



ARTIC SOLAR ENERGY

ONE-STOP SOLUTION PROVIDER

About Artic

Artic focuses on providing advanced solar energy products including photovoltaic panels, solar inverters and energy storage lithium ion batteries.

Artic also offers on grid, off grid and hybrid solar energy solutions for residential, commercial and industrial usage.

Artic is an enterprise that integrates R&D, production, and sales in China. The products have been sold to Southeast Asia, Africa, Middle East, etc.

With professional manufacturing technology, strict quality management system and outstanding R&D capabilities, Artic provides global customers with high-quality, durable, safe and efficient new energy products.



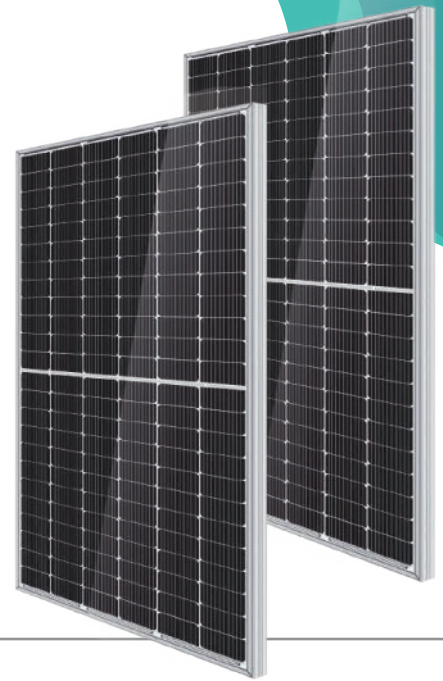


Contents

Solar Panel	04-09
Solar Inverter	10-16
Solar Inverter and Battery 2-in-1	17-21
Solar Charge Controller	22-23
Energy Storage Battery	24-27
Solar Energy System	28-29
Applications and Cases	30-31

MONO

400-550 HALF CUT Solar Panel Series



Introduction

MONO module Assembled with PERC cells, the configuration of the modules offers the advantages of higher power output, cells temperature dependent performance, reduced shading effect on the energy generation. Lower risk of hot spot, as well as enhanced tolerance for mechanical loading.



Higher Durability

The multi-busbar design can decrease the risk of the cell micro-cracks and fingers broken.



High Power Density

High conversion efficiency and more power output per square meter, by lower series resistance and improved light harvesting.



PID Resistant

Tested in accordance to the standard IEC 62804 our PV modules have demonstrated resistance against PID (Potential Induced Degradation), which translates to security for your investment.



Bigger Cells with better performance

A slight increase of the size of our cells, Boosts the performance of the newest modules by six percent on average.

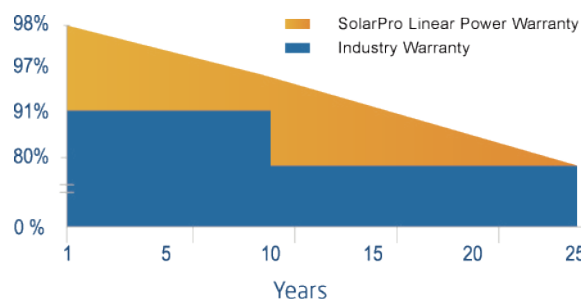
Comprehensive Certificates

- EIC61215, IEC61730
- ISO 9001:2015
Quality management systems
- ISO 14001:2015
Environmental management systems
- ISO 45001:2018
Occupational health and safety management systems

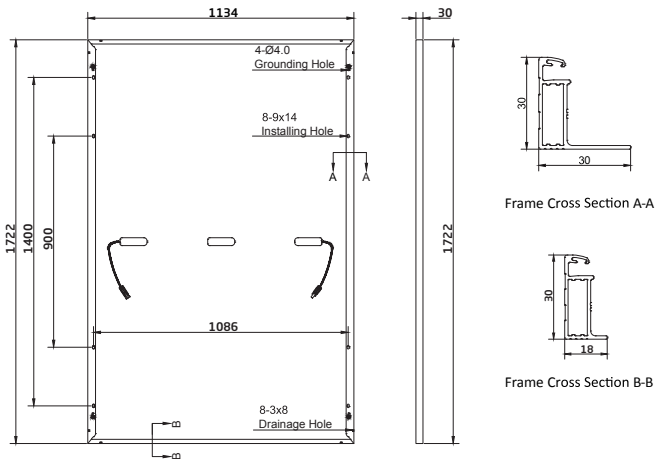


First-class Quality Assurance

10-year warranty for material and technology
25-year linear power output warranty
Every year 0.55% power attenuation



Mechanical Diagrams



Specifications

Weight	21.5kg
Dimensions	1722mm*1134mm*30mm
Cell Amount	54*2 pcs
Maximum System Voltage	1500V
Junction Box	IP68
Frame	Aluminum Alloy
Cable	4mm ² /300mm
Connector	MC4 Compatible
Application Level	Class A

Electrical Parameters AT STC

Module Type	AR-E-SP-400P	AR-E-SP-405P	AR-E-SP-410P	AR-E-SP-415P
Maximum Power (Pmax/W)	400	405	410	415
Open Circuit Voltage (Voc/V)	37.06	37.17	37.28	37.39
Short Circuit Current (Isc/A)	13.78	13.86	13.94	14.02
Maximum Power Voltage (Vmp/V)	30.65	30.80	30.95	31.10
Maximum Power Current (Imp/A)	13.06	13.15	13.25	13.35
Module Efficiency (%)	20.50	20.70	21.00	21.30

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C

Electrical Parameters AT NOCT

Maximum Power (Pmax/W)	297.6	301.3	305.0	308.8
Open Circuit Voltage (Voc/V)	34.70	34.80	34.90	35.00
Short Circuit Current (Isc/A)	11.13	11.20	11.26	11.33
Maximum Power Voltage (Vmp/V)	28.50	28.60	28.80	28.90
Maximum Power Current (Imp/A)	10.45	10.52	10.60	10.68

* Under Nominal Module Operating Temperature (NOCT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

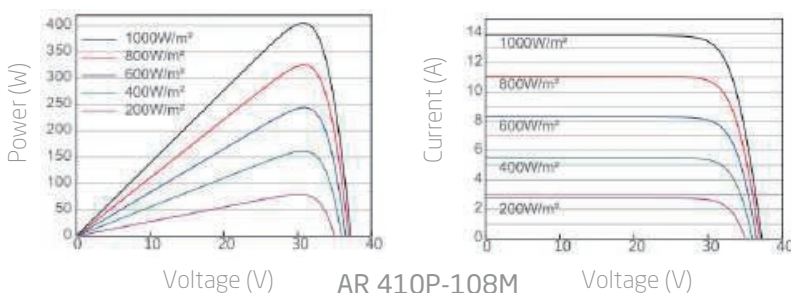
Temperature Characteristics

NOCT	45±2°C	Temp Coefficient of Isc	+0.046%/°C
Temp Coefficient of Voc	-0.275%/°C	Temp Coefficient of Pmax	-0.350%/°C

Packing Configuration

Modules/Pallet	36 Pieces	Modules/40' Container	936 Pieces
Packing Description	26 Pallets, Total=(36+36)x13=936 Pieces		

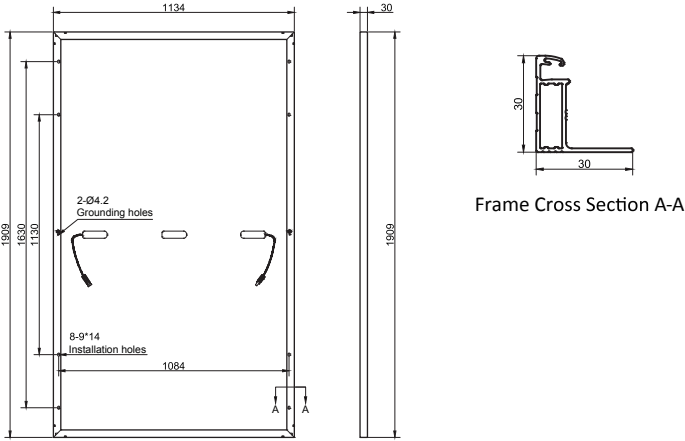
Characteristics



Maximum Rating

Output Tolerance	±5W
Operating Temperature	-40°C~+85°C
Wind Load / Snow Load	2400pa/ 5400pa
Fuse Current	20A

Mechanical Diagrams



Specifications

Weight	23kg
Dimensions	1909mm*1134mm*30mm
Cell Amount	60*2 pcs
Maximum System Voltage	1500V
Junction Box	IP68
Frame	Aluminum Alloy
Cable	4mm ² /300mm
Connector	MC4 Compatible
Application Level	Class A

Electrical Parameters AT STC

Module Type	AR-E-SP-445P	AR-E-SP-450P	AR-E-SP-455P	AR-E-SP-460P
Maximum Power (Pmax/W)	445	450	455	460
Open Circuit Voltage (Voc/V)	41.10	41.25	41.40	41.55
Short Circuit Current (Isc/A)	13.82	13.89	13.97	14.05
Maximum Power Voltage (Vmp/V)	34.48	34.67	34.87	35.06
Maximum Power Current (Imp/A)	12.91	12.98	13.05	13.13
Module Efficiency (%)	20.60	20.80	21.00	21.20

