

Reversible
C Mode

Automatically discriminates forward/reverse rotation directions for reversible counting. Requires a rotary encoder or two sensors (meter wheels) with a 90° phase difference.

Horizontal Sensor Installation:

Sensor installation position 1 Sensor installation position 2

Installation on a Rotating Shaft:

1.Button Functions:

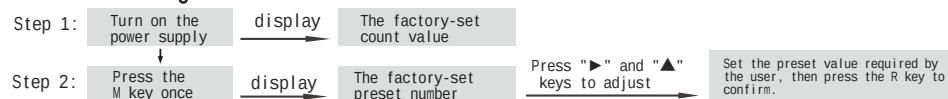
- ① "M" Function Key: Press "M" once: Displays the preset value (setting range: 1~99999999).
Long-press "M" for 4 seconds: Displays the quantity value coefficient, $A2$, $A3$, $A4$, $A5$:
Explanation: Quantity Value Coefficient: Setting range: 0.0001~9.9999.
 $A2$: $A2$ ----L represents low-frequency counting (counting frequency ≤ 30 times/second);
 $A2$ ----H represents high-frequency counting (counting frequency ≤ 5000 times/second);
 $A3$: $A3$ -Ud-b represents reversible counting mode B $A3$ -Ud-C represents reversible counting mode C
 $A4$: $A4$ -----N represents N system $A4$ -----C represents C system $A4$ -----F represents F system
 $A4$ -----A represents R system $A4$ -----H represents X system
 $A5$: $A5$ -----0.0 represents automatic zero reset time (setting range 0.1 second to 99.9 seconds, limited to C and R systems):

- ② "►" Shift key: Press this key to move the digit, such as moving the units digit to the tens digit or the tens digit to the hundreds digit, etc.
- ③ "▲" Add key: Press this key to add digits to the selected number (i.e., the flashing number).
- ④ "R" Reset key: Press this key to reset the displayed number and the counting output state to the initial state.

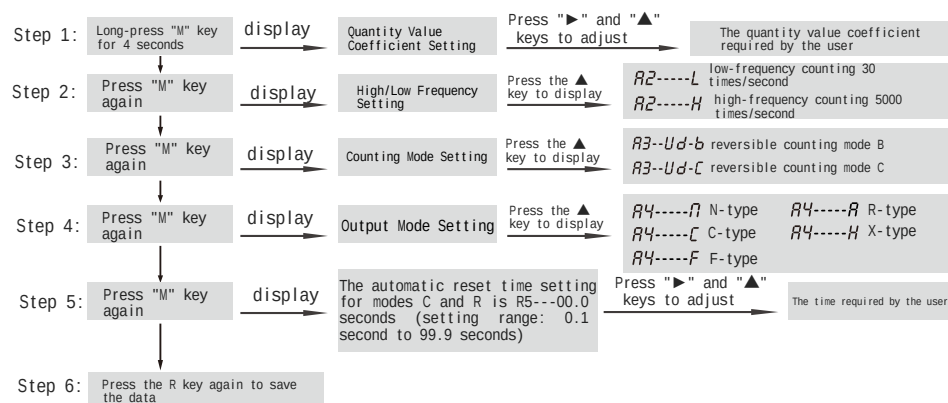
Note: Calculation of the magnitude coefficient: Assuming the circumference of the roller is 0.2 meters and one pulse signal is generated per revolution, then:

$$\text{Magnitude coefficient} = \frac{\pi \times \text{Roller diameter}}{\text{Number of pulses per revolution of the roller}} = \frac{\text{Roller circumference}}{\text{Number of pulses per revolution of the roller}} = \frac{0.2}{1} = 0.2$$

2.Preset number setting



3.Parameter setting (No fifth-step setting for N, F, X systems; limited to C, R, T systems):



Example: The preset number is 111250.00, the scale coefficient is 0.2500, the counting signal is high-frequency counting, the counting method is reversible counting mode B, the output modes are N, F, X, C, and R types respectively, and the automatic reset time is 15.8 seconds. Its display codes are as follows:

N-type	111250.00	0.2500	R2-----H	R3--Ud-b	R4-----N	Finally, press the R key to store the data.	
F-type	111250.00	0.2500	R2-----H	R3--Ud-b	R4-----F	Finally, press the R key to store the data.	
X-type	111250.00	0.2500	R2-----H	R3--Ud-b	R4-----H	Finally, press the R key to store the data.	
C-type	111250.00	0.2500	R2-----H	R3--Ud-b	R4-----C	R5--15.8	Finally, press the R key to store the data.
R-type	111250.00	0.2500	R2-----H	R3--Ud-b	R4-----R	R5--15.8	Finally, press the R key to store the data.

