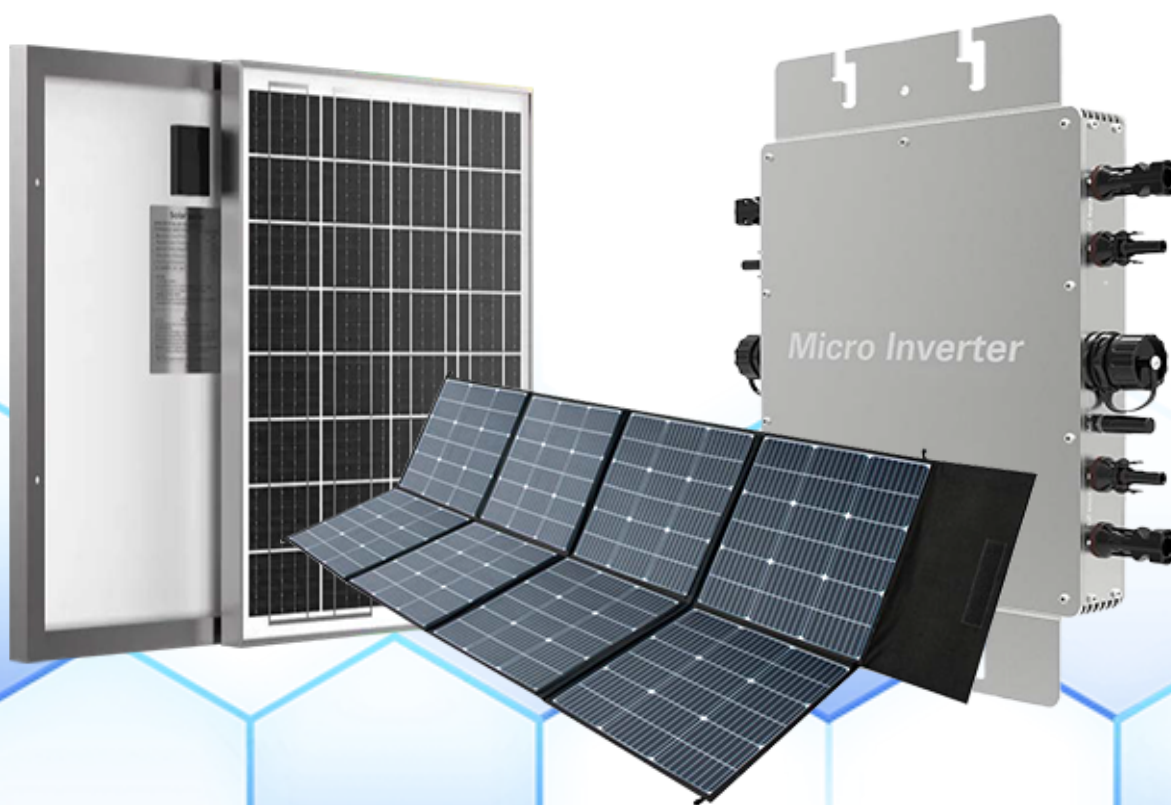


ATO

www.entersolar.com

Solar Panel & Inverter Supplier in China

Custom and provide solar products



Email: sales@entersolar.com

Tel: +86 773-363-7977

Address: BLDG A, MiXc Xiufeng, Guilin China

ATO

About ATO

Quality Solar Panel & Inverter Manufacturer in China

ATO is a solar supplier with more than 20 years experience in Chinese renewable energy industry. We are committed to providing our customers with new technologies, high quality and first class service experience. We provide professional consultancy and design services for a range of clients including domestic, commercial and community projects. Our solar products often widely used in desalination, car industry, communication and so on.



Contents

Solar Panel Catalog /

Mono Solar Panel, 30W-550W	1
Folding Solar Panel, 300W-500W	19
Portable Solar Panel, 40W-200W	21

Solar Inverter Catalog /

Solar Micro Inverter 300W-1200W	23
Solar Hybrid Inverter 3KW-10KW	30
Solar On Grid Inverter 300W-1000W	36
Solar Off Grid Inverter 700W-6000W	41

ATO

Solar Panel Catalog



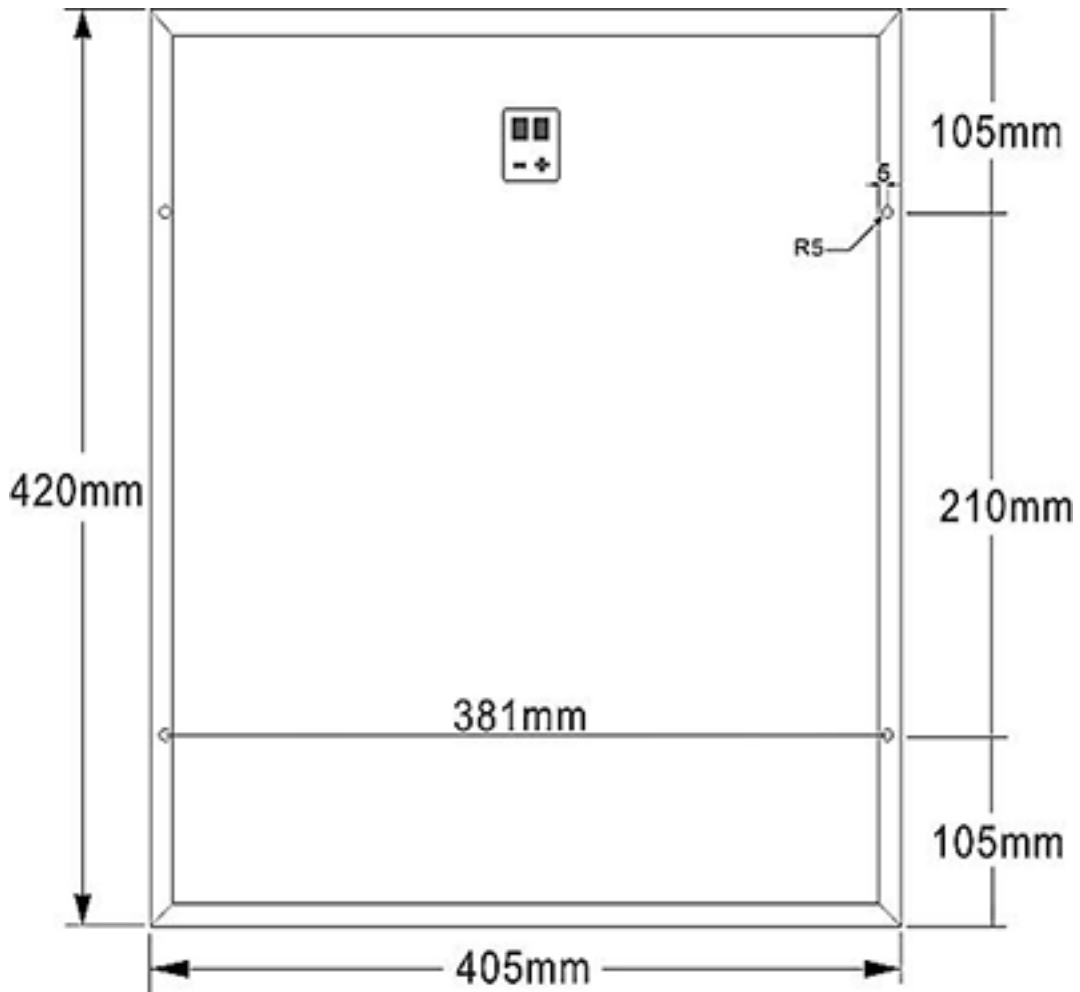


Features:

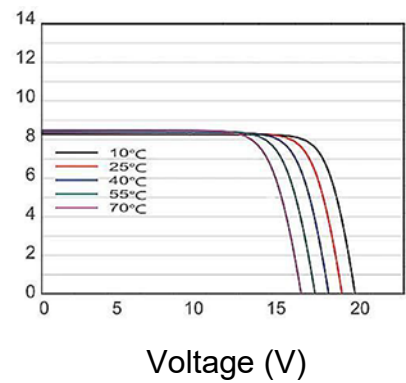
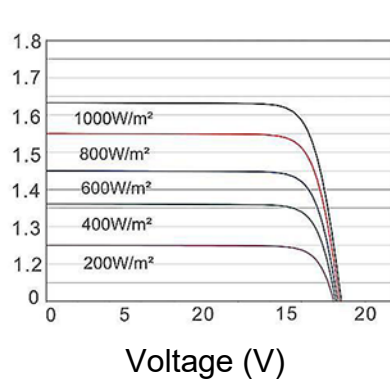
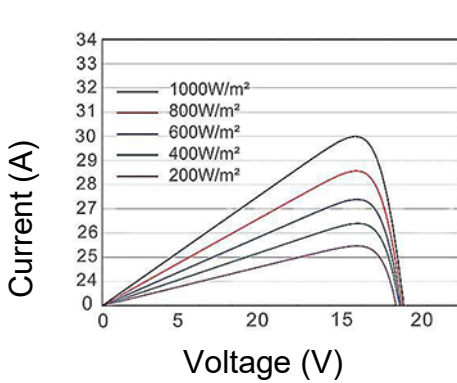
- **High Efficiency.** MBB technology is adopted to improve the photoelectric conversion efficiency and achieve higher power generation capacity.
- **Low Resistance Loss.** The design of multiple current collection lines reduces the flow distance of the current inside the cell and reduces resistance loss.
- **High Reliability.** By reducing the stress and thermal stress between cells, the reliability and long-term performance stability of the module are improved.
- **Beautiful Appearance.** Modules using MBB technology have a more detailed cell layout and less wire shielding, presenting a more beautiful appearance.
- **Adapt to Complex Environments.** With good anti-PID performance and durable anti-reflection coating, it can work in different climates and environmental conditions, and has certain pressure and wind resistance.

Mechanical Specifications	
Model	ATO-QN-182M 30W
Solar Cell	182 Mono
Power (W)	30W
Module Efficiency (%)	17.64%
Voltage at Pmax (Vmp)	18.24V
Current at Pmax (Imp)	1.64A
Open Circuit Voltage (Voc)	21.80V
Short Circuit Current (Isc)	1.74A
Dimension	420 * 405 * 25mm
Liectrical Parameters at (STC)	
Current at Pmax (Imp)	1.16A
Power Tolerance (W)	± 3%
Mechanical Parameters	
Solar Cell (Type / Size)	Mono (182mm)
Solar Cells Number	32 Pcs (4 * 8)
Dimension	420 * 405 * 30mm
Weight	1.75 KG / Pcs
Junction Box	IP67 / 0 * bypass diode
Cable	//
Connector	//

Dimension



Characteristics



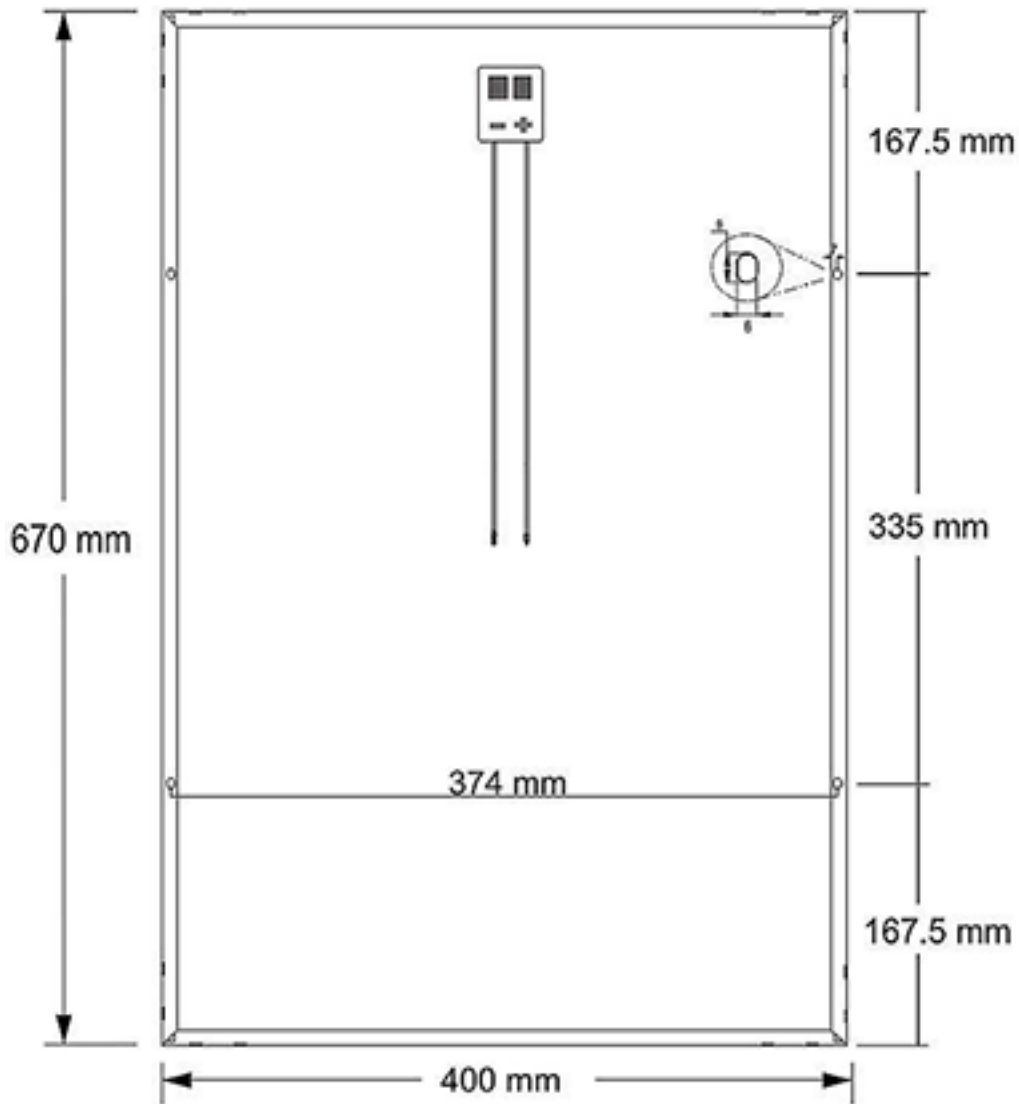


Features:

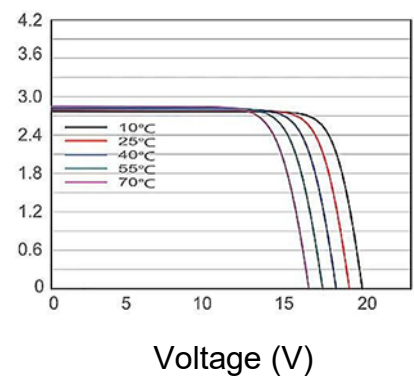
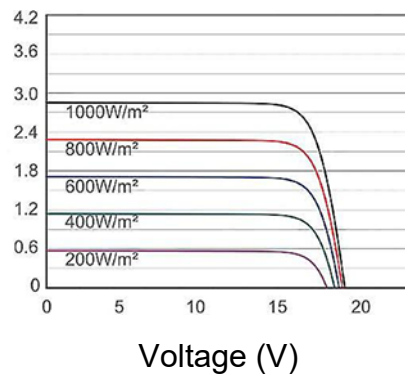
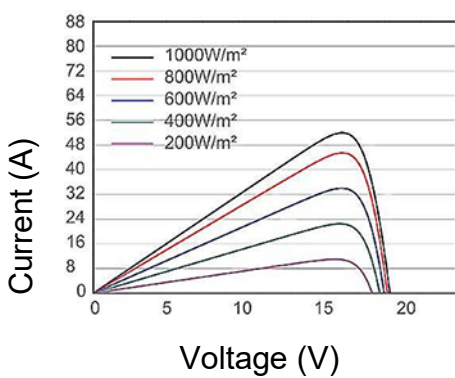
- **High Efficiency.** MBB technology is adopted to improve the photoelectric conversion efficiency and achieve higher power generation capacity.
- **Low Resistance Loss.** The design of multiple current collection lines reduces the flow distance of the current inside the cell and reduces resistance loss.
- **High Reliability.** By reducing the stress and thermal stress between cells, the reliability and long-term performance stability of the module are improved.
- **Beautiful Appearance.** Modules using MBB technology have a more detailed cell layout and less wire shielding, presenting a more beautiful appearance.
- **Adapt to Complex Environments.** With good anti-PID performance and durable anti-reflection coating, it can work in different climates and environmental conditions, and has certain pressure and wind resistance.

