

**YIY**

# **INW**

**Inverter / MPPT Charger / AC Charger**

*Start Digital Power Supply*



# ZHEJIANG YIYEN HOLDING GROUP

Zhejiang YIYEN HOLDING GROUP is a high-tech company that focuses on researching and manufacturing power electronic technology, integrating design, research and development, manufacturing, sales and service. YIYEN is dedicated to reducing electricity costs, improving electricity efficiency, and providing core power equipment and system solutions for the energy Internet of Things. With electrochemical energy storage and energy efficiency management as its core industry, YIYEN provides energy-saving service for power system, communication system, financial system, education system, medical system, and large industrial and mining enterprises.

Energy storage and energy efficiency management are critical reducing carbon emissions and promoting sustainable development. YIYEN's mission is to help make energy and ecology more harmonious by providing advanced energy storage and power quality solutions which improve efficiency, reduce costs, and promote clean energy. YIYEN will always continue to devote ourselves to the research and development and manufacturing of power electronic technology, and be committed to delivering cutting-edge solutions helping customers meet their energy management goals while contributing to a more sustainable future for all.

**300+**

Staff



**30000m<sup>2</sup>+**

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.: 2022ZQ2113R05

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




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



The scope 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.gpc.org.cn or search the CNCA website: www.cnca.gov.cn

**ZHEJIANG QUANPIN CERTIFICATION CO.,LTD.**  
Room 401, Floor 4, Building 1, No.14, Paper Road, Paper Street, Binjiang District, Hangzhou City, Zhejiang Province, China 310012. 电话: http://www.gpc.org.cn

ISO45001



**OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM CERTIFICATE**  
Certificate No.: 2022ZQ20467R05

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

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Room 401, Floor 4, Building 1, No.14, Paper Road, Paper Street, Binjiang District, Hangzhou City, Zhejiang Province, China 310012. 电话: http://www.gpc.org.cn

ISO14001



**ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATE**  
Certificate No.: 2022ZQ20469R05

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)**

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Room 401, Floor 4, Building 1, No.14, Paper Road, Paper Street, Binjiang District, Hangzhou City, Zhejiang Province, China 310012. 电话: http://www.gpc.org.cn

**CERTIFICATION**

**CERTIFICATION**

**STEK**

**CERTIFICATION**

**Certificate of compliance**

Low Voltage Directive 2014/53/EU

Certificate No. STK000480594

Certificate holder: LEMBA HYDRA TECHNOLOGY COMPANY LIMITED

Address: No. 17, Along Long Road, Lian Du Zone, Lian Du City, Zhejiang Province, China

Manufacturer: Same Certificate holder

Address: Same Certificate holder

Brand Name: HY

Product Designation: Dry-Power Cordless Inverter & Charger

Model / Series Models: AFC 150W, AFC 150W, AFC 200W, AFC 200W, AFC 400W, AFC 400W, AFC 600W

Test Report No.: STK000480592

Test Standards: EN 60335-1, 2004 + A11, 2005

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

The Low Voltage Directive 2014/53/EU

May 16, 2023

Date of Issue: Certification Mark

Safety Laboratory Manager

STK Testing and Certification (Shanghai) Co., Ltd.  
 160000 Shanghai, No. 41, Jiangyin Road, Jiangyin Community,  
 Shanghai Free Trade Zone, Shanghai, China  
 Tel: +86-21-5101-1122, E-mail: service@stkcert.com, Web: www.stkcert.com

**CERTIFICATION**

**STEK**

**VERIFICATION**

**Verification of compliance**

Electromagnetic compatibility 2014/53/EU

Certificate No. STK000480597

Certificate holder: LEMBA HYDRA TECHNOLOGY COMPANY LIMITED

Address: No. 17, Along Long Road, Lian Du Zone, Lian Du City, Zhejiang Province, China

Manufacturer: Same Certificate holder

Address: Same Certificate holder

Brand Name: HY

Product Designation: High-Power Cordless Inverter & Charger

Model / Series Models: HF 150W, HF 150W, HF 200W, HF 200W, HF 400W, HF 400W, HF 600W

Test Report No.: STK000480596

Test Standards: EN 60335-1, 2004 + A11, 2005, EN 55022, 2007 + A1, 2011, 2012, EN 55024, 2010 + A1, 2011 + A2, 2012, EN 61000-3-2, 2014 + A1, 2019 + A2, 2021, EN 61000-3-3, 2013 + A1, 2019 + A2, 2021

Conclusion: The evaluation is issued in accordance with the Directive 2014/53/EU of the European Parliament and of the Council of 15 April 2014 on the harmonization of the laws of the Member States relating to the marking available on the market of radio equipment.

June 17, 2023

Date of Issue: Certification Mark

SST, Laboratory Manager

STK Testing and Certification (Shanghai) Co., Ltd.  
 160000 Shanghai, No. 41, Jiangyin Road, Jiangyin Community,  
 Shanghai Free Trade Zone, Shanghai, China  
 Tel: +86-21-5101-1122, E-mail: service@stkcert.com, Web: www.stkcert.com

**CERTIFICATION**

**STEK**

**VERIFICATION**

**Verification of compliance**

Electromagnetic compatibility 2014/53/EU

Certificate No. STK000480595

Certificate holder: LEMBA HYDRA TECHNOLOGY COMPANY LIMITED

Address: No. 17, Along Long Road, Lian Du Zone, Lian Du City, Zhejiang Province, China

Manufacturer: Same Certificate holder

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June 17, 2023

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 Tel: +86-21-5101-1122, E-mail: service@stkcert.com, Web: www.stkcert.com

**CERTIFICATION**

**STEK**

**CERTIFICATION**

**Certificate of compliance**

Low Voltage Directive 2014/53/EU

Certificate No. STK000480590

Certificate holder: LEMBA HYDRA TECHNOLOGY COMPANY LIMITED

Address: No. 17, Along Long Road, Lian Du Zone, Lian Du City, Zhejiang Province, China

Manufacturer: Same Certificate holder

Address: Same Certificate holder

Brand Name: HY

Product Designation: High-Power Cordless Inverter & Charger

Model / Series Models: HF 150W, HF 150W, HF 200W, HF 200W, HF 400W, HF 400W, HF 600W

Test Report No.: STK000480592

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

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June 17, 2023

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 Tel: +86-21-5101-1122, E-mail: service@stkcert.com, Web: www.stkcert.com

**DEKRA**

**ATTESTATION OF CONFORMITY**

Issued to: LEMBA HYDRA TECHNOLOGY CO., LTD  
 2310 National Industrial Park No. 17, Along Long Road, Nantong Free Trade Zone, Lian Du City, Zhejiang Province, P.R. China

For the product: Power Converter Module

Trade name: HY

Type/Model: GP-802-300, GP-800-300

Rating: See model list

Manufactured by: LEMBA HYDRA TECHNOLOGY CO., LTD  
 2310 National Industrial Park No. 17, Along Long Road, Nantong Free Trade Zone, Lian Du City, Zhejiang Province, P.R. China

Requirements: EN 62109-1, 2019  
 EN 62109-2, 2019

This attestation is granted in accordance with the standards of DEKRA, the results of which are set forth in a certificate file no. 817621-01.

The examination has been carried out on one single specimen of several specimens of the product submitted by the manufacturer. The attestation does not include an assessment of the manufacturer's production. Conformity of the 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 CE directives are complied with.

Antwerp, 1 March 2024

Number: 817621-01-000

DEKRA Testing and Certification (Shanghai) Co., Ltd.  
 Kang Liu  
 Safety Lab  
 Certification Manager

CE

DEKRA Testing and Certification (Shanghai) Co., Ltd.  
 200000 Shanghai, No. 2000, Xujiahui Road, Xujiahui Community,  
 Shanghai Free Trade Zone, Shanghai, China  
 Tel: +86-21-5101-1122, E-mail: service@dekra.com, Web: www.dekra.com

**DEKRA**

**ATTESTATION OF CONFORMITY**

Issued to: LEMBA HYDRA TECHNOLOGY CO., LTD  
 No. 17, Along Long Road, Nantong Free Trade Zone, Lian Du City, Zhejiang Province, P.R. China (Along National Industrial Park)

For the product: Power Converter System

Trade name: HY

Type/Model: GP-802-300, GP-800-300

Rating: GP-802-300 (S): Voltage range: 100-110VAC, Max. Current: 100A, AC, Max. power: 8000W, Input voltage: 100VAC, Max. Current: 100A, DC, Max. power: 10000W, 10000W  
 GP-800-300 (S): Voltage range: 100-110VAC, Max. Current: 100A, AC, Max. power: 10000W, Input voltage: 100VAC, Max. Current: 100A, DC, Max. power: 10000W, 10000W  
 GP-802-300 (S): Voltage range: 100-110VAC, Max. Current: 100A, AC, Max. power: 8000W, Input voltage: 100VAC, Max. Current: 100A, DC, Max. power: 10000W, 10000W  
 GP-800-300 (S): Voltage range: 100-110VAC, Max. Current: 100A, AC, Max. power: 10000W, Input voltage: 100VAC, Max. Current: 100A, DC, Max. power: 10000W, 10000W

Manufactured by: LEMBA HYDRA TECHNOLOGY CO., LTD  
 No. 17, Along Long Road, Nantong Free Trade Zone, Lian Du City, Zhejiang Province, P.R. China (Along National Industrial Park)

Requirements: EN 62109-1, 2019 + A1, 2020

This attestation is granted in accordance with the standards of DEKRA, the results of which are set forth in a certificate file no. 817621-02.

