

# Instruction manual

**XHST-30**

**PROGRAMMABLE TIMING CONTROLLER**

**一、Features**

- intelligent and digital LED(light-emitting ) timer
- 1-8 channels ,programmable and arbitrary combination and arbitrary output
- memory storage (10years) / mechanical life
- Panel mounting
- delay time unit :0.1s/1s/1min(option
- power supply (220V AC 50/60Hz)
- input; Transistor
- 100 groups of programme/time periods

**二.Specifications**

model	XHST-30
output points	8 (AC250V2A)
power supply	220V AC 50/60Hz
dimension	96*96/90*90
power consumption	
input signal	Switch contact
memory storage	at less 10 years
ambient temperature	-10~+55℃
anti-interference	Analog ±2000V square wave signal from interference unit (pulse width : 1us)
accuracy of time control	±1%
weight	500g

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**三.Structure and Specifications**



**1、Operation panel (4-digit display)**

a. The upper display shows the function code

b. The lower display shows stepping time or stepping output

c. 0--7 indicator light: : Output indication

d. PRG

press and hold PRG for 3 seconds : step through or exit program mode.

Press PRG to switch function code

press it to select "stepping time" or "stepping output" ('txxx' or 'dxxx')

e. Increment ^ and decrement v

Press ^/ v to set the function code or digital code

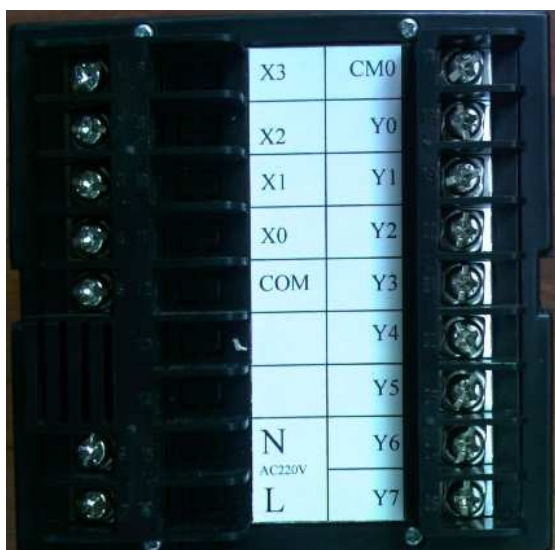
press and hold ^/ v to continuously increase or decrease the number

f. <</SET

press and hold the button for 1.5 seconds : Confirm the date or exit the date settings mode

press it : move adjustment to next digit in set and program mode

**2、Terminal function**



a. COM : input circuit common

b. X0、X1、X3、X4 : switch signal input (set the function by user )

COM0、Y0-Y7 : switch output point (relay output /2A)

c. L、N : supply power AC220V, 50Hz

**四. The description of function setting**

**a.PRG**

1.Parameter setting: Don't release PRG until the last digit of the upper display blink.(enter the programming m)

2.Function code switching : Press PRG momentarily so that the function code can be changed,for example ,  
'dXXX'  $\rightleftharpoons$  "tXXX" (the blinking digit can be changed)

After all the setting , press PRG for a while to exit the set mode.

**b.Increment  $\wedge$  and decrement  $\vee$**

The two buttons is used to change the parameter value .

**c. SET**

1. After setting the blinking digit ,press SET/  $\llcorner$  so that the next digit the user want to set will blink.

2. After the setting of the upper display ,press SET/  $\llcorner$  and don't release it until the last digit of the lower display blink.Now the digit of the display can be changed.

3. After all the setting,press SET/  $\llcorner$  and don't release it to save the date until the last digit of the upper display blink.

**step**

1、PRG: start setting the parameter. Press the button and hold until the last digit of the upper display blink.(“dXXX”or”tXXX”, for example ,set “tXXX” first)

2、SET : after confirming the function code, press and don't release the button until the last digit of the lower display blink. Now set the time (when the upper display shows “txxx”) or the output point (when the upper display shows “dxxx”)

3、Increment  $\wedge$  and decrement  $\vee$

The two buttons is used to change the parameter value .

4、SET: After all the setting,press SET and don't release it to save the date until the last digit of the upper display blink.

5、PRG: after setting the both display of “tXXX”, press PRG momentarily so that “tXXX” can become “dXXX”

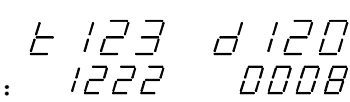
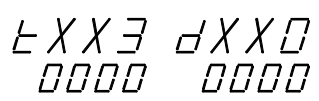
6、SET: when the upper display is “dXXX”, press and don't release the button until the last digit of the lower display blink. Now the output can be set.(detailed introduction please refer to the table “The Table of The Output” )

7、SET: After all the setting,press SET and don't release it to save the date until the last digit of the upper display blink.

8、set another “tXXX” parameter and complete every step.

