



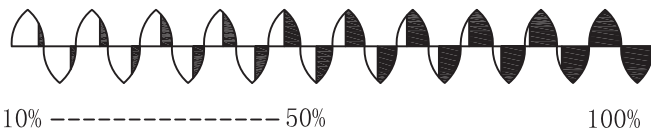
► General Features and Notes

- 1: Heatsink in proper size and cooling fans should be used if the amps more than 20A or ambient temp higher than 40°C. This will help to improve the reliability and life expectancy.
- 2: Large loading amps are expected on the SCR units, the input terminals has to be tightly fastened. Otherwise huge amount of heating will be generated on the terminals and causing the damage on the unit.
- 3: Buffo circuit are built inside to counter the surge amps to protect the SCR units.
- 4: Input and output indicators are available on the panel for easy monitoring.

► Features

- 1: Load voltage, single phase 220Vac/380Vac (50-60HZ)
- 2: Input options, 0-5Vdc, 0-10Vdc, 4-20mA, Potentiometer
- 3: Load amps: 40, 75, 120, 150, 175, 200 amps
- 4: Ambient temperature less than 50°C and humidity less than 90%RH

► Phase control figure



► Panel discription

- 1: Power supply indication
- 2: Input indication (lit when input applied)
- 3: Output indication (lit when output activated)
- 4: Negative terminal for analog input signal
- 5: Positive terminal for analog input
- 6: Internal power source (used for potentiometer)

► Ordering Information

TDD-220T120A

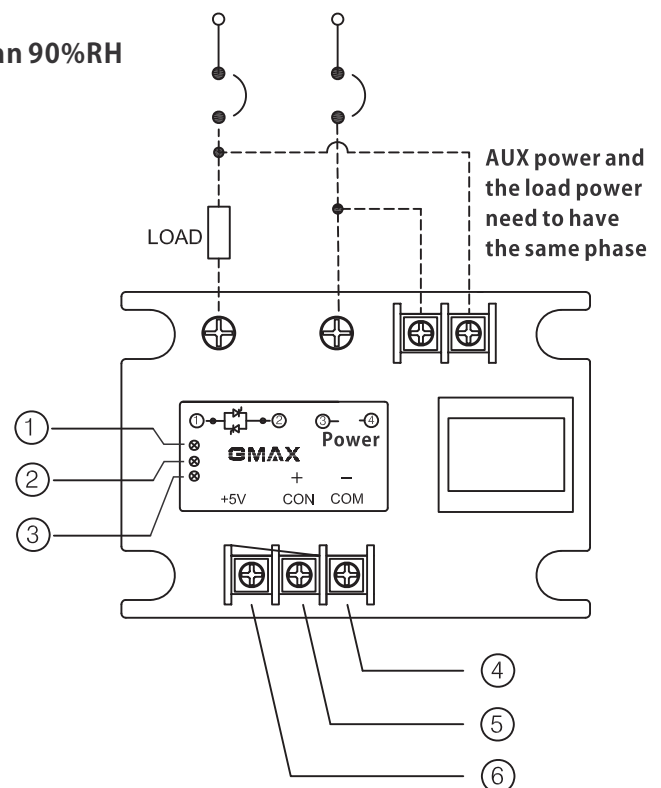
- 40A: 40 amps load
- 75A: 75 amps load
- 120A: 120 amps load
- 150A: 150 amps load
- 175A: 175 amps load
- 200A: 200 amps load

- T: 4-20mA input
- E: 0-10Vdc input
- H: 0-5Vdc input

- 220: For 220Vac load and 220Vac power source
- 380: For 380Vac load and 380Vac power source

TDD Series Regulator

AC220V (50-60HZ)
AC380V (50-60HZ)



► Things you should be know on our SCR modular

- 1: This unit is for single phase application at 220V/230V/380V(50~60HZ)
- 2: The load on the SCR modular should be resistive load, typically the load is heaters
- 3: When it comes down to choose a correct model, general rules is that consider using the relay at no more than 50%~60% if its rated current, for 40 amps and 75 amps model, the maximum load should be at 20 amps and 37.5 amps, for 120 amps model, the maximum load should be at 60 amps
- 4: A simple formula to help you with the selection , if the power source is 50HZ 220Vac/230Vac, follow below formula

$$\text{Actual load amps on the heater} = X \text{ KW} * 5$$

X could be 5, 6, 7, 3, etc....

for example ,if the heater is 5KW, then the amps= 5*5, you will got about 25 amps on the heater. according to the 50% rules, the correct model to be used will be 75 amps in this case.

if the heater is 4 KW, then the amps= 4*5, you will got about 20 amps on the heaters, according to the 50% rules the correct model to be used will be 40 amps in this case

- 5: A simple formula to help you with the selection , if the power source is 60HZ 220Vac/230Vac, follow below formula