The examination has been carried out on one single specimen of several specimens of the product submitted by the manufacturer. The attestation does not include an assessment of the manufacturer's production. Conformity of the 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 CE directives are complied with.

Antwerp, 29 March 2024

Number: 817621-01-000

DEKRA Testing and Certification (Shanghai) Co., Ltd.  
 Kang Liu  
 Safety Lab  
 Certification Manager

CE

DEKRA Testing and Certification (Shanghai) Co., Ltd.  
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 Shanghai Free Trade Zone, Shanghai, China  
 Tel: +86-21-5101-1122, E-mail: service@dekra.com, Web: www.dekra.com

**DEKRA**

**CERTIFICATE OF CONFORMITY**

Issued to: LEMBA HYDRA TECHNOLOGY CO., LTD  
 No. 17, Along Long Road, Nantong Free Trade Zone, Lian Du City, Zhejiang Province, P.R. China (Along National Industrial Park)

For the product: Power Converter System

Trade name: HY

Type/Model: GP-802-300, GP-800-300

Rating: Operating temperature range: -25°C to +55°C  
 Protection class: IP20  
 Input power range: 10000W, 10000W, 10000W  
 GP-802-300 (S): Voltage range: 100-110VAC, Max. Current: 100A, AC, Max. power: 8000W, Input voltage: 100VAC, Max. Current: 100A, DC, Max. power: 10000W, 10000W  
 GP-800-300 (S): Voltage range: 100-110VAC, Max. Current: 100A, AC, Max. power: 10000W, Input voltage: 100VAC, Max. Current: 100A, DC, Max. power: 10000W, 10000W

Manufactured by: LEMBA HYDRA TECHNOLOGY CO., LTD  
 No. 17, Along Long Road, Nantong Free Trade Zone, Lian Du City, Zhejiang Province, P.R. China (Along National Industrial Park)

Requirements: EN 62109-1, 2019 (Requirements for Type A) and EN 62109-2, 2019 (Requirements for Type B)

This Test Certificate is granted in accordance with the standards of DEKRA, the results of which are set forth in a certificate file no. 817621-03.

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 the production with the specimen tested by DEKRA is not the responsibility of DEKRA.

This Test Certificate expires on 31 May 2025 or expires upon withdrawal of one of the above mentioned standards.

Shanghai, 31 May 2024

Number: 817621-01-000

DEKRA Testing and Certification (Shanghai) Co., Ltd.  
 Kang Liu  
 Safety Lab  
 Certification Manager

CE

DEKRA Testing and Certification (Shanghai) Co., Ltd.  
 200000 Shanghai, No. 2000, Xujiahui Road, Xujiahui Community,  
 Shanghai Free Trade Zone, Shanghai, China  
 Tel: +86-21-5101-1122, E-mail: service@dekra.com, Web: www.dekra.com

# PRODUCT CATALOG

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# PRODUCT CATALOGUE

# UE

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# TP

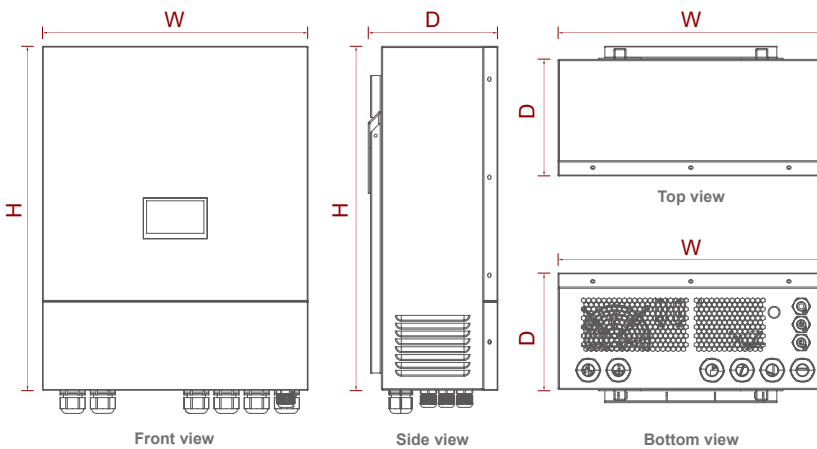
## Hybrid Inverter Charger



### • Features

- 3K/6K: 120V single phase 60Hz.
- 3K/6K/12K: 230V single phase 50Hz.
- Built-in EMS.
- MODBUS/RS485/CAN communication.
- 60A~240A AC charging current.
- Grid-battery hybrid power supply.
- IP54.
- Max. efficiency: 92%.

### • Product Dimensions



Model	Size(W*D*H)
TP 3-6KW	440*195*570mm
TP 12KW	/



**• Technical Parameter**

TP Series Hybrid Inverter Charger						
Model	3048	3048E	6048	6048E	12048E	
<b>Parameter Configuration</b>						
Inverter Mode	Battery Rated Voltage	48V				
	Battery Voltage Range	40-58V				
	Rated Output Power	3000W	3000W	6000W	6000W	12000W
	Inverter Mode Efficiency	92%(Peak)				
	Rated Output Voltage	120Vac	230Vac	120Vac	230Vac	230Vac
	Rated Output Frequency	50/60Hz				
	Overload Capacity	(110%<load<125%) ±10%: Protection in 15 minutes; (125%<load<150%) ±10%: Post-60s protection; (load>150%) ±10%: Post-20s protection.				
Mains Mode	Charging Voltage Range	52-59Vdc				
	Max. Charging Current	60A	60A	120A	120A	240A
	Utility Input Voltage	120Vac	230Vac	120Vac	230Vac	230Vac
	Input Voltage Range	80/90-140Vac, 140/184-254Vac				
	AC Rated Frequency	50/60Hz				
	Frequency Range	47-55, 57-65/40-70Hz				
<b>System Parameter</b>						
System Parameter	Cooling Method	Forced air cooling				
	Noise Level	≤75dB				
	Temperature Range	-20°C ~ 40°C				
	Protection Level	IP54				
	Humidity Range	0-95%(Non-condensing)				
	Dimensions(W*D*H)	440*195*570(mm)				/
<b>Other</b>						
Other	Max. Efficiency	92%				
	Wiring Method	Single phase				
	Isolation Type	Built-in transformer isolation				
	Protection Functions	AC Over/Under Voltage, Over-Temperature, Frequency Anomaly, Over-Current, Fan Fault, Battery Over/Under Voltage, Battery Over-Temperature				
	Display	LCD+APP				
	Communication Interface	RS485(MPPT), CAN(BAT)				
	Communication Settings	Adjustable parameters can be configured via the LCD screen, PC-based software, or mobile APP				
	Hybrid Power Supply	In utility mode, the battery can supply 95% of the load's energy demand				

# TP-3

## Off Grid Three Phase Hybrid Inverter Charger



Wall-mounted:9-18KW

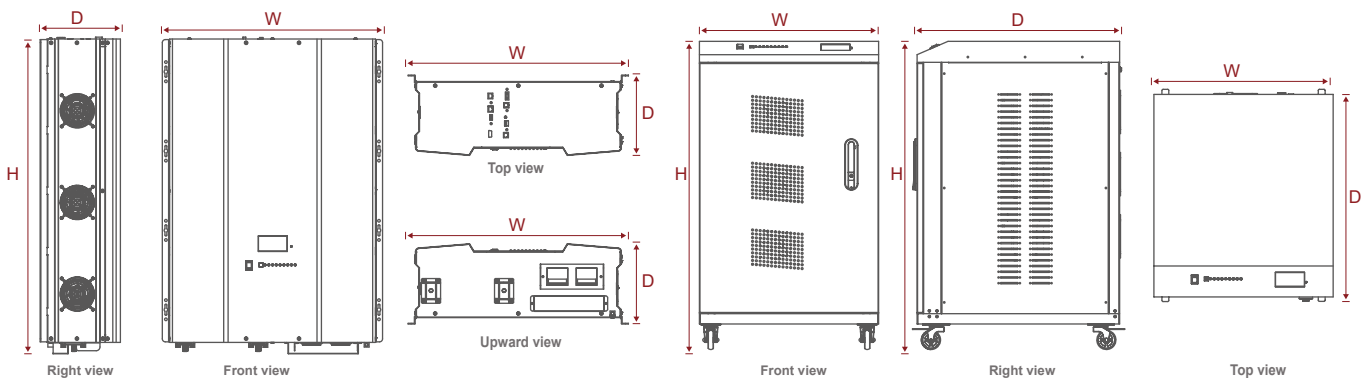


Cabinet type:36KW

### • Features

- Unbalance load acceptable idle consumption search Mode,less than 100w when power saver on.
- Remote control optional(LED or LCD remote).
- MODBUS/RS485/CAN communication.
- Built-in EMS.
- Low frequency 48Vdc.
- 9K/18K/36K 400V/207V optional.
- 180A~720A AC charging current.
- 100% three phase unbalance.
- Grid-battery hybrid power supply.

