





PRODUCT MANUAL

济南金桥通精密机械有限公司

Jinan Golden Bridge Precision Machinery Co., Ltd.



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SBW-S voltage stabilizer(High end)



Summary

SBW-S series three-phase high power voltage regulator (high-end) (hereinafter referred to as voltage regulator) is our company introduced the product foreign advanced technology, combined with China's national conditions, independent research and development and design of a power product. The output voltage can be kept stable when the voltage fluctuation causes the voltage fluctuation.

Compared with other types of voltage regulators, this series of products have large capacity, high efficiency and no wave shape span change, stable voltage regulation, extensive use load, can withstand instantaneous overload, can be long-term continuous operation, the implementation of unattended, hand control, automatic control, mains, voltage control switch at will, with overvoltage, undervoltage, overcurrent, delay, mechanical fault automatic protection device, and the use of convenient installation, reliable operation and other characteristics. Can be widely used in industry, agriculture, transportation, post and telecommunications, national defense, railway, science experiment in the fields of large mechanical and electrical equipment, metal processing equipment, production line, construction equipment, elevator, medical equipment, program control equipment room, CNC machine tools, printing equipment, textile equipment, air conditioning, radio and television and household appliances lighting, Experimental instruments and other places that need to be stabilized.

| Basic Indexes | | Protection F | unction |
|---------------------------------------|---|--------------------------|---|
| Input Voltage | 380V±20% or wide voltage special customization | Overvoltage | Output exceeds the rated voltage by 10% (adjustable), with a delay of 3-5s to cut off the output power supply |
| Output Voltage | Can be selected within 380V±5% | Undervoltage | Output below rated voltage -15% (adjustable), delay 3-5s to cut off output power |
| Voltage Stabiliza -tion Accuracy | 1-5% can be set | Short Circuit | When the load equipment is short circuited, cut off the output power supply |
| Frequency | 50Hz/60Hz | Overcurrent | When the rated output current is exceeded, delay for 3-5 seconds to cut off the output power supply $ \\$ |
| Response Time | 0.05S | Reverse Phase | When there is an error in the three-phase electrical phase sequence, the machine alarms and cuts off the output power. |
| Stable Time | When the input voltage changes step by 10% relative to the rated value, its stabilization time is ≤15 | Phase Miss | When there is a phase loss in the three-phase power supply, the machine alarms and cuts off the output power. |
| | | Bypass | When the voltage regulator malfunctions or is repaired, it has a manual or automatic power supply through device |
| Other Indexes | | | |
| Additional Wave -form Distortion | 1% | Withstand Voltage | The whole machine is 2000VAC/min to ground without breakdown or arcing phenomenon |
| Additional Output Voltage Asymmetr | The increment of output asymmetry to input ≤ 1% | Insulation Resistance | Whole machine to ground ≥ 2M |
| Noise | < 55dB | EMI Filter Device | Can effectively filter out harmonic interference from the power grid (optional configuration) $ \\$ |
| Efficiency | ≤50KVA,efficiency>95%; 100KVA,efficiency>98% | Lightning Arrester | When the power grid undergoes instantaneous changes and induces lightning strikes, it can provide good surge current protection effect (optional configuration) |
| Relative Humidity | 20%~90% | Monitoring Interface | Equipped with RS232 and RS485 interfaces for remote control, remote signaling, and telemetry functions (optional configuration) |



