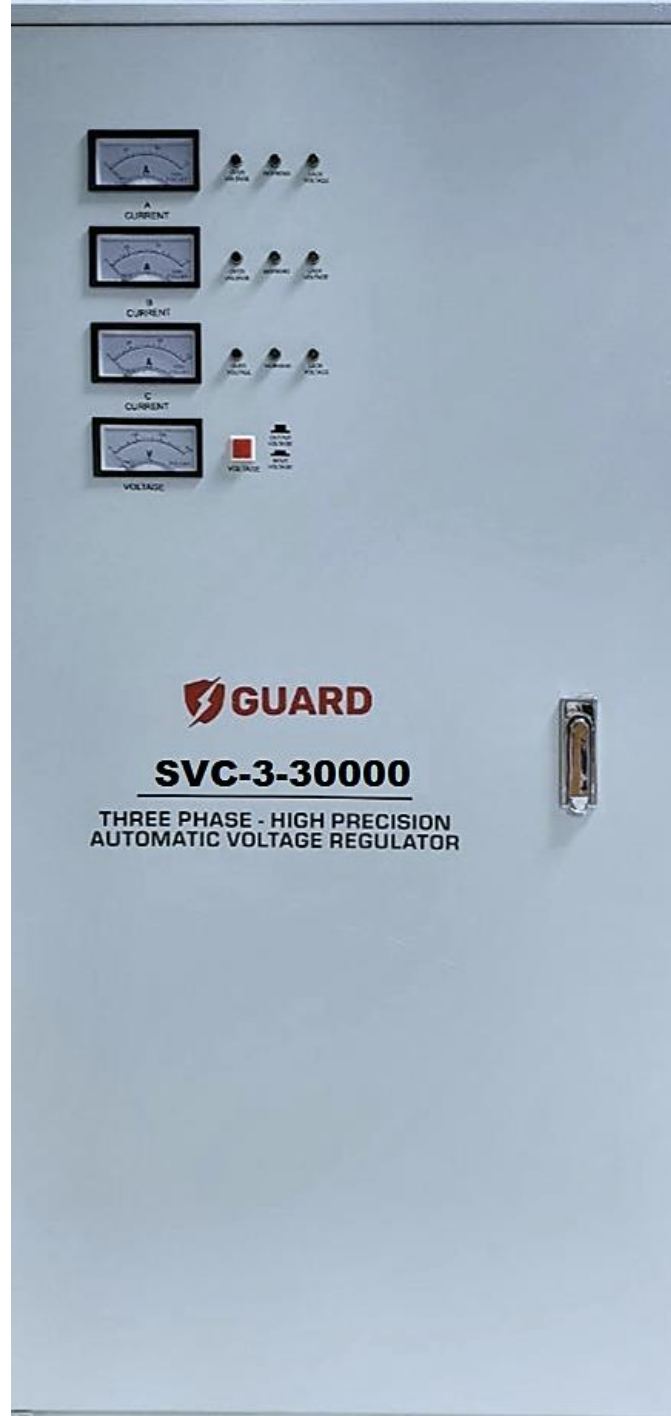




GUARD POWER SOLUTION

GUARD- SVC-Series





GUARD POWER SOLUTION

FULLY AUTOMATIC AC VOLTAGE REGULATOR INSTRUCTION MANUAL

Please do read the instruction Manual carefully before using

TO OUR CUSTOMERS:

Thank you for purchasing this high-precision and fully automatic stabilizer. To better exert the properties of the unit, please read the manual carefully before use.



1).SVC Series Single-phase High-Precision and Fully Automatic Stabilizer

1.Summary

This unit, of high-precision and fully automatic AC stabilizer was designed and produced by adopting automatic regulating principles, accepted internationally. Its pivotal part and devices are all imported ones, which features high-precision stabilization, minimal output wave distortion, small power consumption, compact size and lightweight. It can be widely applied in computer lab, experiment lab and factories, and it's ideal in providing stabilized voltage for high-class electrical appliance. Meanwhile, it can provide 1 IOV for imported electrical appliances. Compared with other AC stabilizers, the unit has a better performance price ratio.

