



- ✓ Professional Quality
- ✓ Exclusive Design
- ✓ Direct Manufacturer
- ✓ Energy Conservation

Off-Grid Pure Sine Wave Inverter

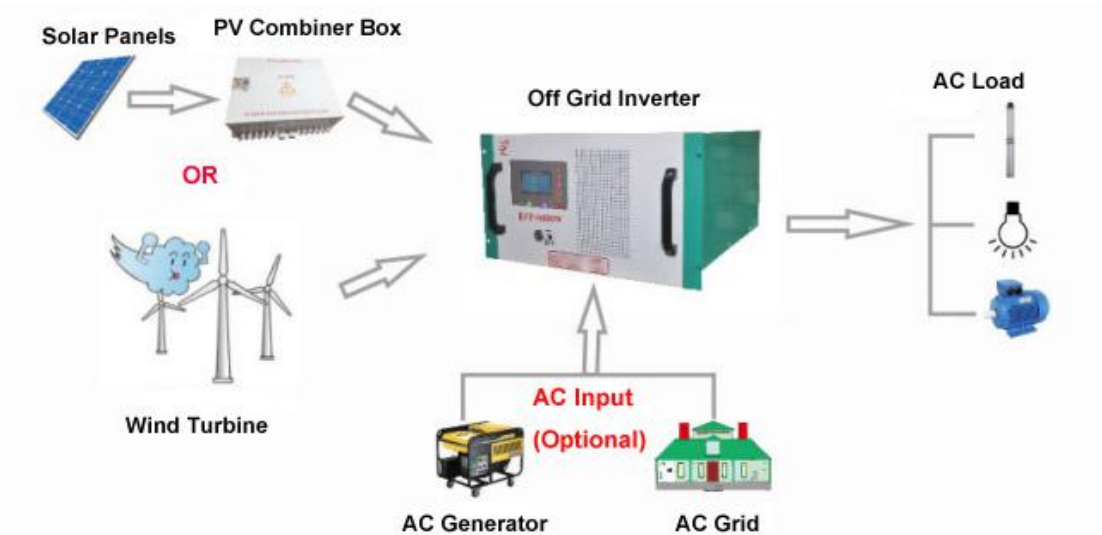
Our ATO series Off Grid Pure sine wave inverter is one of the most advanced DC to AC conversion products in the world, it is suitable use for areas without electricity, vehicles, ships, solar energy, wind turbine and other renewable energy systems and etc, can supply power and provide guarantee effectively for the areas with traffic inconveniences, in the mountains, pastoral, border, island and other areas without electricity. It has the main advantages of high quality sine wave AC output, microcomputer control, humanness design, and it is high efficiency and low no-load loss, and no pollution. The inverter can also supply AC power to all kinds of electric equipment, air conditioners, electric motors, refrigerators, fluorescent lights, televisions, electric fans and other industrial power supply.

Off-Grid No Battery Storage System

Off-grid no battery storage system including solar panel array/wind turbine, PV combiner box, off-grid inverter etc.

- ◆ In the sunshine, the solar panels generate energy through the off grid inverter convert the DC power into the AC power for power supply the AC load.
- ◆ In the wind, the wind turbine generate energy through the off grid inverter convert the DC power into the AC power for power supply the AC load.
- ◆ Optional AC bypass input function. when solar or wind power is insufficient, it can automatically switch to AC generator or AC grid power supply the AC load.