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C

Electrical Parameters AT NOCT

Maximum Power (Pmax/W)	336.0	340.0	343.0	346.0
Open Circuit Voltage (Voc/V)	38.53	38.65	38.77	38.85
Short Circuit Current (Isc/A)	11.03	11.08	11.12	11.17
Maximum Power Voltage (Vmp/V)	32.35	32.51	32.67	32.76
Maximum Power Current (Imp/A)	10.40	10.46	10.51	10.56

* Under Nominal Module Operating Temperature (NOCT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

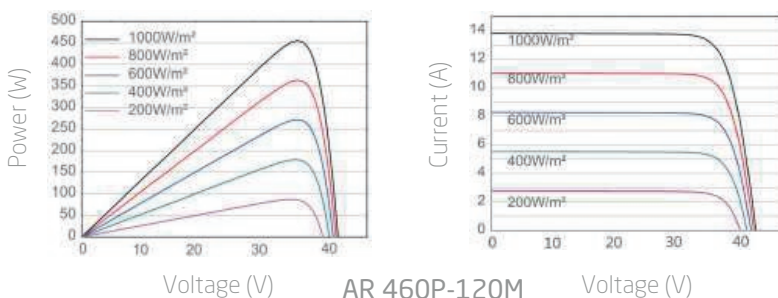
Temperature Characteristics

NOCT	45±2°C	Temp Coefficient of Isc	+0.046%/°C
Temp Coefficient of Voc	-0.275%/°C	Temp Coefficient of Pmax	-0.350%/°C

Packing Configuration

Modules/Pallet	36 Pieces	Modules/40' Container	864 Pieces
Packing Description	26 Pallets, Total=(36+36)x12=864 Pieces		

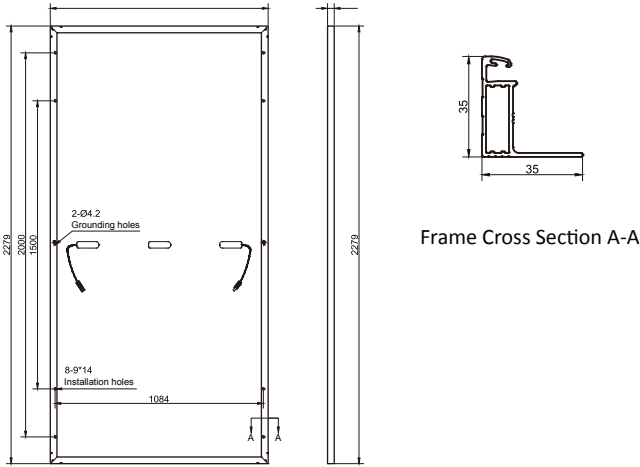
Characteristics



Maximum Rating

Output Tolerance	±5W
Operating Temperature	-40°C~+85°C
Wind Load / Snow Load	2400pa/ 5400pa
Fuse Current	20A

Mechanical Diagrams



Specifications

Weight	27.3kg
Dimensions	2279mm*1134mm*35mm
Cell Amount	72*2 pcs
Maximum System Voltage	1500V
Junction Box	IP68
Frame	Aluminum Alloy
Cable	4mm ² /300mm
Connector	MC4 Compatible
Application Level	Class A

Electrical Parameters AT STC

Module Type	AR-E-SP-535P	AR-E-SP-540P	AR-E-SP-545P	AR-E-SP-550P
Maximum Power (Pmax/W)	535	540	545	550
Open Circuit Voltage (Voc/V)	49.35	49.55	49.75	49.95
Short Circuit Current (Isc/A)	13.82	13.89	13.97	14.05
Maximum Power Voltage (Vmp/V)	41.45	41.62	41.80	41.97
Maximum Power Current (Imp/A)	12.91	12.98	13.05	13.11
Module Efficiency (%)	20.70	20.90	21.10	21.30

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C

Electrical Parameters AT NOCT

Maximum Power (Pmax/W)	404.0	407.0	411.0	414.0
Open Circuit Voltage (Voc/V)	46.26	46.38	46.50	46.63
Short Circuit Current (Isc/A)	11.03	11.08	11.12	11.17
Maximum Power Voltage (Vmp/V)	38.76	38.95	39.16	39.31
Maximum Power Current (Imp/A)	10.43	10.46	10.50	10.53

* Under Nominal Module Operating Temperature (NOCT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

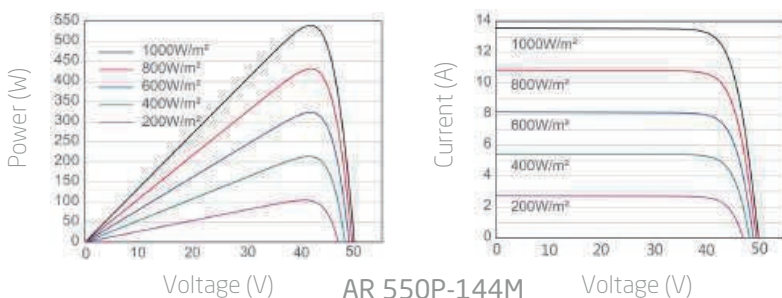
Temperature Characteristics

NOCT	45±2°C	Temp Coefficient of Isc	+0.046%/°C
Temp Coefficient of Voc	-0.275%/°C	Temp Coefficient of Pmax	-0.350%/°C

Packing Configuration

Modules/Pallet	31 Pieces	Modules/40' Container	620 Pieces
Packing Description	20 Pallets, Total=(31+31)x10=620 Pieces		

Characteristics



Maximum Rating

Output Tolerance	±5W
Operating Temperature	-40°C~+85°C
Wind Load / Snow Load	2400pa/ 5400pa
Fuse Current	20A

555W-580W Series Topcon N Type Double glass Bifacial Solar Panel



Introduction

Solarpro MONO module Assembled with PERC cells, the configuration of the modules offers the advantages of higher power output, cells temperature dependent performance, reduced shading effect on the energy generation. Lower risk of hot spot, as well as enhanced tolerance for mechanical loading.

Module Excellence



SMBB

Technology Better light trapping and current collection to improve module power output and reliability.



PID Resistance

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



Adaptability Harsh Environments

Third party certified through high salt spray and high ammonia corrosion tests.



Bifacial Power Generation

Bifaciality is up to 80%, up to 30% more energy yield than conventional modules.



Hot 2.0 Technology

The N-type module with Hot 2.0 technology has better reliability and lower LID/LETID.



Enhanced Mechanical Load

Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).



Better low irradiance performance

Higher power output even under low irradiance environments like on cloudy or foggy days.

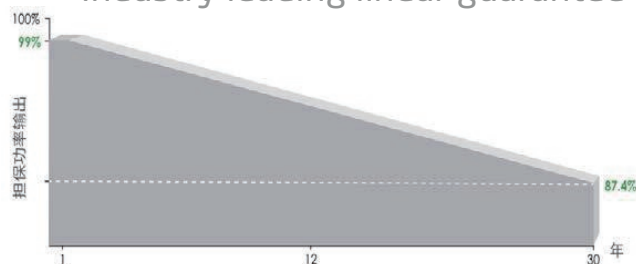


Extensive Application Scenes

More extensive application scenes, such as BIPV, snow field, vertical installation, high humidity, strong wind and desert region

Quality warranty and Certification system

Industry leading linear guarantee



Comprehensive Certificates

- IEC 61215, IEC 61730, UL61215, UL61730
- ISO 9001:2015 - Quality management systems
- ISO 14001:2015 - Environmental management systems
- ISO 45001:2018 - Occupational health and safety management systems

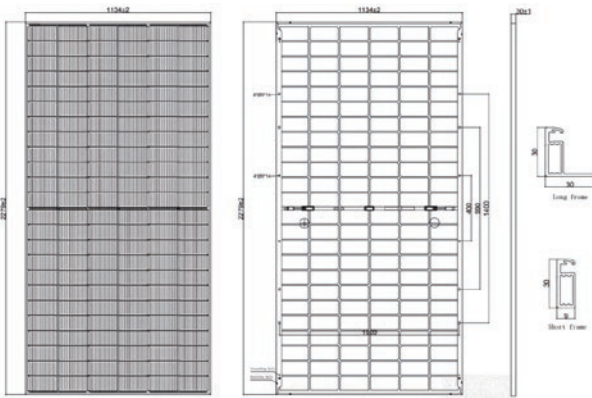
12 years materials and workmanship warranty

30 years linear power warranty

0.40% annual degradation over 30 years



Mechanical Diagrams



Mechanical Parameters

Cell	N Type mono
Solar Cells	144pcs (2*72)
Dimension	2279mm x 1134 x 30mm
Weight	31.5kg±3%
Structure	2.0 glass + POE/EPE film + 2.0 glass
Frame	Anodized - Aluminum alloy
Junction Box	IP68 - 3*bypass diode
Cable Length (Including connector)	4.0mm ² (+) 300mm/ (-) 300mm (custom)
Connector	MC4/Compatible with MC4
Mechanical Load	Front 5400Pa/ Back 2400Pa Maximum Static Load

Electrical Parameters AT STC

Module Type	AR-E-SP-555P	AR-E-SP-560P	AR-E-SP-565P	AR-E-SP-570P	AR-E-SP-575P	AR-E-SP-580P
Maximum Power (Pmax/W)	555	560	565	570	575	580
Module Efficiency (%)	21.48%	21.67%	21.86%	22.06%	22.25%	22.45%
Open Circuit Voltage (Voc/V)	50.65	50.80	50.95	51.1	51.25	51.40
Short Circuit Current (Isc/A)	14.0	14.06	14.12	14.2	14.28	14.35
Voltage at Max. Power (Pmp/V)	42.06	42.23	42.39	42.55	42.71	42.87
Current at Max. Power (Imp/A)	13.20	13.27	13.33	13.40	13.47	13.53

