



### 30KW Energy Storage System With 60KWH Lithium Battery



<b>30KW Energy Storage</b>
<b>CYESS30KW60KWH</b>
<b>Cytech New Energy</b>
<b>Please read the data sheet carefully before application, and contact us for further technical information</b>
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### 1. Product Introduction

This is an efficient and highly reliable hybrid energy storage inverter system primarily developed for small and medium-sized energy storage micro grids. It supports photovoltaic integration, incorporates an on-grid/off-grid switching device, allows for parallel operation of multiple units, supports hybrid operation with diesel engines, and facilitates rapid switching between on-grid and off-grid modes. It is suitable for various scenarios such as small industrial and commercial facilities, small island micro grids, farms, villas, and battery recycling, meeting the needs of different users.

### 2. Product Feature

- ◆ Support photovoltaic access;
- ◆ Multiple communication methods, supporting remote upgrades;
- ◆ Ultra high energy density, small size, easy installation and transportation;
- ◆ Modular design, flexible expansion, convenient transportation and maintenance;
- ◆ Supports 100% unbalanced load and 110% long-term overload;
- ◆ Adjustable output power, adjustable charging and discharging power, strong adaptability to the power grid.
- ◆ Support diesel generator

### 3. Product Parameter

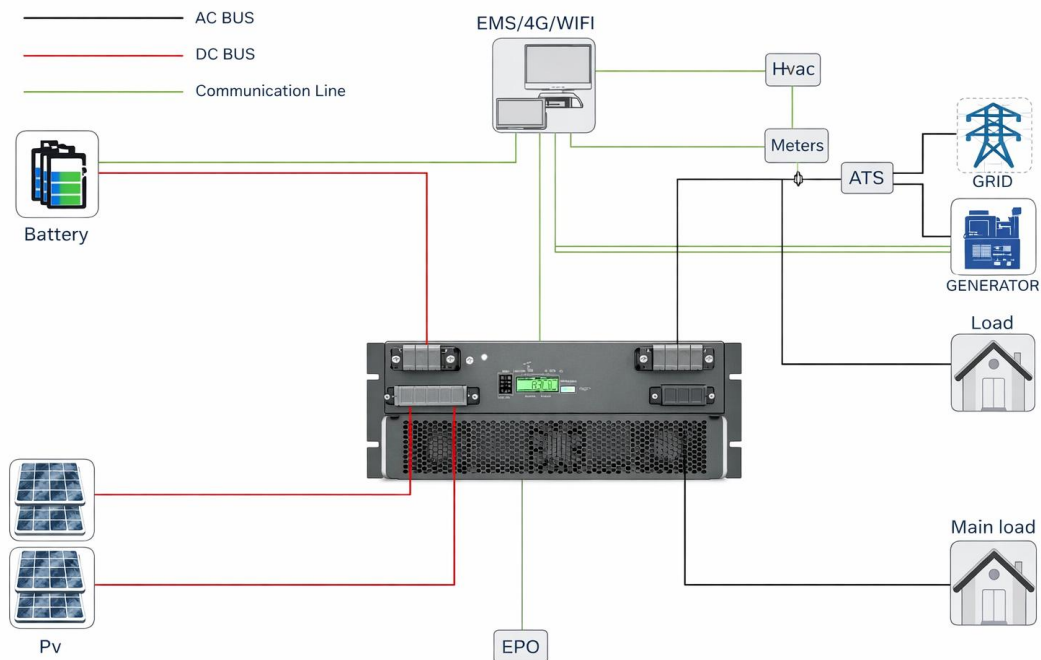
Rated power	30KW
Lithium battery capacity	61.44KWH
DC voltage	341-481VDC
AC voltage	400/230VAC
<b>PV input</b>	
Working mode	MPPT
Rated PV input voltage	500V
MPPT tracking voltage range	200V-830V
Max PV input voltage Voc (Under the lowest temperature conditions)	500V
Max PV input power	38.4KW
MPPT tracking channels (input channels)	2
<b>Input</b>	
DC input voltage range	341-481VDC
Rated AC input range	400/230VAC(-20%~ 15%) 3phase 50/60Hz
<b>Output</b>	
Inverter output efficiency	97% (peak)
Inverter output voltage	400/230VAC 3phase 50/60Hz
Inverter output waveform	Pure sine wave
City power output efficiency	>99%

