SD CORPORATION
Sustainable Solutions

SUSTAINABLE RENEWABLE ENERGY SOLUTIONS FOR A GREENER FUTURE

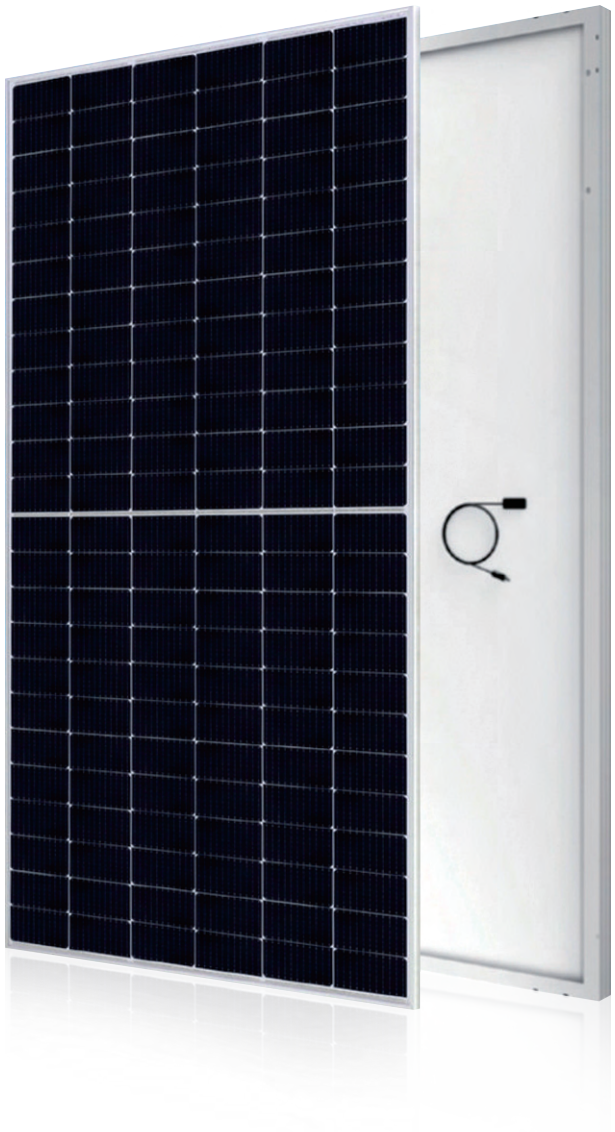
Sustainability Development Corporation (Pty) Ltd

SD CORPORATION
Sustainable Solutions

525-550W

182 Series

Mono Solar Module
144 Cells Single-glass Multi-busbar Half-cut Modules



Non-destructive Cutting
Higher battery bending strength and module mechaniacl performance.

Higher Customer Value
Up to 25% extra power gain, Lower BOS cost and LCOE.

High-efficiency PERC+battery Technology
High module power and efficiency, Lower power attenuation.

Certified to Withstand the Most Challenging Environmental Conditions
2400Pa wind load; 5400Pa snow load.

Highly Efficient and Reliable Components

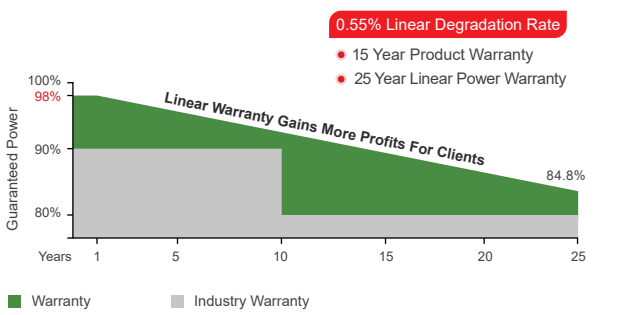
- Advanced production equipment, highly automated process control, world-class production technology.
- Excellent weak light performance, resistant to salt spray and ammonia corrosion.
- Certified by international quality management and environmental management system.
- The company has a product research and development laboratory that meets the new ISO/IEC international standards.
- Passing the certification test of the PV standards.
- Application grade: A; Safe grade: Ⅱ; Fireproofing garde: C

Comprehensive Products And System Certificates

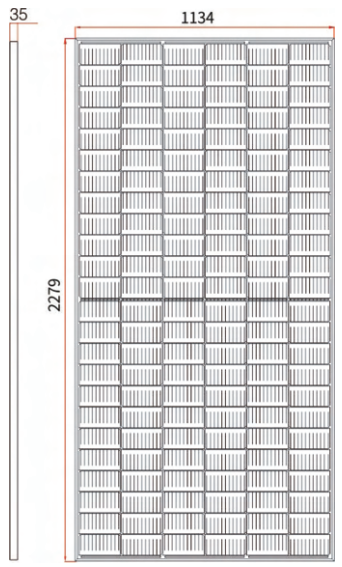
RECYCLABLE PACKAGING

IEC61215/IEC61730/UL1703/IEC61701/IEC62716
ISO 9001: Quality Management System
ISO 14001: Environmental Management System
ISO 45001: Occupational Health and Safety Management System
GB/T 23001-2017: Integrated Management System

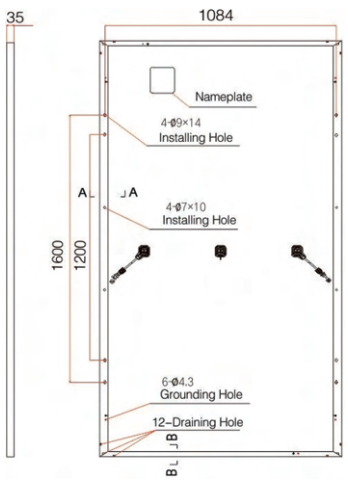
Industry-leading Linear Warranty



Dimensions of PV Module (mm)



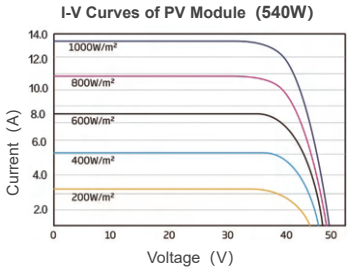
▲ Front View



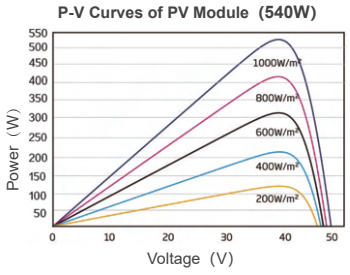
▲ Back View

Component Graph

I-V Curves of PV Module (540W)



P-V Curves of PV Module (540W)



Electrical Data (STC)

Peak Power Watts-P_{MAX}(Wp)	525	530	535	540	545	550
Power Output Tolerance-P_{MAX}(W)	0~ +5					
Maximum Power Voltage-V_{Mpp}(V)	41.15	41.31	41.47	41.64	41.80	41.96
Maximum Power Current-I_{Mpp}(A)	12.76	12.83	12.90	12.97	13.04	13.11
Open Circuit Voltage-V_{OC}(V)	49.15	49.30	49.45	49.60	49.75	49.90
Short Circuit Current-I_{SC}(A)	13.65	13.72	13.79	13.86	13.93	14.00
Module Efficiency-η_m(%)	20.3	20.5	20.7	20.9	21.1	21.3

STC: Irradiance 1000W/㎡, Cell Temperature 25℃, Air Mass AM1.5

Electrical Data (NOCT)

Maximum Power-P_{MAX}(Wp)	397	401	405	408	412	416
Maximum Power Voltage-V_{Mpp}(V)	38.36	38.57	38.78	38.99	39.20	39.43
Maximum Power Current-I_{Mpp}(A)	10.35	10.39	10.43	10.47	10.51	10.55
Open Circuit Voltage-V_{OC}(V)	46.05	46.18	46.31	46.43	46.55	46.68
Short Circuit Current-I_{SC}(A)	10.97	11.01	11.05	11.09	11.13	11.17

NOCT: Irradiance at 800W/㎡, Ambient Temperature 20℃, Wind Speed 1m/s

Mechanical Data

Solar Cells	Monocrystalline
Cell Orientation	144 Cell (6×24)
Module Dimensions	2279×1134×35mm (89.72×44.65×1.38 inches)
Weight	28.5kg (62.83 lb)
Front Glass	3.2mm(0.13inches),High Transmission,Strengthened Costed Glass
Encapsulant Material	EVA
Backsheet	White
Frame	35mm(1.38inches) Anodized Aluminium Alloy
J-Box	IP 68 Rated
Cables	4.0mm², 350mm Photovoltaic Special Cable,or Customized
Connector	MC4、QC4

