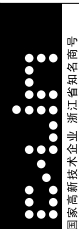




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C-Lin 欣灵

使用说明书
Products Instructions

HHQ4-J

Time Control Switch (Latitude and Longitude Type)

Thank you very much for using the C-Lin Brand Time Control Switch. Please read the instruction manual before using the product!

03A036Q1

I. Overview

The HHQ4 - J Time Control Switch (Latitude and Longitude Type) (hereinafter referred to as the time - control switch) adopts a dedicated timing chip and an LCD liquid crystal display, and has advantages such as high timing accuracy and a wide time - control range. It is widely applied to occasions where electrical equipment and household appliances (such as street lamps, neon lights, advertising sign lamps, production equipment, radio and television equipment, etc.) need to be turned on and off at fixed times. It can also automatically adjust the light - on and light - off times according to the local latitude and longitude and with seasonal changes.

This time - control switch meets the relevant requirements of GB/T 14536.8.

II. Main Technical Data

1. Operating power supply (control power supply voltage): AC 220V, 50Hz;
2. Allowable voltage fluctuation range: 85% ~ 110% of U_e (rated voltage);
3. Time - control range: 1 minute ~ 168 hours;
4. Latitude range: 15° N ~ 50° N;
5. Longitude range: 75° E ~ 135° E;
6. Number of timing settings: 16 groups, available for both automatic and manual operations;
7. Timing error: ± 1 second per day;
8. Power consumption: < 8W;

Table (continued)

City	East Longitude	North Latitude	City	East Longitude	North Latitude
Chengdu	104.1	30.6	Xiamen	118.1	24.4
Chongqing	106.6	29.8	Guangzhou	113.2	23.1
Lanzhou	103.6	36.0	Hai kou	110.3	20.0
Yinchuan	106.4	38.5	Hong Kong	114.2	22.3
Urumqi	87.7	43.8	Macau	113.6	22.2
Lasa	91.1	29.7	Taipei	121.5	25.0

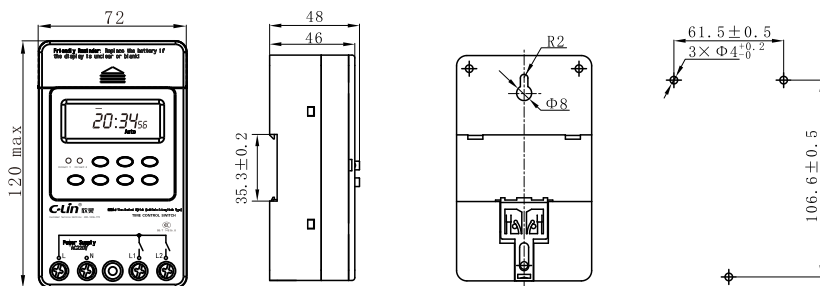
Appendix: Latitude and Longitude Reference for Major Cities across China

Table

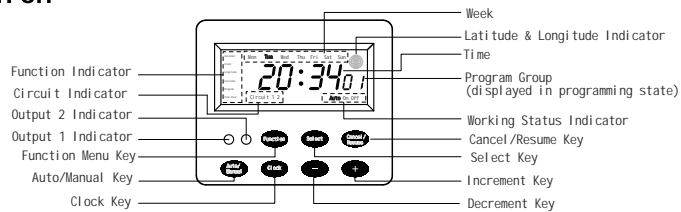
City	East Longitude	North Latitude	City	East Longitude	North Latitude
Beijing	116.5	40.0	Jinan	117.0	36.7
Hohhot	112.2	40.9	Qingdao	120.3	36.1
Shenyang	123.4	41.8	Nanjing	118.8	32.0
Dalian	121.6	39.0	Shanghai	121.5	31.2
Changchun	125.3	43.9	Hangzhou	120.2	30.3
Harbin	126.7	45.7	Hefei	117.3	31.9
Tianjin	117.2	39.1	Nanchang	115.9	28.7
Shijiazhuang	114.4	38.0	Changsha	113.0	28.2
Taiyuan	112.6	37.8	Nanning	108.4	22.8
Zhengzhou	113.8	34.8	Guiyang	106.7	26.6
Wuhan	114.3	30.6	Kunming	102.7	25.1
Xi'an	108.9	34.2	Fuzhou	119.3	26.1

