

## SVC Series

# Instruction Manual

### High-Precision and Fully Automatic Stabilizer

ELECTRONIC CONTROL,ELECTROMECHANICAL TYPE

220V 50/60Hz-CAT

2. When there is a change in either input voltage or load, the sampling circuit will initiate the sampling process on the output voltage, compare and amplify with the rated norm. The output signal controls the servo-motor to regulate the voltage to the designated voltage value.

#### 4. Technical indicators

Stabilizing precision	±3%
Frequency	50Hz~60Hz
Voltage regulating speed	£10V/S
Temperature	-5~+40
Winding temperature rise	£60
Comparative humidity	£90%
Wave distortion	£1.0%
Efficiency	£95%
Power factor	£0.9

#### 5. Using directions:

1. Take the unit from the 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 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 noises 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 do not use the switch of stabilizer as the master switch for all the electrical appliances.

5. The unit adopts fuse or automatic air switch as over-load and shortcircuit Protection. Please check up those devices before operation.

## SVC Series High-precision and Fully Automatic Stabilizer

### 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. 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 110V for imported electrical appliances, compared with the AC stabilizers, the unit has a better performance price ratio.

#### 2. Technical parameters

Model	Input voltage range	Rate output voltage	Rate output	Current volume £mm£	Heft £kg£
SVC-0.5	150V~250V	220V/110V	2.3A	240;210;169	6
SVC-1			4.5A	270;237;184	7.8
SVC-1.5			6.8A	270;237;184	8.6
SVC-2	150V~260V		9A	365;296;238	14
SVC-3			13.6A	420;325;340	17.5
SVC-5	160V~250V	220V	22.7A	530;330;290	23
SVC-7.5			34A	550;350;310	47
SVC-10			45A	550;350;310	50
SVC-15			67A	495;420;800	60
SVC-20			90A	495;420;800	65
SVC-30			135A	495;420;800	75

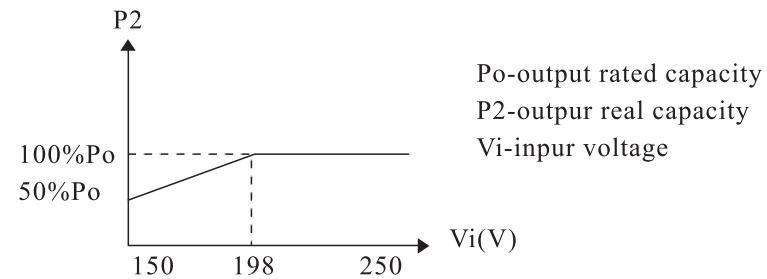
#### 3. Working principle

1. The unit is mainly composed of contact voltage regulator, sampling, comparative, amplifying control circuit and DC servo motor, which form a closed loop control circuit.

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(minute)
20	60
40	32
60	5

7£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 correlation of which is shown below:



8£The optional feature of the unit includes over and under-voltage protection when the grid powergreatly exceeds stabilized range,the unit will automatically shut off to protect the unit and loads, over-voltage and under voltage protection limitare setted at 248V and 186V respectively,which are regulated by 2RP1 and 2RP2 in PCB. When input voltage exceeds 248V or drops below 186V,protective property initiates; when the input voltage returns to normal range,the unit will au-tomatically start for load.

#### 6. Operation 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 capacity. The cross-section of conduction wire is as follows:

2KVA: 2mm<sup>2</sup>;3KVA:2.5mm<sup>2</sup>;5KVA:4mm<sup>2</sup>;7.5KVA:6mm<sup>2</sup>;10KVA:10mm<sup>2</sup>  
15KVA:15mm<sup>2</sup>

5£The unit is equipped with grounding devices, which should be securely connected to earth.Dismantling grounding device and nonconformity to grouding requirement are forbidden.

6£Keep the unit clean,as dust could obstruct the rotation of gear wheel and reduce the conduction property.So it's necessary to brush and contact surface of coilpreiodical and timely.

7£When the unit loses control in automlatic function, electricity supply should be stopped.Check up 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 sewo-motor and de-celerating system.

8£When your loads are the electrical appliances such as AC motor,the stabilizer's rated power must selected more abundant 3 times than your loads`.

9£When the input voltage is 110V,the units actual capacity is within 50% of the normal rated volume. The unit is also equipment with soft start function £added as percustomersrequirement£which cushions the current shock when the unit is switched on.This function makes it possible for input voltage to scale gradually from lower ratings to protect the load of the electrical appliance and the unit.

10£The unit is not suited in places where grid power is in constant change and load surge.

11£If output voltage remains unchanged after use for a period of time,please regulate the adjustable potentiometer£1RP1£on the control circuit. Clockwise rotation will effect higher voltage output, and vise versa.

12£The rated current values of fuse and air switch should not be modified freely.

#### 7. Maintenance instruction

Troubel encountered	Possible causes	Trouble-shooting
Voltmeter does not read when the unit starts	1.incomplete plugging on socket 2.fuse protector broken down	1.check up 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 sill not working properly	Power off.Using a small screwdriver to edge the carbon brush to the middle 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	1.Replace the Voltmeter after measuring and get the normal result. 2.The unit should be powered off if excessive high or low voltage are detected to prevent your appliances from damaging.