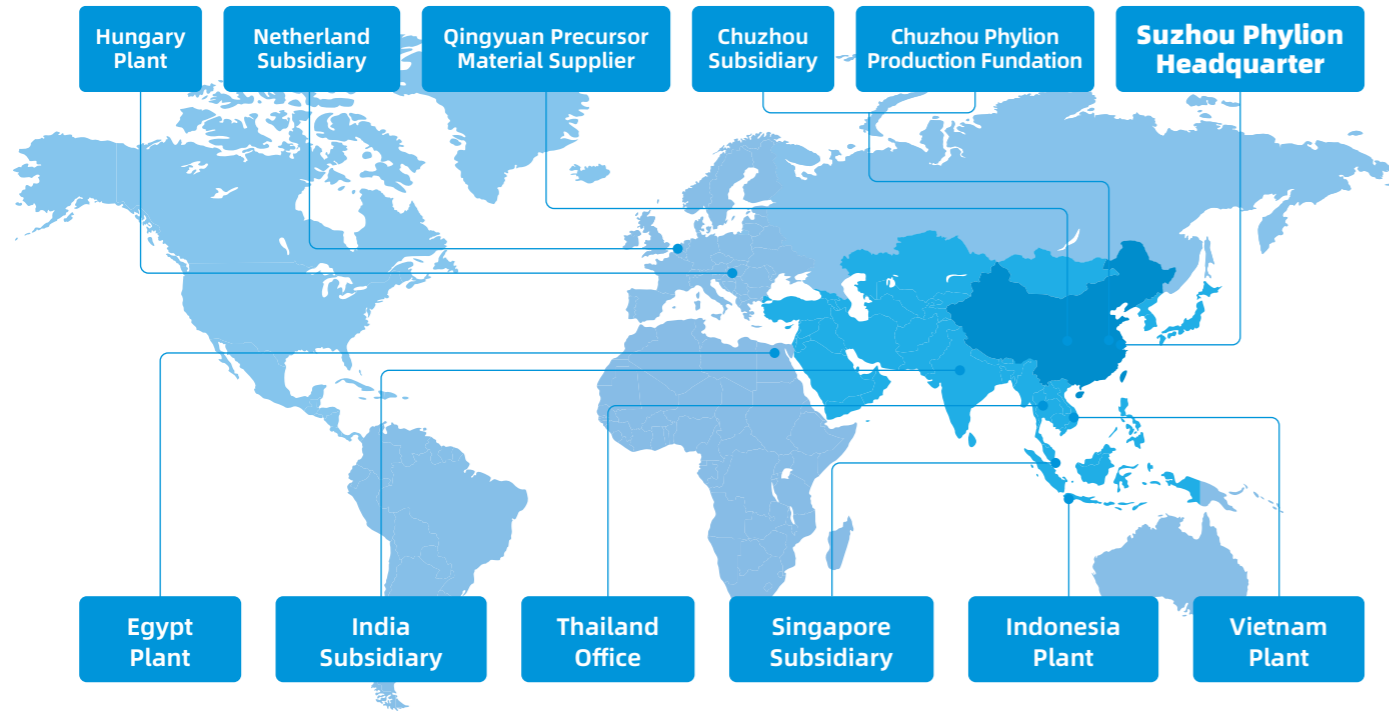


Industrial



GLOBAL LAYOUT

CHINA: **23** Years | EU: **18** Years | INDIA: **9** Years | SOUTHEAST ASIA: **4** Years



QUALIFICATION

CERTIFICATIONS

IP & PATENTS

Intellectual property:
Lithium-ion Manganate (property code: 01134448.2).

Battery Researching Center (BRC):
Committed to the forefront of lithium-ion battery technology research from the innovation materials to the cut edge process.



Battery Engineering Center (BEC):
Specialized in the product development and optimization based on the deep understanding of the applications.

NATIONAL PROJECTS

11 China national "863" EV battery projects, 2 China national "973" projects.



WHY PHYLION

23 years experience & know-how committed to continuous innovation of lithium-ion battery technology for e-mobility and EES.

SAFETY FIRST

Multiple mechanisms on cell design to ensure safety.



Safety Valve

Safety valve automatically releasing the internal gas pressure in extreme condition.



Cover

Cover sealed by laser welding, efficient and reliable.



Material

Material of the international patented materials laying the foundation on cell safety. Ceramic PP separator enhancing the cell thermostability.



