XY-WJ01 Programmable Relay

Description:

Power: 6-30VDC
Quiescent Current: ~15 mA
Working Current: ~50 mA
Timing Range: 0.01 sec~9999 min
Trigger Signal: High-level: 3.0V~24V, low-level:
0.0V~0.2V Relay: SPST-NO Isolated Contacts
Contacts: 10A/14VDC, or 5A/110VAC
Operating Temperature: -40~85 °C
Connections: Terminal Strip
Service life: More than 100,000 times
Size: W:71 H:39   D:25 mm WT: 45gm

Features:

1. Liquid Crystal Display, the operating mode and settings are clear at a glance
2. Supports High & Low Level Triggering
   One-button pause function with reverse connection protection
3. Optocoupler isolation, enhanced anti-interference ability, industrial grade circuit
4. Wide voltage supply (6~30V)
5. Reverse Polarity Protected
6. Sleep mode. After enabling, if there is no operation for ~5 minutes, Backlight turns off
   Any button wakes up;
7. Different OP, CL, LOP parameters can be set. These parameters are independent of
   each other and are saved separately.
8. All setting parameters are automatically saved after power-off.

Panel Functions
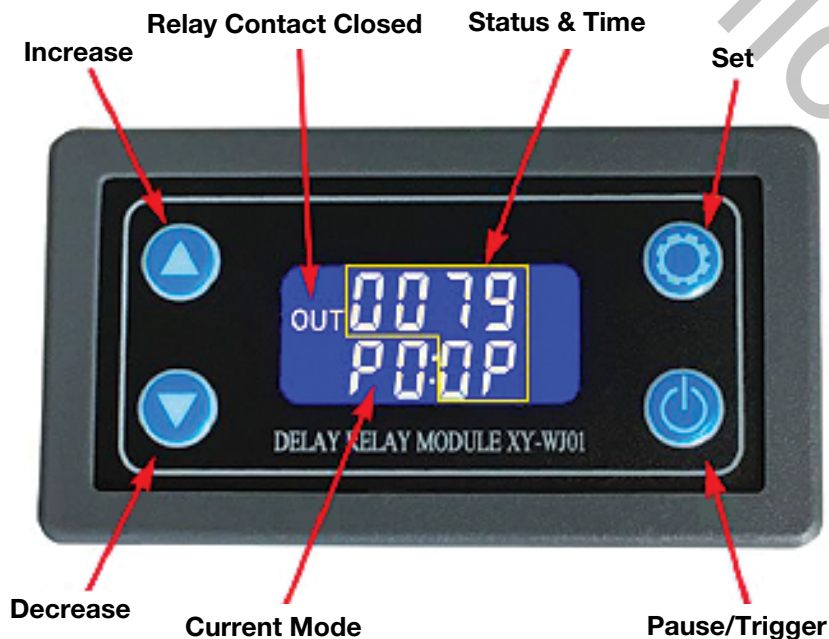
XY-WJ01 Programmable Relay

OP: On Time (Relay Contact Closed)

CL: Off Time (Relay Contact Open)

LOP: Loop Cycles: 1-9999 times, ᴵᴵᴵᴵᴵ stands for infinite loop

Operating (Working) Modes:

1) P0: When Triggered, The Relay will stay ON for the OP time, then turn OFF.
   Another input will not retrigger until after relay times out (OP time).

2) P1 When Triggered, The Relay will stay ON for the OP time, then turn OFF.
   Another input will restart timing if it occurs during OP time.

3) P2: When Triggered, The Relay will stay ON for the OP time, then turn OFF.
   Another Input will reset, stop the timing and turn off the Relay if it occurs during OP time

4) P3: When Triggered, The Relay will stay OFF for time CL and then turn ON.

5) P4: When Triggered, Relay will stay ON for time OP, then relay will turn OFF for CL time; then repeats (loops) the above action. if another trigger signal occurs during a loop; Module will reset, stop timing and relay will stay in present state. The number of cycles (LOP) can be set.
   Relay will stay OFF at end of loop(s).

6) P5: When Triggered, Relay will stay OFF for time CL then relay stay ON for time OP and then repeats (loops) the above action. If another trigger signal occurs during a loop; Module will reset, stop timing and relay will stay in present state. The number of cycles (LOP) can be set.
   Relay will stay ON at end of loop(s).

7) P6: At power On the Relay will stay ON for time OP without receiving a trigger signal; then relay stay OFF for time CL and then repeats the above action. The number of cycles (loops) (LOP) can be set. Relay will stay OFF at end of loop(s).
   Trigger is not functional in this mode

8) P7: At power ON Relay will stay OFF for time CL without receiving a trigger signal; then relay stay ON for time OP and then repeats the above action. The number of cycles (loops) (LOP) can be set. Relay will stay ON it end loop(s).
   Trigger is not functional in this mode

9) P8: Signal Hold function. Continuous Trigger Signal will Reset delay time and the relay will stay ON; Relay turns OFF after delay time OP when the Trigger signal is removed. If another trigger signal occurs during timing (OP), Delay time is Reset and timing OP starts over.

10) P9: Signal Hold function. Continuous Trigger Signal will Reset delay time and the relay will stay OFF; Relay turns ON after delay time CL when the Trigger signal is removed. If another trigger signal occurs during timing (OP), Delay time is Reset and timing CL starts over.

