

# LEILANG ELECTRICAL



## 上海雷郎电器设备制造有限公司

Shanghai Leilang Electrical Equipment Manufacturing Co., Ltd.

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# ABOUT US



## Decades of experience, always adhere to the "TOP QUALITY" route

Shanghai leilang Electrical Equipment Manufacturing Co., Ltd. was established in Shanghai in 2007. Is a production and sales, technical services, product development and maintenance as one of the comprehensive enterprises. With decades of professional knowledge and production experience in the field of power equipment, we provide power solutions, prototype design and product manufacturing services for various customers and markets. Specialized in the production of various transformers, regulators, three-phase transformer, isolation transformer, control transformer, machine transformer, three-phase reactor, filter reactor, lamp transformer, lighting transformer, three-phase isolation transformer, three-phase autotransformer, explosion-proof transformer, mining transformer and other electrical equipment. The products are widely used in industrial machinery, new energy, power generation, power supply, coal, metallurgy, petroleum, chemical industry, construction, port, airport, railway transportation, urban infrastructure and other fields

## High quality products, industry leading company

Since its inception, the company has always attached great importance to personnel training, and now has a number of excellent technical personnel, can provide customers with professional electrical solutions, configuration of economic and effective products, continuous research and development and improvement of products, the company has a modern workshop, equipped with advanced production, testing, testing equipment, in order to pursue more exquisite technology, ensure product quality.

Leilang electric always adheres to the line of "honesty creates brand, quality wins market"! In strict accordance with ISO 9001:2015 management system requirements for production activities, all products have passed CE certification. All products must be strictly inspected before leaving the factory to ensure that customers receive 100% high-quality products.

## Facing in the global market, Leilang travels around the world

Our products not only sell well in many domestic industries, but also sell to Europe, North America and South America, Oceania, Asia and Africa. Over many countries and regions in the world are using the products of leilang. Product quality and technical services have been widely recognized by customers at home and abroad. The company will continue to carry forward the spirit of compliance, integrity, scientific and technological innovation, win-win cooperation, provide high-quality products and all-round services for all partners, and strive for the development of more efficient and energy-saving power! As your power supply solution provider, we provide comprehensive customer service. From the beginning of your first contact, we will provide you with comprehensive application assistance to ensure that you choose the products suitable for your needs. Through our inventory and efficient manufacturing, we can deliver goods in time. After delivery, we provide product warranty and maintenance

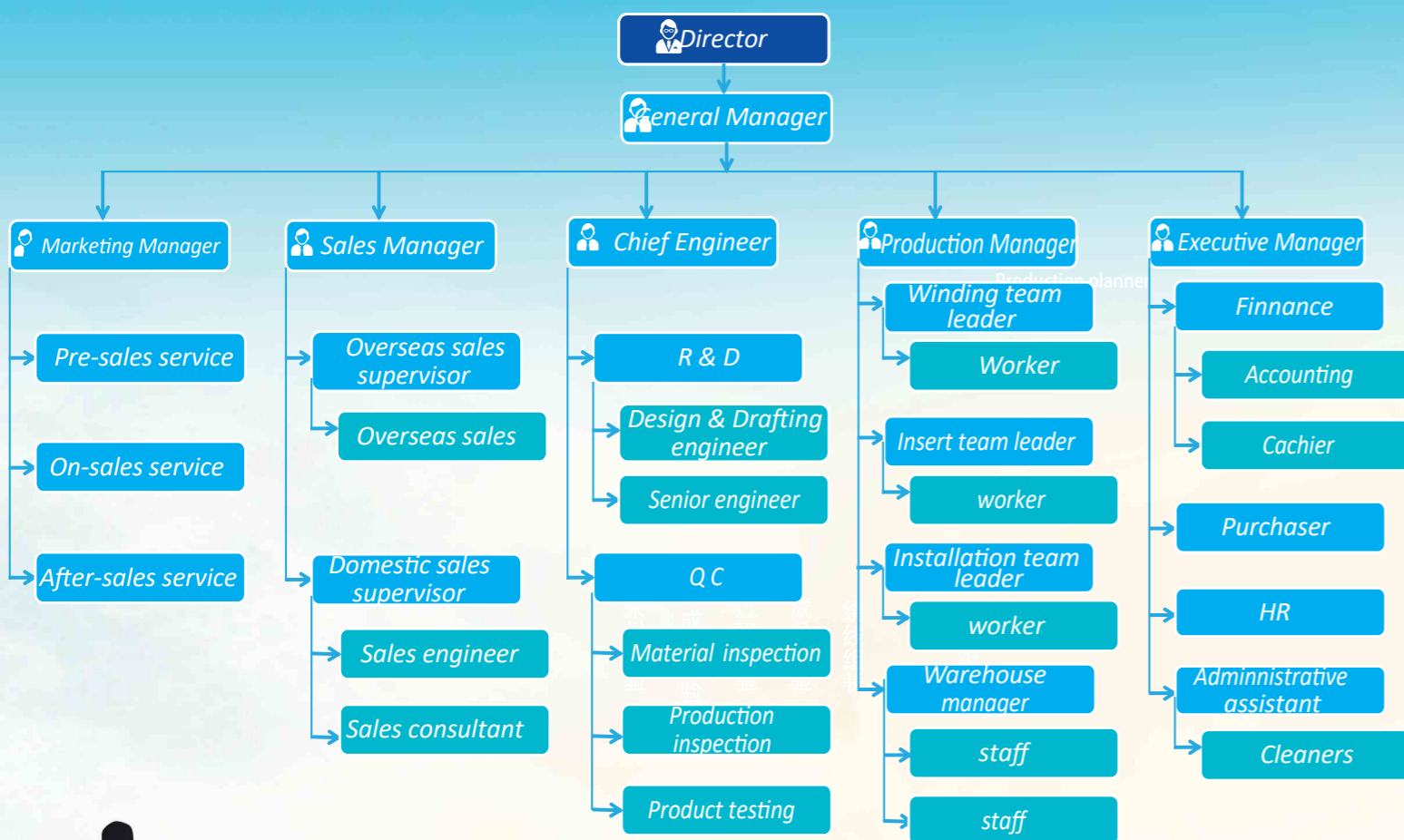




# ORGANIZATION STRUCTURE



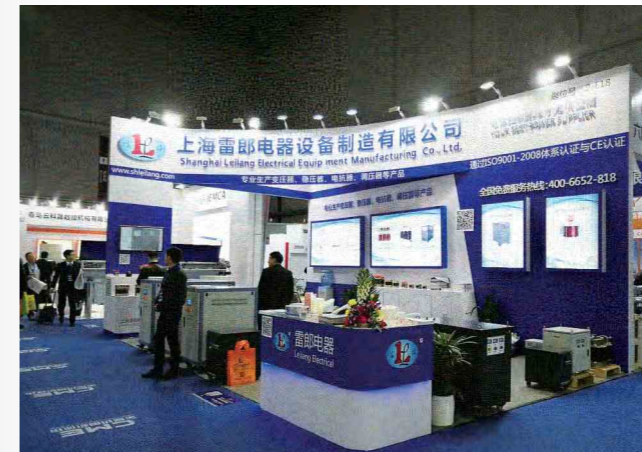
上海雷郎电器设备制造有限公司  
Shanghai Leilang Electrical Equipment Manufacturing Co., Ltd.



**We always insist on:**  
"Integrity makes brand, quality wins the market !"  
" enterprise tenet!

**We always promote:**  
The enterprise spirit of "honesty, steadiness, responsibility, high quality, innovation and development"!

# EXHIBITIONS AND CASES







## TECHNOLOGICAL PROCESS

## CUSTOMER SERVICE

Honesty creates quality . Quality wins the market

### 1. product design

Professional technical team with over 30 years of working experience. Strong technical strength, can provide a comprehensive power control solutions, and provide supporting product customization services.



### 2. Winding

The H-class enameled copper wire or aluminum wire with temperature resistance of 180 °C is adopted, and the advanced mooring winding machine is introduced to wind the high-power product winding.



### 3. illustration

New high quality cold-rolled silicon steel sheet of corresponding type is adopted in the design, which is free of corrosion and is added with paint dipping and insulation treatment.



### 4. Semi finished product testing

Test the basic performance of the product, such as voltage, power, impedance, etc., to ensure the accuracy of the product.



### 5. Vacuum impregnation

H-class insulating paint vacuum impregnation, insulating paint can penetrate into every gap of the product, improve insulation, reduce noise, anti-corrosion and rust, improve the overall performance.



### 6. High temperature baking

Using hot air circulation oven, internal heat circulation, to ensure that the product heated evenly. All products are baked at 125 ~ 140 °C to ensure the curing of every gap.



### 7. Assembly

Assemble according to the technical drawings. High temperature resistant insulating materials are used, and the parts are firm, flat and beautiful.



### 8. Finished product testing



After the completion of production, rigorous and comprehensive product quality testing. Pay attention to every detail to ensure product quality.

### 9. Quality assurance

All products sold must pass the appearance "5S" and all quality tests, and have retained test reports, which can only be packed after being approved and qualified by the person in charge of quality control.



### 10. packing

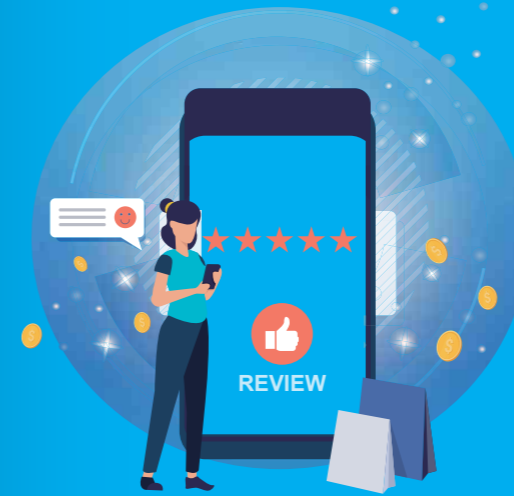


The products are individually packed in cartons and then batch packed in wooden cases; the export products are all in standard export wooden cases, which are firm and beautiful. There is a safety transportation mark on the surface of the package. When customers have special packaging requirements, they should customize the packaging according to customers' requirements.



### 11. deliver goods

According to the size and weight of different products, we will arrange the most suitable mode of transportation. Support door-to-door delivery. The export goods shall be delivered according to the transportation mode and schedule negotiated with customers.



OUR SERVICES >>>

## USER EXPERIENCE

SERVICE

effective communication



No matter when or where you are interested in our products, we will provide you a free 24-hour service.



1. We have a professional customer service team, sales team and technical team, to communicate with you, to provide comprehensive and systematic product information, in the case of mutual recognition to develop technical solutions



2. The company has opened a national free 24-hour service hotline 400-6652-818. After receiving complaints, the company will reply to the handling opinions within 8 hours. According to the user's requirements, the company will handle the complaints within 24 hours, 48 hours and within the time agreed with the user.

3. For all products to implement the principle of life-long service, beyond the warranty period of products only charge service costs.



If you are interested in our products, please don't hesitate to contact us immediately. You will get a chance to inspect our company comprehensively and provide free installation guidance.



As long as it is your request, it is our mission! Welcome to visit our factory!



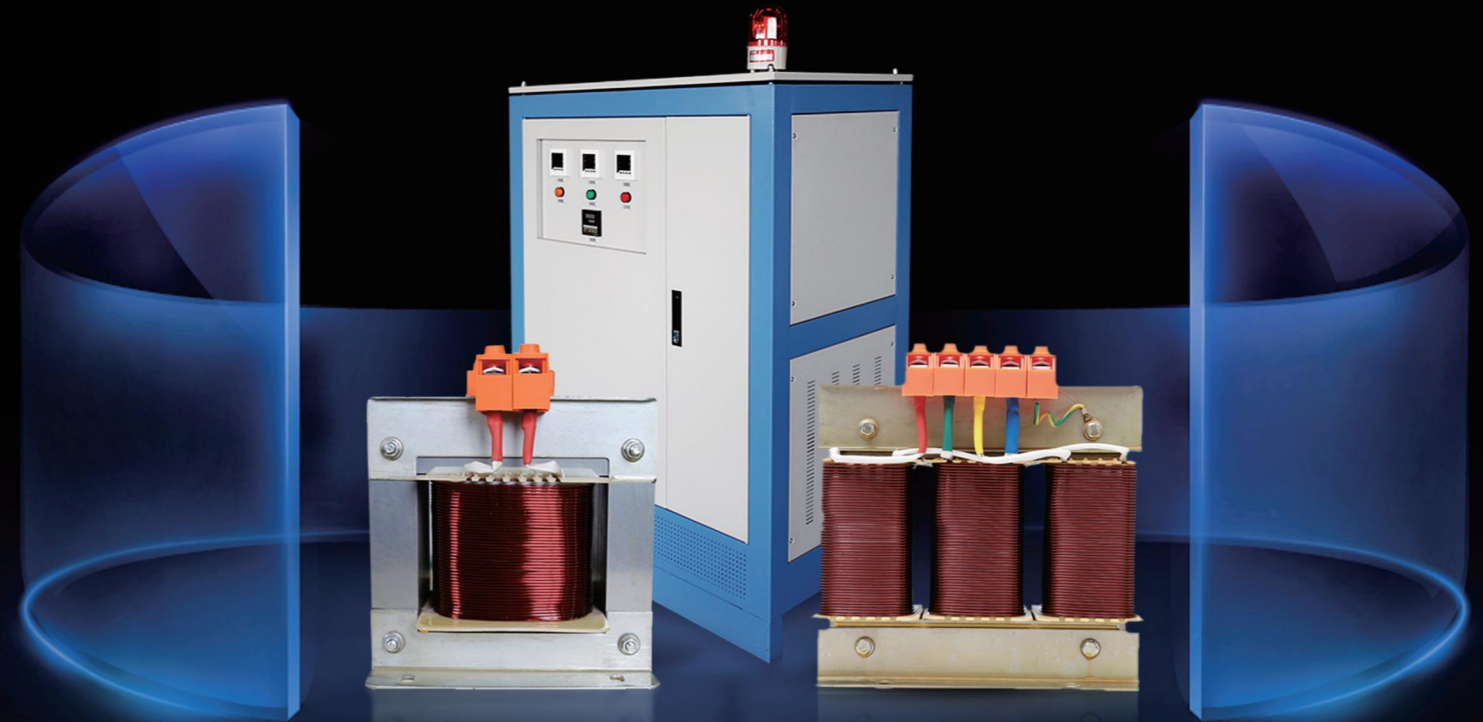
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# 变压器

Transformer



Our main single-phase transformers include BK / LBK / dbk / DK single-phase control transformer, DG single-phase isolation transformer, jbk-jbk1 / 2 / 3 / 4 / 5 / 6 series machine tool control transformer, etc. The main production of three-phase transformers are: three-phase dry isolation transformer, three-phase dry self coupling transformer, three-phase rectifier transformer, three-phase zero transformer, three-phase special transformer, mechanical equipment supporting three-phase transformer and other products.

