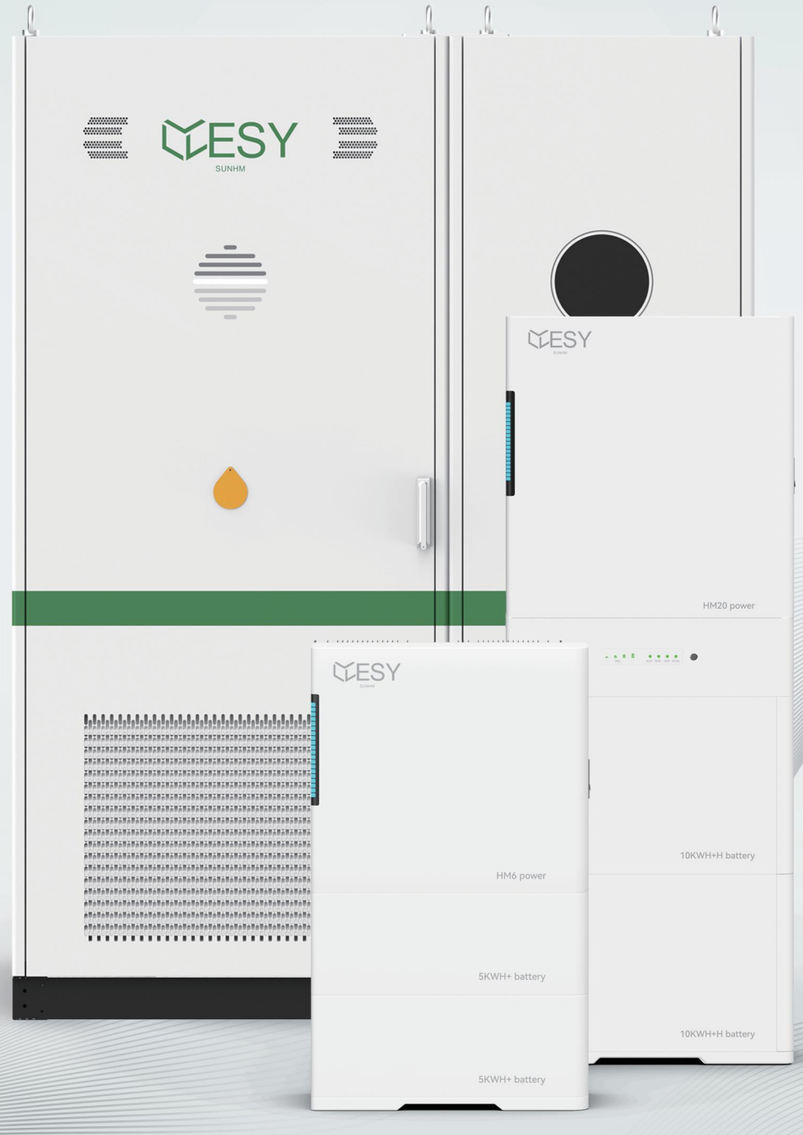
ESY SUNHOME



ESY
SUNHM

ESYsunhome CO.,LTD

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ESYsunhome CO.,LTD

Vision:

Make clean energy available to every family.

Mission:

To provide customers with safe and high-quality renewable energy products.

Core Values:

- Unity and hard work;
- Pragmatic and far-reaching;
- Innovative research and development;
- Scientific and intelligent manufacturing;
- Creating value for customers;
- Creating opportunities;
- Contributing to society.

ABOUT ESY SUNHOME

ESY SUNHOME is a premium provider of advanced energy solutions for residential and business, specializing in energy storage systems, battery products, and Virtual Power Plants (VPP). With over two decades of expertise in Battery Management System (BMS) solutions and a top-tier research and development team, the company is dedicated to driving innovation for a sustainable future. Supported by a comprehensive global sales and service network, ESY SUNHOME is the partner of choice for customers seeking to advance their transition to a green energy future.

PARTNERS

CATL, EVE, Ganfeng Lithium, Dell, Toshiba, Huawei, Texas Instruments.

ESY SUNHOME BUSINESS ENERGY SOLUTIONS

ESY SUNHOME is an innovation-driven provider of comprehensive new energy solutions, specializing in photovoltaic systems, energy storage, charging stations, and smart energy systems. Supported by outstanding manufacturing and strong R&D capabilities, the company has built a full-spectrum technological ecosystem covering IoT, power supply, batteries, and charging infrastructure.

With 24/7 localized service, ESY SUNHOME meets diverse residential, commercial, and industrial needs while offering advanced solutions like Virtual Power Plants (VPP) and grid safety management, driving efficient green energy use and supporting the global energy transition.

Prime Solutions

- Adaptable to diverse scenarios with its modular design.
- Effortlessly stackable for swift installation and immediate deployment.
- Simplified wiring for cost and labor reduction.

Streamlined Operations and Maintenance

- IP66-rated protection for worry-free outdoor applications.
- Comprehensive safeguards for system and battery, maintaining functionality in extreme cold.
- Remote, one-click full-system diagnosis for straightforward issue resolution.

INNOVATIVE TECHNOLOGIES

Smart Innovation
Modular Design; Flexible Integration; Stackable Modules without Wiring; Smart Capability Low-Temperature Heating Function; IP66 Waterproofing.

IEEE2030.5
IEEE 2030.5 cloud integration enables precise control, ensuring stable and efficient operation of energy storage systems.

AI Technology
Leverages big data to optimize energy efficiency in real time.

VPP system
Proprietary technology and VPP platform for optimized grid services and energy distribution.

Bidirectional High-Speed Charging Station

A charger that provides fast charging and supports energy transfer from the vehicle to the grid (V2G) and home (V2H). It features high-power output and smart management, allowing the vehicle to act as a mobile battery, supplying power to homes or the grid when not in use.

Modular Power Station

Utilizes HM series storage systems in parallel to boost power and capacity. It ensures efficient installation, low maintenance costs, and is ideal for large buildings like malls, supermarkets, and office tower, providing flexible and scalable power solutions.

Large-Scale Power Station

Provides instant power support by quickly responding to grid frequency changes, stores energy during low demand, and releases it during peak times. This balances supply and demand, enhances system efficiency, and achieves effective, eco-friendly energy management.

HM5/HM6 ALL-IN-ONE RESIDENTIAL ENERGY STORAGE SYSTEM (SINGLE PHASE)

- IP66-rated Enclosures
- 24/7 Monitoring System
- Modular Installation
- Scalable System Capacity
- Temperature Resistance
- Artificial Intelligence (AI) Operation
- Ease of Maintenance
- Energy Management Optimization

Model	HM5/HM6 -05	HM5/HM6 -10	HM5/HM6 -15	HM5/HM6 -20	HM5/HM6 -25	HM5/HM6 -30
Battery Quantity	1	2	3	4	5	6
Max. Output Power	5/6 kW	5/6 kW	5/6 kW	5/6 kW	5/6 kW	5/6 kW
Battery Capacity	5.12 kWh	10.24 kWh	15.36 kWh	20.48 kWh	25.60 kWh	30.72 kWh
Dimensions (LxWxH)	600x305x778 mm	600x305x998 mm	600x305x1218 mm	600x305x1438 mm	600x305x1658 mm	600x305x1878 mm
Weight	93 kg	143 kg	193 kg	243 kg	293 kg	343 kg