Specification

| Model | Rated Capacity (KVA) | Output Current (A) | Input Voltage (V) | Output Voltage (V) | Weighy (Kgs) | Dimensions W×D×H (mm) |
|------------|----------------------------|--------------------------|-------------------------|---------------------------------------|-----------------|-----------------------------|
| SBW-S-10 | 10 | 16 | | | 150 | |
| SBW-S-20 | 20 | 31 | | | 160 | |
| SBW-S-30 | 30 | 46 | | | 180 | |
| SBW-S-50 | 50 | 76 | | | 200 | |
| SBW-S-80 | 80 | 122 | | | 270 | |
| SBW-S-100 | 100 | 152 | | | 300 | |
| SBW-S-120 | 120 | 182 | | | 320 | |
| SBW-S-150 | 150 | 228 | | | 502 | |
| SBW-S-180 | 180 | 274 | 3 Phase | 3 Phase 380±(1-5)% 304-456 Can be set | 535 | |
| SBW-S-200 | 200 | 304 | | | 582 | |
| SBW-S-250 | 250 | 380 | 004-430 | | 735 | |
| SBW-S-320 | 320 | 487 | | | 840 | |
| SBW-S-400 | 400 | 608 | | | 1245 | |
| SBW-S-500 | 500 | 760 | | | 1586 | |
| SBW-S-600 | 600 | 912 | | | 1865 | |
| SBW-S-800 | 800 | 1216 | | | 2045 | |
| SBW-S-1000 | 1000 | 1520 | | | 2400 | |
| SBW-S-1200 | 1200 | 1824 | | | 2600 | |
| SBW-S-1600 | 1600 | 2431 | | | 2850 | |
| DBW-S-20 | 20 | 91 | | | 210 | |
| DBW-30 | 30 | 137 | | | 235 | |
| DBW-50 | 50 | 228 | 1 Phase 176-264 | 220V ± 3% Can be set | 255 | |
| DBW-100 | 100 | 455 | 170 204 | can be set | 285 | |









SBW-S voltage stabilizer(Basic)



Summary

SBW regulator (basic) namely intelligent high precision three-phase AC regulator composed of contact autoregulator, servo motor, automatic control circuit, when the grid voltage is unstable or load changes, the automatic sampling regulator control circuit signal drive the servo motor, adjust the voltage regulator auto regulator carbon brush position, make the regulator output voltage adjustment to the rated value and reach stable state.

This series of regulator is ordinary, with large screen digital display function.

The series of voltage regulator products have many varieties, full specifications, beautiful appearance and other advantages, with the waveform without distortion, high efficiency, reliable performance, long-term operation and other characteristics, the voltage regulator is equipped with delay and undervoltage protection function. This voltage regulator can be widely used in any power place, is an ideal voltage regulator power supply (voltage regulator), to ensure the normal operation of your electrical equipment. Capacity ranged from 0.5 KVA to 120 KVA

■ Technology Parameter

| Input Voltage | 1 Phase 160V-250V | Adjust Time | <1S(at 10% change in input voltage) |
|-------------------------------------|------------------------------------|-----------------------|-------------------------------------|
| | 3 Phase 277V-430V(3 Phase 4 wires) | Ambient Temperature | -10 -+40 |
| Output Voltage | 1 Phase 220V and 110V(0.5KVA-3KVA) | Temperature rise | <60 |
| | 1 Phase 220V(5KVA-30KVA) | Waveform Distortion | None |
| | 3 Phase 380V and 220V | Load Factor | 0.8 |
| Voltage Stabiliza -tion Accuracy | 3 Phase 220V±3% 110V±6% | Dielectric Strength | 1500V/min |
| Frequency | 50Hz/60Hz | Insulation Resistance | 1Phase>5M 3Phase>2M |
| Overvoltage Protection | 246V±4V | | |

Specification

| Phase | Model (KVA) | Deminsion | Phase | Model (KVA) | Deminsion |
|---------|----------------|---------------|----------|----------------|----------------|
| | SBW-10KVA | 400x350x720mm | | SBW-50KVA | 600x450x970mm |
| | SBW-15KVA | 400x350x720mm | 3 phase | SBW-60KVA | 600x450x970mm |
| 3 phase | SBW-20KVA | 500x400x800mm | 3 priase | SBW-80KVA | 660x450x1050mm |
| | SBW-30KVA | 500x400x800mm | | SBW-100KVA | 660x450x1050mm |
| | SBW-40KVA | 500x400x800mm | | SBW-120KVA | 660x450x1050mm |

ZBW voltage stabilizer



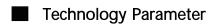
Summary

ZBW series intelligent touchless AC regulator is a new generation of AC regulator power supply developed by our company using the most advanced foreign technology and combined with China's national conditions. It integrates microcomputer program processing, photoelectric transmission, touchless switch, AC compensation voltage regulator technology, which satisfies special need for power supply of sophisticated equipment. It has the advantages of fast response speed, high voltage stabilization accuracy, no carbon brush, no contact, no machinery, no maintenance, three-phase automatic voltage and other balance, and is equipped with RS-232 interface, which can realize remote control, remote communication and telemetry. This product is widely used in communication equipment, radio and television, industrial production lines, CNC machine tools, light industry textile, medical equipment, hotel, computer room and other places that need the voltage stability.

