

SERVO-MOTOR CONTROL SYSTEM
FULL AC.AUTOMATIC VOLTAGE REGULATOR

Profession guaranteed the quality

ISO9001 CE

INSTRUCTION MANUAL

SVC-series

SERVO-MOTOR CONTROL SYSTEM
FULL AC.AUTOMATIC VOLTAGE REGULATOR

All Products Made By ISO 9001:2008 Certified Factory



Power Inverter
Líderes en transformaciones de energía



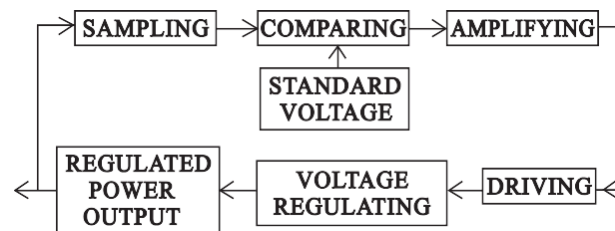
**PLEASE DO READ THE INSTRUCTION
MANUAL CAREFULLY BEFORE USING**

3. Operating principle

3.1 This product consists of contacting voltage regulator, sampling, comparing, amplifying control circuit & forcemotor. The whole circuit formed as a closed-loop circuit.

3.2 The sampling control circuit is sampling & amplifying the changes when an input voltage & a load change, then the servo motor will turn according to needed direction to make the tumbler of the voltage regulator turn, the voltage will be regulated into the rated output magnitude.

3.3 Fundamental Diagram



3.4 Wire connection method of three-phase voltage regulator. Facing the wire connection board. The red terminal marked with “A” , “B” , “C” at the left is the three-phase input phase wire. The red terminal marked with “a” , “b” , “c” at the right is the three-phase output phase wire. The both black terminals marked with “O” and “o” are the input. The output is the joint neutral line.

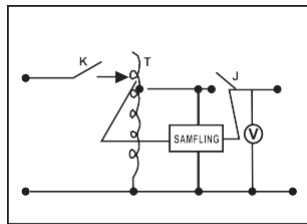
6.10 Don't use it in a frequent change of network supply & a load with shock area.

6.11 If the output voltage does not change after a certain time service, please adjust the potentiometer which is on the controlling circuit board. Clockwise means to increase output voltage, conversely means to lower output voltage.

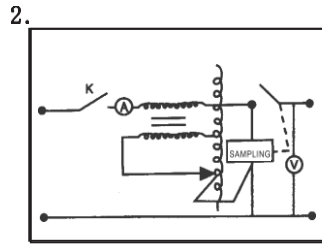
6.12 The value of fuse & rated current can not be changed at rated capacity

