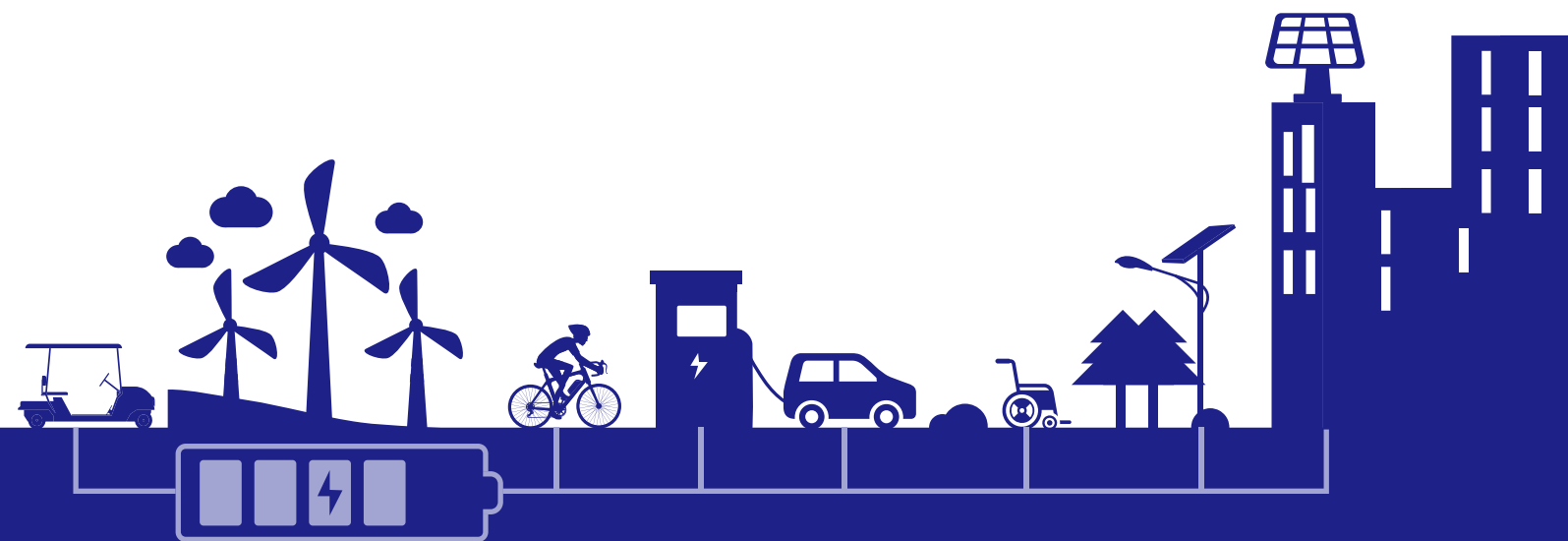




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ENERGY STORAGE SYSTEM BATTERY CATALOGUE

Melasta-A Professional Portable Power Solutions Provider

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COMPANY INTRODUCTIONS

Melasta is one of the leading companies in the Energy power industry, which was founded in 2008 and specialized in Research and Development (R&D), production and marketing, and the sale of rechargeable lithium batteries and provides one-stop solutions from LiFePO4 cells and batteries, Energy Storage systems, Powerwall, Portable Power Stations to Electric Mobility Solutions. It mainly focuses on developing human capacity, the best customer service, and quality production according to international standards. Melasta proudly contributes our strength to developing new innovative products and solving the energy storage problems. We have got more than fifty (50) research patents.



01



Since 2008

- 14+ years specialized lithium battery, Leader of LifePo4 Battery
- One of the leading ESS Solution Provider
- OEM & ODM Solution customized according to clients requirement

02



Research and Development

- Hi-Tech Enterprise
- 2 Research labs
- 50+ research patents
- Customization solution service

03



One Stop Shop Service

- Multiple selection for Brand cells as LG, Panasonic, Lishen, Samsung, CATL, Gotion, EVE
- BMS Design according to the customization demands
- Provide compatible chargers for battery packs
- Provide seamless integration Inverters

Manufacturing Technology

- 40+ Engineers and technicians, 500+ skilled labors
- 5 cell selection processes to ensure high consistency of the cell parameters, extend the working time and cycles life of the battery
- Fully automatic welding equipment, to guaranty each cell well assembled
- All batteries are tested for aging before going out to ensure the products are 100% qualified.

