

### Features:

- 90A switching capacity
- Low power consumption
- Strong anti-shock capability
- Withstand voltage between contacts and coil: 4 kV
- Single/Dual coils available
- Environmentally friendly products(Accord RoHS)
- Compliance with IEC 62052-31 Clause UC 2
- Certified by TUV to IEC 61810 Standard
- Dimensions: 38 mm×30mm×16.5 mm

### Typical Application:

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



### Approvals

TUV (File No.) : R 50426858、AK 50610984 0001

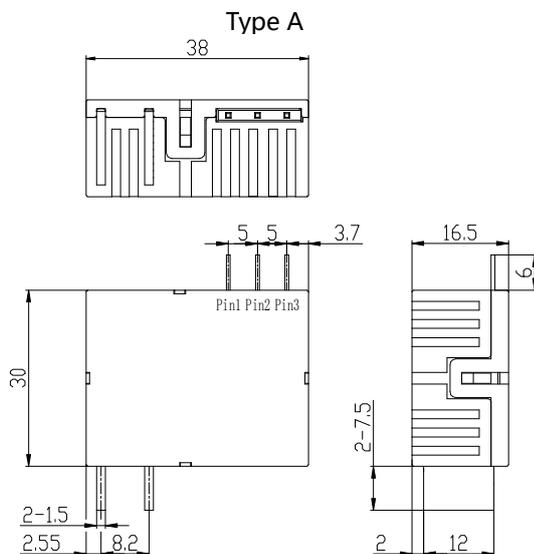
### Contact Data

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 (90A 250VAC Resistive electrical 5000 cycles+ Capacitive 5000 cycles PF=0.5 )
Mechanical Endurance	1x10 <sup>5</sup> cycles

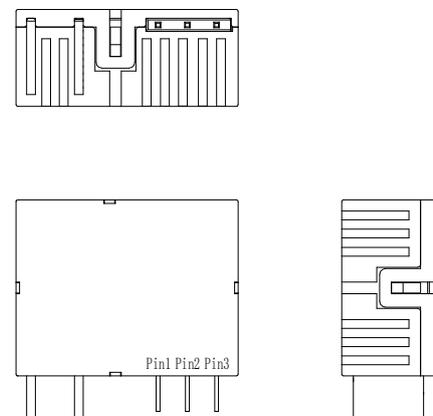
### Insulation Data

Insulation Resistance	≥1,000MΩ (500VDC)
Dielectric Strength	Contact-Contact AC2,000V; 50/60Hz 1min
	Contact-Coil AC4,000V; 50/60Hz 1min
Contact-Coil (Creepage distance)	≥8.0mm

### Outline Dimensions (Unit: mm)



### Type B



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.

### Coil Data

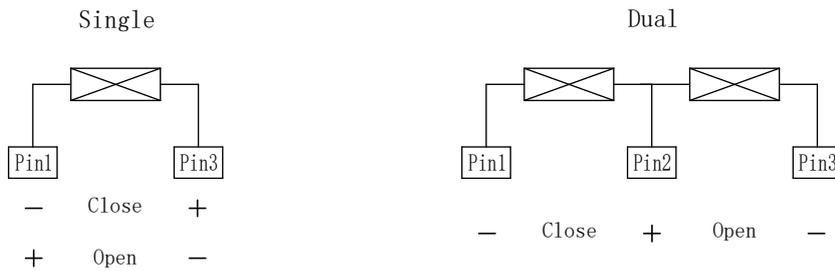
Coil voltage range	5 to 48VDC			
Coil insulation system according UL	Class F			
Coil type, standard type				
Rated Voltage VDC	Operate/Releas Voltage VDC	Coil resistance Ω (1±10%) Single/Dual	Rated power Single/Dual W	Pulse Duration ms
5	≤3.5	16.5/8.25	1.5/3	≥100
9	≤6.3	54/27	1.5/3	≥100
12	≤8.4	96/48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

## Wiring Diagrams



## Model naming rules

WJ31D    -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: WJ31D

Customized special suffix is available after being evaluated by Sanyou.

## Examples of Ordering Codes

WJ31D-90-12D2

Relay WJ31D, 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.