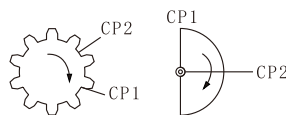


Horizontal Installation:



Installation on a rotating shaft:



IX. Function Setting

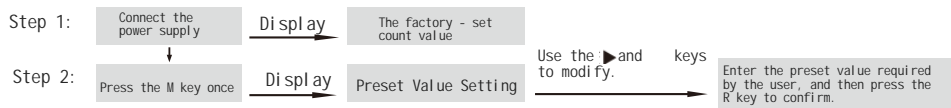
1. Button Functions:

"M" Function Key: Press the "M" key once to display the preset value (setting range: 1 - 99999999); Press and hold the "M" key for 4 seconds to display in sequence: Quantity Value Coefficient, A2, A3, A4, A5;
Description: The setting range of the quantity value coefficient is 0.0001 - 9.9999;
 A2: A2----L indicates low - frequency counting (counting frequency 30 times/second);
 A2----H indicates high - frequency counting (counting frequency 5000 times/second);
 A3: A3--Ud-b indicates reversible counting mode B; A3--Ud-c indicates reversible counting mode C;
 A4: A4----N indicates N mode; A4----C indicates C mode; A4----F indicates F mode;
 A4----R indicates R mode; A4----H indicates H mode; A4----T indicates T mode (with advance quantity);
 A5: A5---00.0 indicates automatic reset time (setting range: 0.1 - 99.9 seconds, only for C and R modes);
 000000.0 indicates T mode advance quantity (only for T mode);
">" Shift Key: Press this key to move the digit position, such as moving from the hundreds place to the tens place or to the units place;
"+" 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 digit and the counting output state, restoring to the initial state;

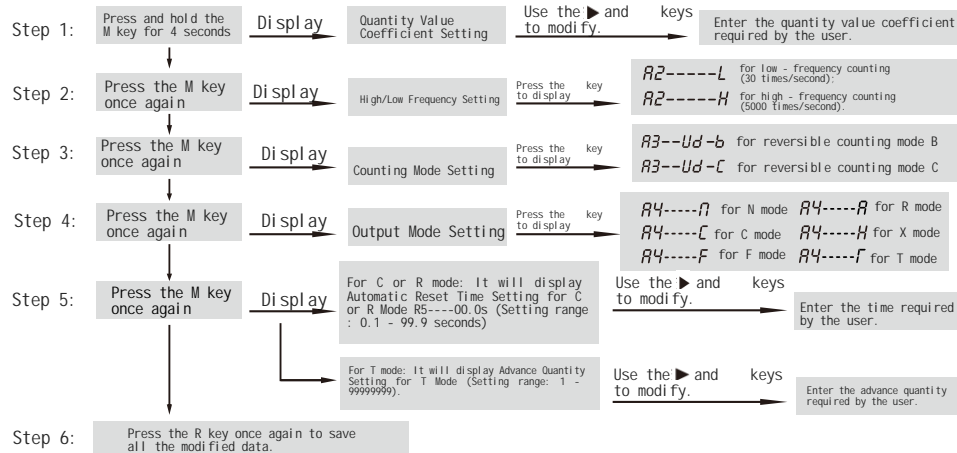
Note: Calculation of the quantity value coefficient: Assuming the circumference of the roller is 0.2 meters and one pulse signal is generated per revolution, then:

$$\text{Quantity Value Coefficient} = \frac{\text{Roller Diameter} \times \pi}{\text{Number of Pulses per Roller Revolution}} = \frac{\text{Roller Circumference}}{\text{Number of Pulses per Roller Revolution}} = \frac{0.2}{1} = 0.2$$

2. Preset Value Setting:



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



Example: The preset value is 111250.00, the quantity value coefficient is 0.2500, the counting signal is high - frequency counting, the counting method is reversible counting mode B, and the output modes are N, F, X, C, R, T respectively with an automatic reset time of 15.8 seconds. Its display is as follows:

N mode	111250.00	0.2500	A2----H	A3--Ud-b	A4----N	Press the R key once at last to save the data	
F mode	111250.00	0.2500	A2----H	A3--Ud-b	A4----F	Press the R key once at last to save the data	
X mode	111250.00	0.2500	A2----H	A3--Ud-b	A4----H	Press the R key once at last to save the data	
C mode	111250.00	0.2500	A2----H	A3--Ud-b	A4----C	15.8	Press the R key once at last to save the data
R mode	111250.00	0.2500	A2----H	A3--Ud-b	A4----R	15.8	Press the R key once at last to save the data
T mode	111250.00	0.2500	A2----H	A3--Ud-b	A4----T	000001.25	Press the R key once at last to save the data

Note: For T mode, the set value of the advance quantity should be less than the preset value.

