

YIY

INW

Inverter / MPPT Charger / AC Charger

Start Digital Power Supply

YIYEN HOLDING GROUP

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



15+
Years Experience



30000m²+
Plant Areas



100,000+ / year
Unit Shipments



50+
R&D Staff



130+
Export Countries



100+
Intellectual Properties

PRODUCT CATALOG

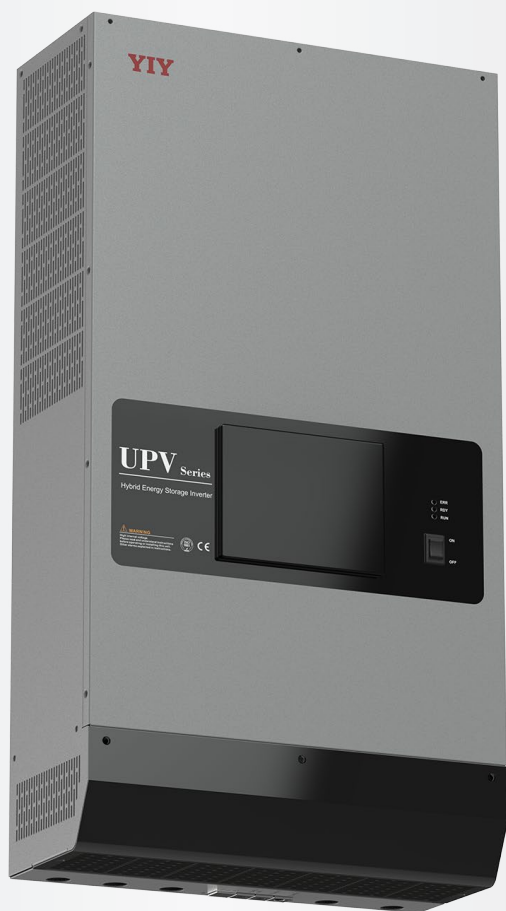
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Hybrid Solar Energy Storage Inverter



UPV Series is a multifunctional hybrid energy storage inverter with DC-AC inverter, DC-DC solar charger and AC-DC battery charger functions to offer uninterrupted and stable power to loads. UPV inverter can maximize the usage of solar energy, minimize electricity bill and optimize the usage of battery power through its builtin EMS system. Its comprehensive HMI offers user configurable and easy accessible operation to preset some basic data and working mode based on different applications.

Product Features

- Builtin EMS achieves high efficient utilization of power energy among the grid, battery and solar.
- Reservation mode allows users to set up time for charging and discharging(peak shaving function).
- Switch time <8 ms(to off grid mode).
- Can be used in single /dual/ three phase grid structures.
- On-grid mode and off grid mode selectable.
- Max efficiency 95%, THD<5% under full load.
- Battery charging voltage and charging current programmable.
- Friendly HMI allows user configuration.

Applications



Home Power Supply



Solar Energy Storage



RV



Office Equipment

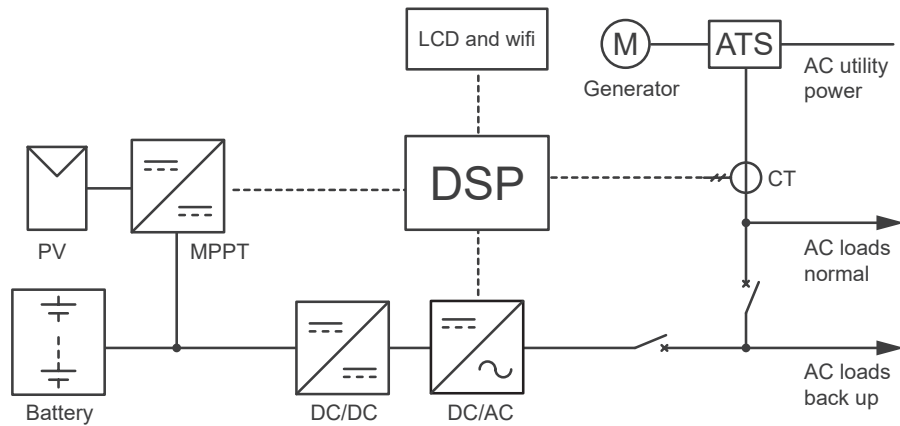


Engineering Vehicles

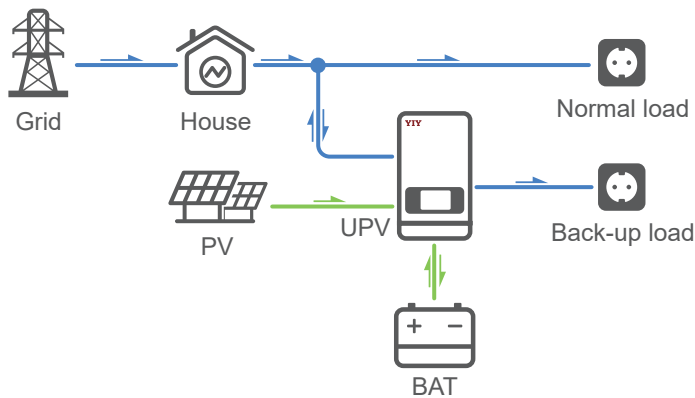


Marine

Technology Topology



Application



Integrated optical storage system :

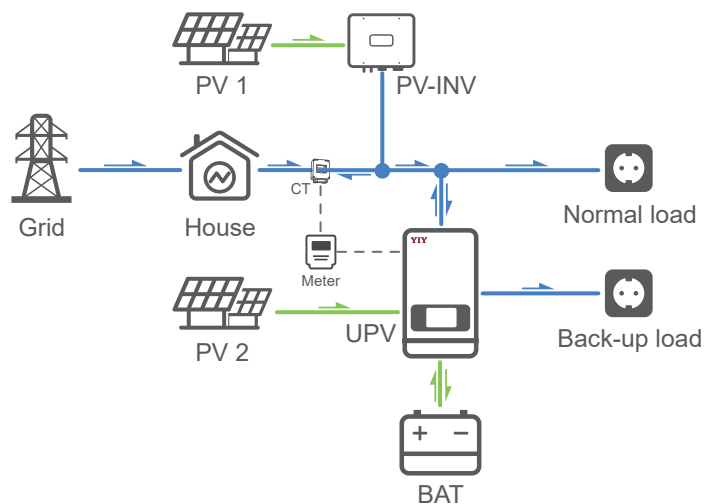
Suitable for newly deployed scenarios of solar storage for self-consumption, it can save customers on electricity costs and continue to power critical loads in the event of a grid outage.

