

VII. Function Setting

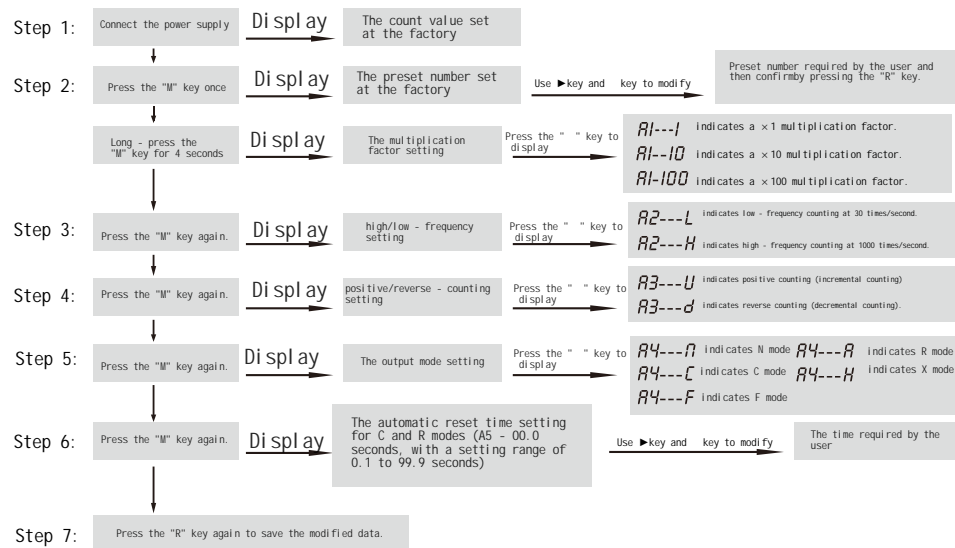
1. Button Functions

"M" Function Key: Press the "M" key once, and the display shows the preset number (which can be set arbitrarily from 1 to 999999). Press and hold the "M" key for 4 seconds, and the display shows R1, R2, R3, R4, R5.

- Explanation:
- R1:** *R1---* indicates a $\times 1$ ratio (i.e., for every 1 pulse signal input, the display increments by 1).
 - R1--10* indicates a $\times 10$ ratio (i.e., for every 10 pulse signals input, the display increments by 1).
 - R1-100* indicates a $\times 100$ ratio (i.e., for every 100 pulse signals input, the display increments by 1).
 - R2:** *R2---L* indicates low - frequency counting (counting frequency 30 times/second).
 - R2---H* indicates high - frequency counting (counting frequency 1000 times/second).
 - R3:** *R3---U* Up-counting (counts as 1, 2, 3, 4, 5, ...)
 - R3---d* Down-counting (display as 100, 99, 98, 97...).
 - R4:** *R4---N* N indicates N mode. *R4---R* R indicates R mode.
 - R4---C* C indicates C mode. *R4---H* H indicates X mode.
 - R4---F* F indicates F mode.
 - R5:** *R5-00.0* indicates the automatic reset time (can be set arbitrarily from 0.1 second to 99.9 seconds) (available in C and R modes).

- ② “▶” Shift Key: Press this key to move the digit position, such as moving the units digit to the tens digit or the tens digit to the hundreds digit, etc.
- ③ “▲” Increment Key: Press this key to increment the selected digit (i.e., the flashing digit).
- ④ “R” Reset Key: Press this key to reset the displayed number and the counting output status back to the initial state.

2. Parameter Settings (The sixth - step setting does not apply to N, F, and X modes, and is only applicable to C and R modes):



Example: The preset number is 126888, the counting multiplication factor is $\times 1$, the counting signal is high - frequency counting, the counting method is positive counting, and the output modes are N, F, and C modes respectively, with an automatic reset time of 15.8 seconds. The display codes are as follows:

N mode	126888	R1---	R2---H	R3---U	R4---N	Finally, press the "R" key to save the data.
F mode	126888	R1---	R2---H	R3---U	R4---F	Finally, press the "R" key to save the data.
N mode	126888	R1---	R2---H	R3---U	R4---C	R5-15.8 Finally, press the "R" key to save the data.

