The Instruction of ZYT20 Microcomputer Time Control Switch

Be sure to read this instruction carefully before use, in order to use this product correctly.
Please keep the instruction carefully after reading.

Function and Purpose

This product can automatically turn on and off the power of various electrical equipment according to the time set by the user.Control objects can be street lights, neon lights, advertising signs, production equipment which needs to be opened and closed on timing.

Performance metrics

Working Power : AC/DC24~2650V(50/60Hz)

Switching capacity : Resistive: 10A Capacitive/Perceptual 2A

Dissipated power : <2W

Time control range : 1min~168hrs

Timing times : 20 groups(20on 20off)

Timing error : ≤±2S/day

Ambient temperature : -10~50 ℃ (frost free)

Size : 87×67×19mm

Weight : about 73g

Display symbol interpretation

TL — Clock
PROG — Program
MODE — Mode
C/D — Countdown
CLR — Clear
ON — 0n
OFF — Off
AUTO — Auto
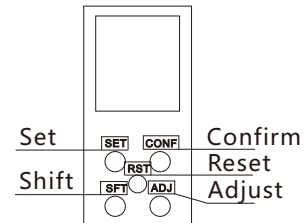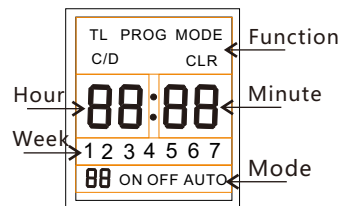
Function and Key buttons

Working Status: The state after initial power-on or reset and the state of running according to the program and working mode set by the user
Operation mode:Automatic: the mode of automatic execution according to the on/off program programmed by the user;
On: the switch is in the open state: the normally closed contacts 3 and 4 are disconnected, and the normally open contacts 3 and 5 are closed;
Off: the switch is in the closed state: normally closed contacts 3 and 4 are closed, and normally open contacts 3 and 5 are disconnected;
On Automatic: the switch is immediately turned on, and then automatically executes according to the user-programmed on/off program;
Off Automatic: The switch is turned off immediately, and then the mode is automatically executed according to the on/off program program-med by the user;
Week mode is the same every day ("123456" every day is the same), every day is different (respectively select "1,2,3,4,5,6,7"), 135, 246 , 123, 456, 12345, 123456, 67, a total of 9 modes;
Countdown: Countdown On (delay on): the switch is off, when the countdown time reaches 0, the switch is on;
Countdown Off (delay off): the switch is on, when the countdown time reaches 0, the switch is turned off;
Note: the longest countdown time is 99 hours and 59 minutes, and the shortest is 1 minute;
Indicator light: When there is no external power supply, the light does not light; when there is an external power supply:
The switch is off, the red light is on; the switch is on, the green light is on;
When the countdown is working: the switch is off, the red light flashes; the switch is on, the green light flashes.

Key Definition

【SET】Press this key to enter the main menu in the working state, press this key to return to the upper-level menu in the setting state, and return to the working state by pressing this key in the main menu interface;
【Confirm CONF】 Enter the sub-menu after confirming the selected item in the setting state;
【Shift SFT 】The setting state is the selection key of the submenu or the item to be set, and the operation function key is the "countdown on " in the working state;
【Adjust ADJ】In the setting state, adjust the parameters of the item to be set, and operate the function key in the working state of "countdown off";
【Reset RST】 In any state, press this key to reset the system, and all parameters must be reset;

Function Setting process

In the working state, press the 【SET】 key to enter the main menu, and then press the 【SHIFT SFT】 key to cycle through 5 submenus: Clock→Program→Mode→Countdown→Clear, and the selected submenu will flash;
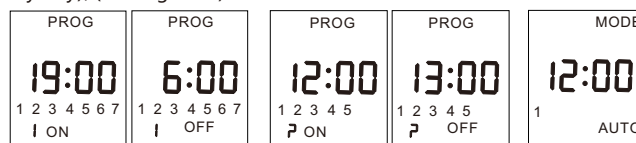
1. Calibration time Select the clock in the main menu, the clock TL flashes, press the 【CONF】 key to enter the clock setting interface, at this time, press the 【SHIFT SFT】 key to cycle through the ten digits of the hour → the one digit of the hour→ Tens digit of minute → One digit of minute → Week (displaying a digit of one, two, three, four, five or six days) 5 options, the selected option will flash and display, press [Adjust ADJ] key to adjust the flashing option . After this, press 【SET】 key to return to the main menu, and then select another submenu to set, or press 【SET】 key again to return to the working state.