### • Product Dimensions



Model	TPP 9KW~18KW (Wall-mounted)	TPP 36KW (Cabinet type)
Size(W*D*H)	583*213*803mm	513*650*835mm

## • Technical Parameter

TP-3 Series Off Grid Three Phase Hybrid Inverter Charger				
Inverter Output	Model	9KW	18KW	36KW
	Continuous Output Power	9000W	18000W	36000W
	Surge Rating(20s)	27000W	54000W	108000W
	Capable of Starting Electric Motor	9HP	18HP	36HP
	Unbalance Load Acceptable	100%		
	DC Input Voltage	48Vdc		
	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+Grid		
	Output Voltage Rating	3AC/N 400V/207V		400V
	Output Phase Voltage	120/230Vac	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	48Vdc		
	Min. Start Voltage	42Vdc / 44Vdc		
	Low Battery Alarm	42Vdc / 44Vdc		
	Low Battery Trip	40Vdc / 42Vdc		
	High Voltage Alarm & Fault	64Vdc		
	High DC Input Recovery	62Vdc		
	Low Battery Voltage Recover	52Vdc		
	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)	20A	30A	60A
	Charger Breaker Rating(120Vac)	30A	60A	

# HP-W

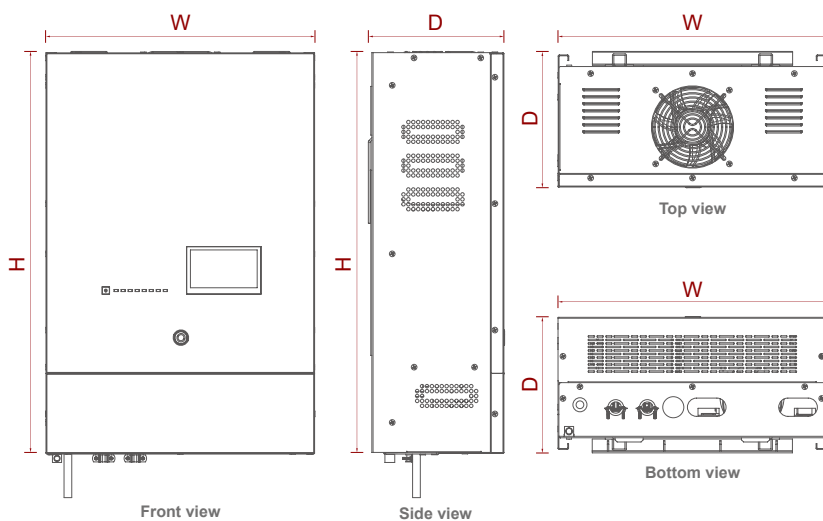
## Low Frequency Pure Sine Wave Inverter Charger



### • 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.

### • Product Dimensions



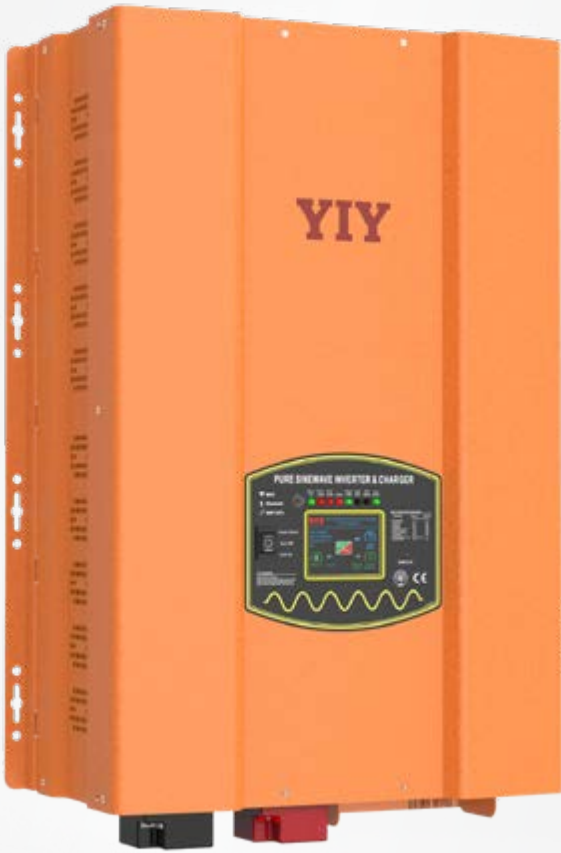
Model	Size(W*D*H)
HP-W 3-6KW	383*188*572mm
HP-W 12KW	/

**• Technical Parameter**

HP-W Series Low Frequency Pure Sine Wave Inverter Charger						
Model	3048	3048E	6048	6048E	12048E	
Inverter mode	Battery Rated Voltage	48Vdc				
	Battery Voltage Range	40-58Vdc				
	Rated Output Power	3000W	3000W	6000W	6000W	12000w
	Inverter Mode Efficiency	88% (Peak)				
	Rated Output Voltage	120Vac	230Vac	120Vac	230Vac	230Vac
	Rated Output Frequency	50/60Hz				
	Overload Capacity	(110%<load<125%) ±10%: protection after 15 minutes; (125%<load<150%) ±10%: protection after 60s; (load>150%) ±10%: protection after 20s				
Line mode	Charging Voltage Range	52-59Vdc (0-9 levels adjustable)				
	Max. Charging Current	30A	30A	60A	60A	120A
	Mains Input Voltage	120Vac	230Vac	120Vac	230Vac	230Vac
	Input Voltage Range	80/90-140Vac, 140/184-254Vac				
	Rated AC Frequency	50/60Hz				
	Frequency Range	47-5, 57-65/40-70Hz				
System specifications	Cooling Method	Forced air cooling				
	Noise	≤75dB				
	Temperature Range	-20°C ~ 40°C				
	Protection Level	IP20				
	Humidity Range	0-95% (No condensation)				
	Dimensions(W*D*H)	383*188*572(mm)				/
Others	Max. Efficiency	88%				
	Wiring Method	Single phase/ Dual phase three-wire				
	Isolation Method	Built-in transformer isolation				
	Protection Function	AC Over/Under Voltage, Over Temperature, Frequency Abnormal, Over Current, Fan Failure, Battery Over/Under Voltage, Battery Over Temperature				
	Display	LED+LCD+APP				
	Communication Interface	RS485(MPPT), CAN(BAT)				

# HP

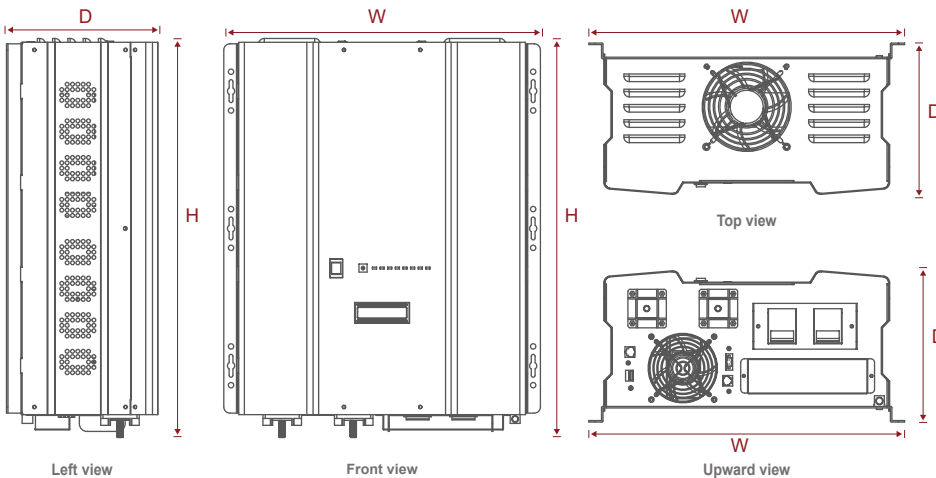
## Off Grid Inverter Charger



### • 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)
HP 1KW~3KW	388*415*200mm
HP 4KW~6KW	488*415*200mm
HP 8KW~12KW	588*415*200mm
HP 15KW~20KW	706*415*213mm