- 9. Ambient temperature: -10 ~ 40 ;
- 10. Contact capacity: 3A AC250V per channel (resistive load) (utilization category AC-15);
- 11. Altitude: 2000m;
- 12. Humidity: When the maximum temperature at the installation site is 40 , the relative humidity of the air shall be 50%. At lower temperatures, a higher relative humidity is permissible (e.g., up to 90% at 20). Special measures shall be taken for occasional condensation caused by temperature changes;
- 13. Pollution degree: Class 3;
- 14. Mounting methods: Panel mounting, 35mm DIN rail mounting, wall - mounting;
- 15. Conventional heating current I: 5A;
- 16. Rated insulation voltage Ui: 400V;
- 17. Rated impulse withstand voltage Uimp: 2.5kV.

III. Outline and Mounting Hole Dimensions (mm)



IV. Panel Description



4. When keys become unresponsive or the device fails to keep time: The product may crash due to severe electromagnetic interference, ambient temperature, or other reasons. Follow item 10 in "V. Instructions for Use" to reset the product or remove the battery. Wait for the product to reset for 5 - 10 seconds, then reinstall a new battery (pay attention to the battery polarity). Finally, cover the battery compartment properly.

5. If the above methods fail to troubleshoot the issue, please contact our company or the local dealer for handling.

VIII. Precautions

1. If the product operates in humid, corrosive environments, or in gases with high metal content, or if the product gets stained with oil or water, its normal operation will be affected.
2. When installing the battery, be sure to pay attention to the battery polarity. Incorrect polarity installation may cause product damage.
3. To prevent contact overheating under strong current, be sure to tighten the screws of the terminal posts during wiring.
4. After the product is connected to the power supply, do not touch live parts.

IX. Ordering Information

When placing an order, specify the product model, voltage rating, and quantity. If there are special requirements, they should be noted separately.
Example: HHQ4 - J AC220V, 100 pieces

VII. Troubleshooting

1. If the product fails to work properly after power - on, check whether the power input terminal is correctly connected to a power supply with a voltage rating matching the product.

2. If the display becomes blank or abnormal after the product has been used for a period of time, it may be that the battery is dead. Remove the battery, wait for about 5 - 10 seconds for the product to reset, then reinstall a new battery (pay attention to the battery polarity), and close the battery cover properly.

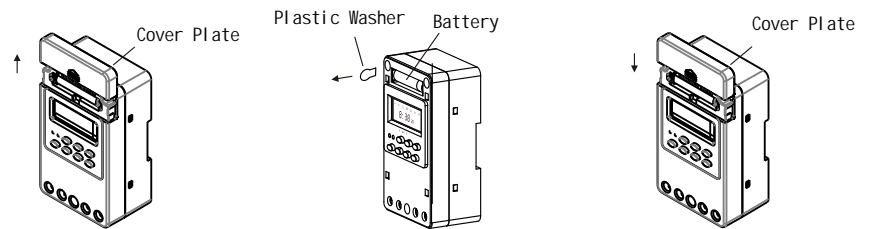
3. If the product fails to turn on or off as preset, it may be due to the following reasons:
a) During "timing setting", the week mode is not set correctly. Reset the week mode as required by the "timing program setting method".

b) During "program setting", too many redundant program groups are set. Press the "Cancel/Resume" key to cancel the redundant program groups until "----" is displayed.

c) The "working state" is not set correctly. That is, when the current time is in the automatic start state, the "working state" on the display should be in the "Auto" position. If not, adjust the on/off setting of the current time from "On" or "Off" to the "Auto" state.