Parameters	HM5	HM6
Battery Type	IFpP	IFpP
Cycle Life	≥6000 Times 25 ℃	≥6000 Times 25 ℃
Max. Efficiency	97.8%	97.8%
MPPT Efficiency	99.9%	99.9%
Mounting	Modular Stacking/Ground	Modular Stacking/Ground
Communication	WiFi(2.412-2.484GHz)/USB/RS485/CAN	WiFi(2.412-2.484GHz)/USB/RS485/CAN
Application Software Support System	iOS/Android/Web	iOS/Android/Web
Cooling Method	Natural Cooling	Natural Cooling
Operating Temperature Range	-25 ℃~60 ℃	-25 ℃~60 ℃
Humidity	0~100% Relative Humidity	0~100% Relative Humidity
Noise Level at 1m	≤25 dB	≤25 dB
Protection Rating	IP66	IP66
Warranty	10 Years	10 Years

PV Input	HM5	HM6
Max. Input Power	8000 W	8000 W
Rated Input Voltage	360 Vd.c.	360 Vd.c.
Max. Input Voltage	550 Vd.c.	550 Vd.c.
Starting Voltage	150 Vd.c.	150 Vd.c.
MPPT Voltage Range	100 Vd.c.~540 Vd.c.	100 Vd.c.~540 Vd.c.
PV Max. Input Current	15 Ad.c./15 Ad.c.	15 Ad.c./15 Ad.c.
Max. Short Circuit Current	20 Ad.c./20 Ad.c.	20 Ad.c./20 Ad.c.

Backup	HM5	HM6
Rated Output Power	5000 W	6000 W
Max. Apparent Output Power	5000 VA	6000 VA
Rated Output Voltage	230 Va.c. L/N/PE	230 Va.c. L/N/PE
Rated Output Current	21.74 Aa.c.	26.09 Aa.c.
Rated Frequency	50 Hz	50 Hz
Waveform	Sine Wave	Sine Wave

Battery	HM5	HM6
Rated Voltage	51.2 Vd.c.	51.2 Vd.c.
Voltage Range	40.8 Vd.c.~57.6 Vd.c.	40.8 Vd.c.~57.6 Vd.c.
Rated Charge Current	100 Ad.c.	100 Ad.c.
Rated Discharge Current	120 Ad.c.	120 Ad.c.

AC Grid	HM5	HM6
Rated Input Power	5000 W	6000 W
Rated Output Power	5000 W	6000 W
Max. Output Apparent Power	5000 VA	6000 VA
Rated Voltage	230 Va.c. L/N/PE	230 Va.c. L/N/PE
Rated Current	21.74 Aa.c.	26.09 Aa.c.
Rated Frequency	50 Hz	50 Hz
Power Factor Range	0.8 leading~0.8 lagging	0.8 leading~0.8 lagging

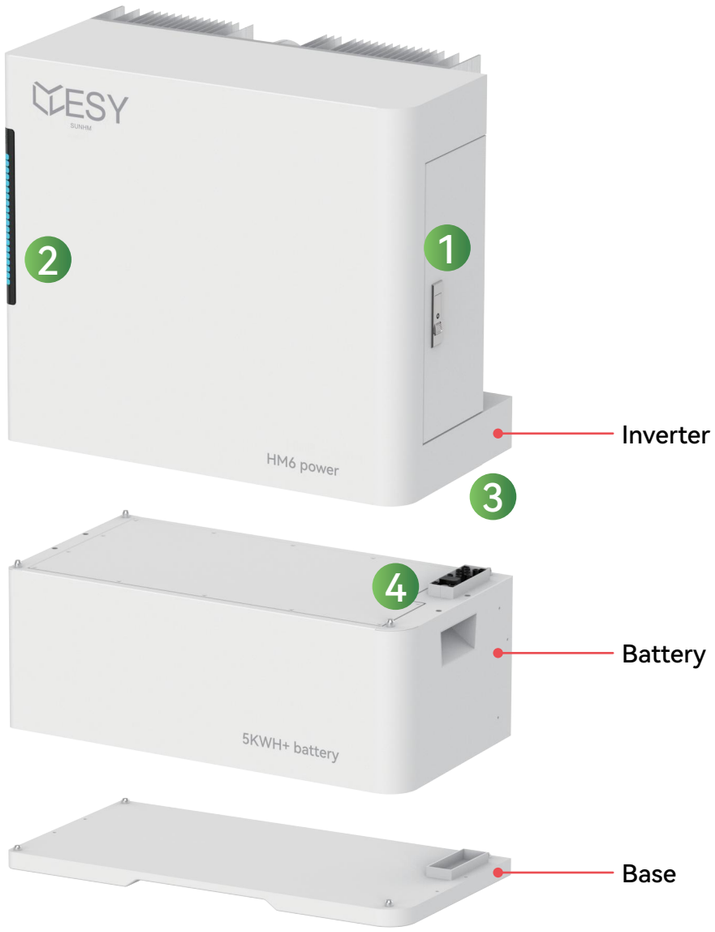
Protection	HM5	HM6
Anti-islanding Protection	Yes	Yes
PV Reverse Polarity Protection	Yes	Yes
Insulation Resistance Detection	Yes	Yes
Residual Current Detection	Yes	Yes
Output Overcurrent Protection	Yes	Yes
Output Short Circuit Protection	Yes	Yes
Overvoltage Category	II (for PV/Battery) III (for AC Grid Mains)	II (for PV/Battery) III (for AC Grid Mains)
Battery Reverse Polarity Protection	Yes	Yes

Applicable Standards

Grid Connection:
AUS: AS 4777.2；CEC； **DE:** DIN VDE V 0124-100:2020；VDE-AR-N 4105:2018； **AT:** OVE Directive R 25:2020；TOR Erzeuger Type A V1.2； **IT:** CEI 0-21；
UK: G99/1-8 typeA； **IE:** Distribution Code Version 8； **BE:** C10/11:2021； **CH:** NA/EEA-NE7-CH:2020； **ES:** NTS 631 V21 SEPE (type A); UNE 217001; UNE 217002；
PT: RfG + Portugal deviation
Safety:
Inverter: IEC 62109-1; IEC 62109-2； **Battery:** IEC 62619:2022; ISO 13849; IEC/EN 62040-1; VDE 2510-050:2017
EMC:
IEC 61000-6-1; IEC 61000-6-3

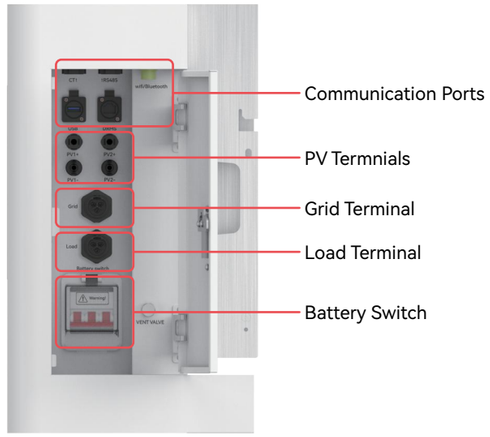
HM5/HM6

RESIDENTIAL ENERGY STORAGE SYSTEM (SINGLE PHASE) - COMPONENT OVERVIEW



HM5/6 Multiple Batteries Overview

1



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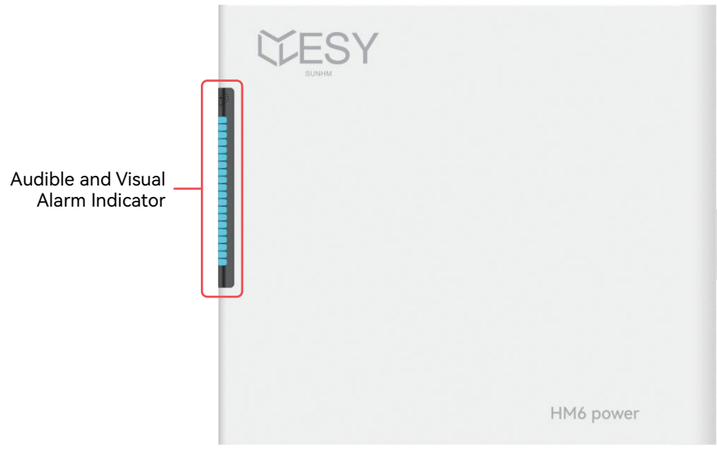

