YIY

Inverter / MPPT Charger / AC Charger

Start Digital Power Supply



ZHEJIANG YIYEN HOLDING GROUP

ZHEJIANG YIYEN HOLDING GROUP is a high-tech enterprise specializing in the research, development, and intelligent manufacturing of power electronics technologies. With a strong focus on reducing electricity costs and improving energy efficiency, the Group provides core power equipment and integrated system solutions for the Energy Internet of Things. With electrochemical energy storage and energy efficiency management at the core of its business, YIYEN provides advanced energy solutions for industries including power, telecommunications, finance, education, healthcare, as well as large industrial and mining enterprises.

The Group has established R&D centers in Shenzhen, Nanjing, and Hangzhou, and has developed joint laboratories and research collaborations with leading universities, including Hohai University, Tsinghua University, Nanjing University of Aeronautics and Astronautics, and The Hong Kong Polytechnic University. Backed by strong R&D capabilities, YIYEN's products have obtained certifications including CE, UL, TÜV, and CQC, and are sold in more than 130 countries and regions worldwide.

Driven by continuous innovation, YIYEN is committed to delivering safe, efficient, intelligent, and sustainable energy solutions, helping customers optimize energy use, reduce operating costs, and build a more sustainable energy future.

300+
Staff

30000m²+
Plant Area

15 years +
Years Experience

100,000+ /year
Unit Shipments

ENTERPRISE ARCHITECTURE

Headquarters — **ZHEJIANG YIYEN HOLDING GROUP**

Intelligent Manufacturing	Lishui Yiyen Technology CO.,LTD	Factory
Globalization Channel	Wenzhou Yiyen Supply Chain Management CO.,LTD	Marketing/Sales/Sourcing Total Solutions and Technical Services
Investment Operation	Wenzhou Yiyen Energy Development CO.,LTD	EPC Service Provider for New Energy and Energy Storage Plants Contract Energy Management (Domestic Only)
R&D	Nanjing Branch Shenzhen Branch Hangzhou Branch	R&D Center

50+
R&D Staff

130+
Export Countries

100+
Intellectual Properties

BMS
12V~1500V
Voltage Class

Qualification Certification



ISO9001

QUALITY MANAGEMENT SYSTEM CERTIFICATE

Certificate No. : 20222Q21193R0S

We hereby certify that the organization:

LISHUI YIYEN TECHNOLOGY COMPANY LIMITED

Unified social credit code: 91331127MA2E079Y8T

is in conformity with Quality Management System Standard:

GB/T19001-2016 idt ISO9001:2015

The certificate is valid to the following products/service:

The assembling of Voltage Stabilizer、Inverter、Photovoltaic Equipment（MPPT Solar Charger、PCS）、 Uninterruptible Power Supply、Emergency Power Supply、Battery Pack Energy Storage System、Battery Management System（BMS）

Registration Address/Audit Address: No.77,Xiang Long Road,Lian Du Zone,Lishui City,Zhejiang Province, China.

Date of Issue: 26-09-2022
Date of Expiry: 25-09-2025
Date of Initial: 26-09-2022

Issued By

IAF CNAS 中国认可 国际互认 管理体系 MANAGEMENT SYSTEM CNAS C197-M

Zhejiang Quanpin Certification CO.,LTD. Certificates Appropriation

The audit of validity of the certificate, the certificate shall be at least once a year. The effectiveness of the Certificate is subject to QR Code in the lower left corner. Meanwhile, you can search the website of certification body: www.qpc.org.cn or search the CNCA website: www.cnca.gov.cn

ZHEJIANG QUANPIN CERTIFICATION CO.,LTD.

Room 603, Floor 6, Building 1, No.74, Puyan Road, Puyan Street, Binjiang District, Hangzhou City, Zhejiang Province, China 310053 WEB: Http://www.qpc.org.cn



ISO45001

OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM CERTIFICATE

Certificate No.：20222S20467R0S

We hereby certify that the organization:

LISHUI YIYEN TECHNOLOGY COMPANY LIMITED

Unified social credit code: 91331127MA2E079Y8T

is in conformity with Occupational Health Safety Management System Standard：

GB/T45001-2020 idt ISO45001:2018

The certificate is valid to the following products/service：

The assembly and related management activities of Voltage Stabilizer、Inverter、Photovoltaic Equipment（MPPT Solar Charger、PCS）、Uninterruptible Power Supply、Emergency Power Supply、Battery Pack Energy Storage System、Battery Management System（BMS）

Registration Address/Audit Address: No.77,Xiang Long Road,Lian Du Zone,Lishui City,Zhejiang Province, China.

Date of Issue: 26-09-2022
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Date of Initial: 26-09-2022

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ZHEJIANG QUANPIN CERTIFICATION CO.,LTD.

Room 603, Floor 6, Building 1, No.74, Puyan Road, Puyan Street, Binjiang District, Hangzhou City, Zhejiang Province, China 310053 WEB: Http://www.qpc.org.cn



ISO14001

ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATE

Certificate No.：20222E20495R0S

We hereby certify that the organization:

LISHUI YIYEN TECHNOLOGY COMPANY LIMITED

Unified social credit code: 91331127MA2E079Y8T

is in conformity with Environmental Management System Standard：

GB/T24001-2016 idt ISO14001:2015

The certificate is valid to the following products/service：

The assembly and related management activities of Voltage Stabilizer、Inverter、Photovoltaic Equipment（MPPT Solar Charger、PCS）、Uninterruptible Power Supply、Emergency Power Supply、Battery Pack Energy Storage System、Battery Management System（BMS）

Registration Address/Audit Address: No.77,Xiang Long Road,Lian Du Zone,Lishui City,Zhejiang Province, China.

Date of Issue: 26-09-2022
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Issued By

IAF CNAS 中国认可 国际互认 管理体系 MANAGEMENT SYSTEM CNAS C197-M

Zhejiang Quanpin Certification CO.,LTD. Certificates Appropriation

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ZHEJIANG QUANPIN CERTIFICATION CO.,LTD.

Room 603, Floor 6, Building 1, No.74, Puyan Road, Puyan Street, Binjiang District, Hangzhou City, Zhejiang Province, China 310053 WEB: Http://www.qpc.org.cn

CERTIFICATION

CERTIFICATION

Certificate of compliance

Low Voltage Directive 2014/35/EU

Certificate No.	BTEK230406E006AS
Certificate holder.	LISHUI YIYEN TECHNOLOGY COMPANY LIMITED
Address.	No.77,Xiang Long Road, Lian Du Zone, Lishui City, Zhejiang Province, China
Manufacturer.	Same Certificate holder
Address.	Same Certificate holder
Brand Name.	YIY
Product Designation:	Any-Power Combined Inverter & Charger
Model / Series Models:	APC 1048E, APC 1548E, APC 2048E, APC 3048E, APC 4048E, APC 5048E, APC 6048E
Test Report No(s).	BTEK230406E006AS
Test Standard(s):	EN IEC 62368-1: 2020 + A11: 2020

Conclusion:

The submitted products have been tested by us with the listed standards and found in compliance with the following European Directives:

The Low Voltage Directive 2014/35/EU

May 16, 2023 — Date of issue; Certification Mark; Safety Laboratory Manager

ShenZhen SANTEK Testing Co.,Ltd.
A5&A6 Building B1&B2 No.45 Gangbu Road,Bagang Community,
Shajing Street,Baoan District, Shenzhen,Guangdong,China 518104
Tel: +86(755-2304 4200 E-mail: Service@btek-lab.com Web: www.btek-lab.com

CERTIFICATION

VERIFICATION

Verification of compliance

Electromagnetic compatibility 2014/30/EU

Certificate No.	BTEK230406E007AEV
Certificate holder.	LISHUI YIYEN TECHNOLOGY COMPANY LIMITED
Address.	No.77, Xiang Long Road, Lian Du Zone, Lishui City, Zhejiang Province, China
Manufacturer.	Same Certificate holder
Address.	Same Certificate holder
Brand Name.	YIY
Product Designation:	High-Power Combined Inverter & Charger
Model / Series Models:	HP 1012E, HP 1512E, HP 2012E, HP 3012E, HP 4012E, HP 5012E, HP 6012E
Test Report No(s):	BTEK230406E007AE
Test Standard(s):	EN 55032:2015+A1:2020, EN 55035:2017+A11:2020, EN 61000-3-3:2013+A1:2019+A2:2021, EN IEC 61000-3-2:2019+A1:2021

Conclusion:

This attestation is issued in accordance with the Directive 2014/30/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment.

June 17, 2023 — Date of issue; Certification Mark; EMC Laboratory Manager

Shenzhen SANTEK Testing Co.,Ltd
A5&A6 Building B1&B2 No.45 Gangbu Road,Bagang Community,
Shajing Street,Baoan District, Shenzhen,Guangdong,China 518104
Tel: +(86)755-2304 4200 E-mail: Service@btek-lab.com Web: www.btek-lab.com

CERTIFICATION

VERIFICATION

Verification of compliance

Electromagnetic compatibility 2014/30/EU

Certificate No.	BTEK230406E017AEV
Certificate holder.	LISHUI YIYEN TECHNOLOGY COMPANY LIMITED
Address.	No.77, Xiang Long Road, Lian Du Zone, Lishui City, Zhejiang Province, China
Manufacturer.	Same Certificate holder
Address.	Same Certificate holder
Brand Name.	YIY
Product Designation:	High-Power Combined Inverter & Charger
Model / Series Models:	HP 1504E, HP 1804E
Test Report No(s):	BTEK230406E017AE
Test Standard(s):	EN 55032:2015+A1:2020, EN 55035:2017+A11:2020, EN 61000-3-3:2013+A2:2021, EN IEC 61000-3-2:2019+A1:2021

Conclusion:

This attestation is issued in accordance with the Directive 2014/30/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment.

June 17, 2023 — Date of issue; Certification Mark; EMC Laboratory Manager

Shenzhen SANTEK Testing Co.,Ltd
A5&A6 Building B1&B2 No.45 Gangbu Road,Bagang Community,
Shajing Street,Baoan District, Shenzhen,Guangdong,China 518104
Tel: +(86)755-2304 4200 E-mail: Service@btek-lab.com Web: www.btek-lab.com

CERTIFICATION

CERTIFICATION

Certificate of compliance

Low Voltage Directive 2014/35/EU

Certificate No.	BTEK230406015AS
Certificate holder.	LISHUI YIYEN TECHNOLOGY COMPANY LIMITED
Address.	No.77,Xiang Long Road, Lian Du Zone, Lishui City, Zhejiang Province, China
Manufacturer.	Same Certificate holder
Address.	Same Certificate holder
Brand Name.	YIY
Product Designation:	High-Power Combined Inverter & Charger
Model / Series Models:	HP 1024E, HP 1524E, HP 2024E, HP 3024E, HP 4024E, HP 5024E, HP 6024E
Test Report No(s):	BTEK230406015AS
Test Standard(s):	EN IEC 62368-1: 2020 + A11: 2020

Conclusion:

The submitted products have been tested by us with the listed standards and found in compliance with the following European Directives:

The Low Voltage Directive 2014/35/EU

May 16, 2023 — Date of issue; Certification Mark; Safety Laboratory Manager

ShenZhen SANTEK Testing Co.,Ltd.
A5&A6 Building B1&B2 No.45 Gangbu Road,Bagang Community,
Shajing Street,Baoan District, Shenzhen,Guangdong,China 518104
Tel: +(86)755-2304 4200 E-mail: Service@btek-lab.com Web: www.btek-lab.com

CERTIFICATION

CERTIFICATION

Certificate of compliance

Low Voltage Directive 2014/35/EU

Certificate No.	BTEK230406014AS
Certificate holder.	LISHUI YIYEN TECHNOLOGY COMPANY LIMITED
Address.	No.77,Xiang Long Road, Lian Du Zone, Lishui City, Zhejiang Province, China
Manufacturer.	Same Certificate holder
Address.	Same Certificate holder
Brand Name.	YIY
Product Designation:	High-Power Combined Inverter & Charger
Model / Series Models:	HP 8024E, HP 10024E, HP 12024E
Test Report No(s):	BTEK230406014AS
Test Standard(s):	EN IEC 62368-1: 2020 + A11: 2020

Conclusion:

The submitted products have been tested by us with the listed standards and found in compliance with the following European Directives:

The Low Voltage Directive 2014/35/EU

May 16, 2023 — Date of issue; Certification Mark; Safety Laboratory Manager

ShenZhen SANTEK Testing Co.,Ltd.
A5&A6 Building B1&B2 No.45 Gangbu Road,Bagang Community,
Shajing Street,Baoan District, Shenzhen,Guangdong,China 518104
Tel: +(86)755-2304 4200 E-mail: Service@btek-lab.com Web: www.btek-lab.com

CERTIFICATION

VERIFICATION

Verification of compliance

Electromagnetic compatibility 2014/30/EU

Certificate No.	BTEK230406033AEV
Certificate holder.	LISHUI YIYEN TECHNOLOGY COMPANY LIMITED
Address.	No.77, Xiang Long Road, Lian Du Zone, Lishui City, Zhejiang Province, China
Manufacturer.	Same Certificate holder
Address.	Same Certificate holder
Brand Name.	YIY
Product Designation:	Any-Power Combined Inverter & Charger
Model / Series Models:	APC 1024E, APC 1524E, APC 2024E, APC 3024E, APC 4024E, APC 5024E, APC 6024E
Test Report No(s):	BTEK230406033E
Test Standard(s):	EN 55032:2015+A1:2020, EN 55035:2017+A11:2020, EN 61000-3-3:2013+A1:2019+A2:2021, EN IEC 61000-3-2:2019+A1:2021

Conclusion:

This attestation is issued in accordance with the Directive 2014/30/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment.

June 17, 2023 — Date of issue; Certification Mark; EMC Laboratory Manager

Shenzhen SANTEK Testing Co.,Ltd.
A5&A6 Building B1&B2 No.45 Gangbu Road,Bagang Community,
Shajing Street,Baoan District, Shenzhen,Guangdong,China 518104
Tel: +(86)755-2304 4200 E-mail: Service@btek-lab.com Web: www.btek-lab.com

DEKRA

ATTESTATION OF CONFORMITY

Issued to:	LISHUI YIYEN TECHNOLOGY CO.,LTD (Lijing National Industrial Park) No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, Lishui City, Zhejiang Province, P.R. China
For the product:	Power Conversion Module
Trade name:	YIY
Type/Model:	UP-M-62.5KW, UP-M-100KW
Ratings:	See model list
Manufactured by:	LISHUI YIYEN TECHNOLOGY CO.,LTD (Lijing National Industrial Park) No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, Lishui City, Zhejiang Province, P.R. China
Requirements:	EN IEC 61000-6-2:2019 EN IEC 61000-6-4:2019

This Attestation is granted on account of an examination by DEKRA, the results of which are laid down in a confidential file no. 6174214.51

This Attestation implies that the examined types are in accordance with the standards designated under the Electromagnetic compatibility directive 2014/30/EU.

The examination has been carried out on one single specimen or several specimens of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

The CE marking may be affixed on the product if all relevant and effective EC directives are complied with.

Arnhem, 1 March 2024 — Number: 6174214.52AOC

DEKRA Testing and Certification (Shanghai) Ltd.

Kristy Lin
Certification Manager

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CE

DEKRA Testing and Certification (Shanghai) Ltd.
2F #262 Jiangchangsan Road Shibei Hi-Tech Park,200436 Jingan District, Shanghai, China
T +86 21 6056 7666 F +86 21 6056 7555 www.dekra-product-safety.com

DEKRA

ATTESTATION OF CONFORMITY

Issued to:	LISHUI YIYEN TECHNOLOGY CO.,LTD No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, Lishui City, Zhejiang Province, P.R. China (Lijing National Industrial Park)
For the product:	Power Conversion System
Trade name:	YIY
Type/Model:	UP-M-62.5KW, UP-M-100KW
Ratings:	UP-M-62.5KW: DC: Voltage range: 650-950Vdc; Max Current: 100A, AC: Rated power: 62.5kW, rated voltage: 400Vac, Max. current: 100A, 50/60Hz, 3W+PE, power factor: -1(lagging)- 1(leading) UP-M-100KW: DC: Voltage range: 650-950Vdc, Max Current: 170A, AC: Rated power: 100kW, rated voltage: 400Vac, Max. current: 167A, 50/60Hz, 3W+PE, power factor: -1(lagging)- 1(leading) General: IP20, class I protection, 2000m altitude, -20-50°C
Manufactured by:	LISHUI YIYEN TECHNOLOGY CO.,LTD No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, Lishui City, Zhejiang Province, P.R. China (Lijing National Industrial Park)
Requirements:	EN 62477-1:2012+A1:2017

This Attestation is granted on account of an examination by DEKRA, the results of which are laid down in a confidential file no. 6174215.30.

This Attestation implies that the examined types are in accordance with the standards designated under the Low Voltage Directive (LVD) 2014/35/EU.

The examination has been carried out on one single specimen or several specimens of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

The CE marking may be affixed on the product if all relevant and effective EC directives are complied with.

Arnhem, 28 May 2024 — Number: 6174215.01AOC

DEKRA Testing and Certification (Shanghai) Ltd.

Kristy Lin
Certification Manager

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DEKRA Testing and Certification (Shanghai) Ltd.
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T +86 21 6056 7666 F +86 21 6056 7555 www.dekra-product-safety.com

DEKRA

CERTIFICATE OF CONFORMITY

Issued to:	LISHUI YIYEN TECHNOLOGY CO., LTD No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, Lishui City, Zhejiang Province, P.R. China (Lijing National Industrial Park)
For the product:	Power Conversion System
Trade name:	YIY
Type/Model:	UP-M-62.5KW, UP-M-100KW
Ratings:	Operating temperature range: - 20°C to + 50°C Protective class: I Ingress protection rating: IP20 Power factor range (adjustable): -1(lagging)~1(leading) UP-M-62.5KW: DC: Voltage range: 650-950Vdc, Max Current: 100A, AC: Rated power: 62.5kW, rated voltage: 400Vac, Max. current: 100A, 50/60Hz, 3W+PE UP-M-100KW: DC: Voltage range: 650-952Vdc, Max Current: 170A, AC: Rated power: 100kW, rated voltage: 400Vac, Max. current: 167A, 50/60Hz, 3W+PE
Manufactured by:	LISHUI YIYEN TECHNOLOGY CO., LTD No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, Lishui City, Zhejiang Province, P.R. China (Lijing National Industrial Park)
Requirements:	EN 50549-1:2019 (Requirements for type A Generating Units) COMMISSION REGULATION (EU) 2016/631 (NC RfG)

This Test Certificate is granted on account of an examination by DEKRA, the results of which are laid down in a confidential file no. 6174227.50.
The examination has been carried out on one single specimen of the product. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

This Test Certificate expires at the latest on: 31 May 2029 or expires upon withdrawal of one of the above mentioned standards.

Shanghai, 31 May 2024 — Number: 6174227.01COC

DEKRA Testing and Certification (Shanghai) Ltd.

