

Residential ESS

All In One Energy Storage System CATL Battery System



Safety

CATL LFP Battery: Secure Modular System Ensures Stability and Safety. Triple IP65 Protection Guarantees Reliability for Both Outdoor and Indoor Installations.



Simple

Lightweight & Portable for Solo Installation. Effortless Plug & Play Setup in Just 30 Minutes. Maximizes Space with a Compact Footprint of 0.15 sq. m.



Interconnection

Global Cloud Platform & Mobile App Accessible Anytime, Anywhere. Open API Supports Power Internet Applications, Enabling Seamless Integration.

10 000 CYCLES - 90% DOD

HYBRID INVERTER



Introducing the MiEnergy Residential Energy Storage System All-In-One (ESS), a Game-Changer that Transcends Traditional Power Backup Solutions.

Enhanced Functionality

Economical, Customizable, and Effortless Energy Storage Solution for Your Family.

- With UPS, No More "POWER OUTAGE"
- Standby Self-Loss Consumption <2W
- Maximum Efficiency: 97%
- PV Charging with Max. Access of 6.5kW
- Battery can be Expanded to 20kWh



Power generation through PV during the daytime



PV gives priority to supplying power to the load and storing excess power to ESS



At night/ during outages ESS power your home



Driven by grid/ESS, heat pump system maintains heating balance



Hybrid Inverter 5kWh to 6kWh
CATL Cells: 10 000 Cycles - 90% DOD
IP65 - Triple Protection
Global Cloud Platform
Sleek Design

Product Description

The MiEnergy Series encompasses a Hybrid Inverter and Battery storage units meticulously crafted to address diverse energy requirements. By incorporating world-leading CATL Cells, we guarantee both safety and exceptional performance.

This elegant energy storage solution is available with a choice of two inverters:

MiEnergy - AIO Modular - 5kWh

MiEnergy - AIO Modular - 6kWh

Once you've selected the inverter that suits your requirements, you also have the option to choose from four different battery sizes, ranging from 5.12kWh to 20.40kWh.

MiEnergy - Modular - 5.12

MiEnergy - Modular - 10.24

MiEnergy - Modular - 15.36

MiEnergy - Modular - 20.48

The units come in integrated modular housings that are both simple to install and aesthetically pleasing

Modular AIO Inverter & Battery System for Solar and Energy Storage

Modular single phase storage solution

Rapid charging technology for quick and efficient power replenishment

Solar input array sizes - 6.5kW or 7.5kW

Multiple operating modes

Back-up, self-use, off-grid and force time user modes

Easy indoor or outdoor installation - IP65rated

Can be configured to operate as a back-up supply

Bipolar DC Switch (125A/Pole), Anti-islanding Protection, Output Over Current Protection, DC Reverse Polarity Protection, String Fault Detection, DC/AC Surge Protection, Insulation Detection, AC Short Circuit Protection.

Simple operation - Programmable software, App control and remote cloud monitoring (Seamlessly integrates with Solarman Cloud services)

