2. Specifications

Characteristics	Item		Specifications	
			Standard type	High capacity type
Contact	Contact material		1 Form A: $AgSnO_2$ type 1 Form C, 2 Form A and 2 Form C: AgNi type	
	Arrangement		1 Form A, 1 Form C, 2 Form A and 2 Form C	1 Form A and 1 Form C
	Contact resistance (Initial)		Max. 100 mΩ (By voltage drop 6 V DC 1A)	
Rating	Nominal switching capacity (resistive load)		5A 250V AC, 5A 30V DC	10A 250V AC, 10A 30V DC
	Max. switching power (resistive load)		1,250VA, 150W	2,500VA, 300W
	Max. switching voltage		250V AC, 30V DC	
	Max. switching current		5A	10A
	Min. switching capacity (reference value)*1		100mA, 5V DC	
Electrical characteristics	Insulation resistance (Initial)		Min. 1,000MΩ (at 500V DC) Measurement at same location as “Breakdown voltage” section.	
	Breakdown voltage (Initial)	Between open contacts	1,000 Vrms for 1 min. (Detection current: 10 mA)	
		Between contact and coil	5,000 Vrms for 1 min. (Detection current: 10 mA)	
		Between contact sets	3,000 Vrms for 1 min. (2 Form A, 2 Form C) (Detection current: 10 mA)	
	Temperature rise (coil)		1 Form A: Max. 45°C 113°F, 1 Form C, 2 Form A and 2 Form C: Max. 55°C 131°F (resistive method, with nominal coil voltage and at nominal switching capacity, at 20°C 68°F)	1 Form A: Max. 45°C 113°F, 1 Form C: Max. 55°C 131°F (resistive method, with nominal coil voltage and at nominal switching capacity, at 20°C 68°F)
	Surge breakdown voltage*2 (Between contact and coil) (Initial)		10,000 V	
	Operate time (at nominal voltage) (at 20°C 68°F)		Max. 15 ms (excluding contact bounce time.)	
	Release time (at nominal voltage) (at 20°C 68°F)		Max. 5 ms (excluding contact bounce time) (Without diode)	
Mechanical characteristics	Shock resistance	Functional	98 m/s² (Half-wave pulse of sine wave: 11 ms; detection time: 10μs.)	
		Destructive	980 m/s² (Half-wave pulse of sine wave: 6 ms.)	
	Vibration resistance	Functional	10 to 55 Hz at double amplitude of 1.6 mm (Detection time: 10μs.)	
		Destructive	10 to 55 Hz at double amplitude of 2.0 mm	
Expected life	Mechanical (at 180 times/min.)		Min. 5×10^6	
	Electrical (at 6 times/min.)		Min. 10^5 (at resistive load)	
Conditions	Conditions for operation, transport and storage*3		Ambient temperature*4: –40°C to +60°C –40°F to 140°F (Class E), (Class B: –40°C to +85°C –40°F to 185°F) Humidity: 5 to 85% R.H. (Not freezing and condensing at low temperature)	
	Max. operating speed (at nominal switching capacity)		Flux-resistant type: 20 times/min., Sealed type: 6 times/min.	
Unit weight			Approx. 13 g .46 oz	

* Specifications will vary with foreign standards certification ratings.

Notes: *1. This value can change due to the switching frequency, environmental conditions, and desired reliability level, therefore it is recommended to check this with the actual load.

*2. Wave is standard shock voltage of ±1.2×50μs according to JEC-212-1981

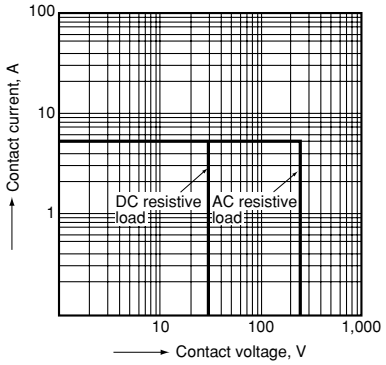
*3. The upper limit of the ambient temperature is the maximum temperature that can satisfy the coil temperature rise value. Refer to Usage, transport and storage conditions in NOTES.

*4. The pick-up and drop out voltages rise approximately 0.4% for every 1°C 33.8°F given a standard ambient temperature of 20°C 68°F. Therefore, when using relays where the ambient temperature is high, please take into consideration the rise in pick-up and drop out voltages and keep the coil applied voltage within the maximum applied voltage.

