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UCTRONICS U6030 DC 12V Programmable Time Delay Relay Module User Guide

UCTRONICS®

Contents

**DC 12V Programmable
Time Delay Relay Module**

SKU: U6030
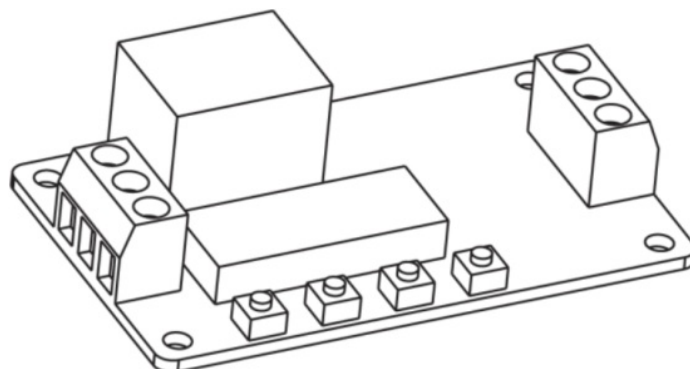
This programmable multifunction time delay relay module is designed for different kinds of control systems. It has

18 preset modes, users can program one of the mode and its parameters to fit for their applications. The four keys are used for programming the relay module, the four segment LED display are used for displaying the mode and timing information.

SPECS

Working voltage	DC 12V
Static current	5.5mA
Temperature limitation	-30 -70 degrees (-20-60 degree recommended)
Load capacity	DC 30V or AC 250V / DC 28V or AC 125V
Load current	10A
Max. frequency	≤5KHz
Overall dimension	66*40*20mm
Mounting hole pitch	59*33mm

WIRING & PART INSTRUCTION
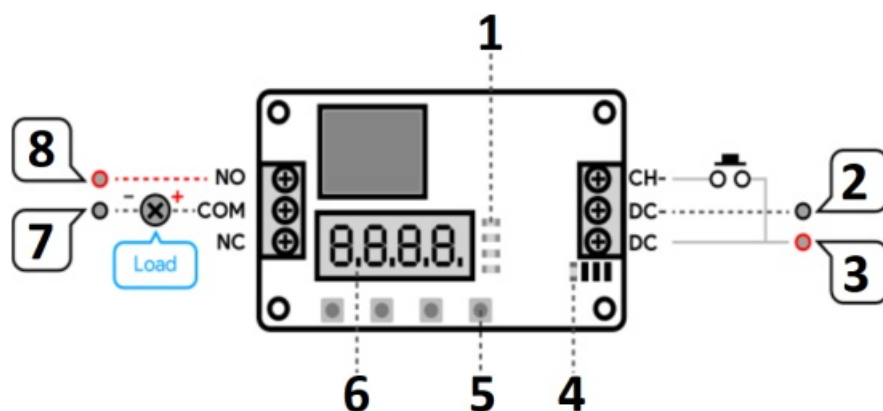
1. 4 blue LED indicators of 4 parameters

2. DC power supply –

3. DC power supply +

4. Power LED

5. 4 press buttons

6. 4 digit display

7. Neutral wires(N) of AC power or DC power supply –

8. FireWire(L) of AC power or DC power supply +

• **Terminal Blocks Explanation**

Input	DC+	DC 12V power supply +
	DC-	DC 12V power supply –
	CH1	3-30V high level voltage
Output	NO	Normally open, disconnected when the timer off, short circuited
	COM	Common interface
	NC	Normally closed, short circuited with COM when the timer off,

• **Press Buttons Explanation**

	In Working Mode Default mode when powered on
SET	Short press to enter power saving mode, turn off the display, operate normally; Long press to enter setting mode, the timer will stop operating and enter the initial status.