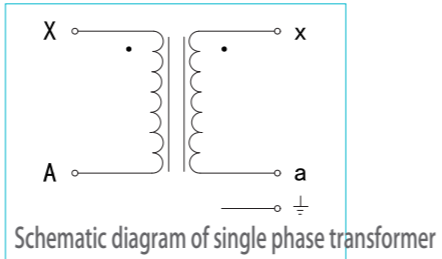


## Single phase control transformer

### Product overview

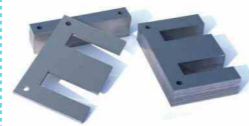
BK / LBK / dbk series single-phase control transformers are manufactured by our company with high-quality materials, advanced technology and rigorous design for many years. The new silicon steel sheet and high temperature resistant and flame retardant terminal are selected, and the vacuum pressure impregnation process of 180 °C temperature resistant insulating varnish is adopted.

It can be used in all kinds of AC power supply, and its output voltage can not exceed the rated voltage of 50 kHz; It has the advantages of fireproof, moistureproof, safe and reliable, energy saving and convenient maintenance.



### Product technology

The iron core can be made of 0.27mm, 0.30mm, 0.35mm and 0.5mm thick h18, h14, H12 and Z11 new high-quality cold-rolled



#### Iron core

Nylon framework, high-temperature resistance, good flame retardant. High power adopts frameless design, and there are ventilation slots between coils, so the air flow is smooth, which can quickly and effectively reduce the coil temperature.

#### Skeleton

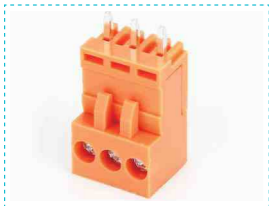


#### Insulation technology

The transformer is impregnated with H-class insulating paint under vacuum pressure, with temperature resistance of 180 °C, anti-rust and anti-corrosion, low operation noise and good insulation performance.



#### Terminal block



Low power adopts Taiwan mark terminal block and Japan TX terminal, which has excellent temperature resistance, pressure resistance and flame retardance;

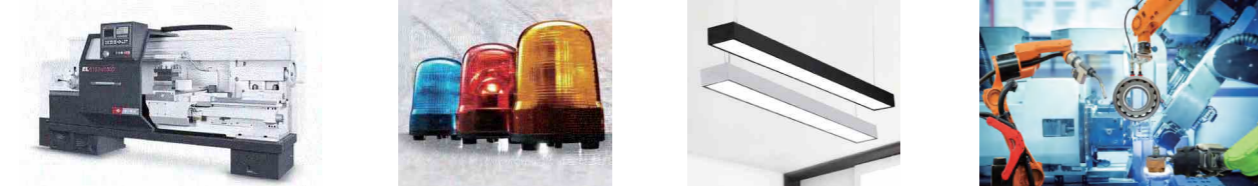
#### Wire winding



The winding is made of H-class enamelled copper / aluminum wire, with temperature resistance of 180 °C; it is closely and evenly arranged, without insulating layer on the surface, with high aesthetic feeling and heat dissipation.

### Product application

This series of single-phase transformer is widely used in CNC machine tools and mechanical equipment, working lighting and signal lamp power supply, and also can be used as small power supply.



### Technical parameters:

Product name	BK / LBK / dbk series single phase control transformer		
Rated capacity	1VA~800kVA (Customizable)	Impedance voltage	1%~20% (Customizable)
input voltage	1V~10000V (Customizable)	Overload capacity	Double the rated current for 1 minute
output voltage	1V~10000V (Customizable)	Cooling form	Self cooling or air cooling
Frequency	50Hz/60Hz (Customizable)	Temperature rise	F ≤ 100k, H ≤ 125k
work efficiency	≥80%~99%	ambient temperature	-15°C~+40°C
operation mode	can be unattended for a long time	Noise	≤35~65dB(A) (1m)
insulation resistance	≥500MΩ	Altitude	≤2000M
Grounding resistance	25A<80mΩ	relative humidity	<90%
Insulation class	Class F / h (Customizable)	Design life	30years
No load current	<0.5%~25%		

### Reference Size :

model	Dimensions:L*W*H(mm)	install:L*W(mm)	aperture(mm)	weight(Kg)
BK-300VA	114*130*140	90*95	12*7	7
BK-500VA	132*140*150	100*110	12*7	8
BK-700VA	150*150*180	120*105	15*8	9.5
BK-1000VA	150*170*180	120*125	15*8	12.5
BK-2000VA	192*160*220	140*120	17*8	16

\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.

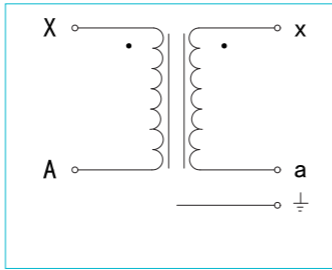


## Single phase isolation transformer

### Product overview

DG series single-phase isolation transformer is suitable for AC circuit with AC 50 Hz / 60 Hz and rated power supply voltage no more than 10000 v. the input winding and output winding are electrically isolated to avoid accidentally touching charged body at the same time.

Using isolation transformer to make secondary suspension to ground can only be used in small power supply range and short circuit. It can work effectively in the rated load for a long time, with excellent performance, reliable operation and safe wiring; all kinds of input and output voltage, tap line group capacity distribution of products can be carefully designed and manufactured according to the requirements of users.



### Product technology



Iron core

The iron core can be made of 0.27mm, 0.30mm, 0.35mm and 0.5mm thick h18, h14, H12 and Z11 new high-quality cold-rolled

Terminal block



Low power adopts Taiwan mark terminal block and Japan TX terminal block, which has excellent temperature resistance, pressure resistance and flame retardance; high power adopts high-quality copper bar.

Skeleton



Nylon framework, high temperature resistance, good flame retardant. High power adopts frameless design, and there are ventilation slots between coils, so the air flow is smooth, which can quickly and effectively reduce the coil temperature.

Wire winding



The winding is made of H-class enamelled copper / aluminum wire, with temperature resistance of 180 °C; it is closely and evenly arranged, without insulating layer on the surface, with high aesthetic feeling and heat dissipation.

Insulation technology

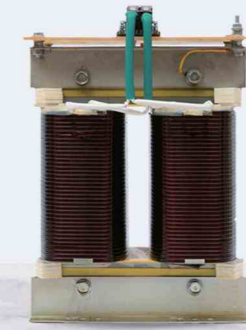
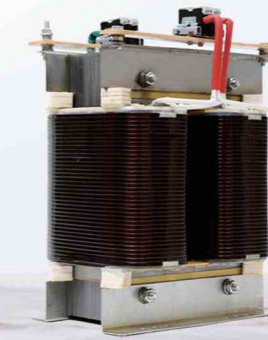


The transformer is impregnated with H-class insulating paint under vacuum pressure, with temperature resistance of 180 °C, anti rust and anti-corrosion, low operation noise and good insulation performance.

### Product application

This series of single-phase transformers are widely used in CNC machine tools and mechanical equipment

- ▶ It can restrain the harmonic interference and make the protection device cooperate easily;
- ▶ For example, when starting the heavy load equipment, reduce the impact on the system voltage;
- ▶ When single-phase grounding occurs at the load side of the isolation transformer, it will not cause single-phase grounding of the whole system;
- ▶ When a short-circuit accident occurs on the load side, the short-circuit current of the system is limited.



### Technical parameters:

Product name	DG series single phase isolation transformer		
Rated capacity	1VA~800kVA (Customizable)	Impedance voltage	1%~20% (Customizable)
input voltage	1V~10000V (Customizable)	Overload capacity	Double the rated current for 1 minute
output voltage	1V~10000V (Customizable)	Cooling form	Self cooling or air cooling
Frequency	50Hz/60Hz (Customizable)	Temperature rise	F ≤ 100k, H ≤ 125k
work efficiency	≥80%~99%	ambient temperature	-15°C~+40°C
operation mode	can be unattended for a long time	Noise	≤35~65dB(A) (1m)
insulation resistance	≥500MΩ	Altitude	≤2000M
Grounding resistance	25A<80mΩ	relative humidity	<90%
Insulation class	Class F / h (Customizable)	Design life	30years
No load current	<0.5%~25%		

### Reference Size :

model	Dimensions:L*W*H(mm)	install:L*W(mm)	aperture(mm)	weight(Kg)
DG-25KVA	330*330*470	170*190	20*10	110
DG-30KVA	370*350*520	190*190		140
DG-40KVA	370*380*520	190*220		165
DG-50KVA	410*350*580	210*200		180
DG-60KVA	410*400*580	210*250		235

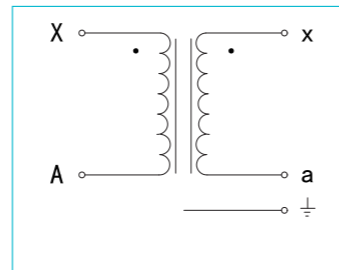
\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.



## Machine tool control transformer

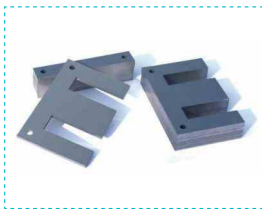
### Product overview

Jbk1 / 2 / 3 / 4 / 5 / 6 series control transformers are a new series of machine tool control transformers designed and manufactured with reference to foreign advanced technology in the 1990s. The products comply with vde0550, iec204-1, iec439, gb5226-85 and other relevant standards. The wiring mode can be crimped or inserted, and the terminal block with protection requirements can be prevented from touching accidentally. The power frequency is 50-60Hz, and the input voltage is generally not more than 10000v.



### Product technology

The iron core can be made of 0.27mm, 0.30mm, 0.35mm and 0.5mm thick h18, h14, H12 and Z11 new high-quality cold-rolled silicon steel sheets. We can use the most suitable materials according to customer requirements.



Iron core

Terminal block



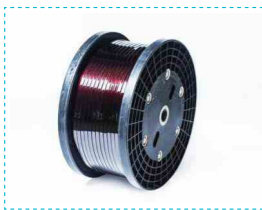
Low power adopts Taiwan-mark terminal block and Japan TX terminal block, which has excellent temperature resistance, pressure resistance and flame retardance; high power adopts high-quality copper bar.

Skeleton



Nylon framework, high temperature resistance, good flame retardant. High power adopts frameless design, and there are ventilation slots between coils, so the air flow is smooth, which can quickly and effectively reduce the coil temperature.

Wire winding



The winding is made of H-class enamelled copper / aluminum wire, with temperature resistance of 180 °C; it is closely and evenly arranged, without insulating layer on the surface, with high aesthetic feeling and heat dissipation.

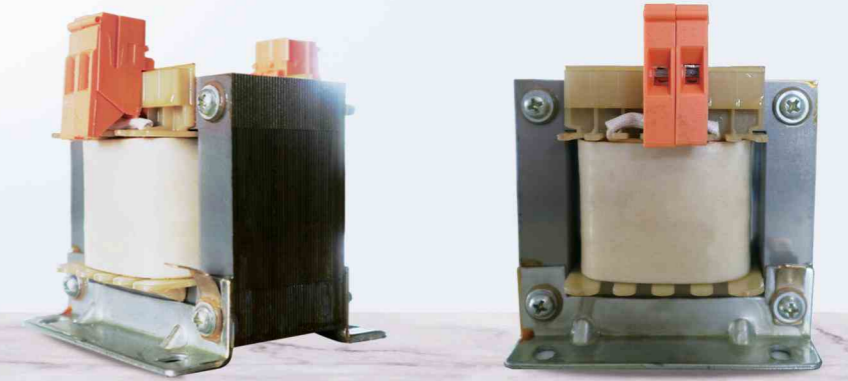
Insulation technology

The transformer is impregnated with H-class insulating paint under vacuum pressure, with temperature resistance of 180 °C, anti rust and anti-corrosion, low operation noise and good insulation performance.



### Product application

This series of single-phase transformers are widely used in CNC machine tools and mechanical equipment



### Technical parameters:

Product name	Jbk1 / 2 / 3 / 4 / 5 / 6 series machine tool control transformer		
Rated capacity	1VA~800kVA (Customizable)	Impedance voltage	1%~20% (Customizable)
input voltage	1V~10000V (Customizable)	Overload capacity	Double the rated current for 1 minute
output voltage	1V~10000V (Customizable)	Cooling form	Self cooling or air cooling
Frequency	50Hz/60Hz (Customizable)	Temperature rise	F ≤ 100k, H ≤ 125k
work efficiency	≥ 80%~99%	ambient temperature	-15°C~+40°C
operation mode	can be unattended for a long time	Noise	≤ 35~65dB(A) (1m)
insulation resistance	≥ 500MΩ	Altitude	≤ 2000M
Grounding resistance	25A < 80mΩ	relative humidity	< 90%
Insulation class	Class F / h (Customizable)	Design life	30years
No load current	< 0.5%~25%		

### Reference Size :

model	Dimensions:L*W*H(mm)	install:L*W(mm)	aperture(mm)	weight(Kg)
JBK-40VA	78*90*90	56*65	9*5	1.5
JBK-63VA	78*90*90	56*65	9*5	1.5
JBK-100VA	84*95*100	64*68	9*5	2
JBK-160VA	96*100*110	84*70	9*5	2.8
JBK-250VA	96*110*110	84*85	9*5	3.8

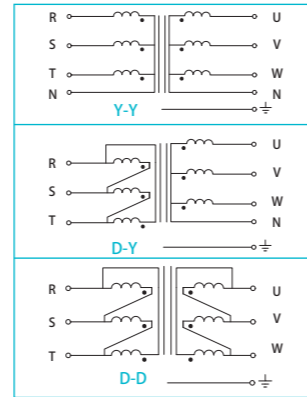
\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.



## Three phase isolation transformer

### Product overview

The input and output voltage of isolation transformer can be designed according to the needs, including single-phase, three-phase or multi-channel input and output, triangle connection and star connection, and the maximum rated power (2500kVA). The production uses high-quality raw materials, advanced production equipment and exquisite technology, advanced winding machine and a full set of vacuum pressure impregnation equipment, and the winding adopts the whole line winding method. The transformer is impregnated with paint in sections, and the progressive drying method of 60 °C, 80 °C, 100 °C and 120 °C is adopted to make the insulating paint better attached to the coil, which can effectively reduce the working noise, loss, temperature rise and increase the service life of the transformer.



Schematic diagram of three phase isolation transformer

### Product technology

The iron core can be made of 0.27mm, 0.30mm, 0.35mm and 0.5mm thick h18, h14, H12 and Z11 new high-quality cold-rolled silicon steel sheets. We can use the most suitable materials according to customer requirements.

Iron core

Low power adopts Taiwan mark terminal block and Japan TX terminal block, which has excellent temperature resistance, pressure resistance and flame retardance; high power adopts high-quality copper bar.

Skeleton

Nylon frame is used for low power, with high temperature resistance and good flame retardancy; High power adopts frameless design, and there are ventilation slots between coils, so the air flow is smooth, which can quickly and effectively reduce the coil temperature.

Insulation technology

The transformer is impregnated with H-class insulating paint under vacuum pressure, with temperature resistance of 180 °C, anti rust and anti-corrosion, low operation noise and good insulation performance.



Wire winding

The winding is made of H-class enamelled copper / aluminum wire, with temperature resistance of 180 °C; it is closely and evenly arranged, without insulating layer on the surface, with high aesthetic feeling and heat dissipation.

### Product application

#### 产品应用

It can be widely used in CNC machinery, photovoltaic power generation system, subway, high-rise buildings, airports, stations, docks, ships, industrial and mining enterprises and tunnel power transmission and distribution places.