REFERENCE DATA

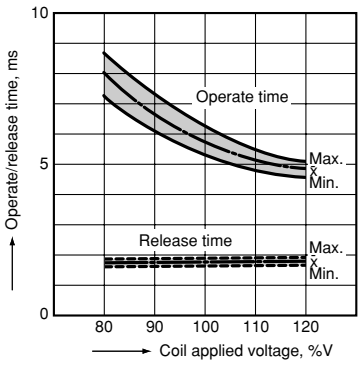
JW 1 Form A Standard (5A) type

1. Maximum operating power



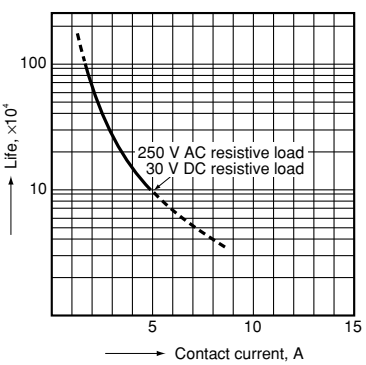
2. Operate/release time

Sample: JW1aSN-DC12V-F, 10 pcs.
Ambient temperature: 20°C 68°F



3. Life curve

1 Form A Standard (5 A) type



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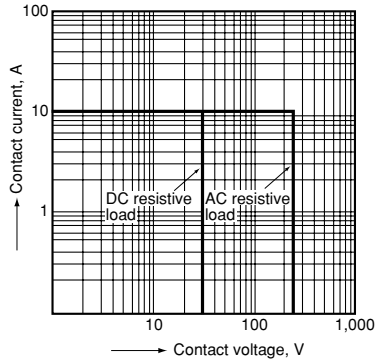
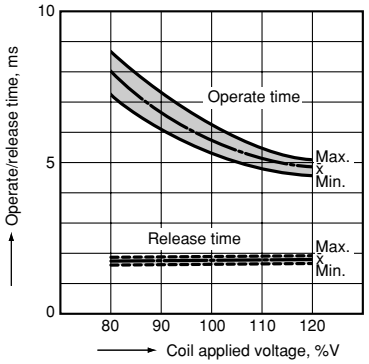
JW 1 Form A High Capacity (10 A) type

1. Maximum operating power

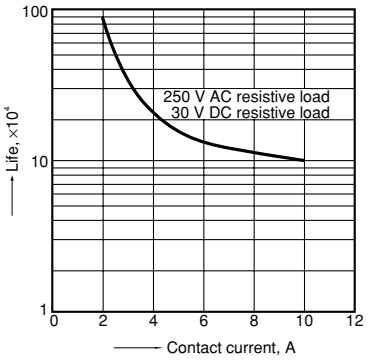


2. Operate/release time

Sample: JW1aFSN-DC12V, 10 pcs.
Ambient temperature: 20°C 68°F

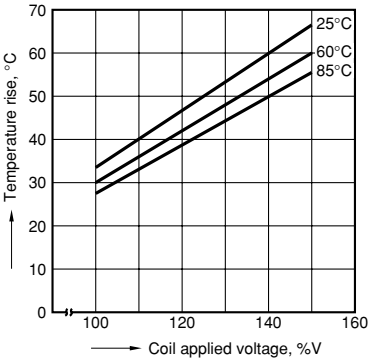


3. Life curve



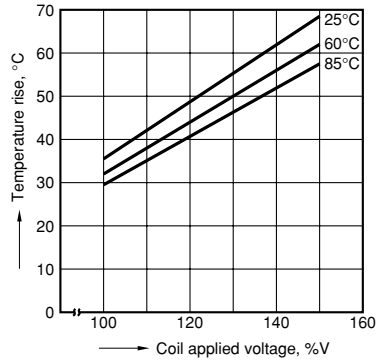
4-(1). Coil temperature rise
(Contact carrying current: 5A)

Sample JW1aFSN-DC12V-F, 6 pcs.
Point measured: Inside the coil



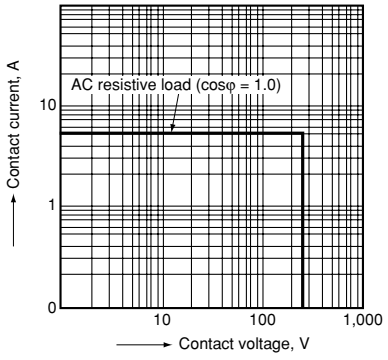
4-(2). Coil temperature rise
(Contact carrying current: 10 A)

Sample: JW1aFSN-DC12V-F, 6 pcs.
Point measured: Inside the coil



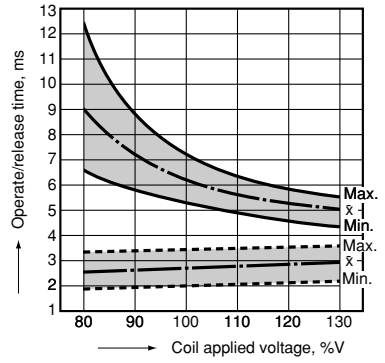
JW 1 Form C Standard (5 A) type

1-(3). Maximum operating power



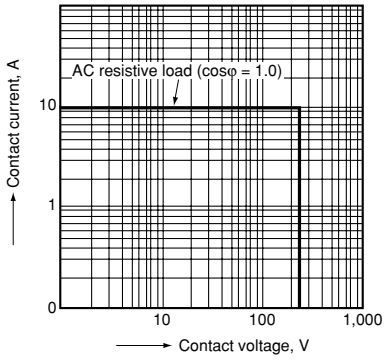
2. Operate/release time

Sample: JW1SN-DC12V-F, 6 pcs.
Ambient temperature: 20°C 68°F



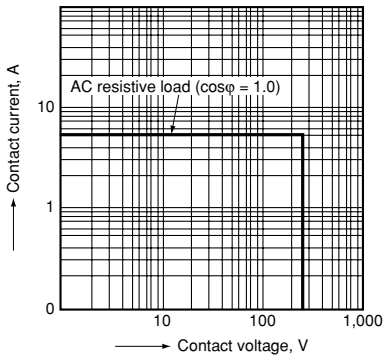
JW 1 Form C High Capacity (10 A) type

1. Maximum operating power



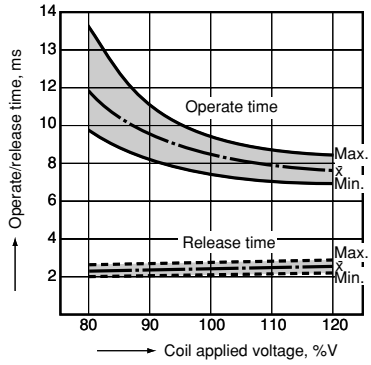
JW 2 Form A Standard (5 A) type

1. Maximum operating power



2. Operate/release time

Sample: JW2aSN-DC24V-F, 6 pcs.
Ambient temperature: 20°C 68°F



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