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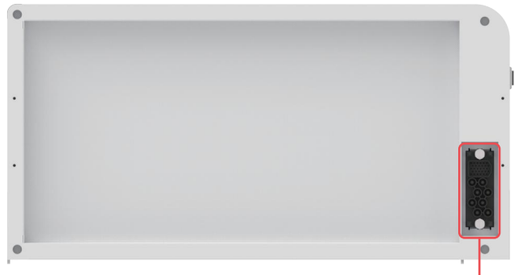

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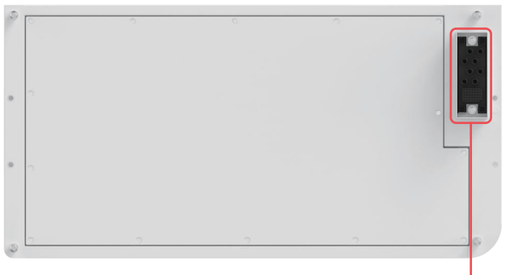


HM5-MAX/HM10/HM12 ALL-IN-ONE RESIDENTIAL ENERGY STORAGE SYSTEM (SINGLE PHASE)

- IP66-rated Enclosures
- 24/7 Monitoring System
- Modular Installation
- Scalable System Capacity
- Temperature Resistance
- Artificial Intelligence (AI) Operation
- Ease of Maintenance
- Energy Management Optimization

Model	HM5-MAX/HM10/HM12 -05	HM5-MAX/HM10/HM12 -10	HM5-MAX/HM10/HM12 -15	HM5-MAX/HM10/HM12 -20	HM5-MAX/HM10/HM12 -25	HM5-MAX/HM10/HM12 -30
Battery Quantity	1	2	3	4	5	6
Max. Output Power	5/10/12 kW	5/10/12 kW	5/10/12 kW	5/10/12 kW	5/10/12 kW	5/10/12 kW
Battery Capacity	5.12 kWh	10.24 kWh	15.36 kWh	20.48 kWh	25.60 kWh	30.72 kWh
Dimensions (LxWxH)	600x305x908 mm	600x305x1128 mm	600x305x1348 mm	600x305x1568 mm	600x305x1788 mm	600x305x2008 mm
Weight	113 kg	163 kg	213 kg	263 kg	313 kg	363 kg

Parameters	HM5-MAX	HM10	HM12
Battery Type	IFpP	IFpP	IFpP
Cycle Life	≥6000 Times 25 ℃	≥6000 Times 25 ℃	≥6000 Times 25 ℃
Max. Efficiency	97.8%	97.8%	97.8%
MPPT Efficiency	99.9%	99.9%	99.9%
Mounting	Modular Stacking/Ground	Modular Stacking/Ground	Modular Stacking/Ground
Communication	WiFi(2.412~2.484GHz)/USB/RS485/CAN	WiFi(2.412~2.484GHz)/USB/RS485/CAN	WiFi(2.412~2.484GHz)/USB/RS485/CAN
Application Software Support System	iOS/Android/Web	iOS/Android/Web	iOS/Android/Web
Cooling Method	Intelligent Air Cooling	Intelligent Air Cooling	Intelligent Air Cooling
Operating Temperature Range	-25 ℃~60 ℃	-25 ℃~60 ℃	-25 ℃~60 ℃
Humidity	0~100% Relative Humidity	0~100% Relative Humidity	0~100% Relative Humidity
Noise Level at 1m	≤55 dB	≤55 dB	≤55 dB
Protection Rating	IP66	IP66	IP66
Warranty	10 Years	10 Years	10 Years

PV Input	HM5-MAX	HM10	HM12
Max. Input Power	18 kW	18 kW	18 kW
Rated Input Voltage	360 Vd.c.	360 Vd.c.	360 Vd.c.
Max. Input Voltage	550 Vd.c.	550 Vd.c.	550 Vd.c.
Starting Voltage	150 Vd.c.	150 Vd.c.	150 Vd.c.
MPPT Voltage Range	100 Vd.c.~540 Vd.c.	100 Vd.c.~540 Vd.c.	100 Vd.c.~540 Vd.c.
PV Max. Input Current	30 Ad.c./30 Ad.c.	30 Ad.c./30 Ad.c.	30 Ad.c./30 Ad.c.
Max. Short Circuit Current	40 Ad.c./40 Ad.c.	40 Ad.c./40 Ad.c.	40 Ad.c./40 Ad.c.

Backup	HM5-MAX	HM10	HM12
Rated Output Power	10 kW	10 kW	12 kW
Max. Apparent Output Power	10 kVA	10 kVA	12 kVA
Rated Output Voltage	230 Va.c. L/N/PE	230 Va.c. L/N/PE	230 Va.c. L/N/PE
Rated Output Current	43.5 Aa.c.	43.5 Aa.c.	52.2 Aa.c.
Rated Frequency	50 Hz	50 Hz	50 Hz
Waveform	Sine Wave	Sine Wave	Sine Wave

Battery	HM5-MAX	HM10	HM12
Rated Voltage	51.2 Vd.c.	51.2 Vd.c.	51.2 Vd.c.
Voltage Range	42 Vd.c.~57.6 Vd.c.	42 Vd.c.~57.6 Vd.c.	42 Vd.c.~57.6 Vd.c.
Rated Charge Current	196 Ad.c.	196 Ad.c.	196 Ad.c.
Rated Discharge Current	196 Ad.c.	196 Ad.c.	196 Ad.c.

AC Grid	HM5-MAX	HM10	HM12
Rated Input Power	9.9 kW	9.9 kW	12 kW
Rated Output Power	5000 W	9.9 kW	12 kW
Max. Output Apparent Power	5000 VA	9.9 kVA	12 kVA
Rated Voltage	230 Va.c. L/N/PE	230 Va.c. L/N/PE	230 Va.c. L/N/PE
Rated Input/Output Current	43.4 Aa.c./21.7 Aa.c.	43.4 Aa.c./43.4 Aa.c.	52.2 Aa.c./52.2 Aa.c.
Rated Frequency	50 Hz	50 Hz	50 Hz
Power Factor Range	0.8 leading~0.8 lagging	0.8 leading~0.8 lagging	0.8 leading~0.8 lagging

