

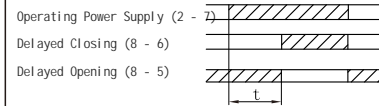
# I. Overview

The HHS8 (AH3) series time relays (hereinafter referred to as "relays") are suitable for use as time - delay components in control circuits with an alternating current of 50Hz, a rated voltage of 380V or less, or a direct - current operating voltage of 24V. They connect or disconnect the circuit according to the preset time. This series of relays complies with the relevant requirements of GB/T 14048.5.

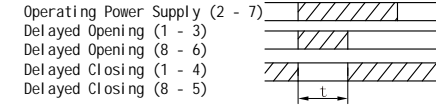
# II. Main Technical Data

Table

Product Model	HHS8-1 (AH3-1)	HHS8 (AH3-2)	HHS8C (AH3-3)	HHS8G (AH3 - 2 Release Delay)	HHS8-N□ (AH3-N□)
Product Name	Time Relay				
Operating Power Supply (Control Power Supply Voltage)	AC24V, 36V, 110V, 220V, 380V 50Hz; DC24V; Allowable voltage fluctuation range is (85%~110%) Ue				
Delay Range	1s, 3s, 5s, 10s, 30s, 60s, 3m, 5m, 10m, 30m, 60m, 3h, 5h, 10h, 12h			NA: 1s/10s/1m/10m; NB: 3s/30s/3m/30m; NC: 6s/60s/6m/60m; ND: 1m/10m/1h/10h; NE: 3m/30m/3h/30h;	
Repeat Error	≤1%				
Operating Mode	Power - on Delay	Power - on Delay	Power - on Delay (with Instant - acting Contacts)	Release Delay	Power - on Delay
Number of Contacts	1 set of delay contacts	2 sets of delay contacts	1 set of delay contacts 1 set of instant - acting contacts	2 sets of delay contacts	Mode A: 2 sets of delay contacts Mode B: 1 set of delay contacts 1 set of instant - acting contacts
Contact Capacity	3A AC250V (Resistive)				
Conventional Heating Current Ith	5A				
Rated Insulation Voltage Ui	400V				
Rated Impulse Withstand Voltage Uimp	2.5kV				
Ue/Ie	Under the usage category, each rated operating voltage Ue / rated operating current Ie: AC 15 Ue: AC250V, Ie: 3A				

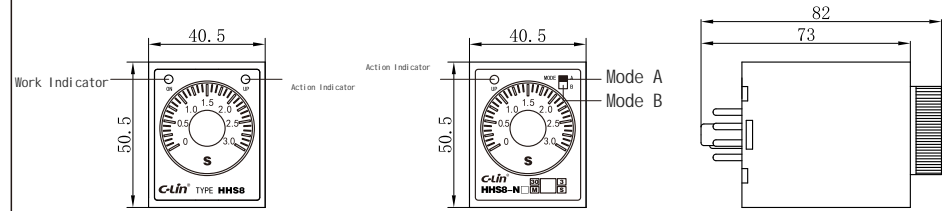


HHS8-1 (AH3-1)



HHS8G (AH3 - 2 Release Delay)

# V. Dimensions (mm)



HHS8 - 1 (AH3 - 1), HHS8 (AH3 - 2), HHS8C (AH3 - 3), HHS8G (AH3 - 2 Release Delay)

HHS8-N□ (AH3-N□)

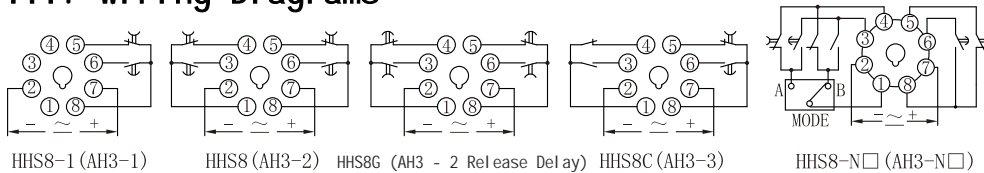
# VI. Instructions for Use

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 Article VIII.

