



# Energy Storage Battery

PRODUCT DATASHEET

51.2V 100Ah 5.12kWh  
51.2V 200Ah 10.24kWh



### Intelligent

Each battery with independent BMS system.



### Perfect Compatibility

Compatible with most of the available Hybrid inverters / LiFeP04 Battery.



### Easy to install and use

Just plug and play to minimize the installation time.



### Long life and safety

Ensures more than 6000 cycles with 80% DoD.



### Ip65 rated protection

That it can be Installed Indoors Or Outdoors.

Battery adopts the latest HESS battery system. With rich experience and advanced techniques, the product has the features of the fashionable design, high energy, high power density, long service life.

Easiness of installation and expansion, all of which reflect the real requirements of the end users and strongest technical capability of our company.

## Application scenarios



Family



Small store



Hospital



School

## Technical Specifications-Rack Mounted Energy Storage Battery

Model	YL-ES-R05	YL-ES-R10
Rated Voltage	51.2V	
Rated Capacity	100Ah	200Ah
Rated Energy	5.12KWh	10.24KWh
Internal Resistance	≤30mΩ	
Cycle Life	≥5000 cycles @ 80% DOD, 25°C, 0.5C ≥4000 cycles @ 80% DOD, 40°C, 0.5C	
Design Life	≥5 years	
Charge Cut-off Voltage	57.0V ± 0.5V	
Max. Continuous Work Current	100A	
Discharge Cut-off Voltage	45.0V ± 0.2V	
Charge Temperature	0°C~60°C (Under 0°C extra heating mechanism)	
Discharge Temperature	-20°C~60°C (Under 0°C Work with reduced capacity)	
Storage Temperature	-40°C~55°C @60% ± 25% relative humidity	
Dimensions	483*480*178mm / 19.02"x18.90"x7.01"	483*680*178mm / 19.02"x26.77"x7.01"
Weight	58kg	96kg
Protocol (optional)	RS232-PC, RS485(B)-PC RS485(A)-Inverter, Canbus-Inverter	

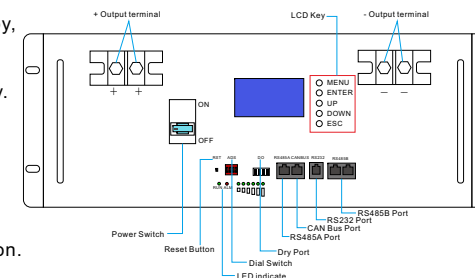
## Equipment Interface Instruction

**Power Switch:** To turn ON/OFF the whole battery BMS standby, power output ready.

**SOC Light:** Green LEDs to show the battery's current capacity.

**RUN light:** Green LED flashing to show the battery is running.

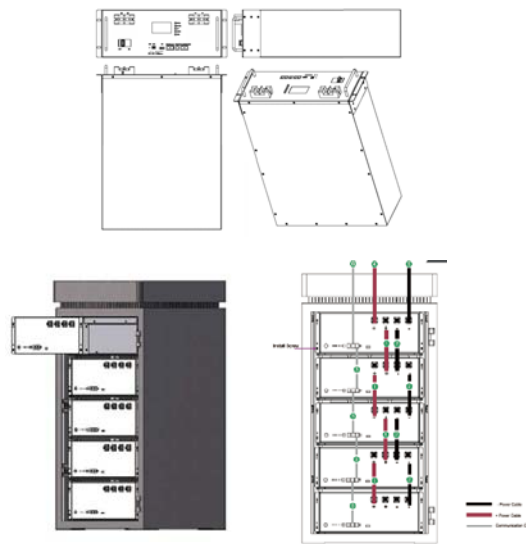
**Alarm light:** Red LED flashing to show the battery has alarm, and lighting to show the battery is under protection.



