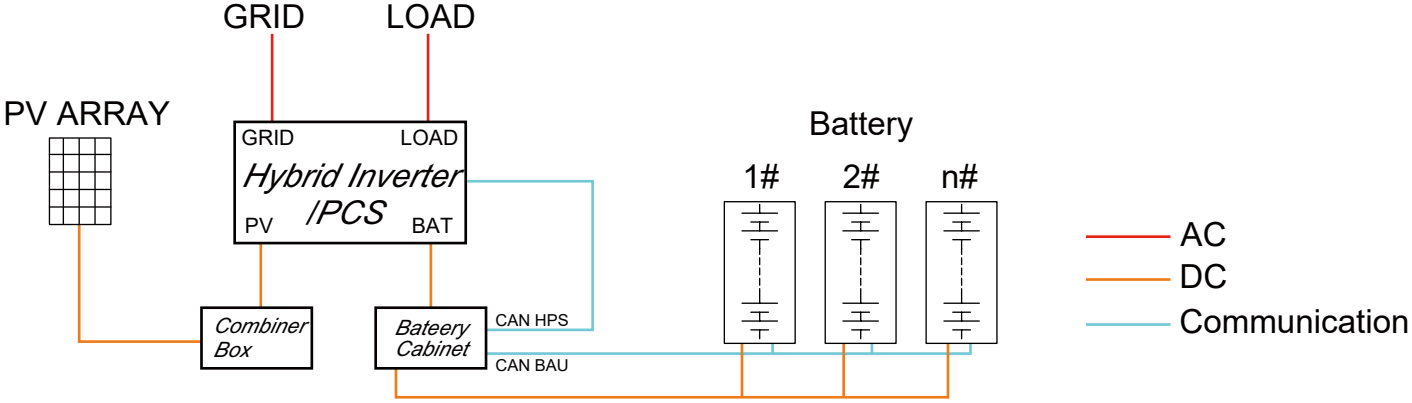
MATESOLAR

51.2V 280Ah Each Pack

100kWh-215kWh (HV)

LiFePO4 Energy Storage Battery (Application scenarios within 0.5C)

- Quick Customization of Electricity
- Patented Modular Plug Design
- Easy Installation Flexible Expansion
- Emergency-Backup and Off-Grid Functionality
- Long cycle life 6000 cycles
- Safety first Smart BMS system



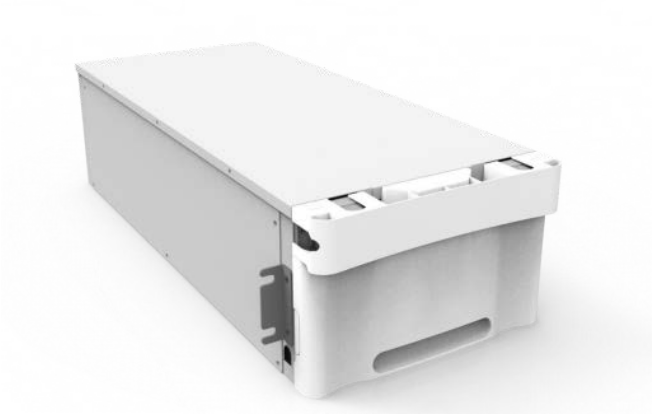
Technical Parameters (Battery Cluster)