- Energy Self-Sufficiency
- Peak shaving
- Backup Power
- Load Balancing

On Grid PV system upgrade scheme :

Ideal for existing solar photovoltaic (PV) systems, meeting the demand for energy storage configuration, and increasing solar power generation capacity, maximizing the utilization of solar energy resources. It can also continue to power critical loads in the event of a grid outage.

- Energy Self-Sufficiency
- Peak shaving
- Backup Power
- Load Balancing



Technical Parameter

UPV Series Hybrid Energy Storage Inverter/Charger

Mode	UPV 5048E	UPV 6048E
Battery		
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)	
Input DC(PV Side)		
Recommended Max. PV Power	3kW	
Rated Voltage	60~200V	
Max. Input Voltage	200V	
Start Up Voltage	75V	
MPPT Voltage Range	75~170V	
Max. Input Current	60A	
No.Of MPPT Trackers No.Of Strings Per MPPT Tracker	1	
PV Module Utilization	≥99.6%	
Output AC (Back Up)		
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	
Output AC(Grid side)		
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%	

Efficiency

Max. efficiency	95%
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Protection

Anti islanding Protection	Integrated
PVString 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

General Data

Display	LED+LCD
Communication	RS485/CAN
Dimensions (W*H*D)	370*706*168mm
Weight	16kg
Installation Style	Rack/Wall Mounted
Topology	Transformer Isolation
Operating Temperature Range	-20~60°C (Derating Treatment Is Required IfThe Radiator Is Above 80)
Humidity	0%~95% Relative Humidity (No Condensation)
Cooling	Intelligent Air Cooling
Protection Degree	IP20
Max. operation altitude	2000m (>2000m Derating)
Warranty	1 Years

***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	

Bi-directional Battery Inverter



UP series is a bidirectional Battery Inverter/charger with DC-AC inverter and AC-DC battery charger functions to offer uninterrupted and stable power to loads. UP inverter can minimize electricity bill and optimize the usage of battery power through its builtin EMS system. Its comprehensive HMI offers user configurable and easy accessible operation to preset some basic data and working mode based on different applications.

Product Features

- Builtin EMS achieves high efficient utilization of power energy among the grid and battery
- Reservation mode allows users to set up time for charging and discharging(peak shaving function)
- Switch time <8 ms (to off grid mode)
- Can be used in single /dual/ three phase grid structures
- On-grid mode and off grid mode selectable
- Max efficiency 95%, THD<5% under full load
- Battery charging voltage and charging current programmable
- Friendly HMI allows user configuration

Applications



Home Power Supply



Solar Energy Storage



RV



Office Equipment

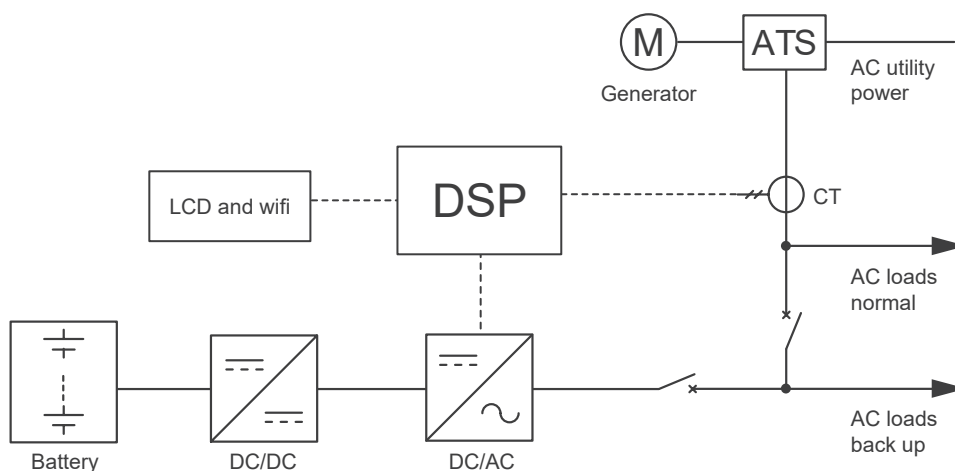


Engineering Vehicles

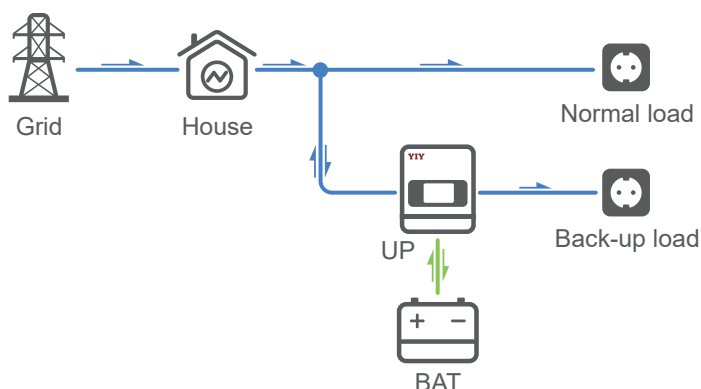


Marine

Technology Topology



Application



Basic application :

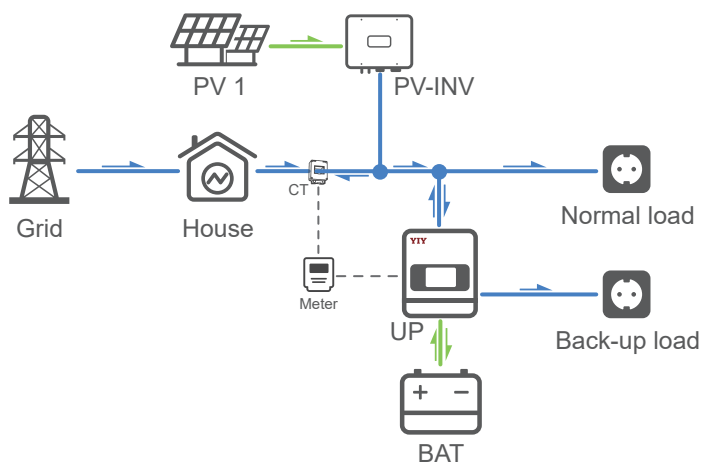
Applicable to scenarios with significant price differentials between peak and off-peak electricity rates, and stable peak and off-peak pricing periods. It operates automatically, saving customers on electricity costs and continuing to power critical loads in the event of a grid outage.