2.On/off setting Select the program in the main menu, the program PROG flashes, press the 【Confirm CONF】 key to enter the program menu, at this time press the 【Shift SFT】 key to cycle through the selection of "1 on → 1 off → 2 on →2 off...20 on→20 off" 40 options in toatal. When an item is selected, press the 【CONF】 key to enter the time and week mode setting interface of this item. The time setting method is the same as that in this section "1. Correct the time" ; set the week mode and each time you press the 【Adjust ADJ】 button to select "1→2→3→4→5→6→Day→135→246→123→456→12345→12 3456→6 days→123456 days", the user can choose according to their needs, if not, the default is "123456 days" (the same every day), After finishing , press 【SET】 key to return to the program menu, and then select the next item to set. Or continue to press the setting key to return to the main menu or working state.

3. Working mode setting: in the main menu, the MODE flashes, press the 【Confirm CONF】 key to enter the mode setting interface (the default mode is "Auto"), and press the 【Adjust ADJ】 key each time to select On → Off. →Auto on →Auto Off →Auto, after selecting, press the 【SET】 key to return to the working state, and the time-controlled switch will run according to the selected working mode.

Time Control setting example

4. Countdown setting Divided into "countdown on" and "countdown off". Select countdown in the main menu, countdown C/D flashes, press 【CONF】 key to enter the countdown menu, then press 【Shift SFT】 key to select "ON (countdown on)", then press 【Confirm CONF】 key to enter the time setting interface of "Countdown On", the time setting method is the same as "1. Correction time" in this section. After completion, press the 【SET】 key to return to the countdown menu, then press the 【SHIFT SFT】 key to select "OFF (countdown off)", press the 【CONF】 key to enter the time setting interface of "Countdown Off", the time setting method is the same This section "1. Correction time". When finished, press 【SET】 key to return to the working state.

5. ClearSelect clear in the main menu to clear CLR flickering, press 【Confirm CONF】 key to enter the clear menu, at this time, press 【Shift SFT】 key to select " On → Off → 1 On → 1 Off→2 on → 2 off...20 on → 20 off", when an item is selected, press the 【ADJ】 key to clear the time of the item, after clearing it will display " ". To restore, press againPress 【Adjust ADJ】 key. When finished, press【SET】key to return to the working state.

6. Example of time control setting: The working hours of an electrical appliance are: A. Open at 19:00 every day and close at 6:00 the next day; B. Open at 12:00 and close at 13:00 from Monday to Friday;

   A: Select 1 On, set the time to 19:00, and set the week to "123456" (same for every day); select 1 Off, set the time to 6:00, and set the week to "Monday and Tuesday" Three, four, five and six days" (the same every day); (see Figure 2)

   B: Select 2 On, set the time to 12:00, and the week to "12345"; select 2 Off, set the time to 13:00, and the week to "12345"; (see Figure 3) Steps A and B above

   After the setting is completed, set the working mode to "Auto" according to the method of "3. Working mode setting" in this section.