City power output voltage range	Follows the input
City power output frequency range	Follows the input
Inverter output waveform distortion	≤ 3% (linear load)
Battery mode no-load loss	≤ 1% of rated power
AC output rated current	43.5A
Charging method	Three stage charging method (constant current, constant voltage, float charging)
<b>Ambient condition</b>	
Working temperature	-10°C~40°C
Storage temperature	-15°C~60°C
Noise	≤55dB
Relative humidity	0%~95%;non-condensing

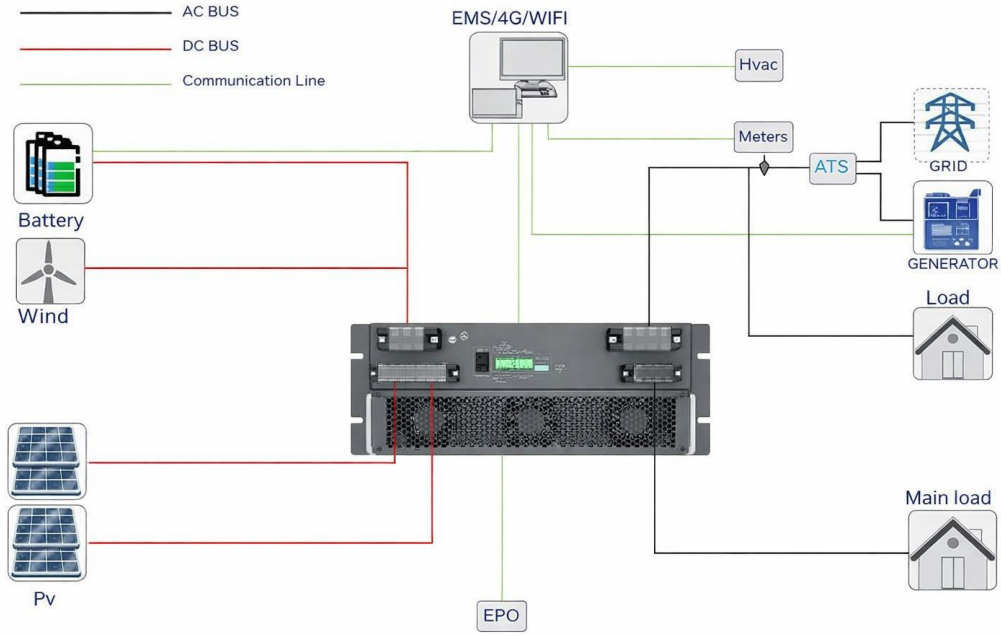
#### 4. Application scenarios

Small-scale industrial and commercial applications: Suitable for small factories, commercial buildings, office buildings, etc., to optimize energy consumption, implement peak-valley electricity pricing, reduce electricity costs, and provide emergency backup power to ensure that critical equipment can still operate normally when the power grid is unstable.

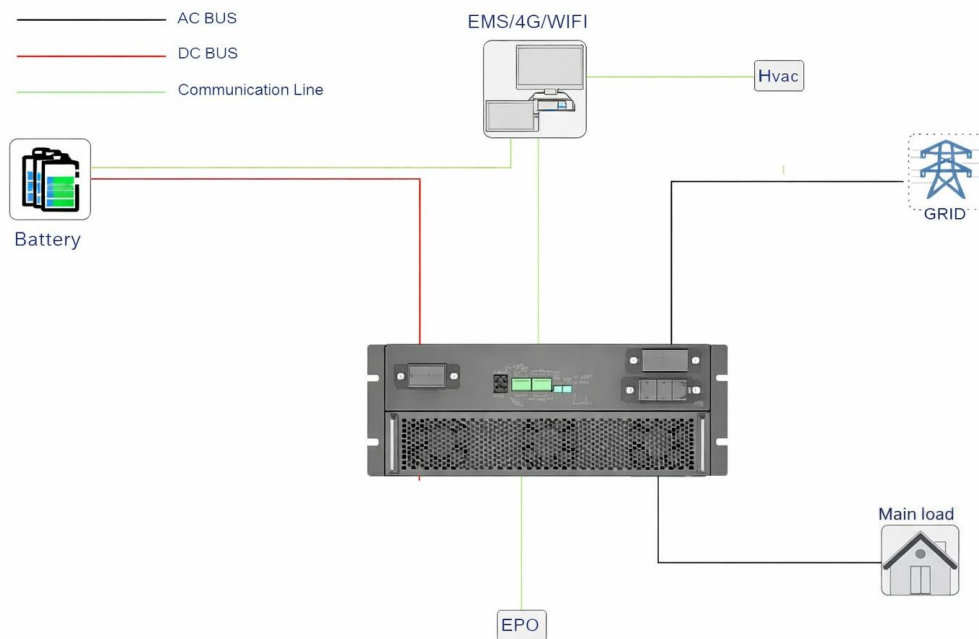
Main functions: Self-consumption of photovoltaic power, emergency backup power, etc.



