

I. Overview

The HH04 - G time - control switch (light/rain control) (hereinafter referred to as the time - control switch) adopts a dedicated timing chip and an LCD liquid - crystal display. It has advantages such as high timing precision and a wide time - control range. It is widely applied in places where electrical devices and household appliances need to be turned on and off at fixed times, including street lamps, neon lights, advertising sign lamps, production equipment, and radio and television equipment.

This time - control switch complies with the relevant requirements of GB/T 14048.5.

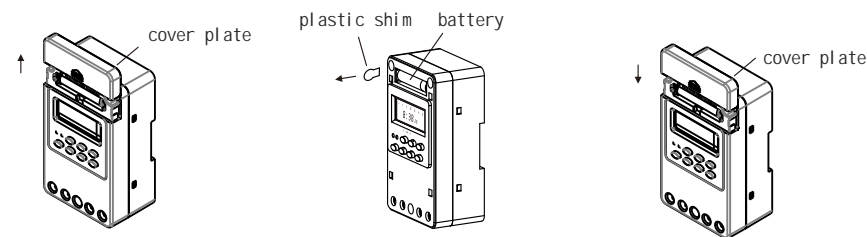
II. Main Technical Data

- Working Power Supply (Control Power Supply Voltage): AC/DC 100V - 240V;
- Allowable Voltage Fluctuation Range: 85% - 110% of U_n ;
- Working Modes: Time control, light control, rain control;
- Time - Control Range: 1 minute-168 hours;
- Number of Timing Settings: 16 groups, available in both automatic and manual modes;
- Timing Error: ± 1 second per day;
- Power Consumption: $< 5W$;
- Ambient Temperature: $-10 \sim 40$;
- Contact Capacity: 20A AC250V (resistive load);
- Altitude: 2000m;
- Humidity: When the maximum temperature at the installation site is 40 , the relative humidity of the air shall be 50% ; Higher relative humidity is permissible at lower temperatures (e.g., up to 90% at 20). Special measures shall be taken for condensation occasionally caused by temperature changes.
- Pollution Degree: Grade 3;
- Installation Methods: Panel - mounted, DIN - rail - mounted, wall - mounted;
- Conventional Heating Current (I_n): 20A;
- Rated Insulation Voltage (U_i): 250V;
- Rated Impulse Withstand Voltage (U_{imp}): 4KV;
- U_i, I_n : For the usage category, the rated operating voltage U_e and rated operating current I_e are as follows: AC - 15, U_e : AC250V, I_e : 20A.

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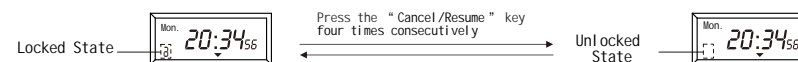
V. Instructions for Use

1. Battery Installation

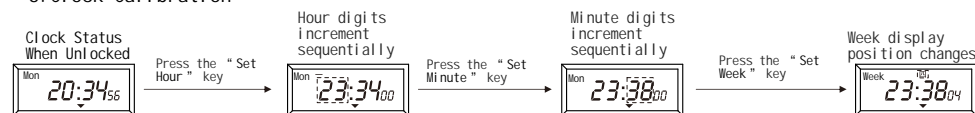


- Push upward to open the cover plate.
- Pull out the plastic shim.
- Snap the cover plate back.

2. Use of the keyboard lock: If no operation is performed on the keyboard within 30 seconds, the time - control switch will automatically lock to prevent misoperation.

