



Power Phase Converter 3KW~500KW

Zhejiang Sandi Electric Co., Ltd

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Company profile

Zhejiang Sandi Electric Co., Ltd is an international PV enterprise which is located in the "capital of China's electrical appliances" Wenzhou. Specialized in the new energy source and electrical source scientific research, development, manufacture and service had surpasses for 15 years.

Sandi company's products are widely applied in solar or wind energy, construction, industry, new energy source, civilian use, electric power, medical treatment, aviation, automatically control system of war industry and national heavy engineering project.

Main products: Solar off grid pure sine wave inverter, Solar pump inverter, PV Grid-connected inverter, PV array combiner box, AC/DC Charger, solar charge controller, wind-solar hybrid controller, single phase to three phase converter and etc products.

Sandi is recognized by widely customers according to entirely varieties, high quality and service first. The R&D and engineering technicians have multi-year experiences in product design, product implementation, engineering service and can manufacture the solar energy generation products with the international competition capability reaches advanced level in the world, our product have passed CE(EMC&LVD), SAA(AS4777&AS3100), G83/1, G59, VDE ARN 4105 and EN62109, EN61000 certification and approved by international standard.

SANDI Electric Company insist on technology as forerunner, keep long-term, good research cooperation with all universities; fetch in and absorb international advanced technology, built strictly quality control system.

We will take the work objective of "unremitting exploration, endeavor and innovation, honesty and dedication, perfect and practicality" and quality guideline of "criterion management, intensive manufacture, quality first, service with all hearts". Seek excellence, value innovation!

We will ceaselessly struggle and create refulgence with you together.





Product Introduction

The Sandi SDT series three-phase to single-phase converter, adopted AC-DC-AC circuit structure and using SVPWM modulation control technology, which can convert ordinary single-phase power to industrial three-phase power. After through SDT series single-phase to three phase converter power conversion, the three-phase power output is standard pure sine wave, the harmonic distortion rate (THD) is less than 2%, totally meet the national standards of three-phase power quality, applicable to all types of load.

The SDT series single-phase to three-phase converter can solve production inconvenience because of some areas with the three-phase electric power restrictions, also solved some user requirements that can't apply for the three-phase electric because of space limitation.

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.**
- 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.
- Intelligentized, modularized, simple structure design, **very easy and convenient for maintenance.**
- The **output frequency 50/60HZ 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 $\pm 1\%$.
- Pure sine wave output. With good dynamic response less than 50MS, waveform distortion rate smaller, higher conversion efficiency and stable output voltage.

- **Built-in low frequency isolation transformer**, strong impact resistance, available with motors, pump, air conditioners and other high impact equipment. At the same time DC busbar and AC busbar are completely isolated to avoid interference.
- Using SVPWM space vector algorithms, high conversion efficiency, high instantaneous power and low losses conversion efficiency up to 94%.
- **Powerful data display and fault instruction 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.
- Output AC Power is suitable for all types of three phase appliances, electric tools, electric motors etc. It has higher efficiency and higher capability of driving load.
- Converter has the function of filtering the grid disturbance and interference at the same time, which is a good performance of stabilized voltage and frequency power, to provide a more stable and pure power supply environment for the backend devices.
- Output perfect protection function with under-voltage and over-voltage, overload, short circuit, over temperature, self-diagnosis protection and other protection.
- There are lightning protection device inside the converter.
- Optional **DC input** function to supplement the AC energy deficiencies.
- Wide voltage input 80-320VAC, can also customize the special voltage according to the requirements, to adapt to the working environment of the regional grid voltage is low.

