

I. Overview

The HHS1 series time relays (hereinafter referred to as relays) are of the on - energization time - delay type. They are suitable for use as time - delay elements in control circuits with an alternating current of 50Hz, a working voltage of 380V or less, or a direct - current working voltage of 24V. They can connect or disconnect the circuit according to the preset time. The relays adopt a dedicated timing chip and have the advantages of high time - delay accuracy, a wide time - delay range, large control capacity, low power consumption, long service life, preset by a DIP switch, dynamic display, and the ability to achieve increasing or decreasing display timing, etc. This series of relays complies with the relevant requirements of GB/T 14048.5.

II. Model and Its Meaning

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 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

- : Enterprise identification;
- : Time relay;
- : Design serial number;
- : Unmarked for increasing type, J for decreasing type;
- : Basic specification;
- : Auxiliary specification;
- : Power supply type (AC - alternating current, DC - direct current);
- : Voltage level (380V, 220V, 127V, 110V, 36V, 24V);
- : Mounting method (panel - type).

III. Main Technical Data

1. Product Model and Name
 - a) HHS1 (JS14S): Time relay.
 - b) HHS1 - 1 (DH14S): Time relay (increasing type).
2. Working Power Supply (Control Power Supply Voltage) AC380V, AC220V, AC127V, AC110V, AC36V, AC24V at 50Hz; DC24V. The allowable fluctuation range is (85% - 110%) of the rated voltage (Ue).
3. Display Device: Digital tube display.
4. Time - delay Range
 - a) For HHS1 (JS14S): 9.9s, 9.99s, 99s, 99.9s, 99.99s, 999s, 9999s, 9m59s, 99m, 99m59s, 999m, 9h59m, 99h59m.
 - b) HHS1 (JS14S) is adjustable. For HHS1 - 1 (DH14S): 0.01s - 99.99s, 1s - 99m99s, 1m - 99h99m (set by hour, minute, and second conversion switch).
5. Working Mode: On - energization time - delay.
6. Repeat Error: When the time - delay range is greater than 1s, Error 1%; when the time - delay range is less than 1s, Error 50ms.
7. Number of Contacts: 2 sets of time - delay conversions.
8. Contact Capacity: 3A AC250V (resistive).
9. Ambient Temperature: - 5 °C - 40 °C.
10. Altitude: 2000m.
11. Humidity: When the maximum temperature at the installation site is 40 °C, the relative humidity of the air 50%. At relatively low temperatures, a higher relative humidity is allowed. For example, at 20 °C, it can reach 90%. Special measures should be taken to prevent condensation due to temperature changes.
12. Pollution Degree: 3.

13. Mounting Method: Panel - type.

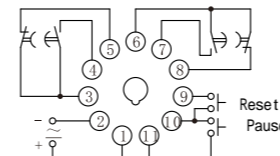
14. Conventional Heating Current (Ith): 5A.

15. Rated Insulation Voltage (Ui): 400V.

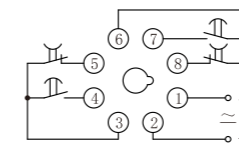
16. Rated Impulse Withstand Voltage (Uimp): 2.5KV.

17. Ue/Ie: Under the usage category, each rated working voltage (Ue)/rated working current (Ie): AC - 15, Ue: AC250V, Ie: 3A.

IV. Wiring Diagrams

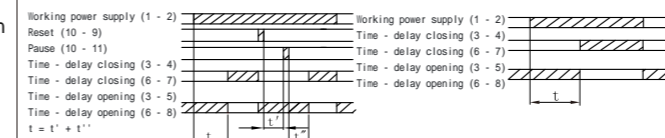


HHS1 (JS14S)、HHS1-1 (DH14S)



HHS1 (JS14S)
without Reset and Pause Functions

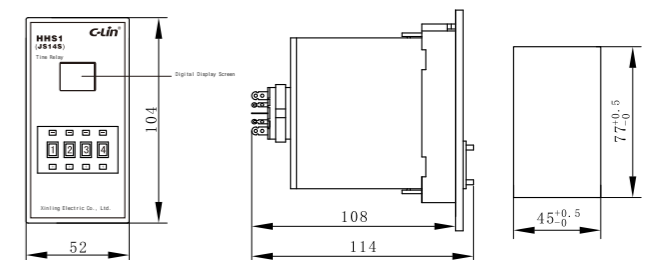
V. Working Timing Diagrams



HHS1 (JS14S)、HHS1-1 (DH14S)