Quality Control

- Quality control process from the raw material to out-going products
- International certificates ISO9001 & ISO14001
- 100% total quality management
- Battery performance testing

Seamless Integration

- Provide battery modules as standardized size,voltage,capacity
- Compatible with most brand Inverters
- Seamless Integration with industry standard Inverters/Charge Controllers

WHY MELASTA



04



05



06


PRODUCTS INTRODUCTION


Lead-acid Replacement Batteries


Melasta provides a complete range of 12 to 48 V LiFePO4 batteries as a replacement solution for Lead-acid batteries and Energy storage solutions for a wide range of applications. These batteries can replace the lead-acid batteries efficiently with plug-and-play. The batteries have a built-in BMS system with multiple options for communications protocol such as Bluetooth, Wi-Fi, and RS485.





Features


- 

Support series and parallel configuration
- 

CANBus, RS485, Bluetooth, and Wi-Fi Communication protocols
- 

High safety with advanced BMS technology
- 

Compatible with applications
- 

Drop and replacement solutions
- 

Environmentally friendly

Advantages

- 200%

2X the power of traditional batteries
- 1/3

The weight and space
- 4X

4X cycle life
- 100%

Useable capacity
- 100%

safe and reliable
- 5X

Charge up to 5X Faster

Lead Acid Replacement Battery

Model Number	Nominal voltage	Capacity (Ah)	Charge Current(A)	Discharge Current (A)	Peak Current (A)	Weight (kg)	Dimension (L*W*H)mm
MB1206F	12V	6	6	6	30	0.83	151*65*95
MB1209F	12V	9	9	9	35	1.15	151*65*95
MB1210F	12V	10	10	15	35	1.5	142*80*80
MB1212F	12V	12	12	15	60	1.6	151*98*95
MB1215F	12V	15	15	15	60	1.9	151*98*95
MB1220F	12V	20	20	30	68	3	180*76*166
MB1224F	12V	24	24	30	60	3	180*76*166
MB1225F	12V	25	25	25	50	3	116*100*200
MB1230F	12V	30	40	40	150	5.3	196*165*174
MB1240F	12V	40	40	50	170	6.5	196*165*174
MB1250F	12V	50	50	50	150	6.5	196*165*174
MB1260F	12V	60	50	50	170	8.5	260*167*211
MB1275F	12V	75	50	50	150	9.8	260*168*213
MB1280F	12V	80	80	100	350	12.1	318*165*215
MB12100F	12V	100	80	100	350	12.3	318*165*215
MB12125F	12V	125	80	100	350	15	318*165*215
MB12150F	12V	150	80	100	350	19.8	485*170*245
MB12200F	12V	200	80	100	350	25	48*170*245
MB12300F	12V	300	80	100	350	35	520*221*296
MB2410F	24V	10	6	15	55	2.95	180*76*166
MB2412F	24V	12	12	15	50	2.8	180*80*150
MB2420F	24V	20	20	20	85	6.5	196*165*174
MB2425F	24V	25	25	25	85	6.5	196*165*174
MB2450F	24V	50	50	50	140	12	318*165*215
MB24100F	24V	100	80	175	300	24.2	485*170*245
MB24125F	24V	125	80	100	350	32.2	518*271*222
MB24150F	24V	150	80	100	300	35	520*221*269
MB24200F	24V	200	100	200	300	60.6	605*490*155
MB24300F	24V	300	100	150	200	85	602*530*202

