



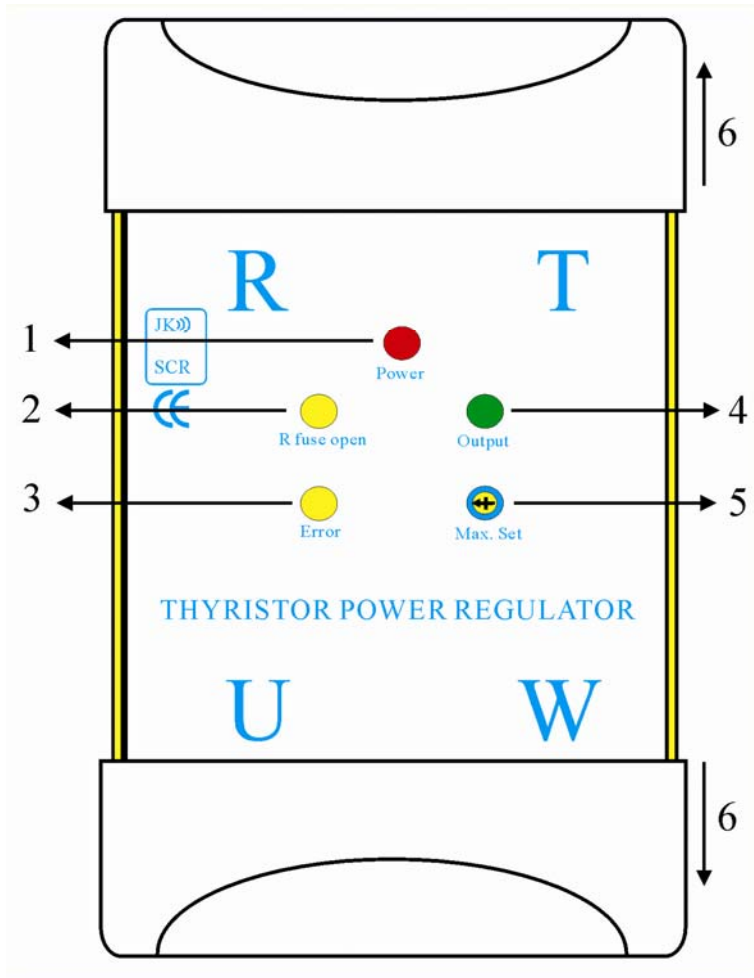
Single Phase Power Regulator of Protect. Specification



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I. The function of the faceplate is explained.



1. Auxiliary voltage indicator lamp.
2. R phase blew the fuse indicator lamp.
3. Error indicator lamp.
4. SCR output indicator lamp.
5. The restrictions of maximum adjust the knob.
6. The top cover and below cover can be according to the instruction press and push open..

Faceplate LED indicator lamp explain:

1. Power: Assistance voltage lamp (AC1 , AC2) " Power " bright light when input voltage 220VAC 50/60Hz.
2. R fuse open: " R fuse open " bright light when R phase fuse blew.
3. Error: Unusual indicator lamp, fuse blew or temperature of the products is too high.
4. Output: The bright light when SCR is output, great and small with the quantity of output, " LED " does the light and shade change.
5. Max. set : The restrictions of maximum adjust.