V. Instructions for Use

1. Battery Installation

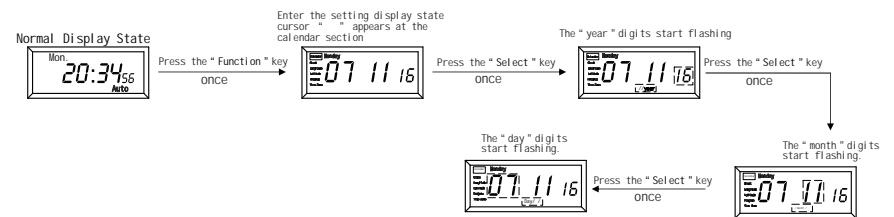


(1) Push the cover plate upward to open it.

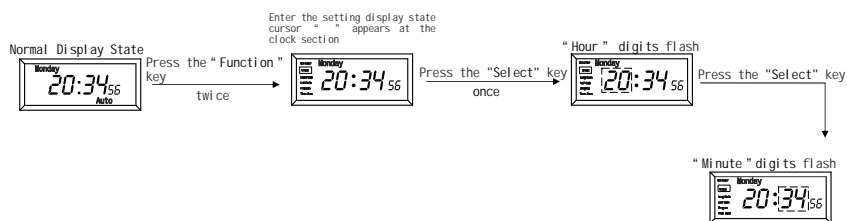
(2) Pull out the plastic washer.

(3) Snap the cover plate back into place.

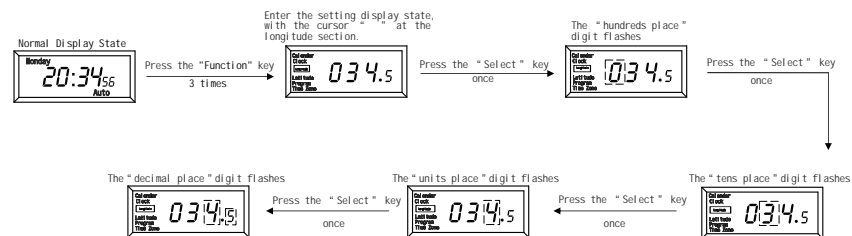
2. Calendar Setting



3. Clock Setting



4. Longitude Setting



1. Wiring for Direct Control Mode: If the controlled load is single - phase powered and its power consumption does not exceed the rated capacity of this time - controlled switch, the direct control mode can be adopted. The wiring method is shown in Example 1.

2. Wiring for Single - phase Capacity Expansion Mode: If the controlled load is single - phase powered but its power consumption exceeds the rated capacity of this time - controlled switch (resistive load exceeds 3A, inductive load exceeds 0.5A), an AC contactor with a capacity exceeding the load power consumption is required for capacity expansion. The wiring method is shown in Example 2 (the coil operating voltage of the AC contactor is AC220V).

3. Wiring for Three - phase Working Mode: a) If the controlled load is three - phase powered, an external AC contactor is required. b) If the coil voltage of the control contactor is AC220V 50Hz, the wiring method is shown in Example 3. c) If the coil voltage of the control contactor is AC380V 50Hz, the wiring method is shown in Example 4.

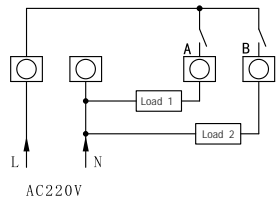
Note 1: The load can be a street lamp, and (the output) can be directly connected to the two wires of the lamp tube. (As shown in Example 1).

Note 2: KM is an AC contactor, and (the output) can be directly connected to the A1 and A2 terminals of the AC contactor (as shown in Example 2 and Example 3).

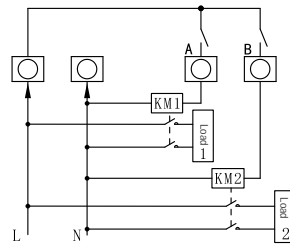
Note 3: The coil operating voltage of KM in Example 4 is AC380V.