Bluetooth and Wi-Fi series

Model Number	Nominal voltage	Capacity (Ah)	Charge Current(A)	Discharge Current (A)	Peak Current (A)	Weight (kg)	Dimension (L*W*H)mm	Communication Protocol
MB1209F	12V	9	9	9	35	1.15	151*65*95	bluetooth
MB1212F	12V	12	12	15	60	1.6	151*98*95	bluetooth
MB1220F	12V	20	20	30	68	3	180*76*166	bluetooth
MB1224F	12V	24	24	30	60	3	180*76*166	bluetooth
MB1250F	12V	50	50	50	150	6.5	196*165*174	bluetooth
MB1275F	12V	75	50	50	150	9.8	260*168*213	bluetooth
MB12100F	12V	100	80	100	350	12.3	318*165*215	bluetooth
MB12125F	12V	125	80	100	350	15	318*165*215	bluetooth
MB12150F	12V	150	80	100	350	19.8	485*170*245	bluetooth
MB12200F	12V	200	80	100	350	25	48*170*245	bluetooth
MB12300F	12V	300	80	100	350	35	520*221*296	bluetooth
MB2450F	24V	50	50	50	140	12	318*165*215	bluetooth
MB1250F	12V	50	50	50	150	6.5	196*165*174	WiFi
MB1275F	12V	75	50	50	150	9.8	260*168*213	WiFi
MB12100F	12V	100	80	100	350	12.3	318*165*215	WiFi
MB12125F	12V	125	80	100	350	15	318*165*215	WiFi
MB12150F	12V	150	80	100	350	19.8	485*170*245	WiFi
MB12200F	12V	200	80	100	350	25	48*170*245	WiFi
MB12300F	12V	300	80	100	350	35	520*221*296	WiFi
MB2450F	24V	50	50	50	140	12	318*165*215	WiFi

Applications



Golf Carts



Marine Boats



Jumps Starter



Forkilift



Industrial Cleaner



Energy Storage

PRODUCTS INTRODUCTION

ESS Storage Battery

Melasta ESS Solutions are unique in offering the best quality features with 100% safety and reliability. These solutions are extendable by connecting modules in parallel. Built-in BMS system and advanced cell balancing technology while charging and discharging ensure safety. The devices are used extensively for home energy storage systems and small grid applications.



Features



Reliability

Advanced lithium iron phosphate technology
First class control system



Flexibility

Modular structure forms varieties of energy levels
Small size, convenient to maintain



Intelligence

Remote control system for APP Visual data



Easy Installation

Modular design, fast transportation and installation, Easy to use

Advantages



Stable and Safe

LiFePO4 Battery,
stable and safe



Small Space

Modern and compact,
small space



More Energy

Mutiple modules configuration,
more energy



Eco-friendly

Backup Protection, Energy save,
Eco-friendly



Melasta Industrial Energy storage systems can provide an array of methods to deal with our supply-demand situation and create an energy infrastructure that is more resilient and offer cost savings to the utilities and consumers. It provides the customization solution from 15KWh to 30KWh by paralleling the standardized battery modules.

Module Specification

- Cell type:**
Lithium ion (NCM),LiFePO4(LFP)
- Nominal voltage:**
48V-51.2V
- Capacity:**
50Ah, 100Ah, 150Ah, 200Ah 300Ah
- Energy:**
15 ~30KWh
- Size:**
Standard Size 2U,3U,4U,5U
- BMS Communication Protocol:**
CANBus, RS485, RS232
- Application:**
Home ESS, Solar ESS, Solar off grid backup system, Solar Hybrid inverter UPS