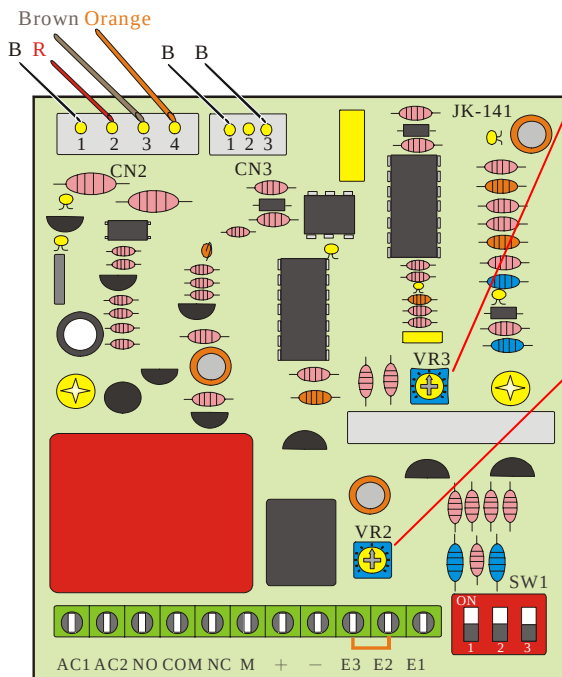


Q & A

Q: If "Error" indicator lamp bright light, How to reset.

A: Please solve the reason of the unusual problem first, and then do action of the reset. Close assistance voltage for 10 seconds, and then transmit the voltage and can finish reset action again.

JK-141 Inside control panel (Apply to: 220V, 380V/20A, 30A, 50A)



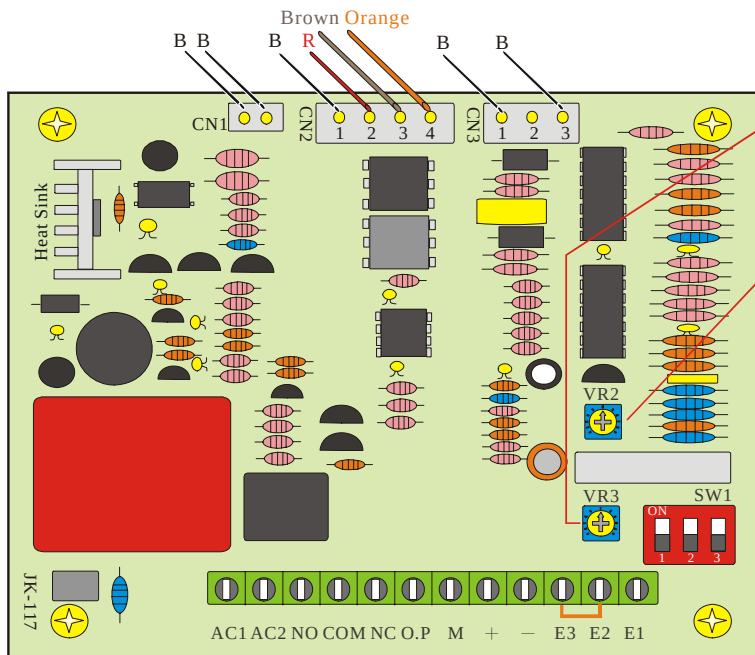
VR3

Maximum limits the knob within the control panel:
The function and faceplate maximum limit the knob the same.

VR2

Minimum:
If need to maintain trace of output when turn off the instrument, just use this knob to adjust. (Only the phase angle controller.)

JK-117 Inside control panel (Apply to: 220V, 380V/60A, 80A, 100A, 125A, 160A, 180A)