7. Maintenance guide

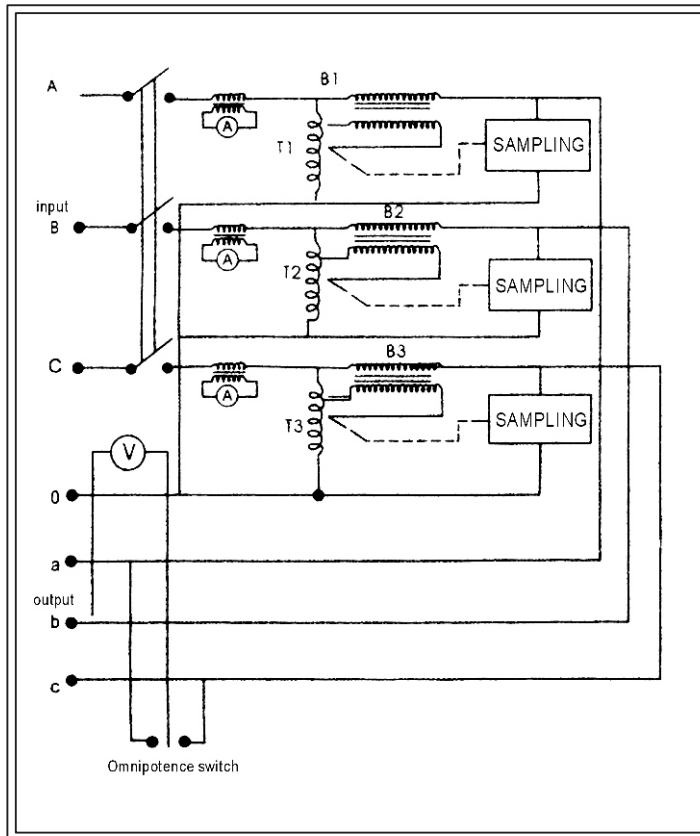
Trouble	Analysis	Solution
Voltage indicator does not move when it is on	1. The plug is loose, no output voltage, 2. Fuse is broken	1. Tighten the plug. 2. Replace
Voltage can not start after turning on the regulator. Output voltage is lowered.	Brush is at the minimum position of the coil. It can not start when the input voltage is too low.	Turn off the regulator. Push the brush at the middle of the coil. then start again.
Indicator of the output voltage is not normal	1. Voltmeter is out of work. 2. Regulator can not work since the input voltage is too low or too high.	1. Replace the voltmeter after the voltage is normal. 2. Please shut off the regulator when the voltage is too low or too high.
The voltage meter on the plate indicates various wires voltage unbalance seriously.	Various phase voltages of the web exceed the voltage regulating range	Stop machine to the three-phase balance high load, check the electric web.
	Load is uncoordinated seriously	Check whether the electric web is normal
	Input voltage is abnormal	Check the electric web
Various phase voltage meters are not balance and occur to over high or over low phenomenon.	Input & output wire connection is reverse.	Verify the terminal, correct it.
	Not to connect the input neutral wire of wire connection abnormal	Connect the neutral wire.



SVC SINGLE-PHASE 0.5KVA-3KVA
ELECTRIC PRINCIPLE FIGURE



SVC SINGLE-PHASE 5KVA-20KVA
ELECTRIC PRINCIPLE FIGURE



SVC THREE-PHASE 1.5KVA-50KVA
ELECTRIC PRINCIPLE FIGURE

7.

5.6 Regulator can not be used under long term overload.

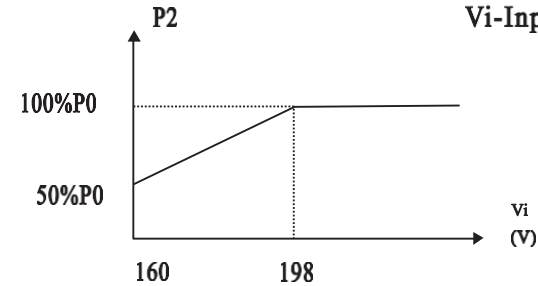
Overload(%)	Maximum time(min)
20	60
40	32
60	5

5.7 Pay attention to valid capacity when it is used in a low voltage area.

Po-Rated capacity (VA)

P2-Output capacity(VA)

Vi-Input voltage(V)