VI. Application Circuit Examples

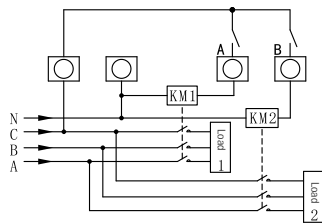
Example 1 :



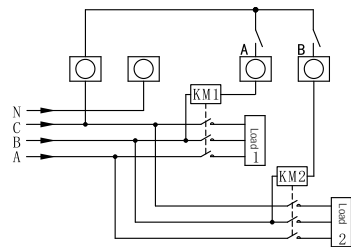
Example 2 :



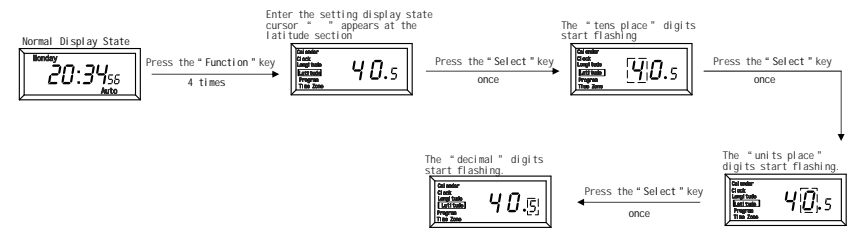
Example 3 :



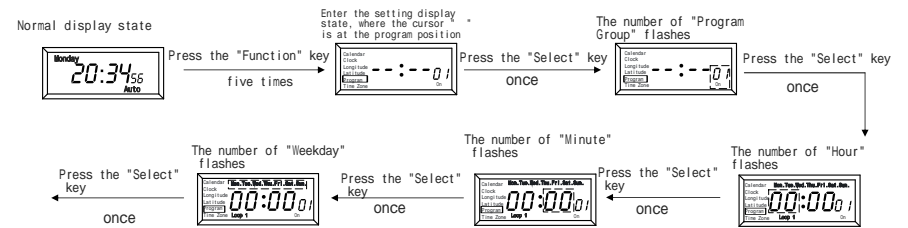
Example 4 :

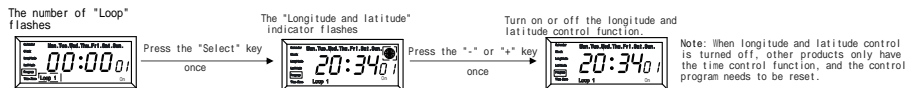


5. Latitude Setting

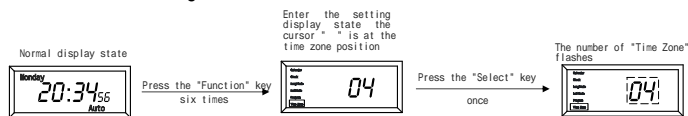


6. Setting of Timing Program





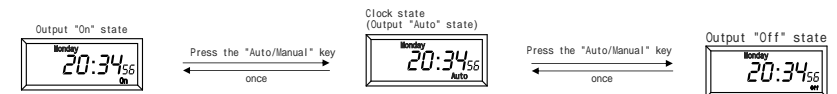
7. Time Zone Setting



8. Cancellation/Recovery of Timing Program Setting



9. Manual Operation



Note: In the setting state, when digits are flashing, press the "+" or "-" key to change digit parameters.

10. Reset Function: If re-setting is required, long press the "Cancel/Recover" key for 6 seconds to reset to the initial state.

11. If the set start time is earlier than the clock time (for example, the current clock time is 9:00 and the set start time is 8:00), the system will not start by default this time and will start automatically next time. If you want to start it, you need to press the "Auto/Manual" key to adjust to the "On" state, start it manually this time, then adjust the state back to the "Auto" state, and execute automatic control.