IX. Instructions for Use

- The "R" key is both a reset key and a confirmation key. After each parameter setting, this key must be pressed for confirmation so that the newly set parameters can take effect.
- When inputting contact signals, if there is a miscount, first set the counting frequency to low - frequency counting. If the effect is not good, then connect a 4.7μF/50V electrolytic capacitor between the counting signal input CP terminal and the 0V terminal, and connect the positive electrode of the capacitor to the CP terminal and the negative electrode to the 0V terminal (invalid when the segment switch is set to NPN).
- The display precision and counting range are related to the setting of the quantity value coefficient: a) If the quantity value coefficient is set to 0.002, that is, accurate to the 3rd decimal place, the counting range is 0.002 - 99999.999; b) If the quantity value coefficient is set to 0.2, that is, accurate to the 1st decimal place, the counting range is 0.2 - 999999.9.

X. Order Instructions

When placing an order, the product model, working voltage, and quantity must be clearly stated.

Example: HHM3 - H AC/DC100 - 240V 800 pieces





欣灵

使用说明书
Products Instructions

HHM3-H

Counting Relay

N/C/F/R/X/T Modes

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



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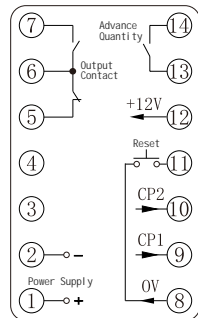
I. Overview

The HHM3-H counting relay is applicable to control circuits with an AC frequency of 50/60Hz and rated operating voltages of AC 380V, AC/DC 100-240V, or AC/DC 24V. It functions as a length-measuring element, switching circuits on or off according to preset numerical values. Equipped with a high-performance single-chip microcomputer, EEPROM memory, photoelectric isolation for signal input, and an 8-digit LED digital display, this relay offers advantages such as a wide length-measurement range, support for multiple signal input types, various output modes, forward/reverse reversible counting, power-off memory of counted values, and stable, reliable performance. This product complies with the requirements of GB/T 14048.5.

II. Main Technical Specifications

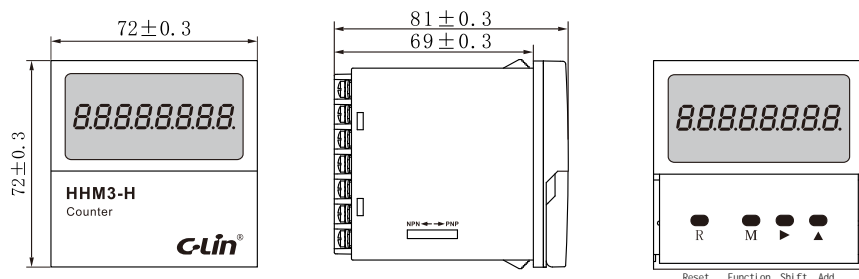
- Operating Voltage (Control Power Supply Voltage): AC 380V, AC/DC 100-240V, AC/DC 24V (50/60Hz). The allowable voltage fluctuation range is (85%-110%) of the rated voltage (Ue).
- Counting Range: 1-9999999 (with a magnitude coefficient of 0.0001-9.9999).
- Counting Signals: a) Contact Signals: Relay contacts, limit switches, etc. b) Level Signals: Pulse level (H: DC 4V-30V valid; L: 0-DC 2V invalid) c) Sensor Signals: Proximity switches, photoelectric switches, Hall switches, wheel encoders, rotary encoders.
- Counting Frequency: a) Low-Frequency Counting: 30 counts/second; minimum signal pulse width 15ms. b) High-Frequency Counting: 5000 counts/second; minimum signal pulse width 0.01ms; signal duty cycle = 50%.
- Input Modes: Reversible Mode B, Reversible Mode C.
- Reset Methods: Button reset, or short-circuit reset via terminals ① and ②.
- Power-Off Memory: 10 years.
- Contact Capacity: 3A (AC 250V, resistive load).
- Ue/Ie (Rated Voltage/Rated Current): For each usage category: AC-15: AC 250V/0.75A; AC-12: AC 250V/3A.
- Output Modes: N, C, F, R, X, T types.
- Conventional Heating Current (Ith): 5A.
- Rated Insulation Voltage (Ui): 400V.
- Rated Impulse Withstand Voltage (Uimp): 2.5kV.
- Pollution Degree: Class 3.
- Protection Class: IP20 (front panel).
- Ambient Temperature: -5 ~ +40 .
- Relative Humidity: 90%.
- Altitude: 2000m.
- Mounting Method: Panel-mounted.