2.Working principle:

- 1) The unit is mainly composed of contact voltage regulator, sampling, comparative, amplifying control circuit and DC servomotor, which form a closed loop control circuit.
- 2) When there's a change either input voltage or load, the sampling circuit would initiate sampling process on output voltage, compare and amplify with the rated norm. The output signal controls the servo-motor to regulate the voltage to the designate-ed voltage value.



3. Technical indicators

Stabilizing precision	
Frequency	50HzN60Hz
Voltage regulating speed	> IOV/S
Temperature	-50c&+400c
Winding temperature rise	0 < 60c
Comparative humidity	
Wave distortion	< 1.0%
Power factor	>0.9

4. Using Direction:

- 1) Take the unit from packing box, keep safe the spare parts and read carefully the operating manual.
- 2) Put the unit in a dry and well-ventilated indoor location and plug it to power after finishing the wiring as referred in the manual. Power on the unit after making sure of the wiring. Observe the output voltage indicator, which should read 220V. Switch on all the electrical appliances, and the unit goes into automatic voltage regulating.
- 3) When input voltage or load changes, the in-built servo motor starts rotating to regulate voltage. The noise produced therein is normal phenomenon.
- 4) After use, turn off the power switch of electrical appliances first, then switch off the power in the stabilizer, Please don't use the switch of stabilizer as the master switch for all the electrical appliances.



- 1) The unit adopts fuse or automatic air switch as over-load and short-circuit protection. Please check up those devices before operation.
- 6) The unit should not be exposed to extended overload conditions.

The time limit for different degrees of overload is shown below:

Overload (%)	Maximum allowable time(m/norite)
20	60
40	32
60	5

When the unit is used in regions where general low voltage exists, it should be noted that the effective used volume should be decreased proportionally.

The optional feature of the unit includes over and under -voltage protection when the grid power(input power) greatly exceeds stabilized range, the unit will automatically shut off to protect the unit and loads, when the input voltage returns to normal range, the unit will automatically start for load.

5.Operating notes

- 1) Don't use the unit in corrosive air (e.g., Oil fume, steam, etc.).
- 2) Keep the unit away from open air.
- 3) The unit should not be used in merging connection.
- 4) When wiring the unit, please pre-arrange sufficient cross-section for the rated capability.
- 5) The unit is equipped with grounding devices, which should be securely connected to earth. Dismantling grounding device and nonconfined to grounding requirement are forbidden.



- 6) Keep the unit clean, as dust could obstruct the rotation of gear wheel and reduce the conducting property. So, it's necessary to brush and contact surface of coprological and timely.
- 7) When the unit loses control in automatic function, electricity supply should be stopped. Checkup malfunctions in the in-built switch, control circuit board and servomotor gear. Only after the completion of trouble-shooting should the unit be used again. When checking. Manual rotation on electrical brush is not allowed to order to keep intact the servo-motor and decelerating system.
- 8) When your loads are the electrical appliances such as AC motor, the stabilizer's rated power must select more abundant 3 times than your loads'.
- 9) The unit is not suited in places where grid power is in constant change and load surge.
- 10) If output voltage remains unchanged after use for a period of time, please regulate the adjustable potentiometer(IRPI)on the control circuit. Clockwise rotation will affect higher voltage output, and vice versa.
- 11) The rated cut tent values of fuse and air switch shall not be modified freely.



6. Maintenance instruction

Trouble encountered	Possible causes	Trouble-shooting
Voltmeter does not read when the unit shorts	1. incomplete plugging on socket 2. fuse protector broken down	checkup power socket to secure complete plugging; 2. replace with new fuse conforming to standard
The voltage does not initiate after power switched on. Output voltage becomes lower	The carbon brush is on the lowest reach of coil, so when the input voltage is too low, the soft start will not working properly	Power off. Using a small screwdriver to edge the carbon brush to the middies of coil. Restart the unit
Output voltage reads abnormally	1. voltmeter broken down 2. input voltage too high or too low, and the carbon brush is on the lower reach of coil, the regulation of the unit stops to function	replace the Voltmeter after measuring and get the normal result. 2. The unit should be powered off if excessive highbrow voltage are detected to prevent your appliances from damaging.