Temperature Rating

NOTC(Nominal Operating Cell Temperature)	45℃(±2℃)
Temperature Coefficient of P_{MAX}	-0.350%/℃
Temperature Coefficient of V_{OC}	-0.275%/℃
Temperature Coefficient of I_{sc}	0.045%/℃

Limit Parameters

Operational Temperature	-45~+85℃
Maximum System Voltage	1500V DC(IEC)
Max Series Fuse Rating	25A

(DO NOT connect Fuse in Combiner Box with two or more strings in parallel connection)

Warranty

15 Year Product Workmanship Warranty
25 Year Linear Power Warranty

Packaging Configuration

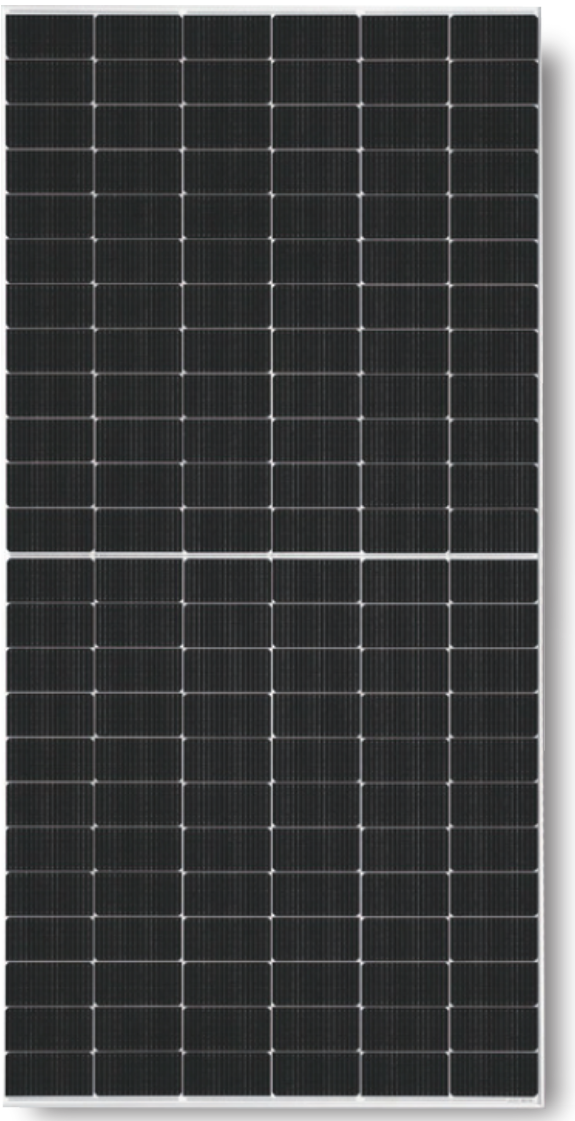
Modules Per Box	31 Pieces
Modules Per 40'comtainer	620 Pieces

SD CORPORATION
Sustainable Solutions

560-585W

MGMN
144TS Series

N-type Single Glass Mono-Facial Module



Lower LCOE
N-TOPCon technology: lower degradation，≥ 30 years life and lower BOS cost.

Better Temperature Coefficient
lower temperature coefficient and higer power generation under high temperature conditions.

PID Resistance
Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.

ZERO LID (Light Induced Degradation)
N-type solar cell has no LID naturally which can increase power generation.

Better Low Light Performance
Higher power output even under low-light environments like on cloudy or foggy days.

Enhanced Mechanical Load
Heavy snow load up to 5400Pa，wind load up to 2400Pa.

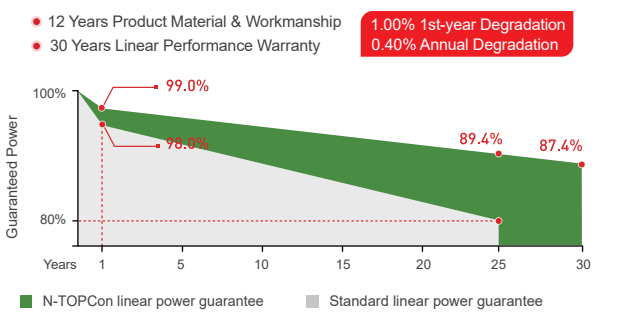
Highly Efficient and Reliable Components

- Advanced production equipment，highly automated process control，world-class production technology.
- Excellent weak light performance，resistant to salt spray and ammonia corrosion.
- Certified by international quality management and environmental management system.
- The company has a product research and development laboratory that meets the new ISO/IEC international standards.
- Passing the certification test of the PV standards.
- Application grade: A；Safe grade：Ⅱ；Fireproofing garde：C

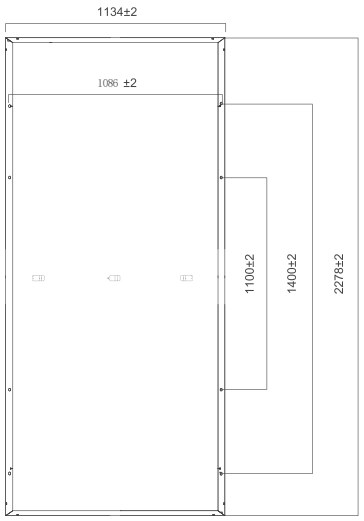
Comprehensive Products And System Certificates

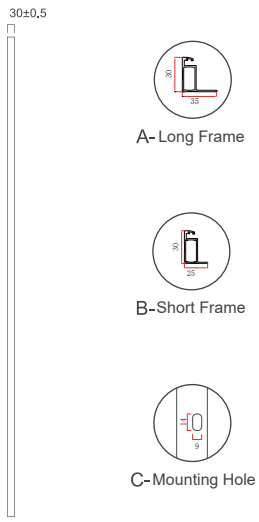
TÜVRheinland®
Precisely Right.

Industry-leading Linear Warranty



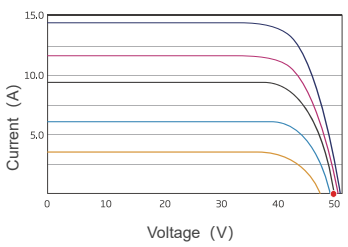
Dimensions of PV Module (mm)



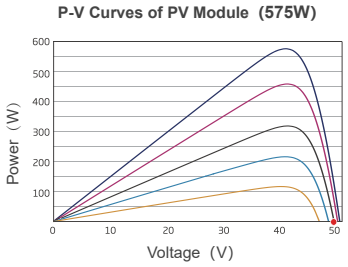


Component Graph

I-V Curves of PV Module (575W)



P-V Curves of PV Module (575W)



Electrical Data (STC)

Peak Power Watts-P_{MAX}(Wp)	560	565	570	575	580	585
Maximum Power Voltage-V_{Mpp}(V)	41.77	41.92	42.07	42.22	42.37	42.52
Maximum Power Current-I_{Mpp}(A)	13.41	13.48	13.55	13.62	13.69	13.76
Open Circuit Voltage-V_{OC}(V)	50.46	50.6	50.74	50.88	51.02	51.16
Short Circuit Current-I_{SC}(A)	14.15	14.23	14.31	14.39	14.47	14.56
Module Efficiency-η_m(%)	21.7	21.9	22.1	22.3	22.5	22.6

STC: Irradiance 1000W/㎡, Cell Temperature 25℃, Air Mass AM1.5
*The data above is for reference only and the actual data is in accordance with the pratical testing power measurement tolerance ±3%

Electrical Data (NOCT)

Maximum Power-P_{MAX}(Wp)	421	425	429	432	436	440
Maximum Power Voltage-V_{Mpp}(V)	39.24	39.38	39.51	39.6	36.69	39.81
Maximum Power Current-I_{Mpp}(A)	10.73	10.79	10.85	10.92	10.99	11.05
Open Circuit Voltage-V_{OC}(V)	47.93	48.06	48.2	48.33	48.46	48.6
Short Circuit Current-I_{SC}(A)	11.43	11.49	11.55	11.62	11.68	11.75

NOCT: Irradiance at 800W/㎡, Ambient Temperature 20℃, Wind Speed 1m/s
*The data above is for reference only and the actual data is in accordance with the pratical testing power measurement tolerance ±3%

Mechanical Properties

Cell Size	182.00mm*91.00mm
Number of Cells	144 Cell (2*72)
Module Dimension	2278mm*1134mm*30mm (89.69 x 44.65 x 1.18inch)
Weight	27.6kg (60.85 lbs)
Front Glass	32mm,Anti-Reflection CoatingHight Transmission,Low Iron,Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68 Rated, 1500VDC,3 bypass diodes
Length of Cable	TUV1 x 4.0mm²(+): 410mm· (-):290mm or customized Length
Mounting holes	1400mm, 1100mm

