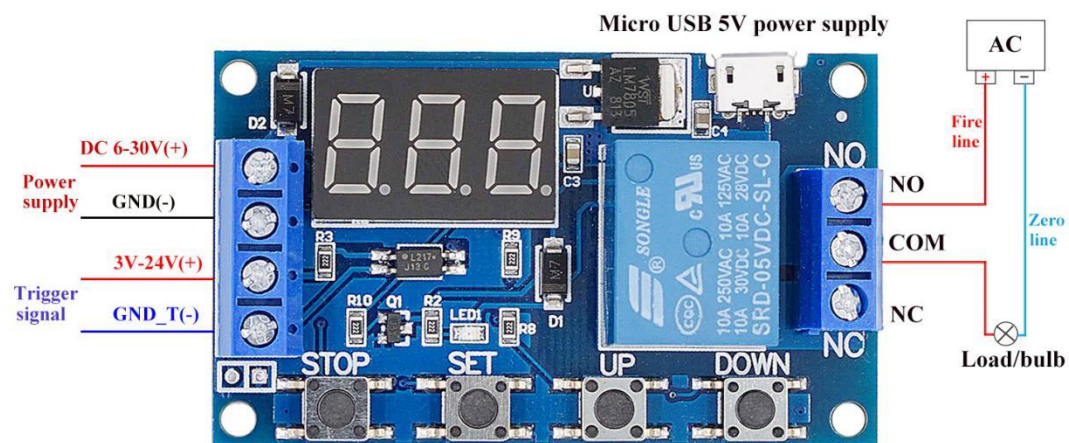


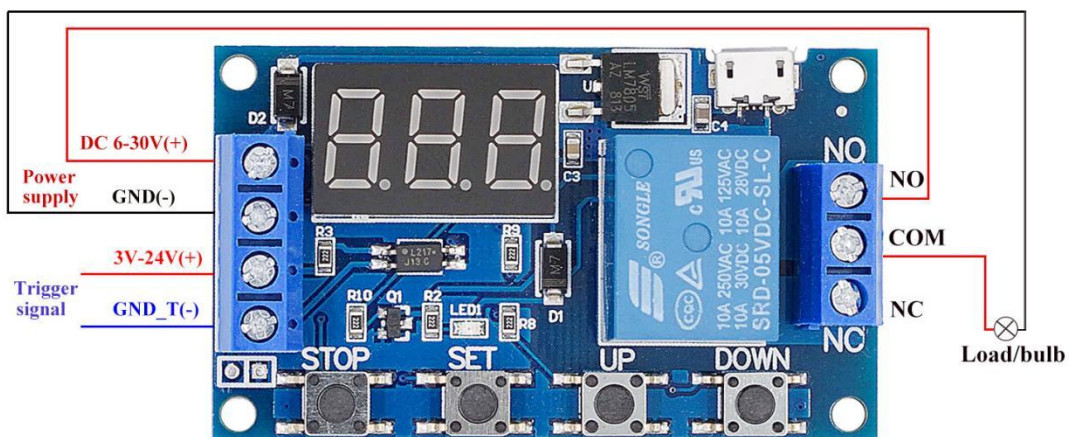
Valefod DC 6-30V Timer Relay Programmable Delay Relay Module USER GUIDE(JZ-801)

Product Overview:

