

# USER'S MANUAL

## SINGLE PHASE SERVO MOTOR VOLTAGE REGULATOR SVC SERIES

### WELCOME

Please read this manual thoroughly before installing and operating your automatic voltage regulator. This manual contains important information and safety instructions you need to obtain the performance required for your application. Keep this manual for future reference. This SVC series single phase automatic voltage regulator featured with servo motor regulation, advanced microprocessor controlling, high efficiency, mature technology and reliable design.

### WARNINGS, CAUTIONS AND NOTES

It's very important that any operator and installer of this voltage regulator read and follow all

**WARNINGS, CAUTIONS AND NOTES** and all installation and operation instructions.

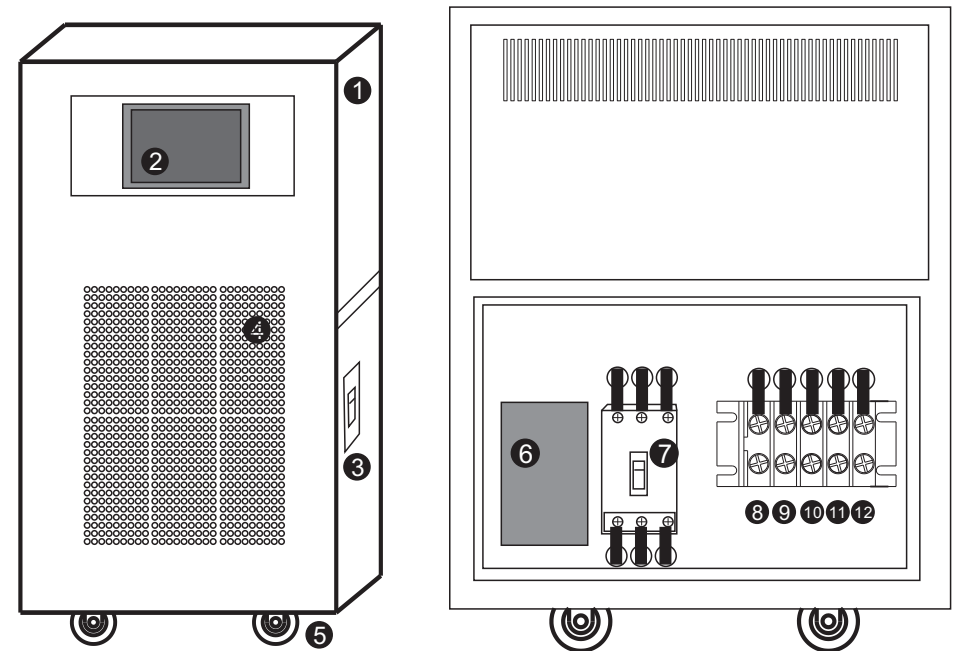
1. This product can only be installed and serviced by professional electricians who had previous training and knowledge about voltage regulators.
2. It is a must to switch off the voltage regulator and disconnect it from the AC mains when install and maintain it. prohibit operate when there is live electricity.
3. When the voltage regulator is working, to avoid electric shock, do no open the cabinet or move any connection cables.
4. The input and output cables must be well deployed, prohibit stepping on it to prevent damage to the cable and electrical leakage risk. Do not allow anything foreign object enter into the cabinet.
5. The voltage regulator must be grounded as instructions illustrated, no grounding may cause electrical shock to the human. The grounding line must not be connected to any gas pipeline, water supply pipe or heating facilities, Electric leakage may cause public disaster.
6. Do not put anything into the cabinet through the ventilation slot; direct contact may result in electric shock.
7. Place the voltage regulator at least 1 Meter away from the wall; keep the surroundings clear and well ventilated.
8. Prohibit washing the voltage regulator by using any corrosive cleaner or liquid. Prohibit operating the

voltage regulator with wet hands.

9. In case the voltage regulator not to be used for a long time period, switch off it, disconnect it from the AC mains and dismantle the connection cables.

10. Transportation Method: Forklifts, Cranes, Prohibition of inverted, Waterproof

### PRODUCT PRESENTATION



1. metal cabinet

2. Comprehensive display, show input and output voltage, current.

3. Protection door, access for input and output wiring and main circuit breaker.

4. Ventilation holes

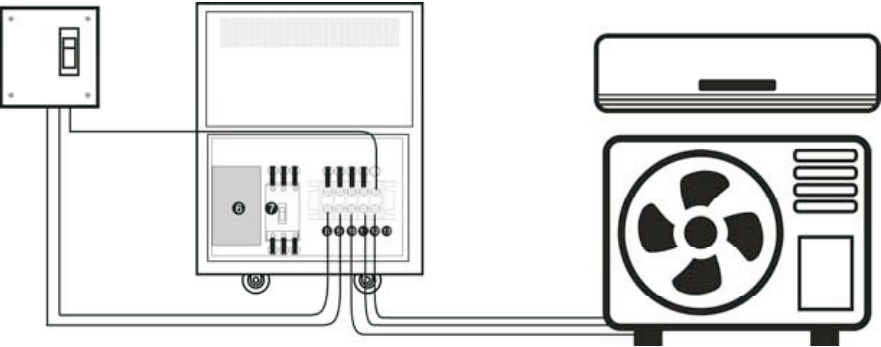
5. Wheels.