Cliff Lin
Certification Manager

IAS ACCREDITED

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PCN 141

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No.262, Jiangchangsan Road, Jing'an District, Shanghai, 200436 People's Republic of China
T +86 21 6056 7600 F +86 21 6056 7616 www.dekra-product-safety.com
ESA-CER.F021 v4.1

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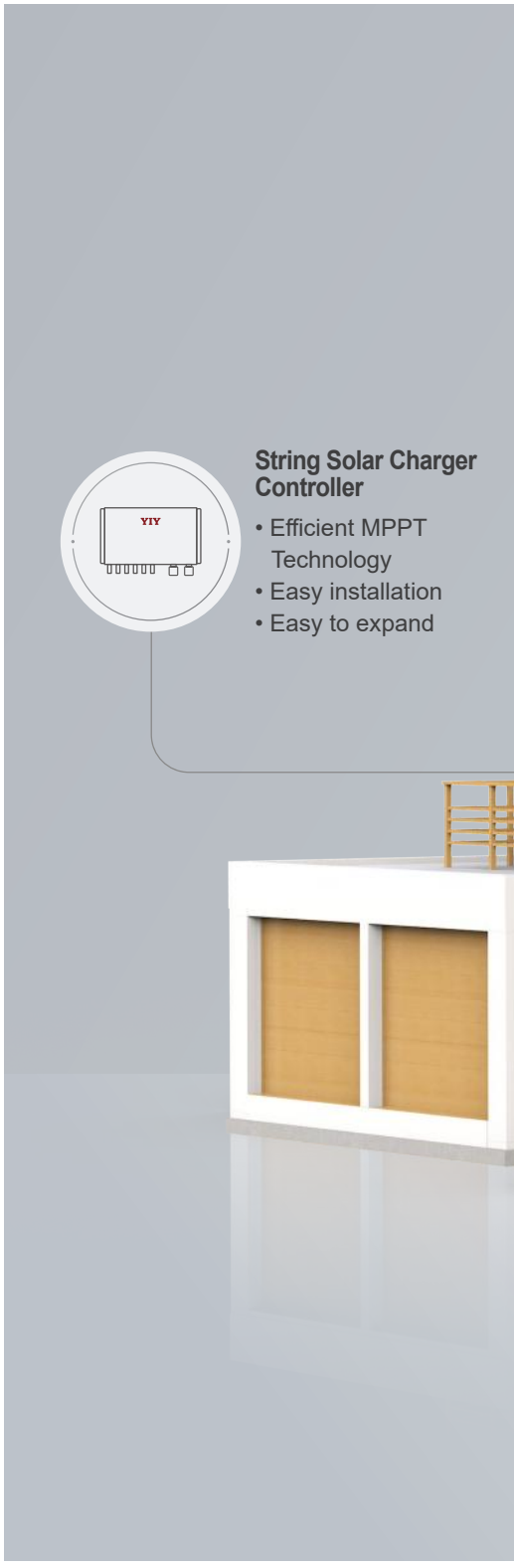
MPPT Solar Charge Controller 51

Solar Panel 55

YIY Residential Energy Storage System

YIY residential energy storage system is a highly flexible and customizable solution suitable for a variety of home energy application scenarios. The system includes inverter, LiFePO4 battery pack, photovoltaic distribution box with built-in MPPT, and an intelligent energy management system that can be monitored by APP.

Users can freely configure devices according to their needs, supporting multiple modes such as backup power supply, off-grid power generation, self-generation and AC-coupled photovoltaic energy storage. The system not only provides stable and efficient power, but also improves energy self-sufficiency and reduces electricity costs. Users can monitor energy use in real time through a simple operation interface to ensure the optimal operation of the system in various environments, meeting the needs of modern families for intelligent, safe and environmentally friendly energy storage.

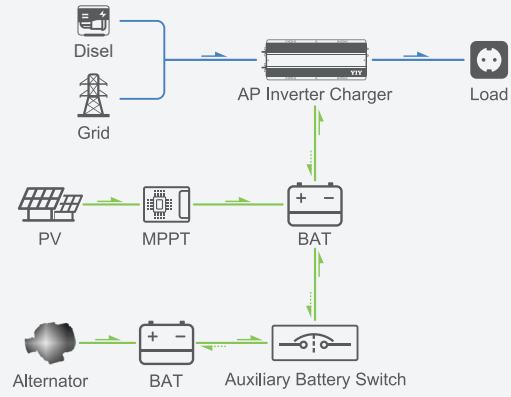


- Back-up Power
- Off Grid
- Self-Consumption
- AC-Coupled

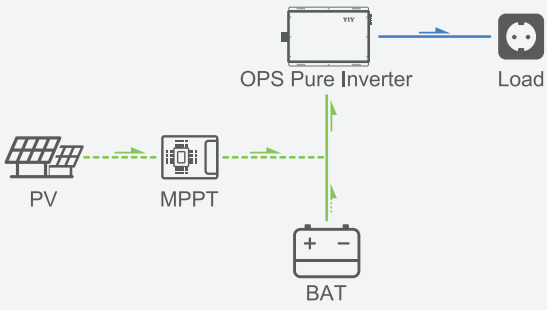

Cloud+APP
• Monitoring system
Solar Panels
Battery
• Modular Design
• Wall-mounted / rack-mounted optional
Inverter
• Off Grid/Hybrid Inverter

What is an complete power system for your vehicles?

• Technology Topology



System 1

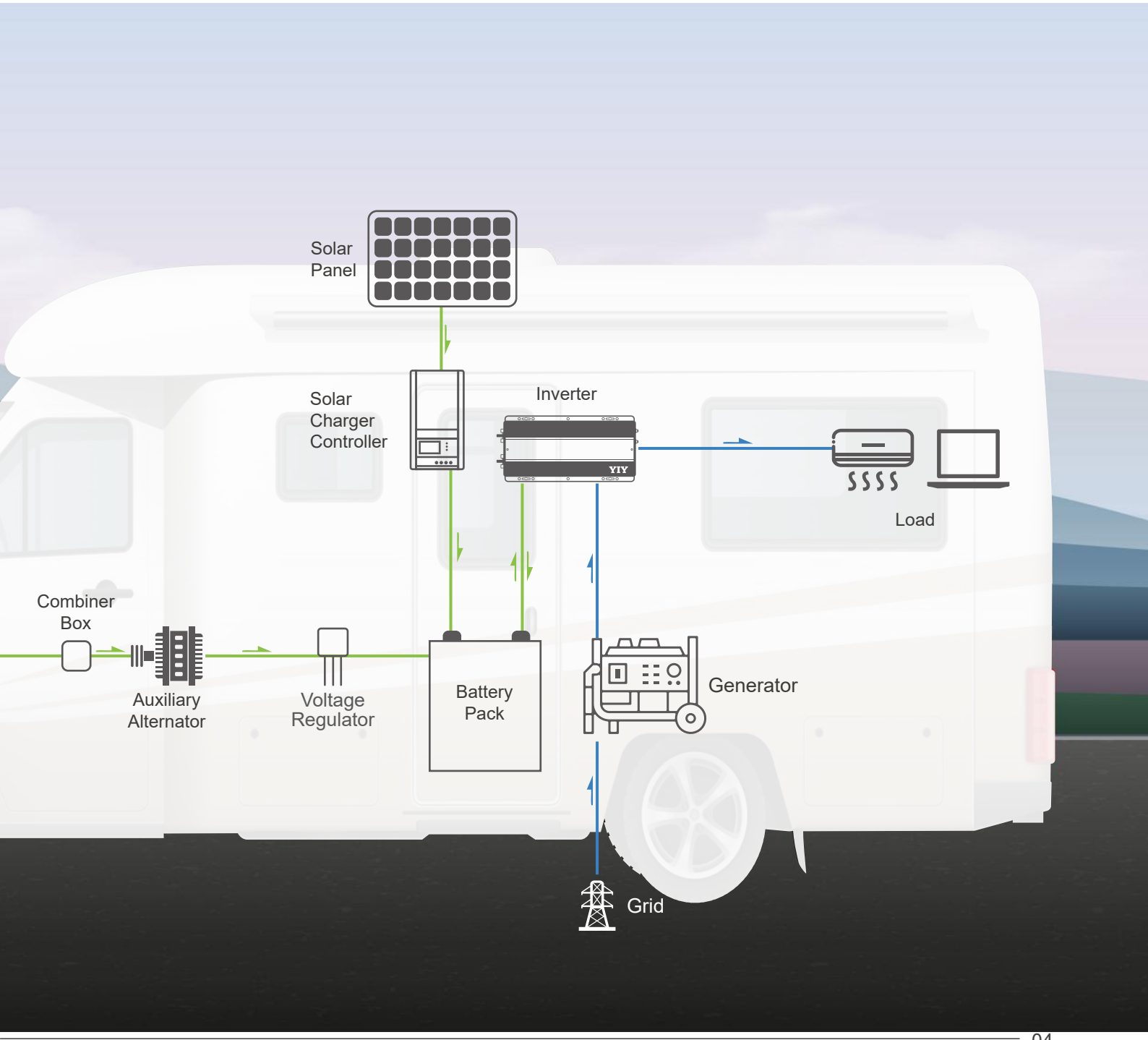


System 2



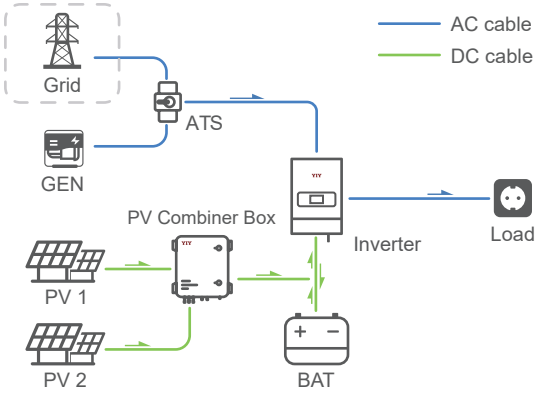
YIY energy storage system for vehicles is an integrated solution for providing reliable and sustainable power in various vehicle applications, including recreational vehicles (RVs),ambulances,trucks,and buses etc.

This system lever-ages solar energy and advanced energy storage technology to ensure uninterrupted power supply for onboard equipment and appliances.it will include following key components:Pure Sine Wave Inverter,Lithium-ion Battery Packs,Solar Charge Controller,Solar Panels,Monitoring and Control System,etc.



• Technology Topology

Off-Grid System(Backup + PV)



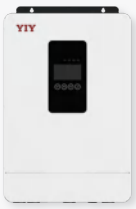
An off-grid home energy storage system is ideal for regions with unstable grids or frequent outages. When grid power is available, solar energy powers the loads first, with any surplus charging the battery (which can also be charged directly by the grid). The grid supplements any shortfall in solar generation. The battery discharges only during a grid outage, ensuring uninterrupted power.The generator automatically starts through inverter only when solar power, grid power, and the battery are all unavailable.



AP Series

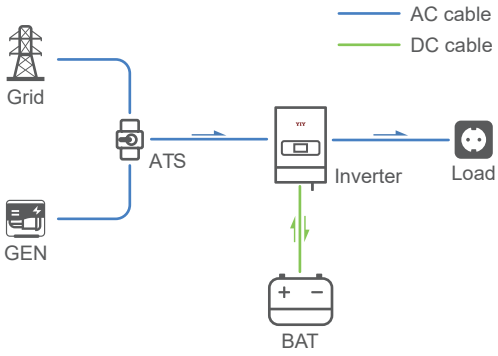


HP-W Series



SMP Series

Off-Grid System(Backup)



In pure backup mode, the inverter charges the battery from the grid . When a power outage occurs, it automatically switches to battery power. If the battery is depleted before grid power returns, the inverter will start the generator to ensure a continuous supply. The system automatically switches back to grid mode once utility power is restored.

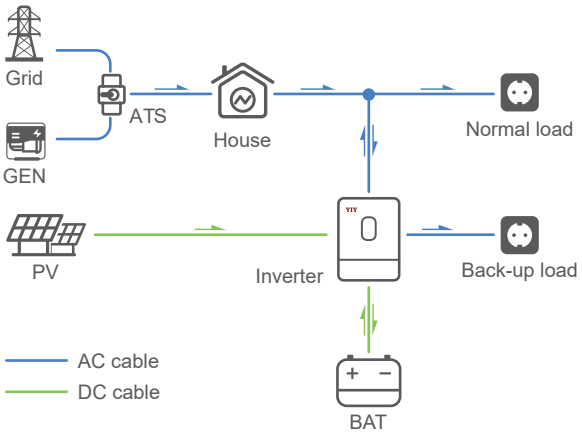


AP Series



HP-W Series

Off-Grid Hybrid System



In an off-grid hybrid system, solar power prioritizes supplying the load, with excess energy charging the battery. When solar is insufficient, the battery and grid power supplement the supply to maximize energy utilization. In the event of a grid failure or outage, the system automatically switches to battery mode. If solar, grid, and battery are all unavailable, the inverter automatically starts the generator.

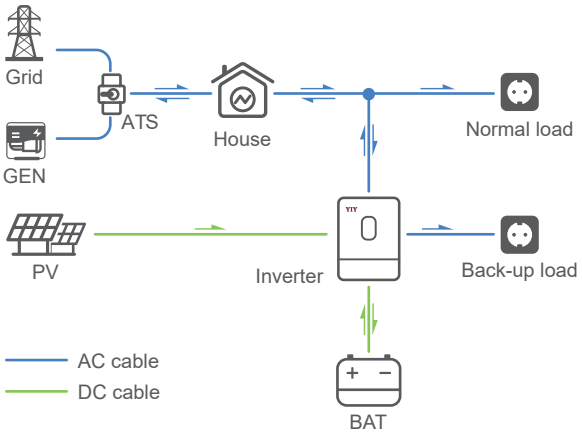


SMP-H Series



SVP Series

On-Grid Hybrid System

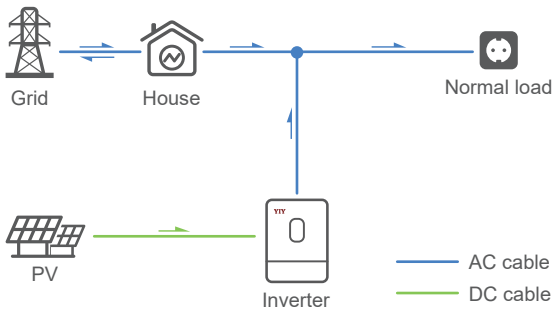


In a grid-tied hybrid system, solar power prioritizes supplying the load, with any excess energy charging the battery. Any further surplus is fed back into the grid. When solar generation is insufficient, the battery and grid power supplement the supply. This enables peak shaving and demand management, alleviates grid congestion in areas with high solar penetration, supports participation in electricity market services such as virtual power plants (VPPs), and provides seamless backup power for scenarios requiring high supply continuity.

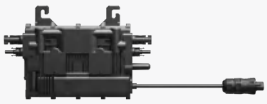


HES Series

Grid-Tied System



A pure grid-tied solar system (with no battery) directly powers your home with solar energy. Any extra solar power is sent to the grid. When solar isn't enough, power is drawn from the grid. If the grid fails, the system shuts down automatically for safety.



EON-MI800S-2B Series

SMP 1.2-5kW

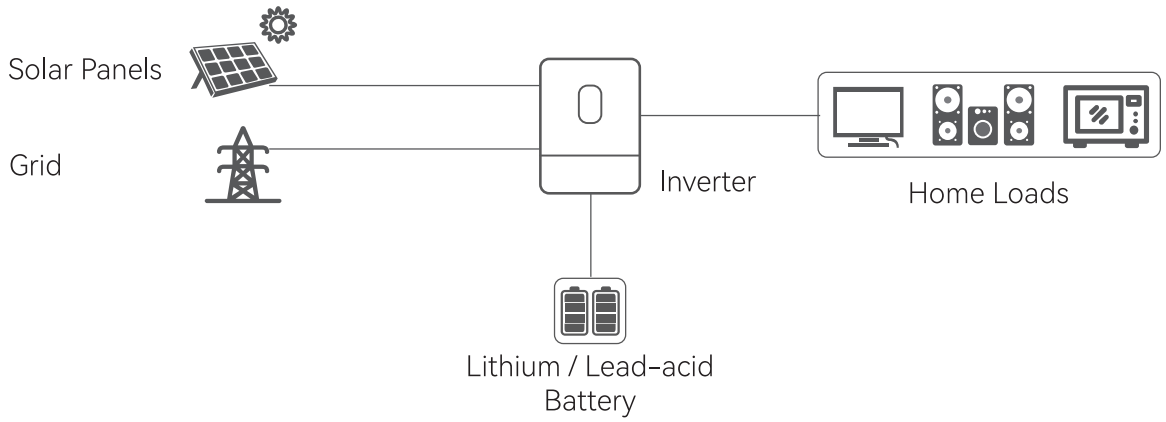
Off Grid Inverter



• Features

- Built-in 60A Solar Charger.
- PV Input Voltage Range 20-125V.
- Pure Sine Wave.
- LCD Display.
- Support Lead-acid Battery.
- Power Factor 1.0.
- Detachable Dust Cover.

• System Diagram

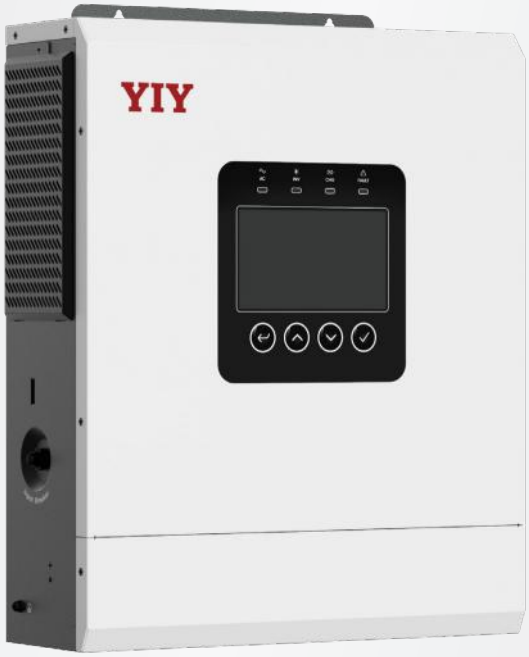


• Technical Parameter

SMP 1.2kW Series Off Grid Inverter				
Model	SMP-1212-10	SMP-2012-30	SMP-3624-50	SMP-5024-90
AC Input				
Rated Input Voltage (Vac)	208/220/230/240;L+N+PE			
Voltage Range (Vac)	90~280+3(normal mode);170~280±3 (UPS mode)			
Frequency (Hz)	50/60(Auto Adaptive)			
AC Output				
Rated Capacity (Kw)	1.2	2	3.6	5
Surge Power (Kva)	2.4	4	7.2	10
Voltage (Vac)	208/220/230/240			
Power Factor (PF)	1			
Frequency	50/60Hz±0.1%			
Switch Time (ms)	10 (normal mode) / 10 (UPS mode)	10 (APP/UPS mode) / 20 (GEN mode)		10 (normal mode) / 10 (UPS mode)
Wave Form	Pure Sine Wave			
Overload Capacity (Battery Mode)	10min@102%~120%load; 60s@120%~150% load;10s@150%~200%load	long term@102%-125% load, 10s@125%-250% load	60s@102%~110% load; 10s@110%~130% load; 3s@130%~150% load; 0.2s@>150% load	1min@102%-120% load;10s@>120% load
Max. Efficiency (Battery Mode)	90%@12Vdc	91%@12VDC	92.7%@24Vdc	93.5%@24VDC
Parallel Quantity	NA			
Charger (PV/AC)				
Solar Charger Type	MPPT			
Max PV input current/power	18A/800W	18A/ 3000W	18A/5000W	27A / 9000W
MPPT Range@Operating Voltage (Vdc)	17-115	30 - 400	40~450	60~450
Max PV Open Circuit Voltage (Vdc)	115	450	500	
Max PV Charge Current (A)	50	100	100	160
Max AC Charge Current (A)	50	100	100	160
Max. Charge Current (PV + AC)(A)	100	100	100	160
Battery				
Normal Voltage (Vdc)	12	12	24	24
Floating Charge Voltage (Vdc)	13.8	13.8	27	27
Overcharge Protection (Vdc)	15	15	30.5	30.5
Battery Type	Lithium /Lead-acid			
Interface				
HMI	LCD			
Interface	RS485/CAN/RS232	RS485 / CAN / RS232 / CT(optional) / Meter (optional)	RS232 / RS485 / CAN	
Monitoring	WiFi (optional)			
General Data				
Ingress Protection	IP21			
Operating Temperature	-10 °C~ 60 °C			
Relative Humidity	5%~95%(Non-condensing)			
Storage Temperature	-15°C~60°C			
Net Weight (kg)	3.2	4.5	6.2	8.4
Dimensions(W*H*D)(mm)	347*236*91	331*270*100	420*284*94	410*336*110
Max. Operating Altitude	4000m(Derating above 2000m)			

SMP 5-12kW

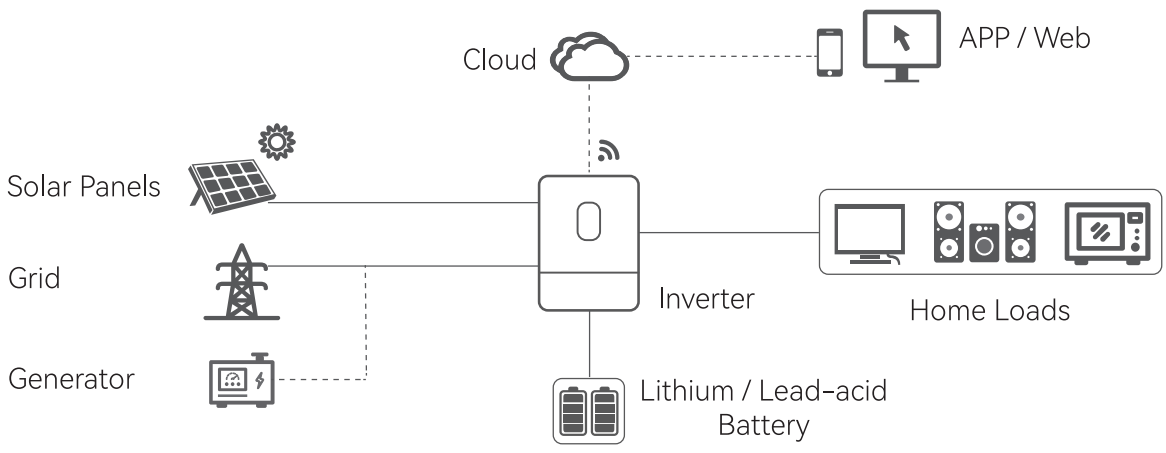
Off Grid Inverter



• Features

- Built-in Solar Charger 100A/120A.
- Wide PV Input Voltage Range.
- Workable with Generator.
- Complete CE Certificate.
- Support Lithium/Lead-acid Battery.
- Lithium Battery Activation.
- Detachable Dust Cover.
- WiFi Monitoring(optional).
- With the ability to work without battery.