### Technical parameters:

Product name	SG / llsg / LSG series three phase isolation transformer		
Rated capacity	50VA~2500kVA (Customizable)	No load current	<0.5%~25%
input voltage	1V~30000V (Customizable)	Impedance voltage	1%~20% (Customizable)
output voltage	1V~30000V (Customizable)	Overload capacity	Double the rated current for 1 minute
Frequency	50Hz/60Hz (Customizable)	Cooling form	Self cooling or air cooling
work efficiency	≥80% ~99%	Protection level	protection levels can be customized
Connection mode	Yyn0Yd11Dyn11Dd0Dyn5Dzn0 (Customizable)	Temperature rise	F ≤ 100k, H ≤ 125k
operation mode	can be unattended for a long time	ambient temperature	-15°C~+40°C
Electrical strength	2500VAC/min	Noise	≤60dB (A) (1m)
insulation resistance	≥500MΩ	Altitude	≤2000M
Grounding resistance	25A<80mΩ	relative humidity	≤90%
Insulation class	Class F / h (Customizable)	Design life	20year

### Reference Size :

model	Dimensions:L*W*H(mm)	install:L*W(mm)	weight(Kg)
SG-30KVA	440*350*430	300*205	150
SG-50KVA	560*330*550	380*190	215
SG-100KVA	760*400*685	500*350	280
SG-150KVA	820*400*800	500*350	400
SG-200KVA	900*400*840	550*350	475
SG-300KVA	1060*450*955	600*400	720
SG-500KVA	1150*500*1160	760*450	1140

\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.

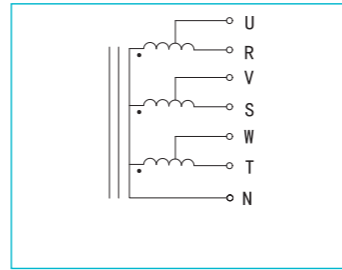




## Three phase auto-transformer

### Product overview

Autotransformer is a kind of transformer whose primary and secondary windings are in the same winding. The primary and secondary windings are directly connected in series and self coupled. According to the structure, it can be divided into adjustable pressure type and fixed type.



Schematic diagram of three phase autotransformer

### Product technology

Iron core



The iron core can be made of 0.27mm, 0.30mm, 0.35mm and 0.5mm thick h18, h14, H12 and Z11 new high-quality cold-rolled silicon steel sheets. We can use the most suitable materials according to customer requirements.

Wire winding



The winding is made of H-class enamelled copper / aluminum wire, with temperature resistance of 180 °C; it is closely and evenly arranged, without insulating layer on the surface, with high aesthetic feeling and heat dissipation.

Terminal block



Low power adopts Taiwan mark terminal block and Japan TX terminal block, which has excellent temperature resistance, pressure resistance and flame retardant; high power adopts high-quality copper bar.

Skeleton



Nylon framework, high temperature resistance, good flame retardant. High power adopts frameless design, and there are ventilation slots between coils, so the air flow is smooth, which can quickly and effectively reduce the coil temperature.

Insulation technology



The transformer is impregnated with H-class insulating paint under vacuum pressure, with temperature resistance of 180 °C, anti rust and anti-corrosion, low operation noise and good insulation performance.

### Product application

This series of single-phase transformers are widely used in CNC machine tools and mechanical equipment



### Technical parameters:

Product name	OSG / LOSG three-phase autotransformer and QZB three-phase autotransformer		
Rated capacity	50VA~2500kVA (Customizable)	Impedance voltage	1%~20% (Customizable)
input voltage	1V~30000V (Customizable)	Overload capacity	Double the rated current for 1 minute
output voltage	1V~30000V (Customizable)	Cooling form	Self cooling or air cooling
Frequency	50Hz/60Hz (Customizable)	Protection level	IP00/IP20 (Customizable)
work efficiency	≥80%~99%	Temperature rise	F ≤ 100k, H ≤ 125k
operation mode	can be unattended for a long time	ambient temperature	-15°C~+40°C
Electrical strength	3000VAC/min	Noise	≤35~65dB(A) (1m)
insulation resistance	≥500MΩ	Altitude	≤2000M
Grounding resistance	25A<80mΩ	relative humidity	<90%
Insulation class	Class F / h (Customizable)	Design life	20years
No load current	<0.5%~25%		

### Reference Size :

model	Dimensions:L*W*H(mm)	install:L*W(mm)	weight(Kg)
OSG-10KVA	300*155*310	180*125	37
OSG-20KVA	380*220*380	260*150	70
OSG-30KVA	380*250*380	260*160	78
OSG-50KVA	440*310*430	300*165	110
OSG-100KVA	560*330*550	380*160	215
OSG-150KVA	620*350*600	420*200	280

\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.

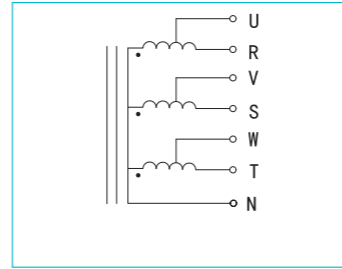




## Three phase servo control transformer

### Product overview

SBK servo control transformer is widely used in various power supply situations with 50 Hz / 60 Hz, input and output voltage less than 1000 V, especially suitable for servo motor and imported equipment (380 V in - 220 V out, 380 V in - any voltage out), rated capacity between 1 VA - 1600 kVA.



Schematic diagram of three phase servo control transformer

### Product technology



Iron core

The iron core can be made of 0.27mm, 0.30mm, 0.35mm and 0.5mm thick h18, h14, H12 and Z11 new high-quality cold-rolled silicon steel sheets. We can use the most suitable materials according to customer requirements.

Terminal block



Low power adopts Taiwan mark terminal block and Japan TX terminal block, which has excellent temperature resistance, pressure resistance and flame retardance; high power adopts high-quality copper bar.

Skeleton

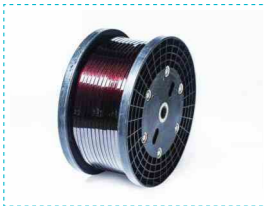


Nylon framework, high temperature resistance, good flame retardant. High power adopts frameless design, and there are ventilation slots between coils, so the air flow is smooth, which can quickly and effectively reduce the coil temperature.

Insulation technology



The transformer is impregnated with H-class insulating paint under vacuum pressure, with temperature resistance of 180 °C, anti rust and anti-corrosion, low operation noise and good insulation performance.

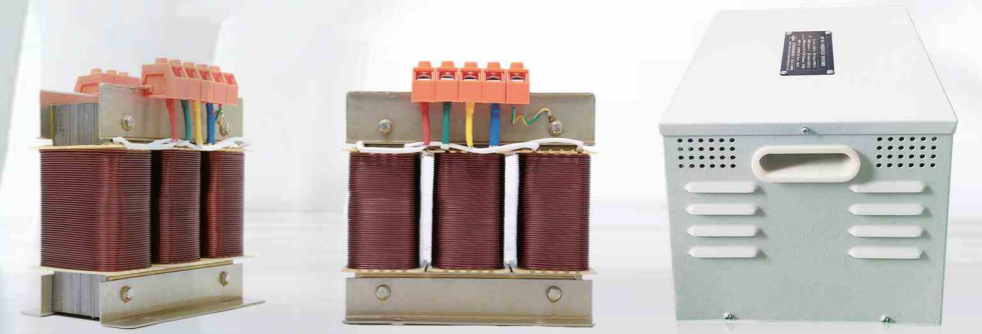


Wire winding

The winding is made of H-class enamelled copper / aluminum wire, with temperature resistance of 180 °C; it is closely and evenly arranged, without insulating layer on the surface, with high aesthetic feeling and heat dissipation.

### Product application

This series of single-phase transformers are widely used in CNC machine tools and mechanical equipment



### Technical parameters:

Product name		SBK three phase servo control transformer	
Rated capacity	50VA~2500kVA (Customizable)	Impedance voltage	1%~20% (Customizable)
input voltage	1V~30000V (Customizable)	Overload capacity	Double the rated current for 1 minute
output voltage	1V~30000V (Customizable)	Cooling form	Self cooling or air cooling
Frequency	50Hz/60Hz (Customizable)	Protection level	IP00/IP20 (Customizable)
work efficiency	≥80%~99%	Temperature rise	F ≤ 100k, H ≤ 125k
operation mode	can be unattended for a long time	ambient temperature	-15°C~+40°C
Electrical strength	3000VAC/min	Noise	≤35~65dB(A) (1m)
insulation resistance	≥500MΩ	Altitude	≤2000M
Grounding resistance	25A<80mΩ	relative humidity	<90%
Insulation class	Class F / h (Customizable)	Design life	20years
No load current	<0.5%~25%		

### Reference Size :

model	Dimensions:L*W*H(mm)	install:L*W(mm)	weight(Kg)
SBK-6KVA	240*170*250	130*130	28
SBK-10KVA	300*155*310	180*125	37
SBK-15KVA	380*200*380	260*110	50
SBK-20KVA	380*220*380	260*130	62
SBK-30KVA	380*250*380	260*160	78
SBK-50KVA	440*330*430	300*185	130

\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.



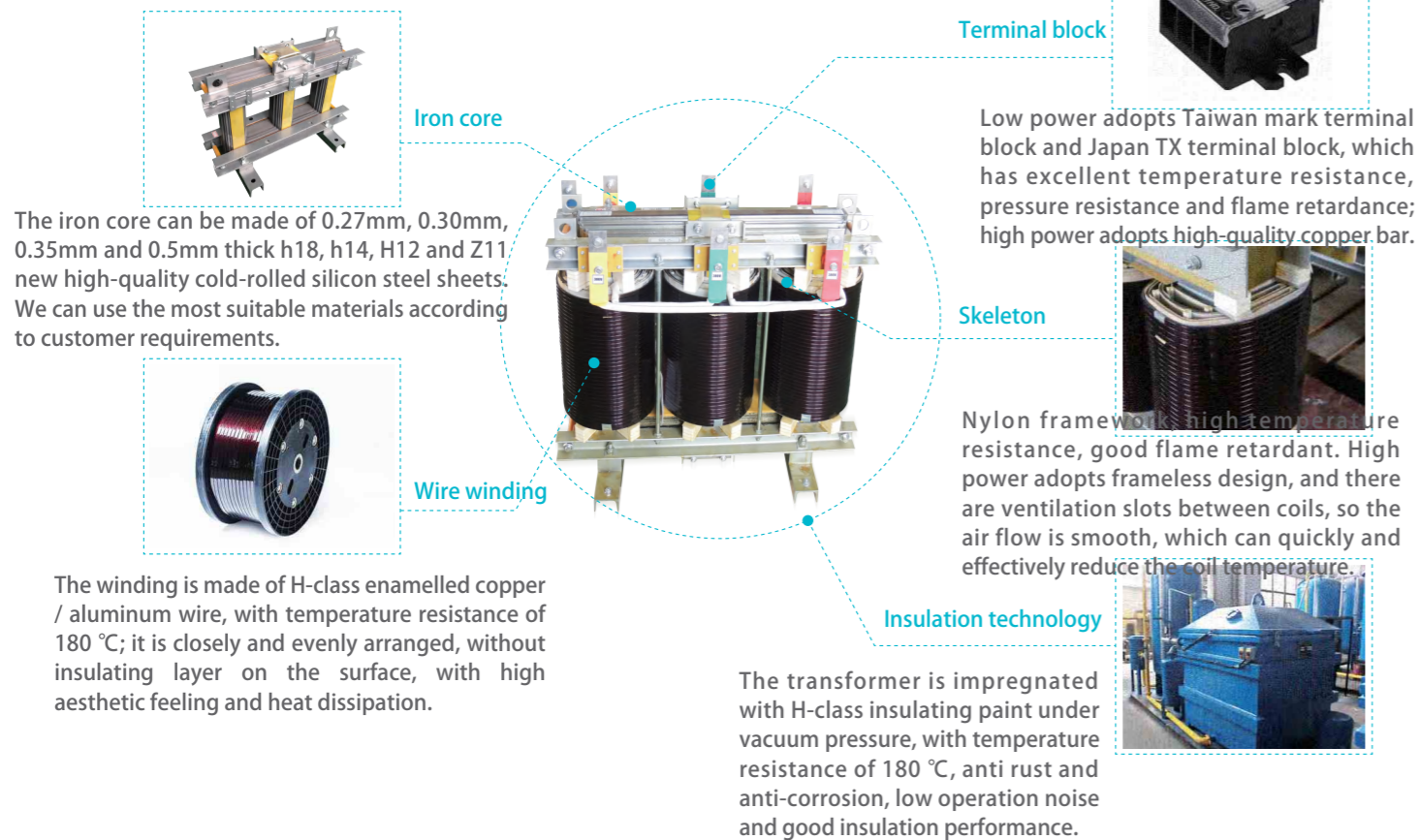


## Photovoltaic isolation transformer

### Product overview

Solar energy with its pollution-free, noise-free, widely distributed advantages, more and more people focus on. But its large-scale investment will inevitably bring hidden dangers to the reliability and stability of power grid, such as harmonics, flicker, DC bias, overvoltage and so on. The leakage current generated in the inverter can be effectively suppressed by the floating current generated by the isolation devices.

### Product technology



### Product application

This series of isolation transformers are widely used in photovoltaic power generation, wind energy, UPS, EPS fire emergency power supply, variable frequency power supply and inverter power supply.



### Product technology

Isolation transformer is very important in photovoltaic grid connected inverter system. Its performance is not only related to the efficiency and heating of the transformer itself, but also determines the technical performance of the whole converter, and even leads to the damage of power tube and inverter failure.

- Electrical isolation: transformer is used to achieve electrical isolation between photovoltaic power supply and power grid.
- Prevent the DC component of the current from injecting into the grid: since DC will not cause the change of magnetic flux, the DC component of the photovoltaic inverter system will not flow into the grid through the isolation transformer.
- It can eliminate the influence of the third harmonic and the third harmonic on the power grid. The role of stable voltage: when the system fails, it can effectively suppress the resonant overvoltage and steady-state overvoltage of photovoltaic inverter system.

#### Technical parameters:

Product name	PV isolation transformer		
Rated capacity	1kVA~6000kVA (Customizable)	Impedance voltage	1%~20% (Customizable)
input voltage	380V/400V/415V (Customizable)	Overload capacity	Double the rated current for 1 minute
output voltage	380V/400V/415V (Customizable)	Cooling form	Self cooling or air cooling
Frequency	50Hz/60Hz (Customizable)	Protection level	IP00/IP20 (Customizable)
work efficiency	≥95%	Temperature rise	F ≤ 100k, H ≤ 125k
Connection mode	YN/yn0(Customizable)	ambient temperature	-15°C~+40°C
Electrical strength	3000VAC/min	Noise	≤35~65dB(A) (1m)
insulation resistance	≥500MΩ	Altitude	≤2000M
Grounding resistance	25A<80mΩ	relative humidity	<90%
Insulation class	Class F / h (Customizable)	Design life	20years
No load current	<0.5%~25%		

\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.