Temperature Coefficient

NOTC(Nominal Operating Cell Temperature)	45±2℃
Temperature Coefficient of P_{MAX}	-0.30%/℃
Temperature Coefficient of V_{OC}	-0.25%/℃
Temperature Coefficient of I_{sc}	0.046%/℃

Operating Properties

Operating Temperature	-40℃-+85℃
Max System Voltage	1500V (IEC)
Max Series Fuse Rating	25A
Power Tolerance	0~+5W

Packaging Configuration

Packing Type	40HQ Container
Pcs/Pallet	36 pcs
Pallet/Container	Pal20 trayslet/container
Pcs/Container	720 pcs

Warranty

12 Years Product Material & Workmanship
30 Years Linear Performance Warranty

SD CORPORATION
Sustainable Solutions

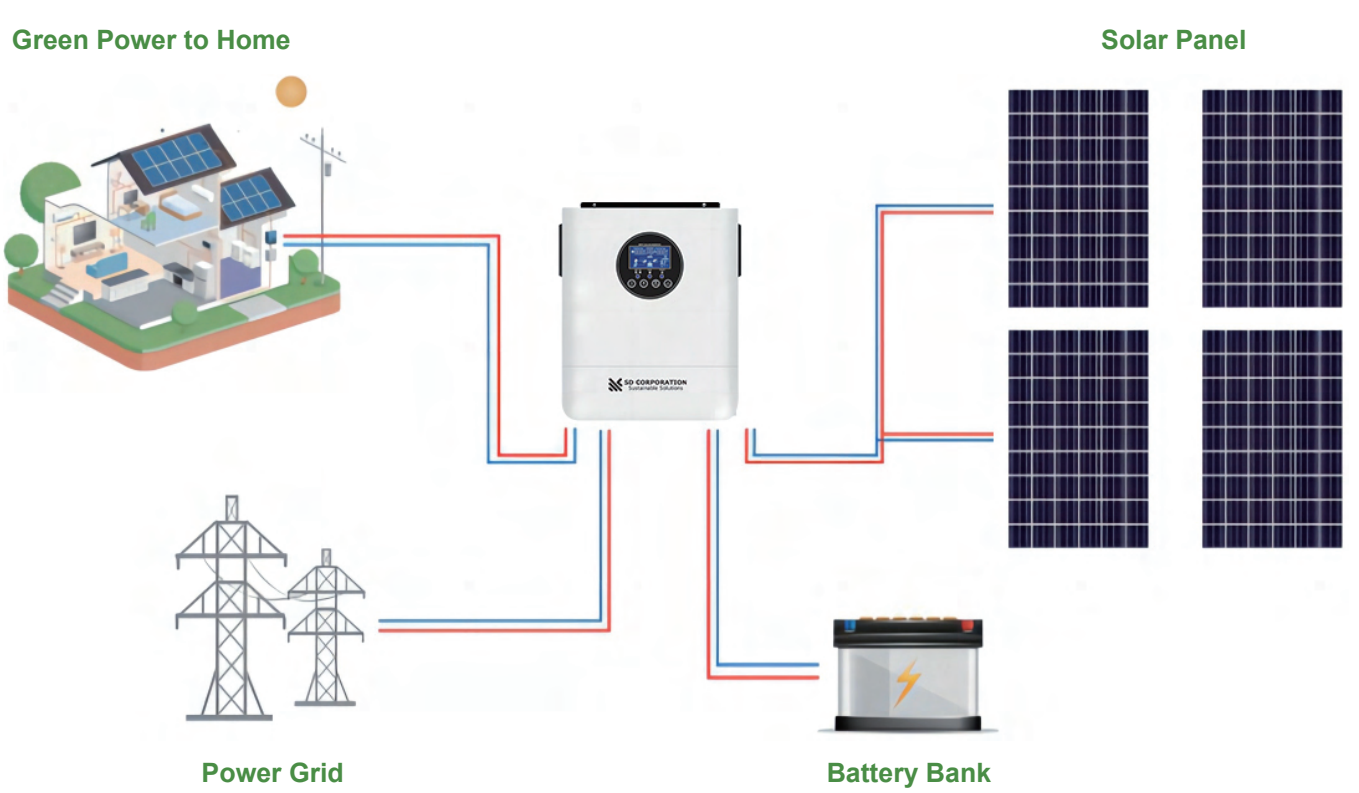
12V- 24V

800-1500W

HMK PLUS Off-Grid Inverter

Product Features

- Pure sine wave inverter.
- Compatible to AC mainsor generator power.
- Configurable AC/Solar input priority via LCD setting.
- Cold start funcion.
- Selectable input voltage range for home appliances and personel computers.
- Built-in MPPT solar controller.
- Auto restart while AC is recovering.
- Overload/Over temperature/short circuit protection.



Datasheet	HMK PLUS 800-12	HMK PLUS 1500-24
Rated Power	**800W**	**1500W**
Input		
Voltage	230 VAC	
Frequency Range	170-280 VAC (For Personal Computers）, 90-280 VAC(For Home Appliances) 50 Hz/60 Hz (Auto sensing）	
Output		
AC Voltage Regulation (Batt. Mode)	230VAC±5%	
Surge Power	1600 VA	3000 VA
Efficiency (Peak) PV to INV	97%	
Efficiency (Peak) Battery to INV	94%	
Transfer Time	10 ms (For Personal Computers); 20 ms (For Home Appliances)	
Waveform	Pure sine wave	
Battery & AC Charger		
Battery Voltage	12 VDC	24 VDC
Floating Charge Voltage	13.5 VDC	27 VDC
Overcharge Protection	16 VDC	33 VDC
Maximum Charge Current	50 A	
Solar Charger		
Maximum PV Array Power	800W	1500W
MPPT Range@ Operating Voltage	20~110 VDC	
Maximum PV Array Open Circuit Voltage	145 VDC	
Maximum Charging Current	50 A	
Maximum Efficiency	98%	
Physical		
Dimension, D*W *H (mm)	240*340*100	
Net Weight (kgs)	5.1	6.2
Operating Environment		
Humidity	5% to 95% Relative Humidity(Non-condensing)	
Operating Temperature	0℃- 55℃	
Storage Temperature	-15℃- 60℃	