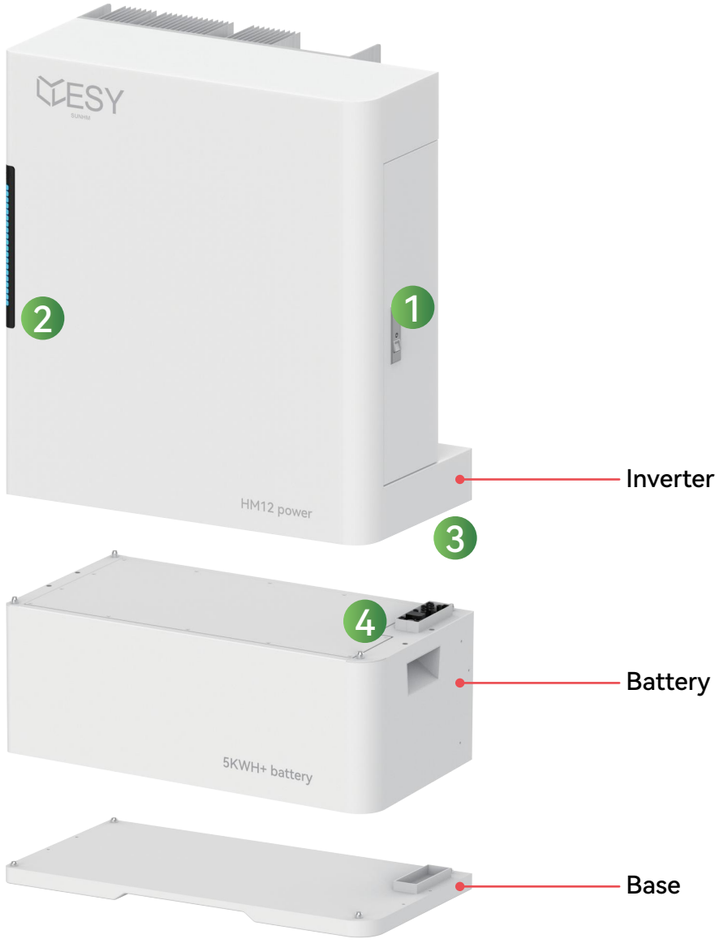
Protection	HM5-MAX	HM10	HM12
Anti-islanding Protection	Yes	Yes	Yes
PV Reverse Polarity Protection	Yes	Yes	Yes
Insulation Resistance Detection	Yes	Yes	Yes
Residual Current Detection	Yes	Yes	Yes
Output Overcurrent Protection	Yes	Yes	Yes
Output Short Circuit Protection	Yes	Yes	Yes
Overvoltage Category	II (for PV/Battery) III (for AC Grid Mains)	II (for PV/Battery) III (for AC Grid Mains)	II (for PV/Battery) III (for AC Grid Mains)
Battery Reverse Polarity Protection	Yes	Yes	Yes

Applicable Standards

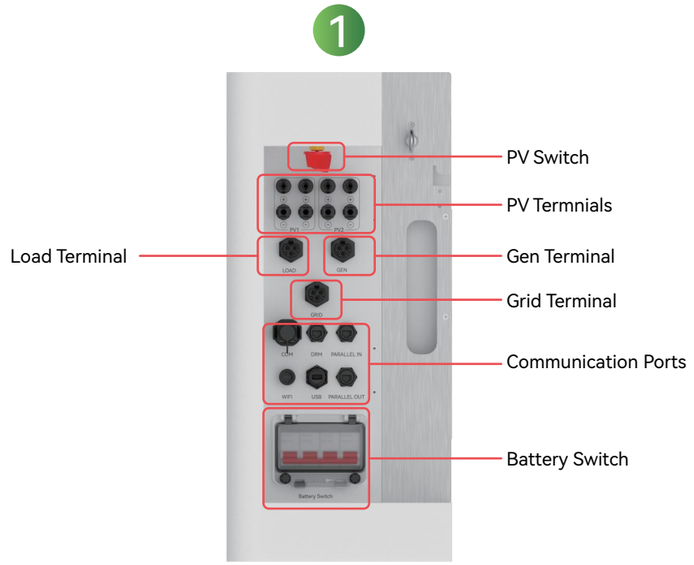
Grid Connection:
AUS: AS 4777.2；CEC
Safety:
Inverter: IEC 62109-1; IEC 62109-2； **Battery:** IEC 62619:2022; ISO 13849; IEC/EN 62040-1; VDE 2510-050:2017
EMC:
IEC 61000-6-1; IEC 61000-6-3

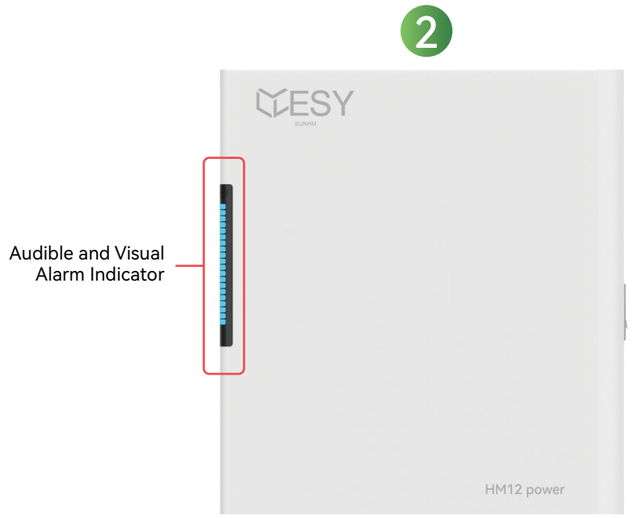
HM5-MAX/HM10/HM12

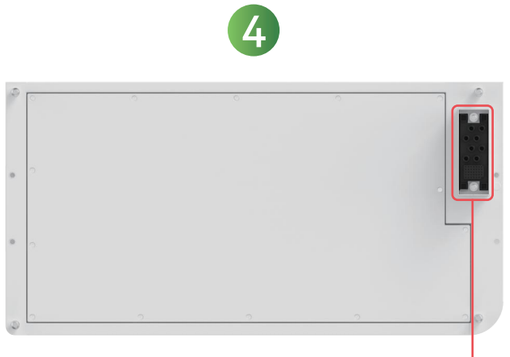
RESIDENTIAL ENERGY STORAGE SYSTEM (SINGLE PHASE) - COMPONENT OVERVIEW



HM5-MAX/HM10/HM12 Multiple Batteries Overview







HM10-H/HM15/HM20 ALL-IN-ONE RESIDENTIAL ENERGY STORAGE SYSTEM (3-PHASE)

- Seamless Emergency Power
- Real-Time Monitoring
- Sustainable & Cost-Saving
- Expandable, Modular Design
- Weather-Resilient Design
- AI-Driven Performance
- Ease of Maintenance
- Energy Management Optimization

Model	HM10-H/HM15/HM20 -20	HM10-H/HM15/HM20 -30	HM10-H/HM15/HM20 -60	HM10-H/HM15/HM20 -90
Battery Quantity	2	3	6	9
Max. Output Power	10/15/20 kW	10/15/20 kW	10/15/20 kW	10/15/20 kW
Battery Capacity	21.0 kWh	31.5 kWh	63.0 kWh	94.5 kWh
Dimensions (LxWxH)	660x270x1725 mm	660x270x2131 mm	660x270x2131 mm +(660x270x1448 mm)x1	660x270x2131 mm +(660x270x1448 mm)x2
Weight	262.5 kg/266.6 kg/266.6 kg	358.75 kg/376.35 kg/376.35 kg	670.7 kg/674.8 kg/674.8 kg	980.25 kg/984.35 kg/984.35 kg

Parameters	HM10-H	HM15	HM20
Battery Type	IFpP	IFpP	IFpP
Cycle Life	≥6000 Times 25 ℃	≥6000 Times 25 ℃	≥6000 Times 25 ℃
Conversion Efficiency	98.20%	98.20%	98.20%
MPPT Efficiency	99.90%	99.90%	99.90%
Mounting	Modular Stacking/Ground	Modular Stacking/Ground	Modular Stacking/Ground
Communication	WiFi(2.412-2.484GHz)/USB/RS485/CAN	WiFi(2.412-2.484GHz)/USB/RS485/CAN	WiFi(2.412-2.484GHz)/USB/RS485/CAN
Application Software Support System	iOS/Android/Web	iOS/Android/Web	iOS/Android/Web
Cooling Method	Natural Cooling	Intelligent Air Cooling	Intelligent Air Cooling
Operating Temperature Range	-25 ℃~60 ℃	-25 ℃~60 ℃	-25 ℃~60 ℃
Humidity	0~100% Relative Humidity	0~100% Relative Humidity	0~100% Relative Humidity
Noise Level at 1m	≤45 dB	≤45 dB	≤45 dB
Protection Rating	IP66	IP66	IP66
Warranty	10 Years	10 Years	10 Years