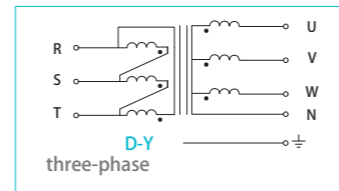
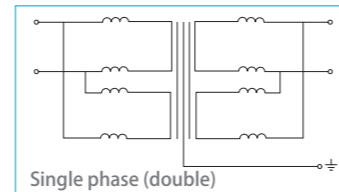




## Low voltage high current transformer

### Product overview

Low voltage high current transformer is a special form of isolation transformer, which is divided into single-phase (DDG transformer) and three-phase (SDG) series. This series of products are characterized by high primary voltage, low secondary voltage and high current. Whether it is tested or heated, this series of transformers need to step down from the power supply voltage to increase the current, so that the low-voltage current can reach thousands or tens of thousands of amperes. The high voltage voltage of this series of products is generally 220 V, 380 V and 650 v. the low voltage of this series of products is different from the size of current rise, forming a series of its own. When using this series of products, it is generally necessary to add voltage regulation at the front side of the power supply, so that the low-voltage side can achieve stepless regulation. The transformer is suitable for continuous working system. The output voltage is 3V, 6V, 9V, 12V, 15V, 24V, 36V, etc. (it can be designed according to customer's requirements)



### Product technology



Wire winding

The winding is made of H-class enamelled copper / aluminum wire, with temperature resistance of 180 °C; it is closely and evenly arranged, without insulating layer on the surface, with high aesthetic feeling and heat dissipation.



Insulation technology

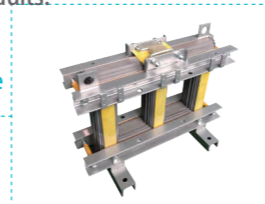
The transformer is impregnated with H-class insulating paint under vacuum pressure, with temperature resistance of 180 °C, anti rust and anti-corrosion, low operation noise and good insulation performance.

Copper bar



High quality copper bar, high over-current, good conductivity, high temperature resistance, not easy to burn equipment in case of short circuit and other faults.

Iron core



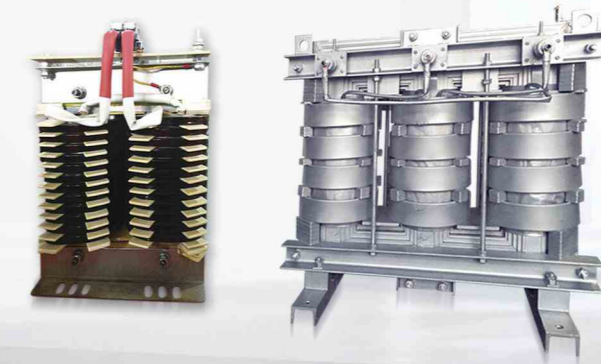
The iron core can be made of 0.27mm, 0.30mm, 0.35mm and 0.5mm thick h18, h14, H12 and Z11 new high-quality cold-rolled silicon steel sheets. We can use the most suitable materials according to customer requirements.

### Product application

It is suitable for continuous load test and heating of electric welding machine, spot welding machine, boiler, plating, forging and annealing equipment, current transformer, circuit breaker, contactor, thermal relay, switch and so on. It is used as power supply for temperature rise test, protection characteristic test, continuous load test and electrical parameter measurement test.



SHLLBWT®



DDG/DSG  
低压大电流变压器

### Technical parameters:

model	DDG	DSG
Phase number	single-phase	three-phase
Rated capacity	0.1kVA~200kVA (Customizable)	0.5kVA~1600kVA (Customizable)
input voltage	1V ~ 500V (customizable)	
output voltage	1V ~ 500V (customizable)	
Frequency	50 Hz / 60 Hz (customizable)	
Output voltage accuracy	±1%	
Output waveform distortion	No distortion (compared with input waveform)	
work efficiency	≥80%~99%	
connection	Δ type, Y type (optional)	
Overload capacity	Double rated current can last for 1 minute	
Electrical strength	2500VAC/min	
insulation resistance	≥500MΩ	
Grounding resistance	25A<80mΩ	
Insulation class	Class F / h (optional)	
Cooling form	Self cooling or air cooling	
Protection level	IP00 / IP20 (customizable)	
Temperature rise	Class 100k ≤ 125h	
ambient temperature	-15°C~+40°C	
Noise	≤ 35 ~ 65dB (a) (within 1m)	
Altitude	≤ 2000M	
relative humidity	≤ 90%	
Design life	20 years	

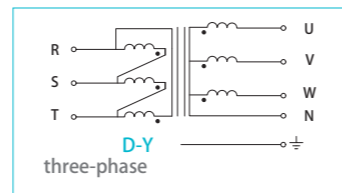
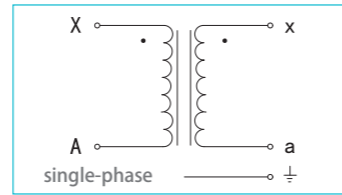
\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.



## Medical isolation transformer

### Product overview

HDB it series medical isolation transformer is dedicated to medical IT system. There are conventional single-phase isolation transformer and special three-phase isolation transformer. Conventional capacity ranges from 3.15kva to 10KVA, and the transformer can be used for horizontal and vertical installation. Medical IT system is mainly used in important level 2 medical places, such as operating room, ICU / CCU intensive care unit, to provide safe, reliable and continuous power distribution for important equipment in these places. The product can realize the real-time monitoring of insulation, load and temperature of insulation transformer in it system, and has the functions of system insulation fault circuit location and multi system centralized monitoring.

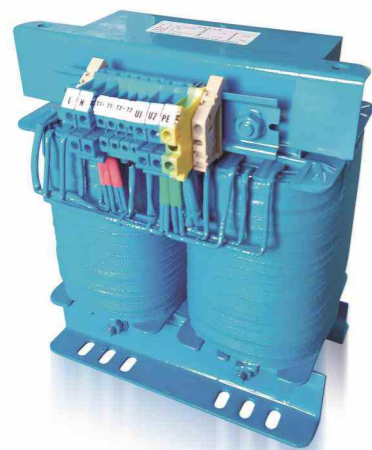


### Product technology

#### Protective enclosure

- Steel shell
- Protection grade IP20 or customized
- Cable access hole
- transformers with rated capacity of 3.15 to 10 KVA

The housing is provided with fixing holes for installation and replacement at any time.



#### transformer

- The ratio between primary winding and secondary winding is 1:1.
- The winding is made of H-class enamelled copper wire, with temperature resistance of 180 °C; it is closely and evenly arranged, without insulating layer on the surface, with high aesthetic feeling and heat dissipation.
- Double insulation treatment is adopted between windings, and electrostatic shielding layer is designed.
- The transformer adopts 180 °C temperature resistant insulating varnish and vacuum pressure impregnation, which has high heat resistance, anti-corrosion, low operating noise and good insulation performance.
- The isolation transformer has excellent filtering effect and is used to convert TN system into it system (ungrounded system).
- Built in PT100 temperature sensor to monitor the temperature of isolation transformer.

### Product application

Ventilator, infusion pump, testing equipment, pulse compression machine, patient monitoring equipment, high frequency shell equipment, etc.

## Suitable for all kinds of medical equipment

### Escort medical equipment



#### Technical parameters:

Product name	Medical isolation transformer / it isolation power supply		
Rated capacity	3.15kva ~ 10KVA (customizable)	Overload capacity	Double rated current can last for 1 minute
input voltage	1V ~ 500V (customizable)	Cooling form	Self cooling
output voltage	1V ~ 500V (customizable)	Protection level	IP00 (open) IP20 (customizable)
Frequency	50Hz/60Hz	Temperature rise	F ≤ 100k, H ≤ 125k
work efficiency	≥80%~99%	ambient temperature	-15°C~+40°C
Insulation class	Class F / h (optional)	Noise	≤ 40dB (a) (within 1m)
operation mode	It can be unattended for a long time	Altitude	≤2000M
Electrical strength	2500VAC/min	relative humidity	<90%
insulation resistance	≥500MΩ	Design life	20 years
Grounding resistance	25A<100mΩ		

\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.

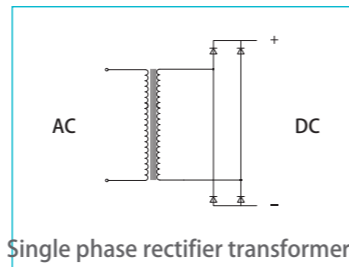


## Rectifier transformer

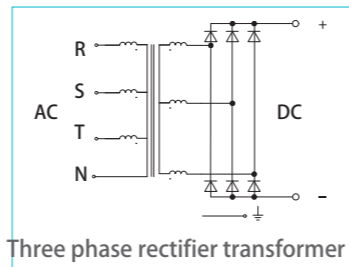
### Product overview

Three phase rectifier transformer is the power transformer of rectifier equipment. The characteristics of rectifier equipment is that the original side inputs current, while the secondary side outputs DC after rectifying the original. Converter is the general term of rectifier, counter current and frequency conversion, among which rectifier is the most widely used. The transformer used as the power supply of rectifying device is called rectifying transformer. Most of the rectifying DC power supply used in industry is obtained by AC power grid through rectifying transformer and rectifying equipment.

The commonly used rectifier circuits are single-phase half wave, single-phase full wave, three-phase half wave, three-phase full wave (Y or  $\Delta$ ) bridge, three-phase zigzag (Zo), six phase y (neutral point connection), six phase fork (zigzag), six phase y parallel bridge (with balance reactor), six phase  $\Delta$  Y series bridge, twelve phase four zigzag with balance reactor, six phase y or  $\Delta$  form, six phase (ten phase) 2、24 phase double anti star with balance reactor, or multiple sets of parallel bridge, double anti star circuit. DC current can reach 25kA, DC voltage from tens of volts to hundreds of volts, valve side often adopts in-phase reverse parallel connection method.

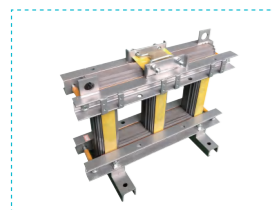


Single phase rectifier transformer



Three phase rectifier transformer

### Product technology



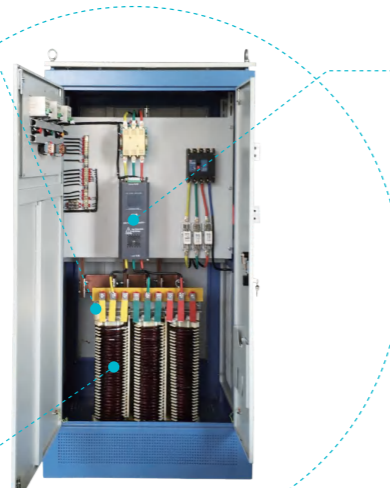
Iron core

The iron core can be made of 0.27mm, 0.30mm, 0.35mm and 0.5mm thick h18, h14, H12 and Z11 new high-quality cold-rolled silicon steel sheets. We can use the most suitable materials according to customer requirements.



Wire winding

The winding is made of H-class enamelled copper / aluminum wire, with temperature resistance of 180 °C; it is closely and evenly arranged, without insulating layer on the surface, with high aesthetic feeling and heat dissipation.



an adjuster



Using high-quality electronic intelligent silicon controlled regulator, it has the characteristics of high efficiency, no mechanical noise and wear, fast response, small volume, light weight and so on.



Insulation technology

The transformer is impregnated with H-class insulating paint under vacuum pressure, with temperature resistance of 180 °C, anti rust and anti-corrosion, low operation noise and good insulation performance.

### Product application

It can be widely used in electrochemical industry, DC power supply for electroplating or electrical processing, DC power supply for excitation, DC power supply for charging and electrostatic precipitating, DC power grid of mine or urban electric locomotive, mechanical and electronic equipment, medical equipment, rectifier device, etc.



#### Technical parameters:

model	BKZ	ZSG	ZSG5
Phase number	single-phase	three-phase	Three phase (three phase five column)
Rated capacity	50VA ~ 2500kVA (customizable)		
input voltage	1V ~ 1000V (customizable)		
output voltage	1V ~ 1000V (customizable)		
Frequency	50 Hz / 60 Hz (customizable)		
work efficiency	≥ 80%~99%		
operation mode	It can be unattended for a long time		
Electrical strength	2500VAC/min		
insulation resistance	Secondary to ground winding resistance ≥ 500m Ω		
Grounding resistance	25A < 80mΩ		
Insulation class	Class F / h (optional)		
No load current	< 0.5%~25%		
Impedance voltage	1% - 20% (customizable)		
Overload capacity	Double rated current can last for 1 minute		
Cooling form	Self cooling or air cooling		
Protection level	IP00 / IP20 / IP65 (customizable)		
Temperature rise	Class 100k ≤ 125h		
ambient temperature	-15°C~+40°C		
Noise	≤ 60dB (a) (within 1m)		
Altitude	≤ 2000M		
relative humidity	≤ 90%		
Design life	20 years		

\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.





## Product overview

EPS / UPS matching inverter transformer is divided into single-phase and three-phase, suitable for AC 50 Hz / 60 Hz, working voltage 10000 V and below. It is a kind of special isolation transformer, because its input power is the AC power through inverter, so the harmonic component content is high, ordinary isolation transformer can not be used in this situation.

This series of transformers are made by making full use of new scientific research materials and new technology, aiming at the technical requirements of various types of power frequency ups and EPS series products on the market, through unique design concept and advanced production technology, which can meet the compensation needs of inverter circuit for special waveforms, The transformer can also be adapted to a variety of medium and high power inverter power supply equipment.

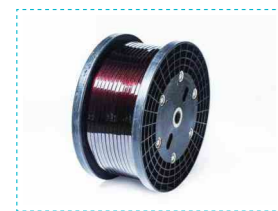


## Product technology



The iron core can be made of 0.27mm, 0.30mm, 0.35mm and 0.5mm thick h18, h14, H12 and Z11 new high-quality cold-rolled silicon steel sheets. We can use the most suitable materials according to customer requirements.

Iron core



Winding wire

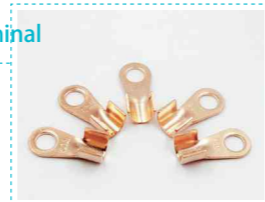
The winding is made of H-class enamelled copper / aluminum wire, with temperature resistance of 180 °C; it is closely and evenly arranged, without insulating layer on the surface, with high aesthetic feeling and heat dissipation.



Insulation technology

The transformer is impregnated with H-class insulating paint under vacuum pressure, with temperature resistance of 180 °C, anti rust and anti-corrosion, low operation noise and good insulation performance.

Cold pressed terminal



High quality cold pressed terminal / copper nose, with electroplating process, good conductivity and strong

Clip



It mainly adopts CNC bending cold rolled plate, and has environmental protection electroplating options such as five color (gold), blue zinc (silver), white zinc (Ivory), surface anodizing (black).

## Product application

This series of single-phase transformers are widely used in EPS / UPS uninterruptible power supply and high-power inverter power supply equipment.