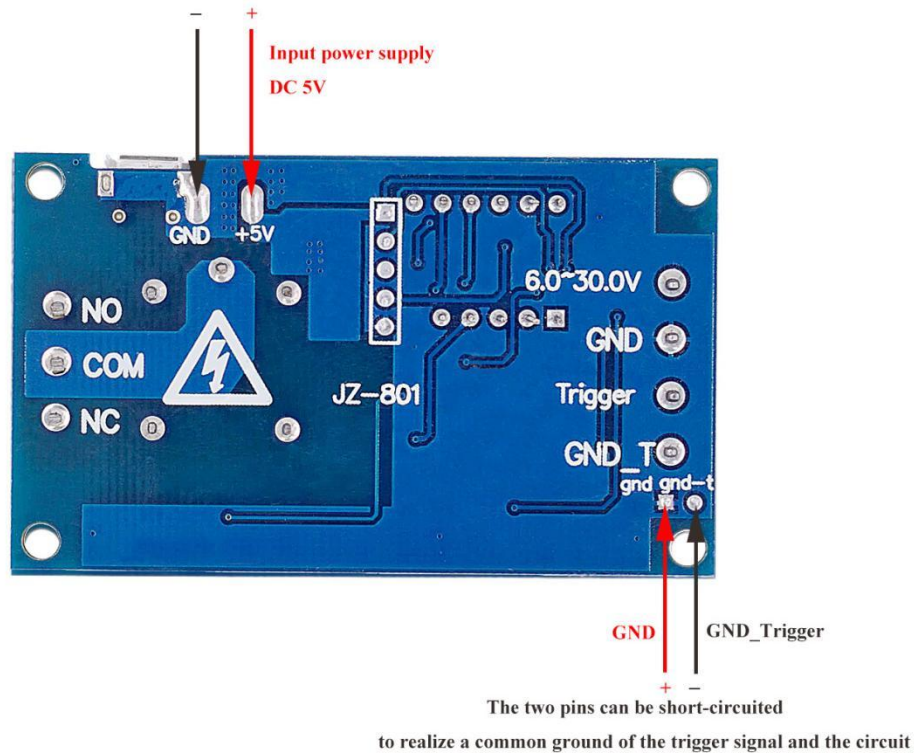
The multifunctional relay control module is designed for people with different timing and control needs. It's perfect for many applications from hobby to industrial controls.



Wiring diagram of weak current controlling strong current



Wiring diagram of sharing one power supply



Specifications:

Specifications are subject to change without notice.

Operating voltage: DC 6V - 30V, supporting micro USB 5V power supply

Operating current: 50mA, static current: 20mA

Working temperature: -20—60℃

NO maximum load: < AC 250V/10A, < DC 30V/10A

Size: 6.4*3.8*1.7cm

Operation Modes:

P1: Upon signal is triggered(application of input voltage), the relay remains on for OP time, then turn off. Operate within the OP period as follows.

- P1.1: Signal being re-triggered is ignored
- P1.2: Signal being re-triggered to reclock
- P1.3: Signal being re-triggered to reset, the relay contact disconnected, stop timing

P1.4 (random mode): The relay conducts OP time only once when power on.

P2.1 (or P2): Feed trigger signal, the relay remains off for CL time, then conducts OP time. After timing, the relay turn off.

P2.2 (random mode): Feed trigger signal, the relay remains off for CL time, then conducts OP time. Signal being re-triggered, the relay remains off for CL time and conducts OP time again.

P3.1: Feed trigger signal, the relay conducted OP time, the relay remains off for CL time, then repeat above actions, re-trigger signal within the timing cycle, the relay contact disconnected, stop timing. The circuit times(LOP) can be set.

P3.2: No need to trigger signal when power on, the relay conducts OP time, then the relay remains off for CL time, then repeat above actions.The circuit times(LOP) can be set.

P4: The function of remaining signal: the timing will be reset upon signal is triggered, relay contacts stay connected. when no signal, turn off the relay after timing OP. During the period of timing, the timing will be reset upon signal is re-triggered.

Timing Range: 0.1 seconds (min.) ~ 999 minutes (max.) continuously adjustable

How to choose a timing range:

Upon setting the parameter value in the mode selection interface, select the timing range by short pressing the STOP button.

XXX. Decimal point at single digit, timing range = 1 second ~ 999 seconds.

XX.X Decimal point at tens digit. timing range = 0.1 second ~ 99.9 seconds

X.X.X. All the decimal points appear, timing range = 1 minute ~ 999 minutes.

For example, if you want to set the OP to 3.2 seconds, then move the decimal point to the tenth digit, the digital tube displays 03.2

Parameter explanation: OP = on time, CL = off time, LOP = cycle times (1 - 999 times, "---" stands for infinite cycles)

These parameters are independent each other, while they are shared by all operation modes. For example, when the OP(on-time) is set to 5 seconds in P1.1, the user wants P1.2 mode, then enter P1.2 to set the corresponding parameters, OP will also be 5 seconds.

In the main interface (digital tube displays 000), short press SET button, it will show OP (CL, LOP) and the corresponding time XXX

- If there is only OP (such as mode P1.1, P1.2, P1.3) time in the mode, then short press SET button will only display OP and the corresponding time.

- If there are OP, CL, LOP in the mode (such as mode P3.1, P3.2), short press SET button will display OP and corresponding time, CL and corresponding time, LOP and corresponding times.

After setting the operation mode, you can easily view and change the parameters by pressing the SET button in the main interface.