**• Technical Parameter**

HP Series Off Grid Inverter Charger														
Model	1.0KW	1.5KW	2.0KW	3.0KW	4.0KW	5.0KW	6.0KW	8.0KW	10.0KW	12.0KW	15.0KW	18.0KW	20.0KW	
Inverter Output	Continuous Output Power	1.0KW	1.5KW	2.0KW	3.0KW	4.0KW	5.0KW	6.0KW	8.0KW	10.0KW	12.0KW	15.0KW	18.0KW	20.0KW
	Surge Rating (20Secs)	3.0KW	4.5KW	6.0KW	9.0KW	12.0KW	15.0KW	18.0KW	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	12.0Vdc/24.0Vdc	12.0Vdc/24.0Vdc/48.0Vdc				24.0Vdc/48.0Vdc	24.0Vdc/48.0Vdc/96.0Vdc	48.0Vdc/96.0Vdc					
	Min. Start Voltage	10.0Vdc / 10.5Vdc for 12Vdc Mode						*2 for 24Vdc / *4 for 48Vdc / *8 for 96Vdc,						
	Low Battery Alarm	10.5Vdc / 11.0Vdc for 12Vdc Mode												
	Low Battery Trip	10.0Vdc / 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	Depends on battery type (Refer to Table 2.5.2)												
	Charger Breaker Rating	20A	20A	20A	25A	32A	40A	40A	50A	80A	80A	100A		
	Max. Charge Power Rate	1/3 Rating Power (Refer to Table 2.5.3)												
	Battery Initial Voltage For Start	10-15.7Vdc for 12Vdc Mode						*2 for 24Vdc / 4 for 48Vdc / 8 for 96Vdc						
	Over Charge Protection S.D.	15.7Vdc for 12Vdc Mode												
	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)								
For 12Vdc Mode Series(*2 for 24Vdc Mode/*4 for 48Vdc Mode/*8 for 96Vdc Mode)														
BTS	Battery Temperature Sensor (Optional)	Yes ( Refer to the table) Variances in Charging Voltage & S.D Voltage Base on the Battery Temperature												

HP Series Off Grid 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	20A	20A	20A	25A	32A	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 (H*W*D)	388*415*200mm				488*415*200mm			588*415*200mm			706*415*213mm		
	Inverter Weight (Solar Charger) KG	21+2.5	22+2.5	23+2.5	27+2.5	38+2.5	48+2.5	49+2.5	60+2.5	66+2.5	70+2.5	85+2.5	95+2.5	100+2.5
	Shipping Dimensions(H*W*D)	550*520*310mm				650*520*310mm			750*520*310mm			850*520*350mm		
	Shipping Weight (Solar Charger) KG	23+2.5	24+2.5	25+2.5	29+2.5	40+2.5	50+2.5	51+2.5	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												



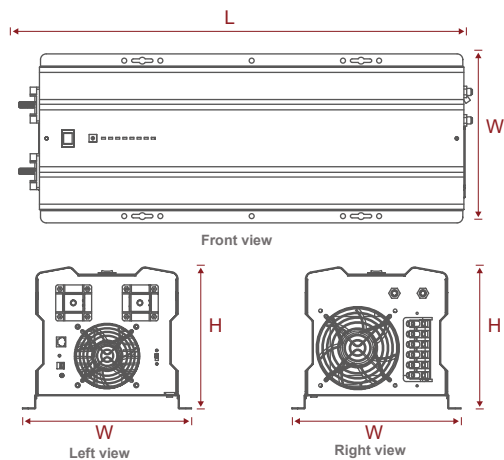
## Off Grid Inverter Charger



### • 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)
AP 1KW~1.5KW	382*218*179mm
AP 2KW~3KW	442*218*179mm
AP 4KW~6KW	598*218*179mm

## • Technical Parameter

AP Series Off Grid Inverter Charger									
Inverter Output	Model	1000W	1500W	2000W	3000W	4000W	5000W	6000W	
	Continuous Output Power	1000W	1500W	2000W	3000W	4000W	5000W	6000W	
	Surge Rating (20S)	3000W	4500W	6000W	9000W	12000W	15000W	18000W	
	Capable Of Starting Electric Motor	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 Narrow: 100-135Vac / 194-243Vac							
	Output Voltage	Depends on battery type							
	Charger Breaker Rating	10A	10A	10A	20A	20A	30A	30A	
	Max. Charge Rate	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)							
	Battery type	Fast Vdc				Float Vdc			
	Gel U.S.A	14				13.7			
	A.G.M 1	14.1				13.4			
	A.G.M2	14.6				13.7			
	Sealed Lead Acid	14.4				13.6			
	Gel Euro	14.4				13.8			
	Open Lead Acid	14.8				13.3			
Calcium	15.1				13.6				
De-sulphation	15.5 for 4 Hours								
Remote Control	Yes(Optional)								

## AP Series Off Grid 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	10A	15A	20A	30A	30A	40A	40A
	Transfer Switch Rating	30Amp for UL&TUV				270Vac		
Max. Bypass Current				40Amp				
Mechanical Specification	Mounting	Wall Mount						
	Inverter Dimensions(L*W*H)	382*218*179mm		442*218*179mm		598*218*179mm		
	Inverter Weight	16KG	17KG	20KG	24KG	35KG	45KG	45KG
	Shipping Dimensions(L*W*H)	520*315*300mm		580*315*300mm		740*315*300mm		
	Shipping Weight	18KG	19KG	22KG	26KG	37KG	47KG	47KG
	Display	Status LED / Status LED+LCD						
	Standard Warranty	1 Year						



Appearance 1



Appearance 2

# SMP

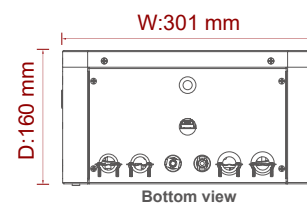
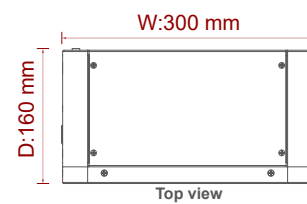
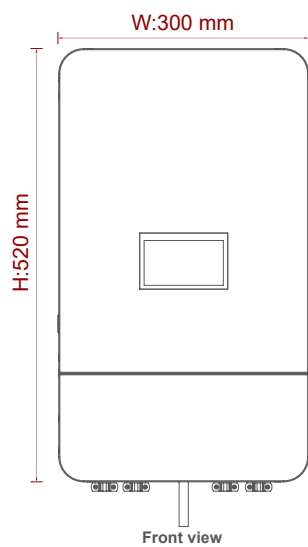
## Hybrid Power Inverter



### • Features

- 5.5KW 48V 230V 50Hz/60Hz.
- With the ability to work without battery.
- Solar-battery-grid hybrid power supply.
- Charging battery by utility and PV energy even without AC output.
- Solar input voltage: 100-450V 500Voc 30A.
- Max. charging current 140A ( PV+Grid ).
- RS485 communication.

### • Product Dimensions



**• Technical Parameter**

SMP Series Hybrid Power Inverter	
<b>Inverter Mode</b>	
Model	5548E
Nominal Output Voltage	5500W
Output Waveform	5500W
Nominal Output Voltage	230Vac±5%
Output Frequency	50Hz or 60Hz
Peak Efficiency	94%
Overload Protection	5s@≥150% Overload; 10s@110~150% Overload
Surge Rating	2*Rated Power 5s
Nominal DC Input Voltage	48Vdc
Cold Start Voltage	46Vdc
Low Battery Alarm	44Vdc
Low Battery Voltage Recover	46Vdc
Low Battery Trip	42Vdc
High Battery Voltage Recover	58Vdc
High Battery Trip	62Vdc
No Load Loss	< 50W
<b>Bypass Mode</b>	
Input Waveform	Pure Sine Wave (Grid or Generator)
Nominal Input Voltage	230Vac
Low Voltage Trip	170Vac±7V (UPS) 90Vac±7V (Appliances)
Low Voltage Protection Recover	180Vac±7V (UPS) 100Vac±7V (Appliances)
High Voltage Trip	280Vac±7V
High Voltage Protection Recover	270Vac±7V
Max. Input AC Voltage	300Vac
Nominal Input Frequency	50Hz or 60Hz (Automatic Detection)
Low Frequency Trip	40±1Hz
Low Frequency Protection Trip	42±1Hz
High Frequency Trip	65±1Hz
High Frequency Protection Trip	63±1Hz
Output Short Circuit Protection	Bypass Mode: Circuit Breaker Battery Mode: Electronic Circuits
Efficiency	>95% (Rated load, battery fully charged)
Typical Transfer Time	10ms (UPS) 20ms (Appliances)
<b>Line Mode</b>	
Charging Current (UPS) @Nominal Input Voltage	80A
Large Capacity Charging Voltage	Water Battery: 58.4V
	AGM/Gel Battery: 56.4V
Charge Voltage	54Vdc
Charging Mode	3 Steps
<b>Solar Charging Mode</b>	
PV Max. Input Current	30A
PV Charging Current	100A
Efficiency	98%
Max. PV Array Open Circuit Voltage	500Voc
PV Array MPPT Voltage Range	100-450Vdc
Idle Consumption	2W
Battery Voltage Accuracy	±0.3%
PV Voltage Accuracy	±2V
<b>General Data</b>	
Certification	CE
Operating Temperature Range	0°C ~ 45°C
Storage Temperature	-15°C ~ 60°C