Specification

| Model | Rated Capacity (KVA) | Output Voltage Range(V) | Output Voltage (V) | Rated Output Current (A) | Weight (Kgs) | Deminsions W×D×H (mm) |
|----------|----------------------------|-------------------------------|--------------------------|--------------------------------|-----------------|-----------------------------|
| ZBW-S10 | 10 | 3 phase | 3 phase | 15 | 140 | |
| ZBW-S20 | 20 | 304V~456V | 380V ± 2% | 30 | 160 | |
| ZBW-S30 | 30 | | | 46 | 180 | |
| ZBW-S50 | 50 | | | 76 | 195 | |
| ZBW-S75 | 75 | | | 114 | 316 | |
| ZBW-S100 | 100 | | | 152 | 330 | |
| ZBW-S150 | 150 | | | 228 | 450 | |
| ZBW-S225 | 225 | | | 342 | 530 | |
| ZBW-S320 | 320 | | | 486 | 630 | |
| ZBW-S400 | 400 | | | 608 | 750 | |
| ZBW-S500 | 500 | | | 760 | 870 | |
| ZBW-S600 | 600 | | | 912 | 980 | |
| ZBW-D3 | 3 | 1 phase | 1 phase | 14 | 20 | |
| ZBW-D5 | 5 | 176V~264V | 220V ± 2% | 23 | 28 | |
| ZBW-D10 | 10 | | | 45 | 50 | |
| ZBW-D20 | 20 | | | 91 | 80 | |
| ZBW-D30 | 30 | | | 136 | 100 | |





| | Stable Voltage Range | 3Phase 304V-456V 1Phase 176V-264V |
|-------------------|---------------------------------|---|
| Input | Frequency | 47Hz-63Hz |
| | Rated Voltage | Single phase voltage 220V, three-phase voltage 380V (can also be adjusted to other voltages, such as 400V) |
| | Stabilized Voltage Precision | \pm (1-5)% selectable (conventional setting is \pm 2%) |
| | Response Time | Fast (one power cycle 20ms) |
| Output | Waveform Distortion | No additional waveform distortion (static) |
| | Efficiency | 98% |
| | Three-phase Imbalance | Automatic balance of three-phase |
| | Delay Output | First stabilize the voltage, then output (to protect the equipment from impact) |
| | Overvoltage | If the output voltage is higher than 10% (245V), cut off the output or continuously turn to the bypass. |
| | Undervoltage | If the output voltage is below 10% (195V), cut off the output or continuously turn to the bypass. |
| | Phase Loss | have(Automatic cut-off) |
| Protection | Overload | Electronic detection, cut off output within 3 minutes of overload |
| | Overcurrent | Dual protection of electronic detection and circuit breaker |
| | Short Circuit | Dual protection of electronic detection and circuit breaker |
| | Bypass | Uninterruptible automatic bypass |
| | Voltage | A. B, C, Σ ABC 3Phase have true RMS LCD display, respectively |
| Indicate | Current | A. B, C, Σ ABC 3Pphase have true RMS LCD display, respectively |
| | Work Status | Stable voltage state/mains voltage state |
| | Abnormal Situation | Overvoltage, undervoltage, overload, and protection wire breakage |
| Human Machine | Interface | Intelligent human-machine interface operation panel, convenient for setting and querying various parameters |
| Working Mode | | Two working modes: voltage stabilization and mains power supply |
| Overload Capacity | | 5 times rated current for 1 second |



JJW precision purifying ac voltage stabilizer



Summary

JJW series precision purification AC voltage regulator is a new type of voltage regulator with international advanced sinusoidal energy distribution voltage regulator technology, integrating voltage regulator and mains power purification function.