Power Tolerance: 0~+3%
STC: Irradiance 1000W/m² - Cell Temperature 25°C - AM 1.5

Electrical Parameters AT NOCT

	417	421	425	429	432	436
Maximum Power (Pmax/W)	417	421	425	429	432	436
Open Circuit Voltage (Voc/V)	48.24	48.38	48.52	48.67	48.81	48.95
Short Circuit Current (Isc/A)	11.29	11.34	11.39	11.45	11.52	11.57
Voltage Max. Power (Pmp/V)	39.68	39.84	39.99	40.14	40.29	40.44
Current Max. Power (Imp/A)	10.56	10.62	10.66	10.72	10.78	10.82

NOCT: Irradiance 800W/m² - Ambient Temperature 20°C - Wind at 1m/S - AM1.5

Bifacial Output - Rearside Power Gine (570W)

	10%	15%	20%	25%	30%
Rear side power gain	10%	15%	20%	25%	30%
Maximum Power (Pmax/W)	627.0	655.5	684.0	712.5	741.0
Open Circuit Voltage (Voc/V)	51.60	51.60	51.70	51.70	51.70
Short Circuit Current (Isc/A)	15.68	16.39	17.10	17.81	18.53
Voltage at Max. Power (Pmp/V)	42.32	42.32	42.42	42.42	42.42
Current at Max. Mower (Imp/A)	14.82	15.49	16.12	16.80	17.47

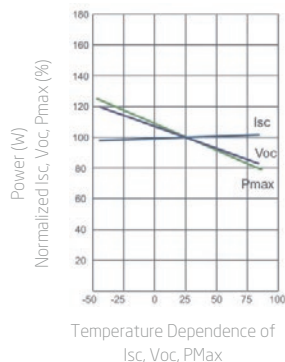
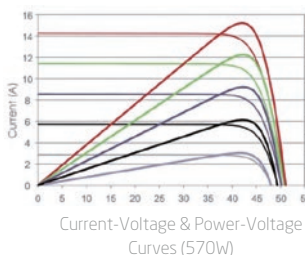
Temperature Characteristics

Temperature coefficients of Voc	-0.25%/°C	Temperature coefficients of Pmax	-0.29%/°C
Temperature coefficients of Is	0.045%/°C	Nominal operating cell temperature (NOCT)	45±2°C

Packing Configuration

Modules/Pallet	36 Pieces	Modules/40' Container	720 Pieces
Weight	N.W.1134KG/G.W.1152KG		

Characteristics

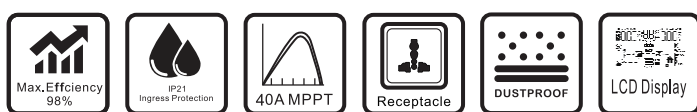


Maximum Rating

Output Tolerance	0~+5W
Operating Temperature	-40°C~+85 °C
Mechanical load	Front 5400Pa/ Back 2400Pa
Maximum Series Fuse	25A
Maximum System Voltage	DC 1500V
Fireproof Performance	Glass C
Refer. Bifacial Factor	80±5%

OFF GRID SOLAR INVERTER

AR NMS SERIES



Features

- Pure sine wave solar inverter
- Built-in 40A MPPT solar charger
- 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 rich customized demands
- Solar energy is provided directly to the load first



Product Data Sheet

Model	AR-E-NMS-1000-12	AR-E-NMS-1500-24
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	50 Hz/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	10 ms	
BATTERY		
Battery Voltage	12VDC	24VDC
Floating Charge Voltage	13.5VDC	27VDC
Overcharge Protection	16VDC	32VDC
SOLAR CHARGER & AC CHARGER		
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 Charging Current	40A	
Maximum AC Charging Current	40A	
Maximum Solar+AC Charging Current	80A	
PHYSICAL		
Dimension ,H*W*D (mm)	290*240*91	
Carton Dimension ,H*W*D (mm)	340*295*145	
Net Weight (kgs)	3.5	3.6
Gross Weight (kgs)	4.0	4.2
ENVIRONMENT		
Humidity	5% to 95% Relative Humidity (Non-condensing)	
Operating Temperature	-10°C~50°C	
STANDARD		
Compliance Safety	CE	

OFF GRID SOLAR INVERTER

AR NML SERIES



Features

- Pure sine wave solar inverter
- WIFI & GPRS available for IOS and Android
- Built-in 80A MPPT solar charger
- High PV input voltage range 30~400VDC
- Built-in anti-dust kit for harsh environment
- Smart battery charge design to optimize battery life
- Meet rich customized demands
- Compatible with lithium battery
- Solar energy is provided directly to the load first



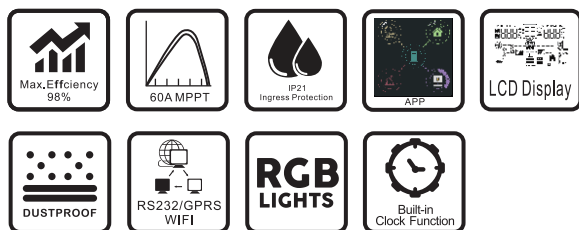
Product Data Sheet

Model	AR-E-NML-2000-12	AR-E-NML-3200-24
Rated Power	2000VA/1600W	3200VA/3000W
AC INPUT		
Voltage	230VAC	
Selectable Voltage Range	170~280VAC(For Personal Computers) // 90~280VAC (For Home Appliances)	
Frequency Range	50 Hz/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	10 ms (For Personal Computers) // 20 ms (For Home Appliances)	
BATTERY		
Battery Voltage	12VDC	24VDC
Floating Charge Voltage	13.5VDC	27VDC
Overcharge Protection	16VDC	33VDC
SOLAR CHARGER & AC CHARGER		
Solar Charger Type	MPPT	
Maximum PV Array Power	3000W	3000W
MPPT Range @ Operating Voltage	30~400VDC	
Maximum PV Array Open Circuit Voltage Solar	400VDC	
Max Input Current	1/13A	
Maximum Solar Charging Current	80A	
Maximum AC Charging Current	60A	
Maximum Solar+AC Charging Current	80A	
PHYSICAL		
Dimension ,H*W*D (mm)	357*273*95	
Carton Dimension ,H*W*D (mm)	435*335*165	
Net Weight (kgs)	4.6	4.8
Gross Weight (kgs)	5.6	5.8
Communication Interface	RS232 / GPRS / WIFI	
ENVIRONMENT		
Humidity	5% to 95% Relative Humidity (Non-condensing)	
Operating Temperature	-10°C-50°C	
STANDARD		
Compliance Safety	CE	

OFF GRID SOLAR INVERTER

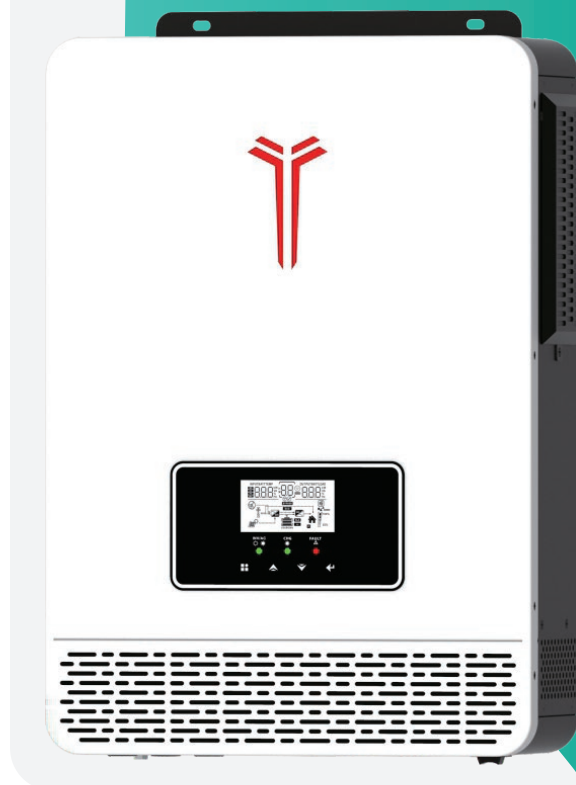
AR LS SERIES

(R) Inverter Mode **(G)** PV Mode **(B)** Utility Mode



Features

- Pure sine wave solar inverter
- WIFI&GPRS available for IOS and Android
- Built-in 60A MPPT solar charger
- PV input voltage range 20-150VDC(for 2000W),30~150VDC(for 3200W)
- 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
- Regular charging of municipal electricity
- Output mode diversity to make better use of solar energy
- Statistical Power Generation
- Built-in Clock Function
- Controllable Discharge Current
- Industry's First 12V with 2000W capacity