Unique Features

Reliability
Cells matching, smart BMS technology, super safety

Internal Stucture
Can stack up to 15 Modulares to meet different energy demand

APP Monitor
Cloud base APP monitoring system, remote control

Multiple Cumminucation Protocols
Supports with CANBUS, RS485, RS232 etc

Modules Technical Specification for Cabinet Batteries series

Model No.	Mb48100-15S-CB	Mb48100-16S-CB	Mb48150-15S-CB	Mb48150-16S-CB	Mb48200-15S-CB	Mb48200-16S-CB
Norminal Voltage	48V (15 Series)	51.2V (16 Series)	48V (15 Series)	51.2V (16 Series)	48V (15 Series)	51.2V (16 Series)
Norminal Capacity	100Ah	100Ah	150Ah	150Ah	200Ah	200Ah
Energy	4800Wh	5120Wh	7200Wh	7680Wh	9600Wh	10300Wh
Cycles times	≥ 3000times @80% DOD, 25°C, 0.5C ≥ 5000times @60% DOD, 25°C, 0.5C					
Durations	≥ 10years					
The Max discharge current	100A	100A	150A	150A	200A	200A
Operating temperature	Charing 0°C~45°C Discharging -10°C~50°C					
Storage Environment	-10°C~45°C@ 60%±25%					
Dimensions(L*D*W)	450*177*442 mm(4U)	450*177*442 mm(4U)	480*222*442 mm(5U)	480*222*442 mm (5U)	560*222*442 mm (5U)	560*222*442 mm (5U)
Weight	About 56Kg	About 58Kg	About 75Kg	About 78Kg	About 92Kg	About 96Kg
Communicate Protocol	CANBus, RS485, RS232					
Certificates	IEC62619, UN38.3, MSDS					

Battery Technical Specification for Cabinet Batteries LV Series

Model No.	MB48300-16S-CBL	MB48450-16S-CBL	MB48500-15S-CBL	MB48600-15S-CBL
Norminal Voltage	51.2V (16 Series)	51.2V (16 Series)	48V(15 Series)	48V(15 Series)
Norminal Capacity	300Ah	450Ah	500Ah	600Ah
Energy	15.36KWh	20.48KWh	25.6KWh	30.72KWh
Cycles times	≥3000times @80% DOD, 25°C, 0.5C ≥5000times @60% DOD, 25°C, 0.5C			
Durations	≥10years			
The Max discharge current	100A			
Operating temperature	Charing 0°C~45°C Discharging -10°C~50°C			
Storage Environment	-10°C~45°C@ 60%±25%			
Dimensions(L*D*W)	745*415*590mm	930*415*590mm	1120*415*590mm	1300*415*590mm
Weight	About 195Kg	About 260Kg	About 310Kg	About 360Kg
Communicate Protocol	CANBus, RS485, RS232			
Certificates	IEC62619, UN38.3, MSDS			

Battery Technical Specification for Cabinet Batteries HV Series

Model No.	MB153100-48S-CBH	MB204100-64S-CBH	MB256100-80S-CBH	MB307100-96S-CBH
Norminal Voltage	153.6V (48 Series)	204.8V (64 Series)	256V (80 Series)	307.2V (96 Series)
Norminal Capacity	100Ah	100Ah	100Ah	100Ah
Energy	15.36KWh	20.48KWh	25.6KWh	30.72KWh
Cycles times	≥3000times @80% DOD, 25°C, 0.5C ≥5000times @60% DOD, 25°C, 0.5C			
Durations	≥10years			
The Max discharge current	100A			
Operating temperature	Charing 0°C~45°C Discharging -10°C~50°C			
Storage Environment	-10°C~45°C@ 60%±25%			
Dimensions(L*D*W)	745*415*590mm	930*415*590mm	1120*415*590mm	1300*415*590mm
Weight	About 195Kg	About 260Kg	About 310Kg	About 360Kg
Communicate Protocol	CANBus, RS485, RS232			
Certificates	IEC62619, UN38.3, MSDS			

Applications

Telecom Centers, Data Center, Industrial Power Backup





Unique Features



Modular, Scalable & Proven Performance



Standard size, capacity and current customzied



Max support 15 units parallel connection



Child and pet friendly with no exposed wires or hot vent

Melasta wall-mounted batteries for homes are smart 2.5KWh, 5KWh 7.5KWh, 10 KWh, 20 KWh and 30KWh home energy storage devices that offer homeowners the option to store energy generated by an on-site solar system or from the grid to serve as an emergency home battery backup. Melasta can provide OEM and ODM solutions as clients requirement and the modules can be paralleled. In addition, Melasta Powerwalls are low-cost solutions with the best quality.

