

OFF GRID SOLAR INVERTER

MKS SERIES

Off Grid Solar Inverter

WIFI(optional)

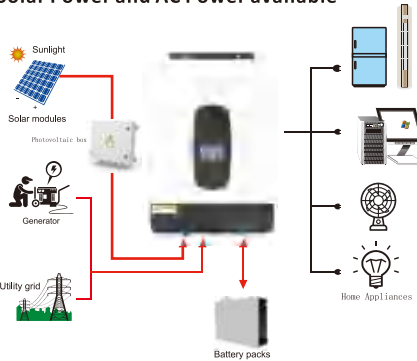


Features

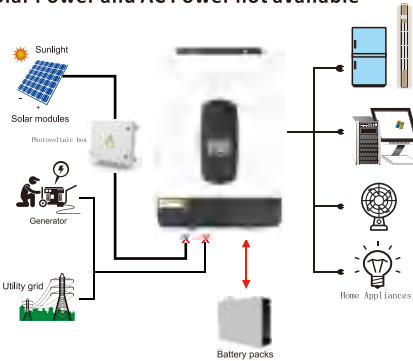
- Pure sine wave inverter
- Programmable supply priority for PV,battery or Grid
- High PV input voltage range(55~450VDC)
- Built-in Max 110A(3.8KW&6.2KW) MPPT solar charge
- Compatibe with lithium-ion battery
- Support BMS communication with Lithium battery
- Smart battery charge design to optimize battery life
- Overload,high temperature,inverter output short circuit protection
- Cold start function
- Intelligent fan speed adjustment
- Built-in anti-dusk kit for harsh enviromen(optional)
- WIFI&GPRS available for IOS and android

Solar System Connection

Operation with battery connected
Solar Power and AC Power available



Solar Power and AC Power not available



Overview



MKS-2200
MKS-3200



MKS-4200
MKS-7000

Max PV Input
2000W/3000W
5000W/6000W

Max PV Voltage 450VDC

Max PV Input Current 27A
(For 3.8KW/6.2KW)

MPPT Range 55 ~ 450VDC

MPPT Controller

12/24/48 Volt

Works with Lithium battery

AC Output
1800W/3000W
3600W/6200W

Max Charging Current 80/110A

Monitor & Control (Optional)

Communication Port RS232/RS485

Pure Sine Wave Inverter

Wi-Fi Option

BMS

Product Data Sheet

MODEL	MKS-2200	MKS-3200	MKS-4200-24	MKS-4200-48	MKS-7000
Rated Power	2200VA/1800W	3200VA/3000W	4200VA/3800W	4200VA/3800W	7000VA/6200W
INPUT					
Voltage	230VAC				
Selectable Voltage Range	170-280VAC(for personal computers) 90-280VAC(for home appliances)				
Frequency Range	50Hz/60Hz (Auto sensing)				
OUTPUT					
AC Voltage Regulation (Batt.Mode)	230VAC±5%				
Surge power	4400VA	6400VA	8400VA	8400VA	14000VA
Transfer Time	10ms (for personal computers) 20ms (for home appliances)				
Wave form	Pure Sine Wave				
BATTERY & AC CHARGER					
Battery Voltage	12VDC	24VDC	24VDC	48VDC	48VDC
Floating Charge Voltage	13.5VDC	27VDC	27VDC	54VDC	54VDC
Overcharge Protection	15.5VDC	31VDC	31VDC	61VDC	61VDC
Maximum charge current	60A		80A	60A	80A
SOLAR CHARGER					
MAX.PV Array Power	2000W	3000W	6000W		
MPPT Range@ Operating Voltage	55-450VDC				
Maximum PV Array Open Circuit Voltage	450VDC				
Maximum Charging Current	80A		110A	80A	110A
Maximum Efficiency	98%				
PHYSICAL					
Dimension.D*W*H(mm)	405x286x98mm		423x290x100mm	423x290x105mm	
Net Weight (kgs)	4.5kg	5.0kg	6.8kg	6.9kg	7. 5kg
Communication Interface	RS232/RS485(Standard) WIFI(Optional)				
OPERATING ENVIRONMENT					
Humidity	5% to 95% Relative Humidity(Non-condensing)				
Operating Temperature	-10°C to 55°C				
Storage Temperature	-15°C to 60°C				