### Technical parameters:

Product name	EPS / UPS matching inverter transformer	
Phase number	single-phase	three-phase
Rated capacity	1va ~ 1000KVA (customizable)	
input voltage	1V ~ 10000v (customizable)	
output voltage	1V ~ 10000v (customizable)	
Frequency	50 Hz / 60 Hz (customizable)	
work efficiency	≥80%~99%	
operation mode	It can be unattended for a long time	
Electrical strength	2500VAC/min	
insulation resistance	≥500MΩ	
Grounding resistance	25A < 80mΩ	
Insulation class	Class F / h (optional)	
No load current	<0.5%~25%	
Impedance voltage	1% - 20% (customizable)	
Overload capacity	Double rated current can last for 1 minute	
Cooling form	Self cooling or air cooling	
Protection level	IP00 / IP20 (customizable)	
Temperature rise	Class 100k ≤ 125h	
ambient temperature	-15°C~+40°C	
Noise	≤ 60dB (a) (within 1m)	
Altitude	≤2000M	
relative humidity	≤90%	
Design life	20 years	

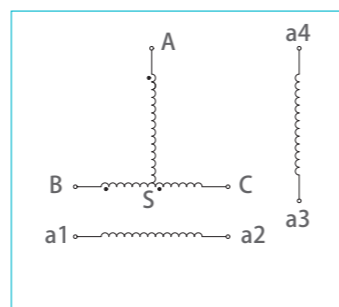
\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.



## Scott transformer

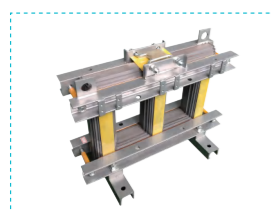
### Product overview

The Scott connected transformer is usually composed of two single-phase transformers. The three-phase high voltage winding with T-junction can be formed by connecting the end of high voltage winding of one transformer to the center of the other. Each low-voltage winding is a simple single-phase winding, and there is no electrical connection between them. Their voltage and current are the same as those of ordinary single-phase transformers. However, the winding and current of each high voltage transformer is different from that of ordinary single-phase transformer.



Three phase to single phase Scott Transformer

### Product technology



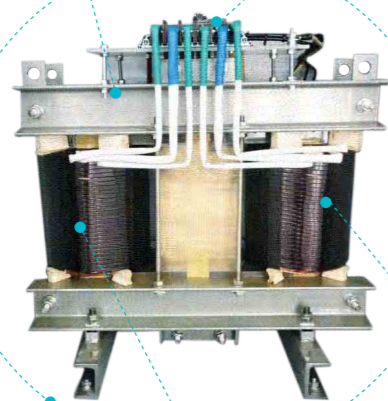
Iron core

The iron core can be made of 0.27mm, 0.30mm, 0.35mm and 0.5mm thick h18, h14, H12 and Z11 new high-quality cold-rolled silicon steel sheets. We can use the most suitable materials according to customer requirements.



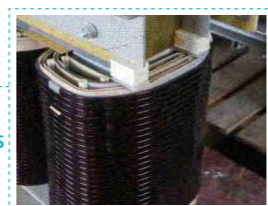
Terminal block

Low power adopts Taiwan mark terminal block and Japan TX terminal block, which has excellent temperature resistance, pressure resistance and flame retardance; high power adopts high-quality copper bar.



Winding process

No framework design is adopted, ventilation slot is left between coils, air flow is smooth, and coil temperature can be reduced quickly and effectively.



Insulation technology



The transformer is impregnated with H-class insulating paint under vacuum pressure, with temperature resistance of 180 °C, anti rust and anti-corrosion, low operation noise and good insulation performance.



Wire winding

The winding is made of H-class enamelled copper / aluminum wire, with temperature resistance of 180 °C; it is closely and evenly arranged, without insulating layer on the surface, with high aesthetic feeling and heat dissipation.

### Product application

It is mainly used for electric furnace industrial equipment, machinery supporting, import and export equipment, construction engineering equipment, automatic production line, etc.



#### Technical parameters:

Product name	SBDG series Scott Transformer
Rated capacity	1va ~ 2500kVA (customizable)
input voltage	440V, 380V (customizable)
output voltage	220 V, 110 V (customizable)
Frequency	50 Hz / 60 Hz (customizable)
work efficiency	≥ 80%~99%
operation mode	It can be unattended for a long time
Electrical strength	3000VAC/min
insulation resistance	Winding resistance to ground ≥ 100m Ω
Grounding resistance	25A < 80mΩ
Insulation class	Class F / h (optional)
No load current	< 0.5%~25%
Impedance voltage	1% - 20% (customizable)
Overload capacity	Double rated current can last for 1 minute
Cooling form	Self cooling or air cooling
Protection level	IP00 / IP20 (customizable)
Temperature rise	F ≤ 100k, H ≤ 125k
ambient temperature	-25°C~+40°C
Noise	≤ 60dB (a) (within 1m)
Altitude	≤ 2000M
relative humidity	≤ 90%
Design life	20 years

\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.



# High voltage electrostatic generator / precipitator

## Product overview

Our company introduces advanced technology and further improves and upgrades the constant current high voltage DC power supply according to the market demand. It is also known as high voltage electrostatic generator, which is mainly used for electrostatic precipitator.

The control cabinet is equipped with L-C constant current components with low temperature, low loss and high flux density. The peak voltage can reach 70kv, 100kv, 120kv, 140kv, etc., with constant current function.

The complete set of power supply is equipped with safety protection cabinet, voltage zero start, simple installation, simple operation, safety and high efficiency.



## Product technology

### output voltage

The input and output voltage is a complete sine wave, which does not interfere with the power grid and other instruments.

### Output current

Stable operation, high reliability, can maintain deposition efficiency for a long time, can withstand transient and steady-state short circuit.

### Power indicator

### Over voltage warning lamp

### Automatic start stop protection door lock

Open the door automatically power off, use more safe.

### Voltage regulation button

It can adjust the voltage independently and start at 0. The operation is safe, simple and convenient.



## Product application

This product is matched with the electric field body and can be used in the following occasions:

- electrostatic precipitator
- dust and smoke removal
- acid mist and oil mist removal
- Additional static electricity for melt blown fabric production line
- Remove coal tar, etc

Suitable for metallurgy, electric power, building materials, petroleum, chemical, textile and other industries



### Technical features

- Stable operation, high reliability, long-term deposition efficiency, and can withstand transient and steady-state short circuit.
- It can adapt to the change of working conditions, overcome the secondary dust, and has the ability to restrain corona blocking and cathode hypertrophy.
- High operating voltage, suppression of discharge and insensitivity to mechanical defects.
- The structure of the power supply is simple, the parallel modular design is adopted, and the failure rate of the power supply is low.
- The power factor is high,  $\cos \varphi \geq 0.90$ , and does not change with the operating power level, so the power saving effect is obvious.
- The input and output voltage is a complete sine wave, which does not interfere with the power grid and other instruments.



# Oil immersed power transformer

## Product overview

S-11-m series fully sealed oil immersed power transformer has the advantages of low loss, low noise and high efficiency, which can achieve good energy saving effect and reduce pollution. Compared with the ordinary oil immersed transformer, the fully sealed transformer cancels the oil conservator. The change of oil volume is automatically adjusted and compensated by the elasticity of corrugated plate. The transformer is isolated from the air, so as to prevent and slow down some disadvantages and insulation aging, enhance operation reliability, and avoid maintenance in normal operation.

### Description of product model

S	11	M	-□	/□
Three-phase	Performance level code	Fully sealed	Rated capacity (kVA)	Voltage level (kV)



## Product technology

### Executive standard:

- GB 1094.1 power transformer
- GB / T 15164 load guide for oil immersed power transformer
- Technical parameters and requirements of GB / T 6451 three phase oil immersed power transformer
- GB 2536 transformer oil
- JB / T 3837 transformer product model compilation method
- JB / T 501 power transformer test guide
- GB 1094.3 power transformer insulation level and air gap of external insulation in insulation test
- DL / t572 transformer operation specification

\*The above standards shall be subject to the latest release, and other requirements of the equipment shall be subject to the corresponding latest national or professional standards.

### Service conditions:

1. The maximum ambient temperature is + 40 °C
2. Minimum ambient temperature: - 25 °C
3. Altitude: < 1000M
4. Average relative humidity: 90% in April
5. Installation location: it should be installed in the place without fire, explosion, serious pollution, chemical corrosion and violent vibration, indoor or outdoor.

### Product features:

1. The transformer core is made of high-quality cold-rolled silicon steel sheet, which can reduce no-load loss, no-load current and noise.
2. High and low voltage windings are made of oxygen free copper
3. The transformer connection group adopts Dyn11 to improve the power supply quality.
4. The transformer is of fully sealed structure, which can prolong its service life, and is free of core lifting and maintenance.
5. The measured noise value is lower than the standard.

## Technical parameters:

### Main product performance parameters

#### S11 type 10kV double winding series

model	Rated capacity (kVA)	connection symbol	Voltage combination (kV)			No load loss (W)	Load loss (W)	No load current (%)	Impedance (%)
			high	Tap range	low				
S11-M-30	30	Yyn0 or Dyn11	6 6.3 10 10.5 11	±5% or ±2×2.5%	0.4	100	630/600	2.3	4
S11-M-80	80					180	1310/1250	1.9	4
S11-M-100	100					200	1580/1500	1.8	4
S11-M-200	200					340	2730/2600	1.5	4
S11-M-500	500					680	5410/5100	1.2	4
S11-M-800	800					980	7500	1	4.5
S11-M-1000	1000					1150	10300	1	4.5
S11-M-2500	2500					2700	20700	0.6	5

### Main product performance parameters

#### S11 type 20kV double winding series

model	Rated capacity (kVA)	connection symbol	Voltage combination (kV)			No load loss (W)	Load loss (W)	No load current (%)	Impedance (%)
			high	Tap range	low				
S11-M-30	30	Yyn0 or Dyn11	20	±5% or ±2×2.5%	0.4	90	600	2.1	5.5
S11-M-80	80					180	1370	1.8	5.5
S11-M-100	100					200	1650	1.6	5.5
S11-M-200	200					330	2860	1.3	5.5
S11-M-500	500					680	5660	1.0	5.5
S11-M-800	800					980	8250	1.8	6
S11-M-1000	1000					1150	11330	0.7	6
S11-M-1600	1600					1630	15950	0.6	6

### Insulation level

Voltage class (kV)	Maximum operating voltage (kV) (effective value)	Power frequency withstand voltage (kV) (effective value) / min		Lightning withstand voltage kV (peak value)	
		full wave	Truncation	full wave	Truncation
0.4	0.46	5		75	85
10	12	35			
20	23	35		125	140

\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.



## Dry-type high voltage transformer

### Product overview

The performance of dry-type transformer meets various standards. It has been proved by users that the operation is reliable and reaches the national advanced level. This series of products adopts foreign advanced manufacturing technology, advanced production equipment, stable manufacturing process and complete testing means, which provides a solid guarantee for the production of high-quality tea products.

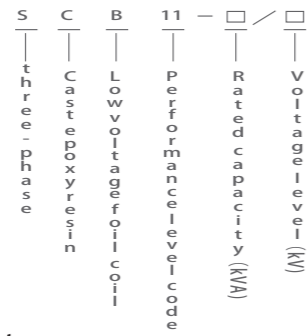
Fire performance is good, maintenance free, pollution-free, easy to install, is now the business center and other public places on the waterproof requirements of high places the best choice!



### Application

SC(B)10、SC(B)11 epoxy resin cast dry-type transformers are manufactured according to the standard "dry type transformers". This product has low performance loss, good energy-saving effect, economical operation and maintenance free. In addition to advanced process structure, short circuit resistance. Besides high lightning impulse level, it also has the characteristics of flame retardant, moisture-proof, dust-proof and low noise, which can go deep into the load center. It is widely used in high-rise buildings, airports, stations, docks, power plants, substations, etc. Especially suitable for inflammable and explosive places with high fire protection requirements.

#### Model meaning



#### Service conditions:

1. The main performance parameters of SC (b) 10 and SC (b) 11 are shown in the table
2. Number of phases: three phase
3. Frequency: 3.50 Hz
4. Insulation heat resistance grade F
5. Average temperature rise of winding:  $\leq 100K$
6. Partial discharge: less than 5pc

#### Technical parameters:

S11 type 10kV double winding series

model	Rated capacity (kVA)	connection symbol	Voltage combination (kV)			No load loss (W)	Load loss (W)	Impedance (%)	
			high	Tap range	low			No load current (%)	
SC10-50	50	Yyn0 or Dyn11	10 6.3 6	$\pm 5\%$ $\pm 2 \times 2.5\%$ or $+3/-1 \times 2.5\%$	0.4	270	1000	2.4	4
SC10-80	80					370	1380	1.8	4
SC10-100	100					400	1570	1.8	4
SCB10-200	200					630	2530	1.4	4
SCB10-500	500					1160	4880	1.2	4
SCB10-800	800					1520	6960	1.0	4
SCB10-1000	1000					1770	8130	1.0	6
SCB10-2000	2000					3050	14450	0.8	6

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# 稳压器

Voltage stabilizer



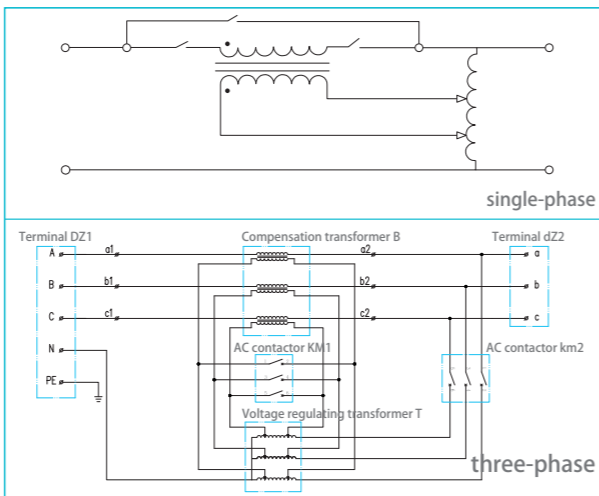
A voltage regulator is a device that stabilizes the output voltage. The voltage regulator consists of voltage regulating circuit, control circuit and motor. When the input voltage or load changes, the control circuit samples, compares, amplifies, and then drives the servo motor to rotate to change the position of the carbon brush of the voltage regulator. By automatically adjusting the coil turns ratio, the output voltage can be kept stable.



# Automatic compensated voltage stabilizer

## Product overview

DBW, SBW series single, three-phase full-automatic compensation power regulator, when the external power supply network voltage fluctuations or load changes caused by voltage changes, can automatically stabilize the output voltage. Manual / automatic mode free switching, with over-voltage, under voltage, over-current, phase loss protection and mechanical fault automatic protection, when the regulated power supply fails or needs maintenance, it can automatically and uninterruptedly switch to the mains state to protect the load equipment.



## Product technology

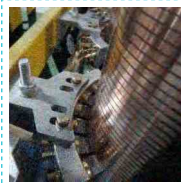
**Protection function:** Under voltage, over voltage, over current, phase sequence protection.

**Working characteristics:** When the power supply fails or needs to be repaired, it can automatically switch to the utility function to protect the load equipment.



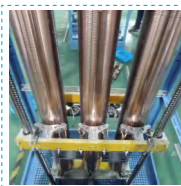
### electric machinery

Optimized motor, stable operation and high efficiency.



### Carbon brush

High quality carbon brush, anti-oxidation, low wear, high temperature resistance.



### Coil

The auxiliary transformer adopts pure copper coil, and the sliding part of carbon brush is polished



### Orbit

Alloy track, more stable and accurate than conventional pulley.