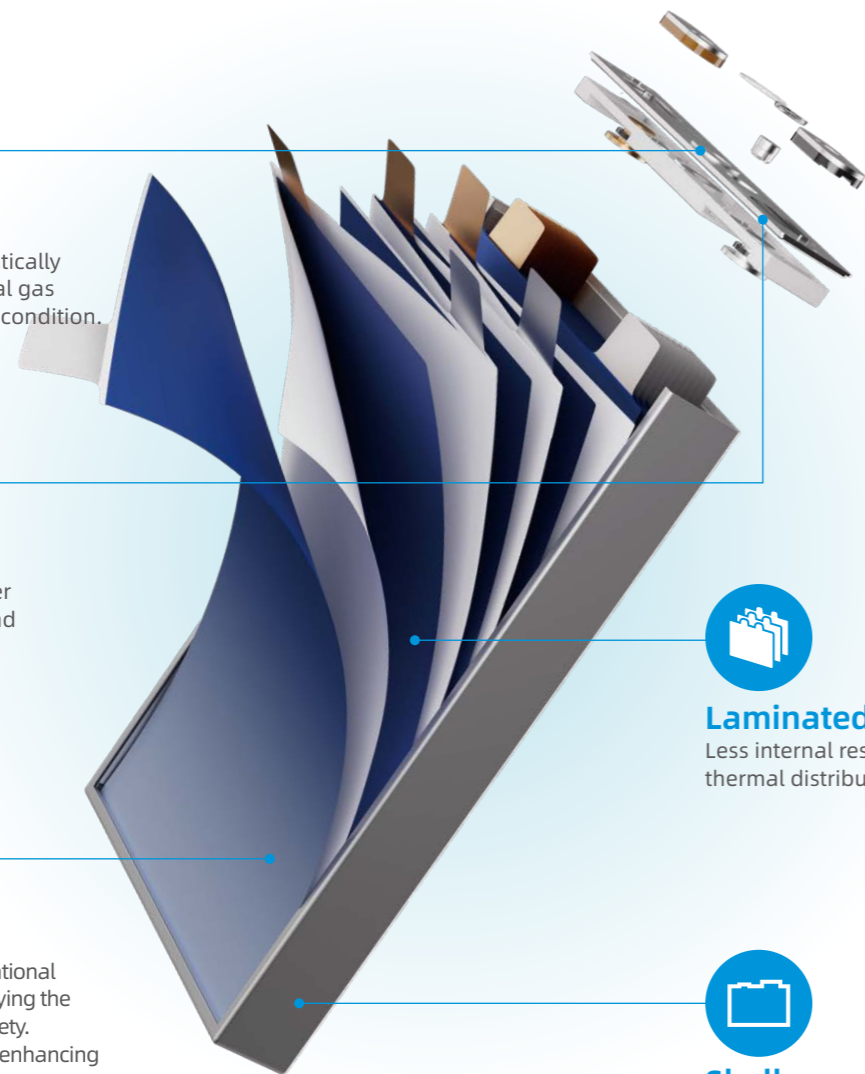
Laminated Foils

Less internal resistance, balanced thermal distribution.



Shell

Shell protecting internal foils from the external force.



TECHNOLOGY INNOVATION



Positive Electrode High-Energy Ion Release

- Precursor grain boundary strengthening for enhanced capacity.
- Multi-element composite modification for improved conductivity.
- Microparticle coating to boost conduction speed.



Anode Improves low-temperature performance and preserves energy

- Carbon coating provides efficient transport pathways.
- Interface toughening reduces lithium loss.
- Directional granulation improves low-temperature performance.



Output Enhancement High-Conductivity Network

- Multi-metal conductive network reduces internal resistance.
- 3D stereo conductive network accelerates dynamic response.
- Conductivity-enhanced coating improves transmission efficiency.
- Composite solid electrolyte enhances stability.



Conduction Enhancement Self-Healing Electrolyte

- Improves the high-low temperature shelf life and cycling performance of the cathode.
- Strengthens the formation of a stable, flexible SEI film on the anode.
- Optimizes the solvent to repair microcracks.



Structure Enhancement Thermal Shutdown Separator

- Composite-coated separator prevents thermal runaway.
- High-speed ion channels enable fast lithium-ion transport.
- Optimized high wettability avoids localized capacity fading.