JJW series precision AC purification AC voltage regulator not only has the advantages of high voltage control accuracy, fast dynamic response speed and small distortion, but also this voltage regulator has the advantages of strong load adaptability and strong anti-lectromagnetic interference ability.

JJW series precision purification AC voltage regulator is mainly used in computers, precision instruments, testing equipment, communication and broadcasting equipment, automatic control system with high power supply quality requirements.

Production capacity: single-phase 0.5 KVA-30 KVA three-phase 1.5 KVA-100 KVA

| Input Voltage | 1Phase 175~260V±3% , 3Phase 310V~450V |
|--------------------------------|---------------------------------------|
| Output Voltage | 1Phase 220V±0.5% 3Phase 380V±1% |
| Frequency | 50Hz/60Hz |
| Overvoltage Protection | 1Phase 245±5V 3phase 420V±8V |
| Source Voltage Effect | ≤±0.5% |
| Loading Effect | ≤±1% |
| Response Time | ≤50ms |
| Additional Waveform Distortion | ≤±5% |
| Relative Humidity | ≤90% |
| Peak Absorption | Input 1000V/3us, peak output ≤ 5V |
| Insulation Resistance | >5M |
| Power-factor of Load | > 0.9 |
| Amblent Temperature | -5~+40 |
| Efficiency | >98% (Fullload) |



Transformer and voltage stabilizer integrated machine



Summary

The change of the peak and valley voltage of the power grid and the impact of various high-power perceptual loads on the power grid cause the fluctuation of the power grid voltage, which threatens the safety of many sophisticated and expensive equipment and causes direct or indirect heavy losses. According to the different needs of industry users for electricity safety, we have customized a series of personalized industry special regulators for many industry users, hoping to use more stable power supply to achieve mutual benefit and win-win results to maintain and increase the value of users' assets. In view of the difference between the input voltage required by most imported equipment and the domestic power grid voltage, this product is specially designed to integrate voltage stabilization, voltage change and protection functions. The product has the characteristics of small size, high efficiency, high cost performance, and can complete multiple different output voltages at the same time. Capacity ranging from 10 KVA to 250 KVA.

| Model | SBW-SG |
|-------------------------|--|
| Capacity | 10KVA-250KVA |
| Input Voltage | 304V~456V |
| Output Voltage | 200V, 220V, 380V, 480V or set according to user requirements |
| Phase | 3 Phase |
| Insulation Strength | 2000V, no breakdown for 1 minute, no arcing phenomenon |
| Insulation Resistance | 2 M |
| Efficiency | 98% |
| Waveform Distortion | 0.1% |
| Frequency | 50Hz~60Hz |
| Stable Voltage Accuracy | ±(1~5)% can be set |
| Stability Time | When the input voltage jumps by 10% relative to the rated value, the stable time is less than 1.5S |

SG transformer





Summary

SG, DG series products are our company using high quality materials and advanced vacuum immersion paint equipment and professional production technology, independent research and development, production of 0.5 KVA-1200 KVA between. SG series three-phase coherent type transformer is widely used for various power supply occasions with AC 50,60Hz, input and output voltage is not more than 1000V. We have independent research and development design capabilities, transformer key indicators such as: product capacity, insulation level, voltage ratio, connection mode , multi-tap lead, external size, distribution requirements, etc., can be customized according to user requirements. This product has a applicable load, can withstand overload at any time, long-term continuous work.

| | 1Phase 3Phase | е | | |
|-------------------------|---|---|--|--|
| System Voltage | 36V-1000V | | | |
| Capacity | 0.5~1200KVA | | | |
| Phase | 1Phase 3Phase | | | |
| Power | 98% | | | |
| No-load Current | <4% | | | |
| Insulation Strength | 2000V, no breakdown or arcing phenomenon for 1 minute | | | |
| Insulation Resistance | 2M | | | |
| Temperature Rise | <100 | | | |
| Short-circuit Impedance | <4% | | | |
| Linking Goups | / , /Y,Y/Y,Y/ (3Phase) | | | |
| Frequency | 50Hz/60Hz | | | |