SD CORPORATION
Sustainable Solutions

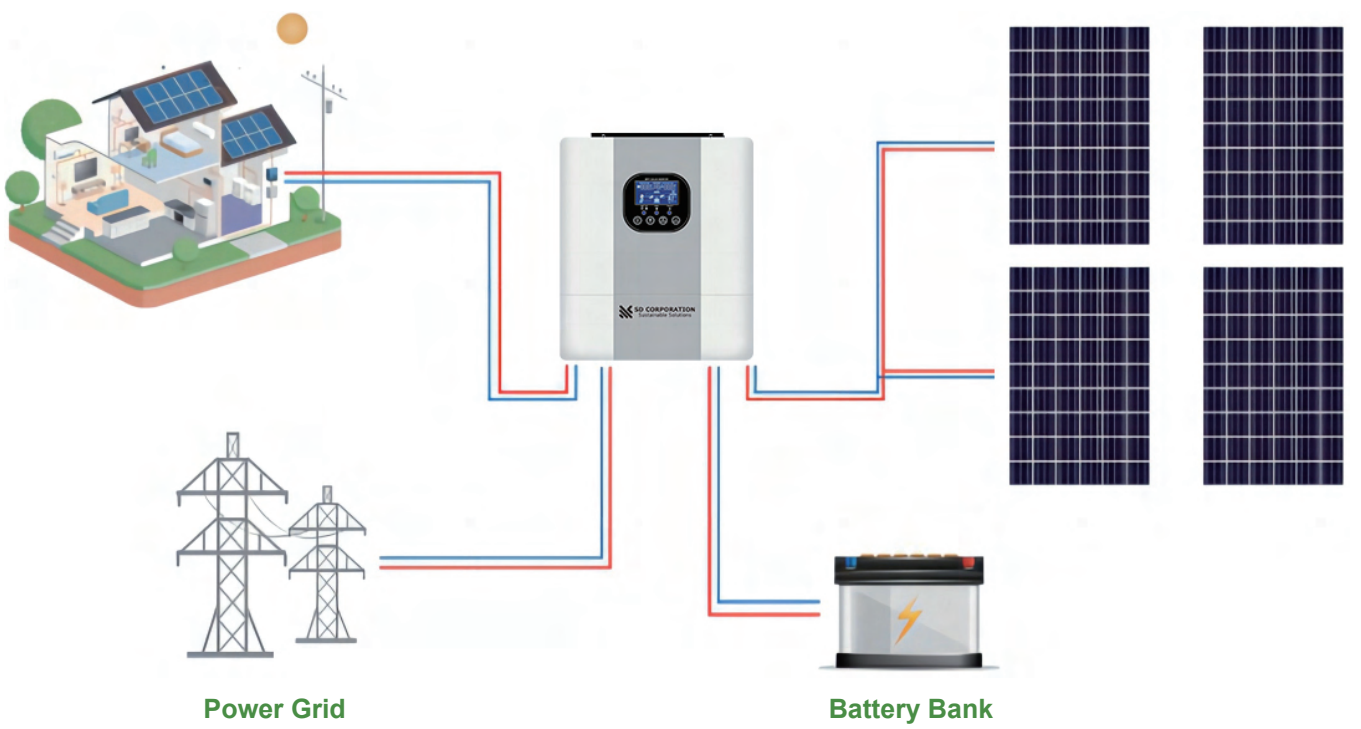
24V- 48V

3500-5600W

HMK PLUS Off-Grid Inverter

Product Features

- Pure sine wave inverter.
- Compatible to AC mainsor generator power.
- Configurable AC/Solar input priority via LCD setting.
- Cold start funcion.
- Selectable input voltage range for home appliances and personel computers.
- Built-in MPPT solar controller.
- Auto restart while AC is recovering.
- Overload/Over temperature/short circuit protection.



Datasheet	HMK PLUS 3500-24	HMK PLUS 5600-48
Rated Power	**3500W**	**5600W**
Input		
Voltage	230 VAC	
Selectable Voltage Range Frequency Range	170-280 VAC (For Personal Computers），90-280 VAC(For Home Appliances) 50 Hz/60 Hz (Auto sensing）	
Output		
AC Voltage Regulation (Batt. Mode)	230VAC±5%	
Surge Power	7000 VA	11200 VA
Efficiency (Peak) PV to INV	97%	
Efficiency (Peak) Battery to INV	94%	
Transfer Time	10 ms (For Personal Computers); 20 ms (For Home Appliances)	
Output Port	Single output	Dual output(Smart load)
Waveform	Pure sine wave	
Battery & AC Charger		
Battery Voltage	24 VDC	48 VDC
Floating Charge Voltage	27 VDC	54 VDC
Overcharge Protection	33 VDC	61 VDC
Maximum Charge Current	100 A（From Grid）	
SOC Display	Shows battery State of charge in percentage and in voltage as well	
Sleeping Mode	YES	
Battery Voltage Low Cut off Selectable	21V-24V	42V-49V
Battery High Voltage Range Selectable	25V-30V	50V-60V
Works without Battery	YES	
Solar Charger		
Maximum PV Array Power	4000W	6000W
MPPT Range@ Operating Voltage	60 ~ 450 VDC	
Maximum PV Array Open Circuit Voltage	500 VDC	
Maximum Charging Current	120 A	
Maximum Efficiency	98%	
Physical		
Dimension, D*W *H (mm)	128*300*363	
Net Weight (kgs)	8.7	10.6
Communication Interface	RS485/ Wifi option(BMS Compatible with lithium battery using RS-485)	
LCD Display	General LCD	
Operating Environment		
Humidity	5% to 95% Relative Humidity(Non-condensing)	
Operating Temperature	0℃- 55℃	
Storage Temperature	-15℃- 60℃	

SD CORPORATION
Sustainable Solutions

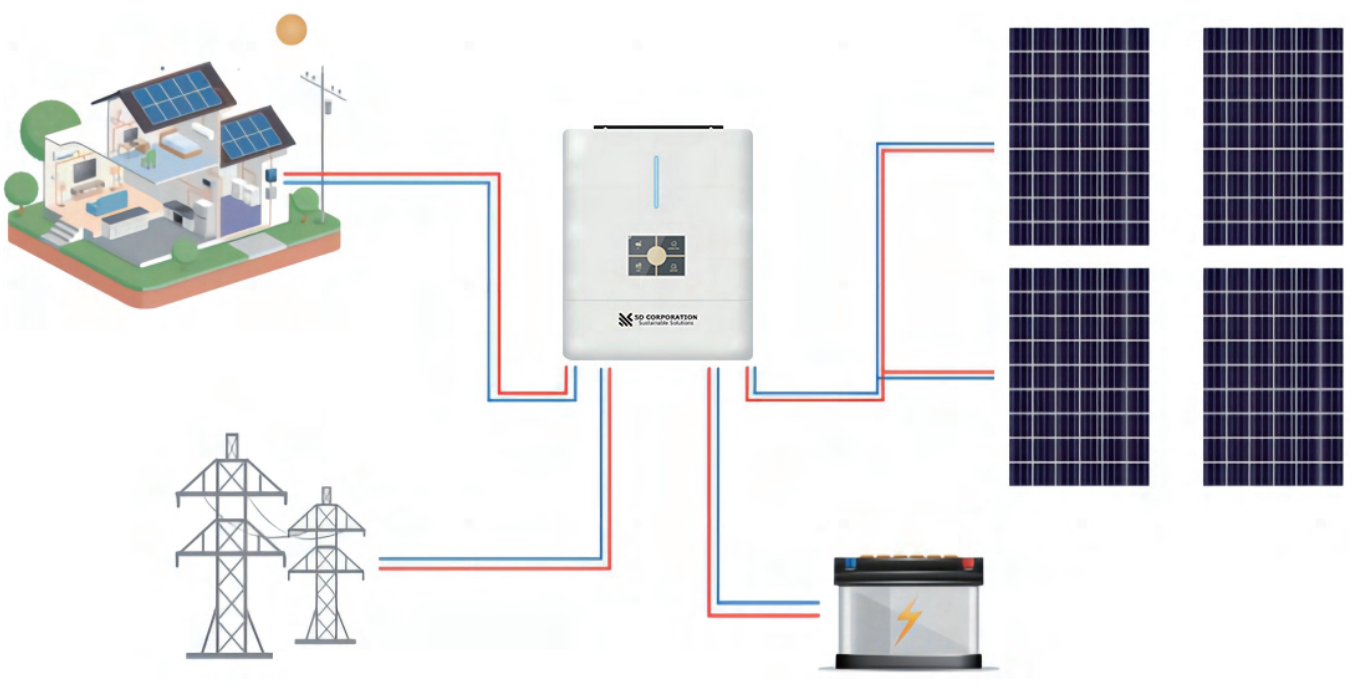
24V- 48V

3600-6000W

Hybrid Inverter

Product Features

- A combination of inverter, solar charger and battery charger.
- Compatible with AGM/Sealed, Gel, Flooded, Lithium batteries and a User Mode for custom inputs to work with virtually all battery types.
- Powerful bypass function with uninterrupted power supply function.
- Configurable AC/Solar input priority via LCD setting.
- Compatible with mains voltage or generator power.
- Status indication with RGB lights.
- Cold start and the smart battery charger design optimizes battery performance.
- MPPT solar charge controller to maximize and regulate DC power from the solar array to charge the battery bank.
- Touch screen control module with various communications.
- Self-consumption and Feed-in to the grid.
- Programmable multiple operation modes: Grid-tie, off-grid and grid-tie with backup.



Datasheet	3.6KW	6KW
Max. PV Array Power	4000W	6500W
Rated Output Power	3600W	6000W
Maximum PV Array Open Circuit Voltage	500 VDC	500 VDC
MPPT Range @ Operating Voltage	60 VDC - 450 VDC	
MPPT Tracker Number	1	

Grid-Tie Operation

Grid Output (AC)		
Nominal Output Voltage	220/230/240 VAC	
Output Voltage Range	184 -264.5 VAC or 195.5 -253 VAC (Selectable)	
Nominal Output Current	14.5 A	26.1 A
Power Factor	>0.99	
Efficiency		
Maximum Conversion Efficiency (DC/AC)	95%	95%

Off-Grid, Hybrid Operation

Grid Input (AC)		
Acceptable Input Voltage Range	90-280 VAC or170-280 VAC	
Frequency Range	50 Hz/60 Hz (Auto sensing)	
Maximum AC Input Current	40 A	40 A
Battery Mode Output (AC)		
Nominal Output Voltage	220/230/240 VAC	
Output Waveform	Pure sine wave	
Efficiency (DC to AC)	93%	
Battery & Charger		
Nominal DC Voltage	24 VDC	48 VDC
Maximum Solar Charge Current	120 A	120 A
Maximum AC Charge Current	100 A	100 A
Maximum Charge Current	120 A	