1. When the contact signal is input, if there is an incorrect count due to poor contact or bounce of the contact, please connect a 4.7 μ F/50V electrolytic capacitor between the counting signal input terminals ⑧, ⑨ and ⑩ respectively. Terminals ⑧ and ⑨ are connected to the positive pole of the electrolytic capacitor, and terminal ⑩ is connected to the negative pole of the electrolytic capacitor.
2. The display accuracy and counting range are related to the setting of the scale coefficient:
 - a) If the scale coefficient is set to 0.002, which is accurate to the third decimal place, its counting range is 0.002 ~ 99999.999.
 - b) If the scale coefficient is set to 0.2, which is accurate to the first decimal place, its counting range is 0.2 ~ 9999999.9.

The order form should specify the product model, working voltage, and quantity.

Example: HHM2-H (new type), AC220V, 600 pieces

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

地址：浙江省乐清经济开发区纬十九路328号
电话：0577-62735555 传真：0577-62722963
官网：www.c-lin.cn 邮箱：xl@xinling.com
技术咨询：400-8236-775



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使用说明书
Products Instructions

HHM2-H (New Model)

Counting Relay N/C/F/R/X Type

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

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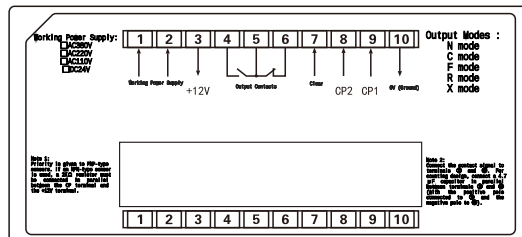
I. Overview

The HHM2-H (new type) counting relay is suitable for use as a counting component in control circuits with an AC frequency of 50/60Hz, a rated operating voltage of 380V and below, or a DC operating voltage of 24V. It connects or disconnects the circuit according to the preset value. It adopts a single-chip microcomputer circuit, an EEPROM memory, photoelectric isolation for signal input, and an 8-digit LED display. It has the advantages of a wide length measurement range, multiple counting signal inputs, multiple output working modes, forward/reverse reversible counting, a power-off memory duration of up to 10 years, and stable and reliable counting performance. This product meets the requirements of GB/T 14048.5

II. Main Technical Data

- Operating voltage (control power supply voltage): AC380V, 220V, 110V, 36V, 24V at 50/60Hz, allowable voltage fluctuation range: (85%~110%) Ue.DC24V.
- Counting range1~9999999 (quantity value coefficient: 0.0001~9.9999).
- Counting signal : a) Contact signal: Relay contacts, travel switches, etc.
b) Level signal: Pulse level (H: DC4V~30V valid; L: 0~DC2V invalid).
c) Sensor signal: Photoelectric switch, proximity switch, Hall switch, meter wheel, rotary encoder.
- Counting frequency : a) Low-frequency counting: ≤ 30 counts/second, minimum signal pulse width ≥ 15 ms.
b) High-frequency counting: ≤ 5000 counts/second, minimum signal pulse width ≥ 0.01 ms, signal duty cycle = 50%.
- Reset method : Button reset or short-circuit reset via terminals ⑦ and ⑩.
- Output modeN, C, F, R, X modes.
- Input modeReversible B, Reversible C modes.
- Power-off memory : 10 years.
- Contact capacity3A AC250V (resistive).
- Ue/Ie:Under usage category AC-15: rated operating voltage Ue = AC250V, rated operating current Ie = 3A.
- Conventional heating current Ith:5A.
- Rated insulation voltage Ui:400V.
- Rated impulse withstand voltage Uimp:2.5KV.
- Pollution degree:Level 3.
- Protection classFront panel IP20.
- Ambient temperature:-5°C~+40°C.
- Relative humidity: $\leq 90\%$.
- Altitude ≤ 2000 m.
- Installation method:Panel-mounted.

