

Miniature High Power Relay

XJC

Features

- 30A switching capability
- 4kV dielectric strength
(between coil and contacts)
- 3mm contact gap available
: Photovoltaic inverter, EV etc.




 (File No.:E134581)
 Pending

1. COIL DATA (at 23°C)

1) DC coil

Nominal Voltage (VDC)	Pick-up Voltage (VDC) Max. ¹⁾	Drop-out Voltage (VDC) Min. ¹⁾	Max. Allowable Voltage (VDC) *2)	Coil Current (mA)(±10%)	Coil Resistance (Ω)	Coil Power (W)
3	2.25	0.3	3.3	633.3	4.7 x (1±10%)	Approx. 1.9
6	4.50	0.6	6.6	316.7	18.8 x (1±10%)	
12	9.00	1.2	13.2	158.3	75 x (1±10%)	
24	18.0	2.4	26.4	79.2	300 x (1±10%)	
48	36.0	4.8	52.8	40	1200 x (1±10%)	
100	75.0	10	110	19	5200 x (1±10%)	
110	82.5	11	121	17.3	6300 x (1±10%)	
200	150	20	220	9.5	21000 x (1±10%)	

2) AC coil

Nominal Voltage (VAC)	Pick-up Voltage (VAC) Max. ¹⁾	Drop-out Voltage (VAC) Min. ¹⁾	Max. Allowable Voltage (VAC) *2)	Coil Resistance (Ω)	Coil Power (VA)
6	4.80	0.9	6.6	18.8 x (1±10%)	Approx. 2.7
12	9.60	1.8	13.2	75 x (1±10%)	
24	19.2	3.6	26.4	300 x (1±10%)	
48	38.4	7.2	52.8	1200 x (1±10%)	
120	96	18	132	5200 x (1±10%)	
220/240	176	33	242	20800 x (1±10%)	

Notes: 1) The data shown above are initial values.

2) *The maximum allowable voltage refers to the maximum voltage which relay coil could endure in a short period of time.

2. CONTACT DATA

Contact Arrangement		1 Form A	2 Form A
Contact Resistance (Initial)		100mΩ max. (at 1A 24VDC)	
Contact Material		AgSnO ₂	
Contact Rating (Resistive Load)		30A 240VAC 30A 277VAC	25A 240VAC 25A 277VAC
Max. Switching Voltage		277VAC	
Max. Switching Current		30A	25A
Max. Switching Power		8310VA	6925VA
Life Expectancy	Electrical	1 Form A: 50,000 operations (30A 240V AC) 1 Form C: 50,000 operations (25A 240V AC)	
	Mechanical	10,000,000 operations	

3. CHARACTERISTICS

Insulation Resistance		1000MΩ (at 500VDC)
Dielectric Strength	Open Contacts	2000VAC 1min
	Coil and Contacts	4000VAC 1min
Operate Time (at nominal voltage)		30ms max. (DC type)
Release Time (at nominal voltage)		30ms max. (DC type)
Temperature Range		-55℃ ~ 70℃
Shock Resistance	Functional	Standard: 98m/s ² Pulse width 11ms 3.0mm: 98m/s ² Pulse width 6ms
	Destructive	980m/s ² Pulse width 6ms
Vibration Resistance		Standard: 10 ~ 55Hz 1.5mm DA 3.0mm: 10 ~ 55Hz 1.0mm DA
Humidity		5 ~ 85% RH
Termination		PCB, QC, Screw
Construction		Dust protected
Weight		Approx. 120g
Outline Dimension (L x W x H)		Flanged type: 68.0 x 32.9 x 51.0mm Mount type: 50.5 x 32.9 x 56.8mm

Notes: 1) The data shown above are initial values.

2) Please find coil temperature curve in the characteristic curves below.

3) UL insulation system: Class F, Class B.

4. ORDERING INFORMATION

<u>XJC</u> ①	<u>11</u> ②	-	<u>D12</u> ③	<u>F</u> ④	<u>T</u> ⑤	<u>F</u> ⑥	<u>N</u> ⑦	<u>C</u> ⑧
① Relay Model	XJC							
② Contact Arrangement	11: 1 Form A (SPST-NO) 22: 2 Form A (DPST-NO) ³⁾							
③ Coil Voltage	DC: D3=3VDC, D6=6VDC, D12=12VDC, D24=24VDC, D48=48VDC, D100=100VDC, D110=110VDC, D200=200VDC AC: A6=6VAC, A12=12VAC, A24=24VAC, A48=48VAC, A120=120VAC, A220/240=220/240VAC							
④ Termination Form	M: Mount F: Flanged							
⑤ Contact Material	T: AgSnO2							
⑥ Insulation Standard	F: Class F Nil: Class B							
⑦ Contact Gap	N: 3.0mm Nil: Standard							
⑧ Capacitor	C: With Capacitor (Only for AC) Nil: Without Capacitor							

