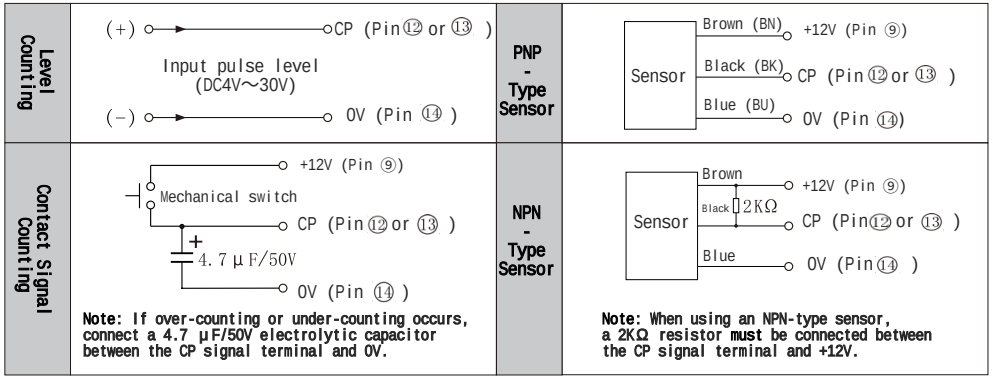
VI.Counting Signal Input

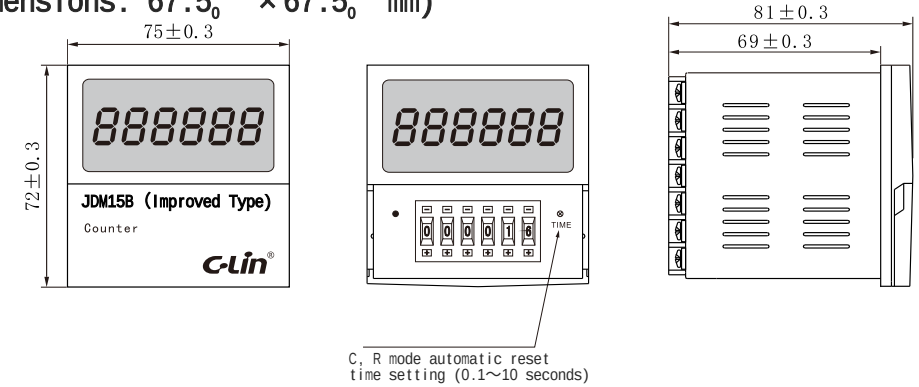


Note: If over-counting or under-counting occurs, connect a 4.7 μF/50V electrolytic capacitor between the CP signal terminal and 0V.

Note: When using an NPN-type sensor, a 2KΩ resistor must be connected between the CP signal terminal and +12V.

Note: It is recommended to use a DC (10～30V) PNP normally open photoelectric switch or proximity switch as the first choice. If an NPN-type sensor is used, connect a 2KΩ external resistor as shown in the diagram above. (Each counter is randomly provided with two 2KΩ resistors and two 4.7 μF/50V electrolytic capacitors at the time of factory shipment.)

VII.Outline and Installation Dimension Drawing(Mounting Hole Dimensions: $67.5_{0}^{+0.5} \times 67.5_{0}^{+0.5}$mm)



VIII.Function Description of Selection Switches

1. **C Mode:** K1/K3 = ON
   N Mode: K1/K3 = OFF
   F Mode: K1 = ON, K3 = OFF
   R Mode: K1 = OFF, K3 = ON

2. **No Memory (Power-off Reset):** K2 = ON
   Power-off Memory: K2 = OFF

3. **Low-frequency Counting:** K4 = ON
   High-frequency Counting: K4 = OFF

4. **×1 Rate Addition Counting:** K5/K6/K7 = OFF
   ×10 Rate Addition Counting: K5/K7 = OFF, K6 = ON
   ×100 Rate Addition Counting: K5 = ON, K6/K7 = OFF
   ×1 Rate Subtraction Counting: K5/K6 = ON, K7 = OFF

5. **Reversible Mode A:** K5 = OFF, K6/K7 = ON
   Reversible Mode B: K5/K6 = OFF, K7 = ON
   Reversible Mode C: K5/K7 = ON, K6 = OFF