SWI	Long press to enter view mode.
NUM+	Long press to set/cancel the function of entering power saving mode automatically if there is no any operation for 10s, the display will flash twice if setting finished. Short Press SET to recover display briefly.
NUM-	Long press to reset/recover the current mode and stop operating
In View Mode	
SET	Short press to switch the parameters
SWI	Long press to exit the view mode and enter the working mode
In Setting Mode	
SET	Short press to switch the setting parameter, the corresponding LED will light; Long press to save the parameters and enter the working mode.
SWI	Short press to switch the digits, the selected digit will flash. Long press to set/cancel the decimal digits when setting T1 or T2.
NUM+	Short press to increase the digit value.

NUM-	Short press to decrease the digit value.

• 4 Blue LED Indicators Explanation

MO – the MODE OF THE TIMER. Set to between 1 and 18 based on how you want the timer to work. Mode 1-8 are self-starting upon power-on, while mode 9-18 require a high level pulse signal to trigger start-up and the high level need to be longer than 20ms.

T1 – FIRST TIME PERIOD DELAY. Based on the mode selected, this is the delay from first receiving the input trigger pulse until the second action happens. Look at the graphs in the next chapter for further explanations.

T2 – SECOND TIME PERIOD DELAY. Based on the mode selected, this is triggered by the completion of the T1 delay. T2 determines the delay until the next action happens.

NX – NUMBER MULTIPLIER & DELAY CYCLE INDEX. In the modes of 1 to 6 and 11 to 16, it's used to set the values of T1 and/or T2 to greater than 9999 seconds. The default value of NX is 0101. To determine the actual time delay, T1 is multiplied by the first two digits of NX. The resulting value is the delay in seconds used by the timer. Similarly, the last two digits of NX are the multiplier for T2. In the modes of finite loops (mode 7/8/17/18), NX is also the cycle index.
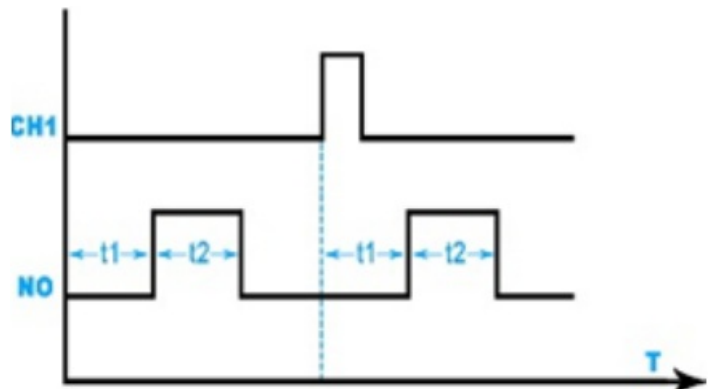
TIMING CHART of MODES