- Peak shaving
- Backup Power
- Load Balancing

On Grid PV system upgrade scheme :

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 shaving
- Backup Power
- Load Balancing



Technical Parameter

UP Series Bi-directional Battery Inverter

Model	UP 5048E	UP 6048E
Battery		
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)	
Output AC (Back Up)		
Rated Output Powe	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	
Output AC(Grid side)		
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%	
Efficiency		
Max. efficiency	95%	
Protection		
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	

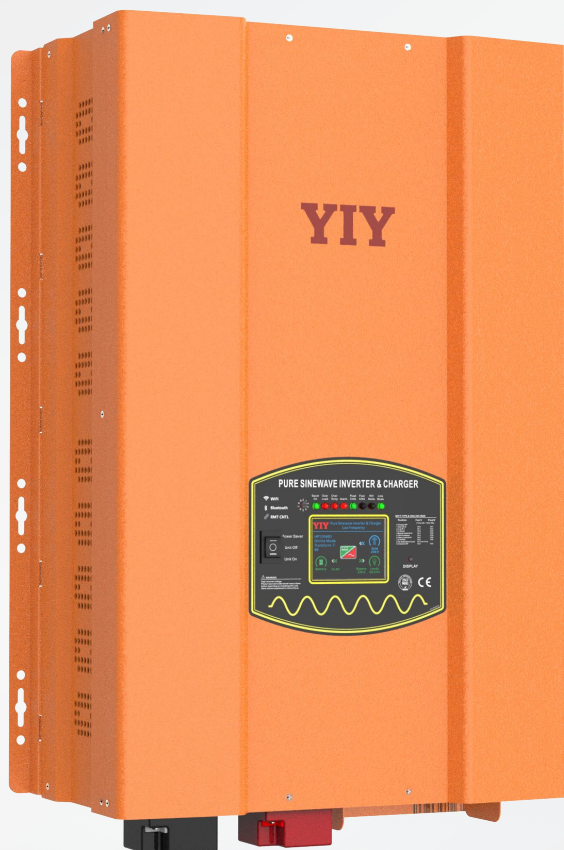
General Data

Display	LED+LCD
Communication	RS485/CAN
Dimensions (W*H*D)	370*531*168mm
Weight	16kg
Installation Style	Rack/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 Years

*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	

Low Frequency Pure Sine Wave Inverter/Charger



- High Output Capacity up to 20 KW.
- 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 Features

- AC Voltage: 100-110-120VAC/220-230-240VAC.
- DC Voltage: 12VDC/24VDC/48VDC/96VDC.
- MPPT built-in Selectable.
- Remote Control Selectable (RJ11 port/RJ45 port).
- $\geq 3\text{KW}$, 120/240VAC split phase.
- BTS Selectable.
- GFCI Selectable.

Applications



Home Power Supply



Solar Energy Storage



RV



Office Equipment



Engineering Vehicles



Marine

Technical Parameter

HP Pure Sine Wave Inverter/Charger														
Inverter Output	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
	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 vave/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		
	Minimum 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 Batteiy Trip	10.0Vdc/ 10.5Vdcfor 12VdcMode												
	High Voltage Alarm	16.0Vdcfor12Vdc 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 Pover (Refer to Table 2.5.3)												
	Battery Initial Voltage for start	10-15.7Vdcfor12Vdc Mode						*2 for 24Vdc;4 for 48Vdc/8 for 96Vdc,						
	Over Charge Protection S.D.	15.7Vdcfor12Vdc 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)					
		9				Classic LFP			13.6			13.5		
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 Pure Sine Wave 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 vave (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	50Hzor60Hz												
	Low Freq Trip	47±0.3Hzfor 50Hz 57±0.3Hzfor 60Hz												
	High Freq Trip	55±0.3Hz for 50Hz. 65±0.3Hz for 60Hz												
	Ov ertoad 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	30AmpforUL&TUV				40Ampfor UL			80Amp for UL			100AmpforUL		
	Bypass Without Battery Connected	Yes (Optional)												
	Max Bypass Current	30Amp				40 Amp			80Amp			100 Amp		
Mechanical Specifications	Mounting	Wall Mount												
	Inverter Dimensions (L*WH)	388*415*200mm				488*415*200mm			588*415*200mm			706*415*213mm		
	Inverter Weight (Solar Chg) 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(LWH)	550*520*310mm				650*520*310mm			750*520*310mm			850*520*350mm		
	Shipping Weight (Solar Chg) 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 LEDs / Status LEDs+LCD												
	Standard Warranty	1 Years												

Optional Built-In MPPT Solar Controller Parameters Are Detailed On Page 25

AP Mini



Low Frequency Pure Sine Wave Inverter/Charger



- Ultra Low THD, Typically 7% Under Full Linear Load (battery low).
- MPPT Solar Charger Controller Available.
- Remote Control Available.
- Battery Temperature Sensing For Increased Charging Precision.
- Auto Gen Start Function For Off Grid System With Generator As Backup Power.

Product Features

- AC Voltage: 120VAC/230VAC.
- DC Voltage: 12VDC/24VDC.
- Remote Control Seletable(RJ11 port/RJ45 port).
- BTS Seletable.
- GFCI Seletable.

Applications



Home Power Supply



Solar Energy Storage



RV



Office Equipment



Engineering Vehicles



Marine

Technical Parameter

AP Mini Series Pure Sine Wave Inverter/Charger					
Inverter Output	Power Rating	600W	1000W		1500W
	Continuous Output Power	600W	1000W		1500W
	Surge Rating (20s)	1800W	3000W		4500W
	Output Waveform	Pure Sine wave / Same as input (Bypass mode)			
	Nominal Efficiency	80%(Peak)			
	Line Mode Efficiency	>95%			
	Power Factor	0.9-1.0			
	Nominal Output Voltage RMS	120Vacor230Vac			
	Output Voltage Regulation	±10% RMS			
	Output Frequency	50/60Hz± 0.3Hz			
	Short Circuit Protection	Yes, Current Limit Function (Fault after 1sec)			
	Typical transfer Time	10ms (Max)			
	THD	Typically < 3%(Rated battery level, rated full linear load)			
DC Input	Nominal Input Voltage	12.0Vdc		24.0Vdc	
	Minimum Start Voltage	10.0Vdc		20.0Vdc	
	Low Battery Alarm	10.5Vdc/11.0Vdc		21.0Vdc/22.0Vdc	
	Low Battery Trip	10.0Vdc/10.5Vdc		20.0Vdc/21.0Vdc	
	High Voltage Alarm & Fault	16.0Vdc		32.0Vdc	
	High DC Input Recovery	15.5Vdc		31.0Vdc	
	Low Battery Voltage Recover	13.0Vdc		26.0Vdc	
	Idle Consumption-Search Mode	<25W when Power Saver On			
Bypass & Protection	Input Voltage Range	Narrow: 100 ~ 135VAC /194 - 243Vac			
		Wide: 90 ~ 135VAC /150 ~ 260Vac			
	Input Frequency Range	Narrow: 47-55 ± 0.3Hz for 50Hz, 57-65 ± 0.3Hzfor 60Hz			
		Wide: 42-68 ± 0.3Hz for 50Hz / 60Hz			
	Output Voltage	Depends on battery type			
	Charger Breaker Rating (120Vac)	7A	10A		15A
	Max Charge Rate	20A to 25A +/-5A, depending on models		15A	
	Over Charge Protection Shutdown	15.7V for 12Vdc			
	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 4hrs			
	Remote Control	Yes. Optional			
Mechanical Specification	Inverter Dimensions (L*W*H)	325*173*135mm/12.8*6.8*5.3		362*173,135mm /14.3*6.8*5.3"	
	Inverter Weight	7.5KG/16.5lb		11KG/24.3lb	14KG/30.8lb
	Shipping Dimensions (L*W*H)	425*230*205mm/16.7*9*8		475*230*205mm/18.7*9*8	
	Shipping Weight	8.5KG/18.7lb		12KG/26.5lb	16KG/35.2lb
	Display	Display			
	Standard Warranty	Standard Warranty			