# UP

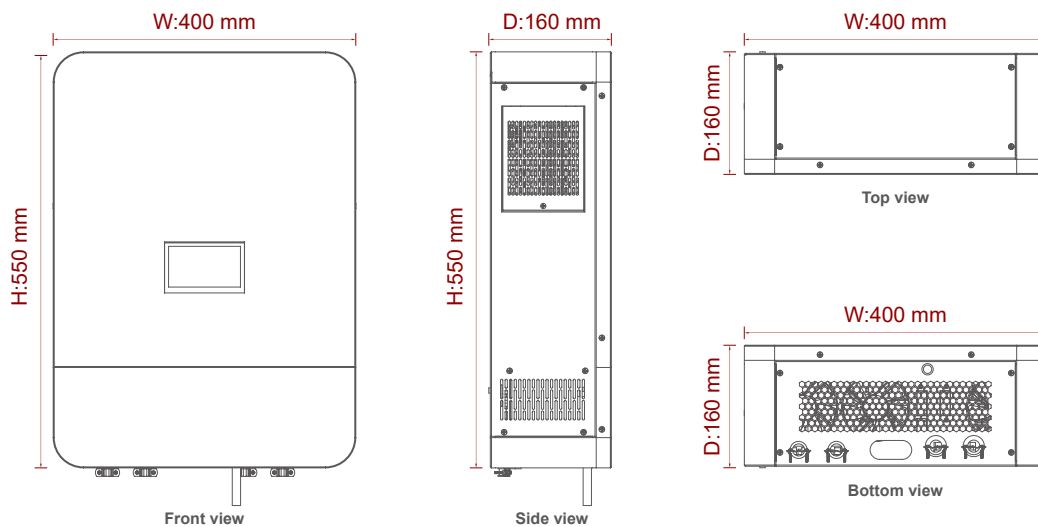
## On/Off Grid Bi-Directional Inverter



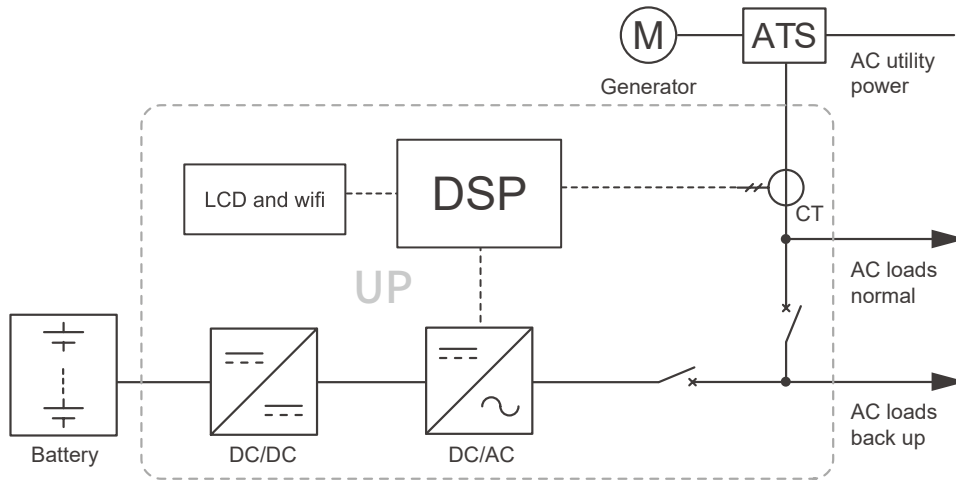
### • Features

- 5KW / 6KW 48Vdc 230Vac.
- Grid-battery hybrid power supply.
- Anti-backflow protection.
- 120A charging current.
- MODBUS/RS485/CAN communication.
- Peak shaving function.

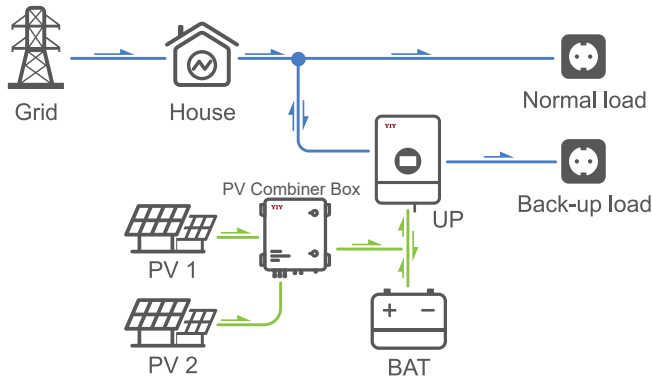
### • Product Dimensions



## • Technology Topology



## • Application



### Basic Application :

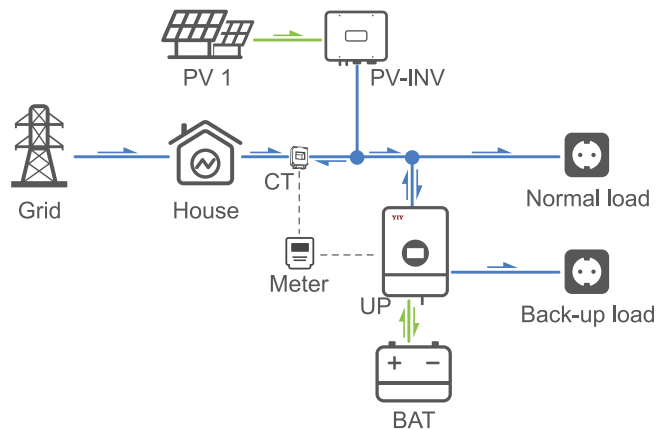
Applicable to scenarios with significant price differentials between peak and off-peak electricity rates, and stable peak and off-peak pricing periods. It operates automatically, saving customers on electricity costs and continuing to power critical loads in the event of a grid outage.

- Peak & Valley Reduction
- Back-up Power
- Load Balancing

### AC Coupled Energy Storage System :

Suitable for existing solar PV systems, meeting the demand for energy storage configuration, maximizing the utilization of solar energy resources, and continuing to power critical loads in the event of a grid outage.

- Energy Self-Sufficiency
- Peak & Valley Reduction
- Back-up Power
- Load Balancing



## • Technical Parameter

UP Series On/Off Grid Bi-Directional Inverter		
Model	UP 5048E	UP 6048E
<b>Battery</b>		
Battery Type	Lead-acid or Lithium-ion	
Battery Voltage Range	40-60V	
Max. Charge/Discharge Current	100A	
Charging Curve	3 Stages	
Charging Voltage	Depends on battery type (Schedule 1)	
<b>Output AC (Back Up)</b>		
Rated Output Power	5000W	6000W
Max. AC Output Power	5500W	6600W
Back Up Switch Time	<8ms	
Rated Output Voltage	230V (Single Phase)	
Rated Frequency	50Hz	
Rated Output Current	22.7A	27.3A
Input Voltage Waveform	Sine Wave	
THDv (@linear load)	2%	
No Load Loss	<50W	
<b>Output AC(Grid side)</b>		
Rated Output Power	5000W	6000W
Max. AC Output Power	5500W	6600W
Rated Grid Voltage	230V(177-267V/90-267V) (Single Phase)	
Rated Grid Frequency	50Hz/60Hz (47Hz-55Hz/57Hz-65Hz)	
Rated Output Current	22.7A	27.3A
Power Factor	>0.95	
THDi	<5%	
<b>Efficiency</b>		
Max. Efficiency	95%	
<b>Protection</b>		
Anti Islanding Protection	Integrated	
PV String Input Reverse Polarity Protection	Integrated	
Insulation Resistor Detection	Integrated	
Output Over Current Protection	Integrated	
Output Over Voltage Protection	Integrated	
Overtemperature Protection	Integrated	
Surge Protection	Integrated	
<b>General Data</b>		
Display	LCD	
Communication	RS485/CAN	
Dimensions (W*D*H)	400*160*550mm	
Weight	/	
Installation Style	Wall Mounted	
Topology	Transformer Isolation	
Operating Temperature Range	-20~60°C (Derating treatment is required if the radiator is above 80°C )	
Humidity	0%~95% Relative Humidity (No Condensation)	
Cooling	Intelligent air cooling	
Protection Degree	IP20	
Max. Operation Altitude	2000m(>2000m Derating)	
Warranty	1 Year	