MODE 1 On Delay	
MODE 2 Off Delay	

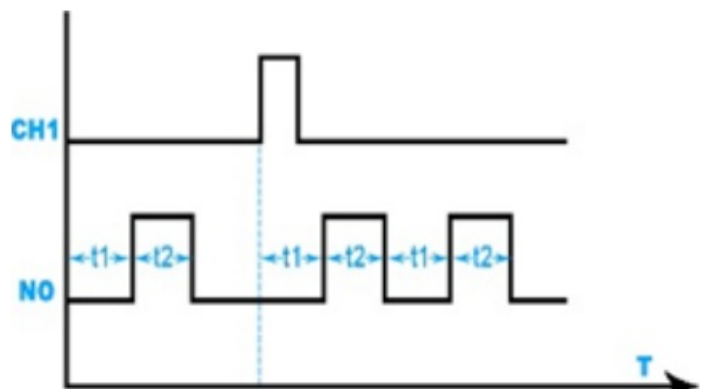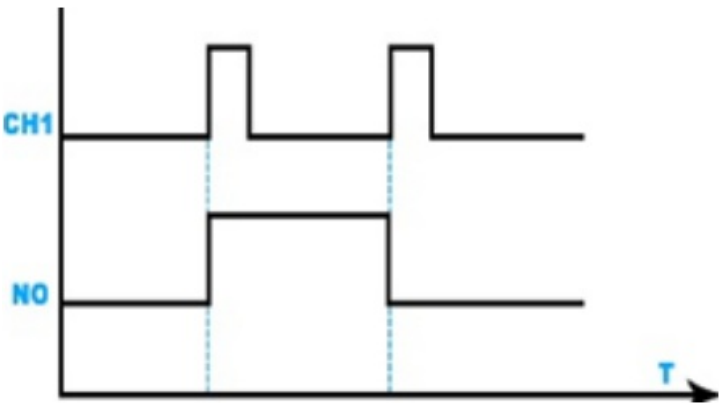|	
MODE 3 On Delay & Off Delay	
MODE 4 Off Delay & On delay	
MODE 5 Infinite Loop of On Delay	
MODE 6 Infinite Loop of Off Delay	
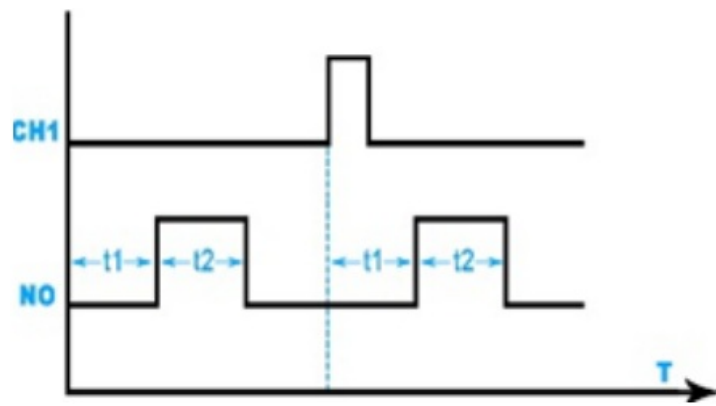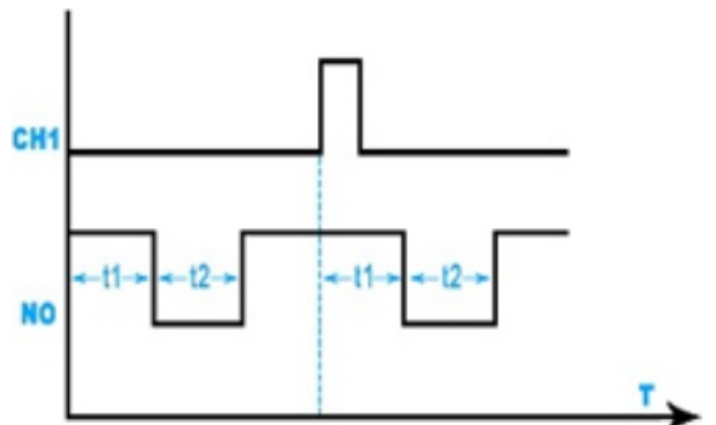