OFF GRID SOLAR INVERTER

AR LS SERIES

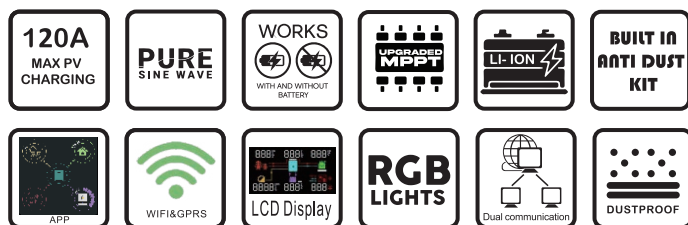
Product Data Sheet

Model	AR-E-LS-2000-12	AR-E-LS-3200-24
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	50 Hz/60Hz (Auto sensing)	
AC OUTPUT		
AC Voltage Regulation	230VAC±5%	
Surge Power	2000VA	3200VA
Efficiency(Peak) PV to INV	98%	
Efficiency(Peak) Battery to INV	92%	
Transfer Time	10 ms	
BATTERY		
Battery Voltage	12VDC	24VDC
Floating Charge Voltage	13.5VDC	27VDC
Overcharge Protection	16VDC	32VDC
SOLAR CHARGER & AC CHARGER		
Solar Charger Type	MPPT	
Maximum PV Array Power	900W	1800W
MPPT Range @ Operating Voltage	20~150VDC	30~150VDC
Maximum PV Array Open Circuit Voltage Solar	150VDC	
Maximum Solar Charging Current	60A	
Maximum AC Charging Current	80A	
Maximum Solar+AC Charging Current	140A	
PHYSICAL		
Dimension ,H*W*D (mm)	416*291*112	
Carton Dimension ,H*W*D (mm)	490*370*190	
Net Weight (kgs)	6.6	7.0
Gross Weight (kgs)	7.5	7.9
ENVIRONMENT		
Humidity	5% to 95% Relative Humidity (Non-condensing)	
Operating Temperature	-10°C-50°C	
STANDARD		
Compliance Safety	CE	

ON/OFF GRID SOLAR INVERTER

AR NM ECO SERIES

(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
- Dual communication ports for battery communication and Wifi communication
- Built-in 120A MPPT solar charger:max 6200W (for 3.6KW/4.2KW), max 6500W(for 6.2KW)
- Built-in 80A MPPT solar charger max 6500W(for 3.6KW /48V)
- 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



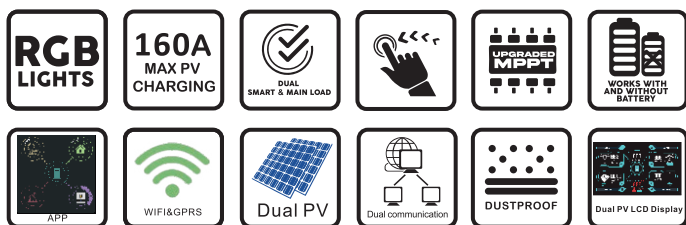
Product Data Sheet

Model	AR-E-NM-ECO-3.6KW+		AR-E-NM-ECO-4.2KW+		AR-E-NM-ECO-6.2KW+	
Phase	1-phase					
Maximum PV Input Power	6200W	6500W	6200W		6500W	
Rated Output Power	3600W/3600VA		4200W/4200VA		6200W/6200VA	
Maximum Solar Charging Current	120A	80A	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	1/18A		1/22A	
GRID OUTPUT(AC)						
Nominal Output Voltage	220/230/240VAC					
Output Voltage Range	195~253VAC					
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	52VDC	26VDC		52VDC	
Maximum Load Return Voltage	27VDC	54VDC	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	59~61±1Hz					
Maximum AC Input Current	21.1A		24.7A		36.4A	
PV INPUT (DC)						
Nominal DC Voltage/Maximum DC Voltage	360/500VDC					
MPPT Voltage Range	60~450VDC					
Maximum AC Input Current	1/18A	1/22A	1/18A		1/22A	
BATTERY MODE OUTPUT(AC)						
Nominal Output Voltage	220/230/240VAC					
Output Wave Form Efficiency (DC to AC)	Pure sine wave					
BATTERY&CHARGER						
Nominal DC Voltage	24VDC	48VDC	24VDC		48VDC	
Maximum Solar Charging Current	120A	80A	120A		120A	
Maximum AC Charging Current	100A	60A	100A		100A	
Maximum Solar+AC Charging Current	120A	80A	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	1/18A		1/22A	
GRID OUTPUT(AC)						
Nominal Output Voltage	220/230/240VAC					
Output Voltage Range	195~253VAC					
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 AC Input Current	21.1A		24.7A		36.4A	
Maximum Charging Current	100A					
GENERAL						
PHYSICAL						
Dimension ,H*W*D(mm)	420*350*110					
Carton Dimension, H*W*D(mm)	500*415*180					
Net Weight (kgs)	8.0		8.0		8.9	
Gross Weight(kgs)	9.0		9.0		10.0	
INTERACE						
Communication Port	RS232/RS485/WIFI/GPRS/LITHIUM BATTERY					
ENVIRONMENT						
Humidity	5% to 95% Relative Humidity (Non-condensing)					
Operating Temperature	-10°C-50°C					
STANDARD						
Compliance Safety	CE					

ON/OFF GRID SOLAR INVERTER

AR MAX SERIES

(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 160A MPPT solar charger (for 8.2kw,10.2kw)
- Dual communication ports for battery communication and Wifi communication
- 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

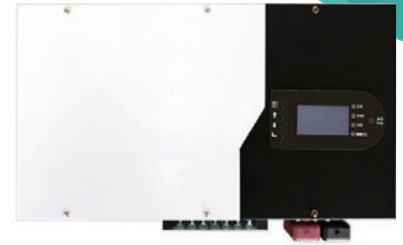


Product Data Sheet

Model	AR-E-MAX-8.2KW	AR-E-MAX-10.2KW
Phase	1-phase	
Maximum PV Input Power	5400W+5400W	
Rated Output Power	8200W/8200VA	10200W/10200VA
Maximum Solar Charging Current	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	2/18A	
GRID OUTPUT(AC)		
Nominal Output Voltage	220/230/240VAC	
Output Voltage Range	195~253VAC	
Nominal Output Current	35.6A	44.3A
Power Factor	>0.99	
EFFICIENCY		
Maximum Conversion Efficiency(DC / AC)	98%	
TWO LOAD OUTPUT POWER		
Full Load	8200W	10200W
Maximum Main Load	8200W	10200W
Maximum Second Load (battery mode)	2733W	3400W
Maximum Load Cut Off Voltage	52VDC	
Maximum Load Return Voltage	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	
Frecuency Range	59~61±1Hz	
Maximum AC input Current	48.2A	60A
PV INPUT (DC)		
Nominal DC Voltage/Maximum DC Voltage	360/500VDC	
MPPT Voltage Range	60~450VDC	
Maximum AC input Current	2/18A	
BATTERY MODE OUTPUT(AC)		
Nominal Output Voltage	220/230/240VAC	
Output Wave Form Efficiency (DC to AC)	Pure sine wave	
BATTERY&CHARGER		
Nominal DC Voltage	48VDC	
Maximum Solar Charging Current	160A	
Maximum AC Charging Current	140A	
Maximum Sotar+AC Charging Current	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	60~450VDC	
Maximum Input Current	2/18A	
GRID OUTPUT(AC)		
Nominal Output Voltage	220/230/240VAC	
Output Voltage Range	195~253VAC	
Nominal Output Current	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 AC Input Current	48.2A	60A
Maximum Charging Current	140A	
GENERAL		
PHYSICAL		
Dimension ,H*W*D(mm)	530*390*130	
Carton Dimension, H*W*D(mm)	618*463*205	
Net Weight (kgs)	14.2	14.7
Gross Weight(kgs)	15.7	16.2
INTERACE		
Communication Port	RS232/RS485/WIFI/GPRS/LITHIUM BATTERY	
ENVIRONMENT		
Humidity	5% to 95% Relative Humidity (Non-condensing)	
Operating Temperature	-10°C-50°C	
STANDARD		
Compliance Safety	CE	

Solar Inverter AR-DNK SERIES 1-12KW

Reverse control all-in-one machine
Power frequency series
single-phase/split phase



Product Introduction

The TYDNK series adopts a dual MCU design, with integrated optimization solutions for photovoltaic charging controllers and inverters, providing users with the best experience. Pure sine wave output, suitable for different types of loads. Mains supply priority mode/power-saving mode/battery priority mode, easily meets the needs of different users. Adopting intelligent optimized SOC control and separate three-level solar charging management to improve battery charging efficiency. LCD display integrates inverters and photovoltaic panels, providing intuitive device operation status and simple operation.

Application area

Widely used in homes, schools, streets, borders, pastoral areas, industrial equipment, satellite communication equipment, ships, etc.

Performance characteristics

1. Dual MCU intelligent control technology with excellent performance.
2. Pure sine wave output, suitable for different types of loads.
3. Mains supply priority mode, power-saving mode and battery priority mode can be set to easily meet the different application needs of users.
4. Large range, high precision, fully automatic voltage stabilization.
5. Intelligent optimization of SOC control and independent three-stage photovoltaic cell charging management to improve charging efficiency.
6. Full digital LED display, visualizing equipment operation status.
7. Overall protection function: battery overcharge protection, battery under-voltage protection, overload protection, short circuit protection, and over-temperature protection.
8. Compatible with lithium batteries and mains charging current. 100A adjustable, with three working modes to choose from.
9. English display interface, easy to operate, user friendly human-computer interaction, can easily show the operation status and system parameters of the power system.
10. Wall mounted design, easy to install, suitable for both industrial and agricultural use.
11. Intelligent communication interface, standard RS232/485 communication interface, can remotely online debug and monitor the operation status and system parameters of the power system through monitor software, which simplifies network management and improves system reliability.
12. Novel exterior design with built-in MPPT controller.
13. Supports diesel engines and is suitable for working in harsh electrical environments.

