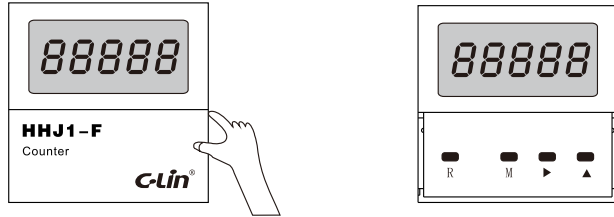


VII. Function Settings

First, hook your finger on the concave part on the right - hand side of the cover plate (as shown in the left - hand figure below). Gently pull it outward. After opening the cover plate, it will look like the right - hand figure below. (Note: Do not use excessive force to avoid breaking the cover plate.) Then set the numbers as required.



1. Button Functions:

"M" Function Key: Press the "M" key once, and the display shows the preset number (setting range: 1 - 99999). Long - press the "M" key for 4 seconds without releasing, and the display shows the scale factor, *R2*, *R3*, *R4*, *R5*.

Explanation: Scale factor: Can be set arbitrarily from 0.001 - 9.999.

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*: indicates up - counting (counting display is 1, 2, 3, 4, 5...);
R3--d: indicates down - counting (counting display is 100, 99, 98, 97...).

R4: *R4--N*: indicates N mode
R4--C: indicates C mode
R4--F: indicates F mode
R4--R indicates R mode
R4--H indicates X mode

R5: *R500.0* indicates automatic reset time (can be set arbitrarily from 0.1s - 99.9s) (limited to C and R modes).

"▶" Shift Key:

Press this key to move the digit position, such as shifting from the units place to the tens place or from the tens place to the hundreds place, etc.

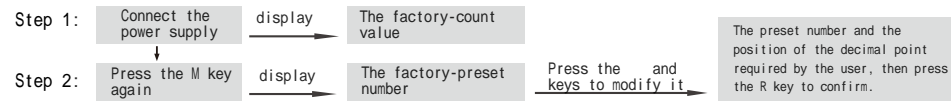
" " Increment Key:

Press this key to increment the selected digit (i.e., the flashing digit).

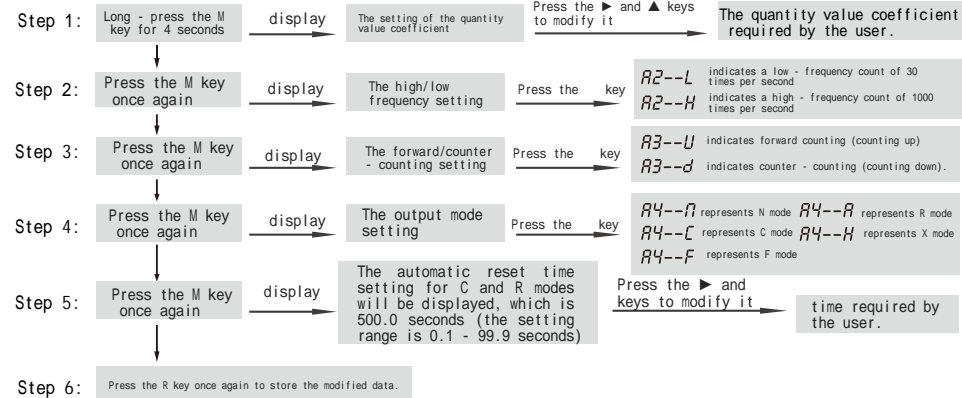
"R" Reset Key:

Press this key to reset the displayed number and the counting output state, restoring them to the initial state.

2. Preset Number Setting



3. Parameter Setting (No fifth - step setting for N, F, X modes, only for C and R modes):



Note: 1. When setting the preset number in the second step, continuously pressing the "▶" key will sequentially move the flashing position to the ten - thousands place, thousands place, hundreds place, tens place, units place, and the decimal point after the units place. Then, press the " " key to add numbers and move the position of the decimal point.

2. When the decimal point is flashing, its position can be moved by pressing the " " key. That is, the preset number can be set as 108.25 by moving the decimal point, and it can also be set as 10.825 or 1082.5.

③

Example: When the preset number is 12688, the quantity coefficient is 0.250, the counting signal is high - frequency counting, the counting mode is forward counting, the output modes are N, F, and C respectively, and the automatic reset time is 15.8 seconds, its display codes are as follows:

N mode	12688	0.250	R2--H	R3--U	R4--N	Finally, press the R key to store the data.
F mode	12688	0.250	R2--H	R3--U	R4--F	Finally, press the R key to store the data.
C mode	12688	0.250	R2--H	R3--U	R4--C	Finally, press the R key to store the data.

