

## 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

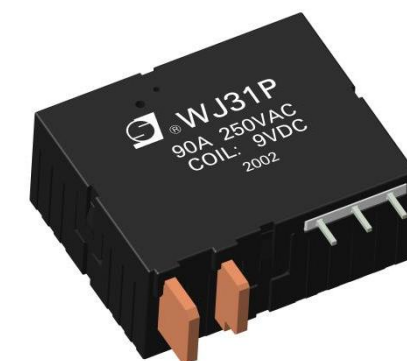
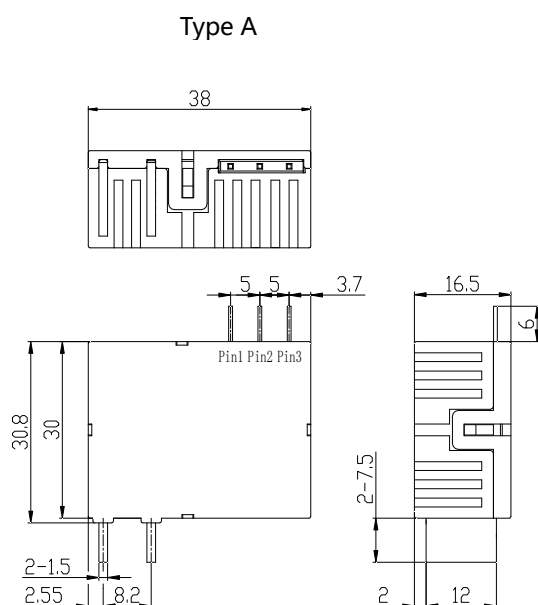
## Contact Data

|                          |  |
|--------------------------|--|
| 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       | ≤1 mΩ  |
| Max.Operate/Release time | 20ms/20ms  |
| Electrical Endurance     | 1x10 <sup>4</sup> cycles<br>(90A 250VAC Resistive electrical 5000 cycles+<br>Capacitive 5000 cycles PF=0.5 ) |
| Mechanical Endurance     | 1x10 <sup>5</sup> cycles   |

## Insulation Data

|                                  |  |
|----------------------------------|--|
| Insulation Resistance            | ≥1,000MΩ (500VDC)                      |
| Dielectric Strength              | Contact-Contact AC3,000V; 50/60Hz 1min |
|                                  | Contact-Coil AC4,000V; 50/60Hz 1min    |
| Contact-Coil (Creepage distance) | ≥8.0mm                                 |

## Outline Dimensions (Unit: mm)



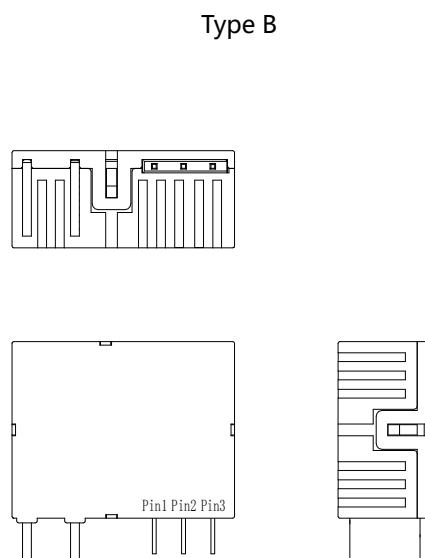
## Coil Data

|                                     |                                  |   |                                 |                         |
|-------------------------------------|----------------------------------|---|---------------------------------|-------------------------|
| Coil voltage range                  |                                  | 5 to 48VDC                                  |                                 |                         |
| Coil insulation system according UL |                                  | Class F                                     |                                 |                         |
| Coil type, standard type            |                                  |   |                                 |                         |
| Rated<br>Voltage<br>VDC             | Operate/Releas<br>Voltage<br>VDC | Coil resistance<br>Single/Dual<br>Ω (1±10%) | Rated power<br>Single/Dual<br>W | Pulse<br>Duration<br>ms |
| 5                                   | ≤3.5                             | 16.5/8.25                                   | 1.5/3                           | ≥100                    |
| 9                                   | ≤6.3                             | 54/27                                       | 1.5/3                           | ≥100                    |
| 12                                  | ≤8.4                             | 96/48                                       | 1.5/3                           | ≥100                    |
| 24                                  | ≤16.8                            | 384/192                                     | 1.5/3                           | ≥100                    |
| 48                                  | ≤33.6                            | 1536/768                                    | 1.5/3                           | ≥100                    |

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

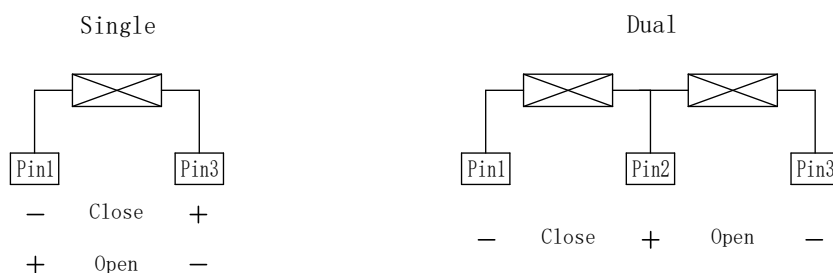
## Other Data

|                      |                                  |
|----------------------|----------------------------------|
| 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                  |



Note: Some product dimensional tolerance is not specified. When < 1mm, the tolerance is ±0.2mm; when between 1~5mm, the tolerance is ±0.3mm; when > 5mm, the tolerance is ±0.4mm.

## Wiring Diagrams



## 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.