20FT 500KW/1075KWH COMPLETE ENERGY STORAGE SOLUTION Fine Service Technical Expertise Intelligent Manufacturing

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Creating Value for Customers Building the Future for Employees

1. Uneven global energy structure, energy shortages, and temporal or local imbalances between grid supply and demand.
2. Renewable energy is expanding worldwide, but intermittent power generation causes grid instability.
3. During peak times, there is insufficient power, while during off-peak times, energy remains unused.
4. High grid coverage costs, environmentally unfriendly diesel power generation, unstable voltage, and power outages.
5. Increasing environmental protection and energy-saving demands have led to the implementation and expansion of eco-friendly projects.

Why Battery ESS?

Inner Structure

- 5 battery clusters of 215 kWh capacity with a DC distribution cabinet
- 500KW PCS
- Firefighting system, PDU, and control cabinet

System Electrical Diagram

Applications: Charging stations, solar plants

Application Cases

MSP-20ft Container Solution

- **Battery Module**: 51.2V 280Ah (14.336 kWh)
- **Battery Cell**: 3.2V 280Ah LiFePO4
- **Battery System**: 1075 kWh (5×215 kWh)
- **Container**: 20ft
- **Battery Cluster**: 768V 280Ah (215 kWh)
- **PCS**: 500KW
- **8000 cykles**
- **10 year warranty**

Technical Specifications of 500KW/1075KWH System

DC Data:

- Cell: LFP71173207, 3.2V 280Ah
- Module: 1P16S, 51.2V 280Ah
- Battery Cluster: 1P240S, 768V 280Ah
- Number of Clusters: 5 pcs
- Nominal Capacity: 1075 kWh
- Nominal Voltage: 768V
- BMS Communication: CANbus, Modbus, Ethernet

AC Data:

- Nominal AC Power: 500KW
- Nominal AC Voltage: 3-phase 400V
- Power Factor Correction: 1 (leading to lagging)
- Output THDi: ≤3%
- Frequency: 50/60Hz
- Isolation Method: Non-isolated

General Data:

- System Weight: <16T
- Protection Level: IP54
- Operating Temperature: -20~50℃
- Relative Humidity: 0~95% (non-condensing)
- Max Operating Altitude: 3,000m
- Cooling: liquid cooling, HVAC 5KW
- Fire System: HFC bottles (40L)
- Communication Interfaces: RS485, Ethernet, GPRS
- Container: 20ft (non-walk-in)

215kWh Battery Cluster

- **Battery Type**: LiFePO4
- **Battery Module**: 51.2V 280Ah 16S1P
- **Battery System**: 768V
- **Nominal Capacity**: 280Ah (140A @ 25℃)
- **Nominal Energy**: 215 kWh
- **Max. Charging Current**: 140A (adjustable)
- **Max. Discharging Current**: 140A (adjustable)
- **Max. Output Power**: 100 kW (constant)
- **Charging Voltage**: 876V
- **Discharge Cut-off Voltage**: 600V
- **Cycle Life**: >8,000 cycles (80% DOD, @25℃)
- **Short Circuit Current**: 700A (<10 ms)
- **System Dimensions**: 1200×800×2300 mm
- **Total Weight**: ≈1.8 t
- **Thermal Regulation**: liquid cooling

- **Operating Temperature**: Charging: -5 – 55°C, Discharging -20 - 65°C
- **Communication**: RS485/CAN/LAN

500KW PCS

- **Battery Voltage (DC)**: 600~900V
- **Max. Current (A)**: 929
- **Output Power (AC)**: 500KW (max. 550 kVA)
- **Nominal Voltage (AC)**: 400V (range 320~460V)
- **Nominal Current (A)**: 722
- **Max. Output Current (A)**: 794
- **Frequency**: 50/60Hz (range 45~~55/55~~65Hz)
- **AC Connection**: 3W+N+PE
- **Max. Efficiency**: 98.7%
- **Protection Level**: IP21
- **Noise**: <70 dB
- **Operating Temperature**: -30~55°C
- **Cooling**: Forced air
- **Dimensions**: 1000×700×2050 mm
- **Weight**: 950 kg
- **Display**: LCD touchscreen

