Ⅰ.Overview

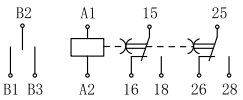
HHS18 series time relays (hereinafter referred to as relays) are suitable for use as time - delay elements in control circuits with AC 50Hz, working voltage of 380V or below, or DC working voltage of 24V, to connect or disconnect the circuit as required.

This series of relays complies with the relevant requirements of GB/T14048.5.

Ⅱ.Main Technical Data

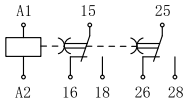
Item	HHS18	HHS18R	HHS18F
Working Power Supply (Control Power Supply Voltage)	AC24V AC36V、AC110V、AC220V、AC380V 50Hz,DC24V: Allowable voltage fluctuation range (85%~110%)Ue		
Working Mode	See Article 4 Working Sequence Diagram for details	Cyclic delay	Power - off delay
Setting Method	Panel Knob setting		
Delay Range	0.1s~120h (delay specification adjustable)	0.1s~100h (delay specification adjustable)	0.1s～1s; 0.2s～2s; 0.5s～5s; 1s～10s 3s～30s; 6s～60s; 12s～120s; 18s～180s
Repeat Error	When the delay range is greater than 1s, Er ≤ 1%; when the delay range is less than 1s, Dr ≤ 50ms.		When the delay range is greater than 1s, Er ≤ 5%; when the delay range is less than 1s, Dr ≤ 100ms.
Number of Contacts	HHS18 and HHS18R: two groups of time - delay conversion contacts. HHS18 - C and HHS18R - C: one group of time - delay contacts and one group of instantaneous contacts.		Two groups of time - delay conversion contacts.
Contact Rating	1A AC240V (resistive)	3A AC250V (resistive)	1A AC250V (resistive)
Ambient Temperature	-5℃～40℃		
Altitude	≤2000m		
Humidity	When the maximum temperature at the installation site is 40℃, the relative humidity of the air ≤50%. At lower temperatures, a higher relative humidity is allowed, for example, at 20℃, it can reach 90%. Special measures should be taken for occasional condensation due to temperature changes.		
Pollution Degree	Level 3		
Installation Method	Surface-mounted, Rail-mounted		
Conventional Heating Current Ith	5A		
Rated Insulation Voltage Ui	400V		
Rated Impulse Withstand Voltage Uimp	2.5KV		
Ue/Ie	Use categories under each rated working voltage Ue/rated working current Ie: AC - 15 Ue: AC240V (HHS18, HHS18F), AC250V (HHS18R), Ie: 1A (HHS18, HHS18F), 3A (HHS18R)		

Ⅲ. Wiring Diagrams



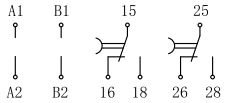
Note: A1 and A2 are power connection terminals, B1 and B2 are control terminals, and B2 and B3 are pause terminals.

HHS18

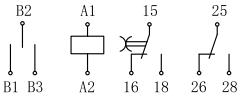


Note: A1 and A2 are power connection terminals.

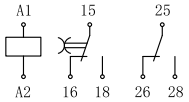
HHS18R



Note: A1 and A2 are power connection terminals, B1 and B2 are reset connection terminal.

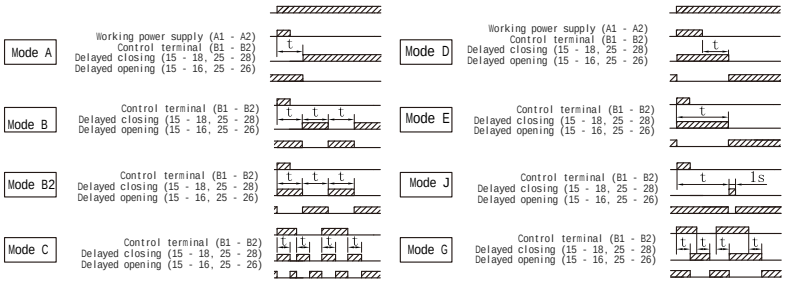


HHS18-C

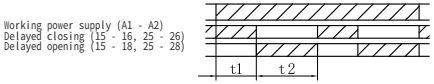


HHS18R-C

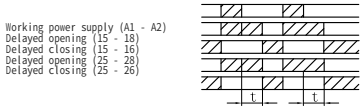
IV. Working Sequence Diagrams



HHS18



HHS18R



HHS18F

Introduction to HHS18 Working Modes

Mode A: After power - on, activate control terminals B1 and B2, start the delay. When the set delay time is reached, the relay energizes and the contact switches.