Solar Inverter

Technical parameter

AR DNK Series								Electrical specifications(8kW/10kW/12kW)							
Model		1k	1.5k	2k	3k	5k	6k	7k	Model		AR-E-DNK-8KW	AR-E-DNK-10KW	AR-E-DNK-12KW		
Rated power		1kW	1.5kW	2kW	3kW	5kW	6kW	7kW	Inverter output	Continuous output power	8000	10000	12000		
Battery		Battery voltage		12VDC/24VDC		24VDC/48VDC		48VDC		Surge rated power (20ms)	24kW	30kW	36kW		
		Over discharge protection voltage		10.5VDC/21VDC (Default)		21VDC/42VDC (Default)		42VDC (Default)		42VDC	Output waveform			Pure sine wave/same as input(bypass mode)	
		Battery type		Lead acid or lithium battery						Overall efficiency	88%(Peak value)				
Mains power input		Phase		Single phase+G						Effective value of rated output voltage	100~110~120Vac/220~230~240Vac				
		Input voltage		AC220V/230V±15%						Output voltage regulation	+ 5% effective value				
		Frequency		50Hz/60Hz±5%						Output frequency	50Hz+0.3Hz/60Hz+0.3Hz				
		Mains charging current		15A(Max), 30A(Max)						Short circuit protection	1s after fault				
		Input circuit quantity of PV panels		1 circuit						Conversion time	10ms				
		Rated current		40A		60A/80A		60A/80A		80A	Power factor	0.9~1.0			
MPPT controller		Input voltage range		DC16~180V /DC36~180V		DC36~180V /DC60~180V		DC60~180V		DC input	Rated voltage	48.0Vdc			
		Recommended operating voltage		45Vdc		80Vdc		110Vdc			Minimum starting voltage	46Vdc			
		Maximum open circuit voltage		180Vdc							Low voltage warning	43Vdc±1Vdc			
		Equalizing charging voltage		14.2V/12V;28.4V/24V;56.8V/48V							Shut down when the battery is low	42Vdc			
		Constant charging voltage		14V/12V;28V/24V;56V/48V							High voltage warning	59Vdc alarm, 60Vdc protection			
		Float charging voltage		13.5V/12V;27V/24V;54V/48V							Low battery voltage recovery	>44Vdc			
		Efficiency		≥96.5%							No load consumption	<150W when power savings is turned on			
		AC output voltage		220Vac/230Vac: ±5%							Charge	Output voltage	Depends on battery type		
		Output frequency		50Hz/60Hz: ±1%						Maximum charging power		One third of rated power			
		Output waveform		Pure sine wave						Overvoltage protection		60Vdc			
		Inverter efficiency		>90%						Battery	Battery temperature sensor	Charging voltage and step-down voltage change with temperature			
		Overload capacity		101%~120%/30s;>125%300ms							Bypass protection	Input voltage protection	Sine wave		
		Protection function		Battery overvoltage protection,battery undervoltage protection, overload protection, short circuitprotection, over temperature protection,etc								Rated voltage	220/230/240Vac		
		Switching time		10ms								Maximum input AC voltage	150Vac is used for 220Vac low-voltage mode; 300Vac for 230Vac high voltage mode		
		Isolation mode		Power frequency transformer								Overload protection	Circuit breaker		
		Operating temperature		0~40								Output short-circuit protection	Circuit breaker		
		Storage temperature		-40~+70								Bypass without battery connection	Optional		
		Relative humidity		0~90%(non condensing)						Mechanical parameters		Installation mode	Wall mounted/horizontal		
Overall performance		Size(mm)		480*335*160			580*385*195		740*450*225		Inverter size(mm)	800*460*250			
		Package size(mm)		535*350*210			645*400*240		792*460*252		Package size(mm)	865*510*300			
		Net weight(KG)		13	16.5	19	26.25/31	38	43		45.8	Net weight(KG)	56.5	59.5	61.5
		Gross weight(KG)		14.3	17	22	27.2/31.5	38.5	44.5		46.2	Gross weight(KG)	63.5	66	68.5
		Display		LED/LED-LCD											

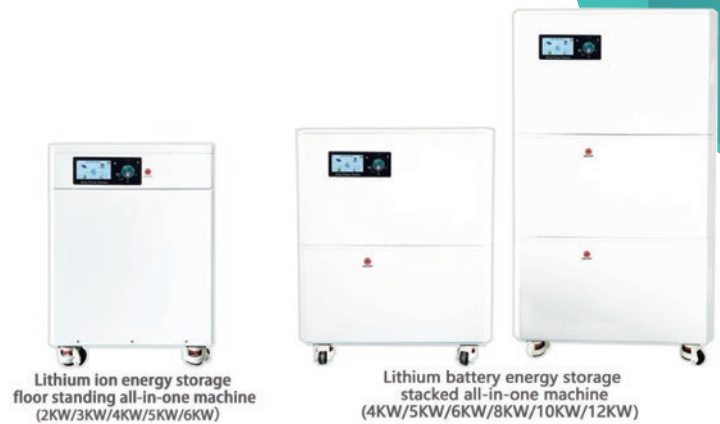
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Solar Inverter and Battery 2-in-1

AR-LDCD-L series

AR-LDCN-D Series

Lithium series power frequency off-grid photovoltaic energy storage all-in-one machine



Product Introduction

The power frequency inverter and energy storage battery integrated machine adheres to the design concept of convenience and modularity, adopts digital control technology, soft-switching technology, etc., with high efficiency and reliability. The entire series is equipped with built-in isolation transformers, which have strong anti-interference and impact resistance capabilities, meeting the safety standards of the power industry and meeting the needs of various occasions such as power systems and household use.

Performance characteristics

1. Easy to operate

The 2-in-1 machine is easy to use. It can be set and controlled through the LCD touch display. Users can easily view the parameters such as output voltage, frequency, etc., and keep abreast of the internal working conditions to ensure the normal operation of the equipment.

2. Flexible mode

The 2-in-1 machine can flexibly set the output according to the usage needs: AC priority or DC priority

(1) In AC priority mode, when the device is connected to the mains input, it directly outputs mains power and charges the battery. When the mains input is abnormal, it automatically switches to the inverter output.

(2) In DC priority mode, priority is given to the inverter output. When the DC input does not meet the requirements for inverter output, it automatically switches to the mains output, and the mains charging current is flexibly set to fully save energy.

3. Reliable performance

The 2-in-1 machine adopts digital control technology and soft-switching technology, which improves the efficiency of control, switching, algorithm processing and fault handling of the entire module, with good consistency and strong resistance to disturbance capability. Equipped with a built-in bypass switch, the machine ensures the continuity and reliability of power supply, and has strong carrying capacity and good load compatibility. The DC input and AC output are completely electrically isolated, without the need for an external isolation transformer, meeting the requirements for power inverters in integrated power supply design, and supporting AC startup function, can be used to power on in case of DC fault.

4. Automatic switching

The 2-in-1 machine has the function of automatic circuit switching. When power on, the device allows cutting off the DC input and automatically switching to the mains bypass, without affecting the power supply to the load, making it convenient to maintain and replace the inverter power supply.

After the alarm of high or low current or voltage or overload, and output shutdown, the power supply will automatically resume output when the battery voltage returns to normal: when the overload phenomenon is eliminated, the power supply will automatically resume output.

5. Air duct heat dissipation

The 2-in-1 machine is equipped with a unique air duct heat dissipation system, which improves the overall heat dissipation effect, enhance the stability and reliability of the power supply equipment and ensures the normal operation of the equipment and the service life.

6. Remote communication

The 2-in-1 machine supports remote communication function, and the back of the chassis is equipped with a set of RS232 interfaces. It can be optionally equipped with a WIFI module to enable network and mobile APP to control the device.