Technical Parameter SDT-3KW / 4KW

Model	SDT-3KW	SDT-4KW
Isolation mode	Low Frequency Transformer	
AC Input		
Rated voltage (Vac)	220V single phase	
Input rated voltage range	110/120/220/230/240Vac optional	
Rated current (A)	14A	18A
AC Output		
Rated power (Kw)	3KW	4KW
Rated voltage	380VAC	
Output voltage range	220/380/400/415/440/480Vac optional	
Output phases	3 phase 4 wires	
Rated current (A)	4.5A	6A
Output frequency	50Hz/60Hz±0.05Hz (Can be set)	
Waveform	Pure sine wave	
Voltage accuracy	Load balancing≤1%、Unbalanced load≤5%	
Waveform distortion rate (THD)	Linear load≤2%、Nonlinear load≤3%	
Unbalance ability	≤20% (long-term unbalanced load will affect the life of equipment)	
Dynamic Response	5%, ≤50ms (load 0~100%)	
Power Factor (PF)	0.99	
Inverter Efficiency	>94%	
Electrical insulation properties	2000Vac、1 Minute	
Protection Function		
Overload Ability	150%、10s	
Protection	Input under voltage, overvoltage, output over-current, short circuit, overheating etc.	
Display	LCD	
Method of working	Working continuously	
Cooling method	High speed fan	
Short-circuit protection	No automatic recovery, need to restart the machine	
Working Environment & Mechanical dimension		
Degree of protection	IP20 (indoor)	
Working Altitude (m)	≤2500m	
Working temperature (℃)	-15~+50℃	
Relative humidity (℃)	-25~+85℃	
Noise (1 meter)	≤50dB	
Vertical type: (W x D x H)	540x450x760mm	
Reference net weight (Kg)	60Kg	65Kg

Technical Parameter SDT-5KW / 6KW

Model	SDT-5KW	SDT-6KW
Isolation mode	Low Frequency Transformer	
AC Input		
Rated voltage (Vac)	220V single phase	
Input rated voltage range	110/120/220/230/240Vac optional	
Rated current (A)	23A	27A
AC Output		
Rated power (Kw)	5KW	6KW
Rated voltage	380VAC	
Output voltage range	220/380/400/415/440/480Vac optional	
Output phases	3 phase 4 wires	
Rated current (A)	7.6A	9A
Output frequency	50Hz/60Hz±0.05Hz (Can be set)	
Waveform	Pure sine wave	
Voltage accuracy	Load balancing≤1%、Unbalanced load≤5%	
Waveform distortion rate (THD)	Linear load≤2%、Nonlinear load≤3%	
Unbalance ability	≤20% (long-term unbalanced load will affect the life of equipment)	
Dynamic Response	5%, ≤50ms (load 0~100%)	
Power Factor (PF)	0.99	
Inverter Efficiency	>94%	
Electrical insulation properties	2000Vac、1 Minute	
Protection Function		
Overload Ability	150%、10s	
Protection	Input under voltage, overvoltage, output over-current, short circuit, overheating etc.	
Display	LCD	
Method of working	Working continuously	
Cooling method	High speed fan	
Short-circuit protection	No automatic recovery, need to restart the machine	
Working Environment & Mechanical dimension		
Degree of protection	IP20 (indoor)	
Working Altitude (m)	≤2500m	
Working temperature (℃)	-15~+50℃	
Relative humidity (℃)	-25~+85℃	
Noise (1 meter)	≤50dB	
Vertical type: (W x D x H)	540x450x760mm	
Reference net weight (Kg)	70Kg	75Kg