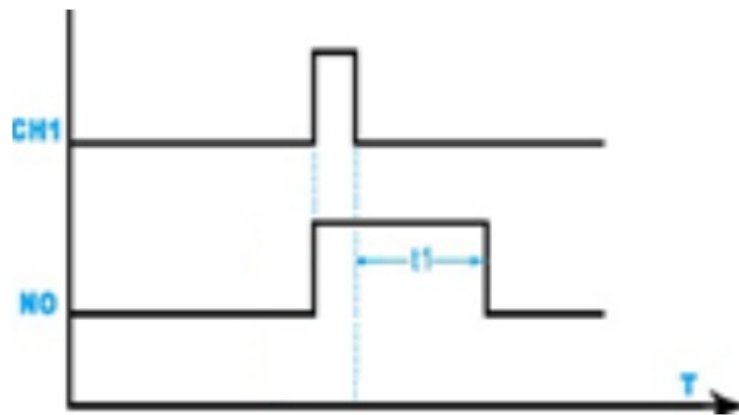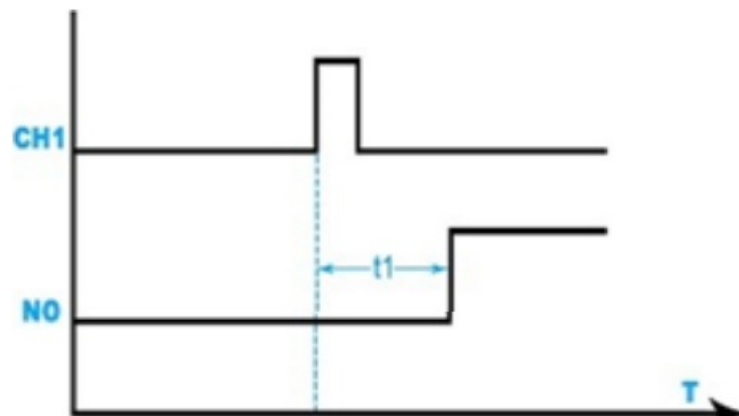|	
MODE 7 Finite Loop of On Delay	
MODE 8 Finite Loop of Off Delay	
MODE 9 Self-locking Relay	
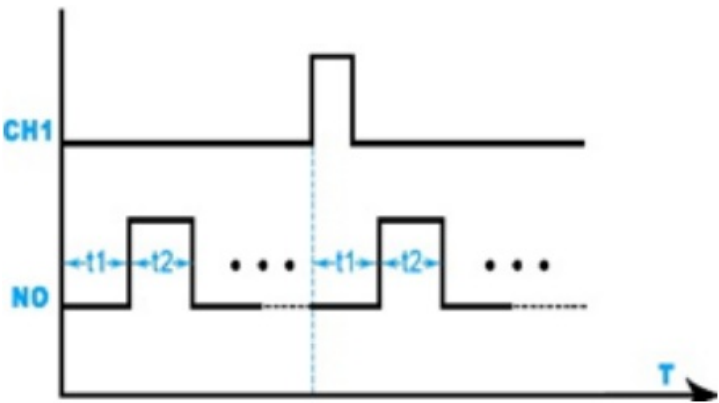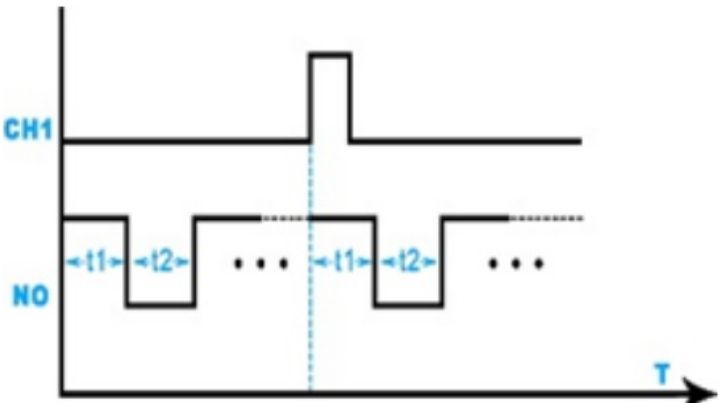
MODE 10
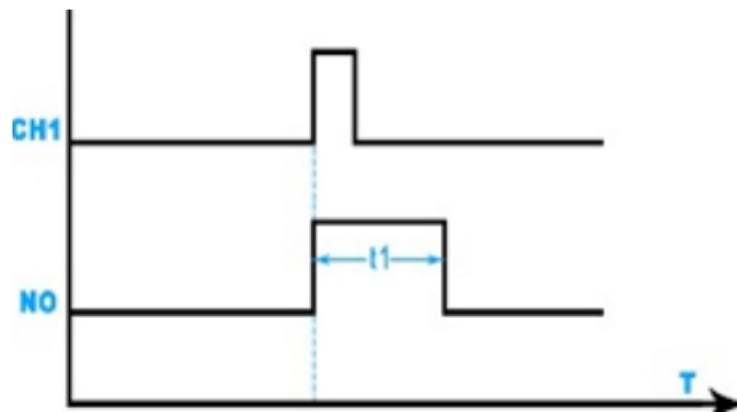Triggered On, and Off Delay after the CH1 signal disappearing