*Schedule 1: Battery Type And Charging Voltage		
Battery Type	Boost/Vdc	Float/Vdc
Gel USA	56Vdc	54.8Vdc
AGM 1	56.4Vdc	53.6Vdc
LiFePO4_LF14	57.6Vdc	54.4Vdc
MnNiCo_N14	54.8Vdc	54.8Vdc
Custom	Set the information according to the specification of the battery	



# OPS

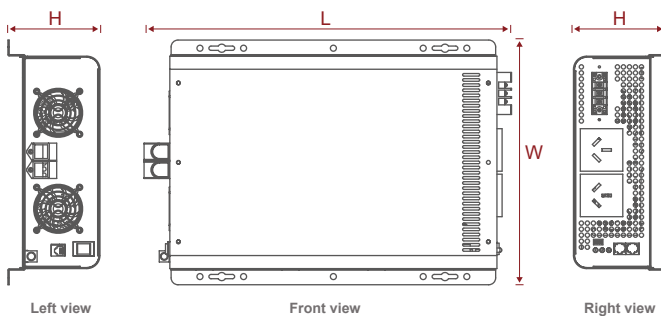
## Solar Inverter



### • 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

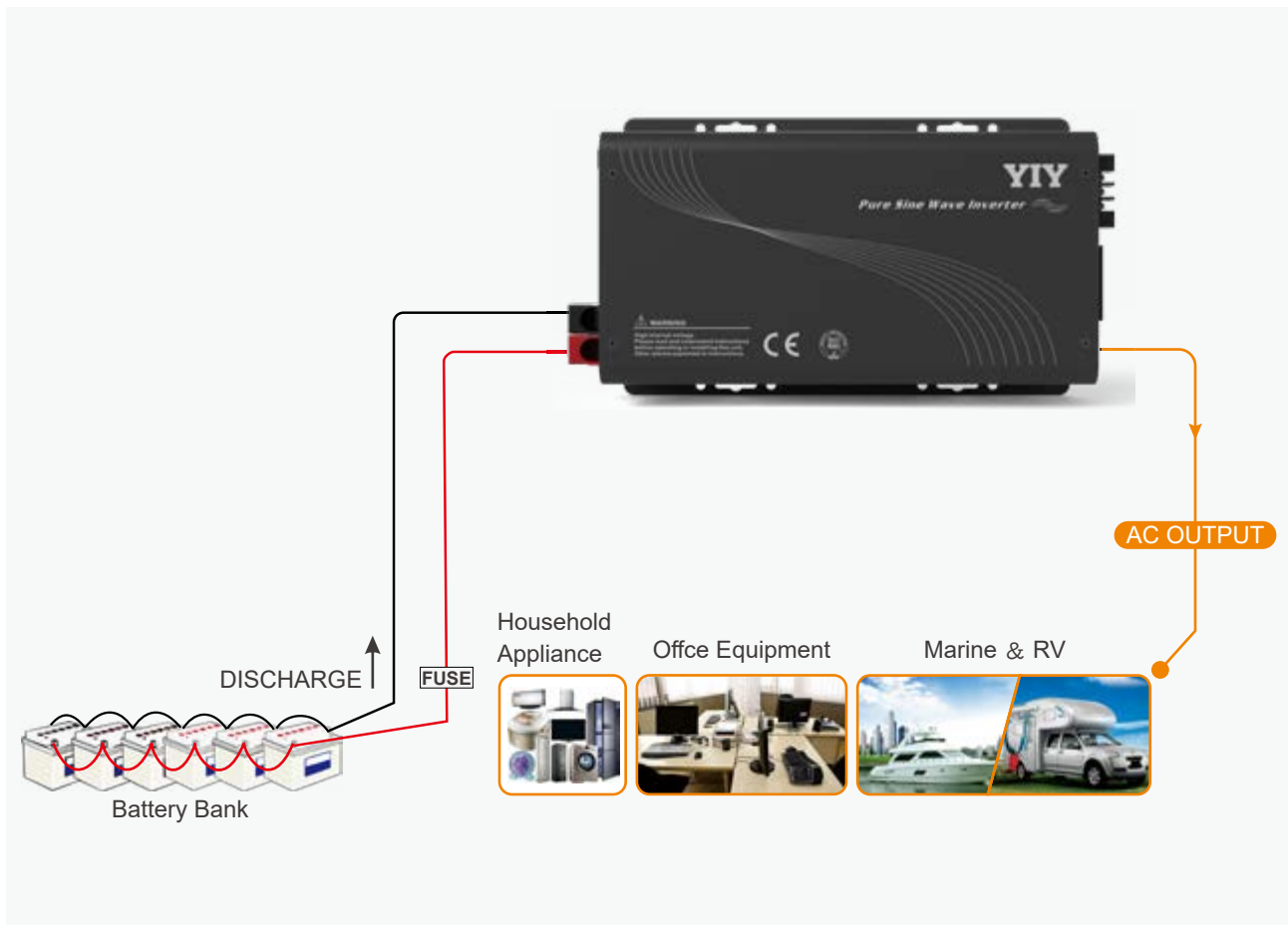


Model	Size(L*W*H)
OPS 0.6KW~1KW	270*160*70 mm
OPS 1.5KW~2KW	355*190*95 mm
OPS 3KW~4KW	411*285*122 mm

## • Technical Parameter

OPS Series Solar Inverter												
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											
Input	Load Level			0~29%		30~69%			70~100%			
	Battery-low Level			11.3Vdc		11.2Vdc			11.0Vdc			
	Battery-high Level			14.1Vdc		14.0Vdc			13.8Vdc			
	Battery-under Level			10.3Vdc		10.2Vdc			10.0Vdc			
	Battery-over Level			15.1Vdc		15.0Vdc			14.8Vdc			
	Battery-under Recovery			12.5Vdc								
	Battery-over Recovery			14.0Vdc								
	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 / 12.51A	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 / 16.67A	—							
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 / 26.1A / 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

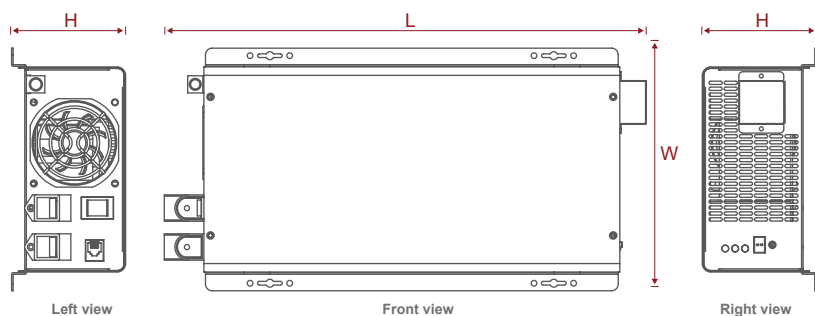
## AC Converter / Battery Charger



### • 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)
CSB 500W	259*134*72.5 mm
CSB 1000W	259*134*72.5 mm
CSB 2000W	315*170*83.5 mm

## • Technical Parameter

Series AC Converter / 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 Chassis / Alu. Chassis					
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

# UP-S

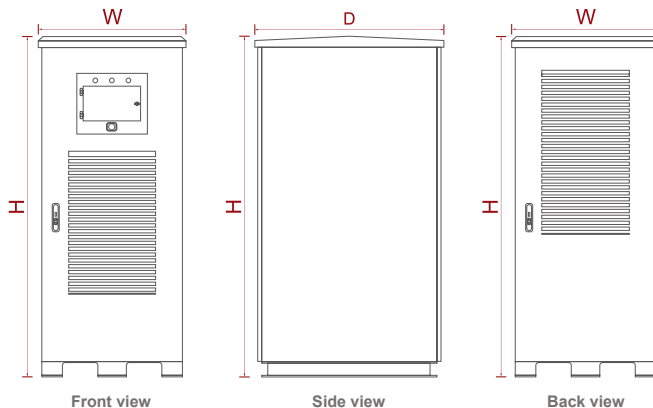
## Three Phase Power Conversion System



### • Features

- Max. efficiency can reach 97.5%.
- Modular design ,easy for installation and depolyment.
- Bi-directional power conversion system with full fourquadrant operation.
- 100KW to 500KW by 1 to 5 power modules.
- Multi-string technology for better battery safety and performance.
- Multiple battery strings working in parallel or independently to allow easy power and energy expansion.
- Grid-support function built-in.
- Optional STS/ATS to achieve seamless switching between on-grid and off-grid.