General

Physical		
Dimension, D*W *H (mm)	128*300*363	
Net Weight (kgs)	8.7	10.6
Interface		
Communication Ports	USB/RS232/RS485/WIFI	
Environment		
Humidity	0~90% RH (Non-condensing)	
Operating Temperature	-10°C to 50°C	

SD CORPORATION
Sustainable Solutions

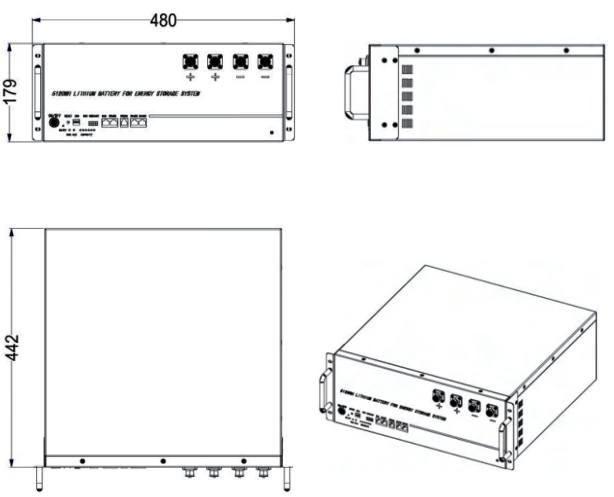
51.2V 100AH/200AH

5120Wh 20240Wh Lithium Battery for Energy Storage System

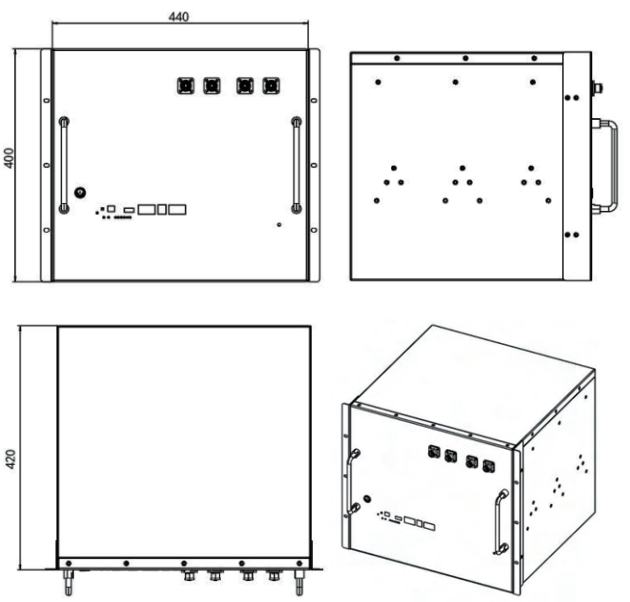
Product Features

- The whole module is non-toxic, non-polluting and environmentally friendly.
- Battery management system with better performance, possesses protection.
- Self-management on charging and discharging, Single core balancing function.
- Cathode material is made from LiFePO4 with safety performance and long cycle life.
- Function like over-discharge, over-charge, over-current, abnormal temperature.

Product Size



51.2V 100AH



51.2V 200AH

Technical Specification

Model	51.2V 100AH	51.2V 200AH
Electrical Characteristics		
Nomianl Voltage(V)	51.2	
Nominal Capacity(AH)	100	200
Energy storage(WH)	5120	10240
Design Life	10 Years+	
Cycle life	＞6000	
Charge/Discharge Standard		
Charge Voltage(V)	58.4	
Discharge Voltage(V)	40	
Recommend Charge/Discharge Current(A)	50	
Max.Charge/Discharge Current(A)	100	
Working Temperature	0℃~50℃ Charge / -10℃ ~50℃ Disharge	
Shelf Temperature	-20℃~60℃	
Mechanical		
Material system	LifePO4	
Dimension L*W*H(mm)	440*442*179	440*440*420
Weight(kg)	50	95
Communication		
Protocol	RS485/RS232/CAN	
Certificates		
Pack	CE,IEC62619	
Cell	UN38.3, MSDS	

SD CORPORATION
Sustainable Solutions

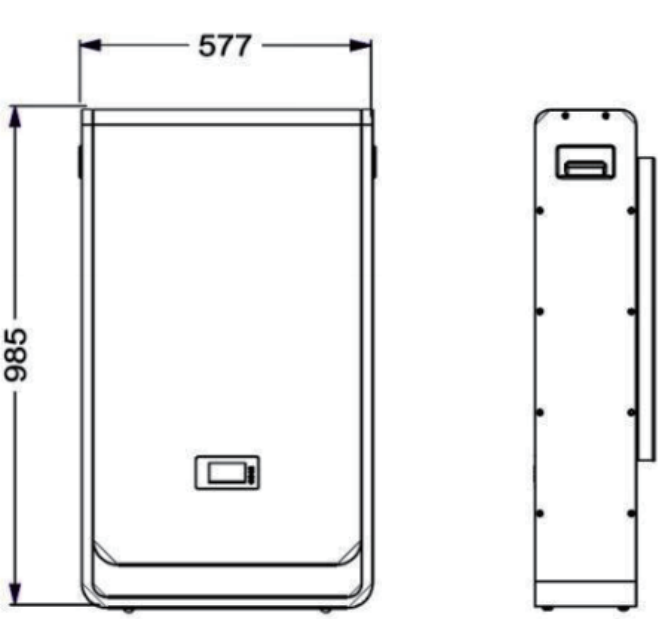
51.2V 200AH

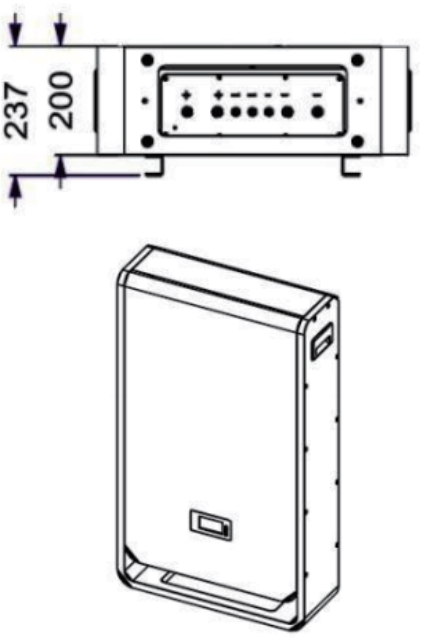
10240Wh LifePO4 PowerWall for Energy Storage System

Product Features

- The whole module is non-toxic, non-polluting and environmentally friendly.
- Battery management system with better performance, possesses protection.
- Self-management on charging and discharging, Single core balancing function.
- Cathode material is made from LiFePO4 with safety performance and long cycle life.
- Function like over-discharge, over-charge, over-current, abnormal temperature.

Product Size





Technical Specification

Model	51.2V 200AH
Electrical Characteristics	
Nomianl Voltage(V)	51.2
Nominal Capacity(AH)	200
Energy storage(WH)	10240
Design Life	10 Years+
Cycle life	＞6000
Charge/Discharge Standard	
Charge Voltage(V)	58.4
Discharge Voltage(V)	40
Recommend Charge/Discharge Current(A)	50
Max.Charge/Discharge Current(A)	100
Working Temperature	0℃~50℃ Charge / -10℃ ~50℃ Disharge
Shelf Temperature	-20℃~60℃
Mechanical	
IP class	IP65
Material system	LifePO4
Dimension L*W*H(mm)	440*440*420
Weight(kg)	100
Communication	
Protocol	RS485/RS232/CAN
Certificates	
Pack	CE,IEC62619
Cell	UN38.3, MSDS

SD CORPORATION
Sustainable Solutions

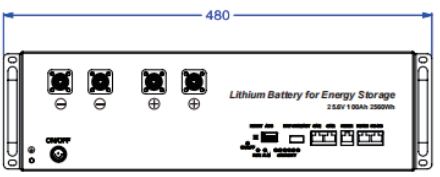
52.6V 100AH /200AH

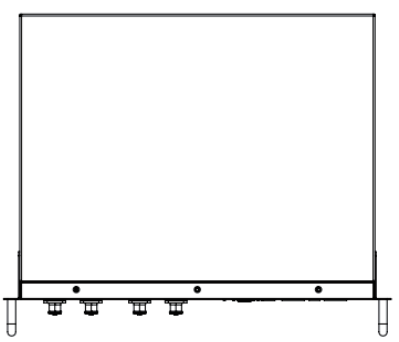
2560WH/5120WH Lithium Battery

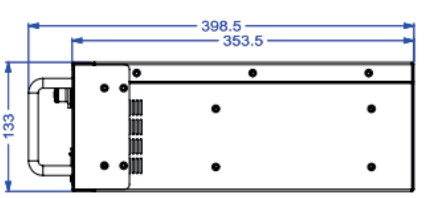
Product Features

- The whole module is non-toxic, non-polluting and environmentally friendly.
- Battery management system with better performance, possesses protection.
- Self-management on charging and discharging, Single core balancing function.
- Cathode material is made from LiFePO4 with safety performance and long cycle life.
- Function like over-discharge, over-charge, over-current, abnormal temperature.