9、After all the setting, press PRG and hold to exit the programming.

display	function	Remark/range
$\llcorner$ X X Y	“XX”=stepping time period “Y”contacts with the upper 4-digit $\rightleftharpoons$ “YXXXX”, ”Y”=0, 1, 2, 3, 4, 6(‘0’=0.1s, ’1’=1s, ’2’=1min, ’3’=jump instruction , ’4’=end instruction , ’6’=maintain instruction)	0-99
$\square$ X X	“XX”=stepping output section	Output point yo-y7
0XXXX	‘0’=0.1seconds as a unit	0-999.9s

	Example : "0359" =35.9s "9999"=999.9	
<u>1</u> XXXX	'1'=1second as a unit	0-9999s
<u>2</u> XXXX	'2'=1min as a unit	0-9999mins
<u>3</u> XXXX	Jump instruction t XX 3XXXX The jump order and the number of cycle (the fourth digit of upper display set to be 3)  d XX 00XX XX=the jump position	 Example 1 the first jump, the cycle 222 times the jump position, start from the eighth-segment   Example 2: Circulate running according the program Start from 0-segment
4XXXX	end instruction t XX4 0000	The program will end when execute the instruction.
5XXXX	maintain instruction t XX5 d XX0 0000 00XX	The programs will maintain the status quo when execute the instruction.