Table (Continued)

Product Model	HHS8-1 (AH3-1)	HHS8 (AH3-2)	HHS8C (AH3-3)	HHS8G (AH3 - 2 Release Delay)	HHS8-N□ (AH3-N□)
Ambient Temperature	-5°C ~ 40°C				
Altitude	≤2000m				
Humidity	When the maximum temperature at the installation site is 40°C, the relative humidity of the air 50%. Higher relative humidity is allowed at lower temperatures, for example, up to 90% at 20°C. Special measures should be taken for condensation caused by temperature changes.				
Pollution Degree	Class 3				
Mounting Method	Can be installed in a panel - mounting type or on a 35mm DIN rail by using different bases.				

# III. Wiring Diagrams



HHS8-1 (AH3-1)

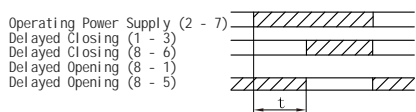
HHS8 (AH3-2)

HHS8G (AH3 - 2 Release Delay)

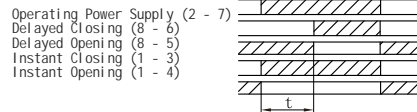
HHS8C (AH3-3)

HHS8-N□ (AH3-N□)

# IV. Operating Timing Diagrams



HHS8 (AH3-2), HHS8-N□ (AH3-N□) Mode A



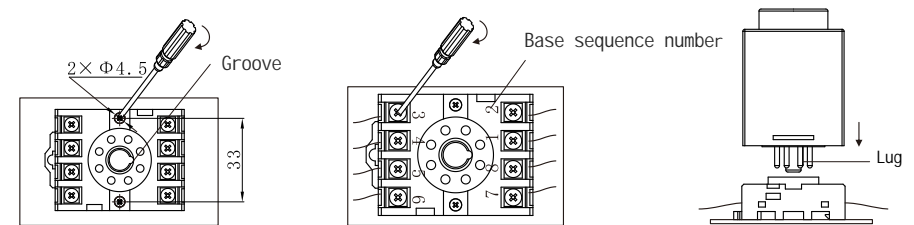
HHS8C (AH3-3), HHS8-N□ (AH3-N□) Mode B

2. Adjust the potentiometer and the range - selection switch to preset the delay time. Then connect the power supply, and the relay will start to operate according to the operating timing sequence in Article IV.  
3. Since the product's set time is set by the potentiometer, when users select the delay specification, they should set it to 2/3 of the maximum value of the nominal value. This can avoid large time deviations caused by setting a small delay time with a large - specification delay.

# VII. Installation and Removal Methods

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

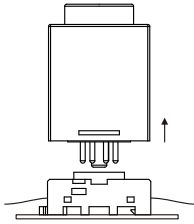
1. Panel - mounting installation: (1) (2) (3)
2. Panel - mounting removal: (4) (5) (6)
3. Rail - mounting installation: (7) (8) (9)
4. Rail - mounting removal: (10) (11) (12)



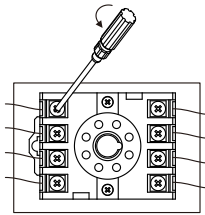
(1) Panel - mounting installation: Tighten the mounting screws.

(2) Panel - mounting installation: Connect the wires according to the base sequence number and tighten the terminal screws.

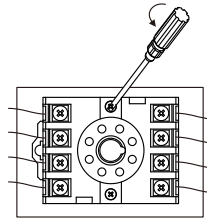
(3) Panel - mounting installation: Align the protrusions on the upper part of the relay with the grooves on the base.



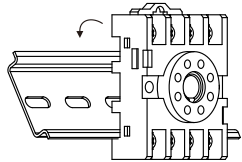
(4) Panel - mounting removal: Pull out the relay.



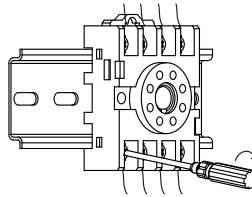
(5) Panel - mounting removal: Loosen the terminal screws and remove the wires.