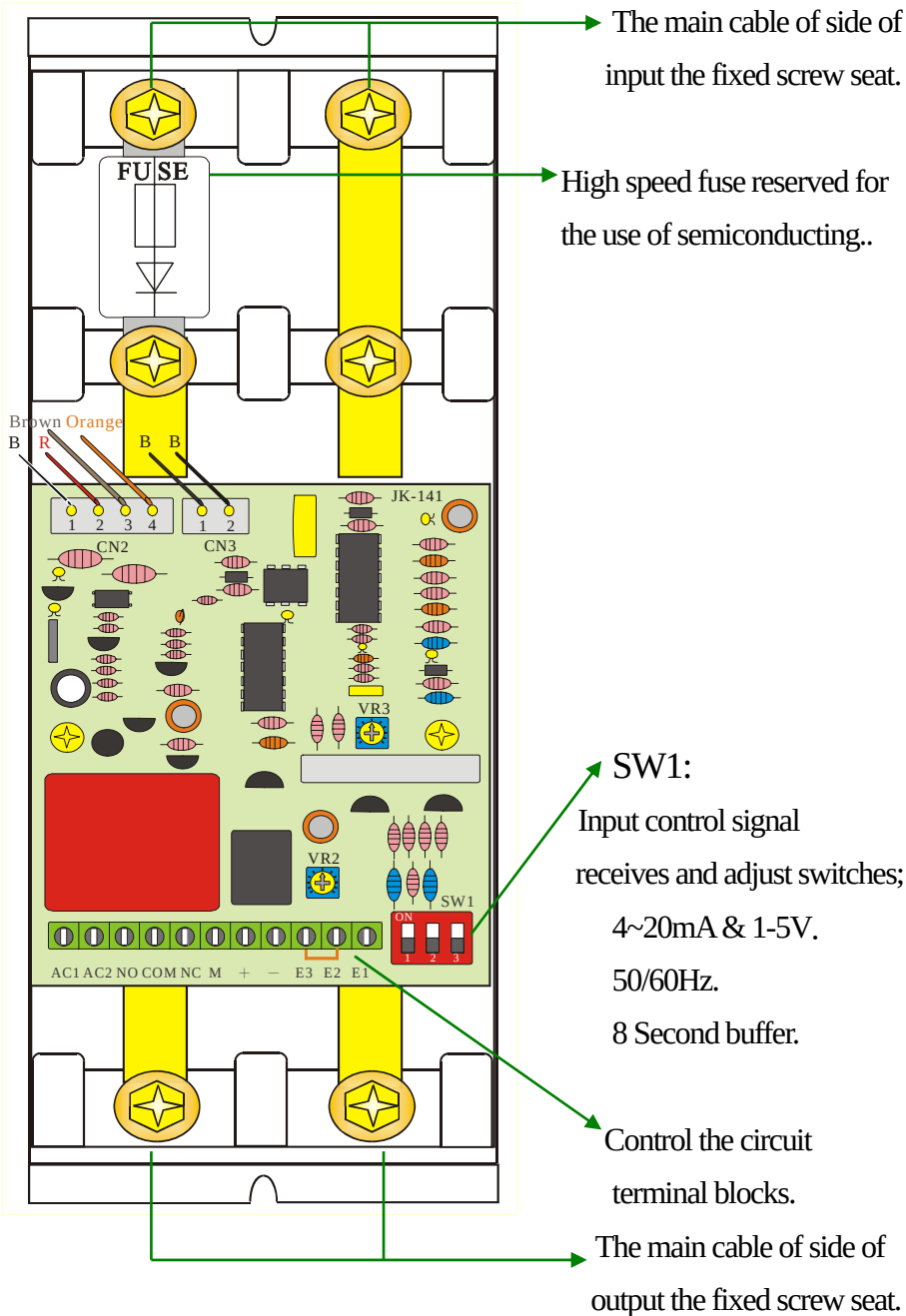
VR3

The same as above.