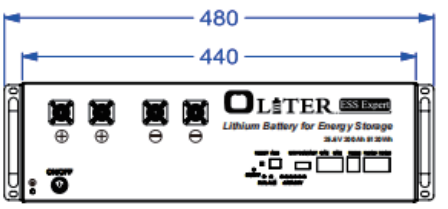
Product Size

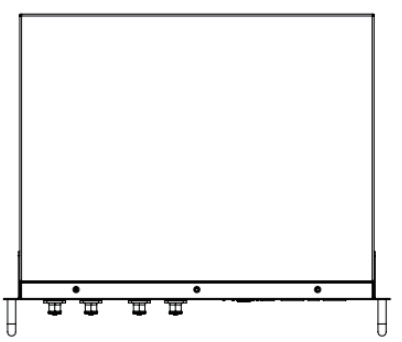


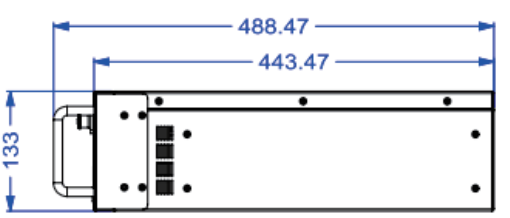




52.6V 100AH







52.6V 200AH

Technical Specification

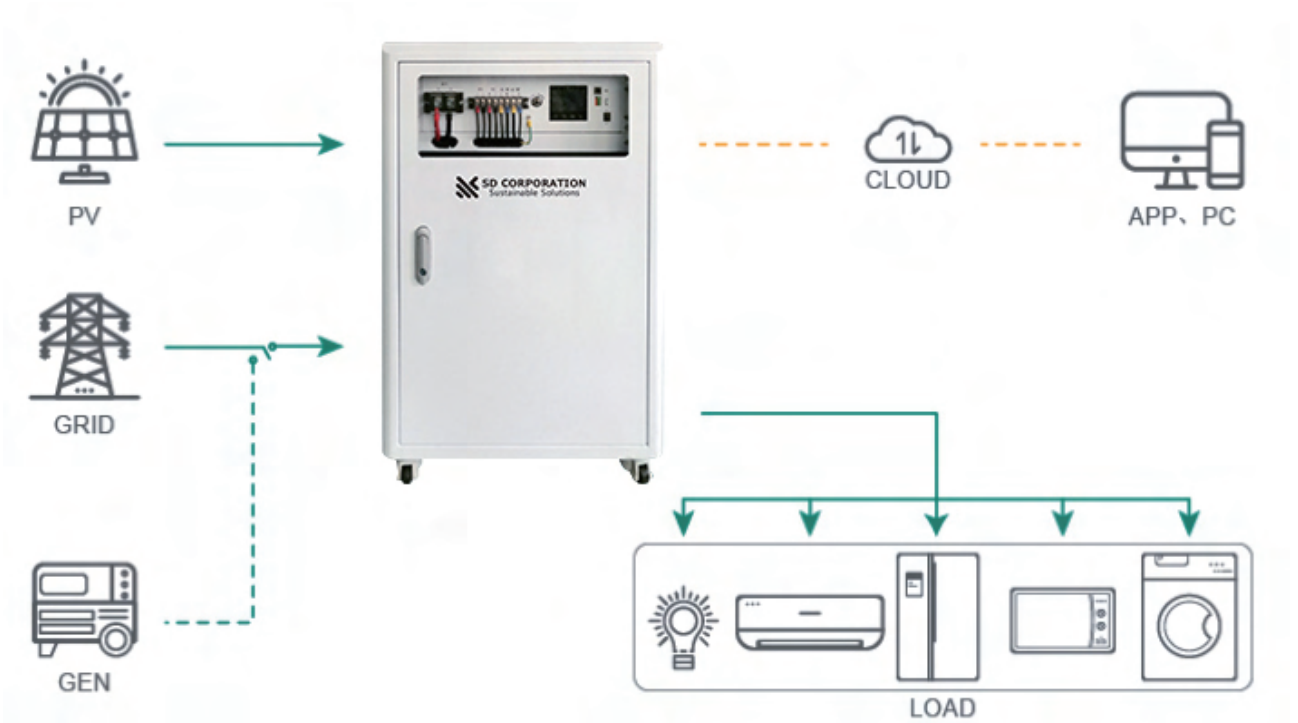
Model	52.6V 100AH	52.6V 200AH
Electrical Characteristics		
Nomianl Voltage(V)	25.6	
Nominal Capacity(AH)	100	200
Energy storage(WH)	2560	5120
Design Life	10 Years+	
Cycle life	＞6000	
Charge/Discharge Standard		
Charge Voltage(V)	28.4	
Discharge Voltage(V)	22.4	
Recommend Charge/Discharge Current(A)	50	
Max.Charge/Discharge Current(A)	100	
Working Temperature	0℃~50℃ Charge	
Shelf Temperature	-20℃~60℃	
Mechanical		
Material system	LifePO4	
Dimension L*W*H(mm)	440*353.5*133	440*443*133
Weight(kg)	26	45
Communication		
Protocol	RS485/RS232/CAN	
Certificates		
Pack	CE,IEC62619	
Cell	UN38.3, MSDS	

SD CORPORATION
Sustainable Solutions

Off Grid All-in-one Storage System

Product Features

- Compatible with various batteries， perfect protection function & strong environmental adaptability.
- Wide DC input voltage range design.
- Fully digital voltage and current double closed-loop control, advanced SPWM technology, output pure sine wave.
- With two output modes of mains power bypass and inverter output, with UPS function.
- Charging mode optional: utility / solar power priority, solar charging, hybrid charging.
- Full power UPS function, staged SOC design.
- Integrated design, Built-in controller, inverter， battery and BMS.
- With lithium-ion battery activation function.support lead acid battery, colloid battery.



Technical Specifications

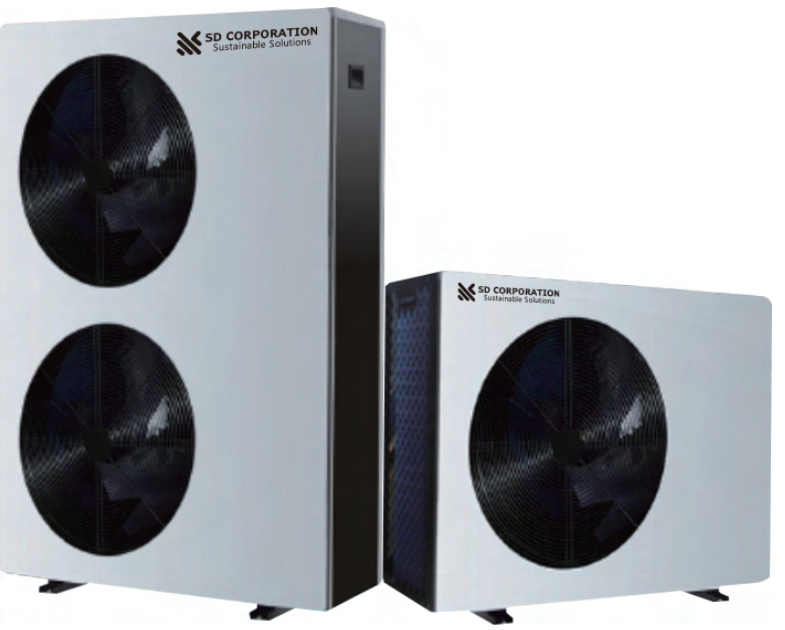
Model	MG-3K5120-FG	MG-5K1024-FG
AC Input (Bypass)		
Rated Voltage (V)	220	
Input Voltage Range (V)	(185~280)±2%	
Input Power Range (Hz)	47~55(50) / 57~65(60)	
Overload Current (A)	40	
Max. Charging Current By Bypass (A)	20	
Battery (Built-in)		
Battery Type	Lithium	
Rated Input Voltage (V)	48	
Input Voltage Range (V)	45 ~ 60	
No Load Loss (A)	＜1	
Stored Electric Energy (kWh)	5.12	10.24
Battery (Built-in)		
Max. Input Power (W)	2800	4500
Input Voltage Range (V)	60 ~ 145	
Recommended PV String Voltage (V)	105	
Charging Mode	MPPT	
Number Of MPPTs	1	1+1
Max. Charging Current By PV (A)	50	40 + 40
AC Output		
Rated Input Power (VA)	3000	5000
Peak Output Power (kVA)	5000	8000
Output Voltage (V)	220±5%	
Output Power (Hz)	50/60±1%	
Output Waveform	Sine Wave	
No Load Loss	＜3% (Rated Power)	
THDi	＜3%	
Peak Efficiency	＞ 90%	
Overload Protection	“120%: turn off output in 1 minute, 150%: turn off output in 10 seconds"	
Other Data		
Temperature Range （℃）	-20 ~+ 45	
Relative Humidity	5%~95% (non-condensing)	
Ingress Protection	IP20	
Altitude (m)	≤ 5000 (>1000 Derating)	
Noise (dB)	≤ 55	
Cooling Method	Smart Fan Cooling	
Isolation Method	High Frequency Isolation	
Display	LCD+LED	
Communication Method	RS485-RTU	
Dimensions (W*D*H) (mm)	600*720*550 (U-Box: 482*133*462)	600*920*550 (U-Box: 482*133*462)
Weight (kg)	75 (U-Box:15)	120 (U-Box:15)