PV Input	HM10-H	HM15	HM20
Max. Input Power	20 kW	30 kW	30 kW
Rated Input Voltage	650 Vd.c.	650 Vd.c.	650 Vd.c.
Max. Input Voltage	1000 Vd.c.	1000 Vd.c.	1000 Vd.c.
MPPT Voltage Range	160 Vd.c.~950 Vd.c.	160 Vd.c.~950 Vd.c.	160 Vd.c.~950 Vd.c.
PV Max. Input Current	16 Ad.c./16 Ad.c.	16 Ad.c./32 Ad.c.	16 Ad.c./32 Ad.c.
Max. Short Circuit Current	24 Ad.c./24 Ad.c.	24 Ad.c./48 Ad.c.	24 Ad.c./48 Ad.c.
MPPT	2	2	2

AC Output (Backup)	HM10-H	HM15	HM20
Rated Output Power	10 kW	15 kW	20 kW
Max. Output Apparent Power	10 kVA	15 kVA	20 kVA
Rated Output Voltage	400 Va.c. 3L/N/PE	400 Va.c. 3L/N/PE	400 Va.c. 3L/N/PE
Rated Output Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Rated Output Current	14.4 Aa.c.	21.7 Aa.c.	28.9 Aa.c.
Max. Output Current	14.4 Aa.c.	21.7 Aa.c.	28.9 Aa.c.
Current Harmonics	≤3% (Linear Load)	≤3% (Linear Load)	≤3% (Linear Load)
Switching Time	≤10 ms	≤10 ms	≤10 ms

Battery	HM10-H	HM15	HM20
Rated Operating Voltage	450 Vd.c.	450 Vd.c.	450 Vd.c.
Voltage Range	380 Vd.c.~560 Vd.c.	380 Vd.c.~560 Vd.c.	380 Vd.c.~560 Vd.c.
Protection	BMS/Software/Hardware/Fuse	BMS/Software/Hardware/Fuse	BMS/Software/Hardware/Fuse

AC Input (Grid)	HM10-H	HM15	HM20
Max. Input Apparent Power	15 kVA	22.5 kVA	30 kVA
Grid Type	400 Va.c. 3L/N/PE	400 Va.c. 3L/N/PE	400 Va.c. 3L/N/PE
Max. Input Current	21.7 Aa.c.	32.6 Aa.c.	40.0 Aa.c.
Input Frequency Range	50/60 Hz	50/60 Hz	50/60 Hz

AC Output (Grid)	HM10-H	HM15	HM20
Rated Output Power	9.9 kW	15 kW	20 kW
Max. Output Apparent Power	11 kVA	16.5 kVA	22 kVA
Rated Output Voltage	400 Va.c. 3L/N/PE	400 Va.c. 3L/N/PE	400 Va.c. 3L/N/PE
Rated Output Current	14.3 Aa.c.	21.7 Aa.c.	29.0 Aa.c.
Max. Output Current	15.8 Aa.c.	23.9 Aa.c.	31.9 Aa.c.
Rated Output Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Current Harmonics	≤3% (@Rated Power)	≤3% (@Rated Power)	≤3% (@Rated Power)
Power Factor Range	0.8 leading~0.8 lagging	0.8 leading~0.8 lagging	0.8 leading~0.8 lagging

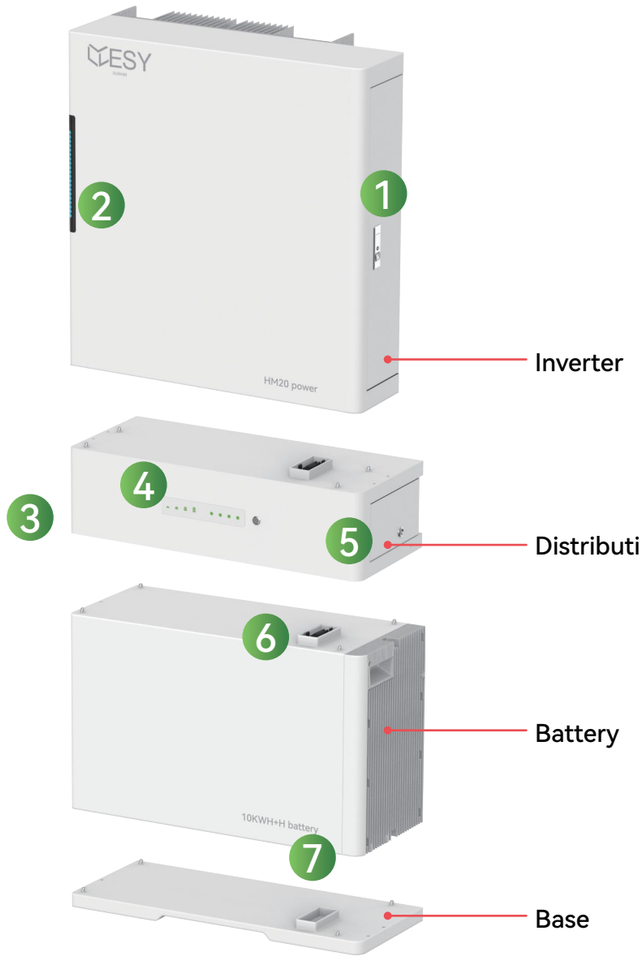
Protection	HM10-H	HM15	HM20
Anti-islanding Protection	Yes	Yes	Yes
PV Reverse Polarity Protection	Yes	Yes	Yes
Insulation Resistance Detection	Yes	Yes	Yes
Residual Current Detection	Yes	Yes	Yes
Output Overcurrent Protection	Yes	Yes	Yes
Output Short Circuit Protection	Yes	Yes	Yes
Battery Reverse Polarity Protection	Yes	Yes	Yes

Applicable Standards

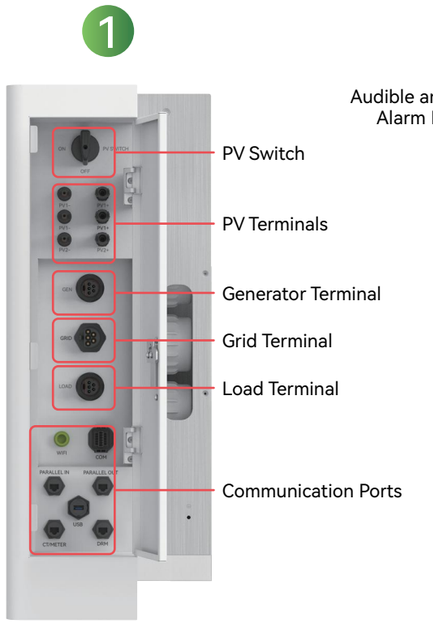
Grid Connection:
AUS: AS 4777.2；CEC； **DE:** DIN VDE V 0124-100:2020；VDE-AR-N 4105:2018； **AT:** OVE Directive R 25:2020；TOR Erzeuger Type A V1.2； **IT:** CEI 0-21； **BE:** C10/11:2021
Safety:
Inverter: IEC 62109-1; IEC 62109-2； **Battery:** IEC 62619:2022; ISO 13849; IEC/EN 62040-1; VDE 2510-050:2017
EMC:
IEC 61000-6-1; IEC 61000-6-3

