

**Features:**

- 90A switching capacity
- Low power consumption
- Strong anti-shock resistance
- Withstand voltage between contacts: 3KV
- Single/Dual coils available
- Environmentally friendly products(Accord RoHS)
- Dimensions: 38 mm×30mm×16.5 mm

**Typical Application:**

- Smart meter
- Remote electrical control
- Power composite switch
- Electrical equipment

**Contact Data**

Contact form	1 Form A or 1 Form B
Rated Load	90A 250VAC
Max.switching voltage	250V
Max.switching current	90A
Max.switching power	22,500VA
Contact Material	Silver alloy
Contact resistance	$\leq 1 \text{ m}\Omega$
Max.Operate/Release time	20ms/20ms
	$1 \times 10^4$ cycles
Electrical Endurance	(90A 250VAC Resistive electrical 5000 cycles+ Capacitive 5000 cycles PF=0.5 )
Mechanical Endurance	$1 \times 10^5$ cycles

**Insulation Data**

Insulation Resistance	$\geq 1,000\text{M}\Omega$ (500VDC)
Dielectric Strength	Contact-Contact AC3,000V; 50/60Hz 1min
	Contact-Coil AC4,000V; 50/60Hz 1min
Contact-Coil (Creepage distance)	$\geq 8.0\text{mm}$

**Outline Dimensions (Unit: mm)****Coil Data**

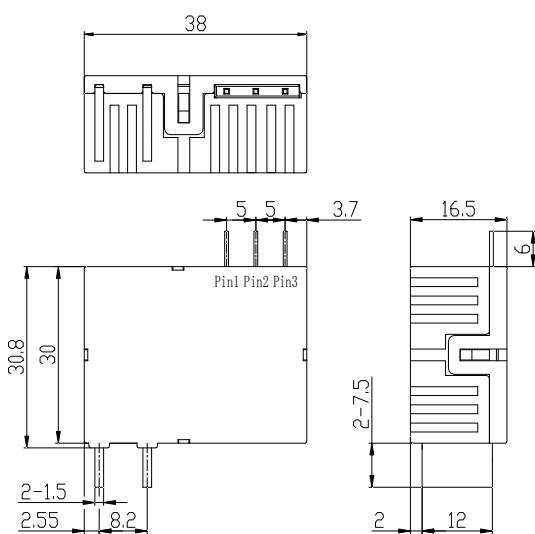
Coil voltage range		5 to 48VDC		
Coil insulation system according UL		Class F		
Coil type, standard type				
Rated Voltage VDC	Operate/Release Voltage VDC	Coil resistance Single/Dual $\Omega$ (1±10%)	Rated power Single/Dual W	Pulse Duration ms
5	$\leq 3.5$	16.5/8.25	1.5/3	$\geq 100$
9	$\leq 6.3$	54/27	1.5/3	$\geq 100$
12	$\leq 8.4$	96/48	1.5/3	$\geq 100$
24	$\leq 16.8$	384/192	1.5/3	$\geq 100$
48	$\leq 33.6$	1536/768	1.5/3	$\geq 100$

All figures are given for coil without pre-energization, at ambient temperature 20°C.

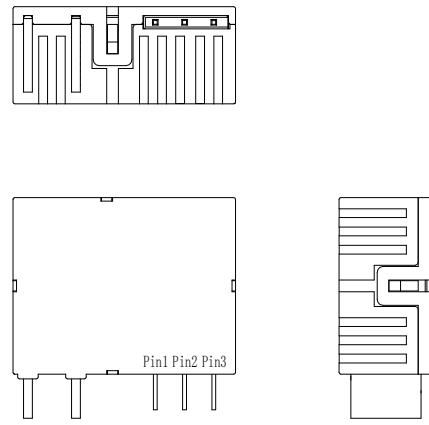
**Other Data**

Material compliance: EU RoHS/ELV, China RoHS, REACHHS	
Ambient Temperature	-40°C to +85°C
Ambient Humidity	5% ~ 85% RH
Vibration resistance	10 ~ 55Hz, 1.5mm DA
Shock resistance	Durability 100g Malfunction 10g
Packaging type	Dust proof type

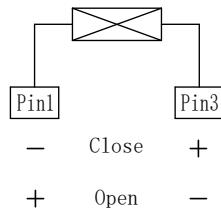
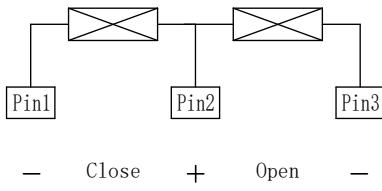
Type A



Type B



Note: Some product dimensional tolerance is not specified. When <1mm, the tolerance is  $\pm 0.2\text{mm}$ ; when between 1~5mm, the tolerance is  $\pm 0.3\text{mm}$ ; when > 5mm, the tolerance is  $\pm 0.4\text{mm}$ .

**Wiring Diagrams**
**Single**

**Dual**

**Model naming rules**

WJ31P

-90

-12

D

2

XXX

Customer required type

Coil type: 1- means single coil; 2- means dual coil

Coil Power Consumption: D - Standard Type

Coil Specifications (VDC): 05 , 09 , 12 , 24 , 48

Rated current: 90-90A

Type: WJ31P

Customized special suffix is available after being evaluated by Sanyou.

**Examples of Ordering Codes**

WJ31P-90-12D2

Relay WJ31P, Rated current 90 A, Coil Specifications 12 VDC, Standard type, Dual coil

**Cautions**

1. The original position of latching relay is "closed" when shipping. It is possible that during transit or installation, the relay may change its state to be "open" position, it is recommended to set the relay in to state needed via apply voltage to the coil.
2. In order to let relay operate normally, the voltage which apply to the coil should reach to the rated voltage, the pulse width should be 50ms to 100ms. Do not energize both coil at the same time on Dual coil or energize the coil for longer than minute.
3. Relay without copper wire, the terminal can not be soldered, bend, and rigid fasten both two terminals.
4. Keep away from corrosive gas and other condition which may damage the relay.

**Disclaimer**

This product specification is for reference only and may change without prior notice. Customers should select the appropriate product model according to the performance parameter requirements of their specific application areas. The customer will bear the responsibility and loss caused by improper selection. For more technical support, please contact Sanyou Corporation Limited.