Technical Parameter SDT-10KW / 15KW

Model	SDT-10KW	SDT-15KW
Isolation mode	Low Frequency Transformer	
AC Input		
Rated voltage (Vac)	220V single phase	
Input rated voltage range	110/120/220/230/240Vac optional	
Rated current (A)	45.5A	68A
AC Output		
Rated power (Kw)	10KW	15KW
Rated voltage	380VAC	
Output voltage range	220/380/400/415/440/480Vac optional	
Output phases	3 phase 4 wires	
Rated current (A)	15A	23A
Output frequency	50Hz/60Hz±0.05Hz (Can be set)	
Waveform	Pure sine wave	
Voltage accuracy	Load balancing≤1%、Unbalanced load≤5%	
Waveform distortion rate (THD)	Linear load≤2%、Nonlinear load≤3%	
Unbalance ability	≤20% (long-term unbalanced load will affect the life of equipment)	
Dynamic Response	5%, ≤50ms (load 0~100%)	
Power Factor (PF)	0.99	
Inverter Efficiency	>94%	
Electrical insulation properties	2000Vac、1 Minute	
Protection Function		
Overload Ability	150%、10s	
Protection	Input under voltage, overvoltage, output over-current, short circuit, overheating etc.	
Display	LCD	
Method of working	Working continuously	
Cooling method	High speed fan	
Short-circuit protection	No automatic recovery, need to restart the machine	
Working Environment & Mechanical dimension		
Degree of protection	IP20 (indoor)	
Working Altitude (m)	≤2500m	
Working temperature (℃)	-15~+50℃	
Relative humidity (℃)	-25~+85℃	
Noise (1 meter)	≤50dB	
Vertical type: (W x D x H)	540x550x860mm	
Reference net weight (Kg)	120Kg	145Kg

Technical Parameter SDT-20KW / 25KW

Model	SDT-20KW	SDT-25KW
Isolation mode	Low Frequency Transformer	
AC Input		
Rated voltage (Vac)	220V single phase	
Input rated voltage range	110/120/220/230/240Vac optional	
Rated current (A)	91A	114A
AC Output		
Rated power (Kw)	20KW	25KW
Rated voltage	380VAC	
Output voltage range	220/380/400/415/440/480Vac optional	
Output phases	3 phase 4 wires	
Rated current (A)	30.5A	38A
Output frequency	50Hz/60Hz±0.05Hz (Can be set)	
Waveform	Pure sine wave	
Voltage accuracy	Load balancing≤1%、Unbalanced load≤5%	
Waveform distortion rate (THD)	Linear load≤2%、Nonlinear load≤3%	
Unbalance ability	≤20% (long-term unbalanced load will affect the life of equipment)	
Dynamic Response	5%, ≤50ms (load 0~100%)	
Power Factor (PF)	0.99	
Inverter Efficiency	>94%	
Electrical insulation properties	2000Vac、1 Minute	
Protection Function		
Overload Ability	150%、10s	
Protection	Input under voltage, overvoltage, output over-current, short circuit, overheating etc.	
Display	LCD	
Method of working	Working continuously	
Cooling method	High speed fan	
Short-circuit protection	No automatic recovery, need to restart the machine	
Working Environment & Mechanical dimension		
Degree of protection	IP20 (indoor)	
Working Altitude (m)	≤2500m	
Working temperature (℃)	-15~+50℃	
Relative humidity (℃)	-25~+85℃	
Noise (1 meter)	≤50dB	
Vertical type: (W x D x H)	540x550x860mm	600x700x1080mm
Reference net weight (Kg)	170Kg	245Kg

Technical Parameter SDT-30KW / 40KW

Model	SDT-30KW	SDT-40KW
Isolation mode	Low Frequency Transformer	
AC Input		
Rated voltage (Vac)	220V single phase	
Input rated voltage range	110/120/220/230/240Vac optional	
Rated current (A)	136A	182A
AC Output		
Rated power (Kw)	30KW	40KW
Rated voltage	380VAC	
Output voltage range	220/380/400/415/440/480Vac optional	
Output phases	3 phase 4 wires	
Rated current (A)	45.5A	61A
Output frequency	50Hz/60Hz±0.05Hz (Can be set)	
Waveform	Pure sine wave	
Voltage accuracy	Load balancing≤1%、Unbalanced load≤5%	
Waveform distortion rate (THD)	Linear load≤2%、Nonlinear load≤3%	
Unbalance ability	≤20% (long-term unbalanced load will affect the life of equipment)	
Dynamic Response	5%, ≤50ms (load 0~100%)	
Power Factor (PF)	0.99	
Inverter Efficiency	>94%	
Electrical insulation properties	2000Vac、1 Minute	
Protection Function		
Overload Ability	150%、10s	
Protection	Input under voltage, overvoltage, output over-current, short circuit, overheating etc.	
Display	LCD	
Method of working	Working continuously	
Cooling method	High speed fan	
Short-circuit protection	No automatic recovery, need to restart the machine	
Working Environment & Mechanical dimension		
Degree of protection	IP20 (indoor)	
Working Altitude (m)	≤2500m	
Working temperature (℃)	-15~+50℃	
Relative humidity (℃)	-25~+85℃	
Noise (1 meter)	≤50dB	
Vertical type: (W x D x H)	600x700x1080mm	600x700x1080mm
Reference net weight (Kg)	260Kg	298Kg