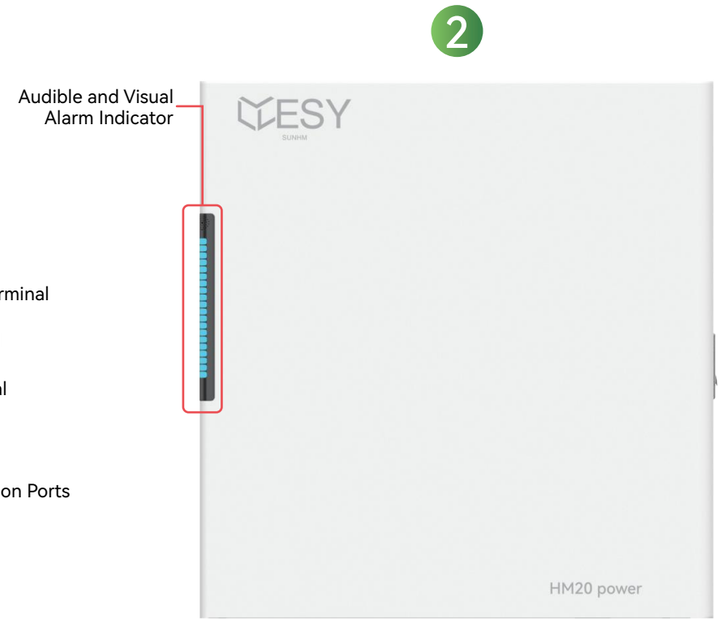
HM10-H/HM15/HM20

RESIDENTIAL ENERGY STORAGE SYSTEM (3-PHASE) - COMPONENT OVERVIEW



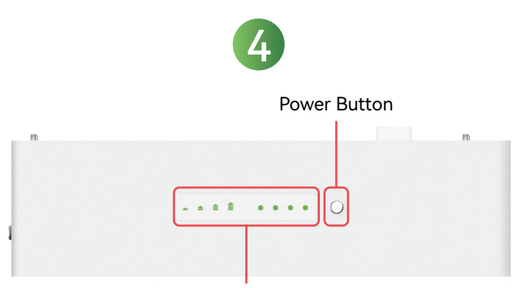
HM10-H/HM15/HM20 Multiple Batteries Overview



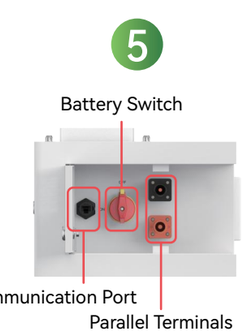


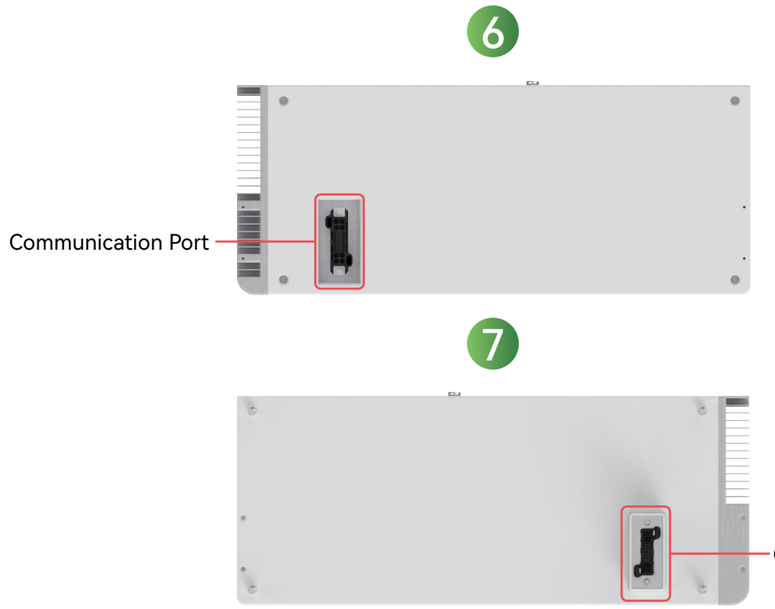
3 Communication Ports

4 Power Button



5 Battery Switch





ES130-261 COMMERCIAL AND INDUSTRIAL PHOTOVOLTAIC ENERGY STORAGE SYSTEM
ES130-261 COMMERCIAL AND INDUSTRIAL ENERGY STORAGE SYSTEM

- Safe and Reliable Construction
- IP54 Waterproof Protection
- 24/7 Monitoring System
- Integrated All-in-One System with Parallel Support
- Advanced Thermal Management System
- AI-Driven Intelligence for Optimal Performance

Model	ES130-261 Commercial and Industrial Photovoltaic Energy Storage System	ES130-261 Commercial and Industrial Energy Storage System
Rated Power	130 kW	130 kW
Rated Capacity	261 kWh	261 kWh
Rated Charge/Discharge Power	130 kW	130 kW
Dimensions (Width * Length * Height)	1800×2250×1350mm,Battery Cabinet 1000×2250×1350mm, Power Distribution Cabinet 800×2250×1350mm	1000×2250×1350mm
Weight	≤3 T	≤2 T
Protection Level	Battery Cabinet IP54/Power Distribution Cabinet IP55	IP54
Equipment Cooling Method	Air Cooling	Air Cooling
Battery Cooling Method	Liquid Cooling	Liquid Cooling
Grid Connection	Yes	Yes
PV Input	Yes	/

PV Input Parameters	ES130-261 Commercial and Industrial Photovoltaic Energy Storage System	ES130-261 Commercial and Industrial Energy Storage System
Maximum Input Power	260 kW	/
Maximum Input Voltage	950 Vd.c.	/
Rated Input Voltage	810 V	/
Start Voltage	220 Vd.c.	/
Minimum Operating Voltage	200 Vd.c.	/
MPPT Operating Voltage Range	200~950 Vd.c	/
MPPT Power	260 kW	/
Quantity of MPPT	6	/
Quantity of Strings per MPPT Channel	3	/
Maximum Current Per MPPT	52 A	/
Maximum Short Circuit Current Per MPPT	55 A	/

AC Parameters	
Wiring Configuration	3W+N+PE
Rated Output Power	130 kW
Maximum Output Apparent Power	143 kVA
Rated Input Power	260kW
Maximum Input power	260kW
Rated Output Voltage	380/400 Va.c.
Output Voltage Range	320~480 Va.c.
Rated Output Frequency	50 Hz/60 Hz
Grid Frequency Range	45 Hz~55 Hz/55 Hz~65 Hz
Rated Output Current	197/188.4 Aa.c. (@380/400 Va.c.)
Maximum Output Current	217/206 Aa.c. (@380/400 Va.c.)
Total Harmonic Distortion (THD)	<3% (at Rated Power)
Output Current DC Component	<0.5% In
Power Factor	>0.99 (at Rated Power)
Power Factor Adjustment Range	0.8 Leading ~ 0.8 Lagging

Battery Parameters	
Battery Type	IFpP
Battery Pack Configuration	1P260S
Quantity of Battery Packs	5
Rated Energy	261 kWh
Rated Power	135 kW
Maximum Output Power	146 kW
Rated Voltage	832 Vd.c.
Voltage Range	728~949 Vd.c.
Rated Current	160 Ad.c.
Maximum Charge Current	160 Ad.c.
Maximum Discharge Current	177 Ad.c.
Battery Charging Protocol	BMS Adaptive System
Cycle Life	≥6000 Times (25 ℃, 0.5 P)
Voltage and Current Accuracy	1%

