SMK SOLAR
TECHNOLOGIES NIGERIA LIMITED
Energy...Anytime...Anywhere

SMK NEW ENERGY

Hybrid Solar Inverter OEM/ODM Service Specialist



“Brief Introduction of SMK Solar”

ABOUT SMK

SMK SOLAR is a leading manufacturer for solar off grid system over 10 years experience. Our produt range is wide which including solar water heating system, Mppt solar charge controller, inverter, portable solar system, solar energy storage system, solar street light and solar dc fridge & freezer etc. We are professional in residential stand-alone system solutions. SMK not only offer the componet of solar product but also we provide the whole solar kits for your different energy demand.

VISION STATEMENT

SMK Solar's vision remains being a true supplier partner that support you to be more competitive in you market and will always strive to offer excellent value and service.

BUSINESS STRATEGY

SMK Solar has developed comprehensive product line for residential off grid system. We understand the need to offer choices for our customers and offer a range of technologies, price points and service. We align ourselves to brands that have the same values as ours namely service and support, quality and value for money. Our products are backed by warranties held globally, our experience and knowledge sets us apart from the competition and our commitment to serving the customer's needs is paramount.

WHY SMK

Reliability

SMK Solar is a leading manufactuer of Solar Charge Controller and various components for off-grid power

Quality

SMK Solar controller & inverter have set with the world class manufacturing standards in performance,quality,reliability and innovative teatrues.

Customer Focus

SMK Solar always keep to build trusted,long terms relationships with its customers.More harvest from solar,more benefit for customers.



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SMK SOLAR



Hybrid Solar Inverter

Solar Inverters-CM Series

1.5 / 2.5/3.5KW 220V / 230Vac Output



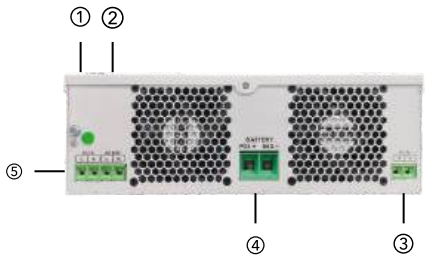
CM-N CM-S

Features

- Lithium battery activation function, which can be triggered by PV
- Pure Sine Wave
- PV Input 500Vdc Max
- Built-in MPPT 60A-100A
- 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

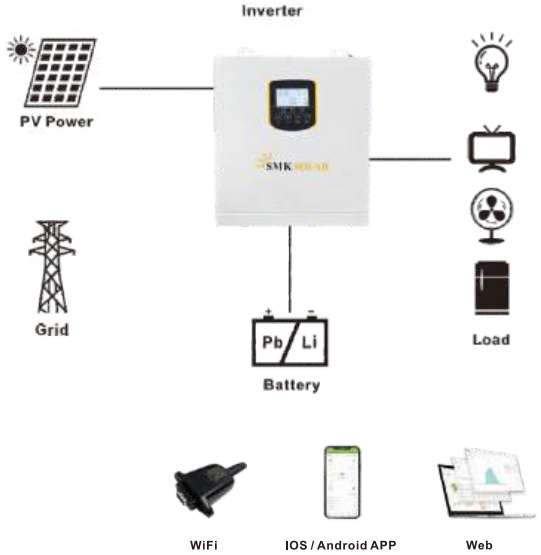


Bottom view



1. AC input
2. AC output
3. PV input
4. Battery input
5. Grounding

System Diagram



Technical Data

MODEL	CM1500-12S	CM1500-12N	CM2500-24S	CM2500-24N	CM3500-24S	CM3500-24N
Capacity	1500VA/1500W		2500VA/2500W		3500VA/3500W	
Parallel Capability	NO		NO		NO	
Lithium Battery Activation	YES(By PV)	NO	YES(By PV)	NO	YES(By PV)	NO
Lithium battery Communication	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%					
Rated Power	1500VA/1500W		2500VA/2500W		3500VA/3500W	
Battery Mode Power	1500VA/1500W		2500VA/2500W		3500VA/3500W	
Surge Power	3000VA		5000VA		7000VA	
Frequency	50/60 Hz					
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@>=140% load; 10s@100%~140% load					
Crest Factor	3:1					
Admissible Power Factor	0.6~1 (inductive or capacitive)					
BATTERY						
Battery Voltage	12Vdc		24Vdc		24Vdc	
Floating Charge Voltage	13.5Vdc		27Vdc		27Vdc	
OverCharge Protection	16.5Vdc		32Vdc		32Vdc	
Charging Method	CC/CV					
SOLAR CHARGER & AC CHARGER						
Solar Charger TYPE	MPPT					
Max.PV Array Power	2000W		3000W		4000W	
Max. PV Array Open Circuit Voltage	500VDC					
PV Array MPPT Voltage Range	30VDC~500VDC					
Max. Solar Input Current	15A					
Max. Solar Charge Current	100A		100A		100A	
Max. AC Charge Current	60A		60A		60A	
Max. Charge Current(AC+PV)	100A		100A		100A	
PHYSICAL						
Dimensions, D x W x H(mm)	334x293x98.5					
Package Dimensions, D x W x H(mm)	402x368x174					
Net Weight (Kgs)	4.0		4.4		4.4	
Gross weight(Kgs)	4.9		5.25		5.25	
Communication Interface	RJ45 For WiFi					
ENVIRONMENT						
Operating Temperature Range	-10°C to 55°C					
Storage temperature	-15°C~ 60°C					
Humidity	5% to 95% Relative Humidity (Non-condensing)					
Ingress Protection	IP21					

Product specifications are subject to change without further notice.

IP21 Solar Inverters-EMT Series

3.6/4.2/6.2/11KW 220V / 230Vac Output

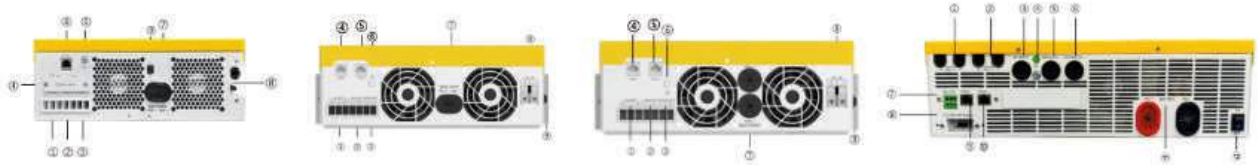


Features

- Dual output for smart load management
- Lithium battery activation function by PV or Utility
- Compatible work with LiFePO4 battery via RS485
- PV Input 500Vdc Max
- Built-in MPPT 100A/120A/160A
- 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



Bottom view



3.6KW

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

4.2KW

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

6.2KW

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

11KW

1. Solar input - 1
2. Solar input - 2
3. AC input
4. Grounding
5. Main output
6. Second output
7. Dry contact
8. WiFi(Optional)
9. RS485 communication port
10. RS232 communication port
11. Battery input
12. Power on / off switch

Technical Data

MODEL	EM3600T-24L	EM4200T-24L	EM6200T-48L	EM11000T-48L
PHASE	1-Phase In /1-Phase Out			
Maximum PV Input Power	4000W	6200W	9000W	11000W
Maximum Main Output Power	3600VA/3600W	4200VA/4200W	6200VA/6200W	11000VA/11000W
Maximum Second Output Power	3600VA/3600W	4200VA/4200W	6200VA/6200W	5500VA/5500W
Maximum Total Output Power	3600VA/3600W	4200VA/4200W	6200VA/6200W	11000VA/11000W
Parallel Capability	NO	NO	NO	NO
Lithium Battery activation	YES (By PV or Utility)	YES (By PV or Utility)	YES(By PV or Utility)	YES (By PV or Utility)
Lithium Battery communication	YES(RS485)	YES(RS485)	YES(RS485)	YES(RS485)
WIFI	Optional			
AC INPUT				
Nominal Voltage	230VAC			
Acceptable Voltage Range	170-280VAC(For personal Computer);90-280VAC(For Home Appliances)			
Frequency	50/60 Hz (Auto sensing)			
AC OUTPUT				
Nominal Voltage	220/230VAC±5%			
Surge Power	7200VA	8400VA	12400VA	22000VA
Frequency	50/60 Hz			
Waveform	Pure Sine wave			
Dual Outputs	Yes			
Transfer Time	10ms(For personal Computer);20ms(For Home Appliances)			
Peak Efficiency	94%			
Overload Protection	5s@> =140% load; 10s@100%~140% load			
Admissible Power Factor	0.6~1 (inductive or capacitive)			
BATTERY				
Battery Voltage	24VDC	24VDC	48VDC	48VDC
Floating Charge Voltage	27VDC	27VDC	54VDC	54VDC
OverCharge Protection	33VDC	33VDC	63VDC	63VDC
Charging Method	CC/CV	CC/CV	CC/CV	CC/CV
SOLAR CHARGER & AC CHARGER				
Solar Charger TYPE	MPPT			
Max.PV Array Power	4000W	6200W	9000W	11000W
Max. PV Array Open Circuit Voltage	500VDC			
PV Array MPPT Voltage Range	30VDC~500VDC	60VDC~500VDC	60VDC~500VDC	60VDC~500VDC
Max. Solar Input Current	15A*1	27A*1	27A*1	27A*2 (40A Max)
Max. Solar Charge Current	100A	120A	120A	160A
Max. AC Charge Current	80A	120A	120A	120A
Max. Charge Current	100A	120A	120A	160A
PHYSICAL				
Dimensions, D x W x H(mm)	371.8x327x106.2	372x340x120.5	439x340x120.5	544.5x414.5x123
Package Dimensions,D x W x H(mm)	470x388x180	478x408x195	550x408x195	637x495x214
Net Weight (Kgs)	6.7	6.9		14.8
Gross weight(Kgs)	7.5	7.85		15.6
Communication Interface	RS485(RJ45)/RS232(DB9)	RS485(RJ45)/RS232(RJ45)		Builtin WIFI version: RS485(RJ45)
ENVIRONMENT				
Operating Temperature Range	-10°C to 55°C			
Storage temperature	-15°C~ 60°C			
Humidity	5% to 95% Relative Humidity (Non-condensing)			
Ingress Protection	IP21			

Product specifications are subject to change without further notice.

Solar Inverters-EM Series

2.5 / 3.5 / 8.5 / 11KW 220V / 230Vac Output

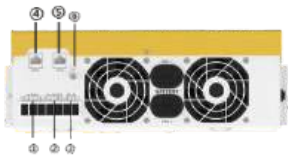


Features

- Lithium battery activation function by PV or Utility
- Compatible work with lifepo4 battery via RS485
- Pure sine wave
- Power factor 1.0
- PV input Voltage 60Vdc-500Vdc
- Built-in MPPT 60A / 100A /120A/160A
- 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

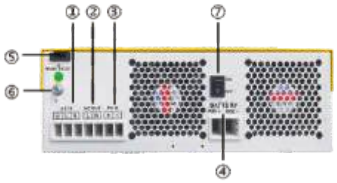


Bottom view



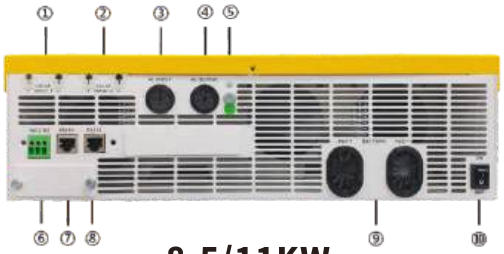
2.5KW

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



3.5KW

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

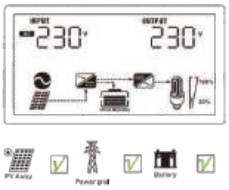


8.5/11KW

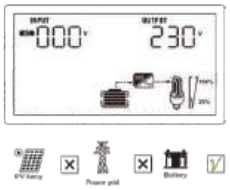
1. Solar input - 1
2. Solar input - 2
3. AC input
4. AC output
5. Grounding
6. Dry contact
7.RS485 communication port
8.RS232 communication port
9.Battery input
10.Power on / off switch

Working Mode

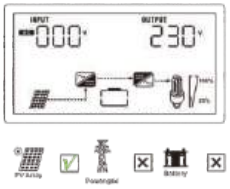
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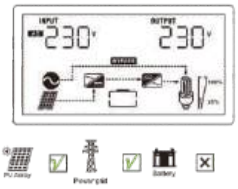
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C



D



Technical Data

MODEL	EM2500-12L	EM2500-24L	EM3500-24L	EM8500-48L	EM11000-48L
Capacity	2.5KVA/2.5KW	2.5KVA/2.5KW	3.5KVA/3.5KW	8.5KVA/8.5KW	11KVA/11KW
Parallel Capability	NO				
Lithium Battery activation	YES (By PV or Utility)	YES (By PV only)	YES (By PV or Utility)	YES (By PV or Utility)	YES (By PV or Utility)
Lithium Battery communication	YES(RS485)				
WIFI	Optional				
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	5000VA	5000VA	7000VA	17000VA	22000VA
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@>=140% load; 10s@110%~140% load				
Crest Factor	3:1				
Admissible Power Factor	0.6~1 (inductive or capacitive)				
BATTERY					
Battery Voltage	12VDC	24VDC	24VDC	48VDC	48VDC
Floating Charge Voltage	13.5VDC	27VDC	27VDC	54VDC	54VDC
OverCharge Protection	16VDC	32VDC	32VDC	63VDC	63VDC
Charging Method	CC / CV				
SOLAR CHARGER & AC CHARGER					
Solar Charger Type	MPPT				
Max.PV Array Power	3000W	3000W	4000W	5000W*2	5500W*2
Max.PV Array Open Circuit Voltage	500Vdc				
PV Array MPPT Voltage Range	50Vdc~500Vdc	60Vdc~500Vdc	60Vdc~500Vdc	60Vdc~500Vdc	60Vdc~500Vdc
Max.Solar Input Current	15A	15A	15A	18A*2	18A*2
Max.Solar Charge Current	120A	100A	100A	140A	160A
Max.AC Charge Current	120A	60A	80A	120A	120A
Max.Charge Current (PV+AC)	120A	100A	100A	140A	160A
PHYSICAL					
Dimensions,D x W x H(mm)	372x340x120.5	361.8x310x106	361.8x310x106	544.5x414.5x122.5	544.5x414.5x122.5
Package Dimensions,D x W x H(mm)	478x408x195	560x375x185	560x375x185	637x495x214	637x495x214
Net Weight(Kg)	6.9	6.0	6.2	14.4	14.8
Gross weight(kgs)	7.85	6.7	6.9	15.65	16.05
Communication Interface	RS232+RS485		RS232+RS485+ DRY CONTACT		
ENVIRONMENT					
Operating Temperature Range	(-10°C to 55°C)				
Storage Temperature	(-15°C ~ 60° C)				
Humidity	5% to 95% Relative Humidity (Non-condensing)				
Ingress Protection	IP21				

Product specifications are subject to change without further notice.

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Solar Inverters-MT Series

6.2/8.5/11KW 220V / 230Vac Output

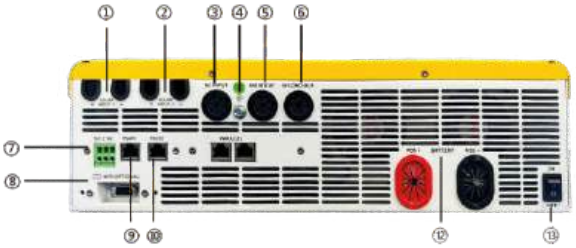


Features

- Dual Outputs
- Built-in 2 MPPT
- 6.2kW: max 12 units parallel 8.5/11kW: max 6 units parallel
- Lithium battery activation function by PV or Utility
- Compatible work with LiFePO4 battery via RS485
- Pure Sine Wave
- Power factor 1.0
- PV Input 500Vdc Max
- Built-in MPPT 120A/140A/160A
- Capable to work without battery
- Detachable dust cover for harsh environment
- WIFI remote monitoring optional
- Support multiple output priority: SUB,SBU
- EQ function to optimize battery performance and extend lifecycle



Bottom view



8.5/11KW

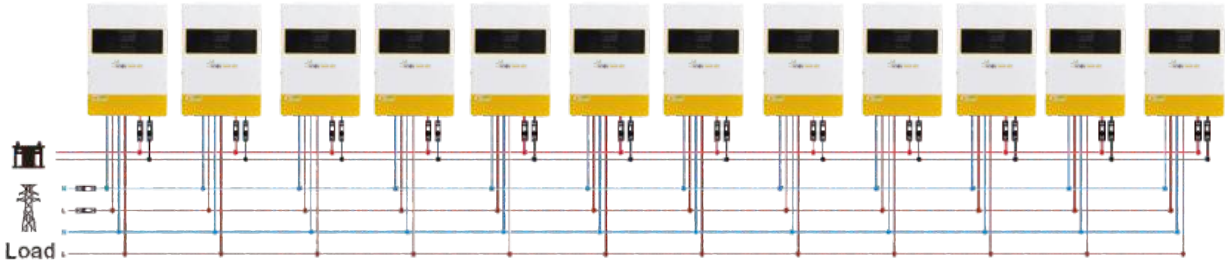
1. Solar input - 1
2. Solar input - 2
3. AC input
4. Grounding
5. AC Main output
6. AC Second output
7. Dry contact
8. WiFi (Optional)
9. RS485 communication port
10. RS232 communication port
11. Parallel
12. Battery input
13. Power on / off switch



6.2KW

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

Parallel 12 Units Max (6.2KW)



Technical Data

MODEL	M6200-48PL	M8500T-48PL	M11000T-48PL
CAPACITY	6.2KVA/6.2KW	8.5KVA/8.5KW	11KVA/11KW
Maximum PV Input Power	6.5KW	10KW	11KW
Twin AC Output Function	NO	YES	YES
Maximum Main Output Power	6.2KVA/6.2KW	8.5KVA/8.5KW	11KVA/11KW
Maximum Second Output Power	NO	5KVA/5KW	5.5KVA/5.5KW
Maximum Total Output Power	6.2KVA/6.2KW	8.5KVA/8.5KW	11KVA/11KW
Parallel Capability	YES, 12 units	YES, 6 units	YES, 6 units
Lithium Battery Communication	YES(RS485)	YES(RS485)	YES(RS485)
Lithium Battery Activation	YES(By PV or Utility)	YES(By PV or Utility)	YES(By PV or Utility)
Built-in WIFI	Optional		
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	220/230/240VAC		
Surge Power	12400VA	17000VA	22000VA
Frequency	50/60 Hz		
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@ > =140% load; 10s@110%~140% load		
Crest Factor	3:1		
Admissible Power Factor	0.6~1 (inductive or capacitive)		
BATTERY			
Battery Voltage	48VDC	48VDC	48VDC
Maximum Discharge Current	135A	180A	220A
Floating Charge Voltage	54VDC	54VDC	54VDC
OverCharge Protection	63VDC	63VDC	63VDC
Charging Method	CC/CV	CC/CV	CC/CV
Solar Charger & AC Charger			
Solar Charger TYPE	MPPT	MPPT	MPPT
Max.PV Array Power	6500W	5000W*2	5500W*2
Max. PV Array Open Circuit Voltage	500VDC	500VDC	500VDC
PV Array MPPT Voltage Range	60VDC~500VDC	60VDC~500VDC	60VDC~500VDC
Max. Solar Input Current	27A	18A*2	18A*2
Max. Solar Charge Current	120A	140A	160A
Max. AC Charge Current	80A	120A	120A
Max. Charge Current	120A	140A	160A
PHYSICAL			
Dimensions, D x W x H(mm)	457x314.5x131	544.5x414.5x123	544.5x414.5x123
Package Dimensions, D x W x H(mm)	637x495x214	637x495x214	637x495x214
Net Weight (Kgs)	9.6	14.4	15.8
Gross weight(Kgs)	10.7	16.4	16.9
Communication Interface	RS232/RS485	RS232/RS485/Dry-contact	RS232/RS485/Dry-contact
LCD	YES		
ENVIRONMENT			
Operating Temperature Range	-10°C to 55°C		
Storage temperature	-15°C~ 60°C		
Humidity	5% to 95% Relative Humidity (Non-condensing)		
Ingress Protection	IP21		

Product specifications are subject to change without further notice.

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Solar Inverters-MT Series

8.5 / 11KW 220V / 230Vac Output



Features

- Dual AC output
- Built-in 2 MPPT
- Parallel max up to 6 units
- Lithium battery activation function by PV or Utility
- Compatible work with LiFePO4 battery via RS485
- Pure Sine Wave
- Power factor 1.0
- PV Input 500Vdc Max
- Built-in MPPT 140A/160A
- Capable to work without battery
- Detachable dust cover for harsh environment
- WIFI remote monitoring optional
- Support multiple output priority: SUB,SBU
- EQ function to optimize battery performance and extend lifecycle

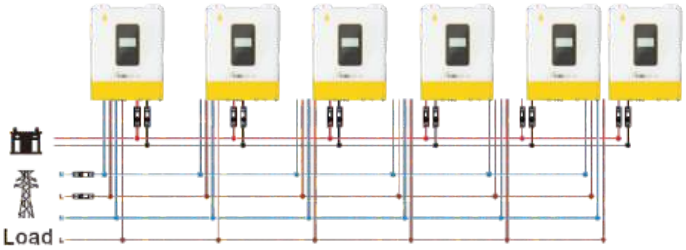


Bottom view



1. Solar input - 1
2. Solar input - 2
3. AC input
4. Grounding
5. AC Main output
6. AC Second output
7. Dry contact
8. WIFI (Optional)
9. RS485 communication port
10. RS232 communication port
11. Parallel
12. Battery input
13. Power on / off switch

System Diagram



RGB Light Indicator



Green	Blue	Cyan	Red	Purple	Yellow
Inverter mode	AC mode	Standby mode	Fault mode	Bypass mode	Charging mode

Working Mode

A 

B 

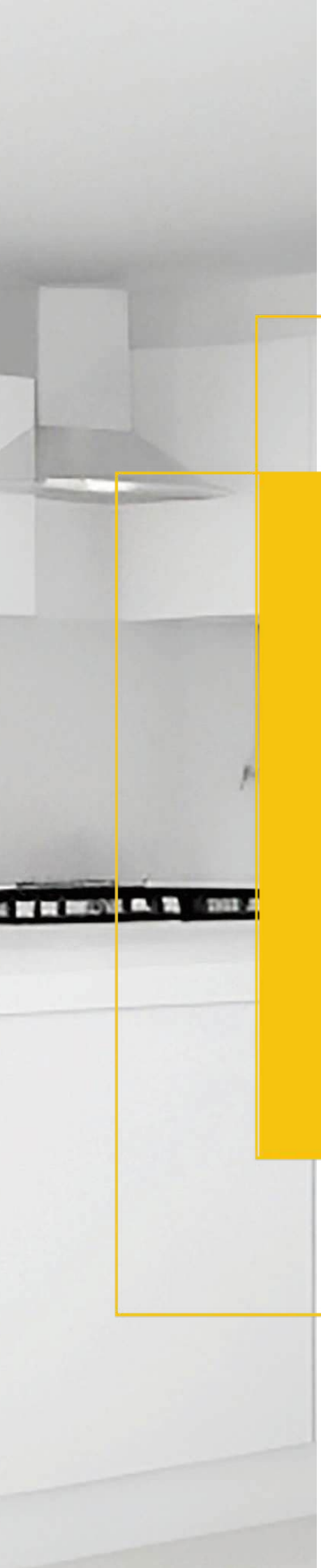
C 

D 

Technical Data

MODEL	M8500T-48PL Plus	M11000T-48PL Plus
CAPACITY	8.5KVA/8.5KW	11KVA/11KW
Maximum PV Input Power	10KW	11KW
Twin AC Output Function	YES	
Maximum Main Output Power	8.5KVA/8.5KW	11KVA/11KW
Maximum Second Output Power	5KVA/5KW	5.5KVA/5.5KW
Maximum Total Output Power	8.5KVA/8.5KW	11KVA/11KW
Parallel Capability	YES, 6units	YES, 6units
Lithium Battery Communication	YES(RS485)	YES(RS485)
Lithium Battery Activation	YES(By PV or Utility)	YES(By PV or Utility)
WIFI	Optional	
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	220/230/240VAC	
Surge Power	17000VA	22000VA
Frequency	50/60 Hz	
Waveform	Pure Sine wave	
Transfer Time	10ms(For personal Computer);20ms(For Home Appliances)	
Peak Efficiency (PV to INV)	94%	
Peak Efficiency (Battery to INV)	93%	
Overload Protection	5.5s@ > =140% load; 10.5s@110%~140% load	
Crest Factor	3:1	
Admissible Power Factor	0.6~1 (inductive or capacitive)	
BATTERY		
Battery Voltage	48VDC	48VDC
Maximum Discharge Current	180A	220A
Floating Charge Voltage	54VDC	54VDC
OverCharge Protection	63VDC	63VDC
Charging Method	CC/CV	CC/CV
Solar Charger & AC Charger		
Solar Charger TYPE	MPPT	MPPT
Max.PV Array Power	5000W*2	5500W*2
Max. PV Array Open Circuit Voltage	500VDC	500VDC
PV Array MPPT Voltage Range	60VDC~500VDC	60VDC~500VDC
Max. Solar Input Current	27A*2 (40A Max)	27*2 (40A Max)
Max. Solar Charge Current	140A	160A
Max. AC Charge Current	120A	120A
Max. Charge Current	140A	160A
PHYSICAL		
Dimensions, D x W x H(mm)	544.5x414.5X123	544.5x414.5x123
Package Dimensions, D x W x H(mm)	637x495x214	637x495x214
Net Weight (Kgs)	14.4	16.3
Gross weight(Kgs)	16.95	18.4
Communication Interface	RS485/RS232/Dry-contact	
LCD	YES	
ENVIRONMENT		
Operating Temperature Range	-10°C to 55°C	
Storage temperature	-15°C~ 60°C	
Humidity	5% to 95% Relative Humidity (Non-condensing)	
Ingress Protection	IP21	


5MK SOLAR



Solar Freezer

Solar Freezer

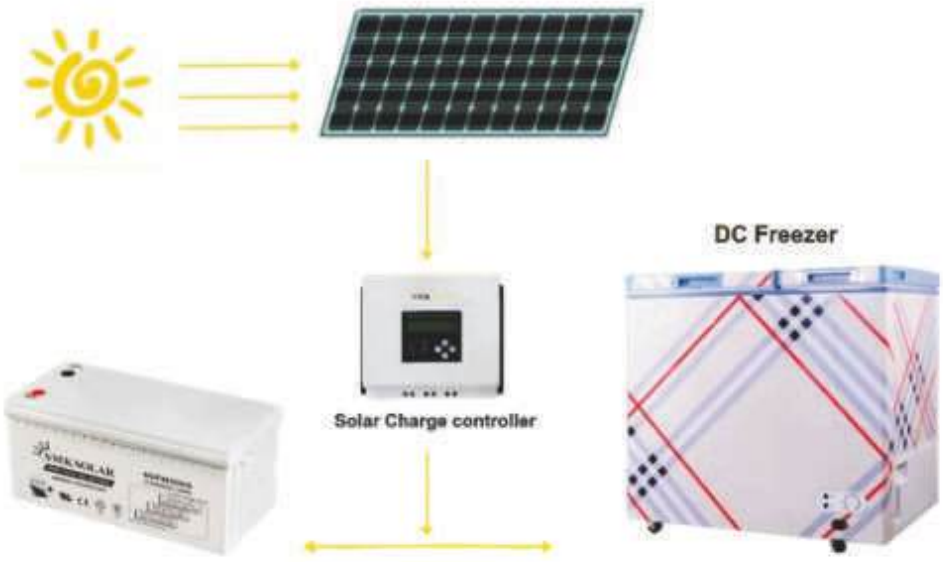
DCF 308/358L



Features

- Totally enclosed compressor , does not contain CFCS.
- The cooling speed, small volume, light weight, smooth operation , low noise, long service life.
- Green environment protection, safe and reliable, no pollution, no damage, easy to operate, simple to use.
- 12/24V power supply, it is suitable for outdoor use; The 220V power supply indoor use.

Application Diagram



Technical Data

Model	DCF 308	DCF 358
Rated Voltage	DC 12/24V	
Rated power	78W	88W
Total Storage Capacity	300L	350L
Condenser	Outside	
G.W/N.W (KGS)	59/54	64/58
Product Dimension (mm)	1341 x 680 x 850	1521 x 660 x 850
Carton Dimension(mm)	1399 x 706 x 880	1579 x 706 x 880
Temprature	0---23 °C	
Foam Thickness	90mm	90mm
Refrigerant	R134a	
40HQ loading (PCS)	75	72
Certificate	SASO	





Lithium Battery

Lithium Battery - ES Box Series

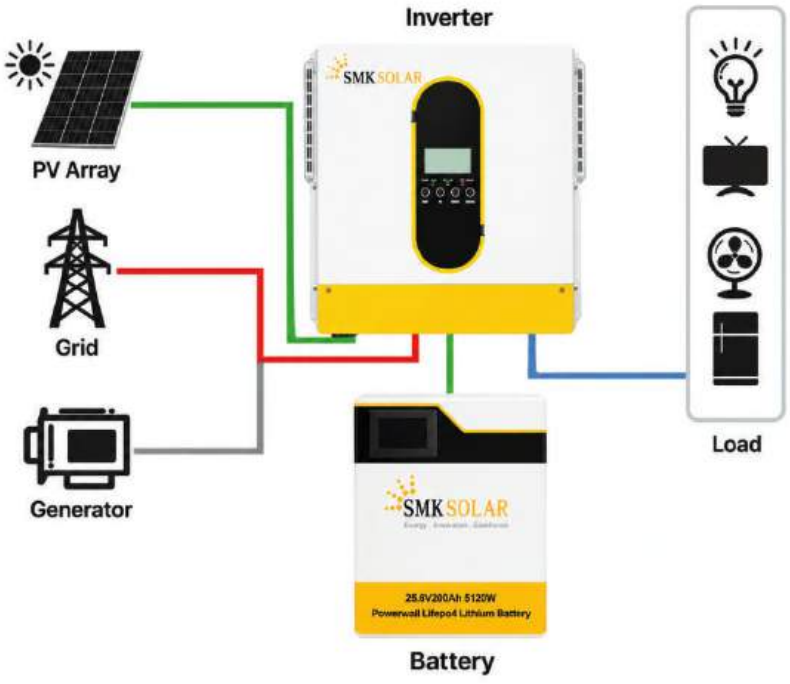
25.6V 200AH/ 51.2V 100AH/ 51.2V 200AH/ 51.2V 350AH



Features

- LIFePO4 Battery, Longer life span
- Low self consumption
- High efficiency, fast charging
- Maintenance free
- RS485/CAN/RS232 Communication Port
- Parallel up to 15pcs
- Smart BMS with current limiting function
- Touch/Color screen
- Bluetooth Monitor, and wifi remote monitoring
- Built in protection for overcharge, over discharge and over temperature.

Application Diagram



Technical Data

MODEL	ES-Box5S 5KWH	ES-Box5 5KWH	ES-Box10 10.24KWH	ES-Box18 18KWH
Rated Capacity	200AH	100AH	200AH	350AH
Voltage	25.6V	51.2V	51.2V	51.2V
Dischage Cut-off Voltage	22V	44.8V	44.8V	44.8V
Equalized Charge Voltage	29.2V	56.8V	56.8V	56.8V
Max Continues Charging Current	100A	100A	100A	200A
Max Continues Discharging Current	100A	100A	100A	200A
Weight	Approx. 45kg	Approx. 45kg	Approx. 85kg	Approx. 135kg
Display	LCD			
Parallel	Parrallel connection up to 15 packs with full communications			
Dimensions (wxDxH) mm	550mm x 400mm x 230mm	550mm x 400mm x 230mm	720mm x 425mm x 230mm	900mm x 450mm x 242mm
Ports	1x CAN-bus, 1x RS-485 Battery Link ports, 2x Parallel Instruction ports			
Cells	New Li-ion Prismatic cells			
BMS	Jikong bms, 3.5" touch screen		Pace bms, 9" touch screen	
Warranty	5 Years			
Design Life	+-15 Years			
Cycle Life @0.5C	+-4000 Cycles @ 100% DOD, Above 6000 Cycles @ 80% DOD			
Certification	UN38.3, IEC, MSDS			
Outer Package Materials	White bake lacquer steel case			
Operating Temperature	0 to +50 C			
Protection	Electronic Circuit Breaker, BMS Voltage protection, current limiting			
Compatible Inverter	SMK SOLAR, Deye, Growatt, Sunsynk, Victron, SMA, Voltronic etc.			

Product specifications are subject to change without further notice.

Lithium Battery

25.6V 314AH 8038.4WH/51.2V 314AH 16076.8WH

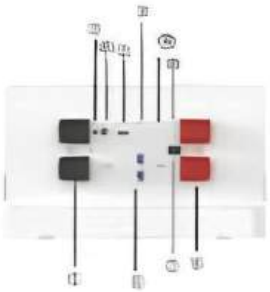


Feature

-IPS4 design
-Multi-protections
-6000 times Deep cycle design
-With builtin BMS protection
-Suitable for residential backup system
-10 Years+ life span design
-Parallel to 16pcs Max
-BMS matched with mainstream inverter brands

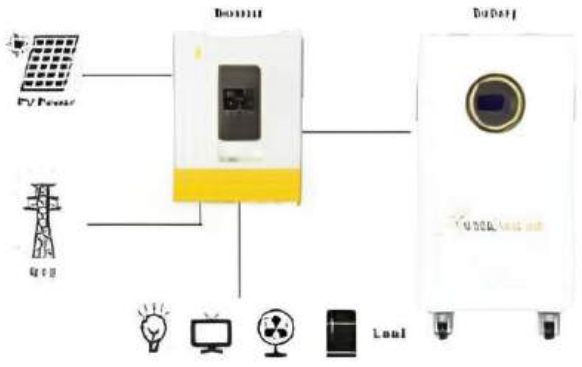


Side view



1. Negative Terminal
2. Circuit Breaker
3. Power Switch
4. Positive Terminal
5. RESET
6. ADS
7. Dry Contacts
8. CAN/RS485 communication port
9. RS232 communication port
10. RS485 Communication port (Parallel port)

System Diagram



Appearance






Technical Data

Model	LFP-25.6V314AH	LFP-51.2V314AH
Nominal Energy	8038.4WH	16076.8WH
Nominal Voltage(V)	25.6V	51.2V
Battery Cell Energy(AH)	314AH	314AH
Discharge voltage(V)	29.2~20V	58.4~40V
Charge voltage(V)	29.2V	58.4V
Max.Charge current(A)	200A	200A
Max.Discharge current(A)	200A	200A
Communication port	RS232/RS485/CAN-BUS	
Parallel Max	16	
Altitude	<2000M	
Humidity	<95% RH	
Operating temperature(°C)	- 10~50	
Storage Temperature(°C)	0~35	
Depth of discharge(DOD)	80%	
Cycle life	6000 cycle @ 80% DOD 25°C	
Design life	10 years	
Installation	On Floor	
Dimensions,D x W x H(mm)	460*430*250	750*430*250
Package Dimensions,D x W x H(mm)	671*508*442	875*508*442
Net Weight(Kgs)	65	115
Gross weight(Kgs)	78	137
Ingress Protection	/	IP54

Product specifications are subject to change without further notice.

Lithium Battery

12.8V 314AH 4019.2WH/25.6V 100AH 2560WH/51.2V 100AH 5120WH

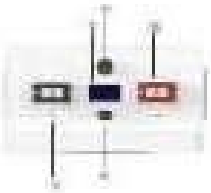


Features

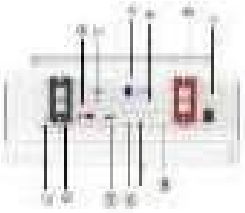
- IP54 design
- Multi-protections
- 6000 times Deep cycle design
- With builtin BMS protection
- Suitable for residential backup system
- 10 Years+ life span design
- Parallel to 16pcs Max(Only for 24V/48V)
- BMS matched with mainstream inverter brands (Only for 24V/48V)



Side view



1. Negative Terminal
2. Display
3. COM Port
4. Power Switch
5. Positive Terminal



1. Grounding
2. Negative Terminal
3. RESET
4. ADS
5. Dry Contacts
6. CAN/RS485 communication port
7. Circuit Breaker
8. RS232 communication port
9. RS485 Communication port (Parallel port)
10. Positive Terminal
11. Power Switch

System Diagram



Appearance



Technical Data

Model	LP-12.8V314AH	LP-25.6V100AH	LP-51.2V100AH
Nominal Energy	4015.2WH	2560WH	5120WH
Nominal Voltage(V)	12.8V	25.6V	51.2V
Battery Cell Energy(AH)	314AH	100AH	100AH
Discharge voltage(V)	14.6~10V	29.2~20V	58.4~40V
Charge voltage(V)	14.6V	29.2V	58.4V
MaxCharge current(A)	200A	100A	100A
Max.Discharge current(A)	200A	100A	100A
Communication port	RS485/CAN-BUS	RS232/RS485/CAN-BUS	RS232/RS485/CAN-BUS
Parallel Max	/	16	16
Altitude	<2000M		
Humidity	<95% RH		
Operating termperature(°C)	-10~50		
Storage Temperature(°C)	0~35		
Depth of discharge(DOD)	80%		
Cycle life	6000 cycle @ 80% DOD 25°C		
Design life	10 years		
Installation	On floor	Wall mount	Wall mount
Dimensions,D x W x H(mm)	365*200*305	395*385*153.6	605.2*384.8*153.6
Package Dimensions,D x W x H(mm)	/	466*456*230mm	676*456*230
Net Weight(Kgs)	38	28	47
Gross weight(Kgs)	/	29.5	50
Ingress Protection	IP54		

*Product specifications are subject to change without further notice.

Lithium Battery (Lyd Series)

IP65 WATERPROOF

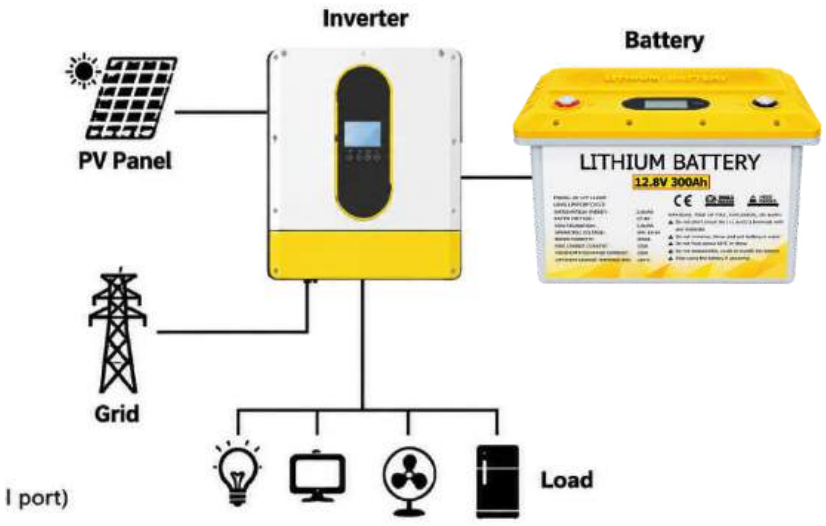


Features

- Multiple Protection
- 4500 times deep cycle design
- Suitable for residential backup system
- With built-in BMS protection
- Easily stackable

Wide Application | Long cycle Life | Smart BMS | Lead acid replacement | Universal Compatibility | Rugged

System Diagram



Product Specification

Model	LYD-LFP-12100F	LYD-LFP-12200F	LYD-LFP-12300F
Nominal Voltage	12.8V	12.8V	12.8V
Nominal Capacity	100 Ah	200 Ah	300 Ah
Min. Capacity	100 Ah	200 Ah	300 Ah
Nominal Energy	1280 Wh	2560 Wh	3840 Wh
Internal Resistance	≤16mΩ	≤16mΩ	≤16mΩ
Cycle Life	2000 Cycles @40A Charging Discharging ,Until 70% Capacity	2000 Cycles @40A Charging Discharging ,Until 70% Capacity	2000 Cycles @40A Charging Discharging ,Until 70% Capacity
Self Discharge	≤3.5% per month at 25℃	≤3.5% per month at 25℃	≤3.5% per month at 25℃
Independent Digital Display	YES	YES	YES
Max.Charging Voltage	14.0~14.4V	14.0~14.4V	14.0~14.4V
Charging Mode	CC-CV	CC-CV	CC-CV
Charging Current	40A	40A	40A
Max.Charging Current	100A	100A	100A
Discharging Current	100A	100A	100A
Max. Continuous Discharging Current	100A	100A	100A
Max.Pulse Discharging Current	400A(<3S)	400A(<3S)	400A(<3S)
Discharging Cut-off Voltage	10.8V	10.8V	10.8V
Charge Temperature	0℃ to 45℃(32℉ to 113℉) @60±25% Relative Humidity	0℃ to 45℃(32℉ to 113℉) @60±25% Relative Humidity	0℃ to 45℃(32℉ to 113℉) @60±25% Relative Humidity
Discharge Temperature	-20℃ to 60℃(-4℉ to 140℉) @60±25% Relative Humidity	-20℃ to 60℃(-4℉ to 140℉) @60±25% Relative Humidity	-20℃ to 60℃(-4℉ to 140℉) @60±25% Relative Humidity
Storage Temperature	0℃ to 45℃(32℉ to 113℉) @60±25% Relative Humidity	0℃ to 45℃(32℉ to 113℉) @60±25% Relative Humidity	0℃ to 45℃(32℉ to 113℉) @60±25% Relative Humidity
Casing	Plastic	Plastic	Plastic
Dimension(LWH*TH)	303*214*171 mm	306*233*255 mm	378*233*259 mm
Weight	Approx 9Kgs	Approx 18Kgs	Approx 23Kgs
Terminal	M5	M8	M8
Water Dust Resistance	IP65	IP65	IP65





Solar Flood Light And Solar Street Light

Solar Flood Light

IP66 WATERPROOF



Features

- Solar energy, free electricity
- Wiring free, install anywhere you want
- Newly detachable design, easy for installation & maintenance
- Optical lens improve 20% light efficiency
- High quality & brand new LiFePO4 battery, 100% full capacity
- Multi working mode fordifferent scene application
- Auto on at night, auto off during the daytime

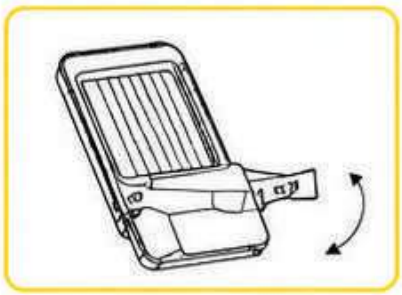
Electricity Free

Wiring Free

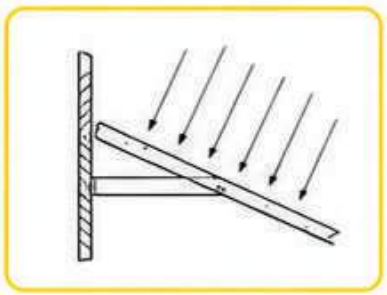
Induction Lights

Simple Installation

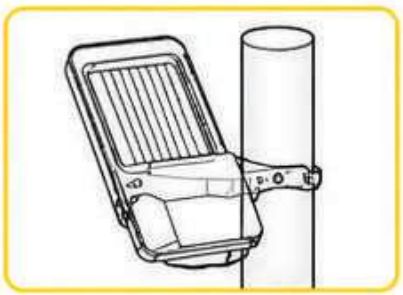
Application Diagram



Adjustable Bracket



Wall Mounted



Pole Installation

Technical Data

Model No.	SMK-8150	SMK-8200	SMK-8300S
LED Lumen	1200LM	1800LM	2500LM
Solar panel specification	25W	35W	50W
Battery Capacity	3.2V 20AH	3.2V 30AH	3.2V 40AH
Lamp Size	260*190*55mm	335*250*60mm	
LED Chips	96pcs	160 pcs	
Solar Panel Size	530*350*17mm	650*350*17mm	670*530*25mm
Lighting Mode	Lighting Control+Timer		
Package Info	6 Sets/Carton	4 Sets/Carton	6 Sets/Carton Solar Panel And Lamp Packed Separately
IP Class	IP66		
Recommend Installation Height	3-5M		6-8M
Charging Time	4-5H		
Discharging Time	8-24H		

Product specifications are subject to change without further notice.

Solar Flood Light

IP66 WATERPROOF



Features

- **2 in One Design:**
  Optical lens improve 20% light efficiency.
  Newly detachable design, easy for installation and maintenance
- **Brand Accessories:**
  Highly quality & brand new LiFePO4 battery, 100% full capacity
- **Easy To Use:**
  Free firing, zero electricity, easy to install and use.
  Lighting control, turn on automatically when it is dark.
- **Efficiency Solar Panel:**
  High efficiency solar panel, lifetime is more than 25 years.
- **High Lumen LED:**
  High bright 5054 LED chips.IP65 class, suitable for outdoor installation

Application Diagram

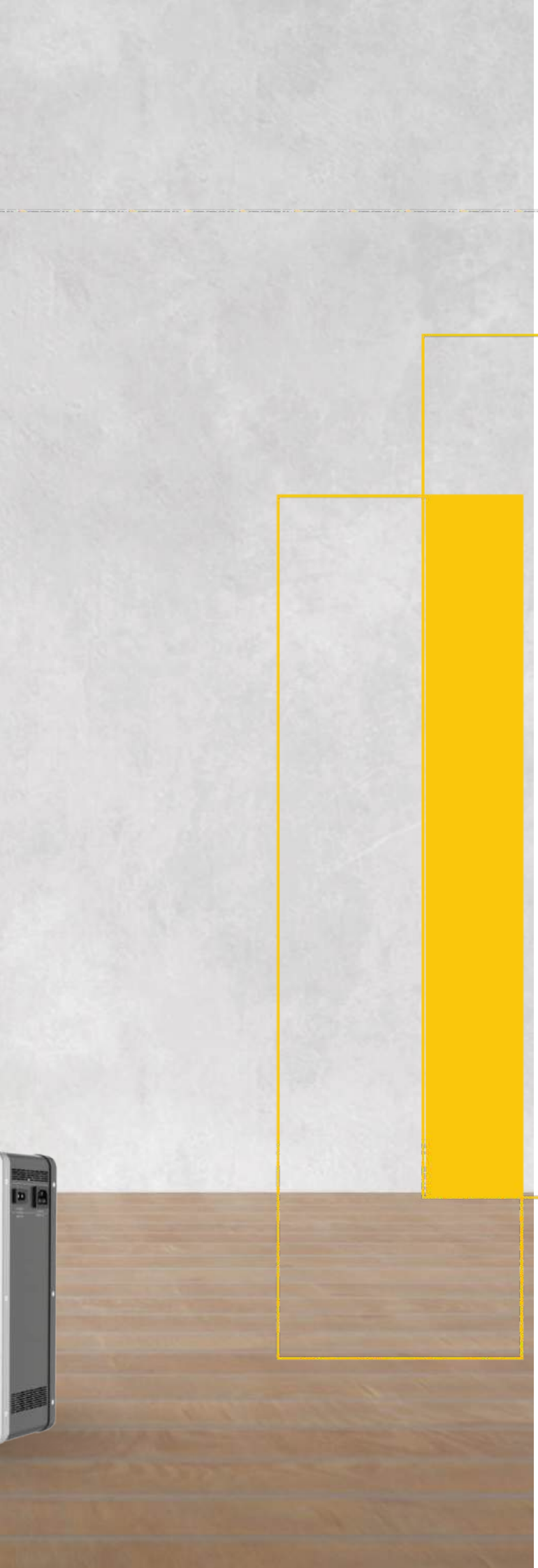




Technical Data

Model No.		LYD-5050	LYD-8358	LYD-8188
LED Lamp	LED Chips	5054 (88pcs)	5054 (88pcs)	6064 (80pcs)
	Lamp Voltage	3.2V	3.2V	3.2V
	Color Temperature	6000K		
	Lamp Size	500*210*78mm		
	Lifespan	50000H		
	IP Rating	IP65		
	CRI	70		
	Beam Angle	70*140		
	Wattage/Lumen	200W/1200LM	300W/1600LM	400W/2800LM
Battery	Battery Capacity	3.2V 20AH	3.2V 30AH	3.2V 40AH
	Working Temperature	-10℃~60℃		
	Type	LiFePO4		
	Lifespan	5 Years		
Controller	Charging Time	6-7 Hours		
	Working Time	Whole Night		
	Rainy Day	3 Days		
Solar Panel	Power	25W	35W	50W
	Size	350*350*17mm	350*390*17mm	500*390*25mm
	Voltage	6V	6V	6V
Recommended Installation Height		4-6m	4-6m	6-7m
Material		Aluminum Alloy		
Warranty		2 Years		


SMK SOLAR
SMK SOLAR
All In One Energy Storage System



Energy Storage System

Energy Storage System—ESS Series

500W+1004.8WH/1000W+2009.6WH



Features

-6 in 1 design. Inverter, MPPT, AC charger, DC 12V output, USB and Type C.
-Wall mount and on desk design
-Builtin BMS protection
-Builtin lithium battery, longer span life
-User friendly
-Plug and play
-Multi-protections



Side view



1. AC Input
2. PV Input
3.AC Output
4.Power switch
5.12VDC output port
6.TYPE-C
7.USB-1
8.USB-2

System Diagram



Technical Data

MODEL	ESS-P500	ESS-P1000
Inverter / Charger		
Rated AC Output Power	500W	1000W
Output Voltage Waveform	Pure Sine Wave	
Output Voltage	185~230VAC 50Hz	
Low DC Warning Point	<19%	< 19%
Low DC Cut-off Voltage	2.9Vdc	5.8Vdc
Low DC Warning Return Voltage	>20%	>20%
Charging Power(Utility and solar together)	500W Max.	800W Max
Bulk Charging Voltage	3.6Vdc	7.2Vdc
Float Charging Voltage	3.5Vdc	7.0Vdc
AC Input		
Nominal Input Voltage	230Vac	
Low Loss Voltage	90Vac±7	
Low Loss Return Voltage	100Vac±7	
High Loss Voltage	280Vac±7	
High Loss Return Voltage	270Vac±7	
Max. AC Input Voltage	300Vac	
Nominal Input Frequency	45~65Hz	
AC Charging Power	500W Max	800W Max
Solar Input		
Nominal PV Voltage	30Vdc	38Vdc
PV Array MPPT Voltage Range	11-55V	
Max. PV Array Open Circuit Voltage	56Vdc	56Vdc
Solar Charging Power	300W Max	550W Max
Lithium Iron Battery		
Capacity	1004.8Wh	2009.6Wh
Nominal Battery Voltage	3.2Vdc	6.4Vdc
Lithium Battery Cell	314Ah	
Max. Charge Current	220A	220A
Max.Discharge Current	220A	220A
Operation Voltage Range	2.9Vdc~3.6Vdc	5.8Vdc~7.2Vdc
Operation Temperature	-10°C+50°C	
DC Output		
DC Output Socket	2PCS*USB charger, 2PCS* 12V DC Power JACK,1PCS* Type C	
Display Function		
LED Indicator	5PCS* indicators	
Protection		
Protection	Overcharge protection, Overdischarge protection Overcurrent protection.Shortcircuit protection. Overtemperature protection	
ENVIRONMENT		
Noise(dB)	< 40dB (1 meter)	
Working Temperature	-10°C~40°C	
Humidity	5~95% (no condensation)	
Altitude	< 2000	
Dimension		
Products size (L*W*H)	345*260*150mm	345*360*150
Package size(L*W*H)	410*290*220mm	410*390*220mm
Weight(NW Kg)	11kg	21kg
Weight(GW Kg)	12kg	23kg

Product specifications are subject to change without further notice.

Energy Storage System—ESS Series

2500W+4019.2WH / 4000W+8038.4WH / 6000W+16076.8WH



Features

-6 in 1 design. Inverter, MPPT, AC charger, DC 12V output, USB and Type C.
-Builtin BMS protection
-Builtin lithium battery, longer span life
-User friendly
-Plug and play
-Multi-protections



Side view



1. Power Switch
2. Battery Switch
3. AC Out
4. AC Out Socket
5. AC Output
6. AC Input
7. PV
8. RS485 communication port

Taking 6KW as an example

System Diagram



Technical Data

Model	ESS-H2500V2	ESS-V4000V2	ESS-V6000V2
Output power (KW))	2500W	4000W	6000W
Total(WH)	4019.2WH	8038.4WH	16076.8WH
Nominal Voltage(V)	12.8V	25.6V	51.2V
Battery Cell Energy	314AH	314AH	314AH
Photovoltaic input (PV)			
Maximum power of PV	2500W	5500W	7500W
MPPT maximum voltage	500VDC		
Maximum charging current	100A	100A	120A
MPPT voltage range	30VDC-500VDC	60VDC-500VDC	60VDC-500VDC
Exchange Input (AC)			
Rated voltage	230VAC		
Voltage range	170-280 VAC (For Personal Computers); 90-280 VAC (For Home Appliances)		
Input frequency	50Hz/60Hz		
Maximum current	100A	100A	100A
Exchange output (AC)			
Rated output power	2500VA/2500W	4000VA/4000W	6000VA/6000W
Rated output power	230VAC±5%		
Output frequency	50Hz/60Hz		
Output waveform	Pure sine wave		
Switch time	10ms(For personal Computer);20ms(For Home Appliances)		
Communication port	RS232		
Storage Temperature(°C)	0~35		
Altitude	<2000M		
Humidity	<95% RH		
Operating termperature(°C)	-10~55°C		
Depth of discharge(DOD)	80%		
Cycle life	Battery 6000 cycle 80% DOD 25°C		
Installation	On floor	On floor	On floor
Weight(kg)	33	96	154.5
Dimension(L*W*H)mm	430*250*500	430*250*750	430*250*1040
Ingress Protection			

Product specifications are subject to change without further notice.

Monitoring System

Wi-Fi Plug Pro / WiFi 003/WiFi 008/Solarman

Plug-and-play data acquisition device, which can support Wi-Fi communication mode, and compatible with inverters, energy storage integrated machines and other through a variety of connection methods such as DB9, RJ-45 and so on. It can support remote control, remote debugging, remote upgrade and other functions of the, and can monitor the working status and power generation situation of the equipment in real time, providing users with a complete monitoring scheme of long distance, low cost and visualization



Energy Storage Management Platform

Energy storage management platform, provides users with application services such as data collection, analysis, calculation, storage, alarm push, etc. Users can view the data of energy storage device through PC web page and mobile APP interface, and operate under the guidance of truly demand and voltage regulation.



iOS Android

Wi-Fi Plug Pro **WiFi003** **WiFi008**

The photovoltaic system cloud platform (WEB & APP) provides users with the operation status and data viewing capabilities of off-grid inters, power station systems, etc. The platform data can be presented in a graphical way, which is intuitive, clear and easy to understand. Users can also customize the fault alarm to understand the abnormal and fault status of the system in a timely manner through SMS, email and other ways.



Solarman

Technical Data

Product Model	Wi-Fi Plug Pro	WiFi003	WiFi008	Solarman
Product picture				
ESSENTIAL PARAMETERS				
Dimensions	105*72*28mm	76*20*12mm	76*20*12mm	66.55*20*12mm
Weight	56g	12.2g	12.2g	11g
Protection class	IP65	IP21	IP21	IP21
Installation mode	Fixed to the equipment via screws	Directly insert	Directly insert	Directly insert
Rated voltage	DC 5-12V	DC 5-12V	DC 5-12V	DC5-12V(±5%)
Maximum current	800mA(DC5V)	500mA(5V)	580mA(5V)	/
External port	Db9/RJ-45	RJ-45	RJ-45	RJ-45
Indicator lights	4	4	4	3
Operation temperature	-40℃~+85℃	-40℃~+85℃	-40℃~+85℃	-30℃~+70℃
Storage temperature	-40℃~+90℃	-40℃~+90℃	-40℃~+90℃	-40℃~+90℃
COMMUNICATION PARAMETERS				
Local communication	RS-232	RS-232	RS-232	RS-232
Public network access	Wi-Fi	Wi-Fi	Wi-Fi	Wi-Fi
Baud rate	9600bps (default)	9600bps (default)	9600bps (default)	9600bps (default)
Working frequency	2.412GHz-2.484GHz	2.4GHz	2.4GHz	2.400 GHz-2.4835GHz
Communication standard	IEEE802.11b/g/n	/	/	/
Maximum transmission rate	72Mbps	11Mbps@11b, 54Mbps@11g, 72Mbps@11n	11Mbps@11b, 54Mbps@11g, 72Mbps@11n	11Mbps@11b, 54Mbps@11g, 150Mbps@11n, 86.1Mbps@11AX
Communication distance	100m (open environment)	30m (open environment)	30m (open environment)	30m (open environment)
Antenna gain	2.7dBi	2.5dBi	2.5dBi	/
Antenna	External antenna (extend antenna optional)	On-board antenna	On-board antenna	On-board antenna
OTHER PARAMETERS				
Watchdog	Software watchdog +hardware watchdog	Software watchdog +hardware watchdog	Software watchdog +hardware watchdog	Software watchdog +hardware watchdog
Device layer communication protocol	Modbus-RTU	/	/	/
Networking layer communication protocol	Modbus-TCP	TCP/UDP	TCP/UDP	/
Parameters setting mode	Message/remote server	Cloud platform, APP, Serial port	Cloud platform, APP, Serial port	Cloud platform, APP, Serial port
Firmware update mode	Remote server	Remote server	Remote server	Remote server
Number of connected devices	1	1	1	1

Product specifications are subject to change without further notice

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Solutions

SMK Solar aim to be your best supplier of off grid solar system.

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Off grid inverter 1KW-12KW
Energy storage system 1kwh-15kwh
Solar water heating system 2 / 3 / 4KW



Marketing

SMK Solar are active in global solar exhibitions.

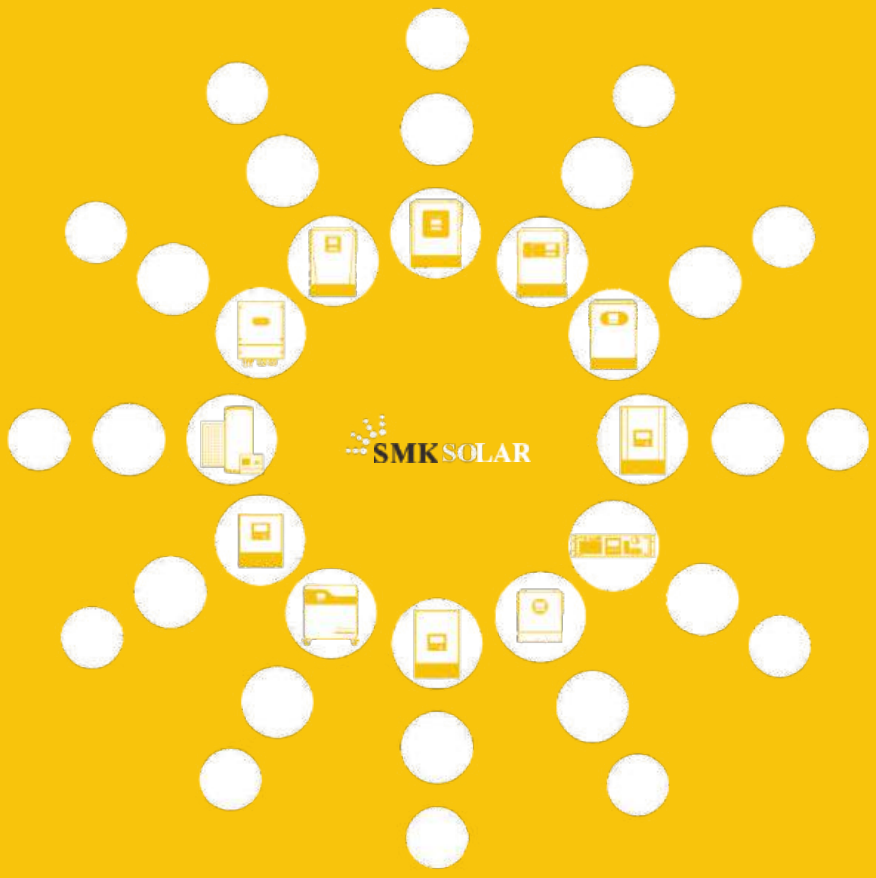


Certifications





Project Application



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