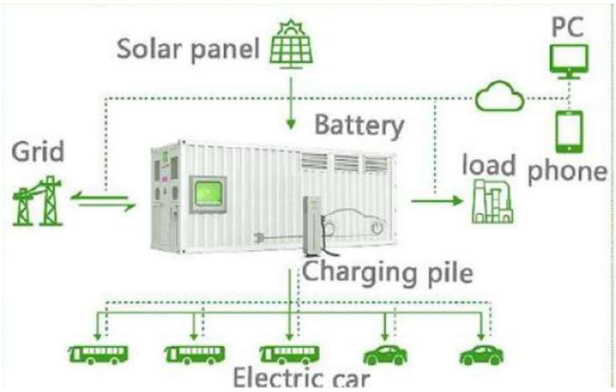
BMS Structure

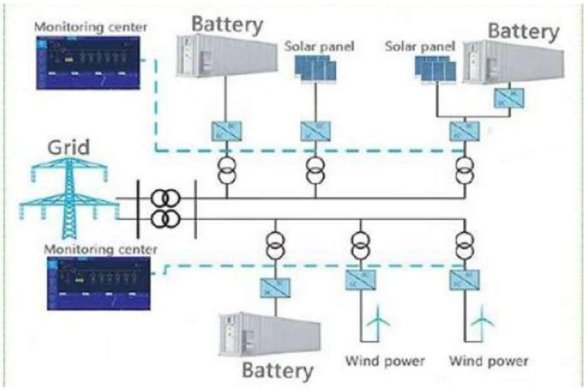
- **Mobile Microgrid**
- **Uninterruptible Power Supply**
- **Peak Time Energy Savings**
- **Zero Emissions for Environmental Protection**
- **Backup Power for Grid or Generator**
- **24-Hour Support Before, During, and After Sales**

Industrial Container Battery System

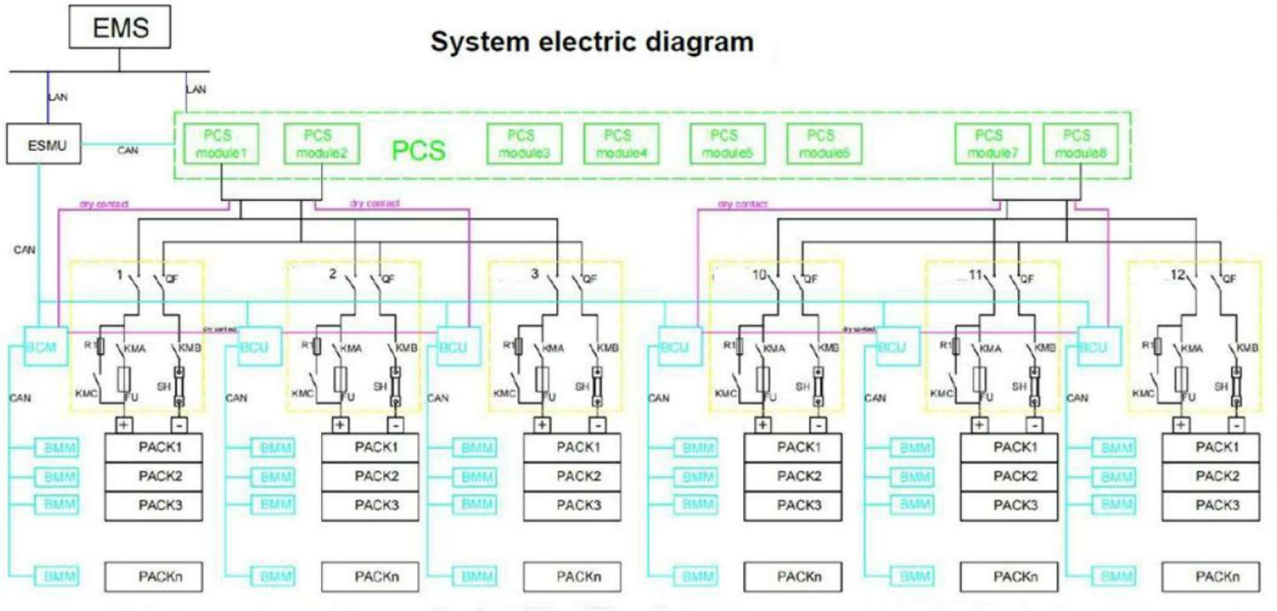
For any questions, please feel free to contact me!