• System Diagram



• Technical Parameter

SMP 3.6-12kW Series Off Grid Inverter				
Model	SMP-5048-60	SMP-6548-90	SMP-10048-90	SMP-12048-150
AC Input				
Rated Input Voltage (Vac)	208/220/230/240;L+N+PE			
Voltage Range (Vac)	90~280+3(normal mode);170~280±3 (UPS mode)			
Frequency (Hz)	50/60(Auto Adaptive)			
AC Output				
Rated Capacity (Kw)	5	6.5	10	12
Surge Power (Kva)	10	12	20	24
Voltage (Vac)	208/220/230/240			
Power Factor (PF)	1			
Frequency	50/60Hz±0.1%			
Switch Time (ms)	10 (normal mode) /10 (UPS mode)		10(APP/UPS mode), 20(GEN mode)	
Wave Form	Pure Sine Wave			
Overload Capacity (Battery Mode)	60s@102%~110% load; 10s@110%~130% load; 3s@130%~150% load; 0.2s@>150% load	1min@102%~110% load; 10s@ > 110% load	1min@102%~125%Load; 10s@>125%Load	
Max. Efficiency (Battery Mode)	93%@48VDC	94%@48Vdc	94%@48Vdc	
Parallel Quantity	9	9	NA	
Charger (PV/AC)				
Solar Charger Type	MPPT		MPPT*2	
Max PV Input Current /Input Power	18A / 6000W	27A/9000W	Using One MPPT: 27A/9KW Using Two MPPTs: 22.5A/Per MPPT, 15kW/Total	
MPPT Range@Operating Voltage (Vdc)	120-450	60~450		
Max PV Open Circuit Voltage (Vdc)			500	
Max PV Charge Current (A)	80	120	160	
Max AC Charge Current (A)	80	120	160	
Max. Charge Current (PV + AC)(A)	80	120	160	
Battery				
Rated Voltage (Vdc)	48			
Floating Charge Voltage (Vdc)	54			
Overcharge Protection (Vdc)	61			
Battery Type	Lithium and Lead-acid			
Interface				
HMI	LCD			
Interface	RS485 / CAN / RS232 / Dry Contact	RS232/RS485/CAN/Parallel Interface	RS232 / RS485 / CAN	
Monitoring				
General Data				
Ingress Protection	IP21			
Operating Temperature	-10 °C~ 60 °C			
Relative Humidity	5%~95%(Non-condensing)			
Storage Temperature	-15°C~60°C			
Net Weight (kg)	9.5	8.4	15	15
Dimensions(W*H*D)	510*306*115	410*336*110	495*425*120	495*425*120
Max. Operating Altitude	4000m(Derating above 2000m)			

SMP-H 5.6-12kW

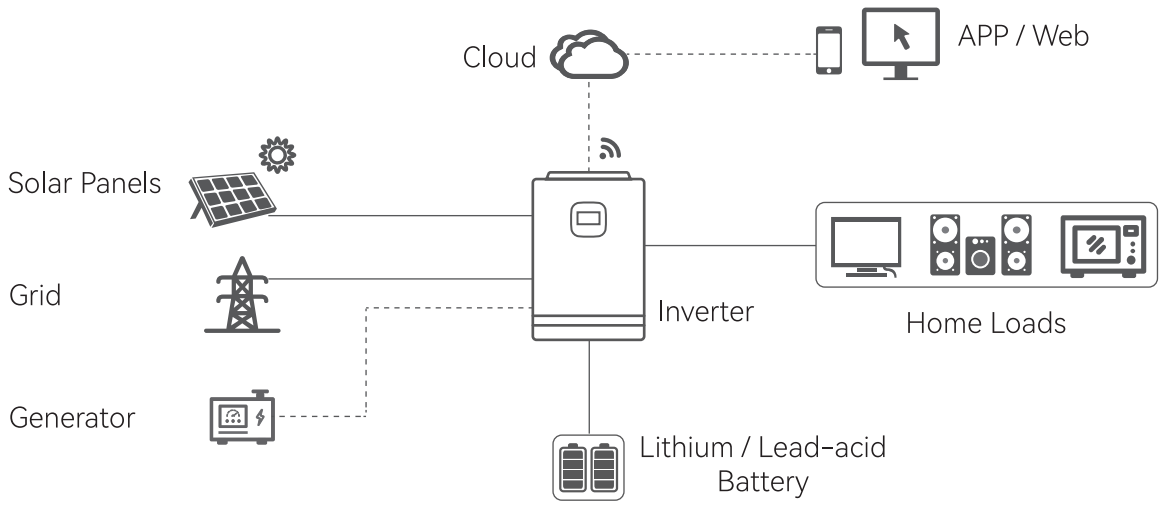
Off Grid Hybrid Inverter



• Features

- Sectional charge/discharge; supports lead-acid & lithium batteries with dual activation.
- Hybrid/grid-connected with anti-backflow; battery-less solar+grid operation.
- Four charging modes plus power-saving mode.
- Dual output (inverter/bypass) for uninterrupted pure sine-wave UPS.
- Full digital SPWM control & dual MPPT (99.9% efficiency).
- 360° protection and intelligent cooling (variable-speed fan, AC switch).

• System Diagram



• Technical Parameter

SMP-H 5.6-12kW Series Off Grid Hybrid Inverter					
Models	SMP-H-5648-60P	SMP-H-6248-60P	SMP-H-8048-110P	SMP-H-11048-110P	SMP-H-12048-120P
Parallel mode					
Permitted parallel number	1~6				
AC mode					
Rated input voltage	230Vac±5%				
Input voltage range	(170Vac~280Vac)±2% (90Vac-280Vac)±2%				
Frequency	50Hz/60Hz (Auto detection)				
Frequency Range	47±0.3Hz~55±0.3Hz (50Hz); 57±0.3Hz~65±0.3Hz (60Hz);				
Overload/short circuit protection	Circuit breaker				
Efficiency	>93%				
Conversion time (bypass and inverter)	10ms (typical)				
AC reverse protection	Yes				
Maximum bypass overload current	40A		60A		
Inverter mode					
Output voltage waveform	Pure sine wave				
Rated output power (VA)	5600	6200	8000	11000	12000
Rated output power (W)	5600	6200	8000	11000	12000
Power factor	1				
Rated output voltage (Vac)	230Vac				
Output voltage error	±5%				
Output frequency range (Hz)	50Hz±0.3Hz/60Hz±0.3Hz				
Maximum output efficiency	>94%				
Overload protection	(102% < load <125%) ±10%: report error and turn off the output after 5 minutes; (125% < load < 150%) ± 10%: report error and turn off the output after 10 seconds; Load >150% ±10%: report error and turn off the output after 5 seconds;				
Peak power	11000VA	12000VA	16000VA	22000VA	24000VA
Loaded motor capability	3HP	4HP	5HP	7HP	8HP
Output short circuit protection	200ms protection				
Bypass circuit breaker pecification	40A		63A		
Rated battery input voltage	51.2V (Minimum starting voltage 44V)				
Battery voltage range	40.0Vdc~60Vdc±0.6Vdc (Undervoltage alarm/shutdown voltage/overvoltage alarm /overvoltage recovery... settable on LCD screen)				
Power saving mode self-consumption	Load≤25W		Load≤50W		

• Technical Parameter

AC charging				
Battery type	Lead acid or lithium battery			
Maximum charge current (can be set)	80A		120A	150A
Charge current error	±5Adc			
Charge voltage rang	40~60Vdc			
Short circuit protection	Circuit breaker			
Circuit breaker specifications	40A		63A	
PV charging				
Maximum PV open circuit voltage	500Vdc			
Start-up Voltage	120Vdc			
PV operating voltage range	90~500Vdc			
MPPT voltage range	90~450Vdc			
Battery voltage range	40~60Vdc			
Maximum PV input power	6000W	6500W	5500W+5500W	9000W+9000W
Maximum PV input current	22A	27A	22A+22A	27A+27A
PV charging current range (can be set)	0~100A		0~150A	
Charging short circuit protection	Blown fuse			
Wiring protection	Reverse polarity protection			
Hybrid charging Max charger current specifications (AC charger+PV charger)				
Max charger current (can be set)	0~100A		0~150A	
Certified specifications				
Certification	CE(IEC62109-1,2)			
EMC certification level	EN61000, C2			
Operating temperature range	-10°C to 55°C,> 45°C drop runs			
Storage temperature range	-25°C ~ 60°C			
Humidity range	5% to 95%(Conformal coating protection)			
Noise	≤60dB			
Heat dissipation	Forced air cooling, variable speed of fan			
Communication interface	USB/RS485(/WiFi/GPRS)/ Dry contact control			
Size (L*W*D)	428mm*280mm*110mm		540mm*350mm*120mm	
Weight (kg)	8.2		19.5	

SVP48 3.6-12kW LV

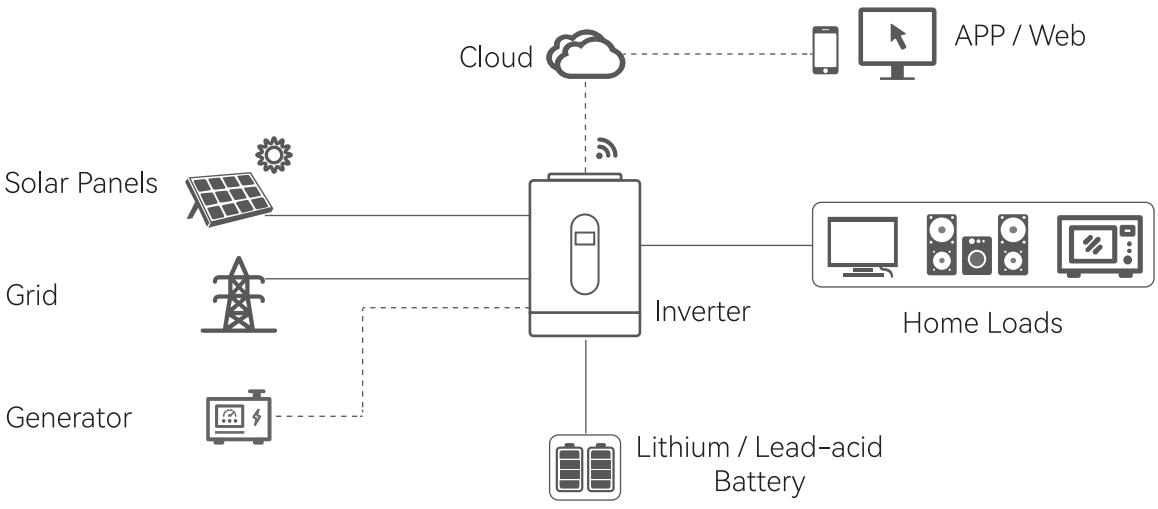
Off Grid Hybrid Inverter



• Features

- Scheduled sectional charge/discharge; dual-activation for lead-acid & lithium batteries.
- Solar-grid-battery hybrid or battery-less operation with anti-feed-in.
- Four charging modes; dual MPPT (99.9% efficiency).
- Pure sine-wave UPS (split/single-phase, 100–127 VAC) with inverter & bypass.
- Touch LCD flow diagram; CAN/USB/Wi-Fi/ RS-485 & remote/dry-contact control.
- Power-saving mode; variable-speed fan; 360° protection; optional whole-house CT.

• System Diagram



• Technical Parameter

SVP48 3.6-12kW LV Series Off Grid Hybrid Inverter							
Models	SVP2436LV	SVP4836LV-P	SVP4865LV-P	SVP4862LV	SVP4872LV-P	SVP48100LV-P	SVP48120LV-P
Parallel mode							
Permitted parallel number	NO	1~6		NO	1~6		
AC mode							
Rated input voltage	120Vac±5%			120(L1/N, L2/N)/240Vac(L1/L2)			
Input phase voltage range	(90Vac~140Vac)±2%			(85Vac~140Vac)±2%			
Frequency	50Hz/60Hz (Auto detection)						
Frequency Range	47±0.3Hz~55±0.3Hz (50Hz);57±0.3Hz~65±0.3Hz (60Hz);						
Overload/short circuit protection	Circuit breaker						
Efficiency	>95%						
Conversion time (bypass and inverter)	10ms (typical)						
AC reverse protection	Yes						
Maximum bypass phase overload current	40A		60A	2pole, 40A/40A (L1/L2)current	2pole, 50A/50A (L1/L2)current	2pole, 63A/63A(L1/L2)	
Inverter mode							
Output voltage waveform	Pure sine wave						
Rated output power (VA)	3600		6500	Split phase: 6200	Split phase: 7200	Split phase: 10000	Split phase: 12000
				Single phase: 4800	Single phase: 6000	Single phase: 7200 (limited by the wiring terminals)	
Rated output power (W)	3600		6500	Split phase: 6200	Split phase: 7200	Split phase: 10000	Split phase: 12000
				Single phase: 4800	Single phase: 6000	Single phase: 7200 (limited by the wiring terminals)	
Power factor	1						
Rated output voltage (Vac)	120Vac			120Vac (L1/N, L2/N)/240Vac(L1/L2)			
Output voltage error	±5%						
Output frequency range (Hz)	50Hz±0.3Hz/60Hz±0.3Hz						
Maximum Efficiency	>91%			>93%		>91%	
Overload protection	(102% < load <110%) ±5%~10%: report error and turn off the output after 5 minutes; (110% < load < 125%) ± 5%~10%: report error and turn off the output after 10 seconds; Load >125% ±5%~10%: report error and turn off the output after 5 seconds;						
Peak power	5400VA	7200VA	12000VA	Split phase: 9300VA	Split phase: 10800VA	Split phase: 15000VA	Split phase: 18000VA
				Single phase: 7200VA	Single phase: 10800VA	Single phase: 15000VA	Single phase: 18000VA
Loaded motor capability	2HP		5HP	3HP	4HP	5HP	6HP
Output short circuit protection	Circuit breaker			Continuous short circuit 200ms protect		Can protect, after continuous short circuit for 1 second	
Bypass circuit breaker phase specification	40A		63A	2pole, 40A/40A (L1/L2)current	2pole, 50A/50A (L1/L2)current	2pole, 63A/63A(L1/L2)	
Rated battery input voltage	30V (Minimum starting voltage 22V)	51.2V (Minimum starting voltage 44V)					
Battery voltage range	20.0Vdc~33Vdc ±0.6Vdc	40.0Vdc~60Vdc±0.6Vdc		40.0Vdc~58.6Vdc±0.6Vdc			
	(Undervoltage alarm/shutdown voltage/overvoltage alarm /overvoltage recovery... settable on LCD screen)						
Power saving mode self-consumption	Load≤25W	Load≤50W		Load≤25W enter power-saving mode			

• Technical Parameter

AC charging							
Battery type	Lead acid or lithium battery						
Maximum charge current (can be set)	80A	40A	120A	100A	120A	120A	160A
Charge current error	±5Adc						
Charge voltage range	20-33Vdc	40~60Vdc		40~58.6Vdc			
Short circuit protection	Circuit breaker and blown fuse						
Circuit breaker phase specifications	40A		63A	2pole, 40A/40A (L1/L2)current	2pole, 50A/50A (L1/L2)current	2pole, 63A/63A(L1/L2)	
PV charging							
Number of MPPT groups	/	1	2	1	2		
Maximum PV open circuit voltage	500Vdc	300Vdc		500Vdc			
PV operating voltage range	90-500Vdc	120~300Vdc		90Vdc~485Vdc		90Vdc~500Vdc	
MPPT voltage range	90-450Vdc	90~260Vdc		90Vdc~450Vdc		90Vdc~450Vdc	
Battery voltage range	20-33Vdc	40~60Vdc		40~58.6Vdc			
Maximum PV input power	6000W	4500W	4500W+4500W			6000W+6000W	
Maximum PV input current	27A		22A+22A	27A	16A+16A	22A+22A	
PV charge current (can be set)	0~120A	0~80A	0~150A	0~120A	0~150A	200A	
Charging short circuit protection	Blown fuse						
Wiring protection	Reverse polarity protection						
Hybrid charging Max charger current specifications (AC charger+PV charger)							
Max charger current (can be set)	0~120A	0~80A	0~150A	0~120A	0~150A	0~220A	
Certified specifications							
Certification	UL 1741	CE(IEC62109-1,2)/ UL 1741		UL1741			
EMC certification level	FCC 15 class B	EN61000, C2/FCC 15 CLASS B		FCC part15, CLASS B			
Operating temperature range	-10°C to 55°C(>45°C derating)						
Storage temperature range	-25°C ~ 60°C						
Humidity range	5% to 95%(Conformal coating protection)						
Noise	≤60dB						
Heat dissipation	Forced air cooling, variable speed of fan						
Communication interface	USB/RS485(/WiFi/GPRS)/ Dry contact control						
Size (L*W*D)(mm)	428*280*110	415*280*100	540*350*120	483*339*127	580*359*127	620*450*132	
Weight (kg)	8.2	7.8	18.5	11.5	15.9	23.8	

AP

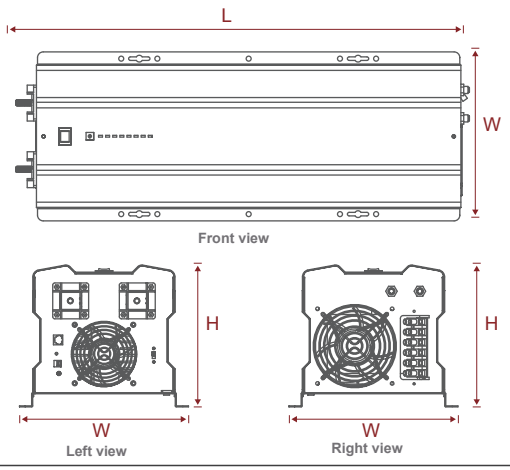
Low Frequency Inverter Charger



• Features

- From 600W up to 6KW.
- 230Vac single phase, 120Vac single phase, or 230Vac split phase optional.
- 12V/24V/48V optional.
- AGS, BTS ports compatible.
- Built-in voltage stabilisation (optional).
- Built-in solar controller MPPT (optional).