Function Introduction of Switches at the Counter Bottom

K3 \ K1	ON	OFF
ON	C Mode	R Mode
OFF	F Mode	N Mode

	ON	OFF
K2	No Memory	Power-off Memory
K4	Low-frequency (30 counts/s)	High-frequency (1000 counts/s)

K5	K6	K7	Function
OFF	OFF	OFF	×1 Addition Counting
ON	OFF	OFF	×100 Addition Counting
OFF	ON	OFF	×10 Addition Counting
ON	ON	OFF	×1 Subtraction Counting
OFF	ON	ON	Reversible A Counting
OFF	OFF	ON	Reversible B Counting
ON	OFF	ON	Reversible C Counting

IX.Usage Instructions

1. The counting signal input wires and reset control wires should be as short as possible. Avoid running them in the same conduit or twisting them together with other power lines and power cables. When necessary, use shielded wires, and never input voltage to the reset terminal to avoid damaging the product.
2. Preset the required functions and values before use. Changing the set values during operation is ineffective; it is necessary to re - power or reset for the changes to take effect.
3. When counting with contact signal input, if false counting occurs due to poor contact or bounce of the input contact, connect a 4.7 μF/50V electrolytic capacitor between terminal ⑫ or ⑬ of the counting signal input end respectively. And terminal ⑭ is connected to the negative pole of the electrolytic capacitor, and terminal ⑫ or ⑬ is connected to the positive pole of the electrolytic capacitor.
4. ×1: Each input of 1 counting signal makes the counter display count as 1;
   ×10: Every 10 counting signals input make the counter display count as 1;
   ×100: Every 100 counting signals input make the counter display count as 1.
5. Terminal ⑩ is a contactless output, that is, the open - collector output of a triode, and the maximum current that can pass through is DC30V 100mA.
6. The reversible C counting mode can automatically recognize forward and reverse counting. It can be used with the GK - 80A (with an accuracy of 1 centimeter) or GK - 80B (with an accuracy of 1 millimeter) meter wheel length measuring instrument and rotary encoder produced by our company.

X.Ordering Instructions

When placing an order, the product model, working voltage, and quantity must be specified;
Example: JDM15B (Improved Type) AC220V 800 pieces

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

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

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

JDM15B(Improved Type)
Counting Relay

N/C/F/R Mode

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

Can be used with rotary encoders

29A048P0

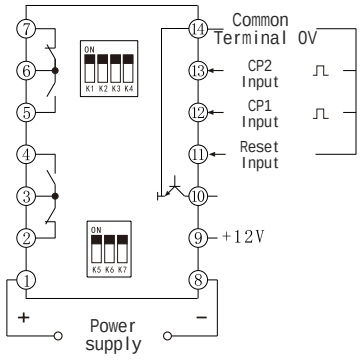
I.Overview

The JDM15B (Improved Type) counting relay is suitable for use as a counting element in control circuits with an AC 50/60Hz power supply, a rated working voltage of 380V and below, or a DC working voltage of 24V. It connects or disconnects circuits according to preset numerical values.
Equipped with a single-chip microcomputer circuit, EEPROM memory, photoelectric isolation for counting signals, and LED digital display, it supports multiplier setting. It features advantages such as a wide counting range, compatibility with multiple counting signal inputs, various output operation modes, up/down counting capability, power-off memory lasting up to 10 years, and stable/reliable counting performance.
This product complies with the requirements of GB/T 14048.5.