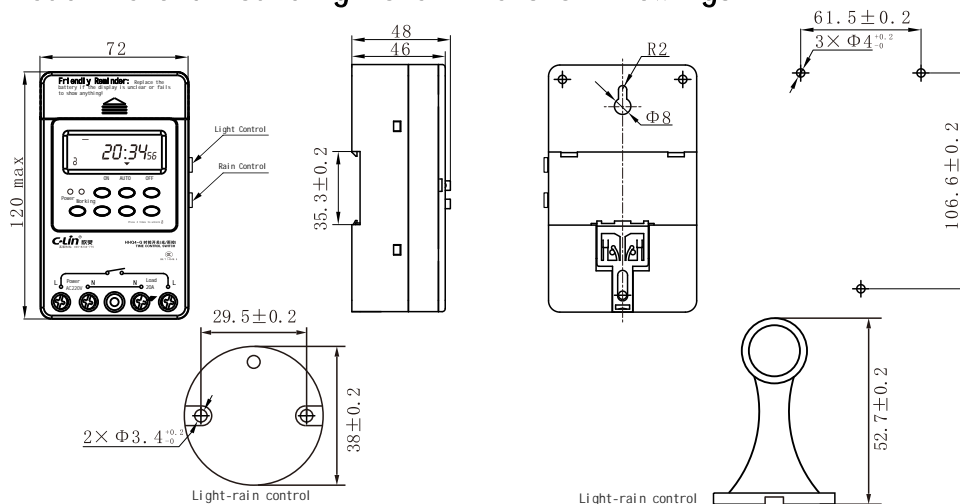


3. Clock Calibration

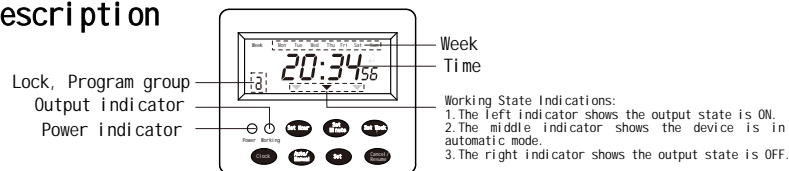


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III. Outline and Mounting Hole Dimension Drawings

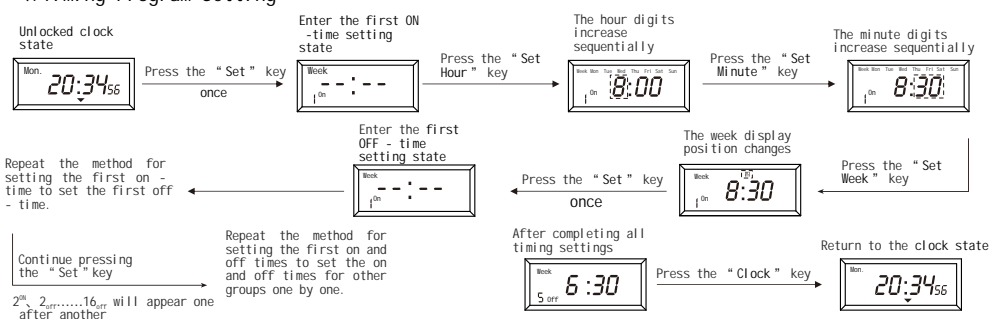


IV. Panel Description



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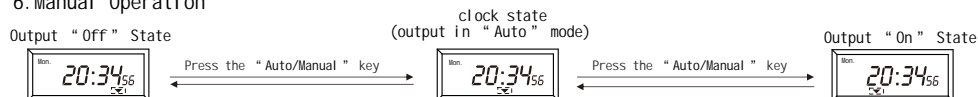
4. Timing Program Setting



5. Cancel/Resume Timing Program Settings



6. Manual Operation



7. If the set start - up time is earlier than the clock time (for example, the current clock time is 9:00 and the set start - up 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.

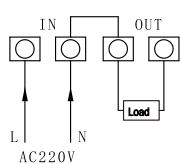
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8. Usage Methods of Light - Rain Probe

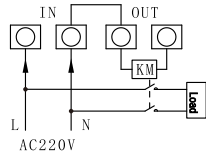
- a) When neither the light - control probe nor the rain - control probe is plugged in, this time - control switch only operates according to the timing settings.
- b) Light - control Usage Method: Plug in the light - control probe (the upper socket is for light control, and the lower one is for rain control). During the set on - time period: Light - control Usage Method: Plug in the light - control probe (the upper socket is for light control, and the lower one is for rain control). During the set on - time period: If there is no light, the time - control switch delays for about one minute and then turns on. If there is light during the on - time, the time - control switch does not turn on. When the light disappears, the time - control switch turns off after about one minute. After the light disappears, it restores the on - state after about one minute. The illumination intensity for on - off control is generally $25LX \pm 5LX$.
- c) Rain - control Usage Method: Plug in the rain - control probe. During the set on - time period: Rain - control Usage Method: Plug in the rain - control probe. During the set on - time period: If the probe senses rainwater, the switch turns off immediately. After the rainwater disappears, it restores the on - state after about one minute. The resistance when turned off (with rainwater) is $50k\Omega$, and the resistance when turned on (without rainwater) is $1M\Omega$.
- d) Using Light Control and Rain Control Simultaneously: Plug in both the light - control and rain - control probes. During the set on - time period: Using Light Control and Rain Control Simultaneously: Plug in both the light - control and rain - control probes. During the set on - time period: If there is either light or rainwater, the timing switch turns off. If there is neither light nor rainwater, the timing switch operates according to the original set program.
- e) For both light - control and rain - control functions to work, the time - control switch must be set to the "Auto" or "On" position.