• Product Dimensions



Model	Size(L*W*H)(mm)
AP 600W	325*173*135
AP 1KW~1.5KW	382*218*179
AP 2KW~3KW	442*218*179
AP 4KW~6KW	598*218*179

• Technical Parameter

AP Series Low Frequency Inverter Charger									
Inverter Output	Model	600W	1000W	1500W	2000W	3000W	4000W	5000W	6000W
	Continuous Output Power	600W	1000W	1500W	2000W	3000W	4000W	5000W	6000W
	Surge Rating (20S)	1800W	3000W	4500W	6000W	9000W	12000W	15000W	18000W
	Capable Of Starting Electric Motor	0.6HP	1HP	1.5HP	2HP	3HP	4HP	5HP	6HP
	Output Waveform	Pure Sine Wave / Same As Input (Bypass Mode)							
	Nominal Efficiency	88% (Peak)							
	Line Mode Efficiency	>95%							
	Power Factor	0.9~1.0							
	Nominal Output Voltage rms	100-110-120Vac / 220-230-240Vac							
	Output Voltage Regulation	±10% RMS							
	Output Frequency	50Hz ± 0.3Hz / 60Hz ± 0.3Hz							
	Short Circuit Protection	Yes, current limit function (Fault after 1 sec)							
	Typical Transfer Time	10ms (Max)							
	THD	<10%							
DC Input	Nominal Input Voltage	12.0Vdc							
		(*2 for 24Vdc, *4 for 48Vdc)							
	Min. Start Voltage	10.0Vdc							
	Low Battery Alarm	10.5Vdc/11.0Vdc							
	Low Battery Trip	10.0Vdc/10.5Vdc							
	High Voltage Alarm & Fault	16.0Vdc							
	High DC Input Recovery	15.5Vdc							
	Low Battery Voltage Recover	13.0Vdc							
	Idle Consumption-Search Mode	<25W when power saver on							
Charger	Input Voltage Range	Wide: 90~135Vac / 164~243Vac							
		Narraw: 100~135Vac / 194~243Vac							
	Output Voltage	Depends on battery type							
	Charger Breaker Rating	7A	10A	10A	10A	20A	20A	30A	30A
	Max. Charge Rate	20A±5A	35A/70~90A Max. (Charger current control)						
	Over Charge Protection Shutdown	15.7V for 12Vdc (*2 for 24Vdc, *4 for 48Vdc)							
	Charger Curve(4 stage constant current) 4 Step Digital Controlled Progressive Charge	Battery types (*2 for 24Vdc, *4 for 48Vdc)							
	Switch Setting	Description			Fast Mode /VDC		Float Mode/DC		
	0	Charger Off							
	1	Gel USA			14.0		13.7		
	2	AGM 1			14.1		13.4		
	3	Lithium			13.8		13.6		
	4	Sealed Leac Acid			14.4		13.6		
	5	Gel EURO			14.4		13.8		
	6	Open Lead Acid			14.8		13.8		
	7	LifePO4			14.0		13.8		
	8	De-sulphation			15.5 (4 Hours then off)				
	9	Classic LFP			13.6		13.5		
	Remote Control	Yes(Optional)							

AP Series Low Frequency Inverter Charger									
Bypass& Protection	Input Voltage Waveform	Sine wave (Grid or Generator)							
	Nominal Voltage	120Vac					230Vac		
	Low Voltage Trip	80V/90V±4%					184V/154V±4%		
	Low Voltage Re Engage	90V/100V±4%					194V/164V±4%		
	High Voltage Trip	140V±4%					253V±4%		
	High Voltage Re Engage	135V±4%					243V±4%		
	Max Input AC Voltage	150Vac					270Vac		
	Nominal Input Frequency	50Hz or 60Hz (Auto Detection)							
	Low Frequency Trip	47±0.3Hz for 50Hz, 57±0.3Hz for 60Hz							
	Low Frequency Re Engage	48±0.3Hz for 50Hz, 58±0.3Hz for 60Hz							
	High Frequency Trip	55±0.3Hz for 50Hz, 65±0.3Hz for 60Hz							
	High Frequency Re Engage	54±0.3Hz for 50Hz. 64±0.3Hz for 60Hz							
	Output Short Circuit Protection	Circuit breaker							
	Bypass Breaker Rating	7A	10A	15A	20A	30A	30A	40A	40A
	Transfer Switch Rating	30Amp for UL&TUV					40Amp for UL		
		Max. Bypass Current					40Amp		
Mechanical Specification	Mounting	Wall Mount							
	Inverter Dimensions(L*W*H)	325*173*135mm	382*218*179mm		442*218*179mm		598*218*179mm		
	Inverter Weight	7.5KG	16KG	17KG	20KG	24KG	35KG	45KG	45KG
	Shipping Dimensions(L*W*H)	425*230*205mm	520*315*300mm		580*315*300mm		740*315*300mm		
	Shipping Weight	8.5KG	18KG	19KG	22KG	26KG	37KG	47KG	47KG
	Display	Status LED / Status LED+LCD							



AP-mini Series
600-1500W



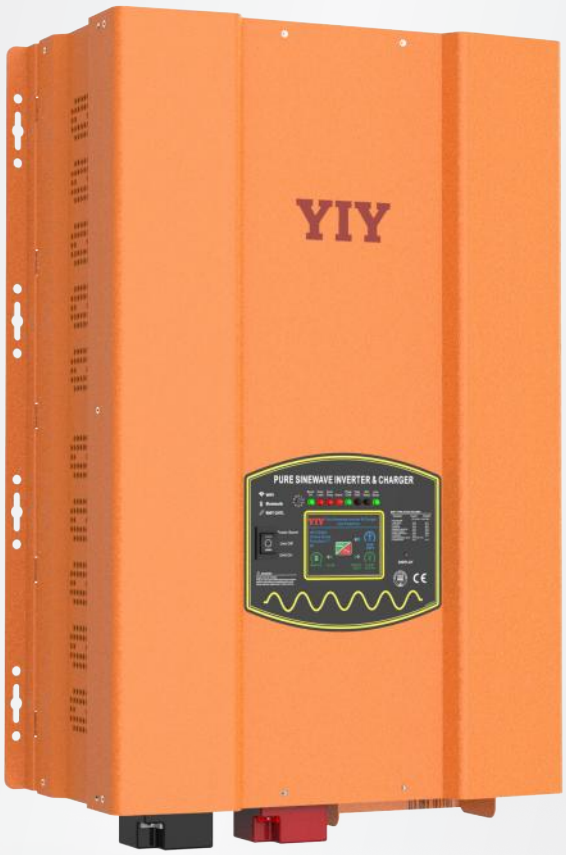
AP Series
1-6KW



APP Series
1-6KW

HP

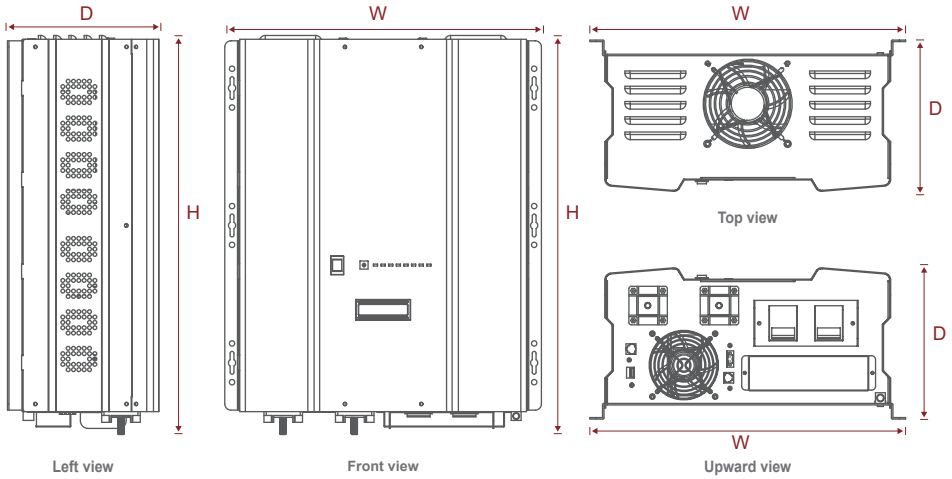
Low Frequency Inverter Charger



• Features

- High output capacity up to 20KW.
- Ultra low THD, typically 7% under full linear load (battery low).
- Battery temperature sensing for increased charging Precision.
- Powerful charge rate up to 140Amp, selectable From 0%-100%.
- Auto Gen Start function for off grid system with generator as backup power.
- MPPT solar charger controller available.

• Product Dimensions



Model	Size(H*W*D)(mm)
HP 8KW~12KW	588*415*200
HP 15KW~20KW	706*415*213

• Technical Parameter

HP Series Low Frequency Inverter Charger							
Inverter Output	Model	8.0KW	10.0KW	12.0KW	15.0KW	18.0KW	20.0KW
	Continuous Output Power	8.0KW	10.0KW	12.0KW	15.0KW	18.0KW	20.0KW
	Surge Rating (20Secs)	24.0KW	30.0KW	36.0KW	45.0KW	54.0KW	60.0KW
	Output Waveform	Pure Sine Wave/Same As Input (Bypass Mode)					
	Nominal Efficiency	>88% (Peak)					
	Line Mode Efficiency	>95%					
	Power Factor	0.9~1.0					
	Nominal Output Voltage rms	100-110-120Vac / 220-230-240Vac					
	Output Voltage Regulation	±10%RMS					
	Output Frequency	50Hz±0.3Hz / 60Hz±0.3Hz					
	Short Circuit Protection	Yes (1 sec after fault)					
	Typical Transfer Time	10ms (Max)					
	THD	< 3% (Rated battery level, rated full linear load)					
DC Input	Nominal Input Voltage	24.0Vdc/48.0Vdc/ 96.0Vdc		48.0Vdc/96.0Vdc			
	Min. Start Voltage	*2 for 24Vdc / *4 for 48Vdc / *8 for 96Vdc					
	Low Battery Alarm						
	Low Batteiy Trip						
	High Voltage Alarm						
	Low Battery Voltage Recover						
	Idle Consumption-Search Mode	< 25W when power saver on (Refer to table)					
Charger	Output Voltage	Depends on battery type (Refer to Table 2.5.2)					
	Charger Breaker Rating	50A	80A	80A	100A		
	Max. Charge Power Rate	1/3 Rating Pover (Refer to Table 2.5.3)					
	Battery Initial Voltage For Start	*2 for 24Vdc / 4 for 48Vdc / 8 for 96Vdc					
	Over Charge Protection S.D.						
	Selector	Switch Setting		Description		Fast Mode / VDC	Float Mode/VDC
		0		Charger Off			
		1		Gel USA		14.0	13.7
		2		AGM 1		14.1	13.4
		3		Lithium		13.8	13.6
		4		Sealed Lead Acid		14.4	13.6
		5		Gel EURO		14.4	13.8
		6		Open Lead Acid		14.8	13.8
		7		LifePO4		14.0	13.8
		8		De-sulphation		15.5 (4 Hours then off)	
		9		Classic LFP		13.6	13.5
		For 12Vdc Mode Series(*2 for 24Vdc Mode/*4 for 48Vdc Mode/*8 for 96Vdc Mode)					

• Technical Parameter

HP Series Low Frequency Inverter Charger								
BTS	Battery Temperature Sensor (Optional)	Yes (Refer to the table) Variances in Charging Voltage & S.D Voltage Base on the Battery Temperature						
Bypass & Protection	Input Voltage Waveform	Sine Wave (Grid or Generator)						
	Nominal Voltage	100-110-120Vac / 220-230-240Vac						
	Max. Input AC Voltage	150Vac for 120Vac LV Mode; 300Vac for 230Vac HV Mode						
	Nominal Input Frequency	50Hz or 60Hz						
	Low Frequency Trip	47±0.3Hz for 50Hz,57±0.3Hz for 60Hz						
	High Frequency Trip	55±0.3Hz for 50Hz,65±0.3Hz for 60Hz						
	Overload Protection (SMPS Load)	Circuit Breaker						
	Output Short Circuit Protection	Circuit Breaker						
	By Pass Breaker Rating	50A	80A	80A	100A			
	Transfer Switch Rating	80Amp for UL			100Amp for UL			
	Bypass Without Battery Connected							
	Max. Bypass Current	80Amp			100Amp			
Mechanical Specifications	Mounting							
	Inverter Dimensions (H*W*D)	588*415*200mm			706*415*213mm			
	Inverter Weight (Solar Charger) KG	60+2.5	66+2.5	70+2.5	85+2.5	95+2.5	100+2.5	
	Shipping Dimensions(H*W*D)	750*520*310mm			850*520*350mm			
	Shipping Weight (Solar Charger) KG	62+2.5	68+2.5	72+2.5	87+2.5	97+2.5	102+2.5	
	Display	Status LED / Status LED+LCD						
	Standard Warranty	1 Year						

HP-W

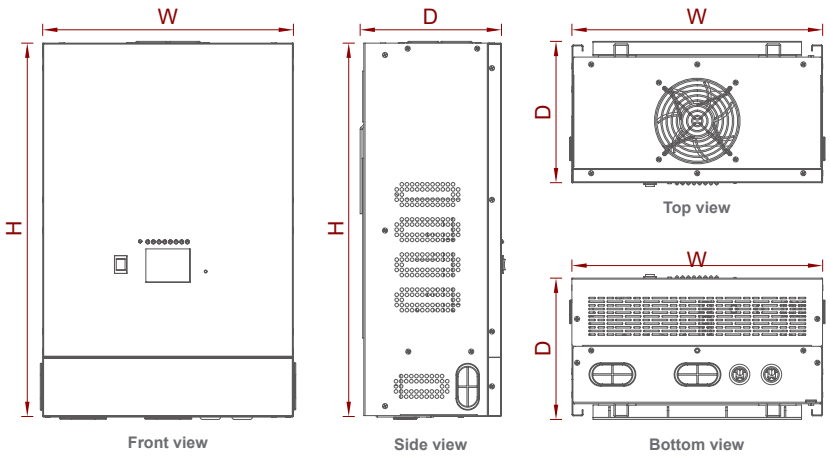
Low Frequency Inverter Charger



• Features

- Built-in EMS, achieves high efficient utilization of power energy between the grid and battery.
- IP20 protection.
- Ultra low THD, typically 7% under full linear load (battery low).
- Battery temperature sensing for increased charging precision.
- Powerful charge rate up to 120 Amp, selectable from 0%-100%.
- Auto Gen Start function for off grid system with generator as backup power.
- PF1.0, high efficiency, lower consumption.
- MPPT solar charger controller available.

• Product Dimensions



Model	Size(W*D*H)(mm)
HP-W 3-6KW	345*190*515
HP-W 8-12KW	403*190*709
HP-W 15-18KW	652.4*226*502
HP-W 20KW	718.4*246*550

• Technical Parameter (120V)

HP-W Series Low Frequency Inverter Charger										
Model		3KW	5KW	6KW	8KW	10KW	12KW	15KW	18KW	20KW
Inverter Output										
Continuous Output Power		3KW	5KW	6KW	8KW	10KW	12KW	15KW	18KW	20KW
Surge Rating (20Secs)		9KW	15KW	18KW	24KW	30KW	36KW	45KW	54KW	60KW
Output Waveform		Pure Sine Wave/Same As Input (Bypass Mode)								
Nominal Efficiency		>88% (Peak)								
Line Mode Efficiency		>95%								
Power Factor		0.9~1.0								
Nominal Output Voltage rms		L-N:100-110-120Vac			HOT1 OR HOT2-N:120Vac;HOT1-HOT2:240Vac					
Output Voltage Regulation		±2%RMS (INVERTER Mode);-20%~+10%RMS (Bypass Mode)								
Output Frequency		60Hz±0.1Hz(INVERTER Mode);40~70Hz (Bypass Mode)								
Short Circuit Protection		Yes (1 sec after fault)								
Typical Transfer Time		6~8ms 10ms (Max)								
THD		< 3% R Load								
DC Input										
Nominal Input Voltage		12.0/24.0 /48.0Vdc	24.0Vdc/48.0Vdc			48.0Vdc				
Min. Start Voltage		10.0/10.5Vdc for 12Vdc Mode	*2 for 24Vdc / *4 for 48Vdc							
Low Battery Alarm		10.5/11.0Vdc for 12Vdc Mode								
Low Battery Trip		10.0/10.5Vdc for 12Vdc Mode								
High Voltage Alarm		16.0Vdc for 12Vdc Mode								
Low Battery Voltage Recover		15.5Vdc for 12Vdc Mode								
Idle Consumption-Search Mode		< 25W when power saver on (Refer to table)								
Charger										
Output Voltage	Charger Off	/								
	Gel USA	14/28/56			13.7/27.4/54.8					
	AGM 1	14.1/28.2/56.4			13.4/26.8/53.6					
	Lithium	13.8/27.6/55.2			13.6/27.2/54.4					
	Sealed lead acid	14.4/28.8/57.6			13.6/27.2/54.4					
	Gel EURO	14.4/28.8/57.6			13.8/27.6/55.255.2					
	Open lead acid	14.8/29.6/59.2			13.8/27.6/55.2					
	LifePO4	14/28/56			13.8/27.6/55.2					
	De sulphation	15.5/31/62 (4 Hours then Off)								
	Class LFP	13.6/27.2/54.4			13.5/27/54					
Charger Breaker Rating		25A	40A	40A	50A	80A	80A	100A		
Max. Charge Power Rate		1/3 Rating Power								
Battery Initial Voltage For Start		10-15.7Vdc for 12Vdc Mode	*2 for 24Vdc / 4 for 48Vdc							
Over Charge Protection S.D.		15.7Vdc for 12Vdc Mode								

• Technical Parameter (120V)

HP-W Series Low Frequency Inverter Charger									
Model	3KW	5KW	6KW	8KW	10KW	12KW	15KW	18KW	20KW
MPPT(Optional)									
PV Input Voltage (Vdc)	13~100Vdc For 12Vdc;26~100Vdc For 24Vdc;10~100Vdc For 48Vdc						/		
charging current	20A*6 MAX For 48Vdc 50A *6 For 12/24Vdc			20A*8 MAX For 48Vdc 50A *8 For 12/24Vdc					
PV wiring method	2S4P MAX			2S6P MAX					
Input Overvoltage Protection (Vdc)	101Vdc								
Overvoltage recovery voltage	95Vdc								
Overvoltage recovery voltage	10 Vdc								
Undervoltage recovery voltage	12.5Vdc								
Output Voltage (Vdc)	14.25/28.5/57.0Vdc(Optional)								
Conversion Efficiency (%)	95.60%								
Output Overvoltage Protection (Vdc)	15/30/60Vdc								
Communication	RS485								
BTS									
Battery Temperature Sensor(Optional)	Yes(Refer to the table) Variances in Charging Voltage & S.D Voltage Base on the Battery Temperature.								
Bypass & Protection									
Input Voltage Waveform	Sine wave (Grid or Generator)								
Nominal Voltage	L-N:100-110-120Vac			HOT1-HOT2:240Vac					
Max Input AC Voltage	150VAC MAX			300VAC MAX					
Nominal Input Frequency	60Hz								
Low Freq Trip	57±0.1Hz for 60Hz/40±0.1Hz (Wide range)								
High Freq Trip	65±0.1Hz for 60Hz/70±0.1Hz (Wide range)								
Overload protection (SMPS load)	Circuit Breaker								
Output Short circuit protection	Circuit Breaker								
Bypass breaker rating	25A	40A	40A	50A	80A	80A	100A		
Transfer switch rating	30Amp for UL&TUV	40Amp for UL		80Amp for UL			100Amp for UL		
Bypass without battery connected	Yes (Optional)								
Max bypass current	30Amp	40Amp		80Amp			100Amp		
Mechanical Specifications									
Mounting	Wall Mount								
Inverter Dimensions (W*D*H)(mm)	345*190*515			403*190*709			652*226*502		718*246*550
Shipping Dimensions (W*D*H)(mm)	458*265*623			530*368*839			779*398*628		845*418*676
Display	Status LEDs / Status LEDs+LCD								
Standard Warranty	1 Year								

• Technical Parameter (230V)

HP-W Series Low Frequency Inverter Charger									
Model	3KW	5KW	6KW	8KW	10KW	12KW	15KW	18KW	20KW
Inverter Output									
Continuous Output Power	3KW	5KW	6KW	8KW	10KW	12KW	15KW	18KW	20KW
Surge Rating (20Secs)	9KW	15KW	18KW	24KW	30KW	36KW	45KW	54KW	60KW
Output Waveform	Pure Sine Wave/Same As Input (Bypass Mode)								
Nominal Efficiency	>88% (Peak)								
Line Mode Efficiency	>95%								
Power Factor	0.9~1.0								
Nominal Output Voltage rms	220/230Vac								
Output Voltage Regulation	±2%RMS (INVERTER Mode);-20%~+10%RMS (Bypass Mode)								
Output Frequency	50Hz±0.1Hz(INVERTER Mode);40~70Hz (Bypass Mode)								
Short Circuit Protection	Yes (1 sec after fault)								
Typical Transfer Time	6~8ms 10ms (Max)								
THD	< 3% R Load								
DC Input									
Nominal Input Voltage	12.0/24.0 /48.0Vdc	24.0Vdc/48.0Vdc			48.0Vdc				
Min. Start Voltage	10.0/10.5Vdc for 12Vdc Mode	*2 for 24Vdc / *4 for 48Vdc							
Low Battery Alarm	10.5/11.0Vdc for 12Vdc Mode								
Low Battery Trip	10.0/10.5Vdc for 12Vdc Mode								
High Voltage Alarm	16.0Vdc for 12Vdc Mode								
Low Battery Voltage Recover	15.5Vdc for 12Vdc Mode								
Idle Consumption-Search Mode	< 25W when power saver on (Refer to table)								
Charger									
Output Voltage	Charger Off	/							
	Gel USA	14/28/56			13.7/27.4/54.8				
	AGM 1	14.1/28.2/56.4			13.4/26.8/53.6				
	Lithium	13.8/27.6/55.2			13.6/27.2/54.4				
	Sealed lead acid	14.4/28.8/57.6			13.6/27.2/54.4				
	Gel EURO	14.4/28.8/57.6			13.8/27.6/55.255.2				
	Open lead acid	14.8/29.6/59.2			13.8/27.6/55.2				
	LifePO4	14/28/56			13.8/27.6/55.2				
	De sulphation	15.5/31/62 (4 Hours then Off)							
	Class LFP	13.6/27.2/54.4			13.5/27/54				
Charger Breaker Rating	25A	40A	40A	50A	80A	80A	100A		
Max. Charge Power Rate	1/3 Rating Power								
Battery Initial Voltage For Start	10-15.7Vdc for 12Vdc Mode	*2 for 24Vdc / 4 for 48Vdc							
Over Charge Protection S.D.	15.7Vdc for 12Vdc Mode								