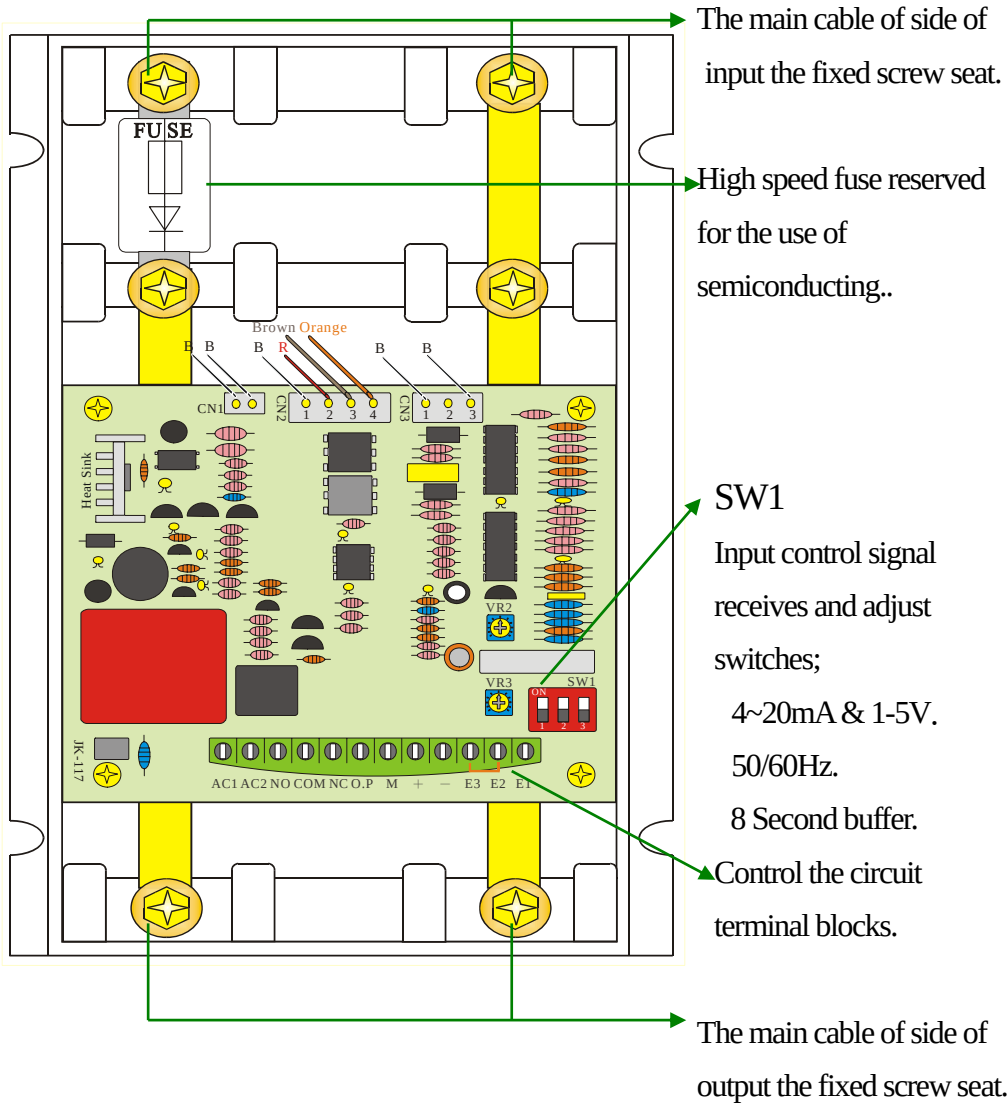
VR2

The same as above.

Conformation illustration within the products. (Apply to: 220V, 380V/20A, 30A, 50A)



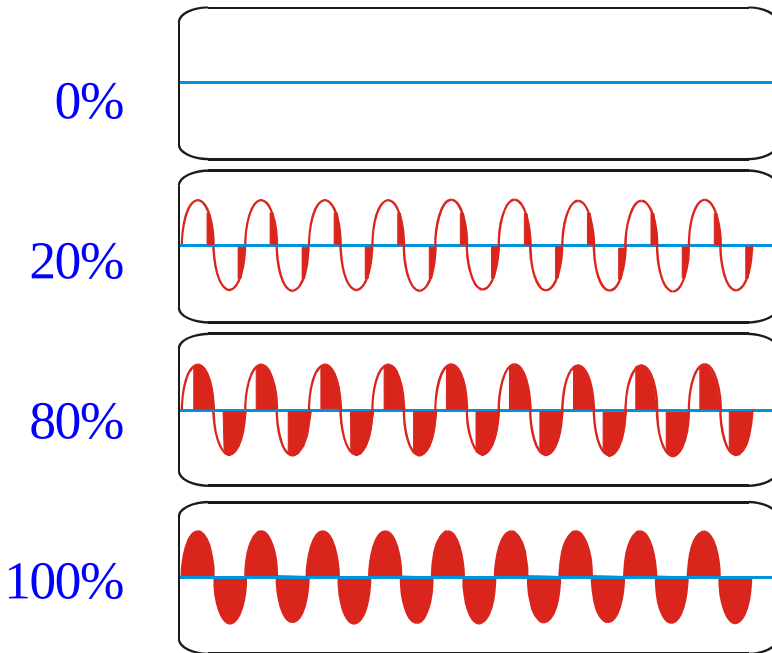
Conformation illustration within the products. (Apply to: 220V, 380V/60A, 80A, 100A, 125A, 160A, 180A)



II. Summary of function.

Phase Angle control.