Low Frequency Pure Sine Wave Inverter/Charger



Product Features

- Stabilizing the output AC voltage to a range of 230V \pm 10%.
- Connected with batteries, the AP inverter will function as a UPS with max transfer time of 10ms.
- With all the unique features from the inverter and AVR, it brings you long-term trouble free operation Beyond your expectation.
- Built-in voltage stabilisation (optional).
- Built-in solar controller MPPT (optional).
- AC Voltage: 100-110-120VAC/220-230-240VAC.
- DC Voltage: 12VDC/24VDC/48VDC.
- Remote Control Seletable(RJ11 port/RJ45 port).
- LCD Display Seletable.
- Split Phase Available : \geq 3KW , 120/240VAC split phase.
- Support for lithium battery charging (optional).
- BTS Seletable.
- GFCI Seletable.

Applications



Home Power Supply



Solar Energy Storage



RV



Office Equipment



Engineering Vehicles



Marine

Technical Parameter

AP Pure Sine Wave 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, *4for48Vdc)						
	Minimum 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	<25 W 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 for48Vdc)						
	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 4hrs						
	Remote Control	Yes. Optional						

AP Pure Sine Wave 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 detect)						
	Low Freq Trip	47±0.3Hz for 50Hz, 57±0.3Hz for 60Hz						
	Low Freq re engage	48±0.3Hz for 50Hz, 58±0.3Hz for 60Hz						
	High Freq Trip	55±0.3Hz for 50Hz, 65±0.3Hz for 60Hz						
	High Freq 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	30ampforUL&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 LEDs / Status LEDs+LCD						
	Standard Warranty	1 Year						



48VDC Three Phase Pure sine wave Inverter/charger



Product Features

- High output capacity upto 45KW .
- Unbalance Load Acceptable Idle Consumption Search Mode,less than 100 W when Power Saver On.
- DC input voltage 12VDC/24VDC/48VDC.
- 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.
- LED + LCD Display.
- Remote control optional(LED or LCD remote)
- Connection mode:3-phase 4-wire /3-phase 3-wire.
- AC Voltage:3AC/N 400V/207V.
- 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 Seletable.

Applications



Home Power Supply



Solar Energy Storage



RV



Office Equipment



Engineering Vehicles



Marine

Technical Parameter

TPP Series 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	120/230VAC	120/230VAC	120/230VAC	120/230VAC	230VAC	230VAC	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 Loac								
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"	< 100 W when Power Saver On								
Charge	Input Voltage Range	Narrow: 96-132VAC / 184~253VAC;Wide 70-135VAC70-135VAC/ 140-270VAC;								
	Input Frequency Range	Narrow: 47-55D.3Hzfor 50Hz. 57-65d£).3Hz for 60Hz Wide:40-70D.3Hz for 50Hz/60Hz								
	Output Voltage	Same as input								
	Charger Breaker Rating(230Vac)	10A	20A	20A	30A	30A	40A	50A	60A	
	Charger Breaker Rating(120Vac)	20A	30A	40A	50A	60A				

Technical Parameter

TPP Series Inverter & Charger											
Charge	Max Charge Rate	20A*3	30A*3	40A*3	50A*3	60A*3	80A*3	100A*3	120A*3	150A*3	
	Power Factor	0.97 MAX									
	Over Charge Protection Shutdown	62.8Vdc									
	Battery type	Fast Vdc			Float Vdc						
	Gel U.S.A	14.0			13.7						
	A.G.M 1	14.1			13.4						
	A.G.M 2	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 4hrs									
	Remote Control	Yes. Optional LED/LCD									
	Bypass & Protection	Input Voltage Waveform	Sine wave (Grid or Generator)								
Nominal Voltage		120Vac			230Vac						
Low Voltage Trip		70V/96V*!%			184V/154V14%						
Low Voltage re engage		75V/100V14%			194V/164V14%						
High Voltage Trip		130Vi4%			253V/260V14%						
High Voltage re engage		135VM%			243V/270VM%						
Max Input AC Voltage		150VAC			300VAC						
Nominal Input Frequency		50Hz or 60Hz (Auto detect)									
Low Freq Trip		Narrow:47±0.3Hz for 50Hz, 57±0.3Hz for 60Hz Wide:40±0.3Hz for 50Hz/60Hz									
Low Freq re engage		Narrow:48±0.3Hzfor 50Hz, 58±0.3Hzfor 60Hz Wide:42±0.3Hz for 50Hz/60Hz									
High Freq Trip		Narrow: 55±0.3Hz for 50Hz, 65 ±0.3Hz for 60Hz Wide:70±0.3Hz for 50Hz/60Hz									
High Freq re engage		Narrow:54 ±0.3Hz for 50Hz, 64 ±0.3Hz for 60Hz Wide:68±0.3Hz for 50Hz/60Hz									
Output Short circuit protection		Circuit breaker									
Bypass breaker rating(230Vac)		10A	20A	20A	30A	30A	40A	50A	60A	80A	
Bypass breaker rating(120Vac)	20A	30A	40A	50A	60A						
Other	Communication methods	RS232/458/CAN									
	Display	LED+LCD									

High Frequency Solar Inverter



- Pure sine wave inverter.
- Configurable input voltage range for home appliances and personal computers via LCD setting.
- Configurable battery charging current based on applications via LCD setting.
- Configurable AC/Solar Charger priority via LCD setting.
- Compatible to mains voltage or generator power.
- Auto restart while AC is recovering.
- Overload/ Over temperature/short circuit protection.
- Smart battery charger design for optimized battery performance.
- Cold start function.