SD CORPORATION
Sustainable Solutions

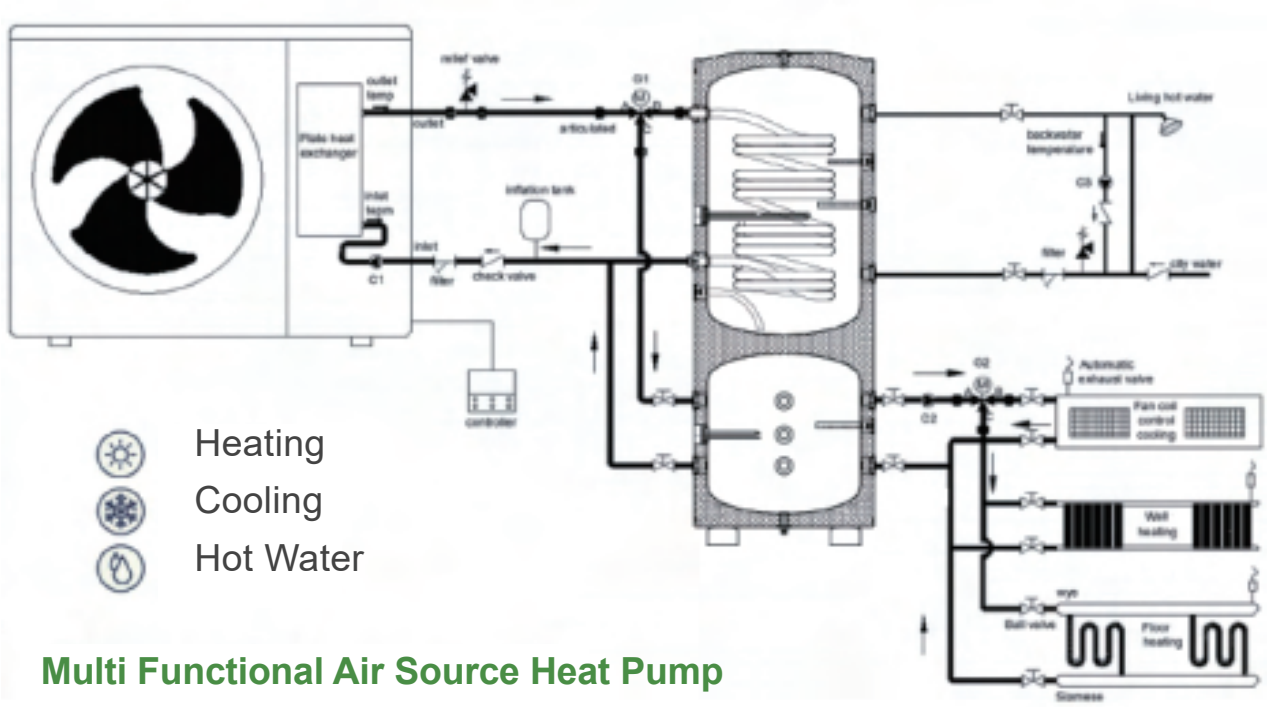
R32
Full DC Inverter

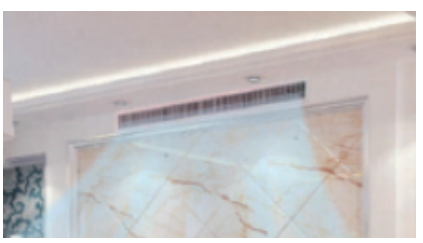
Multi Functional Air Source Heat Pump

MMHP-008B1 (220~240V)
MMHP-012B1 (220~240V)
MMHP-012B2 (380~415V)
MMHP-016B1 (220~240V)
MMHP-016B2 (380~415V)
MMHP-020B2 (380~415V)
MMHP-024B2 (380~415V)



System Diagram





Fan Coil

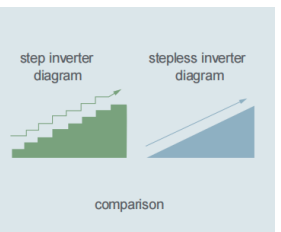
Floor Heating Coil

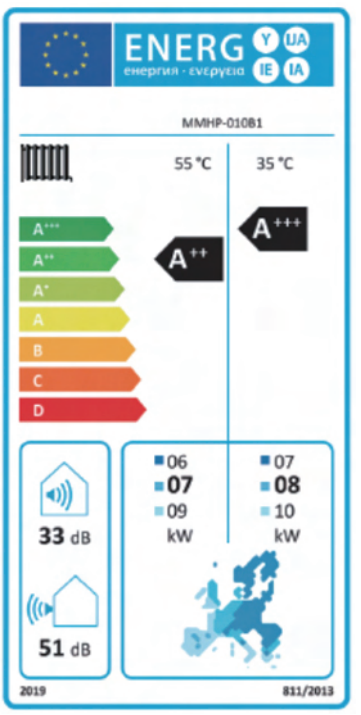
Heating Radiator

Product Features

01 Full DC stepless(1Hz) inverter technology: high efficiency and more energy-saving

Full DC stepless inverter refers to air source heat pump (variable frequency compressor, variable frequency motor) which use DC inverter technology. Most products in the market use step frequency conversion or grid-style frequency conversion, which can not achieve real stepless frequency modulation; Stepless inverter means stepless frequency modulation, which can achieve continuous speed regulation without gear. According to the running condition, Micoe ultra-low temperature full DC inverter heat&cooling heat pump can realize free running with 1Hz stepless frequency modulation, and nominal heating COP at -12℃ is more than 2.65, which can save more energy up to 59% compared with other variable frequency units.



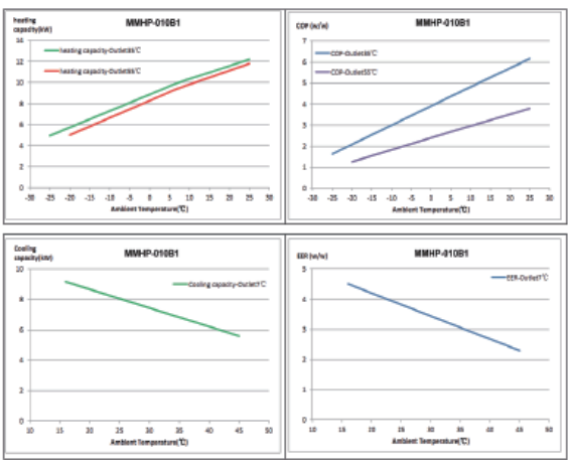


02 33dB low frequency silent cruise technology: ultra-silence

Ultra-low temperature full DC stepless inverter heating&cooling heat pump uses the self-developed 1 Hz DC stepless frequency modulation technology, and realize real-time precision control of various running parameters. When reaching the set temperature, the units automatically switch into low frequency cruise mode, and the volume is only 33 dB (in door), just as the sound of opening books in the library, which supplies you the most comfortable and quiet environment.

03 3min intelligent defrosting technology:

Ultra-low temperature full DC stepless inverter heating&cooling heat pump uses self-developed patented intelligent defrosting technology. If the frost layer coverage is more than 85%, it will switch into defrosting mode, ensuring the machine frost-free.



04 EVI technology: stable running at -30℃

Ultra-low temperature full DC stepless inverter heating&cooling heat pump, the compressor of which uses EVI technology. 20% increase in amount of refrigerant flow, on the one hand, makes the operating temperature range more wider as from - 30℃ to 50 ℃, and on the other hand, realizes two-stage compression function, which solving the problem of poor heating effect at ultra-low temperature, such as at -30℃.