Module Specification

- Cell type:**
Lithium ion (NCM),LiFEPO4(LFP) battery cell
- Nominal voltage:**
48V-51.2V
- Capacity:**
50Ah, 100Ah, 150Ah, 200Ah
- Energy:**
2.5 ~30KWh
- Size and weight :**
485(L)*300(D)*180(W)mm, 28KG
- BMS Communication Protocol:**
RS232,RS485, CANBus (Optional)
- Application:**
Home Power Back UP, ON/OFF Grid Backup



Battery Technical Specification for Power Wall Series

Model No.	MB24100-8S-PW	MB4850-16S-PW	MB48100-15S-PW	MB48150-15S-PW	MB48200-15S-PW
Norminal Voltage	25.6V (8 Series)	51.2V (16 Series)	48V (15 Series)	48V (15 Series)	48V (15 Series)
Norminal Capacity	100Ah	50Ah	100Ah	150Ah	200Ah
Energy	2560Wh	2560Wh	4800Wh	7200Wh	8000Wh
Battery impedance	≤30mΩ				
Cycles times	≥ 3000times @80% DOD, 25℃, 0.5C ≥ 5000times @60% DOD, 25℃, 0.5C				
Durations	≥ 10years				
The Max discharge current	100A	50A	100A	150A	200A
Operating temperature	Charing 0℃~45℃ Discharging -10℃~50℃				
Storage Environment	-10℃~45℃@ 60%±25%				
Dimensions(L*D*W)	485*300*180mm		485*650*180mm		
Weight	About 28Kg		About 56Kg	About 75Kg	About 100Kg
Communicate Protocol	CANBus, RS485, RS232				
Certificates	IEC62619, UN38.3, MSDS				



Unique Features



Intelligent

Equipped with an indepent BMS System Indepence



Modular Expansion

Maximum of 15 batteries can be parallel-connected



Easy Installation

Standard size battery modules and easy to use



Seamless Compatible

Keep appliances running seamlessly

Melasta offers a variety of energy storage solutions that are scalable and based on lithium iron batteries and a lithium battery system designed in series with modules. The modules are 48V or 51.2V with 2.5KWh, 5KWh 7.5KWh, 10 KWh and 20 KWh. It has a wide variety of sizes and configurations to support diverse applications. In addition, for applications with specific power requirements, our experienced engineers can develop, test, and create customized battery solutions to meet the unique needs of almost every application.

Module Specification

- Cell type:**
Lithium ion (NCM),LiFEPO4(LFP) battery cell
- Nominal voltage:**
48V-51.2V
- Capacity:**
50Ah, 100Ah, 150Ah, 200Ah
- Energy:**
2.5 ~20KWh
- Size and weight :**
430(L)*133(H)*442(W)mm, 32KG
- BMS Communication Protocol:**
RS232,RS485, CANBus
- Application:**
Home ESS, Solar ESS, Solar off grid backup system,Solar Hybrid inverter UPS



Battery Technical Specification for Rack Mounted Series

Model No.	MB4850-15S-ST	MB4850-16S-ST	MB48100-15S-ST	MB48100-16S-ST
Norminal Voltage	48V (15 Series)	51.2V (16 Series)	48V (15 Series)	51.2V (16 Series)
Norminal Capacity	50Ah	50Ah	100Ah	100Ah
Energy	2400Wh	2560Wh	4800Wh	5120Wh
Cycles times	≥3000times @80% DOD, 25°C, 0.5C ≥5000times @60% DOD, 25°C, 0.5C			
The Max discharge current	50A	50A	100A	100A
Operating temperature	Charing 0°C~45°C Discharging -10°C~50°C			
Storage Environment	-10°C~45°C@ 60%±25%			
Dimensions	430*133*442mm		185*415*590mm	
Weight	About 33Kg		About 65Kg	
Communicate Protocol	CANBus, RS485, RS232			
Certificates	IEC62619, UN38.3, MSDS			



All in One ESS is with 10KWh 20KWh LiFePO4 Battery and 5KW built-in Inverter. The inverter is equipped with grid monitoring, an independent Disconnection Device (MSD Mains monitoring) with assigned switching devices. It helps reduce the time duration between inverter and battery and it is the ideal choice for a backup battery for your home. The energy storage system is able to supply power to connected appliances using PV power or utility power, as well as battery power. It can also store excess power generated by PV solar panels to be used whenever needed.