Technical Parameter SDT-50KW / 60KW

Model	SDT-50KW	SDT-60KW
Isolation mode	Low Frequency Transformer	
AC Input		
Rated voltage (Vac)	220V single phase	
Input rated voltage range	110/120/220/230/240Vac optional	
Rated current (A)	227A	273A
AC Output		
Rated power (Kw)	50KW	60KW
Rated voltage	380VAC	
Output voltage range	220/380/400/415/440/480Vac optional	
Output phases	3 phase 4 wires	
Rated current (A)	76A	91A
Output frequency	50Hz/60Hz±0.05Hz (Can be set)	
Waveform	Pure sine wave	
Voltage accuracy	Load balancing≤1%、Unbalanced load≤5%	
Waveform distortion rate (THD)	Linear load≤2%、Nonlinear load≤3%	
Unbalance ability	≤20% (long-term unbalanced load will affect the life of equipment)	
Dynamic Response	5%, ≤50ms (load 0~100%)	
Power Factor (PF)	0.99	
Inverter Efficiency	>94%	
Electrical insulation properties	2000Vac、1 Minute	
Protection Function		
Overload Ability	150%、10s	
Protection	Input under voltage, overvoltage, output over-current, short circuit, overheating etc.	
Display	LCD	
Method of working	Working continuously	
Cooling method	High speed fan	
Short-circuit protection	No automatic recovery, need to restart the machine	
Working Environment & Mechanical dimension		
Degree of protection	IP20 (indoor)	
Working Altitude (m)	≤2500m	
Working temperature (℃)	-15~+50℃	
Relative humidity (℃)	-25~+85℃	
Noise (1 meter)	≤50dB	
Vertical type: (W x D x H)	600x700x1080mm	600x750x1200mm
Reference net weight (Kg)	340Kg	390Kg

Technical Parameter SDT-80KW / 100KW

Model	SDT-80KW	SDT-100KW
Isolation mode	Low Frequency Transformer	
AC Input		
Rated voltage (Vac)	220V single phase	
Input rated voltage range	220/230/240/400Vac optional	
Rated current (A)	364A	455A
AC Output		
Rated power (Kw)	80KW	100KW
Rated voltage	380VAC	
Output voltage range	220/380/400/415/440/480Vac optional	
Output phases	3 phase 4 wires	
Rated current (A)	121A	151.5A
Output frequency	50Hz/60Hz±0.05Hz (Can be set)	
Waveform	Pure sine wave	
Voltage accuracy	Load balancing≤1%、Unbalanced load≤5%	
Waveform distortion rate (THD)	Linear load≤2%、Nonlinear load≤3%	
Unbalance ability	≤20% (long-term unbalanced load will affect the life of equipment)	
Dynamic Response	5%, ≤50ms (load 0~100%)	
Power Factor (PF)	0.99	
Inverter Efficiency	>94%	
Electrical insulation properties	2000Vac、1 Minute	
Protection Function		
Overload Ability	150%、10s	
Protection	Input under voltage, overvoltage, output over-current, short circuit, overheating etc.	
Display	LCD	
Method of working	Working continuously	
Cooling method	High speed fan	
Short-circuit protection	No automatic recovery, need to restart the machine	
Working Environment & Mechanical dimension		
Degree of protection	IP20 (indoor)	
Working Altitude (m)	≤2500m	
Working temperature (℃)	-15~+50℃	
Relative humidity (℃)	-25~+85℃	
Noise (1 meter)	≤50dB	
Vertical type: (W x D x H)	600x750x1200mm	900x1000x1600mm
Reference net weight (Kg)	480Kg	680Kg

