



Miniature Power Relay

SJ-5A

Features

- 5A Switching capability.
- Impulse withstand voltage (between coil and contact) : 10,000V.
- Product in accordance to IEC60335-1/IEC60079-15/ GWT 750°C and CTI $\geq$ 250V is available
- Dimensions: 18.2mm $\times$ 10.2mm $\times$ 15.5mm.

Safety certificate

UL, c-UL File No : E190598
 VDE File No : 40002146
 CQC File No : CQC02001002114, CQC09002030583, CQC11002064518, CQC22002367720
 TUV File No : R50142420

Contact Data

Type	SJ-DM/(0.45W)	SJ-LM/(0.2W)
Rated load (Resistive load)	5A 250VAC	3A 250VAC
Max. Switching Current	5A	5A
Max. Switching voltage	277VAC	277VAC
Max. Switching power	1,385VA	1,385VA
Min. Switching load	6V 1A	6V 1A

Characteristic Data

Contact material	Silver alloy	
Contact resistance	100m Ω Max. (at 1A 6VDC)	
Operate time (at rated coil voltage)	10ms Max. (No diode)	
Release time	5ms Max. (No diode)	
Insulation resistance	1,000M Ω Min. (DC500V)	
Dielectric strength	Between open contacts: 1,000VAC 50/60Hz for 1min.	
	Between coil and contact: 4,000VAC, 50/60Hz for 1min.	
Vibration Resistance	Destructive	10 ~ 55Hz, at double amplitude of 1.5mm
	Functional	10 ~ 55Hz, at double amplitude of 1.5mm
Shock Resistance	Destructive	100G Min.
	Functional	10G Min.
Endurance	Mechanical endurance (10,800ops/h)	10,000,000 (at room temperature)



	Electrical endurance (360ops/h)	100,000 (at room temperature)
Ambient Temperature	-40°C ~ +105°C (No condensation)	
Weight	Approx. 5.6g	

- (1) . The Data shown above are initial values.
 (2) . Only typical loads are listed above. Other load specifications can be available upon request.
 (3) . The electrical endurance test has been carried out on flux proofed version.

Coil Data (at 20°C)

Nominal Voltage (VDC)	Nominal operating current $\pm 10\%$ (mA)	Coil resistance $\pm 10\%$ (Ω)	Max allowable voltage (VDC)	Operate voltage (Max.)	Release voltage (Min.)	Nominal operating power (W)
3	150.00	20	130% of Nominal Voltage	75% of Nominal Voltage	5% of Nominal Voltage	0.45W
5	90.00	55				
6	75.00	80				
9	50.00	180				
12	37.50	320				
18	25.00	720				
24	18.75	1280				
3	66.67	45				0.2W
5	40.00	125				
6	33.33	180				
9	22.22	405				
12	16.66	720				
18	11.11	1620				
24	8.33	2880				

The data shown above are initial values. Do not apply maximum allowable voltage on coil for more than 10 minutes to avoid overheating of the coil.

Safety Certificate Ratings (Note: More details of approved ratings, please refer to the safety certificates)

Certificates	CQC	TUV	VDE	UL/cUL
File No.	CQC02001002114 CQC09002030583 CQC11002064518 CQC22002367720	R50142420	40002146	E190598
Approved Ratings	5A 250VAC	SJ-D : 5A 250VAC SJ-L : 3A 250VAC	SJ-D : 5A 250VAC SJ-L : 3A 250VAC 5A 250VAC	SJ-D: 5A 277VAC, Resistive 5A 250VAC, Resistive & General Use 5A 28VDC, Resistive 1.5A 250VAC, General Use SJ-L: 3A 277VAC, Resistive 5A 120VAC, Resistive 3A 250VAC, Resistive & General Use



3A 28VDC, Resistive
1A 250VAC, General use

- (1) All values unspecified are at room temperature.
 (2) Only typical ratings are listed above and the endurance differ in each load. Other specific load information are available upon request.
 (3) For sealed type testing, please open the ventilation hole in the case before test.