Unique Features



All in one design



High efficiency up to 97.60%



String monitoring optional



Easy installation, just plug and play



5KW Built in Inverter



Reactive power cntroller system



Digital controller wtih DC/AC surge protection



Cloud Data Monitoring

Battery Technical Specification for All in One Series

Model No.	MB5510-EU	MB5520-EU
INVERTER		
Maximum PV Input Power	6500W	
Rated Output Power	6000W	
Maximum Charging Power	6000W	
PV INPUT (DC)		
Nominal DC Voltage / Maximum DC Voltage	360 VDC / 500 VDC	
Start-Up Voltage / Initial Feeding Voltage	116 VDC / 150 VDC	
MPP Voltage Range	120 VDC ~ 450 VDC	
Number of MPPT Trackers / Max Input Current	2 / 2 x 13 A	
GRID OUTPUT (AC)		
Nominal Output Voltage	208 / 220 / 230 / 240 VAC	
Output Voltage Range	184- 264.5 VAC	
Maximum Output Current	23.9 A	
Maximum Conversion Efficiency (DC / AC)	96%	
European Efficiency @ Vnominal	95%	
AC INPUT		
AC Start-Up Voltage / Auto Restart Voltage	120- 140 VAC / 180 VAC	
Acceptable Input Voltage Range	170- 280 VAC	
Maximum AC Input Current	40A	
BATTERY MODE OUTPUT (AC)		
Nominal Output Voltage	208/ 220/ 230/ 240 VAC	
Efficiency (DC to AC)	93%	
BATTERY TECHNICAL SPECIFICATIONS		
Nominal DC Voltage	51.2 VDC	
Battery Capacity	200Ah	400Ah
Maximum Charging Current	100 A	200 A
Dimension, D x W x H (mm)	621 x 214 x 1200	621 x 214 x 1750
Net Weight (kg)	103	206
Energy	10.24KWh	20.48KWh
Nominal Voltage	51.2 VDC	
Full Charge Voltage (FC)	56V	
Full Discharge Voltage (FD)	45V	
Maximum Continuous Discharging Current	120A	
Maximum Discharging Current	120 A at 1 min	
Protection	BMS, Breaker	
Charge Voltage	56V	
Charge Current	20 A (0.2 C)	
Maximum Charge Current	100 A (0.5 C)	
Standard Charge Method	0.2 C CC (Constant current) charge to FC, CV (Constant voltage FC) charge till charge current decline to < 0.05 C	
Inner Resistance	< 20 m Ohm	

CUSTOMIZED SOLUTION

Military Grade Cells

- Well-known brand cells selection such as Panasonic, LG, Samsung, CATL, BYD, Gotion, EVE, Lishen etc.
- 5 cells selection processes to ensure high consistency of cells parameters, long cycles life, more than 3000times (@80% SOC)
- Each cell has an independent CID device to prevent firing
- Green energy, environmental protection and pollution-free