VIII. Usage Instructions

1. 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 so that the device can operate according to the newly set parameters.

2. When counting with contact signal input, if mis - counting occurs due to poor contact or bouncing of the input contact, connect a 4.7 μF/50V electrolytic capacitor between terminals and of the counting signal input end. Terminal is connected to the positive pole of the electrolytic capacitor, and terminal is connected to the negative pole.

3. The counting signal input line and the reset control line should be as short as possible. Avoid running them in the same tube or twisting them together with other lines such as power lines and power cables. If necessary, use shielded wires, and do not input voltage to the reset terminal to avoid damaging the product.

4. The display precision is related to the setting of the quantity coefficient:

- If the quantity coefficient is set to 0.002, it is accurate to the 3rd decimal place, that is, the precision is 2 millimeters.
- If the quantity coefficient is set to 0.200, it is accurate to the 1st decimal place, that is, the precision is 2 decimeters.

IX. Ordering Instructions

When placing an order, clearly state the product model, operating voltage, and quantity.

Example: HH J1 - F (new type), AC220V, 500 pieces.

④

浙江欣灵电气有限公司
Zhejiang Xinling Electrical Co., Ltd.

C-Lin 欣灵

使用说明书
Products Instructions

HHJ1 - F (New Type)
Counting Relay N/C/F/R/X Types

Thank you very much for using C-Lin products. Please read the instruction manual before use!

29A008P0

⑤

I. Overview

The HHJ1 - F (New Type) counting relay is applicable as a counting element in control circuits with an alternating current of 50/60Hz and a rated working voltage of 380V or lower, or a direct - current working voltage of 24V. It can connect or disconnect circuits according to preset numbers.

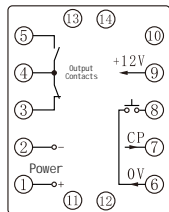
It adopts a single - chip microcomputer circuit, EEPROM memory, opto - isolation for counting signals, and a 5 - digit LED digital display. It supports the setting of a quantity - value coefficient, and has advantages such as a wide counting range, multiple counting signal inputs, various output working modes, up/down 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, 36V, 24V at 50/60Hz. The allowable voltage fluctuation range is (85% - 110%) of U_e ; DC24V.
- Counting Range: 1 - 99999 (quantity - value coefficient: 0.001 - 9.999).
- Counting Signals: a) Contact Signals: Relay contacts, limit switches, etc. b) Voltage 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 per second, minimum signal pulse width 15ms. b) High - frequency Counting: 1000 times per second, minimum signal pulse width 0.5ms, with a signal duty cycle of 50%.
- Counting Method: Up - counting or down - counting.
- Reset Method: Button reset or short - circuit reset by short - connecting terminals and .
- Contact Capacity: 3A AC250V (resistive).
- Output Modes: N, C, F, R, X systems.
- 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.
- Rated Thermal Current I_{th} : 5A.
- Rated Insulation Voltage U_i : 400V.
- Rated Impulse Withstand Voltage U_{imp} : 2.5KV.
- Pollution Degree: 3.
- Protection Level: Front panel IP20.
- Ambient Temperature: - 5 - + 40 .
- Relative Humidity: 90%.
- Altitude: 2000m.
- Mounting Method: Panel - type or 35mm DIN rail.

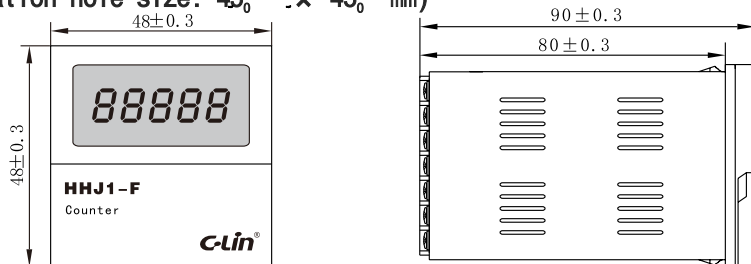
III. Wiring Diagram



Note: and are power input terminals (when using direct current, is the positive pole and is the negative pole); and are normally - closed contacts; and are normally - open contacts; is 0V (i.e., ground); is the counting signal input terminal; is the reset terminal; is the DC12V 30mA(max) auxiliary power output terminal for the sensor.