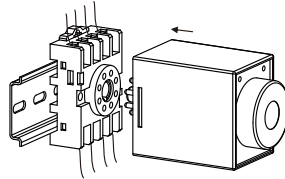
(6) Panel - mounting removal: Loosen the mounting screws.



(7) Rail - mounting installation: Snap the base onto the rail.



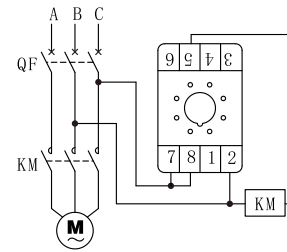
(8) Rail - mounting installation: Connect the wires according to the base sequence number and tighten the terminal screws.



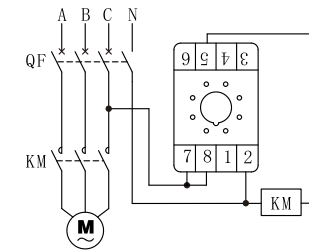
(9) Rail - mounting installation: Install the relay, aligning the protrusions on the relay with the grooves on the base.

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Example 3: AC380V



Example 4: AC380V



1. For single - phase loads, if the resistive current of the load  $\leq 3A$  or the inductive current  $\leq 0.5A$ , the relay controls directly, and the wiring refers to Example 1. If the resistive current of the load  $> 3A$  or the inductive current  $> 0.5A$ , the relay expands the capacity through an AC contactor, and the wiring refers to Example 2. For three - phase loads, when the power supply of the AC contactor and the relay is AC380V, the wiring refers to Example 3; when the power supply of the AC contactor and the relay is AC220V, the wiring refers to Example 4.

2. The function of the relay in the examples is: when the power supply is connected, the load or KM (AC contactor) is energized. After the preset delay time elapses, the load or KM (AC contactor) is de - energized.

Note 1: The load can be streetlights or light bulbs, which can be directly connected to the two wires at the port of streetlights or light bulbs (as shown in Example 1).

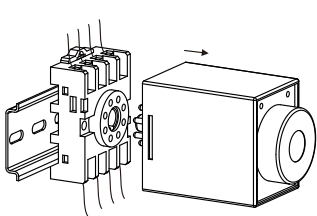
Note 2: KM is the coil of the AC contactor. The two terminals A1 and A2 can be wired according to Example 2, Example 3, and Example 4.

Note 3: The operating power supply of the relay and KM in Example 3 is AC380V. Attention should be paid to the voltage rating of the selected product.

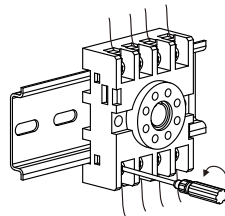
## IX. Ordering Information

The product model, voltage rating, delay range, and quantity should be specified. Special requirements should be noted separately. For example: HHS8 (AH3 - 2) AC220V 30s 100 pieces.

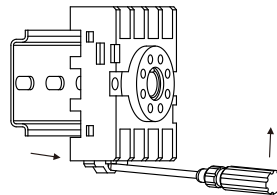
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(10) Rail - mounting removal: Pull out the relay.



(11) Rail - mounting removal: Loosen the terminal screws and remove the wires.

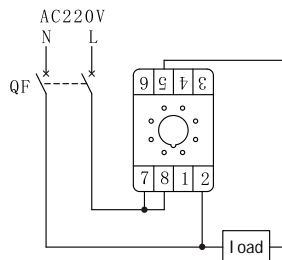


(12) Rail - mounting removal: Pry open the rail clip and remove the base.

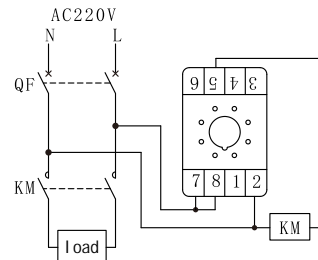
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## VIII. Application Circuit Examples [Taking HHS8 (AH3 - 2) as an Example]

Example 1:



Example 2:



### 产品合格证

符合标准: GB/T 14048.5

检验员: [检01]

出厂日期: 见产品或包装

本产品经检验合格, 准予出厂。

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使用说明书  
Products Instructions

HHS8 (AH3) Series  
Time Relays

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

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