HHS1 (JS14S)
without Reset and Pause Functions

VI. Outline and Cutout Dimension Diagram (mm)

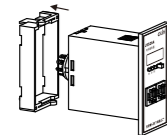


VII. Instructions for Use

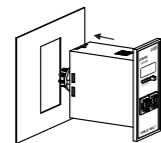
1. Connect the product to the control circuit according to the wiring diagram on the label of the relay cover and refer to the circuit examples in Section Nine.
2. Since the relay has a memory function, the time - delay time should be preset before power - on. The preset time after power - on is invalid. The interval between repeated startups of the relay should be no less than 0.5s.
3. Adjust the DIP switch to preset the time - delay time, then connect the power supply. The relay will start to operate according to the corresponding working timing in Section Five.
4. Reset Function: Connect the reset terminals (9, 10) at any time, and the relay will return to its initial state.
5. Pause Function: Connect the pause terminals (10, 11) at any time. The timing will pause, and the display will hold the current time. Timing will resume after disconnection.
6. In a strong electric field environment, when the connecting wires for the reset and pause functions are relatively long, shielded wires should be used. Do not route them in the same conduit as power lines. Do not apply voltage to or ground the reset and pause terminals to avoid damaging the product.

VIII. Installation Method

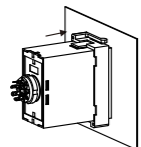
Note: The main circuit power supply must be cut off before installation or disassembly.



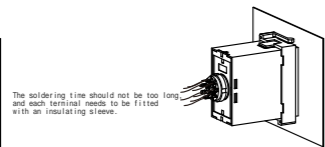
(1) Remove the card cover.



(2) Install the relay into the panel.



(3) Install the card cover, and the card cover should be tightly fastened to the panel.

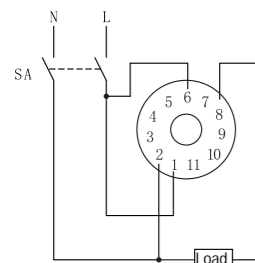


The soldering time should not be too long, and each terminal needs to be fitted with an insulating sleeve.

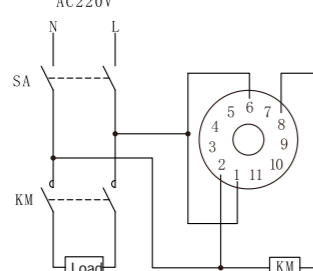
(4) Solder the wires according to the base sequence number.

IX. Application Circuit Examples (Taking HHS1 as an Example)

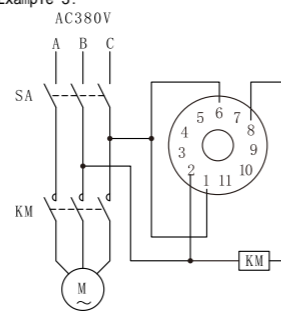
Example 1: AC220V



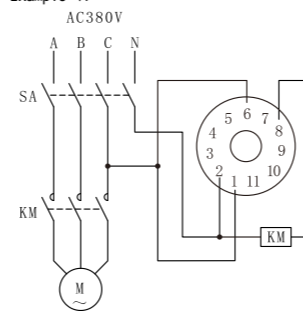
Example 2: AC220V



Example 3:



Example 4:



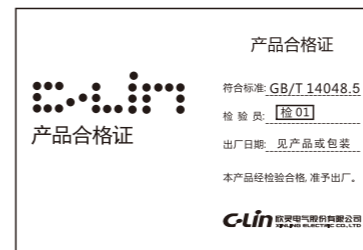
1. Single - phase load: If the resistive current of the load $\leq 3A$ or the inductive current $\leq 0.5A$, the relay controls directly. Refer to Example 1 for wiring. If the resistive current of the load $> 3A$ or the inductive current $> 0.5A$, the relay uses an AC contactor for capacity expansion. Refer to Example 2 for wiring. For a three - phase load, when the power supply of the AC contactor and the relay is AC380V, refer to Example 3 for wiring. When the power supply of the AC contactor and the relay is AC220V, refer to Example 4 for wiring.

2. Function of the relay in the examples: When the power supply is connected, the load or KM (AC contactor) is energized. After a time - delay to the preset value, the load or KM (AC contactor) is de - energized.

Note 1: If the load is a street lamp or a light bulb, it can be directly connected to the two wires at the port of the street lamp or light bulb (as shown in Example 1). Note 2: KM is the coil of the AC contactor. The two terminals A1 and A2 can be connected as per Example 2, Example 3, and Example 4. Note 3: The working power supply of the relay and KM in Example 3 is AC380V. Pay attention to the voltage rating of the selected product.

X. Ordering Information

The product model, voltage rating, time - delay range, and quantity should be specified. Special requirements should be noted separately. Example: HHS1 AC220V 99m59s 100 pieces.



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使用说明书
Products Instructions

HHS1 Series
Time Relays

We sincerely thank you for using C-Lin brand time relays. Please read the instruction manual before use!

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