NKS SERIES PV60-500VDC

3.5KW/ 5.5KW / 6.2KW 220V / 230Vac Output

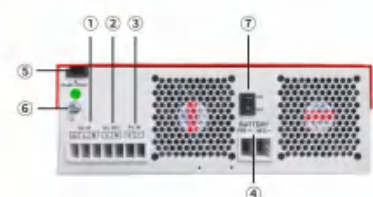


Features

- Pure sine wave
- Power factor 1.0
- PV input Voltage 60Vdc-500Vdc
- Built-in MPPT 100A/120A
- Capable to work without battery
- Detachable dust cover for harsh environment
- WiFi remote monitoring optional
- Support multiple output priority: UTL, SOL, SBU, SUB
- EQ function to optimize battery performance and extend lifecycle
- Compatible work with lifepo4 battery via RS485
- Lithium battery activation function, which can be triggered by mains or PV

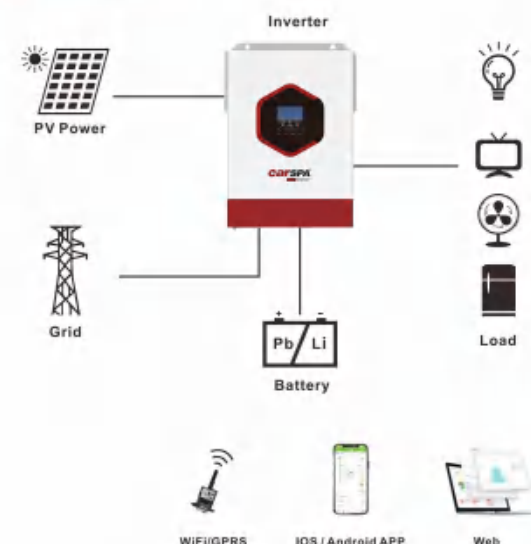


Bottom view

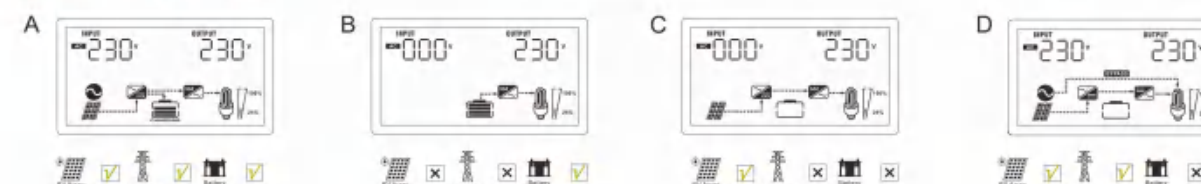


1. AC input
2. AC output
3. PV input
4. Battery input
5. RS232 / RS485 communication port
6. Grounding
7. Power on/off switch