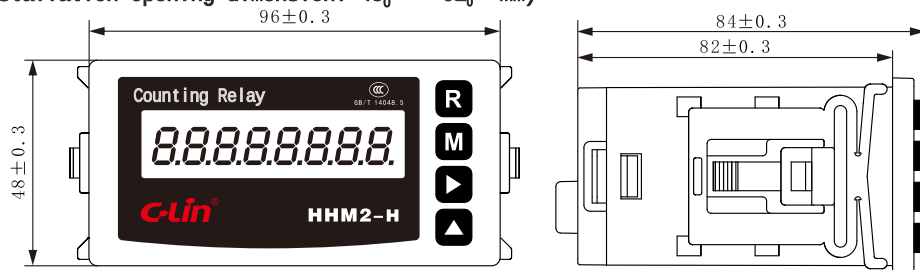
III. Wiring Diagram



Note:① and ② = Power input terminals (for DC, ① = positive pole, ② = negative pole).③ = DC12V 30mA (max) auxiliary power output for sensors.④ and ⑤ = Normally Open (NO) contacts; ⑥ and ⑦ = Normally Closed (NC) contacts.⑧ = Reset terminal.⑨ and ⑩ = Counting signal input terminals.⑩ = 0V (Ground).

IV. Outline and Installation Dimension Diagram

(Installation opening dimension: $45_0^{+0.5} \times 92_0^{+0.5}$ mm)

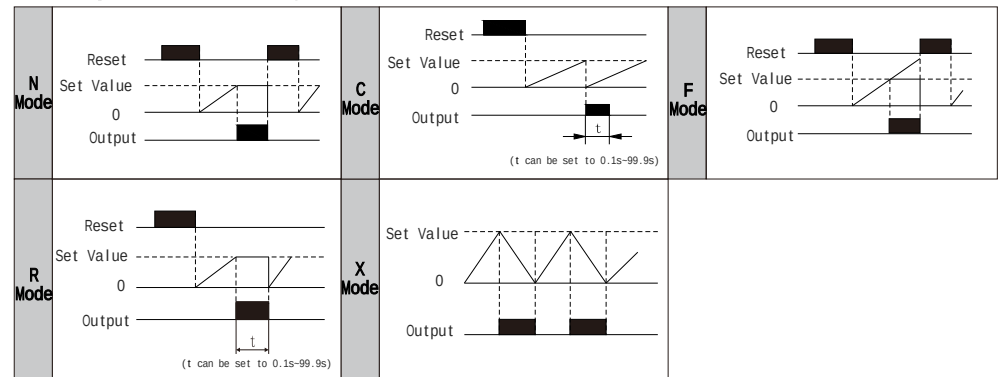


V. Counting Signal Input

Pulse Counting	PNP-Type Sensor	NPN-Type Sensor
Contact Signal Counting	PNP-Type Meter Wheel	PNP-Type Rotary Encoder
Notes:If over-counting or under-counting occurs, connect a 4.7μF/50V electrolytic capacitor between the CP1 signal terminal and 0V.	Notes:When using an NPN-type meter wheel, a 2KΩ resistor must be connected between each of the CP1 and CP2 signal terminals and +12V.	Note:When using an NPN-type rotary encoder, a 2KΩ resistor must be connected between each of the CP1 and CP2 signal terminals and +12V.

Note:Priority is given to DC (10~30V) PNP normally open photoelectric switches or proximity switches. If an NPN -type device is used, connect an external 2KΩ resistor as shown in the diagram above. (Each meter counter is randomly supplied with two 2KΩ resistors and two 4.7μF/50V electrolytic capacitors at the factory.)

VI. Output Mode Diagrams



N Mode: Counting stops when the set value is reached, and the relay pulls in. Press the reset button to reset and restart counting.
C Mode: When the set value is reached, the display automatically resets and counting restarts. Meanwhile, the relay pulls in and releases after t seconds.
F Mode: Counting continues when the set value is reached, but the relay pulls in. Press the reset button to reset and restart counting.
R Mode: When the set value is reached, a short pulse is output for t seconds. After the pulse ends, counting restarts automatically.
X Mode: When the set value is reached, the relay pulls in and releases when counting down to 0, repeating this cycle.

Note:Modes N, F, and X require manual reset; modes C and R support automatic reset.

VII. Input Mode Diagram