Output type:



Characteristic: It is big or small according to input signal, control the silicon controlled rectifier (SCR) and cut the phase angle in the alternating current, cutting every frequency, output is steady.

Advantage: All right continuous output, there is no intermittent phenomenon, suitable for the resistance or the inductance load, start greater load of the electric current, for example: The infrared ray light of the shortwave is managed. The infrared ray tube of the shortwave (IR).

“Annotate 1”

Annotate 1: Output reaction speed needs choosing to buffer 8 seconds.

III. Characteristic of products protection.

1. Offer adjustment of maximum (in/out side) setting and minimum (inside) setting.
2. Signal can be changed: Receive signal: 4~20mA, 1~5V.
3. Frequency can be change (50/60Hz) by DIP switch.
4. Buffer start can be change: Supply buffer 8 seconds or no buffer can be change. **“Annotate 1”**
5. Over temperature to protect: The system will stop automatically to protect when the machine temperature is too high.
6. Cool the fan operation manner: Cooling fans has temperature control, the cooling sheet working at 55°C, and stop at 45°C, this design can extend use-life of fans 2-3times.
7. R phase fuse breaks and examines notify, there are LED indicator lamps. For example: Fuse when breaks, user don't uses ammeter examine, namely exchange fuse.
【For example: R phase when breaks, R phase indicator lamp show Error, LED of "R phase" and "Error" that are at the same time bright, because R phase has no electric current to pass.】
8. Load short circuit and protects the function: Include High speed fuse reserved for the use of semiconductor inside, needn't be afraid that the load end short circuit.
9. Unusually output the contact: As the products exceed safe temperature or the fuse to rupture, offer 1 group (1A, 1B) unusually output the contact to control and use promptly as the system.

IV. Tech Specs.

Main power voltage: 220 VAC, 380VAC, 440VAC, 480 VAC $\pm$ 10%

Auxiliary voltage: 220 VAC $\pm$ 10 %

Rated current: 20A, 30A, 50A, 60A, 80A, 100A, 125A, 160A, 180A

Work frequency: 50 ~ 60 Hz $\pm$ 5 %

Output voltage range: 0~100%

Output type: Phase angle.

Input control signal: 4-20mA / 1-5V

Used environment: -10°C ~ 50°C, humidity under 90 % RH. “Annotate 2”



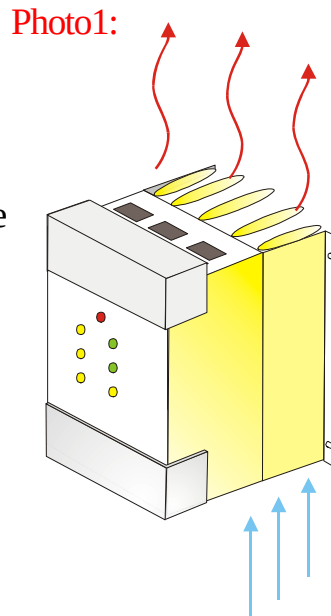
Annotate 2: Working temperature of environment: -10°C ~ 50°C.

Relative humidity: 93% RH without dew.

