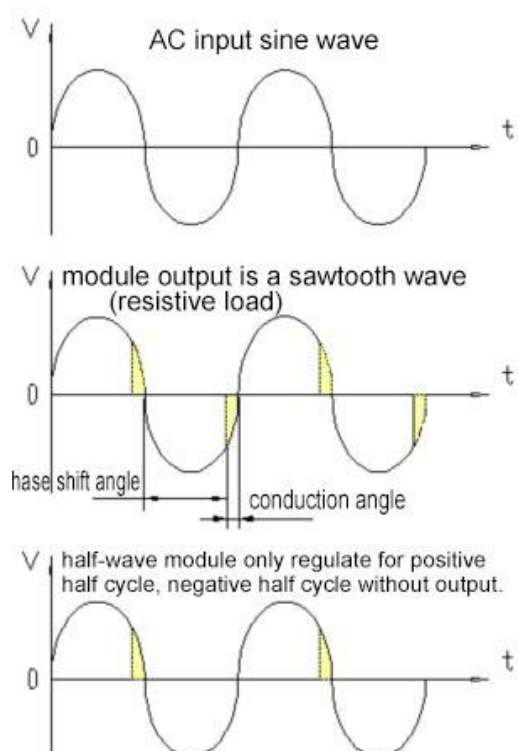


Single - phase intelligent AC voltage regulation module



General descriptions:

DJTY series intelligent single-phase AC voltage regulation & power regulation module is designed from single-chip microcomputer, is developed by our factory a new generation high-precision product, to solve the common problems of various regulators in current market, such as input signal inaccuracy, power regulation instability, big error, etc.

Functions:

phase shift voltage regulation, cycle wave power regulation and PWM regulation.

Application:

The module is widely used in lighting equipment, temperature control equipment, AC motor soft start, AC string wave speed control and other power automatic adjustment occasions.

Instruction to cycle-wave power regulation:

Firstly, short connect terminals EL terminal and COM, Secondly, instrument connected to corresponding analog signal port to achieve power regulation function, this function is mainly used for heating system.

Classification:

Voltage rating: 220V, 380V.

current rating: 10A, 25A, 40A, 60A, 80A, 100A, 120A, 160A, 200A, 240A, 300A, 350A, 400A.

For bigger current, please select intelligent single-phase AC phase-shifting trigger module.

Main Features:

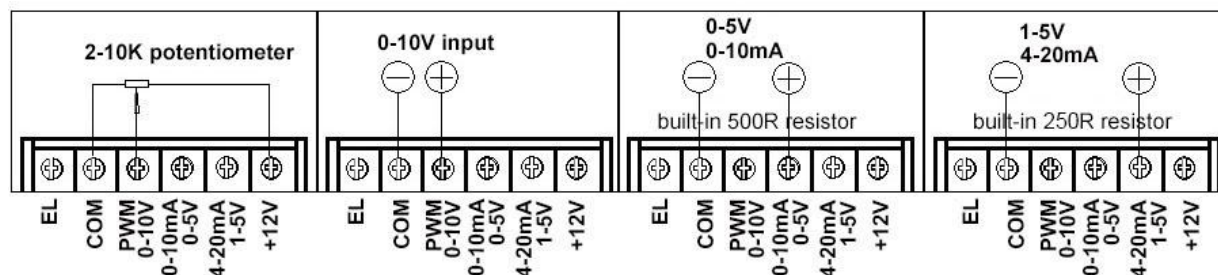
1. Module internal combines phase shift trigger circuit, one-way or two-way thyristor and power circuit in one, can be automatic or manual controlled to adjust load voltage, thus adjusting output power.
2. Module input and output is optical isolated, to facilitate small voltage to control high voltage, and to achieve control of load power by the changes of input voltage.
3. Its input impedance is high, can interface with computer, digital program-controlled circuit directly through digital-analog converter, very convenient to achieve the stepless regulation of load voltage & power.
4. 0-5Vdc, 0-10Vdc, 4-20mA and other signals are fully compatible in one module, automatic control or manual control, output voltage from 0V to the maximum linear adjustable.
5. Integrated structure with built-in power transformer, wiring is simple, easy to use, cost-effective.
6. Using SMT technology, DCB ceramic substrate, stable performance, high reliability, can adapt to inductive load or resistive load.
7. The module has LED power indication and LED output indication.
8. Input control terminal and main circuit is fully isolated, insulation dielectric strength is greater than 2000 Vac.
9. Half-wave type is mainly used in cement, monosodium glutamate, feed and other mixed ingredients occasions, can control the vibration strength of vibration machine.
10. The module has soft start (<2S) function, effectively reducing instantaneous impulse current when load power-on, effectively protect the module safety and extend load life.
11. Power regulation (when EL and COM short connected) are divided into 10 steps to control output by input signal 0-100%, period is 10 cycles.