(2) SVC-series three-phase high-precision and fully automatic Stabilizer



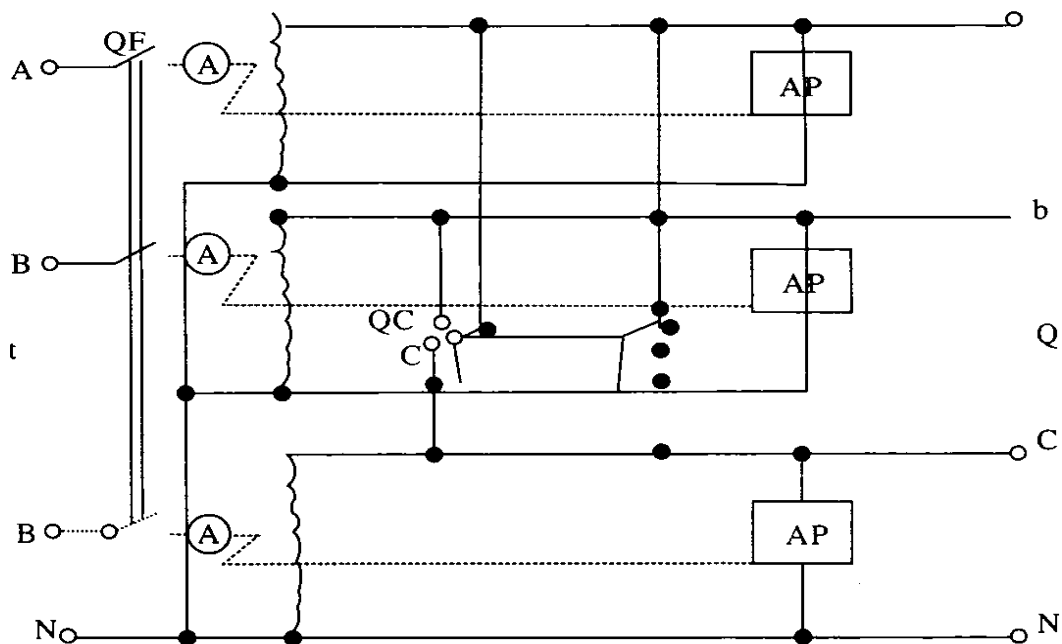
I. Summary

SVC series three-phase and fully-automatic A C voltage stabilizer is designed and produced on the basis of single-phase servo AC regulated power supply, and can be used for three-phase electrical equipment features reliable structure Excellent performance. precise regulation, minimal wave distortion, long and continuous working time. etc. It is really your ideal power supply equipment.

For output and input of the unit both adopt Y shaped connection way,

This series of product can provide you electric source under 380V and 220V at the same time and meet the demand of single or three-phase electrical appliance therefore it is widely applied in the production of industry and Agriculture. especially in those families who have imported air-condition. High class acoustics and computers/ etc.

2. Electric Schematic Diagram





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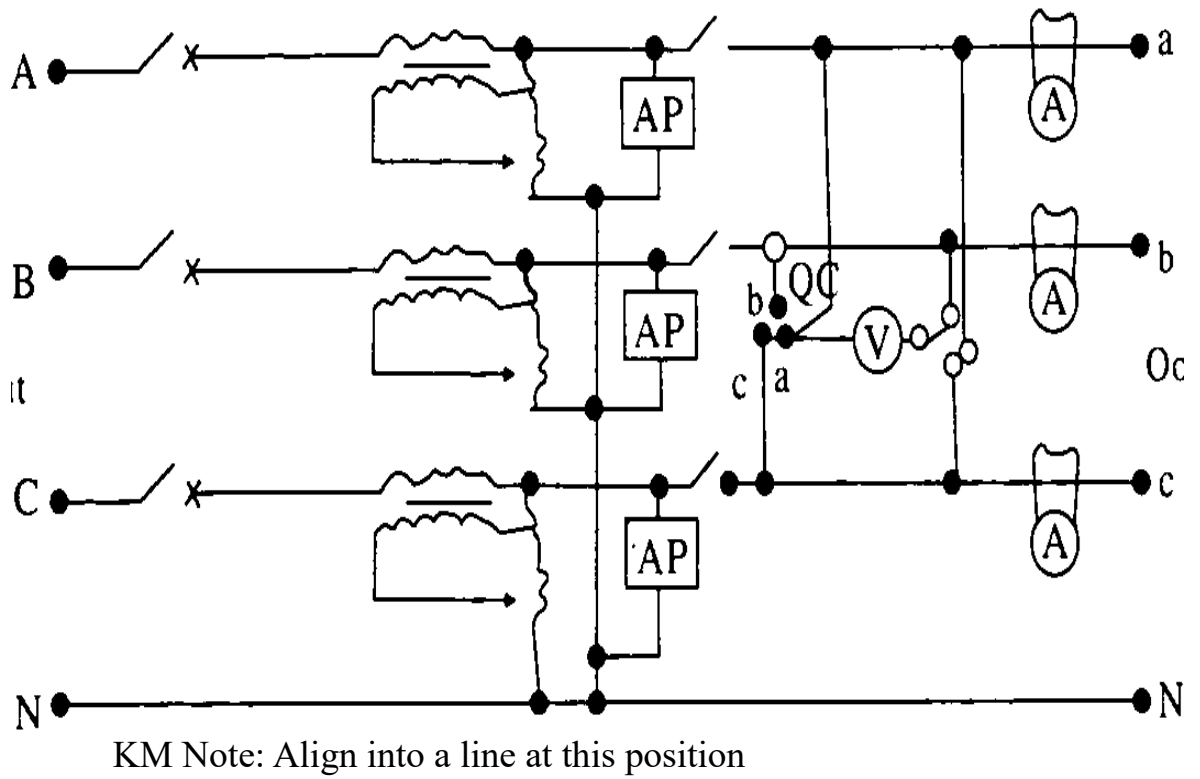