Mechanical Specifications	
Model	ATO-QN-182M 50W
Solar Cell	182 Mono
Power (W)	50W
Module Efficiency (%)	18.6%
Voltage at Pmax (Vmp)	18.24V
Current at Pmax (Imp)	2.74A
Open Circuit Voltage (Voc)	21.80V
Short Circuit Current (Isc)	2.97A
Dimension	420 * 405 * 25mm
Electrical Parameters at (STC)	
Power Tolerance (W)	± 3%
Mechanical Parameters	
Solar Cell (Type / Size)	Mono (182mm)
Solar Cells Number	32 Pcs (4 * 8)
Dimension	670 * 400 * 25mm
Weight	3.80 KG / Pcs
Junction Box	IP67 / 0 * bypass diode
Cable	//
Connector	//

Dimension



Characteristics



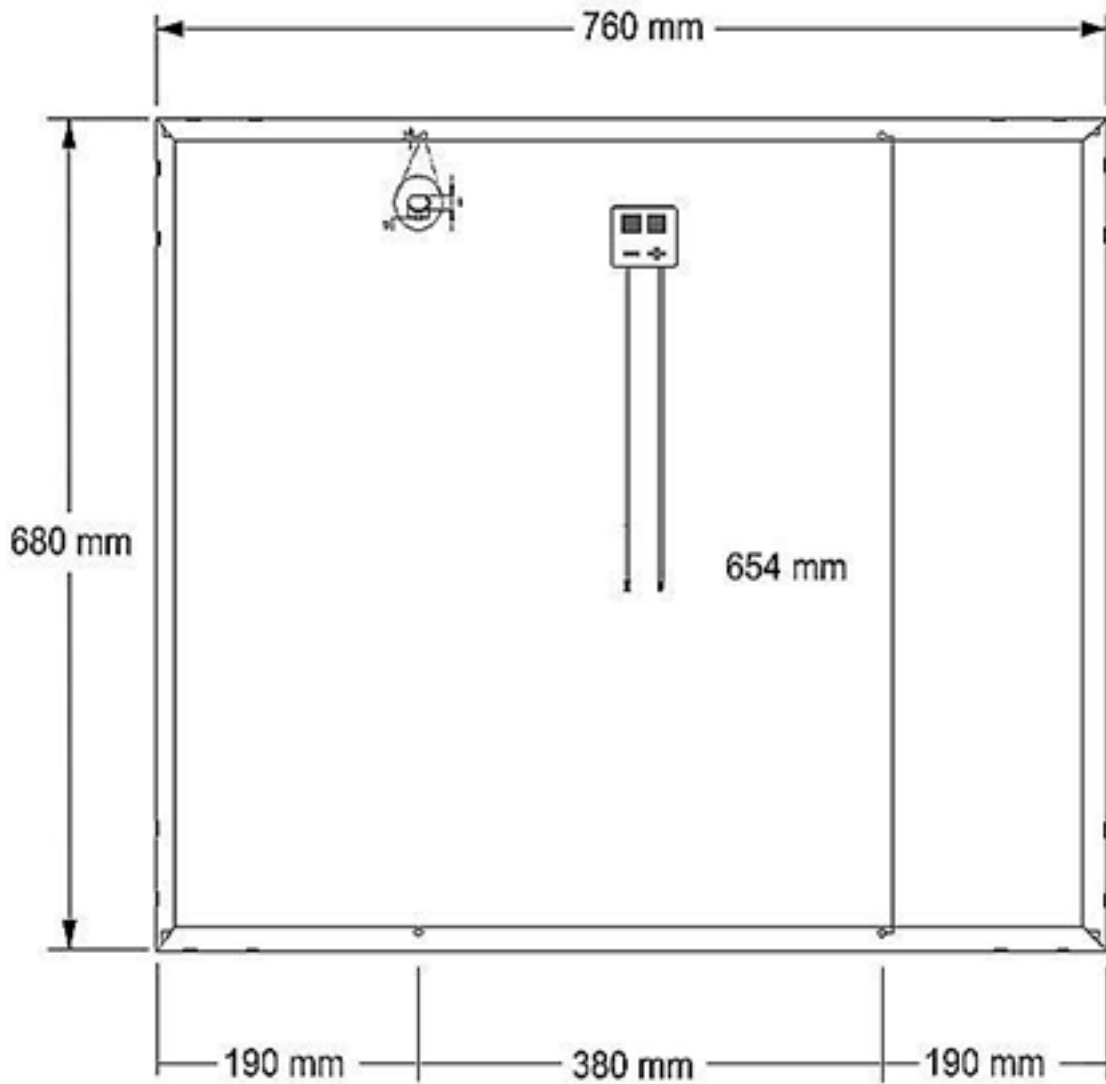


Features:

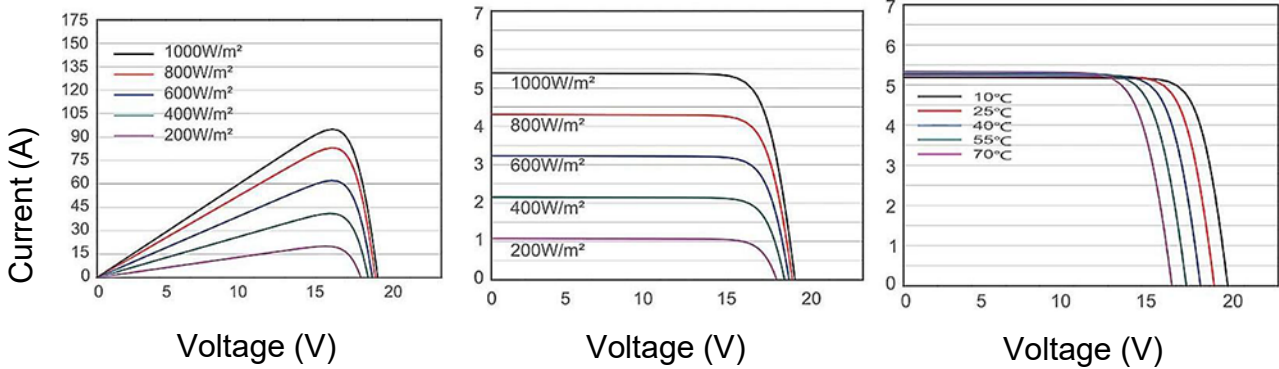
- **High Efficiency.** MBB technology is adopted to improve the photoelectric conversion efficiency and achieve higher power generation capacity.
- **Low Resistance Loss.** The design of multiple current collection lines reduces the flow distance of the current inside the cell and reduces resistance loss.
- **High Reliability.** By reducing the stress and thermal stress between cells, the reliability and long-term performance stability of the module are improved.
- **Beautiful Appearance.** Modules using MBB technology have a more detailed cell layout and less wire shielding, presenting a more beautiful appearance.
- **Adapt to Complex Environments.** With good anti-PID performance and durable anti-reflection coating, it can work in different climates and environmental conditions, and has certain pressure and wind resistance.

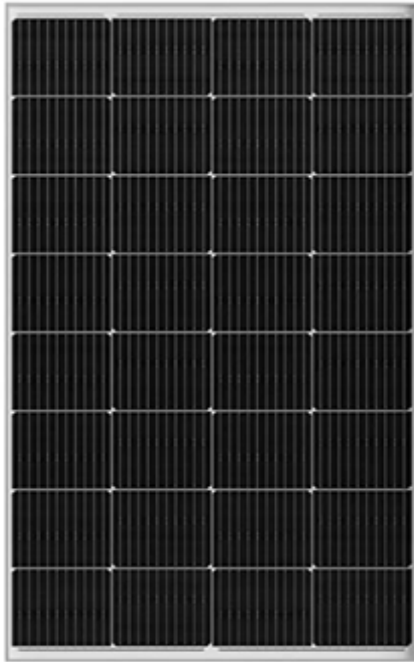
Mechanical Specifications	
Model	ATO-QN-182M 100W
Solar Cell	182 Mono
Power (W)	100W
Module Efficiency (%)	19.30%
Voltage at Pmax (Vmp)	18.24V
Current at Pmax (Imp)	5.48A
Open Circuit Voltage (Voc)	21.80V
Short Circuit Current (Isc)	5.81A
Dimension	680 * 760 * 25mm
Electrical Parameters at (STC)	
Power Tolerance (W)	± 3%
Mechanical Parameters	
Solar Cell (Type / Size)	Mono (182mm)
Solar Cells Number	32 Pcs (4 * 8)
Dimension	680 * 760 * 25mm
Weight	6.3 KG / Pcs
Junction Box	IP67 / 3 * bypass diode
Cable	2.0mm ² /500mm
Connector	Original MC4/Compatible MC4

Dimension



Characteristics



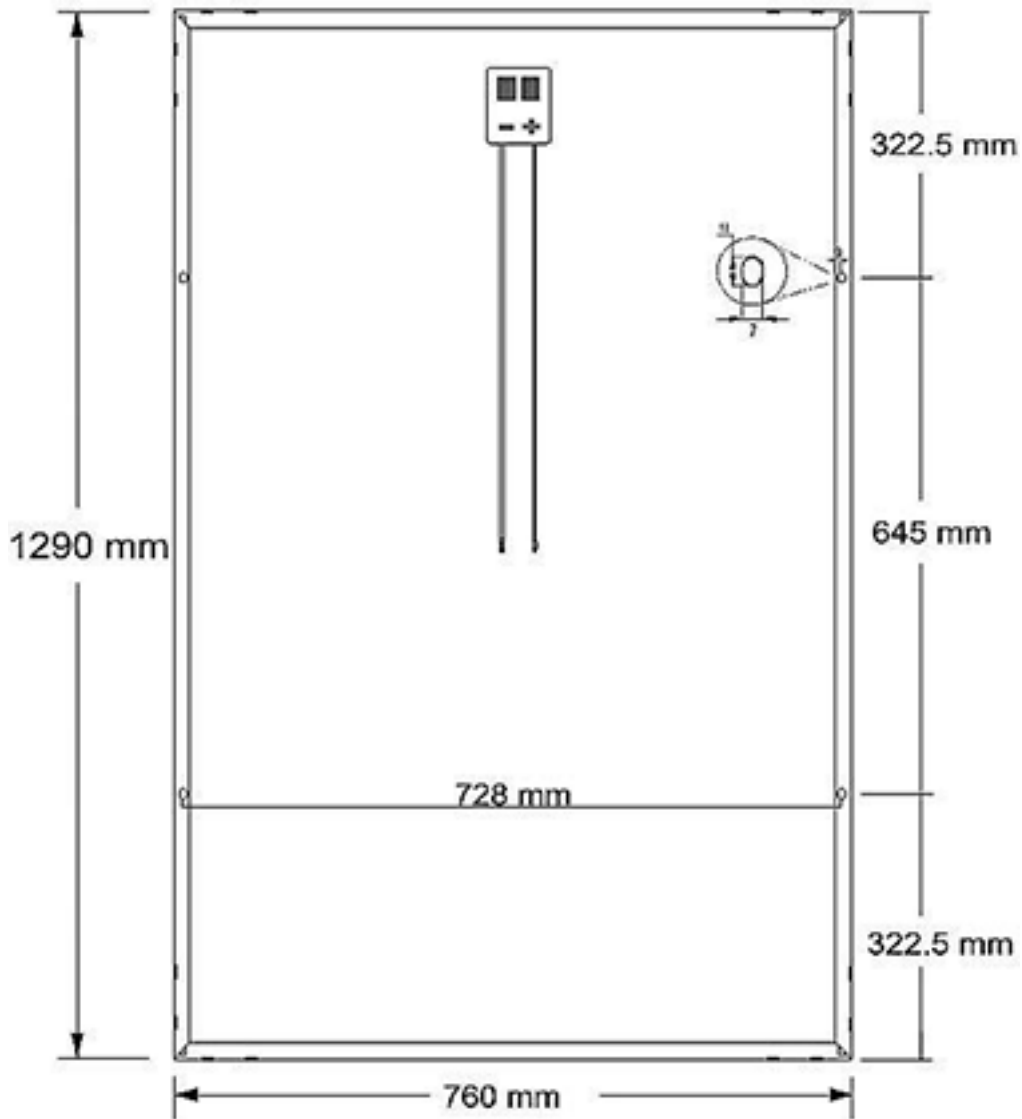


Features:

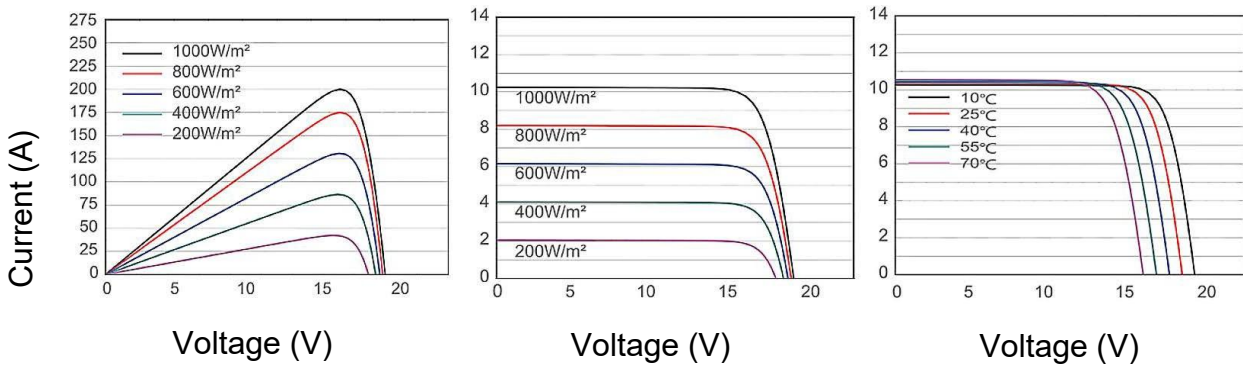
- **High Efficiency.** MBB technology is adopted to improve the photoelectric conversion efficiency and achieve higher power generation capacity.
- **Low Resistance Loss.** The design of multiple current collection lines reduces the flow distance of the current inside the cell and reduces resistance loss.
- **High Reliability.** By reducing the stress and thermal stress between cells, the reliability and long-term performance stability of the module are improved.
- **Beautiful Appearance.** Modules using MBB technology have a more detailed cell layout and less wire shielding, presenting a more beautiful appearance.
- **Adapt to Complex Environments.** With good anti-PID performance and durable anti-reflection coating, it can work in different climates and environmental conditions, and has certain pressure and wind resistance.