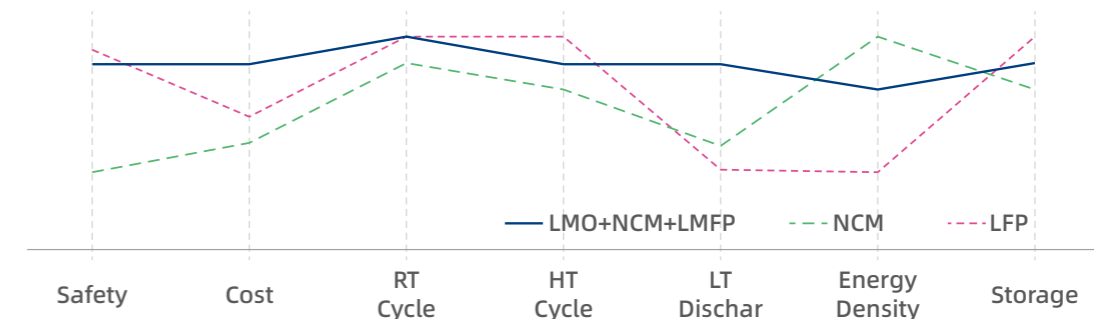
LMO+NCM+LMFP

Carbon coated LMFP can establish a decent conductive net with CNTs/SP. Nanoscale primary particle LMFP improves Electrolyte adsorption and building the unobstructed ion shifting channel. Ameliorative LMFP above will contribute to a better cycle life and low temperature performance.

LFP


The LFP material with nano-sized particles is adopted to increase the energy density of the cell. The proper positive and negative material conductive network is constructed through carbon nanotubes and graphene, etc., to improve the cycle performance. Optimized electrolyte and additives improve the low temperature performance of the cell.


Combined competitiveness





PRODUCT SPECIFICATION


CELLS


1833 SERIES	Model No.	IMP18/66/129(12)HA	ISP18/66/129(14)HA
	Nominal Capacity	12Ah	14Ah
	Dimension(TxWxH)	18*66*133mm	18*66*133mm
	Material	LMO+LMFP	LMO+NCM+LMFP
	Nominal Voltage	3.7V	3.7V
	Discharge cut off voltage	2.7V	2.7V
	Charge cut off voltage	4.2V	4.2V
	Max discharge current	2C	2C
	Charge method	CC/CV	CC/CV
	Working Temp	Charge 0°C ~ +55°C Discharge -20°C ~ +60°C	
	Cycle Life(1C)	≥1200	≥2200
Weight(Appr.)	315g	320g	


15119 SERIES	Model No.	IMP15/119/129(20)EA	ISP15/119/129(24)EA	IFP15/119/129(24)EA
	Nominal Capacity	20Ah	24Ah	24Ah
	Dimension(TxWxH)	15*119*133mm	15*119*133mm	15*119*133mm
	Material	LMO+LMFP	LMO+NCM+LMFP	LFP
	Nominal Voltage	3.7V	3.7V	3.2V
	Discharge cut off voltage	2.7V	2.7V	2.5V
	Charge cut off voltage	4.2V	4.2V	3.65V
	Max discharge current	2C	2C	3C
	Charge method	CC/CV	CC/CV	CC/CV
	Working Temp	Charge 0°C ~ +55°C Discharge -20°C ~ +60°C		
	Cycle Life(1C)	≥1500	≥2200	≥3000
Weight(Appr.)	525g	530g	505g	

17119 SERIES	Model No.	IMP17/119/129(24)EA	IFP17/119/129(27)EA
	Nominal Capacity	24Ah	27Ah
	Dimension(TxWxH)	17*119*133mm	17*119*133mm
	Material	LMO+LMFP	LFP
	Nominal Voltage	3.7V	3.2V
	Discharge cut off voltage	2.7V	2.5V
	Charge cut off voltage	4.2V	3.65V
	Max discharge current	2C	3C
	Charge method	CC/CV	CC/CV
	Working Temp	Charge 0°C ~ +55°C Discharge -20°C ~ +60°C	
	Cycle Life(1C)	≥1500	≥3000
Weight(Appr.)	575g	565g	