JBK series transformer



Selection Guide

| Product Name | Rated Capacity | Rated Voltage (Input/Output) |
|--------------|----------------|---------------------------------------|
| JBK | D | |
| | • | • |
| JBK | 40:40VA | M:380V220V/220V36V24V6V (220Vcommon) |
| JBK1 | 63:63VA | S:380V220V/127V36V12V6V (127V COMMON) |
| JBK2 | | F:380V220V/110V36V24V6V (110V common) |
| JBK3 | 3000:3000VA | C:380V220V/36V24V12V6V (36V common) |
| JBK4 | | D01:380V/220V |
| JBK5 | | D02:380V/36V |
| | | D03:380V/24V |
| | | D04:380V/220V36V |
| | | D05:380V220V/36V |
| | | D06:380V220V/24V |
| | | D07A:220V/220V_isolation |
| | | D08: 220V/36V |
| | | D09: 220V/24V |
| | | DZ1: customized |
| | | DZ1A: customized Class A |
| | | |

Scope of Application

JBK series machine tool control transformers are usually used as electrical control, lighting and indicator power.

Certification and Standards

Industry standard: JB / T5555

Product Features

I-coil skeleton, El shell structure, simple process, simple structure, strong seismic capacity

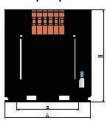
Using imported materials and advanced technology, with reliable work, low energy consumption, small volume, safe wiring, wide applicability and other characteristics

The terminal and skeleton are integrated into one whole to improve the protection level; the domestic IT cold pressing terminal is used to increase the wiring density: the transformer core and bottom plate; the overall installation size is more accurate

The Appearance and Installation Dimensions (mm)











The Appearance and Installation Size of the JBK 4 Machine Tool Control Transformer

| Capacity | Dimension | Installation Dimensions | Installation Hole Size |
|----------|-----------------------|-------------------------|------------------------|
| VA | $A \times B \times H$ | a×b | |
| 40 | 79×73×92 | 58·5×46 | 4⋅5 |
| 63 | 79×73×92 | 58·5×46 | 4⋅5 |
| 100 | 85×89×97 | 65×62 | 5 |
| 160 | 97×91×105 | 83×73 | 5.5 |
| 200 | 97×105×105 | 84.5×86 | 6 |
| 250 | 97×105×105 | 84.5×86 | 6 |
| 300 | 121×103×122 | 90×83.5 | 6 |
| 400 | 121×103×122 | 90×83.5 | 6 |
| 630 | 150×111×143 | 122×90 | 7 |
| 800 | 151×128×143 | 122×105 | 7 |
| 1000 | 215×170×150 | 142×160 | 7×14 |
| 1600 | 245×185×155 | 155×180 | 7×14 |
| 2000 | 275×210×175 | 175×210 | 7×14 |
| 2500 | 275×210×175 | 175×210 | 7×14 |
| 3000 | 200×210×175 | 175×210 | 7×14 |
| 4000 | 240×340×245 | 180×170 | 8.5×19 |
| 5000 | 240×350×245 | 180×170 | 8.5×19 |
| 6000 | 240×360×245 | 180×190 | 8.5×19 |

Working conditions and installation conditions

Altitude: 2000m

Ambient temperature: -5~ + 40°C

Air relative humidity: the average monthly maximum relative humidity of the wettest month is 90%, and the average monthly temperature of the month is $+ 25^{\circ}$ C

work environment:

- A. There is no pollution and corrosion and explosive medium that seriously affects the transformer insulation in the atmosphere
- B. No violent vibration and turbulence in the installation site
- C. Places free from rain and snow
- D. The voltage waveform of the power supply is similar to a sine wave
- E. Power supply voltage deviation shall not be greater than \pm 5%



UPS PLG bypass cabinet





Summary

Electric PLG series bypass cabinet is specially designed for power plant, petrochemical and other large industrial UPS supporting the production of bypass regulator.

PLG series consists of a complete standby mains bypass of isolation transformer (single single / two variable single / single three, three changes), compensation transformer, voltage regulating transformer, transmission mechanism, brush contact system, control system, manual bypass switch (optional), DC reverse diode (optional), transmitter (optional), etc.