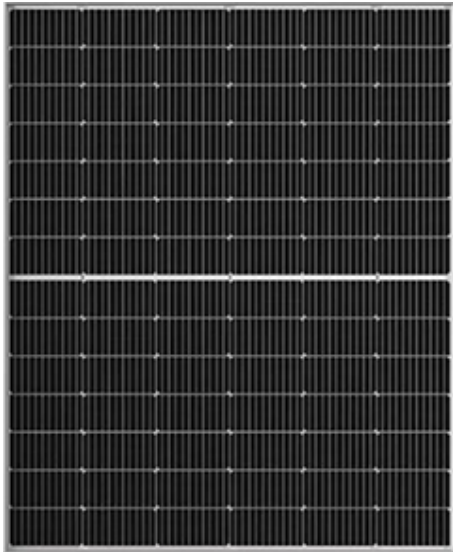
Mechanical Specifications	
Model	ATO-QN-182M 200W
Solar Cell	182 Mono
Power (W)	200W
Module Efficiency (%)	20.40%
Voltage at Pmax (Vmp)	18.24V
Current at Pmax (Imp)	10.96A
Open Circuit Voltage (Voc)	21.80V
Short Circuit Current (Isc)	11.62A
Dimension	1290 * 760 * 30mm
Electrical Parameters at (STC)	
Power Tolerance (W)	± 3%
Mechanical Parameters	
Solar Cell (Type / Size)	Mono (182mm)
Solar Cells Number	32 Pcs (4 * 8)
Dimension	1290 * 760 * 30mm
Weight	10.3 KG / Pcs
Junction Box	IP67 / 2 * bypass diode
Cable	4mm ² /900mm
Connector	Original MC4/Compatible MC4

Dimension



Characteristics



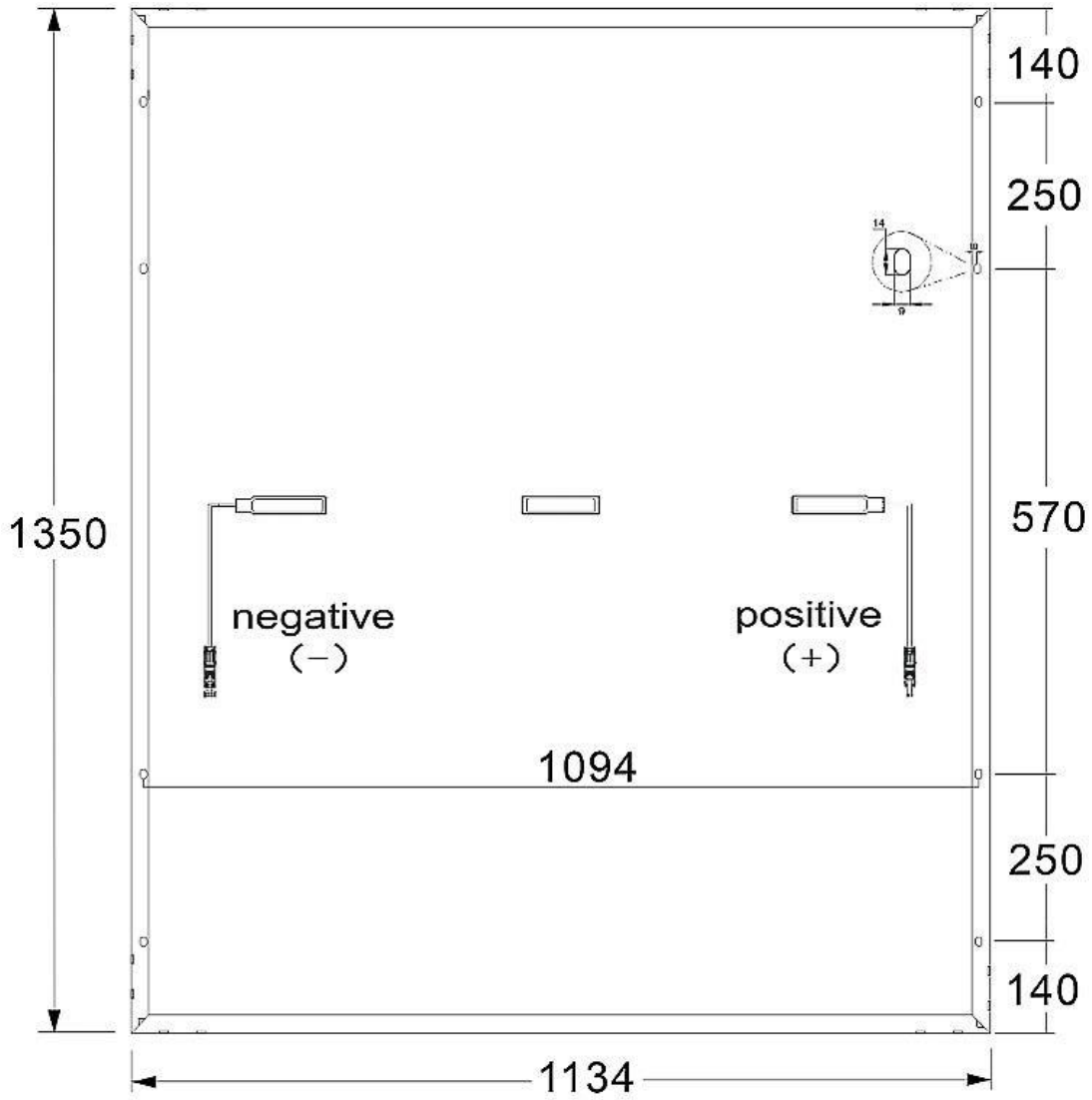


Features:

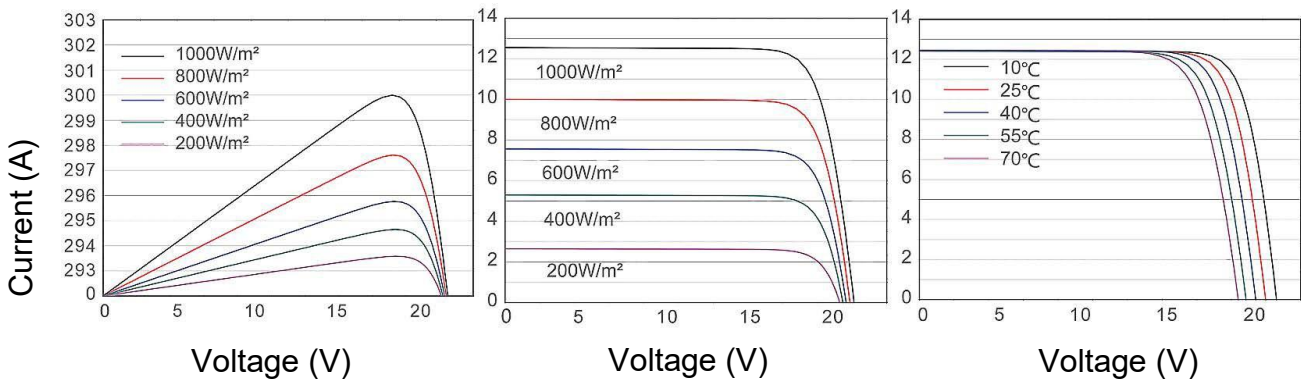
- **High Efficiency.** MBB technology is adopted to improve the photoelectric conversion efficiency and achieve higher power generation capacity.
- **Low Resistance Loss.** The design of multiple current collection lines reduces the flow distance of the current inside the cell and reduces resistance loss.
- **High Reliability.** By reducing the stress and thermal stress between cells, the reliability and long-term performance stability of the module are improved.
- **Beautiful Appearance.** Modules using MBB technology have a more detailed cell layout and less wire shielding, presenting a more beautiful appearance.
- **Adapt to Complex Environments.** With good anti-PID performance and durable anti-reflection coating, it can work in different climates and environmental conditions, and has certain pressure and wind resistance.

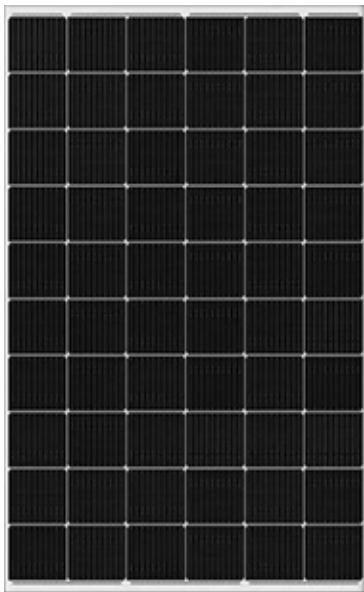
Mechanical Specifications	
Model	ATO-QN-182M 300W (Half Cut)
Solar Cell	182 Mono
Power (W)	300W
Module Efficiency (%)	19.60%
Voltage at Pmax (Vmp)	24V
Current at Pmax (Imp)	12.98A
Open Circuit Voltage (Voc)	27.5V
Short Circuit Current (Isc)	13.89A
Dimension	1350 * 1134 * 35mm
Liectrical Parameters at (STC)	
Power (W)	200W
Module Efficiency (%)	19.60%
Voltage at Pmax (Vmp)	23.22V
Current at Pmax (Imp)	13.08A
Open Circuit Voltage (Voc)	27.75V
Short Circuit Current (Isc)	14.02A
Power Tolerance (W)	±3%
Mechanical Parameters	
Solar Cell (Type / Size)	Mono (182mm)
Solar Cells Number	84 Pcs (6 * 7 * 2)
Dimension	1350 * 1134 * 35mm
Weight	KG / Pcs
Junction Box	IP68 / 3 * bypass diode
Cable	4.0mm ² / 300mm
Connector	//

Dimension



Characteristics



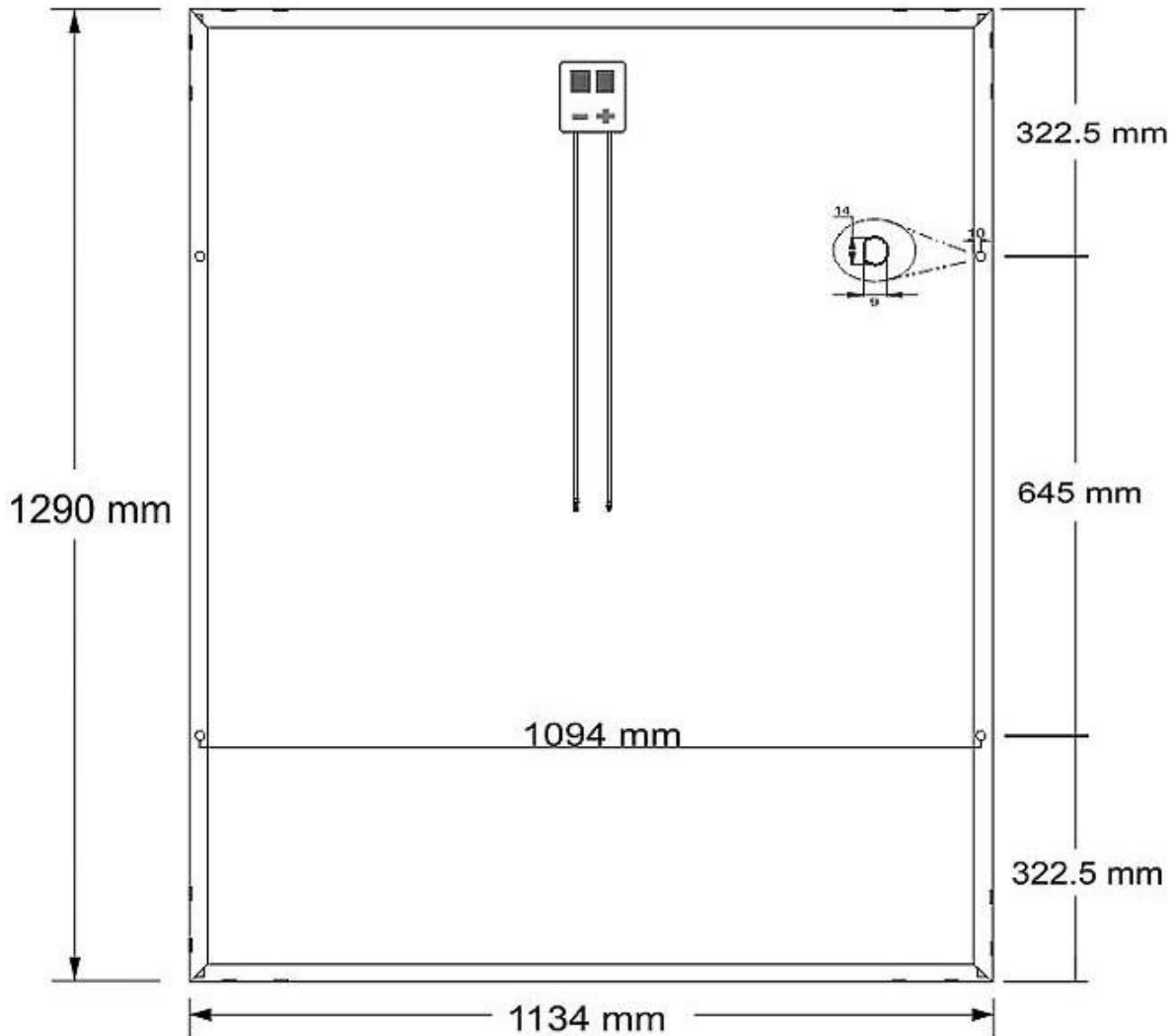


Features:

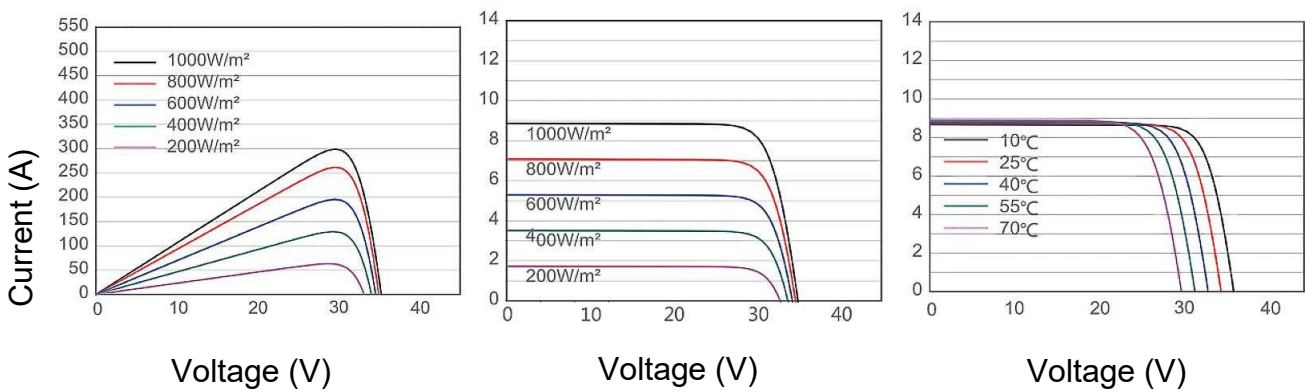
- **High Efficiency.** MBB technology is adopted to improve the photoelectric conversion efficiency and achieve higher power generation capacity.
- **Low Resistance Loss.** The design of multiple current collection lines reduces the flow distance of the current inside the cell and reduces resistance loss.
- **High Reliability.** By reducing the stress and thermal stress between cells, the reliability and long-term performance stability of the module are improved.
- **Beautiful Appearance.** Modules using MBB technology have a more detailed cell layout and less wire shielding, presenting a more beautiful appearance.
- **Adapt to Complex Environments.** With good anti-PID performance and durable anti-reflection coating, it can work in different climates and environmental conditions, and has certain pressure and wind resistance.

Mechanical Specifications	
Model	ATO-QN-182M 300W (Piece)
Solar Cell	182 Mono
Power (W)	300W
Module Efficiency (%)	20.50%
Voltage at Pmax (Vmp)	34.20V
Current at Pmax (Imp)	8.77A
Open Circuit Voltage (Voc)	41.04V
Short Circuit Current (Isc)	9.30A
Dimension	1290 * 1134 * 35mm
Liectrical Parameters at (STC)	
Power Tolerance (W)	± 3%
Mechanical Parameters	
Solar Cell (Type / Size)	Mono (182mm)
Solar Cells Number	60 Pcs (6 * 10)
Dimension	1290 * 1134 * 35mm
Weight	14.3 KG / Pcs
Junction Box	IP67 / 3 * bypass diode
Cable	4mm ² / 900mm
Connector	Original MC4 / Compatible MC4

Dimension



Characteristics



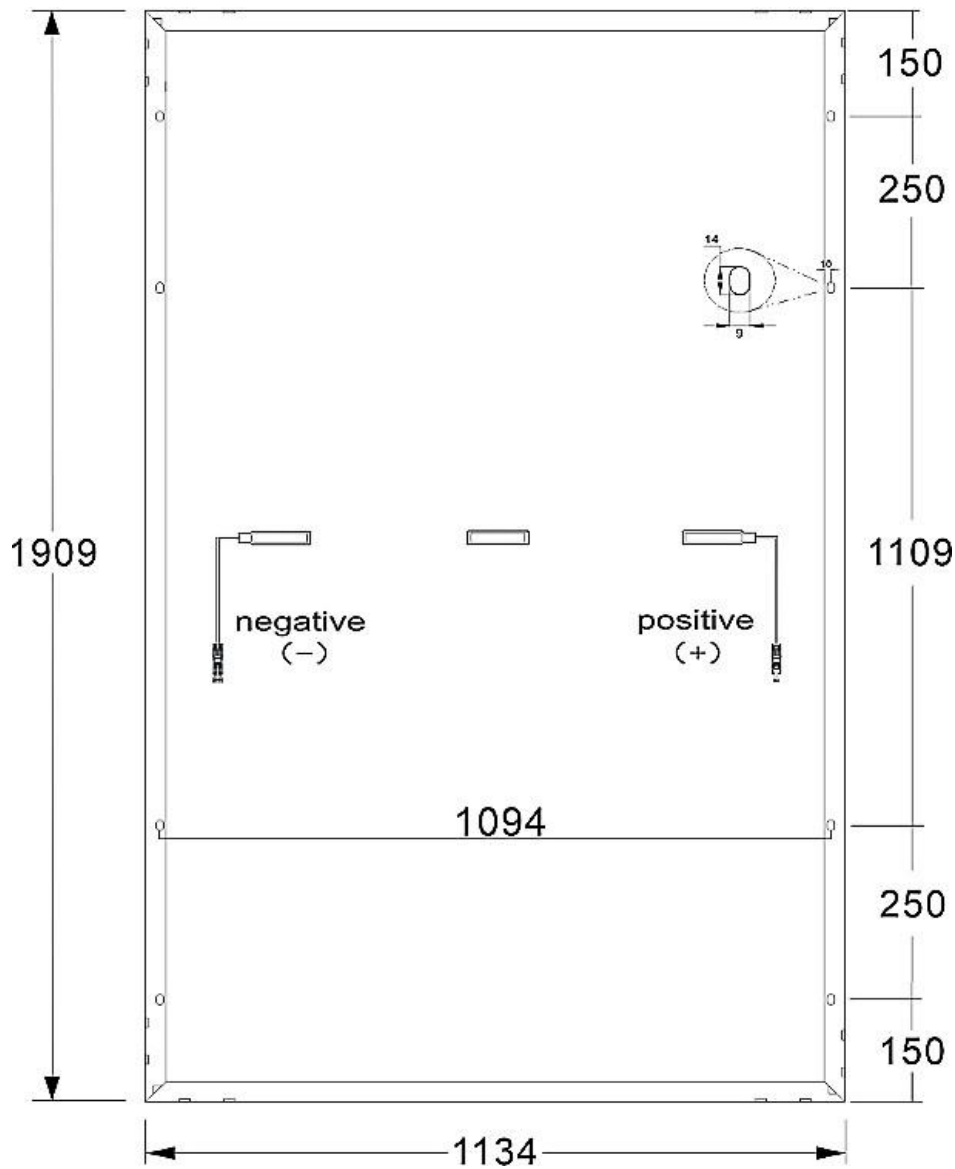
Features:



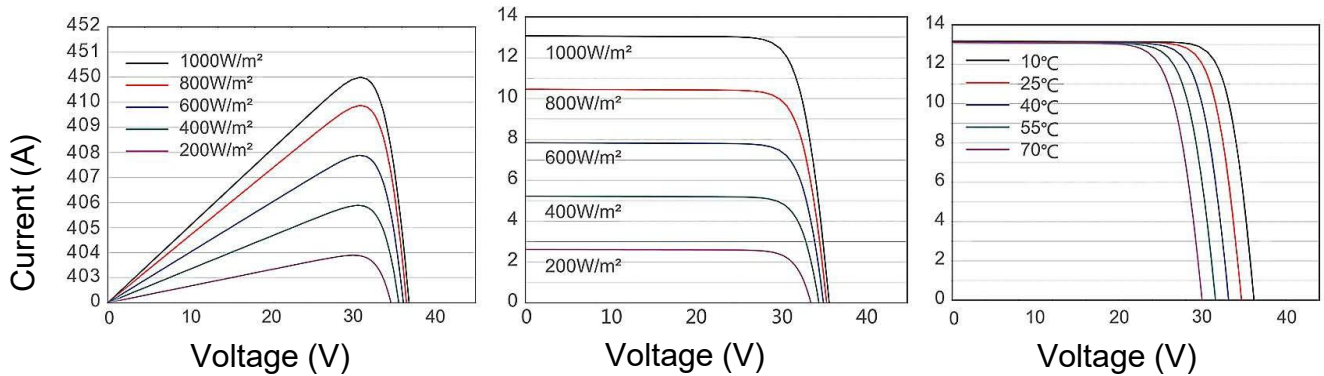
- **High Efficiency.** MBB technology is adopted to improve the photoelectric conversion efficiency and achieve higher power generation capacity.
- **Low Resistance Loss.** The design of multiple current collection lines reduces the flow distance of the current inside the cell and reduces resistance loss.
- **High Reliability.** By reducing the stress and thermal stress between cells, the reliability and long-term performance stability of the module are improved.
- **Beautiful Appearance.** Modules using MBB technology have a more detailed cell layout and less wire shielding, presenting a more beautiful appearance.
- **Adapt to Complex Environments.** With good anti-PID performance and durable anti-reflection coating, it can work in different climates and environmental conditions, and has certain pressure and wind resistance.

Mechanical Specifications	
Model	ATO-QN-182M 450W (Half Cut)
Solar Cell	182 Mono
Power (W)	450W
Module Efficiency (%)	20.80%
Voltage at Pmax (Vmp)	35V
Current at Pmax (Imp)	12.98A
Open Circuit Voltage (Voc)	41.25V
Short Circuit Current (Isc)	13.89A
Dimension	1909 * 1134 * 30mm
Liectrical Parameters at (STC)	
Voltage at Pmax (Vmp)	34.67V
Current at Pmax (Imp)	12.98A
Open Circuit Voltage (Voc)	41.25V
Short Circuit Current (Isc)	13.89A
Power Tolerance (W)	±3%
Mechanical Parameters	
Solar Cell (Type / Size)	Mono (182mm)
Solar Cells Number	120 Pcs (6 * 10 * 2)
Dimension	1909 * 1134 * 35mm
Weight	23.9 KG / Pcs
Junction Box	IP68 / 3 * bypass diode
Cable	4.0mm ² / 300mm
Connector	//

Dimension



Characteristics



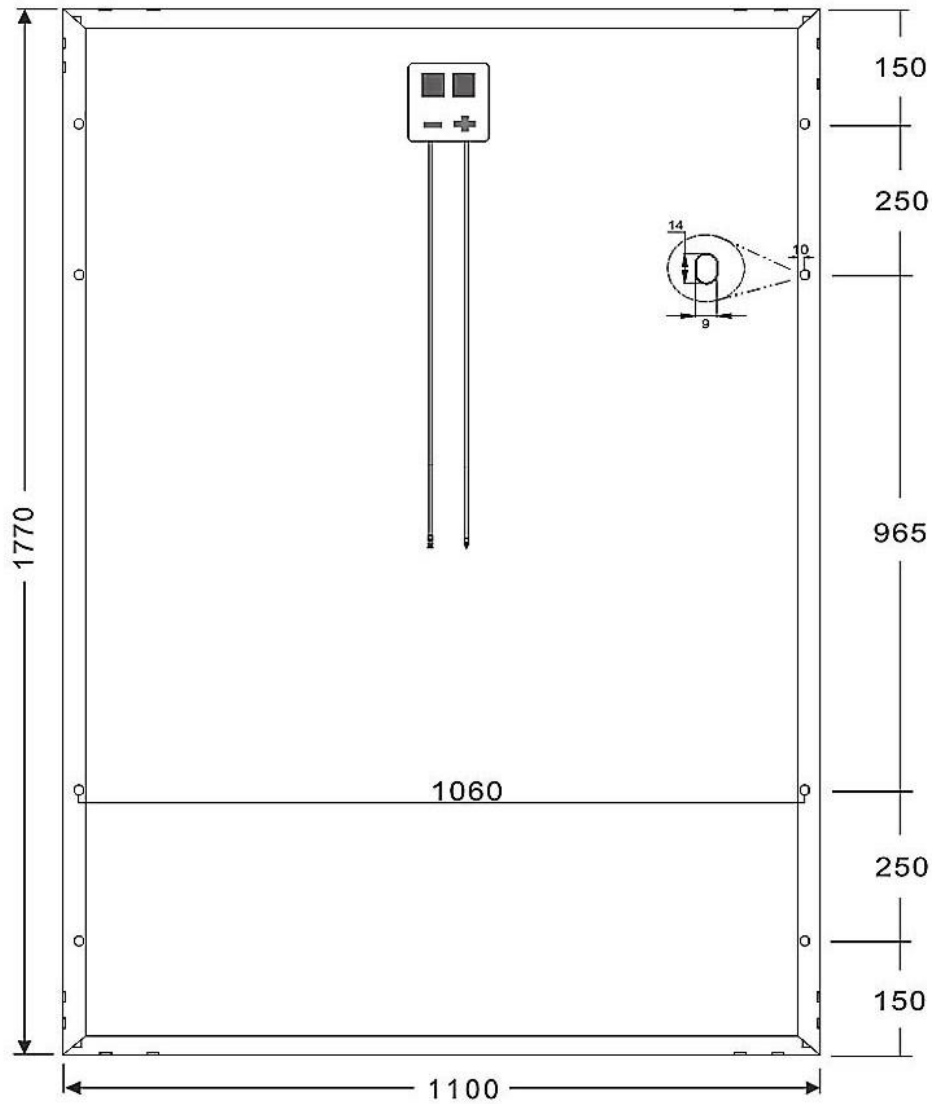


Features:

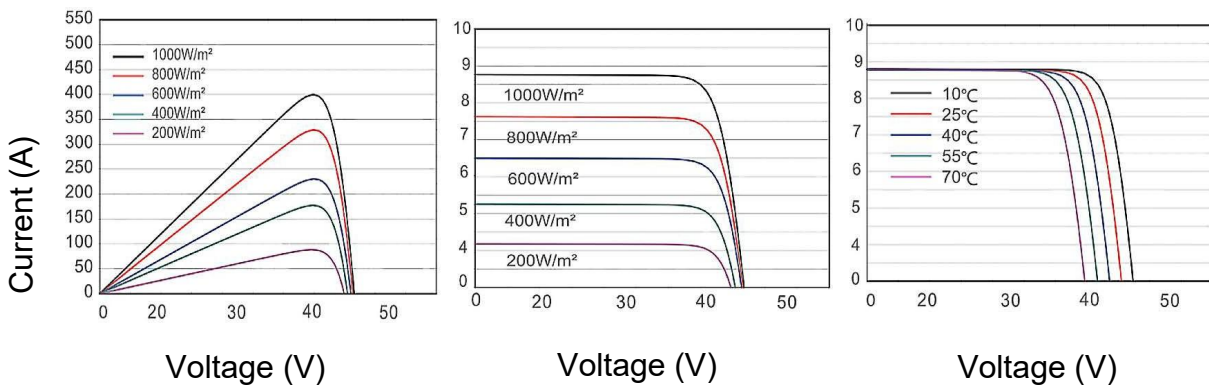
- **High Efficiency.** MBB technology is adopted to improve the photoelectric conversion efficiency and achieve higher power generation capacity.
- **Low Resistance Loss.** The design of multiple current collection lines reduces the flow distance of the current inside the cell and reduces resistance loss.
- **High Reliability.** By reducing the stress and thermal stress between cells, the reliability and long-term performance stability of the module are improved.
- **Beautiful Appearance.** Modules using MBB technology have a more detailed cell layout and less wire shielding, presenting a more beautiful appearance.
- **Adapt to Complex Environments.** With good anti-PID performance and durable anti-reflection coating, it can work in different climates and environmental conditions, and has certain pressure and wind resistance.

Mechanical Specifications	
Model	ATO-QN-210M 450W (Piece)
Solar Cell	210 Mono
Power (W)	450W
Module Efficiency (%)	20.66%
Voltage at Pmax (Vmp)	50.4V
Current at Pmax (Imp)	8.92A
Open Circuit Voltage (Voc)	61.56V
Short Circuit Current (Isc)	9.45A
Dimension	1980 * 1100 * 35mm
Liectrical Parameters at (STC)	
Power (W)	400W
Module Efficiency (%)	20.6%
Voltage at Pmax (Vmp)	44.8V
Open Circuit Voltage (Voc)	54.72V
Power Tolerance (W)	± 3%
Mechanical Parameters	
Solar Cell (Type / Size)	Mono (182mm)
Solar Cells Number	80 Pcs (5 * 16)
Dimension	1770 * 1100 * 35mm
Weight	21 KG / Pcs
Junction Box	IP67 / 3 * bypass diode
Cable	4mm ² / 1000mm
Connector	Original MC4 / Compatible MC4

Dimension



Characteristics



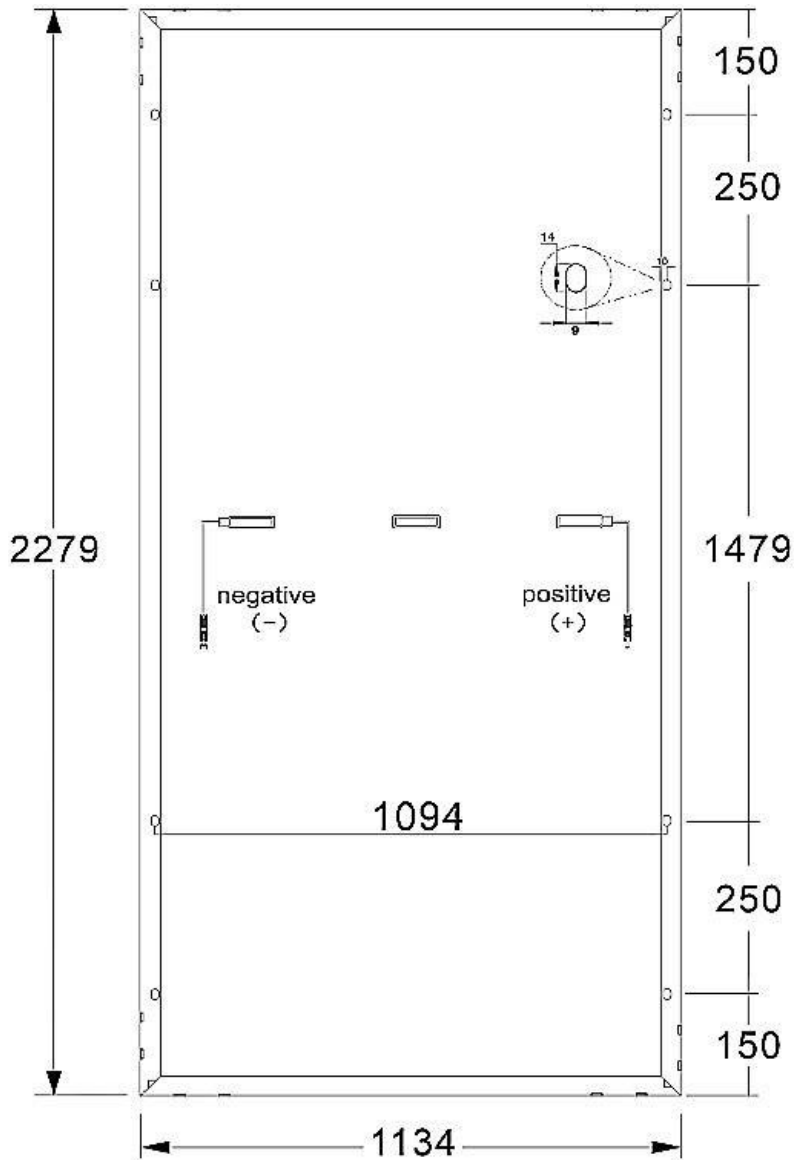


Features:

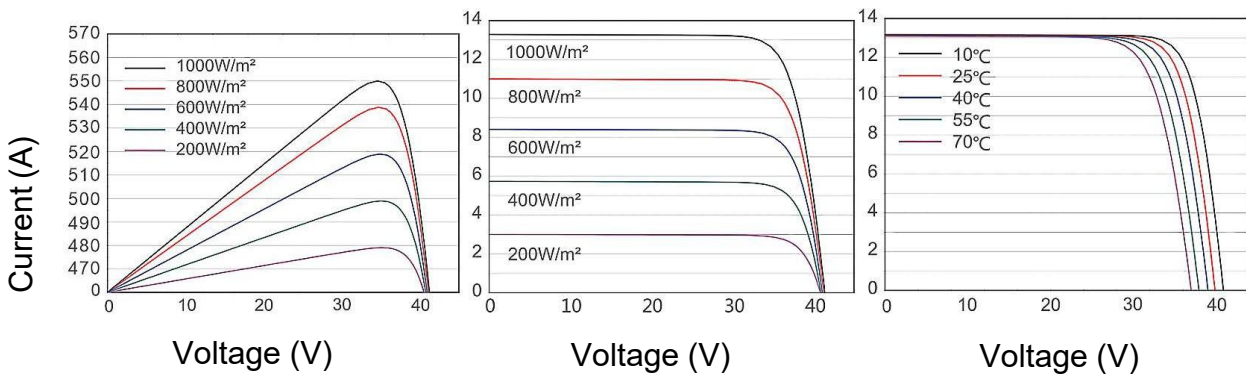
- **High Efficiency.** MBB technology is adopted to improve the photoelectric conversion efficiency and achieve higher power generation capacity.
- **Low Resistance Loss.** The design of multiple current collection lines reduces the flow distance of the current inside the cell and reduces resistance loss.
- **High Reliability.** By reducing the stress and thermal stress between cells, the reliability and long-term performance stability of the module are improved.
- **Beautiful Appearance.** Modules using MBB technology have a more detailed cell layout and less wire shielding, presenting a more beautiful appearance.
- **Adapt to Complex Environments.** With good anti-PID performance and durable anti-reflection coating, it can work in different climates and environmental conditions, and has certain pressure and wind resistance.