Mode B: After power - on, activate control terminals B1 and B2, start the delay. When the set delay time is reached, the relay energizes and the contact switches. After energizing for the same duration, the relay releases and the contact switches again. After releasing for the same duration, the relay energizes again, repeating this cycle. Mode B2: After power - on, activate control terminals B1 and B2, the relay immediately energizes, the contact switches, start the delay. When the set delay time is reached, the relay releases, the contact switches. After releasing for the same duration, the relay energizes again, repeating this cycle.

Mode C: After power - on, connect control terminals B1 and B2, the relay immediately energizes, the contact switches, start the delay. When the set delay time is reached, the relay releases, the contact switches. When disconnecting control terminals B1 and B2, the relay immediately energizes again, the contact switches again, start the delay. When the delay time is reached, the relay releases, the contact switches. Connect the control terminals again and repeat the above process.

Mode D: After power - on, connect control terminals B1 and B2, the relay immediately energizes, the contact switches. After disconnecting control terminals B1 and B2, start the delay. When the set delay time is reached, the relay releases, the contact switches. Connect the control terminals again and repeat the above process.

Mode E: After power - on, activate control terminals B1 and B2, the relay immediately energizes, the contact switches, start the delay. When the set delay time is reached, the relay releases, the contact switches. Activate the control terminals again and repeat the above process.

Mode J: After power - on, activate control terminals B1 and B2, start the delay. When the set delay time is reached, the relay energizes, the contact switches. After energizing for 1s, the relay releases, the contact switches.Activate the control terminals again and repeat the above process.

Mode G: After power - on, connect control terminals B1 and B2, start the delay. When the set delay time is reached, the relay energizes, the contact switches. After disconnecting control terminals B1 and B2, start the delay again. After the same delay time, the relay releases, the contact switches. Connect the control terminals again and repeat the above process.

Note: In each working mode, when connecting the pause terminals B2 and B3 during the operation, the delay is paused and the current time is held. After disconnecting the pause terminals B2 and B3, the product continues to accumulate the timing.

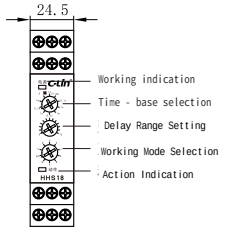
Introduction to HHS18R Working Mode

Power on, the product is energized. At this time, contacts 15 and 16 are closed, and contacts 25 and 26 are closed. After the delay time set by the T1 knob on the panel, the contacts switch. Contacts 15 and 18 are closed, and contacts 25 and 28 are closed. After the delay time set by the T2 knob on the panel, the contacts switch again. Contacts 15 and 16 are closed, and contacts 25 and 26 are closed, repeating this cycle.

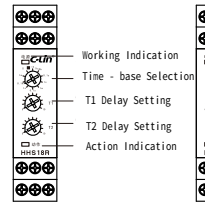
Introduction to HHS18F Working Mode

Power on, the product is energized. At this time, contacts 15 and 18 (25 and 28) are closed. After being powered on for no less than 2s, power off. After the set delay time, contacts 15 and 18 (25 and 28) open. If during the delay process, terminals B1 and B2 are connected, the relay can be reset with the minimum delay time, ending the delay state in advance.

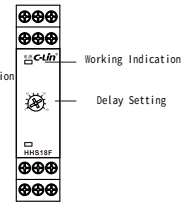
V. Outline and Cutout Dimensions Diagram(mm)



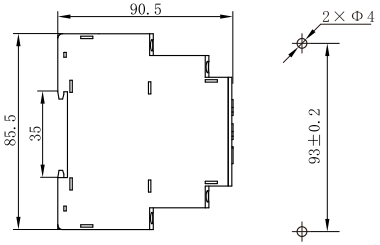
HHS18



HHS18R



HHS18F



VI. Instructions for Use

1.According to the wiring diagram on the relay housing, refer to the circuit examples in Article VIII to connect the product to the control circuit.

2.Adjust the panel knob, preset the delay time and working mode, connect the power supply, and the relay starts to operate according to the corresponding working sequence in Article IV.

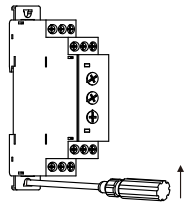
3. The scale value of the delay time on the panel is a schematic scale, and the specific delay time needs to be measured and set by the customer themselves.

4. The power - on reset interval time of the relay should be ≥ 0.5s.

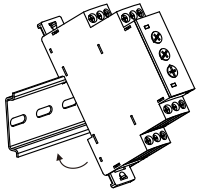
VII. Installation Methods

1. Rail - type installation: (1) → (2) → (3) → (4)
2. Rail - type disassembly: (5) → (6)
3. Device - type installation: (1) → (7) → (8)
4. Device - type disassembly: (9) → (10)

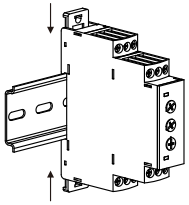
Note: Before installation or disassembly, the main - circuit power supply must be cut off.