V. Install the precautions.

1. Ventilation and Cooling: SCR must be placed at the place with good ventilation, and the temperature of the place can't be higher than 45°C, and lower than -10°C.
2. SCR itself will cause the heat, so, please install in the place with good ventilation, and keep 10 cm from the article next to it for cooling.
3. When install in the control box, please make a window on up side and down side in order to cool air in from down side, and hot air out from up side, and please place the filter net on up side to prevent the dust or waste in, and clean the filter net regularly to avoid the filter net block. **Photo1:**
4. Add the fans if the temperature in the box over 45°C to enhance air convection, keep the temperature in the box lower than 45°C for the best running condition.
5. Please setting signal of machine for keeping normal operating before this SCR have main power.

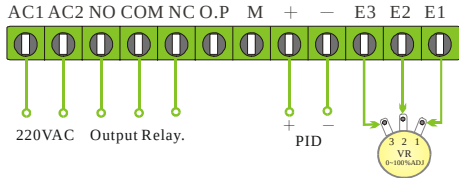
Comments: Please install the products according to this direction, the cold air is flow into below, the hot air is flowed out from the top, if the box opened the hole place and please set up the filter screen and prevent the dust and incidental from invading , and should clear up regularly make it stop up.





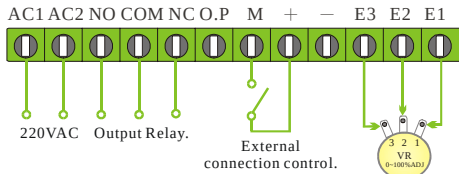
Suggested wiring and control method.

1. Input voltage, current input with adjustable external VR.

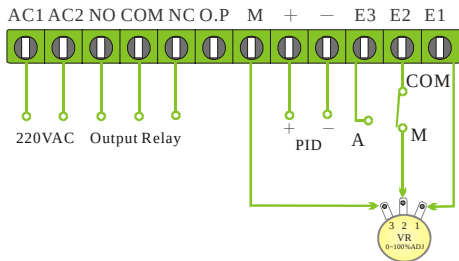


Please jump E3 and E2 when external VR not be used.

2. Contact input with adjustable external VR.

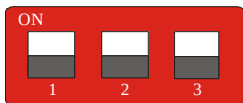


3. Auto control of PID / Control external of VR.



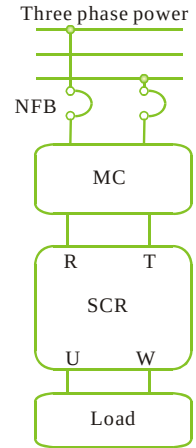
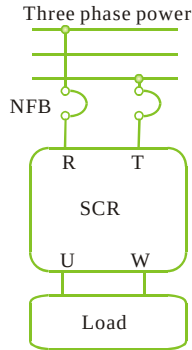
Setting input single.

4~20mA 50Hz 8sec. Buffer

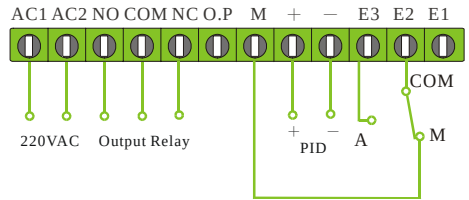


1-5V 60Hz 0sec.