No Battery Storage System



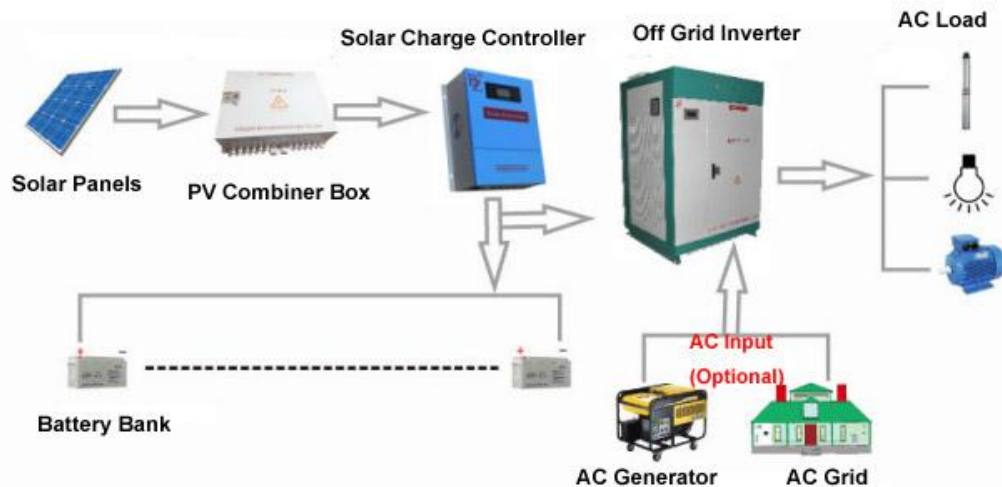
1. When there is sufficient solar or wind energy, the inverter is used to convert the solar or wind energy to the load directly.
2. When there is insufficient solar or wind energy, the inverter will automatically supplies solar or wind power to the load in conjunction with AC grid or AC generator.
3. Automatic regulating stable voltage and stable frequency output. Can set solar or wind power priority or AC grid or AC generator priority on LCD.

Off-Grid Battery Storage System

Off-grid battery storage system including solar panel array or wind turbine, PV combiner box, solar charge controller, storage battery, off-grid inverter etc.

In the sunshine, the solar panels convert the solar energy to DC power and charge the battery group by the charge controller then the off grid inverter convert the DC power into AC power for power supply the AC load.

Battery Storage System



1. When the solar or wind energy is present and higher the battery voltage, the inverter converts the solar or wind energy to the load directly, while the controller detects whether the battery needs to be charged.
2. When the solar or wind energy is present but not sufficient and the battery voltage is high, the inverter will automatically switch to bypass mode supplies solar or wind power to the load in conjunction with AC grid or AC generator.
3. When solar or wind power is lower than the battery voltage or solar or wind power is insufficient, the inverter is used to convert the AC grid or AC generator to the load directly (Optional AC to DC charging function).

Technical Features:

- ❖ Using the sixth generation efficient IPM intelligent module from Japanese Mitsubishi, high efficiency and stable performance. It with powerful protection function, the protection for short circuit, over load, over temperature is more safe and reliable. It's service life can up to 15 years or more.
- ❖ Intelligentized, modularized, simple structure design with powerful function.
- ❖ Two kinds of start mode: Step-down Voltage Start and Variable Frequency Start. Customers can set start mode according to the type of their load. This function is very convenient for users and also reduce frequency converter's usage, which reduced the cost of equipment investment, easy to connect wires and control.
- ❖ The output frequency can be setting via LCD panel, it's very convenient for customer.
- ❖ The output voltage can be set between -40 % to +20 % of rated voltage. And the output voltage is very accuracy $\pm 1\%$.
- ❖ The DC input voltage range can be set. Over-voltage point, under-voltage point, over-voltage recovery point, under-voltage recovery point all can be setting via the LCD panel.
- ❖ Pure sine wave output. With good dynamic response less than 50MS, waveform distortion rate smaller, higher conversion efficiency and stable output voltage.
- ❖ Low frequency transformer, which ensures that inverter has high efficiency.
- ❖ High conversion efficiency, max. efficiency $\geq 97\%$.
- ❖ Adopts black pure aluminum radiator, which confirms the best radiating performance.
- ❖ Powerful data display function. LCD can display the DC input voltage, output frequency, phase voltage, phase current, AC bypass input voltage, output power KWH, time and date, temperature, fault code display.
- ❖ Wide input voltage can be set according to customer's requirement. Input voltage range can be selected from 100-400V or 300-800V.
- ❖ Wide input voltage can work without battery and solar charge controller. save more cost and with MPPT wide voltage input function, maximum use of solar power.
- ❖ European CE (EMC, LVD) Certificate and accredited by Australian CEC, ERAC energy network.
- ❖ Optional function: RS485 remote monitoring. AC bypass input. built in solar charge controller or AC to DC battery charger.