10% power output	
20% power output	
30% power output	
40% power output	
50% power output	
60% power output	
70% power output	
80% power output	
90% power output	
100% power output	

Descriptions of input terminal functions:

1. Automatic control signal(0-5Vdc,0-10Vdc,4-20mA,1-5Vdc,0-10mA) and manual control signal(by potentiometer) are compatible in the module.The input adjustment range is wide,precision of output regulation is high,and has high anti-interference ability.

Guide of Wiring:



① Potentiometer manual control mode: according to above picture,middle terminal of potentiometer connected to module's terminal 0-10V,the other 2 terminals of potentiometer connected to terminals COM and +12V respectively.

The +12V voltage is generated by module internal itself, without external provision, only used with manual potentiometer, not for other use.

Choice of potentiometer resistance is in the 2-10K Ω 2W.

When the control signal increases from 0-12V,AC load voltage is from 0V to maximum linear adjustable,control voltage is higher,the greater module output.

② 0-5Vdc control mode: anode connected to terminal 0-5V,cathode connected to terminal COM.

Input impedance inside module between terminals 0-5V and COM is 500 Ω .

When control signal increases from 0-5Vdc,AC load voltage is from 0V to maximum linear adjustable,among them,0-0.2Vdc is entire closed zone,there isn't any output; 0.2Vdc-4.5Vdc is adjustable zone,that is,as the control voltage increases, the phase shift angle α decreases linearly from 180 ° to 0 °, the conduction angle increases, and the voltage across the AC load increases from 0 volts to the maximum value; 4.5Vdc-5Vdc is entire opening zone,AC load voltage is maximum value(close to grid voltage).

③ 0-10Vdc control mode:anode connected to terminal 0-10V,cathode connected to terminal COM,input impedance inside module between terminals 0-10V and COM is 100K Ω .

④ 4-20mA control mode:anode connected to terminal 4-20mA,cathode connected to terminal COM,input impedance inside module between terminals 0-10V and COM is 250 Ω .

Below 4.5mA is entire closed zone;4.5-19mA is adjustable zone,that's,as the control current increases, the phase shift angle α decreases linearly from 180 ° to 0 °, and the voltage on the AC load increases from 0 volts to the maximum value;19-20mA is entire opening zone,output is maximum value.