Product Features

- Built-in MPPT.
- WIFI module is optional.
- AC Voltage : 120VAC/230VAC.
- DC Voltage : 12VDC/24VDC/48VDC.

Applications



Home Power Supply



Solar Energy Storage



RV



Office Equipment



Engineering Vehicles



Marine

Technical Parameter

SMP Series High Frequency Solar Inverter						
Model Line Mode		1.5KVA-12	3KVA-24	3KW-24	5KW-48	5.5KW-48
		1.5KVA/1.2KW	3KVA/2.4KW	3KVA/3KW	5KVA/5KW	5.5KVA/5.5KW
Nominal AC Input Voltage/Waveform		230Vac/Sinusoidal (utility or generator)				
AC Input Range		90~280Vac(AppEances); 170Vac-280Vac(UPS)				
Max AC Input Voltage		300Vac				
Nominal Input Frequency		50Hz / 60Hz (Auto detection)				
AC Input Frequency Range		40-65±1 Hz; (>42 or <63±1 Hz correback)				
Output Short Circuit Protection		Circuit Breaker				
Efficiency (Line Mode)		>95% (Rated Rload, battery full charged)				
Transfer Time		10ms typical (UPS);				
		20ms typical (Appliances)				
Utility Charging Mode		1.5KVA/1.2KW	3KVA/2.4KW	3KVA/3KW	5KVA/5KW	5.5KVA/5.5KW
Charging Algorithm		3-Step				
AC Charging Current (Max)		30Amp (@ V _{ip} =230Vac)	30Amp (@ V _{ip} =230Vac)	"80Amp (@ V _{ip} =230Vac)"	60Amp (@ V _{ip} =230Vac)	60 Amp (@ V _{ip} =230Vac)
Bulk Charging Votag	Flooded Battery	14.6Vdc	29.2 Vdc	29.2Vdc	58.4Vdc	58.4Vdc
	AGM / Gel Battery	14.1Vdc	28.2Vdc	28.2Vdc	56.4Vdc	56.4Vdc
Floating Charging Voltage		13.5Vdc	27Vdc	27Vdc	54 Vdc	54Vdc
Invert Mode		1.5KVA/1.2KW	3KVA/2.4KW	3KVA/3KW	5KVA/5KW	5.5KVA/5.5KW
Rated Output Power		1.5KVA/1.2KW	3KVA/2.4KW	3KVA/3KW	5KVA/5KW	5.5KVA/5.5KW
Output Voltage Waveform		Pure Sine Wave				
Output Voltage/Frequency		230Vac±5%/50Hz				
Peak Efficiency		92%	93%	94%	94%	94%
Overload Protection		5s@>150% load; 10s@110%-150% load				
Surge Capacity		2* rated power for 5 seconds				
Nominal Battery Input Voltage		12 Vdc	24Vdc	24Vdc	48Vdc	48Vdc
Cold Start Voltage		11.5Vdc	23.0Vdc	23.0 Vdc	46.0Vdc	46.0Vdc
High DC Cut-off Voltage		15.5Vdc	31Vdc	33Vdc	63Vdc	63 Vdc
No Load Power Consumption		<25W	<30W	<30W	<40W	<40W
MPPT Solar Charging & Invert Mode		1-5KVA/1.2KW	3KVA/2.4KW	3KVA/3KW	5KVA/5KW	5.5KVA/5.5KW
Max. PV Array Power		2000W	3000W	4000W	6000W	6000W
PV Array MPPT Voltage Range		60-300Vdc		120~450Vdc		
Max. PV Array Open Circuit Voltage		350Vdc		495Vdc		
Max Charging Current		60Amp		80 Amp		
Other information		1.5KVA/1.2KW	3KVA/2.4KW	3KVA/3KW	5KVA/5KW	5.5KVA/5.5KW
Safety Certification		CE				
Operating Temperature Range		-10°C to 50°C				
Storage temperature		-15°C~60°C				
Humidity		5% to 95% Relative Humidity (hton-condensing)				
Enclosure		P21				
Dimension (D*W*H), mm		102*255*349	102*255*349	110*309*355	110*309*415	110*309*415
Net Weight, kg		5.2	5.5	7.3	9.6	9.6
Shipping Dimensions (D*W*H),mm		208*390*490	208*390*490	208*390*490	208*390*550	208*390*550
Shipping weight, kg		6.2	6.5	8.2	10.6	10.6

Solar Inverter



Product 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.
- N+X redundancy function (optional).

