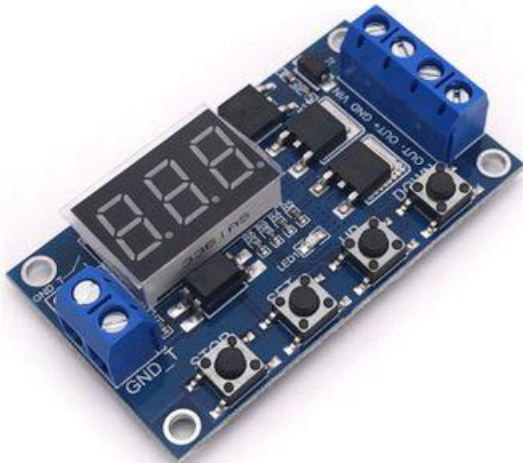


### PROGRAMABLE TIMER



- 12VDC TO 24VDC OPERATION
- 0.1s TO 999m SETTING
- SOLID STATE LOAD CONTROL
- SLEEP / LOW CURRENT MODE
- THREE OPERATING MODES
  - OP  
Delay on trigger / power up
  - CL  
Delay, after trigger
  - LOP  
On delay, Off delay and cycle.

### SPECIFICATIONS

OPERATING VOLTAGE	5 TO 24 VDC
TIME SETTING	0.1 seconds (minimum) to 999 minutes (maximum)
LOAD LIMITS	15A 400W MAX. / 5 TO 24VDC MAX
TRIGGER VOLTAGE	3 TO 24VDC
TIMING LIMITS	0.1 seconds (minimum) to 999 minutes (maximum)

## APPLICATIONS

### Trigger cycle timing delay module

0.1 seconds (minimum) to 999 minutes (maximum) continuously adjustable

This product is simple and easy to use, but please look at the details of the operating instructions.

#### Module Features and applications :

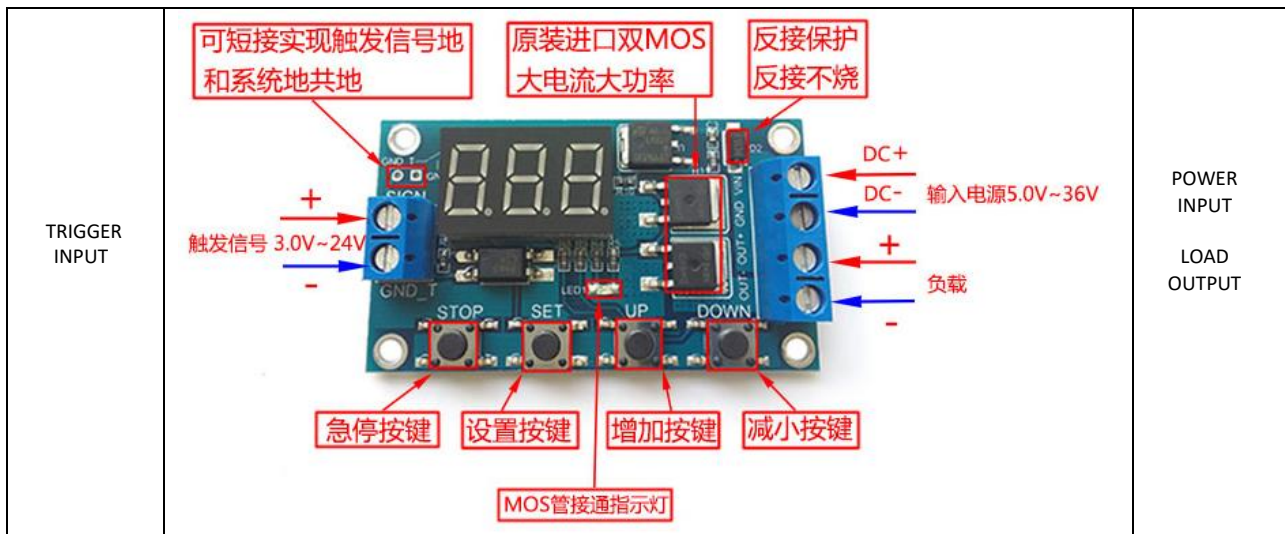
##### Module Highlights:

1. Wide voltage operation (5 ~ 24V)
2. A key emergency stop function (STOP button)
3. Sleep mode, after 5 minutes, automatically turn off the display and any key to wake up
4. You can set different OP, CL, LOP parameters, these parameters are independent of each other.
5. All settings automatically save on power-down.