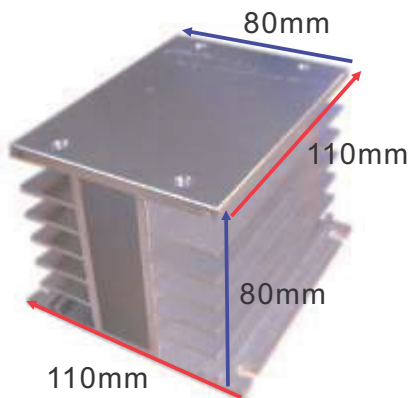
$$\text{Actual load amps on the heater} = X \text{ KW} * 5 * 1.2$$

X could be 5, 6, 7, 3, etc....

for example ,if the heater is 5KW, then the amps= 5*5*1.2, you will got about 30 amps on the heater. according to the 50% rules, the correct model to be used will be 75 amps in this case.

if the heater is 4 KW, then the amps= 4*5*1.2, you will got about 24 amps on the heaters, according to the 50% rules, the correct model to be used will be 75 amps in this case

- 6: Below is the heatsink for this model, 40amps, 75amps, 120 amps using the same heatsink



- 7: The cooling fans to be used is 8cm*8cm, 220Vac type or 24Vdc type. we recommend to use 24Vdc type if you need maximum heat dissipation effect.

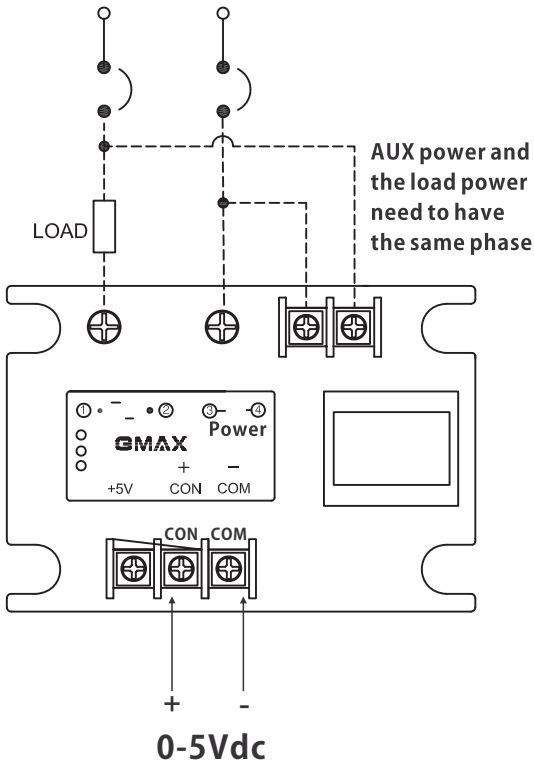
- 8: A fast fuse should be in the system to provide protection to the SCR modular to prevent a short circuit. the fast fuse rating should be 1.8 times of the actual load. for example ,if the load amps on the heater is 20 amps. then the fast fuse should be 1.8*20 which is 36 amps. and the fast fuse should be screw fixing type, check below images for your reference.



► Detailed Wiring Diagram

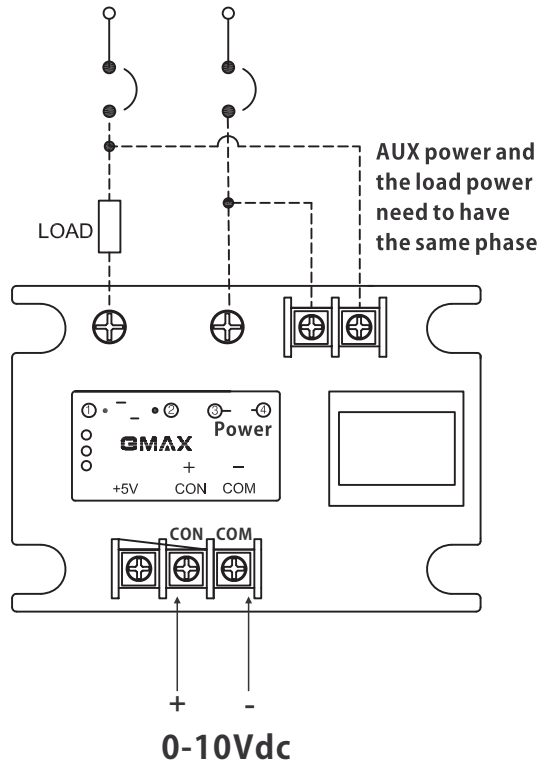
0-5Vdc Input

AC220V (50-60HZ)
AC380V (50-60HZ)