Notes:

- 1) Water cleaning or surface process is not suggested after the dust-protected relays are assembled on PCB.
- 2) Dust-protected relays cannot be used in the environment with pollutants like H₂S, SO₂, NO₂, dust, etc.
- 3) The standard product with 2 Form A contact configuration is only applicable to circuits a and g specified in Table 16 of IEC 61810-1:2015.
For applications in other circuits, please contact our company

5. SAFETY APPROVAL RATINGS

UL/cUL	30A 277VAC 85 °C 1.5HP 120VAC 3HP 240VAC 85 °C 10A 120VAC Tungsten 240VAC(FLA=20.5)(LRA=105) 85 °C 25A Making 400VDC Breaking 60VDC 85 °C
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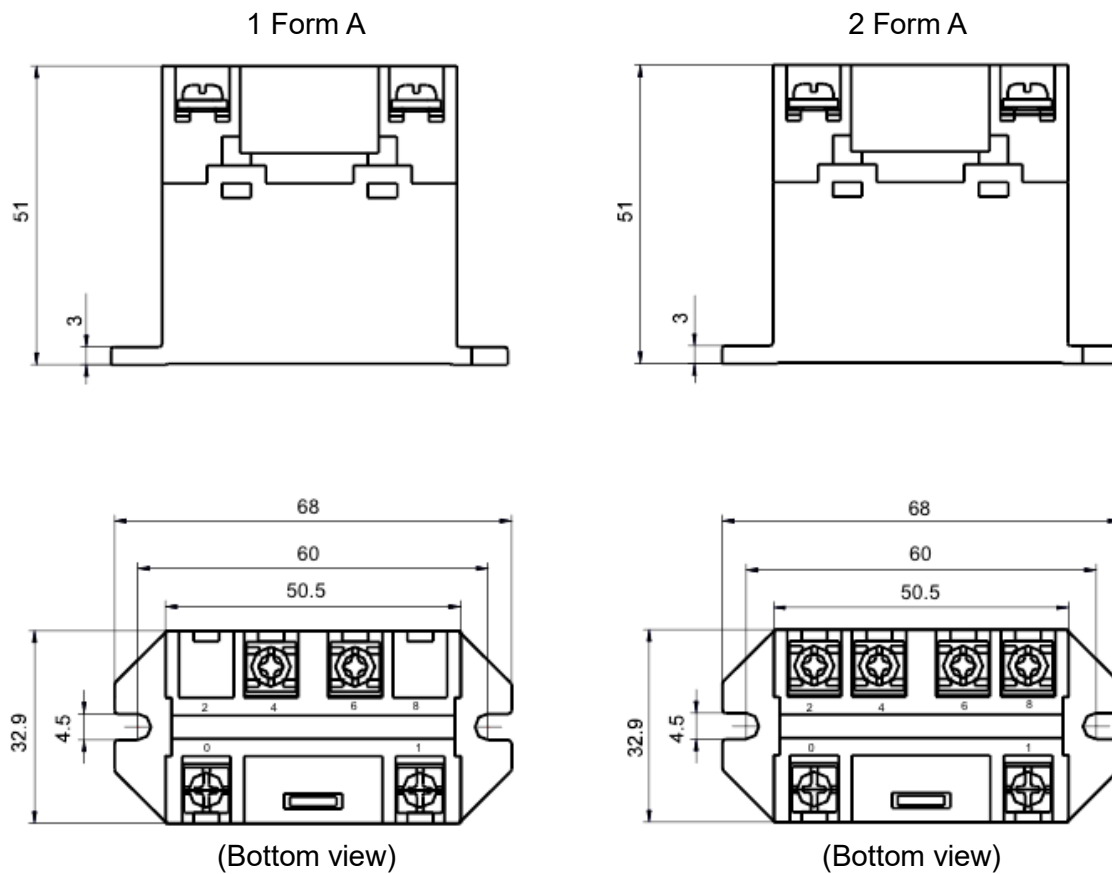
Notes: 1) All values unspecified are at room temperature.

2) Only typical loads are listed above. Other load specifications can be available upon request.