NOTE:
   P0-P7 modes: When the module is not timing, a short press of Pause/Trigger Button will start timing. If the module is already timing, it will stop, relay will turn off and display screen will show a flashing OFF.

   P8~P9 modes: When timing; the Pause button is a trigger. Short/Long push use is not available

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Set Timing Range:

1) Continuously adjustable from 0.01 seconds to 9999 minutes.

2) Enter the Settings interface; Short press the Pause button in the OP/CL parameter modification mode (Flashing) to select timing range.

3) Pay attention to the position of the decimal point and how it moves when the button is pressed.

4) Display XXXX: <u>NO</u> decimal point: Timing range is 1 second ~ 9999 seconds.

5) Display XXX**.**X: The decimal point is the 1st (10s) position: Timing range is 0.1 to 999.9 seconds.

6) Display XX**.**XX: The decimal point is the 2nd. (100s) position: Timing range is 0.01 to 99.99 seconds.

7) Display X**.**X**.**X**.**X: All three decimal points are on: Timing range is 1 minute to 9999 minutes.

8) For example, if you want to set the OP to 3.2 seconds, move the decimal point to the 1st. (10s) position, LCD will display 003**.**2 .

Setting Parameters:

1) Enter set parameter menu by long press (>3sec.) of 'SET' button.

2) Select the Working mode: Short press the UP/DOWN button to scroll through modes. Mode will Flash

3) Short press the SET button to select the working mode and enter the system parameter settings.

4) In the system parameter setting interface, short press the SET button to switch the system parameters to be modified, short/long press the UP/DOWN button to modify value;

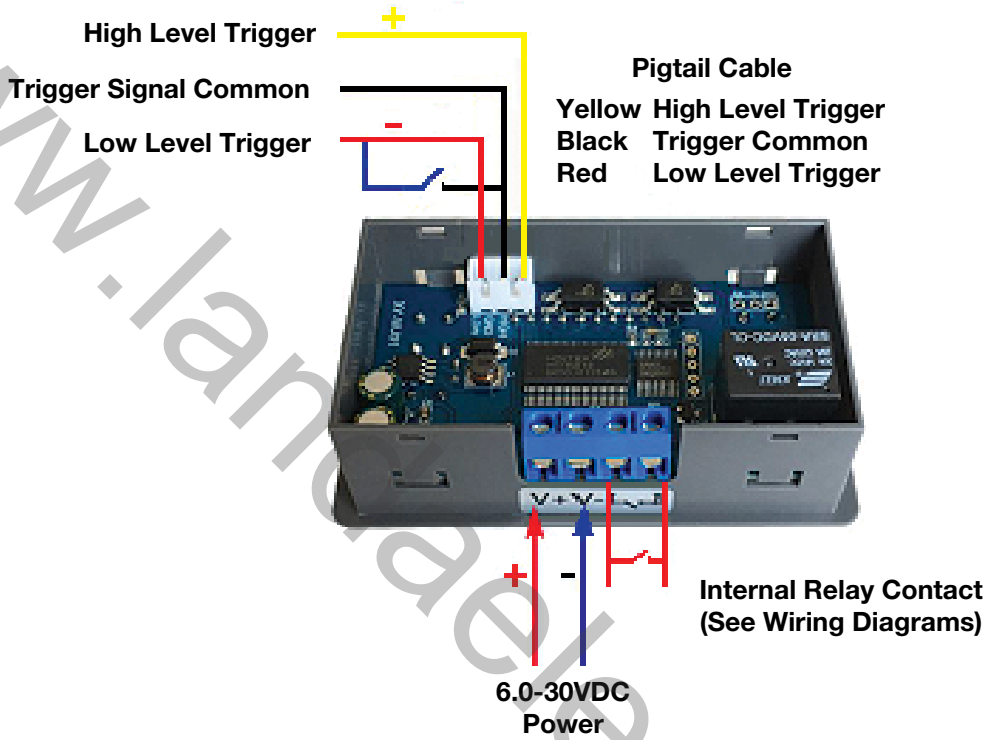**Note:** While setting parameters: Short press of SET is invalid in modes P0,P1,P2,P3,P7,P8.

5) Enter setting interface; Short press the Pause Button in the OP/CL parameter modification mode (Flashing) to select timing range (1s/0.1s/0.01s/1min).

6) To Save the parameter settings and exit the Setting mode: Long press (>3sec.) the SET button.

Additional Features:

1) Auto Sleep function: Backlight automatically turns off after ~5min of no activity.
Long press of the Pause button, in the normal running Modes (P0~P7), to alternately turn On or Off the sleep function. Display shows "L-P:ON" or L-P:OFF
Press any button to wake up display.

2) View Settings: In the timing mode, short press the SET button to display the current parameter settings of the system. Does not affect the normal operation of the system.

3) Switch the display parameter: It will switch the display content by short press button 'DOWN' in the P4~P7 mode (Parameter is Run time or number of loops)

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Basic Connections

High Level Trigger

Trigger Signal Common

Low Level Trigger

Pigtail Cable

Yellow High Level Trigger
Black Trigger Common
Red Low Level Trigger

**Internal Relay Contact
(See Wiring Diagrams)**

**6.0-30VDC
Power**

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DC Wiring Common Power Supply

6-30VDC

LOAD

AC/DC Wiring Separate Load Power

LOAD

6-30VDC

POWER SOURCE

If AC Power Neutral

If AC Power Line