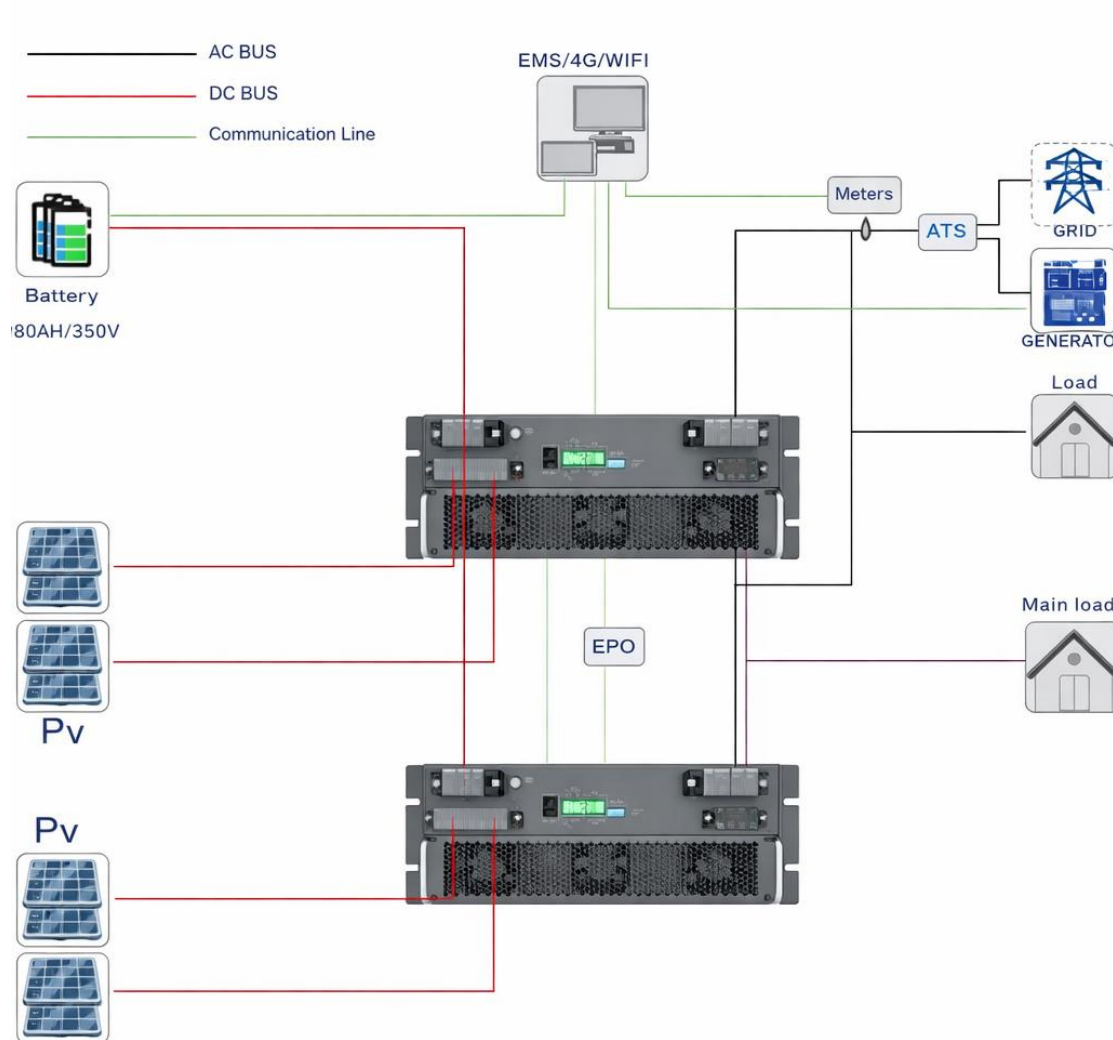
Off-grid microgrids: In remote islands or areas without stable grid coverage, microgrids can be combined with renewable energy sources such as solar photovoltaic panels and wind turbines to establish independent microgrids and provide a stable power supply.