TRIGGER LINK OPTION

MOSFET SWITCHES

REVERSE PROTECTION



#### Operating mode:

P1 mode: After the signal is triggered, the relay turns on the OP time and then turns off;

P-2: to trigger the signal, the relay off CL time, the relay conduction OP time, timing is completed, disconnect the relay;

P3.1: the trigger signal, the relay turns on OP time, the relay off CL time, and then cycle the above action, the cycle again to the signal, the relay off, stop the time; cycle (LOP) can be set;

P3.2: no need to trigger the signal after power-on, the relay turns on OP time, the relay disconnects the CL time, the cycle of the above action; the number of cycles (LOP) can be set;

P-4: signal hold function If there is a trigger signal, the timer is cleared and the relay remains on; when the signal disappears, the relay is turned off after the timer OP;

### Product parameters:

1: Operating voltage: DC 5V - 24V;

2: Trigger source: High-level trigger (DC 3.0V-24V) Signal ground and system ground to improve the system's anti-jamming capability (also self-shorting common ground)

3: Output capacity: DC 5V - 24V, continuous current at room temperature 15A, power 400W! Under the auxiliary heat dissipation condition, the maximum current can reach 30A.

4: Quiescent current: 15mA

5: Service life: unlimited switch; Operating temperature: -40-85 °C; Size: 6.0 \* 3.4 \* 1.2cm

6: with optocoupler isolation, enhanced anti-jamming capability, industrial-grade circuit board, set the parameters after power failure forever memory.

### NOTES :

'DC +' and the load '+' is itself internally shorted, but 'DC-' and load '-' poles cannot be shorted during use.

Timing range: 0.1 seconds (minimum) to 999 minutes (maximum) continuously adjustable

### How to select the timing range:

In the mode selection interface after setting the parameter value by short press the STOP button, select the time range;

XXX. The decimal point is in place, timing range: 1 second to 999 seconds

XX.X decimal point in the ten, timing range: 0.1 seconds to 99.9 seconds

X.X.X. Decimal point full light, timing range: 1 minute to 999 minutes

For example, you want to set the OP is 3.2 seconds, then move the decimal point to ten, the digital display 03.2

Parameter Description: OP turn-on time, CL off time, LOP cycles (1-999 times, "---" represents infinite loop)

These parameters are independent of each other, but each mode share these parameters, for example, P1.1 set the on-time OP is 5 seconds, the user wants to switch to P1.2 mode, then enter P1.2 set the corresponding parameters, OP It will be 5 seconds;

In the main interface (display 000) short press the SET button, will display OP (CL, LOP) and the corresponding time XXX;

If only the OP (for example, mode P1.1, P1.2, P1.3) is the time in the mode, the short press of the SET key will only display the OP and the corresponding time;

If the mode has OP, CL, LOP (for example, mode P3.1, P3.2), short press the SET key will display OP and the corresponding time, CL and the corresponding time, LOP and the corresponding number of times;

After setting the mode, in the main interface by pressing the SET button to easily view the current mode set the

parameters, very convenient!

#### How to set parameters

1. First determine the working mode of the relay;
2. According to the working mode of the relay, in the main interface (when the module is powered on, it will flash under the current operating mode (default P1.1 mode), and then enter the main interface,) "Press the SET button for 2 seconds after the release "To enter the mode selection interface, by short press UP, DOWN button to select the mode to be set (P1.1 ~ P-4);
3. After selecting the mode to be set (for example, P3.2) Press the SET button to set the corresponding parameter. The parameter to be set will flash (OP turn-on time, CL off time, LOP cycle number (" (Increase or decrease by 1 unit). After setting the parameter value, press the STOP key To select the decimal point position, select the time range (the corresponding time 0.1 seconds to 999 minutes); short press the SET button to set the current mode of the next parameter, the same process;
4. Set the parameters of the selected mode, press and hold the SET button for 2 seconds after the release, the current set of good mode will flash, and then return to the main interface, set the parameters of success, very simple!

Main interface: relay does not work under the state shows "000" (no decimal point), the relay working with a decimal point, very clear!

Mode selection interface: long press the SET button to enter, set the finished, long press the SET button to exit, back to the main interface, very simple!

#### Relay enable mode:

1. ON: OP turns on the relay to allow conduction;
2. OFF: The relay is disabled and is always off;

Press the STOP button on the main interface to switch between ON and OFF, the current status will flash, and then return to the main interface. (This function is an emergency stop function, a key to open the closed relay)

#### Sleep mode:

1. C-P sleep mode: within five minutes, without any operation, the digital tube automatically shut down the display, the program normal operation;
2. O-d normal mode: digital display is always on;

Press and hold the STOP button for 2 seconds to release, to achieve C-P and O-d state of the switch, the current state will flash, and then return to the main interface.