System Diagram



Working Mode



Technical Data

MODEL			
Capacity	3.5KVA/3.5KW	5.5KVA/5.5KW	6.2KVA/6.2KW
Parallel Capability	NO	NO	NO
INPUT			
Nominal Voltage	230VAC		
Acceptable Voltage Range	170-280VAC(For personal Computer);90-280vac(For Home Appliances)		
Frequency	50/60 Hz(Auto sensing)		
OUTPUT			
Nominal Voltage	220/230VAC±5%		
Surge Power	7000VA	11000VA	12400VA
Frequency		50/60Hz	
Waveform	Pure Sine wave		
Transfer Time	10ms(For personal Computer);20ms(For Home Appliances)		
Peak Efficiency(PV to INV)	96%		
Peak Efficiency(Battery to INV)	93%		
Overload Protection	5s@ > =150% load; 10s@110%~150% load		
Crest Factor	3:1		
Admissible Power Factor	0.6~1 (inductive or capacitive)		
BATTERY			
Battery Voltage	24VDC	48VDC	48VDC
Floating Charge Voltage	27VDC	54VDC	54VDC
OverCharge Protection	33VDC	63VDC	63VDC
Charging Method	CC / CV		
Lithium Battery Activation	YES		
Lithim battery Communication	YES(RS485)		
SOLAR CHARGER & AC CHARGER			
Solar Charger Type	MPPT		
Max.PV Array Power	4000W	5500W	6500W
Max.PV Array Open Circuit Voltage	500VDC		
PV Array MPPT Voltage Range	60VDC~500VDC		
Max.Solar Input Current	15A	18A	27A
Max.Solar Charge Current	100A	100A	120A
Max.AC Charge Current	80A	80A	80A
Max.Charge Current (PV+AC)	100A	100A	120A
PHYSICAL			
Dimensions,D x W x H(mm)	358*295*100	438*295*105	
Package Dimensions,D x W x H(mm)	465*380*175	560*375*185	
Net Weight(Kg)	7	9	9
Communication Interface	RS232+RS485		
ENVIRONMENT			
Operating Temperature Range	(-10℃ to 50℃)		
Storage Temperature	(-15℃ ~ 50℃)		
Humidity	5% to 95% Relative Humidity (Non-condensing)		

Product specifications are subject to change without further notice.



CARSPA S Series Single Phase Solar

1.5KW/2.2KW/3.0KW/3.6KW/4.4KW/5.0KW/6.0KW

- Big LCD display
- Power export limit
- Compact and easy to install
- Wifi/GPRS/Lan communication optional



Simpler

Quick and easy single person installation
Fault codes warning view on LCD display
Built-in limiter optional



Safer

comply with international quality standards
tested by TUV,BV,Dekra etc.



Great reliability

IP65 ingress protection
10+years R&D accumulation and support

ANYTIME,ANYWHERE REMOTE MONITORING PLATFORM

Monitor system performance in
real-time via smartphone app or
web portal using out advanced
monitoring platform .



S Series Single Phase

SOLAR GRID TIED INVERTER

Technology Data

Model No	S1000	S1500	S2200	S3000	S3600	S4400	S5000	S6000
DC Side / Input Parameters								
Max DC power (W)	1500	2250	3300	4500	5400	6600	7500	7500
Max DC voltage (Vdc)	450	450	500	500	500	500	500	500
Min System start/Shut down voltage (Vdc)	65/70	75/100	75/100	75/100	75/100	75/100	75/100	75/100
MPPT voltage range(Vdc)	70~450	100~450	100~450	100~450	100~450	100~450	100~450	100~450
Max. input current (A)			13			13/13		
Number of MPP trackers	1	1	1	1	2	2	2	2
Strings per MPP tracker	1	1	1	1	1	1	1	1
AC Side / Output Parameters								
Nominal output power (W)	1000	1500	2200	3000	3600	4000	5000	6000
Maximum output power (W)	1100	1650	2420	3300	3960	4400	5500	6600
Nominal output voltage/range (V)	208,220,230,240/180~270							
AC grid frequency/range (Hz)	50Hz,60Hz(auto-selection) / 44Hz-55Hz; 54Hz-65Hz							
Maximum output current (A)	6	8	12	16	16	21	23	26
AC connection (with PE)	Single phase							
Current distortion(THDi)	<1.5%	<1.5%	<1.5%	<1.5%	<2.5%	<2.5%	<2.5%	<2.5%
Power factor	~1%(Adjustable from 0.8 leading to 0.8 lagging)							
Efficiency								
Maximum conversion efficiency	97.3%	97.3%	97.4%	97.5%	97.8%	97.8%	97.5%	97.6%
European efficiency	97.0%	97.0%	97.1%	97.2%	97.3%	97.3%	97.2%	97.3%
MPPT efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
Safety and Protection								
DC reverse-polarity protection				yes				
Anti-islanding / Overvoltage protection				yes				
Short circuit protection				yes				
Leakage current protection				yes				
Grid monitoring / Ground fault monitoring				yes				
DC/AC side SPD(thermally protected)				yes				
General Parameters								
Dimension (L/W/H)(mm)	370/277/115				434/340/115			
Weight (kg)	7				8			
Embedded DC Switch				Optional				
Night power consumption (W)				< 0.2				
Isolation type				Transformerless				
Protection degree				IP65 according to IEC60529				
Operation temperature (°C)				-25 ~ +60				
Cooling concept				Natural convection				
Operatiing Altitude (m)				<2000m without power derating				
Acoustic noise level (dB)				< 25				
Display				Graphic LCD				
Communication Interface				Standard WIFI; RS485 (optional)				
Warranty				5 years; 5/7/10 years for optional				