Mechanical Specifications	
Model	ATO-QN-182M 550W
Solar Cell	182 Mono
Power (W)	550W
Module Efficiency (%)	21.30%
Voltage at Pmax (Vmp)	41V
Current at Pmax (Imp)	13.11A
Open Circuit Voltage (Voc)	49.95V
Short Circuit Current (Isc)	14.05A
Dimension	2279 * 1134 * 35mm
Electrical Parameters at (STC)	
Voltage at Pmax (Vmp)	41.97V
Power Tolerance (W)	± 3%
Mechanical Parameters	
Solar Cell (Type / Size)	Mono (182mm)
Solar Cells Number	144 Pcs (6 * 24 * 2)
Dimension	2279 * 1134 * 35mm
Weight	28.32 KG / Pcs
Junction Box	IP68 / 3 * bypass diode
Cable	4mm ² /300mm
Connector	//

Dimension



Characteristics

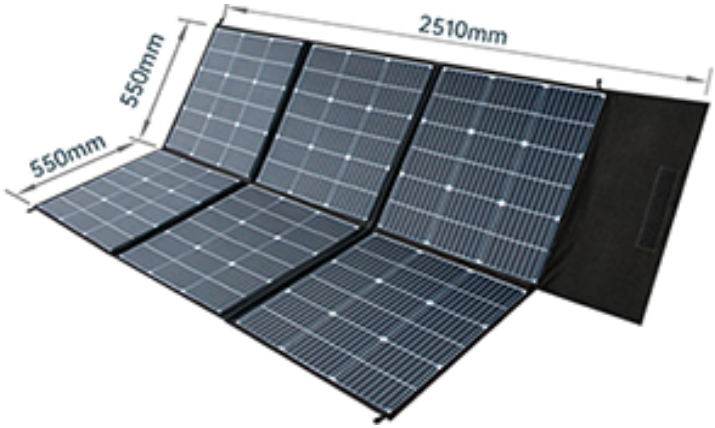
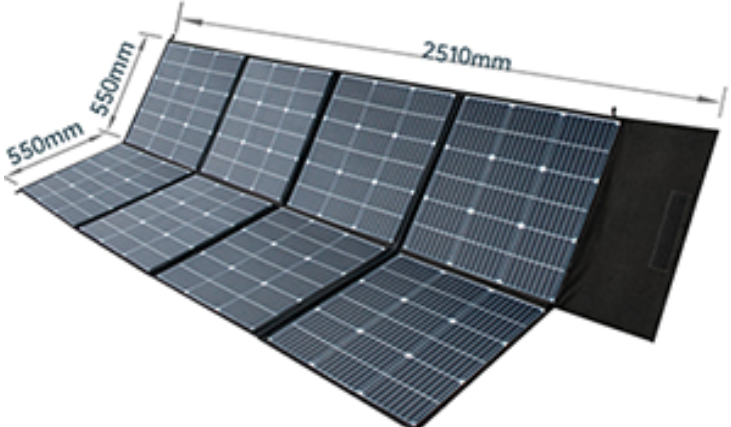
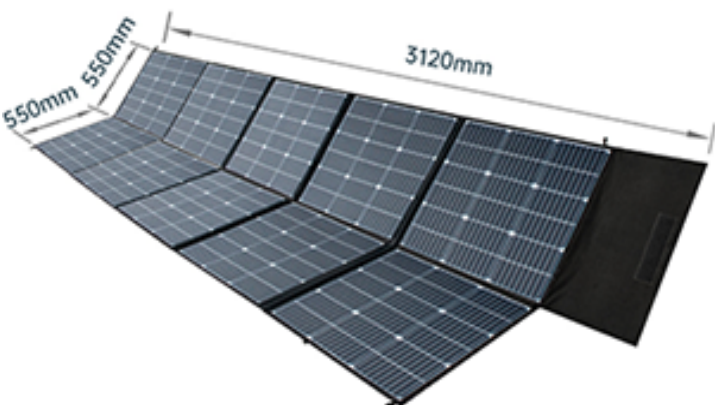




Features:

- Foldable design is better to put and easier to carry anywhere.
- Built-in bracket design is better for charging anytime, anywhere.
- ETFE film has excellent light transmittance and weather resistance, as well as heat, corrosion and UV resistance.
- Longer service life is for higher cost performance.

Mechanical Specifications	
Model	ATO-DF (Folding)
Solar Cell	Monocrystalline
Surface material	ETFE
Cloth color	Black
Open size	1920 × 1100mm / 2510 × 1100mm / 3120 × 1100mm
Folding size	570 × 550mm
No. of folding	6 = 2 * 3 / 8 = 2 * 4 / 10 = 2 * 5
Net weight	6.3 KG / 8.4 KG / 10.5 KG
Type of Connector	XT60 + Anderson + GX16 + DC
Additional design	Kickstands
Certifications	CE, FCC, ROHS, REACH
Electrical Specifications	
Standard Test Condition	Irrandiance 1000W/m ² Module temperature 25°C, AM=1.5
Maximum power (Pm)	300W / 400W / 500W
Voltage at max power (Vmp)	18V
Current at max power (Imp)	16.6A / 22.2A / 27.8A
Open circuit voltage (Voc)	21.6V
Short circuit current (Isc)	18.1A / 24.2A / 30.3A
Temperature Coefficient of Pmax	(-0.41% /°C)
Temperature Coefficient of Voc	(-0.33% /°C)
Temperature Coefficient of Isc	(+0.06% /°C)
Other Performance Datas	
Power Tolerance	-0%, +5%
Maximum System Voltage	1000V DC/ 1500V DC / 1500V DC
Maximum Series Fuse Rating	20A / 25A / 35A
Operating Temperature	-20°C~65°C
Noct*	45°C ±2 °C

Open Size	Maximum Power (Pm)	Product Photo
300W	1920 × 1100mm	 <p>A 3D perspective rendering of a 300W folding solar panel. The panel is shown in its open, flat configuration. It consists of three rectangular solar cells joined by foldable hinges. Dimension lines indicate a width of 550mm for each individual cell, a total width of 2510mm for the entire panel, and a height of 550mm. The panel is dark blue with a visible grid of solar cells.</p>
400W	2510 × 1100mm	 <p>A 3D perspective rendering of a 400W folding solar panel. The panel is shown in its open, flat configuration. It consists of four rectangular solar cells joined by foldable hinges. Dimension lines indicate a width of 550mm for each individual cell, a total width of 2510mm for the entire panel, and a height of 550mm. The panel is dark blue with a visible grid of solar cells.</p>
500W	3120 × 1100mm	 <p>A 3D perspective rendering of a 500W folding solar panel. The panel is shown in its open, flat configuration. It consists of five rectangular solar cells joined by foldable hinges. Dimension lines indicate a width of 550mm for each individual cell, a total width of 3120mm for the entire panel, and a height of 550mm. The panel is dark blue with a visible grid of solar cells.</p>



Features :

- Portable design is better to put and easier to carry anywhere.
- Built-in bracket design is better for charging anytime, anywhere.
- ETFE film has excellent light transmittance and weather resistance, as well as heat, corrosion and UV resistance.
- Longer service life is for higher cost performance.

Mechanical Specifications

Model	ATO-DF (Portable)
Solar Cell	Mono
Surface material	ETFE
Cloth color	Black
Open size	950 × 290mm / 970 × 410mm / 1330 × 530mm / 2290 × 540mm
Folding size	365 × 290mm / 370 × 410mm / 370 × 530mm / 610 × 540mm
No. of folding	3 = 1 * 3 / 3 = 1 * 3 / 4 = 1 * 4 / 4 = 1 * 4
Net weight	1.0 KG / 1.75 KG / 2.9 KG / 4.2 KG
Type of Connector	DC + USB + Type-C / Anderson + XT60 + GX16 + DC
Additional design	Kickstands
Certifications	CE, FCC, ROHS, REACH

Electrical Specifications

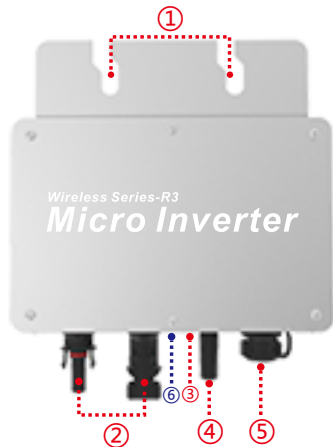
Standard Test Condition	Irradiance 1000W/m ² Module temperature 25°C, AM=1.5
Maximum power (Pm)	40W / 60W / 100W / 200W
Voltage at max power (Vmp)	20V
Current at max power (Imp)	2.0A / 3.0A / 5.0A / 10A
Open circuit voltage (Voc)	24V
Short circuit current (Isc)	2.15A / 3.2A / 5.4A / 10.75A
Temperature Coefficient of Pmax	(-0.41% / °C)
Temperature Coefficient of Voc	(-0.33% / °C)
Temperature Coefficient of Isc	(+0.06% / °C)

Other Performance Data

Power Tolerance	-0%, +5%/± 5%
Maximum System Voltage	300V DC / 700V DC / 700V DC / 1000V DC
Maximum Series Fuse Rating	5A / 5A / 10A / 15A
Operating Temperature	-20°C~65°C
Noct*	45°C ± 2°C

Solar Inverter Catalog

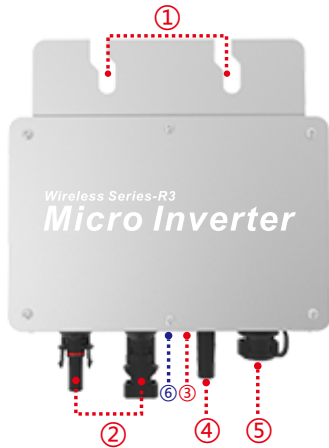




Structure :

- ① : Micro inverter fixing hole
- ② : 30~54V DC Input connected to PV module
- ③ : LED status indicator
- ④ : Wi-Fi Antenna
- ⑤ : AC output terminal, connect previous/next/
connect to grid access point
- ⑥ : Network function key (only in Wi-Fi version)

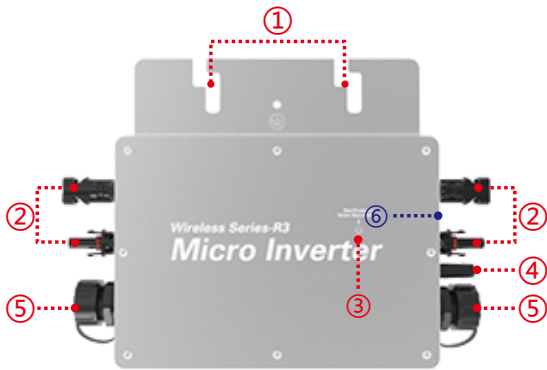
Mechanical Specifications	
Model	ATO-WVC-300W
Maximum input power	330Watt
Output voltage mode	120 / 230V Auto switch
PV Open circuit voltage	33 - 54V
Operating voltage range	22-60V
Starting voltage range	22-60V
short-circuit current	14A
Maximum working current	11.5A
Output parameters	@120V / @230V
Output peak power	330Watt
Rated output power	300Watt
Output current	2.5A / 1.3A
AC voltage range	85 - 160V / 185 - 265V
AC frequency range	47~52 / 57~62Hz
Power factor	> 95%
Number of branch connections	15PCS (Single) / 30PCS (Single)
Output efficiency	
Static MPPT efficiency	99.5%
Max output efficiency	95%
Loss of power at night	< 0.5W
Total current harmonics	< 5%
Appearance and technical features	
Temperature range	-40°C to + 65°C
Size (L × W × H)	165mm × 176mm × 38mm
Net amount	0.8 KG
Waterproof grade	Ip65 NEMA3R



Structure :

- ① : Micro inverter fixing hole
- ② : 30~54V DC Input connected to PV module
- ③ : LED status indicator
- ④ : Wi-Fi Antenna
- ⑤ : AC output terminal, connect previous/next/ connect to grid access point
- ⑥ : Network function key (only in Wi-Fi version)

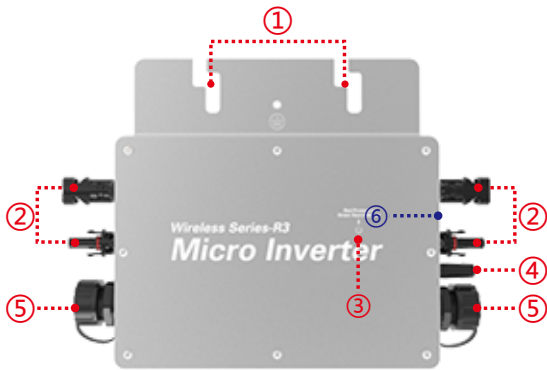
Mechanical Specifications	
Model	ATO-WVC-350W
Maximum input power	420Watt
Output voltage mode	120 / 230V Auto switch
PV Open circuit voltage	33 - 54V
Operating voltage range	22-60V
Starting voltage range	22-60V
short-circuit current	14A
Maximum working current	11.5A
Output parameters	@120V / @230V
Output peak power	420Watt
Rated output power	350Watt
Output current	3A / 1.6A
AC voltage range	85 - 160V / 185 - 265V
AC frequency range	47~52 / 57~62Hz
Power factor	> 95%
Number of branch connections	15PCS (Single) / 30PCS (Single)
Output efficiency	
Static MPPT efficiency	99.5%
Max output efficiency	95%
Loss of power at night	< 0.5W
Total current harmonics	< 5%
Appearance and technical features	
Temperature range	-40°C to + 65°C
Size (L × W × H)	165mm × 176mm × 38mm
Net amount	0.8 KG
Waterproof grade	Ip65 NEMA3R



Structure :

- ① : Micro inverter fixing hole
- ② : 30~54V DC Input connected to PV module
- ③ : LED status indicator
- ④ : Wi-Fi Antenna
- ⑤ : AC output terminal, connect previous/next/
connect to grid access point
- ⑥ : Network function key (only in Wi-Fi version)

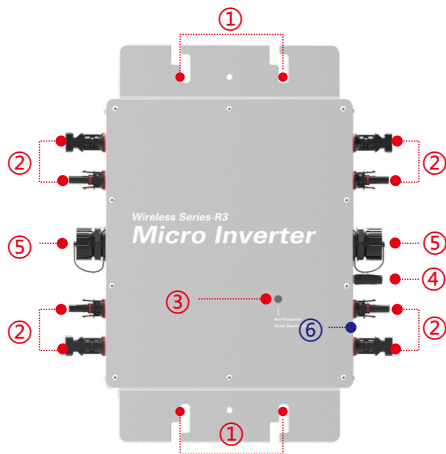
Mechanical Specifications	
Model	ATO-WVC-600W
Maximum input power	620Watt
Output voltage mode	120 / 230V Auto switch
PV Open circuit voltage	33 - 54V
Operating voltage range	22-60V
Starting voltage range	22-60V
short-circuit current	30A
Maximum working current	23A
Output parameters	@120V / @230V
Output peak power	660Watt
Rated output power	600Watt
Output current	5A / 2.6A
AC voltage range	85 - 160V / 185 - 265V
AC frequency range	47~52 / 57~62Hz
Power factor	> 94%
Number of branch connections	6PCS (Single) / 12PCS (Single)
Output efficiency	
Static MPPT efficiency	99.5%
Max output efficiency	95%
Loss of power at night	< 0.5W
Total current harmonics	< 5%
Appearance and technical features	
Temperature range	-20°C to + 50°C
Size (L × W × H)	283mm × 200mm × 41.6mm
Net amount	1.44 KG
Waterproof grade	Ip65 NEMA3R



Structure :

- ① : Micro inverter fixing hole
- ② : 30~54V DC Input connected to PV module
- ③ : LED status indicator
- ④ : Wi-Fi Antenna
- ⑤ : AC output terminal, connect previous/next/ connect to grid access point
- ⑥ : Network function key (only in Wi-Fi version)

Mechanical Specifications	
Model	ATO-WVC-700W
Maximum input power	720Watt
Output voltage mode	120 / 230V Auto switch
PV Open circuit voltage	33 - 54V
Operating voltage range	22-60V
Starting voltage range	22-60V
short-circuit current	32A
Maximum working current	27A
Output parameters	@120V / @230V
Output peak power	760Watt
Rated output power	700Watt
Output current	6A / 3A
AC voltage range	85 - 160V / 185 - 265V
AC frequency range	47~52 / 57~62Hz
Power factor	> 94%
Number of branch connections	6PCS (Single) / 12PCS (Single)
Output efficiency	
Static MPPT efficiency	99.5%
Max output efficiency	95%
Loss of power at night	< 0.5W
Total current harmonics	< 5%
Appearance and technical features	
Temperature range	-20°C to + 50°C
Size (L × W × H)	283mm × 200mm × 41.6mm
Net amount	1.44 KG
Waterproof grade	Ip65 NEMA3R