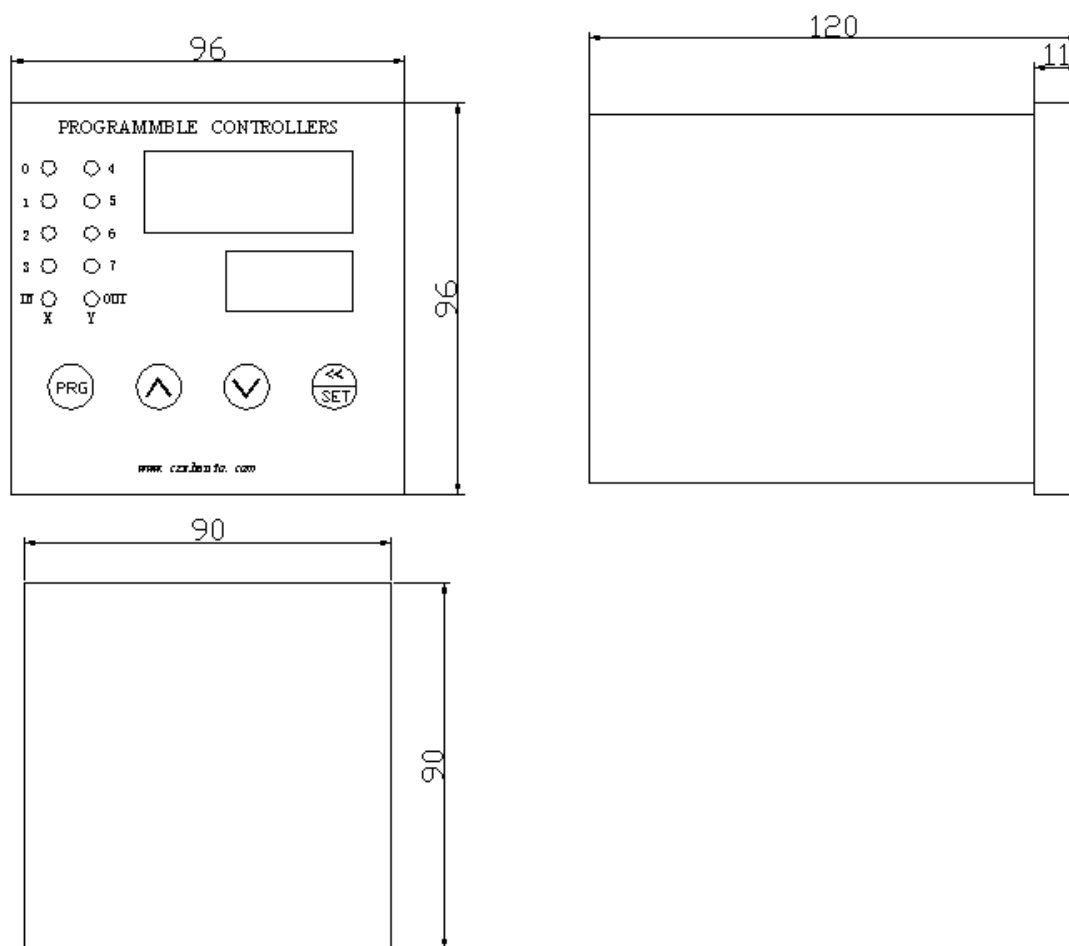
**The Table of The Output**

○--no-output

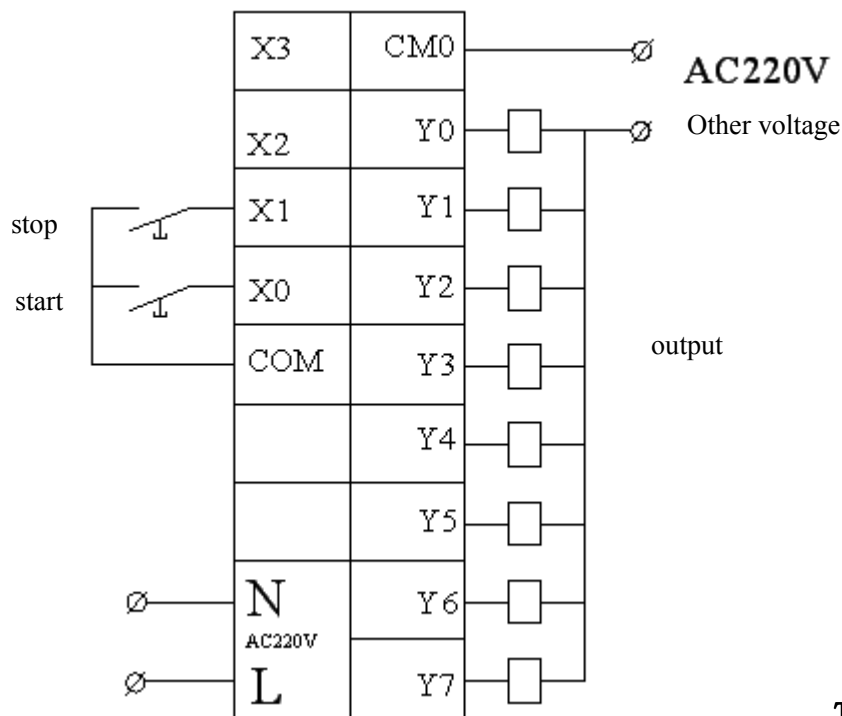
●--output

	Y 0	Y 1	Y 2	Y 3		Y4	Y5	Y6	Y7
XXX0	○	○	○	○	XX0X	○	○	○	○
XXX1	●	○	○	○	XX1X	●	○	○	○
XXX2	○	●	○	○	XX2X	○	●	○	○
XXX3	●	●	○	○	XX3X	●	●	○	○
XXX4	○	○	●	○	XX4X	○	○	●	○
XXX5	●	○	●	○	XX5X	●	○	●	○
XXX6	○	●	●	○	XX6X	○	●	●	○
XXX7	●	●	●	○	XX7X	●	●	●	○
XXX8	○	○	○	●	XX8X	○	○	○	●
XXX9	●	○	○	●	XX9X	●	○	○	●
XXXA	○	●	○	●	XXAX	○	●	○	●
XXXB	●	●	○	●	XXBX	●	●	○	●
XXXC	○	○	●	●	XXCX	○	○	●	●
XXXD	●	○	●	●	XXDX	●	○	●	●
XXXE	○	●	●	●	XXEX	○	●	●	●
XXXF	●	●	●	●	XXFX	●	●	●	●

### 五、The Dimensions and Perforate Dimension



Perforate Dimension



Terminal Diagram

- Press PRG for 3s to enter programming
- Press PRG momentarily to switch the function code txx or dx
- Press SET for 3s to set the parameter of the lower display
- After every setting , press SET for a while to save
- Press SET momentarily to move
- Increment ^ and decrement v
- After all setting ,press and hold PRG to exit the program

Start: 1min interval ,Y0 outputs for 1s  
 1min interval ,Y1 outputs for 1s  
 1min interval,Y2 outputs for 1s  
 1min interval ,Y3 outputs for 1s  
 1min interval ,Y4 outputs for 1s  
 1min interval ,Y5 outputs for 1s  
 1min interval ,Y6 outputs for 1s  
 1min interval ,Y7 outputs for 1s  
 Start cycle from the first step

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t00  0    1min interval. T00 0 ,00=stepping          t08  0
      0600    time period, 0=0=0.1s as a time        0600          1min interval
      d00     unit ,0=1=1s, 0=2=1min                 d08
      0000    0600*0.1s=60s=1min                     0000
              "d00" (output) ,
              "0000" (no-output)

t01  0    t010, 0010*0.1s=1s                        t09  0
      0010          t010, 0010*0.1s=1s                0010          Y4 output
    
```

d01	'0001' Y0-output	d09	
0001		0010	
t02 0		t10 0	
0600	1min interval	0600	1min interval
d02		d10	
0000		0000	
t03 0		t11 0	
0010	Y1 output	0010	Y5 output
d03		d11	
0002		0020	
t04 0		t12 0	
0600	1min interval	0600	1min interval
d04		d12	
0000		0000	
t05 0	Y2 output	t13 0	Y6 output
0010		0010	
d05		d13	
0004		0040	
t06 0	1min interval	t14 0	1min interval
0600		0600	
d06		d14	
0000		0000	
t07 0	Y3 output	t15 0	Y7 output
0010		0010	
d07		d15	
0008		0080	
			<u>t163 0000</u>
		t16 3	30000⇒endless loop
		0000	0000 ⇒ start the cycle
		d16	from the first step
		0000	