Technical Parameter SDT-150KW / 200KW

Model	SDT-150KW	SDT-200KW
Isolation mode	Low Frequency Transformer	
AC Input		
Rated voltage (Vac)	400V single phase	
Input rated voltage range	220/230/240/400Vac optional	
Rated current (A)	375A	500A
AC Output		
Rated power (Kw)	150KW	200KW
Rated voltage	380VAC	
Output voltage range	220/380/400/415/440/480Vac optional	
Output phases	3 phase 4 wires	
Rated current (A)	227A	303A
Output frequency	50Hz/60Hz±0.05Hz (Can be set)	
Waveform	Pure sine wave	
Voltage accuracy	Load balancing≤1%、Unbalanced load≤5%	
Waveform distortion rate (THD)	Linear load≤2%、Nonlinear load≤3%	
Unbalance ability	≤20% (long-term unbalanced load will affect the life of equipment)	
Dynamic Response	5%, ≤50ms (load 0~100%)	
Power Factor (PF)	0.99	
Inverter Efficiency	>94%	
Electrical insulation properties	2000Vac、1 Minute	
Protection Function		
Overload Ability	150%、10s	
Protection	Input under voltage, overvoltage, output over-current, short circuit, overheating etc.	
Display	LCD	
Method of working	Working continuously	
Cooling method	High speed fan	
Short-circuit protection	No automatic recovery, need to restart the machine	
Working Environment & Mechanical dimension		
Degree of protection	IP20 (indoor)	
Working Altitude (m)	≤2500m	
Working temperature (℃)	-15~+50℃	
Relative humidity (℃)	-25~+85℃	
Noise (1 meter)	≤50dB	
Vertical type: (W x D x H)	600x750x1200mm	1200x1000x1800mm
Reference net weight (Kg)	850Kg	1100Kg

Technical Parameter SDT-300KW / 500KW

Model	SDT-300KW	SDT-500KW
Isolation mode	Low Frequency Transformer	
AC Input		
Rated voltage (Vac)	500V single phase	
Input rated voltage range	220/230/240/400Vac optional	
Rated current (A)	600A	1000A
AC Output		
Rated power (Kw)	300KW	500KW
Rated voltage	380VAC	
Output voltage range	220/380/400/415/440/480Vac optional	
Output phases	3 phase 4 wires	
Rated current (A)	454.5A	756A
Output frequency	50Hz/60Hz±0.05Hz (Can be set)	
Waveform	Pure sine wave	
Voltage accuracy	Load balancing≤1%、Unbalanced load≤5%	
Waveform distortion rate (THD)	Linear load≤2%、Nonlinear load≤3%	
Unbalance ability	≤20% (long-term unbalanced load will affect the life of equipment)	
Dynamic Response	5%, ≤50ms (load 0~100%)	
Power Factor (PF)	0.99	
Inverter Efficiency	>94%	
Electrical insulation properties	2000Vac、1 Minute	
Protection Function		
Overload Ability	150%、10s	
Protection	Input under voltage, overvoltage, output over-current, short circuit, overheating etc.	
Display	LCD	
Method of working	Working continuously	
Cooling method	High speed fan	
Short-circuit protection	No automatic recovery, need to restart the machine	
Working Environment & Mechanical dimension		
Degree of protection	IP20 (indoor)	
Working Altitude (m)	≤2500m	
Working temperature (℃)	-15~+50℃	
Relative humidity (℃)	-25~+85℃	
Noise (1 meter)	≤50dB	
Vertical type: (W x D x H)	1400x1200x1800mm	1800x1600x2000mm
Reference net weight (Kg)	1300Kg	1600Kg



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