Production capacity range: 10 KVA ~ 220 KVA

| Basic Indexes | | Protection I | Function |
|--|--|--------------------------|--|
| Input Voltage | 380V±15% (3Phase), 220±15% (1Phase) | Overvoltage | When the voltage exceeds the overvoltage setting value, cut off the output power supply |
| Output Voltage | 380V±5% (3Phase), 220±5% (1Phase) | Undervoltage | When the voltage is below the undervoltage setting, cut off the output power suppl |
| Voltage Stabiliza -tion Accuracy | Initial setting of 2.5% (adjustable from 1% to 5%) | Short Circuit | When the load equipment is short circuited,cut off the output power supply |
| Frequency | 50Hz/60Hz | | |
| | | | |
| Other Indexes | | | |
| Additional Wave -form Distortion | 1% | Withstand Voltage | The whole machine is 2000VAC/min to ground without breakdown or arcing phenomenon $% \left(1\right) =\left(1\right) \left(1\right)$ |
| Additional Output Voltage Asymmetry | Increment of output to input asymmetry ≤ 1% | Insulation Resistance | Whole machine to ground 2M |
| Noise | < 55dB | EMI Filter Device | Can effectively filter out harmonic interference from the power grid(optional configuration) $$ |
| Efficiency | Capacity 40-100KVA \geq 94% Capacity 100KVA \geq 98% | Lightning Arrester | When the power grid undergoes instantaneous changes and induces lightning strikes it can providde good surge current protection effect(optional configuration) |
| Ambient Temperature | -10 -+45 | Monitoring Interface | Equipped with RS232 and RS485 interfaces for remote control,remote signaling,and telemetry function(optional configuration) |



DC power supply

Summary





ZYJ series high power DC voltage stability flow linear power supply for single-phase or three-phase input, output DC power supply, with high precision, high stability and good electrical characteristics, can provide powerful low pulsating DC power supply, so that our products more perfect performance. It has a perfect protection circuit, in order to better meet the user's simple, easy to use requirements.

Compared with the switching power supply, it has high precision, small ripple, and no interference from high frequency radiation. The power supply can be used for complex tests of capacitors, relays, resistors, etc., and can also be used as experimental test equipment for thermistors, motors and other electronic components, automatic aging equipment, and all other occasions that require DC power supply.

| Model Range | Nearly 300 specifications, output voltage 0-1000V, output current 0-2000A | | |
|--|--|--|--|
| Constant voltage and Constant Current | The voltage and current values can be continuously adjusted from zero to the rated value, with automatic conversion of constant voltage and current | | |
| Overcurrent Alarm | The alarm current value is continuously adjustable from 0 to 120% of the rated value. When the output current of the power supply exceeds the current alarm value, an audible and visual alarm will be triggered | | |
| Overvoltage Protection | The voltage protection value is continuously adjustable from 0 to 120% of the rated value. When the output voltage of the power supply exceeds the voltage protection value, it will trip for protection | | |
| Short Circuit Protection | Allow for long-term short circuit or short circuit startup in any working state | | |
| Overload Protection | When the power supply or load malfunctions and the output current exceeds 1.5 times the rated value, the power supply trips for protection | | |
| Short Circuit Alarm | When the output voltage is below 1% of the rated value, the power supply will sound and light an alarm (optional) | | |
| Automatic Discharge | For capacitive load shutdown and discharge (optional), output display voltage and current simultaneously with LED digital display | | |
| Pulse Operation | Can be equipped with a time controller to form a DC pulse power supply (optional) | | |
| Intelligence | Can be connected to a computer to form an intelligent power supply controlled by the computer (optional) | | |
| Input Voltage | AC220V±10% or AC380V±10% | | |
| Output Voltage | DC-0- Rated voltage Output current 0- rated current | | |
| Constant Voltage and Constant Current | The voltage and current values can be continuously adjusted from 0 to the rated value, and the constant voltage state and constant current state can automatically switch | | |
| Voltage Stabilizing Performance | Voltage adjustment rate ≤ 0.05% Load adjustment rate ≤ 0.1% Ripple effective value ≤ 0.1%+20MV | | |
| Temperature Coefficient | 300PPM/°C (typical value) | | |
| Steady Current Performance | Current adjustment rate ≤ 0.1% | | |
| Display Method | The voltmeter has a 3 or 4-digit half LED digital display The ammeter has a 3 or 4-digit half LED digital display | | |
| Display Accuracy | Voltmeter 0.1V Ammeter 0.01A (Note: The display accuracy of different specifications of power supplies may vary) | | |
| Display Error | Voltmeter≤1%±1 Ammeter≤1%±1 (note: display error can be adjusted according to customer requirements) | | |
| Short Circuit Protection | Cut off output | | |
| Protection Method | Overvoltage, overload, and phase loss tripping protection; Overcurrent alarm protection | | |
| Working Mode | Long term full load continuous operation | | |
| Environment Condition | Temperature -20 °C -+40 °C Humidity ≤ 90% | | |
| | | | |