### • Product Dimensions



Model	Size(W*D*H)
UP-S-100KW	890*1240*2100mm
UP-S-125KW	
UP-S-200KW	
UP-S-250KW	
UP-S-300KW	
UP-S-400KW	890*1240*2300mm
UP-S-500KW	

## • Technical Parameter

UP-S Series Power Conversion System							
Model	100KW	125KW	200KW	250KW	300KW	400KW	500KW
<b>DC Parametric</b>							
Battery Voltage	630-850Vdc						
Max. Battery Voltage	900Vdc						
DC Max Current	140A	180A	280A	360A	420A	560A	700A
<b>Utility-interactive Mode</b>							
AC Max. Power	110KW	137.5KW	220KW	275KW	330KW	440KW	550KW
PCS Module Quantity	100KW*1	62.5KW*2	100KW*2	62.5KW*4	100KW*3	100KW*4	100KW*5
AC Frequency	50/60±2.5Hz						
Rated Voltage	380Vac						
AC Voltage Range	340Vac-440Vac						
THDi	≤3% (Rated output)						
Overload Capability	110%(Long-term)						
AC PF/ Adjustment Range	>0.99 (Rated output)/1 (lead) ~ 1 (lag)						
<b>Stand-alone Mode</b>							
Rated Output Voltage	380Vac						
Output Voltage Accuracy	±1%						
Max. Output Current	140A	180A	280A	360A	420A	560A	700A
Output THDu	<3% (Linear load)						
Rated Output Frequency	50/60Hz						
Overload Capability	110%(Long-term)						
Crest Factor	> 3:1						
<b>General Data</b>							
Peak Efficiency	97.5%						
Enclosure	IP54						
Operating Temperature	-25~55° C						
Humidity	0~95% (No condensing)						
Cooling	Intelligent air cooling						
Noise	<65dB						
Max. Elevation	2000m(>2000m derating)						
Display	Touch screen(External)						
BMS Communication	RS485, CAN						
Communication	RS232/RS485(Standard), Ethernet						
Dimension(W*D*H)(mm)	890*1240*2100						890*1240*2300
Protection	OTP, AC OVP/UVF, OFP/UFP, AC Phase Reverse, OLP, Anti-islanding						
AC Connection	3P4W+PE						
Certification	CE-EMC(EN 61000-6-2/-4) ; CE-LVD(IEC 62477-1; EN 50549-1; VDE-410						

# UPV-S

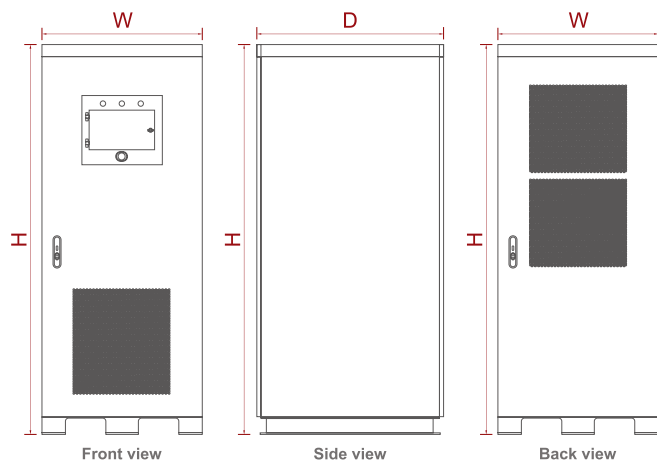
## Three Phase Solar+Storage Hybrid Inverters



### • Features

- High stability, modular design support N+1.
- Bi-directional Power Conversion System.
- Built-in transformer.
- Support self-generation, micro-grid application.
- Supports on/off grid.
- Photovoltaic can be connected to a maximum of twice the capacity of the device.
- Dual-stage topology, wide battery voltage input range.
- With MPPT function to enhance system power generation.
- Self-contained solar storage operation strategy.
- Support communication with BMS, EMS system.

### • Product Dimensions



Model	Size(W*D*H)
0.4-50KW	800*1050*2200mm
0.4-100KW	
0.4-150KW	1350*1050*2200mm
0.4-200KW	
0.4-250KW	
0.5-50KW	800*1050*2200mm
0.5-100KW	
0.5-150KW	1350*1050*2200mm
0.5-200KW	
0.5-250KW	



**• Technical Parameter**

UPV-S Series Solar+Storage Hybrid Inverters										
Model	0.4-50KW	0.4-100KW	0.4-150KW	0.4-200KW	0.4-250KW	0.5-50KW	0.5-100KW	0.5-150KW	0.5-200KW	0.5-250KW
<b>Stand-alone Mode</b>										
AC Output Voltage	400V±10%(Controllable)					480V±10%(Controllable)				
AC Output Current	72A (Max. 79A)	144A (Max. 159A)	216A (Max. 238A)	288A (Max. 317A)	360A (Max. 396A)	60A (Max. 66A)	120A (Max. 132A)	180A (Max. 196A)	240A (Max. 264A)	300A (Max. 330A)
Nominal AC Output Power	50KW	100KW	150KW	200KW	250KW	50KW	100KW	150KW	200KW	250KW
AC Max. Power	55KW	110KW	165KW	220KW	275KW	55KW	110KW	165KW	220KW	275KW
Output THDu	≤3%(Linear load)									
AC Frequency	50/60Hz					60Hz				
AP PF	0.99/-1~1									
Overload Capability	120% (1min)									
Battery Voltage Range	400-600V (Rated 512V)		600-900V			400-600V (Rated 512V)		600-900V		
Battery DC Max Current	120A	240A	275A	367A	458A	120A	240A	275A	367A	458A
PV Voltage Range	520-900V (MPPT 520V-800V)		300-800V			520-900V (MPPT 520V-800V)		300-800V		
PV DC Max Current	192A	384A	360A	480A	600A	192A	384A	360A	480A	600A
<b>Utility grid-interactive Mode</b>										
AC Voltage Range	400V±15%					480V±15%				
AC Rated Current	72A	144A	216A	288A	360A	60A	120A	180A	240A	300A
Nominal AC Output Power	50KW	100KW	150KW	200KW	250KW	50KW	100KW	150KW	200KW	250KW
AC Frequency	50Hz / 60Hz±2.5Hz					60Hz±0.2%±2.5Hz				
Output THDi	≤3%									
AP PF	0.99/-1~1									
Battery Voltage Range	400-600V (Rated 512V)		600-900V			400-600V (Rated 512V)		600-900V		
Batter DC Max Current	120A	240A	275A	367A	458A	120A	240A	275A	367A	458A
PV Voltage Range	520-900V (MPPT 520V-800V)		300-800V			520-900V (MPPT 520V-800V)		300-800V		
PV DC. Max Current	192A	384A	360A	480A	600A	192A	384A	360A	480A	600A
<b>Other</b>										
Peak Efficiency	≥96%		≥95.5%			≥96%		≥95.5%		
Protection	Overtemperature Protection, AC Over/Under Voltage Protection, Over/Under Frequency Protection, Emergency Power Off, AC Phase Reverse, Fan/Relay Failure, Over/Under Load Protection, Ground Faultcircuit Interrupter, Anti-Islanding									
Configurable Protection Limits	Upper/Lower AC Voltage/Frequency limit , Battery end of discharge voltage									
AC Connection	3P4W									
Display	7"color touch screen									
Communication	RS485,CAN,Ethernet									
Isolation	Built-in Transformer									
<b>Physical</b>										
Cooling	Forced air cooling									
Noise	≤70dB									
Enclosure	IP20/IP54									
Max. Elevation	3000m/10000 feet (>2000m/6500 feet derating)									
Operating Temperature	-20°C~ 50°C (>45°C derating)									
Humidity	0~95% (No condensing)									
Size (W*H*D)	800*2200*1050mm		1350*2200*1050mm			800*2200*1050mm		1350*2200*1050mm		
Weight	/	/	1300KG	1650KG	2000KG	/	/	1300KG	1650KG	2000KG

# PV Combiner Box

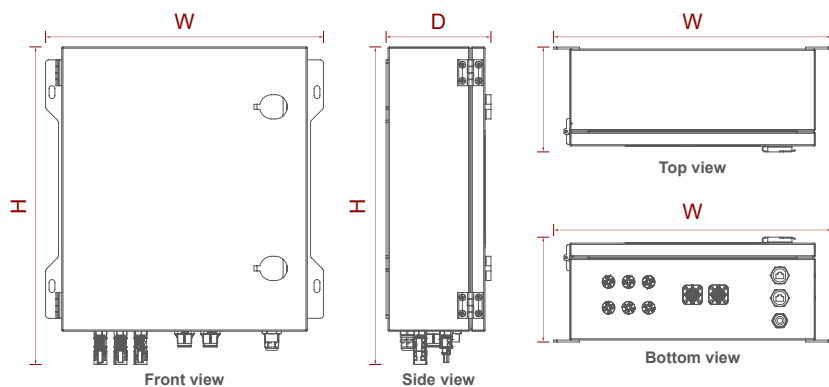
With Built-in MPPT



## • Features

- IP65 protection grade, can be installed outdoor.
- Integrated MPPT modular.
- System Voltage 48 VDC.
- Number of PV inputs, 3 Strings & 6 Strings.
- Anti-backflow protection.
- Reverse connection protection.