⑤ 0-10mA control mode:anode connected to terminal 0-10mA,cathode connected to

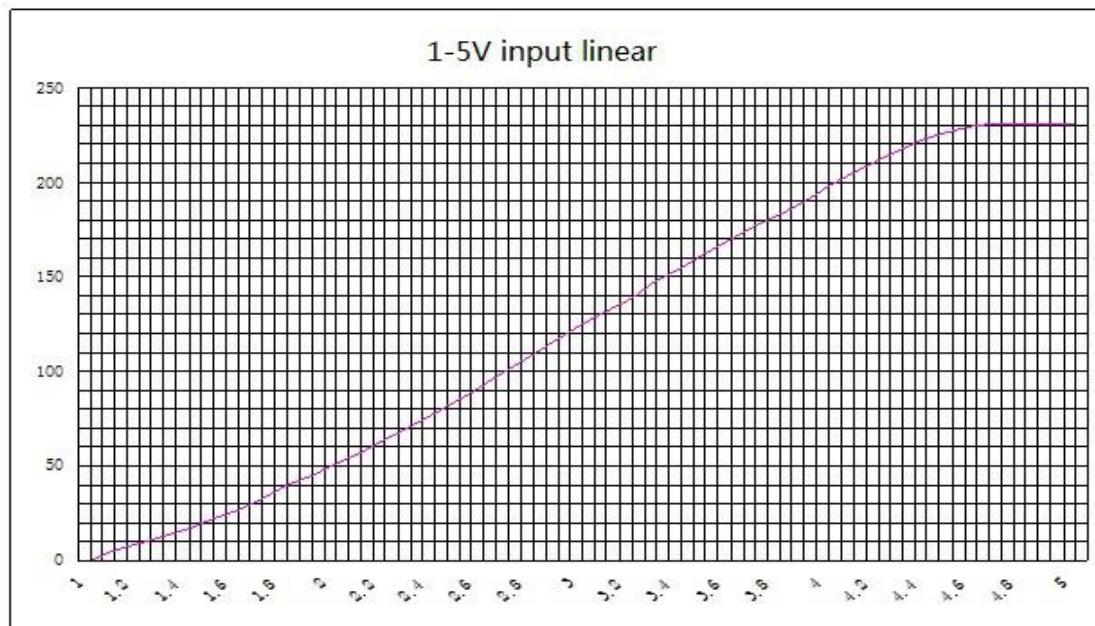
terminal COM,when input is 0mA,control voltage is 0Vdc;when input is 10mA,control voltage is 5Vdc.

2. Each functional terminals must be anode connected,terminal COM must be connected cathode;if the polarity is reversed,the output of module may be out of control.

3.The control of each functional terminals are positive features, that is, the higher the control voltage, the higher the output voltage.

4.Should use only one input mode at a certain time;if more than one mode are used at the same time,the stronger input signal plays a major role,but both control signals can be connected to the module,for example,4-20mA and 0-10V,and use a double-throw switch to switch between them.

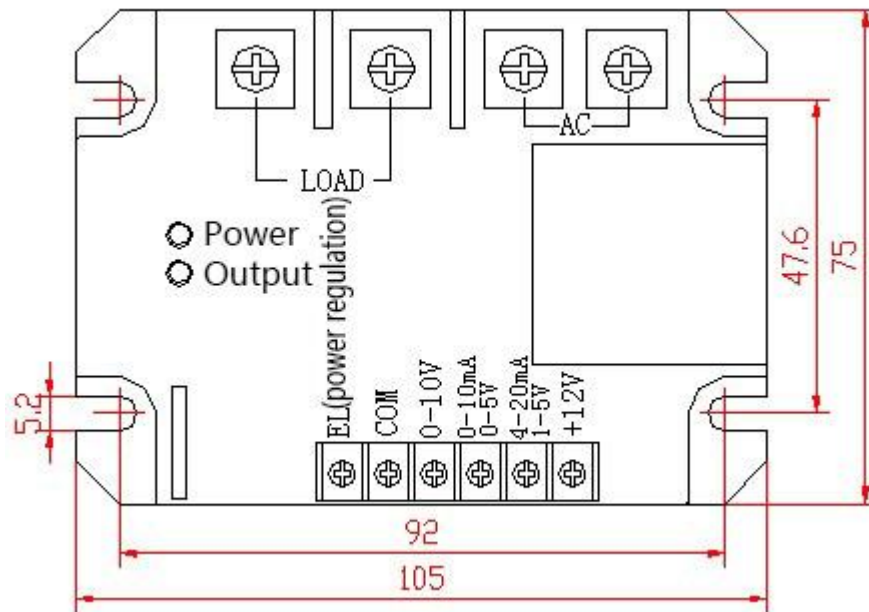
5. The module has linear compensation function, input and output characteristic curve:



ORDERING INFORMATION

	DJTY	220	D	400	P
design code					
Supply/load voltage 220: 220Vac 380:380Vac					
Type of control voltage	D: DC				
Output current 400: 400A(10~400A)					
Wave form P: full wave XP: half-wave					

Dimension Diagram:



Wiring diagram:

