# BESS

## 20ft Container Energy Storage System

Power Is ON | BPE Strategic Power Solutions


## About us

Best Power Equipments India Pvt. Ltd. is industry leading electrical and power electronic product designer and manufacturer since 2000. located in Noida India.

BPE provides complete solutions for Data center infrastructure, Power solutions and Green energy storage sectors.
The BESS products cover four main application: Industrial and commercial BESS, renewable integration, uninterrupted power lithium battery system and residential energy storage system.

**"Sustainability Isn't an Option — It's a Commitment"**

Excellent developer and supplier of innovative smart energy storage system

**Best Power Equipments India Pvt. Ltd.**
Corporate Office: G-240, Sector-63, Distt. Gautam Budh Nagar, Noida-201307 UP
Registered Office: 812A, Shakuntala Building, 59, Nehru Place, New Delhi-110019
Ph: +91 120 4637000-0029 | Mobile: +91 9911995869 | Email: crm@bpee.co.in
support@bpeindia.com | Toll Free: 1800 103 1247 | Website: www.bpee.com

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# BESS Container

BPE uses standard battery modules, PCS modules, BMS, EMS and other systems to form standard containers to build large-scale grid-side energy storage projects. The standardized 20feet container system can be configured with 1075kWh500kW energy storage system.

The standardized and prefabricated design reduces user customization time and construction costs, and reduces safety hazards caused by local installation differences and management risks. It meets the application needs of regional power grid peak shaving, frequency regulation, voltage regulation, emergencyresponse, new energy consumption, etc., and ensures the normal operation of the power system.

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# Configuration

## PCS

Bidirectional AC / DC converter can realize the bidirectional conversion from DC to AC and AC to DC. It can not only convert AC to DC to charge battery, but also convert DC to AC to supply power to load or feedback to power grid.

## Battery System

The system mainly consists of safe, efficient and long-life lithium iron phosphate cells, which are connected in series to form battery modules, and multiple modules are connected in series to form battery clusters.

## Air Conditioning

Air Conditioning (HVAC) system is configured to maintained an optimal temperature to maximize energy system operational life and efficiency.

## Battery management system

The core components of the system can effectively protect the battery from overcharge, overdischarge and over-current. At the same time, the balanced management of the cells can ensure the safe, reliable and efficient operation of the whole system.

## Power Management System

System operation data monitoring, operation strategy management, historical data record, system status record, etc.

### Enclosure

Protection Degree IP54

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| Safe and reliable |

- High quality LFP batteries for mobile use.
- Intelligent air conditioning design, small temperature fluctuation.
- Automatic induction of fire source; automatic fire extinguishing; sound and light alarm function.
- Container-mounted network camera with video surveillance function; (optional)
- IP54, safe and reliable operation in outdoor environment.
- Serially designed PCS and battery pack eliminates circulating current and improve system reliability.
- Integrated BMS, DC, AC multi-layer protection, maximum safety performance design.

| Efficient and Convenient |

- Container installation, high modularity, simple structure, easy installation and maintenance.
- All-in-one equipment, which can be fixed, vehicle-mounted, and easy to move.
- Enables remote monitoring, device management, remote troubleshooting and data analysis.

| Cost optimization |

- Improving and energy storage, etc.
- One investment, multiple benefits: Peak shaving, backup power supply, microgrid building, power quality.
- Long cycle life, low failure rate, reduce operation and maintenance investment.
- Maximize green energy utilization.

## System application


Peak and frequency regulation, smoothing new energy generation.

User side backup power.

Industrial and commercial demand management, peak shaving.

Building microgrid system.

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# Specification

| Model | | BESS5001075C |
|---|---|---|
| AC Parameter (Grid) | Rated Power (kW) | 500 |
| | Rated Grid Voltage (V) | 3W+N+PE，380V/400V |
| | Grid Voltage Range | -15%~+10% |
| | Rated Grid Frequency (Hz) | 50Hz/60Hz |
| | Grid Frequency Range (Hz) | ±2Hz |
| | Output Current Harmonics | ⩽3%(Rated Power) |
| | DC Component | ＜0.5%In |
| | Power Factor Range | -0.9~+0.9 |
| AC Parameter (No Grid) | Rated Output Power (kW) | 500 |
| | Max. Output Power (kW) | 525 |
| | Rated Output Voltage (V) | 3W+N+PE , 380V/400V |
| | Output Voltage Harmonics | 3% |
| | Rated Frequency (Hz) | 50Hz/60Hz |
| | Overload Capacity | 105%：Long-time Running<br>105%~120%：10min<br>120%）：1min |
| Battery Parameter | Cell Type | LFP |
| | Single cell module capacity (KWh) | 241.152 |
| | No. of Battery Cabinets | 5 |
| | Battery System Power (KWh) | 1205.76 |
| | Rated operation hours (h) | 2（Changeable number of battery modules with othertime options） |
| | Cycle Life | 6000（0.5C@25℃ Charge/Discharge@90%DOD，EOL80%） |
| Protection | AC Switch | YES |
| | PV Electric Operated AC Switch | YES |
| | Grid Monitor | YES |
| | Surge Protection | YES |
| Basic Parameter | Size (W*D*H) (mm) | 6058*2438*2591 |
| | Weight (kg) | 16000 |
| | Isolation Method | Isolation Transformer (built-in) |
| | NO/OFF Grid Switch Device | STS（Optional） |
| | IP Class | Outdoor IP54 |
| | Working Temperature Range | -20℃~55℃（Derated above 45° C） |
| | Relative Humidity | 0%RH~95%RH，Non-condensing |
| | Temperature Control Method | Battery cabinet: air-conditioned; electrical cabinet: air-cooled |
| | Max. Working Altitude (m) | 45℃，2000m；2000~4000m Derate |
| | Display | Touchscreen |
| | Communication Interface | RS485、LAN |
| | Communication Protocol | Modbus-RTU、Modbus-TCP |

* Specifications are subject to change without any prior notice.

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