II.Main Technical Data

1.Working Voltage (Control Power Supply Voltage)AC380V, 220V, 24V 50/60Hz (allowable voltage fluctuation range: 85%－110% of Ue); DC24V.
2.Counting Range:1－999999 (×1, ×10, ×100 multipliers).
3.Counting Signals：a) Contact signals: Relay contacts, travel switches, etc.
b) Level signals: Pulse level (H: DC4V－30V valid; L: 0－DC2V invalid).
c) Sensor signals: Photoelectric switches, proximity switches, Hall switches.
4.Counting Frequency:a) Low-frequency counting: ≤30 times/second (minimum signal pulse width ≥15ms).
b) High-frequency counting: ≤1000 times/second (minimum signal pulse width ≥0.5ms at 50% signal duty cycle).
5.Input Modes:Up-counting, down-counting, reversible A/B/C counting.
6.Reset Modes:Reset via button switch or short-circuit terminals ⑪ and ⑭ .
7.Output Modes:N, C, F, R modes.
8.Auxiliary Output Power Supply:DC12V, 30mA (max).
9.Contact Capacity:3A AC250V (resistive load).
10.Ue/Ie:Rated working voltage Ue/rated working current Ie under utilization category (AC-15): Ue = AC250V, Ie = 3A.
11.Conventional Heating Current (Ith):5A.
12.Rated Insulation Voltage (Ui):400V.
13.Rated Impulse Withstand Voltage (Uimp):2.5KV.
14.Pollution Degree:Grade 3.
15.Protection Class:IP20.
16.Ambient Temperature:-5℃ to +40℃.
17.Relative Humidity:≤90%.
18.Altitude:≤2000m.
19.Installation Method:Panel-mounted.

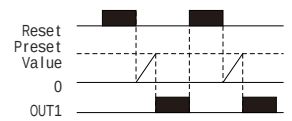
III.Wiring Diagram



Notes:
Terminals ① and ⑧ are power input terminals (for DC power supply, ① is the positive pole and ⑧ is the negative pole);Terminals ② and ③ are normally closed contacts; Terminals ③ and ④ are normally open contacts; Terminals ⑤ and ⑥ are normally open contacts; Terminals ⑥ and ⑦ are normally closed contacts;Terminal ⑨ is the DC12V 30mA (max) sensor auxiliary power output terminal;Terminal ⑩ is the transistor collector output, which can pass a maximum current of DC30V 100mA;Terminal ⑪is the reset terminal; Terminals⑫ and⑬are counting signal input terminals;Terminal⑭is 0V (ground).

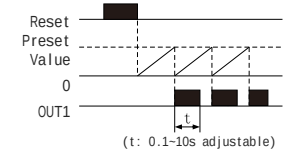
IV.Output Mode Diagrams

N Mode



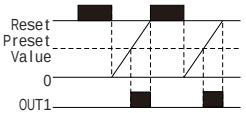
Stops counting when the preset value is reached. The relay pulls in. Press the reset button to restart counting.

C Mode



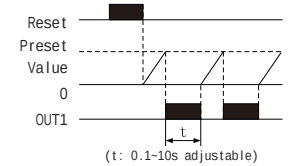
Automatically resets and restarts counting when the preset value is reached. The relay pulls in and releases after t seconds.

F Mode



Continues counting when the preset value is reached. The relay pulls in. Press the reset button to restart counting.

R Mode



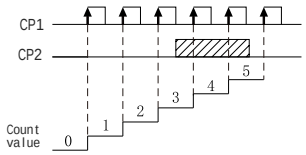
Outputs a short pulse for t seconds when the preset value is reached. Restarts counting after the pulse ends.

Note: Modes N and F require manual reset; Modes C and R are auto-reset.

V.Input Mode Diagrams

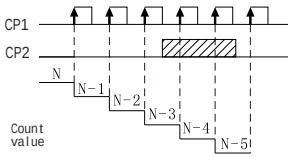
Up Counting

CP1 rising edge triggers up-counting; CP2 input is invalid.



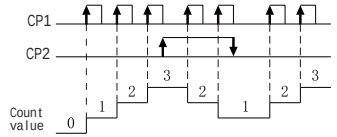
Down Counting

CP1 rising edge triggers down-counting; CP2 input has no effect.



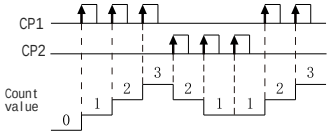
Reversible Mode A

Up-counting when CP2 input is absent; Down-counting when CP2 input is active.



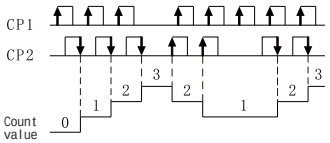
Reversible Mode B

CP1 input triggers up-counting; CP2 input triggers down-counting.



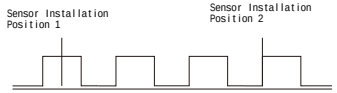
Reversible Mode C

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



Sensor Installation

Horizontal Installation



Installation on Rotating Shafts