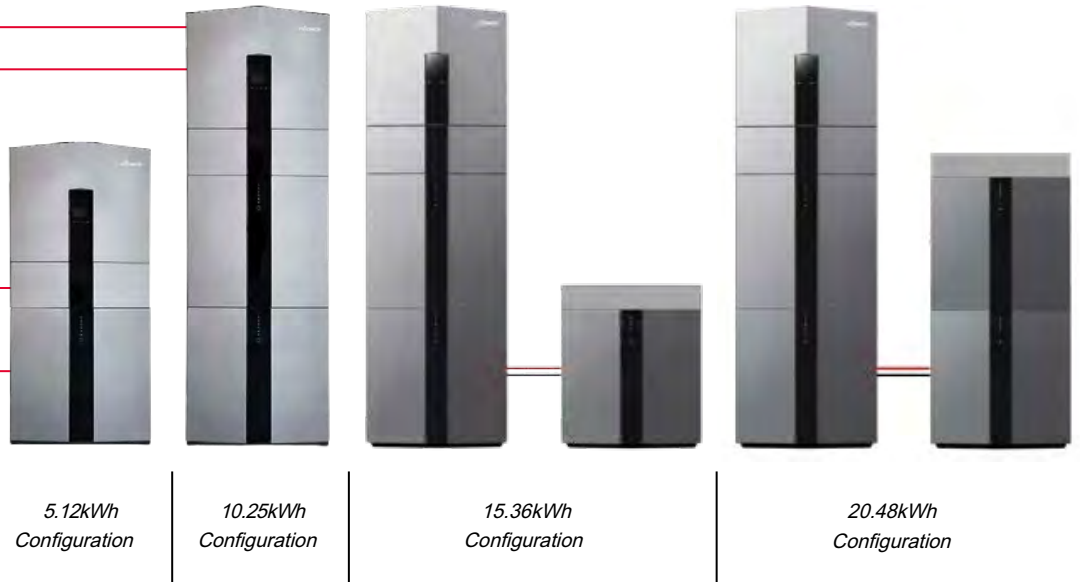
Inverter / Battery Configurations

MIENERGY-MODULAR
Inverter 5kWh - 6kWh

EMS Display Screen

Cable Box
(Connected to Inverter)

MIENERGY-MODULAR
Battery Unit



Certification & Standards

Inverter

IEC/EN 62109-1&2; IEC/EN61000-6-1; IEC/EN61000-6-2; EN61000-6-3;
IEC/EN61000-6-4; IEC/EN61000-3-11; EN61000-3-12; IEC60529; IEC
60068; IEC61683; IEC62116; IEC61727; EN50549-1; AS 4777.2; **NRS 097**;
VDE-AR-N-4105; CEI0-21; G98; G99; C10/C11

Safety (Cell)

Pack: IEC/EN 62619; UN38.3
Cell: IEC/EN 62619; UN38.3; UL1973



Technical Data

Battery Model

HEC-S B 5K

Physical

Battery Type	LFP (LiFePO4)
System Weight	57KG
Dimension (W x H x D)	540*530*250
IP Protection	IP65
Warranty	5 Year Product Warranty, 10 Year Performance Warranty

Electrical

Energy Capacity	5.12kWh
Usable Capacity	4.6kWh
Depth of Discharge (DoD)	90%
Nominal Voltage	51.2V
DC Circuit Breaker	125A
Operating Voltage Range	44.8-56.5V
Internal Resistance	<20mΩ
Cycle Life	10000cycle

Operation

Max. Charge/Discharge Current	50A/80A
Rated DC Power	4096W
Max. Charge/Discharge Power	2825W/4096W
Operating Temperature Range	0 to 50°C charging -10 to 50°C discharging
Humidity	0~95% (No condensation)

BMS

Modules Connection	Max. 4
Capacity	100-400Ah
Power Consumption	<2W
Communication	CAN & RS485
Monitoring Parameters	System voltage, current, cell voltage, cell temperature, PCBA temperature measurement

Certificate

Safety(Cell)	Pack: IEC/EN 62619;UN38.3 Cell: IEC/EN 62619;UN38.3;UL1973
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*Maximum 4 battery pack in parallel.

Hybrid Inverter Model

HEC-S 5K

PV String Input

Max. DC Voltage	580V
Nominal Voltage	400V
MPPT Voltage Range	80V-560V
Startup Voltage	130V
Number of MPP Tracker	2
Strings Per MPP Tracker	1
Max. Input Current Per MPPT	15A
Max. Short-circuit Current Per MPPT	18A

AC Output (Grid)

Nominal AC Output Power	5000W
Max. AC Apparent Power	7360VA (from grid)
Max. AC Output Power	5000W ¹
Nominal AC Voltage	230Vac
AC Grid Frequency Range	50 / 60Hz±5Hz
Max. Output Current	22A ²
Max. Input Current	32A
Power Factor (cosΦ)	0.8leading-0.8lagging
THDi	<3%

Battery Input

Battery Type	LFP (LiFePO4)
Nominal Battery Voltage	48V
Charging Voltage Range	40-60V
Max. Charging Current	100A
Max. Discharging Current	100A
Battery Capacity	100-400Ah
Charging Strategy for Li-ion Battery	Depend on the BMS

AC Output (Backup)