Other Parameters	
Operating Temperature Range	-30 ℃-60 ℃ (>45 ℃ Derating)
Storage Temperature	-30 ℃-60 ℃
Operating Humidity Range	< 95% (No Condensation)
Operating Altitude	4000 m (>2000 m Derating)
Isolation Method	Transformerless
Topology	Non-isolated
Protection	Anti-Backflow, Anti-Islanding, Over-Temperature Protection, Over-Current Protection, Over-Voltage Protection, Short Circuit Protection, Battery Reverse Polarity Protection, Grid Phase Reversal Protection, Surge Protection, Ground Fault Detection, Smoke Monitoring, Temperature and Humidity Monitoring, Water Leak Detection, Lightning Protection Device
Wired/Wireless Communication	Ethernet (1 channel Modbus-TCP) RS485 (1 channel Modbus-RTU)/4G/WIFI
Communication Interface	CAN/RS485/USB
Communication Protocol	Modbus TCP/CAN/RS485
Energy Management	Yes
Remote Control	Yes (Northbound Communication)
Human-Machine Interface	LCD/LED/Web
Three-Phase Unbalanced Input	Yes
DI/DO Interface (Dry Contact)	Integrated (4 Groups)
Installation	Floor-Mounted
Cable Entry Method	Bottom Entry
Fire Protection	Smoke Detector Sound Alarm Cabinet-level gas fire suppression (perfluorohexanone)/ Aerosol + water fire protection
Warranty	5 Years (Extendable)

Efficiency	
DC Side Efficiency	0.985
Maximum Efficiency	0.99
European/MPPT Efficiency	98.2%/99.9%

Distribution Cabinet Parameters (Optional)			
Main Grid Input Power	260 kW	435 kW	875 kW
Main Grid Input Current	400 Aa.c. (@400 Va.c.)	630 Aa.c. (@400 Va.c.)	1260 Aa.c. (@400 Va.c.)
Rated Grid Output Power	130 kW	250 kW	500 kW
Maximum Grid Output Power	143 kVA	275 kVA	550 kVA
Rated Grid Output Current	188 Aa.c. (@400 Va.c.)	361 Aa.c. (@400 Va.c.)	722 Aa.c. (@400 Va.c.)
Maximum Grid Output Current	206 Aa.c. (@400 Va.c.)	397 Aa.c. (@400 Va.c.)	794 Aa.c. (@400 Va.c.)
Load Power	130 kW	250 kW	500 kW
Load Rated Current	188 Aa.c. (@400 Va.c.)	361 Aa.c. (@400 Va.c.)	722 Aa.c. (@400 Va.c.)
Generator Power	175 kW	435 kW	875 kW
Generator Rated Current	250 Aa.c.(@400 Va.c.)	630 Aa.c. (@400 Va.c.)	1260 Aa.c. (@400 Va.c.)

Certification Standards

Grid Connection Standards:
ES130-261 Commercial and Industrial Photovoltaic Energy Storage System:
IEC62109-1/2,IEC62619,IEC62477-1,UN38.3, UL9540A, UL1973,IEC62933-5-2, IEC61439-2 GB/T34120,GB/T34133,EN50549,IEC61000-6-1,2,3,4
ES130-261 Commercial and Industrial Energy Storage System:
VDE 0126, EN50549, DIN VDE V 0124-100:2020, VDE-AR-N 4105:2018,PPDS,CEI 0-21,NC RFG+PTPiREE,NRS 097-2-1
Safety Stardard:
System: IEC/EN 62109-1/-2, AS62109,IEC 62477； **Battery:** IEC/EN 62619 2022,IEC/EN 63056,ISO 13849,IEC/EN 62040-1,IEC/EN 60730-1
EMC: System: EN61000-6-1 EN61000-6-3； **Battery:** EN61000-6-1/-2/-3/-4
Transportation: UN38.3 MSDS

System Composition: 520 kW/1044 kWh Photovoltaic/Energy Storage System

System Composition: 130 kW/1044 kWh Photovoltaic/Energy Storage System

Company Layout

AUSTRALIA
SYDNEY

Australia Office

GERMANY
MUNICH

Germany Office

ITALY
GENOA

Italy Office

USA
LOS ANGELES

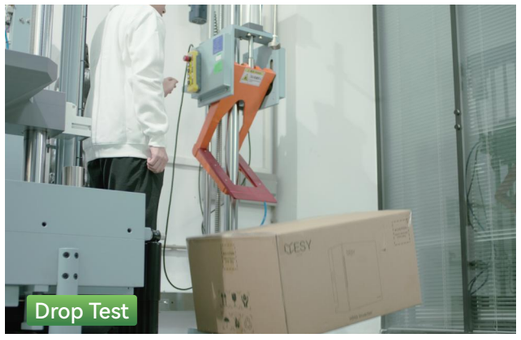
USA Office

Advanced Production Management

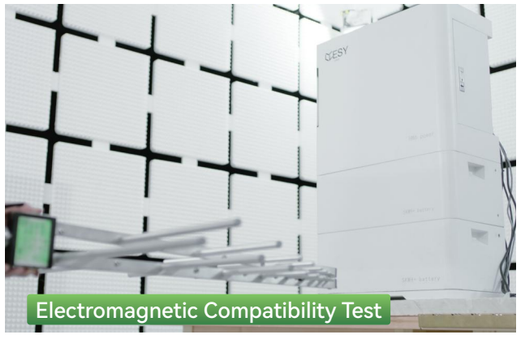
MES

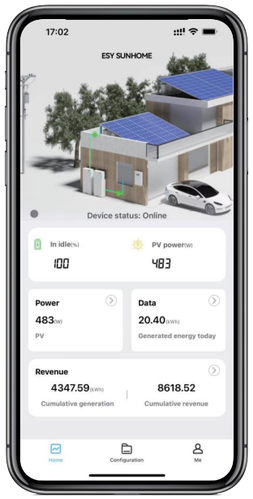
ESY SUNHOME integrates ERP, MES, and WMES systems across its advanced production bases. These systems enable precise informatization in production, material traceability, and warehousing management. They ensure quality and efficiency by monitoring, tracking, and controlling the entire manufacturing process, from raw materials to finished products. This comprehensive approach guarantees superior standards and optimal performance throughout ESY SUNHOME's operations.

Quality First



At ESY SUNHOME, our commitment to customer satisfaction drives us to deliver top-tier products and build enduring partnerships. Our stringent quality control processes ensure every product meets the highest performance and reliability standards. Each product undergoes rigorous tests for aging, tallying, waterproofing, radiation, and more. Quality control is embedded throughout our production process, ensuring safety and excellence in every product.

