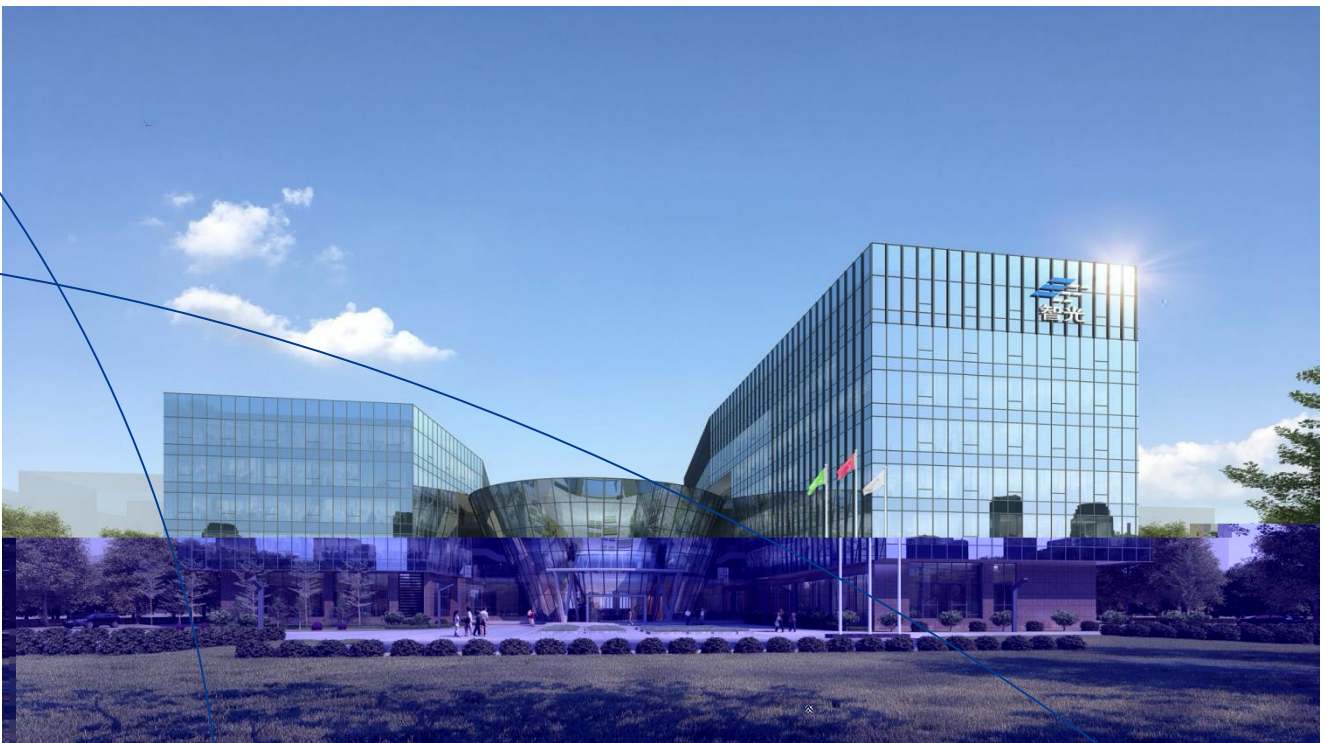




2.5MW/5MWh BESS Specifications



Guangzhou Zhiguang Electric Co., Ltd.