(1) Prize open the guide - rail clamp.

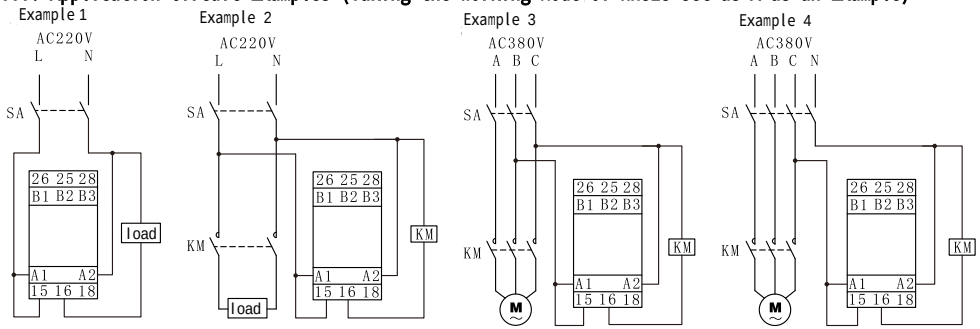


(2) Clip the product into the guide - rail.



(3) Close the guide - rail clamp.

VIII. Application Circuit Examples (Taking the Working Mode of HHS18 Set as A as an Example)



For single - phase load, if the resistive current of the load ≤ 3A or the inductive current ≤ 0.5A, the relay directly controls, and the wiring refers to Example 1; if the resistive current of the load > 3A or the inductive current > 0.5A, the relay expands control through an AC contactor, and the wiring refers to Example 2; for three - phase load, 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.

Explain the function of the relay: when power is on, the load or KM (AC contactor) is energized, and when the delay reaches the preset value, the load or KM (AC contactor) is de - energized.

Note 1: The load can be a street lamp or a bulb, which can be directly connected to the two wires of the street lamp or bulb port (as shown in Example 1).

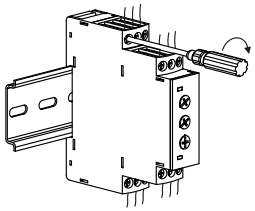
Note 2: KM is the coil of the AC contactor, and the two ends A1 and A2 can be wired according to Example 2, Example 3, and Example 4.

Note 3: The working power supply of the time relay and KM in Example 3 is AC380V, and attention should be paid to the voltage rating of the selected products.

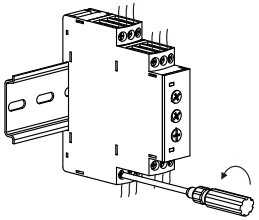
IX. Ordering Instructions

It is necessary to indicate the product model, voltage rating, quantity, and if there are special requirements, they should be separately specified.

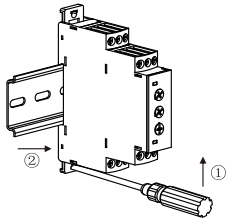
(For example: HHS18 AC220V 100 pieces)



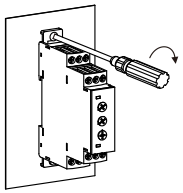
(4) Connect the wire according to the product terminal identification and tighten the connection screw.



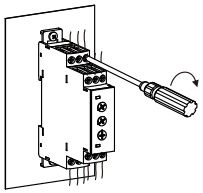
(5) Loosen the connection screw and remove the wire.



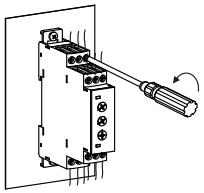
(6) Prize open the guide - rail clamp and remove the product.



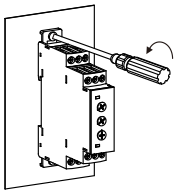
(7) Tighten the mounting screw.



(8) Connect the wire according to the product terminal identification and tighten the connection screw.



(9) Loosen the connection screw and remove the wire .



(10) Loosen the mounting screw and remove the product.

产品合格证

C-Lin

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.

C-Lin 欣灵电气股份有限公司 XINLING ELECTRIC CO.,LTD

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技术咨询: 400-8236-775

RECYCLABLE

国家高新技术企业 浙江省知名商号

C-Lin 欣灵

使用说明书
Products Instructions

HHS18 Series

Time Relay

Thank you very much for using C-Lin brand time relay. Please read the instruction manual before using the product!

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