How to Set Parameters:

1. First of all, determine the working mode of the relay.

2. Upon the working mode of the relay, in the main interface (when the module is powered on, it will flash the current working mode - default P1.1 mode, and then enter the main interface)

Long press the SET button for 2 seconds and release to enter the mode selection interface, select and set the mode (P1.1 ~ P-4) by short pressing the UP and DOWN buttons.

3. Select a setting mode you want (Eg. P3.2), short press SET button to set the parameter. At that time, the parameter you set will flash (OP - ON time, CL - OFF time, LOP - cycle number). You could adjust the parameter by pressing UP and DOWN button. Long press (increase or reduce rapidly) and short press (increase or decrease by 1 unit) are supported. After setting the parameter, select the position of units point by short pressing "STOP" button to choose a timing range (corresponding time 0.1 seconds~999 minutes). Short press "SET" button to set the next parameter of current mode, the progress is as what have mentioned above.

4. After selecting the mode's parameter, long press the "SET" button for 2 seconds and release. The current setting mode will flash and return to the main interface, and the parameter setting is finished. It's very simple!

Main interface:

- It will appear "000" without decimal points when at "OFF" status, while appears decimal points clearly at "ON" status.

Mode selecting interface:

- Long press "SET" button to set parameter, while long press "SET" button to return back to the main interface. It's very simple!

Relay Enable Mode:

- ON: Relay is allowed to conduct within OP time (on-time).
- OFF: Relay is banned conducting and it is always at closing status.

Short pressing "STOP" button in the main interface, you will realize the shift between "ON" and "OFF". It will flash and return to the main interface. (This is acute stop function, one-button turn on and off the relay)

Sleep Mode:

- C-P sleeping mode: When not using the relay for 5 minutes, the digital tube will turn off the display automatically, and the program will keep working.
- O-d normal mode: Display of digital tube always on. Long press "STOP" button for 2 seconds and release to shift the status of C-P and O-d. It will flash and return to the main interface.
- Sleep mode will automatically switch to normal mode when the power is cut off.

Package List:

- 2 x DC 6-30V Timer Relay Module with LED display

Kindly Note:

- If timer relay board does not energize, or when timer relay board energizes but the load in the circuit can not be triggered to start, please try to apply some more power than

expected. Especially for use with trigger signals and load on the wiring diagram of sharing one power supply, as they require additional power to actuate.

- Long press "DOWN" button can switch F1 and F2 mode. F1 is the default mode: relay operating forwards, F2 is the opposite mode: relay operating backwards. As F2 mode is rarely used, some batch does not include this feature.
- Please be advised that the sleep mode(C-P) feature of this relay is not capable of saving its settings in the event of a power failure. Whenever the device is restarted, it will automatically return to its default normal mode(O-d).

FAQ:

Q1: How do you trigger it? what signal on what pins? i've tried 5v to trigger and it doesn't work?

One way is run a jumper to the trigger circuit from either the + or the _ and then have a switch make contact with the other side (all from the power side) However this will not work if you are using the USB for power.

The board claims to be for 6 to 30 v, however when testing for ease I plug in with a USB cord and then use a AA 1.5 V battery (I test all before installing). The 1.5V trips the trigger every time...just be sure that you have + going to + and - going to -. It will not harm the board, however it will not trip the trigger .

Q2: Anyone get sleep mode to work? hold stop for 2secs, display reads c-p but screen never turns off.

Press STOP for 2+ sec., shows C-P. Pressing STOP again until it says ON. Allow it to time out, three 000 displayed. +Trigger timer, allow relay to timeout, wait 3-4 min, 7-seg displays go dark. +trigger and the timer relay wakes up, but 7-seg displays stay off. All timer functions continue as normal in the background. Display stays off. Great option. Mine is installed on a solar powered gate. Every mA of battery voltage saved is a bonus. This only works if timer main supply 6-30VDC stays on. If power is removed, complete cycle must be repeated.

Q3: Does anyone know which types of batteries this is compatible with? Single cell? Multiple cell? NiHm?

Any. You could wire up a potato or lemon series of cells if you wanted to, as long as you feed it 5-30v. I power mine with an old 5.2v diskman power cable.

Watch some YouTube videos about batteries in series vs parallel to understand how to achieve proper voltage.

Q4: P1.1 set to 3 dots (999 minutes) - it does clock down to 599 after 1 minute but then resets shortly after - help?

Check the voltage.

An incorrect voltage may cause the LED to read incorrectly.

I had that issue with a similar relay.