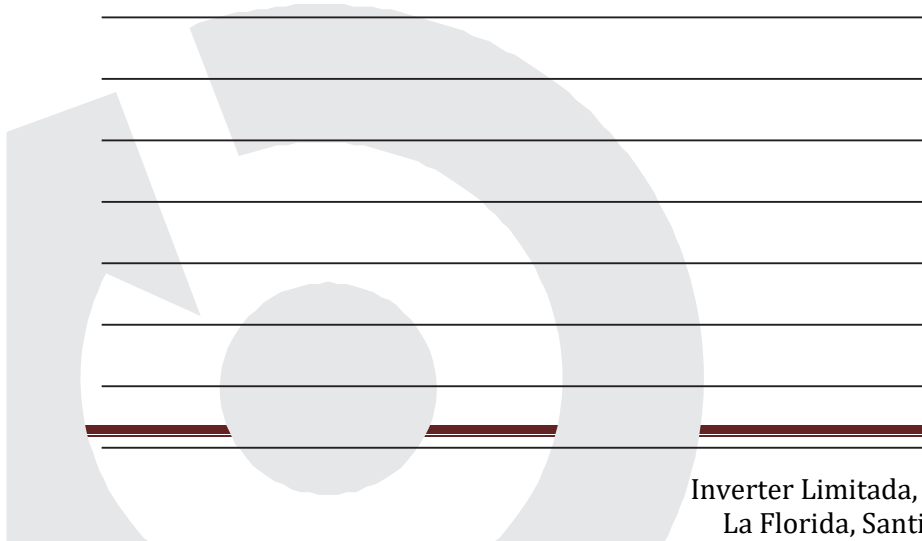


6. Caution

6.1 Regulator should be placed on a location without corrosive air, steam, conductive dust, explosive material & shock.

6.2 Keep away from sun ray & rain.

Remarks:



1.introduction

This series of fully automatic AC voltage regulator is designed according to international designing principle.It is noted for it`s mini-type, lightness.energy-saving, Stabilization, low output error etc. The product can supply stable AC voltage for some electrical apparatus in the locations of laboratory, Factory, etc.

2.Technical specifications

Model (KVA)	Input voltage range	Rated output voltage	Rated output current	Dimensions	Weight (kg)
Single phase	160V ~ 250V	220V ± 3%	0.5	24 × 21 × 17	4.6
			1	27 × 23.7 × 18.4	6.2
			1.5	27 × 23.7 × 18.4	7
			2	35 × 29 × 27	11
			3	40 × 31 × 27	13
			5	54 × 30 × 27	20
			10	46 × 40 × 73	37.5
			15	55 × 44 × 97	55
			20	55 × 44 × 97	62
			30	55 × 44 × 97	90
Three phase	280V ~ 430V	380V ± (1-3)%	1.5	66 × 46 × 29	16.5
			3	66 × 46 × 29	19
			4.5	66 × 46 × 29	23
			6	50 × 44 × 63	47
			9	55 × 44 × 93	52
			15	50 × 49 × 97	75
			20	55 × 50 × 98	102
			30	55 × 50 × 98	115
			60	80 × 70 × 175	280
			90	125 × 50 × 183	580
	60	323V ~ 420V			
90	323V ~ 420V				

Ultra-low voltage input range,can be customized
Output voltage accuracy can be customized

6.3 No parallel connecting.

6.4 Section of the connecting wire should match with rated power.

Single phase: { 2KVA:2mm²; 3KVA:2.5mm²; 5KVA:4mm²;
7.5KVA:6mm²; 10KVA:10mm²; 15KVA:16mm²;
30KVA:25mm²;

Three phase: { 0.5~4.5KVA:1mm²; 6~9KVA:2mm²;
15KVA:4mm²; 20~30KVA:6mm²;
60KVA:16mm²; 90KVA:25mm²;

6.5 This regulator must be well connected with ground.

6.6 Often keep the internal device clean & clear. The contact surface of coil & brush should be cleaned regularly.

6.7 Turn off the power when the regulator is out of control, then exam the mini switch、integrated board、electrical gear Don't turn the brush arm with hands.

6.8 The rated power of the regulator is three times than the practical power in perceptual load.

6.9 The practical capacity of single phase regulator is half of the rated capacity when the input voltage is 110V.

4. Function performance

Accuracy	
Frequency	±3%
Regulating speed	50Hz~60Hz
Surrounding temperature	>10V/S
Temperature rising	-5℃~+40℃
Relative humidity	<60℃
Wave form distortion	<90%
Efficiency	<1.0% >90%

5. Operation

5.1 Read the user's manual carefully after taking out the regulator from the carton, keep the spares.

5.2 Place the regulator on a well-ventilated and dry location before turning on. The regulator will regulate the voltage & service normally when the indicator is on 220V(380V), then turn on the electrical appliance.

5.3 It is normal if you find unusual noise when the regulator is on, since an input voltage & a load changes.

5.4 Don't take the regulator as a main switch. Please turn off the electrical appliances first then turn it off.

5.5 Exam the fuse of automatic circuit breaker before turning on.