Applications



Home Power Supply



Solar Energy Storage



RV



Office Equipment



Engineering Vehicles



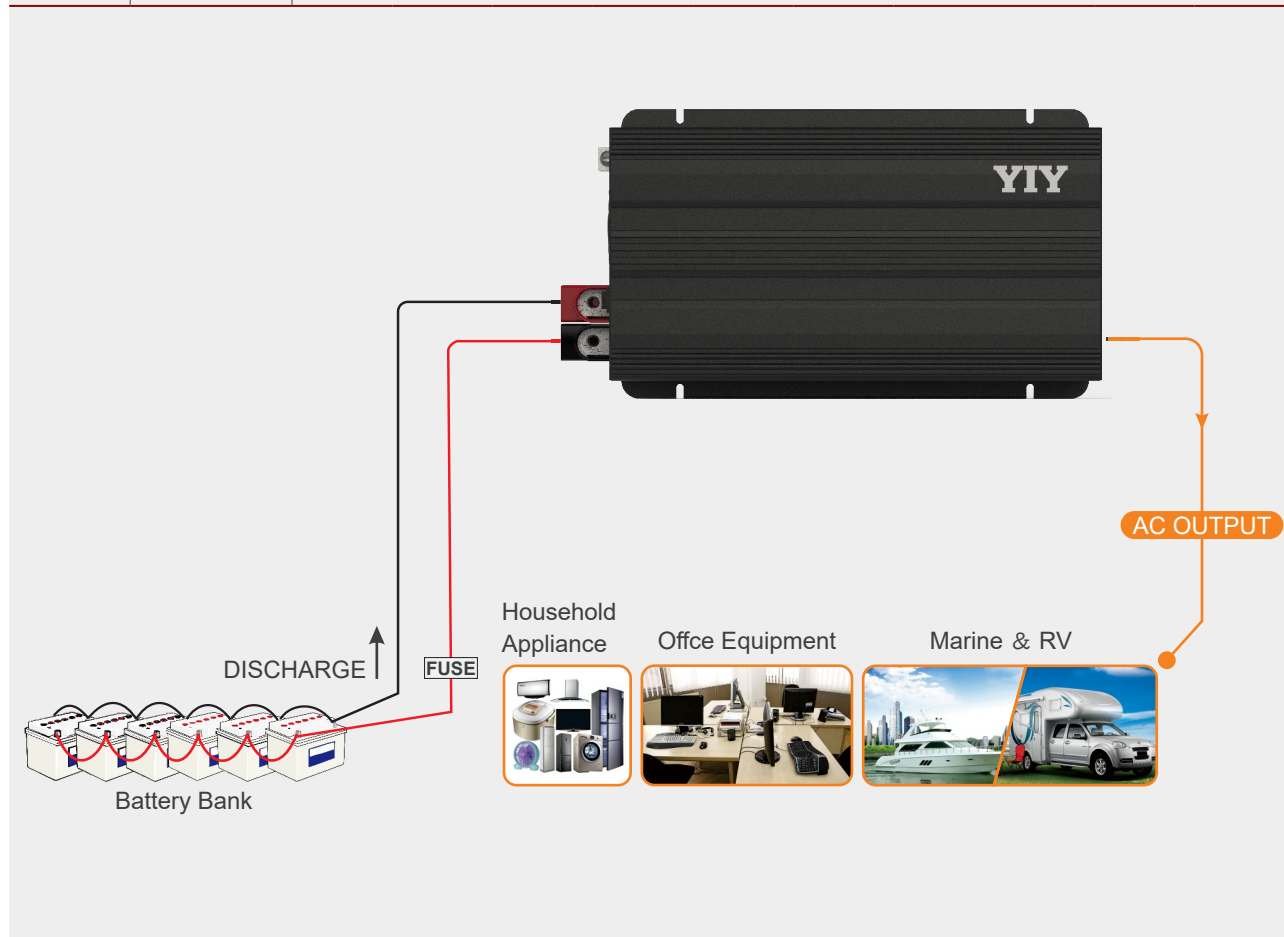
Marine

Technical Parameter

OPS Pure Sine Wave Inverter											
Input	Item	0612	1012	—	2012	0612E	1012E	—	2012E	3012E	—
		0624	1024	1524	2024	0624E	1024E	1524E	2024E	3024E	4024E
	Nominal voltage	12Vdc(*2for24Vdc)									
	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 / 2.61 A / 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 / /1739A / /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	27.3A / 26.1 A / 25.02A	36.36A / /34.78A / /33.34A
	Peak Output Current @110/115/120	10.92A/ 10.44A / 10A	18.2A / 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 Pure Sine Wave Inverter

Environmental	Noise	<50 dB									
	Operating temperature	Operation temperature: -20 to +70°C -5 to +40 °C with full performance.									
	Storage temperature	-30-70°C									
	Operating humidity	90% RH (no condense)									
	Operating Attitude	1500m									
	Safety	ETL, UL-458, CE									
	EMC	FCC Part 15 Class B. EN55022 Class B. E-mark									
Mechanical	Dimension LxWxH(mm)	270x160x70 mm	355x190x95 mm		411x285x107 mm	270x160x70 mm	355x190x95 mm		411x285x107 mm	411x285x122 mm	
	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	< 5 Seconds									
	Power Saving Recovery Time	5 Seconds									
Human Interface	LED Indicator	3-LED installed									
	Audible Alarm	Buzzer									
	Communication Interface	RS232									



AC Converter / Battery Charger



Product 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.

Applications



Home Power Supply



Solar Energy Storage



RV



Office Equipment



Engineering Vehicles



Marine

Technical Parameter

CSB 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)					
Chasis Material	Iron Chasis / Alu. Chasis					
Optional Accessories / Function	BTS ; Reverse Polarity Protection ; RS232 Comm Module ; Battery 0V Charging ; Rain Shield					
"Product Size (mm) (L x W x H)"	259*134*72.5		259*134*72.5		315*170*83.5	
"Packing Size (mm) (L x W x 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

MPPT SCM4860



Advanced MPPT Solar Charger Controller



Product Features

- Intelligent Maximum Power Point Tracking technology increases efficiency 25%~30%.
- Compatible for PV systems in 12V, 24V or 48V.
- Three-stage charging optimizes battery performance.
- Maximum charging current up to 60A.
- Maximum 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.