These are nice little units in general.

Check the input voltage reading on the top of the relay.

Q5: Does this relay open and close power to the load, or does it open and close ground?

That device is a SPDT switch/relay. It does not deliver power. There is one that does, or you can just jumper the board power if that suites you or switch 120 V AC like I do.

Q6: how do I get a 12 dc blower fan to come on , using the usb 5 volt option

the blower fan power should be attached at the relay end of the unit... power for the timer comes from the 5v usb end... and trips the relay. The relay acts as a switch for any 12v device that you want to turn on or off...

There are numerous Youtube videos on how to use these timers.

Q7: One of these timer relay boards doesn't work - it turns on for a few seconds then turns off. The other one is fine. What can I do about it?

If your timer relay board is not working correctly, first of all, please make sure that the Relay Enable Mode is set to **"ON"** and not **"OFF"**, inspect the wiring for any looseness, try testing this timer relay board on different circuits, or utilize an alternate power source.

If timer relay board does not energize, or when timer relay board energizes but the load in the circuit can not be triggered to start, please try to apply some more power than expected. Especially for use with trigger signals and load on the wiring diagram of sharing one power supply, as they require additional power to actuate. If timer relay board still doesn't work, please contact valefod-services@hotmail.com.

The above product usage instructions are the content for the Amazon buyer page. Below is a newly written usage instruction from a helpful customer, hoping it will be useful to you.

I like this timer, it seems usable for many situations, many probably past my needs. Some uses I might just invent for the fun of it. The only thing I miss is a good manual explaining the programs in plain English. So I wrote my own:

* Press the set button for a few seconds to then use the up/down buttons to select the program you need. Press the set button shortly to cycle to the various OP(en) and CL(ose) timers and LO(OP) counter. OP(en) timers can be programmed in increments of a second, CL(osed) timers can be programmed in increments of 1/10th of a second.

* The trigger circuit (Trigger and GND_T connectors) is galvanically separated from all circuitry by means of an opto-coupler with a 2.2K resistor in series. While the board needs at least 6V, the trigger is activated with voltages as low as 1.5V over the Trigger and GND-T pins.

* WARNING: Although the relay states it can handle up to 250V the circuit board is not designed well enough to safely handle anything above maybe 48V. (It is missing it's air gaps to make it safe.)

Abbreviations used in display:

P -> Program

OP -> Open - no power to relay

CL -> Close - relay is powered

LOP -> Loop - number of cycles turning off and on before staying off.

Abbreviations used on board

COM -> Common wire - put power to this wire to then put your load/device on NC or NO.

NC -> Normally Closed - when the relay is not powered this contact is closed.

NO -> Normally Closed - when the relay is not powered this contact is open.

Available programs

P1.1: Run once for CL seconds after power has been applied to trigger.

P1.2: Run for CL seconds each time power has been applied to trigger.

P1.3: As 1.2 but turn off when power is re-applied to trigger within the countdown time.

P1.4: Run once for CL seconds but there is no power to trigger needed.

P2.1: After applying power to the trigger delay for OP seconds, then run for CL seconds.

P2.2: After applying or removing power to the trigger delay for OP seconds, then run for CL seconds.

P3.1: Cycle on and off for OP and CL seconds and LOP cycles when power to trigger is applied momentarily or permanently, restart cycle in "on" phase when power to trigger is re-applied during "off" phase, stop cycle when power to trigger is re-applied in "on" phase.

P3.2: Cycle on and off for OP and CL seconds for LOP cycles without the need to put power to the trigger.

P4 : Run when power is put to trigger and continue for CL seconds after power has been removed from trigger.

Note

* The 5v USB connector can be used for programming/exploring but most programs won't run as the trigger port can't be self-powered by the board's 6.0~30V input. However, and I have not tried this, but I believe that if you bridge diode D2 and voltage regulator U3 you can have a complete 5V 500mA project going from a standard 5V USB cable.

The usage instructions for this timer relay can also be found on Youtube by searching for “JZ-801”. Perhaps the instructional video will be more helpful in understanding the features and usage of this timer relay.

Programmable triggered timing board 35238 MP

<https://www.youtube.com/watch?v=p9u8lrsRrWE>

Multifunction Timer On Off circuit

<https://www.youtube.com/watch?v=05KWuysRP-Q>

Home Automation With Trigger Delay Timer Module JZ-801

<https://www.youtube.com/watch?v=vvov8sPxbcM>