Solar Inverter and Battery 2-in-1

Technical parameter

AR LDCD-L series/AR LDCN-D series										
Model	AR LDCN-L2KW5.3KWH-60A	AR LDCN-L3KW71KWH-80A	AR LDCN-L4KW9.8KWH-80A AR LDCN-D4KW9.8/19.6KWH-80A/160A	AR LDCN-L5KW10.7KWH-80A AR LDCN-D5KW10.7/21.5KWH-80A/160A	AR LDCN-L6KW12.5KWH-80A AR LDCN-D6KW12.5/25KWH-80A/160A	AR LDCN-D8KW14.3/28.6KWH-80A/160A	AR LDCN-D10KW28.6KWH-160A	AR LDCN-D12KW28.6KWH-160A		
System	Rated power	2KW	3KW	4KW	5KW	6KW	8KW	10KW	12KW	
	Battery capacity	5.3KWH	71KWH	9.8KWH/19.6KWH	10.7KWH/21.5KWH	12.5KWH/25KWH	14.3KWH/28.6KWH	28.6KWH	28.6KWH	
	Without automatic restart function of mains supply	18V Recovery restart	24V Recovery restart	36V Recovery restart		48V Recovery restart				
	Battery type	LiFePO4								
	Lithium battery activation function	With lithium battery activation								
	Working mode	AC priority or DC priority (default)								
	Display language	Touch screen (Set optional Chinese/English display)								
	Switching time	4~10ms								
	Overall efficiency	91% (peak)								
	Protection function	Battery undervoltage protection, battery overvoltage protection, overload protection, short circuit protection, overheat protection, etc.								
	Isolation mode	Power frequency isolation transformer								
Spray colour	Light-sensitive white of chassis									
Mains input	Input phase number	Single-phase + G								
	Input voltage	220VAC/230VAC+25%								
	Input frequency	50Hz/60Hz+5%								
MPPT parameter	Built-in photovoltaic controller	MPPT-60A	MPPT-80A	MPPT-80A/160A			MPPT-160A			
	Max PV input power	1332W	2368W	3256W/6512W	3552W/7104W	4144W/8288W	4736W/9472W	9472W	9472W	
	PV open-circuit voltage input range	70V-180VDC								
	Recommended PV open circuit voltage	100-150VDC								
Charging	Max. charging current of commercial power	60A	70A	70A	70A	70A	80A	100A	120A	
	Max. PV charging current	60A	80A	80A	80A	80A	80A/160A	160A	160A	
	Max. combined charging current	120A	150A	150A	150A	150A	160A/240A	260A	280A	
	Battery charging parameters	High voltage 22.2V, low pressure alarm 16V, display full 21.6V	High voltage 29.6V, low voltage alarm 21.2V, display full 28.8V	High voltage 40.7V, low voltage alarm 29.15V, display full 39.6V	High voltage 44.4V, low pressure alarm 31.8V, display full 43.2V	High voltage 51.8V, low voltage alarm 37.1V, display full 50.4V	High voltage 59.2V, low voltage alarm 42.4V, display full 57.6V			
Output	Output voltage	220VAC/230VAC±1%								
	Output frequency	50Hz/60Hz±0.01%								
	Output socket	2 universal sockets								
	Output waveform	Pure sine wave								
Complete machine	Host size mm (width * Depth * height)	500*300*800	550*320*800	Floor-mounted: 550*410*800 Stacked:700*400*960 (9.8KWH)*1350 (19.6KWH)	Floor-mounted: 550*410*800 Stacked:700*400*960 (10.7KWH)*1350 (21KWH)	Floor-mounted: 630*410*800 Stacked: 700*400*960(12.5KWH)*1350(25KWH)	787*400*960(14.3KWH)*1350(28.6KWH)			
Load	Support load type	Air conditioning + other household loads								
	Recommended air conditioning power+ load	1P+lighting	1.5P+lighting	1.5P+1P+lighting	1.5P+1.5P+lighting	3P+1P+lighting	3P+1.5P+1.5P+lighting	3P+3P+1.5P+lighting	3P+3P+3P+lighting	

*The product is subject to the material object, and the above specifications are subject to change without prior notice.

Solar Charge Controller

AR-E-SMxx

Low-voltage mppt controller



Product Introduction

The SM series MPPT controller is an advanced, efficient, and multifunctional photovoltaic product. It utilizes innovative maximum power point tracking technology to significantly improve the energy efficiency of solar systems with a conversion efficiency of 97%. The controller adopts intelligent battery charging management with temperature compensation function, effectively managing the battery and extending its lifespan. The controller integrates RS485 communication interface, which can provide communication protocol for customer integration and management, or optional WIFI module to achieve APP cloud monitoring.

Application area

Widely used in large-scale solar power generation scenarios such as homes, schools, public lighting, industrial and mining enterprises, border defense, islands, pastoral areas, etc.

Performance characteristics

1. Efficient MPPT controller algorithm, with a conversion efficiency of up to 97% for the entire machine.
2. Charging method: Three stage charging (constant current, constant voltage, float charging) can effectively extend battery life.
3. There are load modes including normally open/normally closed mode and dual time control mode.
4. Customers can choose to charge 5 types of ordinary batteries (sealed lead-acid batteries, colloidal lead-acid batteries, open lead-acid batteries, lithium iron phosphate batteries, ternary lithium batteries), or customize parameters to charge other types of batteries.
5. It has a current limiting charging function. When the user's battery level is too high, the controller automatically maintains the charging power, and the charging current will not exceed the rated value.
6. Support multiple parallel connections to achieve system power upgrades.
7. It has high-definition LCD display function, which can view the operating data and working status of the device, and also supports the setting of relevant parameters.
8. RS485 communication, which can provide communication protocols for customers to integrate management and secondary development.
9. Supports PC software monitoring and optional WIFI module to achieve APP cloud monitoring.
10. The product has passed CE, RoHS, and FCC certifications; Can collaborate with customers through authentication and cloud monitoring.

Solar Charge Controller

Technical parameter

Model (low power)		AR-E-SM40	AR-E-SM40-A	AR-E-SM60	AR-E-SM80	AR-E-SM100	
system	Rated charging/discharging current	40A	40A	60A	80A	100A	
	Rated system voltage	12VDC/24VDC	12VDC/24VDC/48VDC(self-adaption)			24VDC/48VDC/72VDC	
	Installation method	Wall mounted					
	Charging method	MPPT automatic maximum power point tracking					
	Display mode	LCD+LED					
	Protection method	Temperature protection, overcurrent protection, high voltage protection, low voltage protection, short circuit protection,input reverse connection protection					
	Static power	≤3W					
	Voltage stabilization accuracy	±3.0%					
	Temperature compensation coefficient	2mV/C/2V(default)					
	Dynamic response	Overrush amplitude (+ 5%) recovery time (500ms) (25%~50%, 50%~75% load, current change rate 0.1A/ms)					
	Ripple and noise (20MHz bandwidth limit)	100mVpp (rated load, output with 10uF/250V and 0.1uF/250V capacitors)					
input	Photovoltaic open circuit voltage input range	12VDC	DC18V~100V	DC20V~210V		/	
		24VDC	DC36V~100V	DC36V~230V			
		48VDC	/	DC70V~230V			
		72VDC	/	/	/	/	DC110V~210V
	Recommended working voltage for photovoltaics	12VDC	45VDC			/	
		24VDC	80VDC				
		48VDC	/	110VDC			
		72VDC	/	/	/	/	150VDC
	Maximum input power of photovoltaic system	12VDC	568W		852W	1136W	/
		24VDC	1136W		1704W	2272W	2840W
		48VDC	/	2272W	3408W	4544W	5680W
		72VDC	/	/	/	/	8520W
	Each MPPT input		1 circuit				
Charger Information	Rated charging current	100A/150A					
	Battery type	Lead acid maintenance free batteries, colloidal batteries, liquid batteries, lithium iron phosphate batteries, ternary lithium batteries (other types of batteries can also be customized)					
	Charging method	Three stages: constant current (MPPT), balanced charging, and float charging					
Generally data	Communication interface	RS485					
	Working environment temperature	-0~50					
	Storage environment temperature	-40~70					
	Humidity	0-95% (no condensation)					
	Using altitude	5500m (power consumption needs to be reduced for distances above 2000m)					
	Protection level	IP21					
	Machine weight (KG)	2.1	2.9	3.5	3.6	6.2	
	Dimensions(mm)	150*200*95	165*245*95	200*295*105	200*295*105	255*410*125	

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Energy Storage Battery

Wall Mounted Battery



Long Life



Easy Mounting



Space Saving



Home Appliance Style

- AR-E-B-512100
- AR-E-B-512150
- AR-E-B-512200
- AR-E-B-512280
- IP20/IP54
- All new grade A cell LFP battery
- 6000 times circle life
- Supports parallel use of ≤15 batteries
- High class of safety with built-in BMS protection

CE UL FC UN38.3 MSDS

Model	AR-E-B-512100	AR-E-B-512150	AR-E-B-512200	AR-E-B-512280
Standard Voltage	51.2VDC			
Voltage Range	43.2~57.6VDC			
Normal Capacity	100Ah	150Ah	200Ah	280Ah
Rated Energy	5.12kWh	7.68kWh	10.24kWh	14.336kWh
Communication	CAN/RS485/RS232/WIFI/Blue Tooth			
Cell Self-Discharge	<5%/Month			
Modules Connection	1~15 in Parallel			
DOD	90%			
Cycle Life	≥6000@25°C, 80% DOD			
Max Charge&Discharge Current	100A			200A
Ingress Protection	IP20(IP54)			
Installation	Wall mounted			
Working Temperature	0~55°C			
Storage Temperature	-20~55°C			
Humidity	≤80%			
Product Dimension	410*592*160mm	705*530*247mm	530*1060*160mm	530*800*267mm
Package Dimension	495*680*280mm	770*630*325mm	630*1160*405mm	630*900*510mm
Net Weight	44kg	84kg	96kg	125kg

Floor Standing Battery



Long Life



Mobility



Space Saving



Home Appliance Style

- AR-E-512280
- AR-E-512300
- AR-E-512320
- All new grade A cell LFP battery
- 6000 times circle life
- Supports parallel use of ≤15 batteries
- High class of safety with built-in BMS protection

CE UL FC UN38.3 MSDS

Model	AR-E-E-512280	AR-E-E-512300	AR-E-E-512320
Standard Voltage	51.2VDC		
Voltage Range	43.2~57.6VDC		
Normal Capacity	280Ah	300Ah	320Ah
Rated Energy	14.336kWh	15.36kWh	16.384kWh
Communication	CAN/RS485/RS232/WIFI/ Blue Tooth		
Cell Self-Discharge	<5%/Month		
Modules Connection	1~15 in Parallel		
DOD	90%		
Cycle Life	≥6000@25°C, 80% DOD		
Max Charge&Discharge Current	200A		
Ingress Protection	IP20		
Installation	Floor Standing		
Working Temperature	0~55 C		
Storage Temperature	-20~55°C		
Humidity	≤80%		
Product Dimension	850*530*250mm		
Package Dimension	1000*630*470mm		
Net Weight	125kg	130kg	135kg