Jan. 2025



Figure1. 2.5MW/5MWh BESS Diagram



Figure 2. 5MWh Battery system

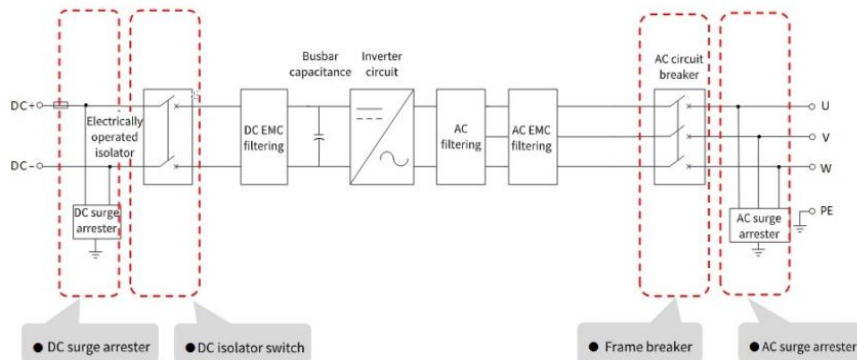
| 5MWh liquid-cooled energy storage container | |
|---|--------------------------------------|
| General | |
| Battery Type | LFP cell, 314Ah |
| configuration | 12*(8*1P52S) |
| Cooling Method | Liquid Cooling |
| Coolant | 50% Ethylene glycol aqueous solution |
| Operating Ambient Temperature | -25 °C ~ +55 °C |
| Storage Temperature | -30°C ~ +60 °C |

| | |
|-------------------------|--|
| Application altitude | ≤2000m |
| Protection Level | IP54 |
| Weight | ~44t |
| Size | 6058mm(W)*2438mm(D)*2896mm(H) |
| Color | RAL7042 |
| Fire protection | Aerosol + water firefighting + explosion-proof fan (combustible gas) |
| Electrical | |
| Rated Energy | 5015.9616kWh |
| Rated Voltage | 1331.2VDC |
| Voltage Range | 1164.8~1476.8VDC |
| Communication method | CAN, RS485, TCP/IP |
| Communication port | RS485, Fiber ST |
| Fulfill standard | |
| Cell | UN38.3, IEC 62620 , IEC62619 |
| Container | UN3536 , IEC62619 , EN61000 , EN62477, IEC63056 , IEC 62933-5-2 |