Usage Possibilities:

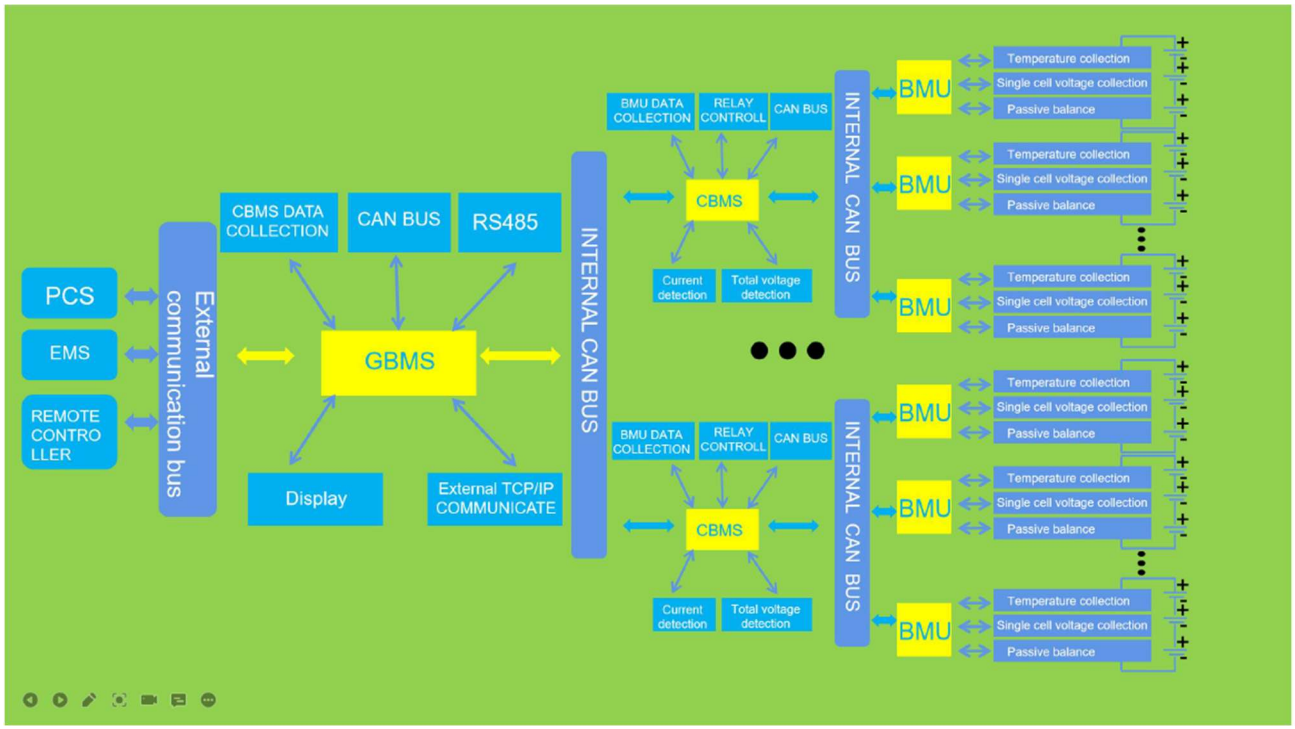




Systém electric diagram:



BMS struktur:



Example of container composition: