



Lighting Life Powering Dreams Your Energy Vanguard

Sunrise New Energy Co.,Ltd

(member of Foshan Solar UP)

Tel: +86-0701-6310019

Mobile: +86-17612051818

Email: info@tt-sun.com
info@solar-dance.com

Office Add: Room 1401, 14th Floor, Juneng Building, No. 3 Juneng Road, High-tech Industrial Development Zone, Yingtan City, Jiangxi Province

Website: www.solar-dance.com

Factory Address

■ Foshan Headquarters

5th Floor, Building 10, District 3, Wanyang
Zhongchuang City, Xiantang Town, Longjiang Town,
Shunde District, Foshan City, Guangdong Province

■ Jiangxi Branch

Building 3, Small and Micro Enterprise Incubation Park,
Longgang Area, High-tech Industrial Development
Zone, Yingtan City, Jiangxi Province

PRODUCT MANUAL

Professional solar energy product manufacturer

ABOUT US

20
YEAR

2000
CUSTOMERS

100 million
SALES VOLUME



For over **20** years, as a leading force in the solar controller industry, our team has been dedicated to providing exceptional energy solutions to nearly **2000** clients worldwide. Our service is not only about meeting the needs of our clients but also about unleashing their untapped potential, empowering them to thrive in the solar energy industry.

During the challenging times of the pandemic, we not only ensured stable services for our clients but also, through empowering them, facilitated remarkable revenue achievements. Many of our partners surpassed **100 million** in sales within just **3 years**. This accomplishment is not only a result of our relentless efforts but also a testament to our joint resilience in overcoming challenges.

Guiding the way in the solar controller industry, we lead with controllers, inverters, and residential energy storage products, deeply rooted in the solar energy domain. Our products not only demonstrate exceptional performance in off-grid systems but have also made significant strides in the realm of hybrid off-grid products. Our goal is to continually innovate, providing distributors with more robust and flexible solutions, empowering them to stand firm in the ever-changing market.

We firmly believe that by providing our clients with more possibilities, we can truly achieve mutual success. Thank you for your enduring trust and support. Let's journey forward together, creating a brighter future!

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Battery
type



Protection



Parameters
adjustable



LCD
display



Temperature
compensation



USB Output

LT20



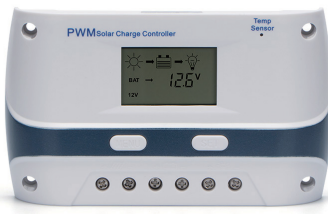
Rated Voltage	Rated Charge Current	USB Output	Product Size	Set/Carton	Weight/Carton	Measurement	Volume/Carton
12V/24V Auto	10A/20A	2A/5V	136×95×33mm	50Pcs	13Kg	470×320×220mm	0.03CBM

LT40



Rated Voltage	Rated Charge Current	USB Output	Product Size	Set/Carton	Weight/Carton	Measurement	Volume/Carton
12V/24V/48V Optional	30A/40A	2A/5V	162×96×38mm	40Pcs	14Kg	475×375×230mm	0.04CBM

LT50



Rated Voltage	Rated Charge Current	USB Output	Product Size	Set/Carton	Weight/Carton	Measurement	Volume/Carton
12V/24V/48V Optional	50A	2A/5V	176×103×38mm	40Pcs	15.3Kg	570×400×205mm	0.04CBM

LT60



Rated Voltage	Rated Charge Current	USB Output	Product Size	Set/Carton	Weight/Carton	Measurement	Volume/Carton
12V/24V/48V Optional	60A	2A/5V	190×110×50mm	30Pcs	17Kg	440×380×300mm	0.05CBM



Battery
type



Protection



Parameters
adjustable



LCD
display



Temperature
compensation



USB Output

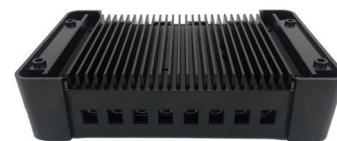


FT20



Rated Voltage	Rated Charge Current	USB Output	Product Size	Set/Carton	Weight/Carton	Measurement	Volume/Carton
12V/24V Auto	10A/20A	2A/5V ×2	133×93×30mm	50Pcs	14Kg	540×320×220mm	0.035CBM

FT40



Rated Voltage	Rated Charge Current	USB Output	Product Size	Set/Carton	Weight/Carton	Measurement	Volume/Carton
12V/24V Auto	30A/40A	2A/5V ×2	153×101×37mm	40Pcs	17.7Kg	510×370×240mm	0.045CBM

FT60



Rated Voltage	Rated Charge Current	USB Output	Product Size	Set/Carton	Weight/Carton	Measurement	Volume/Carton
12V/24V/48V Optional	50A/60A	2A/5V ×2	175×115×43mm	30Pcs	18.2Kg	405×400×275mm	0.044CBM

FT80

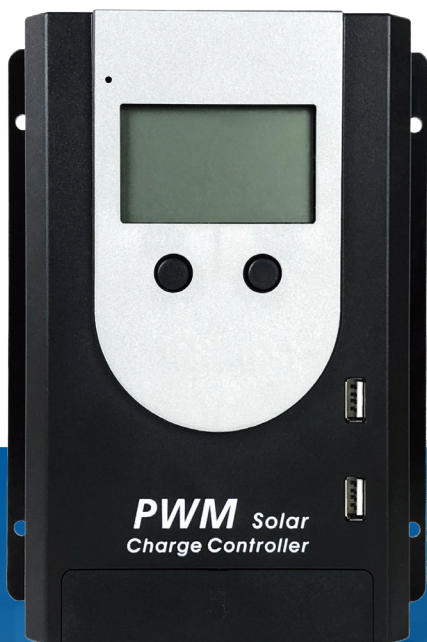


Rated Voltage	Rated Charge Current	USB Output	Product Size	Set/Carton	Weight/Carton	Measurement	Volume/Carton
12V/24V/48V Optional	80A/100A	2A/5V ×2	192×162×60mm	20Pcs	21.5Kg	535×475×425mm	0.1CBM

GT SERIES



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Button
mod



Battery
type



Protection



Parameters
adjustable



LCD
display



Temperature
compensation



USB Output

GT40



Rated Voltage	Rated Charge Current	USB Output	Product Size	Set/Carton	Weight/Carton	Measurement	Volume/Carton
12V/24V Auto	10A/20A/30A	2A/5V ×2	127×163×40mm	40Pcs	15Kg	550×375×235mm	0.05CBM

GT60

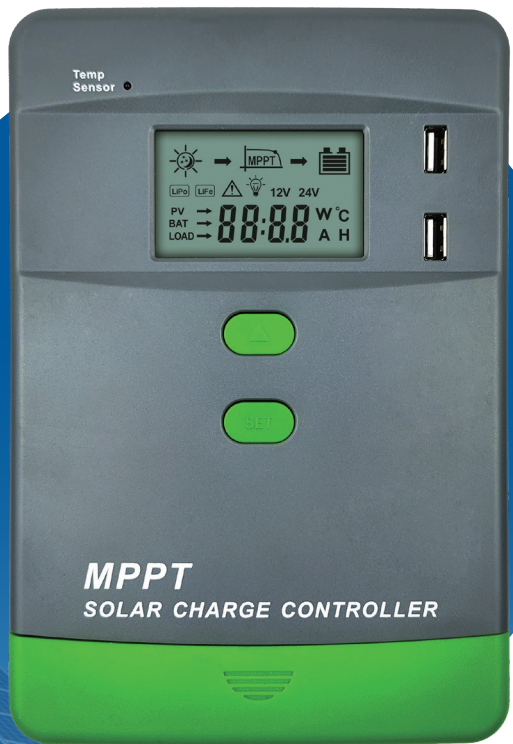


Rated Voltage	Rated Charge Current	USB Output	Product Size	Set/Carton	Weight/Carton	Measurement	Volume/Carton
12V/24V/48V Optional	40V/50V/60V	2A/5V ×2	145×194×57mm	30Pcs	19Kg	470×435×315mm	0.06CBM

MRL SERIES



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Battery
type



Protection



Parameters
adjustable



LCD
Color display



Support Bluetooth
Communication
(Built in optional)



Button
Mode



Temperature
compensation



USB Output

MRL20



Rated Voltage	Rated Charge Current	USB Output	Product Size	Set/Carton	Weight/Carton	Measurement	Volume/Carton
12V/24V Auto	20A	2A/5V ×2	123×178×50mm	30Pcs	19.5Kg	410×390×300mm	0.05CBM

MRL30



Rated Voltage	Rated Charge Current	USB Output	Product Size	Set/Carton	Weight/Carton	Measurement	Volume/Carton
12V/24V Auto	30A	2A/5V ×2	132×195×60mm	20Pcs	17.5Kg	420×340×295mm	0.04CBM

MRL4024



Rated Voltage	Rated Charge Current	USB Output	Product Size	Set/Carton	Weight/Carton	Measurement	Volume/Carton
12V/24V Auto	40A	2A/5V ×2	144×218×70mm	12Pcs	17.5Kg	495×405×310mm	0.06CBM



Rated Voltage	Rated Charge Current	USB Output	Product Size	Set/Carton	Weight/Carton	Measurement	Volume/Carton
12V/24V/36V/48V Auto	30A/40A	2A/5V ×2	144×218×80mm	12Pcs	19Kg	550×410×390mm	0.09CBM



Rated Voltage	Rated Charge Current	USB Output	Product Size	Set/Carton	Weight/Carton	Measurement	Volume/Carton
12V/24V Auto	50A/60A	2A/5V ×2	190×260×95mm	6Pcs	13.7Kg	445×445×330mm	0.07CBM



Rated Voltage	Rated Charge Current	USB Output	Product Size	Set/Carton	Weight/Carton	Measurement	Volume/Carton
12V/24V/36V/48V Auto	50A/60A	2A/5V ×2	190×260×110mm	6Pcs	15.2Kg	495×445×330mm	0.07CBM

Model		MRL20	MRL30	MRL4024	MRL6024		MRL4048		MRL6048	
Maximum PV Open Circuit Voltage		<60V	<75V	<100V	<100V		<150V			
System voltage		12V/24V Auto					12V/24V/36V/48V Auto			
Rated Charge Current		20A	30A	40A	50A	60A	30A	40A	50A	60A
PV Maximum Input Power	12V	260W	390W	520W	650W	780W	390W	520W	650W	780W
	24V	520W	780W	1040W	1300W	1560W	780W	1040W	1300W	1560W
	36V	/	/	/	/	/	1170W	1560W	1950W	2340W
	48V	/	/	/	/	/	1560W	2080W	2600W	3120W
Rated Discharge Current		20A	20A	20A	30A		20A		30A	
Charging Control Mode		MPPT								
Float Charge		13.8V/27.6V/41.4V/55.2V								
Absorption Charge		14.4V/28.8V/43.2V/57.6V								
Equalization Charge		14.6V/29.2V/43.8V/58.4V								
Load Disconnection(LVD)		10.8V/21.6V/32.4V/43.2V								
Load Connection(LVR)		12.6V/25.2V/37.8V/50.4V								
Working Temperature Range		-20~+55℃								
Temperature Compensation		-24mV/℃ for 12V system								
Battery Type		GEL, SLD, FLD, Lithium batteries, Customization								
Load Control Mode		24 hours work, Light control, Light and timing control, reverse light control								
Communication Mode		Bluttooth optional								



MPK3 SERIES



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MPPT



Protection



Parameters adjustable



LCD
Color display



Button
mod



Forced air
cooling



Temperature
compensation

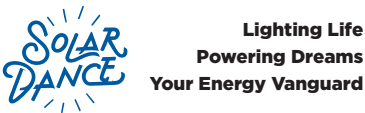


RS485/RJ45 port
(Optional)

Model		MPK3-40		MPK3-60		MPK3-80		MPK3-100	
INPUT									
Maximum PV Open Circuit Voltage		150V(at the lowest temperature), 138V(at a standard temperature of 25°)							
Minimum PV Voltage		20V/40V/60/80V							
Rated Charge Current		30A	40A	50A	60A	80A		100A	
PV Maximum Input Power	12V	390W	520W	650W	780W	1040W		1300W	
	24V	780W	1040W	1300W	1560W	2080W		2600W	
	36V	1170W	1560W	1950W	2340W	3120W		3900W	
	48V	1560W	2080W	2600W	3120W	4160W		5200W	
OUTPUT									
System Voltage		12V/24V/36V/48V Auto							
Rated Discharge Current		20A		30A		40A		50A	
Own Consumption		≤ 35mA(48V)							
MPPT Highest Accuracy		99%							
Maximum Charging Efficiency		97%							
Charging Control Mode		Multi-stage(MPPT, Absorption, Float, Equalization, CV)							
Float Charge		13.8V/27.6V/41.4V/55.2V							
Absorption Charge		14.4V/28.8V/43.2V/57.6V							
Equalization Charge		14.6V/29.2V/43.8V/58.4V							
Load Disconnection(LVD)		10.8V/21.6V/32.4V/43.2V							
Load Connection(LVR)		12.6V/25.2V/37.8V/50.4V							
Load Control Mode		Normal, Light control, Light and timing control, Timing control, Reverse light control							
Light Control Point Voltage		5V/10V/15V/20V							
Battery Type		GEL, SLD, FLD and USER(default), Lithium batteries customization 3 series 3.7V, 4 series 3.7V, 4 series 3.2V, 5 series 3.2V							
OTHER									
Human Interface		Color LCD with backlight, 3 buttons							
Cooling Mode		AL alloy heat sink and cooling fan							
Wiring		≤ 25 mm²/High current copper terminal ≤ 25 mm² (3AWG)							
Temperature Probe		Line length 3 meters							
Communication Mode		RS485, RJ45 port							
Working Temperature Range		-20~+55℃							
Storage Temperature Range		-30~+80℃							
Humidity		10%-90% No condensation							
Note: Please operate at the ambient temperature allowed by the controller. If the ambient temperature exceeds the allowable range of the controller, please derate it.									
PACKAGE									
Specification		30A-40A		50A-60A		80A-100A			
Set/Carton		8Pcs		4Pcs		4Pcs			
Weight/Carton		23Kg		15Kg		18.5Kg			
Measurement		590×480×300mm		510×340×320mm		565×435×375mm			
Volume/Carton		0.08CBM		0.06CBM		0.09CBM			



MPZ SERIES



Battery type



Protection



Parameters adjustable



LCD Color display



Waterproof touch screen



Touch key



Class V-0 flame retardant shell



Temperature compensation



RS485/RJ45 port (Optional)



Cast aluminum shell

Model	MPKZ40		MPKZ60	
INPUT				
Maximum PV Open Circuit Voltage	150V(at the lowest temperature), 138V(at a standard temperature of 25°)			
Minimum PV Voltage	20V/40V/60/80V			
Rated Charge Current	30A	40A	50A	60A
OUTPUT				
System Voltage	12V/24V/36V/48V Auto			
Rated Discharge Current	15A	20A	25A	30A
Own Consumption	≤ 35mA(48V)			
MPPT Highest Accuracy	99%			
Maximum Charging Efficiency	97%			
Charging Control Mode	Multi-stage(MPPT, Absorption, Float, Equalization, CV)			
Float Charge	13.8V/27.6V/41.4V/55.2V			
Absorption Charge	14.4V/28.8V/43.2V/57.6V			
Equalization Charge	14.6V/29.2V/43.8V/58.4V			
Load Disconnection(LVD)	10.8V/21.6V/32.4V/43.2V			
Load Connection(LVR)	12.6V/25.2V/37.8V/50.4V			
Load Control Mode	Normal, Light control, Light and timing control, Timing control, Reverse light control			
Light Control Point Voltage	5V/10V/15V/20V			
Battery Type	GEL, SLD, FLD and USER(default), Lithium batteries customization 3 series 3.7V, 4 series 3.7V, 4 series 3.2V, 5 series 3.2V			
OTHER				
Human Interface	Color LCD with backlight, touch buttons			
Cooling Mode	Cast aluminum casing			
Wiring	≤ 25 mm²/High current copper terminal ≤ 25 mm² (3AWG)			
Temperature Probe	Line length 3 meters			
Communication Mode	RS485, RJ45 port			
Working Temperature Range	-20~+55℃			
Storage Temperature Range	-30~+80℃			
Humidity	10%-90% No condensation			
Note: Please operate at the ambient temperature allowed by the controller. If the ambient temperature exceeds the allowable range of the controller, please derate it.				
PACKAGE				
Specification	30A-40A		50A-60A	
Set/Carton	6Pcs		5Pcs	
Weight/Carton	14Kg		15Kg	
Measurement	685×320×325mm		810×350×265mm	
Volume/Carton	0.07CBM		0.08CBM	

MPK96V SERIES



- 
MPPT
- 
Protection
- 
Parameters adjustable
- 
LCD display
- 
Button mod
- 
Forced air cooling

Model		MPK2-5096	MPK2-6096	MPK2-8096	MPK2-10096
INPUT					
Maximum PV Open Circuit Voltage		230V			
Minimum PV Voltage		80V/160V			
Rated Charge Current		50	60A	80A	100A
PV Maximum Input Power	48V	2600W	3120W	4160W	5200W
	96V	5200W	6240W	8320W	10400W
OUTPUT					
System Voltagea		48V/96V Auto			
Rated Discharge Current		30A	30A	40A	40A
Own Consumption		≤ 35mA			
MPPT Highest Accuracy		99%			
Maximum Charging Efficiency		96%			
Charging Control Mode		Multi-stage(MPPT, Absorption, Float, Equalization, CV)			
Float Charge		55.2V/110.4V			
Absorption Charge		57.6V/115.2V			
Equalization Charge		58.4V/116.8V			
Load Disconnection(LVD)		43.2V/86.4V			
Load Connection(LVR)		50.4V/100.8V			
Load Control Mode		Normal, Light control, Light and timing control, Timing control, Reverse light control			
Light Control Point Voltage		20V/40V			
Battery Type		GEL, SLD, FLD and USER(default), Lithium batteries customization 3 series 3.7V, 4 series 3.7V, 4 series 3.2V, 5 series 3.2V			
OTHER					
Human Interface		Color LCD with backlight, 3 buttons			
Cooling Mode		AL alloy heat sink and cooling fan			
Wiring		≤ 25 mm ² /High current copper terminal ≤ 25 mm ² (3AWG)			
Temperature Probe		10K, line length 3 meters			
Communication Mode		RS485, RJ45 port			
Working Temperature Range		-20~+55℃			
Storage Temperature Range		-30~+80℃			
Humidity		10%-90% No condensation			
Note: Please operate at the ambient temperature allowed by the controller. If the ambient temperature exceeds the allowable range of the controller, please derate it.					
PACKAGE					
Specification		50A-60A		80A-100A	
Set/Carton		4Pcs		4Pcs	
Weight/Carton		15.4Kg		21.6Kg	
Measurement		550×350×345mm		590×425×365mm	
Volume/Carton		0.05CBM		0.09CBM	

SY-ESSM SERIES



Features

- Pure sine wave solar inverter(on/off Grid)
- Output power factor 1.0
- WIFI&GPRS available for iOS and Android
- One-key restoration to factory Settings
- Built-in Lithium battery automatic activation
- Integrated design
- Built-in 120A MPPT Solar charge:max 6200W(for 3.6KW), max6500W(for 6.2KW)
- High PV input voltage range(60~500VDC)
- Built-in anti-dust kit for harsh environment
- Smart battery charge design to optimize battery life
- Dual output



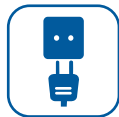
Built-in Lithium
battery automatic
activation



BMS
Protection



Integrated
design



Receptacle



RGB Light



Universal
wheel



Constant voltage
tecnology protects
the circuit



Dustproof

- R** INVERTER MODE
- G** PV MODE
- B** UTILITY MODE

3.6KW

6.2KW

MODEL		SY-ESSM-3.6KW PLUS-100AH/200AH		SY-ESSM-6.2KW PLUS-100AH	
Phase					
Maximum PV Input Power		6200W		6500W	
Rated Output Power		3600W/3600VA		6200W/6200VA	
Maximum Solar Charging Current		120A			
GRID-TIE OPERATION					
PV INPUT (DC)					
Nominal DC Voltage/Maximum DC Voltage		360/500VDC			
Start-up Voltage/Initial Feeding Voltage		60VDC/90VDC			
MPPT Voltage Range		60~450VDC			
Maximum Input Current		1/18A		1/22A	
GRID OUTPUT (AC)					
Nominal Output Voltage		220/230/240VAC			
Output Voltage Range		195.5~253VAC			
Nominal Output Current		15.7A		27.0A	
Power Factor		>0.99			
EFFICIENCY					
Maximum Conversion Efficiency (DC/AC)		98%			
TWO LOAD OUTPUT POWER					
Full Load		3600W		6200W	
Maximum Main Load		3600W		6200W	
Maximum Second Load(battery mode)		1200W		2067W	
Maximum Load Cut Off Voltage		26VDC		52VDC	
Maximum Load Return Voltage		27VDC		54VDC	
OFF-GRID OPERATION					
AC INPUT					
AC Start-up Voltage/Auto Restart Voltage		120~140VAC/180VAC			
Acceptable Input Voltage Range		90~280VAC or 170~280VAC			
Frequency Range		49~51±1Hz			
Maximum ACInput Current		30A		40A	
PV INPUT(DC)					
Nominal DC Voltage/Maximum DC Voltage		360/500VDC			
MPPT Voltage Range		60~450VDC			
Maximum Input Current		1/18A		1/22A	
BATTERY MODE OUTPUT(AC)					
Nominal Output Voltage		220/230/240VAC			
Output Waveform		Pure sine wave			
Efficiency(DC to AC)		94%			
BATTERY & CHARGER					
Nominal DC Voltage		240VDC		48VDC	
Maximum Solar Charging Current		120A	140A	120A	
Maximum AC Charging Current		100A	100A	100A	
Maximum Charging Current		120A	140A	120A	

MODEL	SY-ESSM-3.6KW PLUS-100AH/200AH		SY-ESSM-6.2KW PLUS-100AH
HYBRID OPERATION			
PV INPUT(DC)			
Nominal DC Voltage/Maximum DC Voltage	360/500VDC		
Start-up Voltage/Initial Feeding Voltage	90VDC/120VDC		
MPPT Voltage Range	60~450VDC		
Maximum Input Current	1/18A	1/22A	
GRID OUTPUT (AC)			
Nominal Output Voltage	220/230/240VAC		
Output Voltage Range	195.5~253VAC		
Nominal Output Current	15.7A	27.0A	
AC INPUT			
AC Start-up Voltage/Auto Restart Voltage	120-140VAC/180VAC		
Acceptable Input Voltage Range	90-280VAC or 170-280VAC		
Maximum AC Input Current	30A	40A	
Maximum AC Charging Current	100A		
BATTERY			
MODEL	25.6V100AH	25.6V200AH	48V100AH
Normal Charging Voltage	29.2V	29.2V	54.75V
Maximum Charging Current	100A(Recommended)	100A/200A (Recommended 100A)	100A(Recommended)
Discharge Termination Voltage	20A	20A	37.5A
Recommended Discharge Termination Voltage	22.4A	22.4A	42A
Maximum Discharge Current	100A	100A/200A	100A
Single Cell Charging Overvoltage Protection	3.65V	3.65V	3.65V
Overvoltage Protection For The Whole Battery	29.2V	29.2V	54.75V
Low Voltage Protection For Single Cell Discharge	2.5V	2.5V	2.5V
Low Voltage Protection For Whole Group Discharge	20V	20V	37.5V
Charge Overcurrent Protection	110A	110A/220A	110A
Discharge Overcurrent Protection	110A	110A/220A	110A
BMS Features	High accuracy cell level voltage, current measuring Over-charge, over-discharge protection Short-circuit protection Self-learning intelligent SOC calculation Cell level active equalization Multiple communication type Parallel connect function		
Working Temperature	-20℃ ~+65℃		
Storage Temperature	0℃ ~+65℃		
GENERAL			
PHYSICAL			
Dimension, D×W×H(mm)	701*441*231		
Carton Dimension, D×W×H(mm)	800*530*340		
Net Weight (kgs)	42	59	58
Gross Weight(kgs)	44.7	61.7	60
INTERACE			
Communication Port	RS232/WIFI/GPRS/LITHIUM BATTERY		
ENVIRONMENT			
Humidity	5% to 95% Relative Humidity(Non~condensing)		
STANDARD			
Compliance Safety	CE		



Lighting Life
Powering Dreams
Your Energy Vanguard

SY-ESSM SERIES



Features

- Integrated design
- Pure sine wave solar inverter
- Built-in 40AMPPT solar charger
- PV input voltage range 20150VDC(for 1000W),30~150VDC(for 1500W)
- Built-in anti-dust kit for harsh environment
- Smart battery charge design to optimize battery life
- meet rich customized demands
- Solar energy is provided directly to the load first



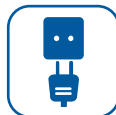
Built-in Lithium battery automatic activation



BMS Protection



Integrated design



Receptacle



RGB Light



Universal wheel



Constant voltage technology protects the circuit



Dustproof



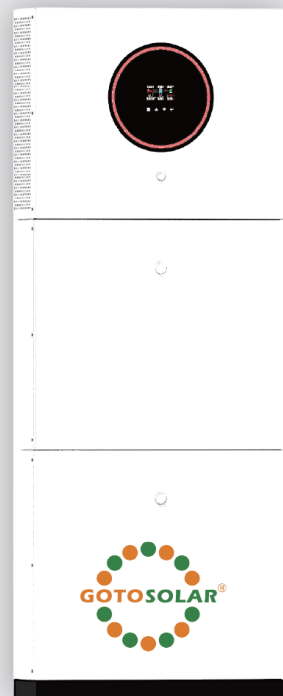
1.0KW
1.5KW

MODEL	SY-ESSM-1.0KW PLUS-100AH		SY-ESSM-1.5KW PLUS-100AH	
Rated Power	1000W/1000VA		1500W/1500VA	
AC INPUT				
Voltage	230VAC			
Selectable Voltage Range	170~280VAC(For Personal Computers)			
	90~280VAC(For Home Appliances)			
Frequency Range	50Hz/60Hz(Auto sensing)			
AC OUTPUT				
AC Voltage Regulation	230VAC±5%			
Surge Power	2000VA		3000VA	
Efficiency(Peak)PV to INV	98%			
Efficiency(Peak)Battery to INV	94%			
Transfer Time	10ms			
BATTERY				
Battery Voltage	12VDC		24VDC	
Floating Charge Voltage	13.5VDC		27VDC	
Overcharge Protection	16VDC		32VDC	
SOLAR CHARGER & AC CARGER				
Solar Charger Type	MPPT			
Maximum PV Array Power	600W		1200W	
MPPT Range @ Operating Voltage	20~150VDC		30~150VDC	
Maximum PV Array Open Circuit Voltage solar	150VDC			
Maximum Solar Charge Current	40A			
Maximum AC Charge Current	40A			
Maximum Charging Current(Solar+AC)	80A			
BATTERY				
MODEL	12.8V100AH		25.6V100AH	
Normal Charging Voltage	14.2V		29.2V	
Maximum Charging Current	50A		100A	
Discharge Termination Voltage	9.2A		20A	
Recommended Discharge Termination Voltage	10A		22.4A	
Maximum Discharge Current	100A		100A	
Single Cell Charging Overvoltage Protection	3.75A		3.65V	
Overvoltage Protection For The Whole Battery	15A		29.2V	
Low Voltage Protection For Single Cell Discharge	2.3V		2.5V	
Low Voltage Protection For Whole Group Discharge	10V		20V	
Charge Overcurrent Protection	180A		110A	
Discharge Overcurrent Protection	90A		110A	
BMS Features	High accuracy cell level voltage, current measuring Over-charge, over-discharge protection Short-circuit protection Self-learning intelligent SOC calculation Cell level active equalization Multiple communication type Parallel connect function			
Working Temperature	-20℃ ~+65℃			
Storage Temperature	0℃ ~+65℃			
PHYSICAL				
Dimension, D×W×H(mm)	238*561*143			
Carton Dimension, D×W×H(mm)	570*390*230			
Net Weight (kgs)	17.3		32.3	
Gross Weight(kgs)	19.2		34.5	
ENVIRONMENT				
Humidity	5% to 95% Relative Humidity(Non~condensing)			
STANDARD				
Compliance Safety	CE			

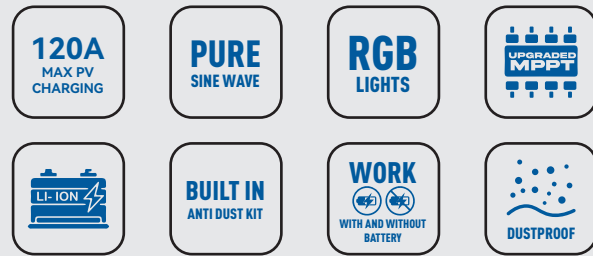
SY-ESS SERIES



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- R** INVERTER MODE
- G** PV MODE
- B** UTILITY MODE



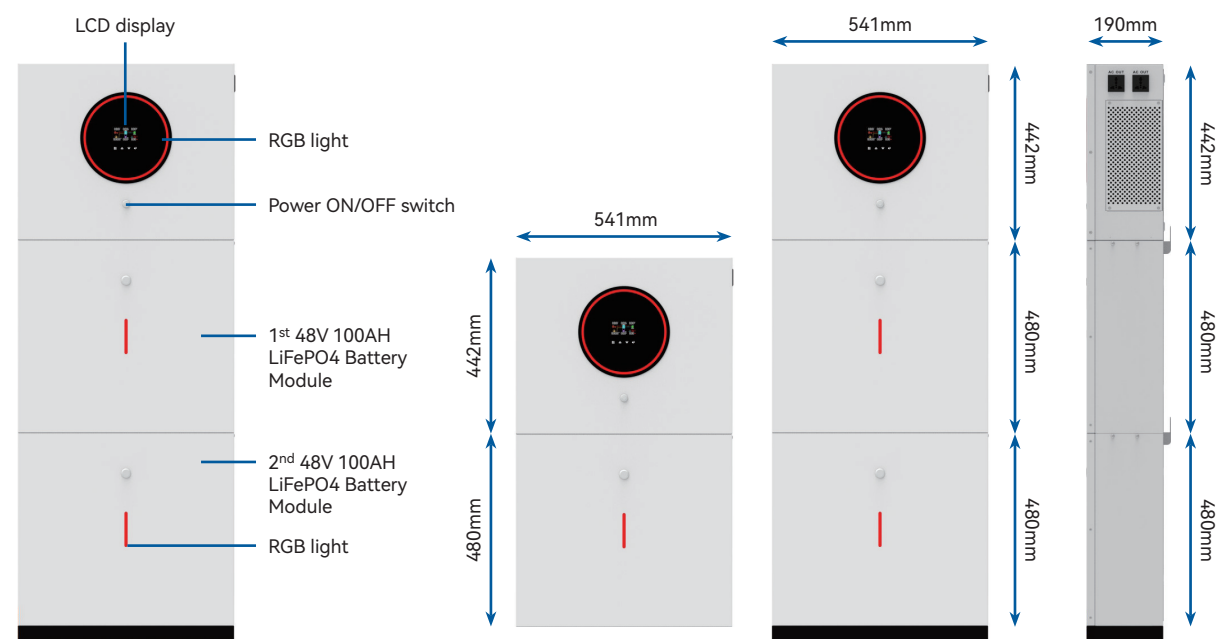
Features

- Pure sine wave solar inverter(on/off Grid)
- Output power factor 1.0
- WIFI&GPRS available for iOS and Android
- Inverter can run without battery
- One-key restoration to factory Settings
- Built-in Lithium battery automatic activation
- Built-in 120A MPPT Solar charge:max 6200W(for 3.6KW),max6500W(for6.2KW)
- High PV input voltage range(60~500VDC)
- Built-in anti-dust kit for harsh environment
- Smart battery charge design to optimize battery life
- Dual output

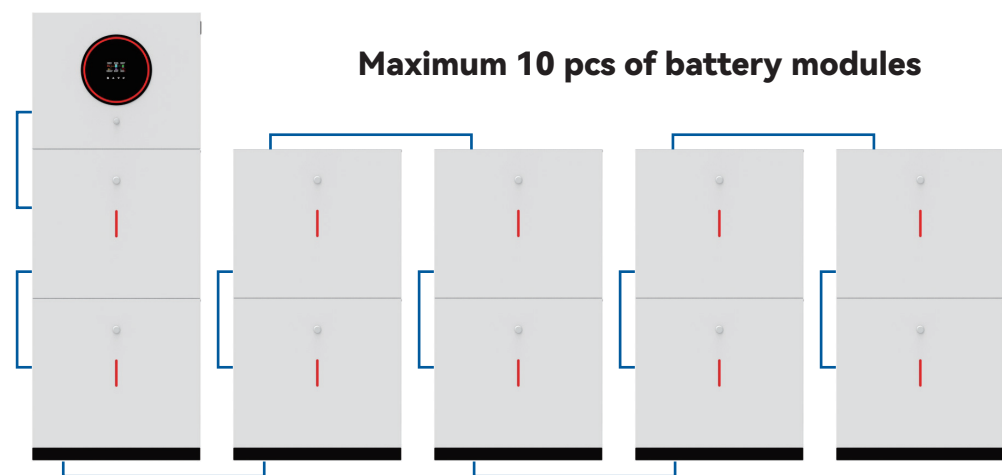
INVERTER		
MODEL	SY-ESS-3.6KW PLUS	SY-ESS-6.2KW PLUS
Phase	1-phase	
Maximum PV Input Power	6200W	6500W
Rated Output Power	3600W/3600VA	6200W/6200VA
Nominal DC Voltage/Maximum DC Voltage	120A	
GRID-TIE OPERATION		
PV INPUT(DC)		
Nominal DC Voltage/Maximum DC Voltage	360/500VDC	
Start-up Voltage/Initial Feeding Voltage	60VDC/90VDC	
MPPT Voltage Range	60~450VDC	
Maximum Input Current	1/18A	1/22A
GRID OUTPUT (AC)		
Nominal Output Voltage	220/230/240VAC	
Output Voltage Range	195.5~253VAC	
Nominal Output Current	15.7A	27.0A
Power Factor	>0.99	

EFFICIENCY		
Maximum Conversion Efficiency (DC/AC)	98%	
TWO LOAD OUTPUT POWER		
Full Load	3600W	6200W
Maximum Main Load	3600W	6200W
Maximum Second Load(battery mode)	1200W	2067W
Maximum Load Cut Off Voltage	26VDC	52VDC
Maximum Load Return Voltage	27VDC	54VDC
OFF-GRID OPERATION		
AC INPUT		
AC Start-up Voltage /Auto Restart Voltage	120-140VAC/180VAC	
Acceptable Input Voltage Range	90-280VAC or 170-280VAC	
Frequency Range	49~51±1Hz	
Maximum ACInput Current	30A	40A
PV INPUT(DC)		
Nominal DC Voltage/Maximum DC Voltage	360/500VDC	
MPPT Voltage Range	60~450VDC	
Maximum Input Current	1/18A	1/22A
BATTERY MODE OUTPUT(AC)		
Nominal Output Voltage	220/230/240VAC	
Output Waveform	Pure sine wave	
Efficiency (DC to AC)	94%	
BATTERY & CHARGER		
Nominal DC Voltage	24VDC	48VDC
Maximum Solar Charging Current	120A	120A
Maximum AC Charging Current	100A	100A
Maximum Charging Current	120A	120A
HYBRID OPERATION		
PV INPUT(DC)		
Nominal DC Voltage/Maximum DC Voltage	360/500VDC	
Start-up Voltage /Initial Feeding Voltage	90VDC/120VDC	
MPPT Voltage Range	60~450VDC	
Maximum Input Current	1/18A	1/22A
GRID OUTPUT(AC)		
Nominal DC Voltage	220/230/240VAC	
Output Voltage Range	195.5~253VAC	
Nominal Output Current	15.7A	27.0A
AC INPUT		
AC Start-up Voltage /Auto Restart Voltage	120-140VAC/180VAC	
Acceptable Input Voltage Range	90-280VAC or 170-280VAC	
Maximum ACInput Current	30A	40A
Maximum AC Charging Current	100A	
GENERAL		
PHYSICAL		
Dimension, D×W×H(mm)	420*350*110	
Carton Dimension, D×W×H(mm)	500*410*190	
Net Weight (kgs)	18.5	19.5
Gross Weight(kgs)	20.5	21.5
INTERACE		
Communication Port	RS232/WIFI/GPRS/LITHIUM BATTERY	
ENVIRONMENT		
Humidity	5% to 95% Relative Humidity(Non~condensing)	
Operating Temperature	-10℃ ~50℃	
STANDARD		
Compliance Safety	CE	

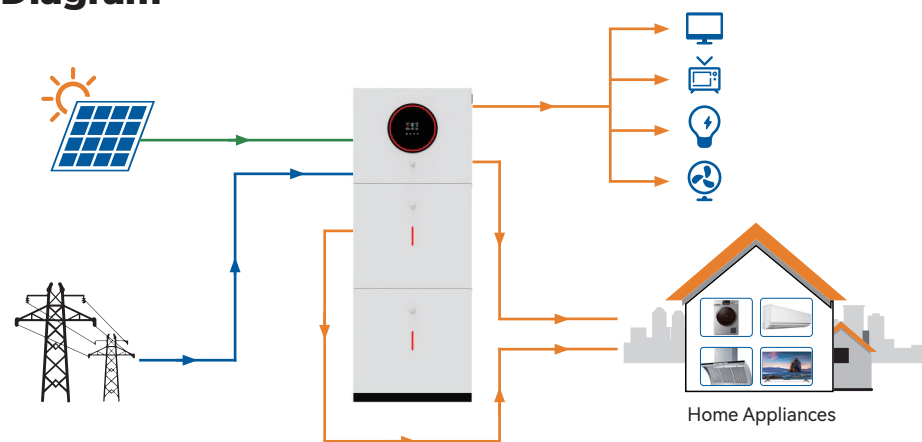
Product Overview



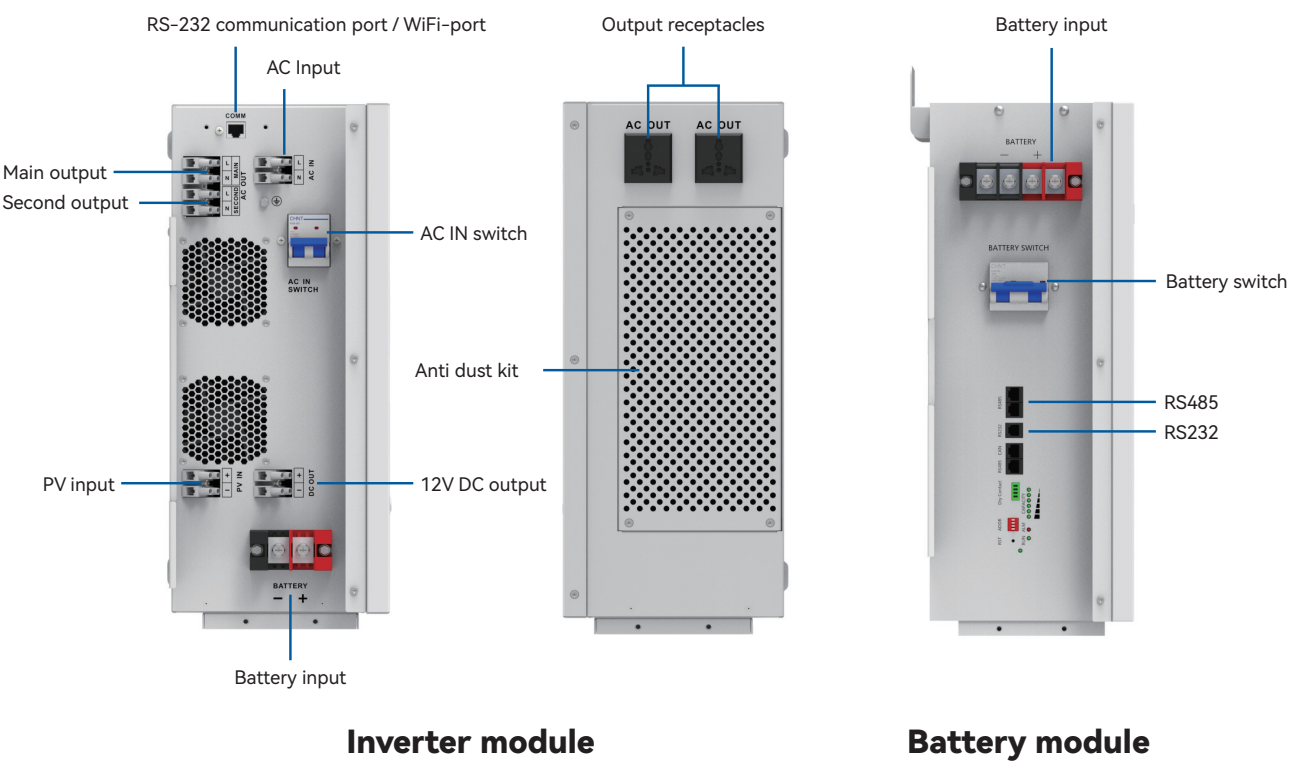
Maximum 10 pcs of battery modules



System Diagram



BATTERY					
MODEL	25.6V100AH	25.6V200AH	48V100AH	48V200AH	
Normal Charging Voltage	29.2V	29.2V	54.75V	54.75V	
Maximum Charging Current	100A	100A	100A	100A	
Discharge Termination Voltage	21.6V	21.6V	40.5V	40.5V	
Recommended Discharge Termination Voltage	22.4V	22.4V	42V	42V	
Maximum Discharge Current	100A	100A	100A	100A	
Single Cell Charging Overvoltage Protection	3.8V	3.8V	3.8V	3.8V	
Overvoltage Protection For The Whole Battery	29.2V	29.2V	54.75V	54.75V	
Low Voltage Protection For Single Cell Discharge	2.7V	2.7V	2.7V	2.7V	
Low Voltage Protection For Whole Group Discharge	21.6V	21.6V	40.5V	40.5V	
Charge Overcurrent Protection	102~112A	102~112A	102~112A	102~112A	
Discharge Overcurrent Protection	102~122A	102~122A	102~122A	102~122A	
BMS Features	High accuracy cell level voltage, current measuring Over-charge, over-discharge protection Short-circuit protection Self-learning intelligent SOC calculation Cell level active equalization Multiple communication type Parallel connect function				
Working Temperature	-15℃ ~+55℃				
Storage Temperature	-20℃ ~+50℃				
Single Battery Module	Dimension(mm)	541*480*190	541*480*190	541*480*190	541*480*190
	Weight(Kg)	27KG	54KG	54KG	54KG



MPPT 140A SERIES



Max.Efficiency
98%



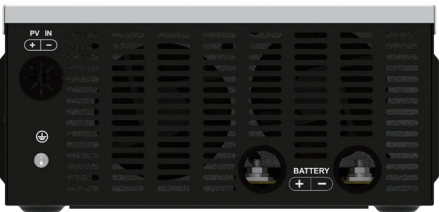
IP21
Ingress Protection



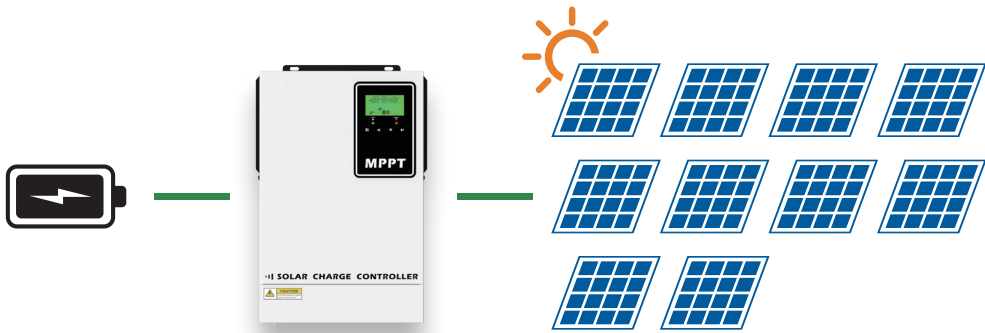
140A MPPT

Features

- Built-in 140AMPPT solar charger
- PVinput voltage range 60~500VDC
- Smart battery charge design to optimize battery life
- Built-in anti-dust kit for harsh environment
- Battery voltage range: 40~59VDC



Model	XMC-140-24V	XMC-140-48V
BATTERY		
Battery Voltage	24VDC	48VDC
Floating Charge Voltage	27VDC	54VDC
Overcharge Protection	31VDC	62VDC
Charging Current	140A	
SOLAR CHARGER		
Solar Charger Type	MPPT	
Maximum PV Array Power	3600W	6500W
MPPT Range @ Operating Voltage	60~450VDC	
Maximum PV Array Open Circuit Voltage	500V	
Number of MPPT Trakers/MaximumInput current	1/22A	
PHYSICAL		
Dimension, D*W*H(mm)	380×249×115	
Carton Dimension, D*W*H(mm)	435×310×180	
Net Weight(kgs)	5.8	
Gross Weight(kgs)	6.4	
OPERATING ENVIRONMENT		
Humidity	5% to 95% Relative Humidity(Non~condensing)	
Operating Temperature	-10℃ ~50℃	
STANDARD		
Compliance Safety	CE	

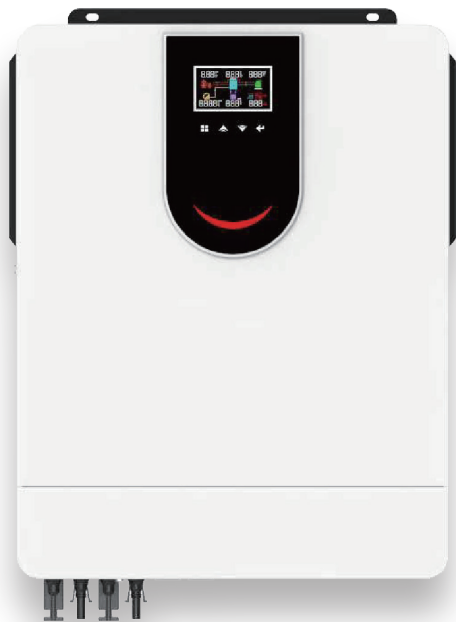


Maximum 10 pcs of solar panels

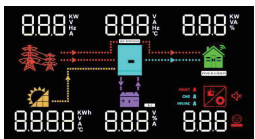
SY-10.2K SERIES



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WIFI&GPRS available for iOS and Android



LCD DISPLAY



Features

- Pure sine wave solar inverter(on/off Grid)
- Output power factor 1.0
- WIFI&GPRS available for iOS and Android
- Inverter can run without battery
- One-keyrestoration to factory Settings
- Built-in Lithium battery automatic activation
- Built-in 160A MPPT Solar charge (for 8.2KW, 10.2KW),140a(for 7.2KW)
- High PV input voltage range(90~500VDC)
- Built-in anti-dust kit for harsh environment
- Smart battery charge design to optimize battery life
- Dual output
- Dual PV input
- Touch button
- ON OFF grid work mode

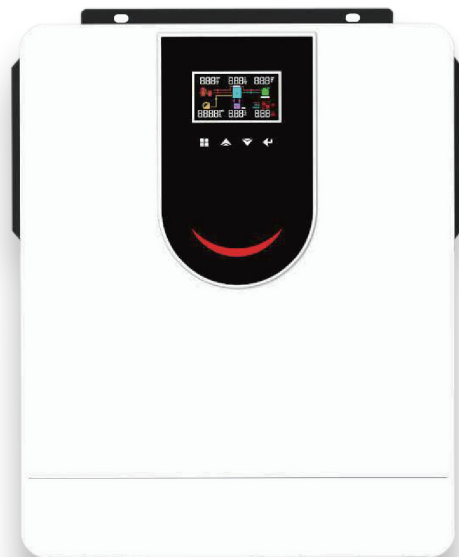
INVERTER					
MODEL	SY7.2K		SY8.2K		SY10.2K
Phase	1-phase				
Maximum PV Input Power	8200W	8200W	5400W+5400W	10200W	5400W+5400W
Rated Output Power	7200W/7200VA	8200W/8200VA		10200W/10200VA	
Nominal DC Voltage/Maximum DC Voltage	140A	160A		160A	
GRID-TIE OPERATION					
PV INPUT(DC)					
Nominal DC Voltage/Maximum DC Voltage	360/500VDC				
Start-up Voltage/Initial Feeding Voltage	90VDC/120VDC				
MPPT Voltage Range	90~450VDC				
Maximum Input Current	1/23A	1/23A	2/18A	1/23A	2/18A
GRID OUTPUT (AC)					
Nominal Output Voltage	220/230/240VAC				
Output Voltage Range	195~253VAC				
Nominal Output Current	31.3A	35.6A		44.3A	
Power Factor	>0.99				

EFFICIENCY					
Maximum Conversion Efficiency (DC/AC)	98%				
TWO LOAD OUTPUT POWER					
Full Load	7200W	8200W	10200W		
Maximum Main Load	7200W	8200W	10200W		
Maximum Second Load(battery mode)	2400W	2733W	3400W		
Maximum Load Cut Off Voltage	52VDC	52VDC	52VDC		
Maximum Load Return Voltage	54VDC	54VDC	54VDC		
OFF-GRID OPERATION					
AC INPUT					
AC Start-up Voltage /Auto Restart Voltage	120-140VAC/180VAC				
Acceptable Input Voltage Range	90-280VAC or 170-280VAC				
Frequency Range	49~51±1Hz				
Maximum ACInput Current	40A	40A	50A		
PV INPUT(DC)					
Nominal DC Voltage/Maximum DC Voltage	360/500VDC				
MPPT Voltage Range	90~450VDC				
Maximum Input Current	1/23A	1/23A	2/18A	1/23A	2/18
BATTERY MODE OUTPUT(AC)					
Nominal Output Voltage	220/230/240VAC				
Output Waveform	Pure sine wave				
Efficiency (DC to AC)	94%				
BATTERY & CHARGER					
Nominal DC Voltage	48VDC				
Maximum Solar Charging Current	140A	160A	160A		
Maximum AC Charging Current	120A	140A	140A		
Maximum Charging Current	140A	160A	160A		
HYBRID OPERATION					
PV INPUT(DC)					
Nominal DC Voltage/Maximum DC Voltage	360/500VDC				
Start-up Voltage /Initial Feeding Voltage	90VDC/120VDC				
MPPT Voltage Range	90~450VDC				
Maximum Input Current	1/23A	1/23A	2/18A	1/23A	2/18A
GRID OUTPUT(AC)					
Nominal DC Voltage	220/230/240VAC				
Output Voltage Range	190~253VAC				
Nominal Output Current	31.3A	35.6A	44.3A		
AC INPUT					
AC Start-up Voltage /Auto Restart Voltage	120-140VAC/180VAC				
Acceptable Input Voltage Range	90-280VAC or 170-280VAC				
Maximum ACInput Current	40A	40A	50A		
Maximum AC Charging Current	120A	140A	140A		
GENERAL					
PHYSICAL					
Dimension, D×W×H(mm)	500*390*130	500*390*130	530*420*160	500*390*130	530*420*160
Carton Dimension, D×W×H(mm)	588*463*205		618*463*205	588*463*205	618*463*205
Net Weight (kgs)	13.6	14.5	14.6	14.8	15
Gross Weight(kgs)	14.9	16	16.1	16.2	16.5
INTERACE					
Communication Port	RS232/RS485/WIFI/GPRS/LITHIUM BATTERY				
ENVIRONMENT					
Humidity	5% to 95% Relative Humidity(Non~condensing)				
Operating Temperature	-10℃ ~50℃				
STANDARD					
Compliance Safety	CE				

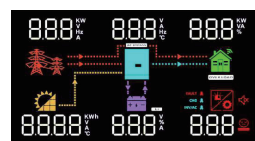
SY-6.2K SERIES



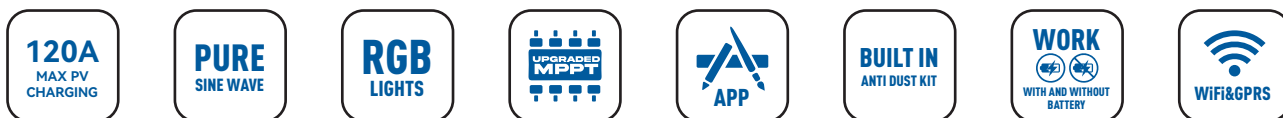
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WIFI&GPRS available for iOS and Android



LCD DISPLAY



Features

- Pure sine wave solar inverter(on/off Grid)
- Output power factor 1.0
- WIFI&GPRS available for iOS and Android
- Inverter can run without battery
- One-key restoration to factory Settings
- Built-in Lithium battery automatic activation
- Built-in 120A MPPT Solar charge:max 6200W (for 3.6KW/4.2KW), max6500W(for 6.2KW)
- High PV input voltage range(90~500VDC)
- Built-in anti-dust kit for harsh environment
- Smart battery charge design to optimize battery life
- Dual output

INVERTER			
MODEL	SY3.6K	SY4.2K	SY6.2K
Phase		1-phase	
Maximum PV Input Power	6200W	6200W	6500W
Rated Output Power	3600W	4200W	6200W
Nominal DC Voltage/Maximum DC Voltage		120A	
GRID-TIE OPERATION			
PV INPUT(DC)			
Nominal DC Voltage/Maximum DC Voltage		360/500VDC	
Start-up Voltage/Initial Feeding Voltage		60VDC/90VDC	
MPPT Voltage Range		60~450VDC	
Maximum Input Current		1/28A	1/22A
GRID OUTPUT (AC)			
Nominal Output Voltage		220/230/240VAC	
Output Voltage Range		195.5~253VAC	
Nominal Output Current	15.7A	18.2A	27.0A
Power Factor		>0.99	

EFFICIENCY			
Maximum Conversion Efficiency (DC/AC)	98%		
TWO LOAD OUTPUT POWER			
Full Load	3600W	4200W	6200W
Maximum Main Load	3600W	4200W	6200W
Maximum Second Load(battery mode)	1200W	1400W	2067W
Maximum Load Cut Off Voltage	26VDC	26VDC	52VDC
Maximum Load Return Voltage	27VDC	27VDC	54VDC
OFF-GRID OPERATION			
AC INPUT			
AC Start-up Voltage /Auto Restart Voltage	120-140VAC/180VAC		
Acceptable Input Voltage Range	90-280VAC or 170-280VAC		
Frequency Range	49~51±1Hz		
Maximum ACInput Current	30A	30A	40A
PV INPUT(DC)			
Nominal DC Voltage/Maximum DC Voltage	360/500VDC		
MPPT Voltage Range	60~450VDC		
Maximum Input Current	1/18A		1/22A
BATTERY MODE OUTPUT(AC)			
Nominal Output Voltage	220/230/240VAC		
Output Waveform	Pure sine wave		
Efficiency (DC to AC)	94%		
BATTERY & CHARGER			
Nominal DC Voltage	24VDC		48VDC
Maximum Solar Charging Current	120A	140A	120A
Maximum AC Charging Current	100A	100A	100A
Maximum Charging Current	120A	140A	120A
HYBRID OPERATION			
PV INPUT(DC)			
Nominal DC Voltage/Maximum DC Voltage	360/500VDC		
Start-up Voltage /Initial Feeding Voltage	90VDC/120VDC		
MPPT Voltage Range	60~450VDC		
Maximum Input Current	1/18A		1/22A
GRID OUTPUT(AC)			
Nominal DC Voltage	220/230/240VAC		
Output Voltage Range	195.5~253VAC		
Nominal Output Current	15.7A	18.2A	27.0A
AC INPUT			
AC Start-up Voltage /Auto Restart Voltage	120-140VAC/180VAC		
Acceptable Input Voltage Range	90-280VAC or 170-280VAC		
Maximum ACInput Current	30A	30A	40A
Maximum AC Charging Current	100A		
GENERAL			
PHYSICAL			
Dimension, D×W×H(mm)	420*350*110		
Carton Dimension, D×W×H(mm)	500*415*180		
Net Weight (kgs)	8	8.5	9
Gross Weight(kgs)	9	9.5	10
INTERACE			
Communication Port	RS232/RS485/WIFI/GPRS/LITHIUM BATTERY		
ENVIRONMENT			
Humidity	5% to 95% Relative Humidity(Non~condensing)		
Operating Temperature	-10℃ ~50℃		
STANDARD			
Compliance Safety	CE		

SY-3.2K SERIES



Features

- Pure sine wave solar inverter
- Output power factor SY2.0K=0.8/SY3.2K>0.9
- WIFI&GPRS available for iOS and Android
- Built-in 80A MPPT Solar charge
- High PV input voltage range(30~400VDC)
- Built-in anti-dust kit for harsh environment
- Smart battery charge design to optimize battery life
- Meet the rich customize needs of customers
- Compatibe with lithium battery
- Solar enerny is provided directly to the load first



Max.Efficiency
98%



IP21
Ingress Protection



80A MPPT

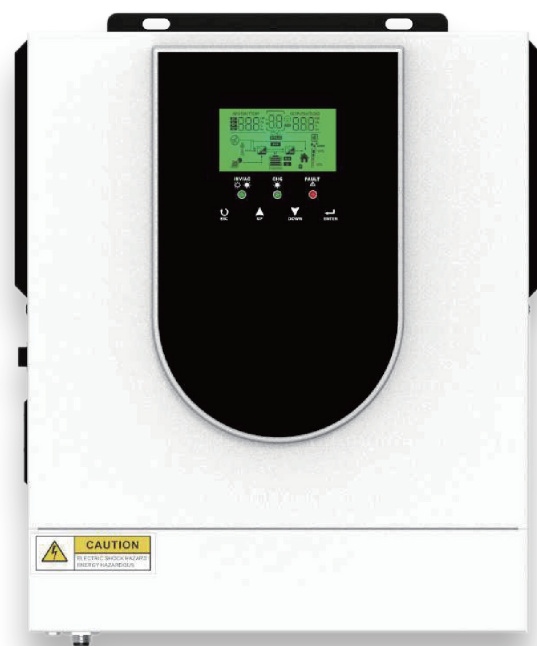


R232/GRPS/WiFi



MODEL	SY-2.0K12	SY-3.2K24
Rated Power	1600W/2000VA	3000W/3200VA
AC INPUT		
Voltage	230VAC	
Selectable Voltage Range	170~280VAC(For Personal Computers)	
	90~280VAC(For Home Appliances)	
Frequency Range	50Hz/60Hz(Auto sensing)	
AC Output		
AC Voltage Regulation	230VAC±5%	
Surge Power	4000VA	6400VA
Efficiency(Peak)PV to INV	98%	
Efficiency(Peak)Battery to INV	94%	
Transfer Time	10ms(For Personal Computers); 20ms(For Home Appliances)	
BATTERY & AC CHARGER		
Battery Voltage	12VDC	24VDC
Floating Charge Voltage	13.5VDC	27VDC
Overcharge Protection	16VDC	33VDC
SOLAR CHARGER & AC CHARGER		
Solar Charge Type	MPPT	
Maximum PV Array Power	2000W	3000W
MPPT Range @ Operating Voltage	30~400VDC	
Maximum PV Array Open Circuit Voltage	400VDC	
Max Input Current	1/13A	
Maximum Solar Charging Current	80A	
Maximum AC Charging Current	60A	
Maximum Charging Current (Solar+AC)	80A	
PHYSICAL		
Dimension, D×W×H(mm)	357*273*95	
Carton Dimension, D×W×H(mm)	440*340*170	
Net Weight (kgs)	5	5.6
Gross Weight(kgs)	6	6.3
ENVIRONMENT		
Humidity	5% to 95% Relative Humidity(Non~condensing)	
Operating Temperature	-10°C ~50°C	
STANDARD		
Compliance Satety	CE	

SY-1.5K SERIES



Features

- Pure sine wave solar inverter
- Output power factor 1.0
- WIFI&GPRS available for iOS and Android
- Built-in 40A MPPT Solar charge
- High PV input voltage range 20~150VDC(for 1000W), 30~150VDC(for 1500W)
- Built-in anti-dust kit for harsh environment
- Smart battery charge design to optimize battery life
- Meet the rich customize needs of customers
- Compatibe with lithium battery
- Solar energy is provided directly to the load first

Max.Efficiency
98%

IP21
Ingress Protection

80A MPPT

R232/GRPS/WiFi



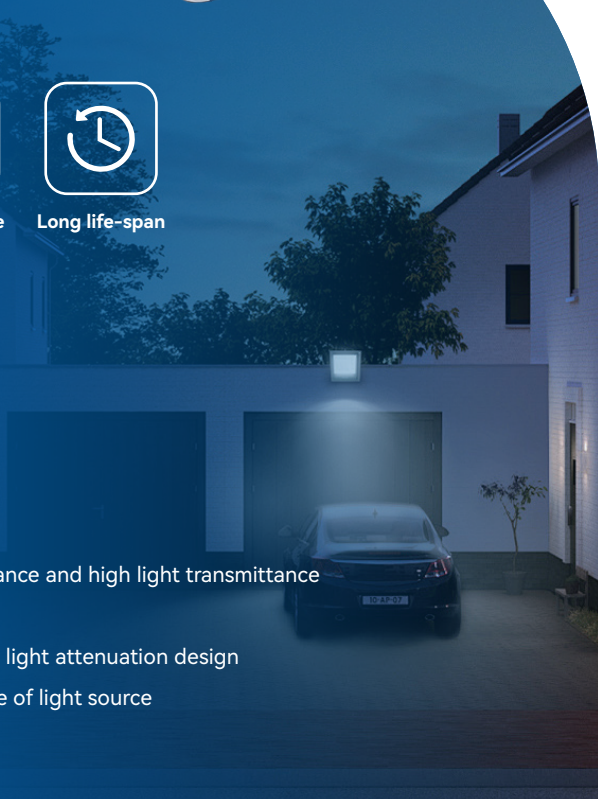
MODEL	SY-1.0K12		SY-1.5K24	
Rated Power	1000W/1000VA		1500W/1500VA	
AC INPUT				
Voltage	230VAC			
Selectable Voltage Range	170~280VAC(For Personal Computers)			
	90~280VAC(For Home Appliances)			
Frequency Range	50Hz/60Hz(Auto sensing)			
AC Output				
AC Voltage Regulation	230VAC±5%			
Surge Power	4000VA		6400VA	
Efficiency(Peak)PV to INV	98%			
Efficiency(Peak)Battery to INV	94%			
Transfer Time	10ms(For Personal Computers); 20ms(For Home Appliances)			
BATTERY & AC CHARGER				
Battery Voltage	12VDC		24VDC	
Floating Charge Voltage	13.5VDC		27VDC	
Overcharge Protection	16VDC		33VDC	
SOLAR CHARGER & AC CHARGER				
Solar Charge Type	MPPT			
Maximum PV Array Power	600W		1200W	
MPPT Range @ Operating Voltage	20~150VDC		30~150VDC	
Maximum PV Array Open Circuit Voltage	150VDC			
Maximum Solar Charging Current	40A			
Maximum AC Charging Current	40A			
Maximum Charging Current (Solar+AC)	80A			
PHYSICAL				
Dimension, D×W×H(mm)	290*240*91			
Carton Dimension, D×W×H(mm)	340*275*145			
Net Weight (kgs)	3		3.5	
Gross Weight(kgs)	3.5		4	
ENVIRONMENT				
Humidity	5% to 95% Relative Humidity(Non~condensing)			
Operating Temperature	-10℃ ~50℃			
STANDARD				
Compliance Satety	CE			

FD SERIES



Features

- Ip66 waterproof grade
- Radar induction control
- Red light remote control
- Intelligent light control function
- Wiring free, easy to install and use, very convenient
- Thickened tempered glass mask with strong impact resistance and high light transmittance
- Die cast aluminum radiator, hot air convection
- Bright double gold wire led beads, high display finger, low light attenuation design
- Efficient heat dissipation effect and prolong the service life of light source



50W



100W



150W



200W



300W



POWER	SIZE	APPLICABLE AREA	WATERPROOF GRADE	CONFIGURE SOLAR PANELS	BATTERY CAPACITY
50W	185×210×35	<60m ²	IP66	15	10
100W	225×260×35	<120m ²	IP66	20	15
150W	260×305×50	<170m ²	IP66	25	20
200W	300×350×50	<220m ²	IP66	30	25
300W	370×400×50	<350m ²	IP66	35	30



Light control



Solar charge



Smart remote



Long life-span

Features

- Ip66 waterproof grade
- Red light remote control
- Intelligent light control function
- Wiring free, easy to install and use, very convenient
- High efficiency solar panel, high conversion and fast charging
- Thickened tempered glass mask with strong impact resistance and high light transmittance
- Die cast aluminum radiator, hot air convection
- Bright double gold wire led beads, high display finger, low light attenuation design
- Efficient heat dissipation effect and prolong the service life of light source

60W



100W



200W



300W



POWER	SIZE	APPLICABLE AREA	WATERPROOF GRADE	CONFIGURE SOLAR PANELS	BATTERY CAPACITY
60W	250×205×65	<60m ²	IP66	8	5
100W	300×250×75	<120m ²	IP66	12	10
200W	330×270×80	<220m ²	IP66	25	20
300W	400×350×40	<350m ²	IP66	30	25



Light control



Solar charge



High capacity
battery



Long life-span

Use sunlight to improve people's quality of life

60W

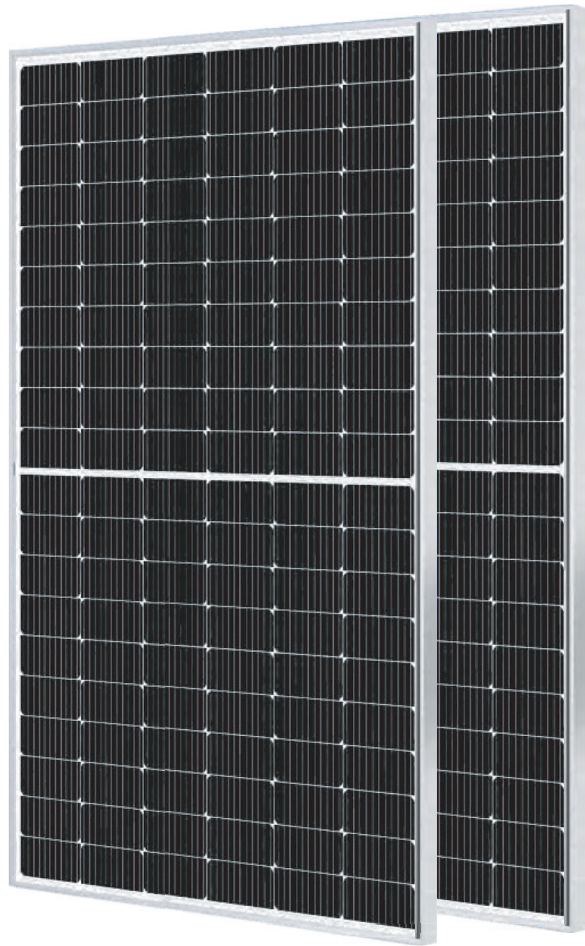
100W



Model	LD-8	LD-12
Luminous Flux	1600Lm/W	
Mono Solar Panel	65W	80W
Battery	240Wh	360Wh
Lamp Size	1175×390×65mm	1430×390×65mm
LED Quantity	80pcs	120pcs
Solar Panel Size	1125×335mm	1377×335mm
Height of Installation	6-8M	8-10M
Waterproof Level	IP66	
Charging Time	4-5h	
Working Time	>20h	
Emitting Angle	75° *155°	
Lighting Mode	Lighting control + Sensor	
RA	≥ 80	
Color Temperature	6500K	



MSD450M-120



MSD450M-120

Mono Half-cut Single/Double Glass Module
430-455/MB Series

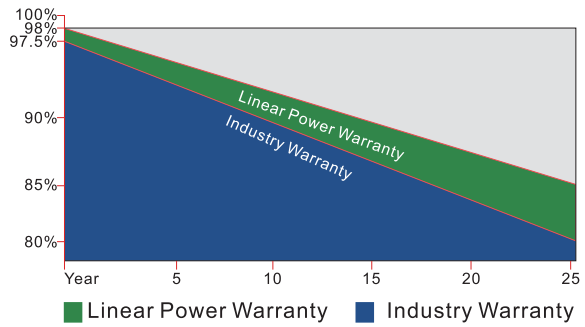
INTRODUCTION
MONO half-cut single / double glass module, assembled with multi-busbar PERC technique and half-cut structure, which can not only absorb the energy from the front of the module, but also absorb the reflected light and the scattered light from the back, offer the advantages of higher power output, reduce shading effect on the energy generation, enhance the mechanical load bearing capacity as well.

LCOE save 6-8%

- ↓6% Saving logistics cost
- ↓7% Saving cable cost
- ↓8% Saving bracket cost
- ↓9% Saving labor cost

First-class Quality Assurance

- 10-year warranty for material and technology
- 25-year linear power output warranty

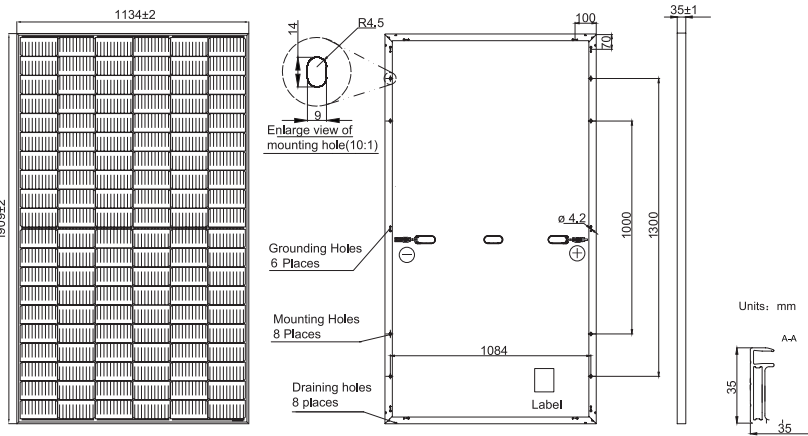


Comprehensive Certificates

- IEC61215, IEC61730
- ISO9001:2015 Quality management systems
- ISO45001:Environmental management systems
- ISO45001:2018 Occupational health and safety management systems



Mechanical Diagrams



PS:Frame color and cable length can be customized

Electrical Parameters at STC

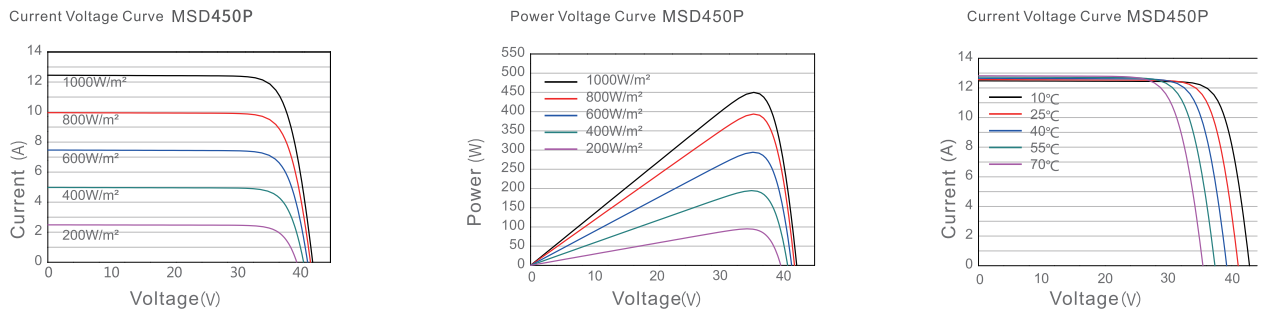
Module Type	MSD430P	MSD435P	MSD440P	MSD445P	MSD450P	MSD455P
Rate Maximum Power(Pmax/W)	430	435	440	445	450	455
Module Efficiency(%)	19.90	20.10	20.30	20.60	20.80	21.10
Open Circuit Volatge(Voc/V)	40.65	40.80	40.95	41.10	41.25	41.40
Short Circuit Current(Isc/A)	13.59	13.67	13.74	13.82	13.89	13.97
Voltage at Pmax(Vmp/V)	33.89	30.09	34.28	34.48	34.67	34.87
Current at Pmax(Imp/A)	12.69	12.77	12.84	12.91	12.98	13.05
Power Tolerance	0~+5w					
Temperature Coefficient of Isc	+0.046%/°C					
Temperature Coefficient of Voc	-0.276%/°C					
Temperature Coefficient of Pmax	-0.350%/°C					
STC	Irradiance 1000W/m² Cell Temperature 25°C AM1.5					

Remark: Electrical data in this catalogue does not refer to a single module, and it's not part of the offer. It only serves for the comparison among different module types.

Electrical Parameters at NOCT

Module Type	MSD430P	MSD435P	MSD440P	MSD445P	MSD450P	MSD455P	Operating Conditions	
Rate Maximum Power(Pmax/W)	327	330	333	336	340	343	Operating Temperature	-40~+85°C
Open Circuit Voltage(Voc.V)	38.15	38.28	38.40	38.53	38.65	38.77	Maximum System Voltage	1500VDC
Short Circuit Current(Isc/A))	10.91	10.95	10.99	11.03	11.08	11.12	NOCT	45±2°C
Voltage at Pmax(Vmp/V)	31.89	32.05	32.19	32.35	32.51	32.67	Fireproof Performance	Glass C
Currrnt at Pmax(Imp/A)	10.26	10.30	10.35	10.40	10.46	10.51	Maximum Series Fuse	25A
NOCT:Irradiance 800W/m² Ambient Temperature 20°C Wind at 1m/S AM1.5							Temperature Coefficient of Voc	-0.276%/K
							Temperature Coefficient of Isc	+0.046%/K

Characteristics





480-505/MB Series

MONO half-cut single / double glass module, assembled with multi-busbar PERC technique and half-cut structure, which can not only absorb the energy from the front of the module, but also absorb the reflected light and the scattered light from the back, offer the advantages of higher power output, reduce shading effect on the energy generation, enhance the mechanical load bearing capacity as well.

LCOE save 6-8%

↓7% Saving cable cost

↓9% Saving labor cost

- 10-year warranty for material and technology
- 25-year linear power output warranty



- IEC61215, IEC61730
- ISO9001:2015 Quality management systems
- ISO45001:Environmental management systems
- ISO45001:2018 Occupational health and safety management systems



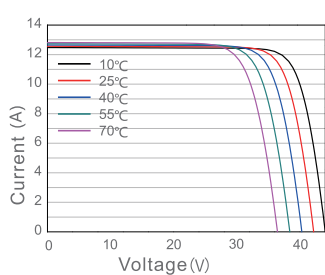
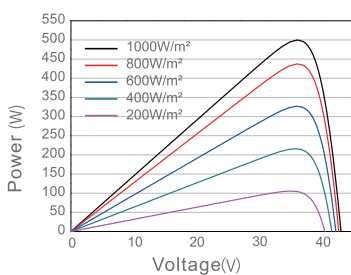
Solar Cell(Type/Size)	MONO(182mm)
Solar Cells Number	132pcs(6*22)
Dimensions	2094×1134×35mm
Weight	26.2Kg/Pcs
Structure	3.2 Glass + EVA film + Back
Frame	Anodized Aluminum Alloy
Junction Box	IP683*3Bypass Diode
Cable Cross Section Size	4.0mm²,(+)300mm/(-)400mm
Mechanical Load	Front 5400Pa/Back 2400Pa
Packing Number	31Pcs/Pallet
Packing Volume	3.100Cbm/Pallet
40'HQ Container	682Pcs

Module Type	MSD480P	MSD485P	MSD490P	MSD495P	MSD500P	MSD505P
Rate Maximum Power(Pmax/W)	480	485	490	495	500	505
Module Efficiency(%)	20.20	20.40	20.60	20.80	21.10	21.30
Open Circuit Volatge(Voc/V)	45.02	45.18	45.33	45.49	45.65	45.79
Short Circuit Current(Isc/A)	13.66	13.73	13.79	13.86	13.92	13.99
Voltage at Pmax(Vmp/V)	37.71	37.87	38.02	38.18	38.33	38.50
Current at Pmax(Imp/A)	12.73	12.81	12.89	12.97	13.05	13.12
Power Tolerance	0~+5w					
Temperature Coefficient of Isc	+0.046%/℃					
Temperature Coefficient of Voc	-0.276%/℃					
Temperature Coefficient of Pmax	-0.350%/℃					
STC	Irradiance 1000W/m² Cell Temperature 25℃ AM1.5					

Remark: Electrical data in this catalogue does not refer to a single module, and it's not part of the offer. It only serves for the comparison among different module types.

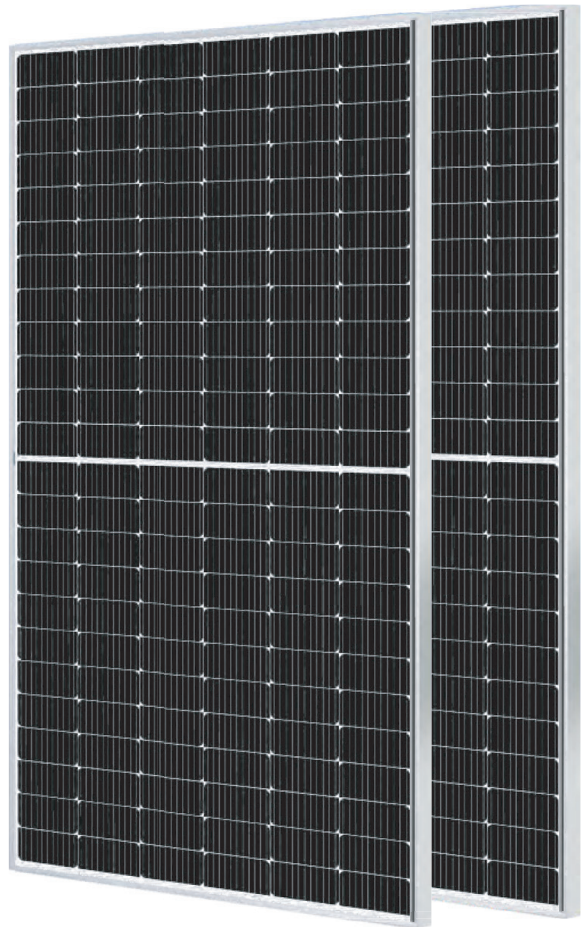
Module Type	MSD480P	MSD485P	MSD490P	MSD495P	MSD500P	MSD505P	Operating Temperature	-40~+85°C
Rate Maximum Power(P max/W)	363	366	370	373	377	381	Maximum System Voltage	1500VDC
Open Circuit Voltage(Voc.V)	42.16	42.31	42.46	42.60	42.75	42.89	NOCT	45±2°C
Short Circuit Current(Isc/A))	10.98	11.06	11.12	11.19	11.26	11.33	Fireproof Performance	Glass C
Voltage at Pmax(Vmp/V)	35.48	35.61	35.73	35.86	35.99	36.11	Maximum Series Fuse	25A
Currrrnt at Pmax(Imp/A)	10.23	10.28	10.36	10.41	10.48	10.56	Temperature Coefficient of Voc	-0.276%/K
NOCT:Irradiance 800W/m² Ambient Temperature 20°C Wind at 1m/S AM1.5							Temperature Coefficient of Isc	+0.046%/K

Current Voltage Curve MSD500P





MSD540M-144



MSD540M-144

Mono Half-cut Single/Double Glass Module
525-550/MB Series

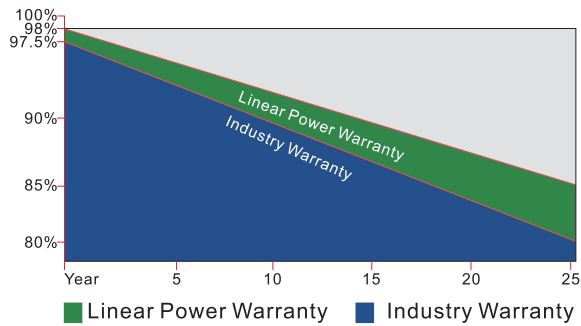
INTRODUCTION
MONO half-cut single / double glass module, assembled with multi-busbar PERC technique and half-cut structure, which can not only absorb the energy from the front of the module, but also absorb the reflected light and the scattered light from the back, offer the advantages of higher power output, reduce shading effect on the energy generation, enhance the mechanical load bearing capacity as well.

LCOE save 6-8%

- ↓6% Saving logistics cost
- ↓7% Saving cable cost
- ↓8% Saving bracket cost
- ↓9% Saving labor cost

First-class Quality Assurance

- 10-year warranty for material and technology
- 25-year linear power output warranty

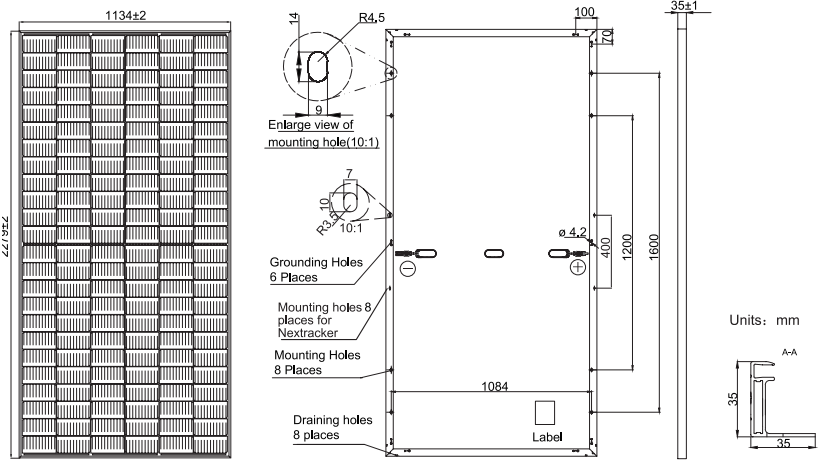


Comprehensive Certificates

- IEC61215, IEC61730
- ISO9001:2015 Quality management systems
- ISO45001: Environmental management systems
- ISO45001:2018 Occupational health and safety management systems



Mechanical Diagrams



PS: Frame color and cable length can be customized

Electrical Parameters at STC

Module Type	MSD525P	MSD530P	MSD535P	MSD540P	MSD545P	MSD550P
Rate Maximum Power(Pmax/W)	525	530	535	540	545	550
Module Efficiency(%)	20.30	20.50	20.70	20.90	21.10	21.30
Open Circuit Volatge(Voc/V)	48.95	49.15	49.35	49.55	49.75	49.95
Short Circuit Current(Isc/A)	13.67	13.74	13.82	13.89	13.97	14.05
Voltage at Pmax(Vmp/V)	41.10	41.27	41.45	41.62	41.80	41.97
Current at Pmax(Imp/A)	12.78	12.85	12.91	12.98	13.05	13.11
Power Tolerance	0~+5w					
Temperature Coefficient of Isc	+0.046%/°C					
Temperature Coefficient of Voc	-0.276%/°C					
Temperature Coefficient of Pmax	-0.350%/°C					
STC	Irradiance 1000W/m² Cell Temperature 25°C AM1.5					

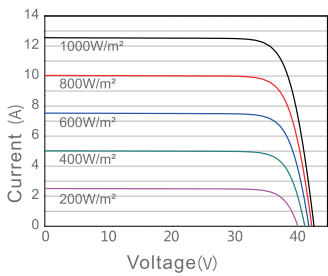
Remark: Electrical data in this catalogue does not refer to a single module, and it's not part of the offer. It only serves for the comparison among different module types.

Electrical Parameters at NOCT

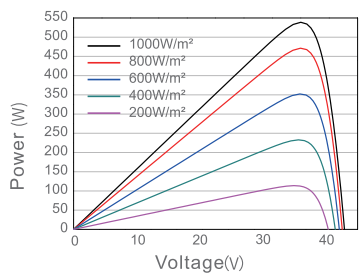
Module Type	MSD525P	MSD530P	MSD535P	MSD540P	MSD545P	MSD550P	Operating Conditions	
Rate Maximum Power(Pmax/W)	396	400	404	407	411	414	Operating Temperature	-40~+85°C
Open Circuit Voltage(Voc.V)	46.00	46.13	46.26	46.38	46.50	46.63	Maximum System Voltage	1500VDC
Short Circuit Current(Isc/A))	10.95	10.99	11.03	11.08	11.12	11.17	NOCT	45±2°C
Voltage at Pmax(Vmp/V)	38.35	38.55	38.76	38.95	39.16	39.31	Fireproof Performance	Glass C
Currrnt at Pmax(Imp/A)	10.33	10.38	10.43	10.46	10.50	10.53	Maximum Series Fuse	25A
NOCT: Irradiance 800W/m² Ambient Temperature 20°C Wind at 1m/S AM1.5							Temperature Coefficient of Voc	-0.276%/K
							Temperature Coefficient of Isc	+0.046%/K

Characteristics

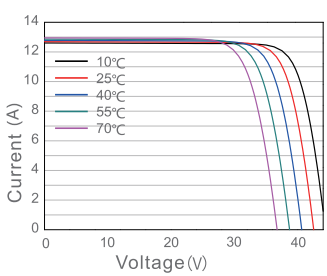
Current Voltage Curve MSD540P



Power Voltage Curve MSD540P



Current Voltage Curve MSD540P

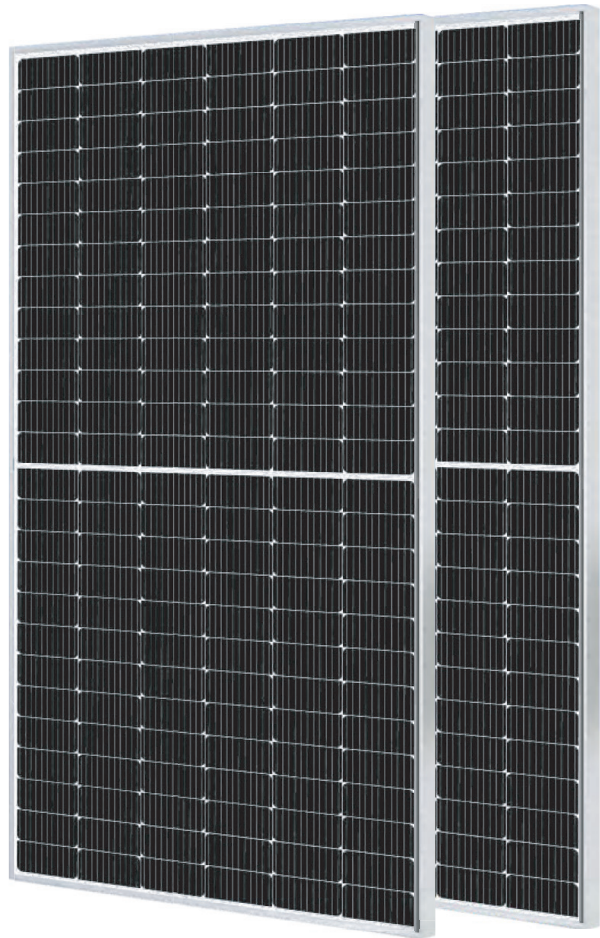




MSD600M-156



Lighting Life
Powering Dreams
Your Energy Vanguard



MSD600M-156

Mono Half-cut Single/Double Glass Module

580-600/MB

Series

INTRODUCTION

MONO half-cut single / double glass module, assembled with multi-busbar PERC technique and half-cut structure, which can not only absorb the energy from the front of the module, but also absorb the reflected light and the scattered light from the back, offer the advantages of higher power output, reduce shading effect on the energy generation, enhance the mechanical load bearing capacity as well.

LCOE save 6-8%

- ↓6%

Saving logistics cost
- ↓7%

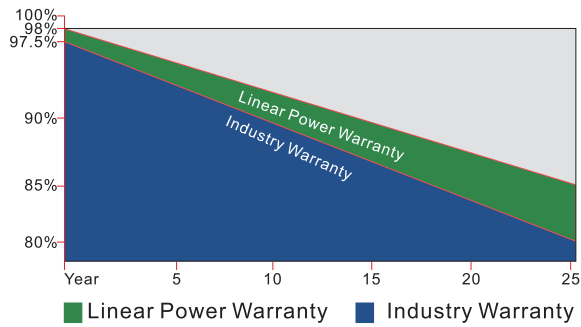
Saving cable cost
- ↓8%

Saving bracket cost
- ↓9%

Saving labor cost

First-class Quality Assurance

- 10-year warranty for material and technology
- 25-year linear power output warranty

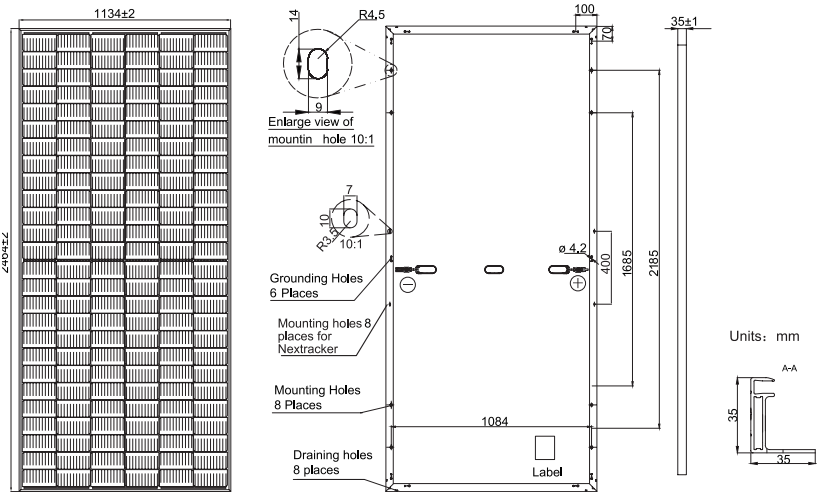


Comprehensive Certificates

- IEC61215, IEC61730
- ISO9001:2015 Quality management systems
- ISO45001:Environmental management systems
- ISO45001:2018 Occupational health and safety management systems



Mechanical Diagrams



PS:Frame color and cable length can be customized

Electrical Parameters at STC

Module Type	MSD580P	MSD585P	MSD590P	MSD595P	MSD600P
Rate Maximum Power(Pmax/W)	580	585	590	595	600
Module Efficiency(%)	20.70	20.90	20.10	21.30	21.50
Open Circuit Volatge(Voc/V)	53.50	53.65	53.80	53.95	54.10
Short Circuit Current(Isc/A)	13.82	13.89	13.96	14.03	14.10
Voltage at Pmax(Vmp/V)	44.90	45.07	45.22	45.39	45.53
Current at Pmax(Imp/A)	12.92	12.98	13.05	13.11	13.18
Power Tolerance	0~+5w				
Temperature Coefficient of Isc	+0.046%/°C				
Temperature Coefficient of Voc	-0.276%/°C				
Temperature Coefficient of Pmax	-0.350%/°C				
STC	Irradiance 1000W/m² Cell Temperature 25°C AM1.5				

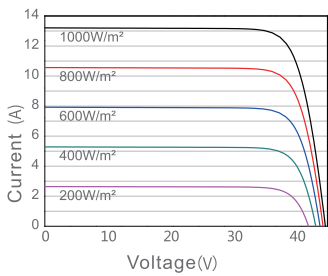
Remark: Electrical data in this catalogue does not refer to a single module, and it's not part of the offer. It only serves for the comparison among different module types.

Electrical Parameters at NOCT

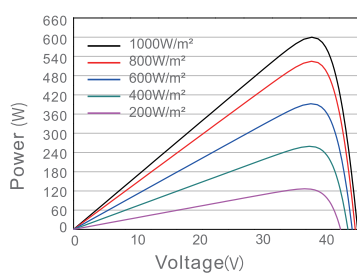
Module Type	MSD580P	MSD585P	MSD590P	MSD595P	MSD600P	Operating Conditions	
Rate Maximum Power(Pmax/W)	438	441	445	448	452	Operating Temperature	-40~-85°C
Open Circuit Voltage(Voc.V)	50.09	50.22	50.35	50.48	50.60	Maximum System Voltage	1500VDC
Short Circuit Current(Isc/A))	11.03	11.08	11.12	11.17	11.22	NOCT	45±2°C
Voltage at Pmax(Vmp/V)	42.03	42.17	42.39	42.51	42.73	Fireproof Performance	Glass C
Currernt at Pmax(Imp/A)	10.42	10.46	10.50	10.54	10.58	Maximum Series Fuse	25A
NOCT: Irradiance 800W/m² Ambient Temperature 20°C Wind at 1m/S AM1.5						Temperature Coefficient of Voc	-0.276%/K
						Temperature Coefficient of Isc	+0.046%/K

Characteristics

Current Voltage Curve MSD600P



Power Voltage Curve MSD600P



Current Voltage Curve MSD600P