21119 SERIES	Model No.	IMP21/119/129(30/32)EA	IFP21/119/129(32/35)EA
	Nominal Capacity	30/32Ah	32/35Ah
	Dimension(TxWxH)	21*119*132mm	21*119*132mm
	Material	LMO+LMFP	LFP
	Nominal Voltage	3.7V	3.2V
	Discharge cut off voltage	2.7V	2.5V
	Charge cut off voltage	4.2V	3.65V
	Max discharge current	2C	3C
	Charge method	CC/CV	CC/CV
	Working Temp	Charge 0°C ~ +55°C Discharge -20°C ~ +60°C	
	Cycle Life(1C)	≥1500	≥3000
Weight(Appr.)	695g	666/700g	

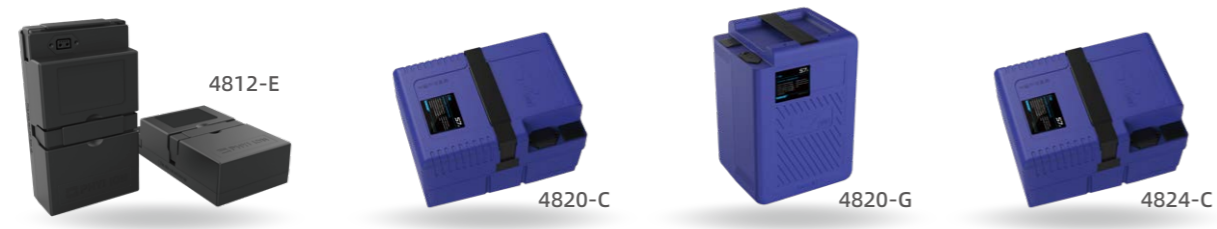
21119 SERIES	Model No.	IMP21/119/152(40)EA	IFP21/119/152(43)EA
	Nominal Capacity	40Ah	43Ah
	Dimension(TxWxH)	21*119*155mm	21*119*155mm
	Material	LMO+LMFP	LFP
	Nominal Voltage	3.7V	3.2V
	Discharge cut off voltage	2.7V	2.5V
	Charge cut off voltage	4.2V	3.65V
	Max discharge current	2C	3C
	Charge method	CC/CV	CC/CV
	Working Temp	Charge 0°C ~ +55°C Discharge -20°C ~ +60°C	
	Cycle Life(1C)	≥1500	≥3000
Weight(Appr.)	880g	850g	

21119 SERIES	Model No.	IMP21/119/175(50)EA	IFP21/119/175(50)EA
	Nominal Capacity	50Ah	50Ah
	Dimension(TxWxH)	21*119*178mm	21*119*178mm
	Material	LMO+LMFP	LFP
	Nominal Voltage	3.7V	3.2V
	Discharge cut off voltage	2.7V	2.5V
	Charge cut off voltage	4.2V	3.65V
	Max discharge current	2C	3C
	Charge method	CC/CV	CC/CV
	Working Temp	Charge 0°C ~ +55°C Discharge -20°C ~ +60°C	
	Cycle Life(1C)	≥1500	≥3000
Weight(Appr.)	975g	930g	

30110 SERIES	Model No.	IFP30/110/300(100)EA
	Nominal Capacity	100Ah
	Dimension(TxWxH)	30*110*300mm
	Material	LFP
	Nominal Voltage	3.2V
	Discharge cut off voltage	2.5V
	Charge cut off voltage	3.65V
	Max discharge current	2C
	Charge method	CC/CV
	Working Temp	Charge 0°C ~ +55°C Discharge -20°C ~ +60°C
	Cycle Life(1C)	≥3000
Weight(Appr.)	2035g	