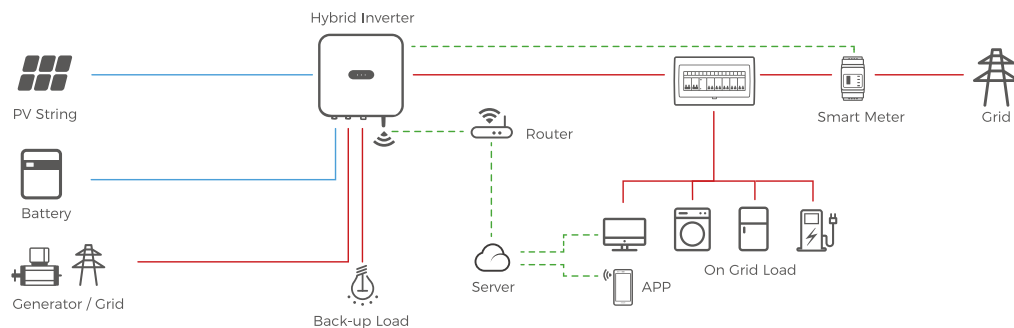
## Installation

Put battery modules into the cabinet and connect the cables, Put the battery into the cabinet, Drive the 4 pcs screws, Connect the cables between battery modules Connect the cables to inverter.

- **Power On** Double check all the power cable and communication cable.
- **ON / OFF** Switch on all the battery modules and the green LED light below will be on:
- **Set ADD** Set ADD follow ADD instruction, pack 1 will be host, others are slaves.



## Schematic Diagram of Solution



## Trouble Shooting Steps

Problem determination based on: 1) Whether the battery can be turned on.2) If battery is turned on, check the red light is off, flashing or lighting;3) If the red light is off, check whether the battery can be charged/discharged.

Preliminary determination steps:1) Battery cannot be turned on, switch on the lights are all no lighting or flashing. If the battery external switch is ON, the RUN light is flashing, and the external power supply voltage is 51.2V or more, the battery still unable to turn on, please contact distributor.

- The battery can be turned on, but red light is lighting, and cannot be charged or discharged, red light is lighting, that means system is abnormal, please check values as following.
- **Temperature:** Above 50°C or under -10°C, the battery could not work. Solution: to move battery to the normal operating temperature range between -10°C and 50°C.4) **Current:** If current is larger than 100A, battery protection will turn on.Solution: Check whether current is too large or not, if it is, to change the settings on power supply side.

- **High Voltage:** If charging voltage above 58.4V battery protection will turn on.Solution: Check whether voltage is too high or not, if it is, to change the settings on power supply side 6) **Low Voltage:** When the battery discharges to 40V or less, battery protection will turn on.Solution: Charge the battery for some time, the red light will turn off.Excluding the four points above, if the faulty is still cannot be located, turn off battery and repair.
- **The battery cannot be charged or discharged**1) Cannot be charged Disconnect the power cables measure voltage on power side if the voltage is 56.5-57.6V rest the battery. connect the power cable and try again, if still not work turn off battery and contact distributor.2) Unable to discharge: Disconnect the power cables and measure voltage on battery side. if it is under 40V. please charge the battery: if voltage is above 51.2V and still cannot discharge, turn off battery and contact distributor. Emergency Situations.

## Matters Need Attention

- Do not immerse the battery in water or allow it to get wet.
- Do not use or store the battery near sources of heat such as a fire or heater.
- Do not reverse the positive(+) and negative(-) terminals.
- Do not connect the battery directly to wall outlets or car cigarette-lighter sockets.
- Do not put the battery into a fire or apply direct heat to it.
- Do not short-circuit the battery by connecting wires or other metal objects to the positive(+) and negative(-) terminals.
- Do not pierce the battery casing with a nail or other sharp object, break it open with a hammer, or step on it.
- Do not strike, throw or subject the battery to severe physical shock.
- Do not directly solder the battery terminals.
- Do not attempt to disassemble or modify the battery in any way.
- Do not place the battery in a microwave oven or pressurized container.
- Do not use the battery in combination with primary batteries (such as dry-cell batteries) or batteries of different capacity, type or brand
- Do not use the battery if it gives off an odor, generates heat, becomes discolored or deformed, or appears abnormal in any way. If the battery is in use or being recharged, remove it from the device or charger immediately and discontinue use.
- If the battery leaks and electrolyte gets in your eyes, do not rub them. Instead, rinse them with clean running water and immediately seek medical attention. If left as is, electrolyte can cause eye injury.