VIII. Instructions for Use

- The "R" key serves as both a reset key and a confirmation key. After each parameter setting is completed, this key must be pressed for confirmation before the device can operate according to the newly - set parameters.
- When counting with contact signal input, if mis - counting occurs due to poor contact or bounce of the input contact, connect a $4.7 \mu\text{F}/50\text{V}$ electrolytic capacitor between terminals and of the counting signal input. Connect the negative terminal of the electrolytic capacitor to terminal and the positive terminal to terminal .
- The counting signal input wire and the reset control wire should be as short as possible. Avoid routing them in the same conduit or twisting them together with other power wires and power - driven wires. If necessary, use shielded wires, and do not input voltage at the reset terminal to prevent product damage.

IX. Ordering Instructions

When placing an order, the product model, working voltage, and quantity must be specified.
 Examples: 1) HHJ4 - A (new type), AC220V, 800 pieces.
 2) HHJ4 - A (new type), DC24V, 800 pieces.

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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

欣灵

使用说明书
Products Instructions

HHJ4 - A (New Type)
Counting Relay

N/C/F/R/X Modes

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

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I. Overview

The HHJ4 - A (new type) counting relay (hereinafter referred to as the counter) is suitable for use as a counting element in control circuits with an alternating current of 50/60Hz and a rated working voltage of 380V or less, or a direct - current working voltage of 24V. It connects or disconnects the circuit according to the preset number.

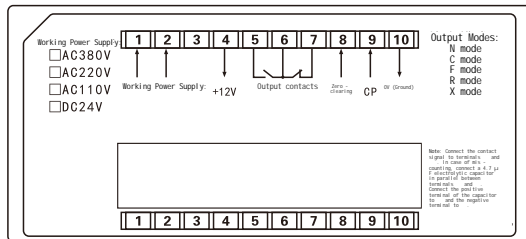
The counter adopts a single - chip microcomputer circuit, EEPROM memory, photoelectric isolation for counting signals, and a 6 - digit digital tube display. The multiplication factor is adjustable. It has the advantages of a wide counting range, multiple counting signal inputs, multiple output working modes, positive/reverse counting, power - failure memory for up to 10 years, and stable and reliable counting performance.

This product complies with the requirements of GB/T 14048.5.

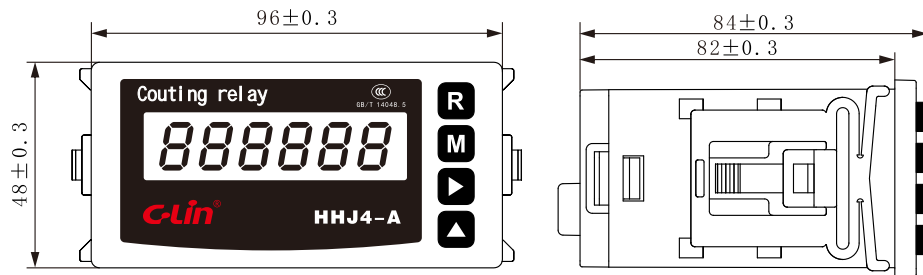
II. Main Technical Data

- Working Voltage (Control Power Supply Voltage): AC380V, 220V, 110V at 50/60Hz, with an allowable voltage fluctuation range of (85% - 110%) U_e; DC24V.
- Counting Range: 1 - 999999 (×1, ×10, ×100 multiplication factors).
- Counting Signals: a) Contact signals: Relay contacts, limit switches, etc.
b) Level signals: Pulse level (H: DC4V - 30V is valid, L: 0 - DC2V is invalid).
c) Sensor signals: Photoelectric switches, proximity switches, Hall switches.
- Counting Frequency: a) Low - frequency counting: 30 times/second, with a minimum signal pulse width 15ms.
b) High - frequency counting: 1000 times/second, with a minimum signal pulse width 0.5ms and a signal duty cycle of 50%.
- Reset Mode: Button reset or short - circuit reset at terminals and .
- Counting Method: Positive counting and reverse counting.
- Power - Failure Memory: 10 years.
- Output Modes: N, C, F, R, X modes.
- Contact Capacity: 3A AC250V (resistive).
- U_e/I_e: Under the usage category, each rated working voltage U_e/rated working current I_e: AC - 15, U_e: AC250V, I_e: 3A.
- Conventional Heating Current I_{th}: 5A.
- Rated Insulation Voltage U_i: 400V.
- Rated Impulse Withstand Voltage U_{imp}: 2.5KV.
- Pollution Degree: Grade 3.
- Protection Level: Front panel IP20.
- Ambient Temperature: - 5° C - + 40° C.
- Relative Humidity: 90%.
- Altitude: 2000m.
- Mounting Method: Panel - mounted.