E2W BATTERIES

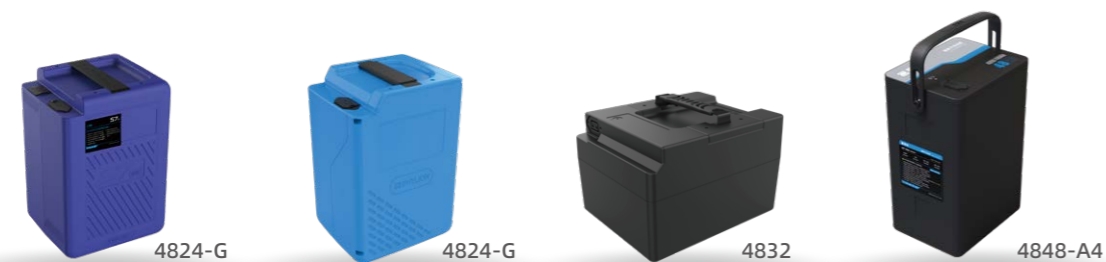
Model	4812-E	4820-C	4820-G	4824-C
Dimension	284*165*80mm	250*180*152mm	184*156*265mm	250*180*152mm
Material	LMO+LMFP	LMO+LMFP	LMO+LMFP	LMO+LMFP
Nominal Voltage	48V	48V	48V	48V
Nominal Capacity	12Ah	20Ah	20Ah	24Ah
Charge Cut off Voltage	4.2V	4.2V	4.2V	4.2V
Discharge Cut off Voltage	2.7V	2.7V	2.7V	2.7V
Peak Discharge Current	20A	30A	30A	30A
Cell	1833-12Ah	15119-20Ah	15119-20Ah	17119-24Ah
Numbers of Cell	13	13	13	13
Weight (Approx)	5.2kg	8.1Kg	8.1Kg	9.4Kg



Model	6024-G	6030-B	6030-C	6048
Dimension	184*156*265mm	184*156*315mm	265*215*170mm	340*220*170mm
Material	LMO+LMFP	LMO+LMFP	LMO+LMFP	LMO+LMFP
Nominal Voltage	60V	60V	60V	60V
Nominal Capacity	24Ah	30Ah	30Ah	48Ah
Charge Cut off Voltage	4.2V	4.2V	4.2V	4.2V
Discharge Cut off Voltage	2.7V	2.7V	2.7V	2.7V
Peak Discharge Current	40A	50A	60A	60A
Cell	17119-24Ah	21119-30Ah	21119-30Ah	17119-24Ah
Numbers of Cell	16	16	16	32
Weight (Approx)	11.5Kg	13.4Kg	13Kg	25Kg



Model	4824-G	4824-G (share)	4832	4848-A4
Dimension	184*156*265mm	184*156*265mm	265*215*170mm	210*175*345mm
Material	LMO+LMFP	LMO+LMFP	LFP	LMO+LMFP
Nominal Voltage	48V	48V	51.2V	48V
Nominal Capacity	24Ah	24Ah	32Ah	48Ah
Charge Cut off Voltage	4.2V	4.2V	3.65V	4.2V
Discharge Cut off Voltage	2.7V	2.7V	2.5V	2.7V
Peak Discharge Current	30A	30A	45A	55A
Cell	17119-24Ah	17119-24Ah	21119-32Ah	17119-24Ah
Numbers of Cell	13	13	16	26
Weight (Approx)	9.4Kg	9kg	13kg	18.5kg



Model	6425-B	7224-B	7248
Dimension	184*165*300mm	184*165*300mm	268*165*388mm
Material	LFP	LMO+NCM+LMFP	LMO+NCM+LMFP
Nominal Voltage	64V	72V	72V
Nominal Capacity	25Ah	24Ah	48Ah
Charge Cut off Voltage	3.65V	4.2V	4.2V
Discharge Cut off Voltage	2.5V	2.7V	2.7V
Peak Discharge Current	50A	50A	110A
Cell	15119-25Ah	15119-24Ah	15119-24Ah
Numbers of Cell	20	20	40
Weight (Approx)	13kg	13.6kg	27kg



E3W BATTERIES

Model	7430-B	7430-C	7442	7460
Dimension	230*165*300mm	304*230*169mm	340*165*311.5mm	460*262*170mm
Material	LMO+LMFP	LMO+LMFP	LMO+LMFP	LMO+LMFP
Nominal Voltage	74V	74V	74V	74V
Nominal Capacity	30Ah	30Ah	42Ah	60Ah
Charge Cut off Voltage	4.2V	4.2V	4.2V	4.2V
Discharge Cut off Voltage	2.7V	2.7V	2.7V	2.7V
Peak Discharge Current	60A	60A	84A	90A
Cell	21119-30Ah	21119-30Ah	15119-21Ah	21119-30Ah
Numbers of Cell	20	20	40	40
Weight (Approx)	17Kg	17Kg	28Kg	37Kg