• Technical Parameter (230V)

HP-W Series Low Frequency Inverter Charger									
Model	3KW	5KW	6KW	8KW	10KW	12KW	15KW	18KW	20KW
MPPT(Optional)									
PV Input Voltage (Vdc)	13~100Vdc For 12Vdc;26~100Vdc For 24Vdc;10~100Vdc For 48Vdc						/		
charging current	20A*6 MAX For 48Vdc 50A *6 For 12/24Vdc			20A*8 MAX For 48Vdc 50A *8 For 12/24Vdc					
PV wiring method	2S4P MAX			2S6P MAX					
Input Overvoltage Protection (Vdc)	101Vdc								
Overvoltage recovery voltage	95Vdc								
Overvoltage recovery voltage	10 Vdc								
Undervoltage recovery voltage	12.5Vdc								
Output Voltage (Vdc)	14.25/28.5/57.0Vdc(Optional)								
Conversion Efficiency (%)	95.60%								
Output Overvoltage Protection (Vdc)	15/30/60Vdc								
Communication	RS485								
BTS									
Battery Temperature Sensor(Optional)	Yes(Refer to the table) Variances in Charging Voltage & S.D Voltage Base on the Battery Temperature.								
Bypass & Protection									
Input Voltage Waveform	Sine wave (Grid or Generator)								
Nominal Voltage	220/230Vac								
Max Input AC Voltage	300VAC MAX								
Nominal Input Frequency	50Hz								
Low Freq Trip	47±0.1Hz for 50Hz/40±0.1Hz (Wide range)								
High Freq Trip	55±0.1Hz for 50Hz/70±0.1Hz (Wide range)								
Overload protection (SMPS load)	Circuit Breaker								
Output Short circuit protection	Circuit Breaker								
Bypass breaker rating	25A	40A	40A	50A	80A	80A	100A		
Transfer switch rating	30Amp for UL&TUV	40Amp for UL		80Amp for UL			100Amp for UL		
Bypass without battery connected	Yes (Optional)								
Max bypass current	30Amp	40Amp		80Amp			100Amp		
Mechanical Specifications									
Mounting	Wall Mount								
Inverter Dimensions (W*D*H)(mm)	345*190*515			403*190*709			652*226*502		718*246*550
Shipping Dimensions (W*D*H)(mm)	458*265*623			530*368*839			779*398*628		845*418*676
Display	Status LEDs / Status LEDs+LCD								
Standard Warranty	1 Year								

TP

Low Frequency Inverter Charger



TP 3~12KW (IP20)

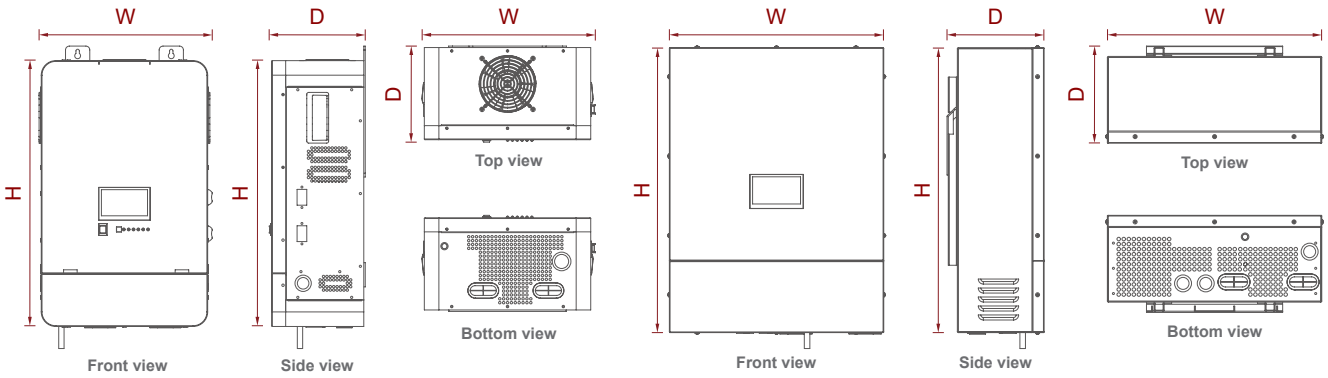


TP 3~6KW (IP54)

• Features

- 3K/6K/8K: 120V single phase.
- 3K/6K/12K: 230V single phase.
- Built-in EMS.
- Battery/MPPT/RMT communication.
- 30A~120A AC charging current.
- Grid-battery hybrid power supply.
- IP20/IP54.

• Product Dimensions



Model	TP 3~6KW (IP20)	TP 8~12KW (IP20)	TP 3~6KW (IP54)
Size(H*W*D)(mm)	548*342*193	710*439*193	565*425*193

• Technical Parameter

TP Series Low Frequency Inverter Charger					
Capacity		3KW	6KW	8KW	12KW
Inverter Output	Continuous Output Power	3000W	6000W	8000W	12000W
	Surge Rating(20s)	9000W	18000W	27000W	36000W
	Capable of Starting Electric Motor	3HP	6HP	8HP	12HP
	DC Input Voltage	48.0Vdc			
	Output Waveform	Pure Sine wave/Same as input(Bypass mode)			
	Inverter Mode Efficiency	89%(Peak)			
	Power Factor	0.9-1			
	Output voltage(L-N)	120VAC	120VAC	120VAC	230VAC
		230VAC	230VAC	120VAC	230VAC
	Output Voltage Regulation	±5% RMS			
	Output Frequency	50/60Hz ± 0.3Hz			
	Short Circuit Protection	Yes, Current Limit Function (Fault after 60ms)			
	Typical transfer Time	Typical 6-8ms,10ms(Max)			
	THD	< 3%(Linear Load)			
DC Input	Nominal Input Voltage	48Vdc			
	Minimum Start Voltage	44Vdc / 46Vdc			
	Low Battery Alarm	44Vdc / 46Vdc			
	Low Battery Trip	42.0Vdc /44.0Vdc			
	High Voltage Alarm & Fault	64.0Vdc			
	High DC Input Recovery	62.0Vdc			
	Low Battery Voltage Recover	52.0Vdc			
	Idle Consumption-Search Mode	>50 W when Power Saver On 3S			
Charge	Input Voltage Range	Narrow: 96~132VAC / 184~253VAC;Wide: 70~135VAC / 140-270VAC			
	Input Frequency Range	Narrow: 47-55±0.3Hz for 50Hz, 57-65±0.3Hz for 60Hz Wide:40-70±0.3Hz for 50Hz/60Hz			
	Output Voltage	Same as input			
	Max Charge Circuit	30A	60A	80A	120A
	Power Factor	0.95			
	Charger Mode Efficiency	88%(Peak)			
	Over Charge Protection Shutdown	64Vdc			
	Voltage Recover Voltage Recover	60Vdc			
	Battery type	Fast Vdc		Float Vdc	
	Gel U.S.A	56		54.8	
	A.G.M 1	56.4		53.6	
	A.G.M 2	58.4		54.8	
	Sealed Lead Acid	57.6		54.4	
	Gel Euro	57.6		55.2	
	Open Lead Acid	59.2		55.2	
	Calcium	60.4		54.4	
	Classic LFP	55.2		54.4	
	De-sulphation	62.0Vdc for 4hrs			
	Remote Control	Yes. Optional(LCD)			

• Technical Parameter

TP Series Low Frequency Inverter Charger						
Capacity			3KW	6KW	8KW	12KW
Hybrid	Output Voltage Waveform		Sine wave (Grid or Generator)			
	Hybrid Input Voltage		120VAC		230VAC	
			96V/80-140VAC		184V/140-253/270VAC	
			Narrow: 47-55±0.3Hz for 50Hz, 57-65±0.3Hz for 60Hz Wide:40-70±0.3Hz for 50Hz/60Hz			
	Low Battery Input		50V/SOC=25%			
	Maximum grid connected power		Load*90%			
	Hybrid Mode Efficiency		89%(Peak)			
	Anti-islanding Protection		Typical 6-8ms,10ms(Max)			
Bypass & Protection	Output Voltage Waveform		Sine wave (Grid or Generator)			
	Nominal Voltage		120Vac		230Vac	
	Low Voltage Trip N/W		96V/80V±4%		184V/140V±4%	
	Low Voltage reengage N/W		101V/85V±4%		194V/150V±4%	
	High Voltage Trip N/W		140V±4%		243V/270V±4%	
	High Voltage reengage N/W		135V±4%		253V/260V±4%	
	Max Input AC Voltage		150VAC		300VAC	
	Nominal Input Frequency		50Hz or 60Hz (Auto detect)			
	Low Freq Trip N/W		47±0.3Hz for 50Hz, 57±0.3Hz for 60Hz 40±0.3Hz for 50Hz/60Hz			
	Low Freq re engage N/W		48±0.3Hz for 50Hz, 58±0.3Hz for 60Hz 42±0.3Hz for 50Hz/60Hz			
	High Freq Trip N/W		55±0.3Hz for 50Hz, 65±0.3Hz for 60Hz 70±0.3Hz for 50Hz/60Hz			
	High Freq re engage N/W		54±0.3Hz for 50Hz, 64±0.3Hz for 60Hz 68±0.3Hz for 50Hz/60Hz			
	Output Short circuit protection		Circuit breaker			
	Output breaker rating(230Vac)		15A	30A	/	60A
	Output breaker rating(120Vac)		30A	60A	80A	/
Other	Communication		Battery/MPPT/RMT			
	Display		LED+LCD			
	Inverter Dimensions (H*W*D)	IP20	548*342*193mm		710*439*193mm	
		IP54	565*435*193mm		/	
	Inverter Weight	IP20	27KG	39KG	62KG	75KG
		IP54	31.5KG	43.5KG	/	
	Shipping Dimensions (H*W*D)	IP20	663*458*265mm		825*555*260mm	
		IP54	678*538*265mm		/	
	Shipping Weight	IP20	32KG	44KG	73KG	86KG
		IP54	38KG	50KG	/	

TPP

Three Phase Low Frequency Inverter Charger



Wall-mounted:6-18KW

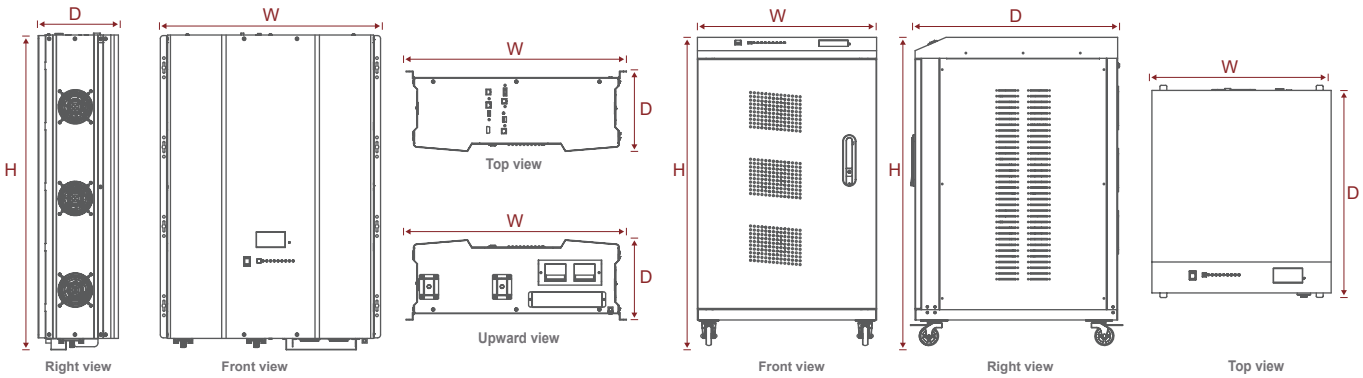


Cabinet type:24-45KW

• Features

- High output capacity upto 45KW.
- Unbalance Load Acceptable Idle Consumption Search Mode,less than 100 W when Power Saver On.
- Powerful charge rate max charge current up to 450A (150A*3).
- Intelligent commnication port RS 232,RS 485,CAN port.
- Advanced MPPT solar charger controller Available.
- Remote control optional(LED or LCD remote).
- Connection mode:3-phase 4-wire/3-phase 3-wire.
- DC Voltage:48VDC.
- Remote Control Seletable(RJ11 port/RJ45 port).
- Ultra Low THD, less than 3% under full linear load (battery low).
- 13Vdc battery Recover Point,Dedicated for Renewable Energy Systems.
- BTS Selectable.

• Product Dimensions



Model	TPP 6~18KW (Wall-mounted)	TPP 24~36KW(Cabinet type)	TPP 45KW(Cabinet type)
Size(W*D*H)(mm)	583*213*803	513*650*835	513*768*880

• Technical Parameter

TPP Series Three Phase Low Frequency Inverter Charger										
Inverter Output	Model	6KW	9KW	12KW	15KW	18KW	24KW	30KW	36KW	45KW
	Continuous Output Power	6000W	9000W	12000W	15000W	18000W	24000W	30000W	36000W	45000W
	Surge Rating(20s)	18000W	27000W	36000W	45000W	54000W	72000W	90000W	108000W	135000W
	Capable of Starting Electric Motor	6HP	9HP	12HP	15HP	18HP	24HP	30HP	36HP	45HP
	Unbalance Load Acceptable	100%								
	DC Input Voltage	48.0Vdc								
	Output Waveform	Pure Sine wave/Same as input (Bypass mode)								
	Nominal Efficiency	89% (Peak)								
	Line Mode Efficiency	>95%								
	Power Factor	0.9~1.0								
	Connection mode	3-phase 4-wire system+Gnd								
	Output voltage rating	3AC/N 400V/207V								
	Output phase voltage	120/230VAC					230VAC			
	Output Voltage Regulation	±10% RMS								
	Output Frequency	50/60HZ ± 0.3Hz								
	Short Circuit Protection	Yes, Current Limit Function (Fault after 60ms)								
	Typical transfer Time	Typical 6~8ms,10ms (Max)								
	THD	<3%Linear Load								
DC Input	Nominal Input Voltage	48.0Vdc								
	Minimum Start Voltage	42.0Vdc / 44.0Vdc								
	Low Battery Alarm	42.0Vdc / 44.0Vdc								
	Low Battery Trip	40.0Vdc / 42.0Vdc								
	High Voltage Alarm & Fault	64.0Vdc								
	High DC Input Recovery	62.0Vdc								
	Low Battery Voltage Recover	52.0Vdc								
	Idle Consumption-Search Mode	< 100W when Power Saver On								
Charge	Input Voltage Range	Narrow: 96~132VAC / 184~253VAC;Wide:70~135VAC / 140~270VAC								
	Input Frequency Range	Narrow: 47~55±0.3Hz for 50Hz,57~65±0.3Hz for 60Hz Wide: 40~70±0.3Hz for 50Hz/60Hz								
	Output Voltage	Same as input								
	Charger Breaker Rating(230Vac)	10A	20A	20A	30A	30A	40A	50A	60A	80A
	Charger Breaker Rating(120Vac)	20A	30A	40A	50A	60A				

HES 5-11.4kW HS LV

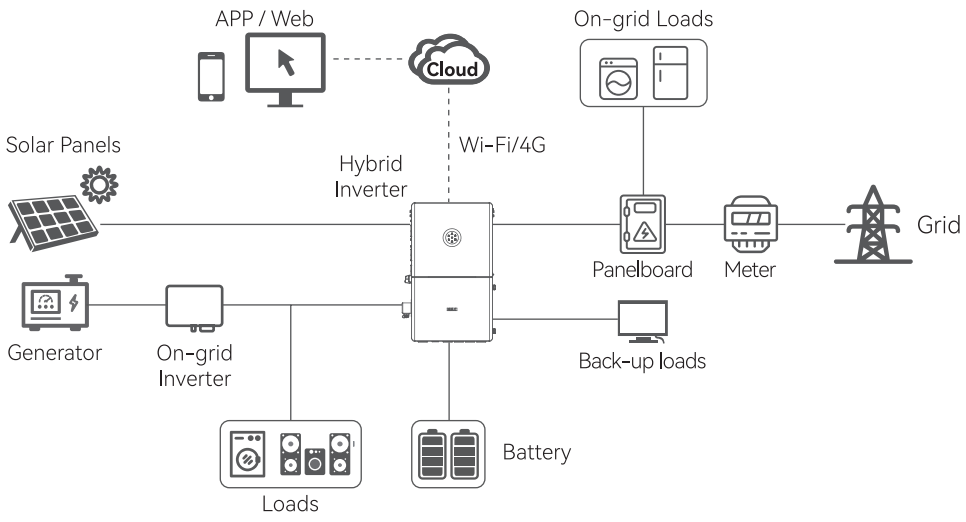
Split Phase Hybrid Inverter



• Features

- Up to 11.4kW output intergrated 200A transfer Relay, support whole home backup power.
- IP65 protection, support indoor and outdoor installlation.
- Lithium battery and lead acid battery compatibility.
- Maximum 4 MPPTs.
- With UPS function switch time ≤ 20ms.
- Compatibility with generator input for backups.