Fig.3 SVC-15K-30KVA Electric Schematic Diagram (For reference only)



3.1 Installation and use

1) Dismantle package box of voltage stabilizer and take out the instruction and spare parts. Please read the using manual carefully and keep it well.

2) Take to the voltage stabilizer and put it in a dry and well-ventilated place Press the button of door lock manually and the door will open automatically.

3) Connect the line according to the indication mark on the terminal board: facing the terminals, three upper terminals marked " A", "B" and "C" are three-phase input phase line; three lower terminals marked "a" ,b" and "c" are three - phase output phase lines; the terminals marked "N", "N " in the middle are respectively input anduoite public neutral lines.

4) After checking up the wire, push C45 circuit breaker handle on the panel to "ON " position. The voltage stabilizer will enter into work adjustment state and working indicator light will be on Turn universal change switch on the panel and observe if the voltage of each line indicated by voltmeter is in order. After that, switch on electrical appliance to be used.

5) Overvoltage protection value is 430V When output voltage exceeds 430V, voltage stabilizer will out off output automatically.



4. Debugging guide

- 1) Three-phase voltage stabilizer actually consists of three single-phase ones and their zero lines(N)are connected together serving for public zero lone(N).
- 2) When debugging, you can set single-phase one by one input the single-phase voltage between AO. At this moment, the voltage stabilizer of top phase starts working and carbon brush activates. Press KM AC contactor to close it. Exam the corresponding voltage between an .and adjust IR 12(1 RPI) potentiometer on A phase control board to make Van 220 V, and then adjust BN and CN phases respectively (in the same way).
- 3) Upon respectively adjusting three phases, it is obvious that the whole adjustment has been completed. Input the three-phase power supply from A, B, C and N and automatically output 380V line voltage.
- 4) According to the way above mentioned, over or undervoltage protection value of each single-phase has to be debugged (usually at 250V/ 190V)by adjusting 2RP1 /2RP2 potentiometers Thus, when three-phase input is performed. Protection value will reach 430V/330V atom antically.



5. Precaution

- 1) Keep the unit away from the sun or rain
- 2) Don't use. The unit in corrosive air (e.g. Oil fume. Steam, etc.).
- 3) Make sure that the outer case is grounded.
- 4) If voltage stabilizer is found off-flavor or fummy, push C45 circuit breaker handle to "OFF" position to cut off power supply at once and remove connected wire. Send it to our service section for repairing.
- 5) When purchasing. Please take the load of unit into consideration as well as total actual capacity of electric appliances you use. The load margin capacity shall be sufficient.
- 6) In order to work in order. The voltage stabilizer should adopt three-phase four - wire system: while output end can adopt three-phase three-wire system or three-phase four-wire system as as requested.
- 7) The voltage stabilizer can't be used in parallel