Full DC Inverter Heating & Cooling & Direct Hot Water Heat Pump

Model			MMHP-008B1	MMHP-012B1	MMHP-012B2	MMHP-016B1
Rated Voltagr / Frequency		V/Hz	230/50	230/50	400V/3N~50Hz	230V/1N~50Hz
Heating Capacity Range		kW	(2.50 - 8.30)	(4.20 - 12.20)	(4.20 - 12.20)	(5.30 - 16.50)
Heating (A7/6℃, W30/35℃)	Heating Capacity	kW	6.46	10.58	10.58	14.58
	Power Input	kW	1.31	2.29	2.29	3.17
	COP	WW	4.93	4.62	4.62	4.60
Heating (A-12℃, W36/41℃)	Heating Capacity	kW	4.51	7.21	7.21	11.00
	Power Input	kW	1.67	2.79	2.79	4.26
	COP	WW	2.71	2.58	2.58	2.58
Heating (A7/6℃, W40/45℃)	Heating Capacity	kW	6.49	10.37	10.37	14.71
	Power Input	kW	1.61	2.69	2.69	3.97
	COP	WW	4.04	3.86	3.86	3.70
Heating (A7/6℃, W47/55℃)	Heating Capacity	kW	5.92	9.28	9.28	14.85
	Power Input	kW	1.87	2.97	2.97	4.91
	COP	WW	3.17	3.12	3.12	3.03
Cooling (A35/24℃, W23/18℃)	Cooling Capacity	kW	6.55	10.27	10.27	13.77
	Power Input	kW	1.47	2.43	2.43	3.52
	EER	WW	4.46	4.23	4.23	3.92
Cooling (A35/24℃, W12/7℃)	Cooling Capacity	kW	5.53	8.54	8.54	12.95
	Power Input	kW	1.82	2.84	2.98	4.51
	EER	WW	3.04	3.00	3.00	2.87
ERP Level (35℃)		/	A+++	A+++	A+++	A+++
ERP Level (55℃)		/	A++	A++	A++	A++
SCOP (35℃) Based on TUV ERP Testreport		/	4.92	4.55	4.55	4.58
SCOP (55℃) Based on TUV ERP Testreport		/	3.37	3.41	3.41	3.39
Rated Water Flow		m3/h	1.10	1.75	1.75	2.50
Rated Voltage / Frequency		V/Hz	230/50	230/50	400V/3N~50Hz	230/50
Maximum Input Power		kW	2.71	3.83	3.83	6.20
Maximum Input Current		A	12.00	17.00	6.5	27.50
Fuse Selection	Rated Currency	A	12	17	7	28
	Fusing Current	A	16	23	9	37
Airswitch		A	25	25	16	40
Cross Sectionalarea of Wire		mm^2	4.00	4.00	2.50	6.00
High Pressure Value cut-off Pressure		MPa	4.4	4.4	4.4	4.4
Low Pressure Valve Cut-off Pressure		MPa	1.5	1.5	1.5	1.5
Brand/Type of		/	Panasonic / Rotary			
Refrigerant		/	R32			
Refrigerant		kg	1.2	1.8	1.8	2.5
Fan	Air Flow	m3/h	3500	4500	4500	7000
Brand of Water Pump			Grundfos / Xie Jie			
Water Pump Model			UPM3K 25-75/APM25-9		UPML GEO 25-105 130/APM25-10	
Defrost		/	Auto defrost with 4 way valve			
Waterproof Grade		/	IPX4			
Noise Pressure		dB(A)	50	52	52	55
Max Water Outlet Temperature		℃	60	60	60	60
Diameter of Water Connection		/	DN 25(1")	DN 25(1")	DN 25(1")	DN 32(1-1/4")
Drainage Valve		mm	15			
Internal Pressure Drop at Rating Water Flow		kPa	25	27	27	30
Min/Maxheating Water Pressure (Safety Valve)		bar	1.0/3.0	1.0/3.0	1.0/3.0	1.0/3.0
Net Dimensions (L*D*H)		mm	1100*495*850	1100*490*850	1100*490*850	1100*520*850
Package Dimensions (L*D*H)		mm	1140*530*1000	1140*530*1000	1140*530*1000	1140*565*1000
Net Weight		kg	102	107	107	124
Gross Weight		kg	114	119	119	136

Full DC Inverter Heating & Cooling & Direct Hot Water Heat Pump

Model			MMHP-016B2	MMHP-020B1	MMHP-020B2	MMHP-026B2
Rated Voltagr / Frequency		V/Hz	400V/3N~50Hz	230V/1N~50Hz	400V/3N~50Hz	400V/3N~50Hz
Heating Capacity Range		kW	(5.30 - 16.50)	(6.20 - 19.80)	(6.20 - 19.80)	6 - 26
Heating (A7/6℃, W30/35℃)	Heating Capacity	kW	14.58	18.77	18.77	24.33
	Power Input	kW	3.17	4.16	4.16	5.10
	COP	WW	4.60	4.51	4.51	4.77
Heating (A-12℃, W36/41℃)	Heating Capacity	kW	11.00	12.86	12.86	16.67
	Power Input	kW	4.26	5.14	5.14	6.30
	COP	WW	2.58	2.50	2.50	2.65
Heating (A7/6℃, W40/45℃)	Heating Capacity	kW	14.71	18.50	18.50	23.98
	Power Input	kW	3.97	4.95	4.95	6.07
	COP	WW	3.70	3.74	3.74	3.95
Heating (A7/6℃, W47/55℃)	Heating Capacity	kW	14.58	18.47	18.47	24.29
	Power Input	kW	4.91	5.98	5.98	7.93
	COP	WW	3.03	3.09	3.09	3.06
Cooling (A35/24℃, W23/18℃)	Cooling Capacity	kW	13.77	16.58	16.58	21.81
	Power Input	kW	3.52	4.47	4.47	5.93
	EER	WW	3.92	4.09	4.09	3.67
Cooling (A35/24℃, W12/7℃)	Cooling Capacity	kW	12.95	15.88	15.88	20.89
	Power Input	kW	4.51	5.36	5.36	7.15
	EER	WW	2.87	2.96	2.96	2.92
ERP Level (35℃)		/	A+++	A+++	A+++	A+++
ERP Level (55℃)		/	A++	A++	A++	A++
SCOP (35℃) Based on TUV ERP Testreport		/	4.62	4.64	4.64	4.58
SCOP (55℃) Based on TUV ERP Testreport		/	3.44	3.42	3.42	3.42
Rated Water Flow		m3/h	2.50	3.20	3.20	4.20
Rated Voltage / Frequency		V/Hz	400V/3N~50Hz	230V1N~50Hz	400V/3N~50Hz	400V/3N~50Hz
Maximum Input Power		kW	6.2	7.50	7.50	10.00
Maximum Input Current		A	10.50	35.00	13.00	17.00
Fuse Selection	Rated Currency	A	11	35	13	17
	Fusing Current	A	14	47	18	23
Airswitch		A	25	50	25	25
Cross Sectionalarea of Wire		mm^2	4.00	6.00	4.00	4.00
High Pressure Value cut-off Pressure		MPa	4.4	4.4	4.4	4.4
Low Pressure Valve Cut-off Pressure		MPa	1.5	1.5	1.5	1.5
Brand/Type of		/	Panasonic / Rotary			
Refrigerant		/	R32			
Refrigerant		kg	2.5	3.2	3.2	4.0
Fan	Air Flow	m3/h	7000	8500	8500	11000
Brand of Water Pump			Grundfos / Xie Jie			
Water Pump Model			UPML GEO 25-105 130/APM25-10			UPMXL 25-125 130 9H
Defrost		/	Auto defrost with 4 way valve			
Waterproof Grade		/	IPX4			
Noise Pressure		dB(A)	55	56	56	58
Max Water Outlet Temperature		℃	60	60	60	60
Diameter of Water Connection		/	DN 32(1-1/4")	DN 40(1.5")	DN 40(1.5")	DN 40(1.5")
Drainage Valve		mm	15			
Internal Pressure Drop at Rating Water Flow		kPa	30	32	32	35
Min/Maxheating Water Pressure (Safety Valve)		bar	1.0/3.0	1.0/3.0	1.0/3.0	0.5/3.0
Net Dimensions (L*D*H)		mm	1110*520*850	1110*485*1450	1110*485*1450	1110*485*1450
Package Dimensions (L*D*H)		mm	1140*565*1000	1140*520*1600	1140*520*1600	1140*520*1600
Net Weight		kg	124	155	155	160
Gross Weight		kg	136	175	175	177

SD CORPORATION
Sustainable Solutions

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