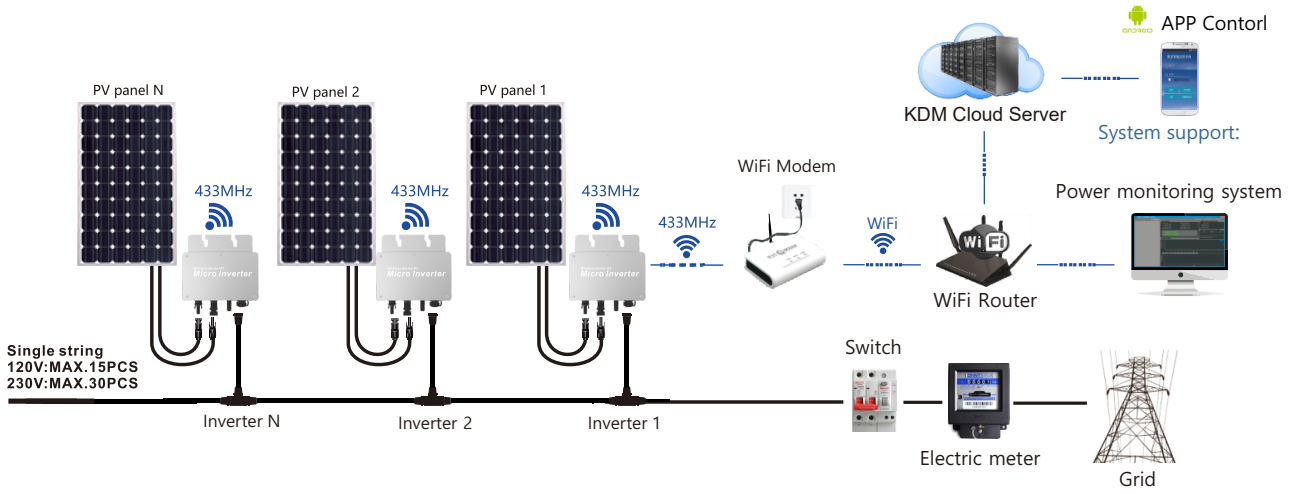


Structure :

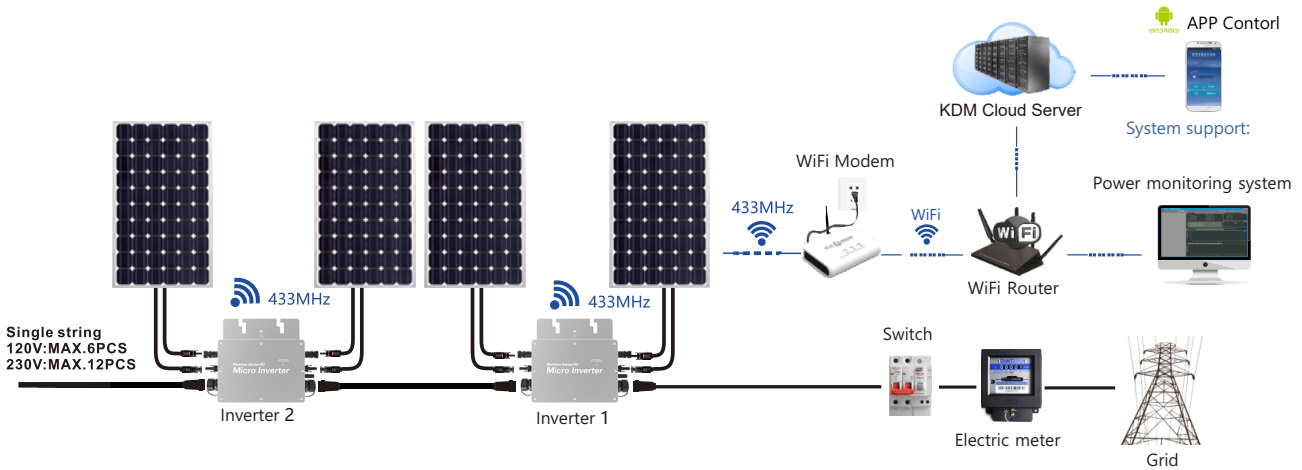
- ① : Micro inverter fixing hole
- ② : 30~54V DC Input connected to PV module
- ③ : LED status indicator
- ④ : Wi-Fi Antenna
- ⑤ : AC output terminal, connect previous/next/ connect to grid access point
- ⑥ : Network function key (only in Wi-Fi version)

Mechanical Specifications	
Model	ATO-WVC-1200W
Maximum input power	1300Watt
Output voltage mode	120 / 230V Auto switch
PV Open circuit voltage	33 - 54V
Operating voltage range	22-60V
Starting voltage range	22-60V
short-circuit current	55A
Maximum working current	48A
Output parameters	@120V / @230V
Output peak power	1300Watt
Rated output power	1200Watt
Output current	10A / 5.22A
AC voltage range	85 - 160V / 185 - 265V
AC frequency range	47~52 / 57~62Hz
Power factor	> 94%
Number of branch connections	3PCS (Single) / 6PCS (Single)
Output efficiency	
Static MPPT efficiency	99.5%
Max output efficiency	95%
Loss of power at night	< 0.5W
Total current harmonics	< 5%
Appearance and technical features	
Temperature range	-20°C to + 50°C
Size (L × W × H)	370mm × 300mm × 41.6mm
Net amount	3.0 KG
Waterproof grade	Ip65 NEMA3R

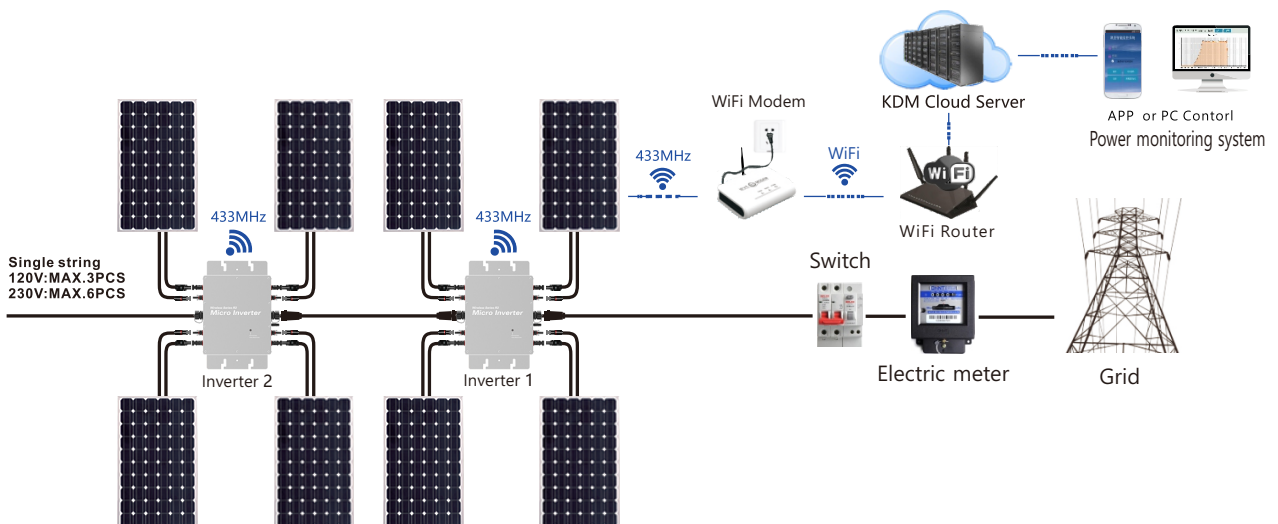
WVC-300-350W Installation Drawing



WVC-600-700W Installation Drawing

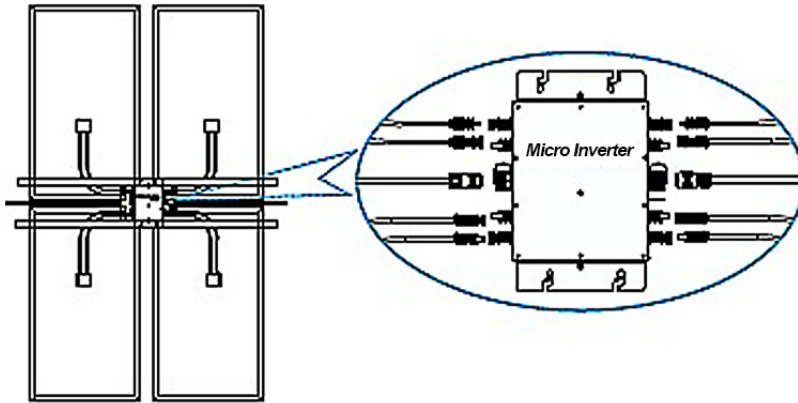


WVC-1200W Installation Drawing

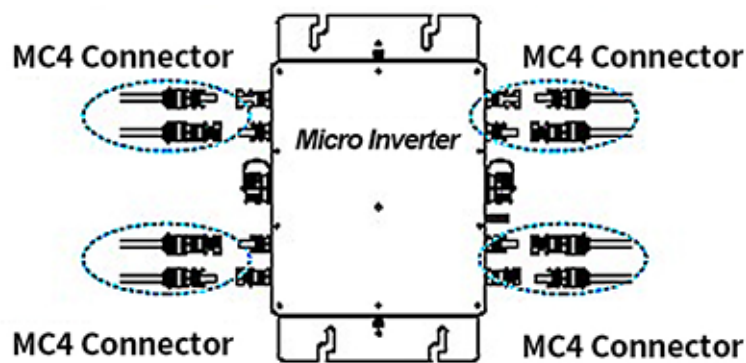


Installation of Micro Inverter

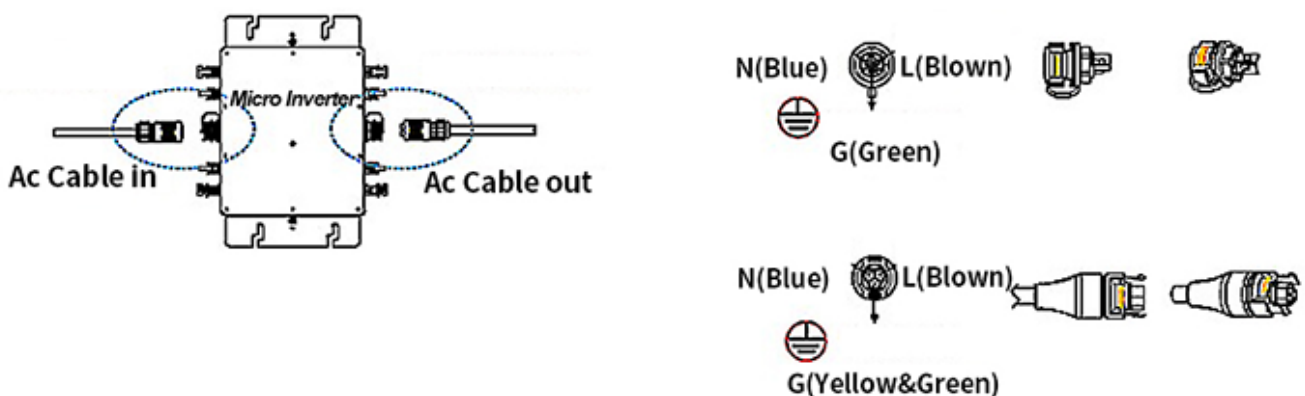
Step1 : Installation for fixed the inverter on the PV holder with the screws attached is as following:



Step2 : Connect the two DC terminal of the PV to the inverter positive to positive, negative to negative. Show below:



Step3 : Open the waterproof cap on AC output side of the micro inverter, then plug to AC power line. Show below:



Step4 : Plug the AC output line to main AC cable;

Step5 : Repeat the first step to the third step to complete the installation of micro inverters;



3kw

Features :

- Pure sine wave output, self-consumption, integrated into the power grid.
- Programmable power priority for photovoltaic, battery or grid.
- User-adjustable battery charging current, suitable for different types of batteries.
- Optional operating modes: grid-connected, off-grid, grid-connected with backup.
- Built-in timer for various on/off operating modes.
- Monitoring software real-time status display and control.

Rated Power	3000W	
PV INPUT (DC)	Maximum DC Power	4500W
	Nominal DC Voltage	DC 360V
	Maximum DC Voltage	DC 500V
	Start-up Voltage / Initial Feeding Voltage	116V / 150V
	MPP Voltage Range	DC 250V-DC 450V
	Maximum Input Current	18A
	Isc PV (absolute maximum)	18A
	Max. inverter back feed current to the array	0A
GRID OUTPUT (AC)	Nominal Output Voltage	AC 208 / 220 / 230 / 240V
	Output Voltage Range	AC 184V-265V
	Output Frequency Range	47.5-51.5Hz~59.3-60.5Hz
	Nominal Output Current	13A
	Inrush Current/Duration	17A
	Maximum Output Fault Current/Duration	51A
	Maximum output Overcurrent Protection	51A
	Power Factor Range	0.9 lead - 0.9 lag
AC INPUT	AC Start-up Voltage	AC 120V-140V
	Auto Restart Voltage	AC 180V
	Acceptable Input Voltage Range	AC 170V-280V
	Nominal Frequency	50Hz / 60Hz
	AC Input Power	5100VA / 5100W
	Maximum AC Input Current	30A
	Inrush Input Current	30A



5kw

Features :

- Combine power for self-use and grid connection.
- The priority supply sequence of solar, battery power and city power can be set.
- The charging current can be adjusted according to a variety of battery types.
- Optional modes: grid-connected mode, off-grid mode and grid-connected energy storage mode.
- The built-in timer can set the machine on/off time.
- The LCD panel can display various detailed information.
- Configure multiple communication ports.

Rated Power	5000W	
PV INPUT (DC)	Maximum DC Power	10000W
	Nominal DC Voltage	DC 720V
	Maximum DC Voltage	DC 900V
	Working DC Voltage Range	DC 200V-900V
	Start-up Voltage / Initial Feeding Voltage	250V / 300V
	MPP Voltage Range	DC 250V-DC 850V
	Full Load MPP Voltage Range	DC 500V-DC 800V
	Maximum Input Current	2*10A
	Isc PV (absolute maximum)	25A
	Max. inverter back feed current to the array	0A
GRID OUTPUT (AC)	Nominal Output Voltage	AC 230V
	Output Voltage Range	AC 184V-265V
	Output Frequency Range	47.5-51.5Hz~59.3-60.5Hz
	Nominal Output Current	21.8A / phase
	Inrush Current/Duration	25A / 20ms
	Maximum Output Fault Current/Duration	65A / 1ms
	Maximum output Overcurrent Protection	65A
Power Factor Range	0.9 lead - 0.9 lag	
AC INPUT	AC Start-up Voltage	AC 120V-140V
	Auto Restart Voltage	AC 180V
	Acceptable Input Voltage Range	AC 170V-280V
	Nominal Frequency	50Hz / 60Hz
	AC Input Power	5100VA / 5100W
	Maximum AC Input Current	40A
	Inrush Input Current	40A / 1ms



5.5kw

Features :

- Pure sine wave output, self-consumption, integrated into the power grid.
- Programmable power priority for photovoltaic, battery or grid.
- User-adjustable battery charging current, suitable for different types of batteries.
- Optional operating modes: grid-connected, off-grid, grid-connected with backup.
- Built-in timer for various on/off operating modes.
- Monitoring software real-time status display and control.