EXTREME PERFORMANCE EXTRAORDINARY QUALITY



- 20 Years Life Time
- 24 Hours Working
- IPM Module
- Fault Alarm
- LCD Display
- VFD Start
- PV Power Charge (optional)
- Step-Down Start
- Multiple Protection
- Work Instructions
- City Power Charge (optional)
- Rs485 Communication (optional)
- Automatic Switching

PERFECT PROTECTION FUNCTION

It has a very good protection function (including overload protection, over-current protection, over temperature protection, short circuit protection),



- Over Temperature
- Reverse Protection
- Overload Protection
- Grounding Protection
- Under voltage Protection
- Lightning Protection
- Short Circuit Protection
- Overvoltage Recovery
- Over Current Protection
- Module Protection
- Under voltage Recovery

Technical Parameters

Model		3kW	4kW	5kW	6kW	8kW	10kW
Isolation Mode		Low Frequency Transformer					
DC Input	Rated Voltage	96V DC				192V DC	
	Rated Current	32A	42A	52A	63A	42A	52A
AC Output	Rated Output Power	3KW	4kW	5kW	6kW	8kW	10kW
	Output Waveform	Pure Sine Wave					
	Rated Voltage	220V±3%					
	Phase	Single phase					
	Rated Current	14A	18A	23A	27A	42A	45A
	Frequency	50Hz or 60Hz					
	Rated Output Voltage Range	110/120/220/230/240V AC (Optional)					
	Power Factor	0.99					
	Overload Ability	150%, 5 seconds					
	Efficiency	>93%					
	Waveform Distortion Rate (THD)	<3% (Linear load)					
	Dynamic Response (0 to 100% load)	5%, ≤50ms					
	Display	LCD					
	Running Mode	Working continuously					
Electrical Insulation Properties	2000Vac, 1min						
Communication Interface		RS485 (Optional)					
Protection Function	Protection	Input reverse polarity, Under voltage, Over voltage, Output over-current, Short circuit, Overheating etc.					
	Cooling Method	Fan-cooled					
	Short-circuit Protection	No automatic recovery, need to restart the machine					
Working Environment	Noise (1 meter)	≤50dB					
	Degree of Protection	IP20 (indoor)					
	Working Altitude	≤2000m					
	Working Temperature	-25~+55°C					
	Relative Humidity	0-90%, non condensing					
Rack Mounted Type	Depth*Width*Height	435x605x267mm					
Stand Type		450*550*760mm			550*550*860mm		

◆ Above parameters only for reference, could be customized according to user specifications.

Model		3kW	4kW	5kW	6kW	8kW	10kW
Isolation Mode		Low Frequency Transformer					
DC Input	Rated Voltage	96V DC				192V DC	
	Rated Current	32A	42A	52A	63A	42A	52A
AC Output	Rated Output Power	3KW	4kW	5kW	6kW	8kW	10kW
	Output Waveform	Pure Sine Wave					
	Rated Voltage	380V±3%					
	Phase	Three phase					
	Rated Current	4.5A	6A	7.5A	9A	12A	15A
	Frequency	50Hz or 60Hz					
	Rated Output Voltage Range	220/380/415/440/480V AC (Optional)					
	Power Factor	0.99					
	Overload Ability	150%, 5 seconds					
	Efficiency	>93%					
	Waveform Distortion Rate (THD)	<3% (Linear load)					
	Dynamic Response (0 to 100% load)	5%, ≤50ms					
	Display	LCD					
	Running Mode	Working continuously					
	Electrical Insulation Properties	2000Vac, 1min					
Communication Interface		RS485 (Optional)					
Protection Function	Protection	Input reverse polarity, Under voltage, Over voltage, Output over-current, Short circuit, Overheating etc.					
	Cooling Method	Fan-cooled					
	Short-circuit Protection	No automatic recovery, need to restart the machine					
Working Environment	Noise (1 meter)	≤50dB					
	Degree of Protection	IP20 (indoor)					
	Working Altitude	≤2000m					
	Working Temperature	-25~+55℃					
	Relative Humidity	0-90%, non condensing					
Stand Type	Depth*Width*Height	450*550*760mm		550*550*860mm			

◆ Above parameters only for reference, could be customized according to user specifications.