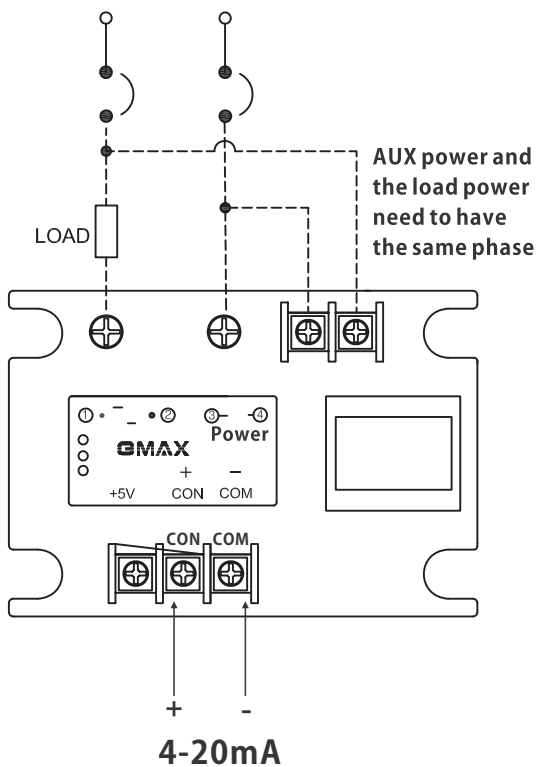
0-10Vdc Input

AC220V (50-60HZ)
AC380V (50-60HZ)



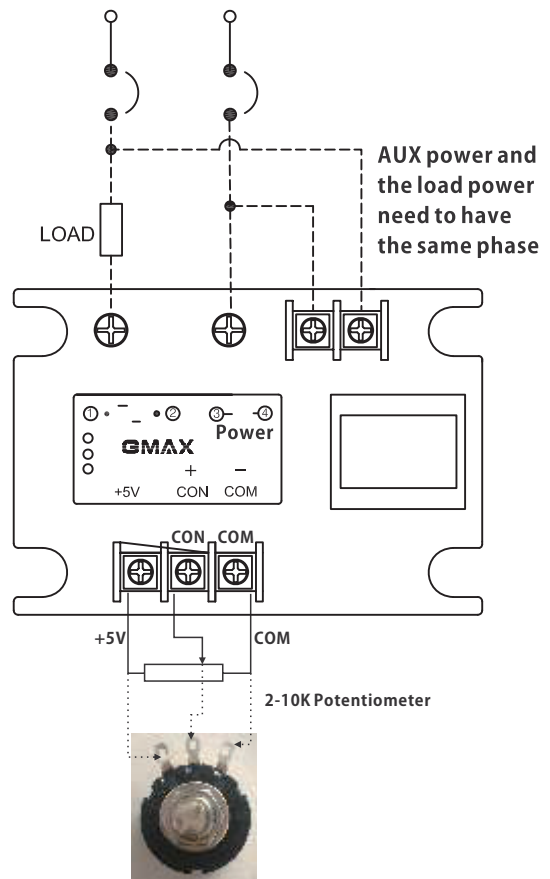
4-20mA Input

AC220V (50-60HZ)
AC380V (50-60HZ)

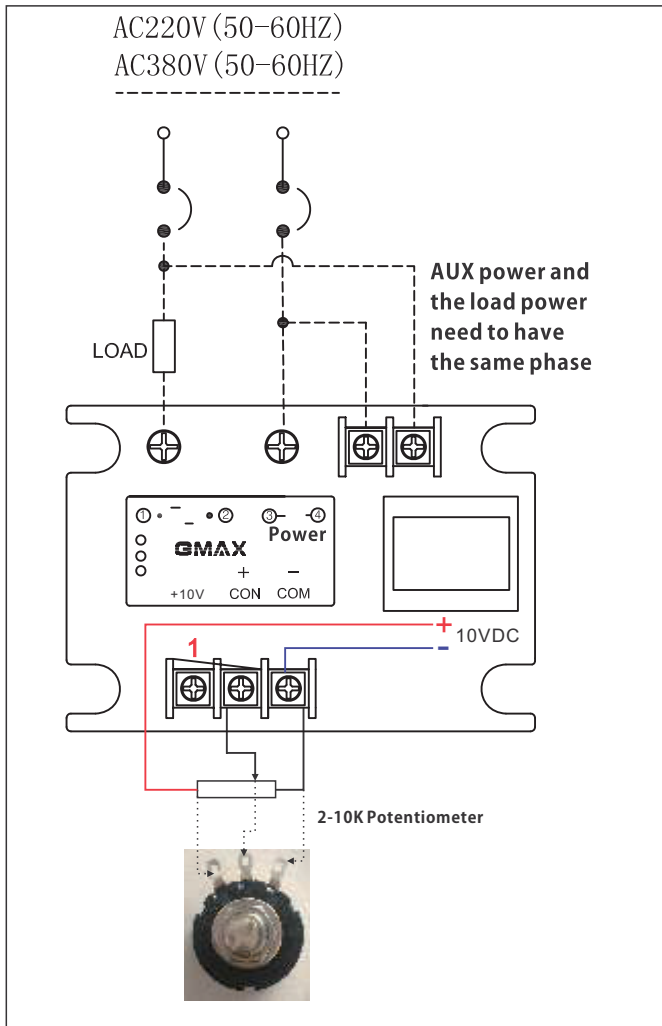


Potentiometer Control

AC220V (50-60HZ)
AC380V (50-60HZ)



Potentiometer Control



This is 0-10VDC input type using with POTI

The terminal marked as "1" is 5Vdc by factory default. if you want to use POTI for 0-10Vdc type, the terminal marked as "1" need to be changed as 10Vdc, we will take note on this for future order