Model	6450	6454	64100	7650
Dimension	462*270*162mm	418*276*198mm	560*276*198mm	402*276*198mm
Material	LFP	LFP	LFP	LFP
Nominal Voltage	64V	64V	64V	76.8V
Nominal Capacity	50Ah	54Ah	100Ah	50Ah
Charge Cut off Voltage	3.65V	3.65V	3.65V	3.65V
Discharge Cut off Voltage	2.5V	2.5V	2.5V	2.5V
Peak Discharge Current	65A	70A	100A	65A
Cell	21119-50Ah	17119-27Ah	21119-50Ah	21119-50Ah
Numbers of Cell	20	40	40	24
Weight (Approx)	30Kg	31Kg	54Kg	35Kg



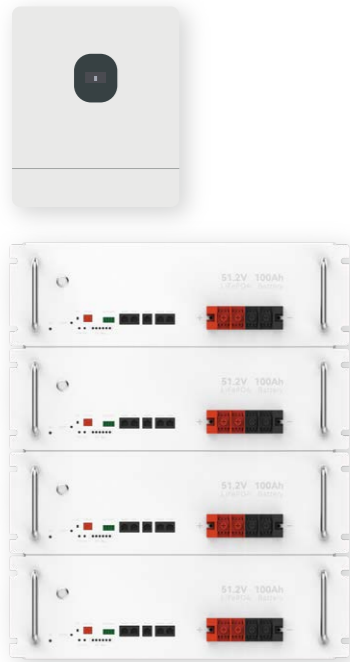
Model	7625-B	7627-B	7632/7635	7650
Dimension	216*165*300mm	230*165*300mm	268*165*335mm	268*210*340mm
Material	LFP	LFP	LFP	LFP
Nominal Voltage	76.8V	76.8V	76.8V	76.8V
Nominal Capacity	25Ah	27Ah	32/35Ah	50Ah
Charge Cut off Voltage	3.65V	3.65V	3.65V	3.65V
Discharge Cut off Voltage	2.5V	2.5V	2.5V	2.5V
Peak Discharge Current	50A	60A	70A	115A
Cell	15119-25Ah	17119-27Ah	21119-32/35Ah	21119-50Ah
Numbers of Cell	24	24	24	24
Weight (Approx)	15.8kg	16.4Kg	21kg	28.5kg



Model	7654	76100	76150	76200
Dimension	488*276*198mm	640*276*198mm	650*395*230mm	640*490*230mm
Material	LFP	LFP	LFP	LFP
Nominal Voltage	76.8V	76.8V	76.8V	76.8V
Nominal Capacity	54Ah	100Ah	150Ah	200Ah
Charge Cut off Voltage	3.65V	3.65V	3.65V	3.65V
Discharge Cut off Voltage	2.5V	2.5V	2.5V	2.5V
Peak Discharge Current	70A	100A	150A	150A
Cell	17119-27Ah	21119-50Ah	21119-50Ah	21119-50Ah
Numbers of Cell	48	48	72	96
Weight (Approx)	36Kg	62Kg	88Kg	120Kg



ENERGY STORAGE PRODUCTS



Cell model	30110-100Ah LFP
Rated capacity of cells	100Ah
Cell layout	1P16S
Module nominal	51.2V/100Ah, 5120wh
Working voltage range	40~58.4V
Product size	580*480*153mm
Communication methods	CAN, 485
Fixed method	Rack mount, multi-pack parallel
Cycle Life (0.5C)	4000 Cycles/80%SOC, 6000 Cycles/70%SOC, 90%DOD
inverter	5KW

Each set of battery packs is 5kwh, can be stacked

PORTABLE SOURCE PRODUCTS

Model	S300	S600	S1210P	S3000
Material	V0 fireproof PC+ABS	V0 fireproof PC+ABS	V0 fireproof PC+ABS	V0 fireproof PC+ABS +Aluminium alloy
Battery	LMFP 236.25Wh	LMFP 551.25Wh	LMFP 1102.5Wh	LMFP 3071.25Wh
AC Output Power	300W-600W	600W-1200W	1200W-2400W	3000W-5000W
Output	2*USB+1*Type-C+2*AC +1*Cigarette light outlet +DC	2*USB+2*Type-C +2*AC +1*Cigarette light outlet	2*USB+2*Type-C +3*AC +1*Cigarette light outlet	4*USB QC3.0+2*Type-C+4*AC +1*Cigarette light outlet +3*DC
Size	238*196*218mm	238*196*285mm	316*240*300mm	432*296*334mm
Net weight	3.9kg	7.5kg	13.8kg	38kg



APPLICATIONS

LEV



EV



EES

Electrical Energy Storage



Industrial Application