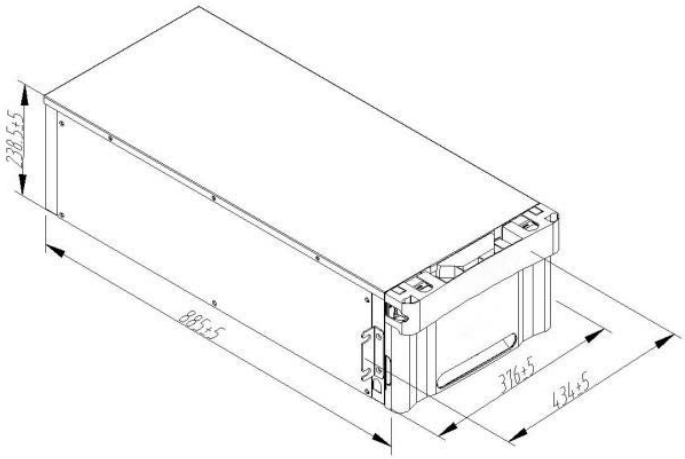
	100.352KWh	114.688KWh	129.024KWh	143.36KWh	157.696KWh	172.032KWh	186.368KWh	200.70KWh	215.01KWh
Battery module specification									
Configuration	1P16S								
Rated capacity	280Ah								
Rated energy	14.336kWh								
Rated voltage	51.2V								
Voltage range	44.8-56.8V								
Rated charge/discharge	0.5C								
AC internal resistance	≤5mΩ								
Dimension (W/D/H)	376*885*238.5 (±5) mm								
Weight	112kg								
Battery rack specification									
Configuration	7 modules +1 BPU	8 modules +1 BPU	9 modules +1 BPU	10 modules +1 BPU	11 modules +1 BPU	12 modules +1 BPU	13 modules +1 BPU	14 modules +1 BPU	15 modules +1 BPU
Rated capacity	280Ah								
Rated energy	100.352kWh	114.688kWh	129.024kWh	143.36kWh	157.696kWh	172.032kWh	186.368kWh	200.70kWh	215.04kWh
Rated voltage	358.4V	409.6V	460.8V	512V	563.2V	614.4V	665.6V	716.8V	768V
Voltage range	313.6-397.6V	358.4-454.4V	403.2-511.2V	448-568V	492.8-624.8V	537.6-681.6V	582.4-738.4V	627.2-795.2V	672-852V
Rated charge/discharge	0.5C								
Display	7"Touch screen								
BMS	Included								
Communication	CAN								
Monitoring	RS485								
Dimension(W/D/H)	908*901*1615mm						908*901*2155mm		
Weight	875kg	1075kg	1200kg	1325kg	1450kg	1575kg	1700kg	1825kg	1950kg
Protection degree	IP20								
BMS Parameters on LCD									
Cell voltage	Yes								
Cell hight voltage	Yes								
Cell low voltage	Yes								
Cell temperature	Yes								
Charge and dicharge current	Yes								
Total battery voltage	Yes								
Battery SOC	Yes								
Fault warning	Yes								
Protection									
Short circuit protection	Yes								
Over current protection	Yes								
Over charge protection	Yes								
Over discharge protection	Yes								
Cell over voltage protection	Yes								
Cell under voltage protection	Yes								
Over temperature protection	Yes								

Compatible Inverters

"Adapt to mainstream brands, customizable communication protocols, and factory compatible."

High Volage Lithium-Ion Phosphate Battery storage system51.2V280A





Module	51.2V 280AH
Basic Parameters	
Capacity(kWh)	14.336
Nominal Voltage(Vdc)	51.2
Nominal Capacity(AH)	280
Voltage Range(Vdc)	44.8~56.8
Depth of Discharge	90%
Dimension(W* D*H,mm)	885mm*434mm*238.2mm(+5)
Design Life	15+ years (25°C)
Cycle Life	>6000 (25°C)
Communication	CANBUS/Modbus RTU/TCP/IP
Protection Class	IP20
Weight(kg)	108kg+3kg
Operation Temperature	0~50°C
Storage Temperature	-20~60°C
Product Certificate	UN38.3

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Main Controller : 1500V 200A

Module	1500V 200AH
Basic Parameters	
Related Product	1500V 200A
AC Supply	/
System Operation Voltage (Vdc)	0~1500
Operation Current (Max.)(A)	200
Self-consumption Power(W)	8
Dimension(W* D*H,mm)	85mm*434mm*238.2mm (±5)
Communication	MODBUS RTU/CAN
Protection Class	IP20
Weight(kg)	20
Operation Life	15+
Operation Temperature	-20~65
Storage Temperature	-40~80

BMS Function

Protection and Alarm

Charge/Discharge End
Charge Over Voltage
Charge/Discharge Over Current
High/Low Temperature
Operation Record
Administrator Monitor: Current, Voltage, Temperature, SOC&SOH.

Management and Monitor

Cells Balance
Intelligent Charge Model
Capacity Retention Calculate
Isolation and Protection
Alarm and Protection.

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Battery Cabinet

The battery cabinet is the dc side bus control unit of the energy storage battery system, which is connected with the high voltage box and storage.
intermediate unit capable of converter; The power pool system (stack) is installed in the bus cabinet,
Switch off/circuit breaker (optional). three-level BMS (ESMU). and UPS power supply. Confluence ark.
The electrical characteristics, heat dissipation performance and safety performance of each component have been fully considered in the design.
And operation and maintenance, reasonable space layout, with compact structure, flexible configuration, security.
Full reliability and other characteristics. Three stage BMS module (ESMU) in the bus cabinet, with CAN,
Rs-485, RJ45 Ethernet communication interface, can be realized with high voltage box, PCS/UPS or
The communication function between EMS realizes the data communication and control of the energy storage battery management system and protection.

NO.	Item	Para Range	Function	Remark
1	DC Breaker	630/1000/1250A	Main loop protection	Customization
2	BMS	ESMU-10 II	Display communication control	
3	Switching power supply	35W/75W 24V	Power Supply	
4	Miniature circuit breaker	S202-C64/20/10	Switch	
5	Emergency stop switch	LA38-22ZS	scram protection	
6	Repeaters	CR-MX024DC2L	Signal control and conversion	
7	LED instruction	ED16-22DSR(G/Y/R)	status indicator	
8	Surge protective devices(spd)	Ex9UEP 20 3	Lightning protection bus	
9	Fuse	DC1500/1000V 300A	protection	Customization
10	Terminal strip		Communication power signal conversion	

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