### Fan cooling system

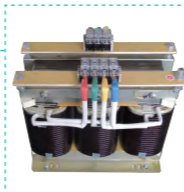
Digital display, Three phase input / output

Commercial power, regulated voltage, power indicator

### Cooling hole

### transformer

The compensation transformer is made of 180 °C H-class enameled wire; the whole transformer is impregnated by vacuum pressure, and the surface is added with epoxy resin.



## Product application

It is mainly used in laser cutting machines, precision machine tools, printing machines, elevators, hospitals, construction sites, automatic production lines, communication equipment and other places where voltage stability is required.

## Technical parameters:

model	DBW	SBW
Phase number	single-phase	Three phase (unified dispatching)
Rated capacity	10kVA~2000kVA	10kVA~6000kVA
input voltage	220V、380V (customizable)	Three phase four wire voltage 176v-264v (phase voltage)
Input voltage range	±15%, ±20%, ±25%, ±30% (customizable)	
output voltage	220V、380V (customizable)	Phase voltage 220 V, line voltage 380 V (customizable)
Voltage stabilization accuracy	± (2% ~ 5%) (settable)	
Frequency	50Hz/60Hz	
work efficiency	≥ 98% (power greater than 50KVA)	
operation mode	It can be unattended for a long time	
Voltage regulation mode	Manual and automatic	
Waveform distortion	≤ 0.1%	
response time	< 1.5s (when the input voltage changes by 10%)	
Protection function	In case of failure, it will automatically switch to the mains power supply without interruption	
Bypass	the voltage regulator needs to be maintained or abnormal, it will be in the power supply state continuously	
Electrical strength	The power frequency sine voltage is 2000V and lasts for 1 minute without breakdown and flashover	
insulation resistance	≥ 100MΩ	
Grounding resistance	25A < 100mΩ	
Overload capacity	Double the rated current for 1 minute	
Cooling form	Forced air cooling	
Control system	Intelligent control system, AC contactor, air switch adopt Chint brand	
Display function	7 inch LCD, digital display of three-phase input voltage, output voltage, current	
Protection level	IP20 (other protection levels can be customized)	
ambient temperature	-25°C~+40°C	
Noise	≤ 60dB (a) (within 1m)	
Altitude	≤ 2000M	
relative humidity	≤ 90%	
Design life	20 years	

## Reference Size :

Phase number	model	capacity (kVA)	Output current(A)	尺寸 L*W*H (mm)
single-phase	DBW-30KVA	30	136	550*880*1180
	DBW-50KVA	50	227	550*880*1180
	DBW-60KVA	60	273	550*880*1180
	DBW-80KVA	80	364	600*980*1230
	DBW-100KVA	100	455	600*980*1230
	DBW-120KVA	120	545	600*980*1230
	DBW-200KVA	200	909	650*1030*1280
three-phase	SBW-30KVA	30	45.6	550*880*1130
	SBW-50KVA	50	76	550*880*1130
	SBW-80KVA	80	122	550*980*1180
	SBW-100KVA	100	152	550*980*1180
	SBW-120KVA	120	182	600*980*1230
	SBW-150KVA	150	228	600*1030*1280
	SBW-200KVA	200	304	600*1030*1280
	SBW-300KVA	300	456	800*1200*1900
	SBW-600KVA	600	912	1100*1250*2000
	SBW-1000KVA	1000	1519	1100*1450*2100

\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.

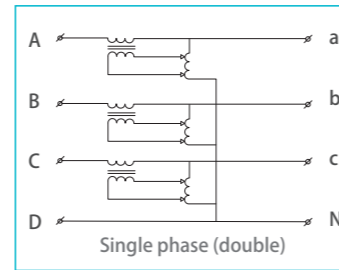




## Three-phase split voltage stabilizer

### Product overview

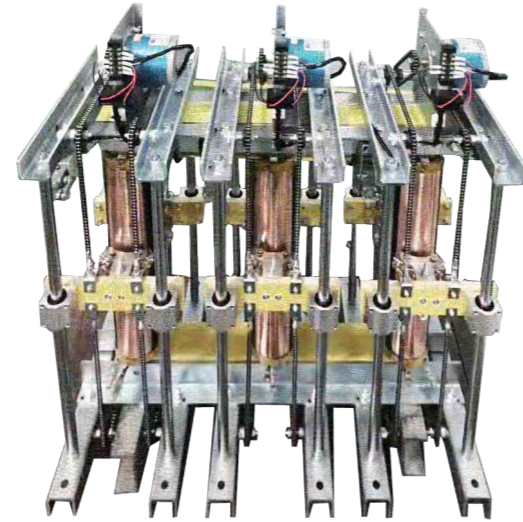
Sbw-f series three-phase sub regulation full-automatic compensation type power regulator is an improved regulator of SBW series products, which is suitable for the power grid with unbalanced three-phase voltage input. When the power grid fluctuates or load current changes, the three-phase output can be automatically balanced and the voltage regulation is stable.



### Selection considerations

Three phase unified voltage regulator or three-phase divided voltage regulator?

When purchasing three-phase unified voltage regulator and sub voltage regulator, it is necessary to measure the input voltage of commercial power. If the three-phase voltage deviation is small, it is recommended to use SBW series three-phase unified voltage regulator, which can fully meet the user's requirements and has high cost performance. If the three-phase input voltage deviation is large, it is recommended to use sbw-f series three-phase voltage regulator, which can stabilize the voltage better and protect the load better.



### Product application

It is mainly used in laser cutting machines, precision machine tools, printing machines, elevators, hospitals, construction sites, automatic production lines, communication equipment and other places where voltage stability is required.



### Technical parameters:

Product name	SBW-F three phase shunt regulator
Rated capacity	10kVA-2000kVA
input voltage	Three phase four wire voltage 176v-264v (phase voltage), 304v-456v (line voltage)
Input voltage range	± 15%, ± 20%, ± 25%, ± 30% (customizable)
output voltage	The phase voltage is 220 V and the line voltage is 380 v
Voltage stabilization accuracy	± (2% ~ 5%) (settable)
Frequency	50Hz/60Hz
work efficiency	≥ 95% (power greater than 50KVA)
operation mode	It can be unattended for a long time
Voltage regulation mode	Manual and automatic
Waveform distortion	≤ 0.1%
response time	< 1.5s (when the input voltage changes by 10%)
Protection function	When there is a fault, it will automatically switch to the mains power supply
Bypass	Can be manually uninterrupted to the mains state
Electrical strength	The power frequency sine voltage is 2000V and lasts for 1 minute without breakdown and flashover
insulation resistance	≥ 100MΩ
Grounding resistance	25A < 100mΩ
Overload capacity	Double the rated current for 1 minute
Cooling form	Air cooling
Protection level	IP20 (other protection levels can be customized)
ambient temperature	-25°C ~ +40°C
Noise	≤ 60dB (a) (within 1m)
Altitude	≤ 2000M
relative humidity	≤ 90%
Design life	20 years

### Reference Size :

model	Product size(mm)	Package size(mm)
SBW-F-100KVA	1000*980*1180	1130*1110*1330
SBW-F-300KVA	1200*1200*1900	1330*1330*2050
SBW-F-800KVA	1600*1450*2100	1730*1580*2250

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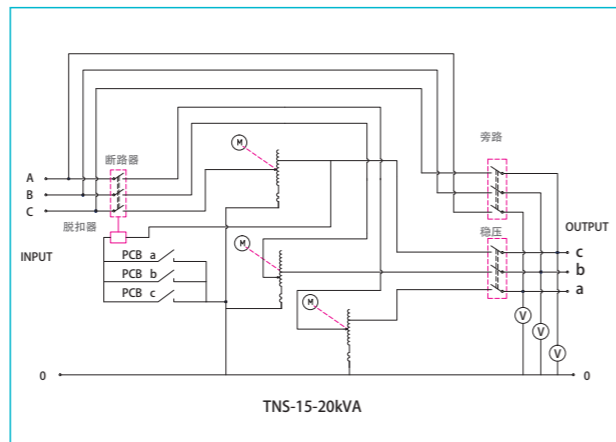
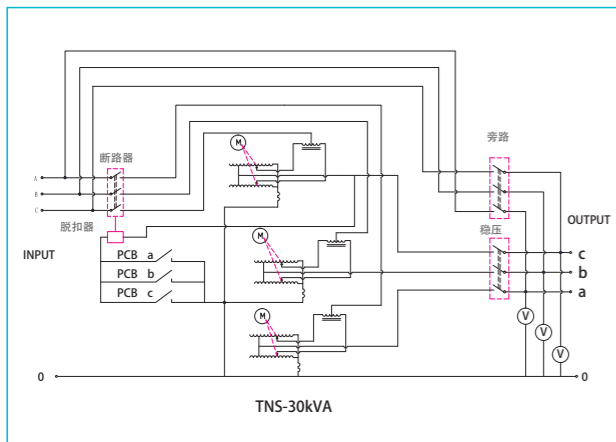
## High precision automatic AC voltage regulator

### Product overview



SVC (TND / TNS) series single, three-phase high-precision automatic AC voltage regulator is a common type of regulated power supply. This series of voltage regulator has many varieties, complete specifications, beautiful appearance, economic and practical advantages. It has the characteristics of small volume, light weight, undistorted output waveform, high efficiency, stable performance, reliable, simple maintenance, long-term unattended operation, and has the protection functions of short delay start, overvoltage / undervoltage, etc.

SVC (TND) series single-phase high-precision automatic AC voltage regulator consists of contact type auto voltage regulator, servo motor and automatic control circuit. When the grid voltage is unstable or the load changes, the automatic sampling control circuit sends out a signal to drive the servo motor and adjust the position of the carbon brush of the autotransformer voltage regulator to adjust the output voltage to the rated value and reach a stable state. It can automatically stabilize the output voltage.



### Product application

It is mainly used for all kinds of equipment, such as production line, laser cutting machine, building automation, hospital automation, etc.



### Technical parameters:

Product name	SVC (TND/TNS) Series single phase and three phase high precision automatic AC voltage regulator	
model	TND	TNS
Phase number	single-phase	three-phase
Rated capacity	0.5kVA~50kVA	1.5kVA~100kVA
Input voltage range	160V~250V	160V~250V(三相四线) (线电压277V~433V)
output voltage	220V±2.5% (0.5~3kVA 110V±6%)	380V±3%
Overvoltage protection value	246V±4V	426±7V
Frequency	50Hz/60Hz	50Hz/60Hz
work efficiency	≥80%~99%	≥80%~99%
Waveform distortion	No additional waveform distortion	No additional waveform distortion
insulation resistance	≥100MΩ	≥500MΩ
Regulating speed	>10V/S	1.5KVA~30KVA >15V/S、40KVA~100KVA >10V/S
Protection performance	When the output voltage is 240v-250v, the protection relay shall act to cut off the output	When the output voltage is higher than 277v, the protection relay shall act to cut off the output
ambient temperature	-15℃~+40℃	
Noise	≤60dB (A) (1m)	
Altitude	≤1000M	
relative humidity	≤60%	
Installation environment	No gas and other explosive and corrosive medium seriously affecting the insulation of voltage regulator	

### Reference Size :

Phase number	model	Input voltage range (V)	size L*W*H (mm)	weight (kg)	Packing number
单相	TND-3KVA	160~250V (Desktop /pointer meter)	320*235*240	12	2
	TND-5KVA		365*220*290	15	2
	TND-7KVA		365*220*290	17	2
	TND-10KVA	160~250V (Vertical digital/ display meter)	435*240*370	27	1
	TND-15KVA		380*345*620	64	1
	TND-20KVA		380*345*620	70	1
	TND-30KVA		490*430*880	85	1
TND-50KVA	490*430*1230	159	1		
三相	TNS-15KVA	Phase voltage 160 ~ 250V, line voltage 277 ~ 433v (digital display meter)	440*360*780	68	1
	TNS-20KVA		520*395*860	85	1
	TNS-30KVA		490*490*985	110	1
	TNS-50KVA		665*540*1185	185	1
	TNS-60KVA		665*540*1185	196	1
	TNS-80KVA		750*630*1290	233	1
	TNS-100KVA		750*630*1320	257	1

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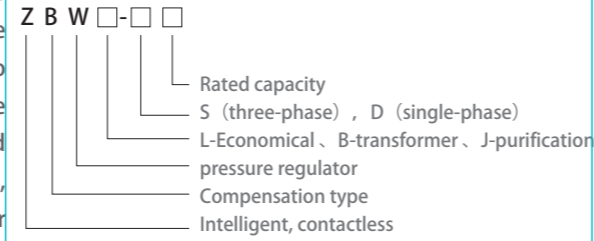




## Contact type auto coupling voltage regulator

### Product overview

ZBW-D, ZBW-S series single-phase, three-phase intelligent contactless voltage regulator is a new generation of microcomputer intelligent energy-saving voltage regulator produced by our company on the basis of contactless AC voltage regulator to optimize and improve the control technology and appearance process. It has three special advantages: intelligent control and display, fast voltage stabilization, mute and energy saving. It can accurately detect the effective value of various voltage waveforms, prevent electromagnetic and radio frequency interference, effectively filter out power grid pollution, and is equipped with RS-232 interface, which can realize three remote functions. At the same time, it has perfect protection function, which ensures the long-term safe operation of various computer centers and data centers under unattended conditions.



### Product features

- Fast response
- Multiple adjustment methods
- Three phase automatic control
- Balance function
- Advanced measurement echnology
- High control accuracy
- Humanized Interface
- Anti harmonic interference
- Wide load range
- Slow start and shock resistance
- Full protection function
- Voltage and current display



### Product application

CNC machining center, medical equipment, printing machinery equipment, environmental test equipment, electronic detection equipment, industrial and mining equipment, radio and television equipment, communication equipment, etc., especially suitable for the environment with large fluctuation range of power grid, sudden voltage change and no noise.



### Technical parameters:

Product name	ZBW-D, ZBW-S series single-phase, three-phase intelligent contactless voltage regulator	
input	Input voltage range	Three phase 380V ± 20% range (customizable)
	working frequency	50Hz/60Hz
output	Rated output voltage	Three phase line voltage 380VAC ± 1% to ± 5% can be set
	Regulated output accuracy	± (1 ~ 5)% can be set (normal setting is ± 2%)
	response speed	≤ 40ms
	Waveform distortion	< 0.1%
	efficiency	≥ 80%~99%
Three phase unbalance adjustment		Automatic adjustment of three phase voltage balance
Delay output		Automatic detection: first stabilize voltage and then output
Protection function	Over voltage protection	When the output phase voltage exceeds 10%, turn to bypass output
	Under voltage protection	When the output phase voltage is lower than 10%, it is transferred to bypass output
	Open phase protection	The output will be cut off automatically in case of phase loss or reverse in the input power grid
	overload protection	Cut off the output according to the set time when the overload is detected automatically
	Over current protection	Automatic detection microcomputer control and double protection of output circuit breaker
	Short circuit protection	Automatic detection microcomputer control and double protection of output circuit breaker

### Reference Size :

Phase number	model	Dimensions (L*W*H (mm))	Product weight (kg)
single-phase	ZBW-D-5KVA	280*550*300	15
	ZBW-D-15KVA	280*550*300	32
	ZBW-D-30KVA	350*600*400	86
	ZBW-D-50KVA	380*780*830	107
three-phase	ZBW-S-20KVA	380*780*830	102
	ZBW-S-50KVA	380*780*830	120
	ZBW-S-100KVA	430*780*1170	198
	ZBW-S-200KVA	550*940*1380	313

### Product overview

The variable frequency power supply is a kind of precise power supply which transforms the commercial power into the required voltage and frequency through the power conversion circuit. Due to the power grid indicators of different countries are not unified, the production of export products need to simulate the power grid situation of different countries, test a variety of export electrical products. Variable frequency power supply can provide the standard grid voltage and frequency in the world. The output voltage and frequency are stepless and digital adjustable, which can be used for aging test of voltage and frequency of export electrical products, and can also be used as power supply for imported 60Hz equipment.