MODE 11
Triggered On Delay

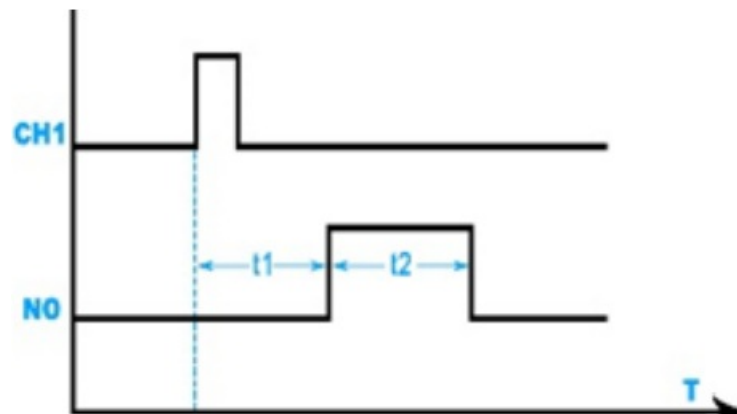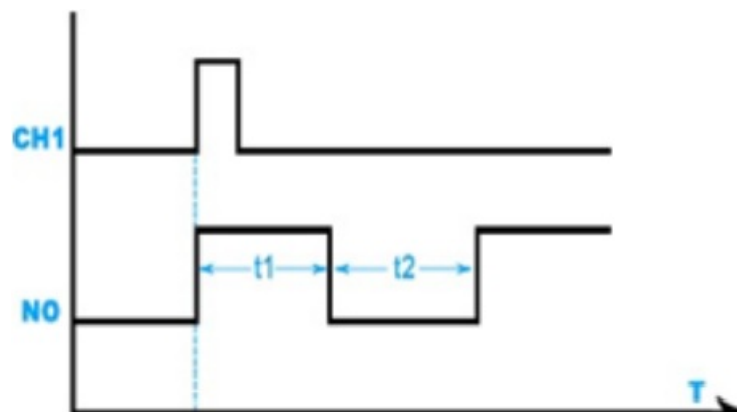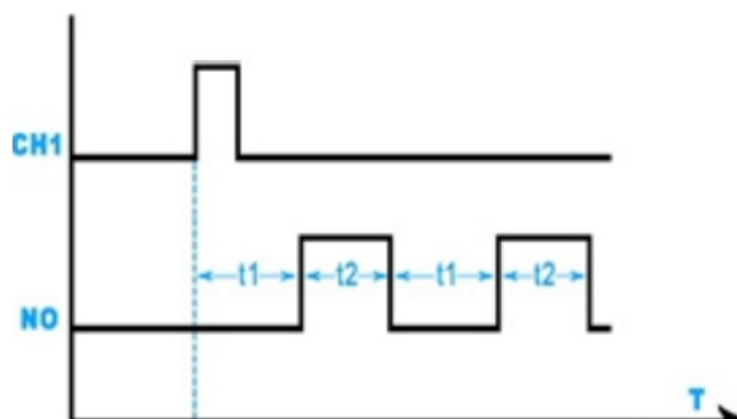|	
MODE 12 Triggered Off Delay	
MODE 13 Triggered On delay & Off delay	
MODE 14 Triggered Off Delay & On Delay	
MODE 15 Triggered Infinite Loop of On Delay and Off Delay	

