




Z Series Power Regulator Controller

User Manual and Simple Maintenance

Notes

1. Do not carry out pressure testing of this product to avoid the destruction of electronic components.
2. Make sure that power supply voltage specifications in line with the product label.
3. Stay away from acid, alkali from this product.
4. Choose to install a well-ventilated place
5. Replacing any components required to confirm the power is

Installation Notes

1. Before installing SCR, make sure current of voltage is consistent with order specification, if not match please contact us.
2. Please install the arrow  on the sign pattern upward, do not upend.
3. R.S.T for the power supply side, U.V.W load side, do not install the wrong, to be checked after installation screw is loose, off phenomena such as wiring; so as to avoid damage to the original point of contact caused by overheating.
4. Enter the PCB board auxiliary power supply AC 220V.
5. SW of contact for the control switch PCB board (acceptable to an external pure contact control), under normal working conditions for the closure of.
6. If you do not use the manual adjustment (variable resistor VR), make sure the 2nd and 3rd contacts to be shorted on PCB board.
7. Control box need to avoid the ambient temperature exceeds 40 °C, and the need for ventilation holes, and mounted vertically in order to facilitate heat dissipation, SCR from top to bottom should be retained in the appropriate space to allow air circulation.
8. Considering the current rate of change, the heat sinks and other external factors, the actual use of SCR rated current shall not exceed 80%.
9. Please be sure to install the electromagnetic contactor, prior good protection from SCR failure may be caused by accidental loss sustained output.

Specifications

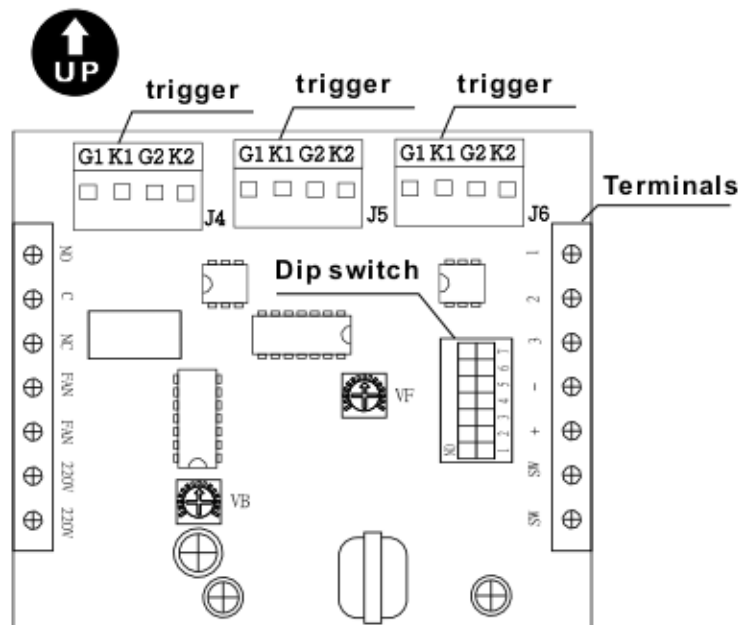
1. PCB External Power: AC 220V +/- 10%, 50/60 HZ.
2. Main power supply: 220V ~ 440V +/- 10%, 50 / 60 HZ.
3. Rated current: 30A, 40A, 60A, 80A, 100A... 500A.
4. Input signal options
 - Automatic output control: DC 4-20mA, DC 1-5V, DC 0-10V
 - Manually adjust the output control: Variable resistor output adjustment (VR5K)
 - Automatic Manual limit the output control: signal input + output to adjust the variable resistor (VR5K)
5. Output range: 0-97% of full-wave phase control.
6. Ambient temperature: -10 °C ~ 50 °C, 90% RH below.
7. With over-temperature indicator, when the heat sink temperature exceeds 85 °C above, the automatic cut-off all of the output while maintaining the alarm contact (AC250V 3A) output.



Load Testing

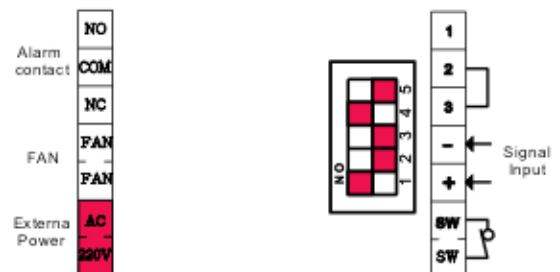
1. It will not do the test if the load isn't connected or the current is too small (1A below). The load has to be more than 1A for test.