• System Diagram



• Technical Parameter

Model	HES-5K-HS LV	HES-7.6K-HS LV	HES-9.6K-HS LV	HES-11.4K-HS LV
PV String Input				
Max PV Array Power [Wp]@STC	7500	11400	14400	17100
Max. DC Voltage [V]	600			
MPPT Voltage Range [V]	90~550			
Nominal DC Voltage [V]	380			
Start Voltage/Min Input Voltage [V]	100			
Max.DC Input Current [A]	16/16/16		16/16/16/16	
No. of Strings per MPPT	1/1/1		1/1/1/1	
No. of MPPT	3		4	
Battery Input				
Battery Type	Lead-acid or LiFePO4			
Battery Voltage Range[V]	40~60			
Max.Charging/Discharging Current [A]	160		240	
AC Output [On-grid]				
Rated AC Power [W]@208Vac	4330	6580	8320	9880
Rated AC Power [W]@240Vac	5000	7600	9600	11400
Max. Apparnet Power [VA]	5500	3860	10560	12540
Rated AC Current [A]@208Vac	20.8	31.7	40	47.5
Max. AC Current [A]@240Vac	22.9	34.8	44	52.3
Rated AC Voltage/Range	L1/L2/N/PE，208V/240V；183V~229V/211V~264V			
Rated Output Frequency [Hz]	60/54~65			
Power Factor [cosφ]	0.8 leading~0.8 lagging			
Total Harmonic Distortion [THDi]	<3%			
AC Output [Back-up Mode]				
Rated Output Power [W]@240Vac	5000	7600	9600	11400
Over Load Capacity [W, 10s]	11400		17100	
Rated Output Voltage [V]	120/240			
Rated Output Frequency [Hz]	60			
Output THDV(@ Liner Load)	<3%			
Efficency				
Max. Efficiency	97.6%			
CEC Efficiency [@600Vdc]	97%			
Bat-AC Max. Efficiency	93%			
Protection				
Over Voltage Protection	Intergrated			
AC Surge Protection	Type II			
DC Surge Protection	Type II			
Over Heat Protection	Intergrated			
Islanding Pretection	Intergrated			
AFP	Intergrated			
RSD	Intergrated			
Interface				
Display	LED+APP (Bluetooth)			
Communication Por	RS232 +RS485(RJ45)+DRM(RJ45)			
Communication	Wi-Fi/Ethernet/4G			
Load Monitor	24 hours			
General Data				
Isolation Type	HF			
Standby Power Consumption [W]	<10			
Operating Temperature Range	-40°C +60°C (>45°C power derating)			
Cooling Method	Smart Fan Cooling			
Ambient Humidity	0%~100% no-condensing			
Altitude	4000m(>3000m power derating)			
Noise [dBA]	<40			
Ingress Protection	NEMA 4x (IP65)			
Mounting	Wall Mounting			
Dimensions [H*W*D][inch]	30.7*18.5*10.2			
Weight [kg]	50 (110 lbs)			
Warranty [years]	10			
Safety/EMC Standard	UL 1741 CRD, IEEE 1547, UL 1699B, UL 1998, UL 9540, CAN/CSA C22.2.107.1-1, FCC, Part 15 Class B, SRD-UL1741			

HES 5-12kW HS

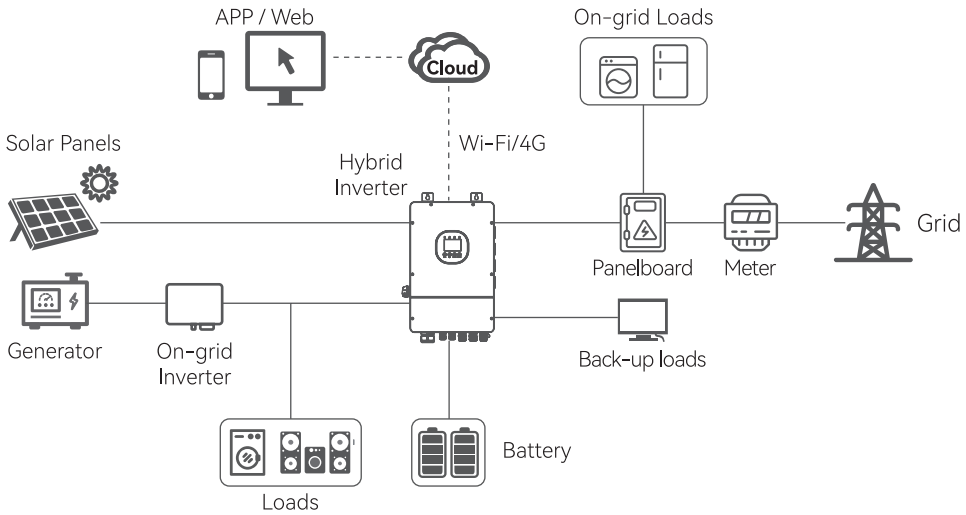
Hybrid Inverter



• Features

- Colorful touch LCD, IP65 protection degree.
- Max. 20A PV input current; DC/AC access oversizing up to 200%.
- Max 240A fast charge/discharge current.
- Heat-resistant (>50°C with derating).
- Support whole home backup function with up to 63 A bypass.
- Max. 4 pcs parallel for on-grid and off-grid operation, Support multiple batteries parallel.
- Integrated Intelligent energy management with generator, heat pump,solar system and smart load.
- Ultralight for easy installation and space-saving.

• System Diagram

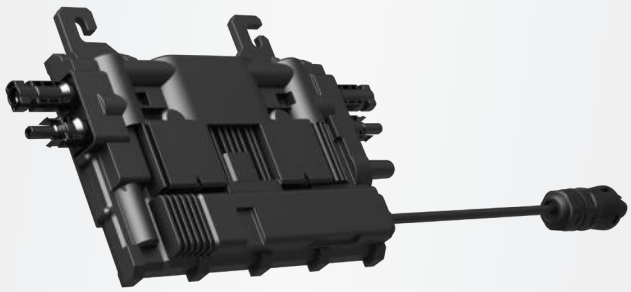


• Technical Parameter

Model	HES-5K-HS	HES-6K-HS	HES-7.6K-HS	HES-8K-HS	HES-10K-HS	HES-12K-HS
DC Input						
Max. PV Access Power [Wp]@STC	10000	12000	15200	16000	20000	24000
Max PV Input Power[W]	8000	9600	12200	12800	16000	19200
Max. DC Voltage [V]	500					
MPPT Voltage Range [V]	90~480					
Rated DC Voltage [V]	360					
Start Voltage [V]	80					
Max.DC Input Current [A]	20/20		40/40			
Max.DC Short Circuit Current [A]	25/25		50/50			
No. of MPPT	2					
Battery Parameters						
Battery Type	Lead-acid or LiFePO4					
Battery Voltage Range[V]	40~60					
Max.Charging/Discharging Current [A]	100	120	190		240	
AC Output [On-grid]						
Rated AC Power [W]	5000	6000	7600	8000	10000	12000
Max.Apparent Power [VA]	5500	6600	8360	8800	10000	12000
Rated Output Current [A]@230Vac	21.8	30	33	34.8	43.5	52.2
Max. Output Current [A]	25	30	38	40	45.5	54.6
Rated AC Voltage/Range [V]	L+N+PE, 220,230,240/180~280					
Rated Output Frequency/Range [Hz]	50,60/45~55,55~65					
Power Factor [cos φ]	0.8 leading~0.8 lagging					
Total Harmonic Distortion [THDi]	<3%					
AC Input [On-grid]						
Rated AC Voltage/Range [V]	L+N+PE, 220,230,240/180~280					
Rated Input Frequency [Hz]	50,60					
Bypass Current [A]@230Vac	63					
AC Output [Back-up]						
Max.Output Power [VA]	5000	6000	7600	8000	10000	12000
Max. Output Current [A]	25	30	38	40	45.5	54.6
Peak Output Apparent Power [VA]	2 Times,10S					
Rated AC Voltage/Range [V]	L+N+PE, 220,230,240/180~280					
Rated Output Frequency/Range [Hz]	50,60/45~55,55~65					
Output THDv (@ Linear Load)	<3%					
Efficiency						
Max. Efficiency	97.6%					
Euro Efficiency	97.0%					
Protection						
Battery Input Reverse Polarity Protection	Integrated					
Over load Protection	Integrated					
AC Short Circuit Current Protection	Integrated					
DC Surge Protection/AC Surge Protection	Integrated					
Anti-islanding Protection	Integrated					
AFCI Protection/RSD Protection	Optional					
Interface						
PV Connection	MC4					
AC Connection	Terminal Block					
Battery Connection	Terminal Block					
Display	LCD+LED+APP					
Communication	Wi-Fi/Ethernet/4G(Optional)					
General Parameters						
Topology	Non-isolated					
Operating Temperature Range	-40°C to +60°C (50°C to 60°C with derating)					
Cooling Method	Intelligent Fan cooling					
Ambient Humidity	0-100% Non-condensing					
Altitude	4000m (>3000m Power Derating)					
Noise [dBA]	<50					
Ingress Protection	IP65					
Dimensions [H*W*D] [mm]	590*380*241					
Weight [kg]	29.0					
Warranty [Year]	5/10					
Standard	EN 62109-1/2, EN 61000-6-1/2/3/4, IEC 62116, IEC 61727, IEC62183, PEA&MEA, NBR 16149, NBR 16150, PORTARIA Nº 140,515, NRS097					

EON-MI800S-2B

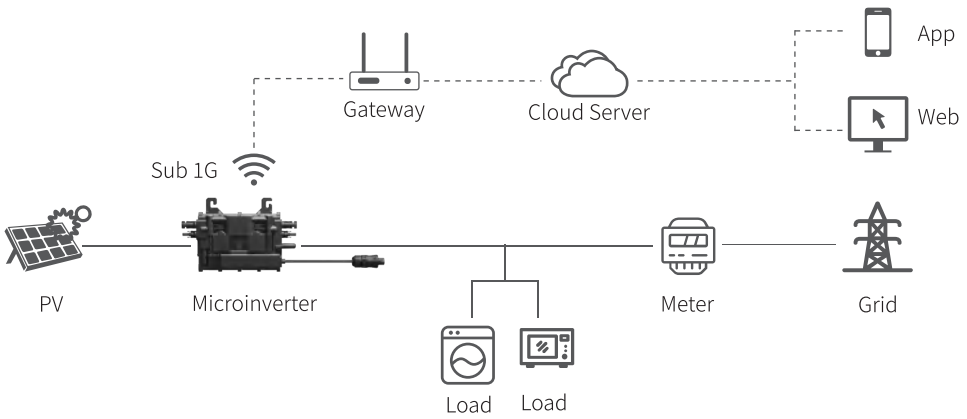
PV Microinverter

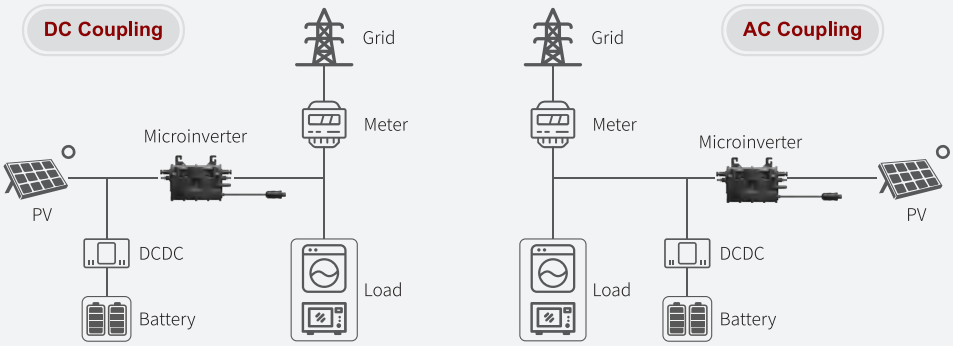


• Features

- More compact, lighter, ultra-high power density.
- Mass products comply with EU EMI standards.
- Safer with rapid shutdown compliance.
- Plug & play, enabling faster, safer and flexible installation.
- High reliability with longer standard warranty.
- 2-in-1 design with 2 independent MPPTs and monitoring.

• System Diagram





• Technical Parameter

EON-MI800S-2B Series PV Microinverter	
Product Model	**EON-MI800S-2B**
Input Data (DC)	
Commonly used module power	320~590W
Maximum input voltage	Min.16, Typ.42, Max.60V
Start-up voltage	Min.18, Typ.19, Max.20V
MPPT voltage range	Min.16, Typ.42, Max.60V
Maximum input current	2 x 16A
Maximum input short circuit current	2 x 22A
Number of input	2
Number of MPPT	2
Output Data (AC)	
Rated output power	800VA
Output current range	0~3.48A
Output voltage	Min.183V, Typ. 230V, Max. 264V
AC frequency range	47.5~51.5Hz
Total harmonic distortion	Typ. < 3%, Max. < 5%
Power factor (adjustable)	> 0.99 default 0.9 leading…0.9 lagging
Efficiency	
Peak efficiency	96.5%
MPPT efficiency	99.8%
Night Consumption	<50mW
Environmental and Mechanical Characteristics	
Operation temperature	-40 to +65℃
Ingress protection	IP67
Cooling	Natural convection
Nominal Dimensions	228*150*31.3mm
Nominal weight	2.4kg
Features	
Communication	Sub-1G
Compliance	IEC/EN 62109-1/-2, EN 50549, VDE-AR-N 4105-2018 UTE C15-712-1:2013 / VFR 2019/ DIN VDE 0126-1-1:2013-08 CEI 0-21:2022-03
Electromagnetic compatibility	IEC/EN 61000-3-2/-3, IEC/EN 61000-6-1/-2/-3/-4

OPS

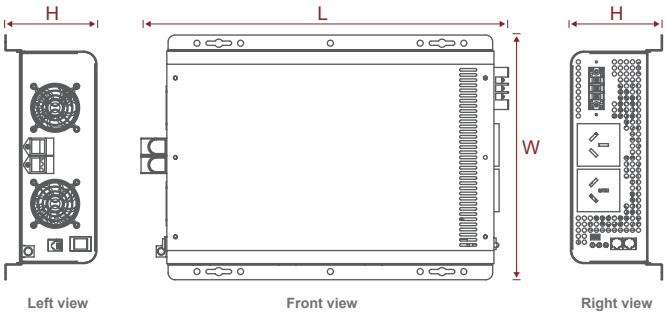
Solar Inverter



• Features

- Adopts new pure sine-wave inverter topology (THD < 3%) .
- High power density with superior reliability and performance.
- Capable of driving highly reactive & capacitive loads at start moment.
- Advanced DSP control, Input/output isolated design.
- LED indicators display.
- Low power “Power Saving Mode” to conserve energy.
- Surge Rating: 2* Prated.

• Product Dimensions

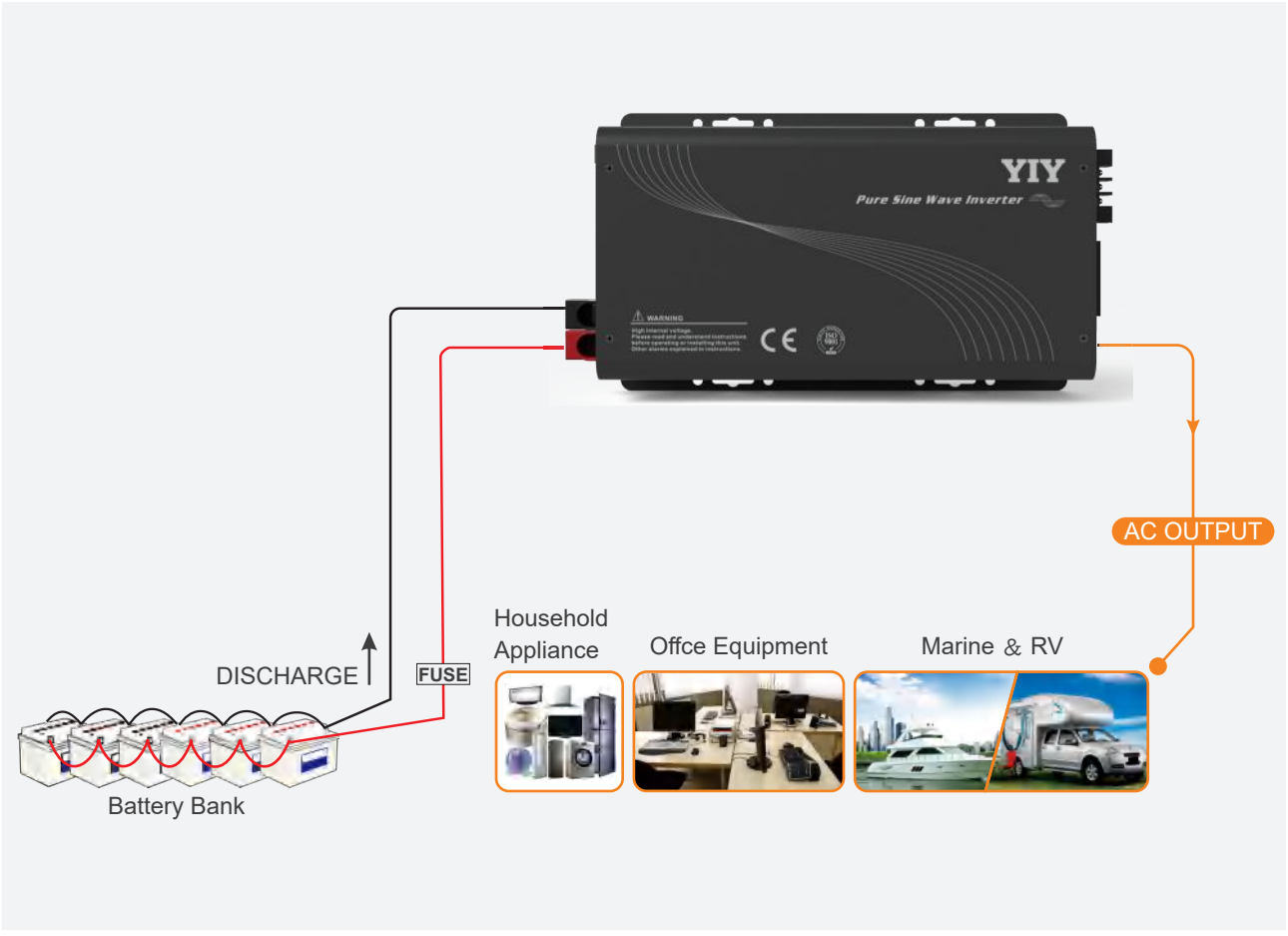


Model	Size(L*W*H)(mm)
OPS 0.6KW~1KW	270*160*70
OPS 1.5KW~2KW	355*190*95
OPS 3KW~4KW	411*285*122

• Technical Parameter

OPS Series Solar Inverter											
Input	Item	0612	1012	—	2012	0612E	1012E	—	2012E	3012E	—
		0624	1024	1524	2024	0624E	1024E	1524E	2024E	3024E	4024E
	Nominal Voltage	12Vdc(*2 for 24Vdc)									
	Operating Range	10Vdc~15.1Vdc									
	Startup Voltage	11.75Vdc~14.8Vdc									
		Load Level			0~29%		30~69%		70~100%		
	Battery Alarm Level	Battery-low Level			11.3Vdc		11.2Vdc		11.0Vdc		
		Battery-high Level			14.1Vdc		14.0Vdc		13.8Vdc		
	Battery Shut-down Level	Battery-under Level			10.3Vdc		10.2Vdc		10.0Vdc		
		Battery-over Level			15.1Vdc		15.0Vdc		14.8Vdc		
	Battery Recovery Level	Battery-under Recovery			12.5Vdc						
		Battery-over Recovery			14.0Vdc						
Output	Output Waveform	Pure Sine Wave									
	Output Power	600W	1000W	1500W	2000W	600W	1000W	1500W	2000W	3000W	4000W
	Surge Rating	2*Prated									
	Nominal Output Voltage	110/115/120Vac				220/230/240Vac					
	Output Voltage Regulation	± 5%(When input voltage higher than battery-low level)									
	Output Frequency	50/60Hz±0.1%									
	Output Current @ 220/230/240	—				2.73A / 2.61A / 2.50A	4.55A / 4.35A / 4.17A	6.81A / 6.52A / 6.25A	9.10A / 8.70A / 8.34A	13.65A/ 13.05A/ 12.51 A	18.18A/ 17.39A/ 16.67A
	Output Current @110/115/120	5.45A / 5.22A / 5A	9.09A / 8.70A / 8.33A	13.63A/ 13.04A/ 12.50A	18.18A/ 17.39A/ 16.67 A	——					
	Crest Factor	3:1									
	THD	<3%, linear load; <5%, non-linear load(At nominal Input voltage) <15%(At minimum cut-off (10Vdc) level)									
	Peak Output Current @ 220/230/240	—				5.46A / 5.22A / 5.00A	9.10A / 8.70A / 8.34A	13.62A /13.04A /12.50A	18.20A /17.40A /16.68A	273A / 26.1 A / 25.02A	36.36A /34.78A /33.34A
	Peak Output Current @110/115/120	10.92A/ 10.44A / 10A	182A / 17.4A / 16.68A	27.3A / 26.1A / 25A	36.36A/ 34.78A/ 33.34A	—					
	Efficiency	>88% (Typical), 90% (Peak)									
	No load Current Draw	<15W	<15W	<15W	<25W	<20W	<20W	<20W	<30W	<35W	<40W
	Stand-by Current Draw	<6W	<6W	<6W	<10W	<6W	<6W	<6W	<10W	<10W	<10W
	Over Load Protection	Refer to Sec.3.9 and Sec.3.10									

OPS Series Solar Inverter											
Environmental	Noise	<50 dB									
	Operating Temperature	Operation temperature: -20 ~ 70°C, -5 ~ 40 °C with full performance									
	Storage Temperature	-30~70°C									
	Operating Humidity	90% RH (No condense)									
	Operating Attitude	1500m									
Mechanical	Dimension L*W*H(mm)	270*160*70	355*190*95		411*285*107	270*160*70	355*190*95		411*285*107	411*285*122	
	Weight (KG)	2.5KG	4.0KG	4.5KG	8.0KG	2.5KG	4.0KG	4.5KG	8.0KG	8.8KG	8.8KG
	Force Cooling	Load and Temperature Controlled Cooling Fan									
Control	Protection	Overload, Short Circuits, Reverse Polarity, Over/ Under Input Voltage, Over Temperature, High Output Voltage, Low Output Voltage, Unit Internal Failure, Unit In-Parallel Failure									
	Startup Time	< 5s									
	Power Saving Recovery Time	5s									
Human Interface	LED Indicator	3-LED installed									
	Audible Alarm	Buzzer									
	Communication Interface	RS232									



CSB

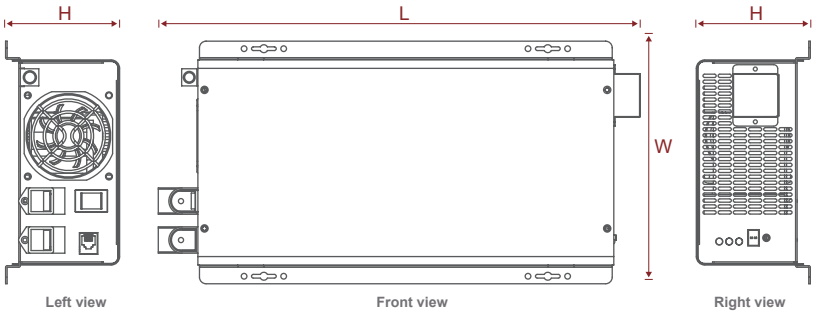
Battery Charger



• Features

- Three stage timer-based charging algorithm.
- Most suitable for fast battery charging.
- Operate with wider input voltage range.
- With PFC function.
- High efficiency.
- Highly reliable MOSEFET base design.
- Smart fan control.