MODE 16 Triggered Infinite Loop of Off Delay and On Delay	
MODE 17 Triggered finite Loop of On Delay and Off Delay	
MODE 18 Triggered finite Loop of Off Delay and On Delay	
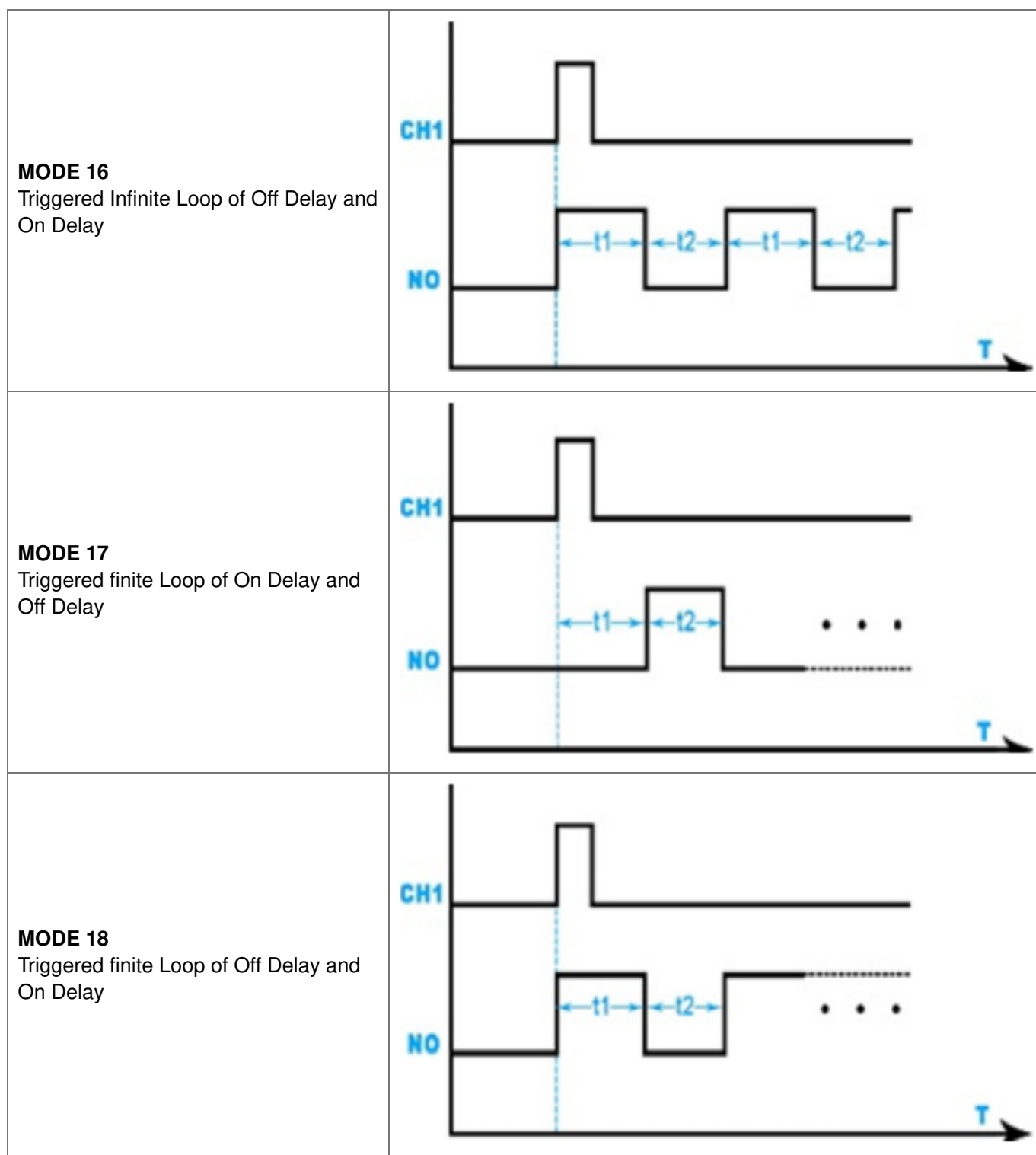
QUICK START GUIDE

Setting example: Delay on a light after 5s.

Step 1. Select the right working mode: Mode 1

Step 2. Long press SET to enter Setting mode; (at this moment the segment LED display starts to flash at the far right)

Step 3. Short press SET to select parameters of MD; (at this moment the LED near MD turn on constantly)

Step 4. Short press NUM+/NUM-, enter 0005, the value of segment LED display, that means 5s. Short press SWI to move cursor among 4 segment LED displays;

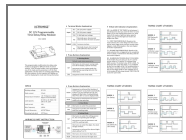Step 5. Long press SET to exit the Setting mode and enter working mode.

CONTACT US

If any problem, please feel free to contact us.
Website: **www.uctronics.com**
Email: **support@uctronics.com**

Documents / Resources

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