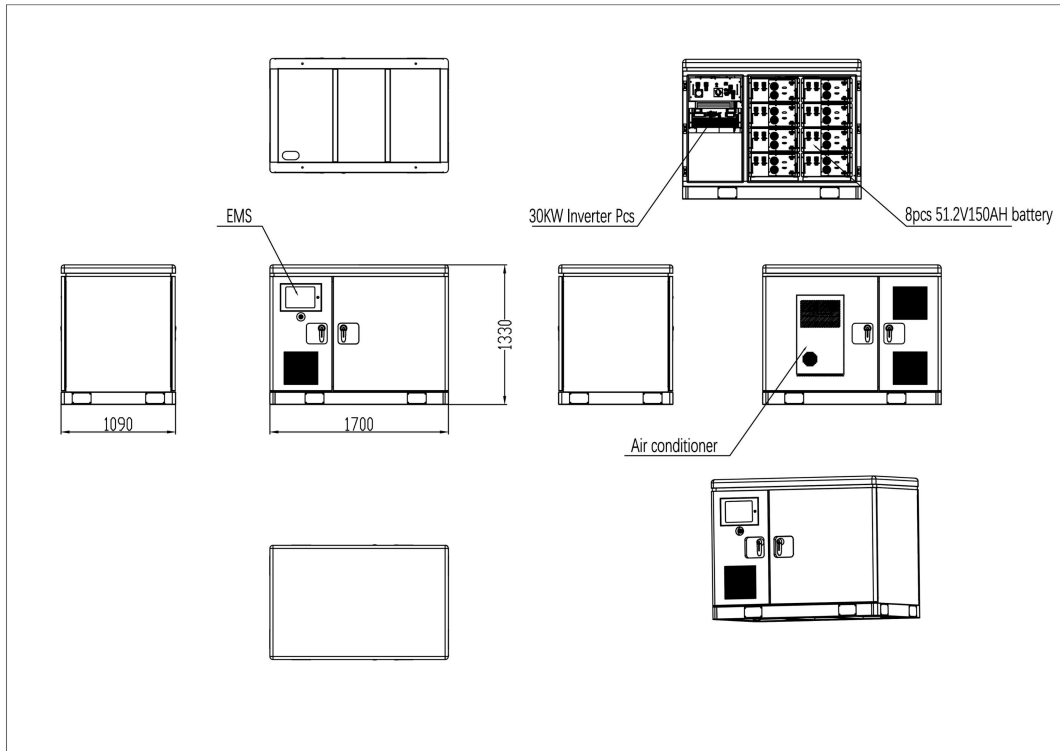
Energy storage + emergency backup power: Supports single-phase charging function, wide battery power full load range, maximum current 150A, to prevent the battery from acting as a backup power source in case of sudden mains power failure.



Multiple units in parallel: Supports multiple units in parallel, supports transformerless output, and supports transformer start-up.



5.Product Size



## 6.EMS Dispatch Function:

Optional matching EMS series products are available, specifically the photovoltaic-storage-diesel version microgrid EMS. The microgrid EMS is a key component ensuring the efficient, reliable, and economical operation of the microgrid. It is responsible for dispatching and managing distributed generation resources, energy storage devices, loads, and possible grid-connected, off-grid, and reverse-current prevention operations to ensure system stability and economical operation.



- **Monitoring and Data Acquisition:** Real-time monitoring of energy flow within the microgrid, including power generation, energy storage, photovoltaic (PV) systems, and load status. Collection and recording of key parameters such as voltage, current, power, and frequency; system diagnostics; and cloud platform integration.
- **Control and Optimization:** Optimizing microgrid operation based on energy demand and supply.
- **Protection and Security:** Ensuring the safe operation of the microgrid, including overload protection, short-circuit protection, equipment fault detection, and response measures.
- **Energy Management:** Managing energy allocation within the microgrid to ensure efficient energy utilization, reduce waste, and potentially include demand response and peak-shaving strategies.
- **Economic Dispatch:** Performing economic dispatch based on electricity price changes and energy costs to minimize overall operating costs.

- User Interaction: Providing a user interface that allows users to view energy usage, set operating modes, and configure operating parameters.
- Grid Connection and Islanding Operation: Managing the microgrid's connection to and disconnection from the main grid.
- Remote OTA (Over-The-Air) Functionality: Remotely diagnosing EMS (Electric Power Supply) and inverter faults, and remotely upgrading software.