The Voltage and Frequency Tables in Some Countries and Areas of The World

| Asian Countries | Voltage(1 Phase) | Frequency |
|-----------------|------------------|-----------|
| South Korea | 110V/220V | 60Hz |
| Japan | 100V | 50/60 Hz |
| Hong Kong | 220V | 50 Hz |
| China | 220V | 50 Hz |
| Taiwan | 110V | 60 Hz |
| Philippines | 220V | 60 Hz |
| Thailand | 220V | 50 Hz |
| Singapore | 230V | 50 Hz |
| Iran | 220V | 50 Hz |
| Israel | 230V | 50 Hz |
| Jordan | 220V | 50 Hz |
| Kuwait | 240V | 50 Hz |
| Malaysia | 240V | 50 Hz |
| Vietnam | 120V | 50 Hz |
| Syria | 220V | 50 Hz |
| Saudi Arabia | 127V/220V | 50/60 Hz |
| Bangladesh | 220V | 50 Hz |
| Indonesia | 127V | 50 Hz |
| India | 115V/230V/240V | 50 Hz |

| European Countries | Voltage(1 Phase) | Frequency |
|--------------------|------------------|-----------|
| Austria | 230V | 50Hz |
| Belgium | 230V | 50 Hz |
| Czecho | 220V | 50 Hz |
| Denmark | 230V | 50 Hz |
| France | 230V | 50 Hz |
| German | 230V | 50 Hz |
| United Kingdom | 240V | 50 Hz |
| Greece | 230V | 50 Hz |
| Hungary | 220V | 50 Hz |
| Iceland | 230V | 50 Hz |
| Italy | 220V | 50 Hz |
| Luxembourg | 220V | 50 Hz |
| Monaco | 220V | 50 Hz |
| Netherlands | 230V | 50 Hz |
| Norway | 230V | 50 Hz |
| Poland | 220V | 50 Hz |
| Portugal | 230V | 50 Hz |
| Spain | 220V | 50 Hz |
| Switzerland | 230V | 50 Hz |
| Finland | 230V | 50 Hz |
| Slovakia | 220V | 50 Hz |
| Russia | 230V | 50 Hz |

| American Countries | Voltage(1 Phase) | Frequency |
|--------------------|------------------|-----------|
| America | 120V | 60Hz |
| Canada | 120V | 60 Hz |
| Mexican | 127V | 60 Hz |
| Brazil | 127V | 60 Hz |
| Chile | 220V | 50 Hz |
| Colombia | 110V | 60 Hz |
| Costarica | 120V | 60 Hz |
| Dominican | 110V | 60 Hz |
| Ecuador | 127V | 60 Hz |
| Morocco | 127V | 50 Hz |
| Porto Rico | 120V | 60 Hz |
| Argentina | 220V | 50 Hz |
| Venezuela | 120V | 60 Hz |

| Africia/Australian Countries | Voltage(1 Phase) | Frequency |
|---------------------------------|------------------|-----------|
| Egypt | 220V | 50Hz |
| South Africa | 220V | 50 Hz |
| Nigeria | 220V | 50 Hz |
| Australia | 240V | 50 Hz |
| New Zealand | 230V | 50 Hz |

Note: The content of this table is only for your reference.

Address: A2-602 Xinyuanxin Center, No.3 Huaxin Street, Licheng District,

Jinan City Shandong Province China

Tel: 0086-0531-88060599

Website: http://www.sdjqt.com