Energy Storage Battery

Stackable Battery



Long Life



Mobility



Space Saving



Home Appliance
Style

- AR-E-HVD-512100
- AR-E-HVD-102450

- All new grade A cell LFP battery
- 6000 times circle life
- Supports stacking 8 batteries or 6 batteries
- High class of safety with built-in BMS protection

CE UL FC UN38.3 MSDS

Model	AR-E-HVD-512100	AR-E-HVD-102450
	Battery	
Standard Voltage	51.2V	102.4V
Normal Capacity	100Ah	50Ah
Rated Energy	51.2kWh	
Max Charge-Discharge Rate	1C/100A	1C/50A
Product Dimension	550*500*171mm	
Package Dimension	545*510*300mm	
Net Weight	41kg	
Cycle Life	≥6000@ 25°C, 80% DOD	
	Stacking Parameters	
Max Stacking Quantity	8 PCS	6 PCS
Standard Voltage	409.6V	614.4V
Working Voltage	345.6~460.8V	518.4~691.2V
Rated Energy	40.93kWh	30.72kWh
Total Product Dimension	550*500*1629mm	550*500*1287mm
Net weight	360kg	263kg
	General Parameters	
Ingress Protection	IP20	
Installation	Stacked	
Communication	CAN/RS485/WiFi(Optional)	
Working Temperature	0~55°C	
Storage Temperature	-20~55°C	
Humidity	≤80%	

Stackable Battery



Long Life



IP54



Space Saving



Home Appliance
Style

- AR-E-HV-1024
- AR-E-HV-1536
- AR-E-HV-2048

- IP54
- All new grade A cell LFP battery
- 6000 times circle life
- Supports stacking ≤5 batteries
- High class of safety with built-in BMS protection

CE UL FC UN38.3 MSDS

Model	AR-E-HV-1024	AR-E-HV-1536	AR-E-HV-2048
Single Module Capacity	51.2kWh		
Standard Voltage	102.4V		
Normal Capacity	50Ah		
Cycle Life	≥6000@25 , 80% DOD		
Product Dimension	530*190*393mm		
Package Dimension	600*265*495mm		
Net Weight	40kg		
Total Product Dimension	530*190*1186mm	530*190*1569mm	530*190*1952mm
Total Net Weight	106kg	150kg	195kg
Nominal Voltage	204.8V	307.2V	409.6V
Rated Energy	10.24kWh	15.36kWh	20.48kWh
Working Voltage	160~233.6V	240~350.4V	320~467.2V
Max Discharge Current	40A		
Max Charge Current	25A		
Working Temperature	0~55		
Storage Temperature	-20~55°C		
Ingress Protection	IP54		
Humidity	≤80%		
Communication	CAN/RS485		

Energy Storage Battery

Led Acid Replacement Battery



Multi Scenarios



Long Life



Light Weight



IP65

- AR-E-D-12850
- AR-E-D-128100
- AR-E-D-128150
- AR-E-D-128200
- AR-E-D-256100
- AR-E-D-48100
- IP65
- All new grade A cell LFP battery
- 6000 times circle life
- Supports concatenation to 48/51.2v
- High class of safety with built-in BMS protection

CE UL FC UN38.3 MSDS

Model	AR-E-D-12850	AR-E-D-128100	AR-E-D-128150	AR-E-D-128200	AR-E-D-256100	AR-E-D-48100	
Standard Voltage	12.8V					25.6V	48V
Normal Capacity	50Ah	200Ah	150Ah	200Ah	100Ah	100Ah	
Rated Energy	0.64kwh	2.56kWh	1.92kwh	2.56kWh	2.56kWh	4.8kwh	
Charge-Discharge Current	25A	100A	50A	100A	50A	50A	
Working Voltage Range	10~14.6V				20~29.2V	37.5~54.75V	
Standard Voltage	12.8V				25.6V	48V	
Max Charge Voltage	14.6V				29.2V	54.75V	
Cycle Life	≥6000 @25°C, 80% DOD						
Product Dimension(mm)	330*172*216	330*172*216	532*207*215	532*207*215	345*190*245	520*267*220	
Package Dimension(mm)	380*225*281	380*225*281	582*260*275	582*260*275	395*240*305	570*317*280	
Net Weight	4.5kg	10kg	15kg	21kg	21kg	33kg	
Working Temperature	0~50°C						
Storage Temperature	-20~55°C						
Humidity	≤80%						
Ingress Protection	IP65						

Rack Mounted Battery



Long Life



Mobility



Independent Maintenance



Good Heat Dissipation

- AR-E-A-256100
- AR-E-A-512100
- AR-E-A-512200
- AR-E-A-512280
- All new grade A cell LFP battery
- 6000 times circle life
- Supports parallel use of ≤15 batteries
- High class of safety with built-in BMS protection

CE UL FC UN38.3 MSDS

Model	AR-E-A-256100	AR-E-A-512100	AR-E-A-512200	AR-E-A-512280
Standard Voltage	25.6VDC		51.2VDC	
Voltage Range	21.6~28.8VDC		43.2~57.6VDC	
Normal Capacity	100Ah	150Ah	200Ah	280Ah
Rated Energy	2.56kWh	7.68kWh	10.24kWh	14.336Wh
Communication	CAN/RS485/RS232/WIFI/Blue Tooth			
Cell self-Discharge	< 5 %/Month			
Modules Connection	1~15 in Parallel			
DOD	90%			
Cycle Life	≥6000 @ 25 , 80% DOD			
Max Charge&Discharge Current	100A			200A
Ingress Protection	IP20			
Installation	Cabinet or Wall			
Working Temperature	0~55			
Storage Temperature	-20~55°C			
Humidity	≤80%			
Product Dimension	484*330*165mm	484*425*176.5mm	520*773*164.5mm	484*750*240mm
Package Dimension	545*430*285mm	545*510*300mm	900*620*385mm	547*875*450mm
Net Weight	24kg	41kg	85kg	106kg

Energy Storage Battery

Energy Storage Integrated Cabinet Series



Good Heat
Dissipation



Highly
Integrated



Cost
Effective



Intelligent

- AR-E-H-20kW/50kWh
- AR-E-H-30kW/60kWh
- IP54 Can be used outdoors
- All new grade A cell LFP battery
- 6000 times circle life
- On grid/Off grid

CE UL FC UN38.3 MSDS

Model	AR-E-H-20kW/50kWh	AR-E-H-30kW/60kWh
Battery		
Module Energy	10.24kWh	
Module Number	5PCS	6PCS
Rated Energy	51.2kWh	61.4kWh
Standard Voltage	512V	614.4V
Working Voltage Range	432~576V	518.4~691.2V
Humidity	≤80%	
Installation	Cabinet	
Communication	CAN/RS485/WIFI(Optional)	
Product Dimension(Module)	773*560*165mm	
Package Dimension(Module)	900*620*385mm	
Net weight(Module)	85kg	
PV Input		
Max OCV	1000VDC	
Starting Voltage	180VDC	
MPPT Voltage Range	150~850VDC	
Input Current	26+26A	36+36+36A
Maxinput Current	39+39A	55+55+55A
Input Power	26000W	39000W
AC Output/Input		
Rated Output/Input Current	30A	45A
Rated Output/Input Voltage	220/380,230/400VAC	
Frequency	50Hz/60Hz(Self-adaption)	
Rated Output Power	20000W	30000W
Type	3 Phases	
Max Bypass Overload Current	80A	200A
General Parameters		
Product Dimension of the Cabinet	1170*1031*1636mm	
Package Dimension of the Cabinet	1300*1160*1850mm	
Total Net Weight	805kg	942kg
Ingress Protection	IP54	
Working Temperature	0~55	
Storage Temperature	-20~55°C	
Cooling	Air-cooled/Natural	

Energy Storage Integrated Cabinet Series



Good Heat
Dissipation



Highly
Integrated



Cost
Effective



Intelligent

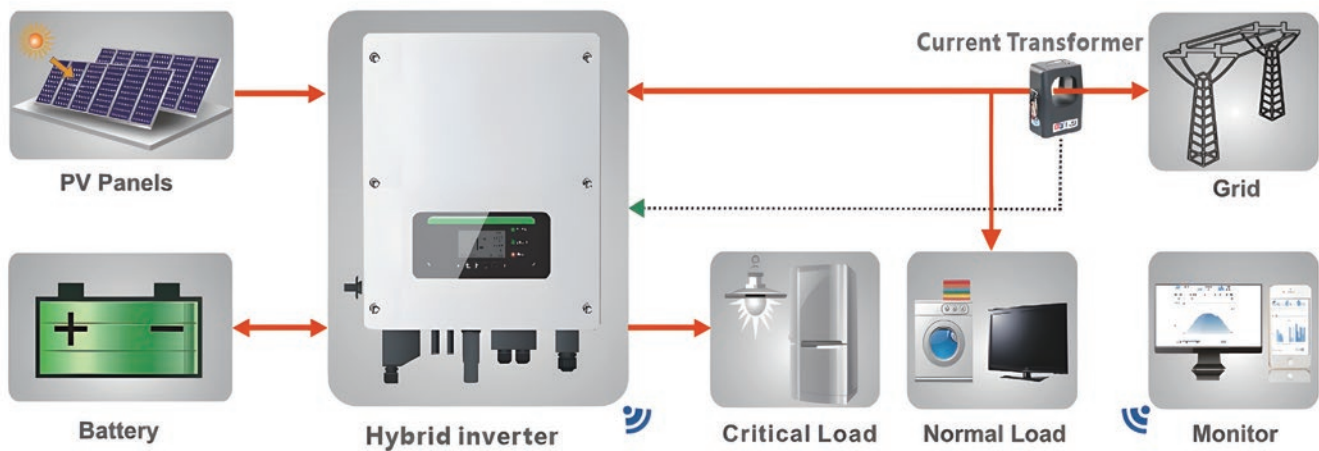
- AR-E-I-100kW/215kWh
- AR-E-I-100kW/232kWh
- IP54 Can be used outdoors
- All new grade A cell LFP battery
- 6000 times circle life
- On grid/off grid
- Real-time remote monitoring
- High class of safety with built-in BMS protection