#### Technical parameters:

Product name		Variable frequency power supply	
Rated capacity		0.1kVA~2000kVA (Customizable)	
Circuit mode		IGBT/PWM	
AC input	Phase number	Three phase four wire + ground wire	
	Voltage	380V ± 15% (customized 440V, 460V, 480v, price will increase)	
	frequency	50Hz/60Hz±3Hz	
AC output	Phase number	Single phase two wire + ground wire	
	Voltage	high-grade	0-520V
		Low end	0-260V
	frequency	40Hz ~ 70Hz continuously adjustable / 50Hz fixed / 60Hz fixed	
	load regulation	≤ ± 1% (pure resistance)	
	Frequency stability	≤ ± 0.01%	
	Distortion rate	THD ≤ ± 2%	
	Peak factor ratio	3:1	
	efficiency	≥ 87%	
	Reflection time	≤ 2MS	
Display accuracy	4.5 bit voltmeter	Resolution 0.1V	
	4.5 bit ammeter	Resolution 0.1A	
	4.5-bit frequency meter	Resolution 0.1Hz	
	Power meter	Resolution 1W	
	Power factor meter	Resolution 0.001	
Protection function		Over current protection, over voltage protection, short circuit protection,	
Safety regulations	Insulation resistance	500VDC/50MΩ	
	Withstand voltage insulation	1800VAC/10mA/1min	

### Product application

It is widely used in home appliance manufacturing, electrical machinery, electronic manufacturing, it industry, computer equipment, laboratories and aviation / military units.



Voltage regulators can be divided into five types: autotransformer, isolated voltage regulator, oil immersed induction voltage regulator, column type electric voltage regulator and thyristor voltage regulator.

The working mode of voltage regulator is divided into dynamic voltage regulation and electric voltage regulation.

It is widely used in electric furnace industry, mechanical equipment, glass industry, automobile industry, energy-saving lighting, chemical industry and other fields;



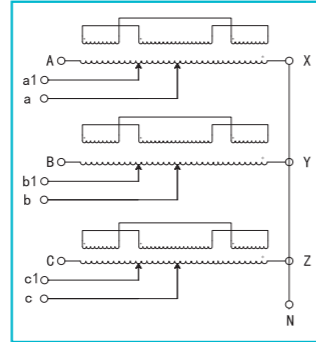
## Column regulator

### Product overview

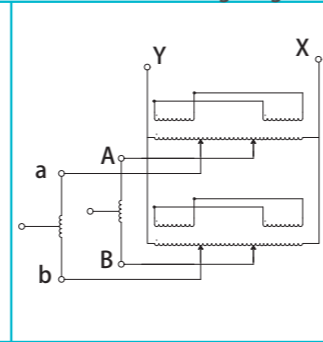
The column voltage regulator is an autotransformer with continuously adjustable turn ratio. When the brush of the voltage regulator slides along the polished surface of the coil with the help of the hand wheel spindle and brush holder, the turn ratio can be continuously changed, so that the output voltage can be smoothly adjusted from zero to the maximum.

This series of products have no distortion of output voltage waveform (distortion rate of output voltage waveform is less than 1%), and the column type electric voltage regulator adopts electric operating mechanism, which can be operated in closed loop and long distance, reducing the labor intensity of operation.

TESGZ Three phase column voltage regulator



TEDZZ Single phase column voltage regulator



### Product features

Configuration name	Process description	advantage
Column regulator	The coil is made of 180 °C H-class enameled wire, 180 °C insulating paint, vacuum pressure impregnation and epoxy coating	Good insulation, high temperature resistance, low noise, low coil loss, can effectively improve the service life.
transformer	The coil is made of 180 °C H-class enameled wire, 180 °C insulating paint, vacuum pressure impregnation and epoxy coating	Good insulation, high temperature resistance, low noise, low coil loss, can effectively improve the service life.
Electrical accessories	Electrical accessories are Chint brand, can also use other brands according to customer demand, such as Schneider, abb and other high-quality brands, reliable	Domestic high quality brand, moderate price.



### Product application

Widely used in chemical industry, metallurgy, instrumentation, machinery manufacturing, light industry, scientific experiments, public equipment.



### Technical parameters:

Product name	TEDGZ/TEGZ Three phase single column high power regulator series	
model	TEDGZ	TEGZ
Phase number	single-phase	three-phase
Rated capacity	20kVA~300kVA	20kVA~1000kVA
input voltage	220V、380V (Customizable)	220V、380V (Customizable)
Output voltage range	0V~1000V (Customizable)	0V~1000V (Customizable)
insulation resistance	>500MΩ	>500MΩ
Frequency	50Hz/60Hz	
work efficiency	≥80%~99%	
Waveform distortion	≤0.1%	
Electrical strength	1500V/min	
ambient temperature	-15°C~+40°C	
Protection level	IP00 (No chassis) , IP20 (Customizable)	
temperature rise	≤100K	
Altitude	≤1000M	
relative humidity	≤90%	
Installation environment	No gas and other explosive and corrosive medium affecting the insulation of voltage regulator	

\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.



## Contact type auto coupling voltage regulator

### Product overview

TDGC2J/TSGC2J series single-phase and three-phase contact type auto voltage regulators are the 14th batch of energy-saving products in Electromechanical industry. This product has the characteristics of small volume, light weight, high efficiency, convenient use and reliable operation.



### Product features

Widely used in industry, scientific experiments, public equipment, household appliances. To achieve the purpose of voltage regulation, temperature control, speed regulation, dimming and power control.

#### Technical parameters:

Product name	Contact type auto voltage regulator	
model	TDGC2J	TSGC2J
Phase number	single-phase	three-phase
Rated capacity	0.5kVA~50kVA	1kVA~100kVA
Rated input voltage	220V	380V
Output voltage range	0V~250V	0V~430V
insulation resistance	>5MΩ	>2MΩ
Frequency	50Hz/60Hz	
work efficiency	≥80%~99%	
Waveform distortion	≤0.1%	
Electrical strength	1500V/min	
ambient temperature	-15°C~+40°C	
temperature rise	≤60K	
Altitude	≤1000M	
relative humidity	≤90%	
Installation environment	No gas and other explosive and corrosive medium affecting the insulation of voltage regulator	

#### Reference Size :

Phase number	model	Input voltage (V)	Voltage range (V)	size L*W*H (mm)	weight (kg)
single-phase	TDGC2J-3KVA	220V	0~250V	270*280*210	11
	TDGC2J-5KVA			330*370*300	13
	TDGC2J-10KVA			340*400*420	36
	TDGC2J-15KVA			34*400*580	80
	TDGC2J-30KVA			340*420*750	105
three-phase	TSGC2J-3KVA	380V	0~430V	190*200*270	15
	TSGC2J-9KVA			270*260*480	25
	TSGC2J-15KVA			340*400*580	79
	TSGC2J-30KVA			340*420*885	75
	TSGC2J-50KVA			350*450*1140	170

\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.



# 电抗器

Reactor



Reactor is also called inductor. When a conductor is electrified, it will produce magnetic field in a certain space occupied by it, so all electric conductors that can carry current have general sense of inductance.

Reactance is divided into inductive reactance and capacitive reactance, the more scientific classification is inductor (inductor) and capacitive reactance (capacitor), collectively known as reactor. However, in the past, there was inductor, and it was called reactor, so now people say capacitor is capacitive reactance, and reactor specifically refers to inductor.





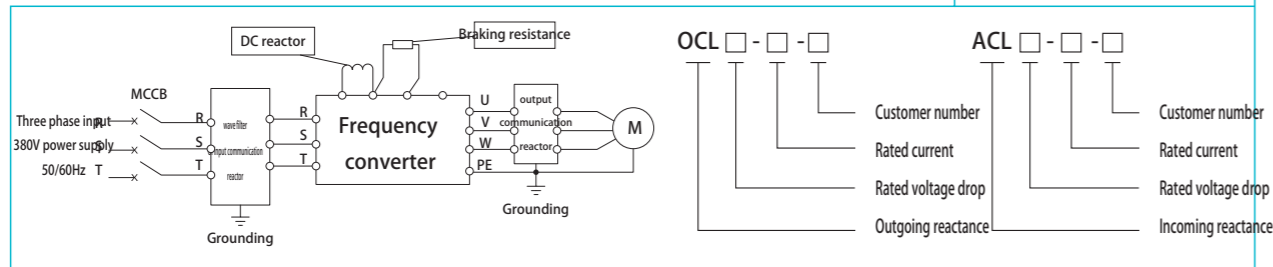
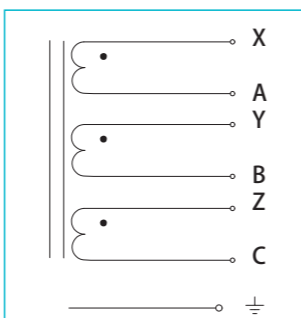


## Input / Output Reactor

### Product overview

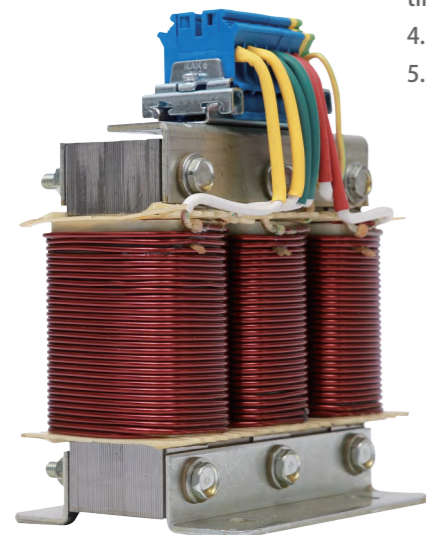
ACL input (in line) reactor and OCL output (out line) reactor are suitable for reactive power compensation and harmonic control system. They can improve power factor and filter harmonics to restrain voltage waveform distortion of power grid, so as to change power grid quality and ensure safe operation of power system. The input-output reactor is used to limit the current impact caused by voltage mutation and switching overvoltage, smooth the peak pulse contained in the power supply voltage, or smooth the voltage defect caused by commutation of bridge rectifier circuit. It can not only prevent the interference from the power grid, but also reduce the pollution of harmonic current generated by rectifier unit to the power grid. The input and output series reactors produced by our company are made of fine imported silicon steel sheet and refined by professional process. They are characterized by small volume, low temperature rise and no noise

Schematic diagram of input / output reactor



1. The power supply has obvious interference (interference, over-voltage) to other equipment.
2. The voltage imbalance between phases of the power supply is greater than 1.8% of the rated voltage.
3. The line with extremely low impedance (the power transformer is more than 10 times of the rated value of the frequency converter)
4. A large number of inverters installed on a line to reduce line current
5. Using  $\cos \varphi$  (power factor) correction capacitor or power factor correction unit

### Product application



### Technical parameters:

Product name	ACL/OCL I / O reactor		
working voltage	220/380V/440V/690V (Customizable)	Temperature rise	F ≤ 100k, H ≤ 125k
working frequency	50Hz/60Hz	Electrical strength	No flashover of iron core coil 3000VAC / 50Hz / 5mA / 10s
Working current	2A~2500A	insulation resistance	1000VDC insulation resistance ≥ 100m Ω
Insulation class	Class F / h (optional)	Protection level	IP00 (no case)
Pressure drop	<4%	ambient temperature	-25°C~+40°C
Maximum current	Rated current × 1.5 for 60s	Altitude	≤ 1000M
Noise	≤ 65dB(A) (1m)	relative humidity	≤ 90%
Conditions of use	There should be no harmful gas, inflammable and explosive materials around; the surrounding environment should have good ventilation conditions.		
Product executive standard	Iec289:1987 reactor, gb10229-88 reactor (EQV Iec289:1987), jb9644-1999 reactor for semiconductor electric drive.		

### Reference Size :

model	Reactance rate%	power(kW)	Rated current(A)	Inductance (MH)	size L*W*H (mm)	weight(kg)
ACL	2%	5.5	15	0.93	120*100*140	2.6
		37	90	0.16	240*150*220	16
		55	150	0.095	240*150*220	16
		110	250	0.056	240*175*220	23
		220	500	0.028	300*185*270	38
OCL	1%	450	1000	0.014	360*200*320	59
		5.5	15	0.47	120*100*140	2.45
		37	90	0.78	240*150*220	15
		55	150	0.047	240*150*220	16
		110	250	0.028	240*150*220	16
		220	500	0.014	300*170*270	31
		450	1000	0.007	360*180*320	44

\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.



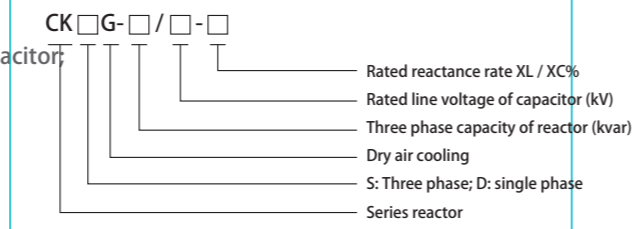
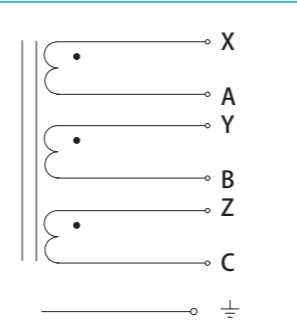
## Series reactor

### Product overview

In the dry pressed series reactor, the alternating current passes through, and its function is to connect with the power factor compensation capacitor in series to form a series resonance for the steady-state harmonics (5th, 7th, 10th and 13th). Generally, there are reactors with reactance rate of 4.5 ~ 6%. For the 5th harmonic, the reactor with reactance rate of 6% is high inductance. For the 3rd harmonic, the reactor with reactance rate of 12 ~ 13% is in series with capacitor bank to form reactive power compensation device

1. The amplification effect of power reactors on system harmonics is limited or even eliminated when series reactors are not installed;
2. Reduce the inrush current and inrush current frequency of capacitor bank, easy to select circuit equipment and protective capacitor;
3. The harmonic voltage on the bus is reduced to improve the quality of power supply;
4. Limit the current higher than this harmonic to flow into the capacitor bank, suppress the higher harmonic and protect the capacitor;
5. Reduce the discharge current value from the sound capacitor bank to the fault capacitor bank to protect the capacitor;

Schematic diagram of three-phase series detuning reactor

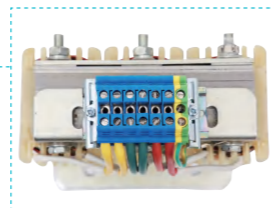


### Product technology



The fastener of reactor core column is made of non-magnetic material, which ensures that the reactor has higher quality factor and lower temperature rise and better filtering effect.

a fastening



Terminal block

The exposed parts are treated with anti-corrosion treatment, and the lead out terminal is made of cold pressed copper tube.



