

YL - ZKG

Temperature Controller of Voltage Regulating Type

User Guide

1.Product Descriptions

The YL - ZKG ,temperature controller of voltage regulating type,is developed and manufactured independently by our company.We adopt the controlling technology of single chip microcomputer,with the special solid relay,SSR-DV(or use silicon controlled rectifier as the element),to control the effective value of voltage on the load circuit and regulate the voltage(0-220V) stably and continuously.

Three Main Features:

- 1) There is a negative feedback compensation circuit in the output,so it can regulate the voltage(0-220V) stably ,continuously and precisely.
- 2) The function of memorying.The voltage regulator can raise the voltage from "0V" to what you set as before you shut it down last time when it start to work this time.
- 3) The function of starting analog output softly is more practical,each time when it start to work,the voltage regulator can raise the voltage from "0V" to what you set as before you shut it down last time slowly,and keep the output voltage stably.Therefor,the heating electronic component would be protected from high voltage and prolong the service time.

The YL - ZKG ,temperature controller of voltage regulating type,especially fit to control temperature in the situation and equipment which is controlled by multiple-point temperature and serious thermal crosstalk,like bottle-blowing machine,film-blowing machine,blister machine,extruding machine,sheet machine and so on.

2.The Function of Panel Buttons

- 1) "MD": Mode selection key for: presetting, reviewing or confirming settings and parameters.
- 2) "V" (Decrease)or "^" (Increase) the values to the desired parameters (Range:0-220V).

3. Instructions for users

- 1)Keep pressing "MD" and "^" for about 3 seconds,when "Ht" is displayed on the screen above(PV),there is a random digit on the screen below(SV),users can press "V" and "^" to regulate the time for soft starting(that is the length of time for raising the voltage from "0V" to how much you have set in the regulator after it start to work).When it is done,press "MD" to storge and exit the menu.
- 2)The time regulating range of soft start is:"0-30" ("0" for shutting down the soft-start,"1-27" for fast soft-start,and"28-30" for slow soft-start)

Ps.Because of different restriction of voltage setted(e.g.24V、100V、220V),when setting the same value of soft-start time (e.g."20") ,the raising rate of the voltage displayed on the meter is impossible synchronize with the actual value of time.

4.Wire Connection Map and Requirement

- 1) Please connect the regulator and solid state relay strictly follow the wire connection map (including the power cord ,ground line,signal controlling line and negative feedback signal line)

Pay special attention to the live line of loading must the same as the one of the power,or the regulator will be out of control and damaged.

- 2) The current level of special solid relay,SSR-DV(or use silicon controlled rectifier) selected must be above 1.5~2.5



times of the actual current, and the corresponding radiator should be equipped, to make sure the working temperature of SSR-DV is **below 75°C**.

3) To protect the SSR-DV from damaging by over current and over voltage, a rapid melting core (the current is close to the actual loading current) can be connected between the **input side of SSR-DV and the live line**.

Attention: The rapid melting core should not connect to the output side of the SSR-DV.

4) Connecting the ammeter also should be connected between the input side of SSR-DV and the live line.

5) The signal controlling line (T1) and negative feedback signal line (G) should be **as short as possible**, and should be separated from the other electric lines, to avoid and reduce the interference.

5. Other Operation Notes

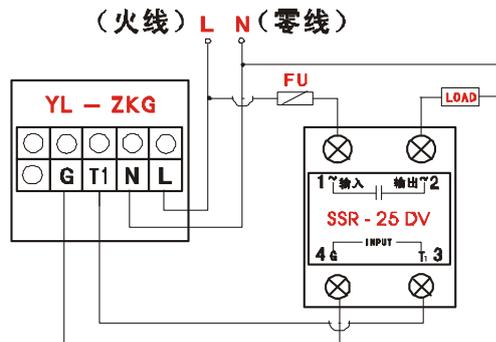
1) Half wave power supply is strictly prohibited because of the circuit design of negative feedback compensation, or the negative feedback transformer would be destroyed by the direct current.

2) YL-ZKG is not fit to control the perceptual load components and situation like induction furnace and step-down transformer.

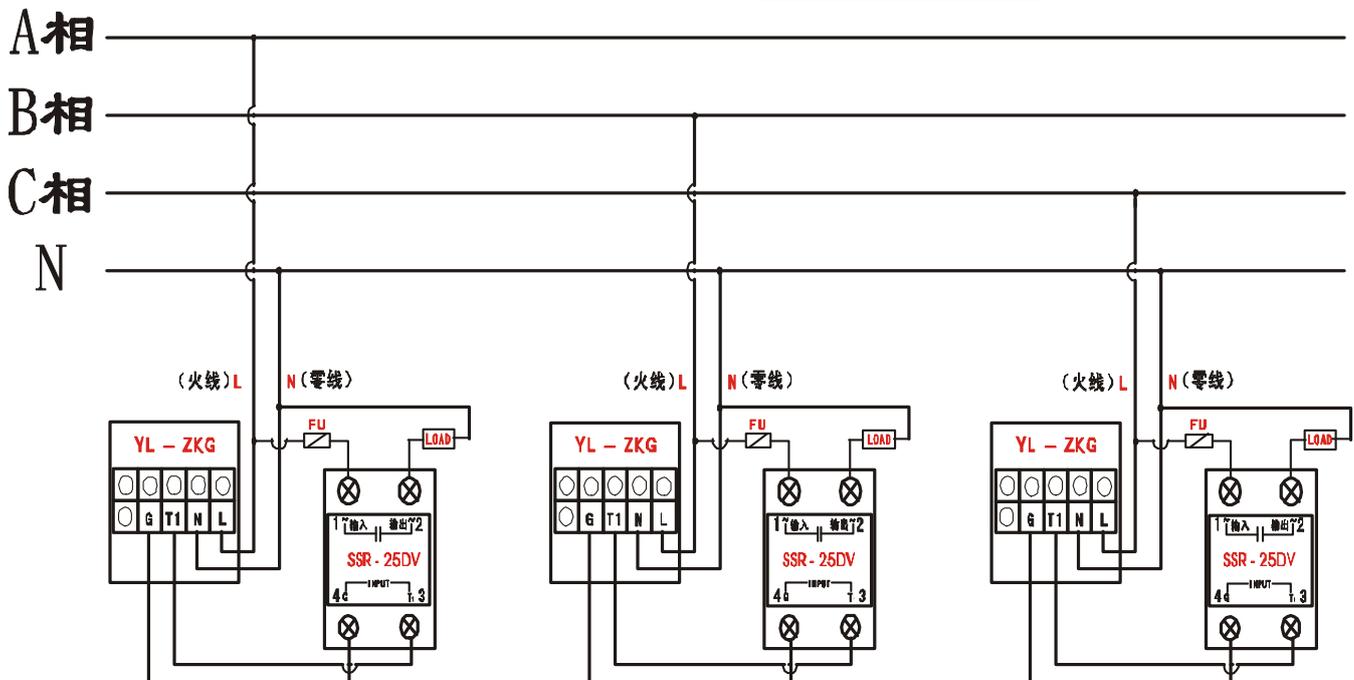
3) If the output of SSR-DV is not all conducting, or the output signal is not stable, that must be because the signal controlling line (T1) and negative feedback signal line (G) connect counter. Just swap T1 and G will be fine.

6. Wire Connection Map of Single/Three Phase Current

1) Wire Connection Map of Single Phase Current



2) Wire Connection Map of Three Phase Current



Digit	L	N	G	T1	1st	2nd
Descriptions	Live Line	Neutral Line	Negative Feedback Signal Line	Signal Controlling Line	Input	Output