Applications



Home Power Supply



Solar Energy Storage



RV



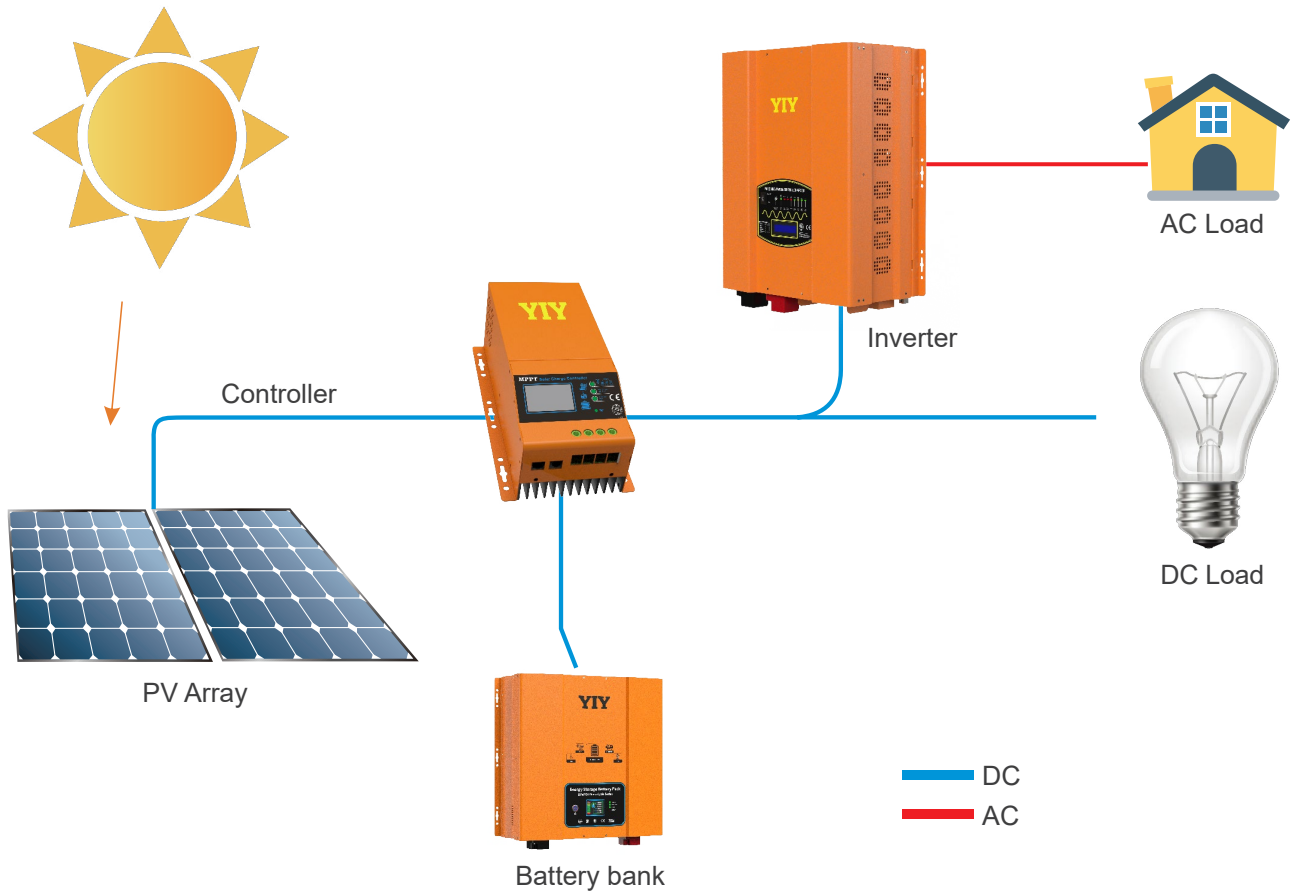
Office Equipment



Engineering Vehicles



Marine



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 Amps	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	
Maximum 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 (W x H x D mm)"	322 x 173 x 118
Temperature compensation	0°C to +50°C	Product weight (Kg)	4.8	
Charging stages	Bulk,Absorption,Float	Enclosure	IP31 (indoor & vented)	

Three Phase Power Conversion System



UP-S series power conversion system mainly consists of AC distribution, transformer, energy storage AC/DC converter module, monitoring system, etc. With modular design, high integration, easy and flexible installation, modular splicing according to the actual application scenario, with constant voltage, constant current and constant power control, it can be applied to industrial and commercial energy storage systems, with bi-directional (rectifier and inverter) as the basic feature, supporting grid-connected and off-grid operation, and with reactive power compensation and harmonic compensation functions. It can meet the application requirements of different application scenarios.

Product Features

- Maximum efficiency can reach 97.3%.
- Modular design ,easy for installation and depolymen.
- Bidirectional power conversion system with full fourquadrant operation.
- 62.5kW to 630kW by 1 to 10 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 to achieve seamless switching between on-grid and off-grid.

Applications



Self-Consumption



Off grid



Demand Charge



Back Up



DG+BESS



Micro-grid



Smooth output



Peak Shifting

Technical Parameter

UP-S Series Power Conversion System			
Model	30KW	62.5KW	100KW
Utility-interactive Mode			
"Battery voltage range"	600~900V		
DC max current	50A	100A	170A
AC voltage	380V±15%		
Max. AC current	100A	200A	400A
Nominal power	30KW	62.5KW	100KW
AC frequency	50Hz/60Hz±2.5Hz		
THDi	≤3%		
AC PF	-1~+1		
Stand-alone Mode			
"Battery voltage range"	650~950V		
DC Max Current	50	220A	440A
AC output voltage	380±1%		
Max. AC output current	50A	100A	170A
Nominal AC output power	30KW	62.5KW	100KW
AC max power	33KW	68.75KW	110KW
Output THDu	< 3 % (Linear load)		
AC frequency	50Hz/60Hz±0.2%		
AC PF	-1~+1		
Overload Capability	110%:10min ; 120%:1min		
Other			
Peak efficiency	97.30%		
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		
AC connection	3P4W		
Display	7 "color touch screen (optional)(External connection)		
Communication	RS485/CAN/ModBusTCP/IP/CAN/LAN		
Isolation	Built-in Transformer		Transformer
Physical			
Cooling	Forced air cooling		
Noise	≤70dB		
Enclosure	IP20		
Max elevation	3000m/10000feet (>2000m/6500feet derating)		
Operating ambient temperature	-20℃ ~50℃ (>45℃ derating)		
Humidity	0~95%(No condensing)		
Size (W×H×D)	850*2400*1600mm		
Weight	/	/	/

UPV-S



Three Phase Solar+Storage Hybrid Inverters



UPV-S series Bi-directional hybrid storage inverter is mainly composed of DC-AC inverter, DC-DC solar controller, AC power distribution, transformer, monitoring system, etc. It can be used in both on-grid and off-grid modes. It adopts modular design, high integration, convenient and flexible installation, which allows modular splicing according to actual application scenarios, and can efficiently use solar power to meet the application requirements of small and medium-sized micro-grid and industrial and commercial buildings.

Product 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.

Applications



Self-Consumption



Off grid



Demand Charge



Back Up



DG+BESS



Micro-grid



Smooth output



Peak Shifting

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
Stand-alone Mode										
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
Utility grid-interactive Mode										
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
Other										
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									
Physical										
Cooling	Forced air cooling									
Noise	≤70dB									
Enclosure	IP20/IP54									
Max elevation	3000m/10000 feet (>2000m/6500 feet derating)									
Operating temp	-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

390W-410W Solar Panel

182M Half Cell



• Features

- Outstanding mechanical load resistance, 2400 Pa wind load, 5400 Pa snow load.
- Anti-PID (potential induced degradation), passed anti-PID test under 85% damp heat, 85% relative humidity for 96 hours.
- Passed salt mist corrosion test, ammonia corrosion test, dust & sand test, fire test, alcertified by TUV.
- Double electroluminescence (EL) tests.



• Technical Parameter

Electrical Performance

Model Type	390W-27MH		400W-27MH		405W-27MH		410W-27MH	
Dimensions (L/W/H)	1722*1134*35							
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Peak Power at STC (Pmax)	390	290	400	297.4	405	301.1	410	304.8
Maximum Power Voltage (Vmp)	34.72	28.56	31.14	28.88	31.30	29.04	31.46	29.20
Maximum Power Current (Imp)	12.66	10.16	12.85	10.30	12.94	10.37	13.04	10.44
Open Circuit Voltage (Voc)	36.65±3%	34.33±3%	37.05±3%	34.69±3%	37.25±3%	34.87±3%	37.45±3%	35.05±3%
Short Circuit Current (Isc)	13.49±3%	10.84±3%	13.67±3%	11.00±3%	13.76±3%	11.08±3%	13.85±3%	11.16±3%
Module Efficiency(%)	19.97		20.48		20.74		20.99	