Ordering Information

Nomenclature

SJ -S -1 12 D M 2 -F -XX

Special Parameter : Nil-Standard , Letter or number-Special requirement

Insulation System : Nil-Standard ,B-Class B ,F- Class F

Contact Material : Nil-AgSnO₂ , 2-AgNi

Contact Arrangement : M-Form A

Coil Power : L-0.2W, D-0.45W

Rated Coil voltage(VDC) : 03,05,06,09,12,18,24

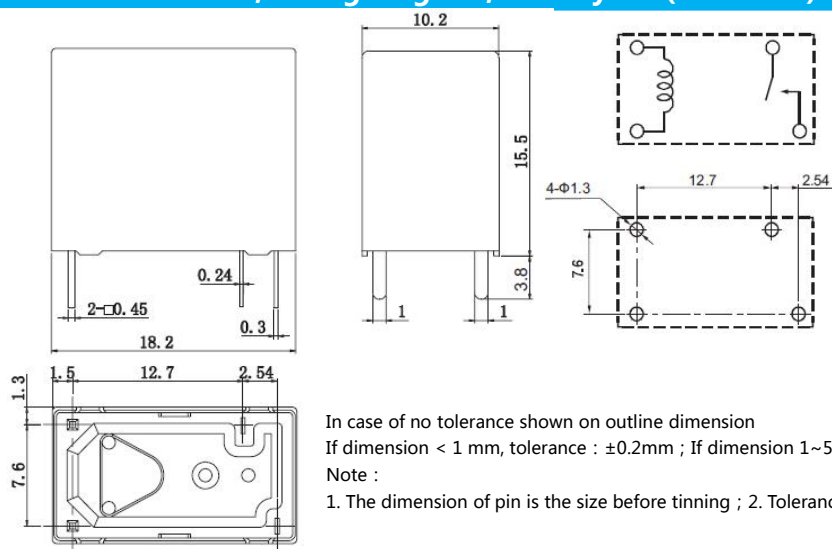
Number of poles : 1-1Pole

Protective Construction : S-Flux-proof , SH- Sealed type washable

Type : SJ

- (1) . Flux-proofed relays can not be used in the environment with pollutants like H₂S, SO₂, NO₂, dust, etc.
 (2) . Water cleaning or surface process is not suggested after the flux-proofed relays are assembled on PCB.
 (3) . Special requirements of customers (XX) shall be evaluated by our company and marked by characteristic symbols.

Outline dimension, wiring diagram, PCB layout (Unit: mm)



In case of no tolerance shown on outline dimension

If dimension < 1 mm, tolerance : ±0.2mm ; If dimension 1~5mm, tolerance : ±0.3mm ; If dimension > 5mm, tolerance : ±0.4mm

Note :

1. The dimension of pin is the size before tinning ; 2. Tolerance of PCB layout : ±0.1 mm.

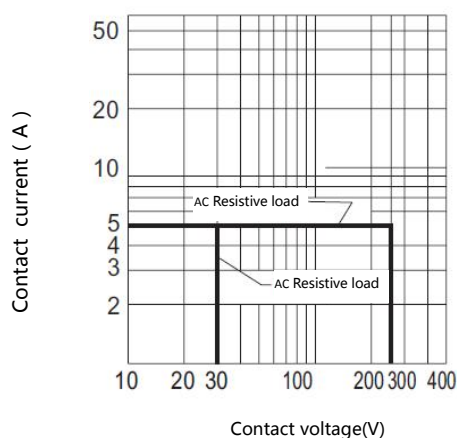
Typical Applications

- Household appliance
- Office equipment
- Sound equipment
- Air conditioner

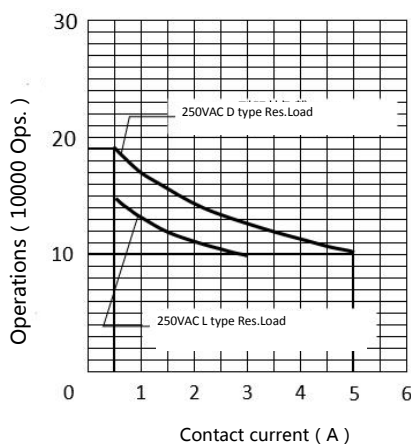


Characteristic Curves

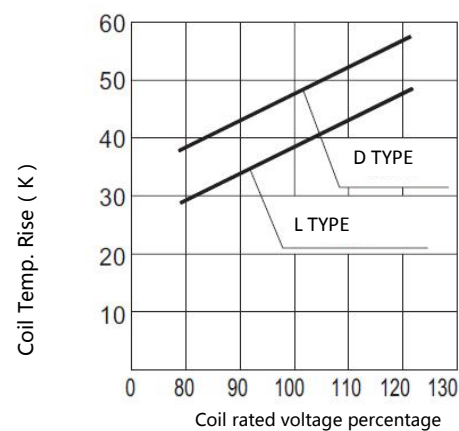
Max. Switching Power



Endurance Curve



Coil Temp. Rise



Note :

(1) Test conditions: room temperature, flux-proof product, resistive load, 1s on, 9s off.

The above curves are for reference only, and the final result is subject to the experiment.

Disclaimer: The specification is for reference only. Specifications are subject to change without prior notice.

We could not evaluate all the performance and all the parameters for every possible applications. Thus the users should in a right position to choose suitable product for their own application. For sealed relays, after installation and cleaning, please open the ventilation hole in the case before use. If there is any query, please contact Sanyou for technical services. However it is the user's responsibility to determine which product should be used.