CARSPA High Voltage Three Phase Hybrid Inverter

4.0KW/5.0KW/6.0KW/8.0KW/10.0KW/12.0KW

- Big lcd display
- Three phase unbalanced output
- Power export limit
- Wifi/GPRS/Lan communication optional



Simpler

Quick and easy single person installation
Fault codes warning view on LCD display
smart meter optional



Safer

comply with international quality standards
tested by TÜV, BV, Dekra etc.



Great reliability

IP65 ingress protection
10+years R&D accumulation and support

ANYTIME, ANYWHERE REMOTE MONITORING PLATFORM

Monitor system performance in
real-time via smartphone app or
web portal using our advanced
monitoring platform .



CPH Series Three Phase



THREE PHASE HYBRID INVERTER

Technology Data

CPH Series CPH10KTL (4KW/5KW/6KW/8KW/10KW/12KW)

Model No	CPH4KTL	CPH5KTL	CPH6KTL	CPH8KTL	CPH10KTL	CPH12KTL
Input (DC)						
Max DC power	6000W	7500W	9000W	12000W	15000W	15000W
Max DC voltage				1000Vd.c.		
MPPT voltage range				200...850Vd.c.		
Max input current/per string				13Ax2		
Number of MPP trackers				2		
Number of input string				2		
Battery Input						
Battery Type				Li-Lon		
Battery voltage range				130~700V		
Maximum charge/discharge current				25/25A		
Charge strategy for Li-tou Battery				Self-adaptation to BMS		
Output (AC)						
AC nominal power	4000VA	5000VA	6000VA	8000VA	10000VA	12000VA
Max AC apparent power	5000VA	5500VA	7000VA	8800VA	11000VA	13200VA
Max output current	8A	10A	12A	15A	17A	20A
Nominal AC output				50/60Hz; 400/350		
AC output range				45/55Hz;280~490Vac(Adj)		
Power factor				0.8leading...0.8laging		
Harmonics factor				<3%		
Grid type				3W/N/PE		
Three-phase unbalance output	0~100%	0~100%	0~100%	0~100%	0~100%	0~80%
AC Output (Back-up)						
Max AC apparent power	4000VA	5000VA	6000VA	8000VA	10000VA	10000VA
Norminal Output Voltage				400/380V		
Norminal Output Frequency				50/60HZ		
Output THDV (@Liuear Load)				<3%		
Efficiency						
Maximum conversion efficiency	98.0%	98.0%	98.2%	98.2%	98.2%	98.2%
European efficiency	97.3%	97.3%	97.5%	97.5%	97.5%	97.5%
Max battery to AC Efficiency	97.2%	97.2%	97.4%	97.4%	97.4%	97.4%
MPPT efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
Safety and Protection						
DC reverse-polarity protection				yes		
DC breaker				yes		
DC/AC SPD				yes		
Leakage current protection				yes		
Insulation Impedance Detection				yes		
Residual Current protection				yes		
Output short circuit protection				yes		
Battery reerse connection protection				yes		
General Parameters						
Dimension (W/H/D)				548*444*184mm		
Weight				27 kg		
Operating temperature range °C				-25°C...+60 °C		
Degree of protection				IP65		
Cooling concept				Natural convection		
Topology				Transformerless		
Display				LCD		
Humidity				0-95%,no condensation		
Communication				Standard WiFi;GPRS/LAN(optional)		
Warranty				Standard 5 years; 7/10 years optional		
BMS communication				CAN/RS485		
Meter communication				RS485		
Certificates and Approvals						

CQC, VDE-AR-N4105, IEC61727, IEC62116, VDE0124-AR-N0124, EN50549, IEC62109, IEC62477