Model		12kW	15kW	20kW	25kW	30kW
Isolation Mode		Low Frequency Transformer				
DC Input	Rated Voltage	192V DC			240V DC	
	Rated Current	63A	78A	83A	105A	125A
AC Output	Rated Output Power	12KW	15kW	20kW	25kW	30kW
	Output Waveform	Pure Sine Wave				
	Rated Voltage	380V±3%				
	Phase	Three phase				
	Rated Current	18A	23A	30A	38A	45A
	Frequency	50Hz or 60Hz				
	Rated Output Voltage Range	220/380/415/440/480V AC (Optional)				
	Power Factor	0.99				
	Overload Ability	150%, 5 seconds				
	Efficiency	>93%				
	Waveform Distortion Rate (THD)	<3% (Linear load)				
	Dynamic Response (0 to 100% load)	5%, ≤50ms				
	Display	LCD				
	Running Mode	Working continuously				
	Electrical Insulation Properties	2000Vac, 1min				
Communication Interface		RS485 (Optional)				
Protection Function	Protection	Input reverse polarity, Under voltage, Over voltage, Output over-current, Short circuit, Overheating etc.				
	Cooling Method	Fan-cooled				
	Short-circuit Protection	No automatic recovery, need to restart the machine				
Working Environment	Noise (1 meter)	≤50dB				
	Degree of Protection	IP20 (indoor)				
	Working Altitude	≤2000m				
	Working Temperature	-25~+55℃				
	Relative Humidity	0-90%, non condensing				
Stand Type	Depth*Width*Height	550*550*860mm			600*700*1080mm	

◆ Above parameters only for reference, could be customized according to user specifications.

Model		40kW	50kW	60kW	80kW	100kW
Isolation Mode		Low Frequency Transformer				
DC Input	Rated Voltage	360V DC			480V DC	
	Rated Current	112A	139A	167A	167A	208A
AC Output	Rated Output Power	40KW	50kW	60kW	80kW	100kW
	Output Waveform	Pure Sine Wave				
	Rated Voltage	380V±3%				
	Phase	Three phase				
	Rated Current	61A	76A	91A	121A	152A
	Frequency	50Hz or 60Hz				
	Rated Output Voltage Range	380/415/440/480V AC (Optional)				
	Power Factor	0.99				
	Overload Ability	150%, 5 seconds				
	Efficiency	>93%				
	Waveform Distortion Rate (THD)	<3% (Linear load)				
	Dynamic Response (0 to 100% load)	5%, ≤50ms				
	Display	LCD				
	Running Mode	Working continuously				
Electrical Insulation Properties	2000Vac, 1min					
Communication Interface		RS485 (Optional)				
Protection Function	Protection	Input reverse polarity, Under voltage, Over voltage, Output over-current, Short circuit, Overheating etc.				
	Cooling Method	Fan-cooled				
	Short-circuit Protection	No automatic recovery, need to restart the machine				
Working Environment	Noise (1 meter)	≤50dB				
	Degree of Protection	IP20 (indoor)				
	Working Altitude	≤2000m				
	Working Temperature	-25~+55°C				
	Relative Humidity	0-90%, non condensing				
Stand Type	Depth*Width*Height	750*750*1480mm			900*800*1200mm	

◆ Above parameters only for reference, could be customized according to user specifications.

Model		150kW	200kW	250kW	300kW	500kW
Isolation Mode		Low Frequency Transformer				
DC Input	Rated Voltage	480V DC			600V DC	
	Rated Current	312A	417A	417A	500A	834A
AC Output	Rated Output Power	150KW	200kW	250kW	300kW	500kW
	Output Waveform	Pure Sine Wave				
	Rated Voltage	380V±3%				480V±3%
	Phase	Three phase				
	Rated Current	228A	303A	379A	454A	601A
	Frequency	50Hz or 60Hz				
	Rated Output Voltage Range	380/415/440/480V AC (Optional)				
	Power Factor	0.99				
	Overload Ability	150%, 5 seconds				
	Efficiency	>93%				
	Waveform Distortion Rate (THD)	<3% (Linear load)				
	Dynamic Response (0 to 100% load)	5%, ≤50ms				
	Display	LCD				
	Running Mode	Working continuously				
Electrical Insulation Properties	2000Vac, 1min					
Communication Interface		RS485 (Optional)				
Protection Function	Protection	Input reverse polarity, Under voltage, Over voltage, Output over-current, Short circuit, Overheating etc.				
	Cooling Method	Fan-cooled				
	Short-circuit Protection	No automatic recovery, need to restart the machine				
Working Environment	Noise (1 meter)	≤50dB				
	Degree of Protection	IP20 (indoor)				
	Working Altitude	≤2000m				
	Working Temperature	-25~+55°C				
	Relative Humidity	0-90%, non condensing				
Stand Type	Depth*Width*Height	1000*1200*1800mm	1200*1200*1860mm	2500*1600*1800mm		

◆ Above parameters only for reference, could be customized according to user specifications.

Application



10kw Solar Home System



90KW Solar Power Station System



5400 Meters High Altitude Solar Power System



Other Applications