6. DIMENSIONS (Unit: mm)

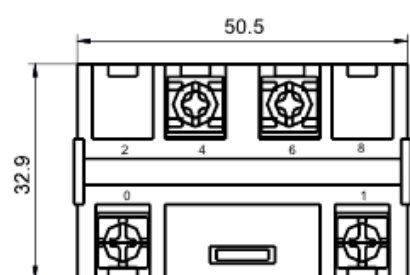
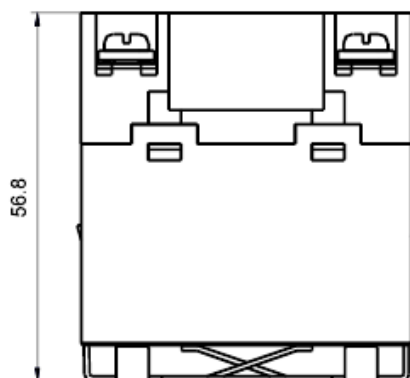
Outline Dimensions

Flanged type



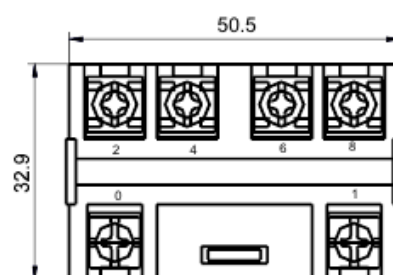
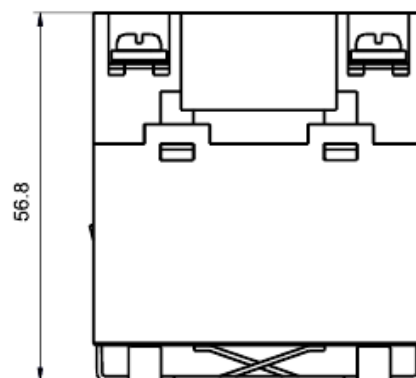
Mount type

1 Form A



(Bottom view)

2 Form A

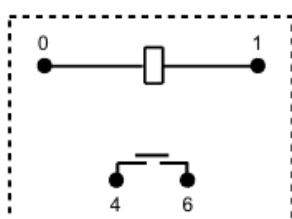


(Bottom view)

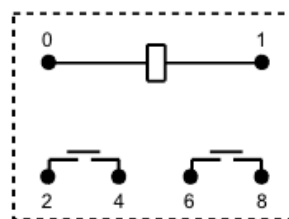
Remark: In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$.

Wiring Diagram (Bottom View)

1 Form A

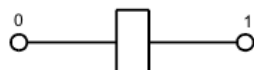


2 Form A

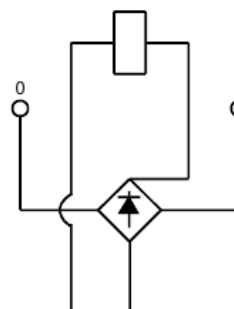


Coil Inner Circuit

DC operation coil

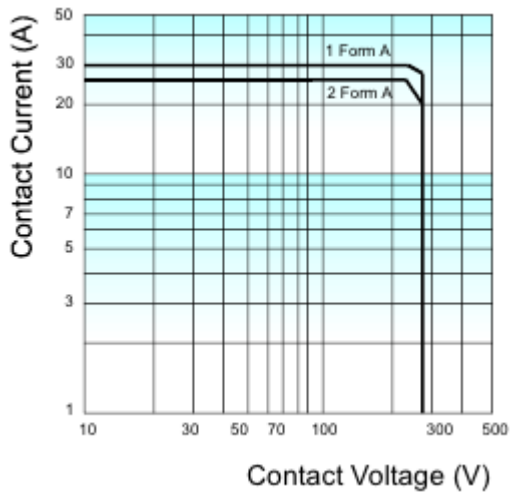


AC operation coil

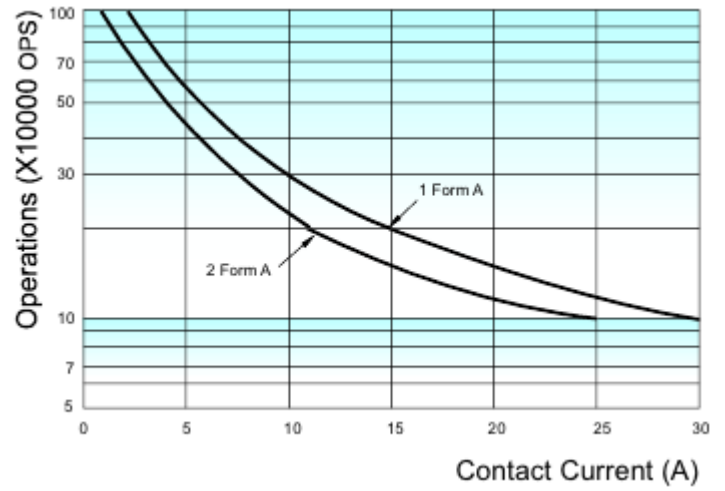


7. CHARACTERISTIC CURVES

Maximum Switching Power



Endurance Curve



Coil Temperature Rise