• Product Dimensions



Model	Size(L*W*H)(mm)
CSB 500W	259*134*72.5
CSB 1000W	259*134*72.5
CSB 2000W	315*170*83.5

• Technical Parameter

CSB Series Battery Charger						
Model No.	05H / 05L		10H / 10L		20H / 20L	
Rated Power (W)	500W		1000W		2000W	
Battery Voltage	12/24Vdc	36/48Vdc	12/24Vdc	36/48Vdc	12/24Vdc	36/48Vdc
Output Current (A)	37.5/18.75A	12.5/9.375A	75/37.5A	25/18.75A	150/75A	50/37.5A
Display	LED Display / LCD Display (optional)					
AC Input Voltage Range (Vac)	H : 90-286Vac / L :70-145Vac					
Input Type	AC Plug Cord		AC Plug Cord		CSB20L: 3 PIN Terminal Block CSB20H : AC Plug Cord	
AC Input Frequency	40~70Hz					
Charging Efficiency	≥80%					
Operation Temperature	0°C ~ 50°C					
Storage Temperature	0°C ~ 105°C					
Protection	Over/Under Voltage, Over Temperature, Over Current					
Cooling	Smart fan control (Control by heat sink temperature, charging current)					
Chassis Material	Iron Chasis / Alu. Chasis					
Optional Accessories / Function	BTS; Reverse Polarity Protection; RS232 Comm Module; Battery 0V Charging; Rain Shield					
Product Size (mm) (L*W*H)	259*134*72.5		259*134*72.5		315*170*83.5	
Packing Size (mm) (L*W*H)	346*191*122		346*191*122		415*245*152	
Net Weight (KG)	2.50		2.50		3.50	
Gross Weight (KG)	2.77		2.77		3.92	
Remark	H : Short for High Voltage 220Vac L: Short for Low Voltage 110Vac					

Charge Voltage Select :

Battery Type			12Vdc Model		24Vdc Model		36Vdc Model		48Vdc Model	
DIP Switch	SW1	SW2	Bulk	Float	Bulk	Float	Bulk	Float	Bulk	Float
	0	1	12.2	12	24.4	24	36.6	36	48.8	48
	1	0	13.8	13.6	27.6	27.2	41.4	40.8	55.2	54.4
	1	1	14.2	13.6	28.4	27.2	42.6	40.8	56.8	54.4
	0	0	14.4	13.8	28.8	27.6	43.2	41.4	57.6	55.2

LFP-M IP65

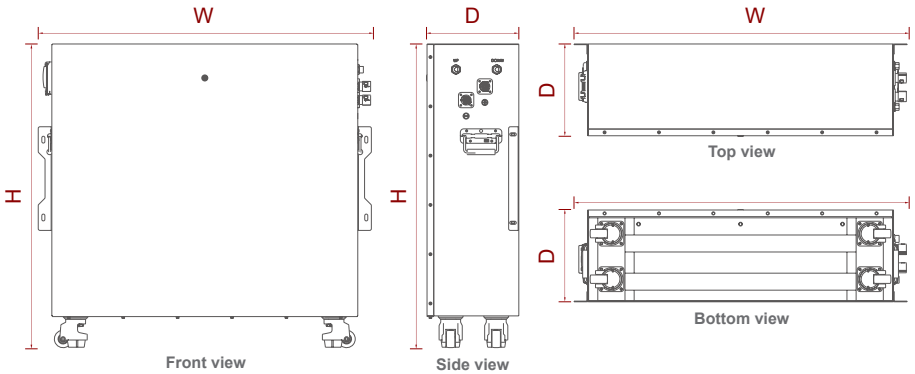
LiFePO4 Battery Pack



• Features

- Grade A LiFePO4 cells.
- Parallel connection up to 9 PCS.
- IP65 Protection.
- 51.2Vdc voltage output suitable for home energy storage system, communication stations and other applications.
- Standard CAN &RS485 communication port, Master & Slave relationship.
- Compatible with other brand inverters' communication protocols.

• Product Dimensions



Model	Size(W*D*H)(mm)
LFP-M48105H2	530*183*557
LFP-M48210H	530*183*865
LFP-M48280H	950*316.5*923.5
LFP-M48314H	

• Technical Parameter

LFP-M IP65 Series LiFePO4 Battery Pack				
Specifications				
Model	LFP-M48105H2	LFP-M48210H	LFP-M48280H	LFP-M48314H
Rated Voltage	51.2V			
Rated Capacity	105Ah	210Ah	280Ah	314Ah
Rated Energy	5.37KWH	10.75KWH	14.33KWH	16.07KWH
Cell Configuration	16S1P	16S2P	16S1P	
Battery Cell	3.2V 105AH		3.2V 280AH	3.2V 314AH
Cycles	6000@70%SOH,90%DOD (25℃)		8000@70%SOH,90%DOD (25℃)	
Standard Charge				
Operation temperature range @charging	0~60℃			
Rated charge voltage	56V			
Over charge protection	57.6V			
Allowed MAX charge current	100A	100A	140A	150A
Peak charge current	110A 3S	110A 3S	160A 2S	160A 3S
Rated charge current	50A	100A	140A	150A
Recommended charge method	CC-CV			
Standard Discharge				
Operation temperature range @discharging	-20~60℃			
Output Voltage Range	48~57.6V			
Discharge Cut-off voltage	48V			
Allowed MAX discharge current	100A	100A	140A	150A
Peak discharge current	110A 3S	110A 3S	160A 2S	160A 3S
Rated discharge current	100A	100A	140A	150A
Recommend discharge current	100A	100A	140A	150A
Mechanical Characteristics				
Dimension W*D*H	530*183*557mm	530*183*865mm	950*316.5*923.5mm	
Weight(N.W)	52KG	94KG	130KG	
Communication				
RS485	PC control and monitor			
CAN	Inverter PC control and monitor			
Storage and Transportation Requirements				
Storage Temperature	Less than 1 month	-20~35℃		
	Less than 6 month	-10~30℃		
Storage Humidity	45~75%RH			
SOC	Storage	60~75%SOC		
	Transport	45~55%SOC		

LFP-M IP21

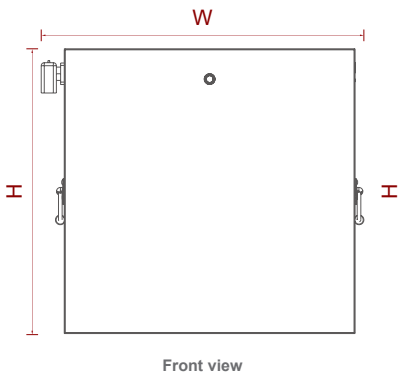
LiFePO4 Battery Pack



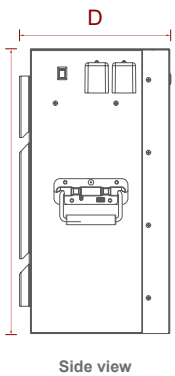
• Features

- Grade A LiFePO4 cells.
- Parallel connection up to 9 PCS.
- IP21 Protection.
- 51.2Vdc/25.6Vdc voltage output suitable for home energy storage system, communication stations and other applications.
- Standard CAN &RS485 communication port, Master & Slave relationship.
- Compatible with other brand inverters' communication protocols.

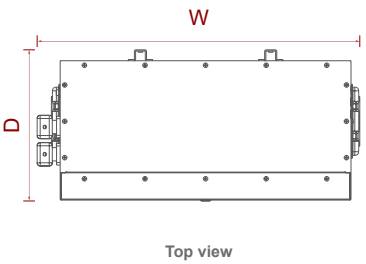
• Product Dimensions



Front view



Side view



Top view

Model	Size(W*D*H)(mm)
LFP-M48100H	460*420*171
LFP-M48206H	480*470*248
LFP-M48314H1	635*570*248
LFP-M24314H1	375*430*263

• Technical Parameter

LFP-M IP21 LiFePO4 Battery Pack				
Specifications				
Model	LFP-M48100H	LFP-M48206H	LFP-M48314H1	LFP-M24314H1
Rated Voltage	51.2V			25.6V
Rated Capacity	100Ah	206Ah	314Ah	314Ah
Rated Energy	5.12kWH	10.54KWH	16.07KWH	8.03KWH
Cell Configuration	16S1P			8S1P
Battery Cell	3.2V 100AH	3.2V 206Ah	3.2V 314Ah	3.2V 314AH
Cycles	3000@80%SOH, 90%DOD (25℃)	4000@80%SOH, 90%DOD (25℃)	8000@70%SOH, 90%DOD (25℃)	8000@70%SOH, 90%DOD (25℃)
Standard Charge				
Operation temperature range @charging	0~55℃			
Rated charge voltage	56V			28V
Over charge protection	57.6V			28.8V
Allowed MAX charge current	100A	150A		150A
Peak charge current	110A 3S	160A 3S		160A 3S
Rated charge current	50A	150A		150A
Recommended charge method	CC-CV			
Standard Discharge				
Operation temperature range @discharging	-10~60℃			
Output Voltage Range	48~57.6V			24~28.8V
Discharge Cut-off voltage	48V			24V
Allowed MAX discharge current	100A	150A		150A
Peak discharge current	110A 3S	160A 3S		160A 3S
Rated discharge current	100A	150A		150A
Recommend discharge current	100A	150A		150A
Mechanical Characteristics				
Dimension (W*D*H) (mm)	460*420*171	480*470*248	635*570*248	375*430*263
Weight(N.W)	52KG	80KG	130KG	60KG
Communication				
RS485	PC control and monitor			
CAN	Inverter PC control and monitor			
Storage and Transportation Requirements				
Storage Temperature	Less than 1 month	-20~35℃		
	Less than 6 month	-10~30℃		
Storage Humidity	45~75%RH			
SOC	Storage	60~75%SOC		
	Transport	45~55%SOC		

LFP-M-R

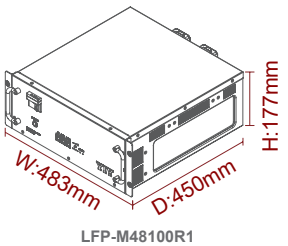
Rack Type LiFePO4 Battery Pack



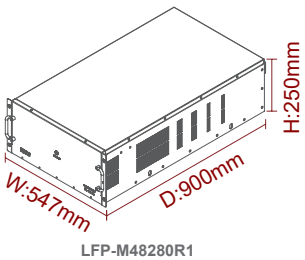
• Features

- Up to 5 layers can be stacked ,unified communication.
- IP21 Protection.
- 51.2Vdc 16.07KWH /14.33KWH /5.12KWH rated capacity.
- 51.2Vdc voltage output suitable for home energy storage system, small commercial scenarios and other applications.
- Standard CAN &RS485 communication port, can meet the requirement of several packages to connect in parallel, Master & Slave relationship, Monitor and other functions.Compatible with other brand inverters' communication protocols.

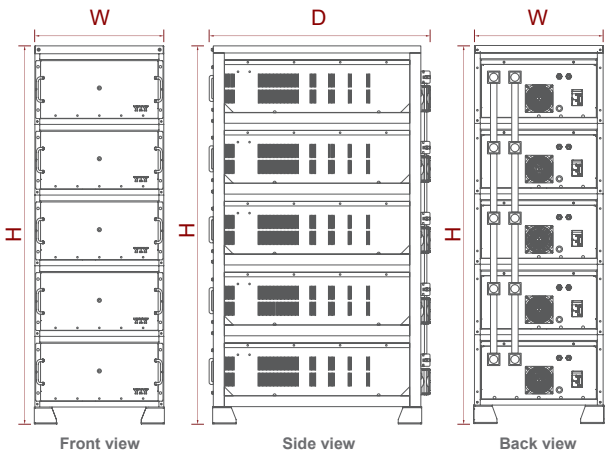
• Product Dimensions



LFP-M48100R1



LFP-M48280R1



5-Layer Rack Size:

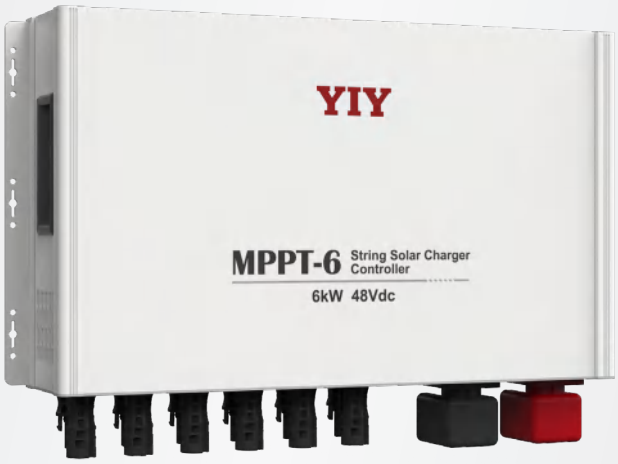
Model	Size(W*D*H)(mm)
LFP-M48100R1	490*450*1286.5
LFP-M48280R1	561*904*1636.5
LFP-M48314R1	

• Technical Parameter

LFP-M Rack type LiFePO4 Battery Pack			
Specifications			
Model	LFP-M48100R1	LFP-M48280R1	LFP-M48314R1
Rated Voltage	51.2V		
Rated Capacity	100AH	280Ah	314Ah
Rated Energy	5.12KWH	14.33KWH	16.07KWH
Cell Configuration	16S1P		
Battery Cell	3.2V 100AH	3.2V 280AH	3.2V 314AH
Cycles	6000@70%SOH,90%DOD (25℃)	8000@70%SOH,90%DOD (25℃)	
Standard Charge			
Operation temperature range charging	0~60℃		
Rated charge voltage	56.8V		
Max charge voltage	58.4±0.4V		
Over charge protection	59.2V		
Allowed MAX charge current	100A	140A	150A
Peak charge current	110A 3S	160A 2S	160A 3S
Rated charge current	50A	140A	150A
Recommended charge method	CC-CV		
Standard Discharge			
Operation temperature range discharging	-20~60℃		
Output Voltage Range	44.8~57.6V		
Discharge Cut-off voltage	42.4V		
Allowed MAX discharge current	110A	140A	150A
Peak discharge current	110A 3S	160A 2S	160A 3S
Rated discharge current	100A	140A	150A
Recommend discharge current	100A	140A	150A
Mechanical Characteristics			
Dimension W*D*H	483*450*177mm	547*900*250mm	
Weight(N.W)	52KG	130KG	
Communication			
RS485	PC control and monitor		
CAN	Inverter PC control and monitor		
Storage and Transportation Requirements			
Storage Temperature	Less than 1 month	-20~35℃	
	Less than 6 month	-10~30℃	
Storage Humidity	45~75%RH		
SOC	Storage	60~75%SOC	
	Transport	45~55%SOC	

MPPT-6

String Solar Charger Controller



• Features

- **Efficient MPPT Technology**
  Dual MPPT technology achieves over 99% tracking efficiency and 30% faster response, improving PV energy utilization by 20%–30%.

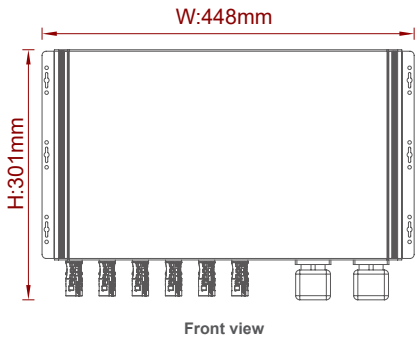
- **Flexible PV Connection**
  Supports direct single-panel connection for simplified system design and installation.

- **Wide PV Input Range**
  13–100Vdc wide PV input for flexible solar module compatibility.

- **Reliable Thermal Design**
  Industrial-grade components with efficient heat dissipation for stable operation.

- **Smart Communication & Protection**
  RS485 / Modbus RTU communication, IP66 protection and comprehensive electrical safety protection.

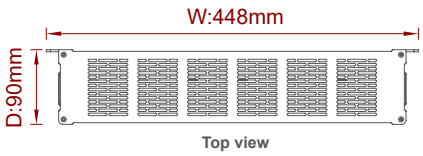
• Product Dimensions



Front view



Side view



Top view

• Technical Parameter

MPPT-6 Series String Solar Charger Controller			
Parameter Category	SCC1250*6	SCC2450*6	SCC4820*6
Charging Current	50A*6	50A*6	20A*6
PV Input Voltage (Vdc)	13Vdc- 100Vdc		
PV Input Current (A)	≤13 A*6		
Input Overvoltage Protection (Vdc)	101Vdc		
Overvoltage Recovery Voltage	95Vdc		
Input Undervoltage Protection (Vdc)	15Vdc	30Vdc	13 Vdc
Undervoltage Recovery Voltage	16Vdc	32Vdc	15Vdc
No-Load Current Consumption (mA)	≤1 (Max)		
Output Voltage (Vdc)	14.4Vdc (Modifiable via protocol)	28.8Vdc (Modifiable via protocol)	57.0Vdc (Modifiable via protocol)
Rated Output Current (A)	50A*6	50A*6	20A*6
Output Overvoltage Protection (Vdc)	17Vdc	34Vdc	60Vdc (Max)
Rated Output Power (W)	4400W	6000W	6000W
Conversion Efficiency (%)	95.5%	95.5%	95.6%
Over-temperature Protection (℃)	95 ℃		
Operating Temperature Range (℃)	-20℃ - 50℃		
Operating Humidity Range (%)	10% - 90%		
Storage Temperature Range (℃)	-30℃ - 70℃		
Operating Altitude (m)	≤3000m		
Communication Interface	RS485		