CE UL FC UN38.3 MSDS

Model	AR-E-I-100kW/215kWh	AR-E-I-100kW/232kWh
Battery		
Type	768V280Ah	832V280Ah
Rated Energy	215.04kWh	232kWh
Working Voltage Range	672~864V	728V~936V
BMS Communication	Ethernet/RS485/CAN	Ethernet/RS485/CAN
PCS		
AC Side	AC Rated Power	100kW
	Max Power	100kW
	Max Current	150A
	Rated Voltage	380V
DC Side	Rated Frequency	50/60Hz
	Max Input Voltage	950V
	Max Current	140A
Battery Voltage Range	650~950V	728~936V
MPPT		
Low Voltage Side	Rated Power	100kW
	Max Current	320A
	MPPT Voltage Range	200~650V(320~650V Fully loaded)
High Voltage Side	Rated Power	100kW
	Rated Current	100A
	Voltage Range	350~1000V
General Parameters		
Product Dimension of the cabinet	1500*2306*1539mm	1350*2050*1350mm
Ingress Protection	IP54	
Working Temperature	-20~55°C	
Cooling	Air-cooled	Liquid-cooled
Security Certification	CE/UN38.3/ROHS	
Net Weight	3500kg	2500kg

Solar Energy System

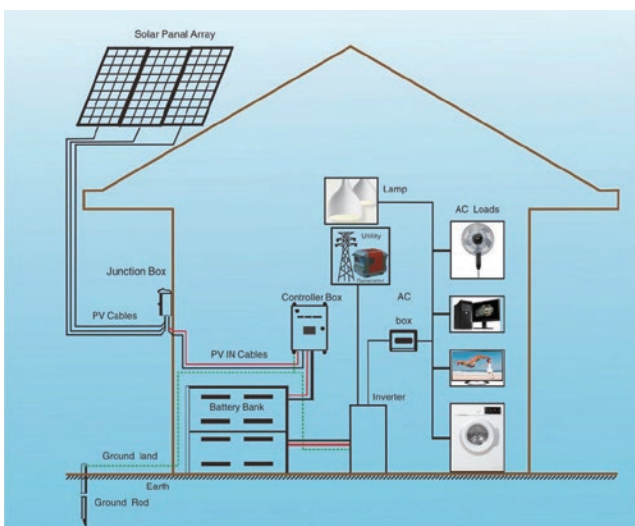
On and Off Grid Solar Energy System



On and off grid solar system includes solar panels, on and off grid hybrid solar inverter, lithium ion batteries. It not only can supply electricity to user's home appliances, but also can set the excessive electricity to be charged into the batteries or sent to the mains grid.

1. The key components are all well-known European and American brands.
2. Efficient operation with low loss.
3. Advanced battery management technology to ensure battery life.
4. Compatible with lead-acid batteries, gel batteries, lithium batteries and other batteries.
5. Multiple working modes can be set, can run off-grid, support emergency power supply.

Off Grid Solar Energy System



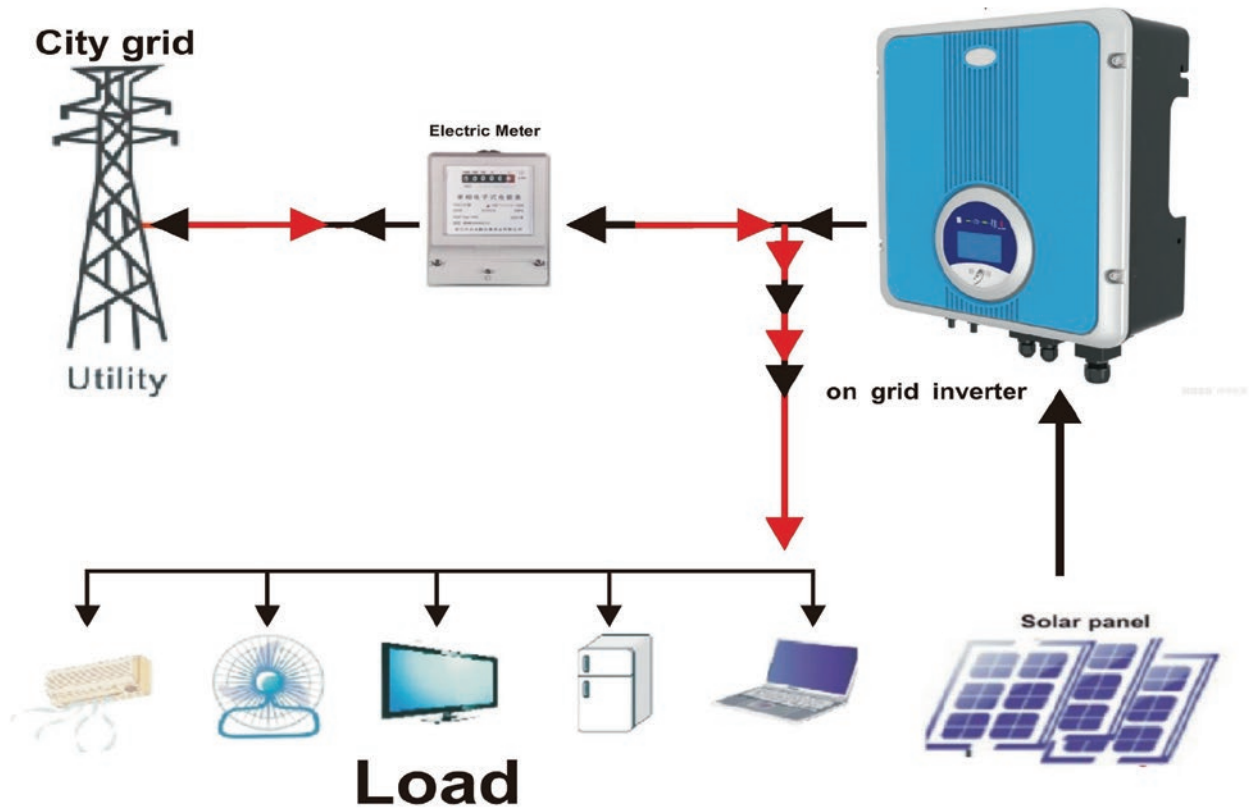
We will provide a complete set of solar systems, which can be installed directly after receiving the goods, without the need to purchase additional accessories.

For the installation, we will send you the connection drawing and installation manual. The installation is easy, and our engineer team will also offer online service.

1. Single phase: 300W to 30kW; three phase: 5kW to 300kW
2. Off-grid system works with energy storage battery which make the system supply power day and night, suitable for where the mains supply is unstable.

Solar Energy System

On Grid Solar Energy System



On grid inverter



Power:

1KW-5KW single phase
10KW-100KW three phase

MPPT range:

120V-800VDC

Protective Functions:

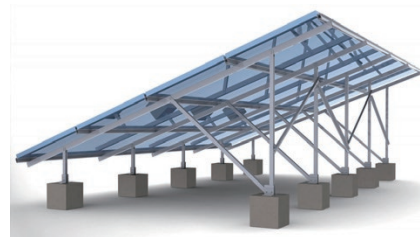
Protection against
overload, short circuit,
overheat, polarity reversal

PV cables/ battery cables/MC4



4/6mm² for PV in series
connection cables,
32mm² for connection to
PV combiner and inverter
cable

Rooftop/Ground Solar Panel Bracket



Material:

Aluminium alloy or stainless steel,
anti-oxidation treatment

Installation type:

Tin-roof/tile roof/ground

Wind Load:

55m/s

Snow Load:

1.5kn/m²

Applications and Cases

Application scenarios

01



Factory

Factory is always with high electricity consumption, we provide solar energy solutions to save electricity expenses.

02



Resort

We offer customized solar energy solutions to meet every resort's demand for zero electricity bill.

03



School

We have a 100kW solar energy project for a school in Zimbabwe in March 2024. We sent engineers to there for installation.

04



Farm

We provide customers with the most suitable solar energy solutions based on their farm usage.

05



Airport

We customize all configurations according to the situation of the airport, providing installation and equipment debugging service.

Applications and Cases



Container Type Energy Storage System

Energy Storage Capacity: 2MWh

The project is designed for a privately owned manufacturer of building materials who mainly produces construction bricks with annual production capacity of 100 million bricks. The factory needs to use a lot of high power equipment, such as extruders, blowers, etc. The average annual electricity consumption is about 5 million kWh and the electricity bill is about 2.5 million RMB. After utilization of TaiYe lithium ion battery energy storage system, the factory is able to realize peak-shaving and valley-filling by taking advantage of the electricity price difference in different time periods. Under same electricity consumption, the annual electricity bill can be saved as much as 0.5 million RMB



200kW Commercial Solar Energy System

This project is designed for a hotel. The commercial solar energy system is installed for 14 air conditioners and 2 motors. This is a long-term investment for the hotel with huge power consumption. After installation of the system, the hotel no longer needs to pay extra electricity bills.