VI. Application Circuit Examples (Product power supply takes AC220V as an example)

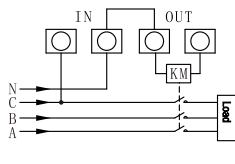
Example 1



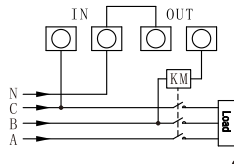
Example 2



Example 3



Example 4



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

2. Single - phase Capacity Expansion Wiring: If the controlled load uses single - phase power supply but its power consumption exceeds the rated capacity of this time - control switch (resistive load > 20A, inductive load > 5A), an AC contactor with a capacity higher than the load's power consumption is required for capacity expansion. The wiring method is as shown in Example 2 (the coil operating voltage of the AC contactor is AC220V).

3. Three - phase Working Wiring:

- a) For a controlled load with three - phase power supply, an external AC contactor is required.
- b) If the coil voltage of the control contactor is AC220V 50Hz, the wiring method is as shown in Example 3.
- c) If the coil voltage of the control contactor is AC380V 50Hz, the wiring method is as shown in Example 4.

Notes 1: The load can be a street lamp. The OUT (output) terminal can be directly connected to the two wires of the lamp tube (as in Example 1).

Note 2: KM represents an AC contactor. The OUT (output) terminal can be directly connected to terminals A1 and A2 of the AC contactor (as in Examples 2 and 3).

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

VII. Troubleshooting

- If the power indicator of the product does not light up after power - on, check whether the power input terminal is correctly connected to a power source that matches the product's operating voltage.
- If the display screen shows no content or displays abnormally after the product has been used normally for a period, it may be that the battery is exhausted. Remove the old battery, wait for the product to reset for 5s-10s, then reinstall a new battery (pay attention to the battery polarity) and close the battery cover properly.
- If the product fails to turn on or off as scheduled, the following reasons may apply:
 - The week mode was not set correctly during "timing setting". Please reset the correct week mode according to the method in "Timing Program Setting" as needed.

b) If extra program groups were set during "timing program configuration", press the "Auto/Manual" key to cancel them until the display shows "--:--".

c) Incorrect "working state" setting: When the current time should trigger automatic on/off, the downward arrow "↓" at the bottom of the display should be in the "Auto" position. If not, adjust from "On" or "Off" to "Auto" according to whether the device should be on or off at the current time.

4. Key Failure or Inaccurate Timekeeping: The product may freeze due to severe electromagnetic interference, extreme temperature, or other factors. Remove the battery, wait 5s-10s for the product to reset, then reinstall the new battery (noting polarity) and close the battery cover.

5. If the above methods fail to resolve the issue, contact our company or the local distributor for assistance.

VIII. Precautions

- The product's normal operation may be affected if used in humid, corrosive, or high - metal - content gas environments, or if contaminated by oil/water.
- When installing the battery, pay close attention to polarity; reverse installation may damage the product.
- To prevent contact overheating under high current, firmly tighten the terminal screws during wiring.
- After putting the timer into use, it is recommended to lock the keypad immediately to prevent misoperation.
- Do not touch live parts when the product is powered on.

IX. Ordering Information

When placing an order, specify the product model, voltage rating, and quantity. For special requirements, provide additional notes.

Example: HHQ4 - G AC220V, 100 units

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使用说明书
Products Instructions

HHQ4-G

Time - Control Switch (Light/Rain Control)

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

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