Thermal Characteristics & Operating Conditions

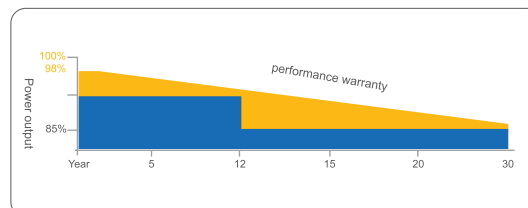
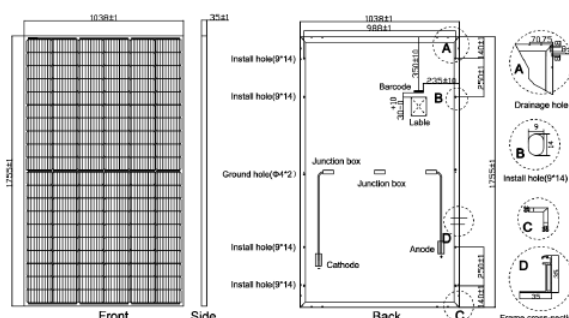
Maximum System Voltage(V)	1500/1000V
Maximum Series Fuse Rating(A)	25A
Power Tolerance	0~+3W
Pmax Temperature Coefficients(W/°C)	-0.350%
Voc Temperature Coefficients(V/°C)	-0.285%
Isc Temperature Coefficients(A/°C)	+0.045%
NOCT Nominal Operating Cell Temperature(°C)	45±2°C
Operating and Storage Temperature(°C)	-40°C~+85°C

Thermal Characteristics & Operating Conditions

Front Cover(Material /Thickness)	low-iron tempered glass / 3.2mm
Weight	19.00kg
Cell (Quantity/Type/Dimensions)	182*91 N Type Mono
No. of Cells	108 (12*9)
Frame (Material)	Anodized Aluminium Alloy
Junction Box (Protection Degree)	IP67/IP68
Cable (Length/Cross-Sectional Area)	4mm² cable 35cm+mc4

Packaging Specifications

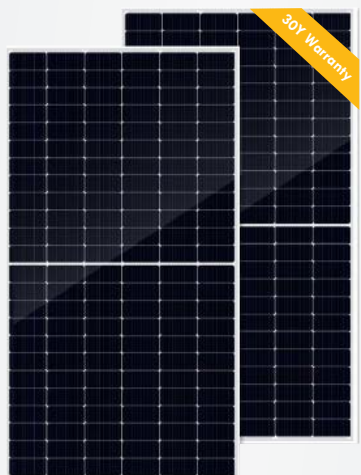
- 20FT container 6Packages/324PCS
- 40HQ container 26Packages/806PCS



STC ☀ Irradiance 1000W/m² ☒ Cell Temperature 25°C AM=1.5
 NOCT ☀ Irradiance 800W/m² ☒ Cell Temperature 20°C AM=1.5

535W-550W Solar Panel

182M Half Cell



• Features

- Outstanding mechanical load resistance, 2400 Pa wind load, 5400 Pa snow load.
- Anti-PID (potential induced degradation), passed anti-PID test under 85% damp heat, 85% relative humidity for 96 hours.
- Passed salt mist corrosion test, ammonia corrosion test, dust & sand test, fire test, as certified by TUV.
- Double electroluminescence (EL) tests.



• Technical Parameter

Electrical Performance

Model Type	535W-36MH		540W-36MH		545W-36MH		550W-36MH	
Dimensions (L/W/H)	2279*1134*35							
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Peak Power at STC (Pmax)	535	397.7	540	401.4	545	405.1	550	408
Maximum Power Voltage (Vmp)	41.6	38.62	41.76	38.78	41.93	38.93	42.13	39.09
Maximum Power Current (Imp)	12.84	10.3	12.93	10.35	13	10.41	13.06	10.46
Open Circuit Voltage (Voc)	49.5±3%	46.36±3%	49.7±3%	46.54±3%	49.9±3%	46.73±3%	50.1±3%	46.92±3%
Short Circuit Current (Isc)	13.61±3%	10.97±3%	13.72±3%	11.05±3%	13.81±3%	11.13±3%	13.9±3%	11.2±3%
Module Efficiency(%)	20.93		21.12		21.32		21.51	

Thermal Characteristics & Operating Conditions

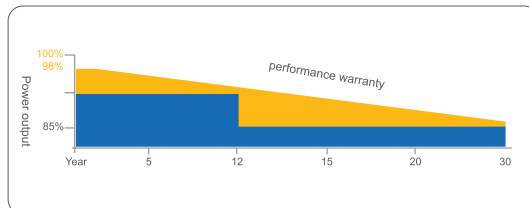
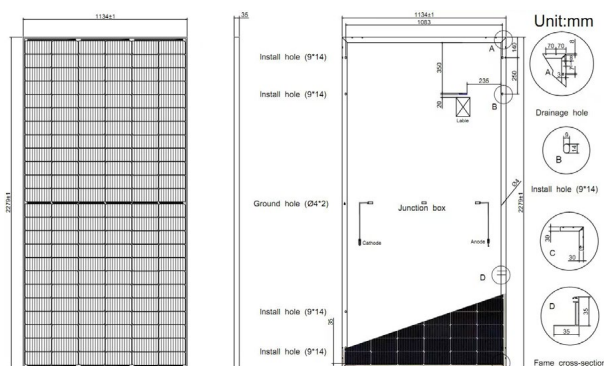
Maximum System Voltage(V)	1500V
Maximum Series Fuse Rating(A)	25A
Power Tolerance	0~+3%
Pmax Temperature Coefficients(W/°C)	-0.350%
Voc Temperature Coefficients(V/°C)	-0.250%
Iso Temperature Coefficients(A/°C)	+0.04%
NOCT Nominal Operating Cell Temperature(°C)	45±2°C
Operating and Storage Temperature(°C)	-40°C~+85°C

Thermal Characteristics & Operating Conditions

Front Cover(Material /Thickness)	low-iron tempered glass /3.2mm
Weight	27.00kg
Cell (Quantity/Type/Dimensions)	182*91 N Type Mono
No. of Cells	144 (6*12)*2
Frame (Material)	Anodized Aluminium Alloy
Junction Box (Protection Degree)	IP68
Cable (Length/Cross-Sectional Area)	4mm² cable 35cm+mc4

Packaging Specifications

- 20FT container 10 Packages/275 PCS
- 40HQ container 20 Packages/740 PCS



STC ☀ Irradiance 1000W/m² ☹ Cell Temperature 25°C AM=1.5
NOCT ☀ Irradiance 800W/m² ☹ Cell Temperature 20°C AM=1.5

Demonstrations







Start Digital Power Supply

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The contents of this volume reflect the state of the art at the time of printing and, although carefully checked, cannot be guaranteed to be completely accurate.