

ESS 30 kW / 76 kWh

Sodium-Ion Air-Cooled Battery Cabinet



FEATURES

Safety Technology

- A+ grade sodium-ion cells
- The system is configured with a multi-level fuse protection
- Built-in aerosol fire extinguishing systems at the package and rack levels

More Reliable

- The system is rigorously designed and tested to operate stably under various conditions
- Equipped with protections against overcharge, over-discharge, and over-temperature to prevent accidents

Easy to Install and Use

- Highly integrated for ease of transportation, installation and deployment
- Modular design with flexible system capacity configuration

Energy Management System

- Peak shaving
- Demand mitigation
- Self-consumption
- Price arbitrage

System Technical Parameters

Battery Data

| | |
|-------------------------|---------------------------------|
| Nominal Energy | 76.8kW |
| Nominal Voltage | 480V |
| Battery Chemistry | Sodium-Ion Battery |
| Cycle Life | ≥8000 cycles(@25 °C, 0.5P/0.5P) |
| Cell Specification | 3.0V 160Ah |
| Battery Pack Energy | 9.6 kWh |
| Number of Racks | 1 |
| String Configuration | 1P160S |
| Operating Voltage | 320V - 552V |
| Rated Charging Power | 0.5P |
| Rated Discharging Power | 0.5P |

Safety

| | |
|---------------------------|----------------------------|
| Fire Extinguishing System | Aerosol fire extinguishing |
|---------------------------|----------------------------|

PCS Data

| | |
|-------------|------|
| Rated Power | 30kW |
|-------------|------|

Please refer to the PCS section for more details.

General

| | |
|--------------------------|---------------------------|
| Dimension(WxDxH) | 1050 x 1360 x2250mm |
| Weight | Approximately 1700Kg |
| IP Rating | IP55 |
| Cooling Method | Smart air cooling |
| Operating Temperature | -30°C - +60°C |
| Storage Temperature | -20°C - +45°C |
| Relative Humidity | 15% - 90%(Non-condensing) |
| Operating Altitude | ≤3000m |
| Communication Interfaces | LAN/CAN/RS485 |
| Compliance | UN 38.3, MSDS |

Bi-directional Storage Inverter



● Inverter Features

Flexible Configuration

- Wide voltage range of 150~750V
- Parallel in both AC side and DC side for larger power & energy

Extensive Use

- Droop control/communication control
- Optional PV charger for DC-coupled hybrid system
- Optional smart transfer switch for auto-backup

High Efficiency & Stability

- Compatible with 19-inch rack for easy integration and installation

Safety & Compatibility

- Global grid certified & listed
- Support lead-acid batteries, lithium batteries & sodium ion batteries & fly-wheel.

PCS Technical Parameters

Battery Side

| | |
|--|---------------------------------|
| Charging and Discharging voltage range | 150V-750V(350V-750V @full load) |
| Rated Power | 30kW |
| Maximum Power | 33kW |
| Maximum Charging and Discharging Current | 90A |
| Battery Switch-off Mode | Relay |
| Over Voltage Protection | Software Protection |
| Over Current Protection | Software Protection & DC Fuse |

DC Bus Side

| | |
|-----------------------|-----------|
| Rated Power | 45kW |
| Input Voltage Range | 700V-830V |
| Maximum Input Current | 32.5A*2 |

AC Grid-tied Output

| | |
|------------------------|---|
| Rated Output Power | 30kW |
| Maximum Apparent Power | 33kVA |
| Maximum Active Power | 33kW |
| Rated Grid Voltage | 3P4W+PE, 400 (±15%) Vac |
| Rated frequency | 50 (±2.5)Hz |
| Power Factor | Listed: 0.8~1 leading or lagging Actual:0.1~1 leading or lagging |
| THDi | <3% |

AC Off-grid Output

| | |
|------------------------|--|
| Rated Output Power | 30kW |
| Maximum Apparent Power | 33kVA |
| Maximum Active Power | 33kW |
| Rated Grid Voltage | 3P4W+PE, 400 (±20% configurable) Vac |
| Rated frequency | 50 (±5 configurable) Hz |
| Power Factor | Listed: 0.8~1 leading or lagging Actual:0.1~1 leading or lagging |
| Overload Capacity | 110%~120%, 10 min 120%~130%, 1 min 130%~150%, 200ms > 150%, 100ms |

PCS Technical Parameters

Off-grid and parallel mode

| | Droop control parallel | Communication parallel |
|--------------------------------|------------------------|------------------------|
| External transformer | Yes | No |
| Maximum number of parallel | 10 | 10 |
| Total length of parallel lines | No limit | 7m |

Efficiency

Peak Efficiency 97.3%

CEC Measured Efficiency 96.5%

Communication

Communication Port CAN/RS485/Ethernet/WIFI

General Specification

Dimension(W*H*D) 440*173*550mm 440*173*596mm (including handles)

Cooling Forced Air Cooling

Weight 33kg

Topology Non-isolation

Operation Altitude 3000m(>3000m derating)

Operation Environment Contamination Level ≤2

Temperature & Humidity -30°C~60°C (>45°C derating) & 0-95%

Noise ≤75dB

IP Rating IP20

Certification


Grid-tied Standard EN50549-1, G99, VDE4105, VDE4110, AS477.2:2020
CEI0-21, Poland Certification, R25, Synergrid listing

Safety Certification IEC62477

EMC Standard IEC61009

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