Intelligent BMS

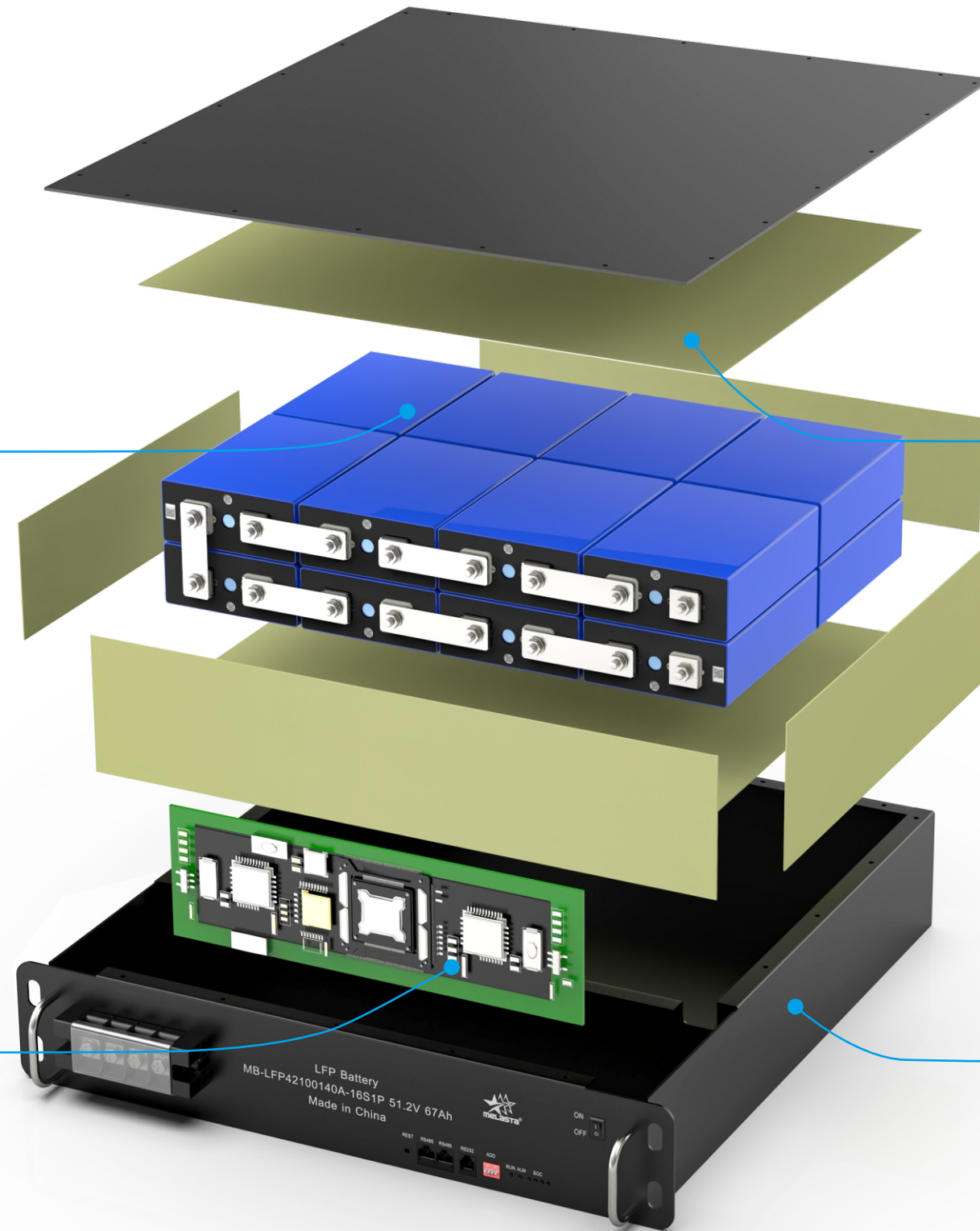
- Customize the BMS to meet your needs
- 8 Functions Smart BMS Protection Board, high energy balancing power
- RS485, CANBus, RS232 Communication Protocol are acceptable
- Monitor the battery situation via mobile APP or cloud system