Rated Power	5500W	
PV INPUT (DC)	Maximum DC Power	6500W
	Nominal DC Voltage	DC 360V60V
	Maximum DC Voltage	DC 500V
	Working DC Voltage Range	DC 120V-500V
	Start-up Voltage / Initial Feeding Voltage	116V / 150V
	MPP Voltage Range	DC 120V-DC 450V
	Full Load MPP Voltage Range	DC 250V-DC 450V
	Maximum Input Current	2*13A
GRID OUTPUT (AC)	Nominal Output Voltage	AC 230V
	Output Voltage Range	AC 184V-265V
	Output Frequency Range	47.5-51.5Hz~59.3-60.5Hz
	Nominal Output Current	23.9A / phase
AC INPUT	AC Start-up Voltage	AC 120V-140V
	Auto Restart Voltage	AC 180V
	Acceptable Input Voltage Range	AC 170V-280V
	Nominal Frequency	50Hz / 60Hz
	AC Input Power	5100VA / 5100W
	Maximum AC Input Current	40A
BATTERY MODE OUTPUT (AC)	Nominal Output Voltage	AC 230V
	Output Frequency Range	50 Hz / 60 Hz (auto sensing)
	Output Waveform	Pure sine wave
	Output Power	5500VA / 5500W
	Efficiency (DC to AC)	93%



10kw

Features :

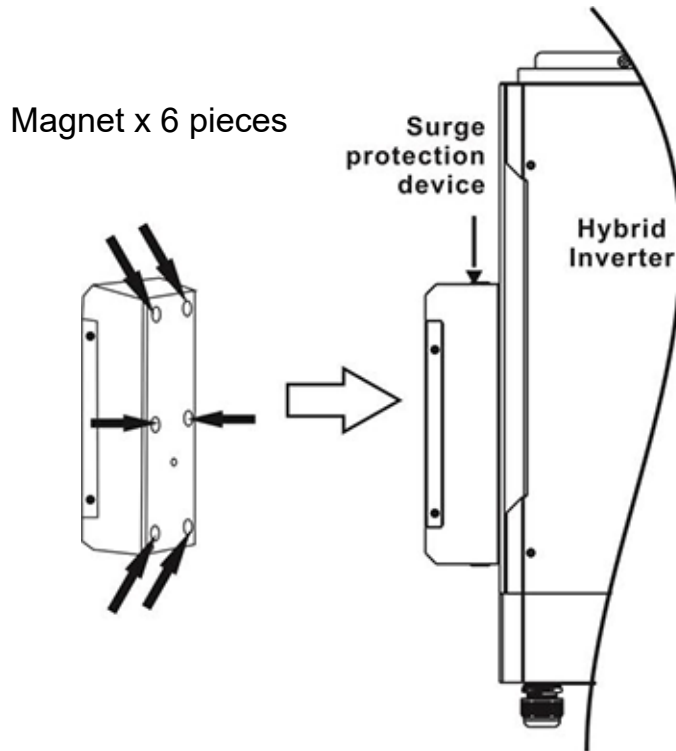
- Combine power for self-use and grid connection.
- The priority supply sequence of solar, battery power and city power can be set.
- The charging current can be adjusted according to a variety of battery types.
- Optional modes: grid-connected mode, off-grid mode and grid-connected energy storage mode.
- The built-in timer can set the machine on/off time.
- The LCD panel can display various detailed information.
- Configure multiple communication ports.

Rated Power	10000W	
PV INPUT (DC)	Maximum DC Power	14850W
	Nominal DC Voltage	DC 720V
	Maximum DC Voltage	DC 900V
	Working DC Voltage Range	DC 300V-900V
	Start-up Voltage / Initial Feeding Voltage	320V / 350V
	MPP Voltage Range	DC 350V-DC 850V-DC 400-800V
	Full Load MPP Voltage Range	DC 500V-DC 800V
	Maximum Input Current	2*18.6A
	Isc PV (absolute maximum)	25A
	Max. inverter back feed current to the array	0A
GRID OUTPUT (AC)	Nominal Output Voltage	AC 230V(P-N)-AC 400V(P-P)
	Output Voltage Range	AC 184V-265V per phase
	Output Frequency Range	47.5-51.5Hz~59.3-60.5Hz
	Nominal Output Current	14.5A / phase
	Inrush Current/Duration	17A / 20ms
	Maximum Output Fault Current/Duration	51A / 1ms
	Maximum output Overcurrent Protection	51A
Power Factor Range	0.9 lead - 0.9 lag	
AC INPUT	AC Start-up Voltage	AC 120V-140V
	Auto Restart Voltage	AC 180V
	Acceptable Input Voltage Range	AC 170V-280V
	Nominal Frequency	50Hz / 60Hz
	AC Input Power	10000VA / 10000W
	Maximum AC Input Current	40A
	Inrush Input Current	40A / 1ms

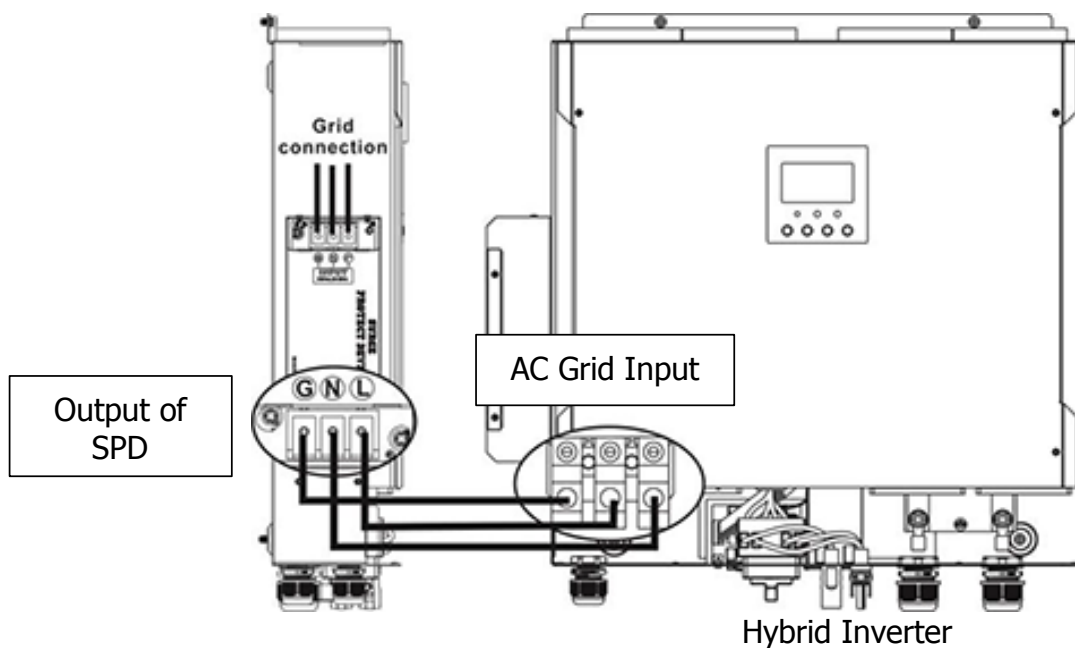
1. Surge Protection Device Installation

CAUTION: Be sure to disconnect from AC power before installing surge protection device.

Step 1: Install the SPD on the left hand side of the inverter with six magnets.



Step 2: Connect the OUTPUT of SPD to AC grid connectors of Hybrid Inverter. The INPUT of SPD is connected to AC utility.



2. Grid (Utility) Connection

Preparation

Before connecting to AC utility, please install a **separate** AC circuit breaker between surge protection device (SPD) and AC utility. This will ensure the inverter can be securely disconnected during maintenance and fully protected from over current of AC input.

NOTE1: Although this inverter is equipped with 250VAC/40A fuse, it's still necessary to install a separate circuit breaker for safety consideration. Please use 250VAC/40A circuit breaker between surge protection device (SPD) and AC utility.

NOTE2: The overvoltage category of the AC input is III. It should be connected to the power distribution.

WARNING! For safety and efficiency, it's very important to use appropriate cables for grid (utility) connection. To reduce risk of injury, please use the proper cable size recommended below.

Suggested cable requirement for AC wire



Features :

- High performance maximum power point tracking (MPPT)
- Directly connected to the solar panels (do not need to connect the battery)
- AC 0 angle with high precision auto-detection
- Synchronous high-frequency modulation
- Use SPWM directly to make pure sine wave output
- Power automatically locked (APL), make the output power more stable

Specifications	
Grid-connected series model	300W / 500W / 600W / 800W / 1000W
Recommended solar panel	420Wp / 620Wp / 720Wp / 1050Wp / 1250Wp
DC maximum input power	400W / 600W / 700W / 900W / 1200W
DC maximum voltage	V _{pv} DC 30.2V
DC voltage range	V _{pv} DC 10.5V~28V
Maximum output power factor	99%
Maximum input current	20A / 30A / 40A / 45A / 65A
AC output power	300W / 500W / 600W / 800W / 1000W
AC maximum output power	300W / 500W / 600W / 1000W
Back pressure protection	Fuse
AC standard voltage range	90~ 140V AC / 180~ 260V AC
AC frequency range	55Hz~63Hz / 45Hz~ 53Hz
Output current total harmonic distortion distortion	THDIAC <5%
Phase difference	<1%
Output short circuit protection	Limiting
Show	Led
Install	Wall hanging
Cool down method	Fan
Standby power consumption	<2W
Night power consumption	<1W
Ambient temperature range	-25 °C~60°C
Environment humidity	0~ 99%
Waterproof	Indoor type design

GTI professional core technology

- More than ten national patents
- High performance maximum power point capture
- Unique inverter processing core
- (MPPT) Powerful Automatic Power Lock (APL)

First class quality assurance

- 1 year free product quality guarantee
- Commitment to lifetime service (telephone and PC remote service only)



Photovoltaic smart inverters can adapt to harsh environments and are suitable for residential, factories, and ground-mounted power stations.



The conversion efficiency is as high as 88% or more using advanced inverter grid-connected technology and higher output efficiency.



The air-cooling method is used to actively dissipate heat to ensure that the inverter can fully dissipate heat during operation and extend the machine's service life.



Excellent low-light automatic locking function (APL) makes your photovoltaic power station more efficient (morning, evening, rainy days)



The high-performance maximum power point tracking (MPPT) function can better track changes in solar luminosity and control different output powers, effectively capturing and collecting sunlight.



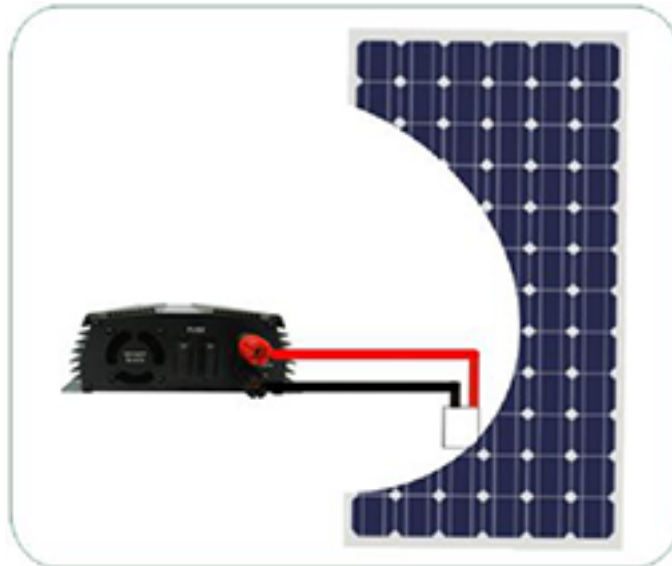
With good resistance to salt spray and ammonia corrosion, the product passed the TÜV North Germany test.

Precautions before installation

- A)** Please ensure that the open circuit voltage of the solar panel is within the range 10.5-28VDC. It is recommended to use solar panels with a rated voltage of 18V or 24V battery.
- B)** Please make sure that the local power grid voltage and frequency are consistent with the voltage and frequency output by the inverter.
- C)** Please install the inverter in a place with low humidity and good ventilation to avoid moisture and overheating of the inverter, and remove flammable and explosive items around it.
- D)** Maximum DC input 4AWG cable is recommended and can handle cables in excess of 50A.
- E)** The optimal length of the DC input cable is 8M or shorter. A cable that is too long will cause the DC voltage from the solar panel to the inverter to drop and cause losses.
- G)** When connecting photovoltaic power generation and mains power, you must first disconnect the mains power, check that the line connection is correct, and then connect the mains power.
- H)** When the photovoltaic system needs to be disconnected from the mains switch during use, the photovoltaic power generation must be cut off first.
- I)** When using this product, avoid children touching or playing with it to avoid electric shock.
- J)** Non-professionals are not allowed to disassemble the machine. Only qualified maintenance personnel can repair this product.

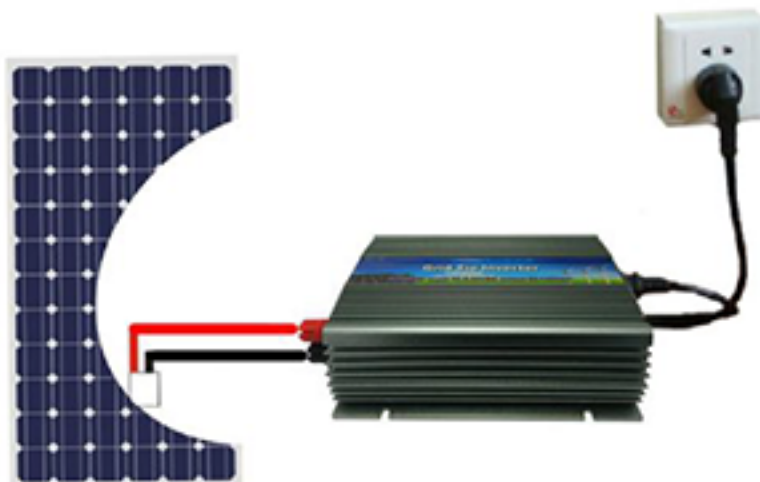
1. DC side connection

Connect the positive output wire of the solar panel to the red input terminal of the inverter and the negative output wire of the solar panel to the black input terminal of the inverter respectively. Be sure to tighten the nuts of the terminals to avoid poor contact. As shown in picture 1:



2. AC terminal connection.

Before connecting the inverter power cord to the mains socket please disconnect the mains power. Then plug the hole end of the AC power cord into the three-pin interface of the inverter; connect the pin end of the AC power cord to the three-pin socket of the mains. Please make sure that both ends are firmly connected to avoid poor contact. As shown in Figure 2:

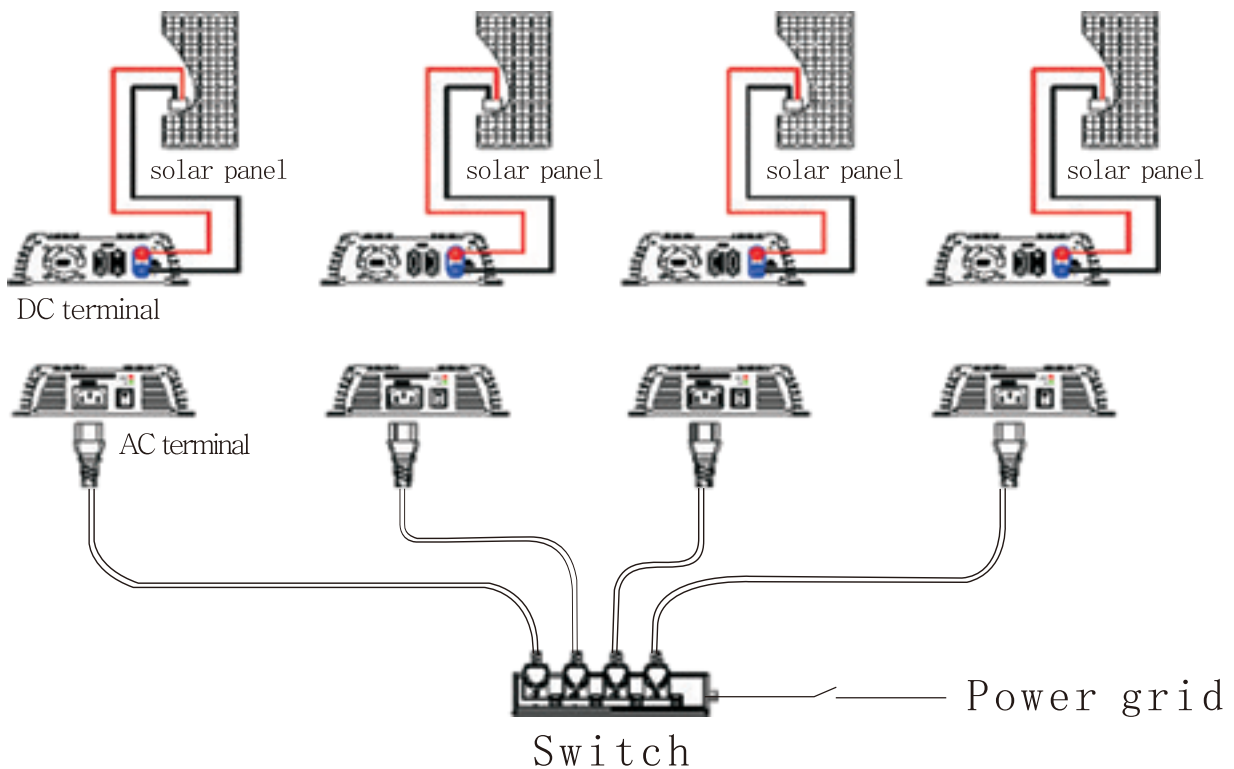


3. Use

After the correct connection, turn on the mains switch and the inverter switch successively. The green indicator light of the inverter lights up and the inverter works normally.