Tectonic map of the internal PCB board

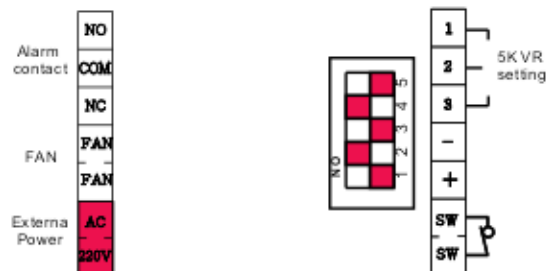


Connector switch and Wiring examples

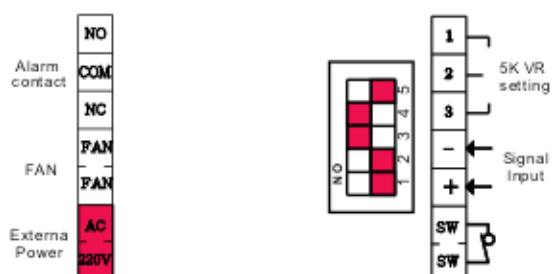
1. DC 4-20mA input



2. Variable resistor to adjust

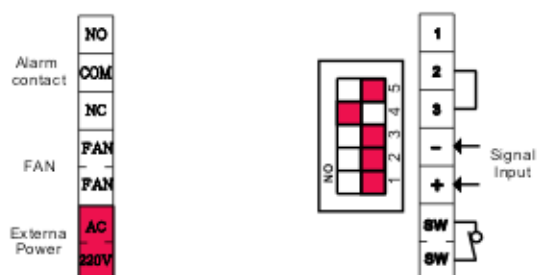


3. DC 4-20mA input and adjust the variable resistor

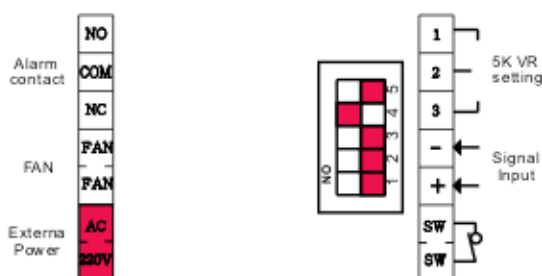


Connector switch and Wiring examples

4. Input DC 1-5V



5. Input DC 1-5V and the Variable resistor to adjust



Fault conditions and to exclude

Faults	Possible Cause	Exclusion
Full voltage has been output but unable to control or fail to output the signal of ON / OFF	1. Dial segment switch error 2. Input signal is too high 3. SCR Module short-circuit 4. Neutral grounding 5. The power phase sequence error (most likely, it occurs for 1 to 3 when single-phase)	1. Check the dial switch is correct paragraph 2. Measurement of the input signal 3. Replace new one 4. Ungrounded 5. Check power phase sequence
No voltage output	1. Fuse is open 2. Heating pipe open 3. No power supply input 4. No input signal 5. PCB damage	1. Check if fuse is open 2. Check if the heating pipe is open 3. Check whether there is voltage power supply 4. Measurement of the input signal whether there is 1 ~ 5V 5. PCB repair or replacement
Voltage output by half or three-phase voltage output unbalanced	1. The input voltage unbalance 2. Input signal is too low 3. An open-phase three-phase fuse 4. SCR semi-Bird-pass or PC Board Fault	1. Check if voltage is balanced 2. Check the input signal whether there is 1 ~ 5V 3. If fuse installed improperly 4. Sent for maintenance
Fuse broken	1. Inductive load, the starting current is too large 2. Harmonics, making the fuse capacity to reduce 3. The load is too large, exceeding rated capacity fuse 4. Load short-circuit 5. Supply voltage transient is too large	1. Using fixed-current-mode SCR 2. Device install harmonic filters 3. Check the load capacity is correct 4. Check whether the load short-circuit 5. Please keep voltage stability

LED lights display Operation and troubleshooting

No.	Color	Status	Cause of the malfunction	Solution
PL	Green	Power LED does not light	Auxiliary power supply is not power transmission	Check the auxiliary power supply circuit Shorted the SW Division Replacement of PCB board or repair
	●	(Lights indicated normal)	Terminal Blocks SW Agency had not shorted PCB Board Fault	
OL	Red	Output indicator does not light	No signal input or + - reverse	Check signal input switch dial segment The 2 & 3 at the terminal station shorted Check the main circuit or fuse Replacement of PCB board or repair
	●	(Lights out with the eradication of the size of the input signal, said normal)	Terminal Blocks 2/3 Agency had not shorted No current output lights PCB Board Fault	
TL	Yellow	Over-temperature indicator light and bright and alert actions	SCR cooling fan failure The ambient temperature exceeds 85 °C	Replacement Fan To improve the ambient temperature
	●	(Light does not shine, said normal)		



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