Dedicate Production

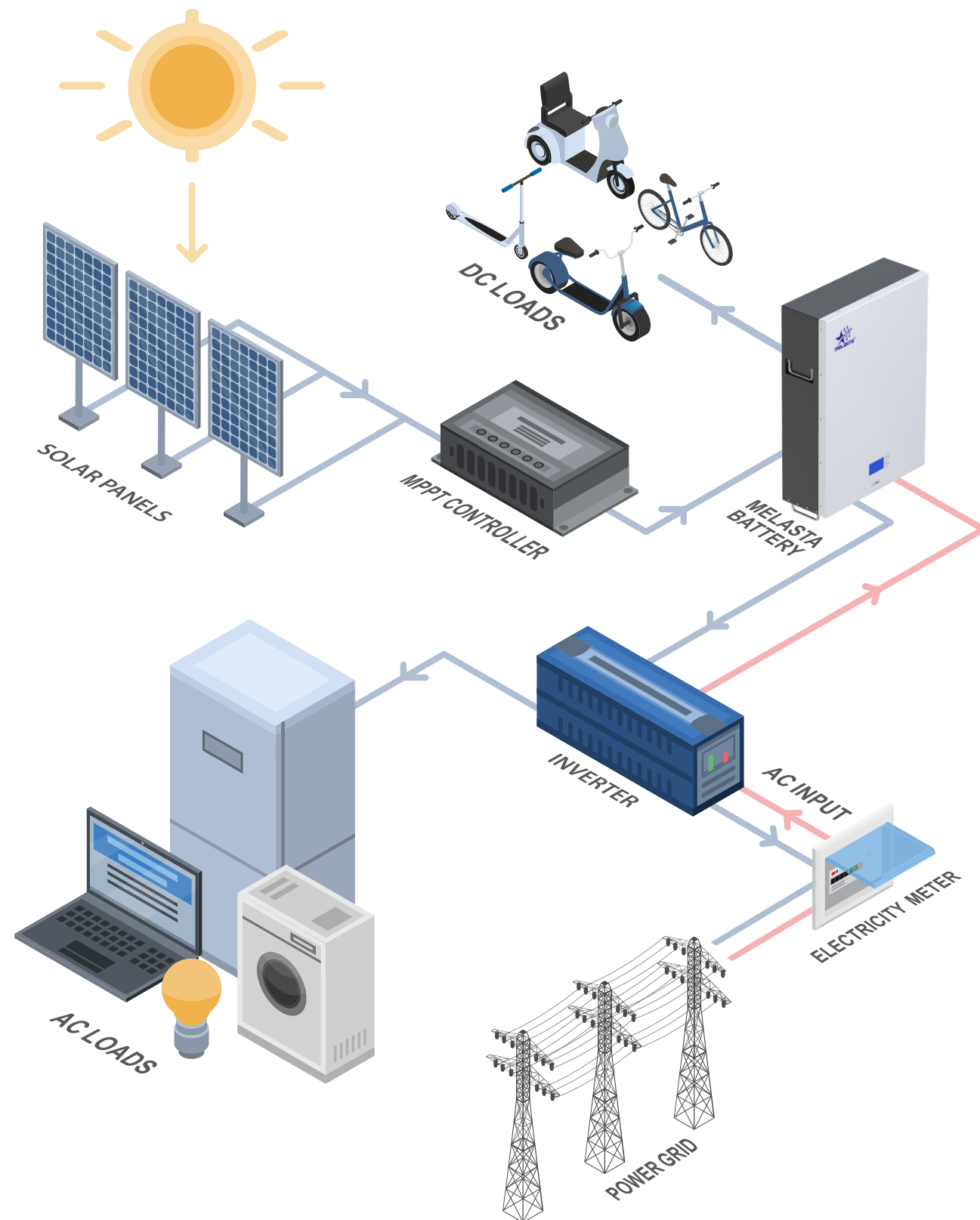
- 14+ years battery production experience, perfect quality management system
- Fully automatic laser welding equipment and dedicate riveting assembly process, make the impedance resistance small and performance good.
- All batteries are tested for aging before going out to ensure all products are 100% qualified

Customized OEM and ODM Service

- Provide OEM service according to the standardize modules
- Offer customized design battery case according clients needs, 100% ensure the product quality
- Customized the intelligent Software



HOW THE BATTERY WORKS



APPLICATIONS



CERTIFICATION

OUR PARTNERS



China High-Tech Enterprise



China High-Tech Enterprise



ISO9001



Design Patent



IEC62133



Utility Model Patent



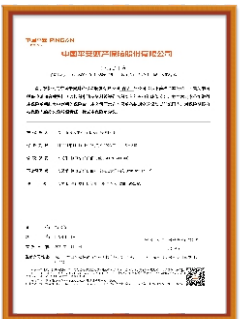
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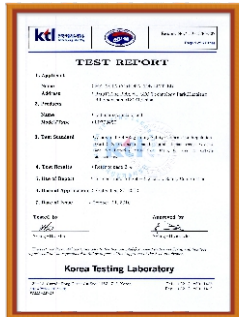
PSE



CB



Global Liability Insurance



KC



CE



FCC



UN38.3