MPPT SCM4860

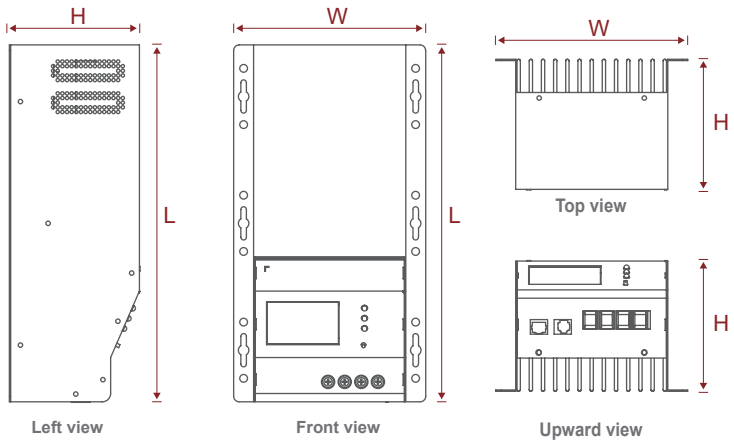
Advanced MPPT Solar Charger Controller



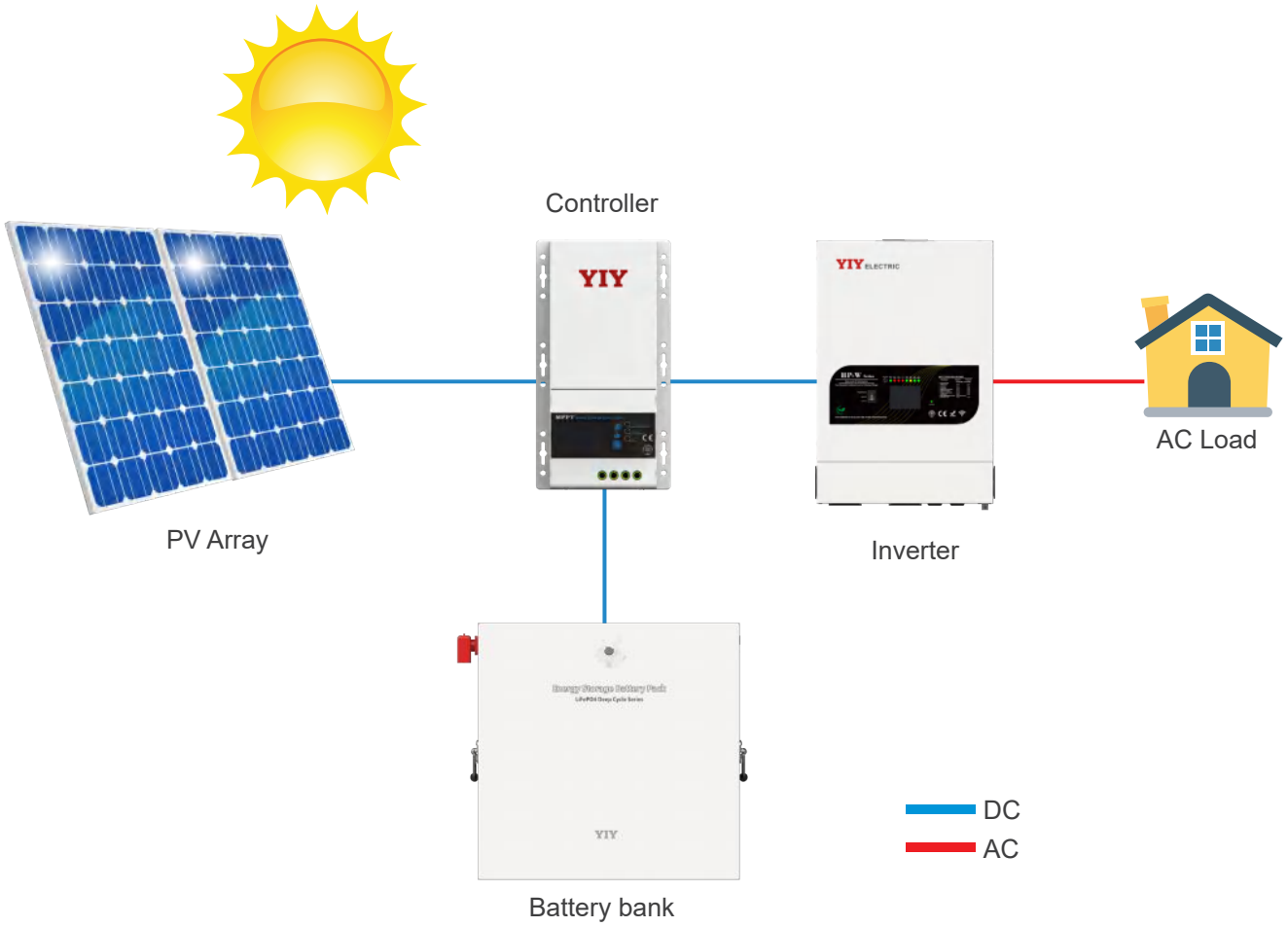
• Features

- Intelligent Max. Power Point Tracking technology increases efficiency 25%~30%.
- Compatible with PV systems in 12V,24V or 48V.
- Three-stage charging optimizes battery performance.
- Max. charging current up to 60A.
- Max. efficiency up to 98%.
- Battery Temperature Sensor (BTS) automatically provides temperature compensation.
- Automatic battery voltage detection.
- Support wide range of lead-acid batteries including wet, AGM and gel batteries, LiFePO4 battery packs.

• Product Dimensions



Model	Size(L*W*H)(mm)
MPPT 3KW	322*173*118

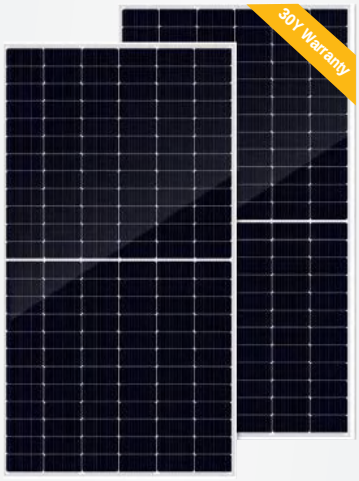


• Technical Parameter

MPPT Solar Charge & Discharge Controller				
Model	3KW	Charging Set points	Absorption Stage	Float Stage
Nominal System Voltage	12, 24, or 48 VDC (Auto detection)	Flooded Battery	14.6 / 29.2 / 58.4Vdc	13.5 / 27 / 54Vdc
Maximum Battery Current	60 Amp	AGM/Gel Battery (Default)	14.1 / 28.2 / 56.4Vdc	13.5 / 27 / 54Vdc
Maximum Solar Input Voltage	145Vdc	Over-charging Voltage	15Vdc / 30Vdc / 60Vdc	
PV Array MPPT Voltage Range	(Bat. Voltage+5)-115Vdc	Overcharging Comeback Voltage	14.5Vdc / 29Vdc/ 58Vdc	
Max. Input Power	12 Volt--800 Watts 24 Volt--1600 Watts 48 Volt--3200 Watts	Battery Defect Voltage	8.5Vdc/ 17Vdc/ 34Vdc	
Transient Surge Protection	4500 Watts / port	Battery Defect Comeback Voltage	9Vdc / 18Vdc / 36Vdc	
Temperature Compensation Coefficient	Volt-5 mV/°C/ cell (25 °C ref.)	Mechanical And Environment	Product size (L*W*H mm)	322*173*118
Temperature Compensation	0°C ~ 50°C	Product Weight (KG)	4.8	
Charging Stages	Bulk, Absorption, Float	Enclosure	IP31 (indoor & vented)	

560W-600W Solar Panel

Bifacial Monocrystalline Module



• Features

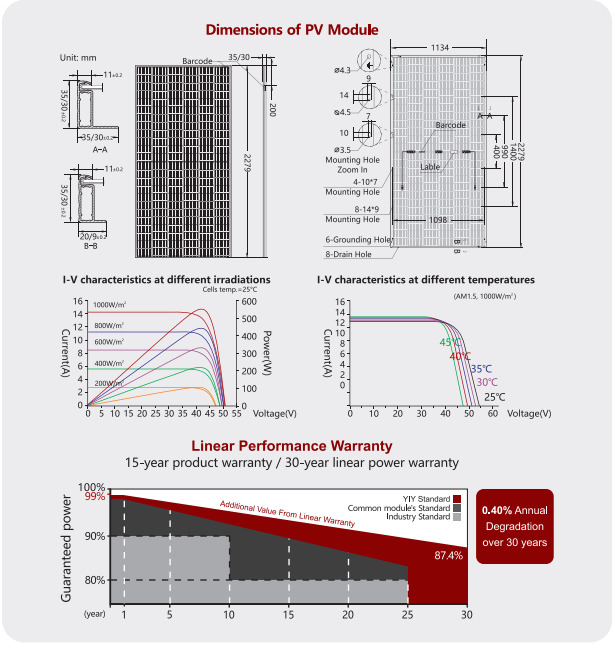
- Higher Power Output
- Multi Busbar Technology
- PID Resistance
- Low-light Performance
- Durability Against Extreme Environments Conditions
- EL Full Inspection

• Technical Parameter

Specifications(BNPI)

Rated Power in Watts-Pmax(Wp)	619.1	624.9	629.9	635.3	641.1	647.0	652.5	658.8	665.2
Open Circuit Voltage-Voc(V)	52.65	52.81	52.97	53.13	53.29	53.45	53.61	53.77	53.93
Short Circuit Current-Isc(A)	14.81	14.91	14.98	15.05	15.13	15.21	15.28	15.34	15.41
Max. Power Voltage-Vmpp(V)	44.32	44.46	44.59	44.81	45.04	45.26	45.48	45.70	45.92
Max. Power Current-Impp(A)	13.97	14.06	14.13	14.18	14.24	14.30	14.35	14.42	14.49
Power Tolerance	0~+3%								
Operating Temperature	-40°C~85°C								

*BNPI: Irradiance: front 1000W/m², rear 135W/m², Cell Temperature 25°C, AM=1.5



Electrical Characteristics (STC*)

Rated Power in Watts-Pmax(Wp)	560	560	570	575	580	585	590	595	600
Open Circuit Voltage-Voc(V)	52.45	52.45	52.77	52.93	53.09	53.26	53.41	53.57	53.73
Short Circuit Current-Isc(A)	13.47	13.47	13.62	13.69	13.76	13.83	13.89	13.95	14.01
Max. Power Voltage-Vmpp(V)	44.12	44.12	44.39	44.61	44.84	45.06	45.28	45.50	45.72
Max. Power Current-Impp(A)	12.71	12.71	12.85	12.90	12.95	13.00	13.06	13.12	13.18
Module Efficiency(%)	21.67	21.67	22.06	22.25	22.44	22.6	22.8	23.02	23.22
Maximum System Voltage	1500V DC								
Fuse Rating(A)	30								
Temperature Coefficient Pmax	-0.29%/°C								
Temperature Coefficient Isc	0.045%/°C								
Temperature Coefficient Voc	-0.25%/°C								
Refer. Bifacial Factor	ΦIsc=80%±10%,ΦVoc=100%±3%,ΦPmax=80%±10%								

*STC: Irradiance 1000W/m², module temperature 25°C , AM=1.5

Mechanical Characteristics

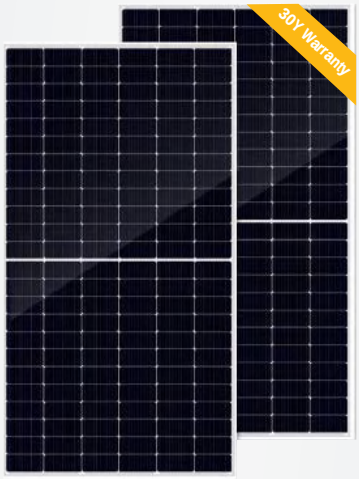
Number of Cells	144pcs
Type of Cell	N-TOPCon Mono
Thickness of Glass(mm)	2.0
Type of Frame	Anodized Aluminum Alloy
Size of Module(mm)	2279×1134×30
Weight(kg)	32
Junction Box	IP68, 1500V DC, 3 Diodes
Cables/Connectors	4.0mm², MC4 compatible
Length of Cable	+300mm/-200mm Length can be customized(connector included)

Packaging Configuration

Height of Modules (mm)	35	30
Number of Modules Per Pallet	31	36
Packaging Box Dimensions (l×w×h) (mm)	2300×1120×1260	2300×1120×1260
Box Gross Weight (kg)	1020	1180
Number of Modules Per 40ft (HQ) Container	620	720
Number of Pallets Per 40ft (HQ) Container	20	20

600W-630W Solar Panel

Bifacial Monocrystalline Module



• Features

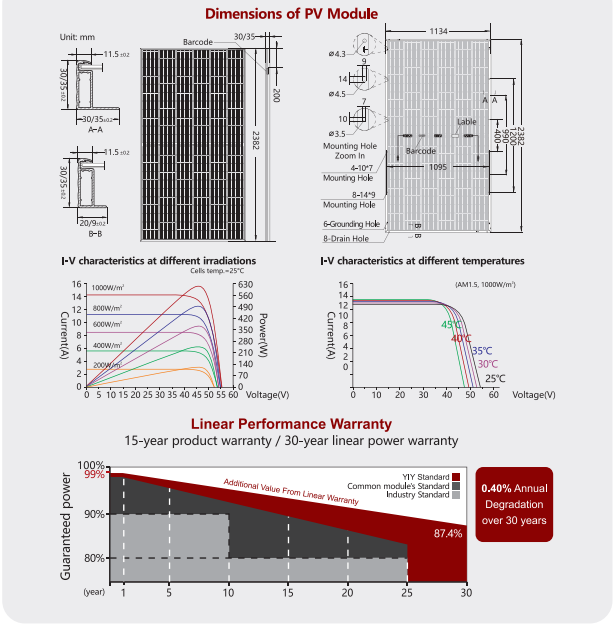
- Higher Power Output
- Multi Busbar Technology
- PID Resistance
- Low-light Performance
- Durability Against Extreme Environments Conditions
- EL Full Inspection

• Technical Parameter

Electrical Characteristics (STC*)

Rated Power In Watts-Pmax(Wp)	600	605	610	615	620	625	630
Open Circuit Voltage-Voc(V)	48.40	48.70	49.00	49.30	49.60	49.80	50.30
Short Circuit Current-Isc(A)	15.80	15.83	15.86	15.89	15.91	15.93	15.94
Max. Power Voltage-Vmpp(V)	40.30	40.50	40.80	41.10	41.40	41.60	42.00
Max. Power Current-Impp(A)	14.91	14.94	14.96	14.98	14.99	15.00	15.01
Module Efficiency(%)	22.20	22.40	22.60	22.80	23.00	23.10	23.32
Maximum System Voltage	1500V DC						
Fuse Rating(A)	30						
Temperature Coefficient Pmax	-0.30%/°C						
Temperature Coefficient Isc	0.046%/°C						
Temperature Coefficient Voc	-0.25%/°C						
Refer. Bifacial Factor	80±5%						

*STC: Irradiance 1000W/m², module temperature 25°C , AM=1.5



Working Characteristics (NOCT*)

Rated Power In Watts-Pmax(Wp)	457	461	465	469	473
Open Circuit Voltage-Voc(V)	37.75	37.92	38.09	38.26	38.44
Short Circuit Current-Isc(A)	12.11	12.16	12.21	12.26	12.31
Max. Power Voltage-Vmpp(V)	46.03	46.22	46.41	46.60	46.70
Max. Power Current-Impp(A)	12.86	12.92	12.98	13.04	13.10
Power Tolerance	0~+3%				
NOCT	45°C ±2°C				
Operating Temperature	-40°C ~85°C				

*NOCT: Irradiance 800W/m², ambient temperature 20°C , wind speed 1m/s

Electrical characteristics with different rear side power gain

	Pmax/W	Voc/V	Isc/A	Vmpp/V	Impp/A
5%	661	50.30	16.74	42.00	15.76
10%	693	50.30	17.53	42.00	16.51

The additional gain from the rear side compared to the power of the front side at the standard test condition.
It depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.

Mechanical Characteristics

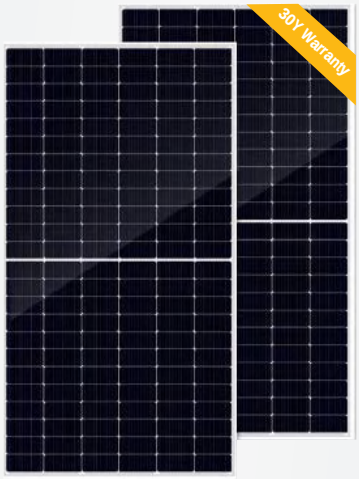
Number of Cells	132pcs
Type of Cell	N-TOPCon Mono
Thickness of Glass(mm)	2.0
Type of Frame	Anodized Aluminum Alloy
Size of Module(mm)	2382×1134×35/30
Weight(kg)	33
Junction Box	IP68, 1500V DC 3 Diodes;Cables/connectors; 4.0mm², MC4 compatible
Length of Cable	+300mm/-200mm Length can be customized(connector included)

Packaging Configuration

Height of Modules (mm)	35	30
Number of Modules Per Pallet	31	36
Packaging Box Dimensions (l×w×h) (mm)	2485×1120×1260	1260×1120×2595
Box Gross Weight (kg)	955	1225
Number of Modules Per 40ft (HQ) Container	496	720
Number of Pallets Per 40ft (HQ) Container	20	20

685W-730W Solar Panel

Bifacial Monocrystalline Module



• Features

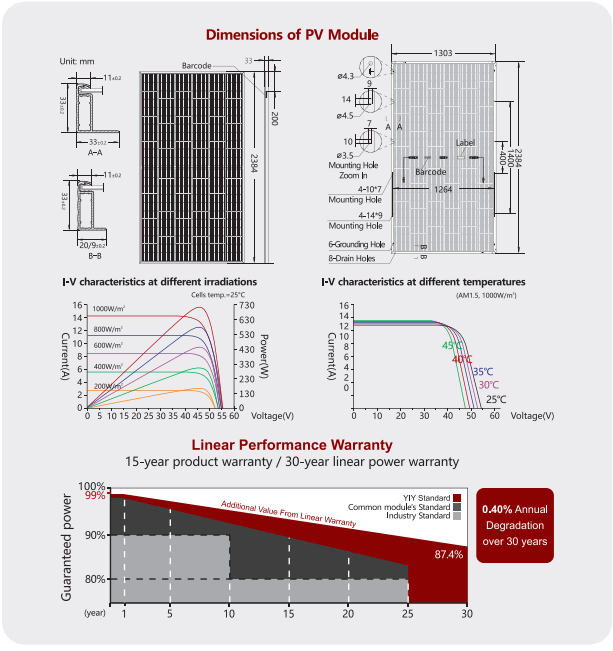
- Higher Power Output
- Multi Busbar Technology
- PID Resistance
- Low-light Performance
- Durability Against Extreme Environments Conditions
- EL Full Inspection

• Technical Parameter

Specifications(BNPI)

Rated Power in Watts-Pmax(Wp)	758.9	764.7	769.3	774.8	780.6	785.7	791.6	797.1	802.6	808.6
Open Circuit Voltage-Voc(V)	47.90	48.10	48.50	48.80	49.00	49.20	49.40	49.60	49.80	50.00
Short Circuit Current-Isc(A)	20.06	20.11	20.15	20.19	20.24	20.28	20.33	20.37	20.41	20.46
Max. Power Voltage-Vmpp(V)	40.10	40.30	40.50	40.70	40.90	41.10	41.30	41.50	41.70	41.90
Max. Power Current-Impp(A)	18.93	18.98	19.00	19.04	19.09	19.12	19.17	19.21	19.25	19.30
Power Tolerance	0~+3%									
Operating Temperature	-40°C~85°C									

*BNPI: Irradiance: front 1000W/m², rear 135W/m², Cell Temperature 25°C, AM=1.5



Electrical Characteristics (STC*)

Rated Power in Watts-Pmax(Wp)	685	690	695	700	705	710	715	720	725	730
Open Circuit Voltage-Voc(V)	47.70	47.90	48.30	48.60	48.80	49.00	49.20	49.40	49.60	49.80
Short Circuit Current-Isc(A)	18.21	18.25	18.28	18.32	18.36	18.40	18.44	18.48	18.52	18.56
Max. Power Voltage-Vmpp(V)	39.90	40.10	40.30	40.50	40.70	40.90	41.10	41.30	41.50	41.70
Max. Power Current-Impp(A)	17.19	17.23	17.25	17.29	17.33	17.36	17.40	17.44	17.48	17.52
Module Efficiency(%)	22.05	22.21	22.37	22.53	22.70	22.86	23.02	23.18	23.34	23.50
Maximum System Voltage	1500V DC									
Fuse Rating(A)	30									
Temperature Coefficient Pmax	-0.30%/°C									
Temperature Coefficient Isc	0.046%/°C									
Temperature Coefficient Voc	-0.25%/°C									
Refer. Bifacial Factor	ΦIsc=80%±10%,ΦVoc=100%±3%,ΦPmax=80%±10%									

*STC: Irradiance 1000W/m², module temperature 25°C , AM=1.5

Mechanical Characteristics

Number of Cells	132pcs
Type of Cell	N-TOPCon Mono
Thickness of Glass(mm)	2.0
Type of Frame	Anodized Aluminum Alloy
Size of Module(mm)	2384×1303×33
Weight(kg)	37.5
Junction Box	IP68, 1500V DC, 3 Diodes
Cables/Connectors	4.0mm², MC4 compatible
Length of Cable	+350mm/-250mm Length can be customized(connector included)

Packaging Configuration

Height of Modules (mm)	33
Number of Modules Per Pallet	33
Packaging Box Dimensions (l×w×h) (mm)	1326×1140×2515
Box Gross Weight (kg)	1280
Number of Modules Per 40ft (HQ) Container	594
Number of Pallets Per 40ft (HQ) Container	18

YIY

Start Digital Power Supply

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