PROG	PROG	PROG	PROG	MODE
19:00	**6:00**	**12:00**	**13:00**	**12:00**
1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 3 4 5	1 2 3 4 5	1
1 ON	1 OFF	2 ON	2 OFF	AUTO

Countdown Setting Example

A. If an electrical appliance needs to be turned on immediately and turned off after 8 hours, the following operations can be done:

A1. Set the "OFF" time to 08:00 according to the method of "4. Countdown time setting" in Section 4, and then return to the working state;

A2. Press and hold the [Adjust] key for 3 seconds in the working state After the green light flashes, it will enter the countdown state, the switch is turned on, and it will automatically close after 8 hours. (See Figure 5)

B. If an electrical appliance needs to be turned on after a delay of 6 hours, the following operations can be done:

B1. According to the method of "4. Countdown time setting" in Section 4, set the "ON (countdown on)" time to 06:00, and then return to the working state; B2. Press and hold the [Shift] key in the working state for 3 more than a second, until the red light flashes, it will enter the countdown state, the switch is disconnected, and it will automatically turn on after 6 hours. (See Figure 6)

Exit: Press and hold the [Shift]/[Adjust] key for more than 3 seconds in the countdown working state to exit the "Countdown On/Countdown Off" working state. Pause: Press the [Shift]/[Adjust] key in the countdown working state (normal key, the time is less than 3 seconds) to pause and resume the "Countdown On/Countdown Off" runs
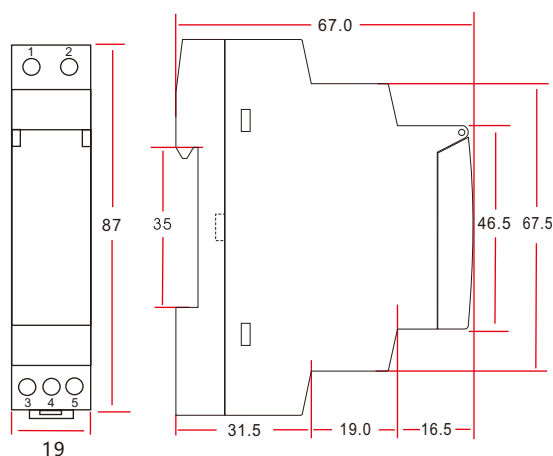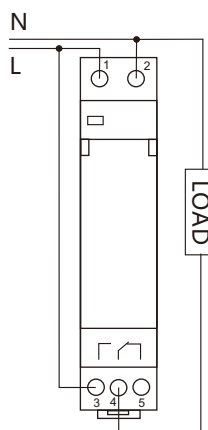
C/D	C/D
08:00	**08:00**
[] OFF	⌐ OFF

A

C/D	C/D
06:00	**06:00**
[]ON	⌐ON

B

Installation dimension and Wiring diagram

67.0

87 35

46.5 67.5

31.5 — 19.0 — 16.5

19

Unit:mm

N
L

LOAD

220V Wiring diagram

Instruction :
The contact capacity of this product is 10A (resistive). Please consider the size of the load and its characteristics when wiring, and multiply the load factor listed in the table below. If it is smaller than the contact capacity of this product, you can connect it directly (as shown on the left). If it is larger than the contact capacity of this product, please install an expansion relay (AC contactor or solid state relay) to prevent the product from burning and affecting the normal operation of your equipment!

Table of load current derating coefficients

Loadtype	Resistance	Electric heating	Incand Escent	LED light	Transf ormer	Motor
Derating factor	1	0.8	0.5	0.3	0.5	0.2

Example:
The rated current of this product is 10A, and the actual upper limit of the load with LED lightsis 10*0.3=3A.

Notices

● Do not use this time-controlled switch for those equipment (such as medical equipment and large-scale equipment, etc.) that may cause accidents related to human life or have a major impact on society due to the error of the time-controlled switch.

● For those equipment (large heaters or refrigerators, etc.) that cause heavy property damage due to the error of the time-controlled switch, when using this time-controlled switch, please make sure that the values of characteristics and performance have sufficient margin, and take two measures if necessary. Safety measures such as heavy circuits.

● Do not repair, disassemble or transform by yourself. Please entrust the repair, inspection and other work to the dealer or the unit responsible for the construction.

● Do not touch the terminal part after turning on the power.

● The switch can only work in a gas environment without moisture, corrosion and high metal content. Do not contaminate it with oil or water.