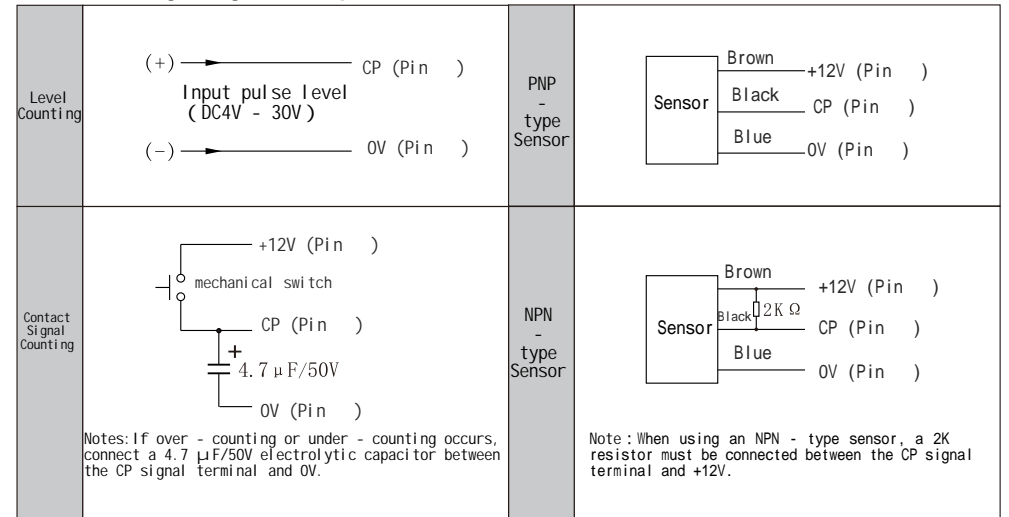
IV. Outline and Installation Dimension Diagram

(Installation hole size: $45_0^{+0.5} \times 45_0^{+0.5}$ mm)



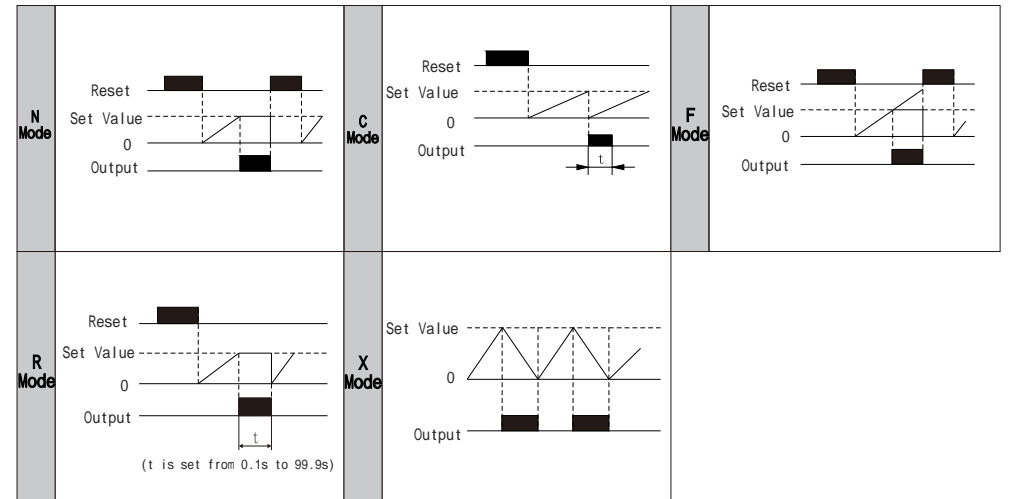
①

V. Counting Signal Input



Note: It is preferred to use DC (DC10 - 30V) PNP normally - open photoelectric switches or proximity switches. When using an NPN - type sensor, connect a 2K resistor as shown in the diagram. Each counter comes with one 2K resistor and one 4.7 μF/50V electrolytic capacitor upon factory shipment.

VI. Output Mode Diagrams



N Mode: Stops counting when the set value is reached. The relay is energized. Press the reset button to reset to zero and start counting again.
 C Mode: When the set value is reached, it automatically resets to zero and starts counting again. Meanwhile, the relay is energized for t seconds and then released.
 F Mode: Continues counting when the set value is reached, but the relay is energized. Press the reset button to reset to zero and start counting again.
 R Mode: When the set value is reached, it outputs a short - term pulse for t seconds. After the pulse ends, it starts counting again.
 X Mode: When the set value is reached, the relay is energized. Then it counts down to 0 and releases, repeating this cycle.

Note: Modes N, F, and X require manual reset, while modes C and R are auto - reset.

②