



Relays for advanced technology

**ULTRA-MINIATURE
PC BOARD TYPE
POWER RELAY**

**WJ109-
RELAYS**



- Ultra-miniature size with universal terminal footprint.
- High contact capacity: 10A.
- Sealed type available.
- Low coil power consumption.

SPECIFICATIONS

Contact

| | |
|--|--------------------------------------|
| Arrangement | 1 A; 1 C |
| Contact Material | Silver alloy |
| Contact Resistance (By voltage drop 6V 1A) | Max.100mΩ |
| Rating | |
| Resistive load (cosφ=1) | 10A 125VAC 7A 250VAC 10A 28VDC |
| Max. Switching current | 10A |
| Max. Switching power | 1250VA 300W |
| Expected life(min.ope) Mechanical(at 180 cpm) | 1×10 ⁷ |
| Electrical (at 20 cpm) | 1×10 ⁵ |

Characteristics

| | | |
|------------------------------|-------------|---|
| Operate Time | | Max.10msec. |
| Release Time | | Max.5msec. |
| Operating humidity | | 45 to 85% RH |
| Initial breakdown voltage | | |
| Between coil & contact | | 2000VAC (50/60Hz)for 1 min. |
| Between open contacts | | 750VAC (50/60Hz)for 1 min. |
| Insulation Resistance | | Min.1000MΩ (500 VDC) |
| Temperature rise(Max.) | | 40deg(at nominal voltage) |
| Ambient temperature | | -40°C ~ +80°C |
| Shock Resistance | Functional | Min. 10G |
| | Destruction | Min. 100G |
| Vibration Resistance | Functional | 10 to 55 Hz at double Amplitude of 1.5mm |
| | Destruction | 10 to 55 Hz at double Amplitude of 1.5mm |
| Insulation withstand voltage | | 5000V 1.2×50μs(between coil and contacts) |
| Unit weight | | Approx.10g |

Coil

| | |
|-------------------------|---------------|
| Nominal operating power | 0.36 to 0.45W |
|-------------------------|---------------|

TYPICAL APPLICATION

1. Cooling appliances
2. Air conditioners
3. Audio equipment.
4. Domestic appliances
5. Car control units, etc.

ORDERING INFORMATION

WJ109 - 1 C - 12VDC 25Ω

1 2 3 4 5

| Type | Number of pole | Contact form | Coil voltage(DC) | Coil sensitivity |
|-------|----------------|---|-----------------------|---|
| wj109 | 1:1pole | A: 1 form A B: 1 form B C: 1 form C | 3,5,6,9, 12,24,48V | 25,70,100,225, 400,1600:0.36W Nil:0.45W |

COIL DATA (at 20°C)

| Nominal Voltage (VDC) | Pick-up Voltage (VDC) | Drop-out Voltage (VDC) | Coil Resistance (Ω) \pm 10% | Nominal operating Power (W) | Coil Resistance (Ω) \pm 10% | Nominal operating Power (W) | Max.Allowable Voltage (VDC) |
|-----------------------|-----------------------|------------------------|--|-----------------------------|--|-----------------------------|-----------------------------|
| 3 | 2.25 | 0.15 | 25 | 0.36 | 20 | 0.45 | 130% of nominal Voltage |
| 5 | 3.75 | 0.25 | 70 | | 55 | | |
| 6 | 4.50 | 0.30 | 100 | | 80 | | |
| 9 | 6.75 | 0.45 | 225 | | 180 | | |
| 12 | 9.00 | 0.60 | 400 | | 320 | | |
| 24 | 18.00 | 1.20 | 1600 | | 1150 | | |
| 48 | 36.00 | 2.40 | 5120 | 0.45 | 5120 | | |

DIMENSIONS

Unit: mm