6. Control power boards.

7. Main circuit breaker, switch ON/OFF the voltage regulator.

8. Input Live(L). Connect to the live wire of the AC mains.
9. Input Neutral(N). Connect to the neutral wire of the AC mains.
10. Output Live (L). Connect to the live wire of the load.
11. Output Neutral (N). Connect to the neutral wire of the load.
12. Earth Wire, Connect to both input and output grounding wire.

INSTALLING AND CONNECT THE VOLTAGE REGULATOR



1. Inspect the voltage regulator before installation, make sure there isn't any sign of damage in the packaging and on the product.
2. Check the specifications if it meet your actual requirement.
3. Place the voltage regulator in a well-ventilated,dry,and safe place,keep it away from direct sunshine, rain, inflammable materials, gas, explosive materials, and children.
4. Use proper cables to make the wiring, for your reference, we recommend pure copper wires, for the cable gauge, we recommend to choose the cable gauge according to 2.5A/ mm2. for example, giving the total maximum load current is 100A, you are recommended to use 40mm2 cables for wiring.
5. Please make the grounding according to the rules and regulations of local authorities.
6. Please don't reverse connection of any phase wire to the neutral wire, do not reverse connection of the input to the output, GROUNDING MUST BE EFFECTIVELY CONNECTED.

TROUBLESHOOTING

| Phenomenon | Cause | Handle Method |
|------------|-------|---------------|
|------------|-------|---------------|

|                        |                                         |                                                                                                                   |
|------------------------|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| The power switch trips | ·Overload<br>·High or low input voltage | ·Reduce the load capacity.<br>·Check the input voltage if within the normal input range of the voltage regulator. |
|------------------------|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------|

|                                      |                                                                                            |                                                                                                                                                                                 |
|--------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High Output voltage                  | ·High input range<br>·The transmission system stuck.<br>·The controller fails to function  | ·Check the input voltage if it exceeds the rated input voltage range.<br>·check the controller by automatic method.                                                             |
| Low Output Voltage                   | ·Low input voltage<br>·The transmission system stuck.<br>·The controller fails to function | ·Check the input voltage if it drops below the rated input voltage range.<br>·check the controller by automatic method.                                                         |
| The Voltage meter displays nothing   | -Bad connection of the the AC mains.<br>-Failure to turn ON the voltage regulator          | · Check the input and output connection, secure them again.<br>-Switch on the circuit breaker properly.                                                                         |
| There is sparks inside the regulator | ·The carbon brush doesn't contact the transformer surface well.                            | ·Use #00polishing paper slightly polish the contact surface of the transformer.<br>·Check the components of the carbon brush, make sure the spring has enough stretch pressure. |
| Smoke from inside                    | ·Components burned                                                                         | ·Stop operation, contact service for help.                                                                                                                                      |

SPECIFICATIONS

|                |             |
|----------------|-------------|
| MODEL          | SVC SERIES  |
| RATED CAPACITY | 10KVA~30KVA |

|                         |                                                                                  |
|-------------------------|----------------------------------------------------------------------------------|
| PHASE                   | SINGLE PHASE                                                                     |
| INPUT VOLTAGE RANGE     | 100-250V / 140V-255V                                                             |
| OUTPUT VOLTAGE          | 220V / 230V                                                                      |
| OUTPUT PRECISION        | ±3%                                                                              |
| EFFICIENCY              | ≥96%                                                                             |
| FREQUENCY               | 50Hz/60Hz                                                                        |
| RESPONSE TIME           | 0.1s                                                                             |
| ISOLATION GRADE         | GRADE A                                                                          |
| ISOLATION RESISTANCE    | >5MΩ                                                                             |
| HI-POT TESTING          | 2000V/min                                                                        |
| THD                     | ≤0.1%                                                                            |
| DISPLAY                 | ANALOGUE VOLTMETER/DIGITAL LED VOLT METER                                        |
| PROTECTION              | OVER VOLTAGE, UNDER VOLTAGE, OVERLOAD, SHORT CIRCUIT                             |
| WIRING                  | SINGLE PHASE THREE WIRE(LIVE,NEUTRAL, GROUNDING)                                 |
| INPUT AND OUTPUT CABLES | MINIUM 16MM <sup>2</sup> COPPER CABLE FOR 10KVA, AND 25MM <sup>2</sup> FOR 20KVA |

| SIZE AND WEIGHT |                 |        |                 |              |
|-----------------|-----------------|--------|-----------------|--------------|
| Model           | Machine size    | Weight | Package Size    | Gross weight |
| 10KVA           | 350*500*470(mm) | 120kg  | 390*540*570(mm) | 42kg         |
| 15KVA           | 330*460*600(mm) | 120kg  | 370*500*700(mm) | 71kg         |
| 20KVA           | 380*500*710(mm) | 120kg  | 420*540*810(mm) | 93kg         |
| 30KVA           | 350*620*680(mm) | 120kg  | 380*650*730(mm) | 140kg        |

Specifications are subject to change without prior notice.

**WARRANTY**

This product is warranted to the original purchaser for a period of one (1) Year from the original purchase date, to be free of defects in material and workmanship. We disclaims any liability for consequential damages. In no event will we be responsible for any amount of damages beyond the amount paid for the product at retail.