Wiring Diagram

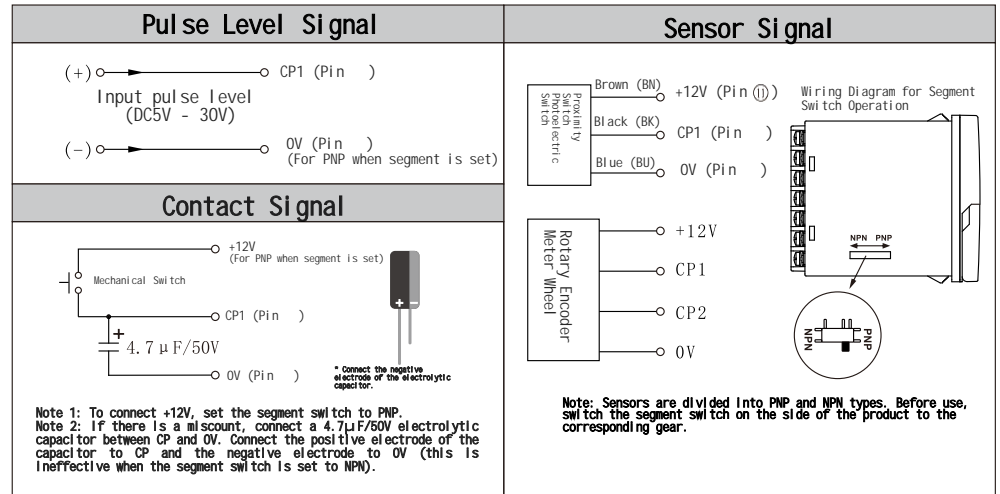


Note: ① and ② are power input terminals (when DC, ① is positive and ② is negative); ③ and ④ are normally closed contacts; ⑤ and ⑥ are normally open contacts; ⑦ is 0V terminal; ⑧ and ⑨ are signal input terminals; ⑩ is reset terminal; ⑫ is DC12V 30mA (max) auxiliary power output terminal for sensor; ⑬ and ⑭ are normally open contacts for advance quantity (only for T type).

IV. Outline and Installation Dimension Drawing (Installation hole size: 67.5^{+0.5} × 67.5^{+0.5} mm)

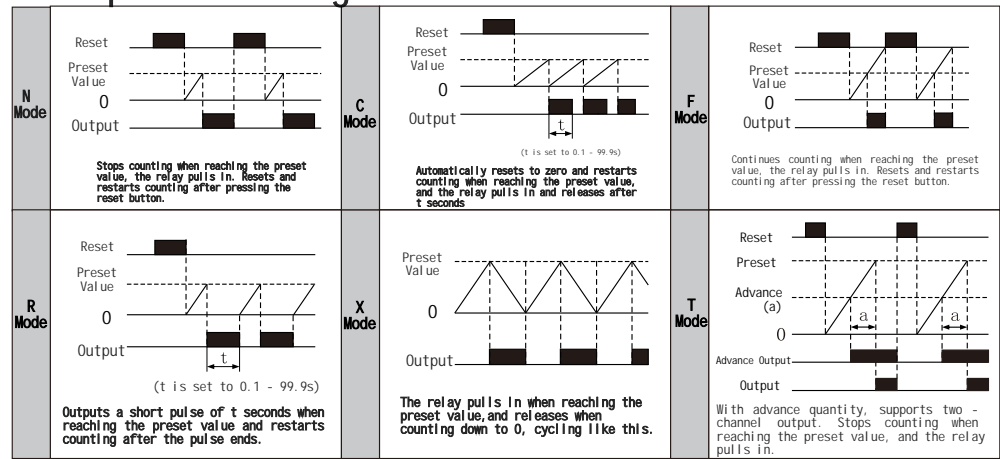


V. Counting Signal Input



Note: It is recommended to use our company's DC (DC10 - 30V) normally - open photoelectric/proximity/Hall switches. Each counter is provided with two 4.7 μF/50V electrolytic capacitors as a gift when leaving the factory.

VI. Output Mode Diagrams



Note: N, F, X, T modes need manual reset; C, R modes are automatic reset.

VII. Input Mode Diagrams