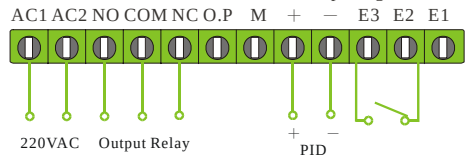
SW1



4. Auto control of PID / Manual full load of output.

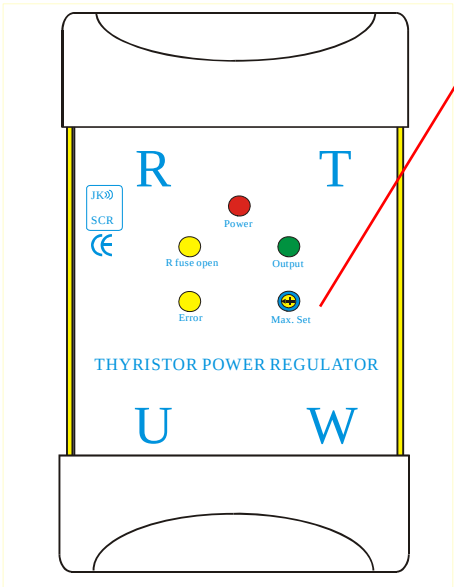
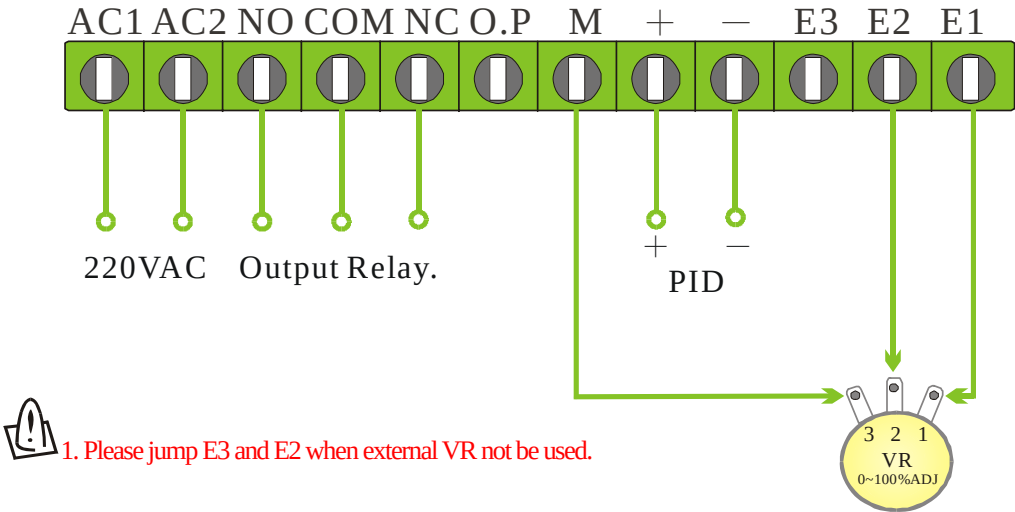


5. External connection control of PID input signal.



VI. How to confirm SCR normally.

- 1. Originally + —, E3 , E2 , E1 wiring moving.
- 2. M Connect +, E3 short out by E2.
- 3. Adjust faceplate the button, if adjust Max. and output can be of change, this SCR is normal.
- 4. Test: The value that — and M gets is that above 5VDC is normal.
- 5. Test: The value that — and E3, E2 gets is that above 4.6~5VDC is normal.



The restrictions of maximum adjust the knob.

VII. Environment characteristic.

Operation position	Vertical
Relative humidity	Over 45% ， 93% RH without dew
Working temperature of Environment	-10℃ ~ under 45℃
Frequency	50 Hz or 60 Hz ， manual-adjust
1 ϕ Power ， Voltage	220 VAC $\pm$ 10% 380 VAC $\pm$ 10% 480 VAC $\pm$ 10%
Vibration	Under 0.5G
Height	Under 1,000m

VIII. Specification.

Auxiliary	Main power	Rated current	Model	L	W	H (mm)
220V	220VAC	20A	JK22020SF	232	93	120
		30A	JK22030SF	232	93	120
		40A	JK22040SF	232	93	120
		50A	JK22050SF	232	93	120
		60A	JK22060SF	220	142	154
		80A	JK22080SF	220	142	154
		100A	JK22100SF	220	142	154
		125A	JK22125SF	243	142	154
		160A	JK22160SF	243	142	154
		180A	JK22180SF	243	142	154
220V	380~480 VAC	20A	JK38020SF	232	93	120
		30A	JK38030SF	232	93	120
		40A	JK38040SF	232	93	120
		50A	JK38050SF	232	93	120
		60A	JK38060SF	220	142	154
		80A	JK38080SF	220	142	154
		100A	JK38100SF	220	142	154
		125A	JK38125SF	243	142	154
		160A	JK38160SF	243	142	154
		180A	JK38180SF	243	142	154



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