Max. Output Apparent Power	5000VA
Peak Output Apparent Power	6900VA 10sec
Max. Output Current	20A
Nominal Output Voltage	230V
Nominal Output Frequency	50/60Hz
Output THDv (@Linear Load)	<3% (Linear Load)

Efficiency

Max. PV Efficiency	97.6%
Euro. PV Efficiency	97.0%

Protection

DC Switch	Bipolar DC Switch (125A/Pole)
Anti-islanding Protection	Yes
Output Over Current Protection	Yes
DC Reverse Polarity Protection	Yes
String Fault Detection	Yes
DC/AC Surge Protection	DC Type II;AC Type III
Insulation Detection	Yes
AC Short Circuit Protection	Yes

General Specifications

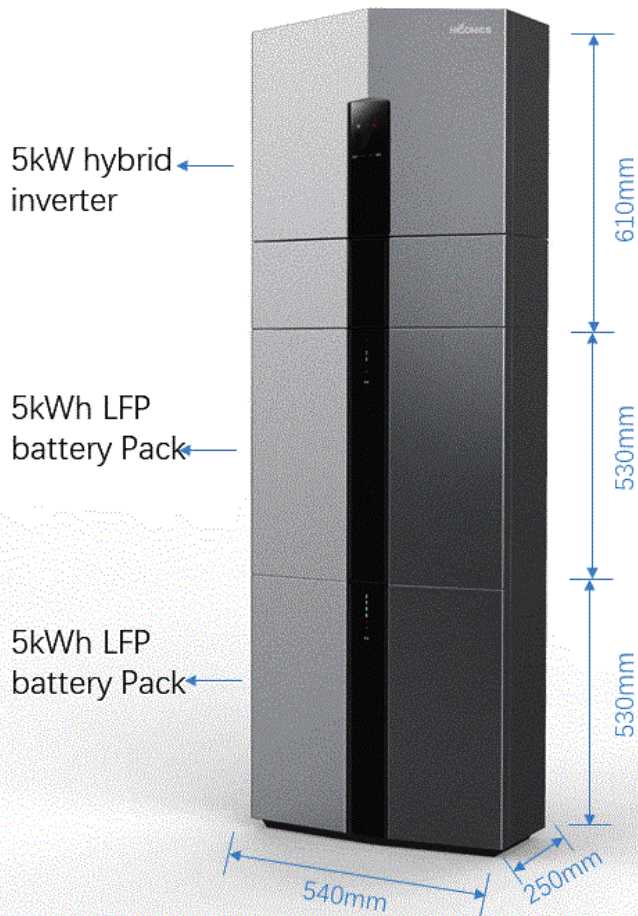
Dimensions (W x H x D)	540*610*250mm
Weight	36kg
Operating Temperature Range	-25°C~ +60°C
Noise (dB)	<25
Cooling Type	Natural Convection
Max. Operating Altitude	2000m
Operating Humidity	0~95% (No Condensation)
IP Class	IP65
Topology	Battery Isolation
Communication	RS485/CAN2.0/WIFI/4G
Display	LCD/APP

Certification & Standard IEC/EN 62109-1&2;IEC/EN61000-6-1;IEC/EN61000-6-2;EN61000-6-3; IEC/EN61000-6-4;IEC/EN61000-3-11; EN61000-3-12;IEC60529;IEC 60068;IEC61683;IEC62116;IEC61727;EN50549-1; AS 4777.2;NRS 097;VDE-AR-N-4105;CEI0-21;G98;G99;C10/C11

*1. Nominal AC output power is 4999W for Australia and 4600W for Germany and South Africa.
*2. Maximum output current is 21.7A for Australia and 20A for Germany and South Africa.



Dimensions (mm)



Model Selection Table

Inverter and Battery Size	Model
5kWh AC output Inverter with 5.12kWh Battery Storage	MIENERGY MODULAR-5.00kW/5.12kWh
5kWh AC output Inverter with 10.24kWh Battery Storage	MIENERGY MODULAR-5.00kW/10.24kWh
5kWh AC output Inverter with 15.36kWh Battery Storage	MIENERGY MODULAR-5.00kW/15.36kWh
5kWh AC output Inverter with 20.48kWh Battery Storage	MIENERGY MODULAR-5.00kW/20.48kWh