Iron core

The iron core can be made of 0.27mm, 0.30mm, 0.35mm and 0.5mm thick h18, h14, H12 and Z11 new high-quality cold-rolled silicon steel sheets. We can use the most suitable materials according to customer requirements.



Wire winding

The winding is made of H-class enamelled copper / aluminum wire, with temperature resistance of 180 °C; it is closely and evenly arranged, without insulating layer on the surface, with high aesthetic feeling and heat dissipation.

Insulation technology



The transformer is impregnated with H-class insulating paint under vacuum pressure, with temperature resistance of 180 °C, anti rust and anti-corrosion, low operation noise and good insulation performance.



### Use environment

1. The altitude shall not exceed 2000 meters;
2. The operating environment temperature is - 25 °C ~ + 45 °C, and the relative humidity is not more than 90%;
3. There is no harmful gas or inflammable and explosive materials around;
4. The surrounding environment should have good ventilation conditions. If it is installed in the cabinet, ventilation equipment should be installed.

### Technical parameters:

Product name		Series reactor	
working voltage	400V、660V	Temperature rise	Iron core ≤ 85K, coil ≤ 95k
Reactance ratio	1%、6%、12%	Altitude	<1000M
Power frequency current	≤ 1.35Times of rated current	Noise	≤ 65dB (a) (1m)
Rated insulation level	3kV/min	Inductance	Customizable
Linearity of reactance value	The ratio of reactance value under 1.8 times of rated current to reactance value under rated current shall not be less than 0.95,The difference of reactance between any two phases of three-phase reactor shall not be greater than ± 3%.		

### Reference Size :

model	wire rod	Matching capacitor specification	Inductance (mH)	Dimensions L*W*H (mm)	Installation dimension (mm)	weight(kg)	
CKSG-0.6/0.45	6%	10kvar/12.8	3.85	240*150*260	120*90	15.2	
CKSG-0.9/0.45		15kvar/19.2	2.57	240*150*260	120*90	16	
CKSG-1.5/0.45		25kvar/32	1.54	240*150*260	120*90	17	
CKSG-1.8/0.45		30kvar/38.4	1.28	240*160*260	120*100	20	
CKSG-3.0/0.45		50kvar/64.1	0.77	240*170*260	120*110	24	
CKSG-4.2/0.45		70kvar/90	0.54	300*170*310	150*115	35	
CKSG-6.0/0.45		100kvar/128	0.38	300*200*270	150*145	51	
CKSG-0.9/0.48		12%	7.5kvar/9	11.76	180*170*200	90*110	14
CKSG-1.2/0.48			10kvar/12	8.82	240*150*260	120*90	17
CKSG-1.8/0.48			15kvar/18	5.9	240*150*260	120*90	17.2
CKSG-3.0/0.48	25kvar/30		3.52	240*190*260	120*130	28	
CKSG-6.0/0.48	50kvar/60.1		1.76	300*190*310	150*135	43	
CKSG-9.6/0.48	80kvar/96.2		1.1	360*200*360	180*130	66	
CKSG-12 /0.48	100kvar/120.2		0.9	360*200*360	180*130	69	

\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.

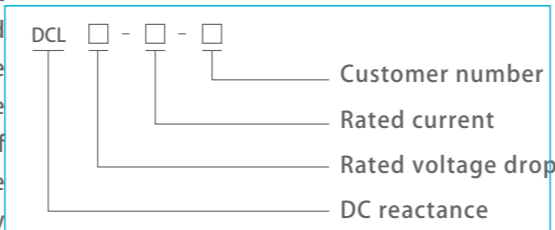




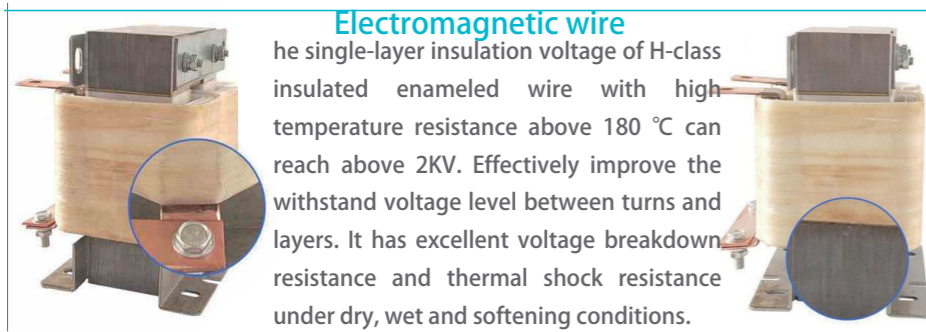
## DC smoothing reactor

### Product overview

DC smoothing reactor is used in the DC side of converter, in which the DC current with AC component flows. Its function is to limit the AC component superimposed on the DC current to a specified value. It is also used to couple the DC side of the parallel inverter, reduce the intermittent limit, limit the circulating current in the circulating circuit line, limit the current rise rate when the DC fast switch cuts off the fault current, and it is also used in the DC flat wave of the middle circuit of the current and voltage type inverter, which can be used to regulate the power supply flat wave to eliminate the ripple.



### Product technology

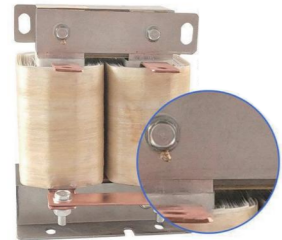


#### Electromagnetic wire

The single-layer insulation voltage of H-class insulated enameled wire with high temperature resistance above 180 °C can reach above 2KV. Effectively improve the withstand voltage level between turns and layers. It has excellent voltage breakdown resistance and thermal shock resistance under dry, wet and softening conditions.

#### Silicon steel sheets

High quality and low loss silicon steel sheet is used in WISCO, which has low iron loss, high magnetic induction under strong magnetic field, good adhesion and corrosion resistance of surface insulating film, and effectively reduces the overall loss and calorific value of reactor.



#### Iron clip

The high strength steel plate is used to press and bend the forming clamp at one time, which effectively ensures the uniform size, flatness, smoothness and no burr after forming. The clip is plated by hanging. It has the properties of color mixing, anti rust, moisture-proof and acid proof. It can be used for a long time without corrosion.

#### Technical parameters:

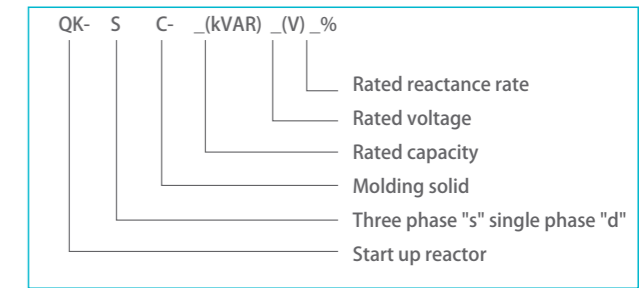
Product name	DC smoothing reactor		
working voltage	220/380V/440V690V (Customizable)	Temperature rise	F ≤ 100k, H ≤ 125k
working frequency	50Hz/60Hz	Electrical strength	No flashover of winding to ground 3000VAC / 50Hz / 5mA / 10s
Working current	≤ 1600A	insulation resistance	Insulation resistance ≥ 100m Ω
Insulation class	Class F / h (optional)	Protection level	IP00 (no case)
Inductance	Customizable	ambient temperature	-25°C~+40°C
Maximum current	Rated current × 1.5 for 60s	Altitude	≤ 1000M
Noise	≤ 65dB(A) (1m)	relative humidity	≤ 90%
Conditions of use	The ratio of reactance value under 1.8 times of rated current to reactance value under rated current shall not be less than 0.95, The difference of reactance between any two phases of three-phase reactor shall not be greater than ± 3%.		
Product executive standard	The ratio of reactance value under 1.8 times of rated current to reactance value under rated current shall not be less than 0.95, The difference of reactance between any two phases of three-phase reactor shall not be greater than ± 3%.		

\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.

## High voltage starting reactor

### Product overview

In order to reduce the starting voltage of induction motor by 5 times or less than the rated current, the method of starting induction motor is usually used. The operation process is very short (usually several seconds to two minutes). After starting, the reactor or autotransformer used for step-down start-up will be cut off. The product is designed according to the starting characteristics of high voltage asynchronous motor, and the matching motor power is 220 ~ 1400kW.



### Performance & characteristics

- Compared with traditional oil immersed reactor and air core reactor, dry starting reactor has the advantages of small volume, light weight, small space, simple structure and convenient installation.
- In normal operation, the core temperature rise of dry-type core starting reactor is not more than 85K, and the coil temperature rise is not more than 95k.
- The loss of dry core starting reactor is lower than that of oil immersed reactor.
- The noise of dry-type core starting reactor is not greater than the national standard (50dB).
- The iron core is vacuum cast with epoxy resin, so that the air gap between the iron cakes is sealed by epoxy resin and a resin layer is formed on the surface of the iron core column, which effectively reduces the vibration between the iron core cakes, thus reducing the noise and enhancing the insulation strength between the iron core and the coil.
- The coil is epoxy resin vacuum casting coil. Epoxy glass grid cloth is laid inside and outside the coil for reinforcement, and F-grade epoxy pouring system is used for pouring in vacuum. The coil not only has good insulation performance, but also has high mechanical strength. It can withstand high current impact and hot and cold impact without cracking. The end face of iron core adopts high-quality silicon steel sheet end face glue, which makes the iron core column and iron yoke firmly combined, greatly reducing the noise of product operation.



#### Technical parameters:

Product name	High voltage starting reactor		
working voltage	220/380V/440V690V (Customizable)	Temperature rise	F ≤ 100k, H ≤ 125k
working frequency	50Hz/60Hz	Electrical strength	No flashover of winding to ground 3000VAC / 50Hz / 5mA / 10s
Working current	≤ 1600A	insulation resistance	Insulation resistance ≥ 100m Ω
Insulation class	Class F / h (optional)	Protection level	IP00 (no case)
Inductance	Customizable	ambient temperature	-25°C~+40°C
Maximum current	Rated current × 1.5 for 60s	Altitude	≤ 1000M
Noise	≤ 65dB(A) (1m)	relative humidity	≤ 90%
Conditions of use	The ratio of reactance value under 1.8 times of rated current to reactance value under rated current shall not be less than 0.95, The difference of reactance between any two phases of three-phase reactor shall not be greater than ± 3%.		
Product executive standard	The ratio of reactance value under 1.8 times of rated current to reactance value under rated current shall not be less than 0.95, The difference of reactance between any two phases of three-phase reactor shall not be greater than ± 3%.		

\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.

## Filter reactor

### Product overview

There are a large number of harmonic sources in power grid, such as rectifier, converter and frequency converter. The high-order harmonic generated by them will seriously endanger the safe operation of main transformer and other electrical equipment in the system. Filter reactors are widely used in high and low voltage filter cabinets. They are connected in series with filter capacitors and tuned to a certain resonant frequency to absorb harmonic current of corresponding frequency in power grid. The reactance rates are 1%, 5.67%, 6%, 12%, 13%, etc., which can eliminate 3, 5, 7, 11, 13 and higher harmonics.

After the filter reactor is connected in series with the capacitor, it can not only effectively absorb the grid harmonics, but also improve the power factor of the system, which plays a greater role in the safe operation of the system.

### Product technology

1. The filter reactor is divided into three-phase and single-phase, both of which are dry core;
2. The core is made of high-quality low loss cold-rolled silicon steel sheet, the core column is divided into uniform sections by multiple air gaps, the air gap is made of epoxy laminated glass cloth plate as the interval, and the special adhesive is used for bonding, so as to ensure that the reactance air gap does not change during operation;
3. The coils are made of F-grade or H-grade flat copper wires, which are closely and evenly arranged;
4. After the coil and iron core of the filter reactor are assembled into a whole, the process of pre drying, vacuum impregnation and hot curing is adopted, and the H-class impregnation paint is used to make the coil and iron core of the reactor firmly combined;
5. The clamps and fasteners of the filter reactor are made of non-magnetic materials to ensure that the reactor has high quality factor and good filtering effect;



#### Technical parameters:

Product name	Filter reactor		
working voltage	220/380V/440V/690V (Customizable)	Temperature rise	F ≤ 100k, H ≤ 125k
working frequency	50Hz/60Hz	Electrical strength	No flashover of winding to ground 3000VAC / 50Hz / 5mA / 10s
Working current	≤1600A	insulation resistance	Insulation resistance ≥ 100m Ω
Insulation class	Class F / h (optional)	Protection level	IP00 (no case)
Inductance	Customizable	ambient temperature	-25°C~+40°C
Maximum current	Rated current × 1.5 for 60s	Altitude	≤1000M
Noise	≤65dB(A) (1m)	relative humidity	≤90%
Conditions of use	The ratio of reactance value under 1.8 times of rated current to reactance value under rated current shall not be less than 0.95, The difference of reactance between any two phases of three-phase reactor shall not be greater than ±3%.		
Product executive standard			

\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.

## Sine wave filter

### Product overview

Sine wave filter transforms PWM output signal of motor into smooth sine wave with low residual ripple voltage to prevent damage to winding insulation of motor. The resonance phenomenon of distributed capacitance and distributed inductance caused by cable length is reduced, the motor overvoltage caused by high DV / DT is eliminated, the motor damage caused by eddy current loss is eliminated, and the audible noise of motor is reduced by filter.



### Selection precautions

1. After sine wave filtering, the load capacity of the inverter will be lower than that of the motor under rated power frequency load;
2. Sine wave filter will make the filtered voltage produce a certain proportion of voltage drop. When the fundamental frequency is 50 Hz, the voltage drop is about 10%. Its proportion is proportional to the change of fundamental frequency;
3. In the process of filtering the PWM wave into sine wave, the filter filters out a large number of high-order harmonic components, so the inverter will have a certain proportion of voltage drop after the rated output current of the inverter when the filter is no-load. When the fundamental frequency is 50 Hz, the voltage drop is about 10%. Its proportion is proportional to the change of several wave frequencies.
4. After using sine wave filter, the length of connectable wire is 300m ~ 1000m;
5. Conventional sine wave filter products, the corresponding inverter output carrier frequency is 4-8kHz. If your application carrier frequency is not in this range, you need to explain to our company in advance. Otherwise, the use of the filter will be affected and the filter will be burned in serious cases;

#### Technical parameters:

Product name	Sine wave reactor		
Rated working voltage	380V/690V (Customizable)	Temperature rise	F ≤ 100k, H ≤ 125k
Rated working current	5A~1600A	Electrical strength	No flashover of winding to ground 3000VAC / 50Hz / 5mA / 10s
working frequency	50Hz/60Hz	Protection level	IP00 (no case)
Insulation class	Class F / h (optional)	ambient temperature	-25°C~+40°C
Inductance	Customizable	Altitude	≤1000M
Noise	≤65dB(A) (1m)	relative humidity	≤90%
Conditions of use	There should be no harmful gas, inflammable and explosive materials around; the surrounding environment should have good ventilation conditions		

\*The above technical parameters and size data are for reference only, please confirm the specific data with our company before ordering.





# GOODS ARE AVAILABLE IN ALL VARIETIES

## SHOWCASE



INNOVATION EXCELLENT QUALITY

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