## • Product Dimensions



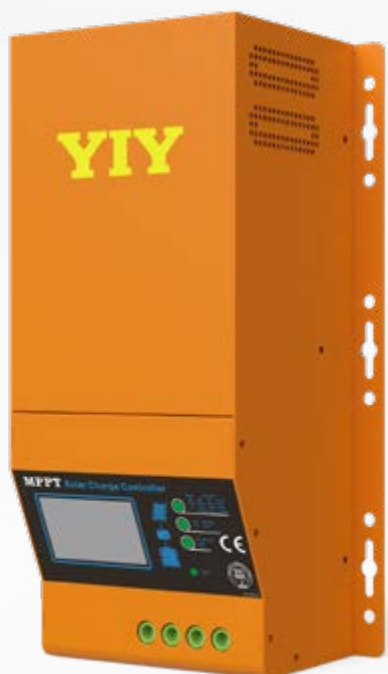
Model	Size(W*D*H)
60A	430*163*492mm
120A	520*163*778mm

**• Technical Parameter**

PV Combiner Box		
Model	60A	120A
Nominal System Voltage	48 VDC	
Max. Battery Current	60 Amp	120 Amp
Max. Solar Input Voltage	150V	
PV Array MPPT Voltage Range	(Bat. Voltage+5V)-115VDC	
Max.Input Power	3200 Watts	6400 Watts
Protections	Solar high voltage disconnect;Solar high voltage reconnect; Battery high voltage disconnect;Battery high voltage reconnect; High temperature disconnect;High temperature reconnect	
Charging Algorithm	3-Step	
Charging Stages	Bulk, Absorption, Float	
Charging Set Points	Absorption Stage	Float Stage
Flooded Battery	58.4V	54V
AGM/Gel Battery (Default)/Customized	56.4V	54V
Over-charging Voltage	60V	
Over-charging Comeback Voltage	58V	
Battery Defect Voltage	34V	
Battery Defect Comeback Voltage	36V	
Number Of DC Inputs	3 Strings	6 Strings
Number Of DC Outputs	1 (Support customization for output number)	
Protection Level	IP65	
Application	Solar PV System/Energy Storage System	
Communication	CAN / RS485	
DC Fuse	250VDC 50A	
Connection Type DC Input	PV MC4 Connector, IP65	
Over Current Protection	Yes	
Short Circuit Protection	Yes	
Surge Protection	Yes	

# MPPT SCM4860

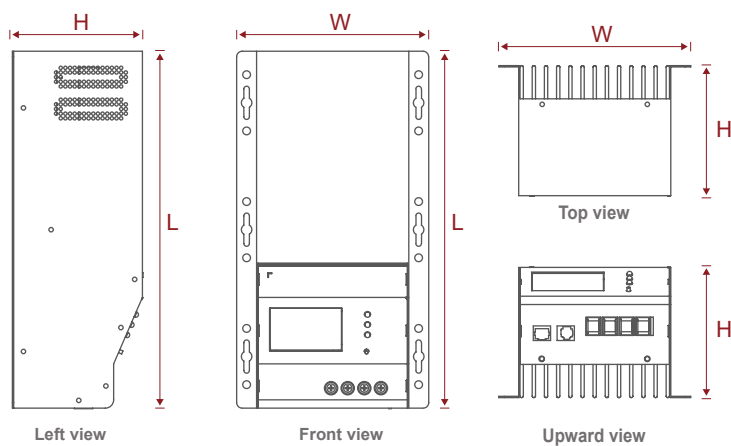
## Advanced MPPT Solar Charger Controller



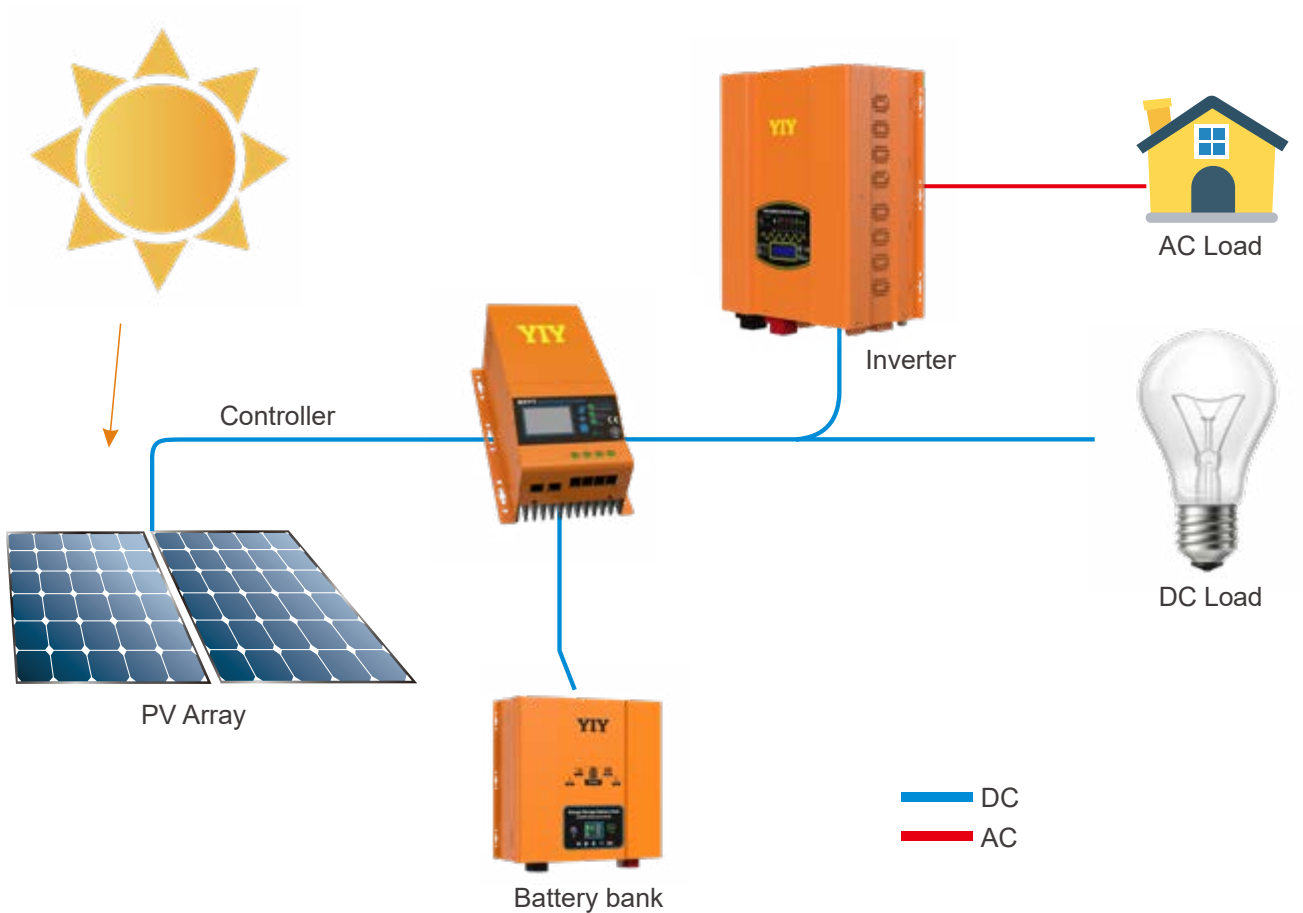
### • Features

- Intelligent Max. Power Point Tracking technology increases efficiency 25%~30%.
- Compatible for 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)
MPPT 3KW	322*173*118 mm



### • 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)	

## Demonstrations







Start Digital Power Supply

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