III. Wiring Diagram

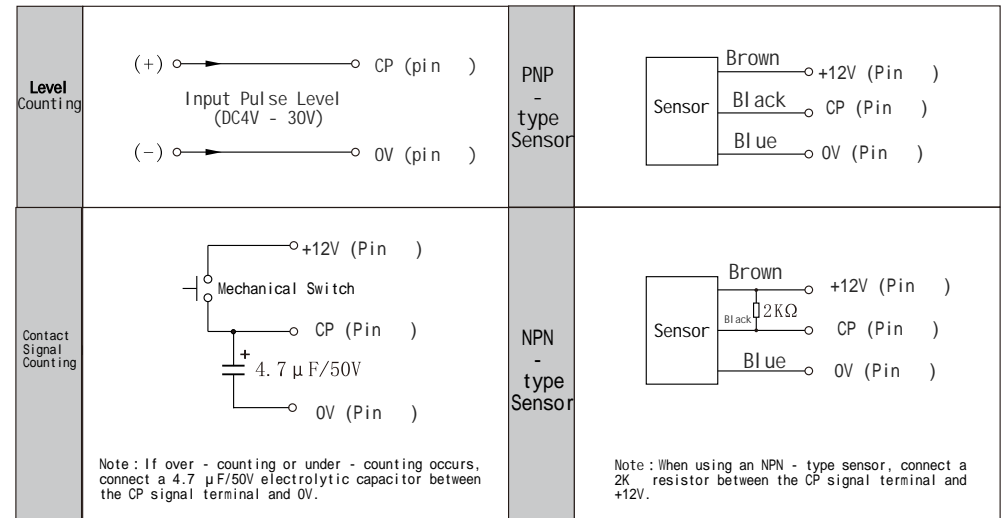


IV. Outline and Mounting Dimensions (Mounting Hole Dimensions: 45^{+0.5} × 92^{+0.5} mm)



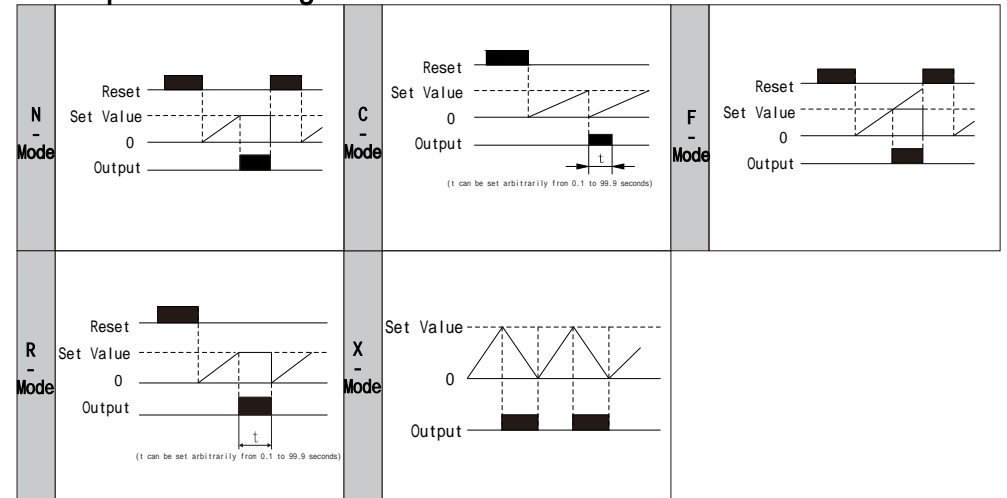
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V. Counting Signal Input



Note: The counter preferably uses a DC (DC10 - 30V) PNP normally - open photoelectric switch or proximity switch. When using an NPN - type sensor, connect a 2K resistor as shown above. Each counter is randomly equipped with a 2K resistor and a 4.7 μF/50V electrolytic capacitor upon leaving the factory.

VI. Output Mode Diagrams



N Mode: Stops counting when the set value is reached. The relay energizes. Press the reset button to reset to zero and start counting again.

C Mode: Automatically resets to zero and restarts counting when the set value is reached. Meanwhile, the relay energizes and releases after t seconds.

F Mode: Continues counting after the set value is reached, but the relay energizes. Press the reset button to reset to zero and start counting anew.

R Mode: Outputs a short pulse for t seconds when the set value is reached. After the pulse ends, counting restarts.

X Mode: The relay energizes when the set value is reached, then counts down to 0 and releases, repeating this cycle.

Note: Formats N, F, and X require manual reset, while formats C and R feature automatic reset.

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