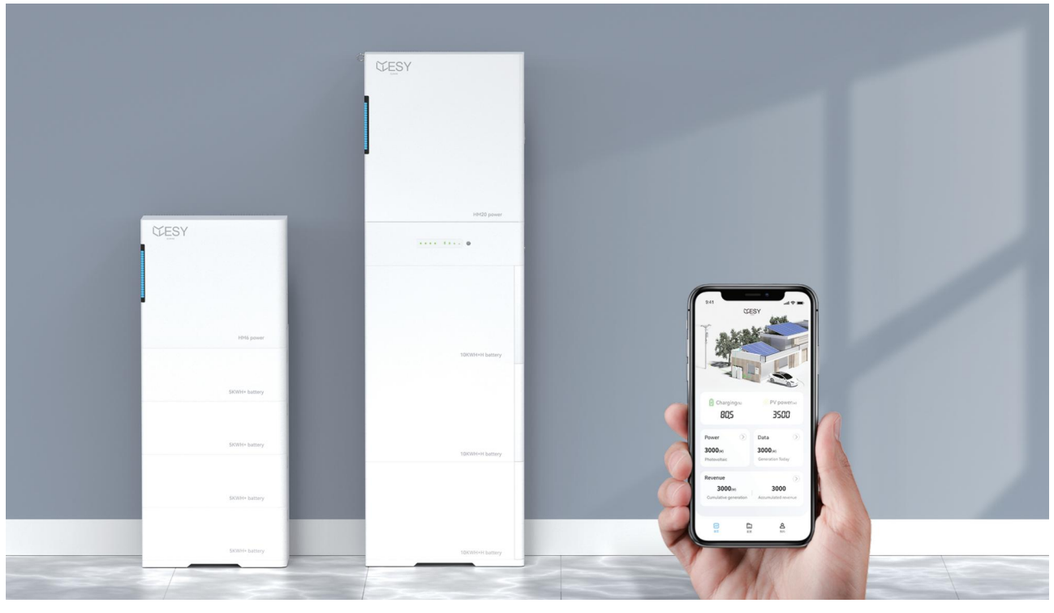




ESY SUNHOME APP

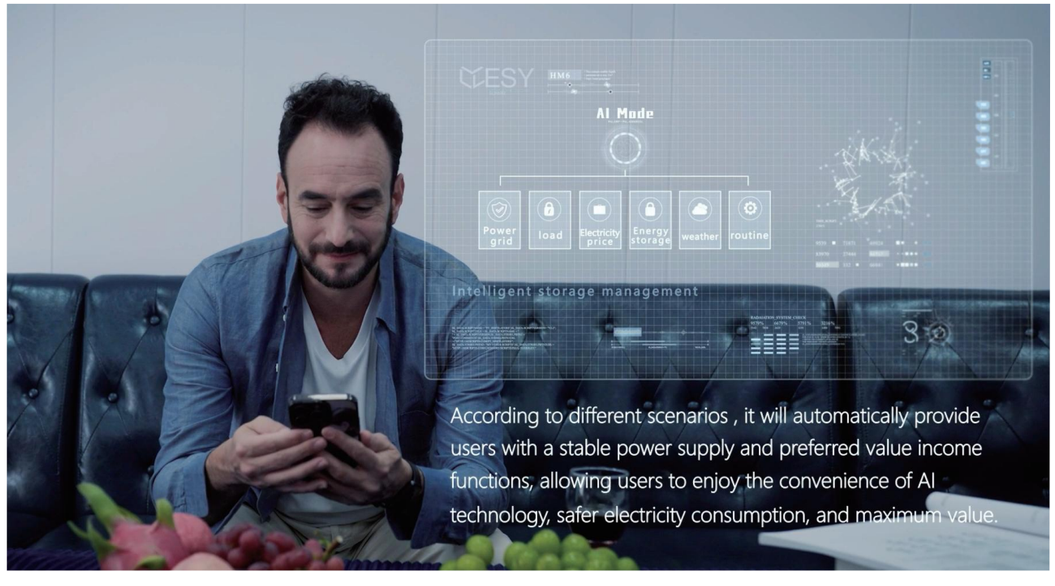
The ESY SUNHOME APP is a comprehensive cloud-based energy storage platform our IoT R&D team meticulously developed. Our commitment to excellence stems from our goal to provide secure, intelligent energy storage solutions for various storage products, ensuring user-friendly simplicity, operational convenience, and enhanced quality of life.

ESYSUNHOME App and AI Intelligence



The ESY SUNHOME APP provides advanced features for comprehensive control and monitoring of energy storage systems. Unlike traditional dashboards, it offers a seamless interface for real-time dynamic analysis, ensuring effortless operation. Intelligent charts track power generation and revenue, optimizing financial gains through real-time monitoring of electricity purchase and sale data. The APP also includes a proactive safety warning system that promptly alerts service providers in the event of any anomalies, enabling swift maintenance.

ESY SUNHOME extensively leverages advanced intelligent technology in managing energy storage products. We implement rapid deployment and on-demand equipment expansion based on our proprietary IoT technology and cloud-native edge computing architecture, ensuring flexible, stable, and reliable system responses.



All products under the brand are designed to support AI functionality. This feature, combined with advanced big data analytics, enables the optimization of real-time energy usage strategies. By analyzing factors such as dynamic electricity prices and photovoltaic power generation, energy efficiency is maximized. User data on electricity usage habits and lifestyle is collected in strict compliance with relevant laws and regulations, allowing for the delivery of customized operation modes and lifestyle recommendations. This approach not only enhances the quality of life but also improves energy utilization efficiency.

Case Sharing

Hotel

Australia (Small Business)

Dairy Farm

Australia (Small Business)

Residential Installation

Australia

Installation in Italy

Installation in Italy

Installation in Germany

Installation in Germany

Installation in Austria

Large-Scale Power Station

Installation in Antarctica

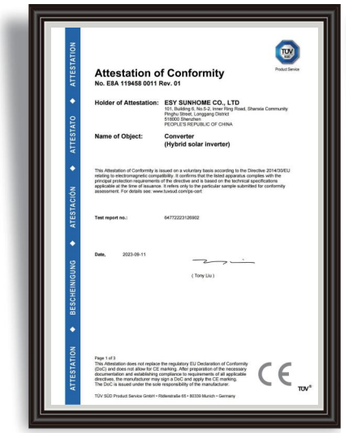
All scenarios
From residential
to commercial

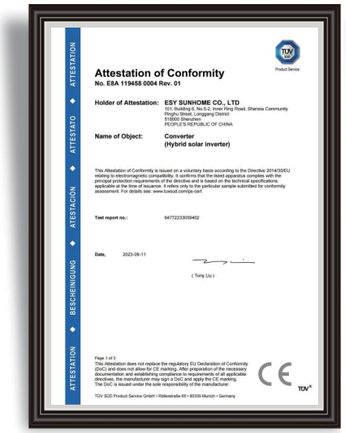
All Gridwork
From on-grid
to off-grid

ONE FITS ALL

The HM series features a modular design, offering exceptional flexibility and adaptability across all product configurations. With easy stacking and quick installation, the system requires no wiring or debugging, allowing for immediate use. Starting from 5 kWh for the single-phase systems and 10 kWh for the three-phase systems, the HM series provides precise capacity matching for a wide range of residential, commercial, and industrial applications. The products are suitable for all scenarios, from small-scale installations to large-scale power station projects. They support all gridworks and are designed to operate efficiently in all locations, meeting the demands of diverse environments and requirements.

Safety Stardard, EMC, Grid Connection Standards


Attestation of Conformity
No. EBA 119458 0011 Rev. 01
Holder of Attestation: ESY SUNHOME CO., LTD
Name of Object: Converter (Hybrid solar inverter)


Attestation of Conformity
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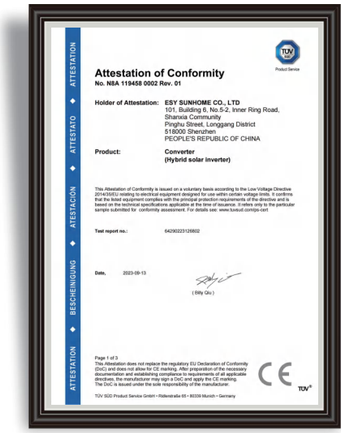
Attestation of Conformity
No. NBA 119458 0002 Rev. 01
Holder of Attestation: ESY SUNHOME CO., LTD
Product: Converter (Hybrid solar inverter)

Transportation


海运运输鉴别报告
Identification and Classification Report for Sea Transport of Goods


UN38.3 TEST REPORT


MATERIAL SAFETY DATA SHEET

United Nations Authorised Supplier

Global Footprint and Local Support Team