4. Connection method for multiple units used in parallel.

In order to meet higher power requirements, this product can be stacked. For example, four 300W grid-connected inverters can be connected in parallel to output 1200W, and the number of stacks is not limited. Use as shown in Figure 3:





Features :

- Equipped with EI low-frequency transformer, it has strong impact resistance.
- LCD display allows real-time viewing of setting parameters and operating status.
- Three working modes (mains priority, battery priority, energy-saving mode).
- Equipped with stable voltage and frequency output, the load is stronger.
- Support to be used for diesel or gasoline generators.
- Support RS485 communication port/APP (optional).

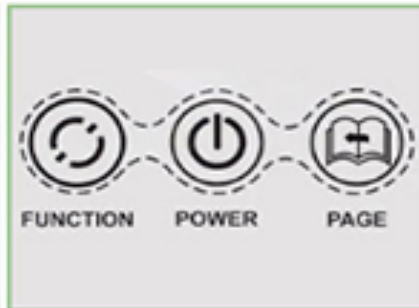
Technical data							
Model		0712	0724	1024	1524	1548	2024 2048
Rated capacity		1000VA		1500VA	2000VA		3000VA
Rated Power load		700W		1000W	1500W		2000W
Input	DC input	DC10.5-15V (12V) / DC21-30V (24V) / DC42-60V (48V) / DC84-120V (96V)					
	AC input voltage(Vac)	190-275VA					
	Frequency (Hz)	50 / 60Hz ± 5% (Auto)					
Output	Voltage	220V / 230V / 240V / 110V ± 3%					
	Frequency	50 / 60Hz ± 5%					
	Wave form	Pure sine wave					
	Transfer Efficiency	≥ 85% (full load)					
	Wave form Distortion Factor	≤ 3%					
	Output Power Load Factor	≥ 0.8 (> 30% Load)					
Protection	Overload Capacity	105 - 120% 30S; 120 - 150% 10S; > 150% 5S					
	Low Voltage	DC10.5V (12V) / DC21V (24V) / DC42 (48V) / DC84V, Alarm and shut down					
	High Temperature	85° Auto shut-down after alarm					
	Short-circuit	Automatic shut-down					
	Over Voltage	DC17V (12V) / DC33V (21V) / DC66 (48V) / DC128V, Auto shut-down after alarm					
Grid charge	Charge Current	0-30A adjust					
Function	Setting	Chiese&English optional, Time&date setting, Contrast, Brightness, Sound, Voltage switch, Grid charge, Clear records, Reset					
	Work Mode(Optional)	Grid first / battery first / standby mode					
	LCD Display	Record (Fault Record), system information					
Others	Switch Time	≤4mS					
	Cooling Method	fan					
	Noise [dBA]	<60					
	Work Temperature(°C)	-10 ~ 50					
	Environment Humidity	10% ~ 90% (No condensation)					
	Working Elevation(M)	< 3000 (>1000m, Derating)					

Technical data										
Model		3024	0724	4048	4096	5048	5096	6048	6096	
Rated capacity		5000VA		6000VA		7000VA		8000VA		
Rated Power load		3000W		4000W		5000W		6000W		
Input	DC input	DC10.5-15V (12V) / DC21-30V (24V) / DC42-60V (48V) / DC84-120V (96V)								
	AC input voltage(Vac)	190-275VA								
	Frequency (Hz)	50 / 60Hz ± 5% (Auto)								
Output	Voltage	220V / 230V / 240V / 110V ± 3%								
	Frequency	50 / 60Hz ± 5%								
	Wave form	Pure sine wave								
	Transfer Efficiency	≥ 85% (full load)								
	Wave form Distortion Factor	≤ 3%								
	Output Power Load Factor	≥ 0.8 (> 30% Load)								
Protection	Overload Capacity	105 - 120% 30S; 120 - 150% 10S; > 150% 5S								
	Low Voltage	DC10.5V (12V) / DC21V (24V) / DC42 (48V) / DC84V, Alarm and shut down								
	High Temperature	85° Auto shut-down after alarm								
	Short-circuit	Automatic shut-down								
	Over Voltage	DC17V (12V) / DC33V (21V) / DC66 (48V) / DC128V, Auto shut-down after alarm								
Grid charge	Charge Current	0-30A adjust								
Function	Setting	Chiese&English optional, Time&date setting, Contrast, Brightness, Sound, Voltage switch, Grid charge, Clear records, Reset								
	Work Mode(Optional)	Grid first / battery first / standby mode								
	LCD Display	Record (Fault Record), system information								
Others	Switch Time	≤4mS								
	Cooling Method	fan								
	Noise [dBA]	<60								
	Work Temperature(°C)	-10 ~ 50								
	Environment Humidity	10% ~ 90% (No condensation)								
	Working Elevation(M)	< 3000 (>1000m, Derating)								

Off grid inverter structure



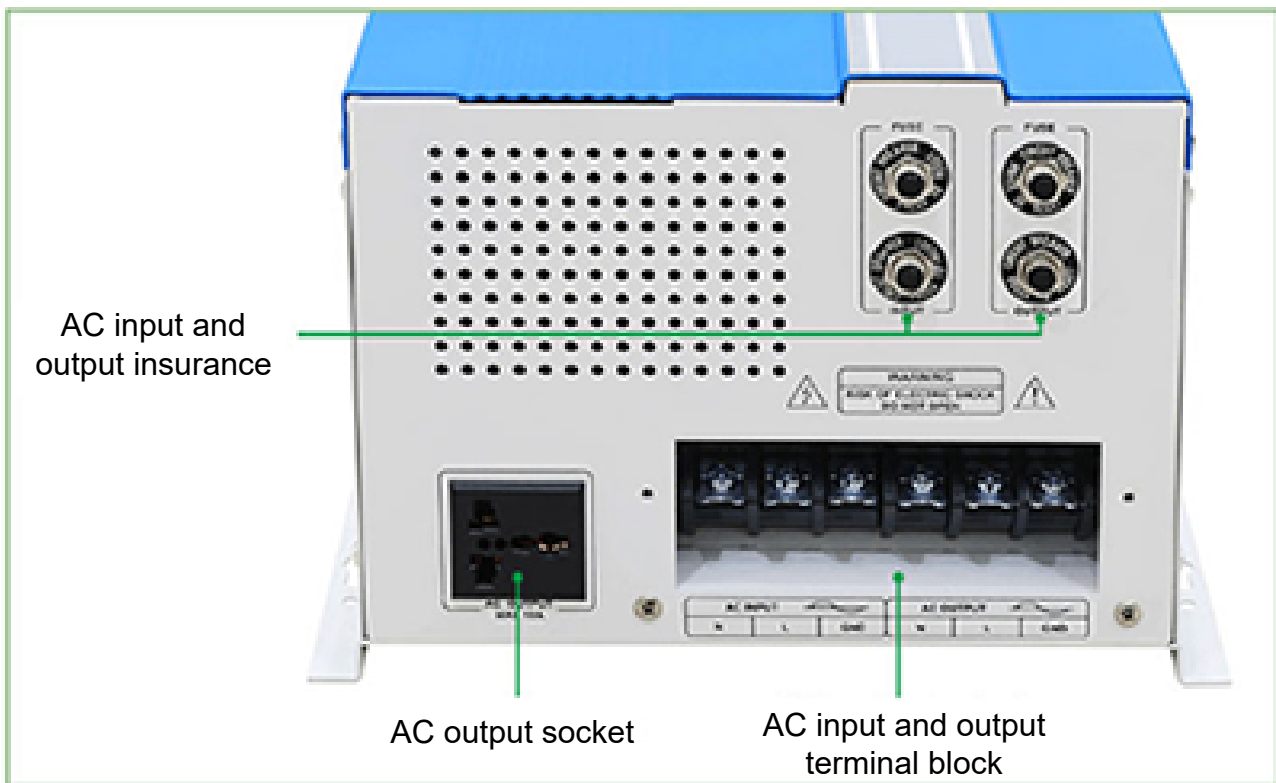
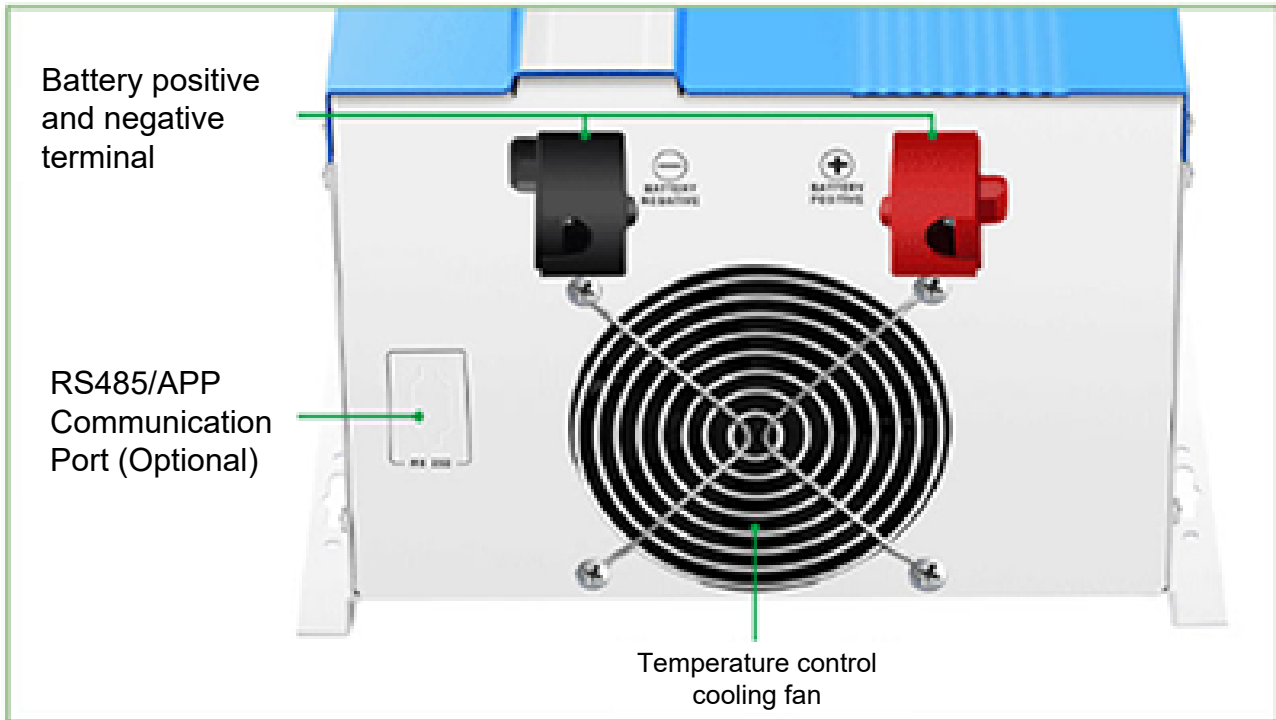
LCD integration display



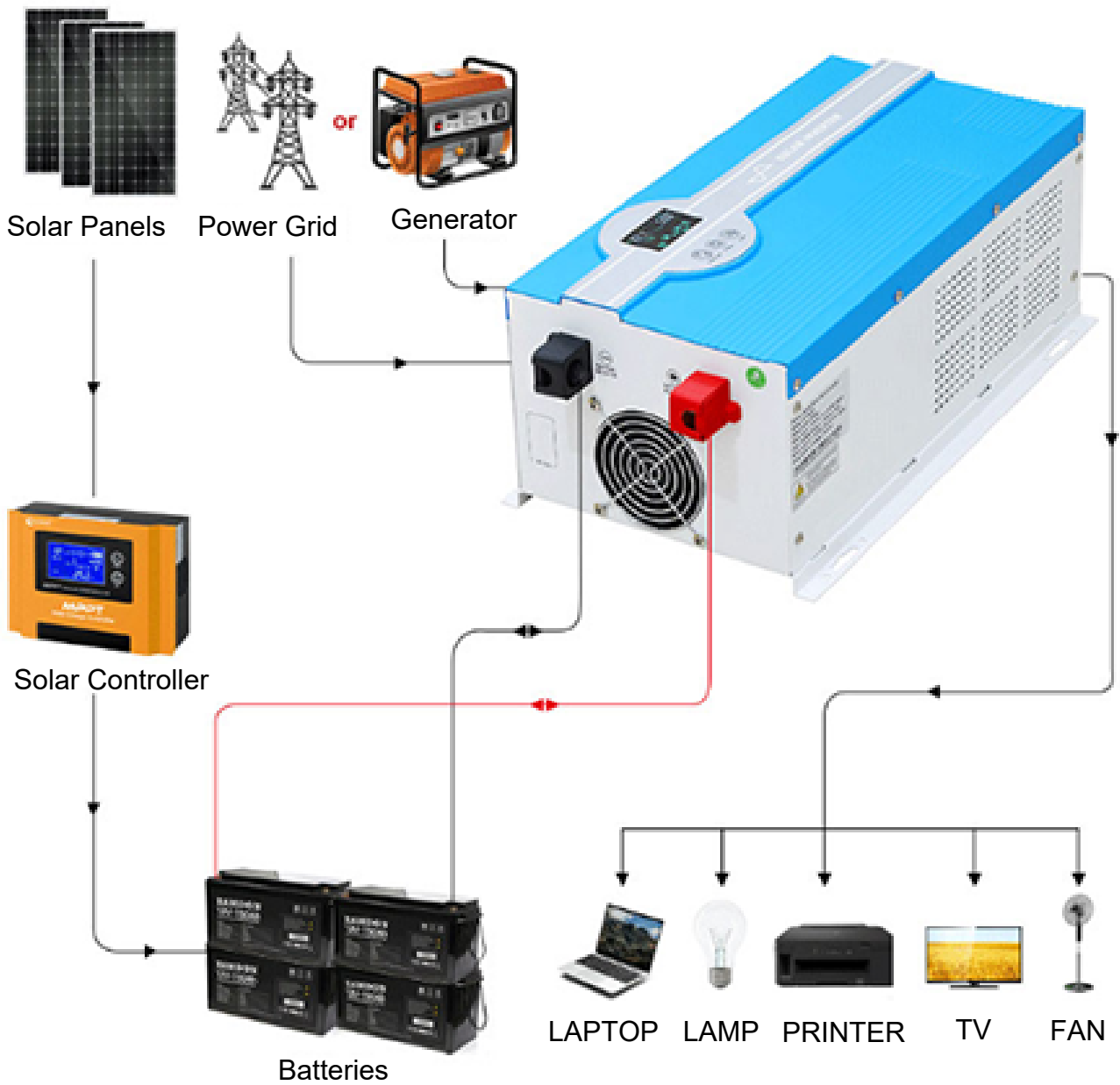
The button to select inverter mute, working modes, AC charging current and battery types



Decorative stamping pattern
Can print your LOGO



Wiring diagram



Installation steps

1. Prepare corresponding installation tools and measuring tools before installation and debugging Such as Philips screwdriver, diagonal pliers, multimeter, No.10 hammer wrench, etc.
2. Check whether the required accessories are complete. Wire and switch shall be selected according to the selection table.
3. Make sure all power switches of the machine are turned off. Confirm positive and negative poles of the battery, and its voltage is consistent with the input voltage of the machine
4. Select a black wire with appropriate cross-sectional area and connect them in sequence: battery negative --- negative terminal of the machine battery to complete the negative connection of the battery. Select a red wire with appropriate cross-sectional area. Battery positive--switch--positive terminal of the machine battery to complete the positive connection of the battery.
5. Select wires with appropriate cross-sectional area and connect them in sequence: (AC live wire--switch--live wire terminal/ AC neutral-- neutral terminal/ AC earth wire--earth wire terminal). Completing AC input wiring.
6. Repeat step 5 to complete AC output wiring.
7. After checking each connection is correct, first of all, turn on battery switch. Second, press ON button of the display screen, then LCD screen will display normally.
8. When the mains input switch is turned on, it can charge the battery and supply power to the load. The screen will display AC charging voltage and status.
9. Turn on the mains output switch and the load can be used. It will display AC charging voltage and status.