Figure 3. 2.5MVA Transformer+12*215kW PCS+MV cabinet

Energy storage converter circuit block diagram



Parameters of 215kW PCS

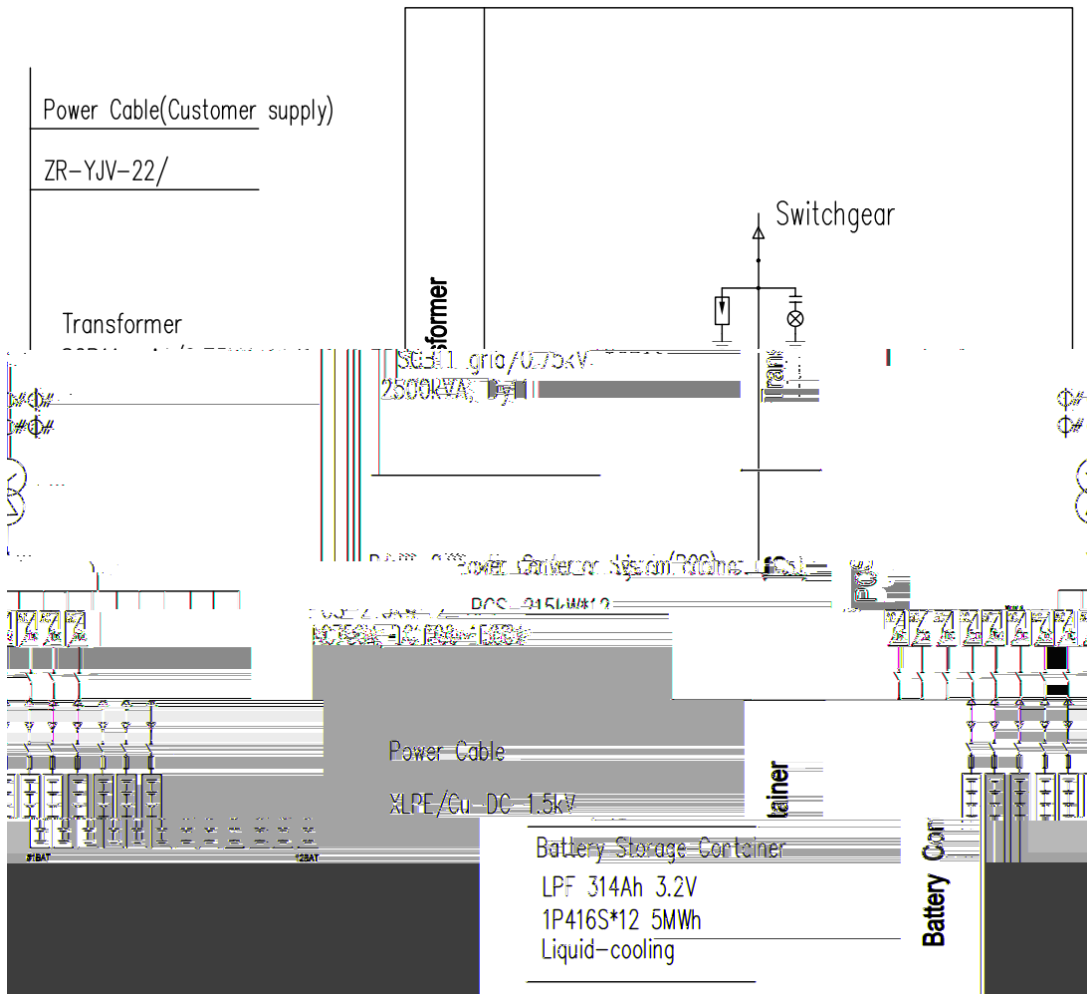
| General | |
|---|-------------------------------------|
| Temperature | -20°C ~ 60°C(De-rating over 50°C) |
| Protection class | Class I |
| Cooling Method | Air Cooling |
| Degree of protection | IP66 |
| Altitude | ≤4000m (>3000m derating) |
| Humidity | 0% ~ 95% (Non condensing) |
| Battery side | |
| Maximum battery voltage | 1500 Vd.c. |
| Operating voltage range | 1100~1500 Vd.c. |
| Rated voltage | 1331.2Vd.c. |
| Max continuous discharge/charging current | 199Ad.c. |
| Grid side | |
| Rated voltage | 3~PE 750 Va.c. |
| Rated frequency | 50Hz / 60Hz |
| Rated power | 215kVA |
| Power factor (at rated power) | >0.99 |
| Power factor adjustable range | -1 ~ 1 |
| Total current waveform distortion rate | <3 % (Under rated power conditions) |



Certification



CE certification in accordance of IEC standards and, Grid Compliance

Parameters of 2.5MVA Transformer

| | |
|---------------------|--------------|
| Rated frequency | 50Hz/60Hz |
| Rated power | 2500kVA |
| Rated voltage | Grid/0.75KV |
| ambient temperature | -25°C ~ 40°C |



| Power Generation Scenario | | |
|---------------------------|--|--|
| Site pictures |  |  |
| Project | Guangdong Thermal Power Auxiliary Frequency Modulation Energy Storage Project | Shandong Reservoir Photovoltaic Energy Storage |
| Capacity | 60MW/60MWh | 44MW/88MWh |
| Functions | AGC frequency regulation, reducing oscillation probability, improving operational reliability and safety | Energy integration, system frequency regulation, peak valley arbitrage |

| Power Grid Scenario | | |
|---------------------|---|--|
| Site pictures |  |  |
| Project | Shandong Laicheng Independent Energy Storage Power Station | State Grid Corporation of China Hunan Power Grid Integrated Energy Storage Project |
| Capacity | 100MW/200MWh | 100MW/200MWh |
| Functions | Participate in provincial power grid assistance, grid peak shaving, and energy storage